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INTERVENTO

FONDO COMPLEMENTARE AL PIANO NAZIONALE DI RIPRESA E RESILIENZA
PROGRAMMA "SICURO, VERDE E SOCIALE: RIQUALIFICAZIONE DELL'EDILIZIA RESIDENZIALE PUBBLICA"

PROGETTO DI MANUTENZIONE STRAORDINARIA PER IL RESTAURO E RISANAMENTO CONSERVATIVO DI DUE CASAMENTI A CORTE SITI IN COMUNE DI BOLOGNA LOCALITA' CIRENAICA. VIA LIBIA CIV. 29÷51 PER COMPLESSIVI 70 ALLOGGI DI ERP CON RELATIVE PERTINENZE E PARTI COMUNI

LOTTO **3053/PN_2**

PROGETTO ESECUTIVO

TAV.	OGGETTO	DATA
TAB_08	TABULATI DI CALCOLO CIVICO 37 STATO DI PROGETTO	Settembre 2022
SCALA		N. DISEGNO

VERSIONE	DESCRIZIONE	DATA	REDATTO	VERIFICATO		APPROVATO
00	PRIMA EMISSIONE	Settembre 2022	F. DALMONTE	N. LEONE		N. LEONE
01						
02						
03						

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SIDEL
INGEGNERIA

TABULATI DI CALCOLO
CIVICO 37
STATO DI PROGETTO

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1 Risultati numerici

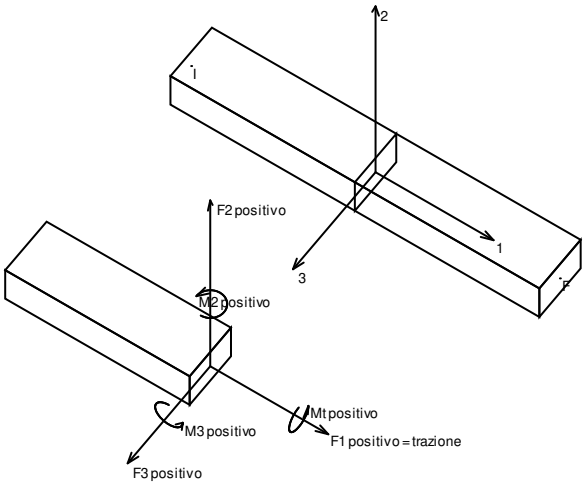
1.1 Sollecitazioni

1.1.1 Sollecitazioni aste

1.1.1.1 Convenzioni di segno aste

Le abbreviazioni relative alle sollecitazioni sugli elementi aste sono da intendersi:

- F1 (N): sforzo normale nell'asta;
- F2: sforzo di taglio agente nella direzione dell'asse locale 2;
- F3: sforzo di taglio agente nella direzione dell'asse locale 3;
- M1 (Mt): momento attorno all'asse locale 1; equivale al momento torcente;
- M2: momento attorno all'asse locale 2;
- M3: momento attorno all'asse locale 3.



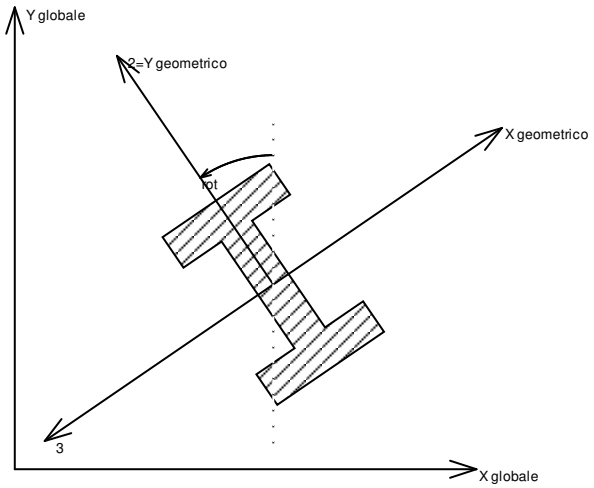
La convenzione sui segni per i parametri di sollecitazione delle aste è la seguente:
presa un'asta con nodo iniziale i e nodo finale f, asse 1 che va da i a f, assi 2 e 3 presi secondo quanto indicato nei paragrafi successivi relativi al sistema locale delle aste sezionando l'asta in un punto e considerando la sezione sinistra del punto in cui si è effettuato il taglio (sezione da cui esce il versore asse 1) i parametri di sollecitazione sono positivi se hanno verso e direzione concordi con il sistema di riferimento locale dell'asta 1, 2, 3 (per i momenti si adotta la regola della mano destra).

Il sistema è definito diversamente per tre categorie di aste, a seconda che siano originate da:

- aste verticali ad esempio pilastri e colonne;
- aste non verticali non di c.a., ad esempio travi di acciaio o legno;
- aste non verticali in c.a.: travi in c.a. di piano, falda o a quota generica.

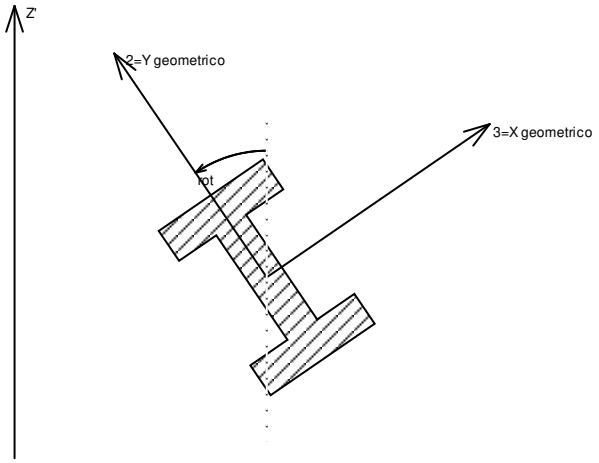
Nel seguito si indica con 1, 2 e 3 il sistema locale dell'asta che non sempre coincide con gli assi principali della sezione. Si ricorda che per assi principali si intendono gli assi rispetto a cui si ha il raggio di inerzia minimo e massimo. Gli assi 1, 2 e 3 rispettano la regola della mano destra.

Sistema locale aste verticali



Nella figura si considera l'asse 1 uscente dal foglio (l'osservatore guarda in direzione opposta a quella dell'asse 1).

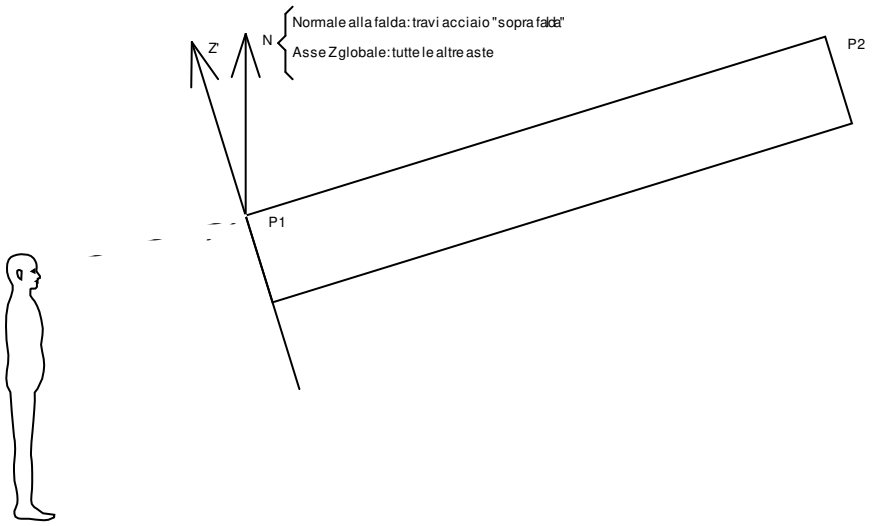
Sistema locale aste non verticali



Nella figura si considera l'asse 1 entrante nel foglio (l'osservatore guarda in direzione coincidente a quella dell'asse 1).

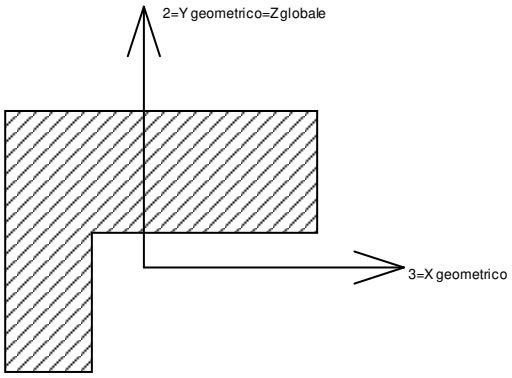
L'asse Z' è illustrato nella figura seguente dove:

- P1 è il punto di inserimento iniziale dell'asta;
- P2 è il punto di inserimento finale dell'asta;
- N è la normale al piano o falda di inserimento;



Z' è quindi l'intersezione tra il piano passante per P1, P2 contenente N e il piano della sezione iniziale dell'asta.

Sistema locale aste derivanti da travi in c.a.



Nella figura si considera l'asse 1 entrante nel foglio (l'osservatore guarda in direzione coincidente a quella dell'asse 1). L'asse 2 è sempre verticale e quindi coincidente con l'asse Z globale nonché con l'asse y geometrico. L'asse 3 coincide con l'asse x geometrico. . Si sottolinea il fatto che gli assi 2 e 3 non corrispondono agli assi principali della sezione.

1.1.1.2 Sollecitazioni estreme aste

Asta: elemento asta a cui si riferiscono le sollecitazioni.
Ind.: indice dell'asta.
Cont.: contesto a cui si riferisce la sollecitazione
N.br.: nome breve della condizione o combinazione di carico.
Pos.: numero della sezione all'interno dell'asta (tra 1 e 31, dove 1 corrisponde alla sezione al nodo iniziale, 16 è la sezione in mezzeria, 31 corrisponde alla sezione al nodo finale).
Posizione: posizione a cui si riferisce la sollecitazione dell'asta.
X: componente X della posizione a cui si riferisce la sollecitazione dell'asta. [m]
Y: componente Y della posizione a cui si riferisce la sollecitazione dell'asta. [m]
Z: componente Z della posizione a cui si riferisce la sollecitazione dell'asta. [m]
Soll.traslazionale: componente traslazionale della sollecitazione dell'asta.
F1: componente F1 della sollecitazione dell'asta. [kN]
F2: componente F2 della sollecitazione dell'asta. [kN]
F3: componente F3 della sollecitazione dell'asta. [kN]
Soll.rotazionale: componente rotazionale della sollecitazione dell'asta.
*M1: componente M1 della sollecitazione dell'asta. [kN*m]*
*M2: componente M2 della sollecitazione dell'asta. [kN*m]*
*M3: componente M3 della sollecitazione dell'asta. [kN*m]*

Sollecitazioni con sforzo normale (N) minimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
578	SLV 16	1	-10.14	6.23	-0.98	-335.06	-123.71	-38.4	3.1077	-13.7713	61.2449
556	SLU 84	1	-15.44	6.23	-0.98	-333.06	-171.88	-13.39	4.6527	23.3498	70.722
566	SLU 84	1	-15.06	6.23	-0.98	-329.39	207.07	-2.21	-4.0414	23.8947	145.3111
579	SLU 84	31	-9.33	6.23	-0.98	-314.87	173.35	11.25	-4.761	20.4006	67.9073
438	SLV 13	31	-6.52	-3.28	-0.98	-304.04	-22.83	-59.48	0.0292	-32.5968	-44.6991

Sollecitazioni con sforzo normale (N) massimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
872	SLV 2	1	-5.09	6.34	15.64	228	44.88	-38.49	-1.1047	2.245	-8.027
735	SLV X	31	-18.25	-3.28	-0.98	191.11	9.52	-48.8	-0.0176	-23.4975	9.3504
438	SLV 4	1	-6.52	-2.89	-0.98	171.41	-73.38	41.88	-0.0032	4.5771	-36.6733
655	SLV 15	1	-6.02	-2.89	-0.98	161.12	116.46	-55.35	0.0024	-11.1728	-29.3665
1018	SLV 7	31	-17.05	-3.17	15.78	158.28	-87.32	3.41	0.0016	0.003	-0.0036

Sollecitazioni con momento M2 minimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
826	SLV 2	1	-13.11	-0.63	-0.98	-154.81	-14.1	45.22	0.1565	-120.5399	-1.2476
306	SLV 16	1	-5.41	6.58	-0.98	-28.34	50.5	170.11	3.325	-101.954	-51.1074
711	SLV 2	31	-18.5	-2.93	-0.98	-119.11	-118.56	-170.6	1.3139	-93.3522	113.2796
714	SLV 13	31	-14.11	-3.28	-0.98	27.37	-98.54	-81.08	-0.8547	-90.9346	3.1825
468	SLV 3	31	-13.11	-0.63	-0.98	-72.44	-56.01	-153.16	0.872	-84.902	88.7026

Sollecitazioni con momento M2 massimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
708	SLV 2	1	-17.05	-2.93	-0.98	-46.1	13.49	-178.26	-0.8016	110.1657	36.267
830	SLU 83	1	-13.11	-3.58	0.45	-11.27	-127.42	-54.94	-2.2052	107.0926	-25.1711
687	SLV 2	31	-11.36	-3.28	-0.98	-36.31	-73.51	88.93	5.7629	106.3952	-1.5445
829	SLU 83	31	-13.11	-3.58	0.45	-1.68	40.9	147.84	-0.4152	96.3545	-24.1353
665	SLV 13	31	-7.72	-2.93	-0.98	-44.02	5.58	172.37	0.6555	95.5044	35.0255

Sollecitazioni con momento M3 minimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
833	SLU 83	1	-11.81	-3.58	0.45	0	-91.79	0	0	0	-182.6086
832	SLU 83	31	-11.81	-3.58	0.45	3.5	144.27	10.96	-0.2078	11.1582	-177.3024
281	SLU 84	31	-24.4	5.48	-0.98	9.07	39.45	3.9	8.5995	-3.7786	-112.1468
644	SLV 14	31	-0.12	1.3	-0.98	-166.55	121.57	27.59	0.0169	17.1028	-107.7066
439	SLV 15	1	-0.12	0.8	-0.98	29.51	-116.82	3.37	0.016	-7.0796	-106.6495

Sollecitazioni con momento M3 massimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
608	SLV 14	31	-0.47	1.05	-0.98	-156.62	-278.36	-58.2	5.3869	-51.0647	240.2445
621	SLV 15	1	-0.47	1.05	-0.98	-118.71	293.99	41.06	-4.265	-0.817	237.8288
762	SLU 83	1	-18.5	-2.93	-0.98	-74.88	259.71	9.31	-6.2968	2.7399	188.0126
290	SLV 4	31	-24.4	1.05	-0.98	-79.65	-210.75	24.98	-3.7619	10.6806	172.8326
305	SLU 83	31	-6.02	-2.93	-0.98	-55.53	-232.56	-3.39	11.036	21.5249	163.7812

1.1.2 Sollecitazioni gusci

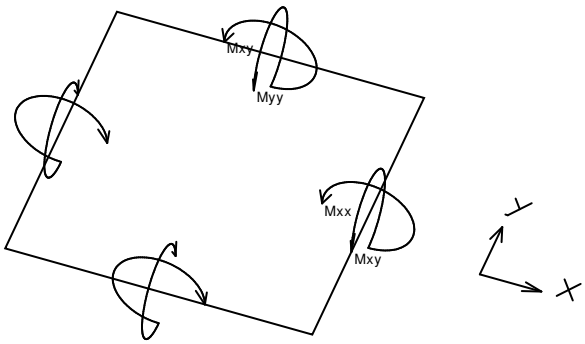
1.1.2.1 Convenzioni di segno gusci

Sono individuate distinte convenzioni di segno in relazione al tipo di elemento strutturale a cui il guscio si riferisce:

- convenzione per gusci non verticali, originati ad esempio da piastre e platee;
- convenzione per gusci verticali, originati ad esempio da pareti e muri.

Convenzione di segno per gusci non verticali

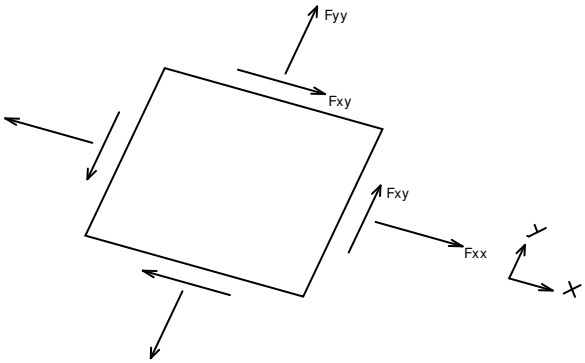
Il sistema di riferimento nel quale sono espressi i parametri di sollecitazione è così definito: origine appartenente al piano dell'elemento, asse x e y contenuti nel piano dell'elemento e terzo asse (z) ortogonale al piano dell'elemento a formare una terna destrogira. In particolare l'asse x ha proiezione in pianta parallela ed equiversa all'asse globale X. Nel caso di piastre orizzontali (caso più comune) gli assi x, y e z locali all'elemento sono paralleli ed equiversi agli assi X, Y e Z globali. Si sottolinea che non ha alcun interesse collocare esattamente nel piano dell'elemento la posizione dell'origine in quanto i parametri di sollecitazione sono invarianti rispetto a tale posizione.
In figura è mostrato un elemento infinitesimo di shell orizzontale con indicato il sistema di riferimento e i parametri di sollecitazione Mxx, Myy, Mxy.



Si definiscono:

- Mxx: momento flettente [Forza*Lunghezza/Lunghezza] agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- Myy: momento flettente [Forza*Lunghezza/Lunghezza] agente sul bordo di normale y (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- Mxy: momento torcente [Forza*Lunghezza/Lunghezza] agente sui bordi (verso positivo indicato dalla freccia in figura).

Per quanto riguarda le sollecitazioni estensionali si faccia riferimento alla figura seguente dove per lo stesso elemento infinitesimo di shell orizzontale con indicato il sistema di riferimento e i parametri di sollecitazione Fxx, Fyy, Fxy.



Si definiscono:

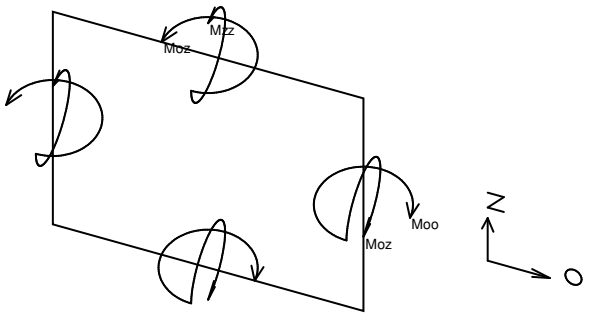
- Fxx: sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Fyy: sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale all'asse y (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Fxy: sforzo di taglio [Forza/Lunghezza] agente sui bordi (verso positivo indicato dalla freccia in figura).

Vengono riportati inoltre i tagli fuori dal piano dell'elemento guscio:

- Vx: taglio fuori piano [Forza/Lunghezza] applicato al bordo di normale parallela all'asse x;
- Vy: taglio fuori piano [Forza/Lunghezza] applicato al bordo di normale parallela all'asse y.

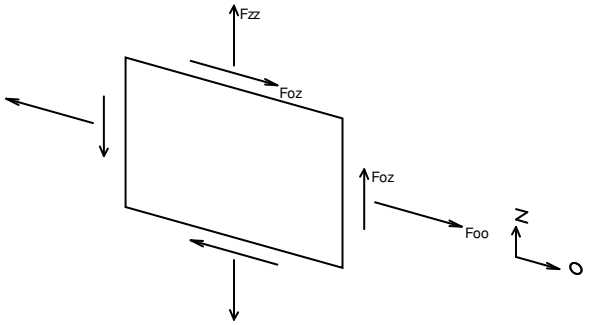
Convenzione di segno per gusci verticali

Il sistema di riferimento nel quale sono espressi i parametri di sollecitazione è così definito: origine appartenente al piano dell'elemento, asse O (ascisse) e z (ordinate) contenuti nel piano dell'elemento e terzo asse ortogonale al piano dell'elemento a formare una terna destrogira. In particolare l'asse O è orizzontale e l'asse z parallelo ed equiverso con l'asse Z globale. Si sottolinea che non ha alcun interesse collocare esattamente nel piano dell'elemento la posizione dell'origine in quanto i parametri di sollecitazione sono invarianti rispetto a tale posizione.In figura è mostrato un elemento infinitesimo di shell orizzontale con indicato il sistema di riferimento e i parametri di sollecitazione Moo, Mzz, Moz.



- Moo: momento flettente distribuito [Forza*Lunghezza/Lunghezza] applicato al bordo di normale parallela all'asse O (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- Mzz: momento flettente distribuito [Forza*Lunghezza/Lunghezza] applicato al bordo di normale parallela all'asse z (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- Moz: momento 'torcente' distribuito [Forza*Lunghezza/Lunghezza] applicato sui bordi (verso positivo indicato dalla freccia in figura).

Per quanto riguarda le sollecitazioni estensionali si faccia riferimento alla figura seguente dove per lo stesso elemento infinitesimo di shell con indicato il sistema di riferimento i parametri di sollecitazione Foo, Fzz, Foz sono rispettivamente:



- Fzz: sforzo tensionale distribuito [Forza/Lunghezza] applicato al bordo di normale parallela all'asse z (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Foo: sforzo tensionale distribuito [Forza/Lunghezza] applicato al bordo di normale parallela all'asse O (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Foz: sforzo tagliante distribuito [Forza/Lunghezza] applicato sui bordi (verso positivo indicato dalla freccia in figura).

Vengono riportati inoltre i tagli fuori dal piano dell'elemento guscio:

- Vo: taglio fuori piano applicato al bordo di normale parallela all'asse O;
- Vz: taglio fuori piano applicato al bordo di normale parallela all'asse z.

1.1.2.2 Sollecitazioni estreme gusci

Shell: elemento guscio a cui si riferiscono le sollecitazioni.
Ind: indice del guscio.
Cont.: contesto a cui si riferiscono le sollecitazioni.
N.br.: nome breve della condizione o combinazione di carico.
Nodo: nodo su cui si basa il guscio a cui si riferisce la sollecitazione.
Ind: indice del nodo.
Sollecitazione: valori della sollecitazione.
*M11: componente M11 della sollecitazione del guscio nel nodo indicato. [kN*m/m]*
*M12: componente M12 della sollecitazione del guscio nel nodo indicato. [kN*m/m]*
*M22: componente M22 della sollecitazione del guscio nel nodo indicato. [kN*m/m]*
F11: componente F11 della sollecitazione del guscio nel nodo indicato. [kN/m]
F12: componente F12 della sollecitazione del guscio nel nodo indicato. [kN/m]
F22: componente F22 della sollecitazione del guscio nel nodo indicato. [kN/m]
V13: componente V13 della sollecitazione del guscio nel nodo indicato. [kN/m]
V23: componente V23 della sollecitazione del guscio nel nodo indicato. [kN/m]

Sollecitazioni con momento M11 minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
16585	SLV 13	134	-177.93	65.99	302.73	-165	215	482	-301	829
16557	SLU 84	198	-126.07	-28.74	8.79	97	5	-96	593	-21

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
16566	SLU 84	222	-120.39	-28.61	22.74	9	37	-42	576	-40
16575	SLV 6	245	-61.05	-15.11	39.68	-36	-7	6	355	-131
17412	SLV 3	18183	-60.76	2.21	-24.81	1104	1332	-5804	441	-90

Sollecitazioni con momento M11 massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
16612	SLU 84	287	196.13	24.08	-4.06	72	-4	33	-396	376
16620	SLU 83	277	151.73	25.38	162.65	-565	-127	-325	-272	-987
16576	SLU 83	300	131.66	-26.35	157.94	-433	99	-248	-251	963
16619	SLU 83	278	122.37	-1.12	83.28	-66	-97	-199	-281	-485
16577	SLU 83	299	107.44	-3.13	88.2	-44	84	-201	-266	556

Sollecitazioni con momento M22 minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
16776	SLV 3	636	21.16	35.83	-178.08	-11	43	-202	28	-431
16614	SLU 84	284	8.55	17.68	-128.14	6	6	-26	23	-144
16615	SLU 84	283	-4.17	6.09	-124.18	-5	3	-42	22	-74
16581	SLV 14	294	-9.63	-17.26	-115.18	17	23	25	16	281
16616	SLU 83	281	-4.18	-14.08	-110.66	26	6	-47	20	32

Sollecitazioni con momento M22 massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
16585	SLV 13	134	-177.93	65.99	302.73	-165	215	482	-301	829
16776	SLV X	636	-18.67	-32.95	168.88	18	20	-154	-33	399
16620	SLU 84	277	151.64	25.43	162.8	-564	-126	-324	-272	-989
16576	SLU 84	300	131.55	-26.38	158.04	-434	99	-248	-250	964
16760	SLV 16	478	-38.93	-23.58	144.54	-139	-49	-282	63	357

Sollecitazioni con sforzo F11 minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
17500	SLU 83	18495	0.11	0	0.06	-1859	-1	-1123	0	-1
17501	SLU 84	18572	-0.04	0	-0.09	-1496	-1	-606	0	0
17518	SLU 79	18665	-0.14	-1.56	3.25	-1250	687	-1380	-45	21
17506	SLV 11	18157	-14.66	0	-2.17	-1217	1	673	-106	-10
17469	SLU 84	18571	0.03	0	-0.23	-1206	-1	-456	0	-1

Sollecitazioni con sforzo F11 massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
17412	SLV 5	18183	-15.72	0.5	-7.36	1765	1233	-4727	113	-25
17520	SLU 83	18527	0.09	0.07	-0.02	1647	356	-3734	0	5
17501	SLU 84	18495	0.1	0	0.09	1636	-1	-133	0	0
17500	SLU 77	18197	-0.31	0	-0.17	1625	-1	30	2	-1
17521	SLU 83	18527	0.12	0.05	0.1	1494	874	1320	0	1

Sollecitazioni con sforzo F22 minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
17412	SLU 84	18183	0.25	-0.15	-1.74	1241	1534	-6543	-5	-4
17520	SLU 84	18187	1.24	0.1	2.2	1087	1487	-6478	-6	6
17415	SLU 84	18535	-0.12	-0.02	-0.06	1201	-1011	-4554	-2	-4
17523	SLU 84	18187	0.83	0.48	2	-250	-1278	-4503	5	4
17416	SLU 84	18534	0.09	-0.03	-0.32	1105	21	-3241	-1	-2

Sollecitazioni con sforzo F22 massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
17412	SLU 84	18536	0.27	-0.13	-0.38	1242	3051	10725	1	-3
17520	SLU 84	18528	0.08	0.11	0.56	1283	3037	10552	0	1
12939	SLU 84	18120	-3.67	-0.11	-5.08	540	-3	2972	2	16
12179	SLU 84	18176	-3.51	-0.11	-4.83	560	337	2667	5	14
17474	SLU 83	18140	0	0	-0.31	-625	1	2177	0	-1

1.1.2.3 Sollecitazioni estreme gusci non verticali

Shell: *elemento guscio a cui si riferiscono le sollecitazioni.*
Ind: *indice del guscio.*
Cont.: *contesto a cui si riferiscono le sollecitazioni.*
N.br.: *nome breve della condizione o combinazione di carico.*
Nodo: *nodo su cui si basa il guscio a cui si riferisce la sollecitazione.*
Ind: *indice del nodo.*
Sollecitazione: *valori della sollecitazione.*
Mxx: *componente Mxx della sollecitazione del guscio nel nodo indicato. [kN*m/m]*
Mxy: *componente Mxy della sollecitazione del guscio nel nodo indicato. [kN*m/m]*

*Myy: componente Myy della sollecitazione del guscio nel nodo indicato. [kN*m/m]*
Fxx: componente Fxx della sollecitazione del guscio nel nodo indicato. [kN/m]
Fxy: componente Fxy della sollecitazione del guscio nel nodo indicato. [kN/m]
Fyy: componente Fyy della sollecitazione del guscio nel nodo indicato. [kN/m]
Vx: componente Vo della sollecitazione del guscio nel nodo indicato. [kN/m]
Vy: componente Vz della sollecitazione del guscio nel nodo indicato. [kN/m]

Sollecitazioni con momento Mxx minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16614	SLU 84	284	-128.28	-17.15	8.68	-26	-6	6	144	23
16615	SLU 84	283	-123.73	-9.58	-4.62	-42	-5	-5	73	24
16581	SLV 14	294	-114.07	20.32	-10.73	24	-23	18	-281	24
16616	SLU 83	281	-111.96	7.59	-2.88	-46	-10	25	-33	18
16580	SLV 14	295	-103.29	13.71	-11.15	19	-13	32	-199	24

Sollecitazioni con momento Mxx massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16585	SLV 13	134	302.78	-65.81	-177.98	482	-215	-165	-829	-301
16620	SLU 84	277	164.98	-24.85	149.46	-335	136	-553	999	-229
16576	SLU 84	300	160.27	25.14	129.32	-256	-107	-425	-974	-208
16584	SLV 14	292	116.11	26.87	54.21	49	-17	-5	-451	-258
16577	SLU 84	299	89.63	5.8	106.07	-221	-57	-24	-590	-182

Sollecitazioni con momento Myy minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16585	SLV 13	134	302.78	-65.81	-177.98	482	-215	-165	-829	-301
16557	SLU 84	198	8.81	28.69	-126.09	-96	-5	97	21	593
16566	SLU 84	222	22.63	28.9	-120.27	-42	-37	9	38	576
16575	SLV 6	245	39.34	16.2	-60.72	6	8	-36	127	356
16586	SLV 13	192	19.23	-17.07	-45.11	55	25	-21	-118	221

Sollecitazioni con momento Myy massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16612	SLU 84	287	-5.65	-16.1	197.72	33	5	72	-391	-381
16620	SLU 83	277	164.82	-24.81	149.56	-336	136	-553	998	-229
16576	SLU 83	300	160.17	25.11	129.43	-257	-107	-424	-973	-209
16619	SLU 83	278	83.78	-4.55	121.87	-224	73	-41	521	-207
16577	SLU 83	299	89.51	5.76	106.13	-222	-58	-24	-589	-182

Sollecitazioni con sforzo Fxx minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16620	SLV 2	277	125.67	-18.95	94.74	-517	224	-1088	810	-148
16576	SLV 13	300	110.93	17.26	75.6	-471	-201	-1014	-711	-122
16585	SLV 2	134	104.5	-48.15	-13.13	-426	203	184	-380	73
16619	SLV 2	278	63.95	-4.67	73.17	-382	114	-161	480	-123
16577	SLV 13	299	61.07	3.95	59.43	-366	-106	-158	-452	-99

Sollecitazioni con sforzo Fxx massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16585	SLV 15	134	292.07	-64.45	-162.25	524	-195	-129	-802	-262
16586	SLV 15	132	3.62	-17.99	-7.5	328	-90	78	13	-7
9258	SLU 83	7422	-0.06	-0.02	-0.02	278	77	-65	0	0
16620	SLV X	277	-20.79	3.44	3.45	262	-118	667	-173	-4
9042	SLU 84	7423	-0.03	-0.01	-0.02	234	75	-57	0	0

Sollecitazioni con sforzo Fyy minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16620	SLV 2	241	-29.32	-6.98	44.78	-76	307	-1108	-121	-167
16576	SLV 13	254	-25.86	7.2	35.27	-71	-277	-1027	91	-137
6992	SLU 84	1330	-0.27	0.09	0.1	38	-15	-728	-1	0
5	SLU 84	1065	0	0.02	0.24	-45	-7	-642	-1	1
6989	SLU 84	1440	0.5	0.09	4.23	-11	22	-588	-4	-23

Sollecitazioni con sforzo Fyy massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16620	SLV X	241	5.03	2.66	2.94	43	-161	678	18	-3
16490	SLV 2	109	1.89	-0.59	-3.27	166	-198	578	-4	35
16576	SLV 4	254	-24.76	6.65	48.15	16	71	416	141	-173
10665	SLV X	4052	0.66	0.21	-0.29	35	-78	265	3	-1

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
2535	SLV X	2634	-0.26	-0.06	-1.69	32	-76	262	-2	-8

1.1.2.4 Sollecitazioni estreme gusci verticali

Shell: elemento guscio a cui si riferiscono le sollecitazioni.
Ind: indice del guscio.
Cont.: contesto a cui si riferiscono le sollecitazioni.
N.br.: nome breve della condizione o combinazione di carico.
Nodo: nodo su cui si basa il guscio a cui si riferisce la sollecitazione.
Ind: indice del nodo.
Sollecitazione: valori della sollecitazione.
*Moo: componente Moo della sollecitazione del guscio nel nodo indicato. [kN*m/m]*
*Moz: componente Moz della sollecitazione del guscio nel nodo indicato. [kN*m/m]*
*Mzz: componente Mzz della sollecitazione del guscio nel nodo indicato. [kN*m/m]*
Foo: componente Foo della sollecitazione del guscio nel nodo indicato. [kN/m]
Foz: componente Foz della sollecitazione del guscio nel nodo indicato. [kN/m]
Fzz: componente Fzz della sollecitazione del guscio nel nodo indicato. [kN/m]
Vo: componente Vo della sollecitazione del guscio nel nodo indicato. [kN/m]
Vz: componente Vz della sollecitazione del guscio nel nodo indicato. [kN/m]

Sollecitazioni con momento Moo minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
17412	SLV 3	18183	-60.76	2.21	-24.81	1104	1332	-5804	441	-90
17520	SLV 3	18187	-59.88	2.39	-22.2	79	678	-3153	439	-85
17550	SLV 14	18163	-55.35	0	-7.45	14	1	604	-400	-32
17442	SLV 14	18133	-55.35	0	-8.02	-409	1	1182	-400	-35
17506	SLV 14	18157	-55.35	0	-8.41	-410	1	1107	-400	-37

Sollecitazioni con momento Moo massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
17520	SLV 14	18187	61.4	-2.25	25.15	1388	1332	-5586	-445	92
17412	SLV 14	18183	60.94	-2.4	22.38	565	739	-3014	-447	84
17506	SLV 14	18185	55.35	0	9.51	641	0	-1444	-400	46
17550	SLV 14	18186	55.35	0	8.17	14	0	-588	-400	36
17442	SLV 14	18184	55.35	0	10.35	-409	0	-1290	-400	43

Sollecitazioni con momento Mzz minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
16776	SLV 3	636	21.16	35.83	-178.08	-11	43	-202	28	-431
16760	SLV 1	478	36.09	15.69	-106.32	-132	-12	-231	-72	-258
16764	SLV 1	478	2.98	-28.91	-102.05	-221	7	-227	-50	-237
16779	SLU 84	2284	0.5	-5.78	-52.99	230	-137	-256	17	185
16772	SLV X	528	5.95	2.15	-39.43	39	3	64	3	-178

Sollecitazioni con momento Mzz massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
16776	SLV X	636	-18.67	-32.95	168.88	18	20	-154	-33	399
16760	SLV 16	478	-38.93	-23.58	144.54	-139	-49	-282	63	357
16764	SLV 16	478	-19.82	38	136.21	-344	30	-252	32	307
17227	SLV 7	594	-0.2	3.23	64.33	64	-5	-68	-102	-161
17226	SLV 7	594	-5.2	16.21	57.5	-22	-50	-69	-31	-133

Sollecitazioni con sforzo Foo minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
17500	SLU 83	18495	0.11	0	0.06	-1859	-1	-1123	0	-1
17501	SLU 84	18572	-0.04	0	-0.09	-1496	-1	-606	0	0
17518	SLU 79	18665	-0.14	-1.56	3.25	-1250	687	-1380	-45	21
17506	SLV 11	18157	-14.66	0	-2.17	-1217	1	673	-106	-10
17469	SLU 84	18571	0.03	0	-0.23	-1206	-1	-456	0	-1

Sollecitazioni con sforzo Foo massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
17412	SLV 5	18183	-15.72	0.5	-7.36	1765	1233	-4727	113	-25
17520	SLU 83	18527	0.09	0.07	-0.02	1647	356	-3734	0	5
17501	SLU 84	18495	0.1	0	0.09	1636	-1	-133	0	0
17500	SLU 77	18197	-0.31	0	-0.17	1625	-1	30	2	-1
17521	SLU 83	18527	0.12	0.05	0.1	1494	874	1320	0	1

Sollecitazioni con sforzo Fzz minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
17412	SLU 84	18183	0.25	-0.15	-1.74	1241	1534	-6543	-5	-4
17520	SLU 84	18187	1.24	0.1	2.2	1087	1487	-6478	-6	6
17415	SLU 84	18535	-0.12	-0.02	-0.06	1201	-1011	-4554	-2	-4
17523	SLU 84	18187	0.83	0.48	2	-250	-1278	-4503	5	4
17416	SLU 84	18534	0.09	-0.03	-0.32	1105	21	-3241	-1	-2

Sollecitazioni con sforzo Fzz massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
17412	SLU 84	18536	0.27	-0.13	-0.38	1242	3051	10725	1	-3
17520	SLU 84	18528	0.08	0.11	0.56	1283	3037	10552	0	1
12939	SLU 84	18120	3.67	-0.11	5.08	540	3	2972	2	-16
12179	SLU 84	18176	3.51	-0.11	4.83	560	-337	2667	5	-14
17474	SLU 83	18140	0	0	-0.31	-625	1	2177	0	-1

1.1.3 Sollecitazioni gusci armati

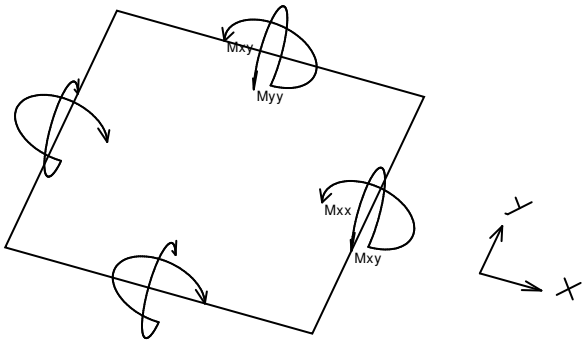
1.1.3.1 Convenzioni di segno gusci

Sono individuate distinte convenzioni di segno in relazione al tipo di elemento strutturale a cui il guscio si riferisce:

- convenzione per gusci non verticali, originati ad esempio da piastre e platee;
- convenzione per gusci verticali, originati ad esempio da pareti e muri.

Convenzione di segno per gusci non verticali

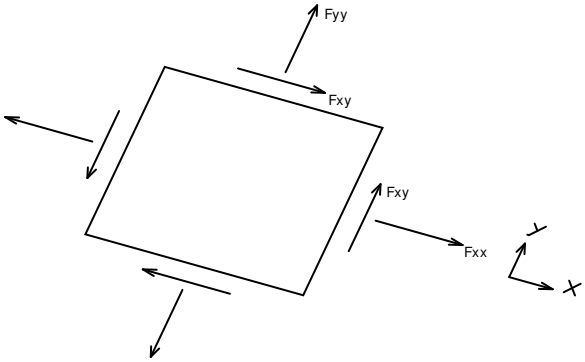
Il sistema di riferimento nel quale sono espressi i parametri di sollecitazione è così definito: origine appartenente al piano dell'elemento, asse x e y contenuti nel piano dell'elemento e terzo asse (z) ortogonale al piano dell'elemento a formare una terna destrogira. In particolare l'asse x ha proiezione in pianta parallela ed equiversa all'asse globale X. Nel caso di piastre orizzontali (caso più comune) gli assi x, y e z locali all'elemento sono paralleli ed equiversi agli assi X, Y e Z globali. Si sottolinea che non ha alcun interesse collocare esattamente nel piano dell'elemento la posizione dell'origine in quanto i parametri di sollecitazione sono invarianti rispetto a tale posizione.
In figura è mostrato un elemento infinitesimo di shell orizzontale con indicato il sistema di riferimento e i parametri di sollecitazione Mxx, Myy, Mxy.



Si definiscono:

- Mxx: momento flettente [Forza*Lunghezza/Lunghezza] agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- Myy: momento flettente [Forza*Lunghezza/Lunghezza] agente sul bordo di normale y (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- Mxy: momento torcente [Forza*Lunghezza/Lunghezza] agente sui bordi (verso positivo indicato dalla freccia in figura).

Per quanto riguarda le sollecitazioni estensionali si faccia riferimento alla figura seguente dove per lo stesso elemento infinitesimo di shell orizzontale con indicato il sistema di riferimento e i parametri di sollecitazione Fxx, Fyy, Fxy.



Si definiscono:

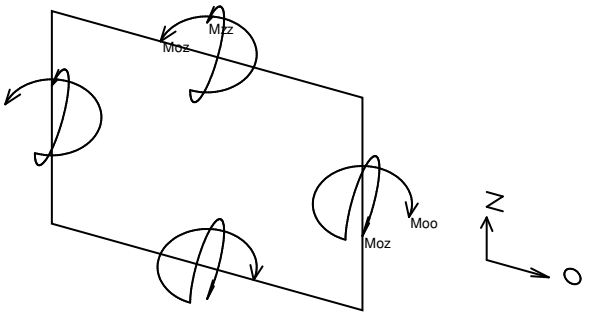
- Fxx: sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Fyy: sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale all'asse y (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Fxy: sforzo di taglio [Forza/Lunghezza] agente sui bordi (verso positivo indicato dalla freccia in figura).

Vengono riportati inoltre i tagli fuori dal piano dell'elemento guscio:

- Vx: taglio fuori piano [Forza/Lunghezza] applicato al bordo di normale parallela all'asse x;
- Vy: taglio fuori piano [Forza/Lunghezza] applicato al bordo di normale parallela all'asse y.

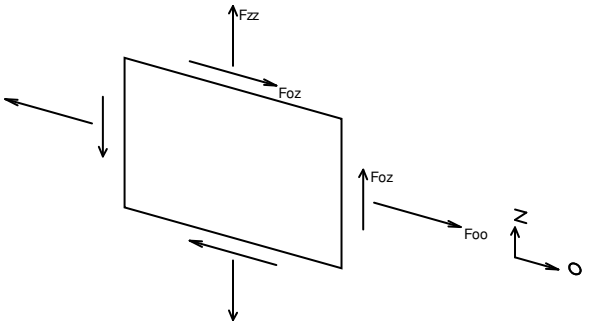
Convenzione di segno per gusci verticali

Il sistema di riferimento nel quale sono espressi i parametri di sollecitazione è così definito: origine appartenente al piano dell'elemento, asse O (ascisse) e z (ordinate) contenuti nel piano dell'elemento e terzo asse ortogonale al piano dell'elemento a formare una terna destrogira. In particolare l'asse O è orizzontale e l'asse z parallelo ed equiverso con l'asse Z globale. Si sottolinea che non ha alcun interesse collocare esattamente nel piano dell'elemento la posizione dell'origine in quanto i parametri di sollecitazione sono invarianti rispetto a tale posizione.In figura è mostrato un elemento infinitesimo di shell orizzontale con indicato il sistema di riferimento e i parametri di sollecitazione Moo, Mzz, Moz.



- Moo: momento flettente distribuito [Forza*Lunghezza/Lunghezza] applicato al bordo di normale parallela all'asse O (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- Mzz: momento flettente distribuito [Forza*Lunghezza/Lunghezza] applicato al bordo di normale parallela all'asse z (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- Moz: momento 'torcente' distribuito [Forza*Lunghezza/Lunghezza] applicato sui bordi (verso positivo indicato dalla freccia in figura).

Per quanto riguarda le sollecitazioni estensionali si faccia riferimento alla figura seguente dove per lo stesso elemento infinitesimo di shell con indicato il sistema di riferimento i parametri di sollecitazione Foo, Fzz, Foz sono rispettivamente:



- Fzz: sforzo tensionale distribuito [Forza/Lunghezza] applicato al bordo di normale parallela all'asse z (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Foo: sforzo tensionale distribuito [Forza/Lunghezza] applicato al bordo di normale parallela all'asse O (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Foz: sforzo tagliante distribuito [Forza/Lunghezza] applicato sui bordi (verso positivo indicato dalla freccia in figura).

Vengono riportati inoltre i tagli fuori dal piano dell'elemento guscio:

- Vo: taglio fuori piano applicato al bordo di normale parallela all'asse O;
- Vz: taglio fuori piano applicato al bordo di normale parallela all'asse z.

1.1.4 Sollecitazioni gusci muratura

1.1.4.1 Convenzioni di segno gusci muratura

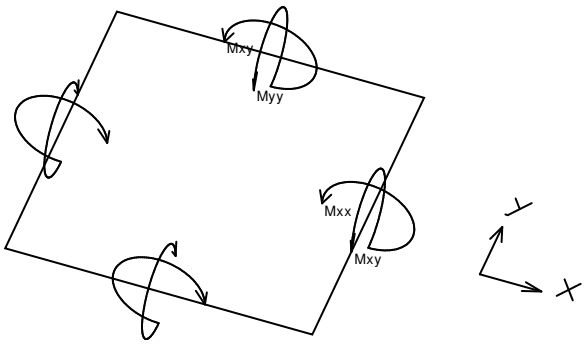
Sono individuate distinte convenzioni di segno in relazione al tipo di elemento strutturale a cui il guscio muratura si riferisce:

- convenzione per gusci non verticali, originati ad esempio da piastre e platee;

- convenzione per gusci verticali, originati ad esempio da pareti e muri.

Convenzione di segno per gusci non verticali

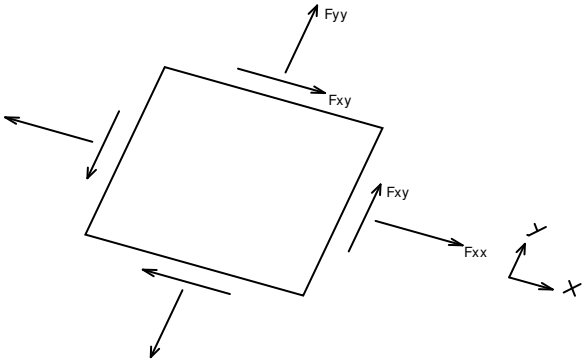
Il sistema di riferimento nel quale sono espressi i parametri di sollecitazione è così definito: origine appartenente al piano dell'elemento, asse x e y contenuti nel piano dell'elemento e terzo asse (z) ortogonale al piano dell'elemento a formare una terna destrogira. In particolare l'asse x ha proiezione in pianta parallela ed equiversa all'asse globale X. Nel caso di piastre orizzontali (caso più comune) gli assi x, y e z locali all'elemento sono paralleli ed equiversi agli assi X, Y e Z globali. Si sottolinea che non ha alcun interesse collocare esattamente nel piano dell'elemento la posizione dell'origine in quanto i parametri di sollecitazione sono invarianti rispetto a tale posizione.
In figura è mostrato un elemento infinitesimo di shell orizzontale con indicato il sistema di riferimento e i parametri di sollecitazione Mxx, Myy, Mxy.



Si definiscono:

- Mxx: momento flettente [Forza*Lunghezza/Lunghezza] agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- Myy: momento flettente [Forza*Lunghezza/Lunghezza] agente sul bordo di normale y (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- Mxy: momento torcente [Forza*Lunghezza/Lunghezza] agente sui bordi (verso positivo indicato dalla freccia in figura).

Per quanto riguarda le sollecitazioni estensionali si faccia riferimento alla figura seguente dove per lo stesso elemento infinitesimo di shell orizzontale con indicato il sistema di riferimento e i parametri di sollecitazione Fxx, Fyy, Fxy.

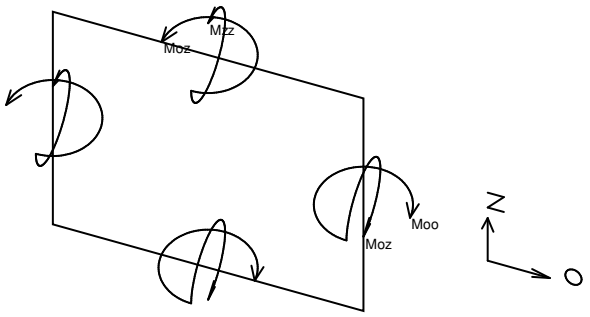


Si definiscono:

- Fxx: sforzo tensionale [Forza/Lunghezza] agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Fyy: sforzo tensionale [Forza/Lunghezza] agente sul bordo di normale all'asse y (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Fxy: sforzo tagliante [Forza/Lunghezza] agente sui bordi (verso positivo indicato dalla freccia in figura).

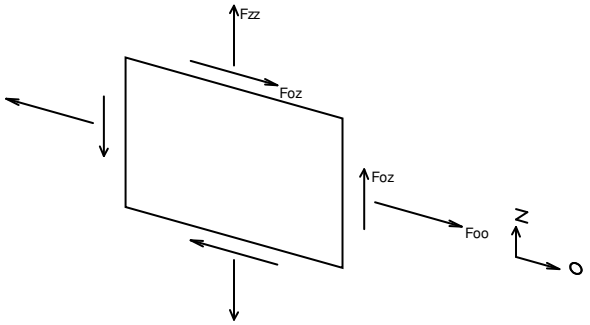
Convenzione di segno per gusci verticali

Il sistema di riferimento nel quale sono espressi i parametri di sollecitazione è così definito: origine appartenente al piano dell'elemento, asse O (ascisse) e z (ordinate) contenuti nel piano dell'elemento e terzo asse ortogonale al piano dell'elemento a formare una terna destrogira. In particolare l'asse O è orizzontale e l'asse z parallelo ed equiverso con l'asse Z globale. Si sottolinea che non ha alcun interesse collocare esattamente nel piano dell'elemento la posizione dell'origine in quanto i parametri di sollecitazione sono invarianti rispetto a tale posizione.In figura è mostrato un elemento infinitesimo di shell orizzontale con indicato il sistema di riferimento e i parametri di sollecitazione Moo, Mzz, Moz.



- Moo: momento flettente distribuito [Forza*Lunghezza/Lunghezza] applicato al bordo di normale parallela all'asse O (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- Mzz: momento flettente distribuito [Forza*Lunghezza/Lunghezza] applicato al bordo di normale parallela all'asse z (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- Moz: momento 'torcente' distribuito [Forza*Lunghezza/Lunghezza] applicato sui bordi (verso positivo indicato dalla freccia in figura).

Per quanto riguarda le sollecitazioni estensionali si faccia riferimento alla figura seguente dove per lo stesso elemento infinitesimo di shell con indicato il sistema di riferimento i parametri di sollecitazione Foo, Fzz, Foz sono rispettivamente:



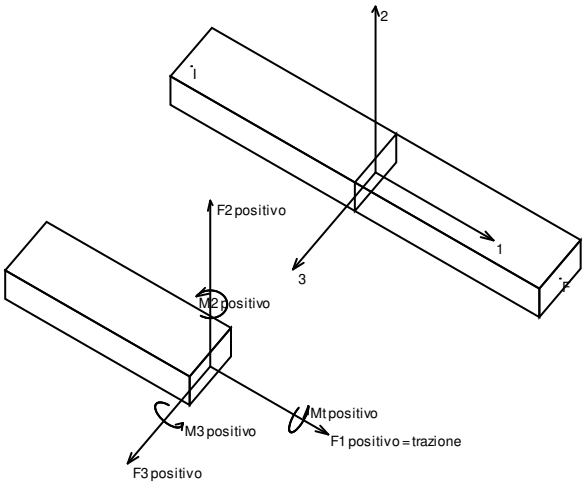
- Fzz: sforzo tensionale distribuito [Forza/Lunghezza] applicato al bordo di normale parallela all'asse z (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Foo: sforzo tensionale distribuito [Forza/Lunghezza] applicato al bordo di normale parallela all'asse O (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Foz: sforzo tagliante distribuito [Forza/Lunghezza] applicato sui bordi (verso positivo indicato dalla freccia in figura).

1.1.5 Sollecitazioni aste in muratura

1.1.5.1 Convenzioni di segno aste

Le abbreviazioni relative alle sollecitazioni sugli elementi aste sono da intendersi:

- F1 (N): sforzo normale nell'asta;
- F2: sforzo di taglio agente nella direzione dell'asse locale 2;
- F3: sforzo di taglio agente nella direzione dell'asse locale 3;
- M1 (Mt): momento attorno all'asse locale 1; equivale al momento torcente;
- M2: momento attorno all'asse locale 2;
- M3: momento attorno all'asse locale 3.



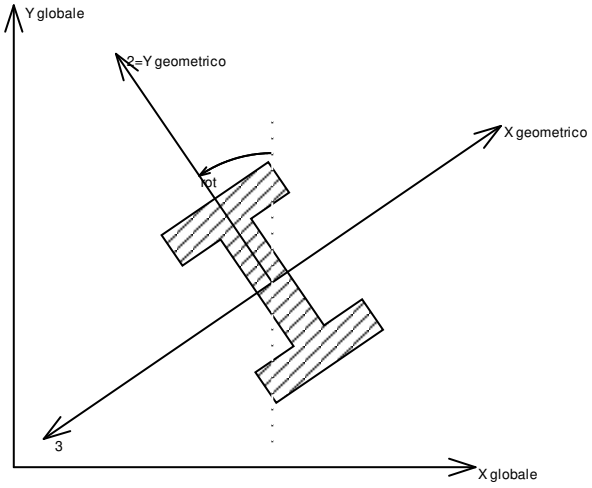
La convenzione sui segni per i parametri di sollecitazione delle aste è la seguente:
presa un'asta con nodo iniziale i e nodo finale f, asse 1 che va da i a f, assi 2 e 3 presi secondo quanto indicato nei paragrafi successivi relativi al sistema locale delle aste sezionando l'asta in un punto e considerando la sezione sinistra del punto in cui si è effettuato il taglio (sezione da cui esce il versore asse 1) i parametri di sollecitazione sono positivi se hanno verso e direzione concordi con il sistema di riferimento locale dell'asta 1, 2, 3 (per i momenti si adotta la regola della mano destra).

Il sistema è definito diversamente per tre categorie di aste, a seconda che siano originate da:

- aste verticali ad esempio pilastri e colonne;
- aste non verticali non di c.a., ad esempio travi di acciaio o legno;
- aste non verticali in c.a.: travi in c.a. di piano, falda o a quota generica.

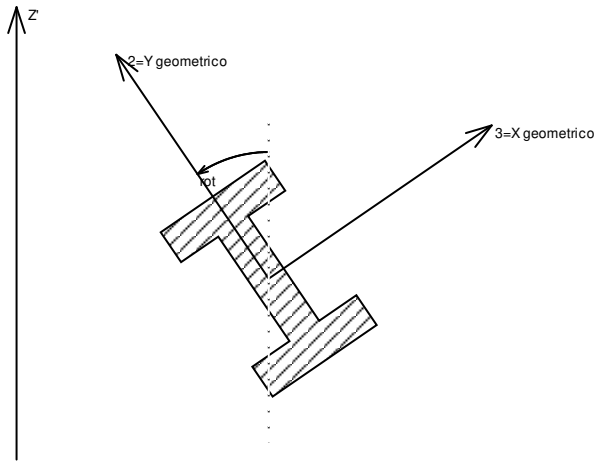
Nel seguito si indica con 1, 2 e 3 il sistema locale dell'asta che non sempre coincide con gli assi principali della sezione. Si ricorda che per assi principali si intendono gli assi rispetto a cui si ha il raggio di inerzia minimo e massimo. Gli assi 1, 2 e 3 rispettano la regola della mano destra.

Sistema locale aste verticali



Nella figura si considera l'asse 1 uscente dal foglio (l'osservatore guarda in direzione opposta a quella dell'asse 1).

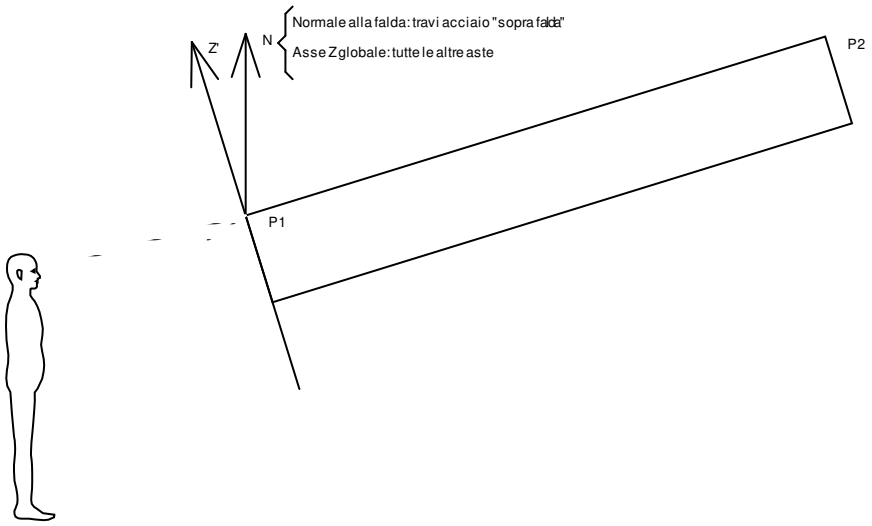
Sistema locale aste non verticali



Nella figura si considera l'asse 1 entrante nel foglio (l'osservatore guarda in direzione coincidente a quella dell'asse 1).

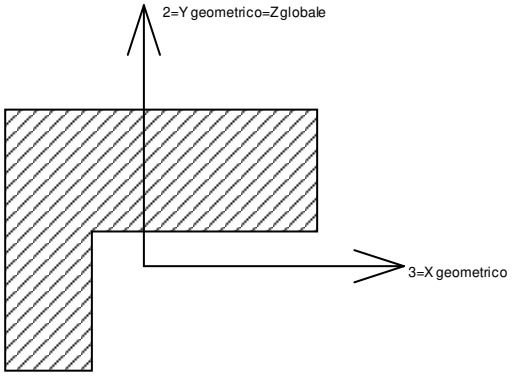
L'asse Z' è illustrato nella figura seguente dove:

- P1 è il punto di inserimento iniziale dell'asta;
- P2 è il punto di inserimento finale dell'asta;
- N è la normale al piano o falda di inserimento;



Z' è quindi l'intersezione tra il piano passante per P1, P2 contenente N e il piano della sezione iniziale dell'asta.

Sistema locale aste derivanti da travi in c.a.



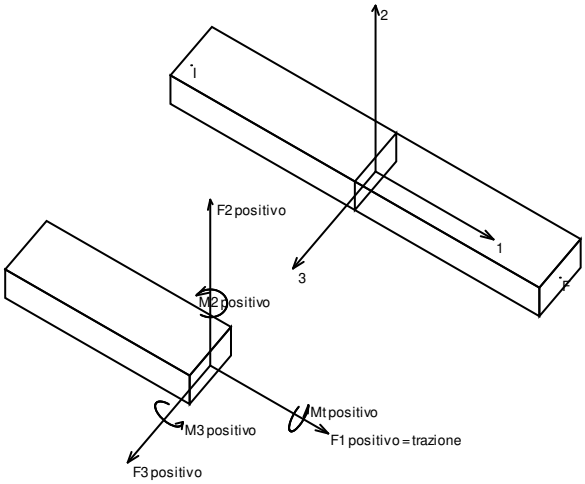
Nella figura si considera l'asse 1 entrante nel foglio (l'osservatore guarda in direzione coincidente a quella dell'asse 1). L'asse 2 è sempre verticale e quindi coincidente con l'asse Z globale nonché con l'asse y geometrico. L'asse 3 coincide con l'asse x geometrico. . Si sottolinea il fatto che gli assi 2 e 3 non corrispondono agli assi principali della sezione.

1.1.6 Sollecitazioni aste in muratura FRCM

1.1.6.1 Convenzioni di segno aste

Le abbreviazioni relative alle sollecitazioni sugli elementi aste sono da intendersi:

- F1 (N): sforzo normale nell'asta;
- F2: sforzo di taglio agente nella direzione dell'asse locale 2;
- F3: sforzo di taglio agente nella direzione dell'asse locale 3;
- M1 (Mt): momento attorno all'asse locale 1; equivale al momento torcente;
- M2: momento attorno all'asse locale 2;
- M3: momento attorno all'asse locale 3.



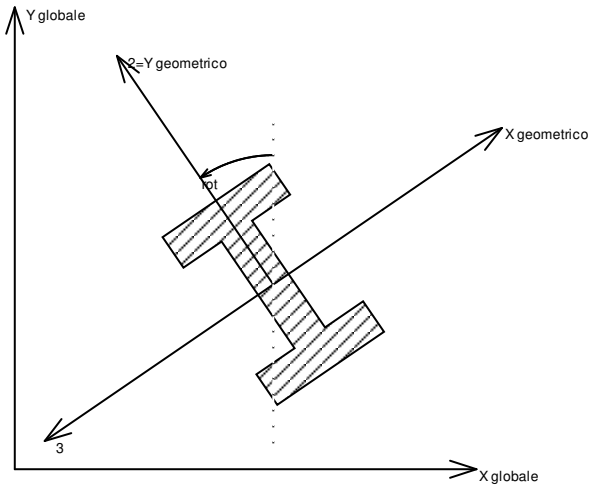
La convenzione sui segni per i parametri di sollecitazione delle aste è la seguente:
presa un'asta con nodo iniziale i e nodo finale f, asse 1 che va da i a f, assi 2 e 3 presi secondo quanto indicato nei paragrafi successivi relativi al sistema locale delle aste sezionando l'asta in un punto e considerando la sezione sinistra del punto in cui si è effettuato il taglio (sezione da cui esce il versore asse 1) i parametri di sollecitazione sono positivi se hanno verso e direzione concordi con il sistema di riferimento locale dell'asta 1, 2, 3 (per i momenti si adotta la regola della mano destra).

Il sistema è definito diversamente per tre categorie di aste, a seconda che siano originate da:

- aste verticali ad esempio pilastri e colonne;
- aste non verticali non di c.a., ad esempio travi di acciaio o legno;
- aste non verticali in c.a.: travi in c.a. di piano, falda o a quota generica.

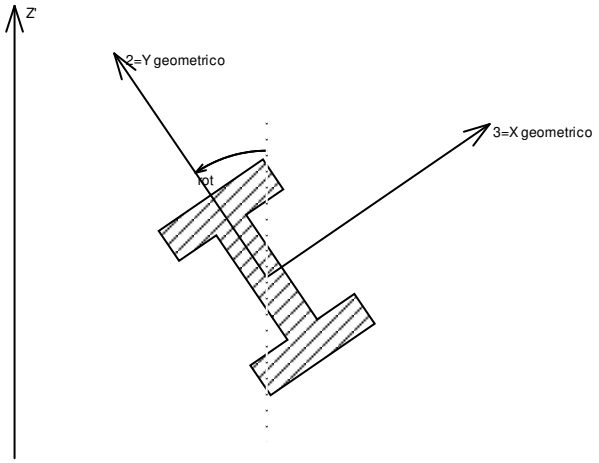
Nel seguito si indica con 1, 2 e 3 il sistema locale dell'asta che non sempre coincide con gli assi principali della sezione. Si ricorda che per assi principali si intendono gli assi rispetto a cui si ha il raggio di inerzia minimo e massimo. Gli assi 1, 2 e 3 rispettano la regola della mano destra.

Sistema locale aste verticali



Nella figura si considera l'asse 1 uscente dal foglio (l'osservatore guarda in direzione opposta a quella dell'asse 1).

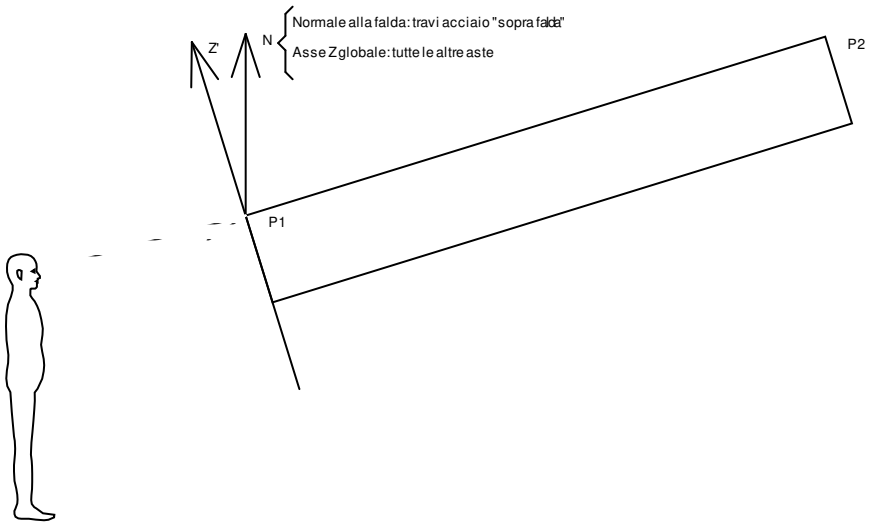
Sistema locale aste non verticali



Nella figura si considera l'asse 1 entrante nel foglio (l'osservatore guarda in direzione coincidente a quella dell'asse 1).

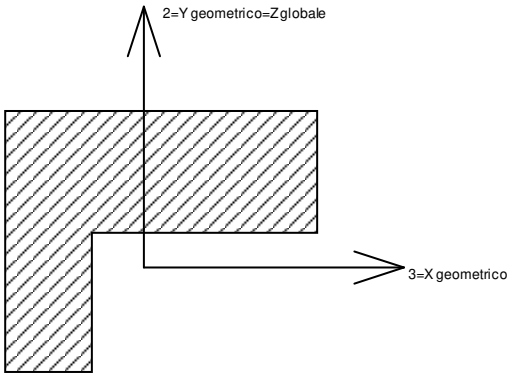
L'asse Z' è illustrato nella figura seguente dove:

- P1 è il punto di inserimento iniziale dell'asta;
- P2 è il punto di inserimento finale dell'asta;
- N è la normale al piano o falda di inserimento;



Z' è quindi l'intersezione tra il piano passante per P1, P2 contenente N e il piano della sezione iniziale dell'asta.

Sistema locale aste derivanti da travi in c.a.



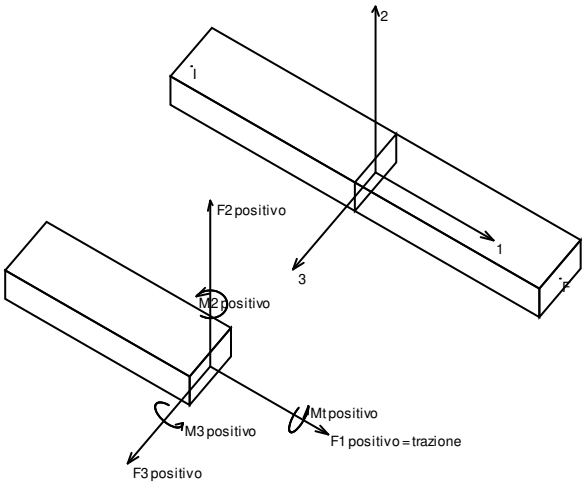
Nella figura si considera l'asse 1 entrante nel foglio (l'osservatore guarda in direzione coincidente a quella dell'asse 1). L'asse 2 è sempre verticale e quindi coincidente con l'asse Z globale nonché con l'asse y geometrico. L'asse 3 coincide con l'asse x geometrico. . Si sottolinea il fatto che gli assi 2 e 3 non corrispondono agli assi principali della sezione.

1.1.7 Sollecitazioni aste in muratura armata

1.1.7.1 Convenzioni di segno aste

Le abbreviazioni relative alle sollecitazioni sugli elementi aste sono da intendersi:

- F1 (N): sforzo normale nell'asta;
- F2: sforzo di taglio agente nella direzione dell'asse locale 2;
- F3: sforzo di taglio agente nella direzione dell'asse locale 3;
- M1 (Mt): momento attorno all'asse locale 1; equivale al momento torcente;
- M2: momento attorno all'asse locale 2;
- M3: momento attorno all'asse locale 3.



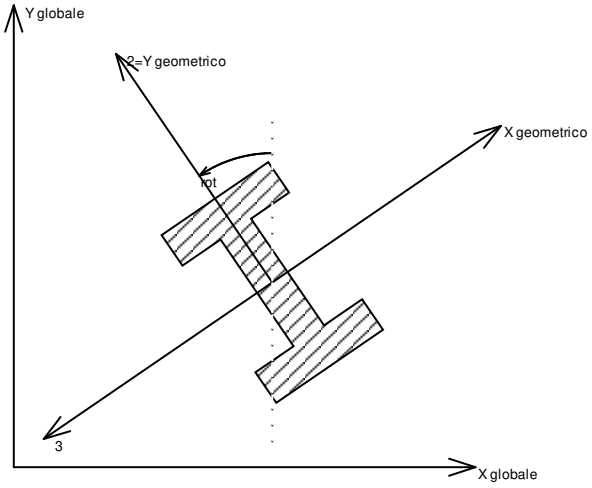
La convenzione sui segni per i parametri di sollecitazione delle aste è la seguente:
presa un'asta con nodo iniziale i e nodo finale f, asse 1 che va da i a f, assi 2 e 3 presi secondo quanto indicato nei paragrafi successivi relativi al sistema locale delle aste sezionando l'asta in un punto e considerando la sezione sinistra del punto in cui si è effettuato il taglio (sezione da cui esce il versore asse 1) i parametri di sollecitazione sono positivi se hanno verso e direzione concordi con il sistema di riferimento locale dell'asta 1, 2, 3 (per i momenti si adotta la regola della mano destra).

Il sistema è definito diversamente per tre categorie di aste, a seconda che siano originate da:

- aste verticali ad esempio pilastri e colonne;
- aste non verticali non di c.a., ad esempio travi di acciaio o legno;
- aste non verticali in c.a.: travi in c.a. di piano, falda o a quota generica.

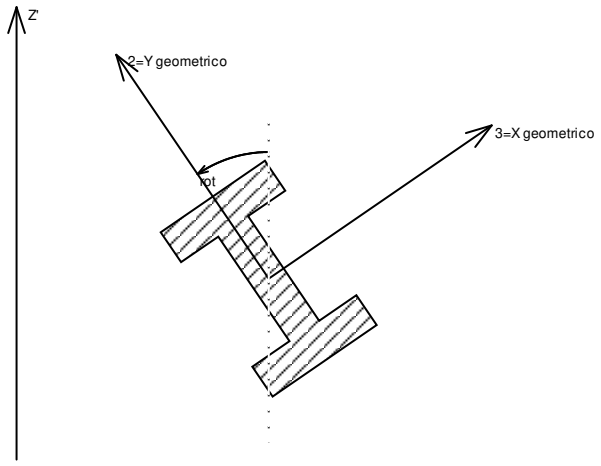
Nel seguito si indica con 1, 2 e 3 il sistema locale dell'asta che non sempre coincide con gli assi principali della sezione. Si ricorda che per assi principali si intendono gli assi rispetto a cui si ha il raggio di inerzia minimo e massimo. Gli assi 1, 2 e 3 rispettano la regola della mano destra.

Sistema locale aste verticali



Nella figura si considera l'asse 1 uscente dal foglio (l'osservatore guarda in direzione opposta a quella dell'asse 1).

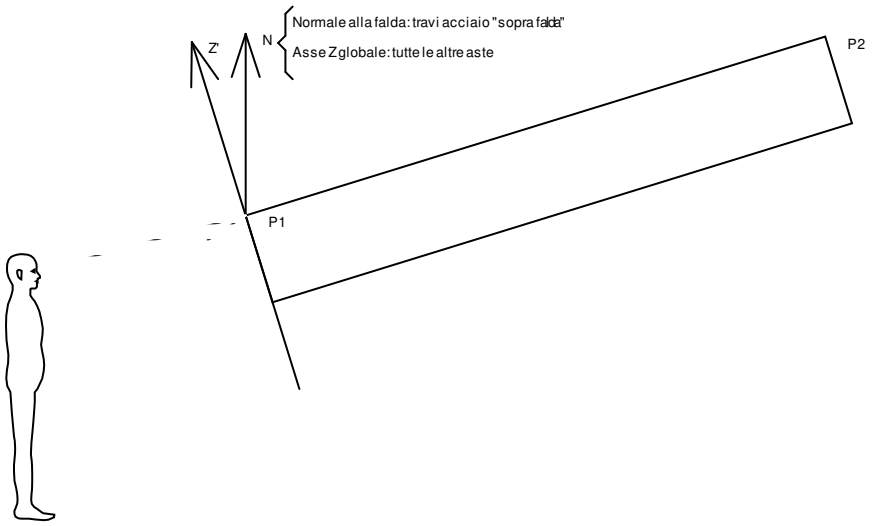
Sistema locale aste non verticali



Nella figura si considera l'asse 1 entrante nel foglio (l'osservatore guarda in direzione coincidente a quella dell'asse 1).

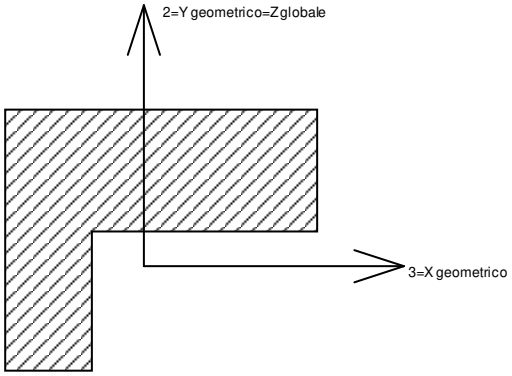
L'asse Z' è illustrato nella figura seguente dove:

- P1 è il punto di inserimento iniziale dell'asta;
- P2 è il punto di inserimento finale dell'asta;
- N è la normale al piano o falda di inserimento;



Z' è quindi l'intersezione tra il piano passante per P1, P2 contenente N e il piano della sezione iniziale dell'asta.

Sistema locale aste derivanti da travi in c.a.



Nella figura si considera l'asse 1 entrante nel foglio (l'osservatore guarda in direzione coincidente a quella dell'asse 1). L'asse 2 è sempre verticale e quindi coincidente con l'asse Z globale nonché con l'asse y geometrico. L'asse 3 coincide con l'asse x geometrico. . Si sottolinea il fatto che gli assi 2 e 3 non corrispondono agli assi principali della sezione.

1.2 Reazioni nodali

1.2.1 Reazioni nodali estreme

Nodo: Nodo sollecitato dalla reazione vincolare.
Ind.: indice del nodo.
Cont.: Contesto a cui si riferisce la reazione vincolare.
N.br.: nome breve della condizione o combinazione di carico.
Reazione a traslazione: reazione vincolare traslazionale del nodo.
x: componente X della reazione vincolare del nodo. [kN]
y: componente Y della reazione vincolare del nodo. [kN]
z: componente Z della reazione vincolare del nodo. [kN]
Reazione a rotazione: reazione vincolare rotazionale del nodo.
*x: componente X della reazione a rotazione del nodo. [kN*m]*
*y: componente Y della reazione a rotazione del nodo. [kN*m]*
*z: componente Z della reazione a rotazione del nodo. [kN*m]*

Reazioni Fx minime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18187	SLV 14	-95.13	175	1105.67	-17.5121	-3.355	-3.1248
18183	SLV 14	-94.64	41.17	605.55	-9.4081	-2.6851	-3.2181
18184	SLV 14	-70.82	-15.41	45.96	0.6798	-1.603	-3.1905
18186	SLV 14	-69.79	25.87	7.5	0.1111	-1.2609	-3.194
18185	SLV 14	-65.82	42.76	25.27	0.3759	-1.4287	-3.0597

Reazioni Fx massime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18183	SLV 3	95.1	116.76	1136.7	-17.0548	3.3068	3.1661
18187	SLV 3	92.09	-56.18	601.09	-8.1584	2.6812	3.0867
18186	SLV 3	68.82	-68.26	7.39	0.1602	1.25	3.1482
18184	SLV 3	68.05	-75.02	50.34	0.8103	0.8714	3.1502
18185	SLV 3	64.76	-26.17	23.09	0.3803	1.3682	3.0165

Reazioni Fy minime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18231	SLV 8	17.42	-258.77	28.63	32.9841	0.6028	0.0343
18184	SLV 8	21.76	-186.94	46.39	0.8298	-0.051	1.0387
18186	SLV 11	-18.47	-160.53	8.37	0.265	-0.309	-0.847
18230	SLV 11	-13.38	-158.24	29.7	7.1562	-0.5849	-0.0157
18250	SLV 11	-16.4	-152.36	512.56	9.484	-33.5266	0.0776

Reazioni Fy massime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18183	SLV 5	24.88	270.12	976.34	-16.6431	1.0906	0.8024
18231	SLV 9	-18.61	258.64	31.95	36.4035	-0.7799	-0.0436
18187	SLV 10	-32.75	238.67	950.01	-16.18	-1.3438	-1.0551

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18058	SLV 9	-17.99	157.78	16.43	-6.3523	-0.9581	0.0058
18059	SLV 9	-17.69	145.31	23.53	-6.0242	-0.8779	0.0104

Reazioni Fz minime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18183	SLV X	-93.81	-23.89	-271.78	4.0198	-2.9626	-3.1577
676	SLV X	-16.78	-1.19	-44.44	2.3014	8.4259	-0.9249
18247	SLV X	-4.69	4.99	-41.62	-0.3337	2.0802	0.008
691	SLV X	-36.33	1.48	-33.05	2.196	1.6512	-2.5453
749	SLV X	-10.14	-0.74	-25.02	4.5742	5.1466	-1.8747

Reazioni Fz massime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18183	SLU 84	0.14	118.25	1293.71	-19.6453	0.4517	-0.0449
18187	SLU 84	-2.42	88.66	1266.06	-19.0531	-0.4988	-0.0342
18250	SLU 83	-3.4	-50.31	711.06	11.9464	-45.1378	-0.0007
18247	SLU 84	-0.28	-11.17	673.56	8.6607	-9.6952	-0.0011
18188	SLU 83	-0.09	-54.05	322.13	0.1046	-4.229	-0.0014

1.2.2 Reazioni nodali in combinazioni di carico

Nodo: *Nodo sollecitato dalla reazione vincolare.*
Ind.: *indice del nodo.*
Cont.: *Contesto a cui si riferisce la reazione vincolare.*
N.br.: *nome breve della condizione o combinazione di carico.*
Reazione a traslazione: *reazione vincolare traslazionale del nodo.*
x: *componente X della reazione vincolare del nodo. [kN]*
y: *componente Y della reazione vincolare del nodo. [kN]*
z: *componente Z della reazione vincolare del nodo. [kN]*
Reazione a rotazione: *reazione vincolare rotazionale del nodo.*
x: *componente X della reazione a rotazione del nodo. [kN*m]*
y: *componente Y della reazione a rotazione del nodo. [kN*m]*
z: *componente Z della reazione a rotazione del nodo. [kN*m]*

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
10	SLU 1	-0.02	-0.04	2.78	0	0	0
10	SLU 2	-0.02	-0.03	2.78	0	0	0
10	SLU 3	-0.03	-0.04	2.84	0	0	0
10	SLU 4	-0.03	-0.03	2.84	0	0	0
10	SLU 5	-0.03	-0.03	2.81	0	0	0
10	SLU 6	-0.03	-0.04	2.87	0	0	0
10	SLU 7	-0.03	-0.03	2.87	0	0	0
10	SLU 8	-0.03	-0.04	2.84	0	0	0
10	SLU 9	-0.03	-0.04	2.84	0	0	0
10	SLU 10	-0.03	-0.03	3.17	0	0	0
10	SLU 11	-0.03	-0.03	3.22	0	0	0
10	SLU 12	-0.03	-0.03	3.22	0	0	0
10	SLU 13	-0.03	-0.03	3.2	0	0	0
10	SLU 14	-0.03	-0.04	3.25	0	0	0
10	SLU 15	-0.03	-0.03	3.25	0	0	0
10	SLU 16	-0.04	-0.04	3.23	0	0	0
10	SLU 17	-0.03	-0.03	3.23	0	0	0
10	SLU 18	-0.04	-0.03	3.33	0	0	0
10	SLU 19	-0.03	-0.03	3.33	0	0	0
10	SLU 20	-0.04	-0.04	3.36	0	0	0
10	SLU 21	-0.04	-0.03	3.36	0	0	0
10	SLU 22	-0.03	-0.03	3.11	0	0	0
10	SLU 23	-0.03	-0.03	3.11	0	0	0
10	SLU 24	-0.03	-0.03	3.16	0	0	0
10	SLU 25	-0.03	-0.03	3.16	0	0	0
10	SLU 26	-0.03	-0.03	3.14	0	0	0
10	SLU 27	-0.03	-0.03	3.19	0	0	0
10	SLU 28	-0.03	-0.03	3.19	0	0	0
10	SLU 29	-0.03	-0.03	3.17	0	0	0
10	SLU 30	-0.03	-0.03	3.17	0	0	0
10	SLU 31	-0.03	-0.03	3.49	0	0	0
10	SLU 32	-0.03	-0.03	3.54	0	0	0
10	SLU 33	-0.03	-0.03	3.54	0	0	0
10	SLU 34	-0.03	-0.03	3.52	0	0	0
10	SLU 35	-0.04	-0.03	3.57	0	0	0
10	SLU 36	-0.04	-0.03	3.57	0	0	0
10	SLU 37	-0.04	-0.03	3.55	0	0	0
10	SLU 38	-0.04	-0.03	3.55	0	0	0
10	SLU 39	-0.04	-0.03	3.65	0	0	0
10	SLU 40	-0.04	-0.03	3.65	0	0	0
10	SLU 41	-0.04	-0.03	3.68	0	0	0
10	SLU 42	-0.04	-0.03	3.68	0	0	0
10	SLU 43	-0.03	-0.05	3.51	0	0	0
10	SLU 44	-0.03	-0.05	3.51	0	0	0
10	SLU 45	-0.03	-0.05	3.56	0	0	0
10	SLU 46	-0.03	-0.05	3.56	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
10	SLU 47	-0.03	-0.05	3.54	0	0	0
10	SLU 48	-0.03	-0.05	3.59	0	0	0
10	SLU 49	-0.03	-0.05	3.59	0	0	0
10	SLU 50	-0.04	-0.05	3.57	0	0	0
10	SLU 51	-0.03	-0.05	3.57	0	0	0
10	SLU 52	-0.04	-0.05	3.89	0	0	0
10	SLU 53	-0.04	-0.05	3.94	0	0	0
10	SLU 54	-0.04	-0.05	3.94	0	0	0
10	SLU 55	-0.04	-0.05	3.92	0	0	0
10	SLU 56	-0.04	-0.05	3.97	0	0	0
10	SLU 57	-0.04	-0.05	3.97	0	0	0
10	SLU 58	-0.04	-0.05	3.95	0	0	0
10	SLU 59	-0.04	-0.05	3.95	0	0	0
10	SLU 60	-0.04	-0.05	4.05	0	0	0
10	SLU 61	-0.04	-0.05	4.05	0	0	0
10	SLU 62	-0.04	-0.05	4.08	0	0	0
10	SLU 63	-0.04	-0.05	4.08	0	0	0
10	SLU 64	-0.03	-0.04	3.83	0	0	0
10	SLU 65	-0.03	-0.04	3.83	0	0	0
10	SLU 66	-0.03	-0.04	3.88	0	0	0
10	SLU 67	-0.03	-0.04	3.88	0	0	0
10	SLU 68	-0.03	-0.04	3.86	0	0	0
10	SLU 69	-0.04	-0.04	3.91	0	0	0
10	SLU 70	-0.04	-0.04	3.91	0	0	0
10	SLU 71	-0.04	-0.05	3.89	0	0	0
10	SLU 72	-0.04	-0.04	3.89	0	0	0
10	SLU 73	-0.04	-0.04	4.21	0	0	0
10	SLU 74	-0.04	-0.04	4.27	0	0	0
10	SLU 75	-0.04	-0.04	4.27	0	0	0
10	SLU 76	-0.04	-0.04	4.24	0	0	0
10	SLU 77	-0.04	-0.04	4.3	0	0	0
10	SLU 78	-0.04	-0.04	4.3	0	0	0
10	SLU 79	-0.04	-0.04	4.27	0	0	0
10	SLU 80	-0.04	-0.04	4.27	0	0	0
10	SLU 81	-0.04	-0.04	4.38	0	0	0
10	SLU 82	-0.04	-0.04	4.38	0	0	0
10	SLU 83	-0.04	-0.04	4.41	0	0	0
10	SLU 84	-0.04	-0.04	4.41	0	0	0
10	SLE RA 1	-0.03	-0.04	2.88	0	0	0
10	SLE RA 2	-0.03	-0.03	2.88	0	0	0
10	SLE RA 3	-0.03	-0.04	2.91	0	0	0
10	SLE RA 4	-0.03	-0.03	2.91	0	0	0
10	SLE RA 5	-0.03	-0.03	2.9	0	0	0
10	SLE RA 6	-0.03	-0.04	2.93	0	0	0
10	SLE RA 7	-0.03	-0.03	2.93	0	0	0
10	SLE RA 8	-0.03	-0.04	2.92	0	0	0
10	SLE RA 9	-0.03	-0.03	2.92	0	0	0
10	SLE RA 10	-0.03	-0.03	3.13	0	0	0
10	SLE RA 11	-0.03	-0.03	3.17	0	0	0
10	SLE RA 12	-0.03	-0.03	3.17	0	0	0
10	SLE RA 13	-0.03	-0.03	3.15	0	0	0
10	SLE RA 14	-0.03	-0.03	3.19	0	0	0
10	SLE RA 15	-0.03	-0.03	3.19	0	0	0
10	SLE RA 16	-0.03	-0.03	3.17	0	0	0
10	SLE RA 17	-0.03	-0.03	3.17	0	0	0
10	SLE RA 18	-0.03	-0.03	3.24	0	0	0
10	SLE RA 19	-0.03	-0.03	3.24	0	0	0
10	SLE RA 20	-0.03	-0.03	3.26	0	0	0
10	SLE RA 21	-0.03	-0.03	3.26	0	0	0
10	SLE FR 1	-0.03	-0.04	2.88	0	0	0
10	SLE FR 2	-0.03	-0.04	2.88	0	0	0
10	SLE FR 3	-0.03	-0.04	2.88	0	0	0
10	SLE FR 4	-0.03	-0.03	2.98	0	0	0
10	SLE FR 5	-0.03	-0.04	2.99	0	0	0
10	SLE FR 6	-0.03	-0.03	3.06	0	0	0
10	SLE QP 1	-0.03	-0.04	2.88	0	0	0
10	SLE QP 2	-0.03	-0.04	2.98	0	0	0
10	SLD 1	0.17	0.01	3.01	0	0	0
10	SLD 2	0.18	0.01	3.01	0	0	0
10	SLD 3	0.16	-0.07	3	0	0	0
10	SLD 4	0.17	-0.07	3	0	0	0
10	SLD 5	0.04	0.1	3.02	0	0	0
10	SLD 6	0.05	0.1	3.02	0	0	0
10	SLD 7	0.02	-0.16	2.96	0	0	0
10	SLD 8	0.02	-0.16	2.96	0	0	0
10	SLD 9	-0.07	0.09	3.01	0	0	0
10	SLD 10	-0.07	0.09	3.01	0	0	0
10	SLD 11	-0.1	-0.17	2.95	0	0	0
10	SLD 12	-0.1	-0.17	2.95	0	0	0
10	SLD 13	-0.22	0	2.97	0	0	0
10	SLD 14	-0.22	0	2.97	0	0	0
10	SLD 15	-0.23	-0.08	2.96	0	0	0
10	SLD 16	-0.23	-0.08	2.96	0	0	0
10	SLV 1	0.44	0.07	3.05	0	0	0
10	SLV 2	0.45	0.07	3.05	0	0	0
10	SLV 3	0.42	-0.11	3.01	0	0	0
10	SLV 4	0.43	-0.1	3.01	0	0	0
10	SLV 5	0.14	0.26	3.06	0	0	0
10	SLV 6	0.15	0.27	3.06	0	0	0
10	SLV 7	0.07	-0.33	2.94	0	0	0
10	SLV 8	0.08	-0.32	2.94	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
10	SLV 9	-0.14	0.25	3.03	0	0	0
10	SLV 10	-0.13	0.26	3.03	0	0	0
10	SLV 11	-0.2	-0.34	2.91	0	0	0
10	SLV 12	-0.2	-0.33	2.91	0	0	0
10	SLV 13	-0.48	0.03	2.95	0	0	0
10	SLV 14	-0.47	0.04	2.96	0	0	0
10	SLV 15	-0.5	-0.14	2.92	0	0	0
10	SLV 16	-0.49	-0.14	2.92	0	0	0
11	SLU 1	-0.04	-0.06	4.7	0	0	0
11	SLU 2	-0.04	-0.06	4.7	0	0	0
11	SLU 3	-0.04	-0.06	4.78	0	0	0
11	SLU 4	-0.04	-0.06	4.79	0	0	0
11	SLU 5	-0.04	-0.06	4.75	0	0	0
11	SLU 6	-0.05	-0.06	4.83	0	0	0
11	SLU 7	-0.05	-0.06	4.84	0	0	0
11	SLU 8	-0.05	-0.06	4.8	0	0	0
11	SLU 9	-0.05	-0.06	4.8	0	0	0
11	SLU 10	-0.05	-0.05	5.34	0	0	0
11	SLU 11	-0.06	-0.06	5.43	0	0	0
11	SLU 12	-0.06	-0.05	5.43	0	0	0
11	SLU 13	-0.06	-0.05	5.39	0	0	0
11	SLU 14	-0.06	-0.06	5.48	0	0	0
11	SLU 15	-0.06	-0.05	5.48	0	0	0
11	SLU 16	-0.06	-0.06	5.44	0	0	0
11	SLU 17	-0.06	-0.06	5.44	0	0	0
11	SLU 18	-0.06	-0.06	5.62	0	0	0
11	SLU 19	-0.06	-0.05	5.62	0	0	0
11	SLU 20	-0.06	-0.06	5.67	0	0	0
11	SLU 21	-0.06	-0.05	5.67	0	0	0
11	SLU 22	-0.04	-0.05	5.24	0	0	0
11	SLU 23	-0.04	-0.05	5.25	0	0	0
11	SLU 24	-0.05	-0.05	5.33	0	0	0
11	SLU 25	-0.05	-0.05	5.33	0	0	0
11	SLU 26	-0.05	-0.05	5.3	0	0	0
11	SLU 27	-0.05	-0.05	5.38	0	0	0
11	SLU 28	-0.05	-0.05	5.38	0	0	0
11	SLU 29	-0.05	-0.05	5.34	0	0	0
11	SLU 30	-0.05	-0.05	5.34	0	0	0
11	SLU 31	-0.06	-0.04	5.89	0	0	0
11	SLU 32	-0.06	-0.05	5.97	0	0	0
11	SLU 33	-0.06	-0.04	5.98	0	0	0
11	SLU 34	-0.06	-0.04	5.94	0	0	0
11	SLU 35	-0.06	-0.05	6.02	0	0	0
11	SLU 36	-0.06	-0.04	6.03	0	0	0
11	SLU 37	-0.06	-0.05	5.99	0	0	0
11	SLU 38	-0.06	-0.05	5.99	0	0	0
11	SLU 39	-0.06	-0.05	6.16	0	0	0
11	SLU 40	-0.06	-0.04	6.16	0	0	0
11	SLU 41	-0.06	-0.05	6.21	0	0	0
11	SLU 42	-0.06	-0.04	6.21	0	0	0
11	SLU 43	-0.05	-0.08	5.92	0	0	0
11	SLU 44	-0.05	-0.08	5.92	0	0	0
11	SLU 45	-0.06	-0.08	6.01	0	0	0
11	SLU 46	-0.06	-0.08	6.01	0	0	0
11	SLU 47	-0.06	-0.08	5.97	0	0	0
11	SLU 48	-0.06	-0.08	6.06	0	0	0
11	SLU 49	-0.06	-0.08	6.06	0	0	0
11	SLU 50	-0.06	-0.09	6.02	0	0	0
11	SLU 51	-0.06	-0.08	6.02	0	0	0
11	SLU 52	-0.07	-0.08	6.56	0	0	0
11	SLU 53	-0.07	-0.08	6.65	0	0	0
11	SLU 54	-0.07	-0.08	6.65	0	0	0
11	SLU 55	-0.07	-0.08	6.61	0	0	0
11	SLU 56	-0.07	-0.08	6.7	0	0	0
11	SLU 57	-0.07	-0.08	6.7	0	0	0
11	SLU 58	-0.07	-0.08	6.66	0	0	0
11	SLU 59	-0.07	-0.08	6.66	0	0	0
11	SLU 60	-0.07	-0.08	6.84	0	0	0
11	SLU 61	-0.07	-0.08	6.84	0	0	0
11	SLU 62	-0.07	-0.08	6.89	0	0	0
11	SLU 63	-0.07	-0.08	6.89	0	0	0
11	SLU 64	-0.06	-0.07	6.46	0	0	0
11	SLU 65	-0.06	-0.07	6.47	0	0	0
11	SLU 66	-0.06	-0.07	6.55	0	0	0
11	SLU 67	-0.06	-0.07	6.55	0	0	0
11	SLU 68	-0.06	-0.07	6.52	0	0	0
11	SLU 69	-0.06	-0.07	6.6	0	0	0
11	SLU 70	-0.06	-0.07	6.6	0	0	0
11	SLU 71	-0.06	-0.08	6.56	0	0	0
11	SLU 72	-0.06	-0.07	6.57	0	0	0
11	SLU 73	-0.07	-0.06	7.11	0	0	0
11	SLU 74	-0.07	-0.07	7.2	0	0	0
11	SLU 75	-0.07	-0.07	7.2	0	0	0
11	SLU 76	-0.07	-0.07	7.16	0	0	0
11	SLU 77	-0.07	-0.07	7.25	0	0	0
11	SLU 78	-0.07	-0.07	7.25	0	0	0
11	SLU 79	-0.07	-0.07	7.21	0	0	0
11	SLU 80	-0.07	-0.07	7.21	0	0	0
11	SLU 81	-0.07	-0.07	7.38	0	0	0
11	SLU 82	-0.07	-0.07	7.38	0	0	0
11	SLU 83	-0.08	-0.07	7.43	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
11	SLU 84	-0.08	-0.07	7.43	0	0	0
11	SLE RA 1	-0.04	-0.06	4.85	0	0	0
11	SLE RA 2	-0.04	-0.06	4.85	0	0	0
11	SLE RA 3	-0.04	-0.06	4.91	0	0	0
11	SLE RA 4	-0.04	-0.06	4.91	0	0	0
11	SLE RA 5	-0.04	-0.06	4.89	0	0	0
11	SLE RA 6	-0.05	-0.06	4.94	0	0	0
11	SLE RA 7	-0.05	-0.06	4.95	0	0	0
11	SLE RA 8	-0.05	-0.06	4.92	0	0	0
11	SLE RA 9	-0.05	-0.06	4.92	0	0	0
11	SLE RA 10	-0.05	-0.05	5.28	0	0	0
11	SLE RA 11	-0.05	-0.06	5.34	0	0	0
11	SLE RA 12	-0.05	-0.05	5.34	0	0	0
11	SLE RA 13	-0.05	-0.05	5.32	0	0	0
11	SLE RA 14	-0.05	-0.06	5.37	0	0	0
11	SLE RA 15	-0.05	-0.05	5.37	0	0	0
11	SLE RA 16	-0.05	-0.06	5.35	0	0	0
11	SLE RA 17	-0.05	-0.06	5.35	0	0	0
11	SLE RA 18	-0.05	-0.06	5.47	0	0	0
11	SLE RA 19	-0.05	-0.05	5.47	0	0	0
11	SLE RA 20	-0.06	-0.06	5.5	0	0	0
11	SLE RA 21	-0.06	-0.05	5.5	0	0	0
11	SLE FR 1	-0.04	-0.06	4.85	0	0	0
11	SLE FR 2	-0.04	-0.06	4.85	0	0	0
11	SLE FR 3	-0.04	-0.06	4.87	0	0	0
11	SLE FR 4	-0.05	-0.06	5.04	0	0	0
11	SLE FR 5	-0.05	-0.06	5.05	0	0	0
11	SLE FR 6	-0.05	-0.06	5.16	0	0	0
11	SLE QP 1	-0.04	-0.06	4.85	0	0	0
11	SLE QP 2	-0.05	-0.06	5.04	0	0	0
11	SLD 1	0.29	0.02	5.04	0	0	0
11	SLD 2	0.3	0.02	5.04	0	0	0
11	SLD 3	0.28	-0.11	5	0	0	0
11	SLD 4	0.28	-0.11	5.01	0	0	0
11	SLD 5	0.08	0.16	5.08	0	0	0
11	SLD 6	0.08	0.16	5.08	0	0	0
11	SLD 7	0.03	-0.27	4.98	0	0	0
11	SLD 8	0.03	-0.27	4.98	0	0	0
11	SLD 9	-0.12	0.16	5.09	0	0	0
11	SLD 10	-0.12	0.16	5.09	0	0	0
11	SLD 11	-0.17	-0.28	4.99	0	0	0
11	SLD 12	-0.17	-0.28	4.99	0	0	0
11	SLD 13	-0.38	-0.01	5.07	0	0	0
11	SLD 14	-0.37	0	5.07	0	0	0
11	SLD 15	-0.39	-0.14	5.04	0	0	0
11	SLD 16	-0.38	-0.13	5.04	0	0	0
11	SLV 1	0.74	0.11	5.03	0	0	0
11	SLV 2	0.76	0.12	5.03	0	0	0
11	SLV 3	0.71	-0.18	4.96	0	0	0
11	SLV 4	0.73	-0.18	4.96	0	0	0
11	SLV 5	0.24	0.44	5.14	0	0	0
11	SLV 6	0.25	0.45	5.14	0	0	0
11	SLV 7	0.12	-0.55	4.91	0	0	0
11	SLV 8	0.14	-0.54	4.91	0	0	0
11	SLV 9	-0.23	0.43	5.16	0	0	0
11	SLV 10	-0.22	0.43	5.17	0	0	0
11	SLV 11	-0.35	-0.57	4.93	0	0	0
11	SLV 12	-0.33	-0.56	4.93	0	0	0
11	SLV 13	-0.82	0.06	5.11	0	0	0
11	SLV 14	-0.8	0.07	5.11	0	0	0
11	SLV 15	-0.86	-0.24	5.04	0	0	0
11	SLV 16	-0.84	-0.23	5.04	0	0	0
12	SLU 1	-0.06	-0.09	6.9	0	0	0
12	SLU 2	-0.06	-0.08	6.9	0	0	0
12	SLU 3	-0.07	-0.09	7.02	0	0	0
12	SLU 4	-0.07	-0.08	7.03	0	0	0
12	SLU 5	-0.07	-0.08	6.97	0	0	0
12	SLU 6	-0.07	-0.09	7.1	0	0	0
12	SLU 7	-0.07	-0.08	7.1	0	0	0
12	SLU 8	-0.07	-0.09	7.04	0	0	0
12	SLU 9	-0.07	-0.09	7.04	0	0	0
12	SLU 10	-0.08	-0.08	7.84	0	0	0
12	SLU 11	-0.08	-0.08	7.96	0	0	0
12	SLU 12	-0.08	-0.08	7.97	0	0	0
12	SLU 13	-0.08	-0.08	7.91	0	0	0
12	SLU 14	-0.09	-0.08	8.04	0	0	0
12	SLU 15	-0.09	-0.08	8.04	0	0	0
12	SLU 16	-0.09	-0.09	7.98	0	0	0
12	SLU 17	-0.09	-0.08	7.98	0	0	0
12	SLU 18	-0.09	-0.08	8.24	0	0	0
12	SLU 19	-0.09	-0.08	8.24	0	0	0
12	SLU 20	-0.09	-0.08	8.31	0	0	0
12	SLU 21	-0.09	-0.08	8.31	0	0	0
12	SLU 22	-0.07	-0.07	7.7	0	0	0
12	SLU 23	-0.06	-0.07	7.7	0	0	0
12	SLU 24	-0.07	-0.07	7.83	0	0	0
12	SLU 25	-0.07	-0.07	7.83	0	0	0
12	SLU 26	-0.07	-0.07	7.78	0	0	0
12	SLU 27	-0.07	-0.07	7.9	0	0	0
12	SLU 28	-0.07	-0.07	7.9	0	0	0
12	SLU 29	-0.07	-0.08	7.84	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
12	SLU 30	-0.07	-0.07	7.85	0	0	0
12	SLU 31	-0.08	-0.06	8.64	0	0	0
12	SLU 32	-0.09	-0.07	8.77	0	0	0
12	SLU 33	-0.09	-0.06	8.77	0	0	0
12	SLU 34	-0.09	-0.06	8.72	0	0	0
12	SLU 35	-0.09	-0.07	8.84	0	0	0
12	SLU 36	-0.09	-0.06	8.84	0	0	0
12	SLU 37	-0.09	-0.07	8.78	0	0	0
12	SLU 38	-0.09	-0.07	8.79	0	0	0
12	SLU 39	-0.09	-0.07	9.04	0	0	0
12	SLU 40	-0.09	-0.06	9.05	0	0	0
12	SLU 41	-0.09	-0.07	9.12	0	0	0
12	SLU 42	-0.09	-0.06	9.12	0	0	0
12	SLU 43	-0.08	-0.12	8.69	0	0	0
12	SLU 44	-0.08	-0.11	8.69	0	0	0
12	SLU 45	-0.08	-0.12	8.82	0	0	0
12	SLU 46	-0.08	-0.11	8.82	0	0	0
12	SLU 47	-0.08	-0.11	8.76	0	0	0
12	SLU 48	-0.09	-0.12	8.89	0	0	0
12	SLU 49	-0.09	-0.12	8.89	0	0	0
12	SLU 50	-0.09	-0.12	8.83	0	0	0
12	SLU 51	-0.09	-0.12	8.83	0	0	0
12	SLU 52	-0.1	-0.11	9.63	0	0	0
12	SLU 53	-0.1	-0.12	9.76	0	0	0
12	SLU 54	-0.1	-0.11	9.76	0	0	0
12	SLU 55	-0.1	-0.11	9.7	0	0	0
12	SLU 56	-0.1	-0.12	9.83	0	0	0
12	SLU 57	-0.1	-0.11	9.83	0	0	0
12	SLU 58	-0.11	-0.12	9.77	0	0	0
12	SLU 59	-0.11	-0.11	9.77	0	0	0
12	SLU 60	-0.11	-0.12	10.03	0	0	0
12	SLU 61	-0.11	-0.11	10.03	0	0	0
12	SLU 62	-0.11	-0.12	10.1	0	0	0
12	SLU 63	-0.11	-0.11	10.11	0	0	0
12	SLU 64	-0.08	-0.11	9.49	0	0	0
12	SLU 65	-0.08	-0.1	9.5	0	0	0
12	SLU 66	-0.09	-0.1	9.62	0	0	0
12	SLU 67	-0.09	-0.1	9.62	0	0	0
12	SLU 68	-0.09	-0.1	9.57	0	0	0
12	SLU 69	-0.09	-0.11	9.69	0	0	0
12	SLU 70	-0.09	-0.1	9.7	0	0	0
12	SLU 71	-0.09	-0.11	9.64	0	0	0
12	SLU 72	-0.09	-0.1	9.64	0	0	0
12	SLU 73	-0.1	-0.09	10.44	0	0	0
12	SLU 74	-0.1	-0.1	10.56	0	0	0
12	SLU 75	-0.1	-0.09	10.56	0	0	0
12	SLU 76	-0.1	-0.09	10.51	0	0	0
12	SLU 77	-0.11	-0.1	10.63	0	0	0
12	SLU 78	-0.11	-0.1	10.64	0	0	0
12	SLU 79	-0.11	-0.1	10.58	0	0	0
12	SLU 80	-0.11	-0.1	10.58	0	0	0
12	SLU 81	-0.11	-0.1	10.84	0	0	0
12	SLU 82	-0.11	-0.09	10.84	0	0	0
12	SLU 83	-0.11	-0.1	10.91	0	0	0
12	SLU 84	-0.11	-0.1	10.91	0	0	0
12	SLE RA 1	-0.06	-0.09	7.13	0	0	0
12	SLE RA 2	-0.06	-0.08	7.13	0	0	0
12	SLE RA 3	-0.07	-0.08	7.21	0	0	0
12	SLE RA 4	-0.07	-0.08	7.21	0	0	0
12	SLE RA 5	-0.07	-0.08	7.18	0	0	0
12	SLE RA 6	-0.07	-0.08	7.26	0	0	0
12	SLE RA 7	-0.07	-0.08	7.26	0	0	0
12	SLE RA 8	-0.07	-0.09	7.22	0	0	0
12	SLE RA 9	-0.07	-0.08	7.22	0	0	0
12	SLE RA 10	-0.07	-0.08	7.76	0	0	0
12	SLE RA 11	-0.08	-0.08	7.84	0	0	0
12	SLE RA 12	-0.08	-0.08	7.84	0	0	0
12	SLE RA 13	-0.08	-0.08	7.8	0	0	0
12	SLE RA 14	-0.08	-0.08	7.89	0	0	0
12	SLE RA 15	-0.08	-0.08	7.89	0	0	0
12	SLE RA 16	-0.08	-0.08	7.85	0	0	0
12	SLE RA 17	-0.08	-0.08	7.85	0	0	0
12	SLE RA 18	-0.08	-0.08	8.02	0	0	0
12	SLE RA 19	-0.08	-0.08	8.02	0	0	0
12	SLE RA 20	-0.08	-0.08	8.07	0	0	0
12	SLE RA 21	-0.08	-0.08	8.07	0	0	0
12	SLE FR 1	-0.06	-0.09	7.13	0	0	0
12	SLE FR 2	-0.06	-0.08	7.13	0	0	0
12	SLE FR 3	-0.06	-0.09	7.15	0	0	0
12	SLE FR 4	-0.07	-0.08	7.4	0	0	0
12	SLE FR 5	-0.07	-0.08	7.41	0	0	0
12	SLE FR 6	-0.07	-0.08	7.57	0	0	0
12	SLE QP 1	-0.06	-0.09	7.13	0	0	0
12	SLE QP 2	-0.07	-0.08	7.39	0	0	0
12	SLD 1	0.43	0.03	7.37	0	0	0
12	SLD 2	0.44	0.03	7.37	0	0	0
12	SLD 3	0.41	-0.17	7.32	0	0	0
12	SLD 4	0.42	-0.16	7.32	0	0	0
12	SLD 5	0.11	0.24	7.46	0	0	0
12	SLD 6	0.12	0.24	7.46	0	0	0
12	SLD 7	0.04	-0.4	7.29	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
12	SLD 8	0.05	-0.4	7.29	0	0	0
12	SLD 9	-0.18	0.23	7.5	0	0	0
12	SLD 10	-0.18	0.23	7.5	0	0	0
12	SLD 11	-0.26	-0.41	7.32	0	0	0
12	SLD 12	-0.25	-0.41	7.32	0	0	0
12	SLD 13	-0.56	-0.01	7.47	0	0	0
12	SLD 14	-0.55	0	7.47	0	0	0
12	SLD 15	-0.58	-0.2	7.42	0	0	0
12	SLD 16	-0.57	-0.19	7.42	0	0	0
12	SLV 1	1.1	0.17	7.33	0	0	0
12	SLV 2	1.13	0.18	7.33	0	0	0
12	SLV 3	1.05	-0.27	7.21	0	0	0
12	SLV 4	1.07	-0.26	7.21	0	0	0
12	SLV 5	0.35	0.65	7.55	0	0	0
12	SLV 6	0.37	0.66	7.55	0	0	0
12	SLV 7	0.18	-0.81	7.16	0	0	0
12	SLV 8	0.2	-0.8	7.16	0	0	0
12	SLV 9	-0.34	0.63	7.63	0	0	0
12	SLV 10	-0.32	0.64	7.63	0	0	0
12	SLV 11	-0.51	-0.83	7.24	0	0	0
12	SLV 12	-0.49	-0.82	7.24	0	0	0
12	SLV 13	-1.21	0.09	7.58	0	0	0
12	SLV 14	-1.18	0.11	7.58	0	0	0
12	SLV 15	-1.26	-0.35	7.46	0	0	0
12	SLV 16	-1.23	-0.33	7.46	0	0	0
13	SLU 1	-0.06	-0.09	6.86	0	0	0
13	SLU 2	-0.06	-0.08	6.86	0	0	0
13	SLU 3	-0.07	-0.09	6.98	0	0	0
13	SLU 4	-0.07	-0.08	6.98	0	0	0
13	SLU 5	-0.07	-0.08	6.93	0	0	0
13	SLU 6	-0.07	-0.09	7.05	0	0	0
13	SLU 7	-0.07	-0.08	7.05	0	0	0
13	SLU 8	-0.07	-0.09	6.99	0	0	0
13	SLU 9	-0.07	-0.08	7	0	0	0
13	SLU 10	-0.08	-0.07	7.79	0	0	0
13	SLU 11	-0.08	-0.08	7.91	0	0	0
13	SLU 12	-0.08	-0.08	7.91	0	0	0
13	SLU 13	-0.08	-0.07	7.86	0	0	0
13	SLU 14	-0.09	-0.08	7.98	0	0	0
13	SLU 15	-0.09	-0.08	7.98	0	0	0
13	SLU 16	-0.09	-0.08	7.92	0	0	0
13	SLU 17	-0.09	-0.08	7.93	0	0	0
13	SLU 18	-0.09	-0.08	8.18	0	0	0
13	SLU 19	-0.09	-0.08	8.18	0	0	0
13	SLU 20	-0.09	-0.08	8.25	0	0	0
13	SLU 21	-0.09	-0.08	8.25	0	0	0
13	SLU 22	-0.07	-0.07	7.66	0	0	0
13	SLU 23	-0.06	-0.06	7.66	0	0	0
13	SLU 24	-0.07	-0.07	7.78	0	0	0
13	SLU 25	-0.07	-0.06	7.78	0	0	0
13	SLU 26	-0.07	-0.06	7.73	0	0	0
13	SLU 27	-0.07	-0.07	7.85	0	0	0
13	SLU 28	-0.07	-0.07	7.85	0	0	0
13	SLU 29	-0.07	-0.07	7.8	0	0	0
13	SLU 30	-0.07	-0.07	7.8	0	0	0
13	SLU 31	-0.08	-0.06	8.59	0	0	0
13	SLU 32	-0.09	-0.07	8.71	0	0	0
13	SLU 33	-0.09	-0.06	8.71	0	0	0
13	SLU 34	-0.09	-0.06	8.66	0	0	0
13	SLU 35	-0.09	-0.07	8.78	0	0	0
13	SLU 36	-0.09	-0.06	8.78	0	0	0
13	SLU 37	-0.09	-0.07	8.72	0	0	0
13	SLU 38	-0.09	-0.06	8.73	0	0	0
13	SLU 39	-0.09	-0.07	8.98	0	0	0
13	SLU 40	-0.09	-0.06	8.99	0	0	0
13	SLU 41	-0.09	-0.07	9.05	0	0	0
13	SLU 42	-0.09	-0.06	9.06	0	0	0
13	SLU 43	-0.08	-0.12	8.64	0	0	0
13	SLU 44	-0.08	-0.11	8.64	0	0	0
13	SLU 45	-0.08	-0.12	8.76	0	0	0
13	SLU 46	-0.08	-0.11	8.77	0	0	0
13	SLU 47	-0.08	-0.11	8.71	0	0	0
13	SLU 48	-0.09	-0.12	8.83	0	0	0
13	SLU 49	-0.09	-0.11	8.83	0	0	0
13	SLU 50	-0.09	-0.12	8.78	0	0	0
13	SLU 51	-0.09	-0.11	8.78	0	0	0
13	SLU 52	-0.1	-0.1	9.57	0	0	0
13	SLU 53	-0.1	-0.11	9.69	0	0	0
13	SLU 54	-0.1	-0.11	9.69	0	0	0
13	SLU 55	-0.1	-0.11	9.64	0	0	0
13	SLU 56	-0.1	-0.11	9.76	0	0	0
13	SLU 57	-0.1	-0.11	9.76	0	0	0
13	SLU 58	-0.11	-0.12	9.71	0	0	0
13	SLU 59	-0.11	-0.11	9.71	0	0	0
13	SLU 60	-0.11	-0.11	9.96	0	0	0
13	SLU 61	-0.11	-0.11	9.97	0	0	0
13	SLU 62	-0.11	-0.11	10.03	0	0	0
13	SLU 63	-0.11	-0.11	10.04	0	0	0
13	SLU 64	-0.08	-0.1	9.44	0	0	0
13	SLU 65	-0.08	-0.09	9.44	0	0	0
13	SLU 66	-0.09	-0.1	9.56	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
13	SLU 67	-0.09	-0.1	9.57	0	0	0
13	SLU 68	-0.09	-0.09	9.51	0	0	0
13	SLU 69	-0.09	-0.1	9.63	0	0	0
13	SLU 70	-0.09	-0.1	9.64	0	0	0
13	SLU 71	-0.09	-0.1	9.58	0	0	0
13	SLU 72	-0.09	-0.1	9.58	0	0	0
13	SLU 73	-0.1	-0.09	10.37	0	0	0
13	SLU 74	-0.1	-0.1	10.49	0	0	0
13	SLU 75	-0.1	-0.09	10.5	0	0	0
13	SLU 76	-0.1	-0.09	10.44	0	0	0
13	SLU 77	-0.11	-0.1	10.56	0	0	0
13	SLU 78	-0.11	-0.09	10.56	0	0	0
13	SLU 79	-0.11	-0.1	10.51	0	0	0
13	SLU 80	-0.11	-0.09	10.51	0	0	0
13	SLU 81	-0.11	-0.1	10.77	0	0	0
13	SLU 82	-0.11	-0.09	10.77	0	0	0
13	SLU 83	-0.11	-0.1	10.83	0	0	0
13	SLU 84	-0.11	-0.09	10.84	0	0	0
13	SLE RA 1	-0.06	-0.08	7.08	0	0	0
13	SLE RA 2	-0.06	-0.08	7.09	0	0	0
13	SLE RA 3	-0.07	-0.08	7.17	0	0	0
13	SLE RA 4	-0.07	-0.08	7.17	0	0	0
13	SLE RA 5	-0.07	-0.08	7.13	0	0	0
13	SLE RA 6	-0.07	-0.08	7.21	0	0	0
13	SLE RA 7	-0.07	-0.08	7.22	0	0	0
13	SLE RA 8	-0.07	-0.08	7.18	0	0	0
13	SLE RA 9	-0.07	-0.08	7.18	0	0	0
13	SLE RA 10	-0.07	-0.07	7.71	0	0	0
13	SLE RA 11	-0.08	-0.08	7.79	0	0	0
13	SLE RA 12	-0.08	-0.07	7.79	0	0	0
13	SLE RA 13	-0.08	-0.07	7.75	0	0	0
13	SLE RA 14	-0.08	-0.08	7.83	0	0	0
13	SLE RA 15	-0.08	-0.08	7.84	0	0	0
13	SLE RA 16	-0.08	-0.08	7.8	0	0	0
13	SLE RA 17	-0.08	-0.08	7.8	0	0	0
13	SLE RA 18	-0.08	-0.08	7.97	0	0	0
13	SLE RA 19	-0.08	-0.07	7.97	0	0	0
13	SLE RA 20	-0.08	-0.08	8.02	0	0	0
13	SLE RA 21	-0.08	-0.08	8.02	0	0	0
13	SLE FR 1	-0.06	-0.08	7.08	0	0	0
13	SLE FR 2	-0.06	-0.08	7.08	0	0	0
13	SLE FR 3	-0.06	-0.08	7.1	0	0	0
13	SLE FR 4	-0.07	-0.08	7.35	0	0	0
13	SLE FR 5	-0.07	-0.08	7.37	0	0	0
13	SLE FR 6	-0.07	-0.08	7.53	0	0	0
13	SLE QP 1	-0.06	-0.08	7.08	0	0	0
13	SLE QP 2	-0.07	-0.08	7.35	0	0	0
13	SLD 1	0.43	0.03	7.28	0	0	0
13	SLD 2	0.44	0.04	7.28	0	0	0
13	SLD 3	0.41	-0.17	7.23	0	0	0
13	SLD 4	0.42	-0.16	7.22	0	0	0
13	SLD 5	0.11	0.24	7.42	0	0	0
13	SLD 6	0.12	0.25	7.42	0	0	0
13	SLD 7	0.04	-0.4	7.22	0	0	0
13	SLD 8	0.05	-0.39	7.22	0	0	0
13	SLD 9	-0.18	0.23	7.47	0	0	0
13	SLD 10	-0.18	0.24	7.47	0	0	0
13	SLD 11	-0.26	-0.41	7.28	0	0	0
13	SLD 12	-0.25	-0.4	7.28	0	0	0
13	SLD 13	-0.56	-0.01	7.47	0	0	0
13	SLD 14	-0.55	0	7.47	0	0	0
13	SLD 15	-0.58	-0.2	7.42	0	0	0
13	SLD 16	-0.57	-0.19	7.42	0	0	0
13	SLV 1	1.1	0.16	7.19	0	0	0
13	SLV 2	1.13	0.19	7.19	0	0	0
13	SLV 3	1.05	-0.27	7.06	0	0	0
13	SLV 4	1.07	-0.25	7.06	0	0	0
13	SLV 5	0.35	0.65	7.5	0	0	0
13	SLV 6	0.37	0.66	7.5	0	0	0
13	SLV 7	0.18	-0.8	7.06	0	0	0
13	SLV 8	0.2	-0.79	7.06	0	0	0
13	SLV 9	-0.34	0.63	7.64	0	0	0
13	SLV 10	-0.32	0.64	7.64	0	0	0
13	SLV 11	-0.51	-0.83	7.2	0	0	0
13	SLV 12	-0.49	-0.81	7.2	0	0	0
13	SLV 13	-1.21	0.09	7.64	0	0	0
13	SLV 14	-1.18	0.11	7.64	0	0	0
13	SLV 15	-1.26	-0.35	7.51	0	0	0
13	SLV 16	-1.23	-0.33	7.51	0	0	0
14	SLU 1	-0.06	-0.08	6.81	0	0	0
14	SLU 2	-0.06	-0.08	6.82	0	0	0
14	SLU 3	-0.07	-0.08	6.94	0	0	0
14	SLU 4	-0.07	-0.08	6.94	0	0	0
14	SLU 5	-0.07	-0.08	6.89	0	0	0
14	SLU 6	-0.07	-0.08	7.01	0	0	0
14	SLU 7	-0.07	-0.08	7.01	0	0	0
14	SLU 8	-0.07	-0.09	6.95	0	0	0
14	SLU 9	-0.07	-0.08	6.95	0	0	0
14	SLU 10	-0.08	-0.07	7.74	0	0	0
14	SLU 11	-0.08	-0.08	7.86	0	0	0
14	SLU 12	-0.08	-0.07	7.86	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
14	SLU 13	-0.08	-0.07	7.8	0	0	0
14	SLU 14	-0.09	-0.08	7.92	0	0	0
14	SLU 15	-0.09	-0.07	7.93	0	0	0
14	SLU 16	-0.09	-0.08	7.87	0	0	0
14	SLU 17	-0.09	-0.08	7.87	0	0	0
14	SLU 18	-0.09	-0.08	8.13	0	0	0
14	SLU 19	-0.09	-0.07	8.13	0	0	0
14	SLU 20	-0.09	-0.08	8.19	0	0	0
14	SLU 21	-0.09	-0.07	8.2	0	0	0
14	SLU 22	-0.07	-0.07	7.61	0	0	0
14	SLU 23	-0.07	-0.06	7.62	0	0	0
14	SLU 24	-0.07	-0.07	7.74	0	0	0
14	SLU 25	-0.07	-0.06	7.74	0	0	0
14	SLU 26	-0.07	-0.06	7.68	0	0	0
14	SLU 27	-0.07	-0.07	7.8	0	0	0
14	SLU 28	-0.07	-0.06	7.81	0	0	0
14	SLU 29	-0.07	-0.07	7.75	0	0	0
14	SLU 30	-0.07	-0.07	7.75	0	0	0
14	SLU 31	-0.08	-0.06	8.53	0	0	0
14	SLU 32	-0.09	-0.06	8.65	0	0	0
14	SLU 33	-0.09	-0.06	8.66	0	0	0
14	SLU 34	-0.09	-0.06	8.6	0	0	0
14	SLU 35	-0.09	-0.06	8.72	0	0	0
14	SLU 36	-0.09	-0.06	8.72	0	0	0
14	SLU 37	-0.09	-0.07	8.66	0	0	0
14	SLU 38	-0.09	-0.06	8.67	0	0	0
14	SLU 39	-0.09	-0.06	8.92	0	0	0
14	SLU 40	-0.09	-0.06	8.93	0	0	0
14	SLU 41	-0.1	-0.06	8.99	0	0	0
14	SLU 42	-0.09	-0.06	8.99	0	0	0
14	SLU 43	-0.08	-0.12	8.58	0	0	0
14	SLU 44	-0.08	-0.11	8.59	0	0	0
14	SLU 45	-0.08	-0.11	8.71	0	0	0
14	SLU 46	-0.08	-0.11	8.71	0	0	0
14	SLU 47	-0.08	-0.11	8.66	0	0	0
14	SLU 48	-0.09	-0.11	8.78	0	0	0
14	SLU 49	-0.09	-0.11	8.78	0	0	0
14	SLU 50	-0.09	-0.12	8.72	0	0	0
14	SLU 51	-0.09	-0.11	8.72	0	0	0
14	SLU 52	-0.1	-0.1	9.51	0	0	0
14	SLU 53	-0.1	-0.11	9.63	0	0	0
14	SLU 54	-0.1	-0.1	9.63	0	0	0
14	SLU 55	-0.1	-0.1	9.57	0	0	0
14	SLU 56	-0.11	-0.11	9.69	0	0	0
14	SLU 57	-0.1	-0.1	9.7	0	0	0
14	SLU 58	-0.11	-0.11	9.64	0	0	0
14	SLU 59	-0.11	-0.11	9.64	0	0	0
14	SLU 60	-0.11	-0.11	9.9	0	0	0
14	SLU 61	-0.11	-0.1	9.9	0	0	0
14	SLU 62	-0.11	-0.11	9.96	0	0	0
14	SLU 63	-0.11	-0.1	9.97	0	0	0
14	SLU 64	-0.08	-0.1	9.38	0	0	0
14	SLU 65	-0.08	-0.09	9.39	0	0	0
14	SLU 66	-0.09	-0.1	9.51	0	0	0
14	SLU 67	-0.09	-0.09	9.51	0	0	0
14	SLU 68	-0.09	-0.09	9.45	0	0	0
14	SLU 69	-0.09	-0.1	9.57	0	0	0
14	SLU 70	-0.09	-0.09	9.58	0	0	0
14	SLU 71	-0.09	-0.1	9.52	0	0	0
14	SLU 72	-0.09	-0.1	9.52	0	0	0
14	SLU 73	-0.1	-0.09	10.3	0	0	0
14	SLU 74	-0.1	-0.09	10.42	0	0	0
14	SLU 75	-0.1	-0.09	10.43	0	0	0
14	SLU 76	-0.1	-0.09	10.37	0	0	0
14	SLU 77	-0.11	-0.09	10.49	0	0	0
14	SLU 78	-0.11	-0.09	10.49	0	0	0
14	SLU 79	-0.11	-0.1	10.44	0	0	0
14	SLU 80	-0.11	-0.09	10.44	0	0	0
14	SLU 81	-0.11	-0.09	10.69	0	0	0
14	SLU 82	-0.11	-0.09	10.7	0	0	0
14	SLU 83	-0.11	-0.09	10.76	0	0	0
14	SLU 84	-0.11	-0.09	10.76	0	0	0
14	SLE RA 1	-0.06	-0.08	7.04	0	0	0
14	SLE RA 2	-0.06	-0.07	7.04	0	0	0
14	SLE RA 3	-0.07	-0.08	7.12	0	0	0
14	SLE RA 4	-0.07	-0.08	7.13	0	0	0
14	SLE RA 5	-0.07	-0.07	7.09	0	0	0
14	SLE RA 6	-0.07	-0.08	7.17	0	0	0
14	SLE RA 7	-0.07	-0.08	7.17	0	0	0
14	SLE RA 8	-0.07	-0.08	7.13	0	0	0
14	SLE RA 9	-0.07	-0.08	7.13	0	0	0
14	SLE RA 10	-0.08	-0.07	7.66	0	0	0
14	SLE RA 11	-0.08	-0.08	7.74	0	0	0
14	SLE RA 12	-0.08	-0.07	7.74	0	0	0
14	SLE RA 13	-0.08	-0.07	7.7	0	0	0
14	SLE RA 14	-0.08	-0.08	7.78	0	0	0
14	SLE RA 15	-0.08	-0.07	7.78	0	0	0
14	SLE RA 16	-0.08	-0.08	7.74	0	0	0
14	SLE RA 17	-0.08	-0.07	7.75	0	0	0
14	SLE RA 18	-0.08	-0.08	7.92	0	0	0
14	SLE RA 19	-0.08	-0.07	7.92	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
14	SLE RA 20	-0.08	-0.08	7.96	0	0	0
14	SLE RA 21	-0.08	-0.07	7.96	0	0	0
14	SLE FR 1	-0.06	-0.08	7.04	0	0	0
14	SLE FR 2	-0.06	-0.08	7.04	0	0	0
14	SLE FR 3	-0.06	-0.08	7.06	0	0	0
14	SLE FR 4	-0.07	-0.08	7.3	0	0	0
14	SLE FR 5	-0.07	-0.08	7.32	0	0	0
14	SLE FR 6	-0.07	-0.08	7.48	0	0	0
14	SLE QP 1	-0.06	-0.08	7.04	0	0	0
14	SLE QP 2	-0.07	-0.08	7.3	0	0	0
14	SLD 1	0.43	0.03	7.2	0	0	0
14	SLD 2	0.44	0.04	7.19	0	0	0
14	SLD 3	0.41	-0.16	7.13	0	0	0
14	SLD 4	0.42	-0.15	7.13	0	0	0
14	SLD 5	0.11	0.24	7.37	0	0	0
14	SLD 6	0.12	0.25	7.37	0	0	0
14	SLD 7	0.04	-0.4	7.15	0	0	0
14	SLD 8	0.05	-0.39	7.15	0	0	0
14	SLD 9	-0.18	0.23	7.45	0	0	0
14	SLD 10	-0.18	0.24	7.45	0	0	0
14	SLD 11	-0.26	-0.41	7.24	0	0	0
14	SLD 12	-0.25	-0.4	7.24	0	0	0
14	SLD 13	-0.56	0	7.48	0	0	0
14	SLD 14	-0.55	0.01	7.48	0	0	0
14	SLD 15	-0.58	-0.2	7.41	0	0	0
14	SLD 16	-0.57	-0.18	7.41	0	0	0
14	SLV 1	1.1	0.16	7.05	0	0	0
14	SLV 2	1.13	0.19	7.05	0	0	0
14	SLV 3	1.05	-0.27	6.9	0	0	0
14	SLV 4	1.07	-0.25	6.9	0	0	0
14	SLV 5	0.35	0.65	7.45	0	0	0
14	SLV 6	0.37	0.67	7.45	0	0	0
14	SLV 7	0.18	-0.8	6.96	0	0	0
14	SLV 8	0.2	-0.78	6.96	0	0	0
14	SLV 9	-0.34	0.63	7.65	0	0	0
14	SLV 10	-0.32	0.64	7.65	0	0	0
14	SLV 11	-0.51	-0.82	7.16	0	0	0
14	SLV 12	-0.49	-0.81	7.15	0	0	0
14	SLV 13	-1.21	0.09	7.71	0	0	0
14	SLV 14	-1.18	0.11	7.7	0	0	0
14	SLV 15	-1.26	-0.35	7.56	0	0	0
14	SLV 16	-1.24	-0.32	7.56	0	0	0
15	SLU 1	-0.06	-0.08	6.77	0	0	0
15	SLU 2	-0.06	-0.07	6.77	0	0	0
15	SLU 3	-0.07	-0.08	6.89	0	0	0
15	SLU 4	-0.07	-0.07	6.89	0	0	0
15	SLU 5	-0.07	-0.07	6.84	0	0	0
15	SLU 6	-0.07	-0.08	6.96	0	0	0
15	SLU 7	-0.07	-0.08	6.96	0	0	0
15	SLU 8	-0.07	-0.08	6.9	0	0	0
15	SLU 9	-0.07	-0.08	6.9	0	0	0
15	SLU 10	-0.08	-0.07	7.68	0	0	0
15	SLU 11	-0.08	-0.08	7.8	0	0	0
15	SLU 12	-0.08	-0.07	7.8	0	0	0
15	SLU 13	-0.08	-0.07	7.75	0	0	0
15	SLU 14	-0.09	-0.08	7.86	0	0	0
15	SLU 15	-0.09	-0.07	7.87	0	0	0
15	SLU 16	-0.09	-0.08	7.81	0	0	0
15	SLU 17	-0.09	-0.07	7.81	0	0	0
15	SLU 18	-0.09	-0.08	8.07	0	0	0
15	SLU 19	-0.09	-0.07	8.07	0	0	0
15	SLU 20	-0.09	-0.08	8.13	0	0	0
15	SLU 21	-0.09	-0.07	8.13	0	0	0
15	SLU 22	-0.07	-0.07	7.56	0	0	0
15	SLU 23	-0.07	-0.06	7.57	0	0	0
15	SLU 24	-0.07	-0.06	7.69	0	0	0
15	SLU 25	-0.07	-0.06	7.69	0	0	0
15	SLU 26	-0.07	-0.06	7.63	0	0	0
15	SLU 27	-0.07	-0.07	7.75	0	0	0
15	SLU 28	-0.07	-0.06	7.75	0	0	0
15	SLU 29	-0.07	-0.07	7.69	0	0	0
15	SLU 30	-0.07	-0.06	7.7	0	0	0
15	SLU 31	-0.08	-0.05	8.48	0	0	0
15	SLU 32	-0.09	-0.06	8.59	0	0	0
15	SLU 33	-0.09	-0.05	8.6	0	0	0
15	SLU 34	-0.09	-0.05	8.54	0	0	0
15	SLU 35	-0.09	-0.06	8.66	0	0	0
15	SLU 36	-0.09	-0.06	8.66	0	0	0
15	SLU 37	-0.09	-0.06	8.6	0	0	0
15	SLU 38	-0.09	-0.06	8.6	0	0	0
15	SLU 39	-0.09	-0.06	8.86	0	0	0
15	SLU 40	-0.09	-0.05	8.86	0	0	0
15	SLU 41	-0.1	-0.06	8.93	0	0	0
15	SLU 42	-0.09	-0.06	8.93	0	0	0
15	SLU 43	-0.08	-0.11	8.53	0	0	0
15	SLU 44	-0.08	-0.1	8.53	0	0	0
15	SLU 45	-0.08	-0.11	8.65	0	0	0
15	SLU 46	-0.08	-0.1	8.65	0	0	0
15	SLU 47	-0.08	-0.1	8.6	0	0	0
15	SLU 48	-0.09	-0.11	8.72	0	0	0
15	SLU 49	-0.09	-0.11	8.72	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
15	SLU 50	-0.09	-0.11	8.66	0	0	0
15	SLU 51	-0.09	-0.11	8.66	0	0	0
15	SLU 52	-0.1	-0.1	9.44	0	0	0
15	SLU 53	-0.1	-0.11	9.56	0	0	0
15	SLU 54	-0.1	-0.1	9.56	0	0	0
15	SLU 55	-0.1	-0.1	9.51	0	0	0
15	SLU 56	-0.11	-0.11	9.62	0	0	0
15	SLU 57	-0.1	-0.1	9.63	0	0	0
15	SLU 58	-0.11	-0.11	9.57	0	0	0
15	SLU 59	-0.11	-0.1	9.57	0	0	0
15	SLU 60	-0.11	-0.11	9.82	0	0	0
15	SLU 61	-0.11	-0.1	9.83	0	0	0
15	SLU 62	-0.11	-0.11	9.89	0	0	0
15	SLU 63	-0.11	-0.1	9.89	0	0	0
15	SLU 64	-0.08	-0.1	9.32	0	0	0
15	SLU 65	-0.08	-0.09	9.33	0	0	0
15	SLU 66	-0.09	-0.09	9.44	0	0	0
15	SLU 67	-0.09	-0.09	9.45	0	0	0
15	SLU 68	-0.09	-0.09	9.39	0	0	0
15	SLU 69	-0.09	-0.1	9.51	0	0	0
15	SLU 70	-0.09	-0.09	9.51	0	0	0
15	SLU 71	-0.09	-0.1	9.45	0	0	0
15	SLU 72	-0.09	-0.09	9.46	0	0	0
15	SLU 73	-0.1	-0.08	10.23	0	0	0
15	SLU 74	-0.1	-0.09	10.35	0	0	0
15	SLU 75	-0.1	-0.08	10.35	0	0	0
15	SLU 76	-0.1	-0.08	10.3	0	0	0
15	SLU 77	-0.11	-0.09	10.42	0	0	0
15	SLU 78	-0.11	-0.09	10.42	0	0	0
15	SLU 79	-0.11	-0.09	10.36	0	0	0
15	SLU 80	-0.11	-0.09	10.36	0	0	0
15	SLU 81	-0.11	-0.09	10.62	0	0	0
15	SLU 82	-0.11	-0.08	10.62	0	0	0
15	SLU 83	-0.11	-0.09	10.68	0	0	0
15	SLU 84	-0.11	-0.09	10.69	0	0	0
15	SLE RA 1	-0.06	-0.08	7	0	0	0
15	SLE RA 2	-0.06	-0.07	7	0	0	0
15	SLE RA 3	-0.07	-0.08	7.08	0	0	0
15	SLE RA 4	-0.07	-0.07	7.08	0	0	0
15	SLE RA 5	-0.07	-0.07	7.04	0	0	0
15	SLE RA 6	-0.07	-0.08	7.12	0	0	0
15	SLE RA 7	-0.07	-0.07	7.12	0	0	0
15	SLE RA 8	-0.07	-0.08	7.08	0	0	0
15	SLE RA 9	-0.07	-0.07	7.09	0	0	0
15	SLE RA 10	-0.08	-0.07	7.6	0	0	0
15	SLE RA 11	-0.08	-0.07	7.68	0	0	0
15	SLE RA 12	-0.08	-0.07	7.68	0	0	0
15	SLE RA 13	-0.08	-0.07	7.65	0	0	0
15	SLE RA 14	-0.08	-0.07	7.73	0	0	0
15	SLE RA 15	-0.08	-0.07	7.73	0	0	0
15	SLE RA 16	-0.08	-0.08	7.69	0	0	0
15	SLE RA 17	-0.08	-0.07	7.69	0	0	0
15	SLE RA 18	-0.08	-0.07	7.86	0	0	0
15	SLE RA 19	-0.08	-0.07	7.86	0	0	0
15	SLE RA 20	-0.08	-0.07	7.9	0	0	0
15	SLE RA 21	-0.08	-0.07	7.91	0	0	0
15	SLE FR 1	-0.06	-0.08	7	0	0	0
15	SLE FR 2	-0.06	-0.08	7	0	0	0
15	SLE FR 3	-0.06	-0.08	7.01	0	0	0
15	SLE FR 4	-0.07	-0.08	7.26	0	0	0
15	SLE FR 5	-0.07	-0.08	7.27	0	0	0
15	SLE FR 6	-0.07	-0.08	7.43	0	0	0
15	SLE QP 1	-0.06	-0.08	7	0	0	0
15	SLE QP 2	-0.07	-0.08	7.26	0	0	0
15	SLD 1	0.43	0	7.11	0	0	0
15	SLD 2	0.44	0.01	7.11	0	0	0
15	SLD 3	0.41	-0.19	7.04	0	0	0
15	SLD 4	0.42	-0.18	7.03	0	0	0
15	SLD 5	0.11	0.23	7.32	0	0	0
15	SLD 6	0.12	0.24	7.32	0	0	0
15	SLD 7	0.04	-0.4	7.08	0	0	0
15	SLD 8	0.05	-0.39	7.08	0	0	0
15	SLD 9	-0.18	0.24	7.43	0	0	0
15	SLD 10	-0.18	0.25	7.43	0	0	0
15	SLD 11	-0.26	-0.39	7.19	0	0	0
15	SLD 12	-0.25	-0.38	7.19	0	0	0
15	SLD 13	-0.56	0.03	7.48	0	0	0
15	SLD 14	-0.55	0.04	7.48	0	0	0
15	SLD 15	-0.58	-0.16	7.41	0	0	0
15	SLD 16	-0.57	-0.15	7.4	0	0	0
15	SLV 1	1.1	0.09	6.91	0	0	0
15	SLV 2	1.13	0.12	6.9	0	0	0
15	SLV 3	1.05	-0.34	6.74	0	0	0
15	SLV 4	1.07	-0.31	6.74	0	0	0
15	SLV 5	0.35	0.62	7.4	0	0	0
15	SLV 6	0.37	0.64	7.4	0	0	0
15	SLV 7	0.18	-0.82	6.85	0	0	0
15	SLV 8	0.2	-0.8	6.85	0	0	0
15	SLV 9	-0.34	0.65	7.66	0	0	0
15	SLV 10	-0.32	0.67	7.66	0	0	0
15	SLV 11	-0.51	-0.8	7.11	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
15	SLV 12	-0.49	-0.78	7.11	0	0	0
15	SLV 13	-1.21	0.16	7.77	0	0	0
15	SLV 14	-1.18	0.19	7.77	0	0	0
15	SLV 15	-1.26	-0.27	7.61	0	0	0
15	SLV 16	-1.24	-0.24	7.6	0	0	0
16	SLU 1	-0.07	-0.09	7.28	0	0	0
16	SLU 2	-0.07	-0.08	7.28	0	0	0
16	SLU 3	-0.07	-0.08	7.41	0	0	0
16	SLU 4	-0.07	-0.08	7.41	0	0	0
16	SLU 5	-0.07	-0.08	7.35	0	0	0
16	SLU 6	-0.08	-0.09	7.47	0	0	0
16	SLU 7	-0.08	-0.08	7.48	0	0	0
16	SLU 8	-0.08	-0.09	7.41	0	0	0
16	SLU 9	-0.08	-0.08	7.42	0	0	0
16	SLU 10	-0.09	-0.07	8.25	0	0	0
16	SLU 11	-0.09	-0.08	8.38	0	0	0
16	SLU 12	-0.09	-0.07	8.38	0	0	0
16	SLU 13	-0.09	-0.07	8.32	0	0	0
16	SLU 14	-0.1	-0.08	8.44	0	0	0
16	SLU 15	-0.09	-0.07	8.45	0	0	0
16	SLU 16	-0.1	-0.08	8.38	0	0	0
16	SLU 17	-0.1	-0.08	8.39	0	0	0
16	SLU 18	-0.1	-0.08	8.66	0	0	0
16	SLU 19	-0.1	-0.07	8.66	0	0	0
16	SLU 20	-0.1	-0.08	8.73	0	0	0
16	SLU 21	-0.1	-0.07	8.73	0	0	0
16	SLU 22	-0.07	-0.07	8.13	0	0	0
16	SLU 23	-0.07	-0.06	8.14	0	0	0
16	SLU 24	-0.07	-0.07	8.26	0	0	0
16	SLU 25	-0.07	-0.06	8.26	0	0	0
16	SLU 26	-0.08	-0.06	8.21	0	0	0
16	SLU 27	-0.08	-0.07	8.33	0	0	0
16	SLU 28	-0.08	-0.06	8.33	0	0	0
16	SLU 29	-0.08	-0.07	8.27	0	0	0
16	SLU 30	-0.08	-0.07	8.27	0	0	0
16	SLU 31	-0.09	-0.06	9.11	0	0	0
16	SLU 32	-0.09	-0.06	9.23	0	0	0
16	SLU 33	-0.09	-0.06	9.23	0	0	0
16	SLU 34	-0.09	-0.06	9.17	0	0	0
16	SLU 35	-0.1	-0.06	9.3	0	0	0
16	SLU 36	-0.1	-0.06	9.3	0	0	0
16	SLU 37	-0.1	-0.07	9.24	0	0	0
16	SLU 38	-0.1	-0.06	9.24	0	0	0
16	SLU 39	-0.1	-0.06	9.52	0	0	0
16	SLU 40	-0.1	-0.06	9.52	0	0	0
16	SLU 41	-0.1	-0.06	9.58	0	0	0
16	SLU 42	-0.1	-0.06	9.59	0	0	0
16	SLU 43	-0.09	-0.12	9.17	0	0	0
16	SLU 44	-0.09	-0.11	9.17	0	0	0
16	SLU 45	-0.09	-0.12	9.3	0	0	0
16	SLU 46	-0.09	-0.11	9.3	0	0	0
16	SLU 47	-0.09	-0.11	9.24	0	0	0
16	SLU 48	-0.1	-0.12	9.36	0	0	0
16	SLU 49	-0.09	-0.11	9.37	0	0	0
16	SLU 50	-0.1	-0.12	9.3	0	0	0
16	SLU 51	-0.1	-0.11	9.31	0	0	0
16	SLU 52	-0.11	-0.1	10.14	0	0	0
16	SLU 53	-0.11	-0.11	10.27	0	0	0
16	SLU 54	-0.11	-0.11	10.27	0	0	0
16	SLU 55	-0.11	-0.1	10.21	0	0	0
16	SLU 56	-0.11	-0.11	10.33	0	0	0
16	SLU 57	-0.11	-0.11	10.34	0	0	0
16	SLU 58	-0.12	-0.11	10.27	0	0	0
16	SLU 59	-0.11	-0.11	10.28	0	0	0
16	SLU 60	-0.12	-0.11	10.55	0	0	0
16	SLU 61	-0.12	-0.11	10.55	0	0	0
16	SLU 62	-0.12	-0.11	10.62	0	0	0
16	SLU 63	-0.12	-0.11	10.62	0	0	0
16	SLU 64	-0.09	-0.1	10.02	0	0	0
16	SLU 65	-0.09	-0.09	10.03	0	0	0
16	SLU 66	-0.09	-0.1	10.15	0	0	0
16	SLU 67	-0.09	-0.09	10.15	0	0	0
16	SLU 68	-0.09	-0.09	10.09	0	0	0
16	SLU 69	-0.1	-0.1	10.22	0	0	0
16	SLU 70	-0.1	-0.09	10.22	0	0	0
16	SLU 71	-0.1	-0.1	10.16	0	0	0
16	SLU 72	-0.1	-0.1	10.16	0	0	0
16	SLU 73	-0.11	-0.09	11	0	0	0
16	SLU 74	-0.11	-0.09	11.12	0	0	0
16	SLU 75	-0.11	-0.09	11.12	0	0	0
16	SLU 76	-0.11	-0.09	11.06	0	0	0
16	SLU 77	-0.12	-0.1	11.19	0	0	0
16	SLU 78	-0.12	-0.09	11.19	0	0	0
16	SLU 79	-0.12	-0.1	11.13	0	0	0
16	SLU 80	-0.12	-0.09	11.13	0	0	0
16	SLU 81	-0.12	-0.09	11.41	0	0	0
16	SLU 82	-0.12	-0.09	11.41	0	0	0
16	SLU 83	-0.12	-0.1	11.47	0	0	0
16	SLU 84	-0.12	-0.09	11.48	0	0	0
16	SLE RA 1	-0.07	-0.08	7.52	0	0	0
16	SLE RA 2	-0.07	-0.08	7.52	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
16	SLE RA 3	-0.07	-0.08	7.61	0	0	0
16	SLE RA 4	-0.07	-0.08	7.61	0	0	0
16	SLE RA 5	-0.07	-0.08	7.57	0	0	0
16	SLE RA 6	-0.07	-0.08	7.65	0	0	0
16	SLE RA 7	-0.07	-0.08	7.65	0	0	0
16	SLE RA 8	-0.07	-0.08	7.61	0	0	0
16	SLE RA 9	-0.07	-0.08	7.61	0	0	0
16	SLE RA 10	-0.08	-0.07	8.17	0	0	0
16	SLE RA 11	-0.08	-0.08	8.25	0	0	0
16	SLE RA 12	-0.08	-0.07	8.26	0	0	0
16	SLE RA 13	-0.08	-0.07	8.22	0	0	0
16	SLE RA 14	-0.09	-0.08	8.3	0	0	0
16	SLE RA 15	-0.09	-0.07	8.3	0	0	0
16	SLE RA 16	-0.09	-0.08	8.26	0	0	0
16	SLE RA 17	-0.09	-0.08	8.26	0	0	0
16	SLE RA 18	-0.09	-0.08	8.44	0	0	0
16	SLE RA 19	-0.09	-0.07	8.45	0	0	0
16	SLE RA 20	-0.09	-0.08	8.49	0	0	0
16	SLE RA 21	-0.09	-0.07	8.49	0	0	0
16	SLE FR 1	-0.07	-0.08	7.52	0	0	0
16	SLE FR 2	-0.07	-0.08	7.52	0	0	0
16	SLE FR 3	-0.07	-0.08	7.54	0	0	0
16	SLE FR 4	-0.07	-0.08	7.8	0	0	0
16	SLE FR 5	-0.08	-0.08	7.82	0	0	0
16	SLE FR 6	-0.08	-0.08	7.98	0	0	0
16	SLE QP 1	-0.07	-0.08	7.52	0	0	0
16	SLE QP 2	-0.07	-0.08	7.8	0	0	0
16	SLD 1	0.47	0	7.59	0	0	0
16	SLD 2	0.48	0.01	7.59	0	0	0
16	SLD 3	0.44	-0.21	7.51	0	0	0
16	SLD 4	0.45	-0.19	7.5	0	0	0
16	SLD 5	0.12	0.25	7.87	0	0	0
16	SLD 6	0.13	0.26	7.87	0	0	0
16	SLD 7	0.04	-0.43	7.58	0	0	0
16	SLD 8	0.05	-0.42	7.58	0	0	0
16	SLD 9	-0.2	0.26	8.02	0	0	0
16	SLD 10	-0.19	0.27	8.02	0	0	0
16	SLD 11	-0.28	-0.42	7.73	0	0	0
16	SLD 12	-0.27	-0.41	7.73	0	0	0
16	SLD 13	-0.6	0.03	8.09	0	0	0
16	SLD 14	-0.59	0.05	8.09	0	0	0
16	SLD 15	-0.63	-0.17	8	0	0	0
16	SLD 16	-0.62	-0.16	8	0	0	0
16	SLV 1	1.19	0.1	7.32	0	0	0
16	SLV 2	1.22	0.13	7.31	0	0	0
16	SLV 3	1.13	-0.37	7.12	0	0	0
16	SLV 4	1.16	-0.33	7.11	0	0	0
16	SLV 5	0.38	0.67	7.96	0	0	0
16	SLV 6	0.4	0.7	7.95	0	0	0
16	SLV 7	0.2	-0.88	7.29	0	0	0
16	SLV 8	0.22	-0.86	7.29	0	0	0
16	SLV 9	-0.37	0.7	8.3	0	0	0
16	SLV 10	-0.35	0.72	8.3	0	0	0
16	SLV 11	-0.55	-0.86	7.64	0	0	0
16	SLV 12	-0.53	-0.83	7.64	0	0	0
16	SLV 13	-1.31	0.17	8.48	0	0	0
16	SLV 14	-1.28	0.21	8.47	0	0	0
16	SLV 15	-1.37	-0.29	8.28	0	0	0
16	SLV 16	-1.34	-0.26	8.27	0	0	0
17	SLU 1	-0.04	-0.04	3.74	0	0	0
17	SLU 2	-0.04	-0.04	3.75	0	0	0
17	SLU 3	-0.04	-0.04	3.81	0	0	0
17	SLU 4	-0.04	-0.04	3.81	0	0	0
17	SLU 5	-0.04	-0.04	3.78	0	0	0
17	SLU 6	-0.04	-0.04	3.84	0	0	0
17	SLU 7	-0.04	-0.04	3.84	0	0	0
17	SLU 8	-0.04	-0.04	3.81	0	0	0
17	SLU 9	-0.04	-0.04	3.81	0	0	0
17	SLU 10	-0.05	-0.04	4.24	0	0	0
17	SLU 11	-0.05	-0.04	4.3	0	0	0
17	SLU 12	-0.05	-0.04	4.31	0	0	0
17	SLU 13	-0.05	-0.04	4.27	0	0	0
17	SLU 14	-0.05	-0.04	4.34	0	0	0
17	SLU 15	-0.05	-0.04	4.34	0	0	0
17	SLU 16	-0.05	-0.04	4.31	0	0	0
17	SLU 17	-0.05	-0.04	4.31	0	0	0
17	SLU 18	-0.05	-0.04	4.45	0	0	0
17	SLU 19	-0.05	-0.04	4.45	0	0	0
17	SLU 20	-0.05	-0.04	4.48	0	0	0
17	SLU 21	-0.05	-0.04	4.49	0	0	0
17	SLU 22	-0.04	-0.03	4.18	0	0	0
17	SLU 23	-0.04	-0.03	4.19	0	0	0
17	SLU 24	-0.04	-0.03	4.25	0	0	0
17	SLU 25	-0.04	-0.03	4.25	0	0	0
17	SLU 26	-0.04	-0.03	4.22	0	0	0
17	SLU 27	-0.04	-0.03	4.28	0	0	0
17	SLU 28	-0.04	-0.03	4.29	0	0	0
17	SLU 29	-0.04	-0.04	4.25	0	0	0
17	SLU 30	-0.04	-0.03	4.25	0	0	0
17	SLU 31	-0.05	-0.03	4.68	0	0	0
17	SLU 32	-0.05	-0.03	4.74	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
17	SLU 33	-0.05	-0.03	4.75	0	0	0
17	SLU 34	-0.05	-0.03	4.72	0	0	0
17	SLU 35	-0.05	-0.03	4.78	0	0	0
17	SLU 36	-0.05	-0.03	4.78	0	0	0
17	SLU 37	-0.05	-0.03	4.75	0	0	0
17	SLU 38	-0.05	-0.03	4.75	0	0	0
17	SLU 39	-0.05	-0.03	4.89	0	0	0
17	SLU 40	-0.05	-0.03	4.89	0	0	0
17	SLU 41	-0.05	-0.03	4.92	0	0	0
17	SLU 42	-0.05	-0.03	4.93	0	0	0
17	SLU 43	-0.05	-0.06	4.71	0	0	0
17	SLU 44	-0.05	-0.05	4.72	0	0	0
17	SLU 45	-0.05	-0.06	4.78	0	0	0
17	SLU 46	-0.05	-0.06	4.78	0	0	0
17	SLU 47	-0.05	-0.05	4.75	0	0	0
17	SLU 48	-0.05	-0.06	4.81	0	0	0
17	SLU 49	-0.05	-0.06	4.82	0	0	0
17	SLU 50	-0.05	-0.06	4.78	0	0	0
17	SLU 51	-0.05	-0.06	4.78	0	0	0
17	SLU 52	-0.06	-0.05	5.21	0	0	0
17	SLU 53	-0.06	-0.06	5.28	0	0	0
17	SLU 54	-0.06	-0.05	5.28	0	0	0
17	SLU 55	-0.06	-0.05	5.25	0	0	0
17	SLU 56	-0.06	-0.06	5.31	0	0	0
17	SLU 57	-0.06	-0.05	5.31	0	0	0
17	SLU 58	-0.06	-0.06	5.28	0	0	0
17	SLU 59	-0.06	-0.05	5.28	0	0	0
17	SLU 60	-0.06	-0.06	5.42	0	0	0
17	SLU 61	-0.06	-0.05	5.42	0	0	0
17	SLU 62	-0.06	-0.06	5.46	0	0	0
17	SLU 63	-0.06	-0.05	5.46	0	0	0
17	SLU 64	-0.05	-0.05	5.15	0	0	0
17	SLU 65	-0.05	-0.05	5.16	0	0	0
17	SLU 66	-0.05	-0.05	5.22	0	0	0
17	SLU 67	-0.05	-0.05	5.22	0	0	0
17	SLU 68	-0.05	-0.05	5.19	0	0	0
17	SLU 69	-0.05	-0.05	5.26	0	0	0
17	SLU 70	-0.05	-0.05	5.26	0	0	0
17	SLU 71	-0.05	-0.05	5.22	0	0	0
17	SLU 72	-0.05	-0.05	5.22	0	0	0
17	SLU 73	-0.06	-0.04	5.65	0	0	0
17	SLU 74	-0.06	-0.05	5.72	0	0	0
17	SLU 75	-0.06	-0.04	5.72	0	0	0
17	SLU 76	-0.06	-0.04	5.69	0	0	0
17	SLU 77	-0.06	-0.05	5.75	0	0	0
17	SLU 78	-0.06	-0.04	5.75	0	0	0
17	SLU 79	-0.06	-0.05	5.72	0	0	0
17	SLU 80	-0.06	-0.05	5.72	0	0	0
17	SLU 81	-0.06	-0.05	5.86	0	0	0
17	SLU 82	-0.06	-0.04	5.86	0	0	0
17	SLU 83	-0.06	-0.05	5.9	0	0	0
17	SLU 84	-0.06	-0.04	5.9	0	0	0
17	SLE RA 1	-0.04	-0.04	3.87	0	0	0
17	SLE RA 2	-0.04	-0.04	3.87	0	0	0
17	SLE RA 3	-0.04	-0.04	3.91	0	0	0
17	SLE RA 4	-0.04	-0.04	3.91	0	0	0
17	SLE RA 5	-0.04	-0.04	3.89	0	0	0
17	SLE RA 6	-0.04	-0.04	3.94	0	0	0
17	SLE RA 7	-0.04	-0.04	3.94	0	0	0
17	SLE RA 8	-0.04	-0.04	3.91	0	0	0
17	SLE RA 9	-0.04	-0.04	3.91	0	0	0
17	SLE RA 10	-0.04	-0.04	4.2	0	0	0
17	SLE RA 11	-0.04	-0.04	4.24	0	0	0
17	SLE RA 12	-0.04	-0.04	4.24	0	0	0
17	SLE RA 13	-0.04	-0.04	4.22	0	0	0
17	SLE RA 14	-0.05	-0.04	4.27	0	0	0
17	SLE RA 15	-0.05	-0.04	4.27	0	0	0
17	SLE RA 16	-0.05	-0.04	4.24	0	0	0
17	SLE RA 17	-0.05	-0.04	4.25	0	0	0
17	SLE RA 18	-0.05	-0.04	4.34	0	0	0
17	SLE RA 19	-0.05	-0.04	4.34	0	0	0
17	SLE RA 20	-0.05	-0.04	4.36	0	0	0
17	SLE RA 21	-0.05	-0.04	4.36	0	0	0
17	SLE FR 1	-0.04	-0.04	3.87	0	0	0
17	SLE FR 2	-0.04	-0.04	3.87	0	0	0
17	SLE FR 3	-0.04	-0.04	3.88	0	0	0
17	SLE FR 4	-0.04	-0.04	4.01	0	0	0
17	SLE FR 5	-0.04	-0.04	4.02	0	0	0
17	SLE FR 6	-0.04	-0.04	4.1	0	0	0
17	SLE QP 1	-0.04	-0.04	3.87	0	0	0
17	SLE QP 2	-0.04	-0.04	4.01	0	0	0
17	SLD 1	0.24	0	3.88	0	0	0
17	SLD 2	0.25	0.01	3.88	0	0	0
17	SLD 3	0.23	-0.11	3.83	0	0	0
17	SLD 4	0.24	-0.1	3.83	0	0	0
17	SLD 5	0.06	0.13	4.05	0	0	0
17	SLD 6	0.07	0.14	4.05	0	0	0
17	SLD 7	0.02	-0.22	3.88	0	0	0
17	SLD 8	0.03	-0.22	3.88	0	0	0
17	SLD 9	-0.1	0.14	4.14	0	0	0
17	SLD 10	-0.1	0.14	4.14	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
17	SLD 11	-0.15	-0.22	3.97	0	0	0
17	SLD 12	-0.14	-0.21	3.97	0	0	0
17	SLD 13	-0.31	0.02	4.19	0	0	0
17	SLD 14	-0.31	0.03	4.19	0	0	0
17	SLD 15	-0.33	-0.09	4.14	0	0	0
17	SLD 16	-0.32	-0.08	4.14	0	0	0
17	SLV 1	0.62	0.05	3.7	0	0	0
17	SLV 2	0.63	0.07	3.7	0	0	0
17	SLV 3	0.59	-0.19	3.58	0	0	0
17	SLV 4	0.6	-0.17	3.58	0	0	0
17	SLV 5	0.2	0.35	4.09	0	0	0
17	SLV 6	0.21	0.36	4.09	0	0	0
17	SLV 7	0.1	-0.46	3.71	0	0	0
17	SLV 8	0.11	-0.44	3.7	0	0	0
17	SLV 9	-0.19	0.36	4.32	0	0	0
17	SLV 10	-0.18	0.38	4.31	0	0	0
17	SLV 11	-0.29	-0.44	3.93	0	0	0
17	SLV 12	-0.28	-0.43	3.93	0	0	0
17	SLV 13	-0.68	0.09	4.44	0	0	0
17	SLV 14	-0.67	0.11	4.43	0	0	0
17	SLV 15	-0.71	-0.15	4.32	0	0	0
17	SLV 16	-0.7	-0.13	4.32	0	0	0
18	SLU 1	-0.03	-0.05	3.36	0	0	0
18	SLU 2	-0.03	-0.04	3.36	0	0	0
18	SLU 3	-0.03	-0.04	3.42	0	0	0
18	SLU 4	-0.03	-0.04	3.42	0	0	0
18	SLU 5	-0.03	-0.04	3.4	0	0	0
18	SLU 6	-0.03	-0.04	3.46	0	0	0
18	SLU 7	-0.03	-0.04	3.46	0	0	0
18	SLU 8	-0.04	-0.05	3.43	0	0	0
18	SLU 9	-0.04	-0.04	3.43	0	0	0
18	SLU 10	-0.04	-0.04	3.82	0	0	0
18	SLU 11	-0.04	-0.04	3.89	0	0	0
18	SLU 12	-0.04	-0.04	3.89	0	0	0
18	SLU 13	-0.04	-0.04	3.86	0	0	0
18	SLU 14	-0.04	-0.04	3.92	0	0	0
18	SLU 15	-0.04	-0.04	3.92	0	0	0
18	SLU 16	-0.04	-0.04	3.9	0	0	0
18	SLU 17	-0.04	-0.04	3.9	0	0	0
18	SLU 18	-0.04	-0.04	4.02	0	0	0
18	SLU 19	-0.04	-0.04	4.02	0	0	0
18	SLU 20	-0.05	-0.04	4.06	0	0	0
18	SLU 21	-0.05	-0.04	4.06	0	0	0
18	SLU 22	-0.03	-0.04	3.75	0	0	0
18	SLU 23	-0.03	-0.03	3.75	0	0	0
18	SLU 24	-0.03	-0.04	3.82	0	0	0
18	SLU 25	-0.03	-0.03	3.82	0	0	0
18	SLU 26	-0.03	-0.03	3.79	0	0	0
18	SLU 27	-0.04	-0.04	3.85	0	0	0
18	SLU 28	-0.04	-0.03	3.85	0	0	0
18	SLU 29	-0.04	-0.04	3.83	0	0	0
18	SLU 30	-0.04	-0.04	3.83	0	0	0
18	SLU 31	-0.04	-0.03	4.22	0	0	0
18	SLU 32	-0.04	-0.03	4.28	0	0	0
18	SLU 33	-0.04	-0.03	4.28	0	0	0
18	SLU 34	-0.04	-0.03	4.26	0	0	0
18	SLU 35	-0.04	-0.04	4.32	0	0	0
18	SLU 36	-0.04	-0.03	4.32	0	0	0
18	SLU 37	-0.05	-0.04	4.29	0	0	0
18	SLU 38	-0.05	-0.03	4.29	0	0	0
18	SLU 39	-0.05	-0.03	4.42	0	0	0
18	SLU 40	-0.05	-0.03	4.42	0	0	0
18	SLU 41	-0.05	-0.04	4.45	0	0	0
18	SLU 42	-0.05	-0.03	4.45	0	0	0
18	SLU 43	-0.04	-0.06	4.23	0	0	0
18	SLU 44	-0.04	-0.06	4.23	0	0	0
18	SLU 45	-0.04	-0.06	4.29	0	0	0
18	SLU 46	-0.04	-0.06	4.29	0	0	0
18	SLU 47	-0.04	-0.06	4.27	0	0	0
18	SLU 48	-0.04	-0.06	4.33	0	0	0
18	SLU 49	-0.04	-0.06	4.33	0	0	0
18	SLU 50	-0.04	-0.06	4.3	0	0	0
18	SLU 51	-0.04	-0.06	4.3	0	0	0
18	SLU 52	-0.05	-0.06	4.7	0	0	0
18	SLU 53	-0.05	-0.06	4.76	0	0	0
18	SLU 54	-0.05	-0.06	4.76	0	0	0
18	SLU 55	-0.05	-0.06	4.73	0	0	0
18	SLU 56	-0.05	-0.06	4.8	0	0	0
18	SLU 57	-0.05	-0.06	4.8	0	0	0
18	SLU 58	-0.05	-0.06	4.77	0	0	0
18	SLU 59	-0.05	-0.06	4.77	0	0	0
18	SLU 60	-0.05	-0.06	4.9	0	0	0
18	SLU 61	-0.05	-0.06	4.9	0	0	0
18	SLU 62	-0.05	-0.06	4.93	0	0	0
18	SLU 63	-0.05	-0.06	4.93	0	0	0
18	SLU 64	-0.04	-0.05	4.63	0	0	0
18	SLU 65	-0.04	-0.05	4.63	0	0	0
18	SLU 66	-0.04	-0.05	4.69	0	0	0
18	SLU 67	-0.04	-0.05	4.69	0	0	0
18	SLU 68	-0.04	-0.05	4.66	0	0	0
18	SLU 69	-0.05	-0.05	4.73	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18	SLU 70	-0.05	-0.05	4.73	0	0	0
18	SLU 71	-0.05	-0.05	4.7	0	0	0
18	SLU 72	-0.05	-0.05	4.7	0	0	0
18	SLU 73	-0.05	-0.05	5.09	0	0	0
18	SLU 74	-0.05	-0.05	5.15	0	0	0
18	SLU 75	-0.05	-0.05	5.15	0	0	0
18	SLU 76	-0.05	-0.05	5.13	0	0	0
18	SLU 77	-0.05	-0.05	5.19	0	0	0
18	SLU 78	-0.05	-0.05	5.19	0	0	0
18	SLU 79	-0.05	-0.05	5.16	0	0	0
18	SLU 80	-0.05	-0.05	5.16	0	0	0
18	SLU 81	-0.05	-0.05	5.29	0	0	0
18	SLU 82	-0.05	-0.05	5.29	0	0	0
18	SLU 83	-0.06	-0.05	5.33	0	0	0
18	SLU 84	-0.06	-0.05	5.33	0	0	0
18	SLE RA 1	-0.03	-0.04	3.47	0	0	0
18	SLE RA 2	-0.03	-0.04	3.47	0	0	0
18	SLE RA 3	-0.03	-0.04	3.51	0	0	0
18	SLE RA 4	-0.03	-0.04	3.51	0	0	0
18	SLE RA 5	-0.03	-0.04	3.5	0	0	0
18	SLE RA 6	-0.03	-0.04	3.54	0	0	0
18	SLE RA 7	-0.03	-0.04	3.54	0	0	0
18	SLE RA 8	-0.03	-0.04	3.52	0	0	0
18	SLE RA 9	-0.03	-0.04	3.52	0	0	0
18	SLE RA 10	-0.04	-0.04	3.78	0	0	0
18	SLE RA 11	-0.04	-0.04	3.82	0	0	0
18	SLE RA 12	-0.04	-0.04	3.82	0	0	0
18	SLE RA 13	-0.04	-0.04	3.81	0	0	0
18	SLE RA 14	-0.04	-0.04	3.85	0	0	0
18	SLE RA 15	-0.04	-0.04	3.85	0	0	0
18	SLE RA 16	-0.04	-0.04	3.83	0	0	0
18	SLE RA 17	-0.04	-0.04	3.83	0	0	0
18	SLE RA 18	-0.04	-0.04	3.91	0	0	0
18	SLE RA 19	-0.04	-0.04	3.91	0	0	0
18	SLE RA 20	-0.04	-0.04	3.94	0	0	0
18	SLE RA 21	-0.04	-0.04	3.94	0	0	0
18	SLE FR 1	-0.03	-0.04	3.47	0	0	0
18	SLE FR 2	-0.03	-0.04	3.47	0	0	0
18	SLE FR 3	-0.03	-0.04	3.48	0	0	0
18	SLE FR 4	-0.03	-0.04	3.6	0	0	0
18	SLE FR 5	-0.03	-0.04	3.61	0	0	0
18	SLE FR 6	-0.04	-0.04	3.69	0	0	0
18	SLE QP 1	-0.03	-0.04	3.47	0	0	0
18	SLE QP 2	-0.03	-0.04	3.6	0	0	0
18	SLD 1	0.21	0.01	3.64	0	0	0
18	SLD 2	0.21	0.01	3.64	0	0	0
18	SLD 3	0.2	-0.08	3.63	0	0	0
18	SLD 4	0.2	-0.08	3.63	0	0	0
18	SLD 5	0.05	0.12	3.63	0	0	0
18	SLD 6	0.06	0.12	3.63	0	0	0
18	SLD 7	0.02	-0.2	3.6	0	0	0
18	SLD 8	0.02	-0.2	3.6	0	0	0
18	SLD 9	-0.09	0.11	3.61	0	0	0
18	SLD 10	-0.09	0.11	3.61	0	0	0
18	SLD 11	-0.13	-0.2	3.58	0	0	0
18	SLD 12	-0.12	-0.2	3.58	0	0	0
18	SLD 13	-0.27	-0.01	3.58	0	0	0
18	SLD 14	-0.27	0	3.58	0	0	0
18	SLD 15	-0.28	-0.1	3.57	0	0	0
18	SLD 16	-0.28	-0.1	3.57	0	0	0
18	SLV 1	0.53	0.08	3.68	0	0	0
18	SLV 2	0.54	0.09	3.68	0	0	0
18	SLV 3	0.51	-0.13	3.66	0	0	0
18	SLV 4	0.52	-0.13	3.66	0	0	0
18	SLV 5	0.17	0.32	3.65	0	0	0
18	SLV 6	0.18	0.32	3.65	0	0	0
18	SLV 7	0.09	-0.39	3.59	0	0	0
18	SLV 8	0.09	-0.39	3.59	0	0	0
18	SLV 9	-0.16	0.31	3.62	0	0	0
18	SLV 10	-0.16	0.31	3.62	0	0	0
18	SLV 11	-0.25	-0.41	3.55	0	0	0
18	SLV 12	-0.24	-0.4	3.55	0	0	0
18	SLV 13	-0.59	0.04	3.55	0	0	0
18	SLV 14	-0.58	0.05	3.55	0	0	0
18	SLV 15	-0.61	-0.17	3.53	0	0	0
18	SLV 16	-0.6	-0.17	3.53	0	0	0
19	SLU 1	-0.11	-0.16	11.8	0	0	0
19	SLU 2	-0.11	-0.14	11.8	0	0	0
19	SLU 3	-0.12	-0.16	12.02	0	0	0
19	SLU 4	-0.12	-0.15	12.02	0	0	0
19	SLU 5	-0.12	-0.14	11.93	0	0	0
19	SLU 6	-0.12	-0.16	12.15	0	0	0
19	SLU 7	-0.12	-0.15	12.15	0	0	0
19	SLU 8	-0.12	-0.16	12.05	0	0	0
19	SLU 9	-0.12	-0.15	12.05	0	0	0
19	SLU 10	-0.14	-0.14	13.43	0	0	0
19	SLU 11	-0.15	-0.15	13.65	0	0	0
19	SLU 12	-0.15	-0.14	13.65	0	0	0
19	SLU 13	-0.15	-0.14	13.56	0	0	0
19	SLU 14	-0.15	-0.15	13.78	0	0	0
19	SLU 15	-0.15	-0.14	13.78	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
19	SLU 16	-0.15	-0.15	13.68	0	0	0
19	SLU 17	-0.15	-0.14	13.68	0	0	0
19	SLU 18	-0.15	-0.15	14.12	0	0	0
19	SLU 19	-0.15	-0.14	14.13	0	0	0
19	SLU 20	-0.16	-0.15	14.25	0	0	0
19	SLU 21	-0.16	-0.14	14.25	0	0	0
19	SLU 22	-0.12	-0.13	13.18	0	0	0
19	SLU 23	-0.11	-0.12	13.18	0	0	0
19	SLU 24	-0.12	-0.13	13.4	0	0	0
19	SLU 25	-0.12	-0.12	13.41	0	0	0
19	SLU 26	-0.12	-0.12	13.31	0	0	0
19	SLU 27	-0.13	-0.13	13.53	0	0	0
19	SLU 28	-0.13	-0.12	13.53	0	0	0
19	SLU 29	-0.13	-0.13	13.44	0	0	0
19	SLU 30	-0.13	-0.13	13.44	0	0	0
19	SLU 31	-0.15	-0.11	14.81	0	0	0
19	SLU 32	-0.15	-0.12	15.04	0	0	0
19	SLU 33	-0.15	-0.11	15.04	0	0	0
19	SLU 34	-0.15	-0.11	14.94	0	0	0
19	SLU 35	-0.16	-0.12	15.16	0	0	0
19	SLU 36	-0.16	-0.11	15.16	0	0	0
19	SLU 37	-0.16	-0.13	15.07	0	0	0
19	SLU 38	-0.16	-0.12	15.07	0	0	0
19	SLU 39	-0.16	-0.12	15.51	0	0	0
19	SLU 40	-0.16	-0.11	15.51	0	0	0
19	SLU 41	-0.17	-0.12	15.64	0	0	0
19	SLU 42	-0.17	-0.11	15.64	0	0	0
19	SLU 43	-0.14	-0.21	14.86	0	0	0
19	SLU 44	-0.14	-0.2	14.86	0	0	0
19	SLU 45	-0.15	-0.21	15.08	0	0	0
19	SLU 46	-0.15	-0.2	15.08	0	0	0
19	SLU 47	-0.15	-0.2	14.99	0	0	0
19	SLU 48	-0.15	-0.21	15.21	0	0	0
19	SLU 49	-0.15	-0.2	15.21	0	0	0
19	SLU 50	-0.16	-0.22	15.11	0	0	0
19	SLU 51	-0.16	-0.21	15.12	0	0	0
19	SLU 52	-0.17	-0.19	16.49	0	0	0
19	SLU 53	-0.18	-0.2	16.71	0	0	0
19	SLU 54	-0.18	-0.19	16.71	0	0	0
19	SLU 55	-0.18	-0.19	16.62	0	0	0
19	SLU 56	-0.18	-0.21	16.84	0	0	0
19	SLU 57	-0.18	-0.2	16.84	0	0	0
19	SLU 58	-0.19	-0.21	16.74	0	0	0
19	SLU 59	-0.19	-0.2	16.75	0	0	0
19	SLU 60	-0.19	-0.2	17.19	0	0	0
19	SLU 61	-0.19	-0.19	17.19	0	0	0
19	SLU 62	-0.19	-0.21	17.32	0	0	0
19	SLU 63	-0.19	-0.2	17.32	0	0	0
19	SLU 64	-0.15	-0.19	16.25	0	0	0
19	SLU 65	-0.15	-0.17	16.25	0	0	0
19	SLU 66	-0.15	-0.19	16.47	0	0	0
19	SLU 67	-0.15	-0.18	16.47	0	0	0
19	SLU 68	-0.15	-0.17	16.38	0	0	0
19	SLU 69	-0.16	-0.19	16.6	0	0	0
19	SLU 70	-0.16	-0.18	16.6	0	0	0
19	SLU 71	-0.16	-0.19	16.5	0	0	0
19	SLU 72	-0.16	-0.18	16.5	0	0	0
19	SLU 73	-0.18	-0.17	17.88	0	0	0
19	SLU 74	-0.18	-0.18	18.1	0	0	0
19	SLU 75	-0.18	-0.17	18.1	0	0	0
19	SLU 76	-0.18	-0.17	18.01	0	0	0
19	SLU 77	-0.19	-0.18	18.23	0	0	0
19	SLU 78	-0.19	-0.17	18.23	0	0	0
19	SLU 79	-0.19	-0.18	18.13	0	0	0
19	SLU 80	-0.19	-0.17	18.13	0	0	0
19	SLU 81	-0.19	-0.18	18.57	0	0	0
19	SLU 82	-0.19	-0.17	18.58	0	0	0
19	SLU 83	-0.2	-0.18	18.7	0	0	0
19	SLU 84	-0.2	-0.17	18.7	0	0	0
19	SLE RA 1	-0.11	-0.15	12.19	0	0	0
19	SLE RA 2	-0.11	-0.14	12.19	0	0	0
19	SLE RA 3	-0.12	-0.15	12.34	0	0	0
19	SLE RA 4	-0.12	-0.14	12.34	0	0	0
19	SLE RA 5	-0.12	-0.14	12.28	0	0	0
19	SLE RA 6	-0.12	-0.15	12.43	0	0	0
19	SLE RA 7	-0.12	-0.14	12.43	0	0	0
19	SLE RA 8	-0.12	-0.15	12.36	0	0	0
19	SLE RA 9	-0.12	-0.15	12.36	0	0	0
19	SLE RA 10	-0.13	-0.14	13.28	0	0	0
19	SLE RA 11	-0.14	-0.14	13.43	0	0	0
19	SLE RA 12	-0.14	-0.14	13.43	0	0	0
19	SLE RA 13	-0.14	-0.14	13.37	0	0	0
19	SLE RA 14	-0.14	-0.14	13.51	0	0	0
19	SLE RA 15	-0.14	-0.14	13.51	0	0	0
19	SLE RA 16	-0.14	-0.15	13.45	0	0	0
19	SLE RA 17	-0.14	-0.14	13.45	0	0	0
19	SLE RA 18	-0.14	-0.14	13.74	0	0	0
19	SLE RA 19	-0.14	-0.14	13.75	0	0	0
19	SLE RA 20	-0.15	-0.14	13.83	0	0	0
19	SLE RA 21	-0.15	-0.14	13.83	0	0	0
19	SLE FR 1	-0.11	-0.15	12.19	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
19	SLE FR 2	-0.11	-0.15	12.19	0	0	0
19	SLE FR 3	-0.11	-0.15	12.23	0	0	0
19	SLE FR 4	-0.12	-0.15	12.66	0	0	0
19	SLE FR 5	-0.12	-0.15	12.69	0	0	0
19	SLE FR 6	-0.13	-0.15	12.97	0	0	0
19	SLE QP 1	-0.11	-0.15	12.19	0	0	0
19	SLE QP 2	-0.12	-0.15	12.66	0	0	0
19	SLD 1	0.73	0.04	12.74	0	0	0
19	SLD 2	0.75	0.05	12.74	0	0	0
19	SLD 3	0.69	-0.29	12.71	0	0	0
19	SLD 4	0.71	-0.28	12.71	0	0	0
19	SLD 5	0.19	0.41	12.73	0	0	0
19	SLD 6	0.2	0.41	12.73	0	0	0
19	SLD 7	0.06	-0.69	12.63	0	0	0
19	SLD 8	0.07	-0.69	12.63	0	0	0
19	SLD 9	-0.31	0.39	12.69	0	0	0
19	SLD 10	-0.3	0.4	12.69	0	0	0
19	SLD 11	-0.45	-0.71	12.59	0	0	0
19	SLD 12	-0.43	-0.71	12.59	0	0	0
19	SLD 13	-0.95	-0.02	12.6	0	0	0
19	SLD 14	-0.94	-0.01	12.6	0	0	0
19	SLD 15	-0.99	-0.35	12.57	0	0	0
19	SLD 16	-0.98	-0.34	12.57	0	0	0
19	SLV 1	1.88	0.29	12.85	0	0	0
19	SLV 2	1.91	0.31	12.85	0	0	0
19	SLV 3	1.79	-0.46	12.78	0	0	0
19	SLV 4	1.82	-0.44	12.78	0	0	0
19	SLV 5	0.61	1.12	12.82	0	0	0
19	SLV 6	0.63	1.13	12.82	0	0	0
19	SLV 7	0.31	-1.39	12.59	0	0	0
19	SLV 8	0.33	-1.38	12.59	0	0	0
19	SLV 9	-0.57	1.08	12.72	0	0	0
19	SLV 10	-0.55	1.09	12.72	0	0	0
19	SLV 11	-0.88	-1.43	12.5	0	0	0
19	SLV 12	-0.85	-1.42	12.5	0	0	0
19	SLV 13	-2.07	0.15	12.53	0	0	0
19	SLV 14	-2.03	0.17	12.53	0	0	0
19	SLV 15	-2.16	-0.6	12.46	0	0	0
19	SLV 16	-2.12	-0.59	12.46	0	0	0
21	SLU 1	-0.13	-0.18	13.83	0	0	0
21	SLU 2	-0.13	-0.16	13.84	0	0	0
21	SLU 3	-0.14	-0.18	14.09	0	0	0
21	SLU 4	-0.14	-0.17	14.1	0	0	0
21	SLU 5	-0.14	-0.17	13.99	0	0	0
21	SLU 6	-0.15	-0.18	14.24	0	0	0
21	SLU 7	-0.14	-0.17	14.24	0	0	0
21	SLU 8	-0.15	-0.19	14.13	0	0	0
21	SLU 9	-0.15	-0.17	14.13	0	0	0
21	SLU 10	-0.17	-0.15	15.74	0	0	0
21	SLU 11	-0.17	-0.17	16	0	0	0
21	SLU 12	-0.17	-0.16	16	0	0	0
21	SLU 13	-0.17	-0.16	15.89	0	0	0
21	SLU 14	-0.18	-0.17	16.14	0	0	0
21	SLU 15	-0.18	-0.16	16.14	0	0	0
21	SLU 16	-0.18	-0.18	16.03	0	0	0
21	SLU 17	-0.18	-0.17	16.03	0	0	0
21	SLU 18	-0.18	-0.17	16.55	0	0	0
21	SLU 19	-0.18	-0.16	16.55	0	0	0
21	SLU 20	-0.19	-0.17	16.7	0	0	0
21	SLU 21	-0.19	-0.16	16.7	0	0	0
21	SLU 22	-0.14	-0.15	15.47	0	0	0
21	SLU 23	-0.14	-0.13	15.47	0	0	0
21	SLU 24	-0.14	-0.15	15.72	0	0	0
21	SLU 25	-0.14	-0.14	15.73	0	0	0
21	SLU 26	-0.14	-0.13	15.62	0	0	0
21	SLU 27	-0.15	-0.15	15.87	0	0	0
21	SLU 28	-0.15	-0.14	15.87	0	0	0
21	SLU 29	-0.15	-0.15	15.76	0	0	0
21	SLU 30	-0.15	-0.14	15.76	0	0	0
21	SLU 31	-0.17	-0.12	17.37	0	0	0
21	SLU 32	-0.18	-0.14	17.63	0	0	0
21	SLU 33	-0.18	-0.13	17.63	0	0	0
21	SLU 34	-0.18	-0.13	17.52	0	0	0
21	SLU 35	-0.19	-0.14	17.77	0	0	0
21	SLU 36	-0.19	-0.13	17.78	0	0	0
21	SLU 37	-0.19	-0.15	17.66	0	0	0
21	SLU 38	-0.19	-0.13	17.66	0	0	0
21	SLU 39	-0.19	-0.14	18.18	0	0	0
21	SLU 40	-0.19	-0.13	18.19	0	0	0
21	SLU 41	-0.2	-0.14	18.33	0	0	0
21	SLU 42	-0.2	-0.13	18.33	0	0	0
21	SLU 43	-0.17	-0.25	17.43	0	0	0
21	SLU 44	-0.17	-0.23	17.43	0	0	0
21	SLU 45	-0.18	-0.24	17.68	0	0	0
21	SLU 46	-0.17	-0.23	17.69	0	0	0
21	SLU 47	-0.18	-0.23	17.58	0	0	0
21	SLU 48	-0.18	-0.25	17.83	0	0	0
21	SLU 49	-0.18	-0.23	17.83	0	0	0
21	SLU 50	-0.19	-0.25	17.72	0	0	0
21	SLU 51	-0.18	-0.24	17.72	0	0	0
21	SLU 52	-0.2	-0.22	19.33	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
21	SLU 53	-0.21	-0.23	19.59	0	0	0
21	SLU 54	-0.21	-0.22	19.59	0	0	0
21	SLU 55	-0.21	-0.22	19.48	0	0	0
21	SLU 56	-0.22	-0.24	19.73	0	0	0
21	SLU 57	-0.22	-0.23	19.74	0	0	0
21	SLU 58	-0.22	-0.24	19.62	0	0	0
21	SLU 59	-0.22	-0.23	19.62	0	0	0
21	SLU 60	-0.22	-0.23	20.14	0	0	0
21	SLU 61	-0.22	-0.22	20.15	0	0	0
21	SLU 62	-0.23	-0.24	20.29	0	0	0
21	SLU 63	-0.23	-0.23	20.29	0	0	0
21	SLU 64	-0.18	-0.22	19.06	0	0	0
21	SLU 65	-0.17	-0.2	19.06	0	0	0
21	SLU 66	-0.18	-0.21	19.32	0	0	0
21	SLU 67	-0.18	-0.2	19.32	0	0	0
21	SLU 68	-0.18	-0.2	19.21	0	0	0
21	SLU 69	-0.19	-0.21	19.46	0	0	0
21	SLU 70	-0.19	-0.2	19.46	0	0	0
21	SLU 71	-0.19	-0.22	19.35	0	0	0
21	SLU 72	-0.19	-0.21	19.35	0	0	0
21	SLU 73	-0.21	-0.19	20.96	0	0	0
21	SLU 74	-0.22	-0.2	21.22	0	0	0
21	SLU 75	-0.22	-0.19	21.22	0	0	0
21	SLU 76	-0.22	-0.19	21.11	0	0	0
21	SLU 77	-0.22	-0.21	21.36	0	0	0
21	SLU 78	-0.22	-0.19	21.37	0	0	0
21	SLU 79	-0.23	-0.21	21.25	0	0	0
21	SLU 80	-0.23	-0.2	21.25	0	0	0
21	SLU 81	-0.23	-0.2	21.77	0	0	0
21	SLU 82	-0.23	-0.19	21.78	0	0	0
21	SLU 83	-0.23	-0.2	21.92	0	0	0
21	SLU 84	-0.23	-0.19	21.92	0	0	0
21	SLE RA 1	-0.13	-0.17	14.3	0	0	0
21	SLE RA 2	-0.13	-0.16	14.3	0	0	0
21	SLE RA 3	-0.14	-0.17	14.47	0	0	0
21	SLE RA 4	-0.14	-0.16	14.47	0	0	0
21	SLE RA 5	-0.14	-0.16	14.4	0	0	0
21	SLE RA 6	-0.14	-0.17	14.57	0	0	0
21	SLE RA 7	-0.14	-0.16	14.57	0	0	0
21	SLE RA 8	-0.14	-0.18	14.5	0	0	0
21	SLE RA 9	-0.14	-0.17	14.5	0	0	0
21	SLE RA 10	-0.16	-0.15	15.57	0	0	0
21	SLE RA 11	-0.16	-0.16	15.74	0	0	0
21	SLE RA 12	-0.16	-0.16	15.74	0	0	0
21	SLE RA 13	-0.16	-0.16	15.67	0	0	0
21	SLE RA 14	-0.17	-0.17	15.84	0	0	0
21	SLE RA 15	-0.17	-0.16	15.84	0	0	0
21	SLE RA 16	-0.17	-0.17	15.76	0	0	0
21	SLE RA 17	-0.17	-0.16	15.77	0	0	0
21	SLE RA 18	-0.17	-0.16	16.11	0	0	0
21	SLE RA 19	-0.17	-0.16	16.11	0	0	0
21	SLE RA 20	-0.17	-0.17	16.21	0	0	0
21	SLE RA 21	-0.17	-0.16	16.21	0	0	0
21	SLE FR 1	-0.13	-0.17	14.3	0	0	0
21	SLE FR 2	-0.13	-0.17	14.3	0	0	0
21	SLE FR 3	-0.14	-0.17	14.34	0	0	0
21	SLE FR 4	-0.14	-0.17	14.84	0	0	0
21	SLE FR 5	-0.15	-0.17	14.88	0	0	0
21	SLE FR 6	-0.15	-0.17	15.21	0	0	0
21	SLE QP 1	-0.13	-0.17	14.3	0	0	0
21	SLE QP 2	-0.14	-0.17	14.84	0	0	0
21	SLD 1	0.86	0.05	14.81	0	0	0
21	SLD 2	0.88	0.06	14.81	0	0	0
21	SLD 3	0.82	-0.34	14.76	0	0	0
21	SLD 4	0.84	-0.32	14.76	0	0	0
21	SLD 5	0.23	0.48	14.9	0	0	0
21	SLD 6	0.24	0.49	14.9	0	0	0
21	SLD 7	0.07	-0.81	14.75	0	0	0
21	SLD 8	0.08	-0.8	14.75	0	0	0
21	SLD 9	-0.37	0.46	14.94	0	0	0
21	SLD 10	-0.36	0.47	14.94	0	0	0
21	SLD 11	-0.53	-0.83	14.79	0	0	0
21	SLD 12	-0.51	-0.82	14.79	0	0	0
21	SLD 13	-1.13	-0.02	14.93	0	0	0
21	SLD 14	-1.11	0	14.93	0	0	0
21	SLD 15	-1.17	-0.41	14.88	0	0	0
21	SLD 16	-1.15	-0.39	14.88	0	0	0
21	SLV 1	2.21	0.34	14.75	0	0	0
21	SLV 2	2.26	0.37	14.75	0	0	0
21	SLV 3	2.11	-0.55	14.65	0	0	0
21	SLV 4	2.15	-0.52	14.65	0	0	0
21	SLV 5	0.72	1.32	14.97	0	0	0
21	SLV 6	0.75	1.34	14.97	0	0	0
21	SLV 7	0.36	-1.63	14.63	0	0	0
21	SLV 8	0.39	-1.61	14.63	0	0	0
21	SLV 9	-0.68	1.27	15.06	0	0	0
21	SLV 10	-0.65	1.29	15.05	0	0	0
21	SLV 11	-1.04	-1.68	14.72	0	0	0
21	SLV 12	-1.01	-1.66	14.72	0	0	0
21	SLV 13	-2.44	0.18	15.04	0	0	0
21	SLV 14	-2.39	0.21	15.03	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
21	SLV 15	-2.55	-0.71	14.94	0	0	0
21	SLV 16	-2.5	-0.68	14.93	0	0	0
22	SLU 1	-0.13	-0.18	13.74	0	0	0
22	SLU 2	-0.13	-0.16	13.74	0	0	0
22	SLU 3	-0.14	-0.17	13.99	0	0	0
22	SLU 4	-0.14	-0.16	13.99	0	0	0
22	SLU 5	-0.14	-0.16	13.88	0	0	0
22	SLU 6	-0.15	-0.17	14.13	0	0	0
22	SLU 7	-0.15	-0.16	14.13	0	0	0
22	SLU 8	-0.15	-0.18	14.02	0	0	0
22	SLU 9	-0.15	-0.17	14.02	0	0	0
22	SLU 10	-0.17	-0.15	15.62	0	0	0
22	SLU 11	-0.17	-0.16	15.87	0	0	0
22	SLU 12	-0.17	-0.15	15.87	0	0	0
22	SLU 13	-0.17	-0.15	15.76	0	0	0
22	SLU 14	-0.18	-0.17	16.01	0	0	0
22	SLU 15	-0.18	-0.15	16.01	0	0	0
22	SLU 16	-0.18	-0.17	15.9	0	0	0
22	SLU 17	-0.18	-0.16	15.9	0	0	0
22	SLU 18	-0.18	-0.16	16.42	0	0	0
22	SLU 19	-0.18	-0.15	16.42	0	0	0
22	SLU 20	-0.19	-0.17	16.56	0	0	0
22	SLU 21	-0.19	-0.15	16.56	0	0	0
22	SLU 22	-0.14	-0.15	15.36	0	0	0
22	SLU 23	-0.14	-0.13	15.36	0	0	0
22	SLU 24	-0.14	-0.14	15.61	0	0	0
22	SLU 25	-0.14	-0.13	15.62	0	0	0
22	SLU 26	-0.14	-0.13	15.51	0	0	0
22	SLU 27	-0.15	-0.14	15.76	0	0	0
22	SLU 28	-0.15	-0.13	15.76	0	0	0
22	SLU 29	-0.15	-0.15	15.64	0	0	0
22	SLU 30	-0.15	-0.14	15.65	0	0	0
22	SLU 31	-0.17	-0.12	17.24	0	0	0
22	SLU 32	-0.18	-0.13	17.49	0	0	0
22	SLU 33	-0.18	-0.12	17.5	0	0	0
22	SLU 34	-0.18	-0.12	17.38	0	0	0
22	SLU 35	-0.19	-0.13	17.63	0	0	0
22	SLU 36	-0.19	-0.12	17.64	0	0	0
22	SLU 37	-0.19	-0.14	17.52	0	0	0
22	SLU 38	-0.19	-0.13	17.52	0	0	0
22	SLU 39	-0.19	-0.13	18.04	0	0	0
22	SLU 40	-0.19	-0.12	18.05	0	0	0
22	SLU 41	-0.2	-0.13	18.18	0	0	0
22	SLU 42	-0.2	-0.12	18.19	0	0	0
22	SLU 43	-0.17	-0.24	17.3	0	0	0
22	SLU 44	-0.17	-0.22	17.3	0	0	0
22	SLU 45	-0.18	-0.24	17.55	0	0	0
22	SLU 46	-0.17	-0.23	17.56	0	0	0
22	SLU 47	-0.18	-0.22	17.45	0	0	0
22	SLU 48	-0.18	-0.24	17.7	0	0	0
22	SLU 49	-0.18	-0.23	17.7	0	0	0
22	SLU 50	-0.19	-0.24	17.58	0	0	0
22	SLU 51	-0.18	-0.23	17.59	0	0	0
22	SLU 52	-0.2	-0.21	19.18	0	0	0
22	SLU 53	-0.21	-0.23	19.43	0	0	0
22	SLU 54	-0.21	-0.22	19.44	0	0	0
22	SLU 55	-0.21	-0.21	19.32	0	0	0
22	SLU 56	-0.22	-0.23	19.57	0	0	0
22	SLU 57	-0.22	-0.22	19.58	0	0	0
22	SLU 58	-0.22	-0.23	19.46	0	0	0
22	SLU 59	-0.22	-0.22	19.46	0	0	0
22	SLU 60	-0.22	-0.23	19.98	0	0	0
22	SLU 61	-0.22	-0.22	19.99	0	0	0
22	SLU 62	-0.23	-0.23	20.13	0	0	0
22	SLU 63	-0.23	-0.22	20.13	0	0	0
22	SLU 64	-0.18	-0.21	18.92	0	0	0
22	SLU 65	-0.17	-0.19	18.93	0	0	0
22	SLU 66	-0.18	-0.21	19.18	0	0	0
22	SLU 67	-0.18	-0.19	19.18	0	0	0
22	SLU 68	-0.18	-0.19	19.07	0	0	0
22	SLU 69	-0.19	-0.21	19.32	0	0	0
22	SLU 70	-0.19	-0.2	19.32	0	0	0
22	SLU 71	-0.19	-0.21	19.21	0	0	0
22	SLU 72	-0.19	-0.2	19.21	0	0	0
22	SLU 73	-0.21	-0.18	20.81	0	0	0
22	SLU 74	-0.22	-0.2	21.06	0	0	0
22	SLU 75	-0.22	-0.19	21.06	0	0	0
22	SLU 76	-0.22	-0.18	20.95	0	0	0
22	SLU 77	-0.23	-0.2	21.2	0	0	0
22	SLU 78	-0.22	-0.19	21.2	0	0	0
22	SLU 79	-0.23	-0.2	21.09	0	0	0
22	SLU 80	-0.23	-0.19	21.09	0	0	0
22	SLU 81	-0.23	-0.2	21.61	0	0	0
22	SLU 82	-0.23	-0.19	21.61	0	0	0
22	SLU 83	-0.23	-0.2	21.75	0	0	0
22	SLU 84	-0.23	-0.19	21.75	0	0	0
22	SLE RA 1	-0.13	-0.17	14.2	0	0	0
22	SLE RA 2	-0.13	-0.16	14.2	0	0	0
22	SLE RA 3	-0.14	-0.17	14.37	0	0	0
22	SLE RA 4	-0.14	-0.16	14.37	0	0	0
22	SLE RA 5	-0.14	-0.16	14.3	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
22	SLE RA 6	-0.14	-0.17	14.46	0	0	0
22	SLE RA 7	-0.14	-0.16	14.47	0	0	0
22	SLE RA 8	-0.14	-0.17	14.39	0	0	0
22	SLE RA 9	-0.14	-0.16	14.39	0	0	0
22	SLE RA 10	-0.16	-0.15	15.45	0	0	0
22	SLE RA 11	-0.16	-0.16	15.62	0	0	0
22	SLE RA 12	-0.16	-0.15	15.62	0	0	0
22	SLE RA 13	-0.16	-0.15	15.55	0	0	0
22	SLE RA 14	-0.17	-0.16	15.72	0	0	0
22	SLE RA 15	-0.17	-0.15	15.72	0	0	0
22	SLE RA 16	-0.17	-0.16	15.64	0	0	0
22	SLE RA 17	-0.17	-0.16	15.64	0	0	0
22	SLE RA 18	-0.17	-0.16	15.99	0	0	0
22	SLE RA 19	-0.17	-0.15	15.99	0	0	0
22	SLE RA 20	-0.17	-0.16	16.08	0	0	0
22	SLE RA 21	-0.17	-0.15	16.08	0	0	0
22	SLE FR 1	-0.13	-0.17	14.2	0	0	0
22	SLE FR 2	-0.13	-0.17	14.2	0	0	0
22	SLE FR 3	-0.14	-0.17	14.24	0	0	0
22	SLE FR 4	-0.14	-0.16	14.74	0	0	0
22	SLE FR 5	-0.15	-0.17	14.77	0	0	0
22	SLE FR 6	-0.15	-0.16	15.09	0	0	0
22	SLE QP 1	-0.13	-0.17	14.2	0	0	0
22	SLE QP 2	-0.14	-0.16	14.74	0	0	0
22	SLD 1	0.86	0.05	14.62	0	0	0
22	SLD 2	0.88	0.07	14.62	0	0	0
22	SLD 3	0.82	-0.33	14.56	0	0	0
22	SLD 4	0.84	-0.32	14.56	0	0	0
22	SLD 5	0.23	0.48	14.79	0	0	0
22	SLD 6	0.24	0.49	14.79	0	0	0
22	SLD 7	0.07	-0.8	14.6	0	0	0
22	SLD 8	0.08	-0.79	14.59	0	0	0
22	SLD 9	-0.37	0.46	14.88	0	0	0
22	SLD 10	-0.36	0.47	14.88	0	0	0
22	SLD 11	-0.53	-0.82	14.68	0	0	0
22	SLD 12	-0.51	-0.81	14.68	0	0	0
22	SLD 13	-1.13	-0.01	14.91	0	0	0
22	SLD 14	-1.11	0	14.91	0	0	0
22	SLD 15	-1.17	-0.4	14.85	0	0	0
22	SLD 16	-1.15	-0.38	14.85	0	0	0
22	SLV 1	2.21	0.33	14.47	0	0	0
22	SLV 2	2.26	0.37	14.46	0	0	0
22	SLV 3	2.11	-0.55	14.33	0	0	0
22	SLV 4	2.15	-0.51	14.33	0	0	0
22	SLV 5	0.72	1.31	14.86	0	0	0
22	SLV 6	0.75	1.33	14.86	0	0	0
22	SLV 7	0.36	-1.62	14.41	0	0	0
22	SLV 8	0.39	-1.59	14.41	0	0	0
22	SLV 9	-0.68	1.26	15.06	0	0	0
22	SLV 10	-0.65	1.29	15.06	0	0	0
22	SLV 11	-1.04	-1.66	14.62	0	0	0
22	SLV 12	-1.01	-1.64	14.61	0	0	0
22	SLV 13	-2.44	0.18	15.15	0	0	0
22	SLV 14	-2.4	0.22	15.14	0	0	0
22	SLV 15	-2.55	-0.7	15.01	0	0	0
22	SLV 16	-2.5	-0.66	15	0	0	0
23	SLU 1	-0.13	-0.17	13.64	0	0	0
23	SLU 2	-0.13	-0.15	13.64	0	0	0
23	SLU 3	-0.14	-0.17	13.89	0	0	0
23	SLU 4	-0.14	-0.16	13.89	0	0	0
23	SLU 5	-0.14	-0.15	13.78	0	0	0
23	SLU 6	-0.15	-0.17	14.03	0	0	0
23	SLU 7	-0.15	-0.16	14.03	0	0	0
23	SLU 8	-0.15	-0.17	13.91	0	0	0
23	SLU 9	-0.15	-0.16	13.92	0	0	0
23	SLU 10	-0.17	-0.14	15.5	0	0	0
23	SLU 11	-0.17	-0.16	15.75	0	0	0
23	SLU 12	-0.17	-0.15	15.75	0	0	0
23	SLU 13	-0.17	-0.15	15.64	0	0	0
23	SLU 14	-0.18	-0.16	15.88	0	0	0
23	SLU 15	-0.18	-0.15	15.89	0	0	0
23	SLU 16	-0.18	-0.16	15.77	0	0	0
23	SLU 17	-0.18	-0.15	15.77	0	0	0
23	SLU 18	-0.18	-0.16	16.29	0	0	0
23	SLU 19	-0.18	-0.15	16.29	0	0	0
23	SLU 20	-0.19	-0.16	16.43	0	0	0
23	SLU 21	-0.19	-0.15	16.43	0	0	0
23	SLU 22	-0.14	-0.14	15.26	0	0	0
23	SLU 23	-0.14	-0.12	15.26	0	0	0
23	SLU 24	-0.14	-0.14	15.51	0	0	0
23	SLU 25	-0.14	-0.13	15.51	0	0	0
23	SLU 26	-0.14	-0.12	15.4	0	0	0
23	SLU 27	-0.15	-0.14	15.64	0	0	0
23	SLU 28	-0.15	-0.13	15.65	0	0	0
23	SLU 29	-0.15	-0.14	15.53	0	0	0
23	SLU 30	-0.15	-0.13	15.53	0	0	0
23	SLU 31	-0.17	-0.11	17.12	0	0	0
23	SLU 32	-0.18	-0.13	17.36	0	0	0
23	SLU 33	-0.18	-0.12	17.37	0	0	0
23	SLU 34	-0.18	-0.11	17.25	0	0	0
23	SLU 35	-0.19	-0.13	17.5	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
23	SLU 36	-0.19	-0.12	17.5	0	0	0
23	SLU 37	-0.19	-0.13	17.39	0	0	0
23	SLU 38	-0.19	-0.12	17.39	0	0	0
23	SLU 39	-0.19	-0.13	17.91	0	0	0
23	SLU 40	-0.19	-0.12	17.91	0	0	0
23	SLU 41	-0.2	-0.13	18.04	0	0	0
23	SLU 42	-0.2	-0.12	18.05	0	0	0
23	SLU 43	-0.17	-0.23	17.18	0	0	0
23	SLU 44	-0.17	-0.21	17.18	0	0	0
23	SLU 45	-0.18	-0.23	17.43	0	0	0
23	SLU 46	-0.18	-0.22	17.43	0	0	0
23	SLU 47	-0.18	-0.22	17.32	0	0	0
23	SLU 48	-0.18	-0.23	17.56	0	0	0
23	SLU 49	-0.18	-0.22	17.57	0	0	0
23	SLU 50	-0.19	-0.24	17.45	0	0	0
23	SLU 51	-0.18	-0.22	17.45	0	0	0
23	SLU 52	-0.2	-0.21	19.04	0	0	0
23	SLU 53	-0.21	-0.22	19.28	0	0	0
23	SLU 54	-0.21	-0.21	19.29	0	0	0
23	SLU 55	-0.21	-0.21	19.17	0	0	0
23	SLU 56	-0.22	-0.22	19.42	0	0	0
23	SLU 57	-0.22	-0.21	19.42	0	0	0
23	SLU 58	-0.22	-0.23	19.31	0	0	0
23	SLU 59	-0.22	-0.22	19.31	0	0	0
23	SLU 60	-0.22	-0.22	19.83	0	0	0
23	SLU 61	-0.22	-0.21	19.83	0	0	0
23	SLU 62	-0.23	-0.22	19.96	0	0	0
23	SLU 63	-0.23	-0.21	19.97	0	0	0
23	SLU 64	-0.18	-0.2	18.79	0	0	0
23	SLU 65	-0.17	-0.18	18.8	0	0	0
23	SLU 66	-0.18	-0.2	19.04	0	0	0
23	SLU 67	-0.18	-0.19	19.05	0	0	0
23	SLU 68	-0.18	-0.19	18.94	0	0	0
23	SLU 69	-0.19	-0.2	19.18	0	0	0
23	SLU 70	-0.19	-0.19	19.18	0	0	0
23	SLU 71	-0.19	-0.2	19.07	0	0	0
23	SLU 72	-0.19	-0.19	19.07	0	0	0
23	SLU 73	-0.21	-0.17	20.65	0	0	0
23	SLU 74	-0.22	-0.19	20.9	0	0	0
23	SLU 75	-0.22	-0.18	20.9	0	0	0
23	SLU 76	-0.22	-0.18	20.79	0	0	0
23	SLU 77	-0.23	-0.19	21.04	0	0	0
23	SLU 78	-0.22	-0.18	21.04	0	0	0
23	SLU 79	-0.23	-0.2	20.92	0	0	0
23	SLU 80	-0.23	-0.18	20.93	0	0	0
23	SLU 81	-0.23	-0.19	21.44	0	0	0
23	SLU 82	-0.23	-0.18	21.45	0	0	0
23	SLU 83	-0.24	-0.19	21.58	0	0	0
23	SLU 84	-0.23	-0.18	21.58	0	0	0
23	SLE RA 1	-0.13	-0.16	14.1	0	0	0
23	SLE RA 2	-0.13	-0.15	14.1	0	0	0
23	SLE RA 3	-0.14	-0.16	14.27	0	0	0
23	SLE RA 4	-0.14	-0.15	14.27	0	0	0
23	SLE RA 5	-0.14	-0.15	14.2	0	0	0
23	SLE RA 6	-0.14	-0.16	14.36	0	0	0
23	SLE RA 7	-0.14	-0.15	14.36	0	0	0
23	SLE RA 8	-0.14	-0.16	14.28	0	0	0
23	SLE RA 9	-0.14	-0.16	14.29	0	0	0
23	SLE RA 10	-0.16	-0.14	15.34	0	0	0
23	SLE RA 11	-0.16	-0.15	15.51	0	0	0
23	SLE RA 12	-0.16	-0.15	15.51	0	0	0
23	SLE RA 13	-0.16	-0.14	15.43	0	0	0
23	SLE RA 14	-0.17	-0.15	15.6	0	0	0
23	SLE RA 15	-0.17	-0.15	15.6	0	0	0
23	SLE RA 16	-0.17	-0.16	15.52	0	0	0
23	SLE RA 17	-0.17	-0.15	15.52	0	0	0
23	SLE RA 18	-0.17	-0.15	15.87	0	0	0
23	SLE RA 19	-0.17	-0.15	15.87	0	0	0
23	SLE RA 20	-0.17	-0.15	15.96	0	0	0
23	SLE RA 21	-0.17	-0.15	15.96	0	0	0
23	SLE FR 1	-0.13	-0.16	14.1	0	0	0
23	SLE FR 2	-0.13	-0.16	14.1	0	0	0
23	SLE FR 3	-0.14	-0.16	14.14	0	0	0
23	SLE FR 4	-0.14	-0.16	14.63	0	0	0
23	SLE FR 5	-0.15	-0.16	14.67	0	0	0
23	SLE FR 6	-0.15	-0.16	14.98	0	0	0
23	SLE QP 1	-0.13	-0.16	14.1	0	0	0
23	SLE QP 2	-0.14	-0.16	14.63	0	0	0
23	SLD 1	0.86	0.05	14.43	0	0	0
23	SLD 2	0.88	0.08	14.43	0	0	0
23	SLD 3	0.82	-0.33	14.35	0	0	0
23	SLD 4	0.84	-0.31	14.35	0	0	0
23	SLD 5	0.23	0.48	14.69	0	0	0
23	SLD 6	0.24	0.5	14.68	0	0	0
23	SLD 7	0.07	-0.8	14.43	0	0	0
23	SLD 8	0.08	-0.78	14.43	0	0	0
23	SLD 9	-0.37	0.46	14.83	0	0	0
23	SLD 10	-0.36	0.48	14.83	0	0	0
23	SLD 11	-0.53	-0.82	14.58	0	0	0
23	SLD 12	-0.51	-0.8	14.58	0	0	0
23	SLD 13	-1.13	-0.01	14.91	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
23	SLD 14	-1.11	0.01	14.91	0	0	0
23	SLD 15	-1.17	-0.39	14.84	0	0	0
23	SLD 16	-1.15	-0.37	14.83	0	0	0
23	SLV 1	2.21	0.33	14.16	0	0	0
23	SLV 2	2.26	0.38	14.15	0	0	0
23	SLV 3	2.11	-0.55	13.99	0	0	0
23	SLV 4	2.15	-0.5	13.98	0	0	0
23	SLV 5	0.72	1.3	14.76	0	0	0
23	SLV 6	0.75	1.34	14.75	0	0	0
23	SLV 7	0.36	-1.61	14.18	0	0	0
23	SLV 8	0.39	-1.58	14.17	0	0	0
23	SLV 9	-0.68	1.26	15.09	0	0	0
23	SLV 10	-0.65	1.29	15.09	0	0	0
23	SLV 11	-1.04	-1.65	14.51	0	0	0
23	SLV 12	-1.01	-1.62	14.51	0	0	0
23	SLV 13	-2.44	0.18	15.29	0	0	0
23	SLV 14	-2.4	0.23	15.28	0	0	0
23	SLV 15	-2.55	-0.7	15.11	0	0	0
23	SLV 16	-2.5	-0.65	15.1	0	0	0
24	SLU 1	-0.13	-0.17	13.55	0	0	0
24	SLU 2	-0.13	-0.15	13.56	0	0	0
24	SLU 3	-0.14	-0.16	13.8	0	0	0
24	SLU 4	-0.14	-0.15	13.8	0	0	0
24	SLU 5	-0.14	-0.15	13.69	0	0	0
24	SLU 6	-0.15	-0.16	13.93	0	0	0
24	SLU 7	-0.15	-0.15	13.93	0	0	0
24	SLU 8	-0.15	-0.17	13.81	0	0	0
24	SLU 9	-0.15	-0.16	13.82	0	0	0
24	SLU 10	-0.17	-0.14	15.39	0	0	0
24	SLU 11	-0.17	-0.15	15.63	0	0	0
24	SLU 12	-0.17	-0.14	15.63	0	0	0
24	SLU 13	-0.17	-0.14	15.52	0	0	0
24	SLU 14	-0.18	-0.15	15.76	0	0	0
24	SLU 15	-0.18	-0.14	15.76	0	0	0
24	SLU 16	-0.18	-0.16	15.65	0	0	0
24	SLU 17	-0.18	-0.15	15.65	0	0	0
24	SLU 18	-0.18	-0.15	16.17	0	0	0
24	SLU 19	-0.18	-0.14	16.17	0	0	0
24	SLU 20	-0.19	-0.15	16.3	0	0	0
24	SLU 21	-0.19	-0.14	16.3	0	0	0
24	SLU 22	-0.14	-0.13	15.16	0	0	0
24	SLU 23	-0.14	-0.12	15.16	0	0	0
24	SLU 24	-0.14	-0.13	15.41	0	0	0
24	SLU 25	-0.14	-0.12	15.41	0	0	0
24	SLU 26	-0.15	-0.12	15.3	0	0	0
24	SLU 27	-0.15	-0.13	15.54	0	0	0
24	SLU 28	-0.15	-0.12	15.54	0	0	0
24	SLU 29	-0.15	-0.14	15.42	0	0	0
24	SLU 30	-0.15	-0.13	15.43	0	0	0
24	SLU 31	-0.17	-0.11	17	0	0	0
24	SLU 32	-0.18	-0.12	17.24	0	0	0
24	SLU 33	-0.18	-0.11	17.24	0	0	0
24	SLU 34	-0.18	-0.11	17.13	0	0	0
24	SLU 35	-0.19	-0.12	17.37	0	0	0
24	SLU 36	-0.19	-0.11	17.37	0	0	0
24	SLU 37	-0.19	-0.13	17.26	0	0	0
24	SLU 38	-0.19	-0.12	17.26	0	0	0
24	SLU 39	-0.19	-0.12	17.78	0	0	0
24	SLU 40	-0.19	-0.11	17.78	0	0	0
24	SLU 41	-0.2	-0.12	17.91	0	0	0
24	SLU 42	-0.2	-0.11	17.91	0	0	0
24	SLU 43	-0.17	-0.23	17.06	0	0	0
24	SLU 44	-0.17	-0.21	17.07	0	0	0
24	SLU 45	-0.18	-0.22	17.31	0	0	0
24	SLU 46	-0.18	-0.21	17.31	0	0	0
24	SLU 47	-0.18	-0.21	17.2	0	0	0
24	SLU 48	-0.18	-0.22	17.44	0	0	0
24	SLU 49	-0.18	-0.21	17.44	0	0	0
24	SLU 50	-0.19	-0.23	17.33	0	0	0
24	SLU 51	-0.19	-0.22	17.33	0	0	0
24	SLU 52	-0.2	-0.2	18.9	0	0	0
24	SLU 53	-0.21	-0.21	19.14	0	0	0
24	SLU 54	-0.21	-0.2	19.14	0	0	0
24	SLU 55	-0.21	-0.2	19.03	0	0	0
24	SLU 56	-0.22	-0.21	19.27	0	0	0
24	SLU 57	-0.22	-0.2	19.28	0	0	0
24	SLU 58	-0.22	-0.22	19.16	0	0	0
24	SLU 59	-0.22	-0.21	19.16	0	0	0
24	SLU 60	-0.22	-0.21	19.68	0	0	0
24	SLU 61	-0.22	-0.2	19.68	0	0	0
24	SLU 62	-0.23	-0.21	19.81	0	0	0
24	SLU 63	-0.23	-0.2	19.82	0	0	0
24	SLU 64	-0.18	-0.19	18.67	0	0	0
24	SLU 65	-0.17	-0.18	18.68	0	0	0
24	SLU 66	-0.18	-0.19	18.92	0	0	0
24	SLU 67	-0.18	-0.18	18.92	0	0	0
24	SLU 68	-0.18	-0.18	18.81	0	0	0
24	SLU 69	-0.19	-0.19	19.05	0	0	0
24	SLU 70	-0.19	-0.18	19.05	0	0	0
24	SLU 71	-0.19	-0.2	18.94	0	0	0
24	SLU 72	-0.19	-0.19	18.94	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
24	SLU 73	-0.21	-0.17	20.51	0	0	0
24	SLU 74	-0.22	-0.18	20.75	0	0	0
24	SLU 75	-0.22	-0.17	20.75	0	0	0
24	SLU 76	-0.22	-0.17	20.64	0	0	0
24	SLU 77	-0.23	-0.18	20.88	0	0	0
24	SLU 78	-0.23	-0.17	20.89	0	0	0
24	SLU 79	-0.23	-0.19	20.77	0	0	0
24	SLU 80	-0.23	-0.18	20.77	0	0	0
24	SLU 81	-0.23	-0.18	21.29	0	0	0
24	SLU 82	-0.23	-0.17	21.29	0	0	0
24	SLU 83	-0.24	-0.18	21.42	0	0	0
24	SLU 84	-0.23	-0.17	21.43	0	0	0
24	SLE RA 1	-0.13	-0.16	14.01	0	0	0
24	SLE RA 2	-0.13	-0.14	14.01	0	0	0
24	SLE RA 3	-0.14	-0.15	14.17	0	0	0
24	SLE RA 4	-0.14	-0.15	14.18	0	0	0
24	SLE RA 5	-0.14	-0.15	14.1	0	0	0
24	SLE RA 6	-0.14	-0.15	14.26	0	0	0
24	SLE RA 7	-0.14	-0.15	14.26	0	0	0
24	SLE RA 8	-0.14	-0.16	14.19	0	0	0
24	SLE RA 9	-0.14	-0.15	14.19	0	0	0
24	SLE RA 10	-0.16	-0.14	15.23	0	0	0
24	SLE RA 11	-0.16	-0.15	15.39	0	0	0
24	SLE RA 12	-0.16	-0.14	15.4	0	0	0
24	SLE RA 13	-0.16	-0.14	15.32	0	0	0
24	SLE RA 14	-0.17	-0.15	15.48	0	0	0
24	SLE RA 15	-0.17	-0.14	15.49	0	0	0
24	SLE RA 16	-0.17	-0.15	15.41	0	0	0
24	SLE RA 17	-0.17	-0.15	15.41	0	0	0
24	SLE RA 18	-0.17	-0.15	15.75	0	0	0
24	SLE RA 19	-0.17	-0.14	15.76	0	0	0
24	SLE RA 20	-0.17	-0.15	15.84	0	0	0
24	SLE RA 21	-0.17	-0.14	15.84	0	0	0
24	SLE FR 1	-0.13	-0.16	14.01	0	0	0
24	SLE FR 2	-0.13	-0.15	14.01	0	0	0
24	SLE FR 3	-0.14	-0.16	14.04	0	0	0
24	SLE FR 4	-0.14	-0.15	14.53	0	0	0
24	SLE FR 5	-0.15	-0.15	14.57	0	0	0
24	SLE FR 6	-0.15	-0.15	14.88	0	0	0
24	SLE QP 1	-0.13	-0.16	14.01	0	0	0
24	SLE QP 2	-0.14	-0.15	14.53	0	0	0
24	SLD 1	0.86	-0.01	14.24	0	0	0
24	SLD 2	0.88	0.02	14.24	0	0	0
24	SLD 3	0.82	-0.39	14.15	0	0	0
24	SLD 4	0.84	-0.36	14.14	0	0	0
24	SLD 5	0.23	0.46	14.59	0	0	0
24	SLD 6	0.24	0.48	14.59	0	0	0
24	SLD 7	0.07	-0.81	14.27	0	0	0
24	SLD 8	0.08	-0.79	14.27	0	0	0
24	SLD 9	-0.37	0.48	14.79	0	0	0
24	SLD 10	-0.36	0.5	14.79	0	0	0
24	SLD 11	-0.53	-0.79	14.48	0	0	0
24	SLD 12	-0.51	-0.77	14.47	0	0	0
24	SLD 13	-1.13	0.06	14.92	0	0	0
24	SLD 14	-1.11	0.08	14.91	0	0	0
24	SLD 15	-1.17	-0.33	14.83	0	0	0
24	SLD 16	-1.15	-0.3	14.82	0	0	0
24	SLV 1	2.21	0.18	13.86	0	0	0
24	SLV 2	2.26	0.24	13.84	0	0	0
24	SLV 3	2.11	-0.69	13.64	0	0	0
24	SLV 4	2.15	-0.63	13.63	0	0	0
24	SLV 5	0.72	1.25	14.66	0	0	0
24	SLV 6	0.75	1.29	14.65	0	0	0
24	SLV 7	0.36	-1.64	13.94	0	0	0
24	SLV 8	0.39	-1.61	13.93	0	0	0
24	SLV 9	-0.68	1.3	15.14	0	0	0
24	SLV 10	-0.65	1.34	15.13	0	0	0
24	SLV 11	-1.04	-1.6	14.41	0	0	0
24	SLV 12	-1.01	-1.56	14.4	0	0	0
24	SLV 13	-2.44	0.32	15.44	0	0	0
24	SLV 14	-2.4	0.38	15.43	0	0	0
24	SLV 15	-2.55	-0.55	15.22	0	0	0
24	SLV 16	-2.5	-0.49	15.21	0	0	0
25	SLU 1	-0.14	-0.17	14.17	0	0	0
25	SLU 2	-0.14	-0.15	14.17	0	0	0
25	SLU 3	-0.15	-0.16	14.42	0	0	0
25	SLU 4	-0.15	-0.15	14.43	0	0	0
25	SLU 5	-0.15	-0.15	14.31	0	0	0
25	SLU 6	-0.15	-0.17	14.56	0	0	0
25	SLU 7	-0.15	-0.15	14.56	0	0	0
25	SLU 8	-0.16	-0.17	14.43	0	0	0
25	SLU 9	-0.16	-0.16	14.44	0	0	0
25	SLU 10	-0.18	-0.14	16.08	0	0	0
25	SLU 11	-0.18	-0.15	16.33	0	0	0
25	SLU 12	-0.18	-0.14	16.33	0	0	0
25	SLU 13	-0.18	-0.14	16.21	0	0	0
25	SLU 14	-0.19	-0.16	16.46	0	0	0
25	SLU 15	-0.19	-0.14	16.47	0	0	0
25	SLU 16	-0.19	-0.16	16.34	0	0	0
25	SLU 17	-0.19	-0.15	16.35	0	0	0
25	SLU 18	-0.19	-0.15	16.89	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
25	SLU 19	-0.19	-0.14	16.89	0	0	0
25	SLU 20	-0.2	-0.16	17.02	0	0	0
25	SLU 21	-0.2	-0.14	17.03	0	0	0
25	SLU 22	-0.15	-0.14	15.85	0	0	0
25	SLU 23	-0.14	-0.12	15.86	0	0	0
25	SLU 24	-0.15	-0.13	16.11	0	0	0
25	SLU 25	-0.15	-0.12	16.11	0	0	0
25	SLU 26	-0.15	-0.12	16	0	0	0
25	SLU 27	-0.16	-0.13	16.24	0	0	0
25	SLU 28	-0.16	-0.12	16.25	0	0	0
25	SLU 29	-0.16	-0.14	16.12	0	0	0
25	SLU 30	-0.16	-0.13	16.13	0	0	0
25	SLU 31	-0.18	-0.11	17.77	0	0	0
25	SLU 32	-0.19	-0.12	18.01	0	0	0
25	SLU 33	-0.19	-0.11	18.02	0	0	0
25	SLU 34	-0.19	-0.11	17.9	0	0	0
25	SLU 35	-0.2	-0.12	18.15	0	0	0
25	SLU 36	-0.2	-0.11	18.15	0	0	0
25	SLU 37	-0.2	-0.13	18.03	0	0	0
25	SLU 38	-0.2	-0.12	18.03	0	0	0
25	SLU 39	-0.2	-0.12	18.58	0	0	0
25	SLU 40	-0.2	-0.11	18.58	0	0	0
25	SLU 41	-0.21	-0.12	18.71	0	0	0
25	SLU 42	-0.21	-0.11	18.71	0	0	0
25	SLU 43	-0.18	-0.23	17.84	0	0	0
25	SLU 44	-0.18	-0.21	17.84	0	0	0
25	SLU 45	-0.19	-0.23	18.09	0	0	0
25	SLU 46	-0.19	-0.21	18.1	0	0	0
25	SLU 47	-0.19	-0.21	17.98	0	0	0
25	SLU 48	-0.19	-0.23	18.23	0	0	0
25	SLU 49	-0.19	-0.22	18.23	0	0	0
25	SLU 50	-0.2	-0.23	18.11	0	0	0
25	SLU 51	-0.2	-0.22	18.11	0	0	0
25	SLU 52	-0.22	-0.2	19.75	0	0	0
25	SLU 53	-0.22	-0.22	20	0	0	0
25	SLU 54	-0.22	-0.2	20	0	0	0
25	SLU 55	-0.22	-0.2	19.88	0	0	0
25	SLU 56	-0.23	-0.22	20.13	0	0	0
25	SLU 57	-0.23	-0.21	20.14	0	0	0
25	SLU 58	-0.23	-0.22	20.01	0	0	0
25	SLU 59	-0.23	-0.21	20.02	0	0	0
25	SLU 60	-0.23	-0.22	20.56	0	0	0
25	SLU 61	-0.23	-0.2	20.56	0	0	0
25	SLU 62	-0.24	-0.22	20.69	0	0	0
25	SLU 63	-0.24	-0.21	20.7	0	0	0
25	SLU 64	-0.19	-0.2	19.52	0	0	0
25	SLU 65	-0.18	-0.18	19.53	0	0	0
25	SLU 66	-0.19	-0.19	19.78	0	0	0
25	SLU 67	-0.19	-0.18	19.79	0	0	0
25	SLU 68	-0.19	-0.18	19.67	0	0	0
25	SLU 69	-0.2	-0.19	19.91	0	0	0
25	SLU 70	-0.2	-0.18	19.92	0	0	0
25	SLU 71	-0.2	-0.2	19.79	0	0	0
25	SLU 72	-0.2	-0.19	19.8	0	0	0
25	SLU 73	-0.22	-0.17	21.44	0	0	0
25	SLU 74	-0.23	-0.18	21.69	0	0	0
25	SLU 75	-0.23	-0.17	21.69	0	0	0
25	SLU 76	-0.23	-0.17	21.57	0	0	0
25	SLU 77	-0.24	-0.19	21.82	0	0	0
25	SLU 78	-0.24	-0.17	21.83	0	0	0
25	SLU 79	-0.24	-0.19	21.7	0	0	0
25	SLU 80	-0.24	-0.18	21.7	0	0	0
25	SLU 81	-0.24	-0.18	22.25	0	0	0
25	SLU 82	-0.24	-0.17	22.25	0	0	0
25	SLU 83	-0.25	-0.19	22.38	0	0	0
25	SLU 84	-0.25	-0.17	22.39	0	0	0
25	SLE RA 1	-0.14	-0.16	14.65	0	0	0
25	SLE RA 2	-0.14	-0.15	14.65	0	0	0
25	SLE RA 3	-0.15	-0.16	14.82	0	0	0
25	SLE RA 4	-0.15	-0.15	14.82	0	0	0
25	SLE RA 5	-0.15	-0.15	14.74	0	0	0
25	SLE RA 6	-0.15	-0.16	14.91	0	0	0
25	SLE RA 7	-0.15	-0.15	14.91	0	0	0
25	SLE RA 8	-0.15	-0.16	14.83	0	0	0
25	SLE RA 9	-0.15	-0.15	14.83	0	0	0
25	SLE RA 10	-0.17	-0.14	15.92	0	0	0
25	SLE RA 11	-0.17	-0.15	16.09	0	0	0
25	SLE RA 12	-0.17	-0.14	16.09	0	0	0
25	SLE RA 13	-0.17	-0.14	16.01	0	0	0
25	SLE RA 14	-0.18	-0.15	16.18	0	0	0
25	SLE RA 15	-0.18	-0.14	16.18	0	0	0
25	SLE RA 16	-0.18	-0.15	16.1	0	0	0
25	SLE RA 17	-0.18	-0.15	16.1	0	0	0
25	SLE RA 18	-0.18	-0.15	16.46	0	0	0
25	SLE RA 19	-0.18	-0.14	16.47	0	0	0
25	SLE RA 20	-0.18	-0.15	16.55	0	0	0
25	SLE RA 21	-0.18	-0.14	16.56	0	0	0
25	SLE FR 1	-0.14	-0.16	14.65	0	0	0
25	SLE FR 2	-0.14	-0.16	14.65	0	0	0
25	SLE FR 3	-0.14	-0.16	14.68	0	0	0
25	SLE FR 4	-0.15	-0.15	15.19	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
25	SLE FR 5	-0.15	-0.16	15.23	0	0	0
25	SLE FR 6	-0.16	-0.15	15.56	0	0	0
25	SLE QP 1	-0.14	-0.16	14.65	0	0	0
25	SLE QP 2	-0.15	-0.16	15.19	0	0	0
25	SLD 1	0.91	0	14.8	0	0	0
25	SLD 2	0.93	0.03	14.79	0	0	0
25	SLD 3	0.86	-0.4	14.68	0	0	0
25	SLD 4	0.88	-0.37	14.67	0	0	0
25	SLD 5	0.24	0.49	15.26	0	0	0
25	SLD 6	0.25	0.51	15.25	0	0	0
25	SLD 7	0.07	-0.84	14.86	0	0	0
25	SLD 8	0.09	-0.82	14.85	0	0	0
25	SLD 9	-0.39	0.51	15.53	0	0	0
25	SLD 10	-0.38	0.53	15.53	0	0	0
25	SLD 11	-0.56	-0.82	15.13	0	0	0
25	SLD 12	-0.54	-0.8	15.13	0	0	0
25	SLD 13	-1.19	0.06	15.71	0	0	0
25	SLD 14	-1.17	0.09	15.71	0	0	0
25	SLD 15	-1.24	-0.34	15.59	0	0	0
25	SLD 16	-1.22	-0.31	15.59	0	0	0
25	SLV 1	2.33	0.19	14.27	0	0	0
25	SLV 2	2.38	0.26	14.25	0	0	0
25	SLV 3	2.22	-0.72	13.99	0	0	0
25	SLV 4	2.27	-0.65	13.97	0	0	0
25	SLV 5	0.76	1.32	15.33	0	0	0
25	SLV 6	0.79	1.36	15.32	0	0	0
25	SLV 7	0.38	-1.72	14.42	0	0	0
25	SLV 8	0.41	-1.68	14.41	0	0	0
25	SLV 9	-0.71	1.36	15.98	0	0	0
25	SLV 10	-0.68	1.41	15.97	0	0	0
25	SLV 11	-1.09	-1.68	15.06	0	0	0
25	SLV 12	-1.06	-1.63	15.05	0	0	0
25	SLV 13	-2.57	0.34	16.41	0	0	0
25	SLV 14	-2.52	0.41	16.39	0	0	0
25	SLV 15	-2.68	-0.57	16.14	0	0	0
25	SLV 16	-2.64	-0.5	16.12	0	0	0
26	SLU 1	-0.07	-0.09	7.44	0	0	0
26	SLU 2	-0.07	-0.08	7.44	0	0	0
26	SLU 3	-0.08	-0.08	7.57	0	0	0
26	SLU 4	-0.08	-0.08	7.57	0	0	0
26	SLU 5	-0.08	-0.08	7.51	0	0	0
26	SLU 6	-0.08	-0.09	7.64	0	0	0
26	SLU 7	-0.08	-0.08	7.64	0	0	0
26	SLU 8	-0.08	-0.09	7.57	0	0	0
26	SLU 9	-0.08	-0.08	7.58	0	0	0
26	SLU 10	-0.09	-0.07	8.44	0	0	0
26	SLU 11	-0.1	-0.08	8.56	0	0	0
26	SLU 12	-0.1	-0.07	8.57	0	0	0
26	SLU 13	-0.1	-0.07	8.51	0	0	0
26	SLU 14	-0.1	-0.08	8.63	0	0	0
26	SLU 15	-0.1	-0.07	8.64	0	0	0
26	SLU 16	-0.1	-0.08	8.57	0	0	0
26	SLU 17	-0.1	-0.08	8.57	0	0	0
26	SLU 18	-0.1	-0.08	8.86	0	0	0
26	SLU 19	-0.1	-0.07	8.86	0	0	0
26	SLU 20	-0.11	-0.08	8.93	0	0	0
26	SLU 21	-0.11	-0.07	8.93	0	0	0
26	SLU 22	-0.08	-0.07	8.33	0	0	0
26	SLU 23	-0.08	-0.06	8.33	0	0	0
26	SLU 24	-0.08	-0.07	8.46	0	0	0
26	SLU 25	-0.08	-0.06	8.46	0	0	0
26	SLU 26	-0.08	-0.06	8.4	0	0	0
26	SLU 27	-0.09	-0.07	8.53	0	0	0
26	SLU 28	-0.08	-0.06	8.53	0	0	0
26	SLU 29	-0.09	-0.07	8.46	0	0	0
26	SLU 30	-0.09	-0.07	8.47	0	0	0
26	SLU 31	-0.1	-0.06	9.33	0	0	0
26	SLU 32	-0.1	-0.06	9.45	0	0	0
26	SLU 33	-0.1	-0.06	9.46	0	0	0
26	SLU 34	-0.1	-0.06	9.39	0	0	0
26	SLU 35	-0.11	-0.06	9.52	0	0	0
26	SLU 36	-0.1	-0.06	9.53	0	0	0
26	SLU 37	-0.11	-0.07	9.46	0	0	0
26	SLU 38	-0.11	-0.06	9.46	0	0	0
26	SLU 39	-0.11	-0.06	9.75	0	0	0
26	SLU 40	-0.11	-0.06	9.75	0	0	0
26	SLU 41	-0.11	-0.06	9.82	0	0	0
26	SLU 42	-0.11	-0.06	9.82	0	0	0
26	SLU 43	-0.1	-0.12	9.36	0	0	0
26	SLU 44	-0.09	-0.11	9.37	0	0	0
26	SLU 45	-0.1	-0.12	9.5	0	0	0
26	SLU 46	-0.1	-0.11	9.5	0	0	0
26	SLU 47	-0.1	-0.11	9.44	0	0	0
26	SLU 48	-0.1	-0.12	9.57	0	0	0
26	SLU 49	-0.1	-0.11	9.57	0	0	0
26	SLU 50	-0.1	-0.12	9.5	0	0	0
26	SLU 51	-0.1	-0.11	9.5	0	0	0
26	SLU 52	-0.11	-0.1	10.36	0	0	0
26	SLU 53	-0.12	-0.11	10.49	0	0	0
26	SLU 54	-0.12	-0.11	10.49	0	0	0
26	SLU 55	-0.12	-0.1	10.43	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
26	SLU 56	-0.12	-0.11	10.56	0	0	0
26	SLU 57	-0.12	-0.11	10.56	0	0	0
26	SLU 58	-0.12	-0.12	10.5	0	0	0
26	SLU 59	-0.12	-0.11	10.5	0	0	0
26	SLU 60	-0.12	-0.11	10.78	0	0	0
26	SLU 61	-0.12	-0.11	10.79	0	0	0
26	SLU 62	-0.13	-0.11	10.85	0	0	0
26	SLU 63	-0.13	-0.11	10.86	0	0	0
26	SLU 64	-0.1	-0.1	10.25	0	0	0
26	SLU 65	-0.1	-0.09	10.26	0	0	0
26	SLU 66	-0.1	-0.1	10.39	0	0	0
26	SLU 67	-0.1	-0.09	10.39	0	0	0
26	SLU 68	-0.1	-0.09	10.33	0	0	0
26	SLU 69	-0.11	-0.1	10.45	0	0	0
26	SLU 70	-0.11	-0.09	10.46	0	0	0
26	SLU 71	-0.11	-0.1	10.39	0	0	0
26	SLU 72	-0.11	-0.1	10.39	0	0	0
26	SLU 73	-0.12	-0.09	11.25	0	0	0
26	SLU 74	-0.12	-0.1	11.38	0	0	0
26	SLU 75	-0.12	-0.09	11.38	0	0	0
26	SLU 76	-0.12	-0.09	11.32	0	0	0
26	SLU 77	-0.13	-0.1	11.45	0	0	0
26	SLU 78	-0.13	-0.09	11.45	0	0	0
26	SLU 79	-0.13	-0.1	11.38	0	0	0
26	SLU 80	-0.13	-0.09	11.39	0	0	0
26	SLU 81	-0.13	-0.1	11.67	0	0	0
26	SLU 82	-0.13	-0.09	11.68	0	0	0
26	SLU 83	-0.13	-0.1	11.74	0	0	0
26	SLU 84	-0.13	-0.09	11.74	0	0	0
26	SLE RA 1	-0.08	-0.08	7.69	0	0	0
26	SLE RA 2	-0.07	-0.08	7.69	0	0	0
26	SLE RA 3	-0.08	-0.08	7.78	0	0	0
26	SLE RA 4	-0.08	-0.08	7.78	0	0	0
26	SLE RA 5	-0.08	-0.08	7.74	0	0	0
26	SLE RA 6	-0.08	-0.08	7.83	0	0	0
26	SLE RA 7	-0.08	-0.08	7.83	0	0	0
26	SLE RA 8	-0.08	-0.08	7.78	0	0	0
26	SLE RA 9	-0.08	-0.08	7.78	0	0	0
26	SLE RA 10	-0.09	-0.07	8.36	0	0	0
26	SLE RA 11	-0.09	-0.08	8.44	0	0	0
26	SLE RA 12	-0.09	-0.07	8.44	0	0	0
26	SLE RA 13	-0.09	-0.07	8.4	0	0	0
26	SLE RA 14	-0.09	-0.08	8.49	0	0	0
26	SLE RA 15	-0.09	-0.07	8.49	0	0	0
26	SLE RA 16	-0.09	-0.08	8.45	0	0	0
26	SLE RA 17	-0.09	-0.08	8.45	0	0	0
26	SLE RA 18	-0.09	-0.08	8.64	0	0	0
26	SLE RA 19	-0.09	-0.07	8.64	0	0	0
26	SLE RA 20	-0.1	-0.08	8.68	0	0	0
26	SLE RA 21	-0.1	-0.07	8.69	0	0	0
26	SLE FR 1	-0.08	-0.08	7.69	0	0	0
26	SLE FR 2	-0.07	-0.08	7.69	0	0	0
26	SLE FR 3	-0.08	-0.08	7.71	0	0	0
26	SLE FR 4	-0.08	-0.08	7.98	0	0	0
26	SLE FR 5	-0.08	-0.08	7.99	0	0	0
26	SLE FR 6	-0.08	-0.08	8.16	0	0	0
26	SLE QP 1	-0.08	-0.08	7.69	0	0	0
26	SLE QP 2	-0.08	-0.08	7.98	0	0	0
26	SLD 1	0.48	0	7.71	0	0	0
26	SLD 2	0.49	0.02	7.71	0	0	0
26	SLD 3	0.46	-0.21	7.64	0	0	0
26	SLD 4	0.47	-0.19	7.63	0	0	0
26	SLD 5	0.13	0.26	8.01	0	0	0
26	SLD 6	0.13	0.27	8.01	0	0	0
26	SLD 7	0.04	-0.44	7.76	0	0	0
26	SLD 8	0.05	-0.43	7.76	0	0	0
26	SLD 9	-0.21	0.27	8.19	0	0	0
26	SLD 10	-0.2	0.28	8.19	0	0	0
26	SLD 11	-0.29	-0.43	7.94	0	0	0
26	SLD 12	-0.29	-0.42	7.94	0	0	0
26	SLD 13	-0.63	0.03	8.32	0	0	0
26	SLD 14	-0.62	0.05	8.31	0	0	0
26	SLD 15	-0.66	-0.18	8.24	0	0	0
26	SLD 16	-0.64	-0.16	8.24	0	0	0
26	SLV 1	1.24	0.1	7.36	0	0	0
26	SLV 2	1.26	0.14	7.35	0	0	0
26	SLV 3	1.18	-0.38	7.19	0	0	0
26	SLV 4	1.2	-0.34	7.18	0	0	0
26	SLV 5	0.4	0.7	8.06	0	0	0
26	SLV 6	0.42	0.72	8.05	0	0	0
26	SLV 7	0.2	-0.91	7.48	0	0	0
26	SLV 8	0.22	-0.88	7.47	0	0	0
26	SLV 9	-0.38	0.72	8.48	0	0	0
26	SLV 10	-0.36	0.75	8.47	0	0	0
26	SLV 11	-0.58	-0.89	7.9	0	0	0
26	SLV 12	-0.56	-0.86	7.9	0	0	0
26	SLV 13	-1.36	0.18	8.77	0	0	0
26	SLV 14	-1.34	0.22	8.76	0	0	0
26	SLV 15	-1.42	-0.3	8.6	0	0	0
26	SLV 16	-1.4	-0.26	8.59	0	0	0
27	SLU 1	-0.04	-0.05	3.96	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
27	SLU 2	-0.04	-0.05	3.96	0	0	0
27	SLU 3	-0.04	-0.05	4.04	0	0	0
27	SLU 4	-0.04	-0.05	4.04	0	0	0
27	SLU 5	-0.04	-0.05	4.01	0	0	0
27	SLU 6	-0.04	-0.05	4.08	0	0	0
27	SLU 7	-0.04	-0.05	4.08	0	0	0
27	SLU 8	-0.04	-0.05	4.05	0	0	0
27	SLU 9	-0.04	-0.05	4.05	0	0	0
27	SLU 10	-0.05	-0.05	4.51	0	0	0
27	SLU 11	-0.05	-0.05	4.59	0	0	0
27	SLU 12	-0.05	-0.05	4.59	0	0	0
27	SLU 13	-0.05	-0.05	4.56	0	0	0
27	SLU 14	-0.05	-0.05	4.63	0	0	0
27	SLU 15	-0.05	-0.05	4.63	0	0	0
27	SLU 16	-0.05	-0.05	4.6	0	0	0
27	SLU 17	-0.05	-0.05	4.6	0	0	0
27	SLU 18	-0.05	-0.05	4.75	0	0	0
27	SLU 19	-0.05	-0.05	4.75	0	0	0
27	SLU 20	-0.06	-0.05	4.79	0	0	0
27	SLU 21	-0.06	-0.05	4.79	0	0	0
27	SLU 22	-0.04	-0.04	4.43	0	0	0
27	SLU 23	-0.04	-0.04	4.43	0	0	0
27	SLU 24	-0.04	-0.04	4.51	0	0	0
27	SLU 25	-0.04	-0.04	4.51	0	0	0
27	SLU 26	-0.04	-0.04	4.48	0	0	0
27	SLU 27	-0.04	-0.04	4.55	0	0	0
27	SLU 28	-0.04	-0.04	4.55	0	0	0
27	SLU 29	-0.04	-0.05	4.52	0	0	0
27	SLU 30	-0.04	-0.04	4.52	0	0	0
27	SLU 31	-0.05	-0.04	4.98	0	0	0
27	SLU 32	-0.05	-0.04	5.06	0	0	0
27	SLU 33	-0.05	-0.04	5.06	0	0	0
27	SLU 34	-0.05	-0.04	5.03	0	0	0
27	SLU 35	-0.05	-0.04	5.1	0	0	0
27	SLU 36	-0.05	-0.04	5.1	0	0	0
27	SLU 37	-0.06	-0.04	5.07	0	0	0
27	SLU 38	-0.05	-0.04	5.07	0	0	0
27	SLU 39	-0.05	-0.04	5.22	0	0	0
27	SLU 40	-0.05	-0.04	5.22	0	0	0
27	SLU 41	-0.06	-0.04	5.26	0	0	0
27	SLU 42	-0.06	-0.04	5.26	0	0	0
27	SLU 43	-0.05	-0.07	4.99	0	0	0
27	SLU 44	-0.05	-0.07	4.99	0	0	0
27	SLU 45	-0.05	-0.07	5.07	0	0	0
27	SLU 46	-0.05	-0.07	5.07	0	0	0
27	SLU 47	-0.05	-0.07	5.03	0	0	0
27	SLU 48	-0.05	-0.07	5.11	0	0	0
27	SLU 49	-0.05	-0.07	5.11	0	0	0
27	SLU 50	-0.05	-0.07	5.08	0	0	0
27	SLU 51	-0.05	-0.07	5.08	0	0	0
27	SLU 52	-0.06	-0.07	5.54	0	0	0
27	SLU 53	-0.06	-0.07	5.62	0	0	0
27	SLU 54	-0.06	-0.07	5.62	0	0	0
27	SLU 55	-0.06	-0.07	5.59	0	0	0
27	SLU 56	-0.06	-0.07	5.66	0	0	0
27	SLU 57	-0.06	-0.07	5.66	0	0	0
27	SLU 58	-0.06	-0.07	5.63	0	0	0
27	SLU 59	-0.06	-0.07	5.63	0	0	0
27	SLU 60	-0.06	-0.07	5.78	0	0	0
27	SLU 61	-0.06	-0.07	5.78	0	0	0
27	SLU 62	-0.07	-0.07	5.82	0	0	0
27	SLU 63	-0.07	-0.07	5.82	0	0	0
27	SLU 64	-0.05	-0.06	5.46	0	0	0
27	SLU 65	-0.05	-0.06	5.46	0	0	0
27	SLU 66	-0.05	-0.06	5.54	0	0	0
27	SLU 67	-0.05	-0.06	5.54	0	0	0
27	SLU 68	-0.05	-0.06	5.5	0	0	0
27	SLU 69	-0.06	-0.06	5.58	0	0	0
27	SLU 70	-0.06	-0.06	5.58	0	0	0
27	SLU 71	-0.06	-0.07	5.55	0	0	0
27	SLU 72	-0.06	-0.06	5.55	0	0	0
27	SLU 73	-0.06	-0.06	6.01	0	0	0
27	SLU 74	-0.06	-0.06	6.09	0	0	0
27	SLU 75	-0.06	-0.06	6.09	0	0	0
27	SLU 76	-0.06	-0.06	6.06	0	0	0
27	SLU 77	-0.07	-0.06	6.13	0	0	0
27	SLU 78	-0.07	-0.06	6.13	0	0	0
27	SLU 79	-0.07	-0.06	6.1	0	0	0
27	SLU 80	-0.07	-0.06	6.1	0	0	0
27	SLU 81	-0.07	-0.06	6.25	0	0	0
27	SLU 82	-0.07	-0.06	6.25	0	0	0
27	SLU 83	-0.07	-0.06	6.29	0	0	0
27	SLU 84	-0.07	-0.06	6.29	0	0	0
27	SLE RA 1	-0.04	-0.05	4.1	0	0	0
27	SLE RA 2	-0.04	-0.05	4.1	0	0	0
27	SLE RA 3	-0.04	-0.05	4.15	0	0	0
27	SLE RA 4	-0.04	-0.05	4.15	0	0	0
27	SLE RA 5	-0.04	-0.05	4.13	0	0	0
27	SLE RA 6	-0.04	-0.05	4.18	0	0	0
27	SLE RA 7	-0.04	-0.05	4.18	0	0	0
27	SLE RA 8	-0.04	-0.05	4.16	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
27	SLE RA 9	-0.04	-0.05	4.16	0	0	0
27	SLE RA 10	-0.05	-0.05	4.47	0	0	0
27	SLE RA 11	-0.05	-0.05	4.52	0	0	0
27	SLE RA 12	-0.05	-0.05	4.52	0	0	0
27	SLE RA 13	-0.05	-0.05	4.49	0	0	0
27	SLE RA 14	-0.05	-0.05	4.54	0	0	0
27	SLE RA 15	-0.05	-0.05	4.54	0	0	0
27	SLE RA 16	-0.05	-0.05	4.52	0	0	0
27	SLE RA 17	-0.05	-0.05	4.52	0	0	0
27	SLE RA 18	-0.05	-0.05	4.62	0	0	0
27	SLE RA 19	-0.05	-0.05	4.62	0	0	0
27	SLE RA 20	-0.05	-0.05	4.65	0	0	0
27	SLE RA 21	-0.05	-0.05	4.65	0	0	0
27	SLE FR 1	-0.04	-0.05	4.1	0	0	0
27	SLE FR 2	-0.04	-0.05	4.1	0	0	0
27	SLE FR 3	-0.04	-0.05	4.11	0	0	0
27	SLE FR 4	-0.04	-0.05	4.26	0	0	0
27	SLE FR 5	-0.04	-0.05	4.27	0	0	0
27	SLE FR 6	-0.04	-0.05	4.36	0	0	0
27	SLE QP 1	-0.04	-0.05	4.1	0	0	0
27	SLE QP 2	-0.04	-0.05	4.26	0	0	0
27	SLD 1	0.25	0.01	4.28	0	0	0
27	SLD 2	0.25	0.02	4.28	0	0	0
27	SLD 3	0.23	-0.1	4.3	0	0	0
27	SLD 4	0.24	-0.09	4.3	0	0	0
27	SLD 5	0.06	0.14	4.24	0	0	0
27	SLD 6	0.07	0.14	4.24	0	0	0
27	SLD 7	0.02	-0.23	4.29	0	0	0
27	SLD 8	0.02	-0.23	4.29	0	0	0
27	SLD 9	-0.11	0.13	4.22	0	0	0
27	SLD 10	-0.1	0.13	4.22	0	0	0
27	SLD 11	-0.15	-0.24	4.27	0	0	0
27	SLD 12	-0.15	-0.24	4.27	0	0	0
27	SLD 13	-0.32	-0.01	4.21	0	0	0
27	SLD 14	-0.32	0	4.21	0	0	0
27	SLD 15	-0.34	-0.12	4.23	0	0	0
27	SLD 16	-0.33	-0.12	4.23	0	0	0
27	SLV 1	0.64	0.1	4.32	0	0	0
27	SLV 2	0.65	0.1	4.32	0	0	0
27	SLV 3	0.6	-0.16	4.35	0	0	0
27	SLV 4	0.61	-0.15	4.35	0	0	0
27	SLV 5	0.21	0.38	4.23	0	0	0
27	SLV 6	0.21	0.38	4.23	0	0	0
27	SLV 7	0.1	-0.47	4.33	0	0	0
27	SLV 8	0.11	-0.47	4.33	0	0	0
27	SLV 9	-0.19	0.36	4.18	0	0	0
27	SLV 10	-0.19	0.37	4.18	0	0	0
27	SLV 11	-0.3	-0.48	4.28	0	0	0
27	SLV 12	-0.29	-0.48	4.28	0	0	0
27	SLV 13	-0.7	0.05	4.16	0	0	0
27	SLV 14	-0.69	0.05	4.16	0	0	0
27	SLV 15	-0.73	-0.2	4.19	0	0	0
27	SLV 16	-0.72	-0.2	4.19	0	0	0
29	SLU 1	-0.11	-0.15	10.95	0	2.0528	0.0277
29	SLU 2	-0.11	-0.13	10.95	0	2.0528	0.025
29	SLU 3	-0.11	-0.14	11.16	0	2.0917	0.0271
29	SLU 4	-0.11	-0.14	11.16	0	2.0917	0.0255
29	SLU 5	-0.11	-0.13	11.07	0	2.0752	0.0252
29	SLU 6	-0.12	-0.15	11.27	0	2.1141	0.0274
29	SLU 7	-0.12	-0.14	11.28	0	2.1141	0.0258
29	SLU 8	-0.12	-0.15	11.19	0	2.0975	0.0282
29	SLU 9	-0.12	-0.14	11.19	0	2.0975	0.0266
29	SLU 10	-0.13	-0.13	12.47	0	2.3378	0.0236
29	SLU 11	-0.14	-0.14	12.68	0	2.3767	0.0258
29	SLU 12	-0.14	-0.13	12.68	0	2.3767	0.0242
29	SLU 13	-0.14	-0.13	12.59	0	2.3602	0.0239
29	SLU 14	-0.15	-0.14	12.79	0	2.399	0.0261
29	SLU 15	-0.15	-0.13	12.8	0	2.3991	0.0244
29	SLU 16	-0.15	-0.14	12.71	0	2.3825	0.0269
29	SLU 17	-0.15	-0.13	12.71	0	2.3825	0.0252
29	SLU 18	-0.15	-0.14	13.12	0	2.4599	0.0258
29	SLU 19	-0.15	-0.13	13.12	0	2.4599	0.0241
29	SLU 20	-0.15	-0.14	13.24	0	2.4822	0.026
29	SLU 21	-0.15	-0.13	13.24	0	2.4823	0.0244
29	SLU 22	-0.11	-0.12	12.25	0	2.2967	0.023
29	SLU 23	-0.11	-0.11	12.25	0	2.2968	0.0203
29	SLU 24	-0.12	-0.12	12.46	0	2.3356	0.0225
29	SLU 25	-0.12	-0.11	12.46	0	2.3357	0.0209
29	SLU 26	-0.12	-0.11	12.37	0	2.3191	0.0206
29	SLU 27	-0.12	-0.12	12.58	0	2.358	0.0227
29	SLU 28	-0.12	-0.11	12.58	0	2.3581	0.0211
29	SLU 29	-0.12	-0.13	12.49	0	2.3414	0.0235
29	SLU 30	-0.12	-0.12	12.49	0	2.3415	0.0219
29	SLU 31	-0.14	-0.1	13.77	0	2.5818	0.019
29	SLU 32	-0.14	-0.11	13.98	0	2.6206	0.0211
29	SLU 33	-0.14	-0.1	13.98	0	2.6207	0.0195
29	SLU 34	-0.15	-0.1	13.89	0	2.6041	0.0192
29	SLU 35	-0.15	-0.11	14.1	0	2.643	0.0214
29	SLU 36	-0.15	-0.11	14.1	0	2.643	0.0198
29	SLU 37	-0.15	-0.12	14.01	0	2.6264	0.0222
29	SLU 38	-0.15	-0.11	14.01	0	2.6265	0.0206

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
29	SLU 39	-0.15	-0.11	14.42	0	2.7038	0.0211
29	SLU 40	-0.15	-0.1	14.42	0	2.7039	0.0195
29	SLU 41	-0.16	-0.11	14.54	0	2.7262	0.0214
29	SLU 42	-0.16	-0.11	14.54	0	2.7262	0.0198
29	SLU 43	-0.14	-0.2	13.79	0	2.5849	0.0376
29	SLU 44	-0.14	-0.19	13.79	0	2.585	0.0349
29	SLU 45	-0.14	-0.2	13.99	0	2.6239	0.037
29	SLU 46	-0.14	-0.19	13.99	0	2.6239	0.0354
29	SLU 47	-0.14	-0.19	13.91	0	2.6074	0.0351
29	SLU 48	-0.15	-0.2	14.11	0	2.6462	0.0373
29	SLU 49	-0.15	-0.19	14.11	0	2.6463	0.0357
29	SLU 50	-0.15	-0.2	14.02	0	2.6297	0.0381
29	SLU 51	-0.15	-0.19	14.03	0	2.6297	0.0365
29	SLU 52	-0.17	-0.18	15.31	0	2.87	0.0335
29	SLU 53	-0.17	-0.19	15.51	0	2.9089	0.0357
29	SLU 54	-0.17	-0.18	15.51	0	2.9089	0.0341
29	SLU 55	-0.17	-0.18	15.43	0	2.8924	0.0338
29	SLU 56	-0.18	-0.19	15.63	0	2.9312	0.036
29	SLU 57	-0.18	-0.18	15.63	0	2.9313	0.0343
29	SLU 58	-0.18	-0.2	15.54	0	2.9147	0.0367
29	SLU 59	-0.18	-0.19	15.55	0	2.9147	0.0351
29	SLU 60	-0.18	-0.19	15.96	0	2.9921	0.0356
29	SLU 61	-0.18	-0.18	15.96	0	2.9921	0.034
29	SLU 62	-0.19	-0.19	16.08	0	3.0144	0.0359
29	SLU 63	-0.18	-0.18	16.08	0	3.0145	0.0343
29	SLU 64	-0.14	-0.18	15.09	0	2.8289	0.0329
29	SLU 65	-0.14	-0.16	15.09	0	2.829	0.0302
29	SLU 66	-0.15	-0.17	15.3	0	2.8678	0.0324
29	SLU 67	-0.15	-0.16	15.3	0	2.8679	0.0308
29	SLU 68	-0.15	-0.16	15.21	0	2.8513	0.0305
29	SLU 69	-0.15	-0.17	15.41	0	2.8902	0.0326
29	SLU 70	-0.15	-0.17	15.41	0	2.8902	0.031
29	SLU 71	-0.16	-0.18	15.33	0	2.8736	0.0334
29	SLU 72	-0.15	-0.17	15.33	0	2.8737	0.0318
29	SLU 73	-0.17	-0.15	16.61	0	3.114	0.0289
29	SLU 74	-0.18	-0.17	16.82	0	3.1528	0.031
29	SLU 75	-0.18	-0.16	16.82	0	3.1529	0.0294
29	SLU 76	-0.18	-0.16	16.73	0	3.1363	0.0291
29	SLU 77	-0.18	-0.17	16.93	0	3.1752	0.0313
29	SLU 78	-0.18	-0.16	16.93	0	3.1752	0.0297
29	SLU 79	-0.18	-0.17	16.85	0	3.1586	0.0321
29	SLU 80	-0.18	-0.16	16.85	0	3.1587	0.0305
29	SLU 81	-0.18	-0.17	17.26	0	3.236	0.031
29	SLU 82	-0.18	-0.16	17.26	0	3.2361	0.0294
29	SLU 83	-0.19	-0.17	17.38	0	3.2584	0.0313
29	SLU 84	-0.19	-0.16	17.38	0	3.2584	0.0296
29	SLE RA 1	-0.11	-0.14	11.32	0	2.1225	0.0263
29	SLE RA 2	-0.11	-0.13	11.32	0	2.1225	0.0245
29	SLE RA 3	-0.11	-0.14	11.46	0	2.1484	0.026
29	SLE RA 4	-0.11	-0.13	11.46	0	2.1484	0.0249
29	SLE RA 5	-0.11	-0.13	11.4	0	2.1374	0.0247
29	SLE RA 6	-0.12	-0.14	11.54	0	2.1633	0.0262
29	SLE RA 7	-0.12	-0.13	11.54	0	2.1634	0.0251
29	SLE RA 8	-0.12	-0.14	11.48	0	2.1523	0.0267
29	SLE RA 9	-0.12	-0.14	11.48	0	2.1523	0.0256
29	SLE RA 10	-0.13	-0.13	12.33	0	2.3125	0.0236
29	SLE RA 11	-0.13	-0.13	12.47	0	2.3384	0.0251
29	SLE RA 12	-0.13	-0.13	12.47	0	2.3384	0.024
29	SLE RA 13	-0.13	-0.13	12.41	0	2.3274	0.0238
29	SLE RA 14	-0.14	-0.13	12.55	0	2.3533	0.0253
29	SLE RA 15	-0.13	-0.13	12.55	0	2.3533	0.0242
29	SLE RA 16	-0.14	-0.14	12.49	0	2.3423	0.0258
29	SLE RA 17	-0.14	-0.13	12.49	0	2.3423	0.0247
29	SLE RA 18	-0.14	-0.13	12.77	0	2.3939	0.0251
29	SLE RA 19	-0.14	-0.13	12.77	0	2.3939	0.024
29	SLE RA 20	-0.14	-0.13	12.85	0	2.4088	0.0252
29	SLE RA 21	-0.14	-0.13	12.85	0	2.4088	0.0242
29	SLE FR 1	-0.11	-0.14	11.32	0	2.1225	0.0263
29	SLE FR 2	-0.11	-0.14	11.32	0	2.1225	0.026
29	SLE FR 3	-0.11	-0.14	11.35	0	2.1284	0.0264
29	SLE FR 4	-0.12	-0.14	11.75	0	2.2039	0.0256
29	SLE FR 5	-0.12	-0.14	11.79	0	2.2098	0.026
29	SLE FR 6	-0.12	-0.14	12.04	0	2.2582	0.0257
29	SLE QP 1	-0.11	-0.14	11.32	0	2.1225	0.0263
29	SLE QP 2	-0.12	-0.14	11.75	0	2.2039	0.026
29	SLD 1	0.69	0.04	11.8	0	2.2125	-0.0075
29	SLD 2	0.7	0.05	11.8	0	2.2123	-0.009
29	SLD 3	0.65	-0.27	11.83	0	2.2176	0.0504
29	SLD 4	0.66	-0.26	11.83	0	2.2174	0.0489
29	SLD 5	0.18	0.38	11.73	0	2.1988	-0.0716
29	SLD 6	0.19	0.39	11.73	0	2.1987	-0.0725
29	SLD 7	0.05	-0.65	11.82	0	2.2158	0.1213
29	SLD 8	0.06	-0.64	11.82	0	2.2156	0.1203
29	SLD 9	-0.29	0.36	11.69	0	2.1921	-0.0684
29	SLD 10	-0.29	0.37	11.69	0	2.192	-0.0694
29	SLD 11	-0.42	-0.66	11.78	0	2.2091	0.1244
29	SLD 12	-0.41	-0.66	11.78	0	2.209	0.1235
29	SLD 13	-0.89	-0.02	11.68	0	2.1903	0.003
29	SLD 14	-0.88	-0.01	11.68	0	2.1901	0.0015
29	SLD 15	-0.93	-0.32	11.71	0	2.1954	0.0609
29	SLD 16	-0.92	-0.32	11.71	0	2.1952	0.0594

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
29	SLV 1	1.76	0.27	11.86	0	2.2244	-0.0505
29	SLV 2	1.79	0.29	11.86	0	2.2239	-0.054
29	SLV 3	1.67	-0.43	11.93	0	2.2361	0.0813
29	SLV 4	1.7	-0.42	11.92	0	2.2356	0.0778
29	SLV 5	0.58	1.05	11.69	0	2.1924	-0.1963
29	SLV 6	0.59	1.06	11.69	0	2.1921	-0.1985
29	SLV 7	0.28	-1.3	11.9	0	2.2314	0.243
29	SLV 8	0.3	-1.28	11.9	0	2.2311	0.2408
29	SLV 9	-0.53	1.01	11.61	0	2.1767	-0.1889
29	SLV 10	-0.52	1.02	11.61	0	2.1764	-0.1911
29	SLV 11	-0.83	-1.34	11.82	0	2.2157	0.2504
29	SLV 12	-0.81	-1.32	11.82	0	2.2154	0.2482
29	SLV 13	-1.94	0.14	11.58	0	2.1722	-0.0259
29	SLV 14	-1.91	0.16	11.58	0	2.1717	-0.0294
29	SLV 15	-2.02	-0.56	11.65	0	2.1839	0.1059
29	SLV 16	-2	-0.55	11.64	0	2.1834	0.1024
30	SLU 1	-0.14	-0.18	13.61	0	0	0
30	SLU 2	-0.13	-0.16	13.61	0	0	0
30	SLU 3	-0.14	-0.18	13.87	0	0	0
30	SLU 4	-0.14	-0.17	13.87	0	0	0
30	SLU 5	-0.14	-0.16	13.76	0	0	0
30	SLU 6	-0.15	-0.18	14.01	0	0	0
30	SLU 7	-0.15	-0.17	14.01	0	0	0
30	SLU 8	-0.15	-0.18	13.9	0	0	0
30	SLU 9	-0.15	-0.17	13.9	0	0	0
30	SLU 10	-0.17	-0.15	15.49	0	0	0
30	SLU 11	-0.18	-0.17	15.75	0	0	0
30	SLU 12	-0.18	-0.16	15.75	0	0	0
30	SLU 13	-0.18	-0.15	15.64	0	0	0
30	SLU 14	-0.18	-0.17	15.89	0	0	0
30	SLU 15	-0.18	-0.16	15.89	0	0	0
30	SLU 16	-0.19	-0.17	15.78	0	0	0
30	SLU 17	-0.19	-0.16	15.78	0	0	0
30	SLU 18	-0.19	-0.17	16.3	0	0	0
30	SLU 19	-0.18	-0.16	16.3	0	0	0
30	SLU 20	-0.19	-0.17	16.44	0	0	0
30	SLU 21	-0.19	-0.16	16.44	0	0	0
30	SLU 22	-0.14	-0.15	15.23	0	0	0
30	SLU 23	-0.14	-0.13	15.23	0	0	0
30	SLU 24	-0.15	-0.15	15.49	0	0	0
30	SLU 25	-0.15	-0.13	15.49	0	0	0
30	SLU 26	-0.15	-0.13	15.38	0	0	0
30	SLU 27	-0.15	-0.15	15.63	0	0	0
30	SLU 28	-0.15	-0.14	15.63	0	0	0
30	SLU 29	-0.16	-0.15	15.52	0	0	0
30	SLU 30	-0.16	-0.14	15.52	0	0	0
30	SLU 31	-0.17	-0.12	17.12	0	0	0
30	SLU 32	-0.18	-0.14	17.37	0	0	0
30	SLU 33	-0.18	-0.13	17.37	0	0	0
30	SLU 34	-0.18	-0.12	17.26	0	0	0
30	SLU 35	-0.19	-0.14	17.52	0	0	0
30	SLU 36	-0.19	-0.13	17.52	0	0	0
30	SLU 37	-0.19	-0.14	17.4	0	0	0
30	SLU 38	-0.19	-0.13	17.41	0	0	0
30	SLU 39	-0.19	-0.14	17.92	0	0	0
30	SLU 40	-0.19	-0.13	17.92	0	0	0
30	SLU 41	-0.2	-0.14	18.07	0	0	0
30	SLU 42	-0.2	-0.13	18.07	0	0	0
30	SLU 43	-0.17	-0.24	17.14	0	0	0
30	SLU 44	-0.17	-0.23	17.14	0	0	0
30	SLU 45	-0.18	-0.24	17.39	0	0	0
30	SLU 46	-0.18	-0.23	17.39	0	0	0
30	SLU 47	-0.18	-0.23	17.28	0	0	0
30	SLU 48	-0.19	-0.24	17.54	0	0	0
30	SLU 49	-0.19	-0.23	17.54	0	0	0
30	SLU 50	-0.19	-0.25	17.43	0	0	0
30	SLU 51	-0.19	-0.24	17.43	0	0	0
30	SLU 52	-0.21	-0.22	19.02	0	0	0
30	SLU 53	-0.21	-0.23	19.27	0	0	0
30	SLU 54	-0.21	-0.22	19.28	0	0	0
30	SLU 55	-0.22	-0.22	19.16	0	0	0
30	SLU 56	-0.22	-0.23	19.42	0	0	0
30	SLU 57	-0.22	-0.22	19.42	0	0	0
30	SLU 58	-0.22	-0.24	19.31	0	0	0
30	SLU 59	-0.22	-0.23	19.31	0	0	0
30	SLU 60	-0.22	-0.23	19.83	0	0	0
30	SLU 61	-0.22	-0.22	19.83	0	0	0
30	SLU 62	-0.23	-0.23	19.97	0	0	0
30	SLU 63	-0.23	-0.22	19.97	0	0	0
30	SLU 64	-0.18	-0.21	18.76	0	0	0
30	SLU 65	-0.18	-0.2	18.76	0	0	0
30	SLU 66	-0.19	-0.21	19.02	0	0	0
30	SLU 67	-0.18	-0.2	19.02	0	0	0
30	SLU 68	-0.19	-0.2	18.91	0	0	0
30	SLU 69	-0.19	-0.21	19.16	0	0	0
30	SLU 70	-0.19	-0.2	19.16	0	0	0
30	SLU 71	-0.2	-0.22	19.05	0	0	0
30	SLU 72	-0.19	-0.21	19.05	0	0	0
30	SLU 73	-0.21	-0.19	20.64	0	0	0
30	SLU 74	-0.22	-0.2	20.9	0	0	0
30	SLU 75	-0.22	-0.19	20.9	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
30	SLU 76	-0.22	-0.19	20.79	0	0	0
30	SLU 77	-0.23	-0.2	21.04	0	0	0
30	SLU 78	-0.23	-0.19	21.04	0	0	0
30	SLU 79	-0.23	-0.21	20.93	0	0	0
30	SLU 80	-0.23	-0.2	20.93	0	0	0
30	SLU 81	-0.23	-0.2	21.45	0	0	0
30	SLU 82	-0.23	-0.19	21.45	0	0	0
30	SLU 83	-0.24	-0.2	21.59	0	0	0
30	SLU 84	-0.24	-0.19	21.59	0	0	0
30	SLE RA 1	-0.14	-0.17	14.07	0	0	0
30	SLE RA 2	-0.14	-0.16	14.07	0	0	0
30	SLE RA 3	-0.14	-0.17	14.24	0	0	0
30	SLE RA 4	-0.14	-0.16	14.25	0	0	0
30	SLE RA 5	-0.14	-0.16	14.17	0	0	0
30	SLE RA 6	-0.15	-0.17	14.34	0	0	0
30	SLE RA 7	-0.15	-0.16	14.34	0	0	0
30	SLE RA 8	-0.15	-0.17	14.27	0	0	0
30	SLE RA 9	-0.15	-0.17	14.27	0	0	0
30	SLE RA 10	-0.16	-0.15	15.33	0	0	0
30	SLE RA 11	-0.16	-0.16	15.5	0	0	0
30	SLE RA 12	-0.16	-0.16	15.5	0	0	0
30	SLE RA 13	-0.16	-0.15	15.43	0	0	0
30	SLE RA 14	-0.17	-0.16	15.6	0	0	0
30	SLE RA 15	-0.17	-0.16	15.6	0	0	0
30	SLE RA 16	-0.17	-0.17	15.52	0	0	0
30	SLE RA 17	-0.17	-0.16	15.52	0	0	0
30	SLE RA 18	-0.17	-0.16	15.87	0	0	0
30	SLE RA 19	-0.17	-0.16	15.87	0	0	0
30	SLE RA 20	-0.18	-0.16	15.96	0	0	0
30	SLE RA 21	-0.17	-0.16	15.96	0	0	0
30	SLE FR 1	-0.14	-0.17	14.07	0	0	0
30	SLE FR 2	-0.14	-0.17	14.07	0	0	0
30	SLE FR 3	-0.14	-0.17	14.11	0	0	0
30	SLE FR 4	-0.15	-0.17	14.61	0	0	0
30	SLE FR 5	-0.15	-0.17	14.65	0	0	0
30	SLE FR 6	-0.15	-0.17	14.97	0	0	0
30	SLE QP 1	-0.14	-0.17	14.07	0	0	0
30	SLE QP 2	-0.15	-0.17	14.61	0	0	0
30	SLD 1	0.86	0.05	14.54	0	0	0
30	SLD 2	0.87	0.06	14.54	0	0	0
30	SLD 3	0.81	-0.33	14.56	0	0	0
30	SLD 4	0.83	-0.32	14.56	0	0	0
30	SLD 5	0.23	0.48	14.56	0	0	0
30	SLD 6	0.23	0.49	14.56	0	0	0
30	SLD 7	0.07	-0.8	14.63	0	0	0
30	SLD 8	0.08	-0.79	14.63	0	0	0
30	SLD 9	-0.37	0.46	14.59	0	0	0
30	SLD 10	-0.36	0.47	14.59	0	0	0
30	SLD 11	-0.53	-0.82	14.67	0	0	0
30	SLD 12	-0.52	-0.81	14.67	0	0	0
30	SLD 13	-1.12	-0.02	14.66	0	0	0
30	SLD 14	-1.11	0	14.66	0	0	0
30	SLD 15	-1.17	-0.4	14.69	0	0	0
30	SLD 16	-1.15	-0.39	14.68	0	0	0
30	SLV 1	2.21	0.33	14.44	0	0	0
30	SLV 2	2.24	0.36	14.44	0	0	0
30	SLV 3	2.1	-0.54	14.49	0	0	0
30	SLV 4	2.13	-0.51	14.49	0	0	0
30	SLV 5	0.72	1.3	14.49	0	0	0
30	SLV 6	0.74	1.33	14.48	0	0	0
30	SLV 7	0.35	-1.61	14.65	0	0	0
30	SLV 8	0.37	-1.59	14.65	0	0	0
30	SLV 9	-0.67	1.26	14.57	0	0	0
30	SLV 10	-0.65	1.28	14.57	0	0	0
30	SLV 11	-1.04	-1.66	14.74	0	0	0
30	SLV 12	-1.01	-1.64	14.74	0	0	0
30	SLV 13	-2.42	0.17	14.73	0	0	0
30	SLV 14	-2.39	0.21	14.73	0	0	0
30	SLV 15	-2.53	-0.7	14.79	0	0	0
30	SLV 16	-2.5	-0.67	14.78	0	0	0
31	SLU 1	-0.14	-0.17	13.49	0	0	0
31	SLU 2	-0.13	-0.16	13.5	0	0	0
31	SLU 3	-0.14	-0.17	13.75	0	0	0
31	SLU 4	-0.14	-0.16	13.75	0	0	0
31	SLU 5	-0.14	-0.16	13.64	0	0	0
31	SLU 6	-0.15	-0.17	13.89	0	0	0
31	SLU 7	-0.15	-0.16	13.89	0	0	0
31	SLU 8	-0.15	-0.18	13.77	0	0	0
31	SLU 9	-0.15	-0.17	13.78	0	0	0
31	SLU 10	-0.17	-0.15	15.35	0	0	0
31	SLU 11	-0.18	-0.16	15.6	0	0	0
31	SLU 12	-0.18	-0.15	15.6	0	0	0
31	SLU 13	-0.18	-0.15	15.49	0	0	0
31	SLU 14	-0.18	-0.16	15.74	0	0	0
31	SLU 15	-0.18	-0.15	15.74	0	0	0
31	SLU 16	-0.19	-0.17	15.63	0	0	0
31	SLU 17	-0.19	-0.16	15.63	0	0	0
31	SLU 18	-0.19	-0.16	16.15	0	0	0
31	SLU 19	-0.18	-0.15	16.15	0	0	0
31	SLU 20	-0.19	-0.16	16.29	0	0	0
31	SLU 21	-0.19	-0.15	16.29	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
31	SLU 22	-0.14	-0.14	15.11	0	0	0
31	SLU 23	-0.14	-0.13	15.11	0	0	0
31	SLU 24	-0.15	-0.14	15.36	0	0	0
31	SLU 25	-0.15	-0.13	15.36	0	0	0
31	SLU 26	-0.15	-0.13	15.25	0	0	0
31	SLU 27	-0.15	-0.14	15.5	0	0	0
31	SLU 28	-0.15	-0.13	15.5	0	0	0
31	SLU 29	-0.16	-0.15	15.39	0	0	0
31	SLU 30	-0.16	-0.14	15.39	0	0	0
31	SLU 31	-0.17	-0.12	16.97	0	0	0
31	SLU 32	-0.18	-0.13	17.22	0	0	0
31	SLU 33	-0.18	-0.12	17.22	0	0	0
31	SLU 34	-0.18	-0.12	17.11	0	0	0
31	SLU 35	-0.19	-0.13	17.36	0	0	0
31	SLU 36	-0.19	-0.12	17.36	0	0	0
31	SLU 37	-0.19	-0.14	17.25	0	0	0
31	SLU 38	-0.19	-0.13	17.25	0	0	0
31	SLU 39	-0.19	-0.13	17.76	0	0	0
31	SLU 40	-0.19	-0.12	17.76	0	0	0
31	SLU 41	-0.2	-0.13	17.9	0	0	0
31	SLU 42	-0.2	-0.12	17.9	0	0	0
31	SLU 43	-0.17	-0.24	16.99	0	0	0
31	SLU 44	-0.17	-0.22	16.99	0	0	0
31	SLU 45	-0.18	-0.23	17.24	0	0	0
31	SLU 46	-0.18	-0.22	17.24	0	0	0
31	SLU 47	-0.18	-0.22	17.13	0	0	0
31	SLU 48	-0.19	-0.24	17.38	0	0	0
31	SLU 49	-0.19	-0.22	17.38	0	0	0
31	SLU 50	-0.19	-0.24	17.27	0	0	0
31	SLU 51	-0.19	-0.23	17.27	0	0	0
31	SLU 52	-0.21	-0.21	18.85	0	0	0
31	SLU 53	-0.22	-0.22	19.1	0	0	0
31	SLU 54	-0.21	-0.21	19.1	0	0	0
31	SLU 55	-0.22	-0.21	18.99	0	0	0
31	SLU 56	-0.22	-0.23	19.24	0	0	0
31	SLU 57	-0.22	-0.22	19.24	0	0	0
31	SLU 58	-0.22	-0.23	19.13	0	0	0
31	SLU 59	-0.22	-0.22	19.13	0	0	0
31	SLU 60	-0.22	-0.22	19.64	0	0	0
31	SLU 61	-0.22	-0.21	19.64	0	0	0
31	SLU 62	-0.23	-0.23	19.78	0	0	0
31	SLU 63	-0.23	-0.22	19.78	0	0	0
31	SLU 64	-0.18	-0.21	18.6	0	0	0
31	SLU 65	-0.18	-0.19	18.6	0	0	0
31	SLU 66	-0.19	-0.2	18.85	0	0	0
31	SLU 67	-0.18	-0.19	18.86	0	0	0
31	SLU 68	-0.19	-0.19	18.74	0	0	0
31	SLU 69	-0.19	-0.2	18.99	0	0	0
31	SLU 70	-0.19	-0.19	19	0	0	0
31	SLU 71	-0.2	-0.21	18.88	0	0	0
31	SLU 72	-0.19	-0.2	18.88	0	0	0
31	SLU 73	-0.21	-0.18	20.46	0	0	0
31	SLU 74	-0.22	-0.19	20.71	0	0	0
31	SLU 75	-0.22	-0.18	20.71	0	0	0
31	SLU 76	-0.22	-0.18	20.6	0	0	0
31	SLU 77	-0.23	-0.2	20.85	0	0	0
31	SLU 78	-0.23	-0.18	20.85	0	0	0
31	SLU 79	-0.23	-0.2	20.74	0	0	0
31	SLU 80	-0.23	-0.19	20.74	0	0	0
31	SLU 81	-0.23	-0.19	21.26	0	0	0
31	SLU 82	-0.23	-0.18	21.26	0	0	0
31	SLU 83	-0.24	-0.2	21.4	0	0	0
31	SLU 84	-0.24	-0.18	21.4	0	0	0
31	SLE RA 1	-0.14	-0.17	13.95	0	0	0
31	SLE RA 2	-0.14	-0.15	13.96	0	0	0
31	SLE RA 3	-0.14	-0.16	14.12	0	0	0
31	SLE RA 4	-0.14	-0.16	14.12	0	0	0
31	SLE RA 5	-0.14	-0.15	14.05	0	0	0
31	SLE RA 6	-0.15	-0.16	14.22	0	0	0
31	SLE RA 7	-0.15	-0.16	14.22	0	0	0
31	SLE RA 8	-0.15	-0.17	14.14	0	0	0
31	SLE RA 9	-0.15	-0.16	14.14	0	0	0
31	SLE RA 10	-0.16	-0.15	15.19	0	0	0
31	SLE RA 11	-0.16	-0.16	15.36	0	0	0
31	SLE RA 12	-0.16	-0.15	15.36	0	0	0
31	SLE RA 13	-0.16	-0.15	15.29	0	0	0
31	SLE RA 14	-0.17	-0.16	15.45	0	0	0
31	SLE RA 15	-0.17	-0.15	15.46	0	0	0
31	SLE RA 16	-0.17	-0.16	15.38	0	0	0
31	SLE RA 17	-0.17	-0.15	15.38	0	0	0
31	SLE RA 18	-0.17	-0.16	15.72	0	0	0
31	SLE RA 19	-0.17	-0.15	15.72	0	0	0
31	SLE RA 20	-0.18	-0.16	15.82	0	0	0
31	SLE RA 21	-0.18	-0.15	15.82	0	0	0
31	SLE FR 1	-0.14	-0.17	13.95	0	0	0
31	SLE FR 2	-0.14	-0.16	13.95	0	0	0
31	SLE FR 3	-0.14	-0.17	13.99	0	0	0
31	SLE FR 4	-0.15	-0.16	14.49	0	0	0
31	SLE FR 5	-0.15	-0.16	14.52	0	0	0
31	SLE FR 6	-0.15	-0.16	14.84	0	0	0
31	SLE QP 1	-0.14	-0.17	13.95	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
31	SLE QP 2	-0.15	-0.16	14.49	0	0	0
31	SLD 1	0.86	0.05	14.34	0	0	0
31	SLD 2	0.87	0.07	14.33	0	0	0
31	SLD 3	0.81	-0.33	14.36	0	0	0
31	SLD 4	0.83	-0.31	14.36	0	0	0
31	SLD 5	0.23	0.48	14.41	0	0	0
31	SLD 6	0.23	0.49	14.4	0	0	0
31	SLD 7	0.07	-0.8	14.48	0	0	0
31	SLD 8	0.08	-0.78	14.48	0	0	0
31	SLD 9	-0.37	0.46	14.49	0	0	0
31	SLD 10	-0.36	0.47	14.49	0	0	0
31	SLD 11	-0.53	-0.82	14.57	0	0	0
31	SLD 12	-0.52	-0.8	14.56	0	0	0
31	SLD 13	-1.12	-0.01	14.61	0	0	0
31	SLD 14	-1.11	0	14.61	0	0	0
31	SLD 15	-1.17	-0.4	14.64	0	0	0
31	SLD 16	-1.15	-0.38	14.63	0	0	0
31	SLV 1	2.21	0.33	14.14	0	0	0
31	SLV 2	2.24	0.37	14.13	0	0	0
31	SLV 3	2.1	-0.54	14.2	0	0	0
31	SLV 4	2.13	-0.5	14.19	0	0	0
31	SLV 5	0.72	1.3	14.3	0	0	0
31	SLV 6	0.74	1.32	14.3	0	0	0
31	SLV 7	0.35	-1.61	14.48	0	0	0
31	SLV 8	0.37	-1.58	14.48	0	0	0
31	SLV 9	-0.67	1.25	14.49	0	0	0
31	SLV 10	-0.65	1.28	14.49	0	0	0
31	SLV 11	-1.04	-1.65	14.68	0	0	0
31	SLV 12	-1.02	-1.62	14.67	0	0	0
31	SLV 13	-2.42	0.18	14.78	0	0	0
31	SLV 14	-2.39	0.22	14.78	0	0	0
31	SLV 15	-2.53	-0.69	14.84	0	0	0
31	SLV 16	-2.5	-0.65	14.83	0	0	0
32	SLU 1	-0.14	-0.17	13.4	0	0	0
32	SLU 2	-0.13	-0.15	13.4	0	0	0
32	SLU 3	-0.14	-0.17	13.64	0	0	0
32	SLU 4	-0.14	-0.15	13.65	0	0	0
32	SLU 5	-0.14	-0.15	13.53	0	0	0
32	SLU 6	-0.15	-0.17	13.78	0	0	0
32	SLU 7	-0.15	-0.16	13.78	0	0	0
32	SLU 8	-0.15	-0.17	13.67	0	0	0
32	SLU 9	-0.15	-0.16	13.67	0	0	0
32	SLU 10	-0.17	-0.14	15.23	0	0	0
32	SLU 11	-0.18	-0.16	15.48	0	0	0
32	SLU 12	-0.18	-0.15	15.48	0	0	0
32	SLU 13	-0.18	-0.14	15.37	0	0	0
32	SLU 14	-0.18	-0.16	15.61	0	0	0
32	SLU 15	-0.18	-0.15	15.62	0	0	0
32	SLU 16	-0.19	-0.16	15.5	0	0	0
32	SLU 17	-0.19	-0.15	15.5	0	0	0
32	SLU 18	-0.19	-0.16	16.02	0	0	0
32	SLU 19	-0.19	-0.15	16.02	0	0	0
32	SLU 20	-0.19	-0.16	16.15	0	0	0
32	SLU 21	-0.19	-0.15	16.16	0	0	0
32	SLU 22	-0.14	-0.14	15	0	0	0
32	SLU 23	-0.14	-0.12	15.01	0	0	0
32	SLU 24	-0.15	-0.13	15.25	0	0	0
32	SLU 25	-0.15	-0.12	15.25	0	0	0
32	SLU 26	-0.15	-0.12	15.14	0	0	0
32	SLU 27	-0.15	-0.14	15.39	0	0	0
32	SLU 28	-0.15	-0.13	15.39	0	0	0
32	SLU 29	-0.16	-0.14	15.27	0	0	0
32	SLU 30	-0.16	-0.13	15.28	0	0	0
32	SLU 31	-0.17	-0.11	16.84	0	0	0
32	SLU 32	-0.18	-0.13	17.09	0	0	0
32	SLU 33	-0.18	-0.12	17.09	0	0	0
32	SLU 34	-0.18	-0.11	16.98	0	0	0
32	SLU 35	-0.19	-0.13	17.22	0	0	0
32	SLU 36	-0.19	-0.12	17.22	0	0	0
32	SLU 37	-0.19	-0.13	17.11	0	0	0
32	SLU 38	-0.19	-0.12	17.11	0	0	0
32	SLU 39	-0.19	-0.13	17.63	0	0	0
32	SLU 40	-0.19	-0.12	17.63	0	0	0
32	SLU 41	-0.2	-0.13	17.76	0	0	0
32	SLU 42	-0.2	-0.12	17.76	0	0	0
32	SLU 43	-0.17	-0.23	16.86	0	0	0
32	SLU 44	-0.17	-0.21	16.87	0	0	0
32	SLU 45	-0.18	-0.23	17.11	0	0	0
32	SLU 46	-0.18	-0.22	17.11	0	0	0
32	SLU 47	-0.18	-0.21	17	0	0	0
32	SLU 48	-0.19	-0.23	17.25	0	0	0
32	SLU 49	-0.19	-0.22	17.25	0	0	0
32	SLU 50	-0.19	-0.23	17.13	0	0	0
32	SLU 51	-0.19	-0.22	17.14	0	0	0
32	SLU 52	-0.21	-0.2	18.7	0	0	0
32	SLU 53	-0.22	-0.22	18.95	0	0	0
32	SLU 54	-0.21	-0.21	18.95	0	0	0
32	SLU 55	-0.22	-0.21	18.84	0	0	0
32	SLU 56	-0.22	-0.22	19.08	0	0	0
32	SLU 57	-0.22	-0.21	19.08	0	0	0
32	SLU 58	-0.23	-0.22	18.97	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
32	SLU 59	-0.22	-0.21	18.97	0	0	0
32	SLU 60	-0.22	-0.22	19.49	0	0	0
32	SLU 61	-0.22	-0.21	19.49	0	0	0
32	SLU 62	-0.23	-0.22	19.62	0	0	0
32	SLU 63	-0.23	-0.21	19.62	0	0	0
32	SLU 64	-0.18	-0.2	18.47	0	0	0
32	SLU 65	-0.18	-0.18	18.47	0	0	0
32	SLU 66	-0.19	-0.2	18.72	0	0	0
32	SLU 67	-0.18	-0.19	18.72	0	0	0
32	SLU 68	-0.19	-0.18	18.61	0	0	0
32	SLU 69	-0.19	-0.2	18.85	0	0	0
32	SLU 70	-0.19	-0.19	18.86	0	0	0
32	SLU 71	-0.2	-0.2	18.74	0	0	0
32	SLU 72	-0.19	-0.19	18.74	0	0	0
32	SLU 73	-0.21	-0.17	20.31	0	0	0
32	SLU 74	-0.22	-0.19	20.55	0	0	0
32	SLU 75	-0.22	-0.18	20.56	0	0	0
32	SLU 76	-0.22	-0.17	20.45	0	0	0
32	SLU 77	-0.23	-0.19	20.69	0	0	0
32	SLU 78	-0.23	-0.18	20.69	0	0	0
32	SLU 79	-0.23	-0.19	20.58	0	0	0
32	SLU 80	-0.23	-0.18	20.58	0	0	0
32	SLU 81	-0.23	-0.19	21.09	0	0	0
32	SLU 82	-0.23	-0.18	21.09	0	0	0
32	SLU 83	-0.24	-0.19	21.23	0	0	0
32	SLU 84	-0.24	-0.18	21.23	0	0	0
32	SLE RA 1	-0.14	-0.16	13.85	0	0	0
32	SLE RA 2	-0.14	-0.15	13.86	0	0	0
32	SLE RA 3	-0.14	-0.16	14.02	0	0	0
32	SLE RA 4	-0.14	-0.15	14.02	0	0	0
32	SLE RA 5	-0.14	-0.15	13.95	0	0	0
32	SLE RA 6	-0.15	-0.16	14.11	0	0	0
32	SLE RA 7	-0.15	-0.15	14.11	0	0	0
32	SLE RA 8	-0.15	-0.16	14.04	0	0	0
32	SLE RA 9	-0.15	-0.16	14.04	0	0	0
32	SLE RA 10	-0.16	-0.14	15.08	0	0	0
32	SLE RA 11	-0.16	-0.15	15.24	0	0	0
32	SLE RA 12	-0.16	-0.14	15.25	0	0	0
32	SLE RA 13	-0.16	-0.14	15.17	0	0	0
32	SLE RA 14	-0.17	-0.15	15.33	0	0	0
32	SLE RA 15	-0.17	-0.15	15.34	0	0	0
32	SLE RA 16	-0.17	-0.16	15.26	0	0	0
32	SLE RA 17	-0.17	-0.15	15.26	0	0	0
32	SLE RA 18	-0.17	-0.15	15.6	0	0	0
32	SLE RA 19	-0.17	-0.14	15.6	0	0	0
32	SLE RA 20	-0.18	-0.15	15.69	0	0	0
32	SLE RA 21	-0.18	-0.15	15.69	0	0	0
32	SLE FR 1	-0.14	-0.16	13.85	0	0	0
32	SLE FR 2	-0.14	-0.16	13.86	0	0	0
32	SLE FR 3	-0.14	-0.16	13.89	0	0	0
32	SLE FR 4	-0.15	-0.16	14.38	0	0	0
32	SLE FR 5	-0.15	-0.16	14.42	0	0	0
32	SLE FR 6	-0.15	-0.16	14.73	0	0	0
32	SLE QP 1	-0.14	-0.16	13.85	0	0	0
32	SLE QP 2	-0.15	-0.16	14.38	0	0	0
32	SLD 1	0.86	0.05	14.18	0	0	0
32	SLD 2	0.87	0.07	14.17	0	0	0
32	SLD 3	0.81	-0.33	14.14	0	0	0
32	SLD 4	0.83	-0.31	14.13	0	0	0
32	SLD 5	0.22	0.48	14.38	0	0	0
32	SLD 6	0.23	0.49	14.37	0	0	0
32	SLD 7	0.07	-0.79	14.25	0	0	0
32	SLD 8	0.07	-0.78	14.25	0	0	0
32	SLD 9	-0.37	0.46	14.51	0	0	0
32	SLD 10	-0.36	0.47	14.51	0	0	0
32	SLD 11	-0.53	-0.81	14.39	0	0	0
32	SLD 12	-0.52	-0.79	14.38	0	0	0
32	SLD 13	-1.12	-0.01	14.62	0	0	0
32	SLD 14	-1.11	0.01	14.62	0	0	0
32	SLD 15	-1.17	-0.39	14.59	0	0	0
32	SLD 16	-1.15	-0.37	14.58	0	0	0
32	SLV 1	2.21	0.32	13.9	0	0	0
32	SLV 2	2.24	0.37	13.89	0	0	0
32	SLV 3	2.1	-0.54	13.82	0	0	0
32	SLV 4	2.13	-0.49	13.8	0	0	0
32	SLV 5	0.72	1.29	14.37	0	0	0
32	SLV 6	0.74	1.32	14.36	0	0	0
32	SLV 7	0.35	-1.6	14.08	0	0	0
32	SLV 8	0.37	-1.56	14.07	0	0	0
32	SLV 9	-0.67	1.25	14.68	0	0	0
32	SLV 10	-0.65	1.28	14.68	0	0	0
32	SLV 11	-1.04	-1.64	14.4	0	0	0
32	SLV 12	-1.02	-1.61	14.39	0	0	0
32	SLV 13	-2.42	0.18	14.95	0	0	0
32	SLV 14	-2.39	0.23	14.94	0	0	0
32	SLV 15	-2.54	-0.69	14.87	0	0	0
32	SLV 16	-2.5	-0.64	14.86	0	0	0
33	SLU 1	-0.14	-0.16	13.32	0	0	0
33	SLU 2	-0.13	-0.15	13.32	0	0	0
33	SLU 3	-0.14	-0.16	13.56	0	0	0
33	SLU 4	-0.14	-0.15	13.57	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
33	SLU 5	-0.14	-0.15	13.46	0	0	0
33	SLU 6	-0.15	-0.16	13.7	0	0	0
33	SLU 7	-0.15	-0.15	13.7	0	0	0
33	SLU 8	-0.15	-0.17	13.58	0	0	0
33	SLU 9	-0.15	-0.16	13.59	0	0	0
33	SLU 10	-0.17	-0.14	15.14	0	0	0
33	SLU 11	-0.18	-0.15	15.38	0	0	0
33	SLU 12	-0.18	-0.14	15.38	0	0	0
33	SLU 13	-0.18	-0.14	15.27	0	0	0
33	SLU 14	-0.18	-0.15	15.51	0	0	0
33	SLU 15	-0.18	-0.14	15.52	0	0	0
33	SLU 16	-0.19	-0.16	15.4	0	0	0
33	SLU 17	-0.19	-0.15	15.4	0	0	0
33	SLU 18	-0.19	-0.15	15.92	0	0	0
33	SLU 19	-0.19	-0.14	15.92	0	0	0
33	SLU 20	-0.19	-0.15	16.05	0	0	0
33	SLU 21	-0.19	-0.14	16.05	0	0	0
33	SLU 22	-0.14	-0.13	14.92	0	0	0
33	SLU 23	-0.14	-0.12	14.93	0	0	0
33	SLU 24	-0.15	-0.13	15.17	0	0	0
33	SLU 25	-0.15	-0.12	15.17	0	0	0
33	SLU 26	-0.15	-0.12	15.06	0	0	0
33	SLU 27	-0.15	-0.13	15.3	0	0	0
33	SLU 28	-0.15	-0.12	15.3	0	0	0
33	SLU 29	-0.16	-0.14	15.19	0	0	0
33	SLU 30	-0.16	-0.13	15.19	0	0	0
33	SLU 31	-0.17	-0.11	16.74	0	0	0
33	SLU 32	-0.18	-0.12	16.99	0	0	0
33	SLU 33	-0.18	-0.11	16.99	0	0	0
33	SLU 34	-0.18	-0.11	16.88	0	0	0
33	SLU 35	-0.19	-0.12	17.12	0	0	0
33	SLU 36	-0.19	-0.11	17.12	0	0	0
33	SLU 37	-0.19	-0.13	17	0	0	0
33	SLU 38	-0.19	-0.12	17.01	0	0	0
33	SLU 39	-0.19	-0.12	17.52	0	0	0
33	SLU 40	-0.19	-0.11	17.52	0	0	0
33	SLU 41	-0.2	-0.12	17.65	0	0	0
33	SLU 42	-0.2	-0.11	17.65	0	0	0
33	SLU 43	-0.17	-0.22	16.77	0	0	0
33	SLU 44	-0.17	-0.21	16.77	0	0	0
33	SLU 45	-0.18	-0.22	17.01	0	0	0
33	SLU 46	-0.18	-0.21	17.01	0	0	0
33	SLU 47	-0.18	-0.21	16.9	0	0	0
33	SLU 48	-0.19	-0.22	17.14	0	0	0
33	SLU 49	-0.19	-0.21	17.14	0	0	0
33	SLU 50	-0.19	-0.23	17.03	0	0	0
33	SLU 51	-0.19	-0.22	17.03	0	0	0
33	SLU 52	-0.21	-0.2	18.59	0	0	0
33	SLU 53	-0.22	-0.21	18.83	0	0	0
33	SLU 54	-0.21	-0.2	18.83	0	0	0
33	SLU 55	-0.22	-0.2	18.72	0	0	0
33	SLU 56	-0.22	-0.21	18.96	0	0	0
33	SLU 57	-0.22	-0.2	18.96	0	0	0
33	SLU 58	-0.23	-0.22	18.85	0	0	0
33	SLU 59	-0.22	-0.21	18.85	0	0	0
33	SLU 60	-0.23	-0.21	19.36	0	0	0
33	SLU 61	-0.22	-0.2	19.36	0	0	0
33	SLU 62	-0.23	-0.21	19.49	0	0	0
33	SLU 63	-0.23	-0.2	19.5	0	0	0
33	SLU 64	-0.18	-0.19	18.37	0	0	0
33	SLU 65	-0.18	-0.18	18.37	0	0	0
33	SLU 66	-0.19	-0.19	18.61	0	0	0
33	SLU 67	-0.19	-0.18	18.62	0	0	0
33	SLU 68	-0.19	-0.18	18.51	0	0	0
33	SLU 69	-0.19	-0.19	18.75	0	0	0
33	SLU 70	-0.19	-0.18	18.75	0	0	0
33	SLU 71	-0.2	-0.2	18.63	0	0	0
33	SLU 72	-0.19	-0.19	18.63	0	0	0
33	SLU 73	-0.21	-0.17	20.19	0	0	0
33	SLU 74	-0.22	-0.18	20.43	0	0	0
33	SLU 75	-0.22	-0.17	20.43	0	0	0
33	SLU 76	-0.22	-0.17	20.32	0	0	0
33	SLU 77	-0.23	-0.18	20.56	0	0	0
33	SLU 78	-0.23	-0.17	20.57	0	0	0
33	SLU 79	-0.23	-0.19	20.45	0	0	0
33	SLU 80	-0.23	-0.18	20.45	0	0	0
33	SLU 81	-0.23	-0.18	20.97	0	0	0
33	SLU 82	-0.23	-0.17	20.97	0	0	0
33	SLU 83	-0.24	-0.18	21.1	0	0	0
33	SLU 84	-0.24	-0.17	21.1	0	0	0
33	SLE RA 1	-0.14	-0.16	13.78	0	0	0
33	SLE RA 2	-0.14	-0.14	13.78	0	0	0
33	SLE RA 3	-0.14	-0.15	13.94	0	0	0
33	SLE RA 4	-0.14	-0.15	13.94	0	0	0
33	SLE RA 5	-0.14	-0.14	13.87	0	0	0
33	SLE RA 6	-0.15	-0.15	14.03	0	0	0
33	SLE RA 7	-0.15	-0.15	14.03	0	0	0
33	SLE RA 8	-0.15	-0.16	13.95	0	0	0
33	SLE RA 9	-0.15	-0.15	13.95	0	0	0
33	SLE RA 10	-0.16	-0.14	14.99	0	0	0
33	SLE RA 11	-0.16	-0.15	15.15	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
33	SLE RA 12	-0.16	-0.14	15.15	0	0	0
33	SLE RA 13	-0.17	-0.14	15.08	0	0	0
33	SLE RA 14	-0.17	-0.15	15.24	0	0	0
33	SLE RA 15	-0.17	-0.14	15.24	0	0	0
33	SLE RA 16	-0.17	-0.15	15.16	0	0	0
33	SLE RA 17	-0.17	-0.14	15.17	0	0	0
33	SLE RA 18	-0.17	-0.15	15.51	0	0	0
33	SLE RA 19	-0.17	-0.14	15.51	0	0	0
33	SLE RA 20	-0.18	-0.15	15.6	0	0	0
33	SLE RA 21	-0.18	-0.14	15.6	0	0	0
33	SLE FR 1	-0.14	-0.16	13.78	0	0	0
33	SLE FR 2	-0.14	-0.15	13.78	0	0	0
33	SLE FR 3	-0.14	-0.16	13.81	0	0	0
33	SLE FR 4	-0.15	-0.15	14.3	0	0	0
33	SLE FR 5	-0.15	-0.15	14.33	0	0	0
33	SLE FR 6	-0.15	-0.15	14.64	0	0	0
33	SLE QP 1	-0.14	-0.16	13.78	0	0	0
33	SLE QP 2	-0.15	-0.15	14.3	0	0	0
33	SLD 1	0.86	-0.01	14.01	0	0	0
33	SLD 2	0.87	0.02	14.01	0	0	0
33	SLD 3	0.81	-0.39	13.96	0	0	0
33	SLD 4	0.83	-0.36	13.95	0	0	0
33	SLD 5	0.22	0.46	14.3	0	0	0
33	SLD 6	0.23	0.48	14.29	0	0	0
33	SLD 7	0.07	-0.8	14.11	0	0	0
33	SLD 8	0.07	-0.79	14.11	0	0	0
33	SLD 9	-0.37	0.48	14.48	0	0	0
33	SLD 10	-0.36	0.5	14.48	0	0	0
33	SLD 11	-0.53	-0.78	14.3	0	0	0
33	SLD 12	-0.52	-0.77	14.3	0	0	0
33	SLD 13	-1.12	0.06	14.64	0	0	0
33	SLD 14	-1.11	0.08	14.63	0	0	0
33	SLD 15	-1.17	-0.32	14.59	0	0	0
33	SLD 16	-1.15	-0.3	14.58	0	0	0
33	SLV 1	2.21	0.18	13.64	0	0	0
33	SLV 2	2.24	0.24	13.62	0	0	0
33	SLV 3	2.1	-0.69	13.51	0	0	0
33	SLV 4	2.13	-0.63	13.49	0	0	0
33	SLV 5	0.72	1.24	14.29	0	0	0
33	SLV 6	0.74	1.28	14.28	0	0	0
33	SLV 7	0.35	-1.63	13.87	0	0	0
33	SLV 8	0.37	-1.59	13.86	0	0	0
33	SLV 9	-0.67	1.29	14.73	0	0	0
33	SLV 10	-0.65	1.33	14.72	0	0	0
33	SLV 11	-1.04	-1.59	14.31	0	0	0
33	SLV 12	-1.02	-1.55	14.3	0	0	0
33	SLV 13	-2.43	0.32	15.1	0	0	0
33	SLV 14	-2.39	0.38	15.09	0	0	0
33	SLV 15	-2.54	-0.54	14.97	0	0	0
33	SLV 16	-2.5	-0.48	14.96	0	0	0
34	SLU 1	-0.14	-0.17	14.08	0	0	0
34	SLU 2	-0.14	-0.15	14.08	0	0	0
34	SLU 3	-0.15	-0.17	14.33	0	0	0
34	SLU 4	-0.15	-0.15	14.34	0	0	0
34	SLU 5	-0.15	-0.15	14.22	0	0	0
34	SLU 6	-0.16	-0.17	14.47	0	0	0
34	SLU 7	-0.16	-0.16	14.47	0	0	0
34	SLU 8	-0.16	-0.17	14.35	0	0	0
34	SLU 9	-0.16	-0.16	14.35	0	0	0
34	SLU 10	-0.18	-0.14	15.99	0	0	0
34	SLU 11	-0.19	-0.16	16.24	0	0	0
34	SLU 12	-0.19	-0.14	16.25	0	0	0
34	SLU 13	-0.19	-0.14	16.13	0	0	0
34	SLU 14	-0.2	-0.16	16.38	0	0	0
34	SLU 15	-0.2	-0.15	16.38	0	0	0
34	SLU 16	-0.2	-0.16	16.26	0	0	0
34	SLU 17	-0.2	-0.15	16.26	0	0	0
34	SLU 18	-0.2	-0.16	16.81	0	0	0
34	SLU 19	-0.2	-0.14	16.81	0	0	0
34	SLU 20	-0.21	-0.16	16.94	0	0	0
34	SLU 21	-0.21	-0.15	16.95	0	0	0
34	SLU 22	-0.15	-0.14	15.78	0	0	0
34	SLU 23	-0.15	-0.12	15.78	0	0	0
34	SLU 24	-0.16	-0.13	16.03	0	0	0
34	SLU 25	-0.16	-0.12	16.04	0	0	0
34	SLU 26	-0.16	-0.12	15.92	0	0	0
34	SLU 27	-0.16	-0.13	16.17	0	0	0
34	SLU 28	-0.16	-0.12	16.17	0	0	0
34	SLU 29	-0.17	-0.14	16.05	0	0	0
34	SLU 30	-0.17	-0.13	16.05	0	0	0
34	SLU 31	-0.19	-0.11	17.69	0	0	0
34	SLU 32	-0.19	-0.12	17.95	0	0	0
34	SLU 33	-0.19	-0.11	17.95	0	0	0
34	SLU 34	-0.19	-0.11	17.83	0	0	0
34	SLU 35	-0.2	-0.13	18.08	0	0	0
34	SLU 36	-0.2	-0.11	18.08	0	0	0
34	SLU 37	-0.2	-0.13	17.96	0	0	0
34	SLU 38	-0.2	-0.12	17.96	0	0	0
34	SLU 39	-0.2	-0.12	18.51	0	0	0
34	SLU 40	-0.2	-0.11	18.51	0	0	0
34	SLU 41	-0.21	-0.13	18.64	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
34	SLU 42	-0.21	-0.11	18.65	0	0	0
34	SLU 43	-0.19	-0.23	17.72	0	0	0
34	SLU 44	-0.18	-0.21	17.72	0	0	0
34	SLU 45	-0.19	-0.23	17.97	0	0	0
34	SLU 46	-0.19	-0.22	17.98	0	0	0
34	SLU 47	-0.19	-0.21	17.86	0	0	0
34	SLU 48	-0.2	-0.23	18.11	0	0	0
34	SLU 49	-0.2	-0.22	18.11	0	0	0
34	SLU 50	-0.2	-0.23	17.99	0	0	0
34	SLU 51	-0.2	-0.22	17.99	0	0	0
34	SLU 52	-0.22	-0.2	19.63	0	0	0
34	SLU 53	-0.23	-0.22	19.88	0	0	0
34	SLU 54	-0.23	-0.21	19.89	0	0	0
34	SLU 55	-0.23	-0.2	19.77	0	0	0
34	SLU 56	-0.24	-0.22	20.02	0	0	0
34	SLU 57	-0.24	-0.21	20.02	0	0	0
34	SLU 58	-0.24	-0.22	19.9	0	0	0
34	SLU 59	-0.24	-0.21	19.9	0	0	0
34	SLU 60	-0.24	-0.22	20.45	0	0	0
34	SLU 61	-0.24	-0.21	20.45	0	0	0
34	SLU 62	-0.25	-0.22	20.58	0	0	0
34	SLU 63	-0.25	-0.21	20.59	0	0	0
34	SLU 64	-0.19	-0.2	19.42	0	0	0
34	SLU 65	-0.19	-0.18	19.42	0	0	0
34	SLU 66	-0.2	-0.19	19.67	0	0	0
34	SLU 67	-0.2	-0.18	19.68	0	0	0
34	SLU 68	-0.2	-0.18	19.56	0	0	0
34	SLU 69	-0.21	-0.2	19.81	0	0	0
34	SLU 70	-0.21	-0.18	19.81	0	0	0
34	SLU 71	-0.21	-0.2	19.69	0	0	0
34	SLU 72	-0.21	-0.19	19.69	0	0	0
34	SLU 73	-0.23	-0.17	21.33	0	0	0
34	SLU 74	-0.24	-0.19	21.59	0	0	0
34	SLU 75	-0.23	-0.17	21.59	0	0	0
34	SLU 76	-0.24	-0.17	21.47	0	0	0
34	SLU 77	-0.24	-0.19	21.72	0	0	0
34	SLU 78	-0.24	-0.18	21.72	0	0	0
34	SLU 79	-0.25	-0.19	21.6	0	0	0
34	SLU 80	-0.24	-0.18	21.6	0	0	0
34	SLU 81	-0.25	-0.19	22.15	0	0	0
34	SLU 82	-0.24	-0.17	22.15	0	0	0
34	SLU 83	-0.25	-0.19	22.28	0	0	0
34	SLU 84	-0.25	-0.18	22.29	0	0	0
34	SLE RA 1	-0.15	-0.16	14.56	0	0	0
34	SLE RA 2	-0.15	-0.15	14.57	0	0	0
34	SLE RA 3	-0.15	-0.16	14.73	0	0	0
34	SLE RA 4	-0.15	-0.15	14.74	0	0	0
34	SLE RA 5	-0.15	-0.15	14.66	0	0	0
34	SLE RA 6	-0.16	-0.16	14.82	0	0	0
34	SLE RA 7	-0.16	-0.15	14.83	0	0	0
34	SLE RA 8	-0.16	-0.16	14.74	0	0	0
34	SLE RA 9	-0.16	-0.15	14.74	0	0	0
34	SLE RA 10	-0.17	-0.14	15.84	0	0	0
34	SLE RA 11	-0.18	-0.15	16.01	0	0	0
34	SLE RA 12	-0.17	-0.14	16.01	0	0	0
34	SLE RA 13	-0.18	-0.14	15.93	0	0	0
34	SLE RA 14	-0.18	-0.15	16.1	0	0	0
34	SLE RA 15	-0.18	-0.14	16.1	0	0	0
34	SLE RA 16	-0.18	-0.16	16.02	0	0	0
34	SLE RA 17	-0.18	-0.15	16.02	0	0	0
34	SLE RA 18	-0.18	-0.15	16.38	0	0	0
34	SLE RA 19	-0.18	-0.14	16.39	0	0	0
34	SLE RA 20	-0.19	-0.15	16.47	0	0	0
34	SLE RA 21	-0.19	-0.14	16.48	0	0	0
34	SLE FR 1	-0.15	-0.16	14.56	0	0	0
34	SLE FR 2	-0.15	-0.16	14.56	0	0	0
34	SLE FR 3	-0.15	-0.16	14.6	0	0	0
34	SLE FR 4	-0.16	-0.15	15.11	0	0	0
34	SLE FR 5	-0.16	-0.16	15.14	0	0	0
34	SLE FR 6	-0.16	-0.16	15.47	0	0	0
34	SLE QP 1	-0.15	-0.16	14.56	0	0	0
34	SLE QP 2	-0.16	-0.16	15.11	0	0	0
34	SLD 1	0.91	-0.01	14.72	0	0	0
34	SLD 2	0.93	0.03	14.71	0	0	0
34	SLD 3	0.86	-0.41	14.65	0	0	0
34	SLD 4	0.88	-0.38	14.64	0	0	0
34	SLD 5	0.24	0.49	15.11	0	0	0
34	SLD 6	0.25	0.51	15.11	0	0	0
34	SLD 7	0.07	-0.85	14.85	0	0	0
34	SLD 8	0.08	-0.83	14.85	0	0	0
34	SLD 9	-0.39	0.51	15.37	0	0	0
34	SLD 10	-0.38	0.53	15.36	0	0	0
34	SLD 11	-0.56	-0.83	15.11	0	0	0
34	SLD 12	-0.55	-0.81	15.1	0	0	0
34	SLD 13	-1.19	0.06	15.58	0	0	0
34	SLD 14	-1.18	0.09	15.57	0	0	0
34	SLD 15	-1.24	-0.34	15.5	0	0	0
34	SLD 16	-1.23	-0.31	15.49	0	0	0
34	SLV 1	2.35	0.19	14.21	0	0	0
34	SLV 2	2.38	0.26	14.19	0	0	0
34	SLV 3	2.23	-0.73	14.03	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
34	SLV 4	2.26	-0.65	14.01	0	0	0
34	SLV 5	0.77	1.32	15.11	0	0	0
34	SLV 6	0.79	1.37	15.1	0	0	0
34	SLV 7	0.37	-1.73	14.51	0	0	0
34	SLV 8	0.4	-1.68	14.5	0	0	0
34	SLV 9	-0.71	1.36	15.72	0	0	0
34	SLV 10	-0.69	1.41	15.7	0	0	0
34	SLV 11	-1.1	-1.68	15.12	0	0	0
34	SLV 12	-1.08	-1.63	15.1	0	0	0
34	SLV 13	-2.58	0.34	16.21	0	0	0
34	SLV 14	-2.54	0.41	16.19	0	0	0
34	SLV 15	-2.69	-0.57	16.03	0	0	0
34	SLV 16	-2.66	-0.5	16.01	0	0	0
35	SLU 1	-0.08	-0.09	7.37	0	0	0
35	SLU 2	-0.08	-0.08	7.37	0	0	0
35	SLU 3	-0.08	-0.09	7.5	0	0	0
35	SLU 4	-0.08	-0.08	7.5	0	0	0
35	SLU 5	-0.08	-0.08	7.44	0	0	0
35	SLU 6	-0.08	-0.09	7.57	0	0	0
35	SLU 7	-0.08	-0.08	7.57	0	0	0
35	SLU 8	-0.09	-0.09	7.51	0	0	0
35	SLU 9	-0.08	-0.08	7.51	0	0	0
35	SLU 10	-0.1	-0.07	8.37	0	0	0
35	SLU 11	-0.1	-0.08	8.5	0	0	0
35	SLU 12	-0.1	-0.07	8.5	0	0	0
35	SLU 13	-0.1	-0.07	8.44	0	0	0
35	SLU 14	-0.1	-0.08	8.57	0	0	0
35	SLU 15	-0.1	-0.07	8.57	0	0	0
35	SLU 16	-0.1	-0.08	8.5	0	0	0
35	SLU 17	-0.1	-0.08	8.5	0	0	0
35	SLU 18	-0.1	-0.08	8.79	0	0	0
35	SLU 19	-0.1	-0.07	8.79	0	0	0
35	SLU 20	-0.11	-0.08	8.86	0	0	0
35	SLU 21	-0.11	-0.08	8.86	0	0	0
35	SLU 22	-0.08	-0.07	8.26	0	0	0
35	SLU 23	-0.08	-0.06	8.27	0	0	0
35	SLU 24	-0.08	-0.07	8.4	0	0	0
35	SLU 25	-0.08	-0.06	8.4	0	0	0
35	SLU 26	-0.08	-0.06	8.33	0	0	0
35	SLU 27	-0.09	-0.07	8.46	0	0	0
35	SLU 28	-0.09	-0.06	8.47	0	0	0
35	SLU 29	-0.09	-0.07	8.4	0	0	0
35	SLU 30	-0.09	-0.07	8.4	0	0	0
35	SLU 31	-0.1	-0.06	9.26	0	0	0
35	SLU 32	-0.1	-0.06	9.39	0	0	0
35	SLU 33	-0.1	-0.06	9.39	0	0	0
35	SLU 34	-0.1	-0.06	9.33	0	0	0
35	SLU 35	-0.11	-0.06	9.46	0	0	0
35	SLU 36	-0.11	-0.06	9.46	0	0	0
35	SLU 37	-0.11	-0.07	9.4	0	0	0
35	SLU 38	-0.11	-0.06	9.4	0	0	0
35	SLU 39	-0.11	-0.06	9.69	0	0	0
35	SLU 40	-0.11	-0.06	9.69	0	0	0
35	SLU 41	-0.11	-0.06	9.75	0	0	0
35	SLU 42	-0.11	-0.06	9.76	0	0	0
35	SLU 43	-0.1	-0.12	9.27	0	0	0
35	SLU 44	-0.1	-0.11	9.28	0	0	0
35	SLU 45	-0.1	-0.12	9.41	0	0	0
35	SLU 46	-0.1	-0.11	9.41	0	0	0
35	SLU 47	-0.1	-0.11	9.35	0	0	0
35	SLU 48	-0.11	-0.12	9.47	0	0	0
35	SLU 49	-0.11	-0.11	9.48	0	0	0
35	SLU 50	-0.11	-0.12	9.41	0	0	0
35	SLU 51	-0.11	-0.11	9.41	0	0	0
35	SLU 52	-0.12	-0.1	10.27	0	0	0
35	SLU 53	-0.12	-0.11	10.4	0	0	0
35	SLU 54	-0.12	-0.11	10.4	0	0	0
35	SLU 55	-0.12	-0.11	10.34	0	0	0
35	SLU 56	-0.13	-0.11	10.47	0	0	0
35	SLU 57	-0.13	-0.11	10.47	0	0	0
35	SLU 58	-0.13	-0.12	10.41	0	0	0
35	SLU 59	-0.13	-0.11	10.41	0	0	0
35	SLU 60	-0.13	-0.11	10.7	0	0	0
35	SLU 61	-0.13	-0.11	10.7	0	0	0
35	SLU 62	-0.13	-0.11	10.76	0	0	0
35	SLU 63	-0.13	-0.11	10.77	0	0	0
35	SLU 64	-0.1	-0.1	10.17	0	0	0
35	SLU 65	-0.1	-0.09	10.17	0	0	0
35	SLU 66	-0.1	-0.1	10.3	0	0	0
35	SLU 67	-0.1	-0.09	10.3	0	0	0
35	SLU 68	-0.1	-0.09	10.24	0	0	0
35	SLU 69	-0.11	-0.1	10.37	0	0	0
35	SLU 70	-0.11	-0.09	10.37	0	0	0
35	SLU 71	-0.11	-0.1	10.3	0	0	0
35	SLU 72	-0.11	-0.1	10.31	0	0	0
35	SLU 73	-0.12	-0.09	11.17	0	0	0
35	SLU 74	-0.12	-0.1	11.3	0	0	0
35	SLU 75	-0.12	-0.09	11.3	0	0	0
35	SLU 76	-0.12	-0.09	11.23	0	0	0
35	SLU 77	-0.13	-0.1	11.36	0	0	0
35	SLU 78	-0.13	-0.09	11.37	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
35	SLU 79	-0.13	-0.1	11.3	0	0	0
35	SLU 80	-0.13	-0.09	11.3	0	0	0
35	SLU 81	-0.13	-0.1	11.59	0	0	0
35	SLU 82	-0.13	-0.09	11.59	0	0	0
35	SLU 83	-0.13	-0.1	11.66	0	0	0
35	SLU 84	-0.13	-0.09	11.66	0	0	0
35	SLE RA 1	-0.08	-0.08	7.62	0	0	0
35	SLE RA 2	-0.08	-0.08	7.63	0	0	0
35	SLE RA 3	-0.08	-0.08	7.71	0	0	0
35	SLE RA 4	-0.08	-0.08	7.71	0	0	0
35	SLE RA 5	-0.08	-0.08	7.67	0	0	0
35	SLE RA 6	-0.08	-0.08	7.76	0	0	0
35	SLE RA 7	-0.08	-0.08	7.76	0	0	0
35	SLE RA 8	-0.08	-0.08	7.72	0	0	0
35	SLE RA 9	-0.08	-0.08	7.72	0	0	0
35	SLE RA 10	-0.09	-0.07	8.29	0	0	0
35	SLE RA 11	-0.09	-0.08	8.38	0	0	0
35	SLE RA 12	-0.09	-0.07	8.38	0	0	0
35	SLE RA 13	-0.09	-0.07	8.34	0	0	0
35	SLE RA 14	-0.1	-0.08	8.42	0	0	0
35	SLE RA 15	-0.1	-0.07	8.42	0	0	0
35	SLE RA 16	-0.1	-0.08	8.38	0	0	0
35	SLE RA 17	-0.1	-0.08	8.38	0	0	0
35	SLE RA 18	-0.1	-0.08	8.57	0	0	0
35	SLE RA 19	-0.1	-0.07	8.57	0	0	0
35	SLE RA 20	-0.1	-0.08	8.62	0	0	0
35	SLE RA 21	-0.1	-0.07	8.62	0	0	0
35	SLE FR 1	-0.08	-0.08	7.62	0	0	0
35	SLE FR 2	-0.08	-0.08	7.62	0	0	0
35	SLE FR 3	-0.08	-0.08	7.64	0	0	0
35	SLE FR 4	-0.08	-0.08	7.91	0	0	0
35	SLE FR 5	-0.08	-0.08	7.93	0	0	0
35	SLE FR 6	-0.09	-0.08	8.1	0	0	0
35	SLE QP 1	-0.08	-0.08	7.62	0	0	0
35	SLE QP 2	-0.08	-0.08	7.91	0	0	0
35	SLD 1	0.48	0	7.65	0	0	0
35	SLD 2	0.49	0.02	7.65	0	0	0
35	SLD 3	0.46	-0.21	7.6	0	0	0
35	SLD 4	0.46	-0.19	7.6	0	0	0
35	SLD 5	0.13	0.26	7.91	0	0	0
35	SLD 6	0.13	0.27	7.91	0	0	0
35	SLD 7	0.04	-0.44	7.74	0	0	0
35	SLD 8	0.04	-0.43	7.73	0	0	0
35	SLD 9	-0.21	0.27	8.08	0	0	0
35	SLD 10	-0.2	0.28	8.08	0	0	0
35	SLD 11	-0.3	-0.43	7.91	0	0	0
35	SLD 12	-0.29	-0.42	7.9	0	0	0
35	SLD 13	-0.63	0.03	8.22	0	0	0
35	SLD 14	-0.62	0.05	8.22	0	0	0
35	SLD 15	-0.66	-0.18	8.17	0	0	0
35	SLD 16	-0.65	-0.16	8.16	0	0	0
35	SLV 1	1.24	0.1	7.31	0	0	0
35	SLV 2	1.26	0.14	7.3	0	0	0
35	SLV 3	1.18	-0.38	7.19	0	0	0
35	SLV 4	1.2	-0.34	7.18	0	0	0
35	SLV 5	0.4	0.69	7.92	0	0	0
35	SLV 6	0.42	0.72	7.91	0	0	0
35	SLV 7	0.2	-0.91	7.51	0	0	0
35	SLV 8	0.21	-0.88	7.5	0	0	0
35	SLV 9	-0.38	0.72	8.32	0	0	0
35	SLV 10	-0.36	0.75	8.31	0	0	0
35	SLV 11	-0.58	-0.88	7.91	0	0	0
35	SLV 12	-0.57	-0.86	7.9	0	0	0
35	SLV 13	-1.36	0.18	8.64	0	0	0
35	SLV 14	-1.34	0.22	8.63	0	0	0
35	SLV 15	-1.42	-0.3	8.52	0	0	0
35	SLV 16	-1.41	-0.26	8.5	0	0	0
37	SLU 1	-0.05	-0.07	5.18	0	0	0
37	SLU 2	-0.05	-0.06	5.18	0	0	0
37	SLU 3	-0.06	-0.07	5.28	0	0	0
37	SLU 4	-0.05	-0.07	5.28	0	0	0
37	SLU 5	-0.06	-0.06	5.24	0	0	0
37	SLU 6	-0.06	-0.07	5.34	0	0	0
37	SLU 7	-0.06	-0.07	5.34	0	0	0
37	SLU 8	-0.06	-0.07	5.3	0	0	0
37	SLU 9	-0.06	-0.07	5.3	0	0	0
37	SLU 10	-0.07	-0.06	5.91	0	0	0
37	SLU 11	-0.07	-0.07	6.01	0	0	0
37	SLU 12	-0.07	-0.06	6.01	0	0	0
37	SLU 13	-0.07	-0.06	5.97	0	0	0
37	SLU 14	-0.07	-0.07	6.07	0	0	0
37	SLU 15	-0.07	-0.06	6.06	0	0	0
37	SLU 16	-0.07	-0.07	6.02	0	0	0
37	SLU 17	-0.07	-0.06	6.02	0	0	0
37	SLU 18	-0.07	-0.07	6.22	0	0	0
37	SLU 19	-0.07	-0.06	6.22	0	0	0
37	SLU 20	-0.07	-0.07	6.28	0	0	0
37	SLU 21	-0.07	-0.06	6.28	0	0	0
37	SLU 22	-0.05	-0.06	5.8	0	0	0
37	SLU 23	-0.05	-0.05	5.8	0	0	0
37	SLU 24	-0.06	-0.06	5.9	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
37	SLU 25	-0.06	-0.05	5.9	0	0	0
37	SLU 26	-0.06	-0.05	5.86	0	0	0
37	SLU 27	-0.06	-0.06	5.96	0	0	0
37	SLU 28	-0.06	-0.05	5.96	0	0	0
37	SLU 29	-0.06	-0.06	5.92	0	0	0
37	SLU 30	-0.06	-0.06	5.92	0	0	0
37	SLU 31	-0.07	-0.05	6.53	0	0	0
37	SLU 32	-0.07	-0.05	6.63	0	0	0
37	SLU 33	-0.07	-0.05	6.63	0	0	0
37	SLU 34	-0.07	-0.05	6.59	0	0	0
37	SLU 35	-0.07	-0.05	6.69	0	0	0
37	SLU 36	-0.07	-0.05	6.69	0	0	0
37	SLU 37	-0.07	-0.06	6.64	0	0	0
37	SLU 38	-0.07	-0.05	6.64	0	0	0
37	SLU 39	-0.07	-0.05	6.84	0	0	0
37	SLU 40	-0.07	-0.05	6.84	0	0	0
37	SLU 41	-0.08	-0.05	6.9	0	0	0
37	SLU 42	-0.08	-0.05	6.9	0	0	0
37	SLU 43	-0.07	-0.1	6.53	0	0	0
37	SLU 44	-0.07	-0.09	6.52	0	0	0
37	SLU 45	-0.07	-0.09	6.63	0	0	0
37	SLU 46	-0.07	-0.09	6.62	0	0	0
37	SLU 47	-0.07	-0.09	6.58	0	0	0
37	SLU 48	-0.07	-0.1	6.68	0	0	0
37	SLU 49	-0.07	-0.09	6.68	0	0	0
37	SLU 50	-0.07	-0.1	6.64	0	0	0
37	SLU 51	-0.07	-0.09	6.64	0	0	0
37	SLU 52	-0.08	-0.09	7.25	0	0	0
37	SLU 53	-0.08	-0.09	7.35	0	0	0
37	SLU 54	-0.08	-0.09	7.35	0	0	0
37	SLU 55	-0.08	-0.09	7.31	0	0	0
37	SLU 56	-0.09	-0.09	7.41	0	0	0
37	SLU 57	-0.09	-0.09	7.41	0	0	0
37	SLU 58	-0.09	-0.09	7.37	0	0	0
37	SLU 59	-0.09	-0.09	7.37	0	0	0
37	SLU 60	-0.09	-0.09	7.56	0	0	0
37	SLU 61	-0.09	-0.09	7.56	0	0	0
37	SLU 62	-0.09	-0.09	7.62	0	0	0
37	SLU 63	-0.09	-0.09	7.62	0	0	0
37	SLU 64	-0.07	-0.08	7.15	0	0	0
37	SLU 65	-0.07	-0.08	7.15	0	0	0
37	SLU 66	-0.07	-0.08	7.25	0	0	0
37	SLU 67	-0.07	-0.08	7.25	0	0	0
37	SLU 68	-0.07	-0.08	7.2	0	0	0
37	SLU 69	-0.08	-0.08	7.3	0	0	0
37	SLU 70	-0.07	-0.08	7.3	0	0	0
37	SLU 71	-0.08	-0.09	7.26	0	0	0
37	SLU 72	-0.08	-0.08	7.26	0	0	0
37	SLU 73	-0.08	-0.07	7.87	0	0	0
37	SLU 74	-0.09	-0.08	7.97	0	0	0
37	SLU 75	-0.09	-0.08	7.97	0	0	0
37	SLU 76	-0.09	-0.07	7.93	0	0	0
37	SLU 77	-0.09	-0.08	8.03	0	0	0
37	SLU 78	-0.09	-0.08	8.03	0	0	0
37	SLU 79	-0.09	-0.08	7.99	0	0	0
37	SLU 80	-0.09	-0.08	7.99	0	0	0
37	SLU 81	-0.09	-0.08	8.18	0	0	0
37	SLU 82	-0.09	-0.08	8.18	0	0	0
37	SLU 83	-0.09	-0.08	8.24	0	0	0
37	SLU 84	-0.09	-0.08	8.24	0	0	0
37	SLE RA 1	-0.05	-0.07	5.36	0	0	0
37	SLE RA 2	-0.05	-0.06	5.36	0	0	0
37	SLE RA 3	-0.05	-0.07	5.43	0	0	0
37	SLE RA 4	-0.05	-0.06	5.43	0	0	0
37	SLE RA 5	-0.06	-0.06	5.4	0	0	0
37	SLE RA 6	-0.06	-0.07	5.47	0	0	0
37	SLE RA 7	-0.06	-0.06	5.47	0	0	0
37	SLE RA 8	-0.06	-0.07	5.44	0	0	0
37	SLE RA 9	-0.06	-0.07	5.44	0	0	0
37	SLE RA 10	-0.06	-0.06	5.84	0	0	0
37	SLE RA 11	-0.06	-0.06	5.91	0	0	0
37	SLE RA 12	-0.06	-0.06	5.91	0	0	0
37	SLE RA 13	-0.06	-0.06	5.88	0	0	0
37	SLE RA 14	-0.07	-0.06	5.95	0	0	0
37	SLE RA 15	-0.07	-0.06	5.95	0	0	0
37	SLE RA 16	-0.07	-0.07	5.92	0	0	0
37	SLE RA 17	-0.07	-0.06	5.92	0	0	0
37	SLE RA 18	-0.07	-0.06	6.05	0	0	0
37	SLE RA 19	-0.07	-0.06	6.05	0	0	0
37	SLE RA 20	-0.07	-0.06	6.09	0	0	0
37	SLE RA 21	-0.07	-0.06	6.09	0	0	0
37	SLE FR 1	-0.05	-0.07	5.36	0	0	0
37	SLE FR 2	-0.05	-0.07	5.36	0	0	0
37	SLE FR 3	-0.05	-0.07	5.38	0	0	0
37	SLE FR 4	-0.06	-0.07	5.57	0	0	0
37	SLE FR 5	-0.06	-0.07	5.58	0	0	0
37	SLE FR 6	-0.06	-0.07	5.71	0	0	0
37	SLE QP 1	-0.05	-0.07	5.36	0	0	0
37	SLE QP 2	-0.06	-0.07	5.57	0	0	0
37	SLD 1	0.33	0.02	5.6	0	0	0
37	SLD 2	0.33	0.02	5.6	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
37	SLD 3	0.31	-0.13	5.64	0	0	0
37	SLD 4	0.31	-0.12	5.63	0	0	0
37	SLD 5	0.09	0.18	5.52	0	0	0
37	SLD 6	0.09	0.18	5.52	0	0	0
37	SLD 7	0.02	-0.31	5.64	0	0	0
37	SLD 8	0.03	-0.31	5.64	0	0	0
37	SLD 9	-0.14	0.17	5.49	0	0	0
37	SLD 10	-0.14	0.18	5.49	0	0	0
37	SLD 11	-0.2	-0.32	5.61	0	0	0
37	SLD 12	-0.2	-0.31	5.61	0	0	0
37	SLD 13	-0.43	-0.01	5.5	0	0	0
37	SLD 14	-0.42	-0.01	5.5	0	0	0
37	SLD 15	-0.45	-0.16	5.54	0	0	0
37	SLD 16	-0.44	-0.15	5.54	0	0	0
37	SLV 1	0.84	0.13	5.64	0	0	0
37	SLV 2	0.85	0.14	5.64	0	0	0
37	SLV 3	0.8	-0.2	5.72	0	0	0
37	SLV 4	0.81	-0.2	5.72	0	0	0
37	SLV 5	0.28	0.5	5.46	0	0	0
37	SLV 6	0.28	0.5	5.46	0	0	0
37	SLV 7	0.13	-0.62	5.74	0	0	0
37	SLV 8	0.14	-0.61	5.74	0	0	0
37	SLV 9	-0.25	0.48	5.4	0	0	0
37	SLV 10	-0.25	0.48	5.4	0	0	0
37	SLV 11	-0.4	-0.64	5.67	0	0	0
37	SLV 12	-0.39	-0.63	5.67	0	0	0
37	SLV 13	-0.92	0.07	5.41	0	0	0
37	SLV 14	-0.91	0.07	5.41	0	0	0
37	SLV 15	-0.96	-0.27	5.5	0	0	0
37	SLV 16	-0.96	-0.26	5.49	0	0	0
39	SLU 1	-0.12	-0.16	11.85	0	1.4817	0.0201
39	SLU 2	-0.12	-0.14	11.85	0	1.4815	0.0181
39	SLU 3	-0.13	-0.16	12.08	0	1.5099	0.0197
39	SLU 4	-0.13	-0.15	12.08	0	1.5098	0.0185
39	SLU 5	-0.13	-0.15	11.98	0	1.4977	0.0183
39	SLU 6	-0.13	-0.16	12.21	0	1.5261	0.0199
39	SLU 7	-0.13	-0.15	12.21	0	1.526	0.0187
39	SLU 8	-0.14	-0.16	12.11	0	1.5141	0.0205
39	SLU 9	-0.13	-0.15	12.11	0	1.514	0.0193
39	SLU 10	-0.15	-0.14	13.51	0	1.6882	0.0171
39	SLU 11	-0.16	-0.15	13.73	0	1.7166	0.0187
39	SLU 12	-0.16	-0.14	13.73	0	1.7165	0.0175
39	SLU 13	-0.16	-0.14	13.64	0	1.7044	0.0173
39	SLU 14	-0.16	-0.15	13.86	0	1.7328	0.0189
39	SLU 15	-0.16	-0.14	13.86	0	1.7327	0.0177
39	SLU 16	-0.17	-0.16	13.77	0	1.7208	0.0195
39	SLU 17	-0.16	-0.15	13.77	0	1.7207	0.0183
39	SLU 18	-0.16	-0.15	14.22	0	1.777	0.0187
39	SLU 19	-0.16	-0.14	14.21	0	1.7769	0.0175
39	SLU 20	-0.17	-0.15	14.35	0	1.7932	0.0189
39	SLU 21	-0.17	-0.14	14.34	0	1.793	0.0177
39	SLU 22	-0.13	-0.13	13.28	0	1.6597	0.0167
39	SLU 23	-0.12	-0.12	13.28	0	1.6595	0.0147
39	SLU 24	-0.13	-0.13	13.5	0	1.688	0.0163
39	SLU 25	-0.13	-0.12	13.5	0	1.6878	0.0151
39	SLU 26	-0.13	-0.12	13.41	0	1.6757	0.0149
39	SLU 27	-0.14	-0.13	13.63	0	1.7042	0.0165
39	SLU 28	-0.14	-0.12	13.63	0	1.704	0.0153
39	SLU 29	-0.14	-0.14	13.54	0	1.6921	0.0171
39	SLU 30	-0.14	-0.13	13.54	0	1.692	0.0159
39	SLU 31	-0.15	-0.11	14.93	0	1.8662	0.0138
39	SLU 32	-0.16	-0.12	15.16	0	1.8947	0.0153
39	SLU 33	-0.16	-0.11	15.16	0	1.8945	0.0142
39	SLU 34	-0.16	-0.11	15.06	0	1.8824	0.014
39	SLU 35	-0.17	-0.12	15.29	0	1.9108	0.0155
39	SLU 36	-0.17	-0.11	15.29	0	1.9107	0.0144
39	SLU 37	-0.17	-0.13	15.19	0	1.8988	0.0161
39	SLU 38	-0.17	-0.12	15.19	0	1.8987	0.0149
39	SLU 39	-0.17	-0.12	15.64	0	1.955	0.0153
39	SLU 40	-0.17	-0.11	15.64	0	1.9549	0.0141
39	SLU 41	-0.18	-0.12	15.77	0	1.9712	0.0155
39	SLU 42	-0.18	-0.11	15.77	0	1.9711	0.0143
39	SLU 43	-0.16	-0.22	14.92	0	1.8652	0.0273
39	SLU 44	-0.16	-0.2	14.92	0	1.865	0.0253
39	SLU 45	-0.16	-0.21	15.15	0	1.8934	0.0269
39	SLU 46	-0.16	-0.21	15.15	0	1.8933	0.0257
39	SLU 47	-0.16	-0.2	15.05	0	1.8812	0.0255
39	SLU 48	-0.17	-0.22	15.28	0	1.9096	0.0271
39	SLU 49	-0.17	-0.21	15.28	0	1.9095	0.0259
39	SLU 50	-0.17	-0.22	15.18	0	1.8976	0.0276
39	SLU 51	-0.17	-0.21	15.18	0	1.8974	0.0265
39	SLU 52	-0.19	-0.19	16.57	0	2.0717	0.0243
39	SLU 53	-0.19	-0.21	16.8	0	2.1001	0.0259
39	SLU 54	-0.19	-0.2	16.8	0	2.1	0.0247
39	SLU 55	-0.19	-0.2	16.7	0	2.0879	0.0245
39	SLU 56	-0.2	-0.21	16.93	0	2.1163	0.0261
39	SLU 57	-0.2	-0.2	16.93	0	2.1162	0.0249
39	SLU 58	-0.2	-0.21	16.83	0	2.1043	0.0267
39	SLU 59	-0.2	-0.2	16.83	0	2.1041	0.0255
39	SLU 60	-0.2	-0.21	17.28	0	2.1605	0.0259
39	SLU 61	-0.2	-0.2	17.28	0	2.1603	0.0247

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
39	SLU 62	-0.21	-0.21	17.41	0	2.1767	0.0261
39	SLU 63	-0.21	-0.2	17.41	0	2.1765	0.0249
39	SLU 64	-0.16	-0.19	16.35	0	2.0432	0.0239
39	SLU 65	-0.16	-0.18	16.34	0	2.043	0.0219
39	SLU 66	-0.17	-0.19	16.57	0	2.0714	0.0235
39	SLU 67	-0.17	-0.18	16.57	0	2.0713	0.0223
39	SLU 68	-0.17	-0.18	16.47	0	2.0592	0.0221
39	SLU 69	-0.17	-0.19	16.7	0	2.0876	0.0237
39	SLU 70	-0.17	-0.18	16.7	0	2.0875	0.0225
39	SLU 71	-0.17	-0.19	16.6	0	2.0756	0.0243
39	SLU 72	-0.17	-0.18	16.6	0	2.0755	0.0231
39	SLU 73	-0.19	-0.17	18	0	2.2497	0.0209
39	SLU 74	-0.2	-0.18	18.23	0	2.2781	0.0225
39	SLU 75	-0.2	-0.17	18.22	0	2.278	0.0213
39	SLU 76	-0.2	-0.17	18.13	0	2.2659	0.0211
39	SLU 77	-0.2	-0.18	18.35	0	2.2943	0.0227
39	SLU 78	-0.2	-0.17	18.35	0	2.2942	0.0215
39	SLU 79	-0.2	-0.19	18.26	0	2.2823	0.0233
39	SLU 80	-0.2	-0.18	18.26	0	2.2821	0.0221
39	SLU 81	-0.2	-0.18	18.71	0	2.3385	0.0225
39	SLU 82	-0.2	-0.17	18.71	0	2.3384	0.0213
39	SLU 83	-0.21	-0.18	18.84	0	2.3547	0.0227
39	SLU 84	-0.21	-0.17	18.84	0	2.3545	0.0215
39	SLE RA 1	-0.12	-0.15	12.26	0	1.5326	0.0191
39	SLE RA 2	-0.12	-0.14	12.26	0	1.5324	0.0178
39	SLE RA 3	-0.13	-0.15	12.41	0	1.5514	0.0189
39	SLE RA 4	-0.13	-0.14	12.41	0	1.5513	0.0181
39	SLE RA 5	-0.13	-0.14	12.35	0	1.5432	0.0179
39	SLE RA 6	-0.13	-0.15	12.5	0	1.5622	0.019
39	SLE RA 7	-0.13	-0.15	12.5	0	1.5621	0.0182
39	SLE RA 8	-0.13	-0.15	12.43	0	1.5542	0.0194
39	SLE RA 9	-0.13	-0.15	12.43	0	1.5541	0.0186
39	SLE RA 10	-0.14	-0.14	13.36	0	1.6702	0.0172
39	SLE RA 11	-0.15	-0.15	13.51	0	1.6892	0.0182
39	SLE RA 12	-0.15	-0.14	13.51	0	1.6891	0.0174
39	SLE RA 13	-0.15	-0.14	13.45	0	1.681	0.0173
39	SLE RA 14	-0.15	-0.15	13.6	0	1.7	0.0183
39	SLE RA 15	-0.15	-0.14	13.6	0	1.6999	0.0175
39	SLE RA 16	-0.15	-0.15	13.54	0	1.692	0.0187
39	SLE RA 17	-0.15	-0.14	13.53	0	1.6919	0.0179
39	SLE RA 18	-0.15	-0.15	13.84	0	1.7294	0.0182
39	SLE RA 19	-0.15	-0.14	13.83	0	1.7293	0.0174
39	SLE RA 20	-0.16	-0.15	13.92	0	1.7402	0.0183
39	SLE RA 21	-0.16	-0.14	13.92	0	1.7401	0.0175
39	SLE FR 1	-0.12	-0.15	12.26	0	1.5326	0.0191
39	SLE FR 2	-0.12	-0.15	12.26	0	1.5325	0.0188
39	SLE FR 3	-0.12	-0.15	12.3	0	1.5369	0.0192
39	SLE FR 4	-0.13	-0.15	12.73	0	1.5916	0.0186
39	SLE FR 5	-0.13	-0.15	12.77	0	1.5959	0.0189
39	SLE FR 6	-0.14	-0.15	13.05	0	1.631	0.0186
39	SLE QP 1	-0.12	-0.15	12.26	0	1.5326	0.0191
39	SLE QP 2	-0.13	-0.15	12.73	0	1.5916	0.0188
39	SLD 1	0.75	0.04	12.76	0	1.5951	-0.0055
39	SLD 2	0.76	0.05	12.76	0	1.5947	-0.0066
39	SLD 3	0.71	-0.29	12.83	0	1.6042	0.0366
39	SLD 4	0.72	-0.28	12.83	0	1.6038	0.0354
39	SLD 5	0.2	0.42	12.63	0	1.579	-0.0521
39	SLD 6	0.2	0.42	12.63	0	1.5787	-0.0528
39	SLD 7	0.05	-0.71	12.87	0	1.6092	0.0882
39	SLD 8	0.06	-0.7	12.87	0	1.609	0.0874
39	SLD 9	-0.32	0.4	12.59	0	1.5743	-0.0498
39	SLD 10	-0.32	0.4	12.59	0	1.574	-0.0505
39	SLD 11	-0.47	-0.72	12.84	0	1.6045	0.0905
39	SLD 12	-0.46	-0.72	12.83	0	1.6043	0.0897
39	SLD 13	-0.98	-0.02	12.64	0	1.5795	0.0022
39	SLD 14	-0.97	-0.01	12.63	0	1.5791	0.001
39	SLD 15	-1.02	-0.35	12.71	0	1.5885	0.0443
39	SLD 16	-1.02	-0.34	12.71	0	1.5882	0.0431
39	SLV 1	1.93	0.29	12.8	0	1.6001	-0.0366
39	SLV 2	1.95	0.32	12.79	0	1.5992	-0.0394
39	SLV 3	1.83	-0.47	12.97	0	1.6208	0.0592
39	SLV 4	1.85	-0.45	12.96	0	1.6199	0.0565
39	SLV 5	0.64	1.14	12.5	0	1.5629	-0.1427
39	SLV 6	0.65	1.16	12.5	0	1.5624	-0.1445
39	SLV 7	0.3	-1.41	13.06	0	1.6319	0.1768
39	SLV 8	0.32	-1.4	13.05	0	1.6314	0.175
39	SLV 9	-0.58	1.1	12.42	0	1.5519	-0.1374
39	SLV 10	-0.57	1.11	12.41	0	1.5514	-0.1391
39	SLV 11	-0.91	-1.46	12.97	0	1.6209	0.1821
39	SLV 12	-0.9	-1.44	12.96	0	1.6204	0.1804
39	SLV 13	-2.12	0.15	12.51	0	1.5633	-0.0188
39	SLV 14	-2.1	0.17	12.5	0	1.5625	-0.0215
39	SLV 15	-2.22	-0.62	12.67	0	1.584	0.077
39	SLV 16	-2.2	-0.59	12.67	0	1.5832	0.0743
40	SLU 1	-0.13	-0.17	13	0	0	0
40	SLU 2	-0.13	-0.16	13	0	0	0
40	SLU 3	-0.14	-0.17	13.24	0	0	0
40	SLU 4	-0.14	-0.16	13.24	0	0	0
40	SLU 5	-0.14	-0.16	13.13	0	0	0
40	SLU 6	-0.15	-0.17	13.38	0	0	0
40	SLU 7	-0.15	-0.16	13.38	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
40	SLU 8	-0.15	-0.18	13.27	0	0	0
40	SLU 9	-0.15	-0.17	13.27	0	0	0
40	SLU 10	-0.17	-0.15	14.8	0	0	0
40	SLU 11	-0.17	-0.16	15.05	0	0	0
40	SLU 12	-0.17	-0.15	15.05	0	0	0
40	SLU 13	-0.17	-0.15	14.94	0	0	0
40	SLU 14	-0.18	-0.16	15.19	0	0	0
40	SLU 15	-0.18	-0.15	15.19	0	0	0
40	SLU 16	-0.18	-0.17	15.08	0	0	0
40	SLU 17	-0.18	-0.16	15.08	0	0	0
40	SLU 18	-0.18	-0.16	15.58	0	0	0
40	SLU 19	-0.18	-0.15	15.58	0	0	0
40	SLU 20	-0.19	-0.16	15.72	0	0	0
40	SLU 21	-0.19	-0.15	15.72	0	0	0
40	SLU 22	-0.14	-0.14	14.56	0	0	0
40	SLU 23	-0.14	-0.13	14.56	0	0	0
40	SLU 24	-0.14	-0.14	14.81	0	0	0
40	SLU 25	-0.14	-0.13	14.81	0	0	0
40	SLU 26	-0.15	-0.13	14.7	0	0	0
40	SLU 27	-0.15	-0.14	14.95	0	0	0
40	SLU 28	-0.15	-0.13	14.95	0	0	0
40	SLU 29	-0.15	-0.15	14.84	0	0	0
40	SLU 30	-0.15	-0.14	14.84	0	0	0
40	SLU 31	-0.17	-0.12	16.37	0	0	0
40	SLU 32	-0.18	-0.13	16.62	0	0	0
40	SLU 33	-0.18	-0.12	16.62	0	0	0
40	SLU 34	-0.18	-0.12	16.51	0	0	0
40	SLU 35	-0.19	-0.13	16.76	0	0	0
40	SLU 36	-0.19	-0.12	16.76	0	0	0
40	SLU 37	-0.19	-0.14	16.65	0	0	0
40	SLU 38	-0.19	-0.13	16.65	0	0	0
40	SLU 39	-0.19	-0.13	17.15	0	0	0
40	SLU 40	-0.19	-0.12	17.14	0	0	0
40	SLU 41	-0.19	-0.13	17.28	0	0	0
40	SLU 42	-0.19	-0.12	17.28	0	0	0
40	SLU 43	-0.17	-0.23	16.36	0	0	0
40	SLU 44	-0.17	-0.22	16.36	0	0	0
40	SLU 45	-0.18	-0.23	16.6	0	0	0
40	SLU 46	-0.18	-0.22	16.6	0	0	0
40	SLU 47	-0.18	-0.22	16.5	0	0	0
40	SLU 48	-0.19	-0.23	16.74	0	0	0
40	SLU 49	-0.19	-0.22	16.74	0	0	0
40	SLU 50	-0.19	-0.24	16.64	0	0	0
40	SLU 51	-0.19	-0.23	16.64	0	0	0
40	SLU 52	-0.21	-0.21	18.16	0	0	0
40	SLU 53	-0.21	-0.22	18.41	0	0	0
40	SLU 54	-0.21	-0.21	18.41	0	0	0
40	SLU 55	-0.21	-0.21	18.3	0	0	0
40	SLU 56	-0.22	-0.22	18.55	0	0	0
40	SLU 57	-0.22	-0.21	18.55	0	0	0
40	SLU 58	-0.22	-0.23	18.44	0	0	0
40	SLU 59	-0.22	-0.22	18.44	0	0	0
40	SLU 60	-0.22	-0.22	18.94	0	0	0
40	SLU 61	-0.22	-0.21	18.94	0	0	0
40	SLU 62	-0.23	-0.22	19.08	0	0	0
40	SLU 63	-0.23	-0.21	19.08	0	0	0
40	SLU 64	-0.18	-0.2	17.93	0	0	0
40	SLU 65	-0.18	-0.19	17.92	0	0	0
40	SLU 66	-0.18	-0.2	18.17	0	0	0
40	SLU 67	-0.18	-0.19	18.17	0	0	0
40	SLU 68	-0.18	-0.19	18.06	0	0	0
40	SLU 69	-0.19	-0.2	18.31	0	0	0
40	SLU 70	-0.19	-0.19	18.31	0	0	0
40	SLU 71	-0.19	-0.21	18.2	0	0	0
40	SLU 72	-0.19	-0.2	18.2	0	0	0
40	SLU 73	-0.21	-0.18	19.73	0	0	0
40	SLU 74	-0.22	-0.19	19.98	0	0	0
40	SLU 75	-0.22	-0.18	19.98	0	0	0
40	SLU 76	-0.22	-0.18	19.87	0	0	0
40	SLU 77	-0.22	-0.19	20.12	0	0	0
40	SLU 78	-0.22	-0.18	20.12	0	0	0
40	SLU 79	-0.23	-0.2	20.01	0	0	0
40	SLU 80	-0.23	-0.19	20.01	0	0	0
40	SLU 81	-0.23	-0.19	20.51	0	0	0
40	SLU 82	-0.23	-0.18	20.51	0	0	0
40	SLU 83	-0.23	-0.19	20.65	0	0	0
40	SLU 84	-0.23	-0.18	20.65	0	0	0
40	SLE RA 1	-0.14	-0.16	13.44	0	0	0
40	SLE RA 2	-0.13	-0.15	13.44	0	0	0
40	SLE RA 3	-0.14	-0.16	13.61	0	0	0
40	SLE RA 4	-0.14	-0.15	13.61	0	0	0
40	SLE RA 5	-0.14	-0.15	13.54	0	0	0
40	SLE RA 6	-0.14	-0.16	13.7	0	0	0
40	SLE RA 7	-0.14	-0.16	13.7	0	0	0
40	SLE RA 8	-0.15	-0.17	13.63	0	0	0
40	SLE RA 9	-0.15	-0.16	13.63	0	0	0
40	SLE RA 10	-0.16	-0.15	14.65	0	0	0
40	SLE RA 11	-0.16	-0.16	14.81	0	0	0
40	SLE RA 12	-0.16	-0.15	14.81	0	0	0
40	SLE RA 13	-0.16	-0.15	14.74	0	0	0
40	SLE RA 14	-0.17	-0.16	14.91	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
40	SLE RA 15	-0.17	-0.15	14.91	0	0	0
40	SLE RA 16	-0.17	-0.16	14.83	0	0	0
40	SLE RA 17	-0.17	-0.15	14.83	0	0	0
40	SLE RA 18	-0.17	-0.16	15.17	0	0	0
40	SLE RA 19	-0.17	-0.15	15.16	0	0	0
40	SLE RA 20	-0.17	-0.16	15.26	0	0	0
40	SLE RA 21	-0.17	-0.15	15.26	0	0	0
40	SLE FR 1	-0.14	-0.16	13.44	0	0	0
40	SLE FR 2	-0.14	-0.16	13.44	0	0	0
40	SLE FR 3	-0.14	-0.16	13.48	0	0	0
40	SLE FR 4	-0.15	-0.16	13.96	0	0	0
40	SLE FR 5	-0.15	-0.16	14	0	0	0
40	SLE FR 6	-0.15	-0.16	14.3	0	0	0
40	SLE QP 1	-0.14	-0.16	13.44	0	0	0
40	SLE QP 2	-0.15	-0.16	13.96	0	0	0
40	SLD 1	0.83	0.05	13.87	0	0	0
40	SLD 2	0.84	0.06	13.86	0	0	0
40	SLD 3	0.78	-0.32	13.93	0	0	0
40	SLD 4	0.79	-0.31	13.93	0	0	0
40	SLD 5	0.22	0.46	13.83	0	0	0
40	SLD 6	0.22	0.47	13.83	0	0	0
40	SLD 7	0.06	-0.77	14.05	0	0	0
40	SLD 8	0.07	-0.76	14.05	0	0	0
40	SLD 9	-0.36	0.44	13.87	0	0	0
40	SLD 10	-0.35	0.45	13.87	0	0	0
40	SLD 11	-0.52	-0.79	14.09	0	0	0
40	SLD 12	-0.51	-0.78	14.09	0	0	0
40	SLD 13	-1.08	-0.02	13.99	0	0	0
40	SLD 14	-1.07	0	13.99	0	0	0
40	SLD 15	-1.13	-0.39	14.06	0	0	0
40	SLD 16	-1.12	-0.37	14.05	0	0	0
40	SLV 1	2.14	0.32	13.74	0	0	0
40	SLV 2	2.16	0.35	13.73	0	0	0
40	SLV 3	2.03	-0.52	13.89	0	0	0
40	SLV 4	2.05	-0.49	13.88	0	0	0
40	SLV 5	0.7	1.26	13.67	0	0	0
40	SLV 6	0.72	1.28	13.66	0	0	0
40	SLV 7	0.34	-1.56	14.17	0	0	0
40	SLV 8	0.35	-1.53	14.16	0	0	0
40	SLV 9	-0.64	1.21	13.76	0	0	0
40	SLV 10	-0.63	1.23	13.75	0	0	0
40	SLV 11	-1.01	-1.6	14.26	0	0	0
40	SLV 12	-0.99	-1.58	14.25	0	0	0
40	SLV 13	-2.34	0.17	14.04	0	0	0
40	SLV 14	-2.32	0.2	14.03	0	0	0
40	SLV 15	-2.45	-0.68	14.19	0	0	0
40	SLV 16	-2.43	-0.64	14.18	0	0	0
41	SLU 1	-0.13	-0.17	12.87	0	0	0
41	SLU 2	-0.13	-0.15	12.87	0	0	0
41	SLU 3	-0.14	-0.16	13.12	0	0	0
41	SLU 4	-0.14	-0.15	13.12	0	0	0
41	SLU 5	-0.14	-0.15	13.01	0	0	0
41	SLU 6	-0.15	-0.17	13.25	0	0	0
41	SLU 7	-0.15	-0.16	13.25	0	0	0
41	SLU 8	-0.15	-0.17	13.14	0	0	0
41	SLU 9	-0.15	-0.16	13.14	0	0	0
41	SLU 10	-0.17	-0.14	14.66	0	0	0
41	SLU 11	-0.17	-0.16	14.9	0	0	0
41	SLU 12	-0.17	-0.15	14.9	0	0	0
41	SLU 13	-0.17	-0.14	14.79	0	0	0
41	SLU 14	-0.18	-0.16	15.04	0	0	0
41	SLU 15	-0.18	-0.15	15.04	0	0	0
41	SLU 16	-0.18	-0.16	14.93	0	0	0
41	SLU 17	-0.18	-0.15	14.93	0	0	0
41	SLU 18	-0.18	-0.16	15.42	0	0	0
41	SLU 19	-0.18	-0.14	15.42	0	0	0
41	SLU 20	-0.19	-0.16	15.56	0	0	0
41	SLU 21	-0.19	-0.15	15.56	0	0	0
41	SLU 22	-0.14	-0.14	14.43	0	0	0
41	SLU 23	-0.14	-0.12	14.43	0	0	0
41	SLU 24	-0.14	-0.13	14.67	0	0	0
41	SLU 25	-0.14	-0.12	14.67	0	0	0
41	SLU 26	-0.15	-0.12	14.57	0	0	0
41	SLU 27	-0.15	-0.14	14.81	0	0	0
41	SLU 28	-0.15	-0.13	14.81	0	0	0
41	SLU 29	-0.15	-0.14	14.7	0	0	0
41	SLU 30	-0.15	-0.13	14.7	0	0	0
41	SLU 31	-0.17	-0.11	16.22	0	0	0
41	SLU 32	-0.18	-0.13	16.46	0	0	0
41	SLU 33	-0.18	-0.12	16.46	0	0	0
41	SLU 34	-0.18	-0.11	16.35	0	0	0
41	SLU 35	-0.19	-0.13	16.59	0	0	0
41	SLU 36	-0.19	-0.12	16.59	0	0	0
41	SLU 37	-0.19	-0.13	16.49	0	0	0
41	SLU 38	-0.19	-0.12	16.49	0	0	0
41	SLU 39	-0.19	-0.13	16.98	0	0	0
41	SLU 40	-0.19	-0.12	16.98	0	0	0
41	SLU 41	-0.19	-0.13	17.12	0	0	0
41	SLU 42	-0.19	-0.12	17.12	0	0	0
41	SLU 43	-0.17	-0.23	16.2	0	0	0
41	SLU 44	-0.17	-0.21	16.2	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
41	SLU 45	-0.18	-0.22	16.44	0	0	0
41	SLU 46	-0.18	-0.21	16.44	0	0	0
41	SLU 47	-0.18	-0.21	16.34	0	0	0
41	SLU 48	-0.19	-0.23	16.58	0	0	0
41	SLU 49	-0.19	-0.22	16.58	0	0	0
41	SLU 50	-0.19	-0.23	16.47	0	0	0
41	SLU 51	-0.19	-0.22	16.47	0	0	0
41	SLU 52	-0.21	-0.2	17.99	0	0	0
41	SLU 53	-0.21	-0.22	18.23	0	0	0
41	SLU 54	-0.21	-0.21	18.23	0	0	0
41	SLU 55	-0.21	-0.2	18.12	0	0	0
41	SLU 56	-0.22	-0.22	18.36	0	0	0
41	SLU 57	-0.22	-0.21	18.36	0	0	0
41	SLU 58	-0.22	-0.22	18.26	0	0	0
41	SLU 59	-0.22	-0.21	18.26	0	0	0
41	SLU 60	-0.22	-0.22	18.75	0	0	0
41	SLU 61	-0.22	-0.21	18.75	0	0	0
41	SLU 62	-0.23	-0.22	18.89	0	0	0
41	SLU 63	-0.23	-0.21	18.89	0	0	0
41	SLU 64	-0.18	-0.2	17.76	0	0	0
41	SLU 65	-0.18	-0.18	17.76	0	0	0
41	SLU 66	-0.18	-0.19	18	0	0	0
41	SLU 67	-0.18	-0.18	18	0	0	0
41	SLU 68	-0.18	-0.18	17.9	0	0	0
41	SLU 69	-0.19	-0.2	18.14	0	0	0
41	SLU 70	-0.19	-0.19	18.14	0	0	0
41	SLU 71	-0.19	-0.2	18.03	0	0	0
41	SLU 72	-0.19	-0.19	18.03	0	0	0
41	SLU 73	-0.21	-0.17	19.55	0	0	0
41	SLU 74	-0.22	-0.19	19.79	0	0	0
41	SLU 75	-0.22	-0.18	19.79	0	0	0
41	SLU 76	-0.22	-0.17	19.68	0	0	0
41	SLU 77	-0.22	-0.19	19.92	0	0	0
41	SLU 78	-0.22	-0.18	19.92	0	0	0
41	SLU 79	-0.23	-0.19	19.81	0	0	0
41	SLU 80	-0.23	-0.18	19.81	0	0	0
41	SLU 81	-0.23	-0.19	20.31	0	0	0
41	SLU 82	-0.23	-0.18	20.31	0	0	0
41	SLU 83	-0.23	-0.19	20.44	0	0	0
41	SLU 84	-0.23	-0.18	20.44	0	0	0
41	SLE RA 1	-0.14	-0.16	13.32	0	0	0
41	SLE RA 2	-0.14	-0.15	13.32	0	0	0
41	SLE RA 3	-0.14	-0.16	13.48	0	0	0
41	SLE RA 4	-0.14	-0.15	13.48	0	0	0
41	SLE RA 5	-0.14	-0.15	13.41	0	0	0
41	SLE RA 6	-0.14	-0.16	13.57	0	0	0
41	SLE RA 7	-0.14	-0.15	13.57	0	0	0
41	SLE RA 8	-0.15	-0.16	13.5	0	0	0
41	SLE RA 9	-0.15	-0.15	13.5	0	0	0
41	SLE RA 10	-0.16	-0.14	14.51	0	0	0
41	SLE RA 11	-0.16	-0.15	14.67	0	0	0
41	SLE RA 12	-0.16	-0.14	14.67	0	0	0
41	SLE RA 13	-0.16	-0.14	14.6	0	0	0
41	SLE RA 14	-0.17	-0.15	14.76	0	0	0
41	SLE RA 15	-0.17	-0.15	14.76	0	0	0
41	SLE RA 16	-0.17	-0.16	14.69	0	0	0
41	SLE RA 17	-0.17	-0.15	14.69	0	0	0
41	SLE RA 18	-0.17	-0.15	15.02	0	0	0
41	SLE RA 19	-0.17	-0.14	15.02	0	0	0
41	SLE RA 20	-0.17	-0.15	15.11	0	0	0
41	SLE RA 21	-0.17	-0.14	15.11	0	0	0
41	SLE FR 1	-0.14	-0.16	13.32	0	0	0
41	SLE FR 2	-0.14	-0.16	13.32	0	0	0
41	SLE FR 3	-0.14	-0.16	13.36	0	0	0
41	SLE FR 4	-0.15	-0.15	13.83	0	0	0
41	SLE FR 5	-0.15	-0.16	13.87	0	0	0
41	SLE FR 6	-0.15	-0.15	14.17	0	0	0
41	SLE QP 1	-0.14	-0.16	13.32	0	0	0
41	SLE QP 2	-0.15	-0.16	13.83	0	0	0
41	SLD 1	0.83	0.05	13.68	0	0	0
41	SLD 2	0.84	0.07	13.67	0	0	0
41	SLD 3	0.78	-0.32	13.73	0	0	0
41	SLD 4	0.79	-0.3	13.73	0	0	0
41	SLD 5	0.22	0.46	13.7	0	0	0
41	SLD 6	0.22	0.47	13.7	0	0	0
41	SLD 7	0.06	-0.77	13.88	0	0	0
41	SLD 8	0.07	-0.76	13.88	0	0	0
41	SLD 9	-0.36	0.44	13.78	0	0	0
41	SLD 10	-0.35	0.45	13.78	0	0	0
41	SLD 11	-0.52	-0.79	13.96	0	0	0
41	SLD 12	-0.51	-0.77	13.96	0	0	0
41	SLD 13	-1.08	-0.01	13.93	0	0	0
41	SLD 14	-1.07	0	13.93	0	0	0
41	SLD 15	-1.13	-0.38	13.99	0	0	0
41	SLD 16	-1.12	-0.36	13.98	0	0	0
41	SLV 1	2.14	0.32	13.48	0	0	0
41	SLV 2	2.16	0.36	13.47	0	0	0
41	SLV 3	2.03	-0.52	13.6	0	0	0
41	SLV 4	2.05	-0.48	13.59	0	0	0
41	SLV 5	0.7	1.25	13.54	0	0	0
41	SLV 6	0.72	1.28	13.53	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
41	SLV 7	0.34	-1.55	13.95	0	0	0
41	SLV 8	0.35	-1.52	13.94	0	0	0
41	SLV 9	-0.64	1.21	13.72	0	0	0
41	SLV 10	-0.63	1.23	13.71	0	0	0
41	SLV 11	-1.01	-1.59	14.13	0	0	0
41	SLV 12	-0.99	-1.56	14.12	0	0	0
41	SLV 13	-2.34	0.17	14.07	0	0	0
41	SLV 14	-2.32	0.21	14.06	0	0	0
41	SLV 15	-2.45	-0.67	14.19	0	0	0
41	SLV 16	-2.43	-0.63	14.18	0	0	0
42	SLU 1	-0.13	-0.16	12.78	0	0	0
42	SLU 2	-0.13	-0.15	12.78	0	0	0
42	SLU 3	-0.14	-0.16	13.02	0	0	0
42	SLU 4	-0.14	-0.15	13.02	0	0	0
42	SLU 5	-0.14	-0.15	12.91	0	0	0
42	SLU 6	-0.15	-0.16	13.15	0	0	0
42	SLU 7	-0.15	-0.15	13.15	0	0	0
42	SLU 8	-0.15	-0.17	13.04	0	0	0
42	SLU 9	-0.15	-0.16	13.04	0	0	0
42	SLU 10	-0.17	-0.14	14.55	0	0	0
42	SLU 11	-0.17	-0.15	14.78	0	0	0
42	SLU 12	-0.17	-0.14	14.78	0	0	0
42	SLU 13	-0.17	-0.14	14.68	0	0	0
42	SLU 14	-0.18	-0.15	14.91	0	0	0
42	SLU 15	-0.18	-0.14	14.91	0	0	0
42	SLU 16	-0.18	-0.16	14.81	0	0	0
42	SLU 17	-0.18	-0.15	14.81	0	0	0
42	SLU 18	-0.18	-0.15	15.3	0	0	0
42	SLU 19	-0.18	-0.14	15.3	0	0	0
42	SLU 20	-0.19	-0.15	15.43	0	0	0
42	SLU 21	-0.19	-0.14	15.43	0	0	0
42	SLU 22	-0.14	-0.13	14.33	0	0	0
42	SLU 23	-0.14	-0.12	14.33	0	0	0
42	SLU 24	-0.15	-0.13	14.57	0	0	0
42	SLU 25	-0.14	-0.12	14.57	0	0	0
42	SLU 26	-0.15	-0.12	14.46	0	0	0
42	SLU 27	-0.15	-0.13	14.7	0	0	0
42	SLU 28	-0.15	-0.12	14.7	0	0	0
42	SLU 29	-0.15	-0.14	14.59	0	0	0
42	SLU 30	-0.15	-0.13	14.59	0	0	0
42	SLU 31	-0.17	-0.11	16.1	0	0	0
42	SLU 32	-0.18	-0.12	16.34	0	0	0
42	SLU 33	-0.18	-0.11	16.34	0	0	0
42	SLU 34	-0.18	-0.11	16.23	0	0	0
42	SLU 35	-0.19	-0.12	16.47	0	0	0
42	SLU 36	-0.19	-0.11	16.47	0	0	0
42	SLU 37	-0.19	-0.13	16.36	0	0	0
42	SLU 38	-0.19	-0.12	16.36	0	0	0
42	SLU 39	-0.19	-0.12	16.85	0	0	0
42	SLU 40	-0.19	-0.11	16.86	0	0	0
42	SLU 41	-0.19	-0.12	16.98	0	0	0
42	SLU 42	-0.19	-0.11	16.99	0	0	0
42	SLU 43	-0.17	-0.22	16.08	0	0	0
42	SLU 44	-0.17	-0.2	16.08	0	0	0
42	SLU 45	-0.18	-0.22	16.32	0	0	0
42	SLU 46	-0.18	-0.21	16.32	0	0	0
42	SLU 47	-0.18	-0.21	16.21	0	0	0
42	SLU 48	-0.19	-0.22	16.45	0	0	0
42	SLU 49	-0.19	-0.21	16.45	0	0	0
42	SLU 50	-0.19	-0.22	16.34	0	0	0
42	SLU 51	-0.19	-0.21	16.34	0	0	0
42	SLU 52	-0.21	-0.2	17.85	0	0	0
42	SLU 53	-0.21	-0.21	18.08	0	0	0
42	SLU 54	-0.21	-0.2	18.08	0	0	0
42	SLU 55	-0.21	-0.2	17.98	0	0	0
42	SLU 56	-0.22	-0.21	18.21	0	0	0
42	SLU 57	-0.22	-0.2	18.22	0	0	0
42	SLU 58	-0.22	-0.22	18.11	0	0	0
42	SLU 59	-0.22	-0.21	18.11	0	0	0
42	SLU 60	-0.22	-0.21	18.6	0	0	0
42	SLU 61	-0.22	-0.2	18.6	0	0	0
42	SLU 62	-0.23	-0.21	18.73	0	0	0
42	SLU 63	-0.23	-0.2	18.73	0	0	0
42	SLU 64	-0.18	-0.19	17.63	0	0	0
42	SLU 65	-0.18	-0.18	17.63	0	0	0
42	SLU 66	-0.18	-0.19	17.87	0	0	0
42	SLU 67	-0.18	-0.18	17.87	0	0	0
42	SLU 68	-0.18	-0.18	17.76	0	0	0
42	SLU 69	-0.19	-0.19	18	0	0	0
42	SLU 70	-0.19	-0.18	18	0	0	0
42	SLU 71	-0.19	-0.2	17.89	0	0	0
42	SLU 72	-0.19	-0.18	17.89	0	0	0
42	SLU 73	-0.21	-0.17	19.4	0	0	0
42	SLU 74	-0.22	-0.18	19.64	0	0	0
42	SLU 75	-0.22	-0.17	19.64	0	0	0
42	SLU 76	-0.22	-0.17	19.53	0	0	0
42	SLU 77	-0.22	-0.18	19.77	0	0	0
42	SLU 78	-0.22	-0.17	19.77	0	0	0
42	SLU 79	-0.23	-0.19	19.66	0	0	0
42	SLU 80	-0.23	-0.18	19.66	0	0	0
42	SLU 81	-0.23	-0.18	20.16	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
42	SLU 82	-0.23	-0.17	20.16	0	0	0
42	SLU 83	-0.23	-0.18	20.29	0	0	0
42	SLU 84	-0.23	-0.17	20.29	0	0	0
42	SLE RA 1	-0.14	-0.15	13.22	0	0	0
42	SLE RA 2	-0.14	-0.14	13.22	0	0	0
42	SLE RA 3	-0.14	-0.15	13.38	0	0	0
42	SLE RA 4	-0.14	-0.15	13.38	0	0	0
42	SLE RA 5	-0.14	-0.14	13.31	0	0	0
42	SLE RA 6	-0.14	-0.15	13.47	0	0	0
42	SLE RA 7	-0.14	-0.15	13.47	0	0	0
42	SLE RA 8	-0.15	-0.16	13.4	0	0	0
42	SLE RA 9	-0.15	-0.15	13.4	0	0	0
42	SLE RA 10	-0.16	-0.14	14.4	0	0	0
42	SLE RA 11	-0.16	-0.15	14.56	0	0	0
42	SLE RA 12	-0.16	-0.14	14.56	0	0	0
42	SLE RA 13	-0.16	-0.14	14.49	0	0	0
42	SLE RA 14	-0.17	-0.15	14.65	0	0	0
42	SLE RA 15	-0.17	-0.14	14.65	0	0	0
42	SLE RA 16	-0.17	-0.15	14.57	0	0	0
42	SLE RA 17	-0.17	-0.14	14.57	0	0	0
42	SLE RA 18	-0.17	-0.15	14.9	0	0	0
42	SLE RA 19	-0.17	-0.14	14.9	0	0	0
42	SLE RA 20	-0.17	-0.15	14.99	0	0	0
42	SLE RA 21	-0.17	-0.14	14.99	0	0	0
42	SLE FR 1	-0.14	-0.15	13.22	0	0	0
42	SLE FR 2	-0.14	-0.15	13.22	0	0	0
42	SLE FR 3	-0.14	-0.15	13.26	0	0	0
42	SLE FR 4	-0.15	-0.15	13.73	0	0	0
42	SLE FR 5	-0.15	-0.15	13.76	0	0	0
42	SLE FR 6	-0.15	-0.15	14.06	0	0	0
42	SLE QP 1	-0.14	-0.15	13.22	0	0	0
42	SLE QP 2	-0.15	-0.15	13.73	0	0	0
42	SLD 1	0.83	0.05	13.5	0	0	0
42	SLD 2	0.84	0.07	13.5	0	0	0
42	SLD 3	0.78	-0.32	13.55	0	0	0
42	SLD 4	0.79	-0.29	13.55	0	0	0
42	SLD 5	0.22	0.46	13.59	0	0	0
42	SLD 6	0.22	0.48	13.59	0	0	0
42	SLD 7	0.06	-0.76	13.75	0	0	0
42	SLD 8	0.07	-0.75	13.74	0	0	0
42	SLD 9	-0.36	0.44	13.71	0	0	0
42	SLD 10	-0.35	0.46	13.71	0	0	0
42	SLD 11	-0.52	-0.78	13.87	0	0	0
42	SLD 12	-0.51	-0.77	13.87	0	0	0
42	SLD 13	-1.08	-0.01	13.91	0	0	0
42	SLD 14	-1.08	0.01	13.9	0	0	0
42	SLD 15	-1.13	-0.38	13.96	0	0	0
42	SLD 16	-1.12	-0.36	13.95	0	0	0
42	SLV 1	2.14	0.31	13.21	0	0	0
42	SLV 2	2.16	0.36	13.19	0	0	0
42	SLV 3	2.03	-0.52	13.32	0	0	0
42	SLV 4	2.05	-0.47	13.3	0	0	0
42	SLV 5	0.7	1.25	13.41	0	0	0
42	SLV 6	0.72	1.28	13.4	0	0	0
42	SLV 7	0.34	-1.54	13.77	0	0	0
42	SLV 8	0.35	-1.51	13.76	0	0	0
42	SLV 9	-0.64	1.2	13.69	0	0	0
42	SLV 10	-0.63	1.23	13.68	0	0	0
42	SLV 11	-1.01	-1.58	14.06	0	0	0
42	SLV 12	-0.99	-1.55	14.05	0	0	0
42	SLV 13	-2.34	0.17	14.15	0	0	0
42	SLV 14	-2.32	0.22	14.14	0	0	0
42	SLV 15	-2.45	-0.66	14.26	0	0	0
42	SLV 16	-2.43	-0.62	14.25	0	0	0
43	SLU 1	-0.13	-0.16	12.71	0	0	0
43	SLU 2	-0.13	-0.14	12.71	0	0	0
43	SLU 3	-0.14	-0.15	12.95	0	0	0
43	SLU 4	-0.14	-0.14	12.95	0	0	0
43	SLU 5	-0.14	-0.14	12.84	0	0	0
43	SLU 6	-0.15	-0.16	13.08	0	0	0
43	SLU 7	-0.15	-0.15	13.08	0	0	0
43	SLU 8	-0.15	-0.16	12.97	0	0	0
43	SLU 9	-0.15	-0.15	12.97	0	0	0
43	SLU 10	-0.17	-0.13	14.47	0	0	0
43	SLU 11	-0.17	-0.15	14.7	0	0	0
43	SLU 12	-0.17	-0.14	14.7	0	0	0
43	SLU 13	-0.17	-0.13	14.59	0	0	0
43	SLU 14	-0.18	-0.15	14.83	0	0	0
43	SLU 15	-0.18	-0.14	14.83	0	0	0
43	SLU 16	-0.18	-0.15	14.72	0	0	0
43	SLU 17	-0.18	-0.14	14.72	0	0	0
43	SLU 18	-0.18	-0.15	15.21	0	0	0
43	SLU 19	-0.18	-0.14	15.22	0	0	0
43	SLU 20	-0.19	-0.15	15.34	0	0	0
43	SLU 21	-0.19	-0.14	15.34	0	0	0
43	SLU 22	-0.14	-0.13	14.26	0	0	0
43	SLU 23	-0.14	-0.11	14.27	0	0	0
43	SLU 24	-0.15	-0.13	14.5	0	0	0
43	SLU 25	-0.14	-0.11	14.5	0	0	0
43	SLU 26	-0.15	-0.11	14.39	0	0	0
43	SLU 27	-0.15	-0.13	14.63	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
43	SLU 28	-0.15	-0.12	14.63	0	0	0
43	SLU 29	-0.15	-0.13	14.52	0	0	0
43	SLU 30	-0.15	-0.12	14.52	0	0	0
43	SLU 31	-0.17	-0.1	16.02	0	0	0
43	SLU 32	-0.18	-0.12	16.25	0	0	0
43	SLU 33	-0.18	-0.11	16.25	0	0	0
43	SLU 34	-0.18	-0.1	16.14	0	0	0
43	SLU 35	-0.19	-0.12	16.38	0	0	0
43	SLU 36	-0.19	-0.11	16.38	0	0	0
43	SLU 37	-0.19	-0.12	16.27	0	0	0
43	SLU 38	-0.19	-0.11	16.27	0	0	0
43	SLU 39	-0.19	-0.12	16.77	0	0	0
43	SLU 40	-0.19	-0.11	16.77	0	0	0
43	SLU 41	-0.19	-0.12	16.89	0	0	0
43	SLU 42	-0.19	-0.11	16.89	0	0	0
43	SLU 43	-0.17	-0.22	16	0	0	0
43	SLU 44	-0.17	-0.2	16	0	0	0
43	SLU 45	-0.18	-0.21	16.23	0	0	0
43	SLU 46	-0.18	-0.2	16.23	0	0	0
43	SLU 47	-0.18	-0.2	16.12	0	0	0
43	SLU 48	-0.19	-0.21	16.36	0	0	0
43	SLU 49	-0.19	-0.2	16.36	0	0	0
43	SLU 50	-0.19	-0.22	16.25	0	0	0
43	SLU 51	-0.19	-0.21	16.25	0	0	0
43	SLU 52	-0.21	-0.19	17.75	0	0	0
43	SLU 53	-0.21	-0.2	17.98	0	0	0
43	SLU 54	-0.21	-0.19	17.98	0	0	0
43	SLU 55	-0.21	-0.19	17.87	0	0	0
43	SLU 56	-0.22	-0.2	18.11	0	0	0
43	SLU 57	-0.22	-0.19	18.11	0	0	0
43	SLU 58	-0.22	-0.21	18	0	0	0
43	SLU 59	-0.22	-0.2	18	0	0	0
43	SLU 60	-0.22	-0.2	18.5	0	0	0
43	SLU 61	-0.22	-0.19	18.5	0	0	0
43	SLU 62	-0.23	-0.2	18.62	0	0	0
43	SLU 63	-0.23	-0.19	18.62	0	0	0
43	SLU 64	-0.18	-0.19	17.55	0	0	0
43	SLU 65	-0.18	-0.17	17.55	0	0	0
43	SLU 66	-0.18	-0.18	17.78	0	0	0
43	SLU 67	-0.18	-0.17	17.78	0	0	0
43	SLU 68	-0.18	-0.17	17.68	0	0	0
43	SLU 69	-0.19	-0.18	17.91	0	0	0
43	SLU 70	-0.19	-0.17	17.91	0	0	0
43	SLU 71	-0.19	-0.19	17.8	0	0	0
43	SLU 72	-0.19	-0.18	17.8	0	0	0
43	SLU 73	-0.21	-0.16	19.3	0	0	0
43	SLU 74	-0.22	-0.17	19.53	0	0	0
43	SLU 75	-0.22	-0.16	19.53	0	0	0
43	SLU 76	-0.22	-0.16	19.43	0	0	0
43	SLU 77	-0.22	-0.18	19.66	0	0	0
43	SLU 78	-0.22	-0.17	19.66	0	0	0
43	SLU 79	-0.23	-0.18	19.55	0	0	0
43	SLU 80	-0.23	-0.17	19.55	0	0	0
43	SLU 81	-0.23	-0.17	20.05	0	0	0
43	SLU 82	-0.23	-0.16	20.05	0	0	0
43	SLU 83	-0.23	-0.18	20.17	0	0	0
43	SLU 84	-0.23	-0.17	20.18	0	0	0
43	SLE RA 1	-0.14	-0.15	13.16	0	0	0
43	SLE RA 2	-0.14	-0.14	13.16	0	0	0
43	SLE RA 3	-0.14	-0.15	13.31	0	0	0
43	SLE RA 4	-0.14	-0.14	13.31	0	0	0
43	SLE RA 5	-0.14	-0.14	13.24	0	0	0
43	SLE RA 6	-0.14	-0.15	13.4	0	0	0
43	SLE RA 7	-0.14	-0.14	13.4	0	0	0
43	SLE RA 8	-0.15	-0.15	13.33	0	0	0
43	SLE RA 9	-0.15	-0.14	13.33	0	0	0
43	SLE RA 10	-0.16	-0.13	14.32	0	0	0
43	SLE RA 11	-0.16	-0.14	14.48	0	0	0
43	SLE RA 12	-0.16	-0.13	14.48	0	0	0
43	SLE RA 13	-0.16	-0.13	14.41	0	0	0
43	SLE RA 14	-0.17	-0.14	14.57	0	0	0
43	SLE RA 15	-0.17	-0.14	14.57	0	0	0
43	SLE RA 16	-0.17	-0.15	14.49	0	0	0
43	SLE RA 17	-0.17	-0.14	14.49	0	0	0
43	SLE RA 18	-0.17	-0.14	14.82	0	0	0
43	SLE RA 19	-0.17	-0.13	14.82	0	0	0
43	SLE RA 20	-0.17	-0.14	14.91	0	0	0
43	SLE RA 21	-0.17	-0.14	14.91	0	0	0
43	SLE FR 1	-0.14	-0.15	13.16	0	0	0
43	SLE FR 2	-0.14	-0.15	13.16	0	0	0
43	SLE FR 3	-0.14	-0.15	13.19	0	0	0
43	SLE FR 4	-0.15	-0.15	13.66	0	0	0
43	SLE FR 5	-0.15	-0.15	13.69	0	0	0
43	SLE FR 6	-0.15	-0.15	13.99	0	0	0
43	SLE QP 1	-0.14	-0.15	13.16	0	0	0
43	SLE QP 2	-0.15	-0.15	13.66	0	0	0
43	SLD 1	0.83	-0.01	13.36	0	0	0
43	SLD 2	0.84	0.02	13.35	0	0	0
43	SLD 3	0.78	-0.37	13.4	0	0	0
43	SLD 4	0.79	-0.35	13.4	0	0	0
43	SLD 5	0.22	0.44	13.49	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
43	SLD 6	0.22	0.46	13.49	0	0	0
43	SLD 7	0.06	-0.77	13.66	0	0	0
43	SLD 8	0.07	-0.76	13.65	0	0	0
43	SLD 9	-0.36	0.46	13.66	0	0	0
43	SLD 10	-0.35	0.48	13.66	0	0	0
43	SLD 11	-0.52	-0.75	13.82	0	0	0
43	SLD 12	-0.51	-0.74	13.82	0	0	0
43	SLD 13	-1.08	0.05	13.92	0	0	0
43	SLD 14	-1.08	0.08	13.91	0	0	0
43	SLD 15	-1.13	-0.31	13.96	0	0	0
43	SLD 16	-1.12	-0.29	13.96	0	0	0
43	SLV 1	2.14	0.17	12.95	0	0	0
43	SLV 2	2.16	0.23	12.94	0	0	0
43	SLV 3	2.03	-0.66	13.07	0	0	0
43	SLV 4	2.05	-0.6	13.05	0	0	0
43	SLV 5	0.7	1.2	13.28	0	0	0
43	SLV 6	0.72	1.24	13.27	0	0	0
43	SLV 7	0.34	-1.57	13.65	0	0	0
43	SLV 8	0.35	-1.54	13.64	0	0	0
43	SLV 9	-0.64	1.24	13.67	0	0	0
43	SLV 10	-0.63	1.28	13.66	0	0	0
43	SLV 11	-1.01	-1.53	14.05	0	0	0
43	SLV 12	-0.99	-1.49	14.04	0	0	0
43	SLV 13	-2.34	0.31	14.26	0	0	0
43	SLV 14	-2.32	0.37	14.25	0	0	0
43	SLV 15	-2.45	-0.52	14.38	0	0	0
43	SLV 16	-2.43	-0.46	14.36	0	0	0
44	SLU 1	-0.15	-0.17	13.71	0	0	0
44	SLU 2	-0.14	-0.15	13.72	0	0	0
44	SLU 3	-0.15	-0.16	13.97	0	0	0
44	SLU 4	-0.15	-0.15	13.97	0	0	0
44	SLU 5	-0.15	-0.15	13.85	0	0	0
44	SLU 6	-0.16	-0.16	14.1	0	0	0
44	SLU 7	-0.16	-0.15	14.1	0	0	0
44	SLU 8	-0.16	-0.17	13.98	0	0	0
44	SLU 9	-0.16	-0.16	13.98	0	0	0
44	SLU 10	-0.18	-0.14	15.6	0	0	0
44	SLU 11	-0.19	-0.15	15.85	0	0	0
44	SLU 12	-0.19	-0.14	15.85	0	0	0
44	SLU 13	-0.19	-0.14	15.73	0	0	0
44	SLU 14	-0.2	-0.15	15.98	0	0	0
44	SLU 15	-0.2	-0.14	15.98	0	0	0
44	SLU 16	-0.2	-0.16	15.86	0	0	0
44	SLU 17	-0.2	-0.15	15.86	0	0	0
44	SLU 18	-0.2	-0.15	16.4	0	0	0
44	SLU 19	-0.2	-0.14	16.41	0	0	0
44	SLU 20	-0.21	-0.15	16.54	0	0	0
44	SLU 21	-0.21	-0.14	16.54	0	0	0
44	SLU 22	-0.15	-0.13	15.39	0	0	0
44	SLU 23	-0.15	-0.12	15.4	0	0	0
44	SLU 24	-0.16	-0.13	15.65	0	0	0
44	SLU 25	-0.16	-0.12	15.65	0	0	0
44	SLU 26	-0.16	-0.12	15.53	0	0	0
44	SLU 27	-0.17	-0.13	15.78	0	0	0
44	SLU 28	-0.16	-0.12	15.78	0	0	0
44	SLU 29	-0.17	-0.14	15.66	0	0	0
44	SLU 30	-0.17	-0.13	15.66	0	0	0
44	SLU 31	-0.19	-0.11	17.28	0	0	0
44	SLU 32	-0.19	-0.12	17.53	0	0	0
44	SLU 33	-0.19	-0.11	17.53	0	0	0
44	SLU 34	-0.19	-0.11	17.41	0	0	0
44	SLU 35	-0.2	-0.12	17.66	0	0	0
44	SLU 36	-0.2	-0.11	17.66	0	0	0
44	SLU 37	-0.2	-0.13	17.54	0	0	0
44	SLU 38	-0.2	-0.12	17.55	0	0	0
44	SLU 39	-0.2	-0.12	18.08	0	0	0
44	SLU 40	-0.2	-0.11	18.09	0	0	0
44	SLU 41	-0.21	-0.12	18.22	0	0	0
44	SLU 42	-0.21	-0.11	18.22	0	0	0
44	SLU 43	-0.19	-0.23	17.25	0	0	0
44	SLU 44	-0.19	-0.21	17.25	0	0	0
44	SLU 45	-0.19	-0.22	17.5	0	0	0
44	SLU 46	-0.19	-0.21	17.51	0	0	0
44	SLU 47	-0.19	-0.21	17.39	0	0	0
44	SLU 48	-0.2	-0.22	17.64	0	0	0
44	SLU 49	-0.2	-0.21	17.64	0	0	0
44	SLU 50	-0.2	-0.23	17.52	0	0	0
44	SLU 51	-0.2	-0.22	17.52	0	0	0
44	SLU 52	-0.22	-0.2	19.14	0	0	0
44	SLU 53	-0.23	-0.21	19.39	0	0	0
44	SLU 54	-0.23	-0.2	19.39	0	0	0
44	SLU 55	-0.23	-0.2	19.27	0	0	0
44	SLU 56	-0.24	-0.22	19.52	0	0	0
44	SLU 57	-0.24	-0.2	19.52	0	0	0
44	SLU 58	-0.24	-0.22	19.4	0	0	0
44	SLU 59	-0.24	-0.21	19.4	0	0	0
44	SLU 60	-0.24	-0.21	19.94	0	0	0
44	SLU 61	-0.24	-0.2	19.94	0	0	0
44	SLU 62	-0.25	-0.22	20.07	0	0	0
44	SLU 63	-0.25	-0.2	20.08	0	0	0
44	SLU 64	-0.19	-0.2	18.93	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
44	SLU 65	-0.19	-0.18	18.94	0	0	0
44	SLU 66	-0.2	-0.19	19.18	0	0	0
44	SLU 67	-0.2	-0.18	19.19	0	0	0
44	SLU 68	-0.2	-0.18	19.07	0	0	0
44	SLU 69	-0.21	-0.19	19.32	0	0	0
44	SLU 70	-0.21	-0.18	19.32	0	0	0
44	SLU 71	-0.21	-0.2	19.2	0	0	0
44	SLU 72	-0.21	-0.19	19.2	0	0	0
44	SLU 73	-0.23	-0.17	20.82	0	0	0
44	SLU 74	-0.24	-0.18	21.07	0	0	0
44	SLU 75	-0.23	-0.17	21.07	0	0	0
44	SLU 76	-0.24	-0.17	20.95	0	0	0
44	SLU 77	-0.24	-0.18	21.2	0	0	0
44	SLU 78	-0.24	-0.17	21.2	0	0	0
44	SLU 79	-0.25	-0.19	21.08	0	0	0
44	SLU 80	-0.24	-0.18	21.08	0	0	0
44	SLU 81	-0.25	-0.18	21.62	0	0	0
44	SLU 82	-0.24	-0.17	21.62	0	0	0
44	SLU 83	-0.25	-0.18	21.76	0	0	0
44	SLU 84	-0.25	-0.17	21.76	0	0	0
44	SLE RA 1	-0.15	-0.16	14.19	0	0	0
44	SLE RA 2	-0.15	-0.15	14.2	0	0	0
44	SLE RA 3	-0.15	-0.15	14.36	0	0	0
44	SLE RA 4	-0.15	-0.15	14.36	0	0	0
44	SLE RA 5	-0.15	-0.15	14.28	0	0	0
44	SLE RA 6	-0.16	-0.16	14.45	0	0	0
44	SLE RA 7	-0.16	-0.15	14.45	0	0	0
44	SLE RA 8	-0.16	-0.16	14.37	0	0	0
44	SLE RA 9	-0.16	-0.15	14.37	0	0	0
44	SLE RA 10	-0.17	-0.14	15.45	0	0	0
44	SLE RA 11	-0.18	-0.15	15.62	0	0	0
44	SLE RA 12	-0.18	-0.14	15.62	0	0	0
44	SLE RA 13	-0.18	-0.14	15.54	0	0	0
44	SLE RA 14	-0.18	-0.15	15.71	0	0	0
44	SLE RA 15	-0.18	-0.14	15.71	0	0	0
44	SLE RA 16	-0.18	-0.15	15.63	0	0	0
44	SLE RA 17	-0.18	-0.15	15.63	0	0	0
44	SLE RA 18	-0.18	-0.15	15.99	0	0	0
44	SLE RA 19	-0.18	-0.14	15.99	0	0	0
44	SLE RA 20	-0.19	-0.15	16.08	0	0	0
44	SLE RA 21	-0.19	-0.14	16.08	0	0	0
44	SLE FR 1	-0.15	-0.16	14.19	0	0	0
44	SLE FR 2	-0.15	-0.16	14.19	0	0	0
44	SLE FR 3	-0.15	-0.16	14.23	0	0	0
44	SLE FR 4	-0.16	-0.15	14.73	0	0	0
44	SLE FR 5	-0.16	-0.16	14.77	0	0	0
44	SLE FR 6	-0.16	-0.15	15.09	0	0	0
44	SLE QP 1	-0.15	-0.16	14.19	0	0	0
44	SLE QP 2	-0.16	-0.15	14.73	0	0	0
44	SLD 1	0.9	-0.01	14.32	0	0	0
44	SLD 2	0.91	0.03	14.31	0	0	0
44	SLD 3	0.85	-0.4	14.38	0	0	0
44	SLD 4	0.86	-0.37	14.37	0	0	0
44	SLD 5	0.24	0.48	14.52	0	0	0
44	SLD 6	0.24	0.5	14.51	0	0	0
44	SLD 7	0.06	-0.83	14.72	0	0	0
44	SLD 8	0.07	-0.81	14.71	0	0	0
44	SLD 9	-0.39	0.5	14.75	0	0	0
44	SLD 10	-0.38	0.52	14.75	0	0	0
44	SLD 11	-0.56	-0.81	14.95	0	0	0
44	SLD 12	-0.55	-0.79	14.95	0	0	0
44	SLD 13	-1.18	0.06	15.1	0	0	0
44	SLD 14	-1.17	0.09	15.09	0	0	0
44	SLD 15	-1.23	-0.34	15.16	0	0	0
44	SLD 16	-1.22	-0.3	15.15	0	0	0
44	SLV 1	2.32	0.18	13.76	0	0	0
44	SLV 2	2.34	0.26	13.74	0	0	0
44	SLV 3	2.2	-0.71	13.9	0	0	0
44	SLV 4	2.22	-0.64	13.88	0	0	0
44	SLV 5	0.76	1.3	14.23	0	0	0
44	SLV 6	0.78	1.34	14.22	0	0	0
44	SLV 7	0.36	-1.7	14.7	0	0	0
44	SLV 8	0.38	-1.65	14.69	0	0	0
44	SLV 9	-0.69	1.34	14.78	0	0	0
44	SLV 10	-0.68	1.39	14.77	0	0	0
44	SLV 11	-1.09	-1.65	15.25	0	0	0
44	SLV 12	-1.08	-1.61	15.23	0	0	0
44	SLV 13	-2.54	0.33	15.59	0	0	0
44	SLV 14	-2.51	0.4	15.57	0	0	0
44	SLV 15	-2.66	-0.57	15.73	0	0	0
44	SLV 16	-2.63	-0.49	15.71	0	0	0
45	SLU 1	-0.08	-0.09	7.31	0	0	0
45	SLU 2	-0.08	-0.08	7.31	0	0	0
45	SLU 3	-0.08	-0.09	7.44	0	0	0
45	SLU 4	-0.08	-0.08	7.44	0	0	0
45	SLU 5	-0.08	-0.08	7.38	0	0	0
45	SLU 6	-0.09	-0.09	7.51	0	0	0
45	SLU 7	-0.09	-0.08	7.51	0	0	0
45	SLU 8	-0.09	-0.09	7.44	0	0	0
45	SLU 9	-0.09	-0.08	7.44	0	0	0
45	SLU 10	-0.1	-0.07	8.31	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
45	SLU 11	-0.1	-0.08	8.44	0	0	0
45	SLU 12	-0.1	-0.07	8.44	0	0	0
45	SLU 13	-0.1	-0.07	8.38	0	0	0
45	SLU 14	-0.11	-0.08	8.51	0	0	0
45	SLU 15	-0.11	-0.08	8.51	0	0	0
45	SLU 16	-0.11	-0.08	8.44	0	0	0
45	SLU 17	-0.11	-0.08	8.44	0	0	0
45	SLU 18	-0.11	-0.08	8.73	0	0	0
45	SLU 19	-0.11	-0.07	8.73	0	0	0
45	SLU 20	-0.11	-0.08	8.8	0	0	0
45	SLU 21	-0.11	-0.08	8.8	0	0	0
45	SLU 22	-0.08	-0.07	8.21	0	0	0
45	SLU 23	-0.08	-0.06	8.21	0	0	0
45	SLU 24	-0.08	-0.07	8.34	0	0	0
45	SLU 25	-0.08	-0.06	8.34	0	0	0
45	SLU 26	-0.08	-0.06	8.28	0	0	0
45	SLU 27	-0.09	-0.07	8.41	0	0	0
45	SLU 28	-0.09	-0.06	8.41	0	0	0
45	SLU 29	-0.09	-0.07	8.34	0	0	0
45	SLU 30	-0.09	-0.07	8.34	0	0	0
45	SLU 31	-0.1	-0.06	9.21	0	0	0
45	SLU 32	-0.1	-0.06	9.34	0	0	0
45	SLU 33	-0.1	-0.06	9.34	0	0	0
45	SLU 34	-0.1	-0.06	9.27	0	0	0
45	SLU 35	-0.11	-0.06	9.41	0	0	0
45	SLU 36	-0.11	-0.06	9.41	0	0	0
45	SLU 37	-0.11	-0.07	9.34	0	0	0
45	SLU 38	-0.11	-0.06	9.34	0	0	0
45	SLU 39	-0.11	-0.06	9.63	0	0	0
45	SLU 40	-0.11	-0.06	9.63	0	0	0
45	SLU 41	-0.11	-0.06	9.7	0	0	0
45	SLU 42	-0.11	-0.06	9.7	0	0	0
45	SLU 43	-0.1	-0.12	9.19	0	0	0
45	SLU 44	-0.1	-0.11	9.19	0	0	0
45	SLU 45	-0.1	-0.12	9.32	0	0	0
45	SLU 46	-0.1	-0.11	9.32	0	0	0
45	SLU 47	-0.1	-0.11	9.26	0	0	0
45	SLU 48	-0.11	-0.12	9.39	0	0	0
45	SLU 49	-0.11	-0.11	9.39	0	0	0
45	SLU 50	-0.11	-0.12	9.33	0	0	0
45	SLU 51	-0.11	-0.11	9.33	0	0	0
45	SLU 52	-0.12	-0.1	10.19	0	0	0
45	SLU 53	-0.12	-0.11	10.32	0	0	0
45	SLU 54	-0.12	-0.11	10.32	0	0	0
45	SLU 55	-0.12	-0.11	10.26	0	0	0
45	SLU 56	-0.13	-0.11	10.39	0	0	0
45	SLU 57	-0.13	-0.11	10.39	0	0	0
45	SLU 58	-0.13	-0.12	10.33	0	0	0
45	SLU 59	-0.13	-0.11	10.33	0	0	0
45	SLU 60	-0.13	-0.11	10.62	0	0	0
45	SLU 61	-0.13	-0.11	10.62	0	0	0
45	SLU 62	-0.13	-0.11	10.68	0	0	0
45	SLU 63	-0.13	-0.11	10.69	0	0	0
45	SLU 64	-0.1	-0.1	10.09	0	0	0
45	SLU 65	-0.1	-0.09	10.09	0	0	0
45	SLU 66	-0.11	-0.1	10.22	0	0	0
45	SLU 67	-0.11	-0.09	10.22	0	0	0
45	SLU 68	-0.11	-0.09	10.16	0	0	0
45	SLU 69	-0.11	-0.1	10.29	0	0	0
45	SLU 70	-0.11	-0.1	10.29	0	0	0
45	SLU 71	-0.11	-0.1	10.23	0	0	0
45	SLU 72	-0.11	-0.1	10.23	0	0	0
45	SLU 73	-0.12	-0.09	11.09	0	0	0
45	SLU 74	-0.13	-0.1	11.22	0	0	0
45	SLU 75	-0.13	-0.09	11.22	0	0	0
45	SLU 76	-0.13	-0.09	11.16	0	0	0
45	SLU 77	-0.13	-0.1	11.29	0	0	0
45	SLU 78	-0.13	-0.09	11.29	0	0	0
45	SLU 79	-0.13	-0.1	11.23	0	0	0
45	SLU 80	-0.13	-0.09	11.23	0	0	0
45	SLU 81	-0.13	-0.1	11.52	0	0	0
45	SLU 82	-0.13	-0.09	11.52	0	0	0
45	SLU 83	-0.14	-0.1	11.58	0	0	0
45	SLU 84	-0.14	-0.09	11.59	0	0	0
45	SLE RA 1	-0.08	-0.08	7.56	0	0	0
45	SLE RA 2	-0.08	-0.08	7.56	0	0	0
45	SLE RA 3	-0.08	-0.08	7.65	0	0	0
45	SLE RA 4	-0.08	-0.08	7.65	0	0	0
45	SLE RA 5	-0.08	-0.08	7.61	0	0	0
45	SLE RA 6	-0.08	-0.08	7.7	0	0	0
45	SLE RA 7	-0.08	-0.08	7.7	0	0	0
45	SLE RA 8	-0.09	-0.08	7.65	0	0	0
45	SLE RA 9	-0.08	-0.08	7.66	0	0	0
45	SLE RA 10	-0.09	-0.07	8.23	0	0	0
45	SLE RA 11	-0.09	-0.08	8.32	0	0	0
45	SLE RA 12	-0.09	-0.07	8.32	0	0	0
45	SLE RA 13	-0.09	-0.07	8.28	0	0	0
45	SLE RA 14	-0.1	-0.08	8.36	0	0	0
45	SLE RA 15	-0.1	-0.07	8.36	0	0	0
45	SLE RA 16	-0.1	-0.08	8.32	0	0	0
45	SLE RA 17	-0.1	-0.08	8.32	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
45	SLE RA 18	-0.1	-0.08	8.51	0	0	0
45	SLE RA 19	-0.1	-0.07	8.51	0	0	0
45	SLE RA 20	-0.1	-0.08	8.56	0	0	0
45	SLE RA 21	-0.1	-0.07	8.56	0	0	0
45	SLE FR 1	-0.08	-0.08	7.56	0	0	0
45	SLE FR 2	-0.08	-0.08	7.56	0	0	0
45	SLE FR 3	-0.08	-0.08	7.58	0	0	0
45	SLE FR 4	-0.08	-0.08	7.85	0	0	0
45	SLE FR 5	-0.09	-0.08	7.87	0	0	0
45	SLE FR 6	-0.09	-0.08	8.04	0	0	0
45	SLE QP 1	-0.08	-0.08	7.56	0	0	0
45	SLE QP 2	-0.08	-0.08	7.85	0	0	0
45	SLD 1	0.48	0	7.57	0	0	0
45	SLD 2	0.49	0.02	7.56	0	0	0
45	SLD 3	0.46	-0.21	7.61	0	0	0
45	SLD 4	0.46	-0.19	7.6	0	0	0
45	SLD 5	0.13	0.26	7.7	0	0	0
45	SLD 6	0.13	0.27	7.7	0	0	0
45	SLD 7	0.03	-0.44	7.84	0	0	0
45	SLD 8	0.04	-0.43	7.83	0	0	0
45	SLD 9	-0.21	0.27	7.86	0	0	0
45	SLD 10	-0.2	0.28	7.86	0	0	0
45	SLD 11	-0.3	-0.43	8	0	0	0
45	SLD 12	-0.3	-0.42	7.99	0	0	0
45	SLD 13	-0.63	0.03	8.1	0	0	0
45	SLD 14	-0.63	0.05	8.09	0	0	0
45	SLD 15	-0.66	-0.18	8.14	0	0	0
45	SLD 16	-0.65	-0.16	8.13	0	0	0
45	SLV 1	1.25	0.1	7.19	0	0	0
45	SLV 2	1.26	0.14	7.17	0	0	0
45	SLV 3	1.18	-0.38	7.28	0	0	0
45	SLV 4	1.2	-0.34	7.27	0	0	0
45	SLV 5	0.41	0.69	7.51	0	0	0
45	SLV 6	0.42	0.72	7.5	0	0	0
45	SLV 7	0.2	-0.91	7.82	0	0	0
45	SLV 8	0.2	-0.88	7.82	0	0	0
45	SLV 9	-0.37	0.72	7.88	0	0	0
45	SLV 10	-0.37	0.75	7.87	0	0	0
45	SLV 11	-0.59	-0.88	8.2	0	0	0
45	SLV 12	-0.58	-0.86	8.19	0	0	0
45	SLV 13	-1.36	0.18	8.43	0	0	0
45	SLV 14	-1.35	0.22	8.42	0	0	0
45	SLV 15	-1.43	-0.3	8.52	0	0	0
45	SLV 16	-1.42	-0.26	8.51	0	0	0
46	SLU 1	-0.07	-0.09	6.39	0	0	0
46	SLU 2	-0.07	-0.08	6.39	0	0	0
46	SLU 3	-0.07	-0.09	6.51	0	0	0
46	SLU 4	-0.07	-0.08	6.51	0	0	0
46	SLU 5	-0.07	-0.08	6.46	0	0	0
46	SLU 6	-0.07	-0.09	6.59	0	0	0
46	SLU 7	-0.07	-0.08	6.58	0	0	0
46	SLU 8	-0.08	-0.09	6.53	0	0	0
46	SLU 9	-0.07	-0.08	6.53	0	0	0
46	SLU 10	-0.08	-0.08	7.29	0	0	0
46	SLU 11	-0.09	-0.08	7.41	0	0	0
46	SLU 12	-0.09	-0.08	7.41	0	0	0
46	SLU 13	-0.09	-0.08	7.36	0	0	0
46	SLU 14	-0.09	-0.08	7.48	0	0	0
46	SLU 15	-0.09	-0.08	7.48	0	0	0
46	SLU 16	-0.09	-0.09	7.43	0	0	0
46	SLU 17	-0.09	-0.08	7.43	0	0	0
46	SLU 18	-0.09	-0.08	7.67	0	0	0
46	SLU 19	-0.09	-0.08	7.67	0	0	0
46	SLU 20	-0.09	-0.08	7.75	0	0	0
46	SLU 21	-0.09	-0.08	7.74	0	0	0
46	SLU 22	-0.07	-0.07	7.16	0	0	0
46	SLU 23	-0.07	-0.06	7.16	0	0	0
46	SLU 24	-0.07	-0.07	7.29	0	0	0
46	SLU 25	-0.07	-0.07	7.29	0	0	0
46	SLU 26	-0.07	-0.07	7.23	0	0	0
46	SLU 27	-0.08	-0.07	7.36	0	0	0
46	SLU 28	-0.08	-0.07	7.36	0	0	0
46	SLU 29	-0.08	-0.07	7.31	0	0	0
46	SLU 30	-0.08	-0.07	7.31	0	0	0
46	SLU 31	-0.09	-0.06	8.06	0	0	0
46	SLU 32	-0.09	-0.07	8.19	0	0	0
46	SLU 33	-0.09	-0.06	8.18	0	0	0
46	SLU 34	-0.09	-0.06	8.13	0	0	0
46	SLU 35	-0.09	-0.07	8.26	0	0	0
46	SLU 36	-0.09	-0.06	8.26	0	0	0
46	SLU 37	-0.09	-0.07	8.21	0	0	0
46	SLU 38	-0.09	-0.07	8.2	0	0	0
46	SLU 39	-0.09	-0.07	8.45	0	0	0
46	SLU 40	-0.09	-0.06	8.45	0	0	0
46	SLU 41	-0.1	-0.07	8.52	0	0	0
46	SLU 42	-0.1	-0.06	8.52	0	0	0
46	SLU 43	-0.09	-0.12	8.04	0	0	0
46	SLU 44	-0.09	-0.11	8.04	0	0	0
46	SLU 45	-0.09	-0.12	8.17	0	0	0
46	SLU 46	-0.09	-0.11	8.16	0	0	0
46	SLU 47	-0.09	-0.11	8.11	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
46	SLU 48	-0.09	-0.12	8.24	0	0	0
46	SLU 49	-0.09	-0.11	8.24	0	0	0
46	SLU 50	-0.09	-0.12	8.19	0	0	0
46	SLU 51	-0.09	-0.12	8.18	0	0	0
46	SLU 52	-0.1	-0.11	8.94	0	0	0
46	SLU 53	-0.11	-0.11	9.06	0	0	0
46	SLU 54	-0.11	-0.11	9.06	0	0	0
46	SLU 55	-0.11	-0.11	9.01	0	0	0
46	SLU 56	-0.11	-0.11	9.14	0	0	0
46	SLU 57	-0.11	-0.11	9.13	0	0	0
46	SLU 58	-0.11	-0.12	9.08	0	0	0
46	SLU 59	-0.11	-0.11	9.08	0	0	0
46	SLU 60	-0.11	-0.11	9.33	0	0	0
46	SLU 61	-0.11	-0.11	9.32	0	0	0
46	SLU 62	-0.11	-0.11	9.4	0	0	0
46	SLU 63	-0.11	-0.11	9.4	0	0	0
46	SLU 64	-0.09	-0.1	8.82	0	0	0
46	SLU 65	-0.09	-0.1	8.81	0	0	0
46	SLU 66	-0.09	-0.1	8.94	0	0	0
46	SLU 67	-0.09	-0.1	8.94	0	0	0
46	SLU 68	-0.09	-0.1	8.89	0	0	0
46	SLU 69	-0.1	-0.1	9.01	0	0	0
46	SLU 70	-0.1	-0.1	9.01	0	0	0
46	SLU 71	-0.1	-0.11	8.96	0	0	0
46	SLU 72	-0.1	-0.1	8.96	0	0	0
46	SLU 73	-0.1	-0.09	9.71	0	0	0
46	SLU 74	-0.11	-0.1	9.84	0	0	0
46	SLU 75	-0.11	-0.09	9.84	0	0	0
46	SLU 76	-0.11	-0.09	9.78	0	0	0
46	SLU 77	-0.11	-0.1	9.91	0	0	0
46	SLU 78	-0.11	-0.09	9.91	0	0	0
46	SLU 79	-0.11	-0.1	9.86	0	0	0
46	SLU 80	-0.11	-0.1	9.86	0	0	0
46	SLU 81	-0.11	-0.1	10.1	0	0	0
46	SLU 82	-0.11	-0.09	10.1	0	0	0
46	SLU 83	-0.12	-0.1	10.17	0	0	0
46	SLU 84	-0.12	-0.09	10.17	0	0	0
46	SLE RA 1	-0.07	-0.08	6.61	0	0	0
46	SLE RA 2	-0.07	-0.08	6.61	0	0	0
46	SLE RA 3	-0.07	-0.08	6.69	0	0	0
46	SLE RA 4	-0.07	-0.08	6.69	0	0	0
46	SLE RA 5	-0.07	-0.08	6.66	0	0	0
46	SLE RA 6	-0.07	-0.08	6.74	0	0	0
46	SLE RA 7	-0.07	-0.08	6.74	0	0	0
46	SLE RA 8	-0.07	-0.08	6.71	0	0	0
46	SLE RA 9	-0.07	-0.08	6.71	0	0	0
46	SLE RA 10	-0.08	-0.08	7.21	0	0	0
46	SLE RA 11	-0.08	-0.08	7.29	0	0	0
46	SLE RA 12	-0.08	-0.08	7.29	0	0	0
46	SLE RA 13	-0.08	-0.08	7.26	0	0	0
46	SLE RA 14	-0.08	-0.08	7.34	0	0	0
46	SLE RA 15	-0.08	-0.08	7.34	0	0	0
46	SLE RA 16	-0.08	-0.08	7.31	0	0	0
46	SLE RA 17	-0.08	-0.08	7.31	0	0	0
46	SLE RA 18	-0.08	-0.08	7.47	0	0	0
46	SLE RA 19	-0.08	-0.08	7.47	0	0	0
46	SLE RA 20	-0.09	-0.08	7.52	0	0	0
46	SLE RA 21	-0.09	-0.08	7.51	0	0	0
46	SLE FR 1	-0.07	-0.08	6.61	0	0	0
46	SLE FR 2	-0.07	-0.08	6.61	0	0	0
46	SLE FR 3	-0.07	-0.08	6.63	0	0	0
46	SLE FR 4	-0.07	-0.08	6.87	0	0	0
46	SLE FR 5	-0.07	-0.08	6.89	0	0	0
46	SLE FR 6	-0.08	-0.08	7.04	0	0	0
46	SLE QP 1	-0.07	-0.08	6.61	0	0	0
46	SLE QP 2	-0.07	-0.08	6.87	0	0	0
46	SLD 1	0.41	0.02	6.9	0	0	0
46	SLD 2	0.41	0.03	6.9	0	0	0
46	SLD 3	0.38	-0.16	6.97	0	0	0
46	SLD 4	0.39	-0.15	6.97	0	0	0
46	SLD 5	0.11	0.23	6.77	0	0	0
46	SLD 6	0.11	0.23	6.77	0	0	0
46	SLD 7	0.03	-0.38	7.01	0	0	0
46	SLD 8	0.03	-0.38	7.01	0	0	0
46	SLD 9	-0.17	0.22	6.73	0	0	0
46	SLD 10	-0.17	0.22	6.73	0	0	0
46	SLD 11	-0.25	-0.39	6.97	0	0	0
46	SLD 12	-0.25	-0.39	6.97	0	0	0
46	SLD 13	-0.53	-0.01	6.77	0	0	0
46	SLD 14	-0.53	-0.01	6.77	0	0	0
46	SLD 15	-0.56	-0.19	6.84	0	0	0
46	SLD 16	-0.55	-0.19	6.84	0	0	0
46	SLV 1	1.05	0.16	6.94	0	0	0
46	SLV 2	1.06	0.17	6.94	0	0	0
46	SLV 3	1	-0.25	7.11	0	0	0
46	SLV 4	1	-0.24	7.1	0	0	0
46	SLV 5	0.35	0.62	6.64	0	0	0
46	SLV 6	0.35	0.62	6.64	0	0	0
46	SLV 7	0.16	-0.77	7.19	0	0	0
46	SLV 8	0.17	-0.76	7.19	0	0	0
46	SLV 9	-0.31	0.59	6.55	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
46	SLV 10	-0.31	0.6	6.55	0	0	0
46	SLV 11	-0.5	-0.79	7.1	0	0	0
46	SLV 12	-0.49	-0.78	7.09	0	0	0
46	SLV 13	-1.15	0.08	6.63	0	0	0
46	SLV 14	-1.14	0.09	6.63	0	0	0
46	SLV 15	-1.2	-0.34	6.8	0	0	0
46	SLV 16	-1.2	-0.33	6.79	0	0	0
48	SLU 1	-0.14	-0.17	12.75	0	0.7969	0.0108
48	SLU 2	-0.13	-0.16	12.75	0	0.7967	0.0098
48	SLU 3	-0.14	-0.17	13	0	0.8122	0.0106
48	SLU 4	-0.14	-0.16	12.99	0	0.812	0.01
48	SLU 5	-0.14	-0.16	12.89	0	0.8054	0.0099
48	SLU 6	-0.15	-0.17	13.13	0	0.8209	0.0107
48	SLU 7	-0.15	-0.16	13.13	0	0.8208	0.0101
48	SLU 8	-0.15	-0.18	13.03	0	0.8144	0.011
48	SLU 9	-0.15	-0.17	13.03	0	0.8142	0.0104
48	SLU 10	-0.17	-0.15	14.54	0	0.9085	0.0092
48	SLU 11	-0.17	-0.16	14.78	0	0.924	0.0101
48	SLU 12	-0.17	-0.15	14.78	0	0.9238	0.0094
48	SLU 13	-0.17	-0.15	14.68	0	0.9172	0.0093
48	SLU 14	-0.18	-0.16	14.92	0	0.9327	0.0102
48	SLU 15	-0.18	-0.15	14.92	0	0.9326	0.0095
48	SLU 16	-0.18	-0.17	14.82	0	0.9262	0.0105
48	SLU 17	-0.18	-0.16	14.82	0	0.926	0.0099
48	SLU 18	-0.18	-0.16	15.31	0	0.9566	0.0101
48	SLU 19	-0.18	-0.15	15.3	0	0.9565	0.0094
48	SLU 20	-0.19	-0.16	15.45	0	0.9654	0.0102
48	SLU 21	-0.19	-0.15	15.44	0	0.9652	0.0095
48	SLU 22	-0.14	-0.14	14.3	0	0.8938	0.009
48	SLU 23	-0.14	-0.13	14.3	0	0.8935	0.0079
48	SLU 24	-0.15	-0.14	14.54	0	0.9091	0.0088
48	SLU 25	-0.14	-0.13	14.54	0	0.9089	0.0081
48	SLU 26	-0.15	-0.13	14.44	0	0.9023	0.008
48	SLU 27	-0.15	-0.14	14.68	0	0.9178	0.0089
48	SLU 28	-0.15	-0.13	14.68	0	0.9176	0.0082
48	SLU 29	-0.16	-0.15	14.58	0	0.9113	0.0092
48	SLU 30	-0.15	-0.14	14.58	0	0.9111	0.0086
48	SLU 31	-0.17	-0.12	16.09	0	1.0053	0.0074
48	SLU 32	-0.18	-0.13	16.33	0	1.0208	0.0082
48	SLU 33	-0.18	-0.12	16.33	0	1.0207	0.0076
48	SLU 34	-0.18	-0.12	16.22	0	1.0141	0.0075
48	SLU 35	-0.19	-0.13	16.47	0	1.0296	0.0083
48	SLU 36	-0.18	-0.12	16.47	0	1.0294	0.0077
48	SLU 37	-0.19	-0.14	16.37	0	1.023	0.0087
48	SLU 38	-0.19	-0.13	16.37	0	1.0229	0.008
48	SLU 39	-0.19	-0.13	16.86	0	1.0535	0.0082
48	SLU 40	-0.19	-0.12	16.85	0	1.0533	0.0076
48	SLU 41	-0.19	-0.13	17	0	1.0622	0.0083
48	SLU 42	-0.19	-0.12	16.99	0	1.0621	0.0077
48	SLU 43	-0.18	-0.24	16.04	0	1.0028	0.0147
48	SLU 44	-0.17	-0.22	16.04	0	1.0025	0.0136
48	SLU 45	-0.18	-0.23	16.29	0	1.0181	0.0145
48	SLU 46	-0.18	-0.22	16.29	0	1.0179	0.0138
48	SLU 47	-0.18	-0.22	16.18	0	1.0113	0.0137
48	SLU 48	-0.19	-0.23	16.43	0	1.0268	0.0146
48	SLU 49	-0.19	-0.22	16.43	0	1.0266	0.014
48	SLU 50	-0.19	-0.24	16.32	0	1.0203	0.0149
48	SLU 51	-0.19	-0.23	16.32	0	1.0201	0.0143
48	SLU 52	-0.21	-0.21	17.83	0	1.1143	0.0131
48	SLU 53	-0.21	-0.22	18.08	0	1.1299	0.014
48	SLU 54	-0.21	-0.21	18.08	0	1.1297	0.0133
48	SLU 55	-0.21	-0.21	17.97	0	1.1231	0.0132
48	SLU 56	-0.22	-0.22	18.22	0	1.1386	0.0141
48	SLU 57	-0.22	-0.21	18.21	0	1.1384	0.0134
48	SLU 58	-0.22	-0.23	18.11	0	1.1321	0.0144
48	SLU 59	-0.22	-0.22	18.11	0	1.1319	0.0137
48	SLU 60	-0.22	-0.22	18.6	0	1.1625	0.0139
48	SLU 61	-0.22	-0.21	18.6	0	1.1624	0.0133
48	SLU 62	-0.23	-0.22	18.74	0	1.1712	0.014
48	SLU 63	-0.23	-0.21	18.74	0	1.1711	0.0134
48	SLU 64	-0.18	-0.21	17.59	0	1.0997	0.0129
48	SLU 65	-0.18	-0.19	17.59	0	1.0994	0.0118
48	SLU 66	-0.18	-0.2	17.84	0	1.1149	0.0126
48	SLU 67	-0.18	-0.19	17.84	0	1.1148	0.012
48	SLU 68	-0.19	-0.19	17.73	0	1.1081	0.0119
48	SLU 69	-0.19	-0.2	17.98	0	1.1237	0.0128
48	SLU 70	-0.19	-0.19	17.98	0	1.1235	0.0121
48	SLU 71	-0.19	-0.21	17.87	0	1.1171	0.0131
48	SLU 72	-0.19	-0.2	17.87	0	1.117	0.0124
48	SLU 73	-0.21	-0.18	19.38	0	1.2112	0.0113
48	SLU 74	-0.22	-0.19	19.63	0	1.2267	0.0121
48	SLU 75	-0.22	-0.18	19.62	0	1.2266	0.0115
48	SLU 76	-0.22	-0.18	19.52	0	1.2199	0.0114
48	SLU 77	-0.22	-0.2	19.77	0	1.2355	0.0122
48	SLU 78	-0.22	-0.19	19.76	0	1.2353	0.0116
48	SLU 79	-0.23	-0.2	19.66	0	1.2289	0.0125
48	SLU 80	-0.23	-0.19	19.66	0	1.2288	0.0119
48	SLU 81	-0.23	-0.19	20.15	0	1.2594	0.0121
48	SLU 82	-0.22	-0.18	20.15	0	1.2592	0.0115
48	SLU 83	-0.23	-0.2	20.29	0	1.2681	0.0122
48	SLU 84	-0.23	-0.19	20.29	0	1.2679	0.0116

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
48	SLE RA 1	-0.14	-0.16	13.19	0	0.8246	0.0103
48	SLE RA 2	-0.14	-0.15	13.19	0	0.8244	0.0096
48	SLE RA 3	-0.14	-0.16	13.36	0	0.8348	0.0102
48	SLE RA 4	-0.14	-0.16	13.35	0	0.8347	0.0097
48	SLE RA 5	-0.14	-0.15	13.28	0	0.8303	0.0097
48	SLE RA 6	-0.15	-0.16	13.45	0	0.8406	0.0102
48	SLE RA 7	-0.15	-0.16	13.45	0	0.8405	0.0098
48	SLE RA 8	-0.15	-0.17	13.38	0	0.8363	0.0104
48	SLE RA 9	-0.15	-0.16	13.38	0	0.8361	0.01
48	SLE RA 10	-0.16	-0.15	14.38	0	0.899	0.0092
48	SLE RA 11	-0.16	-0.16	14.55	0	0.9093	0.0098
48	SLE RA 12	-0.16	-0.15	14.55	0	0.9092	0.0094
48	SLE RA 13	-0.16	-0.15	14.48	0	0.9048	0.0093
48	SLE RA 14	-0.17	-0.16	14.64	0	0.9151	0.0099
48	SLE RA 15	-0.17	-0.15	14.64	0	0.915	0.0094
48	SLE RA 16	-0.17	-0.16	14.57	0	0.9108	0.0101
48	SLE RA 17	-0.17	-0.15	14.57	0	0.9107	0.0097
48	SLE RA 18	-0.17	-0.16	14.9	0	0.9311	0.0098
48	SLE RA 19	-0.17	-0.15	14.9	0	0.931	0.0094
48	SLE RA 20	-0.17	-0.16	14.99	0	0.9369	0.0099
48	SLE RA 21	-0.17	-0.15	14.99	0	0.9368	0.0094
48	SLE FR 1	-0.14	-0.16	13.19	0	0.8246	0.0103
48	SLE FR 2	-0.14	-0.16	13.19	0	0.8246	0.0102
48	SLE FR 3	-0.14	-0.17	13.23	0	0.8269	0.0103
48	SLE FR 4	-0.15	-0.16	13.7	0	0.8565	0.01
48	SLE FR 5	-0.15	-0.16	13.74	0	0.8589	0.0102
48	SLE FR 6	-0.15	-0.16	14.05	0	0.8778	0.01
48	SLE QP 1	-0.14	-0.16	13.19	0	0.8246	0.0103
48	SLE QP 2	-0.15	-0.16	13.7	0	0.8565	0.0101
48	SLD 1	0.82	0.05	13.71	0	0.8571	-0.003
48	SLD 2	0.82	0.06	13.71	0	0.8568	-0.0037
48	SLD 3	0.77	-0.32	13.84	0	0.8651	0.0198
48	SLD 4	0.77	-0.31	13.84	0	0.8648	0.0191
48	SLD 5	0.22	0.45	13.51	0	0.8446	-0.0282
48	SLD 6	0.22	0.46	13.51	0	0.8444	-0.0287
48	SLD 7	0.05	-0.76	13.94	0	0.8713	0.0477
48	SLD 8	0.06	-0.76	13.94	0	0.8711	0.0473
48	SLD 9	-0.35	0.43	13.47	0	0.842	-0.027
48	SLD 10	-0.35	0.44	13.47	0	0.8418	-0.0274
48	SLD 11	-0.51	-0.78	13.9	0	0.8687	0.049
48	SLD 12	-0.51	-0.78	13.9	0	0.8685	0.0485
48	SLD 13	-1.07	-0.02	13.57	0	0.8483	0.0012
48	SLD 14	-1.06	-0.01	13.57	0	0.848	0.0005
48	SLD 15	-1.12	-0.38	13.7	0	0.8563	0.024
48	SLD 16	-1.11	-0.37	13.7	0	0.856	0.0233
48	SLV 1	2.11	0.32	13.73	0	0.8581	-0.0199
48	SLV 2	2.12	0.34	13.72	0	0.8574	-0.0214
48	SLV 3	2	-0.51	14.02	0	0.8763	0.032
48	SLV 4	2.01	-0.49	14.01	0	0.8757	0.0305
48	SLV 5	0.7	1.24	13.27	0	0.8294	-0.0773
48	SLV 6	0.71	1.25	13.26	0	0.829	-0.0783
48	SLV 7	0.32	-1.53	14.24	0	0.8903	0.0957
48	SLV 8	0.33	-1.52	14.24	0	0.8899	0.0947
48	SLV 9	-0.62	1.19	13.17	0	0.8232	-0.0744
48	SLV 10	-0.62	1.21	13.16	0	0.8228	-0.0754
48	SLV 11	-1	-1.58	14.15	0	0.8841	0.0986
48	SLV 12	-0.99	-1.56	14.14	0	0.8837	0.0976
48	SLV 13	-2.3	0.16	13.4	0	0.8374	-0.0102
48	SLV 14	-2.29	0.19	13.39	0	0.8368	-0.0118
48	SLV 15	-2.41	-0.67	13.69	0	0.8557	0.0417
48	SLV 16	-2.4	-0.64	13.68	0	0.855	0.0401
49	SLU 1	-0.13	-0.17	12.41	0	0	0
49	SLU 2	-0.13	-0.15	12.41	0	0	0
49	SLU 3	-0.14	-0.16	12.65	0	0	0
49	SLU 4	-0.14	-0.15	12.65	0	0	0
49	SLU 5	-0.14	-0.15	12.54	0	0	0
49	SLU 6	-0.15	-0.16	12.78	0	0	0
49	SLU 7	-0.15	-0.15	12.78	0	0	0
49	SLU 8	-0.15	-0.17	12.68	0	0	0
49	SLU 9	-0.15	-0.16	12.68	0	0	0
49	SLU 10	-0.16	-0.14	14.15	0	0	0
49	SLU 11	-0.17	-0.15	14.39	0	0	0
49	SLU 12	-0.17	-0.14	14.39	0	0	0
49	SLU 13	-0.17	-0.14	14.28	0	0	0
49	SLU 14	-0.18	-0.16	14.52	0	0	0
49	SLU 15	-0.18	-0.15	14.52	0	0	0
49	SLU 16	-0.18	-0.16	14.42	0	0	0
49	SLU 17	-0.18	-0.15	14.42	0	0	0
49	SLU 18	-0.18	-0.15	14.9	0	0	0
49	SLU 19	-0.18	-0.14	14.89	0	0	0
49	SLU 20	-0.19	-0.16	15.03	0	0	0
49	SLU 21	-0.19	-0.15	15.03	0	0	0
49	SLU 22	-0.14	-0.14	13.93	0	0	0
49	SLU 23	-0.14	-0.12	13.93	0	0	0
49	SLU 24	-0.14	-0.13	14.17	0	0	0
49	SLU 25	-0.14	-0.12	14.16	0	0	0
49	SLU 26	-0.14	-0.12	14.06	0	0	0
49	SLU 27	-0.15	-0.13	14.3	0	0	0
49	SLU 28	-0.15	-0.12	14.3	0	0	0
49	SLU 29	-0.15	-0.14	14.2	0	0	0
49	SLU 30	-0.15	-0.13	14.19	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
49	SLU 31	-0.17	-0.11	15.66	0	0	0
49	SLU 32	-0.17	-0.13	15.9	0	0	0
49	SLU 33	-0.17	-0.12	15.9	0	0	0
49	SLU 34	-0.18	-0.11	15.8	0	0	0
49	SLU 35	-0.18	-0.13	16.04	0	0	0
49	SLU 36	-0.18	-0.12	16.03	0	0	0
49	SLU 37	-0.18	-0.13	15.93	0	0	0
49	SLU 38	-0.18	-0.12	15.93	0	0	0
49	SLU 39	-0.18	-0.12	16.41	0	0	0
49	SLU 40	-0.18	-0.11	16.41	0	0	0
49	SLU 41	-0.19	-0.13	16.55	0	0	0
49	SLU 42	-0.19	-0.12	16.54	0	0	0
49	SLU 43	-0.17	-0.22	15.62	0	0	0
49	SLU 44	-0.17	-0.21	15.62	0	0	0
49	SLU 45	-0.18	-0.22	15.86	0	0	0
49	SLU 46	-0.18	-0.21	15.85	0	0	0
49	SLU 47	-0.18	-0.21	15.75	0	0	0
49	SLU 48	-0.18	-0.22	15.99	0	0	0
49	SLU 49	-0.18	-0.21	15.99	0	0	0
49	SLU 50	-0.19	-0.23	15.89	0	0	0
49	SLU 51	-0.19	-0.22	15.88	0	0	0
49	SLU 52	-0.2	-0.2	17.35	0	0	0
49	SLU 53	-0.21	-0.21	17.59	0	0	0
49	SLU 54	-0.21	-0.2	17.59	0	0	0
49	SLU 55	-0.21	-0.2	17.49	0	0	0
49	SLU 56	-0.22	-0.21	17.73	0	0	0
49	SLU 57	-0.22	-0.2	17.72	0	0	0
49	SLU 58	-0.22	-0.22	17.62	0	0	0
49	SLU 59	-0.22	-0.21	17.62	0	0	0
49	SLU 60	-0.22	-0.21	18.1	0	0	0
49	SLU 61	-0.22	-0.2	18.1	0	0	0
49	SLU 62	-0.23	-0.21	18.23	0	0	0
49	SLU 63	-0.22	-0.2	18.23	0	0	0
49	SLU 64	-0.18	-0.2	17.13	0	0	0
49	SLU 65	-0.17	-0.18	17.13	0	0	0
49	SLU 66	-0.18	-0.19	17.37	0	0	0
49	SLU 67	-0.18	-0.18	17.37	0	0	0
49	SLU 68	-0.18	-0.18	17.26	0	0	0
49	SLU 69	-0.19	-0.19	17.5	0	0	0
49	SLU 70	-0.19	-0.18	17.5	0	0	0
49	SLU 71	-0.19	-0.2	17.4	0	0	0
49	SLU 72	-0.19	-0.19	17.4	0	0	0
49	SLU 73	-0.21	-0.17	18.87	0	0	0
49	SLU 74	-0.21	-0.18	19.11	0	0	0
49	SLU 75	-0.21	-0.17	19.11	0	0	0
49	SLU 76	-0.21	-0.17	19	0	0	0
49	SLU 77	-0.22	-0.19	19.24	0	0	0
49	SLU 78	-0.22	-0.18	19.24	0	0	0
49	SLU 79	-0.22	-0.19	19.14	0	0	0
49	SLU 80	-0.22	-0.18	19.14	0	0	0
49	SLU 81	-0.22	-0.18	19.62	0	0	0
49	SLU 82	-0.22	-0.17	19.61	0	0	0
49	SLU 83	-0.23	-0.19	19.75	0	0	0
49	SLU 84	-0.23	-0.18	19.75	0	0	0
49	SLE RA 1	-0.13	-0.16	12.85	0	0	0
49	SLE RA 2	-0.13	-0.15	12.85	0	0	0
49	SLE RA 3	-0.14	-0.15	13	0	0	0
49	SLE RA 4	-0.14	-0.15	13	0	0	0
49	SLE RA 5	-0.14	-0.15	12.93	0	0	0
49	SLE RA 6	-0.14	-0.16	13.09	0	0	0
49	SLE RA 7	-0.14	-0.15	13.09	0	0	0
49	SLE RA 8	-0.14	-0.16	13.02	0	0	0
49	SLE RA 9	-0.14	-0.15	13.02	0	0	0
49	SLE RA 10	-0.16	-0.14	14	0	0	0
49	SLE RA 11	-0.16	-0.15	14.16	0	0	0
49	SLE RA 12	-0.16	-0.14	14.16	0	0	0
49	SLE RA 13	-0.16	-0.14	14.09	0	0	0
49	SLE RA 14	-0.16	-0.15	14.25	0	0	0
49	SLE RA 15	-0.16	-0.14	14.25	0	0	0
49	SLE RA 16	-0.17	-0.15	14.18	0	0	0
49	SLE RA 17	-0.17	-0.15	14.18	0	0	0
49	SLE RA 18	-0.17	-0.15	14.5	0	0	0
49	SLE RA 19	-0.16	-0.14	14.5	0	0	0
49	SLE RA 20	-0.17	-0.15	14.59	0	0	0
49	SLE RA 21	-0.17	-0.14	14.59	0	0	0
49	SLE FR 1	-0.13	-0.16	12.85	0	0	0
49	SLE FR 2	-0.13	-0.15	12.85	0	0	0
49	SLE FR 3	-0.14	-0.16	12.88	0	0	0
49	SLE FR 4	-0.14	-0.15	13.34	0	0	0
49	SLE FR 5	-0.15	-0.16	13.38	0	0	0
49	SLE FR 6	-0.15	-0.15	13.67	0	0	0
49	SLE QP 1	-0.13	-0.16	12.85	0	0	0
49	SLE QP 2	-0.14	-0.15	13.34	0	0	0
49	SLD 1	0.8	0.05	13.23	0	0	0
49	SLD 2	0.81	0.06	13.22	0	0	0
49	SLD 3	0.76	-0.31	13.34	0	0	0
49	SLD 4	0.76	-0.29	13.33	0	0	0
49	SLD 5	0.21	0.44	13.14	0	0	0
49	SLD 6	0.21	0.45	13.14	0	0	0
49	SLD 7	0.05	-0.74	13.51	0	0	0
49	SLD 8	0.06	-0.73	13.51	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
49	SLD 9	-0.34	0.42	13.18	0	0	0
49	SLD 10	-0.34	0.43	13.18	0	0	0
49	SLD 11	-0.5	-0.76	13.55	0	0	0
49	SLD 12	-0.5	-0.75	13.55	0	0	0
49	SLD 13	-1.05	-0.02	13.35	0	0	0
49	SLD 14	-1.04	0	13.35	0	0	0
49	SLD 15	-1.1	-0.37	13.46	0	0	0
49	SLD 16	-1.09	-0.36	13.46	0	0	0
49	SLV 1	2.07	0.31	13.08	0	0	0
49	SLV 2	2.08	0.34	13.06	0	0	0
49	SLV 3	1.96	-0.5	13.33	0	0	0
49	SLV 4	1.97	-0.47	13.32	0	0	0
49	SLV 5	0.69	1.21	12.88	0	0	0
49	SLV 6	0.69	1.23	12.87	0	0	0
49	SLV 7	0.32	-1.5	13.73	0	0	0
49	SLV 8	0.33	-1.47	13.72	0	0	0
49	SLV 9	-0.61	1.16	12.97	0	0	0
49	SLV 10	-0.61	1.19	12.96	0	0	0
49	SLV 11	-0.98	-1.54	13.81	0	0	0
49	SLV 12	-0.97	-1.52	13.81	0	0	0
49	SLV 13	-2.26	0.16	13.37	0	0	0
49	SLV 14	-2.25	0.19	13.36	0	0	0
49	SLV 15	-2.37	-0.65	13.62	0	0	0
49	SLV 16	-2.36	-0.62	13.61	0	0	0
50	SLU 1	-0.13	-0.16	12.31	0	0	0
50	SLU 2	-0.13	-0.14	12.3	0	0	0
50	SLU 3	-0.14	-0.16	12.54	0	0	0
50	SLU 4	-0.14	-0.15	12.54	0	0	0
50	SLU 5	-0.14	-0.15	12.43	0	0	0
50	SLU 6	-0.15	-0.16	12.67	0	0	0
50	SLU 7	-0.15	-0.15	12.67	0	0	0
50	SLU 8	-0.15	-0.16	12.56	0	0	0
50	SLU 9	-0.15	-0.15	12.56	0	0	0
50	SLU 10	-0.16	-0.14	14.02	0	0	0
50	SLU 11	-0.17	-0.15	14.26	0	0	0
50	SLU 12	-0.17	-0.14	14.25	0	0	0
50	SLU 13	-0.17	-0.14	14.15	0	0	0
50	SLU 14	-0.18	-0.15	14.39	0	0	0
50	SLU 15	-0.18	-0.14	14.38	0	0	0
50	SLU 16	-0.18	-0.16	14.28	0	0	0
50	SLU 17	-0.18	-0.15	14.28	0	0	0
50	SLU 18	-0.18	-0.15	14.76	0	0	0
50	SLU 19	-0.18	-0.14	14.76	0	0	0
50	SLU 20	-0.19	-0.15	14.89	0	0	0
50	SLU 21	-0.19	-0.14	14.89	0	0	0
50	SLU 22	-0.14	-0.13	13.81	0	0	0
50	SLU 23	-0.14	-0.12	13.81	0	0	0
50	SLU 24	-0.14	-0.13	14.05	0	0	0
50	SLU 25	-0.14	-0.12	14.05	0	0	0
50	SLU 26	-0.14	-0.12	13.94	0	0	0
50	SLU 27	-0.15	-0.13	14.18	0	0	0
50	SLU 28	-0.15	-0.12	14.17	0	0	0
50	SLU 29	-0.15	-0.14	14.07	0	0	0
50	SLU 30	-0.15	-0.13	14.07	0	0	0
50	SLU 31	-0.17	-0.11	15.53	0	0	0
50	SLU 32	-0.18	-0.12	15.77	0	0	0
50	SLU 33	-0.17	-0.11	15.76	0	0	0
50	SLU 34	-0.18	-0.11	15.66	0	0	0
50	SLU 35	-0.18	-0.12	15.89	0	0	0
50	SLU 36	-0.18	-0.11	15.89	0	0	0
50	SLU 37	-0.18	-0.13	15.79	0	0	0
50	SLU 38	-0.18	-0.12	15.79	0	0	0
50	SLU 39	-0.18	-0.12	16.27	0	0	0
50	SLU 40	-0.18	-0.11	16.27	0	0	0
50	SLU 41	-0.19	-0.12	16.4	0	0	0
50	SLU 42	-0.19	-0.11	16.4	0	0	0
50	SLU 43	-0.17	-0.22	15.48	0	0	0
50	SLU 44	-0.17	-0.2	15.48	0	0	0
50	SLU 45	-0.18	-0.22	15.71	0	0	0
50	SLU 46	-0.18	-0.21	15.71	0	0	0
50	SLU 47	-0.18	-0.2	15.61	0	0	0
50	SLU 48	-0.19	-0.22	15.84	0	0	0
50	SLU 49	-0.18	-0.21	15.84	0	0	0
50	SLU 50	-0.19	-0.22	15.74	0	0	0
50	SLU 51	-0.19	-0.21	15.74	0	0	0
50	SLU 52	-0.2	-0.19	17.2	0	0	0
50	SLU 53	-0.21	-0.21	17.43	0	0	0
50	SLU 54	-0.21	-0.2	17.43	0	0	0
50	SLU 55	-0.21	-0.2	17.32	0	0	0
50	SLU 56	-0.22	-0.21	17.56	0	0	0
50	SLU 57	-0.22	-0.2	17.56	0	0	0
50	SLU 58	-0.22	-0.21	17.46	0	0	0
50	SLU 59	-0.22	-0.2	17.45	0	0	0
50	SLU 60	-0.22	-0.21	17.93	0	0	0
50	SLU 61	-0.22	-0.2	17.93	0	0	0
50	SLU 62	-0.23	-0.21	18.06	0	0	0
50	SLU 63	-0.22	-0.2	18.06	0	0	0
50	SLU 64	-0.18	-0.19	16.99	0	0	0
50	SLU 65	-0.17	-0.17	16.99	0	0	0
50	SLU 66	-0.18	-0.19	17.22	0	0	0
50	SLU 67	-0.18	-0.18	17.22	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
50	SLU 68	-0.18	-0.18	17.11	0	0	0
50	SLU 69	-0.19	-0.19	17.35	0	0	0
50	SLU 70	-0.19	-0.18	17.35	0	0	0
50	SLU 71	-0.19	-0.19	17.25	0	0	0
50	SLU 72	-0.19	-0.18	17.25	0	0	0
50	SLU 73	-0.21	-0.17	18.7	0	0	0
50	SLU 74	-0.21	-0.18	18.94	0	0	0
50	SLU 75	-0.21	-0.17	18.94	0	0	0
50	SLU 76	-0.21	-0.17	18.83	0	0	0
50	SLU 77	-0.22	-0.18	19.07	0	0	0
50	SLU 78	-0.22	-0.17	19.07	0	0	0
50	SLU 79	-0.22	-0.18	18.97	0	0	0
50	SLU 80	-0.22	-0.17	18.96	0	0	0
50	SLU 81	-0.22	-0.18	19.44	0	0	0
50	SLU 82	-0.22	-0.17	19.44	0	0	0
50	SLU 83	-0.23	-0.18	19.57	0	0	0
50	SLU 84	-0.23	-0.17	19.57	0	0	0
50	SLE RA 1	-0.13	-0.15	12.74	0	0	0
50	SLE RA 2	-0.13	-0.14	12.73	0	0	0
50	SLE RA 3	-0.14	-0.15	12.89	0	0	0
50	SLE RA 4	-0.14	-0.14	12.89	0	0	0
50	SLE RA 5	-0.14	-0.14	12.82	0	0	0
50	SLE RA 6	-0.14	-0.15	12.98	0	0	0
50	SLE RA 7	-0.14	-0.14	12.98	0	0	0
50	SLE RA 8	-0.14	-0.15	12.91	0	0	0
50	SLE RA 9	-0.14	-0.15	12.91	0	0	0
50	SLE RA 10	-0.16	-0.14	13.88	0	0	0
50	SLE RA 11	-0.16	-0.14	14.04	0	0	0
50	SLE RA 12	-0.16	-0.14	14.04	0	0	0
50	SLE RA 13	-0.16	-0.14	13.97	0	0	0
50	SLE RA 14	-0.16	-0.15	14.12	0	0	0
50	SLE RA 15	-0.16	-0.14	14.12	0	0	0
50	SLE RA 16	-0.17	-0.15	14.05	0	0	0
50	SLE RA 17	-0.17	-0.14	14.05	0	0	0
50	SLE RA 18	-0.17	-0.14	14.37	0	0	0
50	SLE RA 19	-0.16	-0.14	14.37	0	0	0
50	SLE RA 20	-0.17	-0.15	14.46	0	0	0
50	SLE RA 21	-0.17	-0.14	14.46	0	0	0
50	SLE FR 1	-0.13	-0.15	12.74	0	0	0
50	SLE FR 2	-0.13	-0.15	12.74	0	0	0
50	SLE FR 3	-0.14	-0.15	12.77	0	0	0
50	SLE FR 4	-0.14	-0.15	13.23	0	0	0
50	SLE FR 5	-0.15	-0.15	13.26	0	0	0
50	SLE FR 6	-0.15	-0.15	13.55	0	0	0
50	SLE QP 1	-0.13	-0.15	12.74	0	0	0
50	SLE QP 2	-0.14	-0.15	13.23	0	0	0
50	SLD 1	0.8	0.05	13.07	0	0	0
50	SLD 2	0.81	0.07	13.06	0	0	0
50	SLD 3	0.76	-0.31	13.16	0	0	0
50	SLD 4	0.76	-0.29	13.16	0	0	0
50	SLD 5	0.21	0.44	13.03	0	0	0
50	SLD 6	0.21	0.45	13.03	0	0	0
50	SLD 7	0.05	-0.74	13.36	0	0	0
50	SLD 8	0.06	-0.73	13.35	0	0	0
50	SLD 9	-0.34	0.43	13.1	0	0	0
50	SLD 10	-0.34	0.44	13.1	0	0	0
50	SLD 11	-0.5	-0.76	13.43	0	0	0
50	SLD 12	-0.5	-0.74	13.42	0	0	0
50	SLD 13	-1.05	-0.01	13.3	0	0	0
50	SLD 14	-1.04	0.01	13.29	0	0	0
50	SLD 15	-1.1	-0.37	13.39	0	0	0
50	SLD 16	-1.09	-0.35	13.39	0	0	0
50	SLV 1	2.07	0.3	12.85	0	0	0
50	SLV 2	2.08	0.34	12.84	0	0	0
50	SLV 3	1.96	-0.5	13.08	0	0	0
50	SLV 4	1.97	-0.46	13.06	0	0	0
50	SLV 5	0.69	1.2	12.78	0	0	0
50	SLV 6	0.69	1.23	12.77	0	0	0
50	SLV 7	0.32	-1.49	13.52	0	0	0
50	SLV 8	0.33	-1.46	13.51	0	0	0
50	SLV 9	-0.61	1.16	12.94	0	0	0
50	SLV 10	-0.61	1.19	12.93	0	0	0
50	SLV 11	-0.98	-1.53	13.68	0	0	0
50	SLV 12	-0.97	-1.5	13.68	0	0	0
50	SLV 13	-2.26	0.16	13.39	0	0	0
50	SLV 14	-2.25	0.2	13.38	0	0	0
50	SLV 15	-2.37	-0.64	13.62	0	0	0
50	SLV 16	-2.36	-0.6	13.6	0	0	0
51	SLU 1	-0.13	-0.16	12.21	0	0	0
51	SLU 2	-0.13	-0.14	12.21	0	0	0
51	SLU 3	-0.14	-0.15	12.44	0	0	0
51	SLU 4	-0.14	-0.14	12.44	0	0	0
51	SLU 5	-0.14	-0.14	12.34	0	0	0
51	SLU 6	-0.15	-0.15	12.57	0	0	0
51	SLU 7	-0.15	-0.14	12.57	0	0	0
51	SLU 8	-0.15	-0.16	12.47	0	0	0
51	SLU 9	-0.15	-0.15	12.46	0	0	0
51	SLU 10	-0.16	-0.13	13.92	0	0	0
51	SLU 11	-0.17	-0.14	14.15	0	0	0
51	SLU 12	-0.17	-0.13	14.15	0	0	0
51	SLU 13	-0.17	-0.13	14.04	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
51	SLU 14	-0.18	-0.15	14.27	0	0	0
51	SLU 15	-0.18	-0.14	14.27	0	0	0
51	SLU 16	-0.18	-0.15	14.17	0	0	0
51	SLU 17	-0.18	-0.14	14.17	0	0	0
51	SLU 18	-0.18	-0.14	14.65	0	0	0
51	SLU 19	-0.18	-0.13	14.65	0	0	0
51	SLU 20	-0.19	-0.15	14.77	0	0	0
51	SLU 21	-0.19	-0.14	14.77	0	0	0
51	SLU 22	-0.14	-0.13	13.72	0	0	0
51	SLU 23	-0.14	-0.11	13.72	0	0	0
51	SLU 24	-0.14	-0.12	13.95	0	0	0
51	SLU 25	-0.14	-0.11	13.95	0	0	0
51	SLU 26	-0.14	-0.11	13.84	0	0	0
51	SLU 27	-0.15	-0.13	14.07	0	0	0
51	SLU 28	-0.15	-0.12	14.07	0	0	0
51	SLU 29	-0.15	-0.13	13.97	0	0	0
51	SLU 30	-0.15	-0.12	13.97	0	0	0
51	SLU 31	-0.17	-0.1	15.42	0	0	0
51	SLU 32	-0.18	-0.12	15.65	0	0	0
51	SLU 33	-0.17	-0.11	15.65	0	0	0
51	SLU 34	-0.18	-0.1	15.55	0	0	0
51	SLU 35	-0.18	-0.12	15.78	0	0	0
51	SLU 36	-0.18	-0.11	15.78	0	0	0
51	SLU 37	-0.18	-0.12	15.67	0	0	0
51	SLU 38	-0.18	-0.11	15.67	0	0	0
51	SLU 39	-0.18	-0.12	16.15	0	0	0
51	SLU 40	-0.18	-0.11	16.15	0	0	0
51	SLU 41	-0.19	-0.12	16.28	0	0	0
51	SLU 42	-0.19	-0.11	16.28	0	0	0
51	SLU 43	-0.17	-0.21	15.36	0	0	0
51	SLU 44	-0.17	-0.2	15.36	0	0	0
51	SLU 45	-0.18	-0.21	15.59	0	0	0
51	SLU 46	-0.18	-0.2	15.59	0	0	0
51	SLU 47	-0.18	-0.2	15.49	0	0	0
51	SLU 48	-0.19	-0.21	15.72	0	0	0
51	SLU 49	-0.18	-0.2	15.72	0	0	0
51	SLU 50	-0.19	-0.22	15.61	0	0	0
51	SLU 51	-0.19	-0.21	15.61	0	0	0
51	SLU 52	-0.2	-0.19	17.06	0	0	0
51	SLU 53	-0.21	-0.2	17.29	0	0	0
51	SLU 54	-0.21	-0.19	17.29	0	0	0
51	SLU 55	-0.21	-0.19	17.19	0	0	0
51	SLU 56	-0.22	-0.2	17.42	0	0	0
51	SLU 57	-0.22	-0.19	17.42	0	0	0
51	SLU 58	-0.22	-0.21	17.32	0	0	0
51	SLU 59	-0.22	-0.2	17.32	0	0	0
51	SLU 60	-0.22	-0.2	17.79	0	0	0
51	SLU 61	-0.22	-0.19	17.79	0	0	0
51	SLU 62	-0.23	-0.2	17.92	0	0	0
51	SLU 63	-0.22	-0.19	17.92	0	0	0
51	SLU 64	-0.18	-0.18	16.87	0	0	0
51	SLU 65	-0.17	-0.17	16.87	0	0	0
51	SLU 66	-0.18	-0.18	17.1	0	0	0
51	SLU 67	-0.18	-0.17	17.1	0	0	0
51	SLU 68	-0.18	-0.17	16.99	0	0	0
51	SLU 69	-0.19	-0.18	17.22	0	0	0
51	SLU 70	-0.19	-0.17	17.22	0	0	0
51	SLU 71	-0.19	-0.19	17.12	0	0	0
51	SLU 72	-0.19	-0.18	17.12	0	0	0
51	SLU 73	-0.21	-0.16	18.57	0	0	0
51	SLU 74	-0.21	-0.17	18.8	0	0	0
51	SLU 75	-0.21	-0.16	18.8	0	0	0
51	SLU 76	-0.21	-0.16	18.69	0	0	0
51	SLU 77	-0.22	-0.17	18.92	0	0	0
51	SLU 78	-0.22	-0.16	18.92	0	0	0
51	SLU 79	-0.22	-0.18	18.82	0	0	0
51	SLU 80	-0.22	-0.17	18.82	0	0	0
51	SLU 81	-0.22	-0.17	19.3	0	0	0
51	SLU 82	-0.22	-0.16	19.3	0	0	0
51	SLU 83	-0.23	-0.17	19.42	0	0	0
51	SLU 84	-0.23	-0.16	19.42	0	0	0
51	SLE RA 1	-0.13	-0.15	12.64	0	0	0
51	SLE RA 2	-0.13	-0.14	12.64	0	0	0
51	SLE RA 3	-0.14	-0.15	12.8	0	0	0
51	SLE RA 4	-0.14	-0.14	12.8	0	0	0
51	SLE RA 5	-0.14	-0.14	12.73	0	0	0
51	SLE RA 6	-0.14	-0.15	12.88	0	0	0
51	SLE RA 7	-0.14	-0.14	12.88	0	0	0
51	SLE RA 8	-0.14	-0.15	12.81	0	0	0
51	SLE RA 9	-0.14	-0.14	12.81	0	0	0
51	SLE RA 10	-0.16	-0.13	13.78	0	0	0
51	SLE RA 11	-0.16	-0.14	13.93	0	0	0
51	SLE RA 12	-0.16	-0.13	13.93	0	0	0
51	SLE RA 13	-0.16	-0.13	13.86	0	0	0
51	SLE RA 14	-0.16	-0.14	14.02	0	0	0
51	SLE RA 15	-0.16	-0.13	14.02	0	0	0
51	SLE RA 16	-0.17	-0.14	13.95	0	0	0
51	SLE RA 17	-0.17	-0.14	13.95	0	0	0
51	SLE RA 18	-0.17	-0.14	14.27	0	0	0
51	SLE RA 19	-0.16	-0.13	14.26	0	0	0
51	SLE RA 20	-0.17	-0.14	14.35	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
51	SLE RA 21	-0.17	-0.13	14.35	0	0	0
51	SLE FR 1	-0.13	-0.15	12.64	0	0	0
51	SLE FR 2	-0.13	-0.15	12.64	0	0	0
51	SLE FR 3	-0.14	-0.15	12.68	0	0	0
51	SLE FR 4	-0.14	-0.14	13.13	0	0	0
51	SLE FR 5	-0.15	-0.15	13.16	0	0	0
51	SLE FR 6	-0.15	-0.14	13.45	0	0	0
51	SLE QP 1	-0.13	-0.15	12.64	0	0	0
51	SLE QP 2	-0.14	-0.15	13.13	0	0	0
51	SLD 1	0.8	0.05	12.91	0	0	0
51	SLD 2	0.81	0.07	12.9	0	0	0
51	SLD 3	0.76	-0.3	13	0	0	0
51	SLD 4	0.76	-0.28	12.99	0	0	0
51	SLD 5	0.21	0.44	12.93	0	0	0
51	SLD 6	0.21	0.46	12.93	0	0	0
51	SLD 7	0.05	-0.73	13.22	0	0	0
51	SLD 8	0.06	-0.72	13.22	0	0	0
51	SLD 9	-0.34	0.43	13.04	0	0	0
51	SLD 10	-0.34	0.44	13.04	0	0	0
51	SLD 11	-0.5	-0.75	13.33	0	0	0
51	SLD 12	-0.5	-0.74	13.33	0	0	0
51	SLD 13	-1.05	-0.01	13.27	0	0	0
51	SLD 14	-1.04	0.01	13.27	0	0	0
51	SLD 15	-1.1	-0.36	13.36	0	0	0
51	SLD 16	-1.09	-0.34	13.35	0	0	0
51	SLV 1	2.07	0.3	12.61	0	0	0
51	SLV 2	2.08	0.35	12.6	0	0	0
51	SLV 3	1.96	-0.5	12.81	0	0	0
51	SLV 4	1.97	-0.46	12.8	0	0	0
51	SLV 5	0.69	1.2	12.68	0	0	0
51	SLV 6	0.69	1.23	12.67	0	0	0
51	SLV 7	0.32	-1.48	13.34	0	0	0
51	SLV 8	0.33	-1.45	13.33	0	0	0
51	SLV 9	-0.61	1.16	12.93	0	0	0
51	SLV 10	-0.61	1.19	12.92	0	0	0
51	SLV 11	-0.98	-1.52	13.59	0	0	0
51	SLV 12	-0.97	-1.49	13.58	0	0	0
51	SLV 13	-2.26	0.16	13.46	0	0	0
51	SLV 14	-2.25	0.21	13.45	0	0	0
51	SLV 15	-2.37	-0.64	13.66	0	0	0
51	SLV 16	-2.36	-0.59	13.65	0	0	0
52	SLU 1	-0.13	-0.15	12.14	0	0	0
52	SLU 2	-0.13	-0.14	12.14	0	0	0
52	SLU 3	-0.14	-0.15	12.37	0	0	0
52	SLU 4	-0.14	-0.14	12.37	0	0	0
52	SLU 5	-0.14	-0.14	12.26	0	0	0
52	SLU 6	-0.15	-0.15	12.49	0	0	0
52	SLU 7	-0.15	-0.14	12.49	0	0	0
52	SLU 8	-0.15	-0.15	12.39	0	0	0
52	SLU 9	-0.15	-0.14	12.39	0	0	0
52	SLU 10	-0.16	-0.13	13.83	0	0	0
52	SLU 11	-0.17	-0.14	14.06	0	0	0
52	SLU 12	-0.17	-0.13	14.06	0	0	0
52	SLU 13	-0.17	-0.13	13.95	0	0	0
52	SLU 14	-0.18	-0.14	14.18	0	0	0
52	SLU 15	-0.18	-0.13	14.18	0	0	0
52	SLU 16	-0.18	-0.15	14.08	0	0	0
52	SLU 17	-0.18	-0.14	14.08	0	0	0
52	SLU 18	-0.18	-0.14	14.56	0	0	0
52	SLU 19	-0.18	-0.13	14.55	0	0	0
52	SLU 20	-0.19	-0.14	14.68	0	0	0
52	SLU 21	-0.19	-0.13	14.68	0	0	0
52	SLU 22	-0.14	-0.12	13.65	0	0	0
52	SLU 23	-0.14	-0.11	13.64	0	0	0
52	SLU 24	-0.14	-0.12	13.87	0	0	0
52	SLU 25	-0.14	-0.11	13.87	0	0	0
52	SLU 26	-0.14	-0.11	13.77	0	0	0
52	SLU 27	-0.15	-0.12	13.99	0	0	0
52	SLU 28	-0.15	-0.11	13.99	0	0	0
52	SLU 29	-0.15	-0.13	13.89	0	0	0
52	SLU 30	-0.15	-0.12	13.89	0	0	0
52	SLU 31	-0.17	-0.1	15.33	0	0	0
52	SLU 32	-0.18	-0.11	15.56	0	0	0
52	SLU 33	-0.17	-0.1	15.56	0	0	0
52	SLU 34	-0.18	-0.1	15.46	0	0	0
52	SLU 35	-0.18	-0.11	15.68	0	0	0
52	SLU 36	-0.18	-0.1	15.68	0	0	0
52	SLU 37	-0.18	-0.12	15.58	0	0	0
52	SLU 38	-0.18	-0.11	15.58	0	0	0
52	SLU 39	-0.18	-0.11	16.06	0	0	0
52	SLU 40	-0.18	-0.1	16.06	0	0	0
52	SLU 41	-0.19	-0.11	16.18	0	0	0
52	SLU 42	-0.19	-0.1	16.18	0	0	0
52	SLU 43	-0.17	-0.21	15.27	0	0	0
52	SLU 44	-0.17	-0.19	15.27	0	0	0
52	SLU 45	-0.18	-0.2	15.5	0	0	0
52	SLU 46	-0.18	-0.19	15.5	0	0	0
52	SLU 47	-0.18	-0.19	15.39	0	0	0
52	SLU 48	-0.18	-0.21	15.62	0	0	0
52	SLU 49	-0.18	-0.2	15.62	0	0	0
52	SLU 50	-0.19	-0.21	15.51	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
52	SLU 51	-0.19	-0.2	15.51	0	0	0
52	SLU 52	-0.2	-0.18	16.96	0	0	0
52	SLU 53	-0.21	-0.2	17.19	0	0	0
52	SLU 54	-0.21	-0.19	17.19	0	0	0
52	SLU 55	-0.21	-0.18	17.08	0	0	0
52	SLU 56	-0.22	-0.2	17.31	0	0	0
52	SLU 57	-0.22	-0.19	17.31	0	0	0
52	SLU 58	-0.22	-0.2	17.2	0	0	0
52	SLU 59	-0.22	-0.19	17.2	0	0	0
52	SLU 60	-0.22	-0.2	17.68	0	0	0
52	SLU 61	-0.22	-0.19	17.68	0	0	0
52	SLU 62	-0.23	-0.2	17.81	0	0	0
52	SLU 63	-0.22	-0.19	17.8	0	0	0
52	SLU 64	-0.18	-0.18	16.77	0	0	0
52	SLU 65	-0.17	-0.16	16.77	0	0	0
52	SLU 66	-0.18	-0.18	17	0	0	0
52	SLU 67	-0.18	-0.17	17	0	0	0
52	SLU 68	-0.18	-0.16	16.89	0	0	0
52	SLU 69	-0.19	-0.18	17.12	0	0	0
52	SLU 70	-0.19	-0.17	17.12	0	0	0
52	SLU 71	-0.19	-0.18	17.02	0	0	0
52	SLU 72	-0.19	-0.17	17.02	0	0	0
52	SLU 73	-0.21	-0.15	18.46	0	0	0
52	SLU 74	-0.21	-0.17	18.69	0	0	0
52	SLU 75	-0.21	-0.16	18.69	0	0	0
52	SLU 76	-0.21	-0.16	18.58	0	0	0
52	SLU 77	-0.22	-0.17	18.81	0	0	0
52	SLU 78	-0.22	-0.16	18.81	0	0	0
52	SLU 79	-0.22	-0.17	18.71	0	0	0
52	SLU 80	-0.22	-0.16	18.71	0	0	0
52	SLU 81	-0.22	-0.17	19.19	0	0	0
52	SLU 82	-0.22	-0.16	19.19	0	0	0
52	SLU 83	-0.23	-0.17	19.31	0	0	0
52	SLU 84	-0.23	-0.16	19.31	0	0	0
52	SLE RA 1	-0.13	-0.14	12.57	0	0	0
52	SLE RA 2	-0.13	-0.13	12.57	0	0	0
52	SLE RA 3	-0.14	-0.14	12.72	0	0	0
52	SLE RA 4	-0.14	-0.14	12.72	0	0	0
52	SLE RA 5	-0.14	-0.13	12.65	0	0	0
52	SLE RA 6	-0.14	-0.14	12.8	0	0	0
52	SLE RA 7	-0.14	-0.14	12.8	0	0	0
52	SLE RA 8	-0.14	-0.15	12.73	0	0	0
52	SLE RA 9	-0.14	-0.14	12.73	0	0	0
52	SLE RA 10	-0.16	-0.13	13.7	0	0	0
52	SLE RA 11	-0.16	-0.14	13.85	0	0	0
52	SLE RA 12	-0.16	-0.13	13.85	0	0	0
52	SLE RA 13	-0.16	-0.13	13.78	0	0	0
52	SLE RA 14	-0.16	-0.14	13.93	0	0	0
52	SLE RA 15	-0.16	-0.13	13.93	0	0	0
52	SLE RA 16	-0.17	-0.14	13.86	0	0	0
52	SLE RA 17	-0.17	-0.13	13.86	0	0	0
52	SLE RA 18	-0.17	-0.14	14.18	0	0	0
52	SLE RA 19	-0.16	-0.13	14.18	0	0	0
52	SLE RA 20	-0.17	-0.14	14.26	0	0	0
52	SLE RA 21	-0.17	-0.13	14.26	0	0	0
52	SLE FR 1	-0.13	-0.14	12.57	0	0	0
52	SLE FR 2	-0.13	-0.14	12.57	0	0	0
52	SLE FR 3	-0.14	-0.14	12.6	0	0	0
52	SLE FR 4	-0.14	-0.14	13.05	0	0	0
52	SLE FR 5	-0.15	-0.14	13.09	0	0	0
52	SLE FR 6	-0.15	-0.14	13.38	0	0	0
52	SLE QP 1	-0.13	-0.14	12.57	0	0	0
52	SLE QP 2	-0.14	-0.14	13.05	0	0	0
52	SLD 1	0.8	-0.01	12.77	0	0	0
52	SLD 2	0.81	0.02	12.76	0	0	0
52	SLD 3	0.76	-0.36	12.85	0	0	0
52	SLD 4	0.76	-0.33	12.84	0	0	0
52	SLD 5	0.21	0.43	12.85	0	0	0
52	SLD 6	0.21	0.44	12.84	0	0	0
52	SLD 7	0.05	-0.74	13.11	0	0	0
52	SLD 8	0.06	-0.73	13.11	0	0	0
52	SLD 9	-0.34	0.44	13	0	0	0
52	SLD 10	-0.34	0.46	13	0	0	0
52	SLD 11	-0.5	-0.73	13.26	0	0	0
52	SLD 12	-0.5	-0.71	13.26	0	0	0
52	SLD 13	-1.05	0.05	13.27	0	0	0
52	SLD 14	-1.04	0.07	13.26	0	0	0
52	SLD 15	-1.1	-0.3	13.35	0	0	0
52	SLD 16	-1.09	-0.28	13.34	0	0	0
52	SLV 1	2.07	0.16	12.39	0	0	0
52	SLV 2	2.08	0.22	12.37	0	0	0
52	SLV 3	1.96	-0.64	12.57	0	0	0
52	SLV 4	1.97	-0.58	12.55	0	0	0
52	SLV 5	0.69	1.15	12.58	0	0	0
52	SLV 6	0.69	1.19	12.57	0	0	0
52	SLV 7	0.32	-1.51	13.19	0	0	0
52	SLV 8	0.33	-1.48	13.18	0	0	0
52	SLV 9	-0.61	1.19	12.93	0	0	0
52	SLV 10	-0.61	1.23	12.92	0	0	0
52	SLV 11	-0.98	-1.47	13.54	0	0	0
52	SLV 12	-0.97	-1.44	13.53	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
52	SLV 13	-2.26	0.3	13.56	0	0	0
52	SLV 14	-2.25	0.35	13.54	0	0	0
52	SLV 15	-2.37	-0.5	13.74	0	0	0
52	SLV 16	-2.36	-0.45	13.72	0	0	0
53	SLU 1	-0.15	-0.16	13.36	0	0	0
53	SLU 2	-0.15	-0.15	13.36	0	0	0
53	SLU 3	-0.15	-0.16	13.61	0	0	0
53	SLU 4	-0.15	-0.15	13.61	0	0	0
53	SLU 5	-0.15	-0.15	13.5	0	0	0
53	SLU 6	-0.16	-0.16	13.74	0	0	0
53	SLU 7	-0.16	-0.15	13.74	0	0	0
53	SLU 8	-0.16	-0.17	13.63	0	0	0
53	SLU 9	-0.16	-0.16	13.63	0	0	0
53	SLU 10	-0.18	-0.14	15.22	0	0	0
53	SLU 11	-0.19	-0.15	15.47	0	0	0
53	SLU 12	-0.19	-0.14	15.47	0	0	0
53	SLU 13	-0.19	-0.14	15.35	0	0	0
53	SLU 14	-0.2	-0.15	15.6	0	0	0
53	SLU 15	-0.2	-0.14	15.6	0	0	0
53	SLU 16	-0.2	-0.16	15.48	0	0	0
53	SLU 17	-0.2	-0.15	15.48	0	0	0
53	SLU 18	-0.2	-0.15	16.01	0	0	0
53	SLU 19	-0.2	-0.14	16.01	0	0	0
53	SLU 20	-0.21	-0.15	16.14	0	0	0
53	SLU 21	-0.21	-0.14	16.14	0	0	0
53	SLU 22	-0.15	-0.13	15.03	0	0	0
53	SLU 23	-0.15	-0.11	15.03	0	0	0
53	SLU 24	-0.16	-0.13	15.27	0	0	0
53	SLU 25	-0.16	-0.12	15.27	0	0	0
53	SLU 26	-0.16	-0.12	15.16	0	0	0
53	SLU 27	-0.17	-0.13	15.4	0	0	0
53	SLU 28	-0.17	-0.12	15.4	0	0	0
53	SLU 29	-0.17	-0.14	15.29	0	0	0
53	SLU 30	-0.17	-0.12	15.29	0	0	0
53	SLU 31	-0.19	-0.11	16.88	0	0	0
53	SLU 32	-0.19	-0.12	17.13	0	0	0
53	SLU 33	-0.19	-0.11	17.13	0	0	0
53	SLU 34	-0.19	-0.11	17.01	0	0	0
53	SLU 35	-0.2	-0.12	17.26	0	0	0
53	SLU 36	-0.2	-0.11	17.26	0	0	0
53	SLU 37	-0.2	-0.13	17.14	0	0	0
53	SLU 38	-0.2	-0.12	17.14	0	0	0
53	SLU 39	-0.2	-0.12	17.67	0	0	0
53	SLU 40	-0.2	-0.11	17.67	0	0	0
53	SLU 41	-0.21	-0.12	17.81	0	0	0
53	SLU 42	-0.21	-0.11	17.81	0	0	0
53	SLU 43	-0.19	-0.22	16.8	0	0	0
53	SLU 44	-0.19	-0.21	16.8	0	0	0
53	SLU 45	-0.2	-0.22	17.05	0	0	0
53	SLU 46	-0.2	-0.21	17.05	0	0	0
53	SLU 47	-0.2	-0.21	16.93	0	0	0
53	SLU 48	-0.2	-0.22	17.18	0	0	0
53	SLU 49	-0.2	-0.21	17.18	0	0	0
53	SLU 50	-0.21	-0.23	17.07	0	0	0
53	SLU 51	-0.21	-0.22	17.07	0	0	0
53	SLU 52	-0.22	-0.2	18.66	0	0	0
53	SLU 53	-0.23	-0.21	18.91	0	0	0
53	SLU 54	-0.23	-0.2	18.91	0	0	0
53	SLU 55	-0.23	-0.2	18.79	0	0	0
53	SLU 56	-0.24	-0.21	19.04	0	0	0
53	SLU 57	-0.24	-0.2	19.04	0	0	0
53	SLU 58	-0.24	-0.22	18.92	0	0	0
53	SLU 59	-0.24	-0.21	18.92	0	0	0
53	SLU 60	-0.24	-0.21	19.45	0	0	0
53	SLU 61	-0.24	-0.2	19.45	0	0	0
53	SLU 62	-0.25	-0.21	19.58	0	0	0
53	SLU 63	-0.25	-0.2	19.58	0	0	0
53	SLU 64	-0.2	-0.19	18.47	0	0	0
53	SLU 65	-0.19	-0.17	18.47	0	0	0
53	SLU 66	-0.2	-0.19	18.71	0	0	0
53	SLU 67	-0.2	-0.18	18.71	0	0	0
53	SLU 68	-0.2	-0.18	18.6	0	0	0
53	SLU 69	-0.21	-0.19	18.84	0	0	0
53	SLU 70	-0.21	-0.18	18.84	0	0	0
53	SLU 71	-0.21	-0.2	18.73	0	0	0
53	SLU 72	-0.21	-0.18	18.73	0	0	0
53	SLU 73	-0.23	-0.17	20.32	0	0	0
53	SLU 74	-0.24	-0.18	20.57	0	0	0
53	SLU 75	-0.24	-0.17	20.57	0	0	0
53	SLU 76	-0.24	-0.17	20.45	0	0	0
53	SLU 77	-0.24	-0.18	20.7	0	0	0
53	SLU 78	-0.24	-0.17	20.7	0	0	0
53	SLU 79	-0.25	-0.19	20.58	0	0	0
53	SLU 80	-0.25	-0.18	20.58	0	0	0
53	SLU 81	-0.25	-0.18	21.11	0	0	0
53	SLU 82	-0.24	-0.17	21.11	0	0	0
53	SLU 83	-0.25	-0.18	21.25	0	0	0
53	SLU 84	-0.25	-0.17	21.25	0	0	0
53	SLE RA 1	-0.15	-0.16	13.84	0	0	0
53	SLE RA 2	-0.15	-0.14	13.84	0	0	0
53	SLE RA 3	-0.15	-0.15	14	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
53	SLE RA 4	-0.15	-0.15	14	0	0	0
53	SLE RA 5	-0.15	-0.14	13.93	0	0	0
53	SLE RA 6	-0.16	-0.15	14.09	0	0	0
53	SLE RA 7	-0.16	-0.15	14.09	0	0	0
53	SLE RA 8	-0.16	-0.16	14.01	0	0	0
53	SLE RA 9	-0.16	-0.15	14.01	0	0	0
53	SLE RA 10	-0.17	-0.14	15.08	0	0	0
53	SLE RA 11	-0.18	-0.15	15.24	0	0	0
53	SLE RA 12	-0.18	-0.14	15.24	0	0	0
53	SLE RA 13	-0.18	-0.14	15.16	0	0	0
53	SLE RA 14	-0.18	-0.15	15.33	0	0	0
53	SLE RA 15	-0.18	-0.14	15.33	0	0	0
53	SLE RA 16	-0.18	-0.15	15.25	0	0	0
53	SLE RA 17	-0.18	-0.14	15.25	0	0	0
53	SLE RA 18	-0.18	-0.15	15.61	0	0	0
53	SLE RA 19	-0.18	-0.14	15.6	0	0	0
53	SLE RA 20	-0.19	-0.15	15.69	0	0	0
53	SLE RA 21	-0.19	-0.14	15.69	0	0	0
53	SLE FR 1	-0.15	-0.16	13.84	0	0	0
53	SLE FR 2	-0.15	-0.15	13.84	0	0	0
53	SLE FR 3	-0.15	-0.16	13.87	0	0	0
53	SLE FR 4	-0.16	-0.15	14.37	0	0	0
53	SLE FR 5	-0.16	-0.15	14.4	0	0	0
53	SLE FR 6	-0.17	-0.15	14.72	0	0	0
53	SLE QP 1	-0.15	-0.16	13.84	0	0	0
53	SLE QP 2	-0.16	-0.15	14.37	0	0	0
53	SLD 1	0.89	-0.01	13.97	0	0	0
53	SLD 2	0.89	0.02	13.97	0	0	0
53	SLD 3	0.84	-0.39	14.06	0	0	0
53	SLD 4	0.84	-0.36	14.05	0	0	0
53	SLD 5	0.23	0.47	14.13	0	0	0
53	SLD 6	0.24	0.49	14.12	0	0	0
53	SLD 7	0.06	-0.82	14.4	0	0	0
53	SLD 8	0.06	-0.8	14.4	0	0	0
53	SLD 9	-0.38	0.49	14.34	0	0	0
53	SLD 10	-0.38	0.51	14.33	0	0	0
53	SLD 11	-0.56	-0.8	14.62	0	0	0
53	SLD 12	-0.55	-0.78	14.61	0	0	0
53	SLD 13	-1.16	0.06	14.69	0	0	0
53	SLD 14	-1.16	0.09	14.68	0	0	0
53	SLD 15	-1.21	-0.33	14.77	0	0	0
53	SLD 16	-1.21	-0.3	14.76	0	0	0
53	SLV 1	2.29	0.18	13.45	0	0	0
53	SLV 2	2.3	0.25	13.43	0	0	0
53	SLV 3	2.17	-0.7	13.64	0	0	0
53	SLV 4	2.18	-0.63	13.62	0	0	0
53	SLV 5	0.76	1.27	13.8	0	0	0
53	SLV 6	0.77	1.32	13.79	0	0	0
53	SLV 7	0.35	-1.67	14.45	0	0	0
53	SLV 8	0.36	-1.62	14.43	0	0	0
53	SLV 9	-0.68	1.32	14.31	0	0	0
53	SLV 10	-0.67	1.36	14.29	0	0	0
53	SLV 11	-1.08	-1.62	14.95	0	0	0
53	SLV 12	-1.08	-1.58	14.93	0	0	0
53	SLV 13	-2.5	0.33	15.12	0	0	0
53	SLV 14	-2.49	0.4	15.1	0	0	0
53	SLV 15	-2.62	-0.56	15.31	0	0	0
53	SLV 16	-2.61	-0.49	15.29	0	0	0
54	SLU 1	-0.08	-0.09	7.24	0	0	0
54	SLU 2	-0.08	-0.08	7.24	0	0	0
54	SLU 3	-0.08	-0.09	7.37	0	0	0
54	SLU 4	-0.08	-0.08	7.37	0	0	0
54	SLU 5	-0.08	-0.08	7.31	0	0	0
54	SLU 6	-0.09	-0.09	7.44	0	0	0
54	SLU 7	-0.09	-0.08	7.44	0	0	0
54	SLU 8	-0.09	-0.09	7.38	0	0	0
54	SLU 9	-0.09	-0.08	7.38	0	0	0
54	SLU 10	-0.1	-0.07	8.24	0	0	0
54	SLU 11	-0.1	-0.08	8.37	0	0	0
54	SLU 12	-0.1	-0.07	8.37	0	0	0
54	SLU 13	-0.1	-0.07	8.31	0	0	0
54	SLU 14	-0.11	-0.08	8.44	0	0	0
54	SLU 15	-0.11	-0.08	8.44	0	0	0
54	SLU 16	-0.11	-0.08	8.38	0	0	0
54	SLU 17	-0.11	-0.08	8.38	0	0	0
54	SLU 18	-0.11	-0.08	8.67	0	0	0
54	SLU 19	-0.11	-0.07	8.67	0	0	0
54	SLU 20	-0.11	-0.08	8.74	0	0	0
54	SLU 21	-0.11	-0.08	8.74	0	0	0
54	SLU 22	-0.08	-0.07	8.14	0	0	0
54	SLU 23	-0.08	-0.06	8.14	0	0	0
54	SLU 24	-0.09	-0.07	8.28	0	0	0
54	SLU 25	-0.09	-0.06	8.28	0	0	0
54	SLU 26	-0.09	-0.06	8.21	0	0	0
54	SLU 27	-0.09	-0.07	8.35	0	0	0
54	SLU 28	-0.09	-0.06	8.35	0	0	0
54	SLU 29	-0.09	-0.07	8.28	0	0	0
54	SLU 30	-0.09	-0.07	8.28	0	0	0
54	SLU 31	-0.1	-0.06	9.15	0	0	0
54	SLU 32	-0.11	-0.06	9.28	0	0	0
54	SLU 33	-0.11	-0.06	9.28	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
54	SLU 34	-0.11	-0.06	9.21	0	0	0
54	SLU 35	-0.11	-0.06	9.35	0	0	0
54	SLU 36	-0.11	-0.06	9.35	0	0	0
54	SLU 37	-0.11	-0.07	9.28	0	0	0
54	SLU 38	-0.11	-0.06	9.28	0	0	0
54	SLU 39	-0.11	-0.06	9.57	0	0	0
54	SLU 40	-0.11	-0.06	9.57	0	0	0
54	SLU 41	-0.12	-0.06	9.64	0	0	0
54	SLU 42	-0.11	-0.06	9.64	0	0	0
54	SLU 43	-0.1	-0.12	9.1	0	0	0
54	SLU 44	-0.1	-0.11	9.1	0	0	0
54	SLU 45	-0.11	-0.12	9.23	0	0	0
54	SLU 46	-0.11	-0.11	9.23	0	0	0
54	SLU 47	-0.11	-0.11	9.17	0	0	0
54	SLU 48	-0.11	-0.12	9.3	0	0	0
54	SLU 49	-0.11	-0.11	9.3	0	0	0
54	SLU 50	-0.11	-0.12	9.24	0	0	0
54	SLU 51	-0.11	-0.11	9.24	0	0	0
54	SLU 52	-0.12	-0.1	10.1	0	0	0
54	SLU 53	-0.13	-0.11	10.24	0	0	0
54	SLU 54	-0.13	-0.11	10.24	0	0	0
54	SLU 55	-0.13	-0.11	10.17	0	0	0
54	SLU 56	-0.13	-0.11	10.3	0	0	0
54	SLU 57	-0.13	-0.11	10.3	0	0	0
54	SLU 58	-0.13	-0.12	10.24	0	0	0
54	SLU 59	-0.13	-0.11	10.24	0	0	0
54	SLU 60	-0.13	-0.11	10.53	0	0	0
54	SLU 61	-0.13	-0.11	10.53	0	0	0
54	SLU 62	-0.14	-0.11	10.6	0	0	0
54	SLU 63	-0.14	-0.11	10.6	0	0	0
54	SLU 64	-0.11	-0.1	10.01	0	0	0
54	SLU 65	-0.11	-0.09	10.01	0	0	0
54	SLU 66	-0.11	-0.1	10.14	0	0	0
54	SLU 67	-0.11	-0.09	10.14	0	0	0
54	SLU 68	-0.11	-0.09	10.08	0	0	0
54	SLU 69	-0.11	-0.1	10.21	0	0	0
54	SLU 70	-0.11	-0.1	10.21	0	0	0
54	SLU 71	-0.12	-0.1	10.14	0	0	0
54	SLU 72	-0.12	-0.1	10.14	0	0	0
54	SLU 73	-0.13	-0.09	11.01	0	0	0
54	SLU 74	-0.13	-0.1	11.14	0	0	0
54	SLU 75	-0.13	-0.09	11.14	0	0	0
54	SLU 76	-0.13	-0.09	11.08	0	0	0
54	SLU 77	-0.13	-0.1	11.21	0	0	0
54	SLU 78	-0.13	-0.09	11.21	0	0	0
54	SLU 79	-0.14	-0.1	11.14	0	0	0
54	SLU 80	-0.13	-0.09	11.14	0	0	0
54	SLU 81	-0.13	-0.1	11.44	0	0	0
54	SLU 82	-0.13	-0.09	11.44	0	0	0
54	SLU 83	-0.14	-0.1	11.5	0	0	0
54	SLU 84	-0.14	-0.09	11.51	0	0	0
54	SLE RA 1	-0.08	-0.08	7.5	0	0	0
54	SLE RA 2	-0.08	-0.08	7.5	0	0	0
54	SLE RA 3	-0.08	-0.08	7.59	0	0	0
54	SLE RA 4	-0.08	-0.08	7.59	0	0	0
54	SLE RA 5	-0.08	-0.08	7.54	0	0	0
54	SLE RA 6	-0.09	-0.08	7.63	0	0	0
54	SLE RA 7	-0.09	-0.08	7.63	0	0	0
54	SLE RA 8	-0.09	-0.08	7.59	0	0	0
54	SLE RA 9	-0.09	-0.08	7.59	0	0	0
54	SLE RA 10	-0.09	-0.07	8.17	0	0	0
54	SLE RA 11	-0.1	-0.08	8.25	0	0	0
54	SLE RA 12	-0.1	-0.07	8.25	0	0	0
54	SLE RA 13	-0.1	-0.07	8.21	0	0	0
54	SLE RA 14	-0.1	-0.08	8.3	0	0	0
54	SLE RA 15	-0.1	-0.07	8.3	0	0	0
54	SLE RA 16	-0.1	-0.08	8.26	0	0	0
54	SLE RA 17	-0.1	-0.08	8.26	0	0	0
54	SLE RA 18	-0.1	-0.08	8.45	0	0	0
54	SLE RA 19	-0.1	-0.07	8.45	0	0	0
54	SLE RA 20	-0.1	-0.08	8.5	0	0	0
54	SLE RA 21	-0.1	-0.07	8.5	0	0	0
54	SLE FR 1	-0.08	-0.08	7.5	0	0	0
54	SLE FR 2	-0.08	-0.08	7.5	0	0	0
54	SLE FR 3	-0.08	-0.08	7.52	0	0	0
54	SLE FR 4	-0.09	-0.08	7.78	0	0	0
54	SLE FR 5	-0.09	-0.08	7.8	0	0	0
54	SLE FR 6	-0.09	-0.08	7.97	0	0	0
54	SLE QP 1	-0.08	-0.08	7.5	0	0	0
54	SLE QP 2	-0.09	-0.08	7.78	0	0	0
54	SLD 1	0.49	0	7.51	0	0	0
54	SLD 2	0.49	0.02	7.51	0	0	0
54	SLD 3	0.46	-0.21	7.56	0	0	0
54	SLD 4	0.46	-0.19	7.55	0	0	0
54	SLD 5	0.13	0.26	7.64	0	0	0
54	SLD 6	0.13	0.27	7.63	0	0	0
54	SLD 7	0.03	-0.44	7.79	0	0	0
54	SLD 8	0.03	-0.43	7.78	0	0	0
54	SLD 9	-0.21	0.27	7.78	0	0	0
54	SLD 10	-0.21	0.28	7.78	0	0	0
54	SLD 11	-0.3	-0.43	7.94	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
54	SLD 12	-0.3	-0.42	7.93	0	0	0
54	SLD 13	-0.64	0.03	8.01	0	0	0
54	SLD 14	-0.63	0.05	8.01	0	0	0
54	SLD 15	-0.66	-0.18	8.06	0	0	0
54	SLD 16	-0.66	-0.16	8.05	0	0	0
54	SLV 1	1.25	0.1	7.15	0	0	0
54	SLV 2	1.26	0.14	7.14	0	0	0
54	SLV 3	1.19	-0.38	7.26	0	0	0
54	SLV 4	1.19	-0.34	7.25	0	0	0
54	SLV 5	0.42	0.69	7.44	0	0	0
54	SLV 6	0.42	0.72	7.43	0	0	0
54	SLV 7	0.19	-0.91	7.79	0	0	0
54	SLV 8	0.2	-0.88	7.78	0	0	0
54	SLV 9	-0.37	0.72	7.79	0	0	0
54	SLV 10	-0.37	0.75	7.78	0	0	0
54	SLV 11	-0.59	-0.88	8.14	0	0	0
54	SLV 12	-0.59	-0.86	8.13	0	0	0
54	SLV 13	-1.37	0.18	8.32	0	0	0
54	SLV 14	-1.36	0.22	8.31	0	0	0
54	SLV 15	-1.44	-0.3	8.43	0	0	0
54	SLV 16	-1.43	-0.26	8.41	0	0	0
55	SLU 1	-0.06	-0.08	5.7	0	0	0
55	SLU 2	-0.06	-0.07	5.69	0	0	0
55	SLU 3	-0.07	-0.08	5.81	0	0	0
55	SLU 4	-0.06	-0.07	5.81	0	0	0
55	SLU 5	-0.07	-0.07	5.76	0	0	0
55	SLU 6	-0.07	-0.08	5.87	0	0	0
55	SLU 7	-0.07	-0.07	5.87	0	0	0
55	SLU 8	-0.07	-0.08	5.83	0	0	0
55	SLU 9	-0.07	-0.08	5.82	0	0	0
55	SLU 10	-0.08	-0.07	6.5	0	0	0
55	SLU 11	-0.08	-0.07	6.61	0	0	0
55	SLU 12	-0.08	-0.07	6.61	0	0	0
55	SLU 13	-0.08	-0.07	6.56	0	0	0
55	SLU 14	-0.08	-0.07	6.68	0	0	0
55	SLU 15	-0.08	-0.07	6.68	0	0	0
55	SLU 16	-0.08	-0.08	6.63	0	0	0
55	SLU 17	-0.08	-0.07	6.63	0	0	0
55	SLU 18	-0.08	-0.07	6.85	0	0	0
55	SLU 19	-0.08	-0.07	6.85	0	0	0
55	SLU 20	-0.09	-0.07	6.91	0	0	0
55	SLU 21	-0.09	-0.07	6.91	0	0	0
55	SLU 22	-0.06	-0.07	6.39	0	0	0
55	SLU 23	-0.06	-0.06	6.39	0	0	0
55	SLU 24	-0.07	-0.06	6.5	0	0	0
55	SLU 25	-0.07	-0.06	6.5	0	0	0
55	SLU 26	-0.07	-0.06	6.45	0	0	0
55	SLU 27	-0.07	-0.06	6.57	0	0	0
55	SLU 28	-0.07	-0.06	6.57	0	0	0
55	SLU 29	-0.07	-0.07	6.52	0	0	0
55	SLU 30	-0.07	-0.06	6.52	0	0	0
55	SLU 31	-0.08	-0.05	7.2	0	0	0
55	SLU 32	-0.08	-0.06	7.31	0	0	0
55	SLU 33	-0.08	-0.06	7.31	0	0	0
55	SLU 34	-0.08	-0.05	7.26	0	0	0
55	SLU 35	-0.08	-0.06	7.37	0	0	0
55	SLU 36	-0.08	-0.06	7.37	0	0	0
55	SLU 37	-0.09	-0.06	7.33	0	0	0
55	SLU 38	-0.09	-0.06	7.33	0	0	0
55	SLU 39	-0.09	-0.06	7.55	0	0	0
55	SLU 40	-0.08	-0.06	7.54	0	0	0
55	SLU 41	-0.09	-0.06	7.61	0	0	0
55	SLU 42	-0.09	-0.06	7.61	0	0	0
55	SLU 43	-0.08	-0.11	7.17	0	0	0
55	SLU 44	-0.08	-0.1	7.16	0	0	0
55	SLU 45	-0.08	-0.11	7.28	0	0	0
55	SLU 46	-0.08	-0.1	7.28	0	0	0
55	SLU 47	-0.08	-0.1	7.23	0	0	0
55	SLU 48	-0.09	-0.11	7.34	0	0	0
55	SLU 49	-0.09	-0.1	7.34	0	0	0
55	SLU 50	-0.09	-0.11	7.3	0	0	0
55	SLU 51	-0.09	-0.1	7.29	0	0	0
55	SLU 52	-0.09	-0.1	7.97	0	0	0
55	SLU 53	-0.1	-0.1	8.08	0	0	0
55	SLU 54	-0.1	-0.1	8.08	0	0	0
55	SLU 55	-0.1	-0.1	8.03	0	0	0
55	SLU 56	-0.1	-0.1	8.15	0	0	0
55	SLU 57	-0.1	-0.1	8.15	0	0	0
55	SLU 58	-0.1	-0.1	8.1	0	0	0
55	SLU 59	-0.1	-0.1	8.1	0	0	0
55	SLU 60	-0.1	-0.1	8.32	0	0	0
55	SLU 61	-0.1	-0.1	8.32	0	0	0
55	SLU 62	-0.1	-0.1	8.38	0	0	0
55	SLU 63	-0.1	-0.1	8.38	0	0	0
55	SLU 64	-0.08	-0.09	7.86	0	0	0
55	SLU 65	-0.08	-0.09	7.86	0	0	0
55	SLU 66	-0.09	-0.09	7.97	0	0	0
55	SLU 67	-0.08	-0.09	7.97	0	0	0
55	SLU 68	-0.09	-0.09	7.93	0	0	0
55	SLU 69	-0.09	-0.09	8.04	0	0	0
55	SLU 70	-0.09	-0.09	8.04	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
55	SLU 71	-0.09	-0.1	7.99	0	0	0
55	SLU 72	-0.09	-0.09	7.99	0	0	0
55	SLU 73	-0.1	-0.08	8.67	0	0	0
55	SLU 74	-0.1	-0.09	8.78	0	0	0
55	SLU 75	-0.1	-0.08	8.78	0	0	0
55	SLU 76	-0.1	-0.08	8.73	0	0	0
55	SLU 77	-0.1	-0.09	8.84	0	0	0
55	SLU 78	-0.1	-0.08	8.84	0	0	0
55	SLU 79	-0.1	-0.09	8.8	0	0	0
55	SLU 80	-0.1	-0.09	8.8	0	0	0
55	SLU 81	-0.1	-0.09	9.02	0	0	0
55	SLU 82	-0.1	-0.08	9.01	0	0	0
55	SLU 83	-0.11	-0.09	9.08	0	0	0
55	SLU 84	-0.11	-0.08	9.08	0	0	0
55	SLE RA 1	-0.06	-0.08	5.9	0	0	0
55	SLE RA 2	-0.06	-0.07	5.89	0	0	0
55	SLE RA 3	-0.06	-0.07	5.97	0	0	0
55	SLE RA 4	-0.06	-0.07	5.97	0	0	0
55	SLE RA 5	-0.07	-0.07	5.94	0	0	0
55	SLE RA 6	-0.07	-0.07	6.01	0	0	0
55	SLE RA 7	-0.07	-0.07	6.01	0	0	0
55	SLE RA 8	-0.07	-0.08	5.98	0	0	0
55	SLE RA 9	-0.07	-0.07	5.98	0	0	0
55	SLE RA 10	-0.07	-0.07	6.43	0	0	0
55	SLE RA 11	-0.07	-0.07	6.51	0	0	0
55	SLE RA 12	-0.07	-0.07	6.51	0	0	0
55	SLE RA 13	-0.07	-0.07	6.47	0	0	0
55	SLE RA 14	-0.08	-0.07	6.55	0	0	0
55	SLE RA 15	-0.08	-0.07	6.55	0	0	0
55	SLE RA 16	-0.08	-0.07	6.52	0	0	0
55	SLE RA 17	-0.08	-0.07	6.52	0	0	0
55	SLE RA 18	-0.08	-0.07	6.66	0	0	0
55	SLE RA 19	-0.08	-0.07	6.66	0	0	0
55	SLE RA 20	-0.08	-0.07	6.71	0	0	0
55	SLE RA 21	-0.08	-0.07	6.71	0	0	0
55	SLE FR 1	-0.06	-0.08	5.9	0	0	0
55	SLE FR 2	-0.06	-0.07	5.9	0	0	0
55	SLE FR 3	-0.06	-0.08	5.91	0	0	0
55	SLE FR 4	-0.07	-0.07	6.13	0	0	0
55	SLE FR 5	-0.07	-0.07	6.14	0	0	0
55	SLE FR 6	-0.07	-0.07	6.28	0	0	0
55	SLE QP 1	-0.06	-0.08	5.9	0	0	0
55	SLE QP 2	-0.07	-0.07	6.13	0	0	0
55	SLD 1	0.37	0.02	6.15	0	0	0
55	SLD 2	0.37	0.03	6.15	0	0	0
55	SLD 3	0.34	-0.14	6.24	0	0	0
55	SLD 4	0.34	-0.14	6.24	0	0	0
55	SLD 5	0.1	0.2	6	0	0	0
55	SLD 6	0.1	0.2	6	0	0	0
55	SLD 7	0.02	-0.34	6.29	0	0	0
55	SLD 8	0.02	-0.34	6.29	0	0	0
55	SLD 9	-0.16	0.19	5.96	0	0	0
55	SLD 10	-0.16	0.2	5.96	0	0	0
55	SLD 11	-0.23	-0.35	6.25	0	0	0
55	SLD 12	-0.23	-0.35	6.25	0	0	0
55	SLD 13	-0.48	-0.01	6.02	0	0	0
55	SLD 14	-0.48	-0.01	6.01	0	0	0
55	SLD 15	-0.5	-0.17	6.11	0	0	0
55	SLD 16	-0.5	-0.17	6.1	0	0	0
55	SLV 1	0.95	0.15	6.18	0	0	0
55	SLV 2	0.95	0.15	6.18	0	0	0
55	SLV 3	0.9	-0.23	6.39	0	0	0
55	SLV 4	0.9	-0.22	6.38	0	0	0
55	SLV 5	0.32	0.56	5.84	0	0	0
55	SLV 6	0.32	0.56	5.84	0	0	0
55	SLV 7	0.14	-0.69	6.51	0	0	0
55	SLV 8	0.14	-0.68	6.51	0	0	0
55	SLV 9	-0.28	0.53	5.75	0	0	0
55	SLV 10	-0.28	0.54	5.74	0	0	0
55	SLV 11	-0.45	-0.71	6.42	0	0	0
55	SLV 12	-0.45	-0.7	6.41	0	0	0
55	SLV 13	-1.03	0.07	5.87	0	0	0
55	SLV 14	-1.03	0.08	5.87	0	0	0
55	SLV 15	-1.08	-0.3	6.07	0	0	0
55	SLV 16	-1.08	-0.29	6.07	0	0	0
56	SLU 1	-0.11	-0.14	10	0	0	0
56	SLU 2	-0.11	-0.12	10	0	0	0
56	SLU 3	-0.12	-0.13	10.19	0	0	0
56	SLU 4	-0.11	-0.13	10.19	0	0	0
56	SLU 5	-0.12	-0.12	10.11	0	0	0
56	SLU 6	-0.12	-0.13	10.3	0	0	0
56	SLU 7	-0.12	-0.13	10.3	0	0	0
56	SLU 8	-0.12	-0.14	10.22	0	0	0
56	SLU 9	-0.12	-0.13	10.22	0	0	0
56	SLU 10	-0.14	-0.12	11.41	0	0	0
56	SLU 11	-0.14	-0.13	11.61	0	0	0
56	SLU 12	-0.14	-0.12	11.6	0	0	0
56	SLU 13	-0.14	-0.12	11.52	0	0	0
56	SLU 14	-0.15	-0.13	11.72	0	0	0
56	SLU 15	-0.15	-0.12	11.71	0	0	0
56	SLU 16	-0.15	-0.13	11.63	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
56	SLU 17	-0.15	-0.12	11.63	0	0	0
56	SLU 18	-0.15	-0.13	12.02	0	0	0
56	SLU 19	-0.15	-0.12	12.02	0	0	0
56	SLU 20	-0.15	-0.13	12.13	0	0	0
56	SLU 21	-0.15	-0.12	12.13	0	0	0
56	SLU 22	-0.11	-0.11	11.23	0	0	0
56	SLU 23	-0.11	-0.1	11.23	0	0	0
56	SLU 24	-0.12	-0.11	11.43	0	0	0
56	SLU 25	-0.12	-0.1	11.42	0	0	0
56	SLU 26	-0.12	-0.1	11.34	0	0	0
56	SLU 27	-0.12	-0.11	11.54	0	0	0
56	SLU 28	-0.12	-0.1	11.53	0	0	0
56	SLU 29	-0.13	-0.12	11.45	0	0	0
56	SLU 30	-0.12	-0.11	11.45	0	0	0
56	SLU 31	-0.14	-0.09	12.64	0	0	0
56	SLU 32	-0.14	-0.1	12.84	0	0	0
56	SLU 33	-0.14	-0.1	12.83	0	0	0
56	SLU 34	-0.14	-0.09	12.75	0	0	0
56	SLU 35	-0.15	-0.1	12.95	0	0	0
56	SLU 36	-0.15	-0.1	12.94	0	0	0
56	SLU 37	-0.15	-0.11	12.87	0	0	0
56	SLU 38	-0.15	-0.1	12.86	0	0	0
56	SLU 39	-0.15	-0.1	13.25	0	0	0
56	SLU 40	-0.15	-0.09	13.25	0	0	0
56	SLU 41	-0.16	-0.1	13.36	0	0	0
56	SLU 42	-0.16	-0.1	13.36	0	0	0
56	SLU 43	-0.14	-0.18	12.58	0	0	0
56	SLU 44	-0.14	-0.17	12.58	0	0	0
56	SLU 45	-0.15	-0.18	12.77	0	0	0
56	SLU 46	-0.15	-0.17	12.77	0	0	0
56	SLU 47	-0.15	-0.17	12.69	0	0	0
56	SLU 48	-0.15	-0.18	12.88	0	0	0
56	SLU 49	-0.15	-0.18	12.88	0	0	0
56	SLU 50	-0.16	-0.19	12.8	0	0	0
56	SLU 51	-0.15	-0.18	12.8	0	0	0
56	SLU 52	-0.17	-0.16	13.99	0	0	0
56	SLU 53	-0.17	-0.18	14.19	0	0	0
56	SLU 54	-0.17	-0.17	14.18	0	0	0
56	SLU 55	-0.17	-0.17	14.1	0	0	0
56	SLU 56	-0.18	-0.18	14.3	0	0	0
56	SLU 57	-0.18	-0.17	14.29	0	0	0
56	SLU 58	-0.18	-0.18	14.21	0	0	0
56	SLU 59	-0.18	-0.17	14.21	0	0	0
56	SLU 60	-0.18	-0.17	14.6	0	0	0
56	SLU 61	-0.18	-0.17	14.6	0	0	0
56	SLU 62	-0.19	-0.18	14.71	0	0	0
56	SLU 63	-0.18	-0.17	14.71	0	0	0
56	SLU 64	-0.15	-0.16	13.81	0	0	0
56	SLU 65	-0.14	-0.15	13.81	0	0	0
56	SLU 66	-0.15	-0.16	14	0	0	0
56	SLU 67	-0.15	-0.15	14	0	0	0
56	SLU 68	-0.15	-0.15	13.92	0	0	0
56	SLU 69	-0.16	-0.16	14.11	0	0	0
56	SLU 70	-0.16	-0.15	14.11	0	0	0
56	SLU 71	-0.16	-0.16	14.03	0	0	0
56	SLU 72	-0.16	-0.16	14.03	0	0	0
56	SLU 73	-0.17	-0.14	15.22	0	0	0
56	SLU 74	-0.18	-0.15	15.42	0	0	0
56	SLU 75	-0.18	-0.14	15.41	0	0	0
56	SLU 76	-0.18	-0.14	15.33	0	0	0
56	SLU 77	-0.18	-0.15	15.53	0	0	0
56	SLU 78	-0.18	-0.15	15.52	0	0	0
56	SLU 79	-0.18	-0.16	15.44	0	0	0
56	SLU 80	-0.18	-0.15	15.44	0	0	0
56	SLU 81	-0.18	-0.15	15.83	0	0	0
56	SLU 82	-0.18	-0.14	15.83	0	0	0
56	SLU 83	-0.19	-0.15	15.94	0	0	0
56	SLU 84	-0.19	-0.14	15.94	0	0	0
56	SLE RA 1	-0.11	-0.13	10.35	0	0	0
56	SLE RA 2	-0.11	-0.12	10.35	0	0	0
56	SLE RA 3	-0.11	-0.13	10.48	0	0	0
56	SLE RA 4	-0.11	-0.12	10.48	0	0	0
56	SLE RA 5	-0.11	-0.12	10.42	0	0	0
56	SLE RA 6	-0.12	-0.13	10.56	0	0	0
56	SLE RA 7	-0.12	-0.12	10.55	0	0	0
56	SLE RA 8	-0.12	-0.13	10.5	0	0	0
56	SLE RA 9	-0.12	-0.13	10.5	0	0	0
56	SLE RA 10	-0.13	-0.12	11.29	0	0	0
56	SLE RA 11	-0.13	-0.12	11.42	0	0	0
56	SLE RA 12	-0.13	-0.12	11.42	0	0	0
56	SLE RA 13	-0.13	-0.12	11.37	0	0	0
56	SLE RA 14	-0.14	-0.12	11.5	0	0	0
56	SLE RA 15	-0.14	-0.12	11.5	0	0	0
56	SLE RA 16	-0.14	-0.13	11.44	0	0	0
56	SLE RA 17	-0.14	-0.12	11.44	0	0	0
56	SLE RA 18	-0.14	-0.12	11.7	0	0	0
56	SLE RA 19	-0.14	-0.12	11.7	0	0	0
56	SLE RA 20	-0.14	-0.12	11.77	0	0	0
56	SLE RA 21	-0.14	-0.12	11.77	0	0	0
56	SLE FR 1	-0.11	-0.13	10.35	0	0	0
56	SLE FR 2	-0.11	-0.13	10.35	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
56	SLE FR 3	-0.11	-0.13	10.38	0	0	0
56	SLE FR 4	-0.12	-0.13	10.76	0	0	0
56	SLE FR 5	-0.12	-0.13	10.79	0	0	0
56	SLE FR 6	-0.12	-0.13	11.03	0	0	0
56	SLE QP 1	-0.11	-0.13	10.35	0	0	0
56	SLE QP 2	-0.12	-0.13	10.76	0	0	0
56	SLD 1	0.65	0.04	10.75	0	0	0
56	SLD 2	0.65	0.05	10.75	0	0	0
56	SLD 3	0.61	-0.25	10.89	0	0	0
56	SLD 4	0.61	-0.24	10.89	0	0	0
56	SLD 5	0.17	0.36	10.54	0	0	0
56	SLD 6	0.17	0.36	10.54	0	0	0
56	SLD 7	0.04	-0.6	11.01	0	0	0
56	SLD 8	0.04	-0.6	11.01	0	0	0
56	SLD 9	-0.28	0.34	10.51	0	0	0
56	SLD 10	-0.28	0.35	10.5	0	0	0
56	SLD 11	-0.41	-0.62	10.98	0	0	0
56	SLD 12	-0.41	-0.61	10.97	0	0	0
56	SLD 13	-0.85	-0.01	10.63	0	0	0
56	SLD 14	-0.85	-0.01	10.62	0	0	0
56	SLD 15	-0.89	-0.3	10.77	0	0	0
56	SLD 16	-0.89	-0.29	10.76	0	0	0
56	SLV 1	1.68	0.25	10.74	0	0	0
56	SLV 2	1.68	0.27	10.73	0	0	0
56	SLV 3	1.59	-0.4	11.07	0	0	0
56	SLV 4	1.59	-0.38	11.05	0	0	0
56	SLV 5	0.56	0.98	10.27	0	0	0
56	SLV 6	0.56	0.99	10.26	0	0	0
56	SLV 7	0.25	-1.21	11.34	0	0	0
56	SLV 8	0.25	-1.19	11.33	0	0	0
56	SLV 9	-0.49	0.94	10.18	0	0	0
56	SLV 10	-0.49	0.95	10.18	0	0	0
56	SLV 11	-0.8	-1.24	11.25	0	0	0
56	SLV 12	-0.8	-1.23	11.25	0	0	0
56	SLV 13	-1.82	0.13	10.46	0	0	0
56	SLV 14	-1.82	0.15	10.45	0	0	0
56	SLV 15	-1.92	-0.53	10.78	0	0	0
56	SLV 16	-1.92	-0.51	10.77	0	0	0
57	SLU 1	-0.1	-0.12	9.23	0	0	0
57	SLU 2	-0.1	-0.11	9.23	0	0	0
57	SLU 3	-0.11	-0.12	9.41	0	0	0
57	SLU 4	-0.11	-0.11	9.41	0	0	0
57	SLU 5	-0.11	-0.11	9.33	0	0	0
57	SLU 6	-0.11	-0.12	9.51	0	0	0
57	SLU 7	-0.11	-0.11	9.51	0	0	0
57	SLU 8	-0.11	-0.13	9.43	0	0	0
57	SLU 9	-0.11	-0.12	9.43	0	0	0
57	SLU 10	-0.13	-0.1	10.53	0	0	0
57	SLU 11	-0.13	-0.11	10.71	0	0	0
57	SLU 12	-0.13	-0.11	10.71	0	0	0
57	SLU 13	-0.13	-0.11	10.63	0	0	0
57	SLU 14	-0.14	-0.12	10.81	0	0	0
57	SLU 15	-0.14	-0.11	10.81	0	0	0
57	SLU 16	-0.14	-0.12	10.73	0	0	0
57	SLU 17	-0.14	-0.11	10.73	0	0	0
57	SLU 18	-0.14	-0.11	11.09	0	0	0
57	SLU 19	-0.14	-0.11	11.09	0	0	0
57	SLU 20	-0.14	-0.12	11.19	0	0	0
57	SLU 21	-0.14	-0.11	11.19	0	0	0
57	SLU 22	-0.11	-0.1	10.37	0	0	0
57	SLU 23	-0.1	-0.09	10.37	0	0	0
57	SLU 24	-0.11	-0.1	10.55	0	0	0
57	SLU 25	-0.11	-0.09	10.55	0	0	0
57	SLU 26	-0.11	-0.09	10.47	0	0	0
57	SLU 27	-0.12	-0.1	10.65	0	0	0
57	SLU 28	-0.11	-0.09	10.65	0	0	0
57	SLU 29	-0.12	-0.1	10.57	0	0	0
57	SLU 30	-0.12	-0.1	10.57	0	0	0
57	SLU 31	-0.13	-0.08	11.67	0	0	0
57	SLU 32	-0.13	-0.09	11.85	0	0	0
57	SLU 33	-0.13	-0.09	11.85	0	0	0
57	SLU 34	-0.13	-0.08	11.77	0	0	0
57	SLU 35	-0.14	-0.09	11.95	0	0	0
57	SLU 36	-0.14	-0.09	11.95	0	0	0
57	SLU 37	-0.14	-0.1	11.88	0	0	0
57	SLU 38	-0.14	-0.09	11.87	0	0	0
57	SLU 39	-0.14	-0.09	12.23	0	0	0
57	SLU 40	-0.14	-0.09	12.23	0	0	0
57	SLU 41	-0.15	-0.09	12.33	0	0	0
57	SLU 42	-0.14	-0.09	12.33	0	0	0
57	SLU 43	-0.13	-0.17	11.61	0	0	0
57	SLU 44	-0.13	-0.16	11.61	0	0	0
57	SLU 45	-0.14	-0.17	11.79	0	0	0
57	SLU 46	-0.14	-0.16	11.79	0	0	0
57	SLU 47	-0.14	-0.16	11.71	0	0	0
57	SLU 48	-0.14	-0.17	11.89	0	0	0
57	SLU 49	-0.14	-0.16	11.89	0	0	0
57	SLU 50	-0.14	-0.17	11.81	0	0	0
57	SLU 51	-0.14	-0.16	11.81	0	0	0
57	SLU 52	-0.16	-0.15	12.91	0	0	0
57	SLU 53	-0.16	-0.16	13.09	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
57	SLU 54	-0.16	-0.15	13.09	0	0	0
57	SLU 55	-0.16	-0.15	13.01	0	0	0
57	SLU 56	-0.17	-0.16	13.19	0	0	0
57	SLU 57	-0.17	-0.15	13.19	0	0	0
57	SLU 58	-0.17	-0.16	13.11	0	0	0
57	SLU 59	-0.17	-0.16	13.11	0	0	0
57	SLU 60	-0.17	-0.16	13.47	0	0	0
57	SLU 61	-0.17	-0.15	13.47	0	0	0
57	SLU 62	-0.17	-0.16	13.57	0	0	0
57	SLU 63	-0.17	-0.15	13.57	0	0	0
57	SLU 64	-0.14	-0.15	12.75	0	0	0
57	SLU 65	-0.13	-0.13	12.75	0	0	0
57	SLU 66	-0.14	-0.14	12.93	0	0	0
57	SLU 67	-0.14	-0.14	12.93	0	0	0
57	SLU 68	-0.14	-0.13	12.85	0	0	0
57	SLU 69	-0.15	-0.14	13.03	0	0	0
57	SLU 70	-0.14	-0.14	13.03	0	0	0
57	SLU 71	-0.15	-0.15	12.95	0	0	0
57	SLU 72	-0.15	-0.14	12.95	0	0	0
57	SLU 73	-0.16	-0.13	14.05	0	0	0
57	SLU 74	-0.16	-0.14	14.23	0	0	0
57	SLU 75	-0.16	-0.13	14.23	0	0	0
57	SLU 76	-0.16	-0.13	14.15	0	0	0
57	SLU 77	-0.17	-0.14	14.33	0	0	0
57	SLU 78	-0.17	-0.13	14.33	0	0	0
57	SLU 79	-0.17	-0.14	14.25	0	0	0
57	SLU 80	-0.17	-0.13	14.25	0	0	0
57	SLU 81	-0.17	-0.14	14.61	0	0	0
57	SLU 82	-0.17	-0.13	14.61	0	0	0
57	SLU 83	-0.18	-0.14	14.71	0	0	0
57	SLU 84	-0.17	-0.13	14.71	0	0	0
57	SLE RA 1	-0.1	-0.12	9.56	0	0	0
57	SLE RA 2	-0.1	-0.11	9.56	0	0	0
57	SLE RA 3	-0.11	-0.12	9.68	0	0	0
57	SLE RA 4	-0.11	-0.11	9.68	0	0	0
57	SLE RA 5	-0.11	-0.11	9.62	0	0	0
57	SLE RA 6	-0.11	-0.12	9.74	0	0	0
57	SLE RA 7	-0.11	-0.11	9.74	0	0	0
57	SLE RA 8	-0.11	-0.12	9.69	0	0	0
57	SLE RA 9	-0.11	-0.11	9.69	0	0	0
57	SLE RA 10	-0.12	-0.1	10.42	0	0	0
57	SLE RA 11	-0.12	-0.11	10.54	0	0	0
57	SLE RA 12	-0.12	-0.11	10.54	0	0	0
57	SLE RA 13	-0.12	-0.11	10.49	0	0	0
57	SLE RA 14	-0.13	-0.11	10.61	0	0	0
57	SLE RA 15	-0.13	-0.11	10.61	0	0	0
57	SLE RA 16	-0.13	-0.11	10.56	0	0	0
57	SLE RA 17	-0.13	-0.11	10.56	0	0	0
57	SLE RA 18	-0.13	-0.11	10.8	0	0	0
57	SLE RA 19	-0.13	-0.11	10.8	0	0	0
57	SLE RA 20	-0.13	-0.11	10.87	0	0	0
57	SLE RA 21	-0.13	-0.11	10.86	0	0	0
57	SLE FR 1	-0.1	-0.12	9.56	0	0	0
57	SLE FR 2	-0.1	-0.12	9.56	0	0	0
57	SLE FR 3	-0.11	-0.12	9.59	0	0	0
57	SLE FR 4	-0.11	-0.11	9.93	0	0	0
57	SLE FR 5	-0.11	-0.12	9.96	0	0	0
57	SLE FR 6	-0.12	-0.11	10.18	0	0	0
57	SLE QP 1	-0.1	-0.12	9.56	0	0	0
57	SLE QP 2	-0.11	-0.12	9.93	0	0	0
57	SLD 1	0.6	0.04	9.82	0	0	0
57	SLD 2	0.6	0.05	9.82	0	0	0
57	SLD 3	0.57	-0.23	9.94	0	0	0
57	SLD 4	0.57	-0.22	9.94	0	0	0
57	SLD 5	0.16	0.33	9.72	0	0	0
57	SLD 6	0.16	0.34	9.71	0	0	0
57	SLD 7	0.04	-0.56	10.12	0	0	0
57	SLD 8	0.04	-0.55	10.11	0	0	0
57	SLD 9	-0.26	0.32	9.75	0	0	0
57	SLD 10	-0.26	0.32	9.74	0	0	0
57	SLD 11	-0.38	-0.57	10.15	0	0	0
57	SLD 12	-0.38	-0.56	10.14	0	0	0
57	SLD 13	-0.79	-0.01	9.92	0	0	0
57	SLD 14	-0.79	0	9.92	0	0	0
57	SLD 15	-0.83	-0.28	10.04	0	0	0
57	SLD 16	-0.83	-0.27	10.04	0	0	0
57	SLV 1	1.56	0.23	9.69	0	0	0
57	SLV 2	1.56	0.25	9.67	0	0	0
57	SLV 3	1.48	-0.38	9.96	0	0	0
57	SLV 4	1.48	-0.35	9.95	0	0	0
57	SLV 5	0.52	0.9	9.44	0	0	0
57	SLV 6	0.52	0.92	9.44	0	0	0
57	SLV 7	0.24	-1.12	10.36	0	0	0
57	SLV 8	0.23	-1.1	10.35	0	0	0
57	SLV 9	-0.46	0.87	9.51	0	0	0
57	SLV 10	-0.46	0.89	9.51	0	0	0
57	SLV 11	-0.74	-1.15	10.42	0	0	0
57	SLV 12	-0.74	-1.13	10.42	0	0	0
57	SLV 13	-1.7	0.12	9.91	0	0	0
57	SLV 14	-1.7	0.15	9.9	0	0	0
57	SLV 15	-1.78	-0.49	10.19	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
57	SLV 16	-1.78	-0.46	10.18	0	0	0
58	SLU 1	-0.1	-0.12	9.16	0	0	0
58	SLU 2	-0.1	-0.11	9.16	0	0	0
58	SLU 3	-0.11	-0.12	9.34	0	0	0
58	SLU 4	-0.11	-0.11	9.33	0	0	0
58	SLU 5	-0.11	-0.11	9.26	0	0	0
58	SLU 6	-0.11	-0.12	9.43	0	0	0
58	SLU 7	-0.11	-0.11	9.43	0	0	0
58	SLU 8	-0.11	-0.12	9.36	0	0	0
58	SLU 9	-0.11	-0.11	9.35	0	0	0
58	SLU 10	-0.13	-0.1	10.45	0	0	0
58	SLU 11	-0.13	-0.11	10.63	0	0	0
58	SLU 12	-0.13	-0.1	10.62	0	0	0
58	SLU 13	-0.13	-0.1	10.55	0	0	0
58	SLU 14	-0.14	-0.11	10.72	0	0	0
58	SLU 15	-0.14	-0.1	10.72	0	0	0
58	SLU 16	-0.14	-0.12	10.65	0	0	0
58	SLU 17	-0.14	-0.11	10.64	0	0	0
58	SLU 18	-0.14	-0.11	11.01	0	0	0
58	SLU 19	-0.14	-0.1	11	0	0	0
58	SLU 20	-0.14	-0.11	11.1	0	0	0
58	SLU 21	-0.14	-0.1	11.1	0	0	0
58	SLU 22	-0.11	-0.1	10.3	0	0	0
58	SLU 23	-0.1	-0.09	10.3	0	0	0
58	SLU 24	-0.11	-0.1	10.47	0	0	0
58	SLU 25	-0.11	-0.09	10.47	0	0	0
58	SLU 26	-0.11	-0.09	10.39	0	0	0
58	SLU 27	-0.12	-0.1	10.57	0	0	0
58	SLU 28	-0.11	-0.09	10.57	0	0	0
58	SLU 29	-0.12	-0.1	10.49	0	0	0
58	SLU 30	-0.12	-0.09	10.49	0	0	0
58	SLU 31	-0.13	-0.08	11.59	0	0	0
58	SLU 32	-0.13	-0.09	11.77	0	0	0
58	SLU 33	-0.13	-0.08	11.76	0	0	0
58	SLU 34	-0.13	-0.08	11.68	0	0	0
58	SLU 35	-0.14	-0.09	11.86	0	0	0
58	SLU 36	-0.14	-0.08	11.86	0	0	0
58	SLU 37	-0.14	-0.09	11.78	0	0	0
58	SLU 38	-0.14	-0.09	11.78	0	0	0
58	SLU 39	-0.14	-0.09	12.14	0	0	0
58	SLU 40	-0.14	-0.08	12.14	0	0	0
58	SLU 41	-0.15	-0.09	12.24	0	0	0
58	SLU 42	-0.14	-0.08	12.24	0	0	0
58	SLU 43	-0.13	-0.16	11.52	0	0	0
58	SLU 44	-0.13	-0.15	11.52	0	0	0
58	SLU 45	-0.14	-0.16	11.69	0	0	0
58	SLU 46	-0.14	-0.15	11.69	0	0	0
58	SLU 47	-0.14	-0.15	11.61	0	0	0
58	SLU 48	-0.14	-0.16	11.79	0	0	0
58	SLU 49	-0.14	-0.15	11.79	0	0	0
58	SLU 50	-0.14	-0.17	11.71	0	0	0
58	SLU 51	-0.14	-0.16	11.71	0	0	0
58	SLU 52	-0.16	-0.14	12.81	0	0	0
58	SLU 53	-0.16	-0.15	12.99	0	0	0
58	SLU 54	-0.16	-0.15	12.98	0	0	0
58	SLU 55	-0.16	-0.15	12.9	0	0	0
58	SLU 56	-0.17	-0.16	13.08	0	0	0
58	SLU 57	-0.17	-0.15	13.08	0	0	0
58	SLU 58	-0.17	-0.16	13	0	0	0
58	SLU 59	-0.17	-0.15	13	0	0	0
58	SLU 60	-0.17	-0.15	13.36	0	0	0
58	SLU 61	-0.17	-0.15	13.36	0	0	0
58	SLU 62	-0.17	-0.16	13.46	0	0	0
58	SLU 63	-0.17	-0.15	13.46	0	0	0
58	SLU 64	-0.14	-0.14	12.66	0	0	0
58	SLU 65	-0.13	-0.13	12.66	0	0	0
58	SLU 66	-0.14	-0.14	12.83	0	0	0
58	SLU 67	-0.14	-0.13	12.83	0	0	0
58	SLU 68	-0.14	-0.13	12.75	0	0	0
58	SLU 69	-0.15	-0.14	12.93	0	0	0
58	SLU 70	-0.14	-0.13	12.93	0	0	0
58	SLU 71	-0.15	-0.14	12.85	0	0	0
58	SLU 72	-0.15	-0.14	12.85	0	0	0
58	SLU 73	-0.16	-0.12	13.95	0	0	0
58	SLU 74	-0.16	-0.13	14.12	0	0	0
58	SLU 75	-0.16	-0.13	14.12	0	0	0
58	SLU 76	-0.16	-0.12	14.04	0	0	0
58	SLU 77	-0.17	-0.13	14.22	0	0	0
58	SLU 78	-0.17	-0.13	14.22	0	0	0
58	SLU 79	-0.17	-0.14	14.14	0	0	0
58	SLU 80	-0.17	-0.13	14.14	0	0	0
58	SLU 81	-0.17	-0.13	14.5	0	0	0
58	SLU 82	-0.17	-0.13	14.5	0	0	0
58	SLU 83	-0.18	-0.13	14.6	0	0	0
58	SLU 84	-0.17	-0.13	14.6	0	0	0
58	SLE RA 1	-0.1	-0.11	9.49	0	0	0
58	SLE RA 2	-0.1	-0.11	9.48	0	0	0
58	SLE RA 3	-0.11	-0.11	9.6	0	0	0
58	SLE RA 4	-0.11	-0.11	9.6	0	0	0
58	SLE RA 5	-0.11	-0.11	9.55	0	0	0
58	SLE RA 6	-0.11	-0.11	9.67	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
58	SLE RA 7	-0.11	-0.11	9.67	0	0	0
58	SLE RA 8	-0.11	-0.12	9.62	0	0	0
58	SLE RA 9	-0.11	-0.11	9.61	0	0	0
58	SLE RA 10	-0.12	-0.1	10.35	0	0	0
58	SLE RA 11	-0.12	-0.11	10.46	0	0	0
58	SLE RA 12	-0.12	-0.1	10.46	0	0	0
58	SLE RA 13	-0.12	-0.1	10.41	0	0	0
58	SLE RA 14	-0.13	-0.11	10.53	0	0	0
58	SLE RA 15	-0.13	-0.1	10.53	0	0	0
58	SLE RA 16	-0.13	-0.11	10.48	0	0	0
58	SLE RA 17	-0.13	-0.11	10.48	0	0	0
58	SLE RA 18	-0.13	-0.11	10.72	0	0	0
58	SLE RA 19	-0.13	-0.1	10.71	0	0	0
58	SLE RA 20	-0.13	-0.11	10.78	0	0	0
58	SLE RA 21	-0.13	-0.1	10.78	0	0	0
58	SLE FR 1	-0.1	-0.11	9.49	0	0	0
58	SLE FR 2	-0.1	-0.11	9.49	0	0	0
58	SLE FR 3	-0.11	-0.11	9.51	0	0	0
58	SLE FR 4	-0.11	-0.11	9.86	0	0	0
58	SLE FR 5	-0.11	-0.11	9.88	0	0	0
58	SLE FR 6	-0.12	-0.11	10.1	0	0	0
58	SLE QP 1	-0.1	-0.11	9.49	0	0	0
58	SLE QP 2	-0.11	-0.11	9.86	0	0	0
58	SLD 1	0.6	0.04	9.72	0	0	0
58	SLD 2	0.6	0.05	9.72	0	0	0
58	SLD 3	0.57	-0.23	9.83	0	0	0
58	SLD 4	0.57	-0.22	9.83	0	0	0
58	SLD 5	0.16	0.33	9.65	0	0	0
58	SLD 6	0.16	0.34	9.65	0	0	0
58	SLD 7	0.04	-0.55	10.02	0	0	0
58	SLD 8	0.04	-0.54	10.01	0	0	0
58	SLD 9	-0.26	0.32	9.7	0	0	0
58	SLD 10	-0.26	0.33	9.7	0	0	0
58	SLD 11	-0.38	-0.56	10.06	0	0	0
58	SLD 12	-0.38	-0.56	10.06	0	0	0
58	SLD 13	-0.79	-0.01	9.89	0	0	0
58	SLD 14	-0.79	0	9.88	0	0	0
58	SLD 15	-0.83	-0.27	10	0	0	0
58	SLD 16	-0.83	-0.26	9.99	0	0	0
58	SLV 1	1.56	0.23	9.55	0	0	0
58	SLV 2	1.56	0.26	9.53	0	0	0
58	SLV 3	1.48	-0.38	9.79	0	0	0
58	SLV 4	1.48	-0.35	9.78	0	0	0
58	SLV 5	0.52	0.9	9.39	0	0	0
58	SLV 6	0.52	0.92	9.38	0	0	0
58	SLV 7	0.24	-1.11	10.22	0	0	0
58	SLV 8	0.24	-1.09	10.21	0	0	0
58	SLV 9	-0.46	0.87	9.5	0	0	0
58	SLV 10	-0.46	0.89	9.49	0	0	0
58	SLV 11	-0.74	-1.14	10.33	0	0	0
58	SLV 12	-0.74	-1.12	10.32	0	0	0
58	SLV 13	-1.7	0.12	9.93	0	0	0
58	SLV 14	-1.7	0.15	9.92	0	0	0
58	SLV 15	-1.78	-0.48	10.18	0	0	0
58	SLV 16	-1.78	-0.45	10.17	0	0	0
59	SLU 1	-0.1	-0.12	9.09	0	0	0
59	SLU 2	-0.1	-0.1	9.09	0	0	0
59	SLU 3	-0.11	-0.11	9.27	0	0	0
59	SLU 4	-0.11	-0.11	9.26	0	0	0
59	SLU 5	-0.11	-0.11	9.18	0	0	0
59	SLU 6	-0.11	-0.12	9.36	0	0	0
59	SLU 7	-0.11	-0.11	9.36	0	0	0
59	SLU 8	-0.11	-0.12	9.28	0	0	0
59	SLU 9	-0.11	-0.11	9.28	0	0	0
59	SLU 10	-0.13	-0.1	10.37	0	0	0
59	SLU 11	-0.13	-0.11	10.55	0	0	0
59	SLU 12	-0.13	-0.1	10.54	0	0	0
59	SLU 13	-0.13	-0.1	10.46	0	0	0
59	SLU 14	-0.14	-0.11	10.64	0	0	0
59	SLU 15	-0.14	-0.1	10.64	0	0	0
59	SLU 16	-0.14	-0.11	10.56	0	0	0
59	SLU 17	-0.14	-0.11	10.56	0	0	0
59	SLU 18	-0.14	-0.11	10.92	0	0	0
59	SLU 19	-0.14	-0.1	10.92	0	0	0
59	SLU 20	-0.14	-0.11	11.02	0	0	0
59	SLU 21	-0.14	-0.1	11.01	0	0	0
59	SLU 22	-0.11	-0.1	10.23	0	0	0
59	SLU 23	-0.1	-0.08	10.23	0	0	0
59	SLU 24	-0.11	-0.09	10.4	0	0	0
59	SLU 25	-0.11	-0.09	10.4	0	0	0
59	SLU 26	-0.11	-0.08	10.32	0	0	0
59	SLU 27	-0.12	-0.09	10.5	0	0	0
59	SLU 28	-0.11	-0.09	10.49	0	0	0
59	SLU 29	-0.12	-0.1	10.42	0	0	0
59	SLU 30	-0.12	-0.09	10.42	0	0	0
59	SLU 31	-0.13	-0.08	11.51	0	0	0
59	SLU 32	-0.13	-0.09	11.68	0	0	0
59	SLU 33	-0.13	-0.08	11.68	0	0	0
59	SLU 34	-0.13	-0.08	11.6	0	0	0
59	SLU 35	-0.14	-0.09	11.78	0	0	0
59	SLU 36	-0.14	-0.08	11.77	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
59	SLU 37	-0.14	-0.09	11.7	0	0	0
59	SLU 38	-0.14	-0.08	11.7	0	0	0
59	SLU 39	-0.14	-0.09	12.06	0	0	0
59	SLU 40	-0.14	-0.08	12.06	0	0	0
59	SLU 41	-0.15	-0.09	12.15	0	0	0
59	SLU 42	-0.14	-0.08	12.15	0	0	0
59	SLU 43	-0.13	-0.16	11.43	0	0	0
59	SLU 44	-0.13	-0.15	11.43	0	0	0
59	SLU 45	-0.14	-0.16	11.6	0	0	0
59	SLU 46	-0.14	-0.15	11.6	0	0	0
59	SLU 47	-0.14	-0.15	11.52	0	0	0
59	SLU 48	-0.14	-0.16	11.7	0	0	0
59	SLU 49	-0.14	-0.15	11.7	0	0	0
59	SLU 50	-0.14	-0.16	11.62	0	0	0
59	SLU 51	-0.14	-0.15	11.62	0	0	0
59	SLU 52	-0.16	-0.14	12.71	0	0	0
59	SLU 53	-0.16	-0.15	12.88	0	0	0
59	SLU 54	-0.16	-0.14	12.88	0	0	0
59	SLU 55	-0.16	-0.14	12.8	0	0	0
59	SLU 56	-0.17	-0.15	12.98	0	0	0
59	SLU 57	-0.17	-0.14	12.98	0	0	0
59	SLU 58	-0.17	-0.15	12.9	0	0	0
59	SLU 59	-0.17	-0.15	12.9	0	0	0
59	SLU 60	-0.17	-0.15	13.26	0	0	0
59	SLU 61	-0.17	-0.14	13.26	0	0	0
59	SLU 62	-0.17	-0.15	13.35	0	0	0
59	SLU 63	-0.17	-0.14	13.35	0	0	0
59	SLU 64	-0.14	-0.14	12.57	0	0	0
59	SLU 65	-0.13	-0.13	12.57	0	0	0
59	SLU 66	-0.14	-0.14	12.74	0	0	0
59	SLU 67	-0.14	-0.13	12.74	0	0	0
59	SLU 68	-0.14	-0.13	12.66	0	0	0
59	SLU 69	-0.15	-0.14	12.83	0	0	0
59	SLU 70	-0.14	-0.13	12.83	0	0	0
59	SLU 71	-0.15	-0.14	12.76	0	0	0
59	SLU 72	-0.15	-0.13	12.75	0	0	0
59	SLU 73	-0.16	-0.12	13.84	0	0	0
59	SLU 74	-0.16	-0.13	14.02	0	0	0
59	SLU 75	-0.16	-0.12	14.02	0	0	0
59	SLU 76	-0.16	-0.12	13.94	0	0	0
59	SLU 77	-0.17	-0.13	14.11	0	0	0
59	SLU 78	-0.17	-0.12	14.11	0	0	0
59	SLU 79	-0.17	-0.13	14.04	0	0	0
59	SLU 80	-0.17	-0.13	14.03	0	0	0
59	SLU 81	-0.17	-0.13	14.4	0	0	0
59	SLU 82	-0.17	-0.12	14.39	0	0	0
59	SLU 83	-0.18	-0.13	14.49	0	0	0
59	SLU 84	-0.17	-0.12	14.49	0	0	0
59	SLE RA 1	-0.1	-0.11	9.42	0	0	0
59	SLE RA 2	-0.1	-0.1	9.42	0	0	0
59	SLE RA 3	-0.11	-0.11	9.53	0	0	0
59	SLE RA 4	-0.11	-0.1	9.53	0	0	0
59	SLE RA 5	-0.11	-0.1	9.48	0	0	0
59	SLE RA 6	-0.11	-0.11	9.6	0	0	0
59	SLE RA 7	-0.11	-0.1	9.59	0	0	0
59	SLE RA 8	-0.11	-0.11	9.54	0	0	0
59	SLE RA 9	-0.11	-0.11	9.54	0	0	0
59	SLE RA 10	-0.12	-0.1	10.27	0	0	0
59	SLE RA 11	-0.12	-0.1	10.39	0	0	0
59	SLE RA 12	-0.12	-0.1	10.38	0	0	0
59	SLE RA 13	-0.12	-0.1	10.33	0	0	0
59	SLE RA 14	-0.13	-0.11	10.45	0	0	0
59	SLE RA 15	-0.13	-0.1	10.45	0	0	0
59	SLE RA 16	-0.13	-0.11	10.4	0	0	0
59	SLE RA 17	-0.13	-0.1	10.4	0	0	0
59	SLE RA 18	-0.13	-0.1	10.64	0	0	0
59	SLE RA 19	-0.13	-0.1	10.64	0	0	0
59	SLE RA 20	-0.13	-0.11	10.7	0	0	0
59	SLE RA 21	-0.13	-0.1	10.7	0	0	0
59	SLE FR 1	-0.1	-0.11	9.42	0	0	0
59	SLE FR 2	-0.1	-0.11	9.42	0	0	0
59	SLE FR 3	-0.11	-0.11	9.44	0	0	0
59	SLE FR 4	-0.11	-0.11	9.78	0	0	0
59	SLE FR 5	-0.11	-0.11	9.81	0	0	0
59	SLE FR 6	-0.12	-0.11	10.03	0	0	0
59	SLE QP 1	-0.1	-0.11	9.42	0	0	0
59	SLE QP 2	-0.11	-0.11	9.78	0	0	0
59	SLD 1	0.6	0.04	9.61	0	0	0
59	SLD 2	0.6	0.05	9.6	0	0	0
59	SLD 3	0.57	-0.23	9.71	0	0	0
59	SLD 4	0.57	-0.21	9.7	0	0	0
59	SLD 5	0.16	0.33	9.58	0	0	0
59	SLD 6	0.16	0.34	9.58	0	0	0
59	SLD 7	0.04	-0.55	9.91	0	0	0
59	SLD 8	0.04	-0.54	9.91	0	0	0
59	SLD 9	-0.26	0.32	9.66	0	0	0
59	SLD 10	-0.26	0.33	9.65	0	0	0
59	SLD 11	-0.38	-0.56	9.99	0	0	0
59	SLD 12	-0.38	-0.55	9.99	0	0	0
59	SLD 13	-0.79	-0.01	9.86	0	0	0
59	SLD 14	-0.79	0.01	9.86	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
59	SLD 15	-0.83	-0.27	9.96	0	0	0
59	SLD 16	-0.83	-0.25	9.96	0	0	0
59	SLV 1	1.56	0.22	9.38	0	0	0
59	SLV 2	1.56	0.26	9.37	0	0	0
59	SLV 3	1.48	-0.38	9.61	0	0	0
59	SLV 4	1.48	-0.34	9.59	0	0	0
59	SLV 5	0.52	0.9	9.32	0	0	0
59	SLV 6	0.52	0.92	9.31	0	0	0
59	SLV 7	0.24	-1.11	10.08	0	0	0
59	SLV 8	0.24	-1.08	10.07	0	0	0
59	SLV 9	-0.46	0.87	9.5	0	0	0
59	SLV 10	-0.46	0.89	9.49	0	0	0
59	SLV 11	-0.74	-1.14	10.26	0	0	0
59	SLV 12	-0.74	-1.11	10.25	0	0	0
59	SLV 13	-1.7	0.12	9.97	0	0	0
59	SLV 14	-1.7	0.16	9.96	0	0	0
59	SLV 15	-1.78	-0.48	10.2	0	0	0
59	SLV 16	-1.78	-0.44	10.19	0	0	0
60	SLU 1	-0.1	-0.11	9.03	0	0	0
60	SLU 2	-0.1	-0.1	9.03	0	0	0
60	SLU 3	-0.11	-0.11	9.2	0	0	0
60	SLU 4	-0.11	-0.1	9.2	0	0	0
60	SLU 5	-0.11	-0.1	9.12	0	0	0
60	SLU 6	-0.11	-0.11	9.29	0	0	0
60	SLU 7	-0.11	-0.1	9.29	0	0	0
60	SLU 8	-0.11	-0.12	9.21	0	0	0
60	SLU 9	-0.11	-0.11	9.21	0	0	0
60	SLU 10	-0.13	-0.1	10.29	0	0	0
60	SLU 11	-0.13	-0.1	10.47	0	0	0
60	SLU 12	-0.13	-0.1	10.47	0	0	0
60	SLU 13	-0.13	-0.1	10.39	0	0	0
60	SLU 14	-0.14	-0.11	10.56	0	0	0
60	SLU 15	-0.14	-0.1	10.56	0	0	0
60	SLU 16	-0.14	-0.11	10.48	0	0	0
60	SLU 17	-0.14	-0.1	10.48	0	0	0
60	SLU 18	-0.14	-0.1	10.84	0	0	0
60	SLU 19	-0.14	-0.1	10.84	0	0	0
60	SLU 20	-0.14	-0.11	10.93	0	0	0
60	SLU 21	-0.14	-0.1	10.93	0	0	0
60	SLU 22	-0.11	-0.09	10.16	0	0	0
60	SLU 23	-0.1	-0.08	10.16	0	0	0
60	SLU 24	-0.11	-0.09	10.33	0	0	0
60	SLU 25	-0.11	-0.08	10.33	0	0	0
60	SLU 26	-0.11	-0.08	10.25	0	0	0
60	SLU 27	-0.12	-0.09	10.42	0	0	0
60	SLU 28	-0.11	-0.08	10.42	0	0	0
60	SLU 29	-0.12	-0.09	10.34	0	0	0
60	SLU 30	-0.12	-0.09	10.34	0	0	0
60	SLU 31	-0.13	-0.07	11.43	0	0	0
60	SLU 32	-0.13	-0.08	11.6	0	0	0
60	SLU 33	-0.13	-0.08	11.6	0	0	0
60	SLU 34	-0.13	-0.07	11.52	0	0	0
60	SLU 35	-0.14	-0.08	11.69	0	0	0
60	SLU 36	-0.14	-0.08	11.69	0	0	0
60	SLU 37	-0.14	-0.09	11.61	0	0	0
60	SLU 38	-0.14	-0.08	11.61	0	0	0
60	SLU 39	-0.14	-0.08	11.97	0	0	0
60	SLU 40	-0.14	-0.08	11.97	0	0	0
60	SLU 41	-0.15	-0.08	12.06	0	0	0
60	SLU 42	-0.14	-0.08	12.06	0	0	0
60	SLU 43	-0.13	-0.16	11.35	0	0	0
60	SLU 44	-0.13	-0.14	11.35	0	0	0
60	SLU 45	-0.14	-0.15	11.52	0	0	0
60	SLU 46	-0.14	-0.14	11.52	0	0	0
60	SLU 47	-0.14	-0.14	11.44	0	0	0
60	SLU 48	-0.14	-0.15	11.61	0	0	0
60	SLU 49	-0.14	-0.15	11.61	0	0	0
60	SLU 50	-0.14	-0.16	11.53	0	0	0
60	SLU 51	-0.14	-0.15	11.53	0	0	0
60	SLU 52	-0.16	-0.14	12.61	0	0	0
60	SLU 53	-0.16	-0.15	12.79	0	0	0
60	SLU 54	-0.16	-0.14	12.78	0	0	0
60	SLU 55	-0.16	-0.14	12.71	0	0	0
60	SLU 56	-0.17	-0.15	12.88	0	0	0
60	SLU 57	-0.17	-0.14	12.88	0	0	0
60	SLU 58	-0.17	-0.15	12.8	0	0	0
60	SLU 59	-0.17	-0.14	12.8	0	0	0
60	SLU 60	-0.17	-0.15	13.16	0	0	0
60	SLU 61	-0.17	-0.14	13.16	0	0	0
60	SLU 62	-0.17	-0.15	13.25	0	0	0
60	SLU 63	-0.17	-0.14	13.25	0	0	0
60	SLU 64	-0.14	-0.13	12.48	0	0	0
60	SLU 65	-0.13	-0.12	12.48	0	0	0
60	SLU 66	-0.14	-0.13	12.65	0	0	0
60	SLU 67	-0.14	-0.12	12.65	0	0	0
60	SLU 68	-0.14	-0.12	12.57	0	0	0
60	SLU 69	-0.15	-0.13	12.74	0	0	0
60	SLU 70	-0.14	-0.12	12.74	0	0	0
60	SLU 71	-0.15	-0.14	12.66	0	0	0
60	SLU 72	-0.15	-0.13	12.66	0	0	0
60	SLU 73	-0.16	-0.12	13.75	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
60	SLU 74	-0.16	-0.13	13.92	0	0	0
60	SLU 75	-0.16	-0.12	13.92	0	0	0
60	SLU 76	-0.16	-0.12	13.84	0	0	0
60	SLU 77	-0.17	-0.13	14.01	0	0	0
60	SLU 78	-0.17	-0.12	14.01	0	0	0
60	SLU 79	-0.17	-0.13	13.93	0	0	0
60	SLU 80	-0.17	-0.12	13.93	0	0	0
60	SLU 81	-0.17	-0.13	14.29	0	0	0
60	SLU 82	-0.17	-0.12	14.29	0	0	0
60	SLU 83	-0.18	-0.13	14.38	0	0	0
60	SLU 84	-0.17	-0.12	14.38	0	0	0
60	SLE RA 1	-0.1	-0.11	9.35	0	0	0
60	SLE RA 2	-0.1	-0.1	9.35	0	0	0
60	SLE RA 3	-0.11	-0.11	9.47	0	0	0
60	SLE RA 4	-0.11	-0.1	9.46	0	0	0
60	SLE RA 5	-0.11	-0.1	9.41	0	0	0
60	SLE RA 6	-0.11	-0.11	9.53	0	0	0
60	SLE RA 7	-0.11	-0.1	9.53	0	0	0
60	SLE RA 8	-0.11	-0.11	9.47	0	0	0
60	SLE RA 9	-0.11	-0.1	9.47	0	0	0
60	SLE RA 10	-0.12	-0.1	10.2	0	0	0
60	SLE RA 11	-0.12	-0.1	10.31	0	0	0
60	SLE RA 12	-0.12	-0.1	10.31	0	0	0
60	SLE RA 13	-0.12	-0.1	10.26	0	0	0
60	SLE RA 14	-0.13	-0.1	10.37	0	0	0
60	SLE RA 15	-0.13	-0.1	10.37	0	0	0
60	SLE RA 16	-0.13	-0.1	10.32	0	0	0
60	SLE RA 17	-0.13	-0.1	10.32	0	0	0
60	SLE RA 18	-0.13	-0.1	10.56	0	0	0
60	SLE RA 19	-0.13	-0.1	10.56	0	0	0
60	SLE RA 20	-0.13	-0.1	10.62	0	0	0
60	SLE RA 21	-0.13	-0.1	10.62	0	0	0
60	SLE FR 1	-0.1	-0.11	9.35	0	0	0
60	SLE FR 2	-0.1	-0.11	9.35	0	0	0
60	SLE FR 3	-0.11	-0.11	9.38	0	0	0
60	SLE FR 4	-0.11	-0.1	9.71	0	0	0
60	SLE FR 5	-0.11	-0.11	9.74	0	0	0
60	SLE FR 6	-0.12	-0.1	9.96	0	0	0
60	SLE QP 1	-0.1	-0.11	9.35	0	0	0
60	SLE QP 2	-0.11	-0.11	9.71	0	0	0
60	SLD 1	0.6	0	9.5	0	0	0
60	SLD 2	0.6	0.01	9.49	0	0	0
60	SLD 3	0.57	-0.27	9.59	0	0	0
60	SLD 4	0.57	-0.25	9.58	0	0	0
60	SLD 5	0.16	0.32	9.51	0	0	0
60	SLD 6	0.16	0.33	9.51	0	0	0
60	SLD 7	0.04	-0.56	9.82	0	0	0
60	SLD 8	0.04	-0.54	9.81	0	0	0
60	SLD 9	-0.26	0.33	9.62	0	0	0
60	SLD 10	-0.26	0.34	9.61	0	0	0
60	SLD 11	-0.38	-0.54	9.92	0	0	0
60	SLD 12	-0.38	-0.53	9.92	0	0	0
60	SLD 13	-0.79	0.04	9.85	0	0	0
60	SLD 14	-0.79	0.06	9.84	0	0	0
60	SLD 15	-0.83	-0.22	9.94	0	0	0
60	SLD 16	-0.83	-0.21	9.93	0	0	0
60	SLV 1	1.56	0.12	9.21	0	0	0
60	SLV 2	1.56	0.16	9.19	0	0	0
60	SLV 3	1.48	-0.48	9.42	0	0	0
60	SLV 4	1.48	-0.43	9.4	0	0	0
60	SLV 5	0.52	0.86	9.24	0	0	0
60	SLV 6	0.52	0.89	9.24	0	0	0
60	SLV 7	0.24	-1.13	9.95	0	0	0
60	SLV 8	0.24	-1.1	9.94	0	0	0
60	SLV 9	-0.46	0.89	9.49	0	0	0
60	SLV 10	-0.46	0.92	9.48	0	0	0
60	SLV 11	-0.74	-1.1	10.19	0	0	0
60	SLV 12	-0.74	-1.07	10.18	0	0	0
60	SLV 13	-1.7	0.22	10.03	0	0	0
60	SLV 14	-1.7	0.26	10.01	0	0	0
60	SLV 15	-1.78	-0.38	10.24	0	0	0
60	SLV 16	-1.78	-0.33	10.22	0	0	0
61	SLU 1	-0.12	-0.12	10.08	0	0	0
61	SLU 2	-0.11	-0.11	10.08	0	0	0
61	SLU 3	-0.12	-0.12	10.27	0	0	0
61	SLU 4	-0.12	-0.11	10.27	0	0	0
61	SLU 5	-0.12	-0.11	10.18	0	0	0
61	SLU 6	-0.13	-0.12	10.37	0	0	0
61	SLU 7	-0.13	-0.11	10.37	0	0	0
61	SLU 8	-0.13	-0.13	10.28	0	0	0
61	SLU 9	-0.13	-0.12	10.28	0	0	0
61	SLU 10	-0.14	-0.1	11.49	0	0	0
61	SLU 11	-0.15	-0.11	11.68	0	0	0
61	SLU 12	-0.15	-0.11	11.68	0	0	0
61	SLU 13	-0.15	-0.1	11.59	0	0	0
61	SLU 14	-0.15	-0.12	11.78	0	0	0
61	SLU 15	-0.15	-0.11	11.78	0	0	0
61	SLU 16	-0.16	-0.12	11.69	0	0	0
61	SLU 17	-0.15	-0.11	11.69	0	0	0
61	SLU 18	-0.15	-0.11	12.1	0	0	0
61	SLU 19	-0.15	-0.11	12.1	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
61	SLU 20	-0.16	-0.12	12.2	0	0	0
61	SLU 21	-0.16	-0.11	12.2	0	0	0
61	SLU 22	-0.12	-0.1	11.35	0	0	0
61	SLU 23	-0.12	-0.09	11.35	0	0	0
61	SLU 24	-0.12	-0.1	11.54	0	0	0
61	SLU 25	-0.12	-0.09	11.54	0	0	0
61	SLU 26	-0.12	-0.09	11.45	0	0	0
61	SLU 27	-0.13	-0.1	11.64	0	0	0
61	SLU 28	-0.13	-0.09	11.64	0	0	0
61	SLU 29	-0.13	-0.1	11.55	0	0	0
61	SLU 30	-0.13	-0.09	11.55	0	0	0
61	SLU 31	-0.14	-0.08	12.76	0	0	0
61	SLU 32	-0.15	-0.09	12.95	0	0	0
61	SLU 33	-0.15	-0.08	12.95	0	0	0
61	SLU 34	-0.15	-0.08	12.86	0	0	0
61	SLU 35	-0.16	-0.09	13.05	0	0	0
61	SLU 36	-0.16	-0.08	13.05	0	0	0
61	SLU 37	-0.16	-0.1	12.96	0	0	0
61	SLU 38	-0.16	-0.09	12.96	0	0	0
61	SLU 39	-0.16	-0.09	13.37	0	0	0
61	SLU 40	-0.16	-0.08	13.37	0	0	0
61	SLU 41	-0.16	-0.09	13.47	0	0	0
61	SLU 42	-0.16	-0.08	13.47	0	0	0
61	SLU 43	-0.15	-0.17	12.67	0	0	0
61	SLU 44	-0.15	-0.16	12.66	0	0	0
61	SLU 45	-0.15	-0.17	12.85	0	0	0
61	SLU 46	-0.15	-0.16	12.85	0	0	0
61	SLU 47	-0.15	-0.16	12.76	0	0	0
61	SLU 48	-0.16	-0.17	12.95	0	0	0
61	SLU 49	-0.16	-0.16	12.95	0	0	0
61	SLU 50	-0.16	-0.17	12.87	0	0	0
61	SLU 51	-0.16	-0.16	12.86	0	0	0
61	SLU 52	-0.18	-0.15	14.08	0	0	0
61	SLU 53	-0.18	-0.16	14.27	0	0	0
61	SLU 54	-0.18	-0.15	14.27	0	0	0
61	SLU 55	-0.18	-0.15	14.18	0	0	0
61	SLU 56	-0.19	-0.16	14.37	0	0	0
61	SLU 57	-0.19	-0.15	14.37	0	0	0
61	SLU 58	-0.19	-0.17	14.28	0	0	0
61	SLU 59	-0.19	-0.16	14.28	0	0	0
61	SLU 60	-0.19	-0.16	14.69	0	0	0
61	SLU 61	-0.19	-0.15	14.68	0	0	0
61	SLU 62	-0.19	-0.16	14.79	0	0	0
61	SLU 63	-0.19	-0.15	14.78	0	0	0
61	SLU 64	-0.15	-0.15	13.94	0	0	0
61	SLU 65	-0.15	-0.13	13.94	0	0	0
61	SLU 66	-0.16	-0.14	14.13	0	0	0
61	SLU 67	-0.16	-0.14	14.12	0	0	0
61	SLU 68	-0.16	-0.13	14.03	0	0	0
61	SLU 69	-0.16	-0.14	14.23	0	0	0
61	SLU 70	-0.16	-0.14	14.22	0	0	0
61	SLU 71	-0.17	-0.15	14.14	0	0	0
61	SLU 72	-0.16	-0.14	14.14	0	0	0
61	SLU 73	-0.18	-0.13	15.35	0	0	0
61	SLU 74	-0.18	-0.14	15.54	0	0	0
61	SLU 75	-0.18	-0.13	15.54	0	0	0
61	SLU 76	-0.18	-0.13	15.45	0	0	0
61	SLU 77	-0.19	-0.14	15.64	0	0	0
61	SLU 78	-0.19	-0.13	15.64	0	0	0
61	SLU 79	-0.19	-0.14	15.55	0	0	0
61	SLU 80	-0.19	-0.13	15.55	0	0	0
61	SLU 81	-0.19	-0.14	15.96	0	0	0
61	SLU 82	-0.19	-0.13	15.96	0	0	0
61	SLU 83	-0.2	-0.14	16.06	0	0	0
61	SLU 84	-0.2	-0.13	16.06	0	0	0
61	SLE RA 1	-0.12	-0.12	10.44	0	0	0
61	SLE RA 2	-0.12	-0.11	10.44	0	0	0
61	SLE RA 3	-0.12	-0.12	10.57	0	0	0
61	SLE RA 4	-0.12	-0.11	10.57	0	0	0
61	SLE RA 5	-0.12	-0.11	10.51	0	0	0
61	SLE RA 6	-0.12	-0.12	10.63	0	0	0
61	SLE RA 7	-0.12	-0.11	10.63	0	0	0
61	SLE RA 8	-0.13	-0.12	10.57	0	0	0
61	SLE RA 9	-0.12	-0.11	10.57	0	0	0
61	SLE RA 10	-0.13	-0.1	11.38	0	0	0
61	SLE RA 11	-0.14	-0.11	11.51	0	0	0
61	SLE RA 12	-0.14	-0.11	11.51	0	0	0
61	SLE RA 13	-0.14	-0.1	11.45	0	0	0
61	SLE RA 14	-0.14	-0.11	11.58	0	0	0
61	SLE RA 15	-0.14	-0.11	11.58	0	0	0
61	SLE RA 16	-0.14	-0.11	11.52	0	0	0
61	SLE RA 17	-0.14	-0.11	11.52	0	0	0
61	SLE RA 18	-0.14	-0.11	11.79	0	0	0
61	SLE RA 19	-0.14	-0.11	11.79	0	0	0
61	SLE RA 20	-0.15	-0.11	11.85	0	0	0
61	SLE RA 21	-0.15	-0.11	11.85	0	0	0
61	SLE FR 1	-0.12	-0.12	10.44	0	0	0
61	SLE FR 2	-0.12	-0.12	10.44	0	0	0
61	SLE FR 3	-0.12	-0.12	10.47	0	0	0
61	SLE FR 4	-0.12	-0.11	10.85	0	0	0
61	SLE FR 5	-0.13	-0.12	10.87	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
61	SLE FR 6	-0.13	-0.11	11.11	0	0	0
61	SLE QP 1	-0.12	-0.12	10.44	0	0	0
61	SLE QP 2	-0.12	-0.12	10.85	0	0	0
61	SLD 1	0.68	0	10.55	0	0	0
61	SLD 2	0.68	0.02	10.54	0	0	0
61	SLD 3	0.64	-0.3	10.64	0	0	0
61	SLD 4	0.64	-0.28	10.64	0	0	0
61	SLD 5	0.18	0.36	10.61	0	0	0
61	SLD 6	0.18	0.37	10.61	0	0	0
61	SLD 7	0.04	-0.62	10.93	0	0	0
61	SLD 8	0.04	-0.61	10.93	0	0	0
61	SLD 9	-0.29	0.37	10.76	0	0	0
61	SLD 10	-0.29	0.39	10.76	0	0	0
61	SLD 11	-0.43	-0.61	11.08	0	0	0
61	SLD 12	-0.43	-0.59	11.08	0	0	0
61	SLD 13	-0.89	0.04	11.05	0	0	0
61	SLD 14	-0.89	0.07	11.05	0	0	0
61	SLD 15	-0.93	-0.25	11.15	0	0	0
61	SLD 16	-0.93	-0.23	11.14	0	0	0
61	SLV 1	1.76	0.14	10.15	0	0	0
61	SLV 2	1.75	0.19	10.13	0	0	0
61	SLV 3	1.66	-0.53	10.37	0	0	0
61	SLV 4	1.66	-0.48	10.35	0	0	0
61	SLV 5	0.58	0.97	10.3	0	0	0
61	SLV 6	0.58	1	10.29	0	0	0
61	SLV 7	0.27	-1.27	11.04	0	0	0
61	SLV 8	0.27	-1.23	11.03	0	0	0
61	SLV 9	-0.51	1	10.66	0	0	0
61	SLV 10	-0.51	1.03	10.65	0	0	0
61	SLV 11	-0.83	-1.23	11.4	0	0	0
61	SLV 12	-0.83	-1.2	11.39	0	0	0
61	SLV 13	-1.91	0.25	11.34	0	0	0
61	SLV 14	-1.91	0.3	11.32	0	0	0
61	SLV 15	-2	-0.42	11.56	0	0	0
61	SLV 16	-2	-0.37	11.54	0	0	0
62	SLU 1	-0.06	-0.07	5.54	0	0	0
62	SLU 2	-0.06	-0.06	5.53	0	0	0
62	SLU 3	-0.07	-0.07	5.64	0	0	0
62	SLU 4	-0.07	-0.06	5.64	0	0	0
62	SLU 5	-0.07	-0.06	5.59	0	0	0
62	SLU 6	-0.07	-0.07	5.69	0	0	0
62	SLU 7	-0.07	-0.06	5.69	0	0	0
62	SLU 8	-0.07	-0.07	5.64	0	0	0
62	SLU 9	-0.07	-0.06	5.64	0	0	0
62	SLU 10	-0.08	-0.06	6.31	0	0	0
62	SLU 11	-0.08	-0.06	6.41	0	0	0
62	SLU 12	-0.08	-0.06	6.41	0	0	0
62	SLU 13	-0.08	-0.06	6.36	0	0	0
62	SLU 14	-0.09	-0.06	6.47	0	0	0
62	SLU 15	-0.08	-0.06	6.47	0	0	0
62	SLU 16	-0.09	-0.06	6.42	0	0	0
62	SLU 17	-0.09	-0.06	6.42	0	0	0
62	SLU 18	-0.09	-0.06	6.64	0	0	0
62	SLU 19	-0.09	-0.06	6.64	0	0	0
62	SLU 20	-0.09	-0.06	6.69	0	0	0
62	SLU 21	-0.09	-0.06	6.69	0	0	0
62	SLU 22	-0.07	-0.05	6.24	0	0	0
62	SLU 23	-0.07	-0.05	6.24	0	0	0
62	SLU 24	-0.07	-0.05	6.34	0	0	0
62	SLU 25	-0.07	-0.05	6.34	0	0	0
62	SLU 26	-0.07	-0.05	6.29	0	0	0
62	SLU 27	-0.07	-0.05	6.39	0	0	0
62	SLU 28	-0.07	-0.05	6.39	0	0	0
62	SLU 29	-0.07	-0.06	6.34	0	0	0
62	SLU 30	-0.07	-0.05	6.34	0	0	0
62	SLU 31	-0.08	-0.04	7.01	0	0	0
62	SLU 32	-0.08	-0.05	7.11	0	0	0
62	SLU 33	-0.08	-0.04	7.11	0	0	0
62	SLU 34	-0.08	-0.04	7.06	0	0	0
62	SLU 35	-0.09	-0.05	7.17	0	0	0
62	SLU 36	-0.09	-0.04	7.17	0	0	0
62	SLU 37	-0.09	-0.05	7.12	0	0	0
62	SLU 38	-0.09	-0.05	7.12	0	0	0
62	SLU 39	-0.09	-0.05	7.34	0	0	0
62	SLU 40	-0.09	-0.04	7.34	0	0	0
62	SLU 41	-0.09	-0.05	7.4	0	0	0
62	SLU 42	-0.09	-0.04	7.4	0	0	0
62	SLU 43	-0.08	-0.09	6.96	0	0	0
62	SLU 44	-0.08	-0.08	6.95	0	0	0
62	SLU 45	-0.09	-0.09	7.06	0	0	0
62	SLU 46	-0.09	-0.09	7.06	0	0	0
62	SLU 47	-0.09	-0.08	7.01	0	0	0
62	SLU 48	-0.09	-0.09	7.11	0	0	0
62	SLU 49	-0.09	-0.09	7.11	0	0	0
62	SLU 50	-0.09	-0.09	7.06	0	0	0
62	SLU 51	-0.09	-0.09	7.06	0	0	0
62	SLU 52	-0.1	-0.08	7.73	0	0	0
62	SLU 53	-0.1	-0.09	7.83	0	0	0
62	SLU 54	-0.1	-0.08	7.83	0	0	0
62	SLU 55	-0.1	-0.08	7.78	0	0	0
62	SLU 56	-0.1	-0.09	7.89	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
62	SLU 57	-0.1	-0.08	7.89	0	0	0
62	SLU 58	-0.11	-0.09	7.84	0	0	0
62	SLU 59	-0.1	-0.08	7.84	0	0	0
62	SLU 60	-0.1	-0.09	8.06	0	0	0
62	SLU 61	-0.1	-0.08	8.06	0	0	0
62	SLU 62	-0.11	-0.09	8.11	0	0	0
62	SLU 63	-0.11	-0.08	8.11	0	0	0
62	SLU 64	-0.09	-0.08	7.66	0	0	0
62	SLU 65	-0.08	-0.07	7.66	0	0	0
62	SLU 66	-0.09	-0.08	7.76	0	0	0
62	SLU 67	-0.09	-0.07	7.76	0	0	0
62	SLU 68	-0.09	-0.07	7.71	0	0	0
62	SLU 69	-0.09	-0.08	7.81	0	0	0
62	SLU 70	-0.09	-0.07	7.81	0	0	0
62	SLU 71	-0.09	-0.08	7.76	0	0	0
62	SLU 72	-0.09	-0.08	7.76	0	0	0
62	SLU 73	-0.1	-0.07	8.43	0	0	0
62	SLU 74	-0.1	-0.07	8.53	0	0	0
62	SLU 75	-0.1	-0.07	8.53	0	0	0
62	SLU 76	-0.1	-0.07	8.48	0	0	0
62	SLU 77	-0.11	-0.07	8.59	0	0	0
62	SLU 78	-0.11	-0.07	8.59	0	0	0
62	SLU 79	-0.11	-0.08	8.54	0	0	0
62	SLU 80	-0.11	-0.07	8.54	0	0	0
62	SLU 81	-0.11	-0.07	8.76	0	0	0
62	SLU 82	-0.11	-0.07	8.76	0	0	0
62	SLU 83	-0.11	-0.07	8.82	0	0	0
62	SLU 84	-0.11	-0.07	8.82	0	0	0
62	SLE RA 1	-0.07	-0.06	5.74	0	0	0
62	SLE RA 2	-0.06	-0.06	5.74	0	0	0
62	SLE RA 3	-0.07	-0.06	5.8	0	0	0
62	SLE RA 4	-0.07	-0.06	5.8	0	0	0
62	SLE RA 5	-0.07	-0.06	5.77	0	0	0
62	SLE RA 6	-0.07	-0.06	5.84	0	0	0
62	SLE RA 7	-0.07	-0.06	5.84	0	0	0
62	SLE RA 8	-0.07	-0.06	5.81	0	0	0
62	SLE RA 9	-0.07	-0.06	5.81	0	0	0
62	SLE RA 10	-0.07	-0.06	6.25	0	0	0
62	SLE RA 11	-0.08	-0.06	6.32	0	0	0
62	SLE RA 12	-0.08	-0.06	6.32	0	0	0
62	SLE RA 13	-0.08	-0.06	6.29	0	0	0
62	SLE RA 14	-0.08	-0.06	6.36	0	0	0
62	SLE RA 15	-0.08	-0.06	6.36	0	0	0
62	SLE RA 16	-0.08	-0.06	6.32	0	0	0
62	SLE RA 17	-0.08	-0.06	6.32	0	0	0
62	SLE RA 18	-0.08	-0.06	6.47	0	0	0
62	SLE RA 19	-0.08	-0.06	6.47	0	0	0
62	SLE RA 20	-0.08	-0.06	6.51	0	0	0
62	SLE RA 21	-0.08	-0.06	6.51	0	0	0
62	SLE FR 1	-0.07	-0.06	5.74	0	0	0
62	SLE FR 2	-0.06	-0.06	5.74	0	0	0
62	SLE FR 3	-0.07	-0.06	5.75	0	0	0
62	SLE FR 4	-0.07	-0.06	5.96	0	0	0
62	SLE FR 5	-0.07	-0.06	5.97	0	0	0
62	SLE FR 6	-0.07	-0.06	6.1	0	0	0
62	SLE QP 1	-0.07	-0.06	5.74	0	0	0
62	SLE QP 2	-0.07	-0.06	5.96	0	0	0
62	SLD 1	0.38	0	5.75	0	0	0
62	SLD 2	0.38	0.01	5.75	0	0	0
62	SLD 3	0.35	-0.16	5.8	0	0	0
62	SLD 4	0.35	-0.15	5.8	0	0	0
62	SLD 5	0.1	0.2	5.82	0	0	0
62	SLD 6	0.1	0.21	5.82	0	0	0
62	SLD 7	0.02	-0.34	5.99	0	0	0
62	SLD 8	0.02	-0.33	5.98	0	0	0
62	SLD 9	-0.16	0.21	5.93	0	0	0
62	SLD 10	-0.16	0.22	5.93	0	0	0
62	SLD 11	-0.24	-0.33	6.1	0	0	0
62	SLD 12	-0.24	-0.33	6.09	0	0	0
62	SLD 13	-0.49	0.02	6.12	0	0	0
62	SLD 14	-0.49	0.04	6.11	0	0	0
62	SLD 15	-0.52	-0.14	6.17	0	0	0
62	SLD 16	-0.52	-0.12	6.16	0	0	0
62	SLV 1	0.97	0.07	5.48	0	0	0
62	SLV 2	0.97	0.11	5.47	0	0	0
62	SLV 3	0.92	-0.3	5.6	0	0	0
62	SLV 4	0.92	-0.26	5.59	0	0	0
62	SLV 5	0.32	0.54	5.64	0	0	0
62	SLV 6	0.32	0.56	5.63	0	0	0
62	SLV 7	0.15	-0.7	6.03	0	0	0
62	SLV 8	0.15	-0.68	6.02	0	0	0
62	SLV 9	-0.29	0.55	5.9	0	0	0
62	SLV 10	-0.29	0.58	5.89	0	0	0
62	SLV 11	-0.46	-0.68	6.28	0	0	0
62	SLV 12	-0.46	-0.66	6.27	0	0	0
62	SLV 13	-1.06	0.14	6.33	0	0	0
62	SLV 14	-1.06	0.17	6.32	0	0	0
62	SLV 15	-1.11	-0.23	6.44	0	0	0
62	SLV 16	-1.11	-0.2	6.43	0	0	0
63	SLU 1	-0.02	-0.03	2.05	0	0	0
63	SLU 2	-0.02	-0.03	2.05	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
63	SLU 3	-0.02	-0.03	2.09	0	0	0
63	SLU 4	-0.02	-0.03	2.09	0	0	0
63	SLU 5	-0.02	-0.03	2.07	0	0	0
63	SLU 6	-0.03	-0.03	2.12	0	0	0
63	SLU 7	-0.03	-0.03	2.12	0	0	0
63	SLU 8	-0.03	-0.03	2.1	0	0	0
63	SLU 9	-0.03	-0.03	2.1	0	0	0
63	SLU 10	-0.03	-0.02	2.34	0	0	0
63	SLU 11	-0.03	-0.03	2.38	0	0	0
63	SLU 12	-0.03	-0.02	2.38	0	0	0
63	SLU 13	-0.03	-0.02	2.37	0	0	0
63	SLU 14	-0.03	-0.03	2.41	0	0	0
63	SLU 15	-0.03	-0.03	2.41	0	0	0
63	SLU 16	-0.03	-0.03	2.39	0	0	0
63	SLU 17	-0.03	-0.03	2.39	0	0	0
63	SLU 18	-0.03	-0.03	2.47	0	0	0
63	SLU 19	-0.03	-0.02	2.47	0	0	0
63	SLU 20	-0.03	-0.03	2.49	0	0	0
63	SLU 21	-0.03	-0.03	2.49	0	0	0
63	SLU 22	-0.02	-0.02	2.31	0	0	0
63	SLU 23	-0.02	-0.02	2.3	0	0	0
63	SLU 24	-0.02	-0.02	2.35	0	0	0
63	SLU 25	-0.02	-0.02	2.34	0	0	0
63	SLU 26	-0.02	-0.02	2.33	0	0	0
63	SLU 27	-0.03	-0.02	2.37	0	0	0
63	SLU 28	-0.03	-0.02	2.37	0	0	0
63	SLU 29	-0.03	-0.02	2.35	0	0	0
63	SLU 30	-0.03	-0.02	2.35	0	0	0
63	SLU 31	-0.03	-0.02	2.6	0	0	0
63	SLU 32	-0.03	-0.02	2.64	0	0	0
63	SLU 33	-0.03	-0.02	2.64	0	0	0
63	SLU 34	-0.03	-0.02	2.62	0	0	0
63	SLU 35	-0.03	-0.02	2.66	0	0	0
63	SLU 36	-0.03	-0.02	2.66	0	0	0
63	SLU 37	-0.03	-0.02	2.64	0	0	0
63	SLU 38	-0.03	-0.02	2.64	0	0	0
63	SLU 39	-0.03	-0.02	2.72	0	0	0
63	SLU 40	-0.03	-0.02	2.72	0	0	0
63	SLU 41	-0.03	-0.02	2.74	0	0	0
63	SLU 42	-0.03	-0.02	2.74	0	0	0
63	SLU 43	-0.03	-0.04	2.58	0	0	0
63	SLU 44	-0.03	-0.04	2.58	0	0	0
63	SLU 45	-0.03	-0.04	2.62	0	0	0
63	SLU 46	-0.03	-0.04	2.62	0	0	0
63	SLU 47	-0.03	-0.04	2.6	0	0	0
63	SLU 48	-0.03	-0.04	2.65	0	0	0
63	SLU 49	-0.03	-0.04	2.64	0	0	0
63	SLU 50	-0.03	-0.04	2.63	0	0	0
63	SLU 51	-0.03	-0.04	2.63	0	0	0
63	SLU 52	-0.03	-0.03	2.87	0	0	0
63	SLU 53	-0.04	-0.04	2.91	0	0	0
63	SLU 54	-0.04	-0.04	2.91	0	0	0
63	SLU 55	-0.04	-0.03	2.9	0	0	0
63	SLU 56	-0.04	-0.04	2.94	0	0	0
63	SLU 57	-0.04	-0.04	2.94	0	0	0
63	SLU 58	-0.04	-0.04	2.92	0	0	0
63	SLU 59	-0.04	-0.04	2.92	0	0	0
63	SLU 60	-0.04	-0.04	3	0	0	0
63	SLU 61	-0.04	-0.04	3	0	0	0
63	SLU 62	-0.04	-0.04	3.02	0	0	0
63	SLU 63	-0.04	-0.04	3.02	0	0	0
63	SLU 64	-0.03	-0.03	2.83	0	0	0
63	SLU 65	-0.03	-0.03	2.83	0	0	0
63	SLU 66	-0.03	-0.03	2.87	0	0	0
63	SLU 67	-0.03	-0.03	2.87	0	0	0
63	SLU 68	-0.03	-0.03	2.86	0	0	0
63	SLU 69	-0.03	-0.03	2.9	0	0	0
63	SLU 70	-0.03	-0.03	2.9	0	0	0
63	SLU 71	-0.03	-0.03	2.88	0	0	0
63	SLU 72	-0.03	-0.03	2.88	0	0	0
63	SLU 73	-0.04	-0.03	3.12	0	0	0
63	SLU 74	-0.04	-0.03	3.17	0	0	0
63	SLU 75	-0.04	-0.03	3.17	0	0	0
63	SLU 76	-0.04	-0.03	3.15	0	0	0
63	SLU 77	-0.04	-0.03	3.19	0	0	0
63	SLU 78	-0.04	-0.03	3.19	0	0	0
63	SLU 79	-0.04	-0.03	3.17	0	0	0
63	SLU 80	-0.04	-0.03	3.17	0	0	0
63	SLU 81	-0.04	-0.03	3.25	0	0	0
63	SLU 82	-0.04	-0.03	3.25	0	0	0
63	SLU 83	-0.04	-0.03	3.27	0	0	0
63	SLU 84	-0.04	-0.03	3.27	0	0	0
63	SLE RA 1	-0.02	-0.03	2.13	0	0	0
63	SLE RA 2	-0.02	-0.03	2.12	0	0	0
63	SLE RA 3	-0.02	-0.03	2.15	0	0	0
63	SLE RA 4	-0.02	-0.03	2.15	0	0	0
63	SLE RA 5	-0.02	-0.03	2.14	0	0	0
63	SLE RA 6	-0.02	-0.03	2.17	0	0	0
63	SLE RA 7	-0.02	-0.03	2.17	0	0	0
63	SLE RA 8	-0.02	-0.03	2.16	0	0	0
63	SLE RA 9	-0.02	-0.03	2.16	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
63	SLE RA 10	-0.03	-0.02	2.32	0	0	0
63	SLE RA 11	-0.03	-0.03	2.35	0	0	0
63	SLE RA 12	-0.03	-0.02	2.35	0	0	0
63	SLE RA 13	-0.03	-0.02	2.33	0	0	0
63	SLE RA 14	-0.03	-0.03	2.36	0	0	0
63	SLE RA 15	-0.03	-0.02	2.36	0	0	0
63	SLE RA 16	-0.03	-0.03	2.35	0	0	0
63	SLE RA 17	-0.03	-0.03	2.35	0	0	0
63	SLE RA 18	-0.03	-0.03	2.4	0	0	0
63	SLE RA 19	-0.03	-0.02	2.4	0	0	0
63	SLE RA 20	-0.03	-0.03	2.42	0	0	0
63	SLE RA 21	-0.03	-0.02	2.42	0	0	0
63	SLE FR 1	-0.02	-0.03	2.13	0	0	0
63	SLE FR 2	-0.02	-0.03	2.12	0	0	0
63	SLE FR 3	-0.02	-0.03	2.13	0	0	0
63	SLE FR 4	-0.02	-0.03	2.21	0	0	0
63	SLE FR 5	-0.03	-0.03	2.21	0	0	0
63	SLE FR 6	-0.03	-0.03	2.26	0	0	0
63	SLE QP 1	-0.02	-0.03	2.13	0	0	0
63	SLE QP 2	-0.02	-0.03	2.21	0	0	0
63	SLD 1	0.13	0.01	2.22	0	0	0
63	SLD 2	0.13	0.01	2.22	0	0	0
63	SLD 3	0.12	-0.05	2.25	0	0	0
63	SLD 4	0.12	-0.05	2.25	0	0	0
63	SLD 5	0.04	0.07	2.16	0	0	0
63	SLD 6	0.04	0.07	2.15	0	0	0
63	SLD 7	0.01	-0.12	2.28	0	0	0
63	SLD 8	0.01	-0.12	2.28	0	0	0
63	SLD 9	-0.06	0.07	2.14	0	0	0
63	SLD 10	-0.06	0.07	2.14	0	0	0
63	SLD 11	-0.08	-0.13	2.26	0	0	0
63	SLD 12	-0.08	-0.13	2.26	0	0	0
63	SLD 13	-0.17	0	2.16	0	0	0
63	SLD 14	-0.17	0	2.16	0	0	0
63	SLD 15	-0.18	-0.06	2.2	0	0	0
63	SLD 16	-0.18	-0.06	2.2	0	0	0
63	SLV 1	0.34	0.05	2.23	0	0	0
63	SLV 2	0.34	0.06	2.23	0	0	0
63	SLV 3	0.33	-0.08	2.31	0	0	0
63	SLV 4	0.32	-0.08	2.31	0	0	0
63	SLV 5	0.12	0.2	2.09	0	0	0
63	SLV 6	0.11	0.2	2.09	0	0	0
63	SLV 7	0.05	-0.25	2.37	0	0	0
63	SLV 8	0.05	-0.25	2.36	0	0	0
63	SLV 9	-0.1	0.19	2.05	0	0	0
63	SLV 10	-0.1	0.19	2.05	0	0	0
63	SLV 11	-0.16	-0.26	2.33	0	0	0
63	SLV 12	-0.16	-0.25	2.33	0	0	0
63	SLV 13	-0.37	0.03	2.11	0	0	0
63	SLV 14	-0.37	0.03	2.11	0	0	0
63	SLV 15	-0.39	-0.11	2.19	0	0	0
63	SLV 16	-0.39	-0.11	2.19	0	0	0
64	SLU 1	-0.04	-0.05	3.66	0	0	0
64	SLU 2	-0.04	-0.04	3.66	0	0	0
64	SLU 3	-0.04	-0.05	3.73	0	0	0
64	SLU 4	-0.04	-0.05	3.73	0	0	0
64	SLU 5	-0.04	-0.05	3.7	0	0	0
64	SLU 6	-0.05	-0.05	3.77	0	0	0
64	SLU 7	-0.05	-0.05	3.77	0	0	0
64	SLU 8	-0.05	-0.05	3.74	0	0	0
64	SLU 9	-0.05	-0.05	3.74	0	0	0
64	SLU 10	-0.05	-0.04	4.18	0	0	0
64	SLU 11	-0.05	-0.05	4.25	0	0	0
64	SLU 12	-0.05	-0.04	4.25	0	0	0
64	SLU 13	-0.05	-0.04	4.22	0	0	0
64	SLU 14	-0.05	-0.05	4.29	0	0	0
64	SLU 15	-0.05	-0.04	4.29	0	0	0
64	SLU 16	-0.06	-0.05	4.26	0	0	0
64	SLU 17	-0.06	-0.05	4.26	0	0	0
64	SLU 18	-0.05	-0.05	4.4	0	0	0
64	SLU 19	-0.05	-0.04	4.4	0	0	0
64	SLU 20	-0.06	-0.05	4.44	0	0	0
64	SLU 21	-0.06	-0.04	4.44	0	0	0
64	SLU 22	-0.04	-0.04	4.11	0	0	0
64	SLU 23	-0.04	-0.04	4.11	0	0	0
64	SLU 24	-0.04	-0.04	4.18	0	0	0
64	SLU 25	-0.04	-0.04	4.18	0	0	0
64	SLU 26	-0.04	-0.04	4.15	0	0	0
64	SLU 27	-0.05	-0.04	4.22	0	0	0
64	SLU 28	-0.05	-0.04	4.22	0	0	0
64	SLU 29	-0.05	-0.04	4.19	0	0	0
64	SLU 30	-0.05	-0.04	4.19	0	0	0
64	SLU 31	-0.05	-0.03	4.63	0	0	0
64	SLU 32	-0.05	-0.04	4.7	0	0	0
64	SLU 33	-0.05	-0.03	4.7	0	0	0
64	SLU 34	-0.05	-0.03	4.67	0	0	0
64	SLU 35	-0.06	-0.04	4.74	0	0	0
64	SLU 36	-0.06	-0.04	4.74	0	0	0
64	SLU 37	-0.06	-0.04	4.71	0	0	0
64	SLU 38	-0.06	-0.04	4.71	0	0	0
64	SLU 39	-0.06	-0.04	4.85	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
64	SLU 40	-0.06	-0.03	4.85	0	0	0
64	SLU 41	-0.06	-0.04	4.89	0	0	0
64	SLU 42	-0.06	-0.04	4.89	0	0	0
64	SLU 43	-0.05	-0.07	4.6	0	0	0
64	SLU 44	-0.05	-0.06	4.6	0	0	0
64	SLU 45	-0.06	-0.07	4.67	0	0	0
64	SLU 46	-0.06	-0.06	4.67	0	0	0
64	SLU 47	-0.06	-0.06	4.64	0	0	0
64	SLU 48	-0.06	-0.07	4.71	0	0	0
64	SLU 49	-0.06	-0.06	4.71	0	0	0
64	SLU 50	-0.06	-0.07	4.68	0	0	0
64	SLU 51	-0.06	-0.07	4.68	0	0	0
64	SLU 52	-0.06	-0.06	5.12	0	0	0
64	SLU 53	-0.06	-0.06	5.19	0	0	0
64	SLU 54	-0.06	-0.06	5.19	0	0	0
64	SLU 55	-0.06	-0.06	5.16	0	0	0
64	SLU 56	-0.07	-0.06	5.23	0	0	0
64	SLU 57	-0.07	-0.06	5.23	0	0	0
64	SLU 58	-0.07	-0.07	5.2	0	0	0
64	SLU 59	-0.07	-0.06	5.2	0	0	0
64	SLU 60	-0.07	-0.06	5.34	0	0	0
64	SLU 61	-0.07	-0.06	5.34	0	0	0
64	SLU 62	-0.07	-0.06	5.38	0	0	0
64	SLU 63	-0.07	-0.06	5.38	0	0	0
64	SLU 64	-0.05	-0.06	5.05	0	0	0
64	SLU 65	-0.05	-0.05	5.05	0	0	0
64	SLU 66	-0.06	-0.06	5.13	0	0	0
64	SLU 67	-0.06	-0.06	5.12	0	0	0
64	SLU 68	-0.06	-0.05	5.09	0	0	0
64	SLU 69	-0.06	-0.06	5.17	0	0	0
64	SLU 70	-0.06	-0.06	5.16	0	0	0
64	SLU 71	-0.06	-0.06	5.14	0	0	0
64	SLU 72	-0.06	-0.06	5.13	0	0	0
64	SLU 73	-0.06	-0.05	5.57	0	0	0
64	SLU 74	-0.07	-0.06	5.64	0	0	0
64	SLU 75	-0.07	-0.05	5.64	0	0	0
64	SLU 76	-0.07	-0.05	5.61	0	0	0
64	SLU 77	-0.07	-0.06	5.68	0	0	0
64	SLU 78	-0.07	-0.05	5.68	0	0	0
64	SLU 79	-0.07	-0.06	5.65	0	0	0
64	SLU 80	-0.07	-0.05	5.65	0	0	0
64	SLU 81	-0.07	-0.06	5.8	0	0	0
64	SLU 82	-0.07	-0.05	5.79	0	0	0
64	SLU 83	-0.07	-0.06	5.84	0	0	0
64	SLU 84	-0.07	-0.05	5.83	0	0	0
64	SLE RA 1	-0.04	-0.05	3.79	0	0	0
64	SLE RA 2	-0.04	-0.04	3.79	0	0	0
64	SLE RA 3	-0.04	-0.05	3.84	0	0	0
64	SLE RA 4	-0.04	-0.04	3.84	0	0	0
64	SLE RA 5	-0.04	-0.04	3.81	0	0	0
64	SLE RA 6	-0.04	-0.05	3.86	0	0	0
64	SLE RA 7	-0.04	-0.05	3.86	0	0	0
64	SLE RA 8	-0.04	-0.05	3.84	0	0	0
64	SLE RA 9	-0.04	-0.05	3.84	0	0	0
64	SLE RA 10	-0.05	-0.04	4.13	0	0	0
64	SLE RA 11	-0.05	-0.05	4.18	0	0	0
64	SLE RA 12	-0.05	-0.04	4.18	0	0	0
64	SLE RA 13	-0.05	-0.04	4.16	0	0	0
64	SLE RA 14	-0.05	-0.05	4.21	0	0	0
64	SLE RA 15	-0.05	-0.04	4.21	0	0	0
64	SLE RA 16	-0.05	-0.05	4.19	0	0	0
64	SLE RA 17	-0.05	-0.04	4.19	0	0	0
64	SLE RA 18	-0.05	-0.05	4.28	0	0	0
64	SLE RA 19	-0.05	-0.04	4.28	0	0	0
64	SLE RA 20	-0.05	-0.05	4.31	0	0	0
64	SLE RA 21	-0.05	-0.04	4.31	0	0	0
64	SLE FR 1	-0.04	-0.05	3.79	0	0	0
64	SLE FR 2	-0.04	-0.05	3.79	0	0	0
64	SLE FR 3	-0.04	-0.05	3.8	0	0	0
64	SLE FR 4	-0.04	-0.05	3.94	0	0	0
64	SLE FR 5	-0.05	-0.05	3.95	0	0	0
64	SLE FR 6	-0.05	-0.05	4.04	0	0	0
64	SLE QP 1	-0.04	-0.05	3.79	0	0	0
64	SLE QP 2	-0.04	-0.05	3.94	0	0	0
64	SLD 1	0.24	0.01	3.93	0	0	0
64	SLD 2	0.24	0.02	3.93	0	0	0
64	SLD 3	0.22	-0.09	3.99	0	0	0
64	SLD 4	0.22	-0.09	3.99	0	0	0
64	SLD 5	0.06	0.13	3.84	0	0	0
64	SLD 6	0.06	0.13	3.84	0	0	0
64	SLD 7	0.01	-0.22	4.05	0	0	0
64	SLD 8	0.01	-0.22	4.04	0	0	0
64	SLD 9	-0.1	0.13	3.83	0	0	0
64	SLD 10	-0.1	0.13	3.83	0	0	0
64	SLD 11	-0.15	-0.23	4.03	0	0	0
64	SLD 12	-0.15	-0.22	4.03	0	0	0
64	SLD 13	-0.31	-0.01	3.88	0	0	0
64	SLD 14	-0.31	0	3.88	0	0	0
64	SLD 15	-0.33	-0.11	3.94	0	0	0
64	SLD 16	-0.33	-0.11	3.94	0	0	0
64	SLV 1	0.62	0.09	3.93	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
64	SLV 2	0.62	0.1	3.92	0	0	0
64	SLV 3	0.58	-0.15	4.07	0	0	0
64	SLV 4	0.58	-0.14	4.06	0	0	0
64	SLV 5	0.21	0.36	3.73	0	0	0
64	SLV 6	0.21	0.36	3.72	0	0	0
64	SLV 7	0.09	-0.44	4.18	0	0	0
64	SLV 8	0.09	-0.44	4.18	0	0	0
64	SLV 9	-0.18	0.35	3.69	0	0	0
64	SLV 10	-0.18	0.35	3.69	0	0	0
64	SLV 11	-0.3	-0.46	4.15	0	0	0
64	SLV 12	-0.3	-0.45	4.15	0	0	0
64	SLV 13	-0.67	0.05	3.81	0	0	0
64	SLV 14	-0.67	0.06	3.81	0	0	0
64	SLV 15	-0.71	-0.19	3.95	0	0	0
64	SLV 16	-0.71	-0.19	3.94	0	0	0
65	SLU 1	-0.04	-0.04	3.22	0	0	0
65	SLU 2	-0.04	-0.04	3.22	0	0	0
65	SLU 3	-0.04	-0.04	3.28	0	0	0
65	SLU 4	-0.04	-0.04	3.28	0	0	0
65	SLU 5	-0.04	-0.04	3.25	0	0	0
65	SLU 6	-0.04	-0.04	3.32	0	0	0
65	SLU 7	-0.04	-0.04	3.31	0	0	0
65	SLU 8	-0.04	-0.04	3.29	0	0	0
65	SLU 9	-0.04	-0.04	3.29	0	0	0
65	SLU 10	-0.04	-0.04	3.67	0	0	0
65	SLU 11	-0.05	-0.04	3.74	0	0	0
65	SLU 12	-0.05	-0.04	3.74	0	0	0
65	SLU 13	-0.05	-0.04	3.71	0	0	0
65	SLU 14	-0.05	-0.04	3.77	0	0	0
65	SLU 15	-0.05	-0.04	3.77	0	0	0
65	SLU 16	-0.05	-0.04	3.74	0	0	0
65	SLU 17	-0.05	-0.04	3.74	0	0	0
65	SLU 18	-0.05	-0.04	3.87	0	0	0
65	SLU 19	-0.05	-0.04	3.87	0	0	0
65	SLU 20	-0.05	-0.04	3.91	0	0	0
65	SLU 21	-0.05	-0.04	3.9	0	0	0
65	SLU 22	-0.04	-0.04	3.62	0	0	0
65	SLU 23	-0.04	-0.03	3.62	0	0	0
65	SLU 24	-0.04	-0.03	3.68	0	0	0
65	SLU 25	-0.04	-0.03	3.68	0	0	0
65	SLU 26	-0.04	-0.03	3.65	0	0	0
65	SLU 27	-0.04	-0.04	3.72	0	0	0
65	SLU 28	-0.04	-0.03	3.72	0	0	0
65	SLU 29	-0.04	-0.04	3.69	0	0	0
65	SLU 30	-0.04	-0.03	3.69	0	0	0
65	SLU 31	-0.05	-0.03	4.07	0	0	0
65	SLU 32	-0.05	-0.03	4.14	0	0	0
65	SLU 33	-0.05	-0.03	4.14	0	0	0
65	SLU 34	-0.05	-0.03	4.11	0	0	0
65	SLU 35	-0.05	-0.03	4.17	0	0	0
65	SLU 36	-0.05	-0.03	4.17	0	0	0
65	SLU 37	-0.05	-0.03	4.15	0	0	0
65	SLU 38	-0.05	-0.03	4.14	0	0	0
65	SLU 39	-0.05	-0.03	4.27	0	0	0
65	SLU 40	-0.05	-0.03	4.27	0	0	0
65	SLU 41	-0.05	-0.03	4.31	0	0	0
65	SLU 42	-0.05	-0.03	4.3	0	0	0
65	SLU 43	-0.05	-0.06	4.05	0	0	0
65	SLU 44	-0.05	-0.05	4.05	0	0	0
65	SLU 45	-0.05	-0.06	4.11	0	0	0
65	SLU 46	-0.05	-0.06	4.11	0	0	0
65	SLU 47	-0.05	-0.05	4.08	0	0	0
65	SLU 48	-0.05	-0.06	4.14	0	0	0
65	SLU 49	-0.05	-0.06	4.14	0	0	0
65	SLU 50	-0.05	-0.06	4.12	0	0	0
65	SLU 51	-0.05	-0.06	4.12	0	0	0
65	SLU 52	-0.06	-0.05	4.5	0	0	0
65	SLU 53	-0.06	-0.06	4.57	0	0	0
65	SLU 54	-0.06	-0.05	4.56	0	0	0
65	SLU 55	-0.06	-0.05	4.54	0	0	0
65	SLU 56	-0.06	-0.06	4.6	0	0	0
65	SLU 57	-0.06	-0.05	4.6	0	0	0
65	SLU 58	-0.06	-0.06	4.57	0	0	0
65	SLU 59	-0.06	-0.05	4.57	0	0	0
65	SLU 60	-0.06	-0.06	4.7	0	0	0
65	SLU 61	-0.06	-0.05	4.7	0	0	0
65	SLU 62	-0.06	-0.06	4.73	0	0	0
65	SLU 63	-0.06	-0.05	4.73	0	0	0
65	SLU 64	-0.05	-0.05	4.45	0	0	0
65	SLU 65	-0.05	-0.05	4.45	0	0	0
65	SLU 66	-0.05	-0.05	4.51	0	0	0
65	SLU 67	-0.05	-0.05	4.51	0	0	0
65	SLU 68	-0.05	-0.05	4.48	0	0	0
65	SLU 69	-0.05	-0.05	4.55	0	0	0
65	SLU 70	-0.05	-0.05	4.54	0	0	0
65	SLU 71	-0.05	-0.05	4.52	0	0	0
65	SLU 72	-0.05	-0.05	4.52	0	0	0
65	SLU 73	-0.06	-0.04	4.9	0	0	0
65	SLU 74	-0.06	-0.05	4.97	0	0	0
65	SLU 75	-0.06	-0.05	4.96	0	0	0
65	SLU 76	-0.06	-0.04	4.94	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
65	SLU 77	-0.06	-0.05	5	0	0	0
65	SLU 78	-0.06	-0.05	5	0	0	0
65	SLU 79	-0.06	-0.05	4.97	0	0	0
65	SLU 80	-0.06	-0.05	4.97	0	0	0
65	SLU 81	-0.06	-0.05	5.1	0	0	0
65	SLU 82	-0.06	-0.05	5.1	0	0	0
65	SLU 83	-0.06	-0.05	5.13	0	0	0
65	SLU 84	-0.06	-0.05	5.13	0	0	0
65	SLE RA 1	-0.04	-0.04	3.33	0	0	0
65	SLE RA 2	-0.04	-0.04	3.33	0	0	0
65	SLE RA 3	-0.04	-0.04	3.37	0	0	0
65	SLE RA 4	-0.04	-0.04	3.37	0	0	0
65	SLE RA 5	-0.04	-0.04	3.36	0	0	0
65	SLE RA 6	-0.04	-0.04	3.4	0	0	0
65	SLE RA 7	-0.04	-0.04	3.4	0	0	0
65	SLE RA 8	-0.04	-0.04	3.38	0	0	0
65	SLE RA 9	-0.04	-0.04	3.38	0	0	0
65	SLE RA 10	-0.04	-0.04	3.64	0	0	0
65	SLE RA 11	-0.04	-0.04	3.68	0	0	0
65	SLE RA 12	-0.04	-0.04	3.68	0	0	0
65	SLE RA 13	-0.04	-0.04	3.66	0	0	0
65	SLE RA 14	-0.04	-0.04	3.7	0	0	0
65	SLE RA 15	-0.04	-0.04	3.7	0	0	0
65	SLE RA 16	-0.05	-0.04	3.68	0	0	0
65	SLE RA 17	-0.05	-0.04	3.68	0	0	0
65	SLE RA 18	-0.05	-0.04	3.77	0	0	0
65	SLE RA 19	-0.04	-0.04	3.77	0	0	0
65	SLE RA 20	-0.05	-0.04	3.79	0	0	0
65	SLE RA 21	-0.05	-0.04	3.79	0	0	0
65	SLE FR 1	-0.04	-0.04	3.33	0	0	0
65	SLE FR 2	-0.04	-0.04	3.33	0	0	0
65	SLE FR 3	-0.04	-0.04	3.34	0	0	0
65	SLE FR 4	-0.04	-0.04	3.46	0	0	0
65	SLE FR 5	-0.04	-0.04	3.47	0	0	0
65	SLE FR 6	-0.04	-0.04	3.55	0	0	0
65	SLE QP 1	-0.04	-0.04	3.33	0	0	0
65	SLE QP 2	-0.04	-0.04	3.46	0	0	0
65	SLD 1	0.21	0.01	3.42	0	0	0
65	SLD 2	0.21	0.02	3.42	0	0	0
65	SLD 3	0.2	-0.08	3.47	0	0	0
65	SLD 4	0.2	-0.08	3.47	0	0	0
65	SLD 5	0.06	0.12	3.38	0	0	0
65	SLD 6	0.06	0.12	3.38	0	0	0
65	SLD 7	0.01	-0.19	3.54	0	0	0
65	SLD 8	0.01	-0.19	3.54	0	0	0
65	SLD 9	-0.09	0.11	3.39	0	0	0
65	SLD 10	-0.09	0.11	3.39	0	0	0
65	SLD 11	-0.13	-0.2	3.55	0	0	0
65	SLD 12	-0.14	-0.2	3.55	0	0	0
65	SLD 13	-0.28	0	3.46	0	0	0
65	SLD 14	-0.28	0	3.46	0	0	0
65	SLD 15	-0.29	-0.1	3.51	0	0	0
65	SLD 16	-0.29	-0.09	3.5	0	0	0
65	SLV 1	0.55	0.08	3.37	0	0	0
65	SLV 2	0.55	0.09	3.36	0	0	0
65	SLV 3	0.52	-0.13	3.48	0	0	0
65	SLV 4	0.52	-0.12	3.48	0	0	0
65	SLV 5	0.18	0.32	3.27	0	0	0
65	SLV 6	0.18	0.32	3.26	0	0	0
65	SLV 7	0.08	-0.39	3.64	0	0	0
65	SLV 8	0.08	-0.39	3.64	0	0	0
65	SLV 9	-0.16	0.3	3.29	0	0	0
65	SLV 10	-0.16	0.31	3.29	0	0	0
65	SLV 11	-0.26	-0.4	3.67	0	0	0
65	SLV 12	-0.26	-0.4	3.66	0	0	0
65	SLV 13	-0.59	0.04	3.45	0	0	0
65	SLV 14	-0.6	0.05	3.45	0	0	0
65	SLV 15	-0.62	-0.17	3.56	0	0	0
65	SLV 16	-0.63	-0.16	3.56	0	0	0
66	SLU 1	-0.04	-0.04	3.2	0	0	0
66	SLU 2	-0.04	-0.04	3.19	0	0	0
66	SLU 3	-0.04	-0.04	3.26	0	0	0
66	SLU 4	-0.04	-0.04	3.26	0	0	0
66	SLU 5	-0.04	-0.04	3.23	0	0	0
66	SLU 6	-0.04	-0.04	3.29	0	0	0
66	SLU 7	-0.04	-0.04	3.29	0	0	0
66	SLU 8	-0.04	-0.04	3.26	0	0	0
66	SLU 9	-0.04	-0.04	3.26	0	0	0
66	SLU 10	-0.04	-0.04	3.65	0	0	0
66	SLU 11	-0.05	-0.04	3.71	0	0	0
66	SLU 12	-0.05	-0.04	3.71	0	0	0
66	SLU 13	-0.05	-0.04	3.68	0	0	0
66	SLU 14	-0.05	-0.04	3.74	0	0	0
66	SLU 15	-0.05	-0.04	3.74	0	0	0
66	SLU 16	-0.05	-0.04	3.72	0	0	0
66	SLU 17	-0.05	-0.04	3.71	0	0	0
66	SLU 18	-0.05	-0.04	3.84	0	0	0
66	SLU 19	-0.05	-0.04	3.84	0	0	0
66	SLU 20	-0.05	-0.04	3.87	0	0	0
66	SLU 21	-0.05	-0.04	3.87	0	0	0
66	SLU 22	-0.04	-0.03	3.59	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
66	SLU 23	-0.04	-0.03	3.59	0	0	0
66	SLU 24	-0.04	-0.03	3.66	0	0	0
66	SLU 25	-0.04	-0.03	3.65	0	0	0
66	SLU 26	-0.04	-0.03	3.63	0	0	0
66	SLU 27	-0.04	-0.03	3.69	0	0	0
66	SLU 28	-0.04	-0.03	3.69	0	0	0
66	SLU 29	-0.04	-0.04	3.66	0	0	0
66	SLU 30	-0.04	-0.03	3.66	0	0	0
66	SLU 31	-0.05	-0.03	4.05	0	0	0
66	SLU 32	-0.05	-0.03	4.11	0	0	0
66	SLU 33	-0.05	-0.03	4.11	0	0	0
66	SLU 34	-0.05	-0.03	4.08	0	0	0
66	SLU 35	-0.05	-0.03	4.14	0	0	0
66	SLU 36	-0.05	-0.03	4.14	0	0	0
66	SLU 37	-0.05	-0.03	4.11	0	0	0
66	SLU 38	-0.05	-0.03	4.11	0	0	0
66	SLU 39	-0.05	-0.03	4.24	0	0	0
66	SLU 40	-0.05	-0.03	4.24	0	0	0
66	SLU 41	-0.05	-0.03	4.27	0	0	0
66	SLU 42	-0.05	-0.03	4.27	0	0	0
66	SLU 43	-0.05	-0.06	4.02	0	0	0
66	SLU 44	-0.05	-0.05	4.01	0	0	0
66	SLU 45	-0.05	-0.06	4.08	0	0	0
66	SLU 46	-0.05	-0.05	4.08	0	0	0
66	SLU 47	-0.05	-0.05	4.05	0	0	0
66	SLU 48	-0.05	-0.06	4.11	0	0	0
66	SLU 49	-0.05	-0.05	4.11	0	0	0
66	SLU 50	-0.05	-0.06	4.08	0	0	0
66	SLU 51	-0.05	-0.06	4.08	0	0	0
66	SLU 52	-0.06	-0.05	4.47	0	0	0
66	SLU 53	-0.06	-0.05	4.53	0	0	0
66	SLU 54	-0.06	-0.05	4.53	0	0	0
66	SLU 55	-0.06	-0.05	4.5	0	0	0
66	SLU 56	-0.06	-0.05	4.56	0	0	0
66	SLU 57	-0.06	-0.05	4.56	0	0	0
66	SLU 58	-0.06	-0.06	4.54	0	0	0
66	SLU 59	-0.06	-0.05	4.54	0	0	0
66	SLU 60	-0.06	-0.05	4.66	0	0	0
66	SLU 61	-0.06	-0.05	4.66	0	0	0
66	SLU 62	-0.06	-0.05	4.7	0	0	0
66	SLU 63	-0.06	-0.05	4.7	0	0	0
66	SLU 64	-0.05	-0.05	4.42	0	0	0
66	SLU 65	-0.05	-0.05	4.41	0	0	0
66	SLU 66	-0.05	-0.05	4.48	0	0	0
66	SLU 67	-0.05	-0.05	4.48	0	0	0
66	SLU 68	-0.05	-0.05	4.45	0	0	0
66	SLU 69	-0.05	-0.05	4.51	0	0	0
66	SLU 70	-0.05	-0.05	4.51	0	0	0
66	SLU 71	-0.05	-0.05	4.48	0	0	0
66	SLU 72	-0.05	-0.05	4.48	0	0	0
66	SLU 73	-0.06	-0.04	4.87	0	0	0
66	SLU 74	-0.06	-0.05	4.93	0	0	0
66	SLU 75	-0.06	-0.04	4.93	0	0	0
66	SLU 76	-0.06	-0.04	4.9	0	0	0
66	SLU 77	-0.06	-0.05	4.96	0	0	0
66	SLU 78	-0.06	-0.04	4.96	0	0	0
66	SLU 79	-0.06	-0.05	4.94	0	0	0
66	SLU 80	-0.06	-0.05	4.94	0	0	0
66	SLU 81	-0.06	-0.05	5.06	0	0	0
66	SLU 82	-0.06	-0.04	5.06	0	0	0
66	SLU 83	-0.06	-0.05	5.1	0	0	0
66	SLU 84	-0.06	-0.04	5.1	0	0	0
66	SLE RA 1	-0.04	-0.04	3.31	0	0	0
66	SLE RA 2	-0.04	-0.04	3.31	0	0	0
66	SLE RA 3	-0.04	-0.04	3.35	0	0	0
66	SLE RA 4	-0.04	-0.04	3.35	0	0	0
66	SLE RA 5	-0.04	-0.04	3.33	0	0	0
66	SLE RA 6	-0.04	-0.04	3.37	0	0	0
66	SLE RA 7	-0.04	-0.04	3.37	0	0	0
66	SLE RA 8	-0.04	-0.04	3.35	0	0	0
66	SLE RA 9	-0.04	-0.04	3.35	0	0	0
66	SLE RA 10	-0.04	-0.04	3.61	0	0	0
66	SLE RA 11	-0.04	-0.04	3.65	0	0	0
66	SLE RA 12	-0.04	-0.04	3.65	0	0	0
66	SLE RA 13	-0.04	-0.04	3.63	0	0	0
66	SLE RA 14	-0.04	-0.04	3.67	0	0	0
66	SLE RA 15	-0.04	-0.04	3.67	0	0	0
66	SLE RA 16	-0.05	-0.04	3.66	0	0	0
66	SLE RA 17	-0.05	-0.04	3.66	0	0	0
66	SLE RA 18	-0.05	-0.04	3.74	0	0	0
66	SLE RA 19	-0.04	-0.04	3.74	0	0	0
66	SLE RA 20	-0.05	-0.04	3.76	0	0	0
66	SLE RA 21	-0.05	-0.04	3.76	0	0	0
66	SLE FR 1	-0.04	-0.04	3.31	0	0	0
66	SLE FR 2	-0.04	-0.04	3.31	0	0	0
66	SLE FR 3	-0.04	-0.04	3.32	0	0	0
66	SLE FR 4	-0.04	-0.04	3.44	0	0	0
66	SLE FR 5	-0.04	-0.04	3.45	0	0	0
66	SLE FR 6	-0.04	-0.04	3.52	0	0	0
66	SLE QP 1	-0.04	-0.04	3.31	0	0	0
66	SLE QP 2	-0.04	-0.04	3.44	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
66	SLD 1	0.21	0.01	3.39	0	0	0
66	SLD 2	0.21	0.02	3.39	0	0	0
66	SLD 3	0.2	-0.08	3.44	0	0	0
66	SLD 4	0.2	-0.08	3.43	0	0	0
66	SLD 5	0.06	0.12	3.36	0	0	0
66	SLD 6	0.06	0.12	3.35	0	0	0
66	SLD 7	0.01	-0.19	3.51	0	0	0
66	SLD 8	0.01	-0.19	3.51	0	0	0
66	SLD 9	-0.09	0.11	3.37	0	0	0
66	SLD 10	-0.09	0.11	3.37	0	0	0
66	SLD 11	-0.13	-0.2	3.52	0	0	0
66	SLD 12	-0.14	-0.19	3.52	0	0	0
66	SLD 13	-0.28	0	3.44	0	0	0
66	SLD 14	-0.28	0	3.44	0	0	0
66	SLD 15	-0.29	-0.1	3.49	0	0	0
66	SLD 16	-0.29	-0.09	3.49	0	0	0
66	SLV 1	0.55	0.08	3.33	0	0	0
66	SLV 2	0.55	0.09	3.32	0	0	0
66	SLV 3	0.52	-0.13	3.43	0	0	0
66	SLV 4	0.52	-0.12	3.42	0	0	0
66	SLV 5	0.18	0.31	3.25	0	0	0
66	SLV 6	0.18	0.32	3.25	0	0	0
66	SLV 7	0.08	-0.39	3.59	0	0	0
66	SLV 8	0.08	-0.38	3.59	0	0	0
66	SLV 9	-0.16	0.3	3.29	0	0	0
66	SLV 10	-0.16	0.31	3.28	0	0	0
66	SLV 11	-0.26	-0.4	3.63	0	0	0
66	SLV 12	-0.26	-0.39	3.63	0	0	0
66	SLV 13	-0.59	0.04	3.45	0	0	0
66	SLV 14	-0.6	0.05	3.45	0	0	0
66	SLV 15	-0.62	-0.17	3.56	0	0	0
66	SLV 16	-0.63	-0.16	3.55	0	0	0
67	SLU 1	-0.04	-0.04	3.17	0	0	0
67	SLU 2	-0.04	-0.04	3.17	0	0	0
67	SLU 3	-0.04	-0.04	3.23	0	0	0
67	SLU 4	-0.04	-0.04	3.23	0	0	0
67	SLU 5	-0.04	-0.04	3.2	0	0	0
67	SLU 6	-0.04	-0.04	3.26	0	0	0
67	SLU 7	-0.04	-0.04	3.26	0	0	0
67	SLU 8	-0.04	-0.04	3.24	0	0	0
67	SLU 9	-0.04	-0.04	3.24	0	0	0
67	SLU 10	-0.04	-0.03	3.62	0	0	0
67	SLU 11	-0.05	-0.04	3.68	0	0	0
67	SLU 12	-0.05	-0.04	3.68	0	0	0
67	SLU 13	-0.05	-0.03	3.65	0	0	0
67	SLU 14	-0.05	-0.04	3.71	0	0	0
67	SLU 15	-0.05	-0.04	3.71	0	0	0
67	SLU 16	-0.05	-0.04	3.68	0	0	0
67	SLU 17	-0.05	-0.04	3.68	0	0	0
67	SLU 18	-0.05	-0.04	3.81	0	0	0
67	SLU 19	-0.05	-0.04	3.81	0	0	0
67	SLU 20	-0.05	-0.04	3.84	0	0	0
67	SLU 21	-0.05	-0.04	3.84	0	0	0
67	SLU 22	-0.04	-0.03	3.57	0	0	0
67	SLU 23	-0.04	-0.03	3.57	0	0	0
67	SLU 24	-0.04	-0.03	3.63	0	0	0
67	SLU 25	-0.04	-0.03	3.63	0	0	0
67	SLU 26	-0.04	-0.03	3.6	0	0	0
67	SLU 27	-0.04	-0.03	3.66	0	0	0
67	SLU 28	-0.04	-0.03	3.66	0	0	0
67	SLU 29	-0.04	-0.03	3.64	0	0	0
67	SLU 30	-0.04	-0.03	3.63	0	0	0
67	SLU 31	-0.05	-0.03	4.02	0	0	0
67	SLU 32	-0.05	-0.03	4.08	0	0	0
67	SLU 33	-0.05	-0.03	4.08	0	0	0
67	SLU 34	-0.05	-0.03	4.05	0	0	0
67	SLU 35	-0.05	-0.03	4.11	0	0	0
67	SLU 36	-0.05	-0.03	4.11	0	0	0
67	SLU 37	-0.05	-0.03	4.08	0	0	0
67	SLU 38	-0.05	-0.03	4.08	0	0	0
67	SLU 39	-0.05	-0.03	4.21	0	0	0
67	SLU 40	-0.05	-0.03	4.21	0	0	0
67	SLU 41	-0.05	-0.03	4.24	0	0	0
67	SLU 42	-0.05	-0.03	4.24	0	0	0
67	SLU 43	-0.05	-0.06	3.98	0	0	0
67	SLU 44	-0.05	-0.05	3.98	0	0	0
67	SLU 45	-0.05	-0.05	4.05	0	0	0
67	SLU 46	-0.05	-0.05	4.04	0	0	0
67	SLU 47	-0.05	-0.05	4.02	0	0	0
67	SLU 48	-0.05	-0.06	4.08	0	0	0
67	SLU 49	-0.05	-0.05	4.08	0	0	0
67	SLU 50	-0.05	-0.06	4.05	0	0	0
67	SLU 51	-0.05	-0.05	4.05	0	0	0
67	SLU 52	-0.06	-0.05	4.43	0	0	0
67	SLU 53	-0.06	-0.05	4.49	0	0	0
67	SLU 54	-0.06	-0.05	4.49	0	0	0
67	SLU 55	-0.06	-0.05	4.46	0	0	0
67	SLU 56	-0.06	-0.05	4.53	0	0	0
67	SLU 57	-0.06	-0.05	4.53	0	0	0
67	SLU 58	-0.06	-0.05	4.5	0	0	0
67	SLU 59	-0.06	-0.05	4.5	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
67	SLU 60	-0.06	-0.05	4.63	0	0	0
67	SLU 61	-0.06	-0.05	4.62	0	0	0
67	SLU 62	-0.06	-0.05	4.66	0	0	0
67	SLU 63	-0.06	-0.05	4.66	0	0	0
67	SLU 64	-0.05	-0.05	4.38	0	0	0
67	SLU 65	-0.05	-0.04	4.38	0	0	0
67	SLU 66	-0.05	-0.05	4.44	0	0	0
67	SLU 67	-0.05	-0.04	4.44	0	0	0
67	SLU 68	-0.05	-0.04	4.42	0	0	0
67	SLU 69	-0.05	-0.05	4.48	0	0	0
67	SLU 70	-0.05	-0.05	4.48	0	0	0
67	SLU 71	-0.05	-0.05	4.45	0	0	0
67	SLU 72	-0.05	-0.05	4.45	0	0	0
67	SLU 73	-0.06	-0.04	4.83	0	0	0
67	SLU 74	-0.06	-0.05	4.89	0	0	0
67	SLU 75	-0.06	-0.04	4.89	0	0	0
67	SLU 76	-0.06	-0.04	4.86	0	0	0
67	SLU 77	-0.06	-0.05	4.93	0	0	0
67	SLU 78	-0.06	-0.04	4.92	0	0	0
67	SLU 79	-0.06	-0.05	4.9	0	0	0
67	SLU 80	-0.06	-0.04	4.9	0	0	0
67	SLU 81	-0.06	-0.05	5.02	0	0	0
67	SLU 82	-0.06	-0.04	5.02	0	0	0
67	SLU 83	-0.06	-0.05	5.06	0	0	0
67	SLU 84	-0.06	-0.04	5.06	0	0	0
67	SLE RA 1	-0.04	-0.04	3.28	0	0	0
67	SLE RA 2	-0.04	-0.04	3.28	0	0	0
67	SLE RA 3	-0.04	-0.04	3.32	0	0	0
67	SLE RA 4	-0.04	-0.04	3.32	0	0	0
67	SLE RA 5	-0.04	-0.04	3.31	0	0	0
67	SLE RA 6	-0.04	-0.04	3.35	0	0	0
67	SLE RA 7	-0.04	-0.04	3.35	0	0	0
67	SLE RA 8	-0.04	-0.04	3.33	0	0	0
67	SLE RA 9	-0.04	-0.04	3.33	0	0	0
67	SLE RA 10	-0.04	-0.03	3.58	0	0	0
67	SLE RA 11	-0.04	-0.04	3.62	0	0	0
67	SLE RA 12	-0.04	-0.03	3.62	0	0	0
67	SLE RA 13	-0.04	-0.03	3.6	0	0	0
67	SLE RA 14	-0.04	-0.04	3.65	0	0	0
67	SLE RA 15	-0.04	-0.04	3.64	0	0	0
67	SLE RA 16	-0.05	-0.04	3.63	0	0	0
67	SLE RA 17	-0.05	-0.04	3.63	0	0	0
67	SLE RA 18	-0.05	-0.04	3.71	0	0	0
67	SLE RA 19	-0.04	-0.03	3.71	0	0	0
67	SLE RA 20	-0.05	-0.04	3.73	0	0	0
67	SLE RA 21	-0.05	-0.04	3.73	0	0	0
67	SLE FR 1	-0.04	-0.04	3.28	0	0	0
67	SLE FR 2	-0.04	-0.04	3.28	0	0	0
67	SLE FR 3	-0.04	-0.04	3.29	0	0	0
67	SLE FR 4	-0.04	-0.04	3.41	0	0	0
67	SLE FR 5	-0.04	-0.04	3.42	0	0	0
67	SLE FR 6	-0.04	-0.04	3.5	0	0	0
67	SLE QP 1	-0.04	-0.04	3.28	0	0	0
67	SLE QP 2	-0.04	-0.04	3.41	0	0	0
67	SLD 1	0.21	0.01	3.35	0	0	0
67	SLD 2	0.21	0.02	3.35	0	0	0
67	SLD 3	0.2	-0.08	3.39	0	0	0
67	SLD 4	0.2	-0.07	3.39	0	0	0
67	SLD 5	0.06	0.12	3.33	0	0	0
67	SLD 6	0.06	0.12	3.33	0	0	0
67	SLD 7	0.01	-0.19	3.47	0	0	0
67	SLD 8	0.01	-0.19	3.47	0	0	0
67	SLD 9	-0.09	0.11	3.36	0	0	0
67	SLD 10	-0.09	0.12	3.35	0	0	0
67	SLD 11	-0.13	-0.2	3.5	0	0	0
67	SLD 12	-0.14	-0.19	3.49	0	0	0
67	SLD 13	-0.28	0	3.43	0	0	0
67	SLD 14	-0.28	0	3.43	0	0	0
67	SLD 15	-0.29	-0.09	3.48	0	0	0
67	SLD 16	-0.29	-0.09	3.47	0	0	0
67	SLV 1	0.55	0.08	3.27	0	0	0
67	SLV 2	0.55	0.09	3.26	0	0	0
67	SLV 3	0.52	-0.13	3.36	0	0	0
67	SLV 4	0.52	-0.12	3.36	0	0	0
67	SLV 5	0.18	0.31	3.22	0	0	0
67	SLV 6	0.18	0.32	3.22	0	0	0
67	SLV 7	0.08	-0.39	3.54	0	0	0
67	SLV 8	0.08	-0.38	3.54	0	0	0
67	SLV 9	-0.16	0.3	3.28	0	0	0
67	SLV 10	-0.16	0.31	3.28	0	0	0
67	SLV 11	-0.26	-0.4	3.6	0	0	0
67	SLV 12	-0.26	-0.39	3.6	0	0	0
67	SLV 13	-0.59	0.04	3.47	0	0	0
67	SLV 14	-0.6	0.06	3.46	0	0	0
67	SLV 15	-0.62	-0.17	3.56	0	0	0
67	SLV 16	-0.63	-0.15	3.56	0	0	0
68	SLU 1	-0.04	-0.04	3.15	0	0	0
68	SLU 2	-0.04	-0.04	3.14	0	0	0
68	SLU 3	-0.04	-0.04	3.2	0	0	0
68	SLU 4	-0.04	-0.04	3.2	0	0	0
68	SLU 5	-0.04	-0.04	3.18	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
68	SLU 6	-0.04	-0.04	3.24	0	0	0
68	SLU 7	-0.04	-0.04	3.24	0	0	0
68	SLU 8	-0.04	-0.04	3.21	0	0	0
68	SLU 9	-0.04	-0.04	3.21	0	0	0
68	SLU 10	-0.04	-0.03	3.59	0	0	0
68	SLU 11	-0.05	-0.04	3.65	0	0	0
68	SLU 12	-0.05	-0.03	3.65	0	0	0
68	SLU 13	-0.05	-0.03	3.62	0	0	0
68	SLU 14	-0.05	-0.04	3.68	0	0	0
68	SLU 15	-0.05	-0.03	3.68	0	0	0
68	SLU 16	-0.05	-0.04	3.65	0	0	0
68	SLU 17	-0.05	-0.04	3.65	0	0	0
68	SLU 18	-0.05	-0.04	3.78	0	0	0
68	SLU 19	-0.05	-0.03	3.78	0	0	0
68	SLU 20	-0.05	-0.04	3.81	0	0	0
68	SLU 21	-0.05	-0.03	3.81	0	0	0
68	SLU 22	-0.04	-0.03	3.54	0	0	0
68	SLU 23	-0.04	-0.03	3.54	0	0	0
68	SLU 24	-0.04	-0.03	3.6	0	0	0
68	SLU 25	-0.04	-0.03	3.6	0	0	0
68	SLU 26	-0.04	-0.03	3.57	0	0	0
68	SLU 27	-0.04	-0.03	3.63	0	0	0
68	SLU 28	-0.04	-0.03	3.63	0	0	0
68	SLU 29	-0.04	-0.03	3.61	0	0	0
68	SLU 30	-0.04	-0.03	3.61	0	0	0
68	SLU 31	-0.05	-0.03	3.99	0	0	0
68	SLU 32	-0.05	-0.03	4.05	0	0	0
68	SLU 33	-0.05	-0.03	4.05	0	0	0
68	SLU 34	-0.05	-0.03	4.02	0	0	0
68	SLU 35	-0.05	-0.03	4.08	0	0	0
68	SLU 36	-0.05	-0.03	4.08	0	0	0
68	SLU 37	-0.05	-0.03	4.05	0	0	0
68	SLU 38	-0.05	-0.03	4.05	0	0	0
68	SLU 39	-0.05	-0.03	4.18	0	0	0
68	SLU 40	-0.05	-0.03	4.18	0	0	0
68	SLU 41	-0.05	-0.03	4.21	0	0	0
68	SLU 42	-0.05	-0.03	4.21	0	0	0
68	SLU 43	-0.05	-0.05	3.95	0	0	0
68	SLU 44	-0.05	-0.05	3.95	0	0	0
68	SLU 45	-0.05	-0.05	4.01	0	0	0
68	SLU 46	-0.05	-0.05	4.01	0	0	0
68	SLU 47	-0.05	-0.05	3.98	0	0	0
68	SLU 48	-0.05	-0.05	4.04	0	0	0
68	SLU 49	-0.05	-0.05	4.04	0	0	0
68	SLU 50	-0.05	-0.05	4.02	0	0	0
68	SLU 51	-0.05	-0.05	4.02	0	0	0
68	SLU 52	-0.06	-0.05	4.4	0	0	0
68	SLU 53	-0.06	-0.05	4.46	0	0	0
68	SLU 54	-0.06	-0.05	4.46	0	0	0
68	SLU 55	-0.06	-0.05	4.43	0	0	0
68	SLU 56	-0.06	-0.05	4.49	0	0	0
68	SLU 57	-0.06	-0.05	4.49	0	0	0
68	SLU 58	-0.06	-0.05	4.46	0	0	0
68	SLU 59	-0.06	-0.05	4.46	0	0	0
68	SLU 60	-0.06	-0.05	4.59	0	0	0
68	SLU 61	-0.06	-0.05	4.59	0	0	0
68	SLU 62	-0.06	-0.05	4.62	0	0	0
68	SLU 63	-0.06	-0.05	4.62	0	0	0
68	SLU 64	-0.05	-0.05	4.35	0	0	0
68	SLU 65	-0.05	-0.04	4.35	0	0	0
68	SLU 66	-0.05	-0.05	4.41	0	0	0
68	SLU 67	-0.05	-0.04	4.41	0	0	0
68	SLU 68	-0.05	-0.04	4.38	0	0	0
68	SLU 69	-0.05	-0.05	4.44	0	0	0
68	SLU 70	-0.05	-0.04	4.44	0	0	0
68	SLU 71	-0.05	-0.05	4.41	0	0	0
68	SLU 72	-0.05	-0.04	4.41	0	0	0
68	SLU 73	-0.06	-0.04	4.79	0	0	0
68	SLU 74	-0.06	-0.04	4.85	0	0	0
68	SLU 75	-0.06	-0.04	4.85	0	0	0
68	SLU 76	-0.06	-0.04	4.83	0	0	0
68	SLU 77	-0.06	-0.04	4.89	0	0	0
68	SLU 78	-0.06	-0.04	4.89	0	0	0
68	SLU 79	-0.06	-0.05	4.86	0	0	0
68	SLU 80	-0.06	-0.04	4.86	0	0	0
68	SLU 81	-0.06	-0.04	4.99	0	0	0
68	SLU 82	-0.06	-0.04	4.98	0	0	0
68	SLU 83	-0.06	-0.04	5.02	0	0	0
68	SLU 84	-0.06	-0.04	5.02	0	0	0
68	SLE RA 1	-0.04	-0.04	3.26	0	0	0
68	SLE RA 2	-0.04	-0.03	3.26	0	0	0
68	SLE RA 3	-0.04	-0.04	3.3	0	0	0
68	SLE RA 4	-0.04	-0.04	3.3	0	0	0
68	SLE RA 5	-0.04	-0.03	3.28	0	0	0
68	SLE RA 6	-0.04	-0.04	3.32	0	0	0
68	SLE RA 7	-0.04	-0.04	3.32	0	0	0
68	SLE RA 8	-0.04	-0.04	3.3	0	0	0
68	SLE RA 9	-0.04	-0.04	3.3	0	0	0
68	SLE RA 10	-0.04	-0.03	3.55	0	0	0
68	SLE RA 11	-0.04	-0.04	3.6	0	0	0
68	SLE RA 12	-0.04	-0.03	3.59	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
68	SLE RA 13	-0.04	-0.03	3.58	0	0	0
68	SLE RA 14	-0.04	-0.04	3.62	0	0	0
68	SLE RA 15	-0.04	-0.03	3.62	0	0	0
68	SLE RA 16	-0.05	-0.04	3.6	0	0	0
68	SLE RA 17	-0.05	-0.03	3.6	0	0	0
68	SLE RA 18	-0.05	-0.04	3.68	0	0	0
68	SLE RA 19	-0.04	-0.03	3.68	0	0	0
68	SLE RA 20	-0.05	-0.04	3.7	0	0	0
68	SLE RA 21	-0.05	-0.03	3.7	0	0	0
68	SLE FR 1	-0.04	-0.04	3.26	0	0	0
68	SLE FR 2	-0.04	-0.04	3.26	0	0	0
68	SLE FR 3	-0.04	-0.04	3.27	0	0	0
68	SLE FR 4	-0.04	-0.04	3.39	0	0	0
68	SLE FR 5	-0.04	-0.04	3.39	0	0	0
68	SLE FR 6	-0.04	-0.04	3.47	0	0	0
68	SLE QP 1	-0.04	-0.04	3.26	0	0	0
68	SLE QP 2	-0.04	-0.04	3.39	0	0	0
68	SLD 1	0.21	0	3.31	0	0	0
68	SLD 2	0.21	0	3.31	0	0	0
68	SLD 3	0.2	-0.09	3.35	0	0	0
68	SLD 4	0.2	-0.09	3.35	0	0	0
68	SLD 5	0.06	0.11	3.3	0	0	0
68	SLD 6	0.06	0.12	3.3	0	0	0
68	SLD 7	0.01	-0.19	3.43	0	0	0
68	SLD 8	0.01	-0.19	3.43	0	0	0
68	SLD 9	-0.09	0.12	3.34	0	0	0
68	SLD 10	-0.09	0.12	3.34	0	0	0
68	SLD 11	-0.13	-0.19	3.47	0	0	0
68	SLD 12	-0.13	-0.19	3.47	0	0	0
68	SLD 13	-0.28	0.01	3.43	0	0	0
68	SLD 14	-0.28	0.02	3.42	0	0	0
68	SLD 15	-0.29	-0.08	3.47	0	0	0
68	SLD 16	-0.29	-0.07	3.46	0	0	0
68	SLV 1	0.55	0.04	3.21	0	0	0
68	SLV 2	0.55	0.06	3.2	0	0	0
68	SLV 3	0.52	-0.17	3.3	0	0	0
68	SLV 4	0.52	-0.15	3.29	0	0	0
68	SLV 5	0.18	0.3	3.2	0	0	0
68	SLV 6	0.18	0.31	3.19	0	0	0
68	SLV 7	0.08	-0.4	3.5	0	0	0
68	SLV 8	0.08	-0.39	3.49	0	0	0
68	SLV 9	-0.16	0.31	3.28	0	0	0
68	SLV 10	-0.16	0.32	3.28	0	0	0
68	SLV 11	-0.26	-0.39	3.58	0	0	0
68	SLV 12	-0.26	-0.38	3.57	0	0	0
68	SLV 13	-0.59	0.08	3.48	0	0	0
68	SLV 14	-0.6	0.09	3.48	0	0	0
68	SLV 15	-0.62	-0.13	3.57	0	0	0
68	SLV 16	-0.63	-0.12	3.56	0	0	0
69	SLU 1	-0.04	-0.04	3.52	0	0	0
69	SLU 2	-0.04	-0.04	3.52	0	0	0
69	SLU 3	-0.04	-0.04	3.59	0	0	0
69	SLU 4	-0.04	-0.04	3.59	0	0	0
69	SLU 5	-0.04	-0.04	3.56	0	0	0
69	SLU 6	-0.05	-0.04	3.62	0	0	0
69	SLU 7	-0.05	-0.04	3.62	0	0	0
69	SLU 8	-0.05	-0.04	3.59	0	0	0
69	SLU 9	-0.05	-0.04	3.59	0	0	0
69	SLU 10	-0.05	-0.04	4.02	0	0	0
69	SLU 11	-0.05	-0.04	4.08	0	0	0
69	SLU 12	-0.05	-0.04	4.08	0	0	0
69	SLU 13	-0.05	-0.04	4.05	0	0	0
69	SLU 14	-0.05	-0.04	4.12	0	0	0
69	SLU 15	-0.05	-0.04	4.12	0	0	0
69	SLU 16	-0.06	-0.04	4.09	0	0	0
69	SLU 17	-0.06	-0.04	4.09	0	0	0
69	SLU 18	-0.05	-0.04	4.23	0	0	0
69	SLU 19	-0.05	-0.04	4.23	0	0	0
69	SLU 20	-0.06	-0.04	4.27	0	0	0
69	SLU 21	-0.06	-0.04	4.27	0	0	0
69	SLU 22	-0.04	-0.04	3.97	0	0	0
69	SLU 23	-0.04	-0.03	3.97	0	0	0
69	SLU 24	-0.04	-0.03	4.04	0	0	0
69	SLU 25	-0.04	-0.03	4.03	0	0	0
69	SLU 26	-0.04	-0.03	4	0	0	0
69	SLU 27	-0.05	-0.03	4.07	0	0	0
69	SLU 28	-0.05	-0.03	4.07	0	0	0
69	SLU 29	-0.05	-0.04	4.04	0	0	0
69	SLU 30	-0.05	-0.03	4.04	0	0	0
69	SLU 31	-0.05	-0.03	4.46	0	0	0
69	SLU 32	-0.05	-0.03	4.53	0	0	0
69	SLU 33	-0.05	-0.03	4.53	0	0	0
69	SLU 34	-0.05	-0.03	4.5	0	0	0
69	SLU 35	-0.06	-0.03	4.57	0	0	0
69	SLU 36	-0.06	-0.03	4.57	0	0	0
69	SLU 37	-0.06	-0.03	4.54	0	0	0
69	SLU 38	-0.06	-0.03	4.54	0	0	0
69	SLU 39	-0.06	-0.03	4.68	0	0	0
69	SLU 40	-0.06	-0.03	4.68	0	0	0
69	SLU 41	-0.06	-0.03	4.71	0	0	0
69	SLU 42	-0.06	-0.03	4.71	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
69	SLU 43	-0.05	-0.06	4.42	0	0	0
69	SLU 44	-0.05	-0.05	4.42	0	0	0
69	SLU 45	-0.06	-0.06	4.49	0	0	0
69	SLU 46	-0.05	-0.06	4.49	0	0	0
69	SLU 47	-0.06	-0.06	4.46	0	0	0
69	SLU 48	-0.06	-0.06	4.53	0	0	0
69	SLU 49	-0.06	-0.06	4.53	0	0	0
69	SLU 50	-0.06	-0.06	4.49	0	0	0
69	SLU 51	-0.06	-0.06	4.49	0	0	0
69	SLU 52	-0.06	-0.05	4.92	0	0	0
69	SLU 53	-0.06	-0.06	4.99	0	0	0
69	SLU 54	-0.06	-0.05	4.99	0	0	0
69	SLU 55	-0.06	-0.05	4.96	0	0	0
69	SLU 56	-0.07	-0.06	5.02	0	0	0
69	SLU 57	-0.07	-0.05	5.02	0	0	0
69	SLU 58	-0.07	-0.06	4.99	0	0	0
69	SLU 59	-0.07	-0.06	4.99	0	0	0
69	SLU 60	-0.07	-0.06	5.13	0	0	0
69	SLU 61	-0.07	-0.05	5.13	0	0	0
69	SLU 62	-0.07	-0.06	5.17	0	0	0
69	SLU 63	-0.07	-0.05	5.17	0	0	0
69	SLU 64	-0.05	-0.05	4.87	0	0	0
69	SLU 65	-0.05	-0.05	4.87	0	0	0
69	SLU 66	-0.06	-0.05	4.94	0	0	0
69	SLU 67	-0.06	-0.05	4.94	0	0	0
69	SLU 68	-0.06	-0.05	4.91	0	0	0
69	SLU 69	-0.06	-0.05	4.97	0	0	0
69	SLU 70	-0.06	-0.05	4.97	0	0	0
69	SLU 71	-0.06	-0.05	4.94	0	0	0
69	SLU 72	-0.06	-0.05	4.94	0	0	0
69	SLU 73	-0.06	-0.04	5.37	0	0	0
69	SLU 74	-0.07	-0.05	5.44	0	0	0
69	SLU 75	-0.07	-0.05	5.43	0	0	0
69	SLU 76	-0.07	-0.04	5.4	0	0	0
69	SLU 77	-0.07	-0.05	5.47	0	0	0
69	SLU 78	-0.07	-0.05	5.47	0	0	0
69	SLU 79	-0.07	-0.05	5.44	0	0	0
69	SLU 80	-0.07	-0.05	5.44	0	0	0
69	SLU 81	-0.07	-0.05	5.58	0	0	0
69	SLU 82	-0.07	-0.05	5.58	0	0	0
69	SLU 83	-0.07	-0.05	5.62	0	0	0
69	SLU 84	-0.07	-0.05	5.62	0	0	0
69	SLE RA 1	-0.04	-0.04	3.65	0	0	0
69	SLE RA 2	-0.04	-0.04	3.65	0	0	0
69	SLE RA 3	-0.04	-0.04	3.69	0	0	0
69	SLE RA 4	-0.04	-0.04	3.69	0	0	0
69	SLE RA 5	-0.04	-0.04	3.67	0	0	0
69	SLE RA 6	-0.04	-0.04	3.72	0	0	0
69	SLE RA 7	-0.04	-0.04	3.72	0	0	0
69	SLE RA 8	-0.04	-0.04	3.7	0	0	0
69	SLE RA 9	-0.04	-0.04	3.7	0	0	0
69	SLE RA 10	-0.05	-0.04	3.98	0	0	0
69	SLE RA 11	-0.05	-0.04	4.02	0	0	0
69	SLE RA 12	-0.05	-0.04	4.02	0	0	0
69	SLE RA 13	-0.05	-0.04	4	0	0	0
69	SLE RA 14	-0.05	-0.04	4.05	0	0	0
69	SLE RA 15	-0.05	-0.04	4.05	0	0	0
69	SLE RA 16	-0.05	-0.04	4.03	0	0	0
69	SLE RA 17	-0.05	-0.04	4.03	0	0	0
69	SLE RA 18	-0.05	-0.04	4.12	0	0	0
69	SLE RA 19	-0.05	-0.04	4.12	0	0	0
69	SLE RA 20	-0.05	-0.04	4.15	0	0	0
69	SLE RA 21	-0.05	-0.04	4.15	0	0	0
69	SLE FR 1	-0.04	-0.04	3.65	0	0	0
69	SLE FR 2	-0.04	-0.04	3.65	0	0	0
69	SLE FR 3	-0.04	-0.04	3.66	0	0	0
69	SLE FR 4	-0.04	-0.04	3.79	0	0	0
69	SLE FR 5	-0.05	-0.04	3.8	0	0	0
69	SLE FR 6	-0.05	-0.04	3.89	0	0	0
69	SLE QP 1	-0.04	-0.04	3.65	0	0	0
69	SLE QP 2	-0.04	-0.04	3.79	0	0	0
69	SLD 1	0.24	0	3.69	0	0	0
69	SLD 2	0.24	0.01	3.68	0	0	0
69	SLD 3	0.22	-0.1	3.73	0	0	0
69	SLD 4	0.22	-0.1	3.72	0	0	0
69	SLD 5	0.06	0.13	3.7	0	0	0
69	SLD 6	0.06	0.13	3.7	0	0	0
69	SLD 7	0.01	-0.22	3.83	0	0	0
69	SLD 8	0.01	-0.21	3.83	0	0	0
69	SLD 9	-0.1	0.13	3.75	0	0	0
69	SLD 10	-0.1	0.14	3.75	0	0	0
69	SLD 11	-0.15	-0.21	3.89	0	0	0
69	SLD 12	-0.15	-0.21	3.88	0	0	0
69	SLD 13	-0.31	0.02	3.86	0	0	0
69	SLD 14	-0.31	0.02	3.86	0	0	0
69	SLD 15	-0.33	-0.09	3.9	0	0	0
69	SLD 16	-0.33	-0.08	3.9	0	0	0
69	SLV 1	0.62	0.05	3.55	0	0	0
69	SLV 2	0.62	0.07	3.54	0	0	0
69	SLV 3	0.58	-0.19	3.64	0	0	0
69	SLV 4	0.58	-0.17	3.63	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
69	SLV 5	0.21	0.34	3.58	0	0	0
69	SLV 6	0.21	0.35	3.57	0	0	0
69	SLV 7	0.09	-0.44	3.89	0	0	0
69	SLV 8	0.09	-0.43	3.89	0	0	0
69	SLV 9	-0.18	0.35	3.7	0	0	0
69	SLV 10	-0.18	0.36	3.69	0	0	0
69	SLV 11	-0.29	-0.43	4.01	0	0	0
69	SLV 12	-0.3	-0.42	4.01	0	0	0
69	SLV 13	-0.67	0.09	3.95	0	0	0
69	SLV 14	-0.67	0.11	3.94	0	0	0
69	SLV 15	-0.71	-0.15	4.04	0	0	0
69	SLV 16	-0.71	-0.13	4.04	0	0	0
70	SLU 1	-0.02	-0.02	1.94	0	0	0
70	SLU 2	-0.02	-0.02	1.94	0	0	0
70	SLU 3	-0.02	-0.02	1.98	0	0	0
70	SLU 4	-0.02	-0.02	1.98	0	0	0
70	SLU 5	-0.02	-0.02	1.96	0	0	0
70	SLU 6	-0.03	-0.02	1.99	0	0	0
70	SLU 7	-0.03	-0.02	1.99	0	0	0
70	SLU 8	-0.03	-0.02	1.98	0	0	0
70	SLU 9	-0.03	-0.02	1.98	0	0	0
70	SLU 10	-0.03	-0.02	2.21	0	0	0
70	SLU 11	-0.03	-0.02	2.25	0	0	0
70	SLU 12	-0.03	-0.02	2.25	0	0	0
70	SLU 13	-0.03	-0.02	2.23	0	0	0
70	SLU 14	-0.03	-0.02	2.27	0	0	0
70	SLU 15	-0.03	-0.02	2.27	0	0	0
70	SLU 16	-0.03	-0.02	2.25	0	0	0
70	SLU 17	-0.03	-0.02	2.25	0	0	0
70	SLU 18	-0.03	-0.02	2.33	0	0	0
70	SLU 19	-0.03	-0.02	2.33	0	0	0
70	SLU 20	-0.03	-0.02	2.35	0	0	0
70	SLU 21	-0.03	-0.02	2.35	0	0	0
70	SLU 22	-0.02	-0.02	2.19	0	0	0
70	SLU 23	-0.02	-0.02	2.19	0	0	0
70	SLU 24	-0.02	-0.02	2.22	0	0	0
70	SLU 25	-0.02	-0.02	2.22	0	0	0
70	SLU 26	-0.02	-0.02	2.21	0	0	0
70	SLU 27	-0.03	-0.02	2.24	0	0	0
70	SLU 28	-0.03	-0.02	2.24	0	0	0
70	SLU 29	-0.03	-0.02	2.22	0	0	0
70	SLU 30	-0.03	-0.02	2.22	0	0	0
70	SLU 31	-0.03	-0.02	2.46	0	0	0
70	SLU 32	-0.03	-0.02	2.5	0	0	0
70	SLU 33	-0.03	-0.02	2.5	0	0	0
70	SLU 34	-0.03	-0.02	2.48	0	0	0
70	SLU 35	-0.03	-0.02	2.51	0	0	0
70	SLU 36	-0.03	-0.02	2.51	0	0	0
70	SLU 37	-0.03	-0.02	2.5	0	0	0
70	SLU 38	-0.03	-0.02	2.5	0	0	0
70	SLU 39	-0.03	-0.02	2.58	0	0	0
70	SLU 40	-0.03	-0.02	2.58	0	0	0
70	SLU 41	-0.03	-0.02	2.6	0	0	0
70	SLU 42	-0.03	-0.02	2.6	0	0	0
70	SLU 43	-0.03	-0.03	2.44	0	0	0
70	SLU 44	-0.03	-0.03	2.44	0	0	0
70	SLU 45	-0.03	-0.03	2.47	0	0	0
70	SLU 46	-0.03	-0.03	2.47	0	0	0
70	SLU 47	-0.03	-0.03	2.45	0	0	0
70	SLU 48	-0.03	-0.03	2.49	0	0	0
70	SLU 49	-0.03	-0.03	2.49	0	0	0
70	SLU 50	-0.03	-0.03	2.47	0	0	0
70	SLU 51	-0.03	-0.03	2.47	0	0	0
70	SLU 52	-0.03	-0.03	2.71	0	0	0
70	SLU 53	-0.04	-0.03	2.75	0	0	0
70	SLU 54	-0.04	-0.03	2.74	0	0	0
70	SLU 55	-0.04	-0.03	2.73	0	0	0
70	SLU 56	-0.04	-0.03	2.76	0	0	0
70	SLU 57	-0.04	-0.03	2.76	0	0	0
70	SLU 58	-0.04	-0.03	2.75	0	0	0
70	SLU 59	-0.04	-0.03	2.75	0	0	0
70	SLU 60	-0.04	-0.03	2.83	0	0	0
70	SLU 61	-0.04	-0.03	2.83	0	0	0
70	SLU 62	-0.04	-0.03	2.84	0	0	0
70	SLU 63	-0.04	-0.03	2.84	0	0	0
70	SLU 64	-0.03	-0.03	2.68	0	0	0
70	SLU 65	-0.03	-0.03	2.68	0	0	0
70	SLU 66	-0.03	-0.03	2.72	0	0	0
70	SLU 67	-0.03	-0.03	2.72	0	0	0
70	SLU 68	-0.03	-0.03	2.7	0	0	0
70	SLU 69	-0.03	-0.03	2.74	0	0	0
70	SLU 70	-0.03	-0.03	2.74	0	0	0
70	SLU 71	-0.03	-0.03	2.72	0	0	0
70	SLU 72	-0.03	-0.03	2.72	0	0	0
70	SLU 73	-0.04	-0.02	2.96	0	0	0
70	SLU 74	-0.04	-0.03	2.99	0	0	0
70	SLU 75	-0.04	-0.02	2.99	0	0	0
70	SLU 76	-0.04	-0.02	2.98	0	0	0
70	SLU 77	-0.04	-0.03	3.01	0	0	0
70	SLU 78	-0.04	-0.02	3.01	0	0	0
70	SLU 79	-0.04	-0.03	2.99	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
70	SLU 80	-0.04	-0.03	2.99	0	0	0
70	SLU 81	-0.04	-0.03	3.07	0	0	0
70	SLU 82	-0.04	-0.02	3.07	0	0	0
70	SLU 83	-0.04	-0.03	3.09	0	0	0
70	SLU 84	-0.04	-0.02	3.09	0	0	0
70	SLE RA 1	-0.02	-0.02	2.01	0	0	0
70	SLE RA 2	-0.02	-0.02	2.01	0	0	0
70	SLE RA 3	-0.02	-0.02	2.03	0	0	0
70	SLE RA 4	-0.02	-0.02	2.03	0	0	0
70	SLE RA 5	-0.02	-0.02	2.02	0	0	0
70	SLE RA 6	-0.02	-0.02	2.05	0	0	0
70	SLE RA 7	-0.02	-0.02	2.05	0	0	0
70	SLE RA 8	-0.02	-0.02	2.04	0	0	0
70	SLE RA 9	-0.02	-0.02	2.03	0	0	0
70	SLE RA 10	-0.03	-0.02	2.19	0	0	0
70	SLE RA 11	-0.03	-0.02	2.22	0	0	0
70	SLE RA 12	-0.03	-0.02	2.22	0	0	0
70	SLE RA 13	-0.03	-0.02	2.2	0	0	0
70	SLE RA 14	-0.03	-0.02	2.23	0	0	0
70	SLE RA 15	-0.03	-0.02	2.23	0	0	0
70	SLE RA 16	-0.03	-0.02	2.22	0	0	0
70	SLE RA 17	-0.03	-0.02	2.22	0	0	0
70	SLE RA 18	-0.03	-0.02	2.27	0	0	0
70	SLE RA 19	-0.03	-0.02	2.27	0	0	0
70	SLE RA 20	-0.03	-0.02	2.28	0	0	0
70	SLE RA 21	-0.03	-0.02	2.28	0	0	0
70	SLE FR 1	-0.02	-0.02	2.01	0	0	0
70	SLE FR 2	-0.02	-0.02	2.01	0	0	0
70	SLE FR 3	-0.02	-0.02	2.02	0	0	0
70	SLE FR 4	-0.02	-0.02	2.09	0	0	0
70	SLE FR 5	-0.03	-0.02	2.09	0	0	0
70	SLE FR 6	-0.03	-0.02	2.14	0	0	0
70	SLE QP 1	-0.02	-0.02	2.01	0	0	0
70	SLE QP 2	-0.02	-0.02	2.09	0	0	0
70	SLD 1	0.13	0	2.02	0	0	0
70	SLD 2	0.13	0	2.01	0	0	0
70	SLD 3	0.12	-0.06	2.04	0	0	0
70	SLD 4	0.12	-0.05	2.04	0	0	0
70	SLD 5	0.04	0.07	2.03	0	0	0
70	SLD 6	0.03	0.07	2.03	0	0	0
70	SLD 7	0.01	-0.12	2.11	0	0	0
70	SLD 8	0.01	-0.12	2.1	0	0	0
70	SLD 9	-0.06	0.07	2.07	0	0	0
70	SLD 10	-0.06	0.08	2.07	0	0	0
70	SLD 11	-0.08	-0.12	2.14	0	0	0
70	SLD 12	-0.08	-0.11	2.14	0	0	0
70	SLD 13	-0.17	0.01	2.14	0	0	0
70	SLD 14	-0.17	0.01	2.14	0	0	0
70	SLD 15	-0.18	-0.05	2.16	0	0	0
70	SLD 16	-0.18	-0.04	2.16	0	0	0
70	SLV 1	0.34	0.03	1.92	0	0	0
70	SLV 2	0.34	0.04	1.92	0	0	0
70	SLV 3	0.33	-0.1	1.97	0	0	0
70	SLV 4	0.32	-0.09	1.97	0	0	0
70	SLV 5	0.12	0.19	1.96	0	0	0
70	SLV 6	0.11	0.2	1.96	0	0	0
70	SLV 7	0.05	-0.25	2.13	0	0	0
70	SLV 8	0.05	-0.24	2.12	0	0	0
70	SLV 9	-0.1	0.19	2.05	0	0	0
70	SLV 10	-0.1	0.2	2.05	0	0	0
70	SLV 11	-0.16	-0.24	2.21	0	0	0
70	SLV 12	-0.16	-0.23	2.21	0	0	0
70	SLV 13	-0.37	0.05	2.21	0	0	0
70	SLV 14	-0.37	0.06	2.21	0	0	0
70	SLV 15	-0.39	-0.08	2.26	0	0	0
70	SLV 16	-0.39	-0.07	2.25	0	0	0
135	SLU 1	0	-0.05	3.64	0	0	0
135	SLU 2	0	-0.04	3.64	0	0	0
135	SLU 3	0	-0.05	3.71	0	0	0
135	SLU 4	0	-0.05	3.71	0	0	0
135	SLU 5	0	-0.05	3.69	0	0	0
135	SLU 6	0	-0.05	3.75	0	0	0
135	SLU 7	0	-0.05	3.76	0	0	0
135	SLU 8	0	-0.05	3.73	0	0	0
135	SLU 9	0	-0.05	3.73	0	0	0
135	SLU 10	0	-0.05	4.13	0	0	0
135	SLU 11	0	-0.05	4.19	0	0	0
135	SLU 12	0	-0.05	4.19	0	0	0
135	SLU 13	0	-0.05	4.17	0	0	0
135	SLU 14	0	-0.05	4.24	0	0	0
135	SLU 15	0	-0.05	4.24	0	0	0
135	SLU 16	0	-0.05	4.21	0	0	0
135	SLU 17	0	-0.05	4.21	0	0	0
135	SLU 18	0	-0.05	4.33	0	0	0
135	SLU 19	0	-0.05	4.33	0	0	0
135	SLU 20	0	-0.05	4.38	0	0	0
135	SLU 21	0	-0.05	4.38	0	0	0
135	SLU 22	0	-0.05	4.07	0	0	0
135	SLU 23	0	-0.04	4.07	0	0	0
135	SLU 24	0	-0.05	4.13	0	0	0
135	SLU 25	0	-0.05	4.14	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
135	SLU 26	0	-0.05	4.11	0	0	0
135	SLU 27	0	-0.05	4.18	0	0	0
135	SLU 28	0	-0.05	4.18	0	0	0
135	SLU 29	0	-0.05	4.15	0	0	0
135	SLU 30	0	-0.05	4.15	0	0	0
135	SLU 31	0	-0.05	4.55	0	0	0
135	SLU 32	0	-0.05	4.62	0	0	0
135	SLU 33	0	-0.05	4.62	0	0	0
135	SLU 34	0	-0.05	4.59	0	0	0
135	SLU 35	0	-0.05	4.66	0	0	0
135	SLU 36	0	-0.05	4.66	0	0	0
135	SLU 37	0	-0.05	4.64	0	0	0
135	SLU 38	0	-0.05	4.64	0	0	0
135	SLU 39	0	-0.05	4.76	0	0	0
135	SLU 40	0	-0.05	4.76	0	0	0
135	SLU 41	0	-0.06	4.8	0	0	0
135	SLU 42	0	-0.05	4.8	0	0	0
135	SLU 43	0	-0.07	4.59	0	0	0
135	SLU 44	0	-0.06	4.59	0	0	0
135	SLU 45	0	-0.07	4.66	0	0	0
135	SLU 46	0	-0.06	4.66	0	0	0
135	SLU 47	0	-0.06	4.63	0	0	0
135	SLU 48	0	-0.07	4.7	0	0	0
135	SLU 49	0	-0.06	4.7	0	0	0
135	SLU 50	0	-0.07	4.68	0	0	0
135	SLU 51	0	-0.06	4.68	0	0	0
135	SLU 52	0	-0.06	5.07	0	0	0
135	SLU 53	0	-0.07	5.14	0	0	0
135	SLU 54	0	-0.06	5.14	0	0	0
135	SLU 55	0	-0.06	5.12	0	0	0
135	SLU 56	0	-0.07	5.19	0	0	0
135	SLU 57	0	-0.07	5.19	0	0	0
135	SLU 58	0	-0.07	5.16	0	0	0
135	SLU 59	0	-0.07	5.16	0	0	0
135	SLU 60	0	-0.07	5.28	0	0	0
135	SLU 61	0	-0.07	5.28	0	0	0
135	SLU 62	0	-0.07	5.32	0	0	0
135	SLU 63	0	-0.07	5.32	0	0	0
135	SLU 64	-0.01	-0.07	5.01	0	0	0
135	SLU 65	-0.01	-0.06	5.01	0	0	0
135	SLU 66	-0.01	-0.07	5.08	0	0	0
135	SLU 67	-0.01	-0.06	5.08	0	0	0
135	SLU 68	-0.01	-0.06	5.06	0	0	0
135	SLU 69	-0.01	-0.07	5.13	0	0	0
135	SLU 70	-0.01	-0.06	5.13	0	0	0
135	SLU 71	-0.01	-0.07	5.1	0	0	0
135	SLU 72	-0.01	-0.06	5.1	0	0	0
135	SLU 73	0	-0.06	5.5	0	0	0
135	SLU 74	0	-0.07	5.57	0	0	0
135	SLU 75	0	-0.06	5.57	0	0	0
135	SLU 76	0	-0.06	5.54	0	0	0
135	SLU 77	0	-0.07	5.61	0	0	0
135	SLU 78	0	-0.07	5.61	0	0	0
135	SLU 79	0	-0.07	5.59	0	0	0
135	SLU 80	0	-0.07	5.59	0	0	0
135	SLU 81	0	-0.07	5.7	0	0	0
135	SLU 82	0	-0.07	5.7	0	0	0
135	SLU 83	0	-0.07	5.75	0	0	0
135	SLU 84	0	-0.07	5.75	0	0	0
135	SLE RA 1	0	-0.05	3.76	0	0	0
135	SLE RA 2	0	-0.05	3.76	0	0	0
135	SLE RA 3	0	-0.05	3.81	0	0	0
135	SLE RA 4	0	-0.05	3.81	0	0	0
135	SLE RA 5	0	-0.05	3.79	0	0	0
135	SLE RA 6	0	-0.05	3.84	0	0	0
135	SLE RA 7	0	-0.05	3.84	0	0	0
135	SLE RA 8	0	-0.05	3.82	0	0	0
135	SLE RA 9	0	-0.05	3.82	0	0	0
135	SLE RA 10	0	-0.05	4.09	0	0	0
135	SLE RA 11	0	-0.05	4.13	0	0	0
135	SLE RA 12	0	-0.05	4.13	0	0	0
135	SLE RA 13	0	-0.05	4.12	0	0	0
135	SLE RA 14	0	-0.05	4.16	0	0	0
135	SLE RA 15	0	-0.05	4.16	0	0	0
135	SLE RA 16	0	-0.05	4.14	0	0	0
135	SLE RA 17	0	-0.05	4.14	0	0	0
135	SLE RA 18	0	-0.05	4.22	0	0	0
135	SLE RA 19	0	-0.05	4.22	0	0	0
135	SLE RA 20	0	-0.05	4.25	0	0	0
135	SLE RA 21	0	-0.05	4.25	0	0	0
135	SLE FR 1	0	-0.05	3.76	0	0	0
135	SLE FR 2	0	-0.05	3.76	0	0	0
135	SLE FR 3	0	-0.05	3.77	0	0	0
135	SLE FR 4	0	-0.05	3.9	0	0	0
135	SLE FR 5	0	-0.05	3.91	0	0	0
135	SLE FR 6	0	-0.05	3.99	0	0	0
135	SLE QP 1	0	-0.05	3.76	0	0	0
135	SLE QP 2	0	-0.05	3.9	0	0	0
135	SLD 1	0.3	-0.02	4.17	0	0	0
135	SLD 2	0.32	-0.03	4.17	0	0	0
135	SLD 3	0.31	-0.12	4.1	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
135	SLD 4	0.32	-0.14	4.1	0	0	0
135	SLD 5	0.07	0.12	4.08	0	0	0
135	SLD 6	0.08	0.11	4.08	0	0	0
135	SLD 7	0.1	-0.23	3.86	0	0	0
135	SLD 8	0.11	-0.24	3.86	0	0	0
135	SLD 9	-0.12	0.13	3.94	0	0	0
135	SLD 10	-0.11	0.13	3.94	0	0	0
135	SLD 11	-0.09	-0.21	3.72	0	0	0
135	SLD 12	-0.08	-0.22	3.72	0	0	0
135	SLD 13	-0.33	0.03	3.7	0	0	0
135	SLD 14	-0.31	0.02	3.7	0	0	0
135	SLD 15	-0.32	-0.07	3.64	0	0	0
135	SLD 16	-0.31	-0.08	3.63	0	0	0
135	SLV 1	0.7	0.01	4.53	0	0	0
135	SLV 2	0.75	-0.01	4.52	0	0	0
135	SLV 3	0.72	-0.22	4.38	0	0	0
135	SLV 4	0.76	-0.25	4.37	0	0	0
135	SLV 5	0.17	0.33	4.31	0	0	0
135	SLV 6	0.2	0.31	4.31	0	0	0
135	SLV 7	0.24	-0.45	3.82	0	0	0
135	SLV 8	0.26	-0.47	3.82	0	0	0
135	SLV 9	-0.27	0.37	3.99	0	0	0
135	SLV 10	-0.24	0.35	3.98	0	0	0
135	SLV 11	-0.21	-0.42	3.49	0	0	0
135	SLV 12	-0.18	-0.43	3.49	0	0	0
135	SLV 13	-0.77	0.15	3.43	0	0	0
135	SLV 14	-0.73	0.12	3.42	0	0	0
135	SLV 15	-0.75	-0.09	3.28	0	0	0
135	SLV 16	-0.71	-0.12	3.28	0	0	0
136	SLU 1	-0.01	-0.09	7.4	0	0	0
136	SLU 2	-0.01	-0.08	7.4	0	0	0
136	SLU 3	-0.01	-0.09	7.54	0	0	0
136	SLU 4	-0.01	-0.08	7.54	0	0	0
136	SLU 5	-0.01	-0.08	7.49	0	0	0
136	SLU 6	-0.01	-0.09	7.63	0	0	0
136	SLU 7	-0.01	-0.08	7.63	0	0	0
136	SLU 8	-0.01	-0.09	7.58	0	0	0
136	SLU 9	-0.01	-0.09	7.58	0	0	0
136	SLU 10	0	-0.08	8.39	0	0	0
136	SLU 11	-0.01	-0.09	8.52	0	0	0
136	SLU 12	0	-0.09	8.53	0	0	0
136	SLU 13	0	-0.08	8.48	0	0	0
136	SLU 14	-0.01	-0.1	8.61	0	0	0
136	SLU 15	0	-0.09	8.62	0	0	0
136	SLU 16	-0.01	-0.1	8.56	0	0	0
136	SLU 17	0	-0.09	8.57	0	0	0
136	SLU 18	0	-0.1	8.81	0	0	0
136	SLU 19	0	-0.09	8.81	0	0	0
136	SLU 20	0	-0.1	8.9	0	0	0
136	SLU 21	0	-0.09	8.9	0	0	0
136	SLU 22	-0.01	-0.09	8.26	0	0	0
136	SLU 23	-0.01	-0.08	8.26	0	0	0
136	SLU 24	-0.01	-0.09	8.4	0	0	0
136	SLU 25	-0.01	-0.08	8.4	0	0	0
136	SLU 26	-0.01	-0.08	8.35	0	0	0
136	SLU 27	-0.01	-0.09	8.49	0	0	0
136	SLU 28	-0.01	-0.08	8.49	0	0	0
136	SLU 29	-0.01	-0.09	8.44	0	0	0
136	SLU 30	-0.01	-0.09	8.44	0	0	0
136	SLU 31	-0.01	-0.08	9.25	0	0	0
136	SLU 32	-0.01	-0.09	9.38	0	0	0
136	SLU 33	-0.01	-0.09	9.38	0	0	0
136	SLU 34	-0.01	-0.08	9.34	0	0	0
136	SLU 35	-0.01	-0.09	9.47	0	0	0
136	SLU 36	-0.01	-0.09	9.48	0	0	0
136	SLU 37	-0.01	-0.1	9.42	0	0	0
136	SLU 38	-0.01	-0.09	9.43	0	0	0
136	SLU 39	-0.01	-0.1	9.66	0	0	0
136	SLU 40	-0.01	-0.09	9.67	0	0	0
136	SLU 41	-0.01	-0.1	9.75	0	0	0
136	SLU 42	-0.01	-0.09	9.76	0	0	0
136	SLU 43	-0.01	-0.12	9.33	0	0	0
136	SLU 44	-0.01	-0.11	9.33	0	0	0
136	SLU 45	-0.01	-0.12	9.47	0	0	0
136	SLU 46	-0.01	-0.11	9.47	0	0	0
136	SLU 47	-0.01	-0.11	9.42	0	0	0
136	SLU 48	-0.01	-0.12	9.56	0	0	0
136	SLU 49	-0.01	-0.11	9.56	0	0	0
136	SLU 50	-0.01	-0.12	9.51	0	0	0
136	SLU 51	-0.01	-0.11	9.51	0	0	0
136	SLU 52	-0.01	-0.11	10.31	0	0	0
136	SLU 53	-0.01	-0.12	10.45	0	0	0
136	SLU 54	-0.01	-0.12	10.45	0	0	0
136	SLU 55	-0.01	-0.11	10.4	0	0	0
136	SLU 56	-0.01	-0.12	10.54	0	0	0
136	SLU 57	-0.01	-0.12	10.54	0	0	0
136	SLU 58	-0.01	-0.12	10.49	0	0	0
136	SLU 59	-0.01	-0.12	10.49	0	0	0
136	SLU 60	-0.01	-0.12	10.73	0	0	0
136	SLU 61	-0.01	-0.12	10.73	0	0	0
136	SLU 62	-0.01	-0.13	10.82	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
136	SLU 63	-0.01	-0.12	10.82	0	0	0
136	SLU 64	-0.01	-0.12	10.19	0	0	0
136	SLU 65	-0.01	-0.11	10.19	0	0	0
136	SLU 66	-0.01	-0.12	10.33	0	0	0
136	SLU 67	-0.01	-0.11	10.33	0	0	0
136	SLU 68	-0.01	-0.11	10.28	0	0	0
136	SLU 69	-0.01	-0.12	10.42	0	0	0
136	SLU 70	-0.01	-0.11	10.42	0	0	0
136	SLU 71	-0.01	-0.12	10.37	0	0	0
136	SLU 72	-0.01	-0.11	10.37	0	0	0
136	SLU 73	-0.01	-0.11	11.17	0	0	0
136	SLU 74	-0.01	-0.12	11.31	0	0	0
136	SLU 75	-0.01	-0.11	11.31	0	0	0
136	SLU 76	-0.01	-0.11	11.26	0	0	0
136	SLU 77	-0.01	-0.12	11.4	0	0	0
136	SLU 78	-0.01	-0.12	11.4	0	0	0
136	SLU 79	-0.01	-0.12	11.35	0	0	0
136	SLU 80	-0.01	-0.12	11.35	0	0	0
136	SLU 81	-0.01	-0.12	11.59	0	0	0
136	SLU 82	-0.01	-0.12	11.59	0	0	0
136	SLU 83	-0.01	-0.12	11.68	0	0	0
136	SLU 84	-0.01	-0.12	11.68	0	0	0
136	SLE RA 1	-0.01	-0.09	7.65	0	0	0
136	SLE RA 2	-0.01	-0.08	7.65	0	0	0
136	SLE RA 3	-0.01	-0.09	7.74	0	0	0
136	SLE RA 4	-0.01	-0.09	7.74	0	0	0
136	SLE RA 5	-0.01	-0.08	7.71	0	0	0
136	SLE RA 6	-0.01	-0.09	7.8	0	0	0
136	SLE RA 7	-0.01	-0.09	7.8	0	0	0
136	SLE RA 8	-0.01	-0.09	7.77	0	0	0
136	SLE RA 9	-0.01	-0.09	7.77	0	0	0
136	SLE RA 10	-0.01	-0.09	8.3	0	0	0
136	SLE RA 11	-0.01	-0.09	8.4	0	0	0
136	SLE RA 12	-0.01	-0.09	8.4	0	0	0
136	SLE RA 13	-0.01	-0.09	8.36	0	0	0
136	SLE RA 14	-0.01	-0.09	8.46	0	0	0
136	SLE RA 15	-0.01	-0.09	8.46	0	0	0
136	SLE RA 16	-0.01	-0.09	8.42	0	0	0
136	SLE RA 17	-0.01	-0.09	8.42	0	0	0
136	SLE RA 18	-0.01	-0.09	8.58	0	0	0
136	SLE RA 19	-0.01	-0.09	8.58	0	0	0
136	SLE RA 20	-0.01	-0.09	8.64	0	0	0
136	SLE RA 21	-0.01	-0.09	8.64	0	0	0
136	SLE FR 1	-0.01	-0.09	7.65	0	0	0
136	SLE FR 2	-0.01	-0.09	7.65	0	0	0
136	SLE FR 3	-0.01	-0.09	7.67	0	0	0
136	SLE FR 4	-0.01	-0.09	7.93	0	0	0
136	SLE FR 5	-0.01	-0.09	7.95	0	0	0
136	SLE FR 6	-0.01	-0.09	8.11	0	0	0
136	SLE QP 1	-0.01	-0.09	7.65	0	0	0
136	SLE QP 2	-0.01	-0.09	7.93	0	0	0
136	SLD 1	0.61	-0.03	8.42	0	0	0
136	SLD 2	0.65	-0.05	8.41	0	0	0
136	SLD 3	0.63	-0.24	8.29	0	0	0
136	SLD 4	0.67	-0.26	8.28	0	0	0
136	SLD 5	0.15	0.25	8.28	0	0	0
136	SLD 6	0.17	0.24	8.27	0	0	0
136	SLD 7	0.2	-0.45	7.84	0	0	0
136	SLD 8	0.23	-0.47	7.83	0	0	0
136	SLD 9	-0.24	0.28	8.02	0	0	0
136	SLD 10	-0.22	0.27	8.02	0	0	0
136	SLD 11	-0.19	-0.42	7.58	0	0	0
136	SLD 12	-0.16	-0.44	7.58	0	0	0
136	SLD 13	-0.68	0.08	7.57	0	0	0
136	SLD 14	-0.65	0.06	7.57	0	0	0
136	SLD 15	-0.66	-0.14	7.44	0	0	0
136	SLD 16	-0.63	-0.16	7.44	0	0	0
136	SLV 1	1.45	0.06	9.07	0	0	0
136	SLV 2	1.53	0.01	9.06	0	0	0
136	SLV 3	1.48	-0.43	8.77	0	0	0
136	SLV 4	1.57	-0.48	8.76	0	0	0
136	SLV 5	0.36	0.7	8.73	0	0	0
136	SLV 6	0.41	0.66	8.72	0	0	0
136	SLV 7	0.49	-0.92	7.73	0	0	0
136	SLV 8	0.54	-0.95	7.72	0	0	0
136	SLV 9	-0.55	0.77	8.13	0	0	0
136	SLV 10	-0.5	0.73	8.13	0	0	0
136	SLV 11	-0.42	-0.85	7.13	0	0	0
136	SLV 12	-0.37	-0.88	7.13	0	0	0
136	SLV 13	-1.58	0.3	7.09	0	0	0
136	SLV 14	-1.5	0.25	7.08	0	0	0
136	SLV 15	-1.54	-0.19	6.79	0	0	0
136	SLV 16	-1.46	-0.24	6.78	0	0	0
137	SLU 1	-0.01	-0.08	7.28	0	0	0
137	SLU 2	-0.01	-0.07	7.28	0	0	0
137	SLU 3	-0.01	-0.08	7.42	0	0	0
137	SLU 4	-0.01	-0.07	7.42	0	0	0
137	SLU 5	-0.01	-0.07	7.37	0	0	0
137	SLU 6	-0.01	-0.08	7.5	0	0	0
137	SLU 7	-0.01	-0.07	7.51	0	0	0
137	SLU 8	-0.01	-0.08	7.46	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
137	SLU 9	-0.01	-0.07	7.46	0	0	0
137	SLU 10	0	-0.07	8.25	0	0	0
137	SLU 11	0	-0.08	8.38	0	0	0
137	SLU 12	0	-0.07	8.38	0	0	0
137	SLU 13	0	-0.07	8.34	0	0	0
137	SLU 14	0	-0.08	8.47	0	0	0
137	SLU 15	0	-0.07	8.47	0	0	0
137	SLU 16	0	-0.08	8.42	0	0	0
137	SLU 17	0	-0.08	8.42	0	0	0
137	SLU 18	0	-0.08	8.66	0	0	0
137	SLU 19	0	-0.08	8.66	0	0	0
137	SLU 20	0	-0.08	8.75	0	0	0
137	SLU 21	0	-0.08	8.75	0	0	0
137	SLU 22	-0.01	-0.08	8.12	0	0	0
137	SLU 23	-0.01	-0.06	8.12	0	0	0
137	SLU 24	-0.01	-0.07	8.26	0	0	0
137	SLU 25	-0.01	-0.07	8.26	0	0	0
137	SLU 26	-0.01	-0.07	8.21	0	0	0
137	SLU 27	-0.01	-0.08	8.35	0	0	0
137	SLU 28	-0.01	-0.07	8.35	0	0	0
137	SLU 29	-0.01	-0.08	8.3	0	0	0
137	SLU 30	-0.01	-0.07	8.3	0	0	0
137	SLU 31	-0.01	-0.07	9.09	0	0	0
137	SLU 32	-0.01	-0.08	9.22	0	0	0
137	SLU 33	-0.01	-0.07	9.23	0	0	0
137	SLU 34	-0.01	-0.07	9.18	0	0	0
137	SLU 35	-0.01	-0.08	9.31	0	0	0
137	SLU 36	-0.01	-0.07	9.31	0	0	0
137	SLU 37	-0.01	-0.08	9.26	0	0	0
137	SLU 38	-0.01	-0.07	9.27	0	0	0
137	SLU 39	-0.01	-0.08	9.5	0	0	0
137	SLU 40	-0.01	-0.07	9.5	0	0	0
137	SLU 41	-0.01	-0.08	9.59	0	0	0
137	SLU 42	-0.01	-0.07	9.59	0	0	0
137	SLU 43	-0.01	-0.1	9.17	0	0	0
137	SLU 44	-0.01	-0.09	9.18	0	0	0
137	SLU 45	-0.01	-0.1	9.31	0	0	0
137	SLU 46	-0.01	-0.09	9.31	0	0	0
137	SLU 47	-0.01	-0.09	9.26	0	0	0
137	SLU 48	-0.01	-0.1	9.4	0	0	0
137	SLU 49	-0.01	-0.1	9.4	0	0	0
137	SLU 50	-0.01	-0.1	9.35	0	0	0
137	SLU 51	-0.01	-0.1	9.35	0	0	0
137	SLU 52	-0.01	-0.09	10.14	0	0	0
137	SLU 53	-0.01	-0.1	10.28	0	0	0
137	SLU 54	-0.01	-0.1	10.28	0	0	0
137	SLU 55	-0.01	-0.1	10.23	0	0	0
137	SLU 56	-0.01	-0.11	10.37	0	0	0
137	SLU 57	-0.01	-0.1	10.37	0	0	0
137	SLU 58	-0.01	-0.11	10.32	0	0	0
137	SLU 59	-0.01	-0.1	10.32	0	0	0
137	SLU 60	-0.01	-0.11	10.55	0	0	0
137	SLU 61	-0.01	-0.1	10.55	0	0	0
137	SLU 62	-0.01	-0.11	10.64	0	0	0
137	SLU 63	-0.01	-0.1	10.64	0	0	0
137	SLU 64	-0.01	-0.1	10.01	0	0	0
137	SLU 65	-0.01	-0.09	10.02	0	0	0
137	SLU 66	-0.01	-0.1	10.15	0	0	0
137	SLU 67	-0.01	-0.09	10.15	0	0	0
137	SLU 68	-0.01	-0.09	10.11	0	0	0
137	SLU 69	-0.01	-0.1	10.24	0	0	0
137	SLU 70	-0.01	-0.09	10.24	0	0	0
137	SLU 71	-0.01	-0.1	10.19	0	0	0
137	SLU 72	-0.01	-0.1	10.19	0	0	0
137	SLU 73	-0.01	-0.09	10.98	0	0	0
137	SLU 74	-0.01	-0.1	11.12	0	0	0
137	SLU 75	-0.01	-0.1	11.12	0	0	0
137	SLU 76	-0.01	-0.09	11.07	0	0	0
137	SLU 77	-0.01	-0.1	11.21	0	0	0
137	SLU 78	-0.01	-0.1	11.21	0	0	0
137	SLU 79	-0.01	-0.1	11.16	0	0	0
137	SLU 80	-0.01	-0.1	11.16	0	0	0
137	SLU 81	-0.01	-0.1	11.39	0	0	0
137	SLU 82	-0.01	-0.1	11.4	0	0	0
137	SLU 83	-0.01	-0.1	11.48	0	0	0
137	SLU 84	-0.01	-0.1	11.49	0	0	0
137	SLE RA 1	-0.01	-0.08	7.52	0	0	0
137	SLE RA 2	-0.01	-0.07	7.52	0	0	0
137	SLE RA 3	-0.01	-0.08	7.61	0	0	0
137	SLE RA 4	-0.01	-0.07	7.61	0	0	0
137	SLE RA 5	-0.01	-0.07	7.58	0	0	0
137	SLE RA 6	-0.01	-0.08	7.67	0	0	0
137	SLE RA 7	-0.01	-0.07	7.67	0	0	0
137	SLE RA 8	-0.01	-0.08	7.64	0	0	0
137	SLE RA 9	-0.01	-0.07	7.64	0	0	0
137	SLE RA 10	-0.01	-0.07	8.16	0	0	0
137	SLE RA 11	-0.01	-0.08	8.25	0	0	0
137	SLE RA 12	-0.01	-0.07	8.26	0	0	0
137	SLE RA 13	-0.01	-0.07	8.22	0	0	0
137	SLE RA 14	-0.01	-0.08	8.31	0	0	0
137	SLE RA 15	-0.01	-0.07	8.32	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
137	SLE RA 16	-0.01	-0.08	8.28	0	0	0
137	SLE RA 17	-0.01	-0.08	8.28	0	0	0
137	SLE RA 18	-0.01	-0.08	8.44	0	0	0
137	SLE RA 19	-0.01	-0.08	8.44	0	0	0
137	SLE RA 20	-0.01	-0.08	8.5	0	0	0
137	SLE RA 21	-0.01	-0.08	8.5	0	0	0
137	SLE FR 1	-0.01	-0.08	7.52	0	0	0
137	SLE FR 2	-0.01	-0.08	7.52	0	0	0
137	SLE FR 3	-0.01	-0.08	7.54	0	0	0
137	SLE FR 4	-0.01	-0.08	7.79	0	0	0
137	SLE FR 5	-0.01	-0.08	7.82	0	0	0
137	SLE FR 6	-0.01	-0.08	7.98	0	0	0
137	SLE QP 1	-0.01	-0.08	7.52	0	0	0
137	SLE QP 2	-0.01	-0.08	7.79	0	0	0
137	SLD 1	0.61	-0.01	8.22	0	0	0
137	SLD 2	0.64	-0.03	8.22	0	0	0
137	SLD 3	0.63	-0.22	8.1	0	0	0
137	SLD 4	0.66	-0.24	8.09	0	0	0
137	SLD 5	0.15	0.27	8.12	0	0	0
137	SLD 6	0.17	0.25	8.12	0	0	0
137	SLD 7	0.2	-0.44	7.69	0	0	0
137	SLD 8	0.22	-0.45	7.69	0	0	0
137	SLD 9	-0.24	0.29	7.9	0	0	0
137	SLD 10	-0.22	0.28	7.9	0	0	0
137	SLD 11	-0.18	-0.41	7.47	0	0	0
137	SLD 12	-0.16	-0.42	7.47	0	0	0
137	SLD 13	-0.67	0.08	7.5	0	0	0
137	SLD 14	-0.64	0.06	7.49	0	0	0
137	SLD 15	-0.66	-0.13	7.37	0	0	0
137	SLD 16	-0.62	-0.15	7.37	0	0	0
137	SLV 1	1.43	0.08	8.79	0	0	0
137	SLV 2	1.52	0.03	8.78	0	0	0
137	SLV 3	1.47	-0.4	8.5	0	0	0
137	SLV 4	1.55	-0.45	8.49	0	0	0
137	SLV 5	0.35	0.71	8.54	0	0	0
137	SLV 6	0.41	0.68	8.53	0	0	0
137	SLV 7	0.48	-0.9	7.57	0	0	0
137	SLV 8	0.53	-0.93	7.56	0	0	0
137	SLV 9	-0.55	0.77	8.03	0	0	0
137	SLV 10	-0.5	0.74	8.02	0	0	0
137	SLV 11	-0.42	-0.83	7.06	0	0	0
137	SLV 12	-0.37	-0.86	7.05	0	0	0
137	SLV 13	-1.57	0.29	7.1	0	0	0
137	SLV 14	-1.49	0.25	7.09	0	0	0
137	SLV 15	-1.53	-0.19	6.81	0	0	0
137	SLV 16	-1.45	-0.23	6.79	0	0	0
138	SLU 1	-0.01	-0.07	7	0	0.3506	0.0033
138	SLU 2	-0.01	-0.06	7.01	0	0.3508	0.0028
138	SLU 3	-0.01	-0.07	7.13	0	0.3573	0.0033
138	SLU 4	-0.01	-0.06	7.14	0	0.3574	0.0029
138	SLU 5	-0.01	-0.06	7.09	0	0.3551	0.0028
138	SLU 6	-0.01	-0.07	7.22	0	0.3616	0.0033
138	SLU 7	-0.01	-0.06	7.22	0	0.3617	0.003
138	SLU 8	-0.01	-0.07	7.17	0	0.3592	0.0034
138	SLU 9	-0.01	-0.06	7.18	0	0.3593	0.0031
138	SLU 10	0	-0.06	7.94	0	0.3973	0.0029
138	SLU 11	0	-0.07	8.07	0	0.4039	0.0033
138	SLU 12	0	-0.06	8.07	0	0.4039	0.003
138	SLU 13	0	-0.06	8.02	0	0.4017	0.0029
138	SLU 14	0	-0.07	8.15	0	0.4082	0.0034
138	SLU 15	0	-0.06	8.15	0	0.4082	0.0031
138	SLU 16	0	-0.07	8.1	0	0.4058	0.0035
138	SLU 17	0	-0.06	8.11	0	0.4059	0.0032
138	SLU 18	0	-0.07	8.33	0	0.4172	0.0034
138	SLU 19	0	-0.06	8.33	0	0.4173	0.0031
138	SLU 20	0	-0.07	8.42	0	0.4215	0.0035
138	SLU 21	0	-0.06	8.42	0	0.4216	0.0032
138	SLU 22	-0.01	-0.06	7.81	0	0.3911	0.0031
138	SLU 23	-0.01	-0.05	7.81	0	0.3912	0.0026
138	SLU 24	-0.01	-0.06	7.94	0	0.3977	0.0031
138	SLU 25	-0.01	-0.06	7.94	0	0.3978	0.0028
138	SLU 26	-0.01	-0.05	7.9	0	0.3955	0.0026
138	SLU 27	-0.01	-0.06	8.03	0	0.402	0.0031
138	SLU 28	-0.01	-0.06	8.03	0	0.4021	0.0028
138	SLU 29	-0.01	-0.06	7.98	0	0.3997	0.0032
138	SLU 30	-0.01	-0.06	7.98	0	0.3998	0.0029
138	SLU 31	-0.01	-0.05	8.74	0	0.4378	0.0027
138	SLU 32	-0.01	-0.06	8.87	0	0.4443	0.0031
138	SLU 33	-0.01	-0.06	8.87	0	0.4444	0.0028
138	SLU 34	-0.01	-0.05	8.83	0	0.4421	0.0027
138	SLU 35	-0.01	-0.06	8.96	0	0.4486	0.0032
138	SLU 36	-0.01	-0.06	8.96	0	0.4487	0.0029
138	SLU 37	-0.01	-0.07	8.91	0	0.4462	0.0033
138	SLU 38	-0.01	-0.06	8.91	0	0.4463	0.003
138	SLU 39	0	-0.06	9.14	-0.0001	0.4576	0.0032
138	SLU 40	0	-0.06	9.14	-0.0001	0.4577	0.0029
138	SLU 41	0	-0.07	9.22	-0.0001	0.4619	0.0033
138	SLU 42	0	-0.06	9.23	-0.0001	0.462	0.003
138	SLU 43	-0.01	-0.09	8.83	0	0.4419	0.0044
138	SLU 44	-0.01	-0.08	8.83	0	0.4421	0.0038
138	SLU 45	-0.01	-0.09	8.96	0	0.4486	0.0043

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
138	SLU 46	-0.01	-0.08	8.96	0	0.4487	0.004
138	SLU 47	-0.01	-0.08	8.91	0	0.4464	0.0039
138	SLU 48	-0.01	-0.09	9.04	-0.0001	0.4529	0.0044
138	SLU 49	-0.01	-0.08	9.05	-0.0001	0.453	0.0041
138	SLU 50	-0.01	-0.09	9	0	0.4506	0.0045
138	SLU 51	-0.01	-0.08	9	0	0.4506	0.0042
138	SLU 52	-0.01	-0.08	9.76	-0.0001	0.4887	0.0039
138	SLU 53	-0.01	-0.09	9.89	-0.0001	0.4952	0.0044
138	SLU 54	-0.01	-0.08	9.89	-0.0001	0.4953	0.0041
138	SLU 55	-0.01	-0.08	9.85	-0.0001	0.493	0.004
138	SLU 56	-0.01	-0.09	9.98	-0.0001	0.4995	0.0045
138	SLU 57	-0.01	-0.08	9.98	-0.0001	0.4996	0.0041
138	SLU 58	-0.01	-0.09	9.93	-0.0001	0.4971	0.0045
138	SLU 59	-0.01	-0.08	9.93	-0.0001	0.4972	0.0042
138	SLU 60	0	-0.09	10.16	-0.0001	0.5085	0.0045
138	SLU 61	0	-0.08	10.16	-0.0001	0.5086	0.0042
138	SLU 62	0	-0.09	10.24	-0.0001	0.5128	0.0045
138	SLU 63	0	-0.08	10.24	-0.0001	0.5129	0.0042
138	SLU 64	-0.01	-0.08	9.63	-0.0001	0.4824	0.0042
138	SLU 65	-0.01	-0.07	9.64	-0.0001	0.4825	0.0036
138	SLU 66	-0.01	-0.08	9.77	-0.0001	0.489	0.0041
138	SLU 67	-0.01	-0.08	9.77	-0.0001	0.4891	0.0038
138	SLU 68	-0.01	-0.07	9.72	-0.0001	0.4868	0.0037
138	SLU 69	-0.01	-0.08	9.85	-0.0001	0.4933	0.0042
138	SLU 70	-0.01	-0.08	9.85	-0.0001	0.4934	0.0039
138	SLU 71	-0.01	-0.09	9.81	-0.0001	0.491	0.0043
138	SLU 72	-0.01	-0.08	9.81	-0.0001	0.4911	0.004
138	SLU 73	-0.01	-0.07	10.57	-0.0001	0.5291	0.0037
138	SLU 74	-0.01	-0.08	10.7	-0.0001	0.5356	0.0042
138	SLU 75	-0.01	-0.08	10.7	-0.0001	0.5357	0.0039
138	SLU 76	-0.01	-0.08	10.65	-0.0001	0.5334	0.0038
138	SLU 77	-0.01	-0.09	10.78	-0.0001	0.5399	0.0043
138	SLU 78	-0.01	-0.08	10.78	-0.0001	0.54	0.0039
138	SLU 79	-0.01	-0.09	10.74	-0.0001	0.5376	0.0044
138	SLU 80	-0.01	-0.08	10.74	-0.0001	0.5377	0.004
138	SLU 81	-0.01	-0.09	10.96	-0.0001	0.5489	0.0043
138	SLU 82	-0.01	-0.08	10.96	-0.0001	0.549	0.004
138	SLU 83	-0.01	-0.09	11.05	-0.0001	0.5532	0.0043
138	SLU 84	-0.01	-0.08	11.05	-0.0001	0.5533	0.004
138	SLE RA 1	-0.01	-0.06	7.23	0	0.3622	0.0032
138	SLE RA 2	-0.01	-0.06	7.23	0	0.3623	0.0029
138	SLE RA 3	-0.01	-0.06	7.32	0	0.3666	0.0032
138	SLE RA 4	-0.01	-0.06	7.32	0	0.3667	0.003
138	SLE RA 5	-0.01	-0.06	7.29	0	0.3651	0.0029
138	SLE RA 6	-0.01	-0.07	7.38	0	0.3695	0.0033
138	SLE RA 7	-0.01	-0.06	7.38	0	0.3695	0.003
138	SLE RA 8	-0.01	-0.07	7.35	0	0.3679	0.0033
138	SLE RA 9	-0.01	-0.06	7.35	0	0.368	0.0031
138	SLE RA 10	-0.01	-0.06	7.85	0	0.3933	0.0029
138	SLE RA 11	-0.01	-0.07	7.94	0	0.3977	0.0033
138	SLE RA 12	-0.01	-0.06	7.94	0	0.3977	0.0031
138	SLE RA 13	-0.01	-0.06	7.91	0	0.3962	0.003
138	SLE RA 14	-0.01	-0.07	8	0	0.4005	0.0033
138	SLE RA 15	-0.01	-0.06	8	0	0.4006	0.0031
138	SLE RA 16	-0.01	-0.07	7.97	0	0.399	0.0034
138	SLE RA 17	-0.01	-0.06	7.97	0	0.399	0.0032
138	SLE RA 18	0	-0.07	8.12	0	0.4065	0.0033
138	SLE RA 19	0	-0.06	8.12	0	0.4066	0.0031
138	SLE RA 20	0	-0.07	8.18	0	0.4094	0.0034
138	SLE RA 21	0	-0.06	8.18	0	0.4095	0.0031
138	SLE FR 1	-0.01	-0.06	7.23	0	0.3622	0.0032
138	SLE FR 2	-0.01	-0.06	7.23	0	0.3622	0.0032
138	SLE FR 3	-0.01	-0.07	7.26	0	0.3633	0.0033
138	SLE FR 4	-0.01	-0.06	7.5	0	0.3755	0.0032
138	SLE FR 5	-0.01	-0.07	7.52	0	0.3766	0.0033
138	SLE FR 6	-0.01	-0.07	7.68	0	0.3844	0.0033
138	SLE QP 1	-0.01	-0.06	7.23	0	0.3622	0.0032
138	SLE QP 2	-0.01	-0.07	7.5	0	0.3755	0.0033
138	SLD 1	0.59	0	7.87	0	0.3939	-0.0002
138	SLD 2	0.62	-0.01	7.86	0	0.3937	0.0007
138	SLD 3	0.6	-0.2	7.74	0	0.3877	0.01
138	SLD 4	0.64	-0.22	7.74	0	0.3875	0.0109
138	SLD 5	0.14	0.27	7.8	0	0.3904	-0.0134
138	SLD 6	0.16	0.26	7.79	0	0.3902	-0.0129
138	SLD 7	0.2	-0.41	7.39	0	0.3699	0.0206
138	SLD 8	0.22	-0.42	7.38	0	0.3697	0.0212
138	SLD 9	-0.23	0.29	7.61	0	0.3813	-0.0147
138	SLD 10	-0.21	0.28	7.61	0	0.3811	-0.0141
138	SLD 11	-0.18	-0.39	7.2	0	0.3607	0.0194
138	SLD 12	-0.15	-0.4	7.2	0	0.3606	0.02
138	SLD 13	-0.65	0.09	7.26	0	0.3635	-0.0043
138	SLD 14	-0.62	0.07	7.25	0	0.3632	-0.0035
138	SLD 15	-0.64	-0.12	7.14	0	0.3573	0.0059
138	SLD 16	-0.6	-0.14	7.13	0	0.3571	0.0068
138	SLV 1	1.39	0.09	8.36	0	0.4184	-0.0046
138	SLV 2	1.47	0.05	8.34	0	0.4178	-0.0025
138	SLV 3	1.42	-0.37	8.08	0	0.4044	0.0187
138	SLV 4	1.5	-0.41	8.06	0	0.4038	0.0208
138	SLV 5	0.34	0.69	8.18	0	0.4097	-0.0348
138	SLV 6	0.39	0.67	8.17	0	0.4093	-0.0335
138	SLV 7	0.47	-0.86	7.25	0	0.363	0.0429

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
138	SLV 8	0.52	-0.88	7.24	0	0.3627	0.0442
138	SLV 9	-0.53	0.75	7.75	0	0.3883	-0.0377
138	SLV 10	-0.48	0.73	7.75	0	0.3879	-0.0363
138	SLV 11	-0.4	-0.8	6.82	0	0.3417	0.04
138	SLV 12	-0.35	-0.82	6.82	0	0.3413	0.0413
138	SLV 13	-1.52	0.28	6.93	0	0.3471	-0.0142
138	SLV 14	-1.44	0.24	6.92	0	0.3466	-0.0122
138	SLV 15	-1.48	-0.18	6.65	0	0.3331	0.0091
138	SLV 16	-1.4	-0.22	6.64	0	0.3326	0.0111
138	CRTFP Ux+	0	0	0	0	0	0
138	CRTFP Ux-	0	0	0	0	0	0
139	SLU 1	-0.01	-0.06	7.28	0	0.4861	0.0039
139	SLU 2	-0.01	-0.05	7.28	0	0.4863	0.0032
139	SLU 3	-0.01	-0.06	7.42	0	0.4953	0.0038
139	SLU 4	-0.01	-0.05	7.42	0	0.4955	0.0034
139	SLU 5	-0.01	-0.05	7.37	0	0.4923	0.0032
139	SLU 6	-0.01	-0.06	7.51	0	0.5013	0.0039
139	SLU 7	-0.01	-0.05	7.51	0	0.5014	0.0035
139	SLU 8	-0.01	-0.06	7.46	0	0.4981	0.004
139	SLU 9	-0.01	-0.05	7.46	0	0.4982	0.0036
139	SLU 10	0	-0.05	8.25	0	0.551	0.0032
139	SLU 11	0	-0.06	8.39	0	0.56	0.0038
139	SLU 12	0	-0.05	8.39	0	0.5601	0.0034
139	SLU 13	0	-0.05	8.34	0	0.557	0.0033
139	SLU 14	0	-0.06	8.48	0	0.566	0.0039
139	SLU 15	0	-0.05	8.48	0	0.5661	0.0035
139	SLU 16	0	-0.06	8.43	0	0.5627	0.004
139	SLU 17	0	-0.05	8.43	0	0.5629	0.0036
139	SLU 18	0	-0.06	8.66	0	0.5785	0.0039
139	SLU 19	0	-0.05	8.67	0	0.5786	0.0035
139	SLU 20	0	-0.06	8.75	0	0.5845	0.004
139	SLU 21	0	-0.05	8.76	0	0.5846	0.0036
139	SLU 22	-0.01	-0.05	8.12	0	0.542	0.0035
139	SLU 23	-0.01	-0.04	8.12	0	0.5422	0.0028
139	SLU 24	-0.01	-0.05	8.26	0	0.5512	0.0034
139	SLU 25	-0.01	-0.05	8.26	0	0.5514	0.003
139	SLU 26	-0.01	-0.04	8.21	0	0.5482	0.0029
139	SLU 27	-0.01	-0.05	8.35	0	0.5572	0.0035
139	SLU 28	-0.01	-0.05	8.35	0	0.5574	0.0031
139	SLU 29	-0.01	-0.05	8.3	0	0.554	0.0036
139	SLU 30	-0.01	-0.05	8.3	0	0.5541	0.0032
139	SLU 31	0	-0.04	9.09	-0.0001	0.6069	0.0028
139	SLU 32	0	-0.05	9.22	-0.0001	0.6159	0.0035
139	SLU 33	0	-0.05	9.23	-0.0001	0.616	0.003
139	SLU 34	0	-0.04	9.18	-0.0001	0.6129	0.0029
139	SLU 35	0	-0.05	9.31	-0.0001	0.6219	0.0035
139	SLU 36	0	-0.05	9.32	-0.0001	0.622	0.0031
139	SLU 37	0	-0.06	9.27	-0.0001	0.6186	0.0037
139	SLU 38	0	-0.05	9.27	-0.0001	0.6188	0.0032
139	SLU 39	0	-0.05	9.5	-0.0001	0.6344	0.0035
139	SLU 40	0	-0.05	9.5	-0.0001	0.6345	0.0031
139	SLU 41	0	-0.05	9.59	-0.0001	0.6404	0.0036
139	SLU 42	0	-0.05	9.59	-0.0001	0.6405	0.0032
139	SLU 43	-0.01	-0.08	9.18	-0.0001	0.6128	0.0052
139	SLU 44	-0.01	-0.07	9.18	-0.0001	0.613	0.0045
139	SLU 45	-0.01	-0.08	9.32	-0.0001	0.622	0.0051
139	SLU 46	-0.01	-0.07	9.32	-0.0001	0.6221	0.0047
139	SLU 47	-0.01	-0.07	9.27	-0.0001	0.619	0.0045
139	SLU 48	-0.01	-0.08	9.41	-0.0001	0.628	0.0052
139	SLU 49	-0.01	-0.07	9.41	-0.0001	0.6281	0.0047
139	SLU 50	-0.01	-0.08	9.36	-0.0001	0.6247	0.0053
139	SLU 51	-0.01	-0.07	9.36	-0.0001	0.6249	0.0049
139	SLU 52	0	-0.07	10.15	-0.0001	0.6776	0.0045
139	SLU 53	0	-0.08	10.28	-0.0001	0.6866	0.0051
139	SLU 54	0	-0.07	10.29	-0.0001	0.6868	0.0047
139	SLU 55	0	-0.07	10.24	-0.0001	0.6836	0.0046
139	SLU 56	0	-0.08	10.37	-0.0001	0.6926	0.0052
139	SLU 57	0	-0.07	10.38	-0.0001	0.6928	0.0048
139	SLU 58	0	-0.08	10.33	-0.0001	0.6894	0.0053
139	SLU 59	0	-0.07	10.33	-0.0001	0.6895	0.0049
139	SLU 60	0	-0.08	10.56	-0.0001	0.7051	0.0052
139	SLU 61	0	-0.07	10.56	-0.0001	0.7053	0.0048
139	SLU 62	0	-0.08	10.65	-0.0001	0.7111	0.0053
139	SLU 63	0	-0.07	10.65	-0.0001	0.7112	0.0048
139	SLU 64	-0.01	-0.07	10.02	-0.0001	0.6687	0.0048
139	SLU 65	-0.01	-0.06	10.02	-0.0001	0.6689	0.0041
139	SLU 66	-0.01	-0.07	10.15	-0.0001	0.6779	0.0047
139	SLU 67	-0.01	-0.06	10.16	-0.0001	0.678	0.0043
139	SLU 68	-0.01	-0.06	10.11	-0.0001	0.6749	0.0042
139	SLU 69	-0.01	-0.07	10.24	-0.0001	0.6839	0.0048
139	SLU 70	-0.01	-0.07	10.25	-0.0001	0.684	0.0044
139	SLU 71	-0.01	-0.07	10.19	-0.0001	0.6807	0.0049
139	SLU 72	-0.01	-0.07	10.2	-0.0001	0.6808	0.0045
139	SLU 73	-0.01	-0.06	10.99	-0.0001	0.7336	0.0041
139	SLU 74	-0.01	-0.07	11.12	-0.0001	0.7425	0.0047
139	SLU 75	-0.01	-0.06	11.12	-0.0001	0.7427	0.0043
139	SLU 76	-0.01	-0.06	11.08	-0.0001	0.7395	0.0042
139	SLU 77	-0.01	-0.07	11.21	-0.0001	0.7485	0.0048
139	SLU 78	-0.01	-0.07	11.21	-0.0001	0.7487	0.0044
139	SLU 79	-0.01	-0.07	11.16	-0.0001	0.7453	0.005
139	SLU 80	-0.01	-0.07	11.17	-0.0001	0.7454	0.0045

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
139	SLU 81	-0.01	-0.07	11.4	-0.0001	0.761	0.0048
139	SLU 82	0	-0.07	11.4	-0.0001	0.7612	0.0044
139	SLU 83	-0.01	-0.07	11.49	-0.0001	0.767	0.0049
139	SLU 84	0	-0.07	11.49	-0.0001	0.7672	0.0045
139	SLE RA 1	-0.01	-0.06	7.52	0	0.5021	0.0038
139	SLE RA 2	-0.01	-0.05	7.52	0	0.5022	0.0033
139	SLE RA 3	-0.01	-0.06	7.61	0	0.5082	0.0037
139	SLE RA 4	-0.01	-0.05	7.61	0	0.5083	0.0034
139	SLE RA 5	-0.01	-0.05	7.58	0	0.5062	0.0033
139	SLE RA 6	-0.01	-0.06	7.67	0	0.5122	0.0038
139	SLE RA 7	-0.01	-0.05	7.67	0	0.5123	0.0035
139	SLE RA 8	-0.01	-0.06	7.64	0	0.5101	0.0039
139	SLE RA 9	-0.01	-0.05	7.64	0	0.5102	0.0036
139	SLE RA 10	0	-0.05	8.17	0	0.5453	0.0033
139	SLE RA 11	0	-0.06	8.26	0	0.5513	0.0037
139	SLE RA 12	0	-0.05	8.26	0	0.5514	0.0035
139	SLE RA 13	0	-0.05	8.23	0	0.5493	0.0034
139	SLE RA 14	0	-0.06	8.32	0	0.5553	0.0038
139	SLE RA 15	0	-0.05	8.32	0	0.5554	0.0035
139	SLE RA 16	0	-0.06	8.29	0	0.5532	0.0039
139	SLE RA 17	0	-0.05	8.29	0	0.5533	0.0036
139	SLE RA 18	0	-0.06	8.44	0	0.5636	0.0038
139	SLE RA 19	0	-0.05	8.44	0	0.5637	0.0035
139	SLE RA 20	0	-0.06	8.5	0	0.5676	0.0038
139	SLE RA 21	0	-0.05	8.5	0	0.5677	0.0036
139	SLE FR 1	-0.01	-0.06	7.52	0	0.5021	0.0038
139	SLE FR 2	-0.01	-0.06	7.52	0	0.5021	0.0037
139	SLE FR 3	-0.01	-0.06	7.54	0	0.5037	0.0038
139	SLE FR 4	-0.01	-0.06	7.8	0	0.5206	0.0037
139	SLE FR 5	-0.01	-0.06	7.82	0	0.5221	0.0038
139	SLE FR 6	-0.01	-0.06	7.98	0	0.5329	0.0038
139	SLE QP 1	-0.01	-0.06	7.52	0	0.5021	0.0038
139	SLE QP 2	-0.01	-0.06	7.8	0	0.5205	0.0038
139	SLD 1	0.62	0.02	8.13	0	0.5426	-0.0013
139	SLD 2	0.65	0	8.12	0	0.5422	-0.0002
139	SLD 3	0.63	-0.19	8	0	0.5341	0.0129
139	SLD 4	0.67	-0.21	7.99	0	0.5338	0.014
139	SLD 5	0.15	0.29	8.09	0	0.5401	-0.0195
139	SLD 6	0.17	0.28	8.09	0	0.5399	-0.0188
139	SLD 7	0.2	-0.42	7.67	0	0.5118	0.0279
139	SLD 8	0.23	-0.43	7.66	0	0.5116	0.0286
139	SLD 9	-0.24	0.32	7.93	0	0.5295	-0.0211
139	SLD 10	-0.22	0.31	7.93	0	0.5293	-0.0204
139	SLD 11	-0.18	-0.39	7.51	0	0.5012	0.0264
139	SLD 12	-0.16	-0.41	7.5	0	0.501	0.0271
139	SLD 13	-0.68	0.1	7.6	0	0.5073	-0.0065
139	SLD 14	-0.64	0.08	7.59	0	0.507	-0.0054
139	SLD 15	-0.66	-0.12	7.47	0	0.4988	0.0077
139	SLD 16	-0.63	-0.13	7.47	0	0.4985	0.0088
139	SLV 1	1.45	0.11	8.57	0	0.5718	-0.0077
139	SLV 2	1.53	0.08	8.55	0	0.5711	-0.0051
139	SLV 3	1.49	-0.37	8.28	0	0.5525	0.0248
139	SLV 4	1.57	-0.41	8.26	0	0.5518	0.0274
139	SLV 5	0.36	0.74	8.47	0	0.5653	-0.0493
139	SLV 6	0.41	0.71	8.46	0	0.5648	-0.0477
139	SLV 7	0.49	-0.88	7.5	0	0.501	0.0589
139	SLV 8	0.54	-0.91	7.5	0	0.5005	0.0605
139	SLV 9	-0.55	0.79	8.1	0	0.5406	-0.053
139	SLV 10	-0.5	0.77	8.09	0	0.5401	-0.0513
139	SLV 11	-0.42	-0.83	7.13	0	0.4763	0.0552
139	SLV 12	-0.37	-0.85	7.13	0	0.4758	0.0569
139	SLV 13	-1.58	0.3	7.33	0	0.4893	-0.0198
139	SLV 14	-1.5	0.26	7.32	0	0.4885	-0.0172
139	SLV 15	-1.54	-0.19	7.04	0	0.47	0.0126
139	SLV 16	-1.46	-0.23	7.03	0	0.4692	0.0152
139	CRTFP Ux+	0	0	0	0	0	0
139	CRTFP Ux-	0	0	0	0	0	0
140	SLU 1	-0.01	-0.05	7.3	0	0.6089	0.004
140	SLU 2	0	-0.04	7.3	0	0.6093	0.0031
140	SLU 3	-0.01	-0.05	7.44	0	0.6205	0.0039
140	SLU 4	0	-0.04	7.44	0	0.6207	0.0033
140	SLU 5	0	-0.04	7.39	0	0.6168	0.0032
140	SLU 6	-0.01	-0.05	7.53	0	0.6281	0.0039
140	SLU 7	0	-0.04	7.53	0	0.6283	0.0034
140	SLU 8	0	-0.05	7.48	0	0.624	0.0041
140	SLU 9	0	-0.04	7.48	0	0.6242	0.0036
140	SLU 10	0	-0.04	8.27	0	0.6904	0.003
140	SLU 11	0	-0.05	8.41	0	0.7017	0.0038
140	SLU 12	0	-0.04	8.41	0	0.7019	0.0033
140	SLU 13	0	-0.04	8.36	0	0.698	0.0031
140	SLU 14	0	-0.05	8.5	0	0.7092	0.0039
140	SLU 15	0	-0.04	8.5	0	0.7094	0.0033
140	SLU 16	0	-0.05	8.45	0	0.7052	0.0041
140	SLU 17	0	-0.04	8.45	0	0.7054	0.0035
140	SLU 18	0	-0.05	8.69	0	0.7249	0.0039
140	SLU 19	0	-0.04	8.69	0	0.7251	0.0033
140	SLU 20	0	-0.05	8.78	0	0.7324	0.0039
140	SLU 21	0	-0.04	8.78	0	0.7326	0.0034
140	SLU 22	-0.01	-0.04	8.13	0	0.6789	0.0034
140	SLU 23	-0.01	-0.03	8.14	0	0.6792	0.0025
140	SLU 24	-0.01	-0.04	8.27	0	0.6904	0.0033

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
140	SLU 25	-0.01	-0.03	8.28	0	0.6906	0.0028
140	SLU 26	-0.01	-0.03	8.23	0	0.6868	0.0026
140	SLU 27	-0.01	-0.04	8.36	0	0.698	0.0034
140	SLU 28	-0.01	-0.03	8.37	0	0.6982	0.0028
140	SLU 29	-0.01	-0.04	8.32	0	0.6939	0.0036
140	SLU 30	-0.01	-0.04	8.32	0	0.6942	0.003
140	SLU 31	0	-0.03	9.11	-0.0001	0.7604	0.0024
140	SLU 32	0	-0.04	9.25	-0.0001	0.7716	0.0032
140	SLU 33	0	-0.03	9.25	-0.0001	0.7718	0.0027
140	SLU 34	0	-0.03	9.2	-0.0001	0.7679	0.0025
140	SLU 35	0	-0.04	9.34	-0.0001	0.7791	0.0033
140	SLU 36	0	-0.03	9.34	-0.0001	0.7793	0.0028
140	SLU 37	0	-0.04	9.29	-0.0001	0.7751	0.0035
140	SLU 38	0	-0.04	9.29	-0.0001	0.7753	0.003
140	SLU 39	0	-0.04	9.52	-0.0001	0.7948	0.0033
140	SLU 40	0	-0.03	9.53	-0.0001	0.795	0.0028
140	SLU 41	0	-0.04	9.61	-0.0001	0.8023	0.0034
140	SLU 42	0	-0.03	9.62	-0.0001	0.8025	0.0028
140	SLU 43	-0.01	-0.06	9.2	-0.0001	0.7677	0.0054
140	SLU 44	-0.01	-0.05	9.2	-0.0001	0.768	0.0045
140	SLU 45	-0.01	-0.06	9.34	-0.0001	0.7792	0.0053
140	SLU 46	-0.01	-0.06	9.34	-0.0001	0.7794	0.0047
140	SLU 47	-0.01	-0.05	9.29	-0.0001	0.7755	0.0046
140	SLU 48	-0.01	-0.06	9.43	-0.0001	0.7868	0.0053
140	SLU 49	-0.01	-0.06	9.43	-0.0001	0.787	0.0048
140	SLU 50	-0.01	-0.07	9.38	-0.0001	0.7827	0.0055
140	SLU 51	-0.01	-0.06	9.38	-0.0001	0.7829	0.005
140	SLU 52	0	-0.05	10.17	-0.0001	0.8491	0.0044
140	SLU 53	0	-0.06	10.31	-0.0001	0.8604	0.0052
140	SLU 54	0	-0.06	10.31	-0.0001	0.8606	0.0047
140	SLU 55	0	-0.05	10.27	-0.0001	0.8567	0.0045
140	SLU 56	0	-0.06	10.4	-0.0001	0.8679	0.0053
140	SLU 57	0	-0.06	10.4	-0.0001	0.8681	0.0047
140	SLU 58	0	-0.07	10.35	-0.0001	0.8639	0.0055
140	SLU 59	0	-0.06	10.35	-0.0001	0.8641	0.0049
140	SLU 60	0	-0.06	10.59	-0.0001	0.8836	0.0053
140	SLU 61	0	-0.06	10.59	-0.0001	0.8838	0.0047
140	SLU 62	0	-0.06	10.68	-0.0001	0.8911	0.0053
140	SLU 63	0	-0.06	10.68	-0.0001	0.8913	0.0048
140	SLU 64	-0.01	-0.06	10.04	-0.0001	0.8376	0.0048
140	SLU 65	-0.01	-0.05	10.04	-0.0001	0.8379	0.0039
140	SLU 66	-0.01	-0.06	10.17	-0.0001	0.8491	0.0047
140	SLU 67	-0.01	-0.05	10.18	-0.0001	0.8494	0.0041
140	SLU 68	-0.01	-0.05	10.13	-0.0001	0.8455	0.004
140	SLU 69	-0.01	-0.06	10.27	-0.0001	0.8567	0.0048
140	SLU 70	-0.01	-0.05	10.27	-0.0001	0.8569	0.0042
140	SLU 71	-0.01	-0.06	10.22	-0.0001	0.8527	0.0049
140	SLU 72	-0.01	-0.05	10.22	-0.0001	0.8529	0.0044
140	SLU 73	0	-0.05	11.01	-0.0001	0.9191	0.0038
140	SLU 74	0	-0.06	11.15	-0.0001	0.9303	0.0046
140	SLU 75	0	-0.05	11.15	-0.0001	0.9305	0.0041
140	SLU 76	0	-0.05	11.1	-0.0001	0.9266	0.0039
140	SLU 77	0	-0.06	11.24	-0.0001	0.9378	0.0047
140	SLU 78	0	-0.05	11.24	-0.0001	0.938	0.0042
140	SLU 79	0	-0.06	11.19	-0.0001	0.9338	0.0049
140	SLU 80	0	-0.05	11.19	-0.0001	0.934	0.0043
140	SLU 81	0	-0.06	11.43	-0.0001	0.9535	0.0047
140	SLU 82	0	-0.05	11.43	-0.0001	0.9537	0.0041
140	SLU 83	0	-0.06	11.52	-0.0001	0.961	0.0048
140	SLU 84	0	-0.05	11.52	-0.0001	0.9612	0.0042
140	SLE RA 1	-0.01	-0.05	7.54	0	0.6289	0.0038
140	SLE RA 2	-0.01	-0.04	7.54	0	0.6292	0.0032
140	SLE RA 3	-0.01	-0.04	7.63	0	0.6366	0.0037
140	SLE RA 4	-0.01	-0.04	7.63	0	0.6368	0.0034
140	SLE RA 5	-0.01	-0.04	7.6	0	0.6342	0.0033
140	SLE RA 6	-0.01	-0.05	7.69	0	0.6417	0.0038
140	SLE RA 7	-0.01	-0.04	7.69	0	0.6418	0.0034
140	SLE RA 8	-0.01	-0.05	7.66	0	0.639	0.0039
140	SLE RA 9	-0.01	-0.04	7.66	0	0.6391	0.0036
140	SLE RA 10	0	-0.04	8.19	0	0.6833	0.0032
140	SLE RA 11	0	-0.04	8.28	0	0.6907	0.0037
140	SLE RA 12	0	-0.04	8.28	0	0.6909	0.0033
140	SLE RA 13	0	-0.04	8.25	0	0.6883	0.0032
140	SLE RA 14	0	-0.04	8.34	0	0.6958	0.0037
140	SLE RA 15	0	-0.04	8.34	0	0.6959	0.0034
140	SLE RA 16	0	-0.05	8.3	0	0.6931	0.0039
140	SLE RA 17	0	-0.04	8.31	0	0.6932	0.0035
140	SLE RA 18	0	-0.04	8.46	0	0.7062	0.0037
140	SLE RA 19	0	-0.04	8.46	0	0.7063	0.0034
140	SLE RA 20	0	-0.05	8.52	0	0.7112	0.0038
140	SLE RA 21	0	-0.04	8.52	0	0.7114	0.0034
140	SLE FR 1	-0.01	-0.05	7.54	0	0.6289	0.0038
140	SLE FR 2	-0.01	-0.04	7.54	0	0.629	0.0037
140	SLE FR 3	-0.01	-0.05	7.56	0	0.6309	0.0038
140	SLE FR 4	0	-0.04	7.81	0	0.6522	0.0037
140	SLE FR 5	0	-0.05	7.84	0	0.6541	0.0038
140	SLE FR 6	0	-0.05	8	0	0.6676	0.0038
140	SLE QP 1	-0.01	-0.05	7.54	0	0.6289	0.0038
140	SLE QP 2	0	-0.05	7.81	0	0.6521	0.0038
140	SLD 1	0.62	0.03	8.09	0	0.6754	-0.0028
140	SLD 2	0.65	0.02	8.09	0	0.675	-0.0016

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
140	SLD 3	0.63	-0.18	7.97	0	0.6648	0.0151
140	SLD 4	0.67	-0.2	7.96	0	0.6644	0.0163
140	SLD 5	0.15	0.31	8.09	0	0.6753	-0.0255
140	SLD 6	0.17	0.3	8.09	0	0.675	-0.0247
140	SLD 7	0.21	-0.41	7.67	0	0.6399	0.0341
140	SLD 8	0.23	-0.42	7.66	0	0.6396	0.0349
140	SLD 9	-0.24	0.33	7.96	0	0.6646	-0.0273
140	SLD 10	-0.22	0.32	7.96	0	0.6643	-0.0265
140	SLD 11	-0.18	-0.39	7.54	0	0.6292	0.0323
140	SLD 12	-0.16	-0.4	7.54	0	0.629	0.0331
140	SLD 13	-0.68	0.1	7.67	0	0.6398	-0.0087
140	SLD 14	-0.64	0.09	7.66	0	0.6394	-0.0075
140	SLD 15	-0.66	-0.11	7.54	0	0.6292	0.0092
140	SLD 16	-0.63	-0.12	7.53	0	0.6288	0.0104
140	SLV 1	1.45	0.13	8.46	0	0.7063	-0.0112
140	SLV 2	1.54	0.1	8.45	0	0.7053	-0.0083
140	SLV 3	1.49	-0.35	8.17	0	0.6822	0.0296
140	SLV 4	1.57	-0.39	8.16	0	0.6812	0.0325
140	SLV 5	0.36	0.76	8.45	0	0.7051	-0.063
140	SLV 6	0.41	0.73	8.44	0	0.7045	-0.0612
140	SLV 7	0.49	-0.87	7.49	0	0.6247	0.0729
140	SLV 8	0.54	-0.9	7.48	0	0.6241	0.0747
140	SLV 9	-0.55	0.8	8.15	0	0.6801	-0.0671
140	SLV 10	-0.5	0.78	8.14	0	0.6795	-0.0653
140	SLV 11	-0.42	-0.82	7.19	0	0.5997	0.0688
140	SLV 12	-0.37	-0.85	7.18	0	0.5991	0.0706
140	SLV 13	-1.58	0.3	7.47	0	0.623	-0.0249
140	SLV 14	-1.5	0.26	7.45	0	0.622	-0.022
140	SLV 15	-1.55	-0.19	7.18	0	0.5989	0.0159
140	SLV 16	-1.46	-0.22	7.16	0	0.5979	0.0187
140	CRTFP Ux+	0	0	0	0	0	0
140	CRTFP Ux-	0	0	0	0	0	0
141	SLU 1	0	-0.04	7.31	0	0.7325	0.0037
141	SLU 2	0	-0.03	7.32	0	0.733	0.0027
141	SLU 3	0	-0.04	7.45	0	0.7464	0.0035
141	SLU 4	0	-0.03	7.46	0	0.7467	0.0029
141	SLU 5	0	-0.03	7.41	0	0.7421	0.0027
141	SLU 6	0	-0.04	7.54	0	0.7555	0.0036
141	SLU 7	0	-0.03	7.55	0	0.7558	0.003
141	SLU 8	0	-0.04	7.5	0	0.7507	0.0039
141	SLU 9	0	-0.03	7.5	0	0.751	0.0032
141	SLU 10	0	-0.02	8.3	0	0.8308	0.0024
141	SLU 11	0	-0.03	8.43	0	0.8443	0.0033
141	SLU 12	0	-0.03	8.43	0	0.8446	0.0027
141	SLU 13	0	-0.03	8.39	0	0.8399	0.0025
141	SLU 14	0	-0.03	8.52	0	0.8534	0.0034
141	SLU 15	0	-0.03	8.52	0	0.8537	0.0028
141	SLU 16	0	-0.04	8.47	0	0.8486	0.0036
141	SLU 17	0	-0.03	8.48	0	0.8489	0.003
141	SLU 18	0	-0.03	8.71	0	0.8723	0.0033
141	SLU 19	0	-0.03	8.71	0	0.8726	0.0027
141	SLU 20	0	-0.03	8.8	0	0.8814	0.0034
141	SLU 21	0	-0.03	8.8	0	0.8817	0.0028
141	SLU 22	-0.01	-0.03	8.15	0	0.8165	0.0028
141	SLU 23	0	-0.02	8.16	0	0.817	0.0018
141	SLU 24	-0.01	-0.03	8.29	0	0.8304	0.0027
141	SLU 25	-0.01	-0.02	8.3	0	0.8307	0.002
141	SLU 26	0	-0.02	8.25	0	0.8261	0.0019
141	SLU 27	-0.01	-0.03	8.38	0	0.8396	0.0027
141	SLU 28	0	-0.02	8.39	0	0.8398	0.0021
141	SLU 29	-0.01	-0.03	8.34	0	0.8347	0.003
141	SLU 30	0	-0.02	8.34	0	0.835	0.0024
141	SLU 31	0	-0.02	9.14	-0.0001	0.9148	0.0016
141	SLU 32	0	-0.02	9.27	-0.0001	0.9283	0.0024
141	SLU 33	0	-0.02	9.27	-0.0001	0.9286	0.0018
141	SLU 34	0	-0.02	9.23	-0.0001	0.9239	0.0016
141	SLU 35	0	-0.03	9.36	-0.0001	0.9374	0.0025
141	SLU 36	0	-0.02	9.36	-0.0001	0.9377	0.0019
141	SLU 37	0	-0.03	9.31	-0.0001	0.9326	0.0028
141	SLU 38	0	-0.02	9.32	-0.0001	0.9329	0.0021
141	SLU 39	0	-0.02	9.55	-0.0001	0.9563	0.0025
141	SLU 40	0	-0.02	9.55	-0.0001	0.9566	0.0019
141	SLU 41	0	-0.03	9.64	-0.0001	0.9654	0.0026
141	SLU 42	0	-0.02	9.64	-0.0001	0.9657	0.002
141	SLU 43	-0.01	-0.05	9.22	-0.0001	0.9234	0.0051
141	SLU 44	0	-0.04	9.23	-0.0001	0.9239	0.0041
141	SLU 45	-0.01	-0.05	9.36	-0.0001	0.9374	0.0049
141	SLU 46	0	-0.04	9.36	-0.0001	0.9377	0.0043
141	SLU 47	0	-0.04	9.32	-0.0001	0.933	0.0041
141	SLU 48	-0.01	-0.05	9.45	-0.0001	0.9465	0.005
141	SLU 49	0	-0.04	9.45	-0.0001	0.9468	0.0044
141	SLU 50	-0.01	-0.05	9.4	-0.0001	0.9416	0.0053
141	SLU 51	0	-0.05	9.41	-0.0001	0.9419	0.0046
141	SLU 52	0	-0.04	10.2	-0.0001	1.0218	0.0038
141	SLU 53	0	-0.05	10.34	-0.0001	1.0352	0.0047
141	SLU 54	0	-0.04	10.34	-0.0001	1.0355	0.0041
141	SLU 55	0	-0.04	10.29	-0.0001	1.0309	0.0039
141	SLU 56	0	-0.05	10.43	-0.0001	1.0443	0.0048
141	SLU 57	0	-0.04	10.43	-0.0001	1.0446	0.0042
141	SLU 58	0	-0.05	10.38	-0.0001	1.0395	0.005
141	SLU 59	0	-0.04	10.38	-0.0001	1.0398	0.0044

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
141	SLU 60	0	-0.05	10.62	-0.0001	1.0632	0.0047
141	SLU 61	0	-0.04	10.62	-0.0001	1.0635	0.0041
141	SLU 62	0	-0.05	10.71	-0.0001	1.0723	0.0048
141	SLU 63	0	-0.04	10.71	-0.0001	1.0726	0.0042
141	SLU 64	-0.01	-0.04	10.06	-0.0001	1.0074	0.0042
141	SLU 65	-0.01	-0.03	10.06	-0.0001	1.0079	0.0032
141	SLU 66	-0.01	-0.04	10.2	-0.0001	1.0214	0.0041
141	SLU 67	-0.01	-0.03	10.2	-0.0001	1.0217	0.0034
141	SLU 68	-0.01	-0.03	10.16	-0.0001	1.017	0.0033
141	SLU 69	-0.01	-0.04	10.29	-0.0001	1.0305	0.0041
141	SLU 70	-0.01	-0.04	10.29	-0.0001	1.0308	0.0035
141	SLU 71	-0.01	-0.04	10.24	-0.0001	1.0257	0.0044
141	SLU 72	-0.01	-0.04	10.24	-0.0001	1.026	0.0038
141	SLU 73	0	-0.03	11.04	-0.0001	1.1058	0.003
141	SLU 74	0	-0.04	11.18	-0.0001	1.1192	0.0038
141	SLU 75	0	-0.03	11.18	-0.0001	1.1195	0.0032
141	SLU 76	0	-0.03	11.13	-0.0001	1.1149	0.003
141	SLU 77	0	-0.04	11.27	-0.0001	1.1284	0.0039
141	SLU 78	0	-0.03	11.27	-0.0001	1.1286	0.0033
141	SLU 79	0	-0.04	11.22	-0.0001	1.1235	0.0042
141	SLU 80	0	-0.04	11.22	-0.0001	1.1238	0.0035
141	SLU 81	0	-0.04	11.46	-0.0001	1.1472	0.0039
141	SLU 82	0	-0.03	11.46	-0.0001	1.1475	0.0033
141	SLU 83	0	-0.04	11.55	-0.0001	1.1563	0.004
141	SLU 84	0	-0.03	11.55	-0.0001	1.1566	0.0034
141	SLE RA 1	0	-0.03	7.55	0	0.7565	0.0034
141	SLE RA 2	0	-0.03	7.56	0	0.7568	0.0027
141	SLE RA 3	0	-0.03	7.65	0	0.7658	0.0033
141	SLE RA 4	0	-0.03	7.65	0	0.766	0.0029
141	SLE RA 5	0	-0.03	7.62	0	0.7629	0.0028
141	SLE RA 6	0	-0.03	7.71	0	0.7719	0.0034
141	SLE RA 7	0	-0.03	7.71	0	0.7721	0.003
141	SLE RA 8	0	-0.04	7.68	0	0.7686	0.0035
141	SLE RA 9	0	-0.03	7.68	0	0.7688	0.0031
141	SLE RA 10	0	-0.03	8.21	0	0.822	0.0026
141	SLE RA 11	0	-0.03	8.3	0	0.831	0.0032
141	SLE RA 12	0	-0.03	8.3	0	0.8312	0.0028
141	SLE RA 13	0	-0.03	8.27	0	0.8281	0.0027
141	SLE RA 14	0	-0.03	8.36	0	0.8371	0.0032
141	SLE RA 15	0	-0.03	8.36	0	0.8373	0.0028
141	SLE RA 16	0	-0.03	8.33	0	0.8339	0.0034
141	SLE RA 17	0	-0.03	8.33	0	0.8341	0.003
141	SLE RA 18	0	-0.03	8.48	0	0.8497	0.0032
141	SLE RA 19	0	-0.03	8.49	0	0.8499	0.0028
141	SLE RA 20	0	-0.03	8.55	0	0.8558	0.0033
141	SLE RA 21	0	-0.03	8.55	0	0.856	0.0029
141	SLE FR 1	0	-0.03	7.55	0	0.7565	0.0034
141	SLE FR 2	0	-0.03	7.55	0	0.7566	0.0033
141	SLE FR 3	0	-0.03	7.58	0	0.7589	0.0035
141	SLE FR 4	0	-0.03	7.83	0	0.7845	0.0032
141	SLE FR 5	0	-0.03	7.86	0	0.7869	0.0034
141	SLE FR 6	0	-0.03	8.02	0	0.8031	0.0033
141	SLE QP 1	0	-0.03	7.55	0	0.7565	0.0034
141	SLE QP 2	0	-0.03	7.83	0	0.7845	0.0034
141	SLD 1	0.62	0.05	8.06	0	0.8075	-0.005
141	SLD 2	0.66	0.04	8.06	0	0.807	-0.0037
141	SLD 3	0.64	-0.17	7.94	0	0.7947	0.0166
141	SLD 4	0.67	-0.18	7.93	0	0.7942	0.0179
141	SLD 5	0.15	0.32	8.1	0	0.8108	-0.032
141	SLD 6	0.17	0.31	8.09	0	0.8105	-0.0312
141	SLD 7	0.21	-0.4	7.67	0	0.7683	0.0398
141	SLD 8	0.23	-0.41	7.67	0	0.7679	0.0406
141	SLD 9	-0.24	0.34	8	0	0.801	-0.0339
141	SLD 10	-0.22	0.33	7.99	0	0.8006	-0.033
141	SLD 11	-0.18	-0.38	7.57	0	0.7584	0.0379
141	SLD 12	-0.16	-0.39	7.57	0	0.7581	0.0387
141	SLD 13	-0.68	0.11	7.74	0	0.7747	-0.0111
141	SLD 14	-0.64	0.1	7.73	0	0.7742	-0.0098
141	SLD 15	-0.66	-0.1	7.61	0	0.7619	0.0104
141	SLD 16	-0.63	-0.12	7.6	0	0.7614	0.0117
141	SLV 1	1.45	0.15	8.37	0	0.838	-0.0155
141	SLV 2	1.54	0.12	8.36	0	0.8368	-0.0124
141	SLV 3	1.49	-0.34	8.08	0	0.809	0.0336
141	SLV 4	1.58	-0.37	8.07	0	0.8078	0.0366
141	SLV 5	0.36	0.77	8.43	0	0.8447	-0.0772
141	SLV 6	0.41	0.75	8.43	0	0.8439	-0.0753
141	SLV 7	0.49	-0.86	7.47	0	0.748	0.0864
141	SLV 8	0.54	-0.88	7.46	0	0.7473	0.0883
141	SLV 9	-0.55	0.81	8.2	0	0.8216	-0.0815
141	SLV 10	-0.5	0.79	8.2	0	0.8209	-0.0796
141	SLV 11	-0.42	-0.82	7.24	0	0.725	0.082
141	SLV 12	-0.37	-0.84	7.23	0	0.7242	0.084
141	SLV 13	-1.59	0.3	7.6	0	0.7611	-0.0299
141	SLV 14	-1.5	0.27	7.59	0	0.7599	-0.0269
141	SLV 15	-1.55	-0.19	7.31	0	0.7321	0.0192
141	SLV 16	-1.46	-0.22	7.3	0	0.7309	0.0222
141	CRTFP Ux+	0	0	0	0	0	0
141	CRTFP Ux-	0	0	0	0	0	0
142	SLU 1	0	-0.03	7.33	0	0.857	0.003
142	SLU 2	0	-0.02	7.34	0	0.8576	0.0019
142	SLU 3	0	-0.02	7.47	0	0.8733	0.0028

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
142	SLU 4	0	-0.02	7.48	0	0.8737	0.0021
142	SLU 5	0	-0.02	7.43	0	0.8683	0.0019
142	SLU 6	0	-0.02	7.57	0	0.8841	0.0029
142	SLU 7	0	-0.02	7.57	0	0.8844	0.0022
142	SLU 8	0	-0.03	7.52	0	0.8784	0.0032
142	SLU 9	0	-0.02	7.52	0	0.8788	0.0025
142	SLU 10	0	-0.01	8.32	0	0.9725	0.0014
142	SLU 11	0	-0.02	8.46	0	0.9882	0.0024
142	SLU 12	0	-0.01	8.46	0	0.9886	0.0017
142	SLU 13	0	-0.01	8.41	0	0.9832	0.0015
142	SLU 14	0	-0.02	8.55	0	0.9989	0.0025
142	SLU 15	0	-0.01	8.55	0	0.9993	0.0017
142	SLU 16	0	-0.02	8.5	0	0.9933	0.0028
142	SLU 17	0	-0.02	8.5	0	0.9936	0.0021
142	SLU 18	0	-0.02	8.74	0	1.0211	0.0024
142	SLU 19	0	-0.01	8.74	0	1.0214	0.0017
142	SLU 20	0	-0.02	8.83	0	1.0318	0.0025
142	SLU 21	0	-0.02	8.83	0	1.0321	0.0018
142	SLU 22	0	-0.02	8.18	0	0.9552	0.0018
142	SLU 23	0	-0.01	8.18	0	0.9559	0.0007
142	SLU 24	0	-0.01	8.32	0	0.9716	0.0016
142	SLU 25	0	-0.01	8.32	0	0.972	0.0009
142	SLU 26	0	-0.01	8.27	0	0.9666	0.0008
142	SLU 27	0	-0.01	8.41	0	0.9823	0.0017
142	SLU 28	0	-0.01	8.41	0	0.9827	0.001
142	SLU 29	0	-0.02	8.36	0	0.9767	0.002
142	SLU 30	0	-0.01	8.36	0	0.977	0.0013
142	SLU 31	0	0	9.16	-0.0001	1.0707	0.0002
142	SLU 32	0	-0.01	9.3	-0.0001	1.0864	0.0012
142	SLU 33	0	0	9.3	-0.0001	1.0868	0.0005
142	SLU 34	0	0	9.26	-0.0001	1.0814	0.0003
142	SLU 35	0	-0.01	9.39	-0.0001	1.0971	0.0013
142	SLU 36	0	0	9.39	-0.0001	1.0975	0.0006
142	SLU 37	0	-0.01	9.34	-0.0001	1.0915	0.0016
142	SLU 38	0	-0.01	9.35	-0.0001	1.0919	0.0009
142	SLU 39	0	-0.01	9.58	-0.0001	1.1193	0.0012
142	SLU 40	0	0	9.58	-0.0001	1.1197	0.0005
142	SLU 41	0	-0.01	9.67	-0.0001	1.13	0.0013
142	SLU 42	0	-0.01	9.67	-0.0001	1.1304	0.0006
142	SLU 43	0	-0.04	9.25	-0.0001	1.0804	0.0043
142	SLU 44	0	-0.03	9.25	-0.0001	1.0811	0.0032
142	SLU 45	0	-0.04	9.39	-0.0001	1.0968	0.0041
142	SLU 46	0	-0.03	9.39	-0.0001	1.0971	0.0034
142	SLU 47	0	-0.03	9.34	-0.0001	1.0918	0.0033
142	SLU 48	0	-0.04	9.48	-0.0001	1.1075	0.0042
142	SLU 49	0	-0.03	9.48	-0.0001	1.1079	0.0035
142	SLU 50	0	-0.04	9.43	-0.0001	1.1018	0.0045
142	SLU 51	0	-0.03	9.43	-0.0001	1.1022	0.0038
142	SLU 52	0	-0.02	10.24	-0.0001	1.1959	0.0027
142	SLU 53	0	-0.03	10.37	-0.0001	1.2116	0.0037
142	SLU 54	0	-0.03	10.37	-0.0001	1.212	0.003
142	SLU 55	0	-0.02	10.33	-0.0001	1.2066	0.0028
142	SLU 56	0	-0.03	10.46	-0.0001	1.2223	0.0038
142	SLU 57	0	-0.03	10.46	-0.0001	1.2227	0.0031
142	SLU 58	0	-0.03	10.41	-0.0001	1.2167	0.0041
142	SLU 59	0	-0.03	10.42	-0.0001	1.2171	0.0034
142	SLU 60	0	-0.03	10.65	-0.0001	1.2445	0.0037
142	SLU 61	0	-0.03	10.65	-0.0001	1.2449	0.003
142	SLU 62	0	-0.03	10.74	-0.0001	1.2552	0.0038
142	SLU 63	0	-0.03	10.75	-0.0001	1.2556	0.0031
142	SLU 64	-0.01	-0.03	10.09	-0.0001	1.1787	0.0032
142	SLU 65	-0.01	-0.02	10.09	-0.0001	1.1793	0.002
142	SLU 66	-0.01	-0.03	10.23	-0.0001	1.195	0.0029
142	SLU 67	-0.01	-0.02	10.23	-0.0001	1.1954	0.0022
142	SLU 68	-0.01	-0.02	10.19	-0.0001	1.19	0.0021
142	SLU 69	-0.01	-0.03	10.32	-0.0001	1.2057	0.003
142	SLU 70	-0.01	-0.02	10.32	-0.0001	1.2061	0.0023
142	SLU 71	-0.01	-0.03	10.27	-0.0001	1.2001	0.0033
142	SLU 72	-0.01	-0.02	10.27	-0.0001	1.2005	0.0026
142	SLU 73	0	-0.01	11.08	-0.0001	1.2941	0.0015
142	SLU 74	0	-0.02	11.21	-0.0001	1.3098	0.0025
142	SLU 75	0	-0.02	11.21	-0.0001	1.3102	0.0018
142	SLU 76	0	-0.01	11.17	-0.0001	1.3048	0.0016
142	SLU 77	0	-0.02	11.3	-0.0001	1.3206	0.0026
142	SLU 78	0	-0.02	11.31	-0.0001	1.3209	0.0019
142	SLU 79	0	-0.02	11.25	-0.0001	1.3149	0.0029
142	SLU 80	0	-0.02	11.26	-0.0001	1.3153	0.0022
142	SLU 81	0	-0.02	11.49	-0.0001	1.3427	0.0025
142	SLU 82	0	-0.02	11.5	-0.0001	1.3431	0.0018
142	SLU 83	0	-0.02	11.58	-0.0001	1.3534	0.0026
142	SLU 84	0	-0.02	11.59	-0.0001	1.3538	0.0019
142	SLE RA 1	0	-0.02	7.58	0	0.8851	0.0027
142	SLE RA 2	0	-0.02	7.58	0	0.8855	0.0019
142	SLE RA 3	0	-0.02	7.67	0	0.896	0.0025
142	SLE RA 4	0	-0.02	7.67	0	0.8962	0.0021
142	SLE RA 5	0	-0.02	7.64	0	0.8926	0.002
142	SLE RA 6	0	-0.02	7.73	0	0.9031	0.0026
142	SLE RA 7	0	-0.02	7.73	0	0.9034	0.0021
142	SLE RA 8	0	-0.02	7.7	0	0.8993	0.0028
142	SLE RA 9	0	-0.02	7.7	0	0.8996	0.0023
142	SLE RA 10	0	-0.01	8.23	0	0.9621	0.0016

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
142	SLE RA 11	0	-0.02	8.32	0	0.9725	0.0022
142	SLE RA 12	0	-0.02	8.33	0	0.9728	0.0018
142	SLE RA 13	0	-0.01	8.3	0	0.9692	0.0017
142	SLE RA 14	0	-0.02	8.38	0	0.9797	0.0023
142	SLE RA 15	0	-0.02	8.39	0	0.9799	0.0018
142	SLE RA 16	0	-0.02	8.35	0	0.9759	0.0025
142	SLE RA 17	0	-0.02	8.35	0	0.9762	0.002
142	SLE RA 18	0	-0.02	8.51	0	0.9944	0.0023
142	SLE RA 19	0	-0.02	8.51	0	0.9947	0.0018
142	SLE RA 20	0	-0.02	8.57	0	1.0016	0.0023
142	SLE RA 21	0	-0.02	8.57	0	1.0018	0.0019
142	SLE FR 1	0	-0.02	7.58	0	0.8851	0.0027
142	SLE FR 2	0	-0.02	7.58	0	0.8852	0.0025
142	SLE FR 3	0	-0.02	7.6	0	0.8879	0.0027
142	SLE FR 4	0	-0.02	7.86	0	0.918	0.0024
142	SLE FR 5	0	-0.02	7.88	0	0.9207	0.0026
142	SLE FR 6	0	-0.02	8.04	0	0.9398	0.0025
142	SLE QP 1	0	-0.02	7.58	0	0.8851	0.0027
142	SLE QP 2	0	-0.02	7.86	0	0.9179	0.0026
142	SLD 1	0.62	0.06	8.04	0	0.9394	-0.0075
142	SLD 2	0.66	0.05	8.04	0	0.9388	-0.0062
142	SLD 3	0.64	-0.15	7.91	0	0.9244	0.0176
142	SLD 4	0.67	-0.16	7.91	0	0.9238	0.0189
142	SLD 5	0.15	0.33	8.11	0	0.9471	-0.0388
142	SLD 6	0.18	0.33	8.1	0	0.9468	-0.038
142	SLD 7	0.21	-0.39	7.68	0	0.8972	0.045
142	SLD 8	0.23	-0.39	7.68	0	0.8969	0.0458
142	SLD 9	-0.24	0.35	8.04	0	0.9389	-0.0407
142	SLD 10	-0.21	0.34	8.03	0	0.9385	-0.0399
142	SLD 11	-0.18	-0.37	7.61	0	0.889	0.0431
142	SLD 12	-0.16	-0.38	7.61	0	0.8886	0.044
142	SLD 13	-0.68	0.12	7.81	0	0.9119	-0.0138
142	SLD 14	-0.64	0.11	7.8	0	0.9113	-0.0125
142	SLD 15	-0.66	-0.1	7.68	0	0.897	0.0114
142	SLD 16	-0.63	-0.11	7.67	0	0.8964	0.0127
142	SLV 1	1.45	0.17	8.28	0	0.9678	-0.0203
142	SLV 2	1.54	0.15	8.27	0	0.9664	-0.0173
142	SLV 3	1.49	-0.32	7.99	0	0.9338	0.037
142	SLV 4	1.58	-0.34	7.98	0	0.9324	0.04
142	SLV 5	0.36	0.79	8.43	0	0.9847	-0.0917
142	SLV 6	0.41	0.77	8.42	0	0.9838	-0.0898
142	SLV 7	0.49	-0.85	7.46	0	0.8713	0.0993
142	SLV 8	0.54	-0.87	7.45	0	0.8704	0.1012
142	SLV 9	-0.55	0.82	8.26	0	0.9654	-0.0961
142	SLV 10	-0.5	0.81	8.25	0	0.9645	-0.0942
142	SLV 11	-0.42	-0.81	7.29	0	0.852	0.0949
142	SLV 12	-0.37	-0.83	7.28	0	0.8511	0.0969
142	SLV 13	-1.58	0.3	7.73	0	0.9034	-0.0349
142	SLV 14	-1.5	0.27	7.72	0	0.902	-0.0319
142	SLV 15	-1.55	-0.19	7.44	0	0.8693	0.0224
142	SLV 16	-1.46	-0.22	7.43	0	0.8679	0.0254
142	CRTFP Ux+	0	0	0	0	0	0
142	CRTFP Ux-	0	0	0	0	0	0
143	SLU 1	0	-0.01	7.36	0	0.9832	0.0019
143	SLU 2	0	0	7.37	0	0.984	0.0006
143	SLU 3	0	-0.01	7.5	0	1.002	0.0016
143	SLU 4	0	-0.01	7.51	0	1.0025	0.0008
143	SLU 5	0	0	7.46	0	0.9964	0.0007
143	SLU 6	0	-0.01	7.6	0	1.0143	0.0017
143	SLU 7	0	-0.01	7.6	0	1.0148	0.0009
143	SLU 8	0	-0.02	7.55	0	1.0079	0.0021
143	SLU 9	0	-0.01	7.55	0	1.0084	0.0013
143	SLU 10	0	0	8.36	0	1.1162	-0.0001
143	SLU 11	0	-0.01	8.49	0	1.1342	0.0009
143	SLU 12	0	0	8.5	0	1.1347	0.0001
143	SLU 13	0	0	8.45	0	1.1285	0
143	SLU 14	0	-0.01	8.59	0	1.1465	0.001
143	SLU 15	0	0	8.59	0	1.147	0.0002
143	SLU 16	0	-0.01	8.54	0	1.1401	0.0014
143	SLU 17	0	0	8.54	0	1.1405	0.0006
143	SLU 18	0	-0.01	8.78	0	1.172	0.0009
143	SLU 19	0	0	8.78	0	1.1725	0.0001
143	SLU 20	0	-0.01	8.87	0	1.1844	0.001
143	SLU 21	0	0	8.87	0	1.1849	0.0002
143	SLU 22	0	0	8.21	0	1.0959	0.0003
143	SLU 23	0	0.01	8.21	0	1.0967	-0.001
143	SLU 24	0	0	8.35	0	1.1147	0
143	SLU 25	0	0.01	8.35	0	1.1152	-0.0008
143	SLU 26	0	0.01	8.31	0	1.109	-0.0009
143	SLU 27	0	0	8.44	0	1.127	0.0001
143	SLU 28	0	0.01	8.44	0	1.1275	-0.0007
143	SLU 29	0	0	8.39	0	1.1206	0.0004
143	SLU 30	0	0	8.4	0	1.1211	-0.0003
143	SLU 31	0	0.01	9.2	-0.0001	1.2289	-0.0017
143	SLU 32	0	0.01	9.34	-0.0001	1.2469	-0.0007
143	SLU 33	0	0.01	9.34	-0.0001	1.2474	-0.0015
143	SLU 34	0	0.01	9.3	-0.0001	1.2412	-0.0016
143	SLU 35	0	0	9.43	-0.0001	1.2592	-0.0006
143	SLU 36	0	0.01	9.43	-0.0001	1.2597	-0.0014
143	SLU 37	0	0	9.38	-0.0001	1.2527	-0.0003
143	SLU 38	0	0.01	9.39	-0.0001	1.2532	-0.001

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
143	SLU 39	0	0.01	9.62	-0.0001	1.2847	-0.0007
143	SLU 40	0	0.01	9.63	-0.0001	1.2852	-0.0015
143	SLU 41	0	0	9.71	-0.0001	1.2971	-0.0006
143	SLU 42	0	0.01	9.72	-0.0001	1.2976	-0.0014
143	SLU 43	-0.01	-0.02	9.28	-0.0001	1.2395	0.003
143	SLU 44	0	-0.01	9.29	-0.0001	1.2403	0.0017
143	SLU 45	-0.01	-0.02	9.42	-0.0001	1.2583	0.0027
143	SLU 46	0	-0.01	9.43	-0.0001	1.2588	0.0019
143	SLU 47	0	-0.01	9.38	-0.0001	1.2527	0.0018
143	SLU 48	-0.01	-0.02	9.52	-0.0001	1.2707	0.0028
143	SLU 49	0	-0.02	9.52	-0.0001	1.2711	0.002
143	SLU 50	-0.01	-0.02	9.47	-0.0001	1.2642	0.0032
143	SLU 51	0	-0.02	9.47	-0.0001	1.2647	0.0024
143	SLU 52	0	-0.01	10.28	-0.0001	1.3725	0.001
143	SLU 53	0	-0.01	10.41	-0.0001	1.3905	0.002
143	SLU 54	0	-0.01	10.42	-0.0001	1.391	0.0012
143	SLU 55	0	-0.01	10.37	-0.0001	1.3849	0.0011
143	SLU 56	0	-0.02	10.51	-0.0001	1.4028	0.0021
143	SLU 57	0	-0.01	10.51	-0.0001	1.4033	0.0013
143	SLU 58	0	-0.02	10.46	-0.0001	1.3964	0.0025
143	SLU 59	0	-0.01	10.46	-0.0001	1.3969	0.0017
143	SLU 60	0	-0.01	10.7	-0.0001	1.4283	0.002
143	SLU 61	0	-0.01	10.7	-0.0001	1.4288	0.0012
143	SLU 62	0	-0.02	10.79	-0.0001	1.4407	0.0021
143	SLU 63	0	-0.01	10.79	-0.0001	1.4412	0.0013
143	SLU 64	-0.01	-0.01	10.13	-0.0001	1.3522	0.0014
143	SLU 65	-0.01	0	10.13	-0.0001	1.353	0.0001
143	SLU 66	-0.01	-0.01	10.27	-0.0001	1.371	0.0011
143	SLU 67	-0.01	0	10.27	-0.0001	1.3715	0.0003
143	SLU 68	-0.01	0	10.23	-0.0001	1.3654	0.0002
143	SLU 69	-0.01	-0.01	10.36	-0.0001	1.3833	0.0012
143	SLU 70	-0.01	0	10.36	-0.0001	1.3838	0.0004
143	SLU 71	-0.01	-0.01	10.31	-0.0001	1.3769	0.0016
143	SLU 72	-0.01	-0.01	10.32	-0.0001	1.3774	0.0008
143	SLU 73	0	0	11.12	-0.0001	1.4852	-0.0006
143	SLU 74	0	0	11.26	-0.0001	1.5032	0.0004
143	SLU 75	0	0	11.26	-0.0001	1.5037	-0.0004
143	SLU 76	0	0	11.22	-0.0001	1.4976	-0.0005
143	SLU 77	0	0	11.35	-0.0001	1.5155	0.0005
143	SLU 78	0	0	11.35	-0.0001	1.516	-0.0003
143	SLU 79	0	-0.01	11.3	-0.0001	1.5091	0.0009
143	SLU 80	0	0	11.31	-0.0001	1.5096	0.0001
143	SLU 81	0	0	11.54	-0.0001	1.541	0.0004
143	SLU 82	0	0	11.54	-0.0001	1.5415	-0.0004
143	SLU 83	0	0	11.63	-0.0001	1.5534	0.0005
143	SLU 84	0	0	11.64	-0.0001	1.5539	-0.0003
143	SLE RA 1	0	-0.01	7.6	0	1.0154	0.0014
143	SLE RA 2	0	0	7.61	0	1.0159	0.0006
143	SLE RA 3	0	-0.01	7.7	0	1.0279	0.0012
143	SLE RA 4	0	-0.01	7.7	0	1.0283	0.0007
143	SLE RA 5	0	0	7.67	0	1.0242	0.0006
143	SLE RA 6	0	-0.01	7.76	0	1.0362	0.0013
143	SLE RA 7	0	-0.01	7.76	0	1.0365	0.0008
143	SLE RA 8	0	-0.01	7.73	0	1.0318	0.0015
143	SLE RA 9	0	-0.01	7.73	0	1.0322	0.001
143	SLE RA 10	0	0	8.27	0	1.1041	0.0001
143	SLE RA 11	0	-0.01	8.36	0	1.116	0.0008
143	SLE RA 12	0	0	8.36	0	1.1164	0.0002
143	SLE RA 13	0	0	8.33	0	1.1123	0.0001
143	SLE RA 14	0	-0.01	8.42	0	1.1243	0.0008
143	SLE RA 15	0	0	8.42	0	1.1246	0.0003
143	SLE RA 16	0	-0.01	8.39	0	1.12	0.0011
143	SLE RA 17	0	0	8.39	0	1.1203	0.0005
143	SLE RA 18	0	-0.01	8.55	0	1.1413	0.0008
143	SLE RA 19	0	0	8.55	0	1.1416	0.0002
143	SLE RA 20	0	-0.01	8.61	0	1.1495	0.0008
143	SLE RA 21	0	0	8.61	0	1.1498	0.0003
143	SLE FR 1	0	-0.01	7.6	0	1.0154	0.0014
143	SLE FR 2	0	-0.01	7.61	0	1.0155	0.0012
143	SLE FR 3	0	-0.01	7.63	0	1.0187	0.0014
143	SLE FR 4	0	-0.01	7.89	0	1.0533	0.001
143	SLE FR 5	0	-0.01	7.91	0	1.0564	0.0012
143	SLE FR 6	0	-0.01	8.08	0	1.0783	0.0011
143	SLE QP 1	0	-0.01	7.6	0	1.0154	0.0014
143	SLE QP 2	0	-0.01	7.89	0	1.0532	0.0012
143	SLD 1	0.62	0.08	8.03	0	1.0723	-0.0108
143	SLD 2	0.66	0.07	8.03	0	1.0717	-0.0096
143	SLD 3	0.64	-0.13	7.9	0	1.0551	0.0179
143	SLD 4	0.67	-0.14	7.9	0	1.0544	0.0192
143	SLD 5	0.15	0.35	8.13	0	1.0852	-0.0463
143	SLD 6	0.18	0.34	8.12	0	1.0848	-0.0455
143	SLD 7	0.21	-0.37	7.7	0	1.0277	0.0497
143	SLD 8	0.23	-0.38	7.69	0	1.0272	0.0505
143	SLD 9	-0.24	0.36	8.08	0	1.0791	-0.048
143	SLD 10	-0.21	0.35	8.08	0	1.0786	-0.0472
143	SLD 11	-0.18	-0.36	7.65	0	1.0215	0.0479
143	SLD 12	-0.16	-0.36	7.65	0	1.0211	0.0487
143	SLD 13	-0.68	0.13	7.88	0	1.0519	-0.0167
143	SLD 14	-0.64	0.12	7.87	0	1.0512	-0.0155
143	SLD 15	-0.66	-0.09	7.75	0	1.0347	0.0121
143	SLD 16	-0.63	-0.1	7.74	0	1.034	0.0133

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
143	SLV 1	1.46	0.2	8.22	0	1.0976	-0.0261
143	SLV 2	1.54	0.17	8.21	0	1.096	-0.0233
143	SLV 3	1.49	-0.3	7.93	0	1.0583	0.0394
143	SLV 4	1.58	-0.32	7.91	0	1.0567	0.0423
143	SLV 5	0.36	0.8	8.43	0	1.1263	-0.1069
143	SLV 6	0.41	0.79	8.43	0	1.1252	-0.1051
143	SLV 7	0.49	-0.84	7.46	0	0.9955	0.1117
143	SLV 8	0.54	-0.85	7.45	0	0.9945	0.1135
143	SLV 9	-0.55	0.83	8.33	0	1.1119	-0.1111
143	SLV 10	-0.5	0.82	8.32	0	1.1108	-0.1092
143	SLV 11	-0.42	-0.81	7.35	0	0.9811	0.1076
143	SLV 12	-0.37	-0.82	7.34	0	0.9801	0.1094
143	SLV 13	-1.58	0.3	7.86	0	1.0496	-0.0399
143	SLV 14	-1.5	0.28	7.85	0	1.048	-0.037
143	SLV 15	-1.55	-0.19	7.57	0	1.0103	0.0257
143	SLV 16	-1.46	-0.21	7.55	0	1.0087	0.0286
144	SLU 1	-0.02	-0.02	26.77	7.9448	-2.1328	0.0029
144	SLU 2	-0.02	0.02	26.79	7.9512	-2.1346	0.006
144	SLU 3	-0.02	-0.01	27.28	8.0967	-2.1736	0.0035
144	SLU 4	-0.02	0.01	27.29	8.1005	-2.1747	0.0054
144	SLU 5	-0.02	0.02	27.13	8.0502	-2.1612	0.0061
144	SLU 6	-0.02	-0.01	27.61	8.1957	-2.2002	0.0036
144	SLU 7	-0.02	0.01	27.63	8.1995	-2.2013	0.0055
144	SLU 8	-0.02	-0.02	27.44	8.1428	-2.1861	0.0029
144	SLU 9	-0.02	0	27.45	8.1466	-2.1872	0.0048
144	SLU 10	-0.02	0.05	30.41	9.0272	-2.423	0.0087
144	SLU 11	-0.02	0.02	30.9	9.1727	-2.462	0.0062
144	SLU 12	-0.02	0.04	30.91	9.1766	-2.4631	0.0081
144	SLU 13	-0.02	0.04	30.74	9.1262	-2.4497	0.0087
144	SLU 14	-0.02	0.02	31.23	9.2717	-2.4887	0.0062
144	SLU 15	-0.02	0.04	31.24	9.2755	-2.4897	0.0081
144	SLU 16	-0.02	0.01	31.05	9.2189	-2.4745	0.0056
144	SLU 17	-0.02	0.03	31.07	9.2227	-2.4756	0.0075
144	SLU 18	-0.02	0.02	31.93	9.4821	-2.5449	0.0067
144	SLU 19	-0.02	0.04	31.95	9.4859	-2.5459	0.0085
144	SLU 20	-0.02	0.02	32.27	9.5811	-2.5715	0.0067
144	SLU 21	-0.02	0.04	32.28	9.5849	-2.5726	0.0086
144	SLU 22	-0.01	0.03	29.83	8.8561	-2.3772	0.006
144	SLU 23	-0.01	0.07	29.86	8.8624	-2.379	0.0091
144	SLU 24	-0.01	0.04	30.35	9.008	-2.418	0.0067
144	SLU 25	-0.01	0.06	30.36	9.0118	-2.4191	0.0085
144	SLU 26	-0.01	0.07	30.19	8.9614	-2.4057	0.0092
144	SLU 27	-0.01	0.04	30.68	9.1069	-2.4446	0.0067
144	SLU 28	-0.01	0.06	30.7	9.1107	-2.4457	0.0086
144	SLU 29	-0.01	0.03	30.51	9.0541	-2.4305	0.0061
144	SLU 30	-0.02	0.05	30.52	9.0579	-2.4316	0.008
144	SLU 31	-0.01	0.1	33.47	9.9385	-2.6675	0.0118
144	SLU 32	-0.01	0.07	33.96	10.084	-2.7065	0.0093
144	SLU 33	-0.01	0.09	33.98	10.0878	-2.7075	0.0112
144	SLU 34	-0.01	0.09	33.81	10.0375	-2.6941	0.0118
144	SLU 35	-0.01	0.07	34.3	10.183	-2.7331	0.0094
144	SLU 36	-0.01	0.09	34.31	10.1868	-2.7342	0.0112
144	SLU 37	-0.02	0.06	34.12	10.1302	-2.7189	0.0087
144	SLU 38	-0.02	0.08	34.13	10.134	-2.72	0.0106
144	SLU 39	-0.01	0.07	35	10.3934	-2.7893	0.0098
144	SLU 40	-0.01	0.09	35.01	10.3972	-2.7904	0.0117
144	SLU 41	-0.01	0.07	35.34	10.4923	-2.8159	0.0098
144	SLU 42	-0.01	0.09	35.35	10.4961	-2.817	0.0117
144	SLU 43	-0.02	-0.04	33.75	10.0159	-2.6888	0.0026
144	SLU 44	-0.02	0	33.77	10.0222	-2.6906	0.0058
144	SLU 45	-0.02	-0.03	34.26	10.1677	-2.7296	0.0033
144	SLU 46	-0.02	-0.01	34.27	10.1715	-2.7307	0.0052
144	SLU 47	-0.02	0	34.1	10.1212	-2.7173	0.0058
144	SLU 48	-0.02	-0.03	34.59	10.2667	-2.7563	0.0034
144	SLU 49	-0.02	-0.01	34.61	10.2705	-2.7573	0.0052
144	SLU 50	-0.02	-0.04	34.42	10.2139	-2.7421	0.0027
144	SLU 51	-0.02	-0.02	34.43	10.2177	-2.7432	0.0046
144	SLU 52	-0.02	0.02	37.38	11.0983	-2.9791	0.0084
144	SLU 53	-0.02	0	37.87	11.2438	-3.0181	0.006
144	SLU 54	-0.02	0.02	37.89	11.2476	-3.0191	0.0079
144	SLU 55	-0.02	0.02	37.72	11.1973	-3.0057	0.0085
144	SLU 56	-0.02	0	38.21	11.3428	-3.0447	0.006
144	SLU 57	-0.02	0.02	38.22	11.3466	-3.0458	0.0079
144	SLU 58	-0.02	-0.02	38.03	11.2899	-3.0306	0.0054
144	SLU 59	-0.02	0.01	38.05	11.2937	-3.0316	0.0073
144	SLU 60	-0.02	0	38.91	11.5531	-3.1009	0.0064
144	SLU 61	-0.02	0.02	38.92	11.5569	-3.102	0.0083
144	SLU 62	-0.02	0	39.25	11.6521	-3.1275	0.0065
144	SLU 63	-0.02	0.02	39.26	11.6559	-3.1286	0.0084
144	SLU 64	-0.02	0.01	36.81	10.9271	-2.9333	0.0058
144	SLU 65	-0.02	0.05	36.84	10.9335	-2.9351	0.0089
144	SLU 66	-0.02	0.02	37.33	11.079	-2.974	0.0064
144	SLU 67	-0.02	0.04	37.34	11.0828	-2.9751	0.0083
144	SLU 68	-0.02	0.04	37.17	11.0325	-2.9617	0.009
144	SLU 69	-0.02	0.02	37.66	11.178	-3.0007	0.0065
144	SLU 70	-0.02	0.04	37.67	11.1818	-3.0018	0.0084
144	SLU 71	-0.02	0.01	37.48	11.1251	-2.9865	0.0059
144	SLU 72	-0.02	0.03	37.5	11.1289	-2.9876	0.0078
144	SLU 73	-0.02	0.07	40.45	12.0095	-3.2235	0.0116
144	SLU 74	-0.02	0.05	40.94	12.155	-3.2625	0.0091
144	SLU 75	-0.02	0.07	40.96	12.1588	-3.2636	0.011

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
144	SLU 76	-0.02	0.07	40.79	12.1085	-3.2501	0.0116
144	SLU 77	-0.02	0.04	41.28	12.254	-3.2891	0.0091
144	SLU 78	-0.02	0.07	41.29	12.2578	-3.2902	0.011
144	SLU 79	-0.02	0.03	41.1	12.2012	-3.275	0.0085
144	SLU 80	-0.02	0.06	41.11	12.205	-3.2761	0.0104
144	SLU 81	-0.02	0.05	41.98	12.4644	-3.3453	0.0096
144	SLU 82	-0.02	0.07	41.99	12.4682	-3.3464	0.0115
144	SLU 83	-0.02	0.05	42.31	12.5634	-3.372	0.0096
144	SLU 84	-0.02	0.07	42.33	12.5672	-3.373	0.0115
144	SLE RA 1	-0.01	0	27.64	8.2052	-2.2026	0.0037
144	SLE RA 2	-0.02	0.02	27.66	8.2094	-2.2038	0.0058
144	SLE RA 3	-0.01	0	27.99	8.3064	-2.2298	0.0042
144	SLE RA 4	-0.01	0.02	27.99	8.309	-2.2305	0.0055
144	SLE RA 5	-0.02	0.02	27.88	8.2754	-2.2216	0.0059
144	SLE RA 6	-0.02	0	28.21	8.3724	-2.2476	0.0042
144	SLE RA 7	-0.02	0.02	28.22	8.375	-2.2483	0.0055
144	SLE RA 8	-0.02	-0.01	28.09	8.3372	-2.2381	0.0038
144	SLE RA 9	-0.02	0.01	28.1	8.3397	-2.2389	0.0051
144	SLE RA 10	-0.02	0.04	30.07	8.9268	-2.3961	0.0076
144	SLE RA 11	-0.01	0.02	30.4	9.0238	-2.4221	0.006
144	SLE RA 12	-0.02	0.04	30.4	9.0263	-2.4228	0.0072
144	SLE RA 13	-0.02	0.04	30.29	8.9928	-2.4139	0.0077
144	SLE RA 14	-0.02	0.02	30.62	9.0898	-2.4399	0.006
144	SLE RA 15	-0.02	0.03	30.63	9.0923	-2.4406	0.0073
144	SLE RA 16	-0.02	0.01	30.5	9.0546	-2.4304	0.0056
144	SLE RA 17	-0.02	0.03	30.51	9.0571	-2.4312	0.0068
144	SLE RA 18	-0.01	0.02	31.09	9.23	-2.4773	0.0063
144	SLE RA 19	-0.02	0.04	31.1	9.2326	-2.4781	0.0075
144	SLE RA 20	-0.02	0.02	31.31	9.296	-2.4951	0.0063
144	SLE RA 21	-0.02	0.04	31.32	9.2986	-2.4958	0.0076
144	SLE FR 1	-0.01	0	27.64	8.2052	-2.2026	0.0037
144	SLE FR 2	-0.01	0	27.65	8.2061	-2.2029	0.0042
144	SLE FR 3	-0.01	0	27.73	8.2316	-2.2097	0.0038
144	SLE FR 4	-0.01	0.01	28.68	8.5135	-2.2853	0.0049
144	SLE FR 5	-0.01	0	28.77	8.5391	-2.2921	0.0045
144	SLE FR 6	-0.01	0.01	29.37	8.7176	-2.34	0.005
144	SLE QP 1	-0.01	0	27.64	8.2052	-2.2026	0.0037
144	SLE QP 2	-0.01	0.01	28.68	8.5127	-2.285	0.0045
144	SLD 1	2.34	0.35	29.01	8.6008	-2.3087	-0.6897
144	SLD 2	2.47	0.32	29	8.5979	-2.3079	-0.7304
144	SLD 3	2.4	-0.46	28.6	8.4945	-2.2783	-0.7554
144	SLD 4	2.53	-0.48	28.59	8.4915	-2.2775	-0.796
144	SLD 5	0.58	1.33	29.4	8.7009	-2.3383	-0.0971
144	SLD 6	0.66	1.31	29.39	8.699	-2.3378	-0.1235
144	SLD 7	0.78	-1.34	28.04	8.3465	-2.2371	-0.3159
144	SLD 8	0.86	-1.36	28.03	8.3445	-2.2366	-0.3423
144	SLD 9	-0.89	1.37	29.33	8.6808	-2.3335	0.3513
144	SLD 10	-0.81	1.35	29.32	8.6789	-2.333	0.3249
144	SLD 11	-0.69	-1.3	27.96	8.3263	-2.2323	0.1325
144	SLD 12	-0.61	-1.32	27.95	8.3244	-2.2318	0.1061
144	SLD 13	-2.56	0.49	28.76	8.5338	-2.2926	0.805
144	SLD 14	-2.43	0.47	28.75	8.5308	-2.2918	0.7644
144	SLD 15	-2.5	-0.31	28.35	8.4275	-2.2622	0.7394
144	SLD 16	-2.37	-0.33	28.34	8.4245	-2.2614	0.6987
144	SLV 1	5.5	0.78	29.45	8.7164	-2.3396	-1.6209
144	SLV 2	5.8	0.72	29.42	8.7095	-2.3377	-1.7157
144	SLV 3	5.64	-1.05	28.52	8.4747	-2.2706	-1.7711
144	SLV 4	5.94	-1.11	28.49	8.4678	-2.2687	-1.8659
144	SLV 5	1.37	3.02	30.33	8.9415	-2.4064	-0.2393
144	SLV 6	1.56	2.98	30.31	8.9371	-2.4052	-0.2998
144	SLV 7	1.85	-3.07	27.22	8.1359	-2.1764	-0.74
144	SLV 8	2.04	-3.11	27.2	8.1314	-2.1751	-0.8005
144	SLV 9	-2.07	3.12	30.15	8.8939	-2.395	0.8095
144	SLV 10	-1.88	3.08	30.13	8.8895	-2.3937	0.749
144	SLV 11	-1.59	-2.97	27.04	8.0882	-2.1649	0.3088
144	SLV 12	-1.4	-3.01	27.03	8.0838	-2.1637	0.2483
144	SLV 13	-5.97	1.12	28.86	8.5575	-2.3014	1.8749
144	SLV 14	-5.67	1.06	28.83	8.5506	-2.2995	1.7802
144	SLV 15	-5.83	-0.71	27.93	8.3158	-2.2324	1.7247
144	SLV 16	-5.53	-0.77	27.9	8.3089	-2.2304	1.63
144	CRTFP Ux+	0	0	0	0	0	0
144	CRTFP Ux-	0	0	0	0	0	0
144	CRTFP Uy+	0	0	0	0	0	0
144	CRTFP Uy-	0	0	0	0	0	0
145	SLU 1	-0.02	-0.03	34.93	12.0243	-0.6454	0.0057
145	SLU 2	-0.02	0.02	34.96	12.0343	-0.646	0.007
145	SLU 3	-0.02	-0.02	35.6	12.2539	-0.6577	0.0058
145	SLU 4	-0.02	0.01	35.62	12.2599	-0.6581	0.0066
145	SLU 5	-0.02	0.02	35.4	12.184	-0.654	0.0074
145	SLU 6	-0.02	-0.02	36.04	12.4035	-0.6658	0.0061
145	SLU 7	-0.02	0.01	36.05	12.4095	-0.6661	0.007
145	SLU 8	-0.02	-0.04	35.8	12.3236	-0.6615	0.0063
145	SLU 9	-0.02	-0.01	35.82	12.3296	-0.6618	0.0071
145	SLU 10	-0.02	0.06	39.68	13.6652	-0.7329	0.0087
145	SLU 11	-0.02	0.02	40.32	13.8847	-0.7447	0.0074
145	SLU 12	-0.02	0.05	40.33	13.8907	-0.745	0.0083
145	SLU 13	-0.02	0.06	40.12	13.8148	-0.741	0.009
145	SLU 14	-0.02	0.02	40.75	14.0344	-0.7527	0.0078
145	SLU 15	-0.02	0.05	40.77	14.0404	-0.7531	0.0086
145	SLU 16	-0.02	0	40.52	13.9545	-0.7484	0.0079
145	SLU 17	-0.02	0.03	40.54	13.9605	-0.7488	0.0087

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
145	SLU 18	-0.02	0.03	41.67	14.3541	-0.7696	0.008
145	SLU 19	-0.02	0.06	41.69	14.3601	-0.7699	0.0088
145	SLU 20	-0.02	0.02	42.11	14.5038	-0.7776	0.0083
145	SLU 21	-0.02	0.05	42.12	14.5098	-0.778	0.0091
145	SLU 22	-0.02	0.03	38.93	13.4019	-0.7191	0.0054
145	SLU 23	-0.02	0.08	38.96	13.4119	-0.7197	0.0068
145	SLU 24	-0.02	0.04	39.6	13.6315	-0.7314	0.0056
145	SLU 25	-0.02	0.07	39.62	13.6375	-0.7318	0.0064
145	SLU 26	-0.02	0.08	39.4	13.5616	-0.7277	0.0071
145	SLU 27	-0.02	0.04	40.03	13.7811	-0.7395	0.0059
145	SLU 28	-0.02	0.07	40.05	13.7871	-0.7398	0.0067
145	SLU 29	-0.02	0.02	39.8	13.7012	-0.7352	0.0061
145	SLU 30	-0.02	0.05	39.82	13.7072	-0.7356	0.0069
145	SLU 31	-0.02	0.12	43.68	15.0428	-0.8066	0.0084
145	SLU 32	-0.02	0.08	44.31	15.2623	-0.8184	0.0072
145	SLU 33	-0.02	0.11	44.33	15.2683	-0.8187	0.008
145	SLU 34	-0.02	0.12	44.11	15.1924	-0.8147	0.0087
145	SLU 35	-0.02	0.08	44.75	15.412	-0.8264	0.0075
145	SLU 36	-0.02	0.11	44.77	15.418	-0.8268	0.0083
145	SLU 37	-0.02	0.06	44.52	15.3321	-0.8221	0.0077
145	SLU 38	-0.02	0.09	44.54	15.3381	-0.8225	0.0085
145	SLU 39	-0.02	0.09	45.67	15.7317	-0.8433	0.0078
145	SLU 40	-0.02	0.12	45.69	15.7377	-0.8436	0.0086
145	SLU 41	-0.02	0.08	46.1	15.8814	-0.8514	0.0081
145	SLU 42	-0.02	0.11	46.12	15.8874	-0.8517	0.0089
145	SLU 43	-0.03	-0.06	44.04	15.1593	-0.8137	0.0075
145	SLU 44	-0.03	-0.01	44.07	15.1693	-0.8143	0.0088
145	SLU 45	-0.03	-0.05	44.71	15.3888	-0.826	0.0076
145	SLU 46	-0.03	-0.02	44.73	15.3948	-0.8264	0.0084
145	SLU 47	-0.03	-0.01	44.51	15.3189	-0.8224	0.0091
145	SLU 48	-0.03	-0.05	45.14	15.5385	-0.8341	0.0079
145	SLU 49	-0.03	-0.02	45.16	15.5445	-0.8345	0.0087
145	SLU 50	-0.03	-0.06	44.91	15.4586	-0.8298	0.0081
145	SLU 51	-0.03	-0.04	44.93	15.4646	-0.8302	0.0089
145	SLU 52	-0.03	0.03	48.79	16.8002	-0.9013	0.0104
145	SLU 53	-0.03	-0.01	49.42	17.0197	-0.913	0.0092
145	SLU 54	-0.03	0.02	49.44	17.0257	-0.9134	0.01
145	SLU 55	-0.03	0.03	49.22	16.9498	-0.9093	0.0108
145	SLU 56	-0.03	-0.01	49.86	17.1693	-0.9211	0.0095
145	SLU 57	-0.03	0.02	49.88	17.1753	-0.9214	0.0104
145	SLU 58	-0.03	-0.02	49.63	17.0894	-0.9168	0.0097
145	SLU 59	-0.03	0	49.65	17.0954	-0.9171	0.0105
145	SLU 60	-0.03	0	50.78	17.4891	-0.9379	0.0098
145	SLU 61	-0.03	0.03	50.8	17.4951	-0.9383	0.0106
145	SLU 62	-0.03	-0.01	51.21	17.6387	-0.946	0.0101
145	SLU 63	-0.03	0.02	51.23	17.6447	-0.9463	0.0109
145	SLU 64	-0.02	0	48.04	16.5369	-0.8874	0.0072
145	SLU 65	-0.02	0.05	48.07	16.5469	-0.888	0.0086
145	SLU 66	-0.02	0.01	48.71	16.7664	-0.8997	0.0074
145	SLU 67	-0.02	0.04	48.72	16.7725	-0.9001	0.0082
145	SLU 68	-0.02	0.05	48.51	16.6965	-0.8961	0.0089
145	SLU 69	-0.02	0.01	49.14	16.9161	-0.9078	0.0077
145	SLU 70	-0.02	0.04	49.16	16.9221	-0.9082	0.0085
145	SLU 71	-0.02	0	48.91	16.8362	-0.9035	0.0079
145	SLU 72	-0.02	0.02	48.93	16.8422	-0.9039	0.0087
145	SLU 73	-0.03	0.09	52.79	18.1778	-0.975	0.0102
145	SLU 74	-0.02	0.05	53.42	18.3973	-0.9867	0.009
145	SLU 75	-0.02	0.08	53.44	18.4033	-0.9871	0.0098
145	SLU 76	-0.03	0.09	53.22	18.3274	-0.983	0.0105
145	SLU 77	-0.03	0.05	53.86	18.547	-0.9948	0.0093
145	SLU 78	-0.03	0.08	53.88	18.553	-0.9951	0.0101
145	SLU 79	-0.03	0.04	53.63	18.467	-0.9905	0.0095
145	SLU 80	-0.03	0.06	53.65	18.473	-0.9908	0.0103
145	SLU 81	-0.03	0.06	54.78	18.8667	-1.0116	0.0095
145	SLU 82	-0.03	0.09	54.79	18.8727	-1.012	0.0104
145	SLU 83	-0.03	0.06	55.21	19.0163	-1.0197	0.0099
145	SLU 84	-0.03	0.08	55.23	19.0223	-1.02	0.0107
145	SLE RA 1	-0.02	-0.01	36.07	12.4179	-0.6664	0.0056
145	SLE RA 2	-0.02	0.02	36.09	12.4246	-0.6668	0.0065
145	SLE RA 3	-0.02	-0.01	36.52	12.571	-0.6746	0.0057
145	SLE RA 4	-0.02	0.01	36.53	12.575	-0.6749	0.0063
145	SLE RA 5	-0.02	0.02	36.38	12.5244	-0.6722	0.0067
145	SLE RA 6	-0.02	-0.01	36.81	12.6707	-0.68	0.0059
145	SLE RA 7	-0.02	0.01	36.82	12.6747	-0.6803	0.0065
145	SLE RA 8	-0.02	-0.02	36.66	12.6174	-0.6772	0.006
145	SLE RA 9	-0.02	0	36.67	12.6214	-0.6774	0.0066
145	SLE RA 10	-0.02	0.05	39.24	13.5118	-0.7248	0.0076
145	SLE RA 11	-0.02	0.02	39.66	13.6582	-0.7326	0.0068
145	SLE RA 12	-0.02	0.04	39.68	13.6622	-0.7329	0.0073
145	SLE RA 13	-0.02	0.04	39.53	13.6116	-0.7302	0.0078
145	SLE RA 14	-0.02	0.02	39.95	13.758	-0.738	0.007
145	SLE RA 15	-0.02	0.04	39.97	13.762	-0.7382	0.0075
145	SLE RA 16	-0.02	0.01	39.8	13.7047	-0.7351	0.0071
145	SLE RA 17	-0.02	0.03	39.81	13.7087	-0.7354	0.0077
145	SLE RA 18	-0.02	0.03	40.57	13.9711	-0.7492	0.0072
145	SLE RA 19	-0.02	0.04	40.58	13.9751	-0.7495	0.0077
145	SLE RA 20	-0.02	0.02	40.86	14.0709	-0.7546	0.0074
145	SLE RA 21	-0.02	0.04	40.87	14.0749	-0.7548	0.0079
145	SLE FR 1	-0.02	-0.01	36.07	12.4179	-0.6664	0.0056
145	SLE FR 2	-0.02	-0.01	36.08	12.4193	-0.6665	0.0058
145	SLE FR 3	-0.02	-0.01	36.19	12.4578	-0.6686	0.0057

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
145	SLE FR 4	-0.02	0.01	37.42	12.8852	-0.6913	0.0063
145	SLE FR 5	-0.02	0	37.54	12.9238	-0.6934	0.0062
145	SLE FR 6	-0.02	0.01	38.32	13.1945	-0.7078	0.0064
145	SLE QP 1	-0.02	-0.01	36.07	12.4179	-0.6664	0.0056
145	SLE QP 2	-0.02	0	37.42	12.8839	-0.6913	0.0061
145	SLD 1	3.09	0.43	37.81	13.0071	-0.6939	-1.0805
145	SLD 2	3.26	0.4	37.79	13.0035	-0.6938	-1.1398
145	SLD 3	3.17	-0.62	37.28	12.8449	-0.6842	-1.1133
145	SLD 4	3.34	-0.65	37.27	12.8412	-0.6841	-1.1727
145	SLD 5	0.76	1.73	38.33	13.1676	-0.7068	-0.2597
145	SLD 6	0.87	1.71	38.32	13.1652	-0.7067	-0.2983
145	SLD 7	1.03	-1.78	36.59	12.6267	-0.6744	-0.3692
145	SLD 8	1.14	-1.79	36.58	12.6243	-0.6743	-0.4077
145	SLD 9	-1.18	1.79	38.26	13.1435	-0.7082	0.4198
145	SLD 10	-1.07	1.77	38.25	13.1411	-0.7081	0.3813
145	SLD 11	-0.91	-1.71	36.52	12.6025	-0.6758	0.3104
145	SLD 12	-0.8	-1.73	36.51	12.6001	-0.6757	0.2719
145	SLD 13	-3.37	0.64	37.57	12.9266	-0.6984	1.1848
145	SLD 14	-3.2	0.62	37.56	12.9229	-0.6983	1.1254
145	SLD 15	-3.29	-0.41	37.05	12.7643	-0.6887	1.152
145	SLD 16	-3.12	-0.43	37.04	12.7606	-0.6886	1.0926
145	SLV 1	7.25	0.98	38.31	13.1686	-0.6971	-2.5355
145	SLV 2	7.64	0.92	38.28	13.16	-0.6968	-2.6738
145	SLV 3	7.43	-1.42	37.12	12.7997	-0.6751	-2.6119
145	SLV 4	7.83	-1.48	37.09	12.7911	-0.6747	-2.7502
145	SLV 5	1.81	3.93	39.5	13.5302	-0.7266	-0.6171
145	SLV 6	2.06	3.89	39.48	13.5247	-0.7264	-0.7054
145	SLV 7	2.44	-4.05	35.53	12.3006	-0.653	-0.8718
145	SLV 8	2.69	-4.09	35.51	12.2951	-0.6527	-0.9601
145	SLV 9	-2.72	4.08	39.33	13.4726	-0.7298	0.9723
145	SLV 10	-2.47	4.04	39.31	13.4671	-0.7296	0.8839
145	SLV 11	-2.1	-3.9	35.37	12.243	-0.6562	0.7176
145	SLV 12	-1.85	-3.94	35.35	12.2376	-0.6559	0.6292
145	SLV 13	-7.86	1.48	37.75	12.9766	-0.7078	2.7624
145	SLV 14	-7.47	1.42	37.72	12.968	-0.7075	2.624
145	SLV 15	-7.68	-0.92	36.56	12.6078	-0.6857	2.6859
145	SLV 16	-7.28	-0.98	36.53	12.5992	-0.6854	2.5476
145	CRTFP Ux+	0	0	0	0	0	0
145	CRTFP Ux-	0	0	0	0	0	0
145	CRTFP Uy+	0	0	0	0	0	0
145	CRTFP Uy-	0	0	0	0	0	0
146	SLU 1	-0.02	-0.05	38.41	13.2169	0.007	0.0058
146	SLU 2	-0.02	0.01	38.45	13.2283	0.007	0.0064
146	SLU 3	-0.02	-0.03	39.15	13.4689	0.0071	0.0057
146	SLU 4	-0.02	0	39.17	13.4757	0.0071	0.0061
146	SLU 5	-0.02	0	38.93	13.3925	0.0071	0.0069
146	SLU 6	-0.02	-0.04	39.63	13.6331	0.0072	0.0062
146	SLU 7	-0.02	-0.01	39.65	13.6399	0.0072	0.0065
146	SLU 8	-0.02	-0.05	39.38	13.5453	0.0072	0.0067
146	SLU 9	-0.02	-0.02	39.4	13.5521	0.0072	0.007
146	SLU 10	-0.02	0.05	43.63	15.0213	0.0083	0.0076
146	SLU 11	-0.02	0.01	44.33	15.2619	0.0085	0.0069
146	SLU 12	-0.02	0.04	44.35	15.2687	0.0085	0.0072
146	SLU 13	-0.02	0.05	44.11	15.1855	0.0084	0.008
146	SLU 14	-0.02	0.01	44.81	15.4261	0.0086	0.0073
146	SLU 15	-0.02	0.04	44.83	15.433	0.0086	0.0077
146	SLU 16	-0.02	-0.01	44.55	15.3383	0.0086	0.0078
146	SLU 17	-0.02	0.03	44.57	15.3451	0.0086	0.0082
146	SLU 18	-0.02	0.02	45.81	15.7783	0.009	0.0074
146	SLU 19	-0.02	0.05	45.83	15.7851	0.0089	0.0078
146	SLU 20	-0.02	0.02	46.29	15.9425	0.0091	0.0079
146	SLU 21	-0.02	0.05	46.31	15.9494	0.009	0.0082
146	SLU 22	-0.01	0.01	42.81	14.7288	0.008	0.004
146	SLU 23	-0.02	0.07	42.84	14.7402	0.008	0.0046
146	SLU 24	-0.01	0.03	43.54	14.9809	0.0081	0.0039
146	SLU 25	-0.01	0.06	43.56	14.9877	0.0081	0.0043
146	SLU 26	-0.02	0.07	43.32	14.9045	0.0081	0.005
146	SLU 27	-0.01	0.02	44.02	15.1451	0.0082	0.0043
146	SLU 28	-0.02	0.06	44.04	15.1519	0.0082	0.0047
146	SLU 29	-0.02	0.01	43.77	15.0573	0.0082	0.0048
146	SLU 30	-0.02	0.04	43.79	15.0641	0.0082	0.0052
146	SLU 31	-0.02	0.11	48.02	16.5333	0.0094	0.0058
146	SLU 32	-0.02	0.07	48.72	16.7739	0.0095	0.0051
146	SLU 33	-0.02	0.11	48.74	16.7807	0.0095	0.0054
146	SLU 34	-0.02	0.11	48.5	16.6975	0.0095	0.0062
146	SLU 35	-0.02	0.07	49.2	16.9381	0.0096	0.0055
146	SLU 36	-0.02	0.1	49.22	16.9449	0.0096	0.0059
146	SLU 37	-0.02	0.06	48.94	16.8503	0.0096	0.006
146	SLU 38	-0.02	0.09	48.96	16.8571	0.0096	0.0064
146	SLU 39	-0.02	0.08	50.2	17.2903	0.01	0.0056
146	SLU 40	-0.02	0.11	50.22	17.2971	0.01	0.006
146	SLU 41	-0.02	0.08	50.68	17.4545	0.0101	0.0061
146	SLU 42	-0.02	0.11	50.7	17.4613	0.0101	0.0064
146	SLU 43	-0.03	-0.08	48.43	16.6635	0.0087	0.0082
146	SLU 44	-0.03	-0.03	48.47	16.6749	0.0087	0.0088
146	SLU 45	-0.02	-0.07	49.17	16.9155	0.0088	0.0081
146	SLU 46	-0.03	-0.04	49.19	16.9224	0.0088	0.0085
146	SLU 47	-0.03	-0.03	48.95	16.8391	0.0088	0.0092
146	SLU 48	-0.03	-0.07	49.65	17.0798	0.0089	0.0085
146	SLU 49	-0.03	-0.04	49.67	17.0866	0.0089	0.0089
146	SLU 50	-0.03	-0.09	49.39	16.9919	0.0089	0.009

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
146	SLU 51	-0.03	-0.06	49.42	16.9988	0.0089	0.0094
146	SLU 52	-0.03	0.02	53.65	18.4679	0.0101	0.0099
146	SLU 53	-0.03	-0.02	54.35	18.7086	0.0102	0.0092
146	SLU 54	-0.03	0.01	54.37	18.7154	0.0102	0.0096
146	SLU 55	-0.03	0.02	54.13	18.6321	0.0102	0.0104
146	SLU 56	-0.03	-0.03	54.83	18.8728	0.0103	0.0097
146	SLU 57	-0.03	0.01	54.85	18.8796	0.0103	0.01
146	SLU 58	-0.03	-0.04	54.57	18.7849	0.0103	0.0102
146	SLU 59	-0.03	-0.01	54.59	18.7918	0.0103	0.0105
146	SLU 60	-0.03	-0.02	55.83	19.225	0.0107	0.0098
146	SLU 61	-0.03	0.02	55.85	19.2318	0.0107	0.0102
146	SLU 62	-0.03	-0.02	56.31	19.3892	0.0108	0.0102
146	SLU 63	-0.03	0.01	56.33	19.396	0.0108	0.0106
146	SLU 64	-0.02	-0.02	52.82	18.1755	0.0097	0.0064
146	SLU 65	-0.02	0.03	52.86	18.1869	0.0097	0.007
146	SLU 66	-0.02	-0.01	53.56	18.4275	0.0099	0.0063
146	SLU 67	-0.02	0.02	53.58	18.4344	0.0099	0.0067
146	SLU 68	-0.02	0.03	53.34	18.3511	0.0098	0.0074
146	SLU 69	-0.02	-0.01	54.04	18.5917	0.01	0.0067
146	SLU 70	-0.02	0.02	54.06	18.5986	0.01	0.0071
146	SLU 71	-0.02	-0.03	53.78	18.5039	0.0099	0.0072
146	SLU 72	-0.02	0.01	53.81	18.5108	0.0099	0.0076
146	SLU 73	-0.03	0.08	58.04	19.9799	0.0111	0.0081
146	SLU 74	-0.02	0.04	58.74	20.2205	0.0113	0.0074
146	SLU 75	-0.02	0.07	58.76	20.2274	0.0113	0.0078
146	SLU 76	-0.03	0.08	58.52	20.1441	0.0112	0.0086
146	SLU 77	-0.02	0.03	59.22	20.3847	0.0114	0.0079
146	SLU 78	-0.03	0.07	59.24	20.3916	0.0114	0.0082
146	SLU 79	-0.03	0.02	58.96	20.2969	0.0113	0.0084
146	SLU 80	-0.03	0.05	58.98	20.3038	0.0113	0.0087
146	SLU 81	-0.02	0.05	60.22	20.7369	0.0117	0.008
146	SLU 82	-0.03	0.08	60.24	20.7438	0.0117	0.0084
146	SLU 83	-0.03	0.04	60.7	20.9011	0.0118	0.0084
146	SLU 84	-0.03	0.08	60.72	20.908	0.0118	0.0088
146	SLE RA 1	-0.02	-0.03	39.67	13.6488	0.0073	0.0053
146	SLE RA 2	-0.02	0.01	39.69	13.6565	0.0073	0.0057
146	SLE RA 3	-0.02	-0.02	40.16	13.8169	0.0074	0.0052
146	SLE RA 4	-0.02	0	40.17	13.8214	0.0073	0.0055
146	SLE RA 5	-0.02	0	40.01	13.7659	0.0073	0.006
146	SLE RA 6	-0.02	-0.02	40.48	13.9263	0.0074	0.0055
146	SLE RA 7	-0.02	0	40.49	13.9309	0.0074	0.0058
146	SLE RA 8	-0.02	-0.03	40.31	13.8678	0.0074	0.0059
146	SLE RA 9	-0.02	-0.01	40.32	13.8724	0.0074	0.0061
146	SLE RA 10	-0.02	0.04	43.14	14.8518	0.0082	0.0065
146	SLE RA 11	-0.02	0.01	43.61	15.0122	0.0083	0.006
146	SLE RA 12	-0.02	0.03	43.62	15.0168	0.0083	0.0063
146	SLE RA 13	-0.02	0.04	43.46	14.9613	0.0082	0.0068
146	SLE RA 14	-0.02	0.01	43.93	15.1217	0.0083	0.0063
146	SLE RA 15	-0.02	0.03	43.94	15.1262	0.0083	0.0065
146	SLE RA 16	-0.02	0	43.76	15.0631	0.0083	0.0066
146	SLE RA 17	-0.02	0.02	43.77	15.0677	0.0083	0.0069
146	SLE RA 18	-0.02	0.02	44.6	15.3565	0.0086	0.0064
146	SLE RA 19	-0.02	0.04	44.61	15.361	0.0086	0.0066
146	SLE RA 20	-0.02	0.01	44.92	15.4659	0.0087	0.0067
146	SLE RA 21	-0.02	0.03	44.93	15.4705	0.0086	0.0069
146	SLE FR 1	-0.02	-0.03	39.67	13.6488	0.0073	0.0053
146	SLE FR 2	-0.02	-0.02	39.67	13.6504	0.0073	0.0054
146	SLE FR 3	-0.02	-0.03	39.8	13.6926	0.0073	0.0054
146	SLE FR 4	-0.02	-0.01	41.15	14.1627	0.0077	0.0057
146	SLE FR 5	-0.02	-0.02	41.28	14.2049	0.0077	0.0057
146	SLE FR 6	-0.02	-0.01	42.13	14.5027	0.0079	0.0058
146	SLE QP 1	-0.02	-0.03	39.67	13.6488	0.0073	0.0053
146	SLE QP 2	-0.02	-0.02	41.15	14.1611	0.0077	0.0056
146	SLD 1	3.42	0.45	41.33	14.2167	0.0102	-1.1977
146	SLD 2	3.61	0.43	41.32	14.2137	0.01	-1.2628
146	SLD 3	3.51	-0.71	40.75	14.036	0.01	-1.2288
146	SLD 4	3.7	-0.73	40.74	14.033	0.0099	-1.2939
146	SLD 5	0.85	1.88	42.08	14.4524	0.0087	-0.2969
146	SLD 6	0.97	1.87	42.07	14.4505	0.0086	-0.3391
146	SLD 7	1.14	-1.98	40.15	13.85	0.0082	-0.4005
146	SLD 8	1.26	-1.99	40.15	13.8481	0.0081	-0.4427
146	SLD 9	-1.3	1.96	42.15	14.4742	0.0072	0.454
146	SLD 10	-1.18	1.95	42.14	14.4723	0.0071	0.4118
146	SLD 11	-1	-1.9	40.22	13.8718	0.0068	0.3503
146	SLD 12	-0.88	-1.92	40.22	13.8699	0.0067	0.3081
146	SLD 13	-3.73	0.7	41.56	14.2892	0.0054	1.3051
146	SLD 14	-3.54	0.68	41.55	14.2863	0.0053	1.24
146	SLD 15	-3.64	-0.46	40.98	14.1085	0.0053	1.274
146	SLD 16	-3.45	-0.48	40.97	14.1056	0.0051	1.2089
146	SLV 1	8.02	1.04	41.55	14.283	0.0136	-2.809
146	SLV 2	8.46	0.99	41.52	14.2762	0.0132	-2.9606
146	SLV 3	8.23	-1.6	40.23	13.8723	0.0132	-2.8816
146	SLV 4	8.66	-1.65	40.21	13.8654	0.0129	-3.0331
146	SLV 5	2.01	4.31	43.27	14.8219	0.01	-0.7031
146	SLV 6	2.28	4.28	43.25	14.8175	0.0098	-0.7999
146	SLV 7	2.7	-4.49	38.88	13.4526	0.0089	-0.9449
146	SLV 8	2.98	-4.52	38.87	13.4483	0.0087	-1.0416
146	SLV 9	-3.01	4.49	43.43	14.874	0.0067	1.0529
146	SLV 10	-2.73	4.46	43.41	14.8696	0.0064	0.9561
146	SLV 11	-2.32	-4.31	39.05	13.5048	0.0055	0.8112
146	SLV 12	-2.04	-4.34	39.03	13.5004	0.0053	0.7144

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
146	SLV 13	-8.7	1.62	42.09	14.4568	0.0024	3.0443
146	SLV 14	-8.26	1.57	42.07	14.45	0.0021	2.8928
146	SLV 15	-8.49	-1.02	40.78	14.0461	0.0021	2.9718
146	SLV 16	-8.06	-1.07	40.75	14.0392	0.0018	2.8203
146	CRTFP Ux+	0	0	0	0	0	0
146	CRTFP Ux-	0	0	0	0	0	0
146	CRTFP Uy+	0	0	0	0	0	0
146	CRTFP Uy-	0	0	0	0	0	0
147	SLU 1	-0.01	-0.06	38.21	13.1432	0.0061	0.0037
147	SLU 2	-0.01	-0.01	38.24	13.1548	0.0061	0.0044
147	SLU 3	-0.01	-0.05	38.94	13.3937	0.0062	0.0036
147	SLU 4	-0.01	-0.02	38.96	13.4006	0.0062	0.004
147	SLU 5	-0.02	-0.01	38.72	13.3178	0.0062	0.0048
147	SLU 6	-0.01	-0.05	39.42	13.5567	0.0063	0.004
147	SLU 7	-0.01	-0.02	39.44	13.5636	0.0063	0.0044
147	SLU 8	-0.01	-0.07	39.16	13.4693	0.0063	0.0045
147	SLU 9	-0.02	-0.04	39.18	13.4762	0.0063	0.005
147	SLU 10	-0.02	0.04	43.38	14.9351	0.0074	0.0055
147	SLU 11	-0.02	-0.01	44.07	15.174	0.0076	0.0047
147	SLU 12	-0.02	0.03	44.09	15.1809	0.0076	0.0051
147	SLU 13	-0.02	0.03	43.85	15.0981	0.0075	0.0059
147	SLU 14	-0.02	-0.01	44.55	15.337	0.0077	0.0051
147	SLU 15	-0.02	0.02	44.57	15.3439	0.0077	0.0055
147	SLU 16	-0.02	-0.02	44.3	15.2496	0.0076	0.0056
147	SLU 17	-0.02	0.01	44.32	15.2565	0.0076	0.0061
147	SLU 18	-0.02	0	45.54	15.6865	0.008	0.0052
147	SLU 19	-0.02	0.04	45.56	15.6934	0.008	0.0057
147	SLU 20	-0.02	0	46.02	15.8495	0.0081	0.0057
147	SLU 21	-0.02	0.03	46.04	15.8564	0.0081	0.0061
147	SLU 22	-0.01	-0.01	42.57	14.6445	0.007	0.0014
147	SLU 23	-0.01	0.05	42.6	14.656	0.007	0.0022
147	SLU 24	-0.01	0	43.3	14.8949	0.0071	0.0013
147	SLU 25	-0.01	0.04	43.32	14.9019	0.0071	0.0018
147	SLU 26	-0.01	0.04	43.08	14.819	0.0071	0.0026
147	SLU 27	-0.01	0	43.78	15.058	0.0072	0.0018
147	SLU 28	-0.01	0.03	43.8	15.0649	0.0072	0.0022
147	SLU 29	-0.01	-0.01	43.52	14.9705	0.0072	0.0023
147	SLU 30	-0.01	0.02	43.54	14.9775	0.0072	0.0027
147	SLU 31	-0.01	0.09	47.74	16.4363	0.0083	0.0032
147	SLU 32	-0.01	0.05	48.43	16.6752	0.0085	0.0024
147	SLU 33	-0.01	0.08	48.45	16.6822	0.0085	0.0028
147	SLU 34	-0.01	0.09	48.21	16.5993	0.0084	0.0037
147	SLU 35	-0.01	0.05	48.91	16.8383	0.0086	0.0028
147	SLU 36	-0.01	0.08	48.93	16.8452	0.0086	0.0033
147	SLU 37	-0.01	0.03	48.66	16.7508	0.0085	0.0034
147	SLU 38	-0.01	0.07	48.68	16.7577	0.0085	0.0038
147	SLU 39	-0.01	0.06	49.9	17.1878	0.0089	0.003
147	SLU 40	-0.01	0.09	49.92	17.1947	0.0089	0.0034
147	SLU 41	-0.01	0.06	50.38	17.3508	0.009	0.0034
147	SLU 42	-0.01	0.09	50.4	17.3577	0.009	0.0039
147	SLU 43	-0.02	-0.1	48.18	16.5715	0.0076	0.0055
147	SLU 44	-0.02	-0.05	48.21	16.583	0.0076	0.0063
147	SLU 45	-0.02	-0.09	48.91	16.8219	0.0077	0.0054
147	SLU 46	-0.02	-0.06	48.93	16.8289	0.0077	0.0059
147	SLU 47	-0.02	-0.05	48.69	16.746	0.0077	0.0067
147	SLU 48	-0.02	-0.09	49.38	16.985	0.0078	0.0059
147	SLU 49	-0.02	-0.06	49.41	16.9919	0.0078	0.0063
147	SLU 50	-0.02	-0.11	49.13	16.8975	0.0078	0.0064
147	SLU 51	-0.02	-0.07	49.15	16.9044	0.0078	0.0069
147	SLU 52	-0.02	0	53.34	18.3633	0.009	0.0074
147	SLU 53	-0.02	-0.04	54.04	18.6022	0.0091	0.0065
147	SLU 54	-0.02	-0.01	54.06	18.6092	0.0091	0.007
147	SLU 55	-0.02	0	53.82	18.5263	0.009	0.0078
147	SLU 56	-0.02	-0.05	54.52	18.7652	0.0092	0.007
147	SLU 57	-0.02	-0.01	54.54	18.7722	0.0092	0.0074
147	SLU 58	-0.02	-0.06	54.26	18.6778	0.0091	0.0075
147	SLU 59	-0.02	-0.03	54.28	18.6847	0.0091	0.008
147	SLU 60	-0.02	-0.04	55.51	19.1147	0.0095	0.0071
147	SLU 61	-0.02	0	55.53	19.1217	0.0095	0.0075
147	SLU 62	-0.02	-0.04	55.99	19.2778	0.0096	0.0075
147	SLU 63	-0.02	-0.01	56.01	19.2847	0.0096	0.008
147	SLU 64	-0.01	-0.04	52.54	18.0727	0.0085	0.0033
147	SLU 65	-0.01	0.01	52.57	18.0843	0.0085	0.004
147	SLU 66	-0.01	-0.03	53.27	18.3232	0.0086	0.0032
147	SLU 67	-0.01	0	53.29	18.3301	0.0086	0.0036
147	SLU 68	-0.02	0.01	53.05	18.2473	0.0086	0.0045
147	SLU 69	-0.01	-0.04	53.74	18.4862	0.0087	0.0036
147	SLU 70	-0.01	0	53.77	18.4931	0.0087	0.0041
147	SLU 71	-0.01	-0.05	53.49	18.3988	0.0087	0.0042
147	SLU 72	-0.02	-0.02	53.51	18.4057	0.0087	0.0046
147	SLU 73	-0.02	0.06	57.7	19.8646	0.0099	0.0051
147	SLU 74	-0.01	0.01	58.4	20.1035	0.01	0.0043
147	SLU 75	-0.02	0.05	58.42	20.1104	0.01	0.0047
147	SLU 76	-0.02	0.05	58.18	20.0276	0.0099	0.0056
147	SLU 77	-0.02	0.01	58.88	20.2665	0.0101	0.0047
147	SLU 78	-0.02	0.04	58.9	20.2734	0.0101	0.0052
147	SLU 79	-0.02	-0.01	58.62	20.1791	0.01	0.0053
147	SLU 80	-0.02	0.03	58.64	20.186	0.01	0.0057
147	SLU 81	-0.02	0.02	59.87	20.616	0.0104	0.0048
147	SLU 82	-0.02	0.05	59.89	20.6229	0.0104	0.0053
147	SLU 83	-0.02	0.02	60.35	20.779	0.0105	0.0053

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
147	SLU 84	-0.02	0.05	60.37	20.786	0.0105	0.0057
147	SLE RA 1	-0.01	-0.05	39.45	13.5721	0.0063	0.003
147	SLE RA 2	-0.01	-0.01	39.48	13.5798	0.0063	0.0035
147	SLE RA 3	-0.01	-0.04	39.94	13.7391	0.0064	0.003
147	SLE RA 4	-0.01	-0.02	39.96	13.7437	0.0064	0.0032
147	SLE RA 5	-0.01	-0.01	39.8	13.6885	0.0064	0.0038
147	SLE RA 6	-0.01	-0.04	40.26	13.8478	0.0065	0.0032
147	SLE RA 7	-0.01	-0.02	40.27	13.8524	0.0065	0.0035
147	SLE RA 8	-0.01	-0.05	40.09	13.7895	0.0064	0.0036
147	SLE RA 9	-0.01	-0.03	40.1	13.7941	0.0064	0.0039
147	SLE RA 10	-0.01	0.02	42.9	14.7667	0.0072	0.0042
147	SLE RA 11	-0.01	-0.01	43.36	14.926	0.0073	0.0037
147	SLE RA 12	-0.01	0.01	43.38	14.9306	0.0073	0.004
147	SLE RA 13	-0.01	0.02	43.22	14.8754	0.0073	0.0045
147	SLE RA 14	-0.01	-0.01	43.68	15.0347	0.0074	0.004
147	SLE RA 15	-0.01	0.01	43.7	15.0393	0.0074	0.0043
147	SLE RA 16	-0.01	-0.02	43.51	14.9764	0.0074	0.0043
147	SLE RA 17	-0.02	0	43.53	14.981	0.0074	0.0046
147	SLE RA 18	-0.01	0	44.34	15.2677	0.0076	0.0041
147	SLE RA 19	-0.01	0.02	44.36	15.2723	0.0076	0.0044
147	SLE RA 20	-0.01	-0.01	44.66	15.3763	0.0077	0.0044
147	SLE RA 21	-0.02	0.02	44.68	15.381	0.0077	0.0046
147	SLE FR 1	-0.01	-0.05	39.45	13.5721	0.0063	0.003
147	SLE FR 2	-0.01	-0.04	39.46	13.5737	0.0063	0.0031
147	SLE FR 3	-0.01	-0.05	39.58	13.6156	0.0063	0.0031
147	SLE FR 4	-0.01	-0.03	40.93	14.0823	0.0067	0.0034
147	SLE FR 5	-0.01	-0.03	41.05	14.1243	0.0067	0.0034
147	SLE FR 6	-0.01	-0.02	41.9	14.4199	0.007	0.0035
147	SLE QP 1	-0.01	-0.05	39.45	13.5721	0.0063	0.003
147	SLE QP 2	-0.01	-0.03	40.92	14.0808	0.0067	0.0033
147	SLD 1	3.43	0.43	41.08	14.1287	0.0091	-1.1997
147	SLD 2	3.61	0.42	41.07	14.1269	0.0089	-1.2647
147	SLD 3	3.52	-0.73	40.5	13.9463	0.0089	-1.2308
147	SLD 4	3.7	-0.74	40.49	13.9445	0.0087	-1.2958
147	SLD 5	0.85	1.86	41.85	14.3721	0.0078	-0.2991
147	SLD 6	0.97	1.86	41.85	14.371	0.0077	-0.3413
147	SLD 7	1.15	-1.99	39.91	13.7641	0.0071	-0.4027
147	SLD 8	1.27	-2	39.91	13.763	0.007	-0.4449
147	SLD 9	-1.29	1.94	41.93	14.3986	0.0065	0.4516
147	SLD 10	-1.17	1.93	41.93	14.3975	0.0064	0.4094
147	SLD 11	-1	-1.92	40	13.7907	0.0058	0.3479
147	SLD 12	-0.87	-1.93	39.99	13.7895	0.0057	0.3057
147	SLD 13	-3.72	0.67	41.35	14.2171	0.0047	1.3025
147	SLD 14	-3.54	0.66	41.35	14.2153	0.0046	1.2375
147	SLD 15	-3.64	-0.49	40.77	14.0347	0.0045	1.2714
147	SLD 16	-3.45	-0.5	40.76	14.0329	0.0044	1.2064
147	SLV 1	8.03	1.02	41.26	14.1853	0.0122	-2.8107
147	SLV 2	8.46	0.99	41.25	14.1812	0.0119	-2.9621
147	SLV 3	8.24	-1.62	39.94	13.7707	0.0117	-2.8832
147	SLV 4	8.67	-1.65	39.93	13.7666	0.0114	-3.0346
147	SLV 5	2.01	4.29	43.03	14.7416	0.0092	-0.7053
147	SLV 6	2.29	4.27	43.02	14.739	0.0089	-0.802
147	SLV 7	2.7	-4.5	38.63	13.3597	0.0076	-0.9469
147	SLV 8	2.98	-4.52	38.62	13.3571	0.0073	-1.0436
147	SLV 9	-3	4.45	43.22	14.8045	0.0061	1.0503
147	SLV 10	-2.73	4.44	43.21	14.8019	0.0059	0.9536
147	SLV 11	-2.31	-4.33	38.82	13.4226	0.0045	0.8087
147	SLV 12	-2.04	-4.35	38.81	13.42	0.0043	0.712
147	SLV 13	-8.69	1.58	41.91	14.395	0.002	3.0413
147	SLV 14	-8.26	1.55	41.9	14.3909	0.0017	2.8898
147	SLV 15	-8.49	-1.06	40.59	13.9804	0.0016	2.9688
147	SLV 16	-8.05	-1.08	40.58	13.9763	0.0012	2.8173
147	CRTFP Ux+	0	0	0	0	0	0
147	CRTFP Ux-	0	0	0	0	0	0
147	CRTFP Uy+	0	0	0	0	0	0
147	CRTFP Uy-	0	0	0	0	0	0
148	SLU 1	0	-0.08	38.04	13.0901	0.0044	0.0005
148	SLU 2	-0.01	-0.03	38.08	13.1017	0.0044	0.0013
148	SLU 3	0	-0.07	38.77	13.3396	0.0045	0.0003
148	SLU 4	0	-0.04	38.79	13.3465	0.0045	0.0008
148	SLU 5	-0.01	-0.03	38.55	13.2638	0.0045	0.0018
148	SLU 6	0	-0.07	39.25	13.5017	0.0046	0.0008
148	SLU 7	-0.01	-0.04	39.27	13.5086	0.0046	0.0013
148	SLU 8	-0.01	-0.09	38.99	13.4144	0.0046	0.0014
148	SLU 9	-0.01	-0.05	39.01	13.4213	0.0046	0.0019
148	SLU 10	-0.01	0.02	43.17	14.8695	0.0056	0.0022
148	SLU 11	-0.01	-0.03	43.86	15.1074	0.0057	0.0011
148	SLU 12	-0.01	0.01	43.89	15.1143	0.0057	0.0017
148	SLU 13	-0.01	0.01	43.65	15.0316	0.0057	0.0026
148	SLU 14	-0.01	-0.03	44.34	15.2695	0.0057	0.0016
148	SLU 15	-0.01	0	44.36	15.2764	0.0058	0.0021
148	SLU 16	-0.01	-0.04	44.09	15.1823	0.0057	0.0022
148	SLU 17	-0.01	-0.01	44.11	15.1892	0.0057	0.0027
148	SLU 18	-0.01	-0.02	45.32	15.6156	0.0061	0.0016
148	SLU 19	-0.01	0.02	45.34	15.6225	0.0061	0.0022
148	SLU 20	-0.01	-0.02	45.79	15.7777	0.0062	0.0021
148	SLU 21	-0.01	0.01	45.81	15.7846	0.0062	0.0026
148	SLU 22	0	-0.03	42.38	14.5832	0.0051	-0.0024
148	SLU 23	0	0.03	42.41	14.5947	0.0051	-0.0015
148	SLU 24	0.01	-0.02	43.11	14.8326	0.0052	-0.0025
148	SLU 25	0	0.02	43.13	14.8395	0.0052	-0.002

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
148	SLU 26	0	0.02	42.89	14.7569	0.0052	-0.0011
148	SLU 27	0	-0.02	43.58	14.9948	0.0052	-0.0021
148	SLU 28	0	0.01	43.6	15.0017	0.0053	-0.0016
148	SLU 29	0	-0.03	43.33	14.9075	0.0052	-0.0015
148	SLU 30	0	0	43.35	14.9144	0.0052	-0.001
148	SLU 31	0	0.07	47.51	16.3625	0.0063	-0.0007
148	SLU 32	0	0.03	48.2	16.6005	0.0064	-0.0017
148	SLU 33	0	0.06	48.22	16.6074	0.0064	-0.0012
148	SLU 34	0	0.07	47.98	16.5247	0.0064	-0.0002
148	SLU 35	0	0.02	48.67	16.7626	0.0064	-0.0013
148	SLU 36	0	0.06	48.7	16.7695	0.0064	-0.0007
148	SLU 37	0	0.01	48.42	16.6753	0.0064	-0.0007
148	SLU 38	0	0.04	48.44	16.6822	0.0064	-0.0001
148	SLU 39	0	0.04	49.65	17.1087	0.0068	-0.0012
148	SLU 40	0	0.07	49.68	17.1156	0.0068	-0.0007
148	SLU 41	0	0.03	50.13	17.2708	0.0069	-0.0008
148	SLU 42	0	0.06	50.15	17.2777	0.0069	-0.0002
148	SLU 43	-0.01	-0.12	47.97	16.5053	0.0055	0.0016
148	SLU 44	-0.01	-0.07	48.01	16.5168	0.0055	0.0024
148	SLU 45	-0.01	-0.11	48.7	16.7547	0.0056	0.0014
148	SLU 46	-0.01	-0.08	48.72	16.7616	0.0056	0.002
148	SLU 47	-0.01	-0.07	48.48	16.6789	0.0056	0.0029
148	SLU 48	-0.01	-0.12	49.17	16.9168	0.0057	0.0019
148	SLU 49	-0.01	-0.08	49.19	16.9238	0.0057	0.0024
148	SLU 50	-0.01	-0.13	48.92	16.8296	0.0057	0.0025
148	SLU 51	-0.01	-0.1	48.94	16.8365	0.0057	0.003
148	SLU 52	-0.01	-0.02	53.1	18.2846	0.0067	0.0033
148	SLU 53	-0.01	-0.07	53.79	18.5225	0.0068	0.0023
148	SLU 54	-0.01	-0.03	53.81	18.5294	0.0068	0.0028
148	SLU 55	-0.01	-0.03	53.57	18.4468	0.0068	0.0037
148	SLU 56	-0.01	-0.07	54.27	18.6847	0.0068	0.0027
148	SLU 57	-0.01	-0.04	54.29	18.6916	0.0068	0.0032
148	SLU 58	-0.01	-0.09	54.01	18.5974	0.0068	0.0033
148	SLU 59	-0.01	-0.05	54.03	18.6043	0.0068	0.0038
148	SLU 60	-0.01	-0.06	55.25	19.0307	0.0072	0.0028
148	SLU 61	-0.01	-0.03	55.27	19.0376	0.0072	0.0033
148	SLU 62	-0.01	-0.06	55.72	19.1929	0.0073	0.0032
148	SLU 63	-0.01	-0.03	55.74	19.1998	0.0073	0.0037
148	SLU 64	0	-0.07	52.31	17.9983	0.0062	-0.0013
148	SLU 65	0	-0.01	52.34	18.0099	0.0062	-0.0004
148	SLU 66	0	-0.06	53.03	18.2478	0.0063	-0.0014
148	SLU 67	0	-0.03	53.05	18.2547	0.0063	-0.0009
148	SLU 68	0	-0.02	52.82	18.172	0.0063	0
148	SLU 69	0	-0.06	53.51	18.4099	0.0063	-0.001
148	SLU 70	0	-0.03	53.53	18.4168	0.0063	-0.0004
148	SLU 71	0	-0.08	53.25	18.3226	0.0063	-0.0004
148	SLU 72	0	-0.04	53.28	18.3295	0.0063	0.0001
148	SLU 73	0	0.03	57.43	19.7777	0.0074	0.0004
148	SLU 74	0	-0.01	58.13	20.0156	0.0074	-0.0006
148	SLU 75	0	0.02	58.15	20.0225	0.0075	-0.0001
148	SLU 76	0	0.03	57.91	19.9398	0.0075	0.0009
148	SLU 77	0	-0.02	58.6	20.1777	0.0075	-0.0001
148	SLU 78	0	0.01	58.62	20.1846	0.0075	0.0004
148	SLU 79	0	-0.03	58.35	20.0905	0.0075	0.0004
148	SLU 80	-0.01	0	58.37	20.0974	0.0075	0.001
148	SLU 81	0	-0.01	59.58	20.5238	0.0079	-0.0001
148	SLU 82	0	0.03	59.6	20.5307	0.0079	0.0004
148	SLU 83	0	-0.01	60.06	20.6859	0.0079	0.0004
148	SLU 84	-0.01	0.02	60.08	20.6928	0.008	0.0009
148	SLE RA 1	0	-0.06	39.28	13.5167	0.0046	-0.0004
148	SLE RA 2	0	-0.03	39.31	13.5244	0.0046	0.0002
148	SLE RA 3	0	-0.06	39.77	13.683	0.0047	-0.0005
148	SLE RA 4	0	-0.04	39.78	13.6876	0.0047	-0.0001
148	SLE RA 5	0	-0.03	39.62	13.6325	0.0047	0.0005
148	SLE RA 6	0	-0.06	40.08	13.7911	0.0047	-0.0002
148	SLE RA 7	0	-0.04	40.1	13.7957	0.0047	0.0002
148	SLE RA 8	0	-0.07	39.92	13.7329	0.0047	0.0002
148	SLE RA 9	0	-0.05	39.93	13.7375	0.0047	0.0006
148	SLE RA 10	0	0	42.7	14.703	0.0054	0.0008
148	SLE RA 11	0	-0.03	43.16	14.8616	0.0054	0.0001
148	SLE RA 12	0	-0.01	43.18	14.8662	0.0055	0.0004
148	SLE RA 13	0	0	43.02	14.811	0.0055	0.0011
148	SLE RA 14	0	-0.03	43.48	14.9697	0.0055	0.0004
148	SLE RA 15	0	-0.01	43.49	14.9743	0.0055	0.0007
148	SLE RA 16	0	-0.04	43.31	14.9115	0.0055	0.0008
148	SLE RA 17	-0.01	-0.02	43.32	14.9161	0.0055	0.0011
148	SLE RA 18	0	-0.02	44.13	15.2004	0.0057	0.0004
148	SLE RA 19	0	0	44.15	15.205	0.0057	0.0008
148	SLE RA 20	0	-0.03	44.45	15.3085	0.0058	0.0007
148	SLE RA 21	0	0	44.46	15.3131	0.0058	0.0011
148	SLE FR 1	0	-0.06	39.28	13.5167	0.0046	-0.0004
148	SLE FR 2	0	-0.06	39.29	13.5183	0.0046	-0.0002
148	SLE FR 3	0	-0.07	39.41	13.56	0.0046	-0.0002
148	SLE FR 4	0	-0.04	40.74	14.0234	0.0049	0
148	SLE FR 5	0	-0.05	40.86	14.0651	0.005	0
148	SLE FR 6	0	-0.04	41.71	14.3585	0.0052	0
148	SLE QP 1	0	-0.06	39.28	13.5167	0.0046	-0.0004
148	SLE QP 2	0	-0.05	40.74	14.0218	0.0049	-0.0001
148	SLD 1	3.43	0.42	40.85	14.0508	0.007	-1.2019
148	SLD 2	3.62	0.42	40.85	14.0502	0.0069	-1.2668
148	SLD 3	3.52	-0.74	40.27	13.8663	0.0073	-1.2329

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
148	SLD 4	3.71	-0.74	40.26	13.8657	0.0071	-1.2979
148	SLD 5	0.86	1.85	41.66	14.3105	0.0052	-0.3022
148	SLD 6	0.98	1.84	41.66	14.3101	0.0051	-0.3443
148	SLD 7	1.16	-2.01	39.71	13.6954	0.0061	-0.4057
148	SLD 8	1.28	-2.02	39.71	13.695	0.006	-0.4479
148	SLD 9	-1.28	1.91	41.77	14.3486	0.0039	0.4476
148	SLD 10	-1.16	1.91	41.77	14.3483	0.0038	0.4055
148	SLD 11	-0.99	-1.95	39.82	13.7335	0.0048	0.3441
148	SLD 12	-0.86	-1.95	39.82	13.7331	0.0047	0.302
148	SLD 13	-3.71	0.64	41.21	14.178	0.0028	1.2976
148	SLD 14	-3.53	0.63	41.21	14.1774	0.0026	1.2327
148	SLD 15	-3.62	-0.52	40.63	13.9934	0.003	1.2665
148	SLD 16	-3.44	-0.52	40.63	13.9928	0.0029	1.2016
148	SLV 1	8.03	1.02	40.98	14.0827	0.0098	-2.8111
148	SLV 2	8.47	1.01	40.97	14.0813	0.0094	-2.9623
148	SLV 3	8.24	-1.62	39.65	13.6632	0.0104	-2.8835
148	SLV 4	8.67	-1.63	39.65	13.6619	0.01	-3.0348
148	SLV 5	2.02	4.27	42.83	14.6765	0.0055	-0.708
148	SLV 6	2.3	4.27	42.82	14.6756	0.0053	-0.8046
148	SLV 7	2.71	-4.52	38.4	13.2783	0.0076	-0.9494
148	SLV 8	2.99	-4.53	38.39	13.2774	0.0073	-1.046
148	SLV 9	-2.99	4.42	43.08	14.7662	0.0025	1.0457
148	SLV 10	-2.71	4.42	43.08	14.7653	0.0023	0.9491
148	SLV 11	-2.3	-4.37	38.65	13.368	0.0046	0.8043
148	SLV 12	-2.02	-4.38	38.65	13.3671	0.0044	0.7077
148	SLV 13	-8.68	1.52	41.83	14.3818	-0.0002	3.0345
148	SLV 14	-8.24	1.52	41.83	14.3804	-0.0005	2.8833
148	SLV 15	-8.47	-1.12	40.5	13.9623	0.0005	2.9621
148	SLV 16	-8.04	-1.12	40.5	13.9609	0.0001	2.8108
148	CRTFP Ux+	0	0	0	0	0	0
148	CRTFP Ux-	0	0	0	0	0	0
148	CRTFP Uy+	0	0	0	0	0	0
148	CRTFP Uy-	0	0	0	0	0	0
149	SLU 1	0.01	-0.1	37.93	13.0607	0.0028	-0.0034
149	SLU 2	0.01	-0.04	37.97	13.072	0.0028	-0.0024
149	SLU 3	0.01	-0.09	38.66	13.3096	0.0028	-0.0036
149	SLU 4	0.01	-0.06	38.68	13.3164	0.0029	-0.003
149	SLU 5	0	-0.05	38.44	13.2336	0.0029	-0.002
149	SLU 6	0.01	-0.09	39.13	13.4712	0.0029	-0.0032
149	SLU 7	0.01	-0.06	39.15	13.478	0.0029	-0.0026
149	SLU 8	0.01	-0.11	38.88	13.3839	0.0029	-0.0025
149	SLU 9	0	-0.07	38.9	13.3907	0.0029	-0.0019
149	SLU 10	0	0	43.03	14.8285	0.0037	-0.002
149	SLU 11	0.01	-0.05	43.72	15.0661	0.0038	-0.0032
149	SLU 12	0.01	-0.01	43.74	15.0729	0.0038	-0.0026
149	SLU 13	0	-0.01	43.5	14.9901	0.0038	-0.0015
149	SLU 14	0.01	-0.05	44.19	15.2277	0.0038	-0.0027
149	SLU 15	0	-0.02	44.21	15.2345	0.0038	-0.0021
149	SLU 16	0	-0.06	43.94	15.1404	0.0038	-0.0021
149	SLU 17	0	-0.03	43.96	15.1472	0.0039	-0.0015
149	SLU 18	0.01	-0.04	45.16	15.5699	0.0041	-0.0028
149	SLU 19	0	-0.01	45.18	15.5767	0.0041	-0.0022
149	SLU 20	0	-0.04	45.63	15.7315	0.0042	-0.0023
149	SLU 21	0	-0.01	45.65	15.7383	0.0042	-0.0017
149	SLU 22	0.02	-0.05	42.25	14.5485	0.0032	-0.007
149	SLU 23	0.02	0.01	42.28	14.5598	0.0033	-0.006
149	SLU 24	0.02	-0.04	42.98	14.7975	0.0033	-0.0072
149	SLU 25	0.02	-0.01	43	14.8043	0.0033	-0.0066
149	SLU 26	0.01	0	42.76	14.7214	0.0033	-0.0055
149	SLU 27	0.02	-0.04	43.45	14.9591	0.0033	-0.0067
149	SLU 28	0.02	-0.01	43.47	14.9659	0.0034	-0.0061
149	SLU 29	0.02	-0.06	43.2	14.8717	0.0033	-0.0061
149	SLU 30	0.01	-0.02	43.22	14.8785	0.0034	-0.0055
149	SLU 31	0.01	0.05	47.34	16.3163	0.0042	-0.0055
149	SLU 32	0.02	0	48.04	16.554	0.0042	-0.0067
149	SLU 33	0.02	0.04	48.06	16.5608	0.0042	-0.0061
149	SLU 34	0.01	0.04	47.82	16.4779	0.0043	-0.0051
149	SLU 35	0.02	0	48.51	16.7156	0.0043	-0.0063
149	SLU 36	0.01	0.03	48.53	16.7224	0.0043	-0.0057
149	SLU 37	0.01	-0.02	48.25	16.6282	0.0043	-0.0056
149	SLU 38	0.01	0.02	48.28	16.635	0.0043	-0.005
149	SLU 39	0.02	0.01	49.48	17.0578	0.0046	-0.0064
149	SLU 40	0.01	0.04	49.5	17.0646	0.0046	-0.0057
149	SLU 41	0.01	0.01	49.95	17.2194	0.0046	-0.0059
149	SLU 42	0.01	0.04	49.97	17.2262	0.0046	-0.0053
149	SLU 43	0.01	-0.14	47.83	16.4688	0.0035	-0.0032
149	SLU 44	0	-0.09	47.87	16.4801	0.0035	-0.0022
149	SLU 45	0.01	-0.13	48.56	16.7177	0.0035	-0.0034
149	SLU 46	0.01	-0.1	48.58	16.7245	0.0035	-0.0028
149	SLU 47	0	-0.09	48.34	16.6417	0.0036	-0.0018
149	SLU 48	0.01	-0.14	49.03	16.8793	0.0036	-0.003
149	SLU 49	0	-0.11	49.05	16.8861	0.0036	-0.0024
149	SLU 50	0	-0.15	48.78	16.792	0.0036	-0.0023
149	SLU 51	0	-0.12	48.8	16.7988	0.0036	-0.0017
149	SLU 52	0	-0.05	52.93	18.2366	0.0044	-0.0018
149	SLU 53	0.01	-0.09	53.62	18.4742	0.0045	-0.003
149	SLU 54	0	-0.06	53.64	18.481	0.0045	-0.0024
149	SLU 55	0	-0.05	53.4	18.3982	0.0045	-0.0013
149	SLU 56	0	-0.1	54.09	18.6358	0.0045	-0.0025
149	SLU 57	0	-0.06	54.11	18.6426	0.0045	-0.0019
149	SLU 58	0	-0.11	53.84	18.5485	0.0045	-0.0019

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
149	SLU 59	0	-0.08	53.86	18.5552	0.0045	-0.0013
149	SLU 60	0	-0.09	55.06	18.978	0.0048	-0.0026
149	SLU 61	0	-0.05	55.08	18.9848	0.0048	-0.002
149	SLU 62	0	-0.09	55.53	19.1396	0.0049	-0.0021
149	SLU 63	0	-0.06	55.55	19.1464	0.0049	-0.0015
149	SLU 64	0.02	-0.09	52.15	17.9566	0.0039	-0.0068
149	SLU 65	0.01	-0.04	52.18	17.9679	0.0039	-0.0058
149	SLU 66	0.02	-0.08	52.88	18.2056	0.004	-0.007
149	SLU 67	0.02	-0.05	52.9	18.2124	0.004	-0.0064
149	SLU 68	0.01	-0.04	52.66	18.1295	0.004	-0.0053
149	SLU 69	0.02	-0.09	53.35	18.3672	0.004	-0.0065
149	SLU 70	0.01	-0.06	53.37	18.374	0.004	-0.0059
149	SLU 71	0.01	-0.1	53.09	18.2798	0.004	-0.0059
149	SLU 72	0.01	-0.07	53.12	18.2866	0.004	-0.0053
149	SLU 73	0.01	0	57.24	19.7244	0.0049	-0.0053
149	SLU 74	0.02	-0.04	57.94	19.9621	0.0049	-0.0065
149	SLU 75	0.01	-0.01	57.96	19.9688	0.0049	-0.0059
149	SLU 76	0.01	0	57.72	19.886	0.0049	-0.0049
149	SLU 77	0.01	-0.05	58.41	20.1237	0.005	-0.0061
149	SLU 78	0.01	-0.02	58.43	20.1304	0.005	-0.0055
149	SLU 79	0.01	-0.06	58.15	20.0363	0.005	-0.0054
149	SLU 80	0.01	-0.03	58.17	20.0431	0.005	-0.0048
149	SLU 81	0.01	-0.04	59.38	20.4659	0.0052	-0.0062
149	SLU 82	0.01	0	59.4	20.4727	0.0053	-0.0056
149	SLU 83	0.01	-0.04	59.85	20.6275	0.0053	-0.0057
149	SLU 84	0.01	-0.01	59.87	20.6343	0.0053	-0.0051
149	SLE RA 1	0.01	-0.08	39.17	13.4858	0.0029	-0.0044
149	SLE RA 2	0.01	-0.05	39.19	13.4933	0.0029	-0.0038
149	SLE RA 3	0.01	-0.08	39.65	13.6517	0.0029	-0.0046
149	SLE RA 4	0.01	-0.06	39.66	13.6563	0.003	-0.0042
149	SLE RA 5	0.01	-0.05	39.5	13.6011	0.003	-0.0035
149	SLE RA 6	0.01	-0.08	39.96	13.7595	0.003	-0.0043
149	SLE RA 7	0.01	-0.06	39.98	13.764	0.003	-0.0039
149	SLE RA 8	0.01	-0.09	39.8	13.7012	0.003	-0.0038
149	SLE RA 9	0.01	-0.07	39.81	13.7058	0.003	-0.0034
149	SLE RA 10	0.01	-0.02	42.56	14.6643	0.0036	-0.0035
149	SLE RA 11	0.01	-0.05	43.02	14.8227	0.0036	-0.0043
149	SLE RA 12	0.01	-0.03	43.04	14.8273	0.0036	-0.0039
149	SLE RA 13	0.01	-0.02	42.88	14.772	0.0036	-0.0032
149	SLE RA 14	0.01	-0.05	43.34	14.9305	0.0036	-0.004
149	SLE RA 15	0.01	-0.03	43.35	14.935	0.0036	-0.0036
149	SLE RA 16	0.01	-0.06	43.17	14.8722	0.0036	-0.0035
149	SLE RA 17	0.01	-0.04	43.18	14.8768	0.0036	-0.0031
149	SLE RA 18	0.01	-0.04	43.99	15.1586	0.0038	-0.004
149	SLE RA 19	0.01	-0.02	44	15.1632	0.0038	-0.0036
149	SLE RA 20	0.01	-0.05	44.3	15.2664	0.0038	-0.0037
149	SLE RA 21	0.01	-0.03	44.31	15.2709	0.0038	-0.0033
149	SLE FR 1	0.01	-0.08	39.17	13.4858	0.0029	-0.0044
149	SLE FR 2	0.01	-0.08	39.17	13.4873	0.0029	-0.0043
149	SLE FR 3	0.01	-0.08	39.29	13.5289	0.0029	-0.0043
149	SLE FR 4	0.01	-0.06	40.62	13.9891	0.0032	-0.0042
149	SLE FR 5	0.01	-0.07	40.74	14.0307	0.0032	-0.0042
149	SLE FR 6	0.01	-0.06	41.58	14.3222	0.0034	-0.0042
149	SLE QP 1	0.01	-0.08	39.17	13.4858	0.0029	-0.0044
149	SLE QP 2	0.01	-0.07	40.61	13.9876	0.0032	-0.0043
149	SLD 1	3.44	0.41	40.67	13.9954	0.0054	-1.2037
149	SLD 2	3.63	0.42	40.67	13.9961	0.0052	-1.2686
149	SLD 3	3.53	-0.75	40.08	13.8086	0.0056	-1.2348
149	SLD 4	3.71	-0.74	40.08	13.8093	0.0055	-1.2996
149	SLD 5	0.87	1.83	41.52	14.2731	0.0034	-0.3058
149	SLD 6	0.99	1.84	41.52	14.2735	0.0033	-0.3479
149	SLD 7	1.17	-2.03	39.56	13.6506	0.0044	-0.4092
149	SLD 8	1.29	-2.03	39.56	13.651	0.0043	-0.4512
149	SLD 9	-1.27	1.89	41.67	14.3243	0.0021	0.4426
149	SLD 10	-1.15	1.89	41.67	14.3247	0.002	0.4005
149	SLD 11	-0.97	-1.98	39.7	13.7018	0.003	0.3392
149	SLD 12	-0.85	-1.97	39.7	13.7022	0.0029	0.2972
149	SLD 13	-3.69	0.6	41.14	14.166	0.0009	1.2909
149	SLD 14	-3.51	0.6	41.15	14.1666	0.0007	1.2261
149	SLD 15	-3.6	-0.56	40.55	13.9792	0.0011	1.2599
149	SLD 16	-3.42	-0.56	40.56	13.9799	0.001	1.1951
149	SLV 1	8.03	1.03	40.72	13.9992	0.0083	-2.8099
149	SLV 2	8.46	1.05	40.73	14.0007	0.0079	-2.9609
149	SLV 3	8.24	-1.61	39.38	13.5747	0.0089	-2.8822
149	SLV 4	8.67	-1.6	39.39	13.5762	0.0086	-3.0332
149	SLV 5	2.03	4.26	42.68	14.6347	0.0038	-0.7107
149	SLV 6	2.31	4.27	42.68	14.6356	0.0035	-0.8072
149	SLV 7	2.72	-4.54	38.21	13.2197	0.006	-0.9518
149	SLV 8	3	-4.53	38.21	13.2207	0.0058	-1.0482
149	SLV 9	-2.98	4.39	43.01	14.7546	0.0006	1.0396
149	SLV 10	-2.7	4.4	43.02	14.7556	0.0004	0.9432
149	SLV 11	-2.29	-4.42	38.54	13.3396	0.0028	0.7985
149	SLV 12	-2.01	-4.41	38.55	13.3406	0.0026	0.7021
149	SLV 13	-8.65	1.45	41.84	14.3991	-0.0023	3.0245
149	SLV 14	-8.22	1.47	41.84	14.4006	-0.0026	2.8735
149	SLV 15	-8.44	-1.19	40.5	13.9746	-0.0016	2.9522
149	SLV 16	-8.01	-1.17	40.5	13.9761	-0.0019	2.8012
149	CRTFP Ux+	0	0	0	0	0	0
149	CRTFP Ux-	0	0	0	0	0	0
149	CRTFP Uy+	0	0	0	0	0	0
149	CRTFP Uy-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
150	SLU 1	0.02	-0.11	34.25	11.8034	0.6389	-0.0046
150	SLU 2	0.01	-0.06	34.28	11.8132	0.6395	-0.0045
150	SLU 3	0.02	-0.1	34.9	12.0284	0.6512	-0.005
150	SLU 4	0.02	-0.07	34.92	12.0343	0.6515	-0.0049
150	SLU 5	0.01	-0.06	34.7	11.9591	0.6475	-0.004
150	SLU 6	0.02	-0.1	35.33	12.1743	0.6591	-0.0045
150	SLU 7	0.01	-0.07	35.35	12.1802	0.6595	-0.0044
150	SLU 8	0.01	-0.12	35.1	12.0951	0.6549	-0.0036
150	SLU 9	0.01	-0.09	35.12	12.101	0.6552	-0.0036
150	SLU 10	0.01	-0.02	38.83	13.3925	0.7249	-0.0051
150	SLU 11	0.02	-0.06	39.46	13.6078	0.7365	-0.0056
150	SLU 12	0.02	-0.03	39.47	13.6137	0.7369	-0.0055
150	SLU 13	0.01	-0.03	39.26	13.5384	0.7328	-0.0046
150	SLU 14	0.02	-0.07	39.88	13.7536	0.7445	-0.0051
150	SLU 15	0.01	-0.04	39.9	13.7595	0.7448	-0.005
150	SLU 16	0.01	-0.08	39.65	13.6744	0.7402	-0.0042
150	SLU 17	0.01	-0.05	39.67	13.6803	0.7406	-0.0042
150	SLU 18	0.02	-0.06	40.75	14.0595	0.7609	-0.0055
150	SLU 19	0.01	-0.03	40.77	14.0654	0.7612	-0.0054
150	SLU 20	0.02	-0.06	41.18	14.2054	0.7688	-0.005
150	SLU 21	0.01	-0.03	41.2	14.2113	0.7692	-0.0049
150	SLU 22	0.03	-0.06	38.14	13.1468	0.7117	-0.0093
150	SLU 23	0.03	-0.01	38.17	13.1566	0.7123	-0.0092
150	SLU 24	0.03	-0.06	38.8	13.3718	0.7239	-0.0097
150	SLU 25	0.03	-0.03	38.82	13.3777	0.7242	-0.0096
150	SLU 26	0.02	-0.02	38.6	13.3025	0.7202	-0.0087
150	SLU 27	0.03	-0.06	39.22	13.5177	0.7318	-0.0092
150	SLU 28	0.03	-0.03	39.24	13.5236	0.7322	-0.0091
150	SLU 29	0.03	-0.07	38.99	13.4385	0.7276	-0.0083
150	SLU 30	0.02	-0.04	39.01	13.4444	0.7279	-0.0082
150	SLU 31	0.02	0.02	42.73	14.7359	0.7976	-0.0098
150	SLU 32	0.03	-0.02	43.35	14.9512	0.8092	-0.0102
150	SLU 33	0.03	0.01	43.37	14.9571	0.8096	-0.0102
150	SLU 34	0.02	0.02	43.15	14.8818	0.8056	-0.0093
150	SLU 35	0.03	-0.03	43.78	15.097	0.8172	-0.0097
150	SLU 36	0.03	0	43.79	15.1029	0.8176	-0.0097
150	SLU 37	0.03	-0.04	43.55	15.0178	0.8129	-0.0089
150	SLU 38	0.02	-0.01	43.57	15.0237	0.8133	-0.0088
150	SLU 39	0.03	-0.01	44.65	15.4029	0.8336	-0.0101
150	SLU 40	0.03	0.02	44.67	15.4088	0.8339	-0.0101
150	SLU 41	0.03	-0.02	45.07	15.5488	0.8416	-0.0096
150	SLU 42	0.02	0.01	45.09	15.5547	0.8419	-0.0096
150	SLU 43	0.02	-0.15	43.19	14.8838	0.8057	-0.0044
150	SLU 44	0.02	-0.1	43.22	14.8936	0.8063	-0.0043
150	SLU 45	0.02	-0.15	43.84	15.1089	0.8179	-0.0048
150	SLU 46	0.02	-0.12	43.86	15.1148	0.8183	-0.0047
150	SLU 47	0.01	-0.11	43.64	15.0395	0.8142	-0.0038
150	SLU 48	0.02	-0.15	44.27	15.2547	0.8259	-0.0043
150	SLU 49	0.02	-0.12	44.28	15.2606	0.8262	-0.0042
150	SLU 50	0.02	-0.16	44.04	15.1755	0.8216	-0.0034
150	SLU 51	0.01	-0.13	44.06	15.1814	0.822	-0.0034
150	SLU 52	0.02	-0.07	47.77	16.4729	0.8916	-0.0049
150	SLU 53	0.02	-0.11	48.39	16.6882	0.9032	-0.0054
150	SLU 54	0.02	-0.08	48.41	16.6941	0.9036	-0.0053
150	SLU 55	0.01	-0.07	48.2	16.6188	0.8996	-0.0044
150	SLU 56	0.02	-0.11	48.82	16.8341	0.9112	-0.0049
150	SLU 57	0.02	-0.08	48.84	16.84	0.9116	-0.0048
150	SLU 58	0.02	-0.13	48.59	16.7549	0.907	-0.004
150	SLU 59	0.01	-0.1	48.61	16.7608	0.9073	-0.004
150	SLU 60	0.02	-0.1	49.69	17.14	0.9276	-0.0053
150	SLU 61	0.02	-0.07	49.71	17.1459	0.928	-0.0052
150	SLU 62	0.02	-0.11	50.12	17.2858	0.9356	-0.0048
150	SLU 63	0.02	-0.08	50.13	17.2917	0.9359	-0.0047
150	SLU 64	0.03	-0.11	47.08	16.2272	0.8784	-0.0091
150	SLU 65	0.03	-0.06	47.11	16.237	0.879	-0.009
150	SLU 66	0.03	-0.1	47.74	16.4523	0.8906	-0.0095
150	SLU 67	0.03	-0.07	47.75	16.4581	0.891	-0.0094
150	SLU 68	0.03	-0.07	47.54	16.3829	0.887	-0.0085
150	SLU 69	0.03	-0.11	48.16	16.5981	0.8986	-0.009
150	SLU 70	0.03	-0.08	48.18	16.604	0.8989	-0.0089
150	SLU 71	0.03	-0.12	47.93	16.5189	0.8943	-0.0081
150	SLU 72	0.03	-0.09	47.95	16.5248	0.8947	-0.008
150	SLU 73	0.03	-0.03	51.66	17.8163	0.9643	-0.0096
150	SLU 74	0.03	-0.07	52.29	18.0316	0.976	-0.01
150	SLU 75	0.03	-0.04	52.31	18.0375	0.9763	-0.01
150	SLU 76	0.03	-0.03	52.09	17.9622	0.9723	-0.0091
150	SLU 77	0.03	-0.07	52.72	18.1774	0.9839	-0.0095
150	SLU 78	0.03	-0.04	52.73	18.1833	0.9843	-0.0095
150	SLU 79	0.03	-0.08	52.49	18.0983	0.9797	-0.0087
150	SLU 80	0.03	-0.05	52.5	18.1042	0.98	-0.0086
150	SLU 81	0.03	-0.06	53.59	18.4834	1.0003	-0.0099
150	SLU 82	0.03	-0.03	53.6	18.4893	1.0007	-0.0099
150	SLU 83	0.03	-0.07	54.01	18.6292	1.0083	-0.0094
150	SLU 84	0.03	-0.04	54.03	18.6351	1.0086	-0.0094
150	SLE RA 1	0.02	-0.09	35.36	12.1872	0.6597	-0.006
150	SLE RA 2	0.02	-0.06	35.38	12.1937	0.6601	-0.0059
150	SLE RA 3	0.02	-0.09	35.8	12.3372	0.6679	-0.0062
150	SLE RA 4	0.02	-0.07	35.81	12.3412	0.6681	-0.0062
150	SLE RA 5	0.02	-0.06	35.66	12.291	0.6654	-0.0056
150	SLE RA 6	0.02	-0.09	36.08	12.4345	0.6732	-0.0059
150	SLE RA 7	0.02	-0.07	36.09	12.4384	0.6734	-0.0058

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
150	SLE RA 8	0.02	-0.1	35.93	12.3817	0.6703	-0.0053
150	SLE RA 9	0.02	-0.08	35.94	12.3856	0.6706	-0.0053
150	SLE RA 10	0.02	-0.04	38.42	13.2466	0.717	-0.0063
150	SLE RA 11	0.02	-0.07	38.83	13.3901	0.7248	-0.0066
150	SLE RA 12	0.02	-0.05	38.84	13.3941	0.725	-0.0066
150	SLE RA 13	0.02	-0.04	38.7	13.3439	0.7223	-0.006
150	SLE RA 14	0.02	-0.07	39.12	13.4874	0.7301	-0.0063
150	SLE RA 15	0.02	-0.05	39.13	13.4913	0.7303	-0.0062
150	SLE RA 16	0.02	-0.08	38.96	13.4346	0.7272	-0.0057
150	SLE RA 17	0.02	-0.06	38.98	13.4385	0.7275	-0.0057
150	SLE RA 18	0.02	-0.06	39.7	13.6913	0.741	-0.0065
150	SLE RA 19	0.02	-0.04	39.71	13.6952	0.7412	-0.0065
150	SLE RA 20	0.02	-0.06	39.98	13.7886	0.7463	-0.0062
150	SLE RA 21	0.02	-0.04	39.99	13.7925	0.7465	-0.0061
150	SLE FR 1	0.02	-0.09	35.36	12.1872	0.6597	-0.006
150	SLE FR 2	0.02	-0.09	35.36	12.1885	0.6598	-0.006
150	SLE FR 3	0.02	-0.1	35.47	12.2261	0.6618	-0.0058
150	SLE FR 4	0.02	-0.08	36.67	12.6397	0.6842	-0.0061
150	SLE FR 5	0.02	-0.09	36.78	12.6773	0.6862	-0.006
150	SLE FR 6	0.02	-0.08	37.53	12.9393	0.7003	-0.0063
150	SLE QP 1	0.02	-0.09	35.36	12.1872	0.6597	-0.006
150	SLE QP 2	0.02	-0.08	36.66	12.6384	0.6841	-0.0061
150	SLD 1	3.11	0.36	36.65	12.6265	0.6858	-1.1197
150	SLD 2	3.28	0.38	36.66	12.6282	0.6858	-1.1786
150	SLD 3	3.19	-0.69	36.11	12.4565	0.6759	-1.0842
150	SLD 4	3.36	-0.67	36.12	12.4582	0.6759	-1.143
150	SLD 5	0.8	1.64	37.47	12.8924	0.6997	-0.3839
150	SLD 6	0.91	1.65	37.48	12.8935	0.6997	-0.4221
150	SLD 7	1.06	-1.86	35.68	12.3257	0.6665	-0.2654
150	SLD 8	1.17	-1.85	35.69	12.3268	0.6666	-0.3036
150	SLD 9	-1.13	1.68	37.64	12.95	0.7016	0.2913
150	SLD 10	-1.02	1.69	37.64	12.9511	0.7016	0.2531
150	SLD 11	-0.87	-1.82	35.85	12.3834	0.6685	0.4098
150	SLD 12	-0.76	-1.81	35.85	12.3845	0.6685	0.3716
150	SLD 13	-3.32	0.5	37.2	12.8187	0.6923	1.1307
150	SLD 14	-3.15	0.52	37.21	12.8203	0.6923	1.0719
150	SLD 15	-3.24	-0.55	36.67	12.6487	0.6824	1.1663
150	SLD 16	-3.07	-0.53	36.67	12.6503	0.6824	1.1074
150	SLV 1	7.26	0.93	36.62	12.6048	0.6877	-2.6102
150	SLV 2	7.65	0.97	36.63	12.6086	0.6878	-2.7472
150	SLV 3	7.44	-1.46	35.4	12.2183	0.6651	-2.5283
150	SLV 4	7.84	-1.42	35.41	12.2222	0.6652	-2.6654
150	SLV 5	1.84	3.84	38.5	13.2137	0.7194	-0.8883
150	SLV 6	2.09	3.86	38.51	13.2162	0.7195	-0.9759
150	SLV 7	2.46	-4.13	34.43	11.9257	0.6441	-0.6154
150	SLV 8	2.71	-4.11	34.44	11.9282	0.6442	-0.7029
150	SLV 9	-2.67	3.94	38.89	13.3487	0.724	0.6907
150	SLV 10	-2.42	3.96	38.89	13.3512	0.7241	0.6031
150	SLV 11	-2.05	-4.03	34.82	12.0607	0.6487	0.9636
150	SLV 12	-1.8	-4.01	34.83	12.0631	0.6487	0.876
150	SLV 13	-7.8	1.26	37.91	13.0546	0.703	2.6531
150	SLV 14	-7.4	1.29	37.93	13.0585	0.7031	2.516
150	SLV 15	-7.61	-1.14	36.69	12.6682	0.6804	2.7349
150	SLV 16	-7.22	-1.1	36.71	12.6721	0.6805	2.5979
150	CRTFP Ux+	0	0	0	0	0	0
150	CRTFP Ux-	0	0	0	0	0	0
150	CRTFP Uy+	0	0	0	0	0	0
150	CRTFP Uy-	0	0	0	0	0	0
152	SLU 1	0.02	-0.17	49.96	10.6648	10.4544	0.026
152	SLU 2	0.02	-0.1	50.01	10.6736	10.4642	0.012
152	SLU 3	0.02	-0.16	50.92	10.8685	10.6546	0.0235
152	SLU 4	0.02	-0.12	50.94	10.8737	10.6604	0.0151
152	SLU 5	0.02	-0.1	50.63	10.8057	10.5947	0.0137
152	SLU 6	0.02	-0.17	51.54	11.0005	10.7851	0.0253
152	SLU 7	0.02	-0.12	51.57	11.0058	10.791	0.0169
152	SLU 8	0.02	-0.18	51.21	10.929	10.7155	0.0295
152	SLU 9	0.02	-0.14	51.23	10.9342	10.7213	0.0211
152	SLU 10	0.02	-0.05	56.62	12.0915	11.8516	0.0017
152	SLU 11	0.02	-0.11	57.53	12.2863	12.042	0.0132
152	SLU 12	0.02	-0.07	57.56	12.2916	12.0478	0.0048
152	SLU 13	0.02	-0.06	57.25	12.2235	11.9821	0.0034
152	SLU 14	0.02	-0.12	58.16	12.4184	12.1725	0.015
152	SLU 15	0.02	-0.07	58.18	12.4236	12.1784	0.0066
152	SLU 16	0.02	-0.14	57.82	12.3468	12.1029	0.0192
152	SLU 17	0.02	-0.09	57.85	12.3521	12.1087	0.0108
152	SLU 18	0.02	-0.1	59.42	12.6904	12.4364	0.0112
152	SLU 19	0.02	-0.06	59.44	12.6956	12.4422	0.0028
152	SLU 20	0.02	-0.11	60.04	12.8224	12.5669	0.013
152	SLU 21	0.02	-0.06	60.06	12.8277	12.5728	0.0046
152	SLU 22	0.04	-0.11	55.64	11.8778	11.6426	0.0096
152	SLU 23	0.04	-0.04	55.68	11.8866	11.6524	-0.0044
152	SLU 24	0.04	-0.1	56.6	12.0814	11.8428	0.0071
152	SLU 25	0.04	-0.06	56.62	12.0867	11.8487	-0.0013
152	SLU 26	0.03	-0.05	56.31	12.0186	11.783	-0.0027
152	SLU 27	0.04	-0.11	57.22	12.2135	11.9734	0.0089
152	SLU 28	0.04	-0.06	57.24	12.2187	11.9792	0.0005
152	SLU 29	0.04	-0.12	56.89	12.1419	11.9037	0.0131
152	SLU 30	0.03	-0.08	56.91	12.1472	11.9096	0.0047
152	SLU 31	0.03	0.01	62.3	13.3044	13.0398	-0.0147
152	SLU 32	0.04	-0.05	63.21	13.4993	13.2302	-0.0032
152	SLU 33	0.04	-0.01	63.24	13.5045	13.2361	-0.0116

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
152	SLU 34	0.03	0	62.92	13.4365	13.1703	-0.013
152	SLU 35	0.04	-0.06	63.84	13.6313	13.3608	-0.0014
152	SLU 36	0.03	-0.02	63.86	13.6366	13.3666	-0.0098
152	SLU 37	0.03	-0.08	63.5	13.5598	13.2911	0.0028
152	SLU 38	0.03	-0.03	63.53	13.5651	13.297	-0.0056
152	SLU 39	0.04	-0.04	65.09	13.9033	13.6246	-0.0052
152	SLU 40	0.04	0	65.12	13.9086	13.6305	-0.0136
152	SLU 41	0.04	-0.05	65.72	14.0354	13.7552	-0.0034
152	SLU 42	0.03	-0.01	65.74	14.0407	13.761	-0.0118
152	SLU 43	0.02	-0.24	63	13.4484	13.1833	0.0394
152	SLU 44	0.02	-0.17	63.05	13.4572	13.1931	0.0254
152	SLU 45	0.03	-0.23	63.96	13.652	13.3835	0.0369
152	SLU 46	0.02	-0.19	63.99	13.6573	13.3894	0.0285
152	SLU 47	0.02	-0.18	63.67	13.5893	13.3236	0.0271
152	SLU 48	0.02	-0.24	64.58	13.7841	13.514	0.0387
152	SLU 49	0.02	-0.19	64.61	13.7894	13.5199	0.0303
152	SLU 50	0.02	-0.25	64.25	13.7125	13.4444	0.0429
152	SLU 51	0.02	-0.21	64.28	13.7178	13.4502	0.0345
152	SLU 52	0.02	-0.12	69.67	14.8751	14.5805	0.0151
152	SLU 53	0.02	-0.18	70.58	15.0699	14.7709	0.0266
152	SLU 54	0.02	-0.14	70.6	15.0752	14.7767	0.0182
152	SLU 55	0.02	-0.13	70.29	15.0071	14.711	0.0168
152	SLU 56	0.02	-0.19	71.2	15.202	14.9014	0.0284
152	SLU 57	0.02	-0.15	71.23	15.2072	14.9073	0.02
152	SLU 58	0.02	-0.21	70.87	15.1304	14.8318	0.0326
152	SLU 59	0.02	-0.16	70.89	15.1357	14.8376	0.0242
152	SLU 60	0.02	-0.17	72.46	15.4739	15.1653	0.0246
152	SLU 61	0.02	-0.13	72.48	15.4792	15.1712	0.0162
152	SLU 62	0.02	-0.18	73.08	15.606	15.2958	0.0264
152	SLU 63	0.02	-0.14	73.11	15.6113	15.3017	0.018
152	SLU 64	0.04	-0.18	68.68	14.6614	14.3715	0.023
152	SLU 65	0.04	-0.11	68.73	14.6702	14.3813	0.009
152	SLU 66	0.04	-0.17	69.64	14.865	14.5717	0.0205
152	SLU 67	0.04	-0.13	69.66	14.8703	14.5776	0.0121
152	SLU 68	0.03	-0.12	69.35	14.8022	14.5119	0.0108
152	SLU 69	0.04	-0.18	70.26	14.9971	14.7023	0.0223
152	SLU 70	0.04	-0.14	70.29	15.0023	14.7081	0.0139
152	SLU 71	0.04	-0.2	69.93	14.9255	14.6326	0.0265
152	SLU 72	0.03	-0.15	69.95	14.9308	14.6385	0.0181
152	SLU 73	0.04	-0.06	75.34	16.088	15.7687	-0.0013
152	SLU 74	0.04	-0.12	76.26	16.2829	15.9591	0.0102
152	SLU 75	0.04	-0.08	76.28	16.2881	15.965	0.0018
152	SLU 76	0.03	-0.07	75.97	16.2201	15.8993	0.0004
152	SLU 77	0.04	-0.13	76.88	16.4149	16.0897	0.012
152	SLU 78	0.04	-0.09	76.9	16.4202	16.0955	0.0036
152	SLU 79	0.04	-0.15	76.54	16.3434	16.02	0.0162
152	SLU 80	0.03	-0.1	76.57	16.3486	16.0259	0.0078
152	SLU 81	0.04	-0.11	78.14	16.6869	16.3535	0.0082
152	SLU 82	0.04	-0.07	78.16	16.6922	16.3594	-0.0002
152	SLU 83	0.04	-0.12	78.76	16.819	16.4841	0.01
152	SLU 84	0.03	-0.08	78.78	16.8242	16.4899	0.0016
152	SLE RA 1	0.03	-0.15	51.59	11.0114	10.7939	0.0213
152	SLE RA 2	0.03	-0.11	51.61	11.0173	10.8004	0.012
152	SLE RA 3	0.03	-0.15	52.22	11.1471	10.9273	0.0196
152	SLE RA 4	0.03	-0.12	52.24	11.1507	10.9313	0.0141
152	SLE RA 5	0.02	-0.11	52.03	11.1053	10.8874	0.0131
152	SLE RA 6	0.03	-0.15	52.64	11.2352	11.0144	0.0208
152	SLE RA 7	0.03	-0.12	52.65	11.2387	11.0183	0.0152
152	SLE RA 8	0.03	-0.16	52.41	11.1875	10.9679	0.0236
152	SLE RA 9	0.02	-0.13	52.43	11.191	10.9718	0.018
152	SLE RA 10	0.02	-0.07	56.03	11.9625	11.7253	0.0051
152	SLE RA 11	0.03	-0.11	56.63	12.0924	11.8523	0.0128
152	SLE RA 12	0.03	-0.09	56.65	12.0959	11.8562	0.0072
152	SLE RA 13	0.02	-0.08	56.44	12.0505	11.8124	0.0062
152	SLE RA 14	0.03	-0.12	57.05	12.1804	11.9393	0.0139
152	SLE RA 15	0.02	-0.09	57.07	12.1839	11.9432	0.0083
152	SLE RA 16	0.02	-0.13	56.83	12.1327	11.8929	0.0167
152	SLE RA 17	0.02	-0.1	56.84	12.1362	11.8968	0.0112
152	SLE RA 18	0.03	-0.11	57.89	12.3618	12.1152	0.0115
152	SLE RA 19	0.03	-0.08	57.9	12.3653	12.1191	0.0059
152	SLE RA 20	0.03	-0.11	58.3	12.4498	12.2022	0.0126
152	SLE RA 21	0.02	-0.08	58.32	12.4533	12.2061	0.007
152	SLE FR 1	0.03	-0.15	51.59	11.0114	10.7939	0.0213
152	SLE FR 2	0.03	-0.14	51.59	11.0126	10.7952	0.0194
152	SLE FR 3	0.03	-0.15	51.75	11.0466	10.8287	0.0218
152	SLE FR 4	0.03	-0.13	53.48	11.4177	11.1916	0.0165
152	SLE FR 5	0.03	-0.14	53.64	11.4517	11.2251	0.0188
152	SLE FR 6	0.03	-0.13	54.74	11.6866	11.4545	0.0164
152	SLE QP 1	0.03	-0.15	51.59	11.0114	10.7939	0.0213
152	SLE QP 2	0.03	-0.14	53.48	11.4165	11.1903	0.0183
152	SLD 1	4.51	0.7	53.4	11.3971	11.1969	-1.1174
152	SLD 2	4.75	0.73	53.41	11.3995	11.1994	-1.1755
152	SLD 3	4.62	-0.82	52.57	11.236	11.0207	-0.7976
152	SLD 4	4.87	-0.79	52.58	11.2383	11.0232	-0.8557
152	SLD 5	1.15	2.41	54.71	11.6547	11.4591	-0.7973
152	SLD 6	1.31	2.43	54.71	11.6562	11.4607	-0.835
152	SLD 7	1.54	-2.65	51.95	11.1175	10.8717	0.2688
152	SLD 8	1.7	-2.63	51.95	11.1191	10.8733	0.2311
152	SLD 9	-1.64	2.35	55	11.714	11.5073	-0.1944
152	SLD 10	-1.48	2.37	55.01	11.7155	11.5088	-0.2321
152	SLD 11	-1.26	-2.71	52.24	11.1768	10.9199	0.8717

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
152	SLD 12	-1.1	-2.69	52.25	11.1783	10.9214	0.834
152	SLD 13	-4.82	0.51	54.37	11.5947	11.3574	0.8923
152	SLD 14	-4.57	0.54	54.38	11.597	11.3598	0.8342
152	SLD 15	-4.7	-1.01	53.54	11.4335	11.1812	1.2122
152	SLD 16	-4.45	-0.98	53.55	11.4359	11.1836	1.1541
152	SLV 1	10.51	1.78	53.27	11.3658	11.1998	-2.6283
152	SLV 2	11.08	1.85	53.3	11.3712	11.2055	-2.7636
152	SLV 3	10.78	-1.68	51.38	10.9995	10.7992	-1.9001
152	SLV 4	11.35	-1.61	51.41	11.0049	10.8049	-2.0355
152	SLV 5	2.66	5.67	56.26	11.9559	11.7997	-1.8571
152	SLV 6	3.03	5.71	56.28	11.9594	11.8033	-1.9435
152	SLV 7	3.57	-5.86	49.99	10.735	10.4645	0.5701
152	SLV 8	3.93	-5.81	50.01	10.7384	10.4681	0.4836
152	SLV 9	-3.88	5.54	56.94	12.0946	11.9124	-0.447
152	SLV 10	-3.51	5.58	56.96	12.0981	11.916	-0.5334
152	SLV 11	-2.98	-5.99	50.67	10.8737	10.5773	1.9802
152	SLV 12	-2.61	-5.95	50.69	10.8771	10.5809	1.8938
152	SLV 13	-11.3	1.33	55.54	11.8281	11.5756	2.0721
152	SLV 14	-10.72	1.4	55.57	11.8335	11.5813	1.9368
152	SLV 15	-11.03	-2.13	53.65	11.4618	11.1751	2.8003
152	SLV 16	-10.45	-2.06	53.69	11.4673	11.1808	2.665
152	CRTFP Ux+	0	0	0	0	0	0
152	CRTFP Ux-	0	0	0	0	0	0
152	CRTFP Uy+	0	0	0	0	0	0
152	CRTFP Uy-	0	0	0	0	0	0
154	SLU 1	0	-0.04	7.16	0	-0.9552	-0.0049
154	SLU 2	0	-0.03	7.17	0	-0.956	-0.0035
154	SLU 3	0	-0.04	7.3	0	-0.9734	-0.0048
154	SLU 4	0	-0.03	7.3	0	-0.9739	-0.0039
154	SLU 5	0	-0.03	7.26	0	-0.9678	-0.0037
154	SLU 6	0	-0.04	7.39	0	-0.9853	-0.0049
154	SLU 7	0	-0.03	7.39	0	-0.9858	-0.0041
154	SLU 8	0	-0.04	7.34	0	-0.979	-0.0052
154	SLU 9	0	-0.03	7.35	0	-0.9794	-0.0044
154	SLU 10	0	-0.02	8.11	0	-1.0812	-0.0028
154	SLU 11	0	-0.03	8.24	0	-1.0987	-0.004
154	SLU 12	0	-0.02	8.24	0	-1.0991	-0.0032
154	SLU 13	0	-0.02	8.2	0	-1.0931	-0.003
154	SLU 14	0	-0.03	8.33	0	-1.1105	-0.0042
154	SLU 15	0	-0.03	8.33	0	-1.111	-0.0034
154	SLU 16	0	-0.03	8.28	0	-1.1042	-0.0045
154	SLU 17	0	-0.03	8.28	0	-1.1047	-0.0037
154	SLU 18	0	-0.03	8.51	0	-1.1341	-0.0039
154	SLU 19	0	-0.02	8.51	0	-1.1346	-0.0031
154	SLU 20	0	-0.03	8.59	0	-1.146	-0.004
154	SLU 21	0	-0.02	8.6	0	-1.1464	-0.0032
154	SLU 22	0	-0.03	7.98	0	-1.0637	-0.004
154	SLU 23	0	-0.02	7.98	0	-1.0644	-0.0026
154	SLU 24	0	-0.03	8.11	0	-1.0819	-0.0039
154	SLU 25	0	-0.02	8.12	0	-1.0823	-0.003
154	SLU 26	0	-0.02	8.07	0	-1.0763	-0.0028
154	SLU 27	0	-0.03	8.2	0	-1.0938	-0.004
154	SLU 28	0	-0.02	8.21	0	-1.0942	-0.0032
154	SLU 29	0	-0.03	8.16	0	-1.0874	-0.0043
154	SLU 30	0	-0.03	8.16	0	-1.0879	-0.0035
154	SLU 31	0	-0.01	8.92	0	-1.1896	-0.0019
154	SLU 32	0	-0.02	9.05	0	-1.2071	-0.0032
154	SLU 33	0	-0.02	9.06	0	-1.2076	-0.0023
154	SLU 34	0	-0.02	9.01	0	-1.2015	-0.0021
154	SLU 35	0	-0.02	9.14	0	-1.219	-0.0033
154	SLU 36	0	-0.02	9.15	0	-1.2194	-0.0025
154	SLU 37	0	-0.03	9.09	0	-1.2126	-0.0036
154	SLU 38	0	-0.02	9.1	0	-1.2131	-0.0028
154	SLU 39	0	-0.02	9.32	0	-1.2426	-0.003
154	SLU 40	0	-0.02	9.32	0	-1.243	-0.0022
154	SLU 41	0	-0.02	9.41	0	-1.2544	-0.0032
154	SLU 42	0	-0.02	9.41	0	-1.2549	-0.0023
154	SLU 43	0	-0.05	9.03	0	-1.2046	-0.0067
154	SLU 44	0	-0.04	9.04	0	-1.2054	-0.0053
154	SLU 45	0	-0.05	9.17	0	-1.2228	-0.0065
154	SLU 46	0	-0.04	9.17	0	-1.2233	-0.0057
154	SLU 47	0	-0.04	9.13	0	-1.2172	-0.0054
154	SLU 48	0	-0.05	9.26	0	-1.2347	-0.0067
154	SLU 49	0	-0.04	9.26	0	-1.2352	-0.0059
154	SLU 50	0	-0.05	9.21	0	-1.2284	-0.007
154	SLU 51	0	-0.05	9.22	0	-1.2288	-0.0062
154	SLU 52	0	-0.03	9.98	0	-1.3306	-0.0046
154	SLU 53	0	-0.04	10.11	0	-1.3481	-0.0058
154	SLU 54	0	-0.04	10.11	0	-1.3485	-0.005
154	SLU 55	0	-0.04	10.07	0	-1.3425	-0.0047
154	SLU 56	0	-0.04	10.2	0	-1.3599	-0.006
154	SLU 57	0	-0.04	10.2	0	-1.3604	-0.0051
154	SLU 58	0	-0.05	10.15	0	-1.3536	-0.0063
154	SLU 59	0	-0.04	10.16	0	-1.354	-0.0054
154	SLU 60	0	-0.04	10.38	0	-1.3835	-0.0057
154	SLU 61	0	-0.04	10.38	0	-1.384	-0.0048
154	SLU 62	0	-0.04	10.47	0	-1.3954	-0.0058
154	SLU 63	0	-0.04	10.47	0	-1.3958	-0.005
154	SLU 64	0	-0.04	9.85	0	-1.3131	-0.0058
154	SLU 65	0	-0.03	9.85	0	-1.3138	-0.0044
154	SLU 66	0	-0.04	9.98	0	-1.3313	-0.0056

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
154	SLU 67	0	-0.04	9.99	0	-1.3317	-0.0048
154	SLU 68	0	-0.03	9.94	0	-1.3257	-0.0046
154	SLU 69	0	-0.04	10.07	0	-1.3432	-0.0058
154	SLU 70	0	-0.04	10.08	0	-1.3436	-0.005
154	SLU 71	0	-0.05	10.03	0	-1.3368	-0.0061
154	SLU 72	0	-0.04	10.03	0	-1.3373	-0.0053
154	SLU 73	0	-0.03	10.79	0	-1.439	-0.0037
154	SLU 74	0	-0.04	10.92	0	-1.4565	-0.0049
154	SLU 75	0	-0.03	10.93	0	-1.457	-0.0041
154	SLU 76	0	-0.03	10.88	0	-1.4509	-0.0038
154	SLU 77	0	-0.04	11.01	0	-1.4684	-0.0051
154	SLU 78	0	-0.03	11.02	0	-1.4688	-0.0043
154	SLU 79	0	-0.04	10.97	0	-1.462	-0.0054
154	SLU 80	0	-0.03	10.97	0	-1.4625	-0.0046
154	SLU 81	0	-0.04	11.19	0	-1.492	-0.0048
154	SLU 82	0	-0.03	11.19	0	-1.4924	-0.0039
154	SLU 83	0	-0.04	11.28	0	-1.5038	-0.0049
154	SLU 84	0	-0.03	11.28	0	-1.5043	-0.0041
154	SLE RA 1	0	-0.03	7.4	0	-0.9862	-0.0046
154	SLE RA 2	0	-0.03	7.4	0	-0.9867	-0.0037
154	SLE RA 3	0	-0.03	7.49	0	-0.9984	-0.0045
154	SLE RA 4	0	-0.03	7.49	0	-0.9987	-0.004
154	SLE RA 5	0	-0.03	7.46	0	-0.9946	-0.0038
154	SLE RA 6	0	-0.03	7.55	0	-1.0063	-0.0047
154	SLE RA 7	0	-0.03	7.55	0	-1.0066	-0.0041
154	SLE RA 8	0	-0.04	7.52	0	-1.002	-0.0049
154	SLE RA 9	0	-0.03	7.52	0	-1.0023	-0.0043
154	SLE RA 10	0	-0.02	8.03	0	-1.0702	-0.0032
154	SLE RA 11	0	-0.03	8.11	0	-1.0818	-0.0041
154	SLE RA 12	0	-0.03	8.12	0	-1.0821	-0.0035
154	SLE RA 13	0	-0.03	8.09	0	-1.0781	-0.0034
154	SLE RA 14	0	-0.03	8.17	0	-1.0898	-0.0042
154	SLE RA 15	0	-0.03	8.18	0	-1.0901	-0.0036
154	SLE RA 16	0	-0.03	8.14	0	-1.0855	-0.0044
154	SLE RA 17	0	-0.03	8.14	0	-1.0858	-0.0038
154	SLE RA 18	0	-0.03	8.29	0	-1.1055	-0.004
154	SLE RA 19	0	-0.03	8.29	0	-1.1058	-0.0034
154	SLE RA 20	0	-0.03	8.35	0	-1.1134	-0.0041
154	SLE RA 21	0	-0.03	8.35	0	-1.1137	-0.0035
154	SLE FR 1	0	-0.03	7.4	0	-0.9862	-0.0046
154	SLE FR 2	0	-0.03	7.4	0	-0.9863	-0.0045
154	SLE FR 3	0	-0.04	7.42	0	-0.9894	-0.0047
154	SLE FR 4	0	-0.03	7.67	0	-1.0221	-0.0043
154	SLE FR 5	0	-0.03	7.69	0	-1.0252	-0.0045
154	SLE FR 6	0	-0.03	7.84	0	-1.0458	-0.0043
154	SLE QP 1	0	-0.03	7.4	0	-0.9862	-0.0046
154	SLE QP 2	0	-0.03	7.66	0	-1.022	-0.0044
154	SLD 1	0.64	0.09	7.61	0	-1.0141	0.0118
154	SLD 2	0.68	0.1	7.61	0	-1.0145	0.0129
154	SLD 3	0.66	-0.12	7.48	0	-0.9972	-0.0166
154	SLD 4	0.69	-0.12	7.48	0	-0.9976	-0.0156
154	SLD 5	0.16	0.33	7.84	0	-1.0452	0.0434
154	SLD 6	0.18	0.33	7.84	0	-1.0455	0.0441
154	SLD 7	0.22	-0.39	7.42	0	-0.9888	-0.0514
154	SLD 8	0.24	-0.38	7.42	0	-0.9891	-0.0508
154	SLD 9	-0.24	0.31	7.91	0	-1.0549	0.0419
154	SLD 10	-0.21	0.32	7.91	0	-1.0551	0.0426
154	SLD 11	-0.18	-0.4	7.49	0	-0.9985	-0.053
154	SLD 12	-0.16	-0.39	7.49	0	-0.9988	-0.0523
154	SLD 13	-0.69	0.05	7.85	0	-1.0464	0.0067
154	SLD 14	-0.65	0.06	7.85	0	-1.0468	0.0077
154	SLD 15	-0.67	-0.16	7.72	0	-1.0294	-0.0218
154	SLD 16	-0.64	-0.16	7.72	0	-1.0299	-0.0207
154	SLV 1	1.49	0.25	7.52	0	-1.003	0.0328
154	SLV 2	1.58	0.26	7.53	0	-1.004	0.0352
154	SLV 3	1.53	-0.24	7.23	0	-0.9646	-0.0321
154	SLV 4	1.62	-0.22	7.24	0	-0.9655	-0.0296
154	SLV 5	0.38	0.78	8.06	0	-1.0744	0.1046
154	SLV 6	0.43	0.8	8.06	0	-1.0751	0.1062
154	SLV 7	0.5	-0.84	7.1	0	-0.9463	-0.1114
154	SLV 8	0.56	-0.82	7.1	0	-0.9469	-0.1099
154	SLV 9	-0.56	0.76	8.23	0	-1.0971	0.101
154	SLV 10	-0.5	0.77	8.23	0	-1.0977	0.1026
154	SLV 11	-0.43	-0.86	7.27	0	-0.9689	-0.115
154	SLV 12	-0.37	-0.85	7.27	0	-0.9695	-0.1135
154	SLV 13	-1.61	0.16	8.09	0	-1.0784	0.0207
154	SLV 14	-1.53	0.17	8.1	0	-1.0794	0.0232
154	SLV 15	-1.57	-0.33	7.8	0	-1.04	-0.0441
154	SLV 16	-1.49	-0.31	7.81	0	-1.0409	-0.0416
154	CRTFP Ux+	0	0	0	0	0	0
154	CRTFP Ux-	0	0	0	0	0	0
156	SLU 1	0	-0.04	7.18	0	-0.8371	-0.005
156	SLU 2	0	-0.03	7.18	0	-0.8377	-0.0038
156	SLU 3	0	-0.04	7.31	0	-0.8531	-0.0049
156	SLU 4	0	-0.04	7.32	0	-0.8534	-0.0042
156	SLU 5	0	-0.03	7.27	0	-0.8481	-0.0039
156	SLU 6	0	-0.04	7.4	0	-0.8634	-0.005
156	SLU 7	0	-0.04	7.4	0	-0.8638	-0.0043
156	SLU 8	0	-0.05	7.35	0	-0.8579	-0.0053
156	SLU 9	0	-0.04	7.36	0	-0.8582	-0.0046
156	SLU 10	0	-0.03	8.12	0	-0.9472	-0.0032

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
156	SLU 11	0	-0.04	8.25	0	-0.9625	-0.0044
156	SLU 12	0	-0.03	8.25	0	-0.9629	-0.0036
156	SLU 13	0	-0.03	8.21	0	-0.9575	-0.0034
156	SLU 14	0	-0.04	8.34	0	-0.9729	-0.0045
156	SLU 15	0	-0.03	8.34	0	-0.9732	-0.0038
156	SLU 16	0	-0.04	8.29	0	-0.9673	-0.0048
156	SLU 17	0	-0.03	8.29	0	-0.9677	-0.004
156	SLU 18	0	-0.04	8.52	0	-0.9935	-0.0042
156	SLU 19	0	-0.03	8.52	0	-0.9938	-0.0035
156	SLU 20	0	-0.04	8.6	0	-1.0038	-0.0044
156	SLU 21	0	-0.03	8.61	0	-1.0042	-0.0037
156	SLU 22	0	-0.04	7.99	0	-0.9322	-0.0043
156	SLU 23	0	-0.03	8	0	-0.9328	-0.0031
156	SLU 24	0	-0.04	8.13	0	-0.9481	-0.0042
156	SLU 25	0	-0.03	8.13	0	-0.9485	-0.0035
156	SLU 26	0	-0.03	8.08	0	-0.9431	-0.0032
156	SLU 27	0	-0.04	8.22	0	-0.9585	-0.0043
156	SLU 28	0	-0.03	8.22	0	-0.9588	-0.0036
156	SLU 29	0	-0.04	8.17	0	-0.9529	-0.0046
156	SLU 30	0	-0.03	8.17	0	-0.9533	-0.0039
156	SLU 31	0	-0.02	8.93	0	-1.0422	-0.0025
156	SLU 32	0	-0.03	9.06	0	-1.0575	-0.0037
156	SLU 33	0	-0.03	9.07	0	-1.0579	-0.0029
156	SLU 34	0	-0.02	9.02	0	-1.0526	-0.0027
156	SLU 35	0	-0.03	9.15	0	-1.0679	-0.0038
156	SLU 36	0	-0.03	9.16	0	-1.0683	-0.0031
156	SLU 37	0	-0.03	9.11	0	-1.0624	-0.0041
156	SLU 38	0	-0.03	9.11	0	-1.0627	-0.0033
156	SLU 39	0	-0.03	9.33	0	-1.0885	-0.0036
156	SLU 40	0	-0.02	9.33	0	-1.0889	-0.0028
156	SLU 41	0	-0.03	9.42	0	-1.0989	-0.0037
156	SLU 42	0	-0.03	9.42	0	-1.0992	-0.003
156	SLU 43	0	-0.06	9.05	0	-1.0557	-0.0067
156	SLU 44	0	-0.05	9.05	0	-1.0563	-0.0055
156	SLU 45	0	-0.06	9.19	0	-1.0716	-0.0066
156	SLU 46	0	-0.05	9.19	0	-1.072	-0.0059
156	SLU 47	0	-0.05	9.14	0	-1.0666	-0.0057
156	SLU 48	0	-0.06	9.27	0	-1.082	-0.0068
156	SLU 49	0	-0.05	9.28	0	-1.0823	-0.006
156	SLU 50	0	-0.06	9.23	0	-1.0764	-0.007
156	SLU 51	0	-0.05	9.23	0	-1.0768	-0.0063
156	SLU 52	0	-0.04	9.99	0	-1.1657	-0.005
156	SLU 53	0	-0.05	10.12	0	-1.181	-0.0061
156	SLU 54	0	-0.05	10.13	0	-1.1814	-0.0054
156	SLU 55	0	-0.04	10.08	0	-1.1761	-0.0051
156	SLU 56	0	-0.05	10.21	0	-1.1914	-0.0063
156	SLU 57	0	-0.05	10.22	0	-1.1918	-0.0055
156	SLU 58	0	-0.06	10.16	0	-1.1859	-0.0065
156	SLU 59	0	-0.05	10.17	0	-1.1862	-0.0058
156	SLU 60	0	-0.05	10.39	0	-1.212	-0.006
156	SLU 61	0	-0.05	10.39	0	-1.2124	-0.0053
156	SLU 62	0	-0.05	10.48	0	-1.2224	-0.0061
156	SLU 63	0	-0.05	10.48	0	-1.2227	-0.0054
156	SLU 64	0	-0.05	9.86	0	-1.1507	-0.006
156	SLU 65	0	-0.04	9.87	0	-1.1513	-0.0048
156	SLU 66	0	-0.05	10	0	-1.1667	-0.0059
156	SLU 67	0	-0.04	10	0	-1.167	-0.0052
156	SLU 68	0	-0.04	9.96	0	-1.1617	-0.005
156	SLU 69	0	-0.05	10.09	0	-1.177	-0.0061
156	SLU 70	0	-0.05	10.09	0	-1.1774	-0.0053
156	SLU 71	0	-0.05	10.04	0	-1.1715	-0.0063
156	SLU 72	0	-0.05	10.04	0	-1.1718	-0.0056
156	SLU 73	0	-0.04	10.81	0	-1.2608	-0.0043
156	SLU 74	0	-0.05	10.94	0	-1.2761	-0.0054
156	SLU 75	0	-0.04	10.94	0	-1.2765	-0.0047
156	SLU 76	0	-0.04	10.9	0	-1.2711	-0.0044
156	SLU 77	0	-0.05	11.03	0	-1.2865	-0.0056
156	SLU 78	0	-0.04	11.03	0	-1.2868	-0.0048
156	SLU 79	0	-0.05	10.98	0	-1.2809	-0.0058
156	SLU 80	0	-0.04	10.98	0	-1.2813	-0.0051
156	SLU 81	0	-0.05	11.2	0	-1.3071	-0.0053
156	SLU 82	0	-0.04	11.21	0	-1.3074	-0.0046
156	SLU 83	0	-0.05	11.29	0	-1.3174	-0.0054
156	SLU 84	0	-0.04	11.3	0	-1.3178	-0.0047
156	SLE RA 1	0	-0.04	7.41	0	-0.8643	-0.0048
156	SLE RA 2	0	-0.03	7.41	0	-0.8647	-0.004
156	SLE RA 3	0	-0.04	7.5	0	-0.8749	-0.0047
156	SLE RA 4	0	-0.04	7.5	0	-0.8752	-0.0042
156	SLE RA 5	0	-0.03	7.47	0	-0.8716	-0.0041
156	SLE RA 6	0	-0.04	7.56	0	-0.8818	-0.0048
156	SLE RA 7	0	-0.04	7.56	0	-0.8821	-0.0043
156	SLE RA 8	0	-0.04	7.53	0	-0.8781	-0.005
156	SLE RA 9	0	-0.04	7.53	0	-0.8784	-0.0045
156	SLE RA 10	0	-0.03	8.04	0	-0.9376	-0.0036
156	SLE RA 11	0	-0.04	8.12	0	-0.9479	-0.0044
156	SLE RA 12	0	-0.03	8.13	0	-0.9481	-0.0039
156	SLE RA 13	0	-0.03	8.1	0	-0.9446	-0.0037
156	SLE RA 14	0	-0.04	8.18	0	-0.9548	-0.0045
156	SLE RA 15	0	-0.03	8.19	0	-0.955	-0.004
156	SLE RA 16	0	-0.04	8.15	0	-0.9511	-0.0046
156	SLE RA 17	0	-0.04	8.15	0	-0.9513	-0.0042

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
156	SLE RA 18	0	-0.04	8.3	0	-0.9685	-0.0043
156	SLE RA 19	0	-0.03	8.3	0	-0.9688	-0.0038
156	SLE RA 20	0	-0.04	8.36	0	-0.9754	-0.0044
156	SLE RA 21	0	-0.03	8.36	0	-0.9757	-0.0039
156	SLE FR 1	0	-0.04	7.41	0	-0.8643	-0.0048
156	SLE FR 2	0	-0.04	7.41	0	-0.8644	-0.0046
156	SLE FR 3	0	-0.04	7.43	0	-0.8671	-0.0048
156	SLE FR 4	0	-0.04	7.68	0	-0.8956	-0.0045
156	SLE FR 5	0	-0.04	7.7	0	-0.8983	-0.0047
156	SLE FR 6	0	-0.04	7.85	0	-0.9164	-0.0046
156	SLE QP 1	0	-0.04	7.41	0	-0.8643	-0.0048
156	SLE QP 2	0	-0.04	7.68	0	-0.8956	-0.0047
156	SLD 1	0.64	0.09	7.58	0	-0.8847	0.01
156	SLD 2	0.68	0.1	7.59	0	-0.8851	0.0112
156	SLD 3	0.66	-0.13	7.46	0	-0.87	-0.0148
156	SLD 4	0.69	-0.12	7.46	0	-0.8704	-0.0137
156	SLD 5	0.16	0.32	7.84	0	-0.9145	0.0372
156	SLD 6	0.19	0.33	7.84	0	-0.9147	0.038
156	SLD 7	0.22	-0.39	7.42	0	-0.8656	-0.0456
156	SLD 8	0.24	-0.38	7.42	0	-0.8658	-0.0448
156	SLD 9	-0.24	0.3	7.93	0	-0.9253	0.0355
156	SLD 10	-0.21	0.31	7.93	0	-0.9255	0.0363
156	SLD 11	-0.18	-0.41	7.51	0	-0.8764	-0.0473
156	SLD 12	-0.16	-0.4	7.51	0	-0.8766	-0.0465
156	SLD 13	-0.69	0.04	7.89	0	-0.9207	0.0044
156	SLD 14	-0.65	0.05	7.89	0	-0.9211	0.0055
156	SLD 15	-0.67	-0.18	7.77	0	-0.906	-0.0205
156	SLD 16	-0.64	-0.17	7.77	0	-0.9064	-0.0193
156	SLV 1	1.49	0.25	7.45	0	-0.8697	0.0289
156	SLV 2	1.58	0.27	7.46	0	-0.8706	0.0316
156	SLV 3	1.53	-0.24	7.17	0	-0.8364	-0.0276
156	SLV 4	1.62	-0.21	7.18	0	-0.8373	-0.025
156	SLV 5	0.38	0.78	8.04	0	-0.9382	0.0908
156	SLV 6	0.43	0.79	8.05	0	-0.9388	0.0925
156	SLV 7	0.51	-0.84	7.09	0	-0.8271	-0.0978
156	SLV 8	0.56	-0.82	7.09	0	-0.8276	-0.0961
156	SLV 9	-0.55	0.74	8.26	0	-0.9635	0.0868
156	SLV 10	-0.5	0.76	8.26	0	-0.964	0.0885
156	SLV 11	-0.43	-0.87	7.31	0	-0.8523	-0.1018
156	SLV 12	-0.37	-0.86	7.31	0	-0.8529	-0.1001
156	SLV 13	-1.61	0.13	8.18	0	-0.9539	0.0157
156	SLV 14	-1.53	0.16	8.18	0	-0.9548	0.0183
156	SLV 15	-1.57	-0.35	7.89	0	-0.9205	-0.0409
156	SLV 16	-1.49	-0.33	7.9	0	-0.9214	-0.0383
156	CRTFP Ux+	0	0	0	0	0	0
156	CRTFP Ux-	0	0	0	0	0	0
158	SLU 1	0	-0.05	7.18	0	-0.718	-0.0049
158	SLU 2	0	-0.04	7.18	0	-0.7184	-0.0038
158	SLU 3	0	-0.05	7.32	0	-0.7316	-0.0048
158	SLU 4	0	-0.04	7.32	0	-0.7319	-0.0042
158	SLU 5	0	-0.04	7.27	0	-0.7273	-0.004
158	SLU 6	0	-0.05	7.4	0	-0.7404	-0.005
158	SLU 7	0	-0.04	7.41	0	-0.7407	-0.0043
158	SLU 8	0	-0.05	7.36	0	-0.7357	-0.0052
158	SLU 9	0	-0.05	7.36	0	-0.7359	-0.0045
158	SLU 10	0	-0.03	8.12	0	-0.812	-0.0035
158	SLU 11	0	-0.04	8.25	0	-0.8252	-0.0045
158	SLU 12	0	-0.04	8.25	0	-0.8255	-0.0038
158	SLU 13	0	-0.04	8.21	0	-0.8209	-0.0036
158	SLU 14	0	-0.05	8.34	0	-0.834	-0.0046
158	SLU 15	0	-0.04	8.34	0	-0.8343	-0.0039
158	SLU 16	0	-0.05	8.29	0	-0.8293	-0.0048
158	SLU 17	0	-0.04	8.3	0	-0.8295	-0.0042
158	SLU 18	0	-0.04	8.52	0	-0.8517	-0.0044
158	SLU 19	0	-0.04	8.52	0	-0.8519	-0.0037
158	SLU 20	0	-0.04	8.61	0	-0.8605	-0.0045
158	SLU 21	0	-0.04	8.61	0	-0.8608	-0.0039
158	SLU 22	0.01	-0.04	8	0	-0.7995	-0.0044
158	SLU 23	0	-0.03	8	0	-0.8	-0.0033
158	SLU 24	0.01	-0.04	8.13	0	-0.8132	-0.0043
158	SLU 25	0	-0.04	8.13	0	-0.8134	-0.0037
158	SLU 26	0	-0.03	8.09	0	-0.8088	-0.0034
158	SLU 27	0	-0.04	8.22	0	-0.822	-0.0044
158	SLU 28	0	-0.04	8.22	0	-0.8223	-0.0038
158	SLU 29	0	-0.05	8.17	0	-0.8172	-0.0046
158	SLU 30	0	-0.04	8.18	0	-0.8175	-0.004
158	SLU 31	0	-0.03	8.94	0	-0.8936	-0.0029
158	SLU 32	0	-0.04	9.07	0	-0.9067	-0.0039
158	SLU 33	0	-0.03	9.07	0	-0.907	-0.0033
158	SLU 34	0	-0.03	9.02	0	-0.9024	-0.0031
158	SLU 35	0	-0.04	9.16	0	-0.9156	-0.0041
158	SLU 36	0	-0.03	9.16	0	-0.9159	-0.0034
158	SLU 37	0	-0.04	9.11	0	-0.9108	-0.0043
158	SLU 38	0	-0.04	9.11	0	-0.9111	-0.0036
158	SLU 39	0	-0.04	9.33	0	-0.9332	-0.0038
158	SLU 40	0	-0.03	9.33	0	-0.9335	-0.0032
158	SLU 41	0	-0.04	9.42	0	-0.9421	-0.004
158	SLU 42	0	-0.03	9.42	0	-0.9424	-0.0033
158	SLU 43	0	-0.07	9.05	0	-0.9054	-0.0065
158	SLU 44	0	-0.05	9.06	0	-0.9058	-0.0055
158	SLU 45	0	-0.06	9.19	0	-0.919	-0.0065

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
158	SLU 46	0	-0.06	9.19	0	-0.9193	-0.0058
158	SLU 47	0	-0.06	9.15	0	-0.9147	-0.0056
158	SLU 48	0	-0.07	9.28	0	-0.9279	-0.0066
158	SLU 49	0	-0.06	9.28	0	-0.9281	-0.006
158	SLU 50	0	-0.07	9.23	0	-0.9231	-0.0068
158	SLU 51	0	-0.06	9.23	0	-0.9234	-0.0062
158	SLU 52	0	-0.05	9.99	0	-0.9994	-0.0051
158	SLU 53	0	-0.06	10.13	0	-1.0126	-0.0061
158	SLU 54	0	-0.05	10.13	0	-1.0129	-0.0055
158	SLU 55	0	-0.05	10.08	0	-1.0083	-0.0052
158	SLU 56	0	-0.06	10.21	0	-1.0215	-0.0062
158	SLU 57	0	-0.06	10.22	0	-1.0217	-0.0056
158	SLU 58	0	-0.06	10.17	0	-1.0167	-0.0064
158	SLU 59	0	-0.06	10.17	0	-1.017	-0.0058
158	SLU 60	0	-0.06	10.39	0	-1.0391	-0.006
158	SLU 61	0	-0.05	10.39	0	-1.0394	-0.0054
158	SLU 62	0	-0.06	10.48	0	-1.048	-0.0061
158	SLU 63	0	-0.06	10.48	0	-1.0482	-0.0055
158	SLU 64	0.01	-0.06	9.87	0	-0.987	-0.006
158	SLU 65	0	-0.05	9.87	0	-0.9874	-0.005
158	SLU 66	0.01	-0.06	10.01	0	-1.0006	-0.006
158	SLU 67	0	-0.05	10.01	0	-1.0008	-0.0053
158	SLU 68	0	-0.05	9.96	0	-0.9963	-0.0051
158	SLU 69	0	-0.06	10.09	0	-1.0094	-0.0061
158	SLU 70	0	-0.05	10.1	0	-1.0097	-0.0054
158	SLU 71	0	-0.06	10.05	0	-1.0047	-0.0063
158	SLU 72	0	-0.06	10.05	0	-1.0049	-0.0057
158	SLU 73	0	-0.05	10.81	0	-1.081	-0.0046
158	SLU 74	0	-0.06	10.94	0	-1.0942	-0.0056
158	SLU 75	0	-0.05	10.94	0	-1.0944	-0.0049
158	SLU 76	0	-0.05	10.9	0	-1.0898	-0.0047
158	SLU 77	0	-0.06	11.03	0	-1.103	-0.0057
158	SLU 78	0	-0.05	11.03	0	-1.1033	-0.0051
158	SLU 79	0	-0.06	10.98	0	-1.0983	-0.0059
158	SLU 80	0	-0.05	10.99	0	-1.0985	-0.0053
158	SLU 81	0	-0.05	11.21	0	-1.1207	-0.0055
158	SLU 82	0	-0.05	11.21	0	-1.1209	-0.0048
158	SLU 83	0	-0.06	11.3	0	-1.1295	-0.0056
158	SLU 84	0	-0.05	11.3	0	-1.1298	-0.005
158	SLE RA 1	0	-0.05	7.41	0	-0.7413	-0.0047
158	SLE RA 2	0	-0.04	7.42	0	-0.7416	-0.004
158	SLE RA 3	0	-0.05	7.5	0	-0.7504	-0.0047
158	SLE RA 4	0	-0.04	7.51	0	-0.7505	-0.0043
158	SLE RA 5	0	-0.04	7.47	0	-0.7475	-0.0041
158	SLE RA 6	0	-0.05	7.56	0	-0.7563	-0.0048
158	SLE RA 7	0	-0.04	7.56	0	-0.7564	-0.0044
158	SLE RA 8	0	-0.05	7.53	0	-0.7531	-0.0049
158	SLE RA 9	0	-0.05	7.53	0	-0.7533	-0.0045
158	SLE RA 10	0	-0.04	8.04	0	-0.804	-0.0038
158	SLE RA 11	0	-0.04	8.13	0	-0.8127	-0.0045
158	SLE RA 12	0	-0.04	8.13	0	-0.8129	-0.004
158	SLE RA 13	0	-0.04	8.1	0	-0.8099	-0.0039
158	SLE RA 14	0	-0.05	8.19	0	-0.8187	-0.0045
158	SLE RA 15	0	-0.04	8.19	0	-0.8188	-0.0041
158	SLE RA 16	0	-0.05	8.15	0	-0.8155	-0.0047
158	SLE RA 17	0	-0.04	8.16	0	-0.8157	-0.0043
158	SLE RA 18	0	-0.04	8.3	0	-0.8304	-0.0044
158	SLE RA 19	0	-0.04	8.31	0	-0.8306	-0.004
158	SLE RA 20	0	-0.04	8.36	0	-0.8363	-0.0045
158	SLE RA 21	0	-0.04	8.36	0	-0.8365	-0.0041
158	SLE FR 1	0	-0.05	7.41	0	-0.7413	-0.0047
158	SLE FR 2	0	-0.05	7.41	0	-0.7413	-0.0046
158	SLE FR 3	0	-0.05	7.44	0	-0.7436	-0.0048
158	SLE FR 4	0	-0.04	7.68	0	-0.7681	-0.0045
158	SLE FR 5	0	-0.05	7.7	0	-0.7704	-0.0047
158	SLE FR 6	0	-0.05	7.86	0	-0.7858	-0.0046
158	SLE QP 1	0	-0.05	7.41	0	-0.7413	-0.0047
158	SLE QP 2	0	-0.05	7.68	0	-0.768	-0.0046
158	SLD 1	0.64	0.08	7.55	0	-0.7548	0.0083
158	SLD 2	0.68	0.09	7.55	0	-0.7551	0.0095
158	SLD 3	0.66	-0.13	7.42	0	-0.7423	-0.0129
158	SLD 4	0.69	-0.12	7.43	0	-0.7426	-0.0117
158	SLD 5	0.16	0.31	7.83	0	-0.7829	0.0312
158	SLD 6	0.19	0.32	7.83	0	-0.7831	0.032
158	SLD 7	0.22	-0.4	7.41	0	-0.7413	-0.0395
158	SLD 8	0.24	-0.39	7.42	0	-0.7415	-0.0388
158	SLD 9	-0.24	0.29	7.94	0	-0.7945	0.0295
158	SLD 10	-0.21	0.3	7.95	0	-0.7947	0.0302
158	SLD 11	-0.18	-0.41	7.53	0	-0.7529	-0.0413
158	SLD 12	-0.16	-0.41	7.53	0	-0.7531	-0.0405
158	SLD 13	-0.69	0.02	7.93	0	-0.7934	0.0025
158	SLD 14	-0.65	0.04	7.94	0	-0.7937	0.0036
158	SLD 15	-0.67	-0.19	7.81	0	-0.7809	-0.0188
158	SLD 16	-0.63	-0.18	7.81	0	-0.7812	-0.0176
158	SLV 1	1.49	0.25	7.37	0	-0.7367	0.025
158	SLV 2	1.58	0.28	7.37	0	-0.7375	0.0277
158	SLV 3	1.53	-0.23	7.08	0	-0.7083	-0.0233
158	SLV 4	1.62	-0.21	7.09	0	-0.7091	-0.0206
158	SLV 5	0.38	0.77	8.02	0	-0.8015	0.0771
158	SLV 6	0.43	0.79	8.02	0	-0.802	0.0788
158	SLV 7	0.51	-0.84	7.07	0	-0.7069	-0.084

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
158	SLV 8	0.56	-0.82	7.07	0	-0.7074	-0.0823
158	SLV 9	-0.55	0.73	8.29	0	-0.8286	0.073
158	SLV 10	-0.5	0.75	8.29	0	-0.8291	0.0747
158	SLV 11	-0.42	-0.88	7.34	0	-0.734	-0.0881
158	SLV 12	-0.37	-0.86	7.35	0	-0.7345	-0.0864
158	SLV 13	-1.61	0.11	8.27	0	-0.8269	0.0113
158	SLV 14	-1.53	0.14	8.28	0	-0.8277	0.014
158	SLV 15	-1.57	-0.37	7.99	0	-0.7985	-0.037
158	SLV 16	-1.49	-0.34	7.99	0	-0.7993	-0.0343
158	CRTFP Ux+	0	0	0	0	0	0
158	CRTFP Ux-	0	0	0	0	0	0
160	SLU 1	0	-0.06	7.18	0	-0.598	-0.0046
160	SLU 2	0	-0.04	7.18	0	-0.5983	-0.0037
160	SLU 3	0	-0.05	7.31	0	-0.6093	-0.0046
160	SLU 4	0	-0.05	7.31	0	-0.6095	-0.004
160	SLU 5	0	-0.05	7.27	0	-0.6057	-0.0038
160	SLU 6	0	-0.06	7.4	0	-0.6167	-0.0047
160	SLU 7	0	-0.05	7.4	0	-0.6169	-0.0041
160	SLU 8	0	-0.06	7.35	0	-0.6127	-0.0048
160	SLU 9	0	-0.05	7.35	0	-0.6129	-0.0043
160	SLU 10	0	-0.04	8.11	0	-0.6761	-0.0035
160	SLU 11	0	-0.05	8.24	0	-0.6871	-0.0043
160	SLU 12	0	-0.05	8.25	0	-0.6873	-0.0038
160	SLU 13	0	-0.04	8.2	0	-0.6834	-0.0036
160	SLU 14	0	-0.05	8.33	0	-0.6944	-0.0044
160	SLU 15	0	-0.05	8.34	0	-0.6946	-0.0039
160	SLU 16	0	-0.06	8.29	0	-0.6904	-0.0046
160	SLU 17	0	-0.05	8.29	0	-0.6906	-0.0041
160	SLU 18	0	-0.05	8.51	0	-0.7091	-0.0042
160	SLU 19	0	-0.04	8.51	0	-0.7093	-0.0037
160	SLU 20	0	-0.05	8.6	0	-0.7164	-0.0044
160	SLU 21	0	-0.05	8.6	0	-0.7166	-0.0038
160	SLU 22	0.01	-0.05	7.99	0	-0.666	-0.0042
160	SLU 23	0.01	-0.04	8	0	-0.6663	-0.0033
160	SLU 24	0.01	-0.05	8.13	0	-0.6773	-0.0042
160	SLU 25	0.01	-0.04	8.13	0	-0.6775	-0.0036
160	SLU 26	0.01	-0.04	8.08	0	-0.6737	-0.0035
160	SLU 27	0.01	-0.05	8.22	0	-0.6847	-0.0043
160	SLU 28	0.01	-0.05	8.22	0	-0.6848	-0.0038
160	SLU 29	0.01	-0.05	8.17	0	-0.6807	-0.0045
160	SLU 30	0	-0.05	8.17	0	-0.6809	-0.0039
160	SLU 31	0	-0.04	8.93	0	-0.7441	-0.0031
160	SLU 32	0.01	-0.05	9.06	0	-0.7551	-0.0039
160	SLU 33	0.01	-0.04	9.06	0	-0.7553	-0.0034
160	SLU 34	0	-0.04	9.02	0	-0.7514	-0.0032
160	SLU 35	0.01	-0.05	9.15	0	-0.7624	-0.0041
160	SLU 36	0	-0.04	9.15	0	-0.7626	-0.0035
160	SLU 37	0	-0.05	9.1	0	-0.7584	-0.0042
160	SLU 38	0	-0.04	9.1	0	-0.7586	-0.0037
160	SLU 39	0.01	-0.05	9.32	0	-0.7771	-0.0039
160	SLU 40	0	-0.04	9.33	0	-0.7773	-0.0033
160	SLU 41	0	-0.05	9.41	0	-0.7844	-0.004
160	SLU 42	0	-0.04	9.42	0	-0.7846	-0.0035
160	SLU 43	0	-0.07	9.05	0	-0.7541	-0.0061
160	SLU 44	0	-0.06	9.05	0	-0.7544	-0.0052
160	SLU 45	0	-0.07	9.18	0	-0.7654	-0.0061
160	SLU 46	0	-0.07	9.19	0	-0.7656	-0.0055
160	SLU 47	0	-0.06	9.14	0	-0.7617	-0.0053
160	SLU 48	0	-0.07	9.27	0	-0.7727	-0.0062
160	SLU 49	0	-0.07	9.28	0	-0.7729	-0.0056
160	SLU 50	0	-0.08	9.23	0	-0.7688	-0.0063
160	SLU 51	0	-0.07	9.23	0	-0.769	-0.0058
160	SLU 52	0	-0.06	9.99	0	-0.8322	-0.005
160	SLU 53	0	-0.07	10.12	0	-0.8432	-0.0058
160	SLU 54	0	-0.06	10.12	0	-0.8433	-0.0053
160	SLU 55	0	-0.06	10.07	0	-0.8395	-0.0051
160	SLU 56	0	-0.07	10.21	0	-0.8505	-0.0059
160	SLU 57	0	-0.06	10.21	0	-0.8507	-0.0054
160	SLU 58	0	-0.07	10.16	0	-0.8465	-0.0061
160	SLU 59	0	-0.07	10.16	0	-0.8467	-0.0056
160	SLU 60	0	-0.07	10.38	0	-0.8652	-0.0057
160	SLU 61	0	-0.06	10.38	0	-0.8653	-0.0052
160	SLU 62	0	-0.07	10.47	0	-0.8725	-0.0059
160	SLU 63	0	-0.06	10.47	0	-0.8727	-0.0053
160	SLU 64	0.01	-0.07	9.86	0	-0.8221	-0.0057
160	SLU 65	0.01	-0.06	9.87	0	-0.8224	-0.0048
160	SLU 66	0.01	-0.07	10	0	-0.8334	-0.0057
160	SLU 67	0.01	-0.06	10	0	-0.8336	-0.0052
160	SLU 68	0.01	-0.06	9.96	0	-0.8297	-0.005
160	SLU 69	0.01	-0.07	10.09	0	-0.8407	-0.0058
160	SLU 70	0.01	-0.06	10.09	0	-0.8409	-0.0053
160	SLU 71	0.01	-0.07	10.04	0	-0.8368	-0.006
160	SLU 72	0.01	-0.07	10.04	0	-0.837	-0.0054
160	SLU 73	0	-0.06	10.8	0	-0.9001	-0.0046
160	SLU 74	0.01	-0.07	10.93	0	-0.9112	-0.0054
160	SLU 75	0.01	-0.06	10.94	0	-0.9113	-0.0049
160	SLU 76	0	-0.06	10.89	0	-0.9075	-0.0047
160	SLU 77	0.01	-0.07	11.02	0	-0.9185	-0.0056
160	SLU 78	0	-0.06	11.02	0	-0.9187	-0.005
160	SLU 79	0	-0.07	10.97	0	-0.9145	-0.0057
160	SLU 80	0	-0.06	10.98	0	-0.9147	-0.0052

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
160	SLU 81	0.01	-0.06	11.2	0	-0.9332	-0.0054
160	SLU 82	0	-0.06	11.2	0	-0.9333	-0.0048
160	SLU 83	0.01	-0.07	11.29	0	-0.9405	-0.0055
160	SLU 84	0	-0.06	11.29	0	-0.9407	-0.005
160	SLE RA 1	0	-0.05	7.41	0	-0.6174	-0.0045
160	SLE RA 2	0	-0.05	7.41	0	-0.6176	-0.0039
160	SLE RA 3	0	-0.05	7.5	0	-0.625	-0.0045
160	SLE RA 4	0	-0.05	7.5	0	-0.6251	-0.0041
160	SLE RA 5	0	-0.05	7.47	0	-0.6225	-0.004
160	SLE RA 6	0	-0.05	7.56	0	-0.6299	-0.0045
160	SLE RA 7	0	-0.05	7.56	0	-0.63	-0.0042
160	SLE RA 8	0	-0.06	7.53	0	-0.6272	-0.0047
160	SLE RA 9	0	-0.05	7.53	0	-0.6273	-0.0043
160	SLE RA 10	0	-0.04	8.03	0	-0.6695	-0.0037
160	SLE RA 11	0	-0.05	8.12	0	-0.6768	-0.0043
160	SLE RA 12	0	-0.05	8.12	0	-0.6769	-0.0039
160	SLE RA 13	0	-0.05	8.09	0	-0.6744	-0.0038
160	SLE RA 14	0	-0.05	8.18	0	-0.6817	-0.0044
160	SLE RA 15	0	-0.05	8.18	0	-0.6818	-0.004
160	SLE RA 16	0	-0.05	8.15	0	-0.679	-0.0045
160	SLE RA 17	0	-0.05	8.15	0	-0.6792	-0.0041
160	SLE RA 18	0	-0.05	8.3	0	-0.6915	-0.0043
160	SLE RA 19	0	-0.05	8.3	0	-0.6916	-0.0039
160	SLE RA 20	0	-0.05	8.36	0	-0.6964	-0.0043
160	SLE RA 21	0	-0.05	8.36	0	-0.6965	-0.004
160	SLE FR 1	0	-0.05	7.41	0	-0.6174	-0.0045
160	SLE FR 2	0	-0.05	7.41	0	-0.6175	-0.0044
160	SLE FR 3	0	-0.05	7.43	0	-0.6194	-0.0045
160	SLE FR 4	0	-0.05	7.68	0	-0.6397	-0.0043
160	SLE FR 5	0	-0.05	7.7	0	-0.6416	-0.0045
160	SLE FR 6	0	-0.05	7.85	0	-0.6544	-0.0044
160	SLE QP 1	0	-0.05	7.41	0	-0.6174	-0.0045
160	SLE QP 2	0	-0.05	7.68	0	-0.6396	-0.0044
160	SLD 1	0.64	0.08	7.5	0	-0.6251	0.0066
160	SLD 2	0.68	0.09	7.5	0	-0.6253	0.0078
160	SLD 3	0.66	-0.13	7.38	0	-0.6147	-0.0109
160	SLD 4	0.69	-0.12	7.38	0	-0.615	-0.0098
160	SLD 5	0.16	0.3	7.81	0	-0.6509	0.0254
160	SLD 6	0.19	0.31	7.81	0	-0.6511	0.0261
160	SLD 7	0.22	-0.4	7.4	0	-0.6164	-0.0333
160	SLD 8	0.24	-0.39	7.4	0	-0.6166	-0.0325
160	SLD 9	-0.23	0.28	7.95	0	-0.6627	0.0237
160	SLD 10	-0.21	0.29	7.95	0	-0.6629	0.0244
160	SLD 11	-0.18	-0.42	7.54	0	-0.6282	-0.0349
160	SLD 12	-0.16	-0.41	7.54	0	-0.6283	-0.0342
160	SLD 13	-0.68	0.01	7.97	0	-0.6643	0.001
160	SLD 14	-0.65	0.03	7.97	0	-0.6645	0.0021
160	SLD 15	-0.67	-0.2	7.85	0	-0.6539	-0.0166
160	SLD 16	-0.63	-0.19	7.85	0	-0.6542	-0.0155
160	SLV 1	1.49	0.25	7.26	0	-0.6052	0.0209
160	SLV 2	1.58	0.28	7.27	0	-0.6059	0.0235
160	SLV 3	1.53	-0.23	6.98	0	-0.5817	-0.0191
160	SLV 4	1.61	-0.2	6.99	0	-0.5823	-0.0166
160	SLV 5	0.38	0.76	7.98	0	-0.6649	0.0635
160	SLV 6	0.43	0.78	7.98	0	-0.6653	0.0652
160	SLV 7	0.51	-0.84	7.04	0	-0.5865	-0.07
160	SLV 8	0.56	-0.82	7.04	0	-0.5869	-0.0684
160	SLV 9	-0.55	0.71	8.31	0	-0.6924	0.0595
160	SLV 10	-0.5	0.73	8.31	0	-0.6928	0.0612
160	SLV 11	-0.42	-0.89	7.37	0	-0.614	-0.074
160	SLV 12	-0.37	-0.87	7.37	0	-0.6144	-0.0724
160	SLV 13	-1.61	0.09	8.36	0	-0.6969	0.0077
160	SLV 14	-1.52	0.12	8.37	0	-0.6976	0.0103
160	SLV 15	-1.57	-0.39	8.08	0	-0.6734	-0.0324
160	SLV 16	-1.48	-0.36	8.09	0	-0.674	-0.0298
160	CRTFP Ux+	0	0	0	0	0	0
160	CRTFP Ux-	0	0	0	0	0	0
162	SLU 1	0	-0.06	7.16	0	-0.4776	-0.0041
162	SLU 2	0	-0.05	7.17	0	-0.4778	-0.0034
162	SLU 3	0	-0.06	7.3	0	-0.4866	-0.0041
162	SLU 4	0	-0.05	7.3	0	-0.4867	-0.0036
162	SLU 5	0	-0.05	7.25	0	-0.4836	-0.0035
162	SLU 6	0	-0.06	7.39	0	-0.4924	-0.0042
162	SLU 7	0	-0.06	7.39	0	-0.4926	-0.0037
162	SLU 8	0	-0.06	7.34	0	-0.4892	-0.0043
162	SLU 9	0	-0.06	7.34	0	-0.4894	-0.0038
162	SLU 10	0	-0.05	8.1	0	-0.5398	-0.0032
162	SLU 11	0	-0.06	8.23	0	-0.5486	-0.0039
162	SLU 12	0	-0.05	8.23	0	-0.5487	-0.0035
162	SLU 13	0	-0.05	8.18	0	-0.5456	-0.0033
162	SLU 14	0	-0.06	8.32	0	-0.5544	-0.004
162	SLU 15	0	-0.05	8.32	0	-0.5545	-0.0036
162	SLU 16	0	-0.06	8.27	0	-0.5512	-0.0041
162	SLU 17	0	-0.06	8.27	0	-0.5514	-0.0037
162	SLU 18	0	-0.06	8.49	0	-0.5661	-0.0039
162	SLU 19	0	-0.05	8.49	0	-0.5662	-0.0034
162	SLU 20	0	-0.06	8.58	0	-0.5719	-0.004
162	SLU 21	0	-0.05	8.58	0	-0.5721	-0.0035
162	SLU 22	0.01	-0.06	7.98	0	-0.5319	-0.0038
162	SLU 23	0.01	-0.05	7.98	0	-0.5322	-0.0031
162	SLU 24	0.01	-0.06	8.11	0	-0.541	-0.0038

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
162	SLU 25	0.01	-0.05	8.12	0	-0.5411	-0.0034
162	SLU 26	0.01	-0.05	8.07	0	-0.538	-0.0032
162	SLU 27	0.01	-0.06	8.2	0	-0.5468	-0.0039
162	SLU 28	0.01	-0.05	8.2	0	-0.547	-0.0035
162	SLU 29	0.01	-0.06	8.15	0	-0.5436	-0.004
162	SLU 30	0.01	-0.05	8.16	0	-0.5438	-0.0036
162	SLU 31	0.01	-0.04	8.91	0	-0.5941	-0.003
162	SLU 32	0.01	-0.05	9.04	0	-0.603	-0.0037
162	SLU 33	0.01	-0.05	9.05	0	-0.6031	-0.0032
162	SLU 34	0.01	-0.05	9	0	-0.6	-0.0031
162	SLU 35	0.01	-0.06	9.13	0	-0.6088	-0.0038
162	SLU 36	0.01	-0.05	9.13	0	-0.6089	-0.0033
162	SLU 37	0.01	-0.06	9.08	0	-0.6056	-0.0039
162	SLU 38	0.01	-0.05	9.09	0	-0.6058	-0.0035
162	SLU 39	0.01	-0.05	9.31	0	-0.6205	-0.0036
162	SLU 40	0.01	-0.05	9.31	0	-0.6206	-0.0032
162	SLU 41	0.01	-0.06	9.39	0	-0.6263	-0.0037
162	SLU 42	0.01	-0.05	9.4	0	-0.6265	-0.0033
162	SLU 43	0	-0.08	9.03	0	-0.6022	-0.0054
162	SLU 44	0	-0.07	9.04	0	-0.6024	-0.0047
162	SLU 45	0	-0.08	9.17	0	-0.6112	-0.0054
162	SLU 46	0	-0.07	9.17	0	-0.6113	-0.0049
162	SLU 47	0	-0.07	9.12	0	-0.6082	-0.0048
162	SLU 48	0	-0.08	9.26	0	-0.617	-0.0055
162	SLU 49	0	-0.08	9.26	0	-0.6172	-0.005
162	SLU 50	0	-0.08	9.21	0	-0.6139	-0.0056
162	SLU 51	0	-0.08	9.21	0	-0.614	-0.0052
162	SLU 52	0	-0.07	9.97	0	-0.6644	-0.0045
162	SLU 53	0	-0.08	10.1	0	-0.6732	-0.0052
162	SLU 54	0	-0.07	10.1	0	-0.6733	-0.0048
162	SLU 55	0	-0.07	10.05	0	-0.6702	-0.0046
162	SLU 56	0	-0.08	10.19	0	-0.679	-0.0053
162	SLU 57	0	-0.07	10.19	0	-0.6792	-0.0049
162	SLU 58	0	-0.08	10.14	0	-0.6758	-0.0054
162	SLU 59	0	-0.08	10.14	0	-0.676	-0.005
162	SLU 60	0	-0.08	10.36	0	-0.6907	-0.0052
162	SLU 61	0	-0.07	10.36	0	-0.6908	-0.0047
162	SLU 62	0	-0.08	10.45	0	-0.6966	-0.0053
162	SLU 63	0	-0.07	10.45	0	-0.6967	-0.0048
162	SLU 64	0.01	-0.08	9.85	0	-0.6566	-0.0051
162	SLU 65	0.01	-0.07	9.85	0	-0.6568	-0.0044
162	SLU 66	0.01	-0.08	9.98	0	-0.6656	-0.0051
162	SLU 67	0.01	-0.07	9.99	0	-0.6657	-0.0047
162	SLU 68	0.01	-0.07	9.94	0	-0.6626	-0.0045
162	SLU 69	0.01	-0.08	10.07	0	-0.6714	-0.0052
162	SLU 70	0.01	-0.07	10.07	0	-0.6716	-0.0048
162	SLU 71	0.01	-0.08	10.02	0	-0.6683	-0.0053
162	SLU 72	0.01	-0.07	10.03	0	-0.6684	-0.0049
162	SLU 73	0.01	-0.06	10.78	0	-0.7188	-0.0043
162	SLU 74	0.01	-0.07	10.91	0	-0.7276	-0.005
162	SLU 75	0.01	-0.07	10.92	0	-0.7277	-0.0045
162	SLU 76	0.01	-0.07	10.87	0	-0.7246	-0.0044
162	SLU 77	0.01	-0.08	11	0	-0.7334	-0.0051
162	SLU 78	0.01	-0.07	11	0	-0.7336	-0.0046
162	SLU 79	0.01	-0.08	10.95	0	-0.7302	-0.0052
162	SLU 80	0.01	-0.07	10.96	0	-0.7304	-0.0048
162	SLU 81	0.01	-0.07	11.18	0	-0.7451	-0.0049
162	SLU 82	0.01	-0.07	11.18	0	-0.7452	-0.0045
162	SLU 83	0.01	-0.08	11.26	0	-0.7509	-0.005
162	SLU 84	0.01	-0.07	11.27	0	-0.7511	-0.0046
162	SLE RA 1	0	-0.06	7.4	0	-0.4931	-0.004
162	SLE RA 2	0	-0.05	7.4	0	-0.4932	-0.0035
162	SLE RA 3	0	-0.06	7.49	0	-0.4991	-0.004
162	SLE RA 4	0	-0.06	7.49	0	-0.4992	-0.0037
162	SLE RA 5	0	-0.05	7.46	0	-0.4971	-0.0036
162	SLE RA 6	0	-0.06	7.55	0	-0.503	-0.0041
162	SLE RA 7	0	-0.06	7.55	0	-0.5031	-0.0038
162	SLE RA 8	0	-0.06	7.51	0	-0.5009	-0.0041
162	SLE RA 9	0	-0.06	7.51	0	-0.501	-0.0039
162	SLE RA 10	0	-0.05	8.02	0	-0.5346	-0.0034
162	SLE RA 11	0	-0.06	8.11	0	-0.5404	-0.0039
162	SLE RA 12	0	-0.05	8.11	0	-0.5405	-0.0036
162	SLE RA 13	0	-0.05	8.08	0	-0.5385	-0.0035
162	SLE RA 14	0	-0.06	8.16	0	-0.5443	-0.004
162	SLE RA 15	0	-0.06	8.17	0	-0.5444	-0.0037
162	SLE RA 16	0	-0.06	8.13	0	-0.5422	-0.004
162	SLE RA 17	0	-0.06	8.13	0	-0.5423	-0.0038
162	SLE RA 18	0	-0.06	8.28	0	-0.5521	-0.0039
162	SLE RA 19	0	-0.05	8.28	0	-0.5522	-0.0036
162	SLE RA 20	0	-0.06	8.34	0	-0.556	-0.0039
162	SLE RA 21	0	-0.05	8.34	0	-0.5561	-0.0036
162	SLE FR 1	0	-0.06	7.4	0	-0.4931	-0.004
162	SLE FR 2	0	-0.06	7.4	0	-0.4931	-0.0039
162	SLE FR 3	0	-0.06	7.42	0	-0.4947	-0.004
162	SLE FR 4	0	-0.06	7.66	0	-0.5108	-0.0039
162	SLE FR 5	0	-0.06	7.69	0	-0.5124	-0.004
162	SLE FR 6	0	-0.06	7.84	0	-0.5226	-0.0039
162	SLE QP 1	0	-0.06	7.4	0	-0.4931	-0.004
162	SLE QP 2	0	-0.06	7.66	0	-0.5108	-0.004
162	SLD 1	0.64	0.08	7.44	0	-0.4962	0.005
162	SLD 2	0.67	0.09	7.45	0	-0.4964	0.0061

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
162	SLD 3	0.65	-0.13	7.32	0	-0.4879	-0.0089
162	SLD 4	0.69	-0.12	7.32	0	-0.4881	-0.0079
162	SLD 5	0.16	0.3	7.78	0	-0.5189	0.0198
162	SLD 6	0.19	0.31	7.79	0	-0.519	0.0204
162	SLD 7	0.22	-0.4	7.37	0	-0.4914	-0.0268
162	SLD 8	0.24	-0.39	7.37	0	-0.4915	-0.0262
162	SLD 9	-0.23	0.27	7.95	0	-0.5301	0.0182
162	SLD 10	-0.21	0.28	7.95	0	-0.5302	0.0189
162	SLD 11	-0.18	-0.42	7.54	0	-0.5026	-0.0283
162	SLD 12	-0.15	-0.42	7.54	0	-0.5027	-0.0277
162	SLD 13	-0.68	0	8	0	-0.5335	0
162	SLD 14	-0.64	0.01	8.01	0	-0.5337	0.001
162	SLD 15	-0.66	-0.21	7.88	0	-0.5252	-0.014
162	SLD 16	-0.63	-0.19	7.88	0	-0.5254	-0.013
162	SLV 1	1.48	0.25	7.14	0	-0.4763	0.0167
162	SLV 2	1.57	0.29	7.15	0	-0.4768	0.019
162	SLV 3	1.52	-0.23	6.86	0	-0.4576	-0.0151
162	SLV 4	1.61	-0.19	6.87	0	-0.4581	-0.0128
162	SLV 5	0.38	0.75	7.93	0	-0.5288	0.0501
162	SLV 6	0.43	0.77	7.94	0	-0.5292	0.0516
162	SLV 7	0.51	-0.84	6.99	0	-0.4663	-0.056
162	SLV 8	0.56	-0.82	7	0	-0.4666	-0.0545
162	SLV 9	-0.55	0.7	8.32	0	-0.555	0.0465
162	SLV 10	-0.5	0.72	8.33	0	-0.5553	0.048
162	SLV 11	-0.42	-0.89	7.39	0	-0.4924	-0.0595
162	SLV 12	-0.37	-0.87	7.39	0	-0.4928	-0.058
162	SLV 13	-1.6	0.07	8.45	0	-0.5635	0.0049
162	SLV 14	-1.51	0.11	8.46	0	-0.564	0.0072
162	SLV 15	-1.56	-0.4	8.17	0	-0.5448	-0.027
162	SLV 16	-1.48	-0.37	8.18	0	-0.5453	-0.0246
162	CRTFP Ux+	0	0	0	0	0	0
162	CRTFP Ux-	0	0	0	0	0	0
164	SLU 1	0	-0.07	7.05	0	-0.3527	-0.0033
164	SLU 2	0	-0.06	7.06	0	-0.3529	-0.0028
164	SLU 3	0	-0.07	7.19	0	-0.3594	-0.0033
164	SLU 4	0	-0.06	7.19	0	-0.3595	-0.003
164	SLU 5	0	-0.06	7.14	0	-0.3572	-0.0029
164	SLU 6	0	-0.07	7.27	0	-0.3637	-0.0034
164	SLU 7	0	-0.06	7.28	0	-0.3638	-0.0031
164	SLU 8	0	-0.07	7.23	0	-0.3613	-0.0035
164	SLU 9	0	-0.06	7.23	0	-0.3614	-0.0031
164	SLU 10	0	-0.05	7.97	0	-0.3986	-0.0027
164	SLU 11	0	-0.06	8.1	0	-0.4051	-0.0032
164	SLU 12	0	-0.06	8.1	0	-0.4052	-0.0029
164	SLU 13	0	-0.06	8.06	0	-0.4029	-0.0028
164	SLU 14	0	-0.07	8.19	0	-0.4094	-0.0033
164	SLU 15	0	-0.06	8.19	0	-0.4095	-0.003
164	SLU 16	0	-0.07	8.14	0	-0.4071	-0.0034
164	SLU 17	0	-0.06	8.14	0	-0.4071	-0.0031
164	SLU 18	0	-0.06	8.36	0	-0.418	-0.0032
164	SLU 19	0	-0.06	8.36	0	-0.4181	-0.0029
164	SLU 20	0	-0.07	8.45	0	-0.4224	-0.0033
164	SLU 21	0	-0.06	8.45	0	-0.4224	-0.003
164	SLU 22	0.01	-0.06	7.86	0	-0.393	-0.0032
164	SLU 23	0.01	-0.05	7.86	0	-0.3931	-0.0026
164	SLU 24	0.01	-0.06	7.99	0	-0.3997	-0.0032
164	SLU 25	0.01	-0.06	7.99	0	-0.3997	-0.0028
164	SLU 26	0.01	-0.05	7.95	0	-0.3974	-0.0027
164	SLU 27	0.01	-0.06	8.08	0	-0.404	-0.0032
164	SLU 28	0.01	-0.06	8.08	0	-0.4041	-0.0029
164	SLU 29	0.01	-0.07	8.03	0	-0.4016	-0.0033
164	SLU 30	0.01	-0.06	8.03	0	-0.4017	-0.003
164	SLU 31	0.01	-0.05	8.78	0	-0.4389	-0.0026
164	SLU 32	0.01	-0.06	8.91	0	-0.4454	-0.0031
164	SLU 33	0.01	-0.06	8.91	0	-0.4455	-0.0028
164	SLU 34	0.01	-0.05	8.86	0	-0.4432	-0.0026
164	SLU 35	0.01	-0.06	8.99	0	-0.4497	-0.0032
164	SLU 36	0.01	-0.06	9	0	-0.4498	-0.0028
164	SLU 37	0.01	-0.07	8.95	0	-0.4473	-0.0033
164	SLU 38	0.01	-0.06	8.95	0	-0.4474	-0.0029
164	SLU 39	0.01	-0.06	9.17	0	-0.4583	-0.0031
164	SLU 40	0.01	-0.05	9.17	0	-0.4584	-0.0027
164	SLU 41	0.01	-0.06	9.25	0	-0.4626	-0.0031
164	SLU 42	0.01	-0.06	9.25	0	-0.4627	-0.0028
164	SLU 43	0	-0.09	8.89	0	-0.4447	-0.0043
164	SLU 44	0	-0.08	8.9	0	-0.4449	-0.0038
164	SLU 45	0	-0.09	9.03	0	-0.4514	-0.0043
164	SLU 46	0	-0.08	9.03	0	-0.4515	-0.004
164	SLU 47	0	-0.08	8.98	0	-0.4492	-0.0039
164	SLU 48	0	-0.09	9.11	0	-0.4557	-0.0044
164	SLU 49	0	-0.08	9.12	0	-0.4558	-0.0041
164	SLU 50	0	-0.09	9.07	0	-0.4534	-0.0045
164	SLU 51	0	-0.08	9.07	0	-0.4534	-0.0042
164	SLU 52	0	-0.07	9.81	0	-0.4906	-0.0037
164	SLU 53	0	-0.09	9.94	0	-0.4971	-0.0043
164	SLU 54	0	-0.08	9.94	0	-0.4972	-0.0039
164	SLU 55	0	-0.08	9.9	0	-0.4949	-0.0038
164	SLU 56	0	-0.09	10.03	0	-0.5014	-0.0043
164	SLU 57	0	-0.08	10.03	0	-0.5015	-0.004
164	SLU 58	0	-0.09	9.98	0	-0.4991	-0.0044
164	SLU 59	0	-0.08	9.98	0	-0.4992	-0.0041

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
164	SLU 60	0	-0.08	10.2	0	-0.5101	-0.0042
164	SLU 61	0	-0.08	10.2	0	-0.5101	-0.0039
164	SLU 62	0	-0.09	10.29	0	-0.5144	-0.0043
164	SLU 63	0	-0.08	10.29	0	-0.5144	-0.004
164	SLU 64	0.01	-0.08	9.7	0	-0.485	-0.0042
164	SLU 65	0.01	-0.07	9.7	0	-0.4852	-0.0037
164	SLU 66	0.01	-0.08	9.83	0	-0.4917	-0.0042
164	SLU 67	0.01	-0.08	9.84	0	-0.4918	-0.0039
164	SLU 68	0.01	-0.07	9.79	0	-0.4895	-0.0037
164	SLU 69	0.01	-0.09	9.92	0	-0.496	-0.0043
164	SLU 70	0.01	-0.08	9.92	0	-0.4961	-0.004
164	SLU 71	0.01	-0.09	9.87	0	-0.4936	-0.0044
164	SLU 72	0.01	-0.08	9.87	0	-0.4937	-0.004
164	SLU 73	0.01	-0.07	10.62	0	-0.5309	-0.0036
164	SLU 74	0.01	-0.08	10.75	0	-0.5374	-0.0041
164	SLU 75	0.01	-0.08	10.75	0	-0.5375	-0.0038
164	SLU 76	0.01	-0.07	10.7	0	-0.5352	-0.0037
164	SLU 77	0.01	-0.08	10.83	0	-0.5417	-0.0042
164	SLU 78	0.01	-0.08	10.84	0	-0.5418	-0.0039
164	SLU 79	0.01	-0.09	10.79	0	-0.5393	-0.0043
164	SLU 80	0.01	-0.08	10.79	0	-0.5394	-0.004
164	SLU 81	0.01	-0.08	11.01	0	-0.5503	-0.0041
164	SLU 82	0.01	-0.08	11.01	0	-0.5504	-0.0038
164	SLU 83	0.01	-0.08	11.09	0	-0.5546	-0.0042
164	SLU 84	0.01	-0.08	11.09	0	-0.5547	-0.0039
164	SLE RA 1	0.01	-0.07	7.28	0	-0.3642	-0.0033
164	SLE RA 2	0.01	-0.06	7.29	0	-0.3643	-0.0029
164	SLE RA 3	0.01	-0.07	7.37	0	-0.3687	-0.0033
164	SLE RA 4	0.01	-0.06	7.37	0	-0.3687	-0.003
164	SLE RA 5	0	-0.06	7.34	0	-0.3672	-0.003
164	SLE RA 6	0.01	-0.07	7.43	0	-0.3716	-0.0033
164	SLE RA 7	0	-0.06	7.43	0	-0.3716	-0.0031
164	SLE RA 8	0	-0.07	7.4	0	-0.37	-0.0034
164	SLE RA 9	0	-0.06	7.4	0	-0.37	-0.0032
164	SLE RA 10	0	-0.06	7.9	0	-0.3948	-0.0029
164	SLE RA 11	0.01	-0.06	7.98	0	-0.3992	-0.0032
164	SLE RA 12	0	-0.06	7.98	0	-0.3992	-0.003
164	SLE RA 13	0	-0.06	7.95	0	-0.3977	-0.0029
164	SLE RA 14	0	-0.07	8.04	0	-0.402	-0.0033
164	SLE RA 15	0	-0.06	8.04	0	-0.4021	-0.0031
164	SLE RA 16	0	-0.07	8.01	0	-0.4005	-0.0033
164	SLE RA 17	0	-0.06	8.01	0	-0.4005	-0.0031
164	SLE RA 18	0.01	-0.06	8.16	0	-0.4078	-0.0032
164	SLE RA 19	0	-0.06	8.16	0	-0.4078	-0.003
164	SLE RA 20	0	-0.07	8.21	0	-0.4107	-0.0033
164	SLE RA 21	0	-0.06	8.21	0	-0.4107	-0.003
164	SLE FR 1	0.01	-0.07	7.28	0	-0.3642	-0.0033
164	SLE FR 2	0.01	-0.06	7.29	0	-0.3643	-0.0032
164	SLE FR 3	0.01	-0.07	7.31	0	-0.3654	-0.0033
164	SLE FR 4	0.01	-0.06	7.55	0	-0.3773	-0.0032
164	SLE FR 5	0.01	-0.07	7.57	0	-0.3784	-0.0033
164	SLE FR 6	0.01	-0.06	7.72	0	-0.386	-0.0032
164	SLE QP 1	0.01	-0.07	7.28	0	-0.3642	-0.0033
164	SLE QP 2	0.01	-0.06	7.55	0	-0.3773	-0.0032
164	SLD 1	0.63	0.07	7.28	0	-0.3642	0.0035
164	SLD 2	0.66	0.09	7.29	0	-0.3644	0.0044
164	SLD 3	0.64	-0.13	7.16	0	-0.3581	-0.0067
164	SLD 4	0.68	-0.12	7.17	0	-0.3583	-0.0059
164	SLD 5	0.16	0.28	7.65	0	-0.3826	0.0142
164	SLD 6	0.18	0.29	7.65	0	-0.3827	0.0147
164	SLD 7	0.22	-0.4	7.24	0	-0.3622	-0.02
164	SLD 8	0.24	-0.39	7.25	0	-0.3624	-0.0194
164	SLD 9	-0.23	0.26	7.85	0	-0.3923	0.0129
164	SLD 10	-0.2	0.27	7.85	0	-0.3924	0.0135
164	SLD 11	-0.17	-0.42	7.44	0	-0.3719	-0.0212
164	SLD 12	-0.15	-0.41	7.44	0	-0.372	-0.0207
164	SLD 13	-0.67	-0.01	7.93	0	-0.3963	-0.0006
164	SLD 14	-0.63	0	7.93	0	-0.3965	0.0002
164	SLD 15	-0.65	-0.22	7.8	0	-0.3902	-0.0108
164	SLD 16	-0.61	-0.2	7.81	0	-0.3904	-0.01
164	SLV 1	1.46	0.25	6.93	0	-0.3466	0.0123
164	SLV 2	1.54	0.28	6.94	0	-0.3469	0.0142
164	SLV 3	1.49	-0.22	6.65	0	-0.3327	-0.0111
164	SLV 4	1.58	-0.18	6.66	0	-0.333	-0.0091
164	SLV 5	0.37	0.73	7.78	0	-0.3891	0.0365
164	SLV 6	0.42	0.75	7.79	0	-0.3893	0.0377
164	SLV 7	0.5	-0.83	6.86	0	-0.3428	-0.0413
164	SLV 8	0.55	-0.8	6.86	0	-0.343	-0.0401
164	SLV 9	-0.54	0.67	8.23	0	-0.4116	0.0336
164	SLV 10	-0.49	0.7	8.24	0	-0.4118	0.0348
164	SLV 11	-0.41	-0.88	7.31	0	-0.3653	-0.0442
164	SLV 12	-0.36	-0.86	7.31	0	-0.3655	-0.0429
164	SLV 13	-1.57	0.05	8.43	0	-0.4216	0.0026
164	SLV 14	-1.48	0.09	8.44	0	-0.4219	0.0046
164	SLV 15	-1.53	-0.41	8.15	0	-0.4077	-0.0207
164	SLV 16	-1.45	-0.38	8.16	0	-0.408	-0.0188
164	CRTFP Ux+	0	0	0	0	0	0
164	CRTFP Ux-	0	0	0	0	0	0
166	SLU 1	0	-0.07	6.89	0	0	0
166	SLU 2	0	-0.06	6.9	0	0	0
166	SLU 3	0	-0.07	7.02	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
166	SLU 4	0	-0.06	7.03	0	0	0
166	SLU 5	0	-0.06	6.98	0	0	0
166	SLU 6	0	-0.07	7.11	0	0	0
166	SLU 7	0	-0.07	7.11	0	0	0
166	SLU 8	0	-0.07	7.06	0	0	0
166	SLU 9	0	-0.07	7.06	0	0	0
166	SLU 10	0	-0.06	7.79	0	0	0
166	SLU 11	0	-0.07	7.92	0	0	0
166	SLU 12	0	-0.06	7.92	0	0	0
166	SLU 13	0	-0.06	7.87	0	0	0
166	SLU 14	0	-0.07	8	0	0	0
166	SLU 15	0	-0.06	8	0	0	0
166	SLU 16	0	-0.07	7.95	0	0	0
166	SLU 17	0	-0.07	7.96	0	0	0
166	SLU 18	0	-0.07	8.17	0	0	0
166	SLU 19	0	-0.06	8.17	0	0	0
166	SLU 20	0	-0.07	8.25	0	0	0
166	SLU 21	0	-0.06	8.25	0	0	0
166	SLU 22	0.01	-0.07	7.68	0	0	0
166	SLU 23	0.01	-0.06	7.68	0	0	0
166	SLU 24	0.01	-0.07	7.81	0	0	0
166	SLU 25	0.01	-0.06	7.81	0	0	0
166	SLU 26	0.01	-0.06	7.77	0	0	0
166	SLU 27	0.01	-0.07	7.9	0	0	0
166	SLU 28	0.01	-0.06	7.9	0	0	0
166	SLU 29	0.01	-0.07	7.85	0	0	0
166	SLU 30	0.01	-0.06	7.85	0	0	0
166	SLU 31	0.01	-0.06	8.58	0	0	0
166	SLU 32	0.01	-0.07	8.71	0	0	0
166	SLU 33	0.01	-0.06	8.71	0	0	0
166	SLU 34	0.01	-0.06	8.66	0	0	0
166	SLU 35	0.01	-0.07	8.79	0	0	0
166	SLU 36	0.01	-0.06	8.79	0	0	0
166	SLU 37	0.01	-0.07	8.74	0	0	0
166	SLU 38	0.01	-0.06	8.74	0	0	0
166	SLU 39	0.01	-0.07	8.96	0	0	0
166	SLU 40	0.01	-0.06	8.96	0	0	0
166	SLU 41	0.01	-0.07	9.04	0	0	0
166	SLU 42	0.01	-0.06	9.04	0	0	0
166	SLU 43	0.01	-0.09	8.69	0	0	0
166	SLU 44	0	-0.08	8.69	0	0	0
166	SLU 45	0.01	-0.09	8.82	0	0	0
166	SLU 46	0	-0.09	8.82	0	0	0
166	SLU 47	0	-0.08	8.78	0	0	0
166	SLU 48	0	-0.09	8.91	0	0	0
166	SLU 49	0	-0.09	8.91	0	0	0
166	SLU 50	0	-0.09	8.86	0	0	0
166	SLU 51	0	-0.09	8.86	0	0	0
166	SLU 52	0	-0.08	9.59	0	0	0
166	SLU 53	0	-0.09	9.71	0	0	0
166	SLU 54	0	-0.08	9.72	0	0	0
166	SLU 55	0	-0.08	9.67	0	0	0
166	SLU 56	0	-0.09	9.8	0	0	0
166	SLU 57	0	-0.09	9.8	0	0	0
166	SLU 58	0	-0.09	9.75	0	0	0
166	SLU 59	0	-0.09	9.75	0	0	0
166	SLU 60	0	-0.09	9.97	0	0	0
166	SLU 61	0	-0.08	9.97	0	0	0
166	SLU 62	0	-0.09	10.05	0	0	0
166	SLU 63	0	-0.09	10.05	0	0	0
166	SLU 64	0.01	-0.09	9.48	0	0	0
166	SLU 65	0.01	-0.08	9.48	0	0	0
166	SLU 66	0.01	-0.09	9.61	0	0	0
166	SLU 67	0.01	-0.08	9.61	0	0	0
166	SLU 68	0.01	-0.08	9.57	0	0	0
166	SLU 69	0.01	-0.09	9.69	0	0	0
166	SLU 70	0.01	-0.08	9.7	0	0	0
166	SLU 71	0.01	-0.09	9.65	0	0	0
166	SLU 72	0.01	-0.09	9.65	0	0	0
166	SLU 73	0.01	-0.08	10.38	0	0	0
166	SLU 74	0.01	-0.09	10.5	0	0	0
166	SLU 75	0.01	-0.08	10.5	0	0	0
166	SLU 76	0.01	-0.08	10.46	0	0	0
166	SLU 77	0.01	-0.09	10.59	0	0	0
166	SLU 78	0.01	-0.08	10.59	0	0	0
166	SLU 79	0.01	-0.09	10.54	0	0	0
166	SLU 80	0.01	-0.09	10.54	0	0	0
166	SLU 81	0.01	-0.09	10.76	0	0	0
166	SLU 82	0.01	-0.08	10.76	0	0	0
166	SLU 83	0.01	-0.09	10.84	0	0	0
166	SLU 84	0.01	-0.08	10.84	0	0	0
166	SLE RA 1	0.01	-0.07	7.12	0	0	0
166	SLE RA 2	0.01	-0.06	7.12	0	0	0
166	SLE RA 3	0.01	-0.07	7.21	0	0	0
166	SLE RA 4	0.01	-0.07	7.21	0	0	0
166	SLE RA 5	0	-0.06	7.18	0	0	0
166	SLE RA 6	0.01	-0.07	7.26	0	0	0
166	SLE RA 7	0.01	-0.07	7.26	0	0	0
166	SLE RA 8	0.01	-0.07	7.23	0	0	0
166	SLE RA 9	0	-0.07	7.23	0	0	0
166	SLE RA 10	0	-0.06	7.72	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
166	SLE RA 11	0.01	-0.07	7.8	0	0	0
166	SLE RA 12	0.01	-0.06	7.8	0	0	0
166	SLE RA 13	0	-0.06	7.77	0	0	0
166	SLE RA 14	0.01	-0.07	7.86	0	0	0
166	SLE RA 15	0	-0.07	7.86	0	0	0
166	SLE RA 16	0	-0.07	7.83	0	0	0
166	SLE RA 17	0	-0.07	7.83	0	0	0
166	SLE RA 18	0.01	-0.07	7.97	0	0	0
166	SLE RA 19	0.01	-0.06	7.97	0	0	0
166	SLE RA 20	0.01	-0.07	8.03	0	0	0
166	SLE RA 21	0	-0.07	8.03	0	0	0
166	SLE FR 1	0.01	-0.07	7.12	0	0	0
166	SLE FR 2	0.01	-0.07	7.12	0	0	0
166	SLE FR 3	0.01	-0.07	7.14	0	0	0
166	SLE FR 4	0.01	-0.07	7.37	0	0	0
166	SLE FR 5	0.01	-0.07	7.4	0	0	0
166	SLE FR 6	0.01	-0.07	7.54	0	0	0
166	SLE QP 1	0.01	-0.07	7.12	0	0	0
166	SLE QP 2	0.01	-0.07	7.37	0	0	0
166	SLD 1	0.61	0.07	7.08	0	0	0
166	SLD 2	0.64	0.08	7.08	0	0	0
166	SLD 3	0.62	-0.13	6.96	0	0	0
166	SLD 4	0.66	-0.12	6.96	0	0	0
166	SLD 5	0.16	0.27	7.47	0	0	0
166	SLD 6	0.18	0.28	7.47	0	0	0
166	SLD 7	0.21	-0.39	7.07	0	0	0
166	SLD 8	0.23	-0.38	7.07	0	0	0
166	SLD 9	-0.22	0.24	7.68	0	0	0
166	SLD 10	-0.2	0.25	7.68	0	0	0
166	SLD 11	-0.17	-0.42	7.28	0	0	0
166	SLD 12	-0.14	-0.41	7.28	0	0	0
166	SLD 13	-0.65	-0.02	7.79	0	0	0
166	SLD 14	-0.61	0	7.79	0	0	0
166	SLD 15	-0.63	-0.22	7.67	0	0	0
166	SLD 16	-0.6	-0.2	7.67	0	0	0
166	SLV 1	1.42	0.24	6.68	0	0	0
166	SLV 2	1.5	0.28	6.69	0	0	0
166	SLV 3	1.45	-0.21	6.41	0	0	0
166	SLV 4	1.53	-0.17	6.41	0	0	0
166	SLV 5	0.36	0.7	7.58	0	0	0
166	SLV 6	0.41	0.73	7.58	0	0	0
166	SLV 7	0.48	-0.81	6.67	0	0	0
166	SLV 8	0.53	-0.78	6.67	0	0	0
166	SLV 9	-0.52	0.64	8.07	0	0	0
166	SLV 10	-0.47	0.67	8.08	0	0	0
166	SLV 11	-0.4	-0.87	7.17	0	0	0
166	SLV 12	-0.35	-0.84	7.17	0	0	0
166	SLV 13	-1.52	0.03	8.33	0	0	0
166	SLV 14	-1.44	0.08	8.34	0	0	0
166	SLV 15	-1.48	-0.42	8.06	0	0	0
166	SLV 16	-1.4	-0.38	8.07	0	0	0
167	SLU 1	0.01	-0.08	7.29	0	0	0
167	SLU 2	0	-0.07	7.29	0	0	0
167	SLU 3	0.01	-0.08	7.43	0	0	0
167	SLU 4	0	-0.07	7.43	0	0	0
167	SLU 5	0	-0.07	7.38	0	0	0
167	SLU 6	0	-0.08	7.51	0	0	0
167	SLU 7	0	-0.08	7.52	0	0	0
167	SLU 8	0	-0.08	7.47	0	0	0
167	SLU 9	0	-0.08	7.47	0	0	0
167	SLU 10	0	-0.07	8.23	0	0	0
167	SLU 11	0	-0.08	8.37	0	0	0
167	SLU 12	0	-0.07	8.37	0	0	0
167	SLU 13	0	-0.07	8.32	0	0	0
167	SLU 14	0	-0.08	8.46	0	0	0
167	SLU 15	0	-0.08	8.46	0	0	0
167	SLU 16	0	-0.08	8.41	0	0	0
167	SLU 17	0	-0.08	8.41	0	0	0
167	SLU 18	0	-0.08	8.64	0	0	0
167	SLU 19	0	-0.07	8.64	0	0	0
167	SLU 20	0	-0.08	8.73	0	0	0
167	SLU 21	0	-0.08	8.73	0	0	0
167	SLU 22	0.01	-0.08	8.13	0	0	0
167	SLU 23	0.01	-0.07	8.13	0	0	0
167	SLU 24	0.01	-0.08	8.26	0	0	0
167	SLU 25	0.01	-0.07	8.26	0	0	0
167	SLU 26	0.01	-0.07	8.22	0	0	0
167	SLU 27	0.01	-0.08	8.35	0	0	0
167	SLU 28	0.01	-0.07	8.35	0	0	0
167	SLU 29	0.01	-0.08	8.3	0	0	0
167	SLU 30	0.01	-0.08	8.3	0	0	0
167	SLU 31	0.01	-0.07	9.07	0	0	0
167	SLU 32	0.01	-0.08	9.21	0	0	0
167	SLU 33	0.01	-0.07	9.21	0	0	0
167	SLU 34	0.01	-0.07	9.16	0	0	0
167	SLU 35	0.01	-0.08	9.3	0	0	0
167	SLU 36	0.01	-0.07	9.3	0	0	0
167	SLU 37	0.01	-0.08	9.25	0	0	0
167	SLU 38	0.01	-0.08	9.25	0	0	0
167	SLU 39	0.01	-0.08	9.47	0	0	0
167	SLU 40	0.01	-0.07	9.48	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
167	SLU 41	0.01	-0.08	9.56	0	0	0
167	SLU 42	0.01	-0.07	9.56	0	0	0
167	SLU 43	0.01	-0.1	9.19	0	0	0
167	SLU 44	0	-0.09	9.19	0	0	0
167	SLU 45	0.01	-0.11	9.33	0	0	0
167	SLU 46	0.01	-0.1	9.33	0	0	0
167	SLU 47	0	-0.1	9.28	0	0	0
167	SLU 48	0.01	-0.11	9.41	0	0	0
167	SLU 49	0	-0.1	9.42	0	0	0
167	SLU 50	0	-0.11	9.37	0	0	0
167	SLU 51	0	-0.1	9.37	0	0	0
167	SLU 52	0	-0.09	10.13	0	0	0
167	SLU 53	0.01	-0.11	10.27	0	0	0
167	SLU 54	0	-0.1	10.27	0	0	0
167	SLU 55	0	-0.1	10.22	0	0	0
167	SLU 56	0	-0.11	10.36	0	0	0
167	SLU 57	0	-0.1	10.36	0	0	0
167	SLU 58	0	-0.11	10.31	0	0	0
167	SLU 59	0	-0.1	10.31	0	0	0
167	SLU 60	0.01	-0.1	10.54	0	0	0
167	SLU 61	0	-0.1	10.54	0	0	0
167	SLU 62	0	-0.11	10.62	0	0	0
167	SLU 63	0	-0.1	10.63	0	0	0
167	SLU 64	0.01	-0.1	10.03	0	0	0
167	SLU 65	0.01	-0.09	10.03	0	0	0
167	SLU 66	0.01	-0.1	10.16	0	0	0
167	SLU 67	0.01	-0.1	10.16	0	0	0
167	SLU 68	0.01	-0.09	10.12	0	0	0
167	SLU 69	0.01	-0.11	10.25	0	0	0
167	SLU 70	0.01	-0.1	10.25	0	0	0
167	SLU 71	0.01	-0.11	10.2	0	0	0
167	SLU 72	0.01	-0.1	10.2	0	0	0
167	SLU 73	0.01	-0.09	10.97	0	0	0
167	SLU 74	0.01	-0.1	11.11	0	0	0
167	SLU 75	0.01	-0.1	11.11	0	0	0
167	SLU 76	0.01	-0.09	11.06	0	0	0
167	SLU 77	0.01	-0.11	11.2	0	0	0
167	SLU 78	0.01	-0.1	11.2	0	0	0
167	SLU 79	0.01	-0.11	11.15	0	0	0
167	SLU 80	0.01	-0.1	11.15	0	0	0
167	SLU 81	0.01	-0.1	11.37	0	0	0
167	SLU 82	0.01	-0.1	11.37	0	0	0
167	SLU 83	0.01	-0.11	11.46	0	0	0
167	SLU 84	0.01	-0.1	11.46	0	0	0
167	SLE RA 1	0.01	-0.08	7.53	0	0	0
167	SLE RA 2	0.01	-0.07	7.53	0	0	0
167	SLE RA 3	0.01	-0.08	7.62	0	0	0
167	SLE RA 4	0.01	-0.08	7.62	0	0	0
167	SLE RA 5	0.01	-0.07	7.59	0	0	0
167	SLE RA 6	0.01	-0.08	7.68	0	0	0
167	SLE RA 7	0.01	-0.08	7.68	0	0	0
167	SLE RA 8	0.01	-0.08	7.65	0	0	0
167	SLE RA 9	0.01	-0.08	7.65	0	0	0
167	SLE RA 10	0.01	-0.07	8.16	0	0	0
167	SLE RA 11	0.01	-0.08	8.25	0	0	0
167	SLE RA 12	0.01	-0.08	8.25	0	0	0
167	SLE RA 13	0.01	-0.07	8.22	0	0	0
167	SLE RA 14	0.01	-0.08	8.31	0	0	0
167	SLE RA 15	0.01	-0.08	8.31	0	0	0
167	SLE RA 16	0.01	-0.08	8.28	0	0	0
167	SLE RA 17	0.01	-0.08	8.28	0	0	0
167	SLE RA 18	0.01	-0.08	8.43	0	0	0
167	SLE RA 19	0.01	-0.08	8.43	0	0	0
167	SLE RA 20	0.01	-0.08	8.49	0	0	0
167	SLE RA 21	0.01	-0.08	8.49	0	0	0
167	SLE FR 1	0.01	-0.08	7.53	0	0	0
167	SLE FR 2	0.01	-0.08	7.53	0	0	0
167	SLE FR 3	0.01	-0.08	7.55	0	0	0
167	SLE FR 4	0.01	-0.08	7.8	0	0	0
167	SLE FR 5	0.01	-0.08	7.82	0	0	0
167	SLE FR 6	0.01	-0.08	7.98	0	0	0
167	SLE QP 1	0.01	-0.08	7.53	0	0	0
167	SLE QP 2	0.01	-0.08	7.8	0	0	0
167	SLD 1	0.64	0.06	7.44	0	0	0
167	SLD 2	0.67	0.09	7.44	0	0	0
167	SLD 3	0.66	-0.14	7.31	0	0	0
167	SLD 4	0.69	-0.12	7.31	0	0	0
167	SLD 5	0.16	0.27	7.88	0	0	0
167	SLD 6	0.19	0.29	7.88	0	0	0
167	SLD 7	0.22	-0.42	7.46	0	0	0
167	SLD 8	0.24	-0.4	7.46	0	0	0
167	SLD 9	-0.23	0.24	8.14	0	0	0
167	SLD 10	-0.21	0.26	8.14	0	0	0
167	SLD 11	-0.18	-0.45	7.71	0	0	0
167	SLD 12	-0.15	-0.43	7.71	0	0	0
167	SLD 13	-0.68	-0.04	8.28	0	0	0
167	SLD 14	-0.64	-0.02	8.29	0	0	0
167	SLD 15	-0.66	-0.24	8.15	0	0	0
167	SLD 16	-0.63	-0.22	8.16	0	0	0
167	SLV 1	1.49	0.25	6.95	0	0	0
167	SLV 2	1.57	0.3	6.96	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
167	SLV 3	1.52	-0.22	6.66	0	0	0
167	SLV 4	1.61	-0.17	6.67	0	0	0
167	SLV 5	0.38	0.73	7.98	0	0	0
167	SLV 6	0.43	0.76	7.99	0	0	0
167	SLV 7	0.51	-0.85	7.01	0	0	0
167	SLV 8	0.56	-0.82	7.02	0	0	0
167	SLV 9	-0.55	0.66	8.58	0	0	0
167	SLV 10	-0.49	0.69	8.58	0	0	0
167	SLV 11	-0.42	-0.92	7.61	0	0	0
167	SLV 12	-0.36	-0.89	7.61	0	0	0
167	SLV 13	-1.6	0.01	8.93	0	0	0
167	SLV 14	-1.51	0.06	8.94	0	0	0
167	SLV 15	-1.56	-0.46	8.64	0	0	0
167	SLV 16	-1.47	-0.41	8.64	0	0	0
168	SLU 1	0	-0.04	3.76	0	0	0
168	SLU 2	0	-0.04	3.76	0	0	0
168	SLU 3	0	-0.05	3.83	0	0	0
168	SLU 4	0	-0.04	3.83	0	0	0
168	SLU 5	0	-0.04	3.8	0	0	0
168	SLU 6	0	-0.05	3.87	0	0	0
168	SLU 7	0	-0.04	3.87	0	0	0
168	SLU 8	0	-0.05	3.85	0	0	0
168	SLU 9	0	-0.04	3.85	0	0	0
168	SLU 10	0	-0.04	4.24	0	0	0
168	SLU 11	0	-0.05	4.31	0	0	0
168	SLU 12	0	-0.04	4.31	0	0	0
168	SLU 13	0	-0.04	4.29	0	0	0
168	SLU 14	0	-0.05	4.36	0	0	0
168	SLU 15	0	-0.04	4.36	0	0	0
168	SLU 16	0	-0.05	4.33	0	0	0
168	SLU 17	0	-0.04	4.33	0	0	0
168	SLU 18	0	-0.05	4.45	0	0	0
168	SLU 19	0	-0.04	4.45	0	0	0
168	SLU 20	0	-0.05	4.5	0	0	0
168	SLU 21	0	-0.04	4.5	0	0	0
168	SLU 22	0	-0.04	4.19	0	0	0
168	SLU 23	0	-0.04	4.19	0	0	0
168	SLU 24	0	-0.04	4.26	0	0	0
168	SLU 25	0	-0.04	4.26	0	0	0
168	SLU 26	0	-0.04	4.24	0	0	0
168	SLU 27	0	-0.05	4.31	0	0	0
168	SLU 28	0	-0.04	4.31	0	0	0
168	SLU 29	0	-0.05	4.28	0	0	0
168	SLU 30	0	-0.04	4.28	0	0	0
168	SLU 31	0	-0.04	4.68	0	0	0
168	SLU 32	0	-0.05	4.75	0	0	0
168	SLU 33	0	-0.04	4.75	0	0	0
168	SLU 34	0	-0.04	4.72	0	0	0
168	SLU 35	0	-0.05	4.79	0	0	0
168	SLU 36	0	-0.04	4.79	0	0	0
168	SLU 37	0	-0.05	4.77	0	0	0
168	SLU 38	0	-0.04	4.77	0	0	0
168	SLU 39	0	-0.05	4.88	0	0	0
168	SLU 40	0	-0.04	4.88	0	0	0
168	SLU 41	0	-0.05	4.93	0	0	0
168	SLU 42	0	-0.04	4.93	0	0	0
168	SLU 43	0	-0.06	4.73	0	0	0
168	SLU 44	0	-0.05	4.73	0	0	0
168	SLU 45	0	-0.06	4.81	0	0	0
168	SLU 46	0	-0.06	4.81	0	0	0
168	SLU 47	0	-0.05	4.78	0	0	0
168	SLU 48	0	-0.06	4.85	0	0	0
168	SLU 49	0	-0.06	4.85	0	0	0
168	SLU 50	0	-0.06	4.83	0	0	0
168	SLU 51	0	-0.06	4.83	0	0	0
168	SLU 52	0	-0.05	5.22	0	0	0
168	SLU 53	0	-0.06	5.29	0	0	0
168	SLU 54	0	-0.06	5.29	0	0	0
168	SLU 55	0	-0.05	5.27	0	0	0
168	SLU 56	0	-0.06	5.34	0	0	0
168	SLU 57	0	-0.06	5.34	0	0	0
168	SLU 58	0	-0.06	5.31	0	0	0
168	SLU 59	0	-0.06	5.31	0	0	0
168	SLU 60	0	-0.06	5.43	0	0	0
168	SLU 61	0	-0.06	5.43	0	0	0
168	SLU 62	0	-0.06	5.47	0	0	0
168	SLU 63	0	-0.06	5.47	0	0	0
168	SLU 64	0	-0.06	5.17	0	0	0
168	SLU 65	0	-0.05	5.17	0	0	0
168	SLU 66	0	-0.06	5.24	0	0	0
168	SLU 67	0	-0.05	5.24	0	0	0
168	SLU 68	0	-0.05	5.21	0	0	0
168	SLU 69	0	-0.06	5.28	0	0	0
168	SLU 70	0	-0.06	5.28	0	0	0
168	SLU 71	0	-0.06	5.26	0	0	0
168	SLU 72	0	-0.06	5.26	0	0	0
168	SLU 73	0	-0.05	5.65	0	0	0
168	SLU 74	0	-0.06	5.72	0	0	0
168	SLU 75	0	-0.06	5.73	0	0	0
168	SLU 76	0	-0.05	5.7	0	0	0
168	SLU 77	0	-0.06	5.77	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
168	SLU 78	0	-0.06	5.77	0	0	0
168	SLU 79	0	-0.06	5.74	0	0	0
168	SLU 80	0	-0.06	5.75	0	0	0
168	SLU 81	0	-0.06	5.86	0	0	0
168	SLU 82	0	-0.06	5.86	0	0	0
168	SLU 83	0	-0.06	5.91	0	0	0
168	SLU 84	0	-0.06	5.91	0	0	0
168	SLE RA 1	0	-0.04	3.88	0	0	0
168	SLE RA 2	0	-0.04	3.88	0	0	0
168	SLE RA 3	0	-0.05	3.93	0	0	0
168	SLE RA 4	0	-0.04	3.93	0	0	0
168	SLE RA 5	0	-0.04	3.91	0	0	0
168	SLE RA 6	0	-0.05	3.96	0	0	0
168	SLE RA 7	0	-0.04	3.96	0	0	0
168	SLE RA 8	0	-0.05	3.94	0	0	0
168	SLE RA 9	0	-0.04	3.94	0	0	0
168	SLE RA 10	0	-0.04	4.2	0	0	0
168	SLE RA 11	0	-0.05	4.25	0	0	0
168	SLE RA 12	0	-0.04	4.25	0	0	0
168	SLE RA 13	0	-0.04	4.23	0	0	0
168	SLE RA 14	0	-0.05	4.28	0	0	0
168	SLE RA 15	0	-0.04	4.28	0	0	0
168	SLE RA 16	0	-0.05	4.26	0	0	0
168	SLE RA 17	0	-0.04	4.26	0	0	0
168	SLE RA 18	0	-0.05	4.34	0	0	0
168	SLE RA 19	0	-0.04	4.34	0	0	0
168	SLE RA 20	0	-0.05	4.37	0	0	0
168	SLE RA 21	0	-0.04	4.37	0	0	0
168	SLE FR 1	0	-0.04	3.88	0	0	0
168	SLE FR 2	0	-0.04	3.88	0	0	0
168	SLE FR 3	0	-0.05	3.89	0	0	0
168	SLE FR 4	0	-0.04	4.02	0	0	0
168	SLE FR 5	0	-0.05	4.03	0	0	0
168	SLE FR 6	0	-0.05	4.11	0	0	0
168	SLE QP 1	0	-0.04	3.88	0	0	0
168	SLE QP 2	0	-0.04	4.02	0	0	0
168	SLD 1	0.33	0.03	3.81	0	0	0
168	SLD 2	0.34	0.04	3.81	0	0	0
168	SLD 3	0.33	-0.07	3.74	0	0	0
168	SLD 4	0.35	-0.06	3.74	0	0	0
168	SLD 5	0.08	0.14	4.06	0	0	0
168	SLD 6	0.1	0.14	4.06	0	0	0
168	SLD 7	0.11	-0.22	3.83	0	0	0
168	SLD 8	0.12	-0.21	3.84	0	0	0
168	SLD 9	-0.12	0.12	4.2	0	0	0
168	SLD 10	-0.11	0.13	4.2	0	0	0
168	SLD 11	-0.09	-0.23	3.98	0	0	0
168	SLD 12	-0.08	-0.23	3.98	0	0	0
168	SLD 13	-0.35	-0.03	4.29	0	0	0
168	SLD 14	-0.33	-0.02	4.29	0	0	0
168	SLD 15	-0.34	-0.13	4.23	0	0	0
168	SLD 16	-0.32	-0.12	4.23	0	0	0
168	SLV 1	0.76	0.13	3.53	0	0	0
168	SLV 2	0.8	0.16	3.53	0	0	0
168	SLV 3	0.78	-0.11	3.37	0	0	0
168	SLV 4	0.82	-0.08	3.38	0	0	0
168	SLV 5	0.19	0.37	4.1	0	0	0
168	SLV 6	0.22	0.39	4.1	0	0	0
168	SLV 7	0.26	-0.43	3.6	0	0	0
168	SLV 8	0.29	-0.42	3.6	0	0	0
168	SLV 9	-0.28	0.33	4.44	0	0	0
168	SLV 10	-0.25	0.34	4.44	0	0	0
168	SLV 11	-0.21	-0.48	3.94	0	0	0
168	SLV 12	-0.19	-0.46	3.94	0	0	0
168	SLV 13	-0.81	-0.01	4.66	0	0	0
168	SLV 14	-0.77	0.02	4.66	0	0	0
168	SLV 15	-0.79	-0.25	4.51	0	0	0
168	SLV 16	-0.75	-0.22	4.51	0	0	0
185	SLU 1	-0.04	-0.18	14.01	0	0	0
185	SLU 2	-0.04	-0.16	14.01	0	0	0
185	SLU 3	-0.04	-0.18	14.28	0	0	0
185	SLU 4	-0.04	-0.16	14.28	0	0	0
185	SLU 5	-0.04	-0.16	14.18	0	0	0
185	SLU 6	-0.04	-0.18	14.45	0	0	0
185	SLU 7	-0.04	-0.17	14.45	0	0	0
185	SLU 8	-0.04	-0.18	14.35	0	0	0
185	SLU 9	-0.04	-0.17	14.35	0	0	0
185	SLU 10	-0.04	-0.16	15.87	0	0	0
185	SLU 11	-0.04	-0.19	16.14	0	0	0
185	SLU 12	-0.04	-0.17	16.14	0	0	0
185	SLU 13	-0.04	-0.17	16.04	0	0	0
185	SLU 14	-0.04	-0.19	16.31	0	0	0
185	SLU 15	-0.04	-0.18	16.31	0	0	0
185	SLU 16	-0.04	-0.19	16.21	0	0	0
185	SLU 17	-0.04	-0.18	16.21	0	0	0
185	SLU 18	-0.04	-0.19	16.67	0	0	0
185	SLU 19	-0.04	-0.18	16.67	0	0	0
185	SLU 20	-0.04	-0.19	16.84	0	0	0
185	SLU 21	-0.04	-0.18	16.84	0	0	0
185	SLU 22	-0.05	-0.18	15.64	0	0	0
185	SLU 23	-0.05	-0.15	15.65	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
185	SLU 24	-0.05	-0.18	15.91	0	0	0
185	SLU 25	-0.05	-0.16	15.91	0	0	0
185	SLU 26	-0.05	-0.16	15.81	0	0	0
185	SLU 27	-0.05	-0.18	16.08	0	0	0
185	SLU 28	-0.05	-0.17	16.08	0	0	0
185	SLU 29	-0.05	-0.18	15.98	0	0	0
185	SLU 30	-0.05	-0.17	15.98	0	0	0
185	SLU 31	-0.04	-0.16	17.51	0	0	0
185	SLU 32	-0.05	-0.18	17.77	0	0	0
185	SLU 33	-0.04	-0.17	17.77	0	0	0
185	SLU 34	-0.04	-0.16	17.68	0	0	0
185	SLU 35	-0.05	-0.19	17.94	0	0	0
185	SLU 36	-0.05	-0.17	17.94	0	0	0
185	SLU 37	-0.05	-0.19	17.85	0	0	0
185	SLU 38	-0.04	-0.18	17.85	0	0	0
185	SLU 39	-0.04	-0.19	18.3	0	0	0
185	SLU 40	-0.04	-0.17	18.3	0	0	0
185	SLU 41	-0.04	-0.19	18.47	0	0	0
185	SLU 42	-0.04	-0.18	18.47	0	0	0
185	SLU 43	-0.05	-0.23	17.66	0	0	0
185	SLU 44	-0.05	-0.21	17.66	0	0	0
185	SLU 45	-0.05	-0.23	17.92	0	0	0
185	SLU 46	-0.05	-0.22	17.92	0	0	0
185	SLU 47	-0.05	-0.21	17.83	0	0	0
185	SLU 48	-0.05	-0.23	18.09	0	0	0
185	SLU 49	-0.05	-0.22	18.09	0	0	0
185	SLU 50	-0.05	-0.24	17.99	0	0	0
185	SLU 51	-0.05	-0.22	17.99	0	0	0
185	SLU 52	-0.05	-0.22	19.52	0	0	0
185	SLU 53	-0.05	-0.24	19.78	0	0	0
185	SLU 54	-0.05	-0.23	19.78	0	0	0
185	SLU 55	-0.05	-0.22	19.69	0	0	0
185	SLU 56	-0.05	-0.24	19.95	0	0	0
185	SLU 57	-0.05	-0.23	19.95	0	0	0
185	SLU 58	-0.05	-0.25	19.86	0	0	0
185	SLU 59	-0.05	-0.23	19.86	0	0	0
185	SLU 60	-0.05	-0.24	20.31	0	0	0
185	SLU 61	-0.05	-0.23	20.31	0	0	0
185	SLU 62	-0.05	-0.25	20.48	0	0	0
185	SLU 63	-0.05	-0.23	20.48	0	0	0
185	SLU 64	-0.06	-0.23	19.29	0	0	0
185	SLU 65	-0.05	-0.21	19.29	0	0	0
185	SLU 66	-0.06	-0.23	19.55	0	0	0
185	SLU 67	-0.06	-0.22	19.55	0	0	0
185	SLU 68	-0.05	-0.21	19.46	0	0	0
185	SLU 69	-0.06	-0.23	19.72	0	0	0
185	SLU 70	-0.06	-0.22	19.72	0	0	0
185	SLU 71	-0.06	-0.24	19.63	0	0	0
185	SLU 72	-0.06	-0.22	19.63	0	0	0
185	SLU 73	-0.05	-0.22	21.15	0	0	0
185	SLU 74	-0.06	-0.24	21.42	0	0	0
185	SLU 75	-0.05	-0.22	21.42	0	0	0
185	SLU 76	-0.05	-0.22	21.32	0	0	0
185	SLU 77	-0.06	-0.24	21.58	0	0	0
185	SLU 78	-0.05	-0.23	21.59	0	0	0
185	SLU 79	-0.05	-0.24	21.49	0	0	0
185	SLU 80	-0.05	-0.23	21.49	0	0	0
185	SLU 81	-0.05	-0.24	21.95	0	0	0
185	SLU 82	-0.05	-0.23	21.95	0	0	0
185	SLU 83	-0.05	-0.24	22.12	0	0	0
185	SLU 84	-0.05	-0.23	22.12	0	0	0
185	SLE RA 1	-0.04	-0.18	14.48	0	0	0
185	SLE RA 2	-0.04	-0.16	14.48	0	0	0
185	SLE RA 3	-0.04	-0.18	14.66	0	0	0
185	SLE RA 4	-0.04	-0.17	14.66	0	0	0
185	SLE RA 5	-0.04	-0.16	14.59	0	0	0
185	SLE RA 6	-0.04	-0.18	14.77	0	0	0
185	SLE RA 7	-0.04	-0.17	14.77	0	0	0
185	SLE RA 8	-0.04	-0.18	14.7	0	0	0
185	SLE RA 9	-0.04	-0.17	14.7	0	0	0
185	SLE RA 10	-0.04	-0.17	15.72	0	0	0
185	SLE RA 11	-0.04	-0.18	15.9	0	0	0
185	SLE RA 12	-0.04	-0.17	15.9	0	0	0
185	SLE RA 13	-0.04	-0.17	15.83	0	0	0
185	SLE RA 14	-0.04	-0.18	16.01	0	0	0
185	SLE RA 15	-0.04	-0.18	16.01	0	0	0
185	SLE RA 16	-0.04	-0.19	15.95	0	0	0
185	SLE RA 17	-0.04	-0.18	15.95	0	0	0
185	SLE RA 18	-0.04	-0.19	16.25	0	0	0
185	SLE RA 19	-0.04	-0.18	16.25	0	0	0
185	SLE RA 20	-0.04	-0.19	16.36	0	0	0
185	SLE RA 21	-0.04	-0.18	16.36	0	0	0
185	SLE FR 1	-0.04	-0.18	14.48	0	0	0
185	SLE FR 2	-0.04	-0.17	14.48	0	0	0
185	SLE FR 3	-0.04	-0.18	14.52	0	0	0
185	SLE FR 4	-0.04	-0.18	15.01	0	0	0
185	SLE FR 5	-0.04	-0.18	15.06	0	0	0
185	SLE FR 6	-0.04	-0.18	15.36	0	0	0
185	SLE QP 1	-0.04	-0.18	14.48	0	0	0
185	SLE QP 2	-0.04	-0.18	15.01	0	0	0
185	SLD 1	1.16	-0.05	15.87	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
185	SLD 2	1.22	-0.09	15.87	0	0	0
185	SLD 3	1.19	-0.46	15.67	0	0	0
185	SLD 4	1.26	-0.51	15.66	0	0	0
185	SLD 5	0.26	0.49	15.58	0	0	0
185	SLD 6	0.3	0.46	15.57	0	0	0
185	SLD 7	0.36	-0.88	14.9	0	0	0
185	SLD 8	0.41	-0.91	14.9	0	0	0
185	SLD 9	-0.49	0.55	15.12	0	0	0
185	SLD 10	-0.45	0.53	15.12	0	0	0
185	SLD 11	-0.38	-0.82	14.45	0	0	0
185	SLD 12	-0.34	-0.85	14.44	0	0	0
185	SLD 13	-1.34	0.15	14.36	0	0	0
185	SLD 14	-1.27	0.11	14.35	0	0	0
185	SLD 15	-1.31	-0.26	14.15	0	0	0
185	SLD 16	-1.24	-0.31	14.15	0	0	0
185	SLV 1	2.76	0.11	17.02	0	0	0
185	SLV 2	2.92	0.01	17.01	0	0	0
185	SLV 3	2.84	-0.84	16.56	0	0	0
185	SLV 4	2.99	-0.94	16.55	0	0	0
185	SLV 5	0.66	1.35	16.32	0	0	0
185	SLV 6	0.76	1.29	16.3	0	0	0
185	SLV 7	0.91	-1.79	14.78	0	0	0
185	SLV 8	1.01	-1.85	14.77	0	0	0
185	SLV 9	-1.09	1.49	15.25	0	0	0
185	SLV 10	-0.99	1.43	15.24	0	0	0
185	SLV 11	-0.84	-1.65	13.72	0	0	0
185	SLV 12	-0.74	-1.71	13.7	0	0	0
185	SLV 13	-3.07	0.58	13.47	0	0	0
185	SLV 14	-2.92	0.48	13.46	0	0	0
185	SLV 15	-3	-0.37	13.01	0	0	0
185	SLV 16	-2.85	-0.47	13	0	0	0
186	SLU 1	-0.04	-0.15	13.58	0	0	0
186	SLU 2	-0.04	-0.13	13.58	0	0	0
186	SLU 3	-0.04	-0.15	13.84	0	0	0
186	SLU 4	-0.04	-0.14	13.84	0	0	0
186	SLU 5	-0.04	-0.13	13.75	0	0	0
186	SLU 6	-0.04	-0.15	14	0	0	0
186	SLU 7	-0.04	-0.14	14.01	0	0	0
186	SLU 8	-0.04	-0.16	13.91	0	0	0
186	SLU 9	-0.04	-0.15	13.91	0	0	0
186	SLU 10	-0.04	-0.14	15.39	0	0	0
186	SLU 11	-0.04	-0.16	15.64	0	0	0
186	SLU 12	-0.04	-0.15	15.64	0	0	0
186	SLU 13	-0.04	-0.14	15.55	0	0	0
186	SLU 14	-0.04	-0.16	15.81	0	0	0
186	SLU 15	-0.04	-0.15	15.81	0	0	0
186	SLU 16	-0.04	-0.16	15.72	0	0	0
186	SLU 17	-0.04	-0.15	15.72	0	0	0
186	SLU 18	-0.04	-0.16	16.16	0	0	0
186	SLU 19	-0.04	-0.15	16.16	0	0	0
186	SLU 20	-0.04	-0.16	16.32	0	0	0
186	SLU 21	-0.04	-0.15	16.32	0	0	0
186	SLU 22	-0.04	-0.15	15.16	0	0	0
186	SLU 23	-0.04	-0.13	15.16	0	0	0
186	SLU 24	-0.05	-0.15	15.42	0	0	0
186	SLU 25	-0.04	-0.13	15.42	0	0	0
186	SLU 26	-0.04	-0.13	15.32	0	0	0
186	SLU 27	-0.05	-0.15	15.58	0	0	0
186	SLU 28	-0.05	-0.14	15.58	0	0	0
186	SLU 29	-0.05	-0.15	15.49	0	0	0
186	SLU 30	-0.04	-0.14	15.49	0	0	0
186	SLU 31	-0.04	-0.13	16.96	0	0	0
186	SLU 32	-0.04	-0.15	17.22	0	0	0
186	SLU 33	-0.04	-0.14	17.22	0	0	0
186	SLU 34	-0.04	-0.14	17.13	0	0	0
186	SLU 35	-0.04	-0.16	17.38	0	0	0
186	SLU 36	-0.04	-0.14	17.39	0	0	0
186	SLU 37	-0.04	-0.16	17.29	0	0	0
186	SLU 38	-0.04	-0.15	17.29	0	0	0
186	SLU 39	-0.04	-0.16	17.74	0	0	0
186	SLU 40	-0.04	-0.14	17.74	0	0	0
186	SLU 41	-0.04	-0.16	17.9	0	0	0
186	SLU 42	-0.04	-0.15	17.9	0	0	0
186	SLU 43	-0.05	-0.2	17.12	0	0	0
186	SLU 44	-0.05	-0.18	17.12	0	0	0
186	SLU 45	-0.05	-0.2	17.37	0	0	0
186	SLU 46	-0.05	-0.19	17.37	0	0	0
186	SLU 47	-0.05	-0.18	17.28	0	0	0
186	SLU 48	-0.05	-0.2	17.54	0	0	0
186	SLU 49	-0.05	-0.19	17.54	0	0	0
186	SLU 50	-0.05	-0.21	17.45	0	0	0
186	SLU 51	-0.05	-0.19	17.45	0	0	0
186	SLU 52	-0.04	-0.19	18.92	0	0	0
186	SLU 53	-0.05	-0.21	19.18	0	0	0
186	SLU 54	-0.05	-0.19	19.18	0	0	0
186	SLU 55	-0.04	-0.19	19.09	0	0	0
186	SLU 56	-0.05	-0.21	19.34	0	0	0
186	SLU 57	-0.05	-0.2	19.34	0	0	0
186	SLU 58	-0.05	-0.21	19.25	0	0	0
186	SLU 59	-0.05	-0.2	19.25	0	0	0
186	SLU 60	-0.04	-0.21	19.69	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
186	SLU 61	-0.04	-0.2	19.69	0	0	0
186	SLU 62	-0.05	-0.21	19.86	0	0	0
186	SLU 63	-0.04	-0.2	19.86	0	0	0
186	SLU 64	-0.05	-0.2	18.69	0	0	0
186	SLU 65	-0.05	-0.17	18.69	0	0	0
186	SLU 66	-0.05	-0.2	18.95	0	0	0
186	SLU 67	-0.05	-0.18	18.95	0	0	0
186	SLU 68	-0.05	-0.18	18.86	0	0	0
186	SLU 69	-0.05	-0.2	19.11	0	0	0
186	SLU 70	-0.05	-0.18	19.12	0	0	0
186	SLU 71	-0.05	-0.2	19.02	0	0	0
186	SLU 72	-0.05	-0.19	19.02	0	0	0
186	SLU 73	-0.05	-0.18	20.5	0	0	0
186	SLU 74	-0.05	-0.2	20.75	0	0	0
186	SLU 75	-0.05	-0.19	20.75	0	0	0
186	SLU 76	-0.05	-0.18	20.66	0	0	0
186	SLU 77	-0.05	-0.2	20.92	0	0	0
186	SLU 78	-0.05	-0.19	20.92	0	0	0
186	SLU 79	-0.05	-0.21	20.83	0	0	0
186	SLU 80	-0.05	-0.19	20.83	0	0	0
186	SLU 81	-0.05	-0.2	21.27	0	0	0
186	SLU 82	-0.05	-0.19	21.27	0	0	0
186	SLU 83	-0.05	-0.21	21.43	0	0	0
186	SLU 84	-0.05	-0.19	21.44	0	0	0
186	SLE RA 1	-0.04	-0.15	14.03	0	0	0
186	SLE RA 2	-0.04	-0.14	14.03	0	0	0
186	SLE RA 3	-0.04	-0.15	14.2	0	0	0
186	SLE RA 4	-0.04	-0.14	14.2	0	0	0
186	SLE RA 5	-0.04	-0.14	14.14	0	0	0
186	SLE RA 6	-0.04	-0.15	14.31	0	0	0
186	SLE RA 7	-0.04	-0.14	14.31	0	0	0
186	SLE RA 8	-0.04	-0.16	14.25	0	0	0
186	SLE RA 9	-0.04	-0.15	14.25	0	0	0
186	SLE RA 10	-0.04	-0.14	15.24	0	0	0
186	SLE RA 11	-0.04	-0.15	15.41	0	0	0
186	SLE RA 12	-0.04	-0.15	15.41	0	0	0
186	SLE RA 13	-0.04	-0.14	15.35	0	0	0
186	SLE RA 14	-0.04	-0.16	15.52	0	0	0
186	SLE RA 15	-0.04	-0.15	15.52	0	0	0
186	SLE RA 16	-0.04	-0.16	15.45	0	0	0
186	SLE RA 17	-0.04	-0.15	15.46	0	0	0
186	SLE RA 18	-0.04	-0.16	15.75	0	0	0
186	SLE RA 19	-0.04	-0.15	15.75	0	0	0
186	SLE RA 20	-0.04	-0.16	15.86	0	0	0
186	SLE RA 21	-0.04	-0.15	15.86	0	0	0
186	SLE FR 1	-0.04	-0.15	14.03	0	0	0
186	SLE FR 2	-0.04	-0.15	14.03	0	0	0
186	SLE FR 3	-0.04	-0.15	14.08	0	0	0
186	SLE FR 4	-0.04	-0.15	14.55	0	0	0
186	SLE FR 5	-0.04	-0.15	14.59	0	0	0
186	SLE FR 6	-0.04	-0.15	14.89	0	0	0
186	SLE QP 1	-0.04	-0.15	14.03	0	0	0
186	SLE QP 2	-0.04	-0.15	14.55	0	0	0
186	SLD 1	1.14	-0.02	15.29	0	0	0
186	SLD 2	1.2	-0.06	15.29	0	0	0
186	SLD 3	1.17	-0.43	15.1	0	0	0
186	SLD 4	1.23	-0.47	15.09	0	0	0
186	SLD 5	0.25	0.51	15.07	0	0	0
186	SLD 6	0.3	0.48	15.07	0	0	0
186	SLD 7	0.36	-0.84	14.42	0	0	0
186	SLD 8	0.4	-0.87	14.41	0	0	0
186	SLD 9	-0.48	0.56	14.68	0	0	0
186	SLD 10	-0.44	0.54	14.68	0	0	0
186	SLD 11	-0.38	-0.79	14.03	0	0	0
186	SLD 12	-0.33	-0.82	14.02	0	0	0
186	SLD 13	-1.31	0.16	14	0	0	0
186	SLD 14	-1.25	0.12	14	0	0	0
186	SLD 15	-1.28	-0.25	13.81	0	0	0
186	SLD 16	-1.22	-0.29	13.8	0	0	0
186	SLV 1	2.71	0.14	16.29	0	0	0
186	SLV 2	2.86	0.05	16.27	0	0	0
186	SLV 3	2.78	-0.78	15.84	0	0	0
186	SLV 4	2.94	-0.87	15.83	0	0	0
186	SLV 5	0.65	1.35	15.75	0	0	0
186	SLV 6	0.75	1.3	15.74	0	0	0
186	SLV 7	0.89	-1.73	14.26	0	0	0
186	SLV 8	0.99	-1.79	14.25	0	0	0
186	SLV 9	-1.07	1.48	14.84	0	0	0
186	SLV 10	-0.97	1.42	14.83	0	0	0
186	SLV 11	-0.83	-1.6	13.36	0	0	0
186	SLV 12	-0.73	-1.66	13.35	0	0	0
186	SLV 13	-3.01	0.56	13.27	0	0	0
186	SLV 14	-2.86	0.47	13.25	0	0	0
186	SLV 15	-2.94	-0.36	12.82	0	0	0
186	SLV 16	-2.79	-0.45	12.81	0	0	0
187	SLU 1	-0.04	-0.14	13.92	0	0	0
187	SLU 2	-0.04	-0.12	13.92	0	0	0
187	SLU 3	-0.04	-0.14	14.18	0	0	0
187	SLU 4	-0.04	-0.12	14.18	0	0	0
187	SLU 5	-0.04	-0.12	14.09	0	0	0
187	SLU 6	-0.04	-0.14	14.35	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
187	SLU 7	-0.04	-0.13	14.35	0	0	0
187	SLU 8	-0.04	-0.14	14.25	0	0	0
187	SLU 9	-0.04	-0.13	14.26	0	0	0
187	SLU 10	-0.04	-0.12	15.77	0	0	0
187	SLU 11	-0.04	-0.14	16.03	0	0	0
187	SLU 12	-0.04	-0.13	16.03	0	0	0
187	SLU 13	-0.04	-0.12	15.94	0	0	0
187	SLU 14	-0.04	-0.14	16.2	0	0	0
187	SLU 15	-0.04	-0.13	16.2	0	0	0
187	SLU 16	-0.04	-0.15	16.1	0	0	0
187	SLU 17	-0.04	-0.13	16.1	0	0	0
187	SLU 18	-0.04	-0.14	16.56	0	0	0
187	SLU 19	-0.04	-0.13	16.56	0	0	0
187	SLU 20	-0.04	-0.14	16.73	0	0	0
187	SLU 21	-0.04	-0.13	16.73	0	0	0
187	SLU 22	-0.05	-0.13	15.52	0	0	0
187	SLU 23	-0.04	-0.11	15.53	0	0	0
187	SLU 24	-0.05	-0.13	15.79	0	0	0
187	SLU 25	-0.05	-0.11	15.79	0	0	0
187	SLU 26	-0.04	-0.11	15.7	0	0	0
187	SLU 27	-0.05	-0.13	15.96	0	0	0
187	SLU 28	-0.05	-0.12	15.96	0	0	0
187	SLU 29	-0.05	-0.13	15.86	0	0	0
187	SLU 30	-0.04	-0.12	15.87	0	0	0
187	SLU 31	-0.04	-0.11	17.38	0	0	0
187	SLU 32	-0.04	-0.13	17.64	0	0	0
187	SLU 33	-0.04	-0.12	17.64	0	0	0
187	SLU 34	-0.04	-0.11	17.55	0	0	0
187	SLU 35	-0.04	-0.13	17.81	0	0	0
187	SLU 36	-0.04	-0.12	17.81	0	0	0
187	SLU 37	-0.04	-0.14	17.71	0	0	0
187	SLU 38	-0.04	-0.12	17.71	0	0	0
187	SLU 39	-0.04	-0.13	18.17	0	0	0
187	SLU 40	-0.04	-0.12	18.17	0	0	0
187	SLU 41	-0.04	-0.14	18.33	0	0	0
187	SLU 42	-0.04	-0.12	18.34	0	0	0
187	SLU 43	-0.05	-0.18	17.54	0	0	0
187	SLU 44	-0.05	-0.16	17.54	0	0	0
187	SLU 45	-0.05	-0.18	17.8	0	0	0
187	SLU 46	-0.05	-0.17	17.8	0	0	0
187	SLU 47	-0.05	-0.16	17.71	0	0	0
187	SLU 48	-0.05	-0.18	17.97	0	0	0
187	SLU 49	-0.05	-0.17	17.97	0	0	0
187	SLU 50	-0.05	-0.19	17.88	0	0	0
187	SLU 51	-0.05	-0.17	17.88	0	0	0
187	SLU 52	-0.04	-0.16	19.39	0	0	0
187	SLU 53	-0.05	-0.18	19.65	0	0	0
187	SLU 54	-0.05	-0.17	19.65	0	0	0
187	SLU 55	-0.04	-0.17	19.56	0	0	0
187	SLU 56	-0.05	-0.19	19.82	0	0	0
187	SLU 57	-0.05	-0.17	19.82	0	0	0
187	SLU 58	-0.05	-0.19	19.73	0	0	0
187	SLU 59	-0.05	-0.18	19.73	0	0	0
187	SLU 60	-0.05	-0.19	20.18	0	0	0
187	SLU 61	-0.04	-0.17	20.18	0	0	0
187	SLU 62	-0.05	-0.19	20.35	0	0	0
187	SLU 63	-0.04	-0.18	20.35	0	0	0
187	SLU 64	-0.05	-0.17	19.15	0	0	0
187	SLU 65	-0.05	-0.15	19.15	0	0	0
187	SLU 66	-0.06	-0.17	19.41	0	0	0
187	SLU 67	-0.05	-0.16	19.41	0	0	0
187	SLU 68	-0.05	-0.15	19.32	0	0	0
187	SLU 69	-0.06	-0.17	19.58	0	0	0
187	SLU 70	-0.05	-0.16	19.58	0	0	0
187	SLU 71	-0.05	-0.18	19.49	0	0	0
187	SLU 72	-0.05	-0.17	19.49	0	0	0
187	SLU 73	-0.05	-0.16	21	0	0	0
187	SLU 74	-0.05	-0.17	21.26	0	0	0
187	SLU 75	-0.05	-0.16	21.26	0	0	0
187	SLU 76	-0.05	-0.16	21.17	0	0	0
187	SLU 77	-0.05	-0.18	21.43	0	0	0
187	SLU 78	-0.05	-0.16	21.43	0	0	0
187	SLU 79	-0.05	-0.18	21.33	0	0	0
187	SLU 80	-0.05	-0.17	21.34	0	0	0
187	SLU 81	-0.05	-0.18	21.79	0	0	0
187	SLU 82	-0.05	-0.17	21.79	0	0	0
187	SLU 83	-0.05	-0.18	21.96	0	0	0
187	SLU 84	-0.05	-0.17	21.96	0	0	0
187	SLE RA 1	-0.04	-0.13	14.37	0	0	0
187	SLE RA 2	-0.04	-0.12	14.38	0	0	0
187	SLE RA 3	-0.04	-0.13	14.55	0	0	0
187	SLE RA 4	-0.04	-0.13	14.55	0	0	0
187	SLE RA 5	-0.04	-0.12	14.49	0	0	0
187	SLE RA 6	-0.04	-0.14	14.66	0	0	0
187	SLE RA 7	-0.04	-0.13	14.66	0	0	0
187	SLE RA 8	-0.04	-0.14	14.6	0	0	0
187	SLE RA 9	-0.04	-0.13	14.6	0	0	0
187	SLE RA 10	-0.04	-0.12	15.61	0	0	0
187	SLE RA 11	-0.04	-0.14	15.78	0	0	0
187	SLE RA 12	-0.04	-0.13	15.78	0	0	0
187	SLE RA 13	-0.04	-0.12	15.72	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
187	SLE RA 14	-0.04	-0.14	15.9	0	0	0
187	SLE RA 15	-0.04	-0.13	15.9	0	0	0
187	SLE RA 16	-0.04	-0.14	15.83	0	0	0
187	SLE RA 17	-0.04	-0.13	15.83	0	0	0
187	SLE RA 18	-0.04	-0.14	16.14	0	0	0
187	SLE RA 19	-0.04	-0.13	16.14	0	0	0
187	SLE RA 20	-0.04	-0.14	16.25	0	0	0
187	SLE RA 21	-0.04	-0.13	16.25	0	0	0
187	SLE FR 1	-0.04	-0.13	14.37	0	0	0
187	SLE FR 2	-0.04	-0.13	14.38	0	0	0
187	SLE FR 3	-0.04	-0.14	14.42	0	0	0
187	SLE FR 4	-0.04	-0.13	14.9	0	0	0
187	SLE FR 5	-0.04	-0.14	14.95	0	0	0
187	SLE FR 6	-0.04	-0.14	15.26	0	0	0
187	SLE QP 1	-0.04	-0.13	14.37	0	0	0
187	SLE QP 2	-0.04	-0.14	14.9	0	0	0
187	SLD 1	1.18	0.01	15.57	0	0	0
187	SLD 2	1.24	-0.03	15.57	0	0	0
187	SLD 3	1.21	-0.41	15.37	0	0	0
187	SLD 4	1.28	-0.45	15.37	0	0	0
187	SLD 5	0.26	0.55	15.41	0	0	0
187	SLD 6	0.31	0.53	15.41	0	0	0
187	SLD 7	0.37	-0.85	14.74	0	0	0
187	SLD 8	0.42	-0.87	14.74	0	0	0
187	SLD 9	-0.5	0.6	15.07	0	0	0
187	SLD 10	-0.45	0.58	15.07	0	0	0
187	SLD 11	-0.39	-0.8	14.4	0	0	0
187	SLD 12	-0.34	-0.82	14.4	0	0	0
187	SLD 13	-1.36	0.18	14.44	0	0	0
187	SLD 14	-1.29	0.14	14.43	0	0	0
187	SLD 15	-1.32	-0.24	14.24	0	0	0
187	SLD 16	-1.26	-0.28	14.23	0	0	0
187	SLV 1	2.81	0.19	16.47	0	0	0
187	SLV 2	2.96	0.1	16.45	0	0	0
187	SLV 3	2.88	-0.77	16.01	0	0	0
187	SLV 4	3.04	-0.86	15.99	0	0	0
187	SLV 5	0.67	1.43	16.07	0	0	0
187	SLV 6	0.77	1.37	16.06	0	0	0
187	SLV 7	0.92	-1.77	14.55	0	0	0
187	SLV 8	1.02	-1.82	14.53	0	0	0
187	SLV 9	-1.1	1.55	15.27	0	0	0
187	SLV 10	-1	1.49	15.26	0	0	0
187	SLV 11	-0.85	-1.65	13.75	0	0	0
187	SLV 12	-0.75	-1.7	13.74	0	0	0
187	SLV 13	-3.12	0.58	13.81	0	0	0
187	SLV 14	-2.96	0.5	13.8	0	0	0
187	SLV 15	-3.04	-0.37	13.36	0	0	0
187	SLV 16	-2.89	-0.46	13.34	0	0	0
188	SLU 1	-0.04	-0.12	14.08	0	0	0
188	SLU 2	-0.04	-0.1	14.08	0	0	0
188	SLU 3	-0.04	-0.12	14.35	0	0	0
188	SLU 4	-0.04	-0.1	14.35	0	0	0
188	SLU 5	-0.04	-0.1	14.26	0	0	0
188	SLU 6	-0.04	-0.12	14.52	0	0	0
188	SLU 7	-0.04	-0.11	14.52	0	0	0
188	SLU 8	-0.04	-0.12	14.42	0	0	0
188	SLU 9	-0.04	-0.11	14.43	0	0	0
188	SLU 10	-0.03	-0.1	15.96	0	0	0
188	SLU 11	-0.04	-0.12	16.22	0	0	0
188	SLU 12	-0.04	-0.1	16.22	0	0	0
188	SLU 13	-0.03	-0.1	16.13	0	0	0
188	SLU 14	-0.04	-0.12	16.39	0	0	0
188	SLU 15	-0.04	-0.11	16.39	0	0	0
188	SLU 16	-0.04	-0.12	16.3	0	0	0
188	SLU 17	-0.04	-0.11	16.3	0	0	0
188	SLU 18	-0.03	-0.12	16.76	0	0	0
188	SLU 19	-0.03	-0.11	16.76	0	0	0
188	SLU 20	-0.03	-0.12	16.93	0	0	0
188	SLU 21	-0.03	-0.11	16.93	0	0	0
188	SLU 22	-0.04	-0.11	15.7	0	0	0
188	SLU 23	-0.04	-0.09	15.71	0	0	0
188	SLU 24	-0.04	-0.11	15.97	0	0	0
188	SLU 25	-0.04	-0.09	15.97	0	0	0
188	SLU 26	-0.04	-0.09	15.88	0	0	0
188	SLU 27	-0.05	-0.11	16.14	0	0	0
188	SLU 28	-0.04	-0.09	16.14	0	0	0
188	SLU 29	-0.04	-0.11	16.05	0	0	0
188	SLU 30	-0.04	-0.1	16.05	0	0	0
188	SLU 31	-0.04	-0.09	17.58	0	0	0
188	SLU 32	-0.04	-0.11	17.84	0	0	0
188	SLU 33	-0.04	-0.09	17.84	0	0	0
188	SLU 34	-0.04	-0.09	17.75	0	0	0
188	SLU 35	-0.04	-0.11	18.01	0	0	0
188	SLU 36	-0.04	-0.1	18.02	0	0	0
188	SLU 37	-0.04	-0.11	17.92	0	0	0
188	SLU 38	-0.04	-0.1	17.92	0	0	0
188	SLU 39	-0.04	-0.11	18.38	0	0	0
188	SLU 40	-0.04	-0.1	18.38	0	0	0
188	SLU 41	-0.04	-0.11	18.55	0	0	0
188	SLU 42	-0.04	-0.1	18.55	0	0	0
188	SLU 43	-0.05	-0.16	17.75	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
188	SLU 44	-0.05	-0.14	17.75	0	0	0
188	SLU 45	-0.05	-0.16	18.01	0	0	0
188	SLU 46	-0.05	-0.14	18.02	0	0	0
188	SLU 47	-0.05	-0.14	17.92	0	0	0
188	SLU 48	-0.05	-0.16	18.19	0	0	0
188	SLU 49	-0.05	-0.14	18.19	0	0	0
188	SLU 50	-0.05	-0.16	18.09	0	0	0
188	SLU 51	-0.05	-0.15	18.09	0	0	0
188	SLU 52	-0.04	-0.14	19.62	0	0	0
188	SLU 53	-0.05	-0.16	19.89	0	0	0
188	SLU 54	-0.04	-0.14	19.89	0	0	0
188	SLU 55	-0.04	-0.14	19.8	0	0	0
188	SLU 56	-0.05	-0.16	20.06	0	0	0
188	SLU 57	-0.04	-0.15	20.06	0	0	0
188	SLU 58	-0.04	-0.16	19.96	0	0	0
188	SLU 59	-0.04	-0.15	19.97	0	0	0
188	SLU 60	-0.04	-0.16	20.42	0	0	0
188	SLU 61	-0.04	-0.15	20.43	0	0	0
188	SLU 62	-0.04	-0.16	20.59	0	0	0
188	SLU 63	-0.04	-0.15	20.6	0	0	0
188	SLU 64	-0.05	-0.15	19.37	0	0	0
188	SLU 65	-0.05	-0.13	19.37	0	0	0
188	SLU 66	-0.05	-0.14	19.64	0	0	0
188	SLU 67	-0.05	-0.13	19.64	0	0	0
188	SLU 68	-0.05	-0.13	19.55	0	0	0
188	SLU 69	-0.05	-0.15	19.81	0	0	0
188	SLU 70	-0.05	-0.13	19.81	0	0	0
188	SLU 71	-0.05	-0.15	19.71	0	0	0
188	SLU 72	-0.05	-0.14	19.72	0	0	0
188	SLU 73	-0.05	-0.13	21.25	0	0	0
188	SLU 74	-0.05	-0.15	21.51	0	0	0
188	SLU 75	-0.05	-0.13	21.51	0	0	0
188	SLU 76	-0.05	-0.13	21.42	0	0	0
188	SLU 77	-0.05	-0.15	21.68	0	0	0
188	SLU 78	-0.05	-0.13	21.68	0	0	0
188	SLU 79	-0.05	-0.15	21.59	0	0	0
188	SLU 80	-0.05	-0.14	21.59	0	0	0
188	SLU 81	-0.05	-0.15	22.05	0	0	0
188	SLU 82	-0.05	-0.14	22.05	0	0	0
188	SLU 83	-0.05	-0.15	22.22	0	0	0
188	SLU 84	-0.05	-0.14	22.22	0	0	0
188	SLE RA 1	-0.04	-0.12	14.54	0	0	0
188	SLE RA 2	-0.04	-0.1	14.55	0	0	0
188	SLE RA 3	-0.04	-0.11	14.72	0	0	0
188	SLE RA 4	-0.04	-0.11	14.72	0	0	0
188	SLE RA 5	-0.04	-0.1	14.66	0	0	0
188	SLE RA 6	-0.04	-0.12	14.84	0	0	0
188	SLE RA 7	-0.04	-0.11	14.84	0	0	0
188	SLE RA 8	-0.04	-0.12	14.77	0	0	0
188	SLE RA 9	-0.04	-0.11	14.77	0	0	0
188	SLE RA 10	-0.04	-0.1	15.79	0	0	0
188	SLE RA 11	-0.04	-0.11	15.97	0	0	0
188	SLE RA 12	-0.04	-0.11	15.97	0	0	0
188	SLE RA 13	-0.04	-0.1	15.91	0	0	0
188	SLE RA 14	-0.04	-0.12	16.08	0	0	0
188	SLE RA 15	-0.04	-0.11	16.09	0	0	0
188	SLE RA 16	-0.04	-0.12	16.02	0	0	0
188	SLE RA 17	-0.04	-0.11	16.02	0	0	0
188	SLE RA 18	-0.04	-0.12	16.33	0	0	0
188	SLE RA 19	-0.04	-0.11	16.33	0	0	0
188	SLE RA 20	-0.04	-0.12	16.44	0	0	0
188	SLE RA 21	-0.04	-0.11	16.44	0	0	0
188	SLE FR 1	-0.04	-0.12	14.54	0	0	0
188	SLE FR 2	-0.04	-0.11	14.54	0	0	0
188	SLE FR 3	-0.04	-0.12	14.59	0	0	0
188	SLE FR 4	-0.04	-0.11	15.08	0	0	0
188	SLE FR 5	-0.04	-0.12	15.12	0	0	0
188	SLE FR 6	-0.04	-0.12	15.44	0	0	0
188	SLE QP 1	-0.04	-0.12	14.54	0	0	0
188	SLE QP 2	-0.04	-0.12	15.08	0	0	0
188	SLD 1	1.2	0.04	15.66	0	0	0
188	SLD 2	1.27	0	15.65	0	0	0
188	SLD 3	1.23	-0.39	15.46	0	0	0
188	SLD 4	1.3	-0.43	15.45	0	0	0
188	SLD 5	0.27	0.59	15.56	0	0	0
188	SLD 6	0.32	0.56	15.56	0	0	0
188	SLD 7	0.38	-0.84	14.88	0	0	0
188	SLD 8	0.42	-0.86	14.88	0	0	0
188	SLD 9	-0.5	0.63	15.28	0	0	0
188	SLD 10	-0.46	0.61	15.27	0	0	0
188	SLD 11	-0.39	-0.8	14.6	0	0	0
188	SLD 12	-0.35	-0.82	14.59	0	0	0
188	SLD 13	-1.38	0.19	14.71	0	0	0
188	SLD 14	-1.31	0.16	14.7	0	0	0
188	SLD 15	-1.35	-0.23	14.51	0	0	0
188	SLD 16	-1.28	-0.27	14.5	0	0	0
188	SLV 1	2.86	0.23	16.43	0	0	0
188	SLV 2	3.02	0.15	16.41	0	0	0
188	SLV 3	2.94	-0.75	15.97	0	0	0
188	SLV 4	3.09	-0.83	15.95	0	0	0
188	SLV 5	0.69	1.48	16.19	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
188	SLV 6	0.79	1.43	16.18	0	0	0
188	SLV 7	0.94	-1.77	14.65	0	0	0
188	SLV 8	1.04	-1.82	14.63	0	0	0
188	SLV 9	-1.12	1.59	15.52	0	0	0
188	SLV 10	-1.02	1.54	15.51	0	0	0
188	SLV 11	-0.87	-1.66	13.98	0	0	0
188	SLV 12	-0.77	-1.71	13.97	0	0	0
188	SLV 13	-3.17	0.6	14.21	0	0	0
188	SLV 14	-3.01	0.52	14.19	0	0	0
188	SLV 15	-3.1	-0.38	13.74	0	0	0
188	SLV 16	-2.94	-0.46	13.72	0	0	0
189	SLU 1	-0.04	-0.1	14.14	0	0	0
189	SLU 2	-0.04	-0.08	14.14	0	0	0
189	SLU 3	-0.04	-0.09	14.41	0	0	0
189	SLU 4	-0.04	-0.08	14.41	0	0	0
189	SLU 5	-0.04	-0.08	14.32	0	0	0
189	SLU 6	-0.04	-0.1	14.58	0	0	0
189	SLU 7	-0.04	-0.08	14.58	0	0	0
189	SLU 8	-0.04	-0.1	14.48	0	0	0
189	SLU 9	-0.04	-0.09	14.49	0	0	0
189	SLU 10	-0.03	-0.07	16.03	0	0	0
189	SLU 11	-0.04	-0.09	16.29	0	0	0
189	SLU 12	-0.03	-0.08	16.29	0	0	0
189	SLU 13	-0.03	-0.08	16.2	0	0	0
189	SLU 14	-0.04	-0.09	16.46	0	0	0
189	SLU 15	-0.03	-0.08	16.47	0	0	0
189	SLU 16	-0.03	-0.1	16.37	0	0	0
189	SLU 17	-0.03	-0.09	16.37	0	0	0
189	SLU 18	-0.03	-0.09	16.83	0	0	0
189	SLU 19	-0.03	-0.08	16.83	0	0	0
189	SLU 20	-0.03	-0.1	17	0	0	0
189	SLU 21	-0.03	-0.08	17.01	0	0	0
189	SLU 22	-0.04	-0.08	15.76	0	0	0
189	SLU 23	-0.04	-0.06	15.77	0	0	0
189	SLU 24	-0.04	-0.08	16.03	0	0	0
189	SLU 25	-0.04	-0.07	16.03	0	0	0
189	SLU 26	-0.04	-0.06	15.94	0	0	0
189	SLU 27	-0.04	-0.08	16.21	0	0	0
189	SLU 28	-0.04	-0.07	16.21	0	0	0
189	SLU 29	-0.04	-0.09	16.11	0	0	0
189	SLU 30	-0.04	-0.07	16.11	0	0	0
189	SLU 31	-0.04	-0.06	17.65	0	0	0
189	SLU 32	-0.04	-0.08	17.92	0	0	0
189	SLU 33	-0.04	-0.07	17.92	0	0	0
189	SLU 34	-0.04	-0.06	17.83	0	0	0
189	SLU 35	-0.04	-0.08	18.09	0	0	0
189	SLU 36	-0.04	-0.07	18.09	0	0	0
189	SLU 37	-0.04	-0.09	17.99	0	0	0
189	SLU 38	-0.04	-0.07	18	0	0	0
189	SLU 39	-0.04	-0.08	18.45	0	0	0
189	SLU 40	-0.04	-0.07	18.46	0	0	0
189	SLU 41	-0.04	-0.08	18.63	0	0	0
189	SLU 42	-0.04	-0.07	18.63	0	0	0
189	SLU 43	-0.05	-0.13	17.82	0	0	0
189	SLU 44	-0.04	-0.11	17.83	0	0	0
189	SLU 45	-0.05	-0.13	18.09	0	0	0
189	SLU 46	-0.05	-0.12	18.09	0	0	0
189	SLU 47	-0.04	-0.11	18	0	0	0
189	SLU 48	-0.05	-0.13	18.26	0	0	0
189	SLU 49	-0.05	-0.12	18.27	0	0	0
189	SLU 50	-0.05	-0.13	18.17	0	0	0
189	SLU 51	-0.04	-0.12	18.17	0	0	0
189	SLU 52	-0.04	-0.11	19.71	0	0	0
189	SLU 53	-0.04	-0.13	19.97	0	0	0
189	SLU 54	-0.04	-0.11	19.98	0	0	0
189	SLU 55	-0.04	-0.11	19.88	0	0	0
189	SLU 56	-0.04	-0.13	20.15	0	0	0
189	SLU 57	-0.04	-0.12	20.15	0	0	0
189	SLU 58	-0.04	-0.13	20.05	0	0	0
189	SLU 59	-0.04	-0.12	20.06	0	0	0
189	SLU 60	-0.04	-0.13	20.51	0	0	0
189	SLU 61	-0.04	-0.12	20.52	0	0	0
189	SLU 62	-0.04	-0.13	20.69	0	0	0
189	SLU 63	-0.04	-0.12	20.69	0	0	0
189	SLU 64	-0.05	-0.12	19.45	0	0	0
189	SLU 65	-0.05	-0.1	19.45	0	0	0
189	SLU 66	-0.05	-0.11	19.72	0	0	0
189	SLU 67	-0.05	-0.1	19.72	0	0	0
189	SLU 68	-0.05	-0.1	19.63	0	0	0
189	SLU 69	-0.05	-0.12	19.89	0	0	0
189	SLU 70	-0.05	-0.1	19.89	0	0	0
189	SLU 71	-0.05	-0.12	19.79	0	0	0
189	SLU 72	-0.05	-0.11	19.8	0	0	0
189	SLU 73	-0.05	-0.09	21.34	0	0	0
189	SLU 74	-0.05	-0.11	21.6	0	0	0
189	SLU 75	-0.05	-0.1	21.6	0	0	0
189	SLU 76	-0.05	-0.1	21.51	0	0	0
189	SLU 77	-0.05	-0.11	21.77	0	0	0
189	SLU 78	-0.05	-0.1	21.78	0	0	0
189	SLU 79	-0.05	-0.12	21.68	0	0	0
189	SLU 80	-0.05	-0.11	21.68	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
189	SLU 81	-0.05	-0.11	22.14	0	0	0
189	SLU 82	-0.05	-0.1	22.14	0	0	0
189	SLU 83	-0.05	-0.12	22.31	0	0	0
189	SLU 84	-0.05	-0.1	22.32	0	0	0
189	SLE RA 1	-0.04	-0.09	14.6	0	0	0
189	SLE RA 2	-0.04	-0.08	14.61	0	0	0
189	SLE RA 3	-0.04	-0.09	14.78	0	0	0
189	SLE RA 4	-0.04	-0.08	14.78	0	0	0
189	SLE RA 5	-0.04	-0.08	14.72	0	0	0
189	SLE RA 6	-0.04	-0.09	14.9	0	0	0
189	SLE RA 7	-0.04	-0.08	14.9	0	0	0
189	SLE RA 8	-0.04	-0.1	14.83	0	0	0
189	SLE RA 9	-0.04	-0.09	14.84	0	0	0
189	SLE RA 10	-0.04	-0.08	15.86	0	0	0
189	SLE RA 11	-0.04	-0.09	16.04	0	0	0
189	SLE RA 12	-0.04	-0.08	16.04	0	0	0
189	SLE RA 13	-0.04	-0.08	15.98	0	0	0
189	SLE RA 14	-0.04	-0.09	16.15	0	0	0
189	SLE RA 15	-0.04	-0.08	16.15	0	0	0
189	SLE RA 16	-0.04	-0.09	16.09	0	0	0
189	SLE RA 17	-0.04	-0.09	16.09	0	0	0
189	SLE RA 18	-0.04	-0.09	16.4	0	0	0
189	SLE RA 19	-0.04	-0.08	16.4	0	0	0
189	SLE RA 20	-0.04	-0.09	16.51	0	0	0
189	SLE RA 21	-0.04	-0.08	16.51	0	0	0
189	SLE FR 1	-0.04	-0.09	14.6	0	0	0
189	SLE FR 2	-0.04	-0.09	14.6	0	0	0
189	SLE FR 3	-0.04	-0.09	14.65	0	0	0
189	SLE FR 4	-0.04	-0.09	15.14	0	0	0
189	SLE FR 5	-0.04	-0.09	15.19	0	0	0
189	SLE FR 6	-0.04	-0.09	15.5	0	0	0
189	SLE QP 1	-0.04	-0.09	14.6	0	0	0
189	SLE QP 2	-0.04	-0.09	15.14	0	0	0
189	SLD 1	1.21	0.07	15.63	0	0	0
189	SLD 2	1.28	0.04	15.62	0	0	0
189	SLD 3	1.24	-0.36	15.42	0	0	0
189	SLD 4	1.31	-0.39	15.41	0	0	0
189	SLD 5	0.27	0.62	15.6	0	0	0
189	SLD 6	0.32	0.6	15.59	0	0	0
189	SLD 7	0.38	-0.82	14.91	0	0	0
189	SLD 8	0.43	-0.84	14.91	0	0	0
189	SLD 9	-0.5	0.66	15.37	0	0	0
189	SLD 10	-0.46	0.64	15.37	0	0	0
189	SLD 11	-0.39	-0.78	14.69	0	0	0
189	SLD 12	-0.35	-0.8	14.68	0	0	0
189	SLD 13	-1.39	0.21	14.87	0	0	0
189	SLD 14	-1.32	0.18	14.86	0	0	0
189	SLD 15	-1.35	-0.22	14.66	0	0	0
189	SLD 16	-1.28	-0.25	14.65	0	0	0
189	SLV 1	2.88	0.27	16.27	0	0	0
189	SLV 2	3.04	0.2	16.25	0	0	0
189	SLV 3	2.95	-0.72	15.8	0	0	0
189	SLV 4	3.11	-0.79	15.79	0	0	0
189	SLV 5	0.69	1.52	16.19	0	0	0
189	SLV 6	0.8	1.48	16.18	0	0	0
189	SLV 7	0.95	-1.76	14.63	0	0	0
189	SLV 8	1.05	-1.81	14.62	0	0	0
189	SLV 9	-1.13	1.62	15.66	0	0	0
189	SLV 10	-1.02	1.58	15.65	0	0	0
189	SLV 11	-0.87	-1.66	14.1	0	0	0
189	SLV 12	-0.77	-1.71	14.09	0	0	0
189	SLV 13	-3.19	0.6	14.49	0	0	0
189	SLV 14	-3.03	0.53	14.48	0	0	0
189	SLV 15	-3.11	-0.38	14.03	0	0	0
189	SLV 16	-2.95	-0.45	14.01	0	0	0
190	SLU 1	-0.04	-0.08	14.19	0	0	0
190	SLU 2	-0.03	-0.05	14.2	0	0	0
190	SLU 3	-0.04	-0.07	14.46	0	0	0
190	SLU 4	-0.04	-0.06	14.47	0	0	0
190	SLU 5	-0.03	-0.06	14.38	0	0	0
190	SLU 6	-0.04	-0.07	14.64	0	0	0
190	SLU 7	-0.04	-0.06	14.64	0	0	0
190	SLU 8	-0.04	-0.08	14.54	0	0	0
190	SLU 9	-0.03	-0.07	14.55	0	0	0
190	SLU 10	-0.03	-0.05	16.1	0	0	0
190	SLU 11	-0.03	-0.07	16.36	0	0	0
190	SLU 12	-0.03	-0.05	16.36	0	0	0
190	SLU 13	-0.03	-0.05	16.27	0	0	0
190	SLU 14	-0.03	-0.07	16.54	0	0	0
190	SLU 15	-0.03	-0.06	16.54	0	0	0
190	SLU 16	-0.03	-0.07	16.44	0	0	0
190	SLU 17	-0.03	-0.06	16.45	0	0	0
190	SLU 18	-0.03	-0.07	16.9	0	0	0
190	SLU 19	-0.03	-0.06	16.91	0	0	0
190	SLU 20	-0.03	-0.07	17.08	0	0	0
190	SLU 21	-0.03	-0.06	17.08	0	0	0
190	SLU 22	-0.04	-0.06	15.82	0	0	0
190	SLU 23	-0.04	-0.04	15.83	0	0	0
190	SLU 24	-0.04	-0.05	16.09	0	0	0
190	SLU 25	-0.04	-0.04	16.1	0	0	0
190	SLU 26	-0.04	-0.04	16.01	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
190	SLU 27	-0.04	-0.06	16.27	0	0	0
190	SLU 28	-0.04	-0.04	16.27	0	0	0
190	SLU 29	-0.04	-0.06	16.17	0	0	0
190	SLU 30	-0.04	-0.05	16.18	0	0	0
190	SLU 31	-0.04	-0.03	17.73	0	0	0
190	SLU 32	-0.04	-0.05	17.99	0	0	0
190	SLU 33	-0.04	-0.04	18	0	0	0
190	SLU 34	-0.04	-0.03	17.9	0	0	0
190	SLU 35	-0.04	-0.05	18.17	0	0	0
190	SLU 36	-0.04	-0.04	18.17	0	0	0
190	SLU 37	-0.04	-0.06	18.07	0	0	0
190	SLU 38	-0.04	-0.04	18.08	0	0	0
190	SLU 39	-0.04	-0.05	18.53	0	0	0
190	SLU 40	-0.04	-0.04	18.54	0	0	0
190	SLU 41	-0.04	-0.05	18.71	0	0	0
190	SLU 42	-0.04	-0.04	18.71	0	0	0
190	SLU 43	-0.04	-0.1	17.89	0	0	0
190	SLU 44	-0.04	-0.08	17.9	0	0	0
190	SLU 45	-0.04	-0.1	18.16	0	0	0
190	SLU 46	-0.04	-0.09	18.17	0	0	0
190	SLU 47	-0.04	-0.08	18.08	0	0	0
190	SLU 48	-0.04	-0.1	18.34	0	0	0
190	SLU 49	-0.04	-0.09	18.34	0	0	0
190	SLU 50	-0.04	-0.11	18.24	0	0	0
190	SLU 51	-0.04	-0.09	18.25	0	0	0
190	SLU 52	-0.04	-0.08	19.8	0	0	0
190	SLU 53	-0.04	-0.1	20.06	0	0	0
190	SLU 54	-0.04	-0.08	20.06	0	0	0
190	SLU 55	-0.04	-0.08	19.97	0	0	0
190	SLU 56	-0.04	-0.1	20.23	0	0	0
190	SLU 57	-0.04	-0.08	20.24	0	0	0
190	SLU 58	-0.04	-0.1	20.14	0	0	0
190	SLU 59	-0.04	-0.09	20.14	0	0	0
190	SLU 60	-0.04	-0.1	20.6	0	0	0
190	SLU 61	-0.04	-0.08	20.61	0	0	0
190	SLU 62	-0.04	-0.1	20.78	0	0	0
190	SLU 63	-0.04	-0.09	20.78	0	0	0
190	SLU 64	-0.05	-0.09	19.52	0	0	0
190	SLU 65	-0.05	-0.07	19.53	0	0	0
190	SLU 66	-0.05	-0.08	19.79	0	0	0
190	SLU 67	-0.05	-0.07	19.8	0	0	0
190	SLU 68	-0.05	-0.07	19.71	0	0	0
190	SLU 69	-0.05	-0.08	19.97	0	0	0
190	SLU 70	-0.05	-0.07	19.97	0	0	0
190	SLU 71	-0.05	-0.09	19.87	0	0	0
190	SLU 72	-0.05	-0.08	19.88	0	0	0
190	SLU 73	-0.05	-0.06	21.43	0	0	0
190	SLU 74	-0.05	-0.08	21.69	0	0	0
190	SLU 75	-0.05	-0.07	21.69	0	0	0
190	SLU 76	-0.05	-0.06	21.6	0	0	0
190	SLU 77	-0.05	-0.08	21.87	0	0	0
190	SLU 78	-0.05	-0.07	21.87	0	0	0
190	SLU 79	-0.05	-0.09	21.77	0	0	0
190	SLU 80	-0.05	-0.07	21.77	0	0	0
190	SLU 81	-0.05	-0.08	22.23	0	0	0
190	SLU 82	-0.05	-0.07	22.24	0	0	0
190	SLU 83	-0.05	-0.08	22.41	0	0	0
190	SLU 84	-0.05	-0.07	22.41	0	0	0
190	SLE RA 1	-0.04	-0.07	14.66	0	0	0
190	SLE RA 2	-0.04	-0.06	14.66	0	0	0
190	SLE RA 3	-0.04	-0.07	14.84	0	0	0
190	SLE RA 4	-0.04	-0.06	14.84	0	0	0
190	SLE RA 5	-0.04	-0.06	14.78	0	0	0
190	SLE RA 6	-0.04	-0.07	14.96	0	0	0
190	SLE RA 7	-0.04	-0.06	14.96	0	0	0
190	SLE RA 8	-0.04	-0.07	14.89	0	0	0
190	SLE RA 9	-0.04	-0.06	14.9	0	0	0
190	SLE RA 10	-0.03	-0.05	15.93	0	0	0
190	SLE RA 11	-0.04	-0.06	16.1	0	0	0
190	SLE RA 12	-0.04	-0.06	16.11	0	0	0
190	SLE RA 13	-0.03	-0.05	16.05	0	0	0
190	SLE RA 14	-0.04	-0.07	16.22	0	0	0
190	SLE RA 15	-0.04	-0.06	16.22	0	0	0
190	SLE RA 16	-0.04	-0.07	16.16	0	0	0
190	SLE RA 17	-0.04	-0.06	16.16	0	0	0
190	SLE RA 18	-0.04	-0.07	16.47	0	0	0
190	SLE RA 19	-0.03	-0.06	16.47	0	0	0
190	SLE RA 20	-0.04	-0.07	16.58	0	0	0
190	SLE RA 21	-0.03	-0.06	16.59	0	0	0
190	SLE FR 1	-0.04	-0.07	14.66	0	0	0
190	SLE FR 2	-0.04	-0.07	14.66	0	0	0
190	SLE FR 3	-0.04	-0.07	14.71	0	0	0
190	SLE FR 4	-0.04	-0.07	15.2	0	0	0
190	SLE FR 5	-0.04	-0.07	15.25	0	0	0
190	SLE FR 6	-0.04	-0.07	15.56	0	0	0
190	SLE QP 1	-0.04	-0.07	14.66	0	0	0
190	SLE QP 2	-0.04	-0.07	15.2	0	0	0
190	SLD 1	1.21	0.1	15.6	0	0	0
190	SLD 2	1.28	0.07	15.59	0	0	0
190	SLD 3	1.24	-0.34	15.39	0	0	0
190	SLD 4	1.31	-0.36	15.38	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
190	SLD 5	0.28	0.64	15.64	0	0	0
190	SLD 6	0.32	0.63	15.63	0	0	0
190	SLD 7	0.39	-0.8	14.94	0	0	0
190	SLD 8	0.43	-0.82	14.94	0	0	0
190	SLD 9	-0.5	0.68	15.47	0	0	0
190	SLD 10	-0.46	0.66	15.46	0	0	0
190	SLD 11	-0.39	-0.76	14.77	0	0	0
190	SLD 12	-0.35	-0.78	14.77	0	0	0
190	SLD 13	-1.39	0.22	15.02	0	0	0
190	SLD 14	-1.32	0.2	15.02	0	0	0
190	SLD 15	-1.35	-0.21	14.82	0	0	0
190	SLD 16	-1.28	-0.24	14.81	0	0	0
190	SLV 1	2.88	0.31	16.12	0	0	0
190	SLV 2	3.04	0.25	16.1	0	0	0
190	SLV 3	2.96	-0.68	15.64	0	0	0
190	SLV 4	3.12	-0.74	15.63	0	0	0
190	SLV 5	0.7	1.55	16.2	0	0	0
190	SLV 6	0.8	1.51	16.18	0	0	0
190	SLV 7	0.95	-1.74	14.62	0	0	0
190	SLV 8	1.05	-1.78	14.61	0	0	0
190	SLV 9	-1.13	1.64	15.79	0	0	0
190	SLV 10	-1.02	1.6	15.78	0	0	0
190	SLV 11	-0.87	-1.65	14.22	0	0	0
190	SLV 12	-0.77	-1.69	14.21	0	0	0
190	SLV 13	-3.19	0.6	14.78	0	0	0
190	SLV 14	-3.03	0.54	14.76	0	0	0
190	SLV 15	-3.11	-0.39	14.3	0	0	0
190	SLV 16	-2.96	-0.45	14.29	0	0	0
191	SLU 1	-0.03	-0.05	14.25	0	0	0
191	SLU 2	-0.03	-0.03	14.26	0	0	0
191	SLU 3	-0.04	-0.05	14.52	0	0	0
191	SLU 4	-0.03	-0.04	14.53	0	0	0
191	SLU 5	-0.03	-0.03	14.44	0	0	0
191	SLU 6	-0.04	-0.05	14.7	0	0	0
191	SLU 7	-0.03	-0.04	14.7	0	0	0
191	SLU 8	-0.03	-0.06	14.6	0	0	0
191	SLU 9	-0.03	-0.04	14.61	0	0	0
191	SLU 10	-0.03	-0.02	16.17	0	0	0
191	SLU 11	-0.03	-0.04	16.43	0	0	0
191	SLU 12	-0.03	-0.03	16.44	0	0	0
191	SLU 13	-0.03	-0.03	16.35	0	0	0
191	SLU 14	-0.03	-0.04	16.61	0	0	0
191	SLU 15	-0.03	-0.03	16.62	0	0	0
191	SLU 16	-0.03	-0.05	16.52	0	0	0
191	SLU 17	-0.03	-0.04	16.52	0	0	0
191	SLU 18	-0.03	-0.04	16.98	0	0	0
191	SLU 19	-0.03	-0.03	16.99	0	0	0
191	SLU 20	-0.03	-0.04	17.16	0	0	0
191	SLU 21	-0.03	-0.03	17.16	0	0	0
191	SLU 22	-0.04	-0.03	15.89	0	0	0
191	SLU 23	-0.04	-0.01	15.9	0	0	0
191	SLU 24	-0.04	-0.03	16.16	0	0	0
191	SLU 25	-0.04	-0.02	16.16	0	0	0
191	SLU 26	-0.04	-0.01	16.07	0	0	0
191	SLU 27	-0.04	-0.03	16.33	0	0	0
191	SLU 28	-0.04	-0.02	16.34	0	0	0
191	SLU 29	-0.04	-0.03	16.24	0	0	0
191	SLU 30	-0.04	-0.02	16.25	0	0	0
191	SLU 31	-0.04	0	17.81	0	0	0
191	SLU 32	-0.04	-0.02	18.07	0	0	0
191	SLU 33	-0.04	-0.01	18.08	0	0	0
191	SLU 34	-0.04	-0.01	17.98	0	0	0
191	SLU 35	-0.04	-0.02	18.25	0	0	0
191	SLU 36	-0.04	-0.01	18.25	0	0	0
191	SLU 37	-0.04	-0.03	18.15	0	0	0
191	SLU 38	-0.04	-0.01	18.16	0	0	0
191	SLU 39	-0.04	-0.02	18.62	0	0	0
191	SLU 40	-0.04	-0.01	18.62	0	0	0
191	SLU 41	-0.04	-0.02	18.79	0	0	0
191	SLU 42	-0.04	-0.01	18.8	0	0	0
191	SLU 43	-0.04	-0.07	17.96	0	0	0
191	SLU 44	-0.04	-0.05	17.97	0	0	0
191	SLU 45	-0.04	-0.07	18.24	0	0	0
191	SLU 46	-0.04	-0.06	18.24	0	0	0
191	SLU 47	-0.04	-0.06	18.15	0	0	0
191	SLU 48	-0.04	-0.07	18.41	0	0	0
191	SLU 49	-0.04	-0.06	18.42	0	0	0
191	SLU 50	-0.04	-0.08	18.32	0	0	0
191	SLU 51	-0.04	-0.07	18.32	0	0	0
191	SLU 52	-0.04	-0.05	19.89	0	0	0
191	SLU 53	-0.04	-0.06	20.15	0	0	0
191	SLU 54	-0.04	-0.05	20.15	0	0	0
191	SLU 55	-0.04	-0.05	20.06	0	0	0
191	SLU 56	-0.04	-0.06	20.32	0	0	0
191	SLU 57	-0.04	-0.05	20.33	0	0	0
191	SLU 58	-0.04	-0.07	20.23	0	0	0
191	SLU 59	-0.04	-0.06	20.24	0	0	0
191	SLU 60	-0.04	-0.06	20.7	0	0	0
191	SLU 61	-0.04	-0.05	20.7	0	0	0
191	SLU 62	-0.04	-0.07	20.87	0	0	0
191	SLU 63	-0.04	-0.05	20.88	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
191	SLU 64	-0.05	-0.05	19.6	0	0	0
191	SLU 65	-0.05	-0.03	19.61	0	0	0
191	SLU 66	-0.05	-0.05	19.87	0	0	0
191	SLU 67	-0.05	-0.04	19.88	0	0	0
191	SLU 68	-0.05	-0.04	19.79	0	0	0
191	SLU 69	-0.05	-0.05	20.05	0	0	0
191	SLU 70	-0.05	-0.04	20.05	0	0	0
191	SLU 71	-0.05	-0.06	19.95	0	0	0
191	SLU 72	-0.05	-0.05	19.96	0	0	0
191	SLU 73	-0.05	-0.03	21.52	0	0	0
191	SLU 74	-0.05	-0.04	21.78	0	0	0
191	SLU 75	-0.05	-0.03	21.79	0	0	0
191	SLU 76	-0.05	-0.03	21.7	0	0	0
191	SLU 77	-0.05	-0.04	21.96	0	0	0
191	SLU 78	-0.05	-0.03	21.97	0	0	0
191	SLU 79	-0.05	-0.05	21.87	0	0	0
191	SLU 80	-0.05	-0.04	21.87	0	0	0
191	SLU 81	-0.05	-0.04	22.33	0	0	0
191	SLU 82	-0.05	-0.03	22.34	0	0	0
191	SLU 83	-0.05	-0.04	22.51	0	0	0
191	SLU 84	-0.05	-0.03	22.51	0	0	0
191	SLE RA 1	-0.04	-0.05	14.72	0	0	0
191	SLE RA 2	-0.04	-0.03	14.72	0	0	0
191	SLE RA 3	-0.04	-0.04	14.9	0	0	0
191	SLE RA 4	-0.04	-0.04	14.9	0	0	0
191	SLE RA 5	-0.04	-0.03	14.84	0	0	0
191	SLE RA 6	-0.04	-0.04	15.02	0	0	0
191	SLE RA 7	-0.04	-0.04	15.02	0	0	0
191	SLE RA 8	-0.04	-0.05	14.95	0	0	0
191	SLE RA 9	-0.04	-0.04	14.96	0	0	0
191	SLE RA 10	-0.03	-0.03	16	0	0	0
191	SLE RA 11	-0.04	-0.04	16.17	0	0	0
191	SLE RA 12	-0.03	-0.03	16.18	0	0	0
191	SLE RA 13	-0.03	-0.03	16.12	0	0	0
191	SLE RA 14	-0.04	-0.04	16.29	0	0	0
191	SLE RA 15	-0.04	-0.03	16.29	0	0	0
191	SLE RA 16	-0.04	-0.04	16.23	0	0	0
191	SLE RA 17	-0.03	-0.04	16.23	0	0	0
191	SLE RA 18	-0.03	-0.04	16.54	0	0	0
191	SLE RA 19	-0.03	-0.03	16.54	0	0	0
191	SLE RA 20	-0.03	-0.04	16.66	0	0	0
191	SLE RA 21	-0.03	-0.03	16.66	0	0	0
191	SLE FR 1	-0.04	-0.05	14.72	0	0	0
191	SLE FR 2	-0.04	-0.04	14.72	0	0	0
191	SLE FR 3	-0.04	-0.05	14.76	0	0	0
191	SLE FR 4	-0.04	-0.04	15.27	0	0	0
191	SLE FR 5	-0.04	-0.04	15.31	0	0	0
191	SLE FR 6	-0.04	-0.04	15.63	0	0	0
191	SLE QP 1	-0.04	-0.05	14.72	0	0	0
191	SLE QP 2	-0.04	-0.04	15.26	0	0	0
191	SLD 1	1.21	0.13	15.57	0	0	0
191	SLD 2	1.28	0.11	15.56	0	0	0
191	SLD 3	1.24	-0.3	15.36	0	0	0
191	SLD 4	1.31	-0.33	15.35	0	0	0
191	SLD 5	0.28	0.67	15.68	0	0	0
191	SLD 6	0.32	0.66	15.67	0	0	0
191	SLD 7	0.38	-0.78	14.97	0	0	0
191	SLD 8	0.43	-0.79	14.97	0	0	0
191	SLD 9	-0.5	0.7	15.56	0	0	0
191	SLD 10	-0.46	0.69	15.55	0	0	0
191	SLD 11	-0.39	-0.74	14.86	0	0	0
191	SLD 12	-0.35	-0.76	14.85	0	0	0
191	SLD 13	-1.38	0.24	15.18	0	0	0
191	SLD 14	-1.31	0.22	15.17	0	0	0
191	SLD 15	-1.35	-0.2	14.96	0	0	0
191	SLD 16	-1.28	-0.22	14.96	0	0	0
191	SLV 1	2.87	0.35	15.98	0	0	0
191	SLV 2	3.03	0.3	15.96	0	0	0
191	SLV 3	2.95	-0.64	15.5	0	0	0
191	SLV 4	3.11	-0.69	15.48	0	0	0
191	SLV 5	0.69	1.58	16.21	0	0	0
191	SLV 6	0.8	1.55	16.2	0	0	0
191	SLV 7	0.95	-1.71	14.61	0	0	0
191	SLV 8	1.05	-1.75	14.6	0	0	0
191	SLV 9	-1.12	1.66	15.93	0	0	0
191	SLV 10	-1.02	1.62	15.92	0	0	0
191	SLV 11	-0.87	-1.64	14.33	0	0	0
191	SLV 12	-0.77	-1.67	14.32	0	0	0
191	SLV 13	-3.18	0.6	15.05	0	0	0
191	SLV 14	-3.02	0.55	15.03	0	0	0
191	SLV 15	-3.1	-0.39	14.57	0	0	0
191	SLV 16	-2.95	-0.44	14.55	0	0	0
192	SLU 1	-0.03	-0.03	14.3	0	0	0
192	SLU 2	-0.03	-0.01	14.31	0	0	0
192	SLU 3	-0.03	-0.03	14.57	0	0	0
192	SLU 4	-0.03	-0.01	14.58	0	0	0
192	SLU 5	-0.03	-0.01	14.48	0	0	0
192	SLU 6	-0.04	-0.03	14.75	0	0	0
192	SLU 7	-0.03	-0.01	14.75	0	0	0
192	SLU 8	-0.03	-0.03	14.65	0	0	0
192	SLU 9	-0.03	-0.02	14.66	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
192	SLU 10	-0.03	0	16.23	0	0	0
192	SLU 11	-0.03	-0.01	16.5	0	0	0
192	SLU 12	-0.03	0	16.5	0	0	0
192	SLU 13	-0.03	0	16.41	0	0	0
192	SLU 14	-0.03	-0.02	16.67	0	0	0
192	SLU 15	-0.03	0	16.68	0	0	0
192	SLU 16	-0.03	-0.02	16.58	0	0	0
192	SLU 17	-0.03	-0.01	16.58	0	0	0
192	SLU 18	-0.03	-0.01	17.05	0	0	0
192	SLU 19	-0.03	0	17.05	0	0	0
192	SLU 20	-0.03	-0.02	17.23	0	0	0
192	SLU 21	-0.03	0	17.23	0	0	0
192	SLU 22	-0.04	-0.01	15.94	0	0	0
192	SLU 23	-0.04	0.01	15.95	0	0	0
192	SLU 24	-0.04	0	16.21	0	0	0
192	SLU 25	-0.04	0.01	16.22	0	0	0
192	SLU 26	-0.04	0.01	16.13	0	0	0
192	SLU 27	-0.04	0	16.39	0	0	0
192	SLU 28	-0.04	0.01	16.4	0	0	0
192	SLU 29	-0.04	-0.01	16.29	0	0	0
192	SLU 30	-0.04	0	16.3	0	0	0
192	SLU 31	-0.04	0.02	17.87	0	0	0
192	SLU 32	-0.04	0.01	18.14	0	0	0
192	SLU 33	-0.04	0.02	18.14	0	0	0
192	SLU 34	-0.04	0.02	18.05	0	0	0
192	SLU 35	-0.04	0.01	18.31	0	0	0
192	SLU 36	-0.04	0.02	18.32	0	0	0
192	SLU 37	-0.04	0	18.22	0	0	0
192	SLU 38	-0.04	0.01	18.23	0	0	0
192	SLU 39	-0.04	0.01	18.69	0	0	0
192	SLU 40	-0.04	0.02	18.69	0	0	0
192	SLU 41	-0.04	0.01	18.87	0	0	0
192	SLU 42	-0.04	0.02	18.87	0	0	0
192	SLU 43	-0.04	-0.05	18.02	0	0	0
192	SLU 44	-0.04	-0.03	18.03	0	0	0
192	SLU 45	-0.04	-0.04	18.3	0	0	0
192	SLU 46	-0.04	-0.03	18.3	0	0	0
192	SLU 47	-0.04	-0.03	18.21	0	0	0
192	SLU 48	-0.04	-0.04	18.47	0	0	0
192	SLU 49	-0.04	-0.03	18.48	0	0	0
192	SLU 50	-0.04	-0.05	18.38	0	0	0
192	SLU 51	-0.04	-0.04	18.39	0	0	0
192	SLU 52	-0.04	-0.02	19.96	0	0	0
192	SLU 53	-0.04	-0.03	20.22	0	0	0
192	SLU 54	-0.04	-0.02	20.23	0	0	0
192	SLU 55	-0.04	-0.02	20.14	0	0	0
192	SLU 56	-0.04	-0.03	20.4	0	0	0
192	SLU 57	-0.04	-0.02	20.41	0	0	0
192	SLU 58	-0.04	-0.04	20.3	0	0	0
192	SLU 59	-0.04	-0.03	20.31	0	0	0
192	SLU 60	-0.04	-0.03	20.77	0	0	0
192	SLU 61	-0.04	-0.02	20.78	0	0	0
192	SLU 62	-0.04	-0.03	20.95	0	0	0
192	SLU 63	-0.04	-0.02	20.96	0	0	0
192	SLU 64	-0.05	-0.02	19.66	0	0	0
192	SLU 65	-0.05	0	19.67	0	0	0
192	SLU 66	-0.05	-0.02	19.94	0	0	0
192	SLU 67	-0.05	-0.01	19.94	0	0	0
192	SLU 68	-0.05	0	19.85	0	0	0
192	SLU 69	-0.05	-0.02	20.12	0	0	0
192	SLU 70	-0.05	-0.01	20.12	0	0	0
192	SLU 71	-0.05	-0.03	20.02	0	0	0
192	SLU 72	-0.05	-0.01	20.03	0	0	0
192	SLU 73	-0.05	0.01	21.6	0	0	0
192	SLU 74	-0.05	-0.01	21.86	0	0	0
192	SLU 75	-0.05	0	21.87	0	0	0
192	SLU 76	-0.05	0.01	21.78	0	0	0
192	SLU 77	-0.05	-0.01	22.04	0	0	0
192	SLU 78	-0.05	0	22.05	0	0	0
192	SLU 79	-0.05	-0.02	21.95	0	0	0
192	SLU 80	-0.05	0	21.95	0	0	0
192	SLU 81	-0.05	-0.01	22.41	0	0	0
192	SLU 82	-0.05	0	22.42	0	0	0
192	SLU 83	-0.05	-0.01	22.59	0	0	0
192	SLU 84	-0.05	0	22.6	0	0	0
192	SLE RA 1	-0.04	-0.02	14.77	0	0	0
192	SLE RA 2	-0.04	-0.01	14.77	0	0	0
192	SLE RA 3	-0.04	-0.02	14.95	0	0	0
192	SLE RA 4	-0.04	-0.01	14.95	0	0	0
192	SLE RA 5	-0.04	-0.01	14.89	0	0	0
192	SLE RA 6	-0.04	-0.02	15.07	0	0	0
192	SLE RA 7	-0.04	-0.01	15.07	0	0	0
192	SLE RA 8	-0.04	-0.02	15	0	0	0
192	SLE RA 9	-0.04	-0.02	15.01	0	0	0
192	SLE RA 10	-0.03	0	16.06	0	0	0
192	SLE RA 11	-0.04	-0.01	16.23	0	0	0
192	SLE RA 12	-0.03	-0.01	16.24	0	0	0
192	SLE RA 13	-0.03	0	16.17	0	0	0
192	SLE RA 14	-0.04	-0.01	16.35	0	0	0
192	SLE RA 15	-0.03	-0.01	16.35	0	0	0
192	SLE RA 16	-0.04	-0.02	16.29	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
192	SLE RA 17	-0.03	-0.01	16.29	0	0	0
192	SLE RA 18	-0.03	-0.01	16.6	0	0	0
192	SLE RA 19	-0.03	-0.01	16.6	0	0	0
192	SLE RA 20	-0.03	-0.01	16.72	0	0	0
192	SLE RA 21	-0.03	-0.01	16.72	0	0	0
192	SLE FR 1	-0.04	-0.02	14.77	0	0	0
192	SLE FR 2	-0.04	-0.02	14.77	0	0	0
192	SLE FR 3	-0.04	-0.02	14.81	0	0	0
192	SLE FR 4	-0.04	-0.02	15.32	0	0	0
192	SLE FR 5	-0.04	-0.02	15.36	0	0	0
192	SLE FR 6	-0.04	-0.02	15.68	0	0	0
192	SLE QP 1	-0.04	-0.02	14.77	0	0	0
192	SLE QP 2	-0.04	-0.02	15.32	0	0	0
192	SLD 1	1.2	0.16	15.55	0	0	0
192	SLD 2	1.27	0.14	15.54	0	0	0
192	SLD 3	1.23	-0.27	15.33	0	0	0
192	SLD 4	1.3	-0.29	15.33	0	0	0
192	SLD 5	0.27	0.69	15.71	0	0	0
192	SLD 6	0.32	0.68	15.7	0	0	0
192	SLD 7	0.38	-0.75	15	0	0	0
192	SLD 8	0.43	-0.76	14.99	0	0	0
192	SLD 9	-0.5	0.72	15.64	0	0	0
192	SLD 10	-0.45	0.71	15.63	0	0	0
192	SLD 11	-0.39	-0.72	14.93	0	0	0
192	SLD 12	-0.35	-0.73	14.92	0	0	0
192	SLD 13	-1.37	0.25	15.31	0	0	0
192	SLD 14	-1.3	0.23	15.3	0	0	0
192	SLD 15	-1.34	-0.18	15.09	0	0	0
192	SLD 16	-1.27	-0.2	15.08	0	0	0
192	SLV 1	2.85	0.39	15.85	0	0	0
192	SLV 2	3.01	0.35	15.83	0	0	0
192	SLV 3	2.93	-0.59	15.37	0	0	0
192	SLV 4	3.09	-0.64	15.35	0	0	0
192	SLV 5	0.69	1.6	16.21	0	0	0
192	SLV 6	0.79	1.58	16.2	0	0	0
192	SLV 7	0.94	-1.68	14.6	0	0	0
192	SLV 8	1.04	-1.71	14.59	0	0	0
192	SLV 9	-1.11	1.67	16.04	0	0	0
192	SLV 10	-1.01	1.64	16.03	0	0	0
192	SLV 11	-0.86	-1.62	14.43	0	0	0
192	SLV 12	-0.76	-1.64	14.42	0	0	0
192	SLV 13	-3.16	0.6	15.28	0	0	0
192	SLV 14	-3	0.55	15.26	0	0	0
192	SLV 15	-3.08	-0.39	14.8	0	0	0
192	SLV 16	-2.92	-0.43	14.78	0	0	0
194	SLU 1	-0.02	-0.1	7.13	0	0	0
194	SLU 2	-0.02	-0.09	7.13	0	0	0
194	SLU 3	-0.02	-0.1	7.27	0	0	0
194	SLU 4	-0.02	-0.09	7.27	0	0	0
194	SLU 5	-0.02	-0.09	7.22	0	0	0
194	SLU 6	-0.02	-0.1	7.35	0	0	0
194	SLU 7	-0.02	-0.1	7.35	0	0	0
194	SLU 8	-0.02	-0.1	7.3	0	0	0
194	SLU 9	-0.02	-0.1	7.3	0	0	0
194	SLU 10	-0.02	-0.09	8.08	0	0	0
194	SLU 11	-0.02	-0.11	8.22	0	0	0
194	SLU 12	-0.02	-0.1	8.22	0	0	0
194	SLU 13	-0.02	-0.1	8.17	0	0	0
194	SLU 14	-0.02	-0.11	8.3	0	0	0
194	SLU 15	-0.02	-0.1	8.3	0	0	0
194	SLU 16	-0.02	-0.11	8.25	0	0	0
194	SLU 17	-0.02	-0.1	8.25	0	0	0
194	SLU 18	-0.02	-0.11	8.49	0	0	0
194	SLU 19	-0.02	-0.1	8.49	0	0	0
194	SLU 20	-0.02	-0.11	8.57	0	0	0
194	SLU 21	-0.02	-0.1	8.57	0	0	0
194	SLU 22	-0.02	-0.1	7.97	0	0	0
194	SLU 23	-0.02	-0.09	7.97	0	0	0
194	SLU 24	-0.02	-0.1	8.1	0	0	0
194	SLU 25	-0.02	-0.09	8.1	0	0	0
194	SLU 26	-0.02	-0.09	8.05	0	0	0
194	SLU 27	-0.02	-0.1	8.19	0	0	0
194	SLU 28	-0.02	-0.1	8.19	0	0	0
194	SLU 29	-0.02	-0.1	8.14	0	0	0
194	SLU 30	-0.02	-0.1	8.14	0	0	0
194	SLU 31	-0.02	-0.09	8.92	0	0	0
194	SLU 32	-0.02	-0.11	9.05	0	0	0
194	SLU 33	-0.02	-0.1	9.05	0	0	0
194	SLU 34	-0.02	-0.1	9	0	0	0
194	SLU 35	-0.02	-0.11	9.14	0	0	0
194	SLU 36	-0.02	-0.1	9.14	0	0	0
194	SLU 37	-0.02	-0.11	9.09	0	0	0
194	SLU 38	-0.02	-0.1	9.09	0	0	0
194	SLU 39	-0.02	-0.11	9.32	0	0	0
194	SLU 40	-0.02	-0.1	9.32	0	0	0
194	SLU 41	-0.02	-0.11	9.41	0	0	0
194	SLU 42	-0.02	-0.1	9.41	0	0	0
194	SLU 43	-0.02	-0.13	8.99	0	0	0
194	SLU 44	-0.02	-0.12	8.99	0	0	0
194	SLU 45	-0.03	-0.13	9.12	0	0	0
194	SLU 46	-0.02	-0.12	9.12	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
194	SLU 47	-0.02	-0.12	9.07	0	0	0
194	SLU 48	-0.03	-0.13	9.21	0	0	0
194	SLU 49	-0.02	-0.13	9.21	0	0	0
194	SLU 50	-0.02	-0.13	9.16	0	0	0
194	SLU 51	-0.02	-0.13	9.16	0	0	0
194	SLU 52	-0.02	-0.12	9.93	0	0	0
194	SLU 53	-0.02	-0.14	10.07	0	0	0
194	SLU 54	-0.02	-0.13	10.07	0	0	0
194	SLU 55	-0.02	-0.13	10.02	0	0	0
194	SLU 56	-0.02	-0.14	10.16	0	0	0
194	SLU 57	-0.02	-0.13	10.16	0	0	0
194	SLU 58	-0.02	-0.14	10.11	0	0	0
194	SLU 59	-0.02	-0.13	10.11	0	0	0
194	SLU 60	-0.02	-0.14	10.34	0	0	0
194	SLU 61	-0.02	-0.13	10.34	0	0	0
194	SLU 62	-0.02	-0.14	10.43	0	0	0
194	SLU 63	-0.02	-0.13	10.43	0	0	0
194	SLU 64	-0.03	-0.13	9.82	0	0	0
194	SLU 65	-0.03	-0.12	9.82	0	0	0
194	SLU 66	-0.03	-0.13	9.96	0	0	0
194	SLU 67	-0.03	-0.12	9.96	0	0	0
194	SLU 68	-0.03	-0.12	9.91	0	0	0
194	SLU 69	-0.03	-0.13	10.04	0	0	0
194	SLU 70	-0.03	-0.13	10.04	0	0	0
194	SLU 71	-0.03	-0.13	9.99	0	0	0
194	SLU 72	-0.03	-0.13	9.99	0	0	0
194	SLU 73	-0.03	-0.12	10.77	0	0	0
194	SLU 74	-0.03	-0.14	10.9	0	0	0
194	SLU 75	-0.03	-0.13	10.9	0	0	0
194	SLU 76	-0.03	-0.13	10.85	0	0	0
194	SLU 77	-0.03	-0.14	10.99	0	0	0
194	SLU 78	-0.03	-0.13	10.99	0	0	0
194	SLU 79	-0.03	-0.14	10.94	0	0	0
194	SLU 80	-0.03	-0.13	10.94	0	0	0
194	SLU 81	-0.03	-0.14	11.18	0	0	0
194	SLU 82	-0.03	-0.13	11.17	0	0	0
194	SLU 83	-0.03	-0.14	11.26	0	0	0
194	SLU 84	-0.03	-0.13	11.26	0	0	0
194	SLE RA 1	-0.02	-0.1	7.37	0	0	0
194	SLE RA 2	-0.02	-0.09	7.37	0	0	0
194	SLE RA 3	-0.02	-0.1	7.46	0	0	0
194	SLE RA 4	-0.02	-0.1	7.46	0	0	0
194	SLE RA 5	-0.02	-0.09	7.43	0	0	0
194	SLE RA 6	-0.02	-0.1	7.52	0	0	0
194	SLE RA 7	-0.02	-0.1	7.52	0	0	0
194	SLE RA 8	-0.02	-0.1	7.49	0	0	0
194	SLE RA 9	-0.02	-0.1	7.49	0	0	0
194	SLE RA 10	-0.02	-0.1	8	0	0	0
194	SLE RA 11	-0.02	-0.1	8.09	0	0	0
194	SLE RA 12	-0.02	-0.1	8.09	0	0	0
194	SLE RA 13	-0.02	-0.1	8.06	0	0	0
194	SLE RA 14	-0.02	-0.11	8.15	0	0	0
194	SLE RA 15	-0.02	-0.1	8.15	0	0	0
194	SLE RA 16	-0.02	-0.11	8.12	0	0	0
194	SLE RA 17	-0.02	-0.1	8.12	0	0	0
194	SLE RA 18	-0.02	-0.11	8.27	0	0	0
194	SLE RA 19	-0.02	-0.1	8.27	0	0	0
194	SLE RA 20	-0.02	-0.11	8.33	0	0	0
194	SLE RA 21	-0.02	-0.1	8.33	0	0	0
194	SLE FR 1	-0.02	-0.1	7.37	0	0	0
194	SLE FR 2	-0.02	-0.1	7.37	0	0	0
194	SLE FR 3	-0.02	-0.1	7.39	0	0	0
194	SLE FR 4	-0.02	-0.1	7.64	0	0	0
194	SLE FR 5	-0.02	-0.1	7.66	0	0	0
194	SLE FR 6	-0.02	-0.1	7.82	0	0	0
194	SLE QP 1	-0.02	-0.1	7.37	0	0	0
194	SLE QP 2	-0.02	-0.1	7.64	0	0	0
194	SLD 1	0.58	-0.04	8.13	0	0	0
194	SLD 2	0.62	-0.07	8.12	0	0	0
194	SLD 3	0.6	-0.25	8.02	0	0	0
194	SLD 4	0.63	-0.27	8.02	0	0	0
194	SLD 5	0.13	0.23	7.95	0	0	0
194	SLD 6	0.15	0.22	7.94	0	0	0
194	SLD 7	0.18	-0.46	7.6	0	0	0
194	SLD 8	0.2	-0.47	7.6	0	0	0
194	SLD 9	-0.25	0.27	7.69	0	0	0
194	SLD 10	-0.22	0.25	7.68	0	0	0
194	SLD 11	-0.19	-0.42	7.34	0	0	0
194	SLD 12	-0.17	-0.44	7.34	0	0	0
194	SLD 13	-0.67	0.07	7.26	0	0	0
194	SLD 14	-0.64	0.05	7.26	0	0	0
194	SLD 15	-0.66	-0.14	7.16	0	0	0
194	SLD 16	-0.62	-0.16	7.16	0	0	0
194	SLV 1	1.39	0.03	8.77	0	0	0
194	SLV 2	1.47	-0.02	8.77	0	0	0
194	SLV 3	1.43	-0.44	8.54	0	0	0
194	SLV 4	1.5	-0.5	8.53	0	0	0
194	SLV 5	0.33	0.66	8.34	0	0	0
194	SLV 6	0.38	0.63	8.33	0	0	0
194	SLV 7	0.46	-0.91	7.56	0	0	0
194	SLV 8	0.51	-0.95	7.55	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
194	SLV 9	-0.55	0.74	7.73	0	0	0
194	SLV 10	-0.5	0.71	7.73	0	0	0
194	SLV 11	-0.42	-0.83	6.95	0	0	0
194	SLV 12	-0.37	-0.87	6.94	0	0	0
194	SLV 13	-1.54	0.29	6.75	0	0	0
194	SLV 14	-1.47	0.24	6.74	0	0	0
194	SLV 15	-1.51	-0.18	6.52	0	0	0
194	SLV 16	-1.43	-0.23	6.51	0	0	0
195	SLU 1	-0.02	0	7.21	0	1.0827	0.0005
195	SLU 2	-0.02	0.01	7.21	0	1.0836	-0.0009
195	SLU 3	-0.02	0	7.35	0	1.1035	0.0002
195	SLU 4	-0.02	0	7.35	0	1.104	-0.0007
195	SLU 5	-0.02	0.01	7.3	0	1.0972	-0.0008
195	SLU 6	-0.02	0	7.44	0	1.117	0.0002
195	SLU 7	-0.02	0	7.44	0	1.1176	-0.0006
195	SLU 8	-0.02	0	7.39	0	1.1099	0.0007
195	SLU 9	-0.02	0	7.39	0	1.1104	-0.0001
195	SLU 10	-0.01	0.01	8.19	0	1.23	-0.0019
195	SLU 11	-0.02	0.01	8.32	0	1.2499	-0.0008
195	SLU 12	-0.02	0.01	8.32	0	1.2504	-0.0017
195	SLU 13	-0.01	0.01	8.28	0	1.2436	-0.0018
195	SLU 14	-0.02	0	8.41	0	1.2634	-0.0007
195	SLU 15	-0.02	0.01	8.41	0	1.2639	-0.0016
195	SLU 16	-0.02	0	8.36	0	1.2562	-0.0003
195	SLU 17	-0.02	0.01	8.37	0	1.2568	-0.0011
195	SLU 18	-0.02	0.01	8.6	0	1.2918	-0.0009
195	SLU 19	-0.01	0.01	8.6	0	1.2924	-0.0017
195	SLU 20	-0.02	0.01	8.69	0	1.3054	-0.0008
195	SLU 21	-0.01	0.01	8.69	0	1.3059	-0.0016
195	SLU 22	-0.02	0.01	8.04	0	1.2071	-0.0015
195	SLU 23	-0.02	0.02	8.04	0	1.208	-0.003
195	SLU 24	-0.02	0.01	8.17	0	1.2278	-0.0019
195	SLU 25	-0.02	0.02	8.18	0	1.2283	-0.0028
195	SLU 26	-0.02	0.02	8.13	0	1.2215	-0.0029
195	SLU 27	-0.02	0.01	8.26	0	1.2414	-0.0018
195	SLU 28	-0.02	0.02	8.27	0	1.2419	-0.0027
195	SLU 29	-0.02	0.01	8.22	0	1.2342	-0.0014
195	SLU 30	-0.02	0.01	8.22	0	1.2347	-0.0022
195	SLU 31	-0.02	0.03	9.02	0	1.3543	-0.004
195	SLU 32	-0.02	0.02	9.15	0	1.3742	-0.0029
195	SLU 33	-0.02	0.02	9.15	0	1.3747	-0.0038
195	SLU 34	-0.02	0.03	9.11	0	1.3679	-0.0039
195	SLU 35	-0.02	0.02	9.24	0	1.3878	-0.0028
195	SLU 36	-0.02	0.02	9.24	0	1.3883	-0.0037
195	SLU 37	-0.02	0.02	9.19	0	1.3806	-0.0023
195	SLU 38	-0.02	0.02	9.19	0	1.3811	-0.0032
195	SLU 39	-0.02	0.02	9.43	0	1.4162	-0.0029
195	SLU 40	-0.02	0.03	9.43	0	1.4167	-0.0038
195	SLU 41	-0.02	0.02	9.52	0	1.4297	-0.0029
195	SLU 42	-0.02	0.02	9.52	0	1.4303	-0.0037
195	SLU 43	-0.02	-0.01	9.09	0	1.3649	0.0014
195	SLU 44	-0.02	0	9.09	0	1.3658	0
195	SLU 45	-0.02	-0.01	9.22	0	1.3857	0.001
195	SLU 46	-0.02	0	9.23	0	1.3862	0.0002
195	SLU 47	-0.02	0	9.18	0	1.3794	0.0001
195	SLU 48	-0.02	-0.01	9.31	0	1.3992	0.0011
195	SLU 49	-0.02	0	9.32	0	1.3998	0.0003
195	SLU 50	-0.02	-0.01	9.27	0	1.392	0.0016
195	SLU 51	-0.02	0	9.27	0	1.3926	0.0007
195	SLU 52	-0.02	0.01	10.07	0	1.5122	-0.001
195	SLU 53	-0.02	0	10.2	0	1.532	0
195	SLU 54	-0.02	0.01	10.2	0	1.5326	-0.0008
195	SLU 55	-0.02	0.01	10.16	0	1.5257	-0.0009
195	SLU 56	-0.02	0	10.29	0	1.5456	0.0001
195	SLU 57	-0.02	0	10.29	0	1.5461	-0.0007
195	SLU 58	-0.02	0	10.24	0	1.5384	0.0006
195	SLU 59	-0.02	0	10.24	0	1.539	-0.0003
195	SLU 60	-0.02	0	10.48	0	1.574	0
195	SLU 61	-0.02	0.01	10.48	0	1.5746	-0.0009
195	SLU 62	-0.02	0	10.57	0	1.5876	0.0001
195	SLU 63	-0.02	0.01	10.57	0	1.5881	-0.0008
195	SLU 64	-0.02	0	9.91	0	1.4893	-0.0007
195	SLU 65	-0.02	0.01	9.92	0	1.4902	-0.0021
195	SLU 66	-0.02	0.01	10.05	0	1.51	-0.001
195	SLU 67	-0.02	0.01	10.06	0	1.5105	-0.0019
195	SLU 68	-0.02	0.01	10.01	0	1.5037	-0.002
195	SLU 69	-0.02	0.01	10.14	0	1.5236	-0.001
195	SLU 70	-0.02	0.01	10.15	0	1.5241	-0.0018
195	SLU 71	-0.02	0	10.09	0	1.5164	-0.0005
195	SLU 72	-0.02	0.01	10.1	0	1.5169	-0.0014
195	SLU 73	-0.02	0.02	10.89	0	1.6365	-0.0031
195	SLU 74	-0.02	0.01	11.03	0	1.6564	-0.002
195	SLU 75	-0.02	0.02	11.03	0	1.6569	-0.0029
195	SLU 76	-0.02	0.02	10.98	0	1.6501	-0.003
195	SLU 77	-0.02	0.01	11.12	0	1.6699	-0.0019
195	SLU 78	-0.02	0.02	11.12	0	1.6705	-0.0028
195	SLU 79	-0.02	0.01	11.07	0	1.6628	-0.0015
195	SLU 80	-0.02	0.02	11.07	0	1.6633	-0.0023
195	SLU 81	-0.02	0.01	11.31	0	1.6984	-0.0021
195	SLU 82	-0.02	0.02	11.31	0	1.6989	-0.0029
195	SLU 83	-0.02	0.01	11.4	0	1.7119	-0.002

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
195	SLU 84	-0.02	0.02	11.4	0	1.7125	-0.0028
195	SLE RA 1	-0.02	0	7.44	0	1.1183	-0.0001
195	SLE RA 2	-0.02	0.01	7.45	0	1.1189	-0.001
195	SLE RA 3	-0.02	0	7.54	0	1.1321	-0.0003
195	SLE RA 4	-0.02	0.01	7.54	0	1.1324	-0.0009
195	SLE RA 5	-0.02	0.01	7.51	0	1.1279	-0.001
195	SLE RA 6	-0.02	0	7.6	0	1.1411	-0.0003
195	SLE RA 7	-0.02	0.01	7.6	0	1.1415	-0.0008
195	SLE RA 8	-0.02	0	7.56	0	1.1363	0.0001
195	SLE RA 9	-0.02	0	7.57	0	1.1367	-0.0005
195	SLE RA 10	-0.02	0.01	8.1	0	1.2164	-0.0017
195	SLE RA 11	-0.02	0.01	8.19	0	1.2297	-0.001
195	SLE RA 12	-0.02	0.01	8.19	0	1.23	-0.0015
195	SLE RA 13	-0.02	0.01	8.16	0	1.2255	-0.0016
195	SLE RA 14	-0.02	0.01	8.25	0	1.2387	-0.0009
195	SLE RA 15	-0.02	0.01	8.25	0	1.2391	-0.0015
195	SLE RA 16	-0.02	0	8.21	0	1.2339	-0.0006
195	SLE RA 17	-0.02	0.01	8.22	0	1.2343	-0.0012
195	SLE RA 18	-0.02	0.01	8.37	0	1.2577	-0.001
195	SLE RA 19	-0.02	0.01	8.37	0	1.258	-0.0016
195	SLE RA 20	-0.02	0.01	8.43	0	1.2667	-0.0009
195	SLE RA 21	-0.02	0.01	8.43	0	1.2671	-0.0015
195	SLE FR 1	-0.02	0	7.44	0	1.1183	-0.0001
195	SLE FR 2	-0.02	0	7.45	0	1.1184	-0.0003
195	SLE FR 3	-0.02	0	7.47	0	1.1219	0
195	SLE FR 4	-0.02	0	7.72	0	1.1602	-0.0005
195	SLE FR 5	-0.02	0	7.75	0	1.1637	-0.0003
195	SLE FR 6	-0.02	0	7.91	0	1.188	-0.0005
195	SLE QP 1	-0.02	0	7.44	0	1.1183	-0.0001
195	SLE QP 2	-0.02	0	7.72	0	1.1601	-0.0003
195	SLD 1	0.6	0.1	7.81	0	1.1733	-0.0144
195	SLD 2	0.63	0.09	7.81	0	1.1727	-0.0133
195	SLD 3	0.61	-0.12	7.7	0	1.1571	0.0181
195	SLD 4	0.65	-0.13	7.7	0	1.1565	0.0192
195	SLD 5	0.14	0.36	7.91	0	1.1888	-0.054
195	SLD 6	0.16	0.35	7.91	0	1.1884	-0.0533
195	SLD 7	0.19	-0.36	7.55	0	1.1347	0.0543
195	SLD 8	0.21	-0.37	7.55	0	1.1343	0.055
195	SLD 9	-0.25	0.37	7.89	0	1.1859	-0.0557
195	SLD 10	-0.22	0.37	7.89	0	1.1855	-0.055
195	SLD 11	-0.19	-0.35	7.53	0	1.1318	0.0526
195	SLD 12	-0.17	-0.36	7.53	0	1.1314	0.0533
195	SLD 13	-0.68	0.13	7.75	0	1.1637	-0.0199
195	SLD 14	-0.65	0.13	7.74	0	1.1631	-0.0188
195	SLD 15	-0.67	-0.08	7.64	0	1.1475	0.0126
195	SLD 16	-0.63	-0.09	7.63	0	1.1469	0.0137
195	SLV 1	1.42	0.21	7.93	0	1.1906	-0.0322
195	SLV 2	1.5	0.2	7.92	0	1.1893	-0.0296
195	SLV 3	1.46	-0.28	7.68	0	1.1537	0.0418
195	SLV 4	1.54	-0.3	7.67	0	1.1524	0.0444
195	SLV 5	0.34	0.82	8.16	0	1.2255	-0.1226
195	SLV 6	0.39	0.81	8.15	0	1.2246	-0.121
195	SLV 7	0.47	-0.83	7.34	0	1.1024	0.1242
195	SLV 8	0.52	-0.84	7.33	0	1.1016	0.1258
195	SLV 9	-0.55	0.84	8.11	0	1.2186	-0.1265
195	SLV 10	-0.5	0.83	8.11	0	1.2177	-0.1249
195	SLV 11	-0.43	-0.8	7.29	0	1.0956	0.1203
195	SLV 12	-0.38	-0.81	7.29	0	1.0947	0.1219
195	SLV 13	-1.57	0.3	7.77	0	1.1678	-0.0451
195	SLV 14	-1.49	0.28	7.76	0	1.1664	-0.0425
195	SLV 15	-1.54	-0.19	7.53	0	1.1309	0.0289
195	SLV 16	-1.46	-0.21	7.52	0	1.1295	0.0315
197	SLU 1	0.04	-0.13	37.58	0.8383	9.7008	0.0267
197	SLU 2	0.03	-0.07	37.62	0.8389	9.7097	0.0127
197	SLU 3	0.04	-0.12	38.3	0.8543	9.8865	0.0244
197	SLU 4	0.04	-0.08	38.32	0.8547	9.8918	0.0161
197	SLU 5	0.03	-0.08	38.08	0.8493	9.8304	0.014
197	SLU 6	0.04	-0.12	38.77	0.8646	10.0072	0.0257
197	SLU 7	0.04	-0.09	38.79	0.865	10.0125	0.0173
197	SLU 8	0.04	-0.14	38.52	0.8589	9.9422	0.0292
197	SLU 9	0.03	-0.1	38.54	0.8593	9.9476	0.0208
197	SLU 10	0.04	-0.03	42.61	0.9511	11.0041	0.0027
197	SLU 11	0.04	-0.08	43.3	0.9664	11.1808	0.0143
197	SLU 12	0.04	-0.05	43.32	0.9668	11.1862	0.006
197	SLU 13	0.03	-0.04	43.08	0.9614	11.1248	0.0039
197	SLU 14	0.04	-0.09	43.76	0.9768	11.3015	0.0156
197	SLU 15	0.04	-0.05	43.78	0.9772	11.3069	0.0072
197	SLU 16	0.04	-0.1	43.51	0.9711	11.2365	0.0191
197	SLU 17	0.03	-0.07	43.53	0.9715	11.2419	0.0107
197	SLU 18	0.04	-0.07	44.72	0.9985	11.5498	0.0123
197	SLU 19	0.04	-0.04	44.74	0.9989	11.5552	0.0039
197	SLU 20	0.04	-0.08	45.19	1.0088	11.6705	0.0135
197	SLU 21	0.04	-0.04	45.21	1.0092	11.6759	0.0052
197	SLU 22	0.05	-0.08	41.86	0.9337	10.8043	0.014
197	SLU 23	0.05	-0.03	41.89	0.9344	10.8132	0.0001
197	SLU 24	0.05	-0.07	42.58	0.9497	10.99	0.0117
197	SLU 25	0.05	-0.04	42.6	0.9501	10.9953	0.0034
197	SLU 26	0.05	-0.03	42.36	0.9447	10.9339	0.0013
197	SLU 27	0.05	-0.08	43.04	0.96	11.1107	0.013
197	SLU 28	0.05	-0.04	43.06	0.9604	11.116	0.0046
197	SLU 29	0.05	-0.09	42.79	0.9544	11.0457	0.0165

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
197	SLU 30	0.05	-0.06	42.81	0.9548	11.051	0.0081
197	SLU 31	0.05	0.01	46.89	1.0465	12.1076	-0.01
197	SLU 32	0.06	-0.03	47.57	1.0619	12.2843	0.0016
197	SLU 33	0.05	0	47.59	1.0623	12.2897	-0.0067
197	SLU 34	0.05	0.01	47.35	1.0569	12.2283	-0.0088
197	SLU 35	0.05	-0.04	48.04	1.0722	12.405	0.0029
197	SLU 36	0.05	-0.01	48.06	1.0726	12.4104	-0.0055
197	SLU 37	0.05	-0.05	47.79	1.0665	12.34	0.0064
197	SLU 38	0.05	-0.02	47.81	1.0669	12.3454	-0.0019
197	SLU 39	0.05	-0.03	49	1.0939	12.6533	-0.0004
197	SLU 40	0.05	0.01	49.01	1.0943	12.6587	-0.0088
197	SLU 41	0.05	-0.03	49.46	1.1043	12.774	0.0008
197	SLU 42	0.05	0	49.48	1.1047	12.7794	-0.0075
197	SLU 43	0.04	-0.18	47.39	1.057	12.2327	0.039
197	SLU 44	0.04	-0.12	47.43	1.0577	12.2416	0.0251
197	SLU 45	0.04	-0.17	48.11	1.073	12.4184	0.0368
197	SLU 46	0.04	-0.14	48.13	1.0734	12.4238	0.0284
197	SLU 47	0.04	-0.13	47.89	1.068	12.3623	0.0264
197	SLU 48	0.04	-0.18	48.58	1.0834	12.5391	0.038
197	SLU 49	0.04	-0.14	48.6	1.0838	12.5445	0.0297
197	SLU 50	0.04	-0.19	48.33	1.0777	12.4741	0.0415
197	SLU 51	0.04	-0.16	48.35	1.0781	12.4795	0.0332
197	SLU 52	0.04	-0.09	52.42	1.1699	13.536	0.015
197	SLU 53	0.05	-0.13	53.11	1.1852	13.7127	0.0267
197	SLU 54	0.04	-0.1	53.13	1.1856	13.7181	0.0183
197	SLU 55	0.04	-0.09	52.89	1.1802	13.6567	0.0163
197	SLU 56	0.04	-0.14	53.57	1.1955	13.8334	0.0279
197	SLU 57	0.04	-0.11	53.59	1.1959	13.8388	0.0196
197	SLU 58	0.04	-0.15	53.32	1.1899	13.7684	0.0315
197	SLU 59	0.04	-0.12	53.34	1.1903	13.7738	0.0231
197	SLU 60	0.05	-0.13	54.53	1.2173	14.0818	0.0246
197	SLU 61	0.04	-0.09	54.55	1.2177	14.0871	0.0163
197	SLU 62	0.04	-0.13	55	1.2276	14.2025	0.0259
197	SLU 63	0.04	-0.1	55.02	1.228	14.2078	0.0175
197	SLU 64	0.06	-0.13	51.67	1.1525	13.3362	0.0264
197	SLU 65	0.06	-0.08	51.7	1.1531	13.3451	0.0124
197	SLU 66	0.06	-0.12	52.39	1.1685	13.5219	0.0241
197	SLU 67	0.06	-0.09	52.41	1.1689	13.5272	0.0157
197	SLU 68	0.05	-0.08	52.17	1.1635	13.4658	0.0137
197	SLU 69	0.06	-0.13	52.85	1.1788	13.6426	0.0253
197	SLU 70	0.06	-0.1	52.87	1.1792	13.6479	0.017
197	SLU 71	0.06	-0.14	52.6	1.1731	13.5776	0.0289
197	SLU 72	0.05	-0.11	52.62	1.1735	13.5829	0.0205
197	SLU 73	0.06	-0.04	56.7	1.2653	14.6395	0.0023
197	SLU 74	0.06	-0.09	57.38	1.2806	14.8162	0.014
197	SLU 75	0.06	-0.05	57.4	1.281	14.8216	0.0056
197	SLU 76	0.06	-0.05	57.16	1.2756	14.7602	0.0036
197	SLU 77	0.06	-0.09	57.85	1.291	14.9369	0.0153
197	SLU 78	0.06	-0.06	57.87	1.2914	14.9423	0.0069
197	SLU 79	0.06	-0.11	57.6	1.2853	14.8719	0.0188
197	SLU 80	0.06	-0.07	57.62	1.2857	14.8773	0.0104
197	SLU 81	0.06	-0.08	58.81	1.3127	15.1852	0.0119
197	SLU 82	0.06	-0.05	58.82	1.3131	15.1906	0.0036
197	SLU 83	0.06	-0.09	59.27	1.323	15.3059	0.0132
197	SLU 84	0.06	-0.05	59.29	1.3234	15.3113	0.0048
197	SLE RA 1	0.04	-0.11	38.81	0.8655	10.0161	0.0231
197	SLE RA 2	0.04	-0.08	38.83	0.866	10.022	0.0138
197	SLE RA 3	0.04	-0.11	39.28	0.8762	10.1399	0.0215
197	SLE RA 4	0.04	-0.08	39.3	0.8765	10.1434	0.016
197	SLE RA 5	0.04	-0.08	39.14	0.8729	10.1025	0.0146
197	SLE RA 6	0.04	-0.11	39.59	0.8831	10.2203	0.0224
197	SLE RA 7	0.04	-0.09	39.61	0.8834	10.2239	0.0168
197	SLE RA 8	0.04	-0.12	39.43	0.8793	10.177	0.0247
197	SLE RA 9	0.04	-0.1	39.44	0.8796	10.1806	0.0192
197	SLE RA 10	0.04	-0.05	42.16	0.9408	10.8849	0.007
197	SLE RA 11	0.04	-0.08	42.61	0.951	11.0028	0.0148
197	SLE RA 12	0.04	-0.06	42.63	0.9512	11.0063	0.0092
197	SLE RA 13	0.04	-0.05	42.47	0.9476	10.9654	0.0079
197	SLE RA 14	0.04	-0.09	42.93	0.9579	11.0832	0.0157
197	SLE RA 15	0.04	-0.06	42.94	0.9581	11.0868	0.0101
197	SLE RA 16	0.04	-0.09	42.76	0.9541	11.0399	0.018
197	SLE RA 17	0.04	-0.07	42.77	0.9544	11.0435	0.0124
197	SLE RA 18	0.04	-0.08	43.56	0.9724	11.2488	0.0135
197	SLE RA 19	0.04	-0.06	43.58	0.9726	11.2524	0.0079
197	SLE RA 20	0.04	-0.08	43.87	0.9792	11.3292	0.0143
197	SLE RA 21	0.04	-0.06	43.89	0.9795	11.3328	0.0087
197	SLE FR 1	0.04	-0.11	38.81	0.8655	10.0161	0.0231
197	SLE FR 2	0.04	-0.1	38.81	0.8656	10.0173	0.0212
197	SLE FR 3	0.04	-0.11	38.93	0.8683	10.0483	0.0234
197	SLE FR 4	0.04	-0.09	40.24	0.8977	10.3871	0.0183
197	SLE FR 5	0.04	-0.1	40.36	0.9003	10.4181	0.0205
197	SLE FR 6	0.04	-0.09	41.18	0.9189	10.6324	0.0183
197	SLE QP 1	0.04	-0.11	38.81	0.8655	10.0161	0.0231
197	SLE QP 2	0.04	-0.1	40.23	0.8976	10.3859	0.0202
197	SLD 1	3.43	0.54	40.2	0.8981	10.4068	-0.1999
197	SLD 2	3.62	0.56	40.21	0.8982	10.4084	-0.208
197	SLD 3	3.52	-0.62	39.62	0.8867	10.2557	0.0986
197	SLD 4	3.7	-0.6	39.63	0.8868	10.2573	0.0904
197	SLD 5	0.89	1.84	41.1	0.915	10.6211	-0.4971
197	SLD 6	1.01	1.86	41.11	0.9151	10.6221	-0.5024
197	SLD 7	1.19	-2.01	39.17	0.877	10.1173	0.4978

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
197	SLD 8	1.31	-2	39.17	0.8771	10.1184	0.4925
197	SLD 9	-1.22	1.8	41.29	0.9181	10.6534	-0.4522
197	SLD 10	-1.1	1.81	41.3	0.9182	10.6544	-0.4574
197	SLD 11	-0.93	-2.06	39.36	0.8801	10.1496	0.5427
197	SLD 12	-0.81	-2.05	39.36	0.8802	10.1507	0.5375
197	SLD 13	-3.62	0.39	40.84	0.9083	10.5145	-0.0501
197	SLD 14	-3.44	0.41	40.84	0.9085	10.5161	-0.0582
197	SLD 15	-3.53	-0.76	40.25	0.8969	10.3633	0.2484
197	SLD 16	-3.35	-0.74	40.26	0.8971	10.365	0.2403
197	SLV 1	7.97	1.36	40.14	0.8984	10.4293	-0.4855
197	SLV 2	8.4	1.41	40.16	0.8987	10.4331	-0.5044
197	SLV 3	8.18	-1.27	38.82	0.8725	10.0858	0.1943
197	SLV 4	8.61	-1.22	38.84	0.8728	10.0896	0.1754
197	SLV 5	2.04	4.33	42.21	0.9371	10.9193	-1.1594
197	SLV 6	2.31	4.36	42.22	0.9372	10.9217	-1.1715
197	SLV 7	2.72	-4.46	37.8	0.8507	9.7742	1.1067
197	SLV 8	2.99	-4.43	37.82	0.8509	9.7767	1.0946
197	SLV 9	-2.91	4.22	42.65	0.9443	10.9951	-1.0543
197	SLV 10	-2.64	4.25	42.66	0.9445	10.9976	-1.0663
197	SLV 11	-2.23	-4.56	38.25	0.8579	9.8501	1.2118
197	SLV 12	-1.95	-4.53	38.26	0.8581	9.8525	1.1998
197	SLV 13	-8.52	1.02	41.62	0.9224	10.6822	-0.1351
197	SLV 14	-8.09	1.07	41.64	0.9227	10.686	-0.154
197	SLV 15	-8.32	-1.61	40.3	0.8965	10.3386	0.5448
197	SLV 16	-7.89	-1.57	40.32	0.8968	10.3425	0.5259
197	CRTFP Ux+	0	0	0	0	0	0
197	CRTFP Ux-	0	0	0	0	0	0
197	CRTFP Uy+	0	0	0	0	0	0
197	CRTFP Uy-	0	0	0	0	0	0
199	SLU 1	0.02	-0.07	13.92	0	0	0
199	SLU 2	0.01	-0.05	13.93	0	0	0
199	SLU 3	0.02	-0.07	14.18	0	0	0
199	SLU 4	0.02	-0.06	14.19	0	0	0
199	SLU 5	0.01	-0.06	14.1	0	0	0
199	SLU 6	0.02	-0.07	14.36	0	0	0
199	SLU 7	0.02	-0.06	14.36	0	0	0
199	SLU 8	0.02	-0.08	14.26	0	0	0
199	SLU 9	0.01	-0.07	14.27	0	0	0
199	SLU 10	0.02	-0.04	15.76	0	0	0
199	SLU 11	0.02	-0.06	16.02	0	0	0
199	SLU 12	0.02	-0.05	16.02	0	0	0
199	SLU 13	0.01	-0.04	15.94	0	0	0
199	SLU 14	0.02	-0.06	16.19	0	0	0
199	SLU 15	0.02	-0.05	16.2	0	0	0
199	SLU 16	0.02	-0.07	16.1	0	0	0
199	SLU 17	0.01	-0.06	16.1	0	0	0
199	SLU 18	0.02	-0.06	16.54	0	0	0
199	SLU 19	0.02	-0.05	16.55	0	0	0
199	SLU 20	0.02	-0.06	16.71	0	0	0
199	SLU 21	0.02	-0.05	16.72	0	0	0
199	SLU 22	0.02	-0.06	15.5	0	0	0
199	SLU 23	0.02	-0.04	15.51	0	0	0
199	SLU 24	0.02	-0.06	15.77	0	0	0
199	SLU 25	0.02	-0.05	15.77	0	0	0
199	SLU 26	0.02	-0.04	15.68	0	0	0
199	SLU 27	0.02	-0.06	15.94	0	0	0
199	SLU 28	0.02	-0.05	15.94	0	0	0
199	SLU 29	0.02	-0.06	15.84	0	0	0
199	SLU 30	0.02	-0.05	15.85	0	0	0
199	SLU 31	0.02	-0.03	17.35	0	0	0
199	SLU 32	0.02	-0.05	17.6	0	0	0
199	SLU 33	0.02	-0.03	17.61	0	0	0
199	SLU 34	0.02	-0.03	17.52	0	0	0
199	SLU 35	0.02	-0.05	17.77	0	0	0
199	SLU 36	0.02	-0.04	17.78	0	0	0
199	SLU 37	0.02	-0.05	17.68	0	0	0
199	SLU 38	0.02	-0.04	17.69	0	0	0
199	SLU 39	0.02	-0.05	18.12	0	0	0
199	SLU 40	0.02	-0.03	18.13	0	0	0
199	SLU 41	0.02	-0.05	18.29	0	0	0
199	SLU 42	0.02	-0.03	18.3	0	0	0
199	SLU 43	0.02	-0.1	17.55	0	0	0
199	SLU 44	0.02	-0.08	17.56	0	0	0
199	SLU 45	0.02	-0.1	17.82	0	0	0
199	SLU 46	0.02	-0.09	17.82	0	0	0
199	SLU 47	0.02	-0.08	17.73	0	0	0
199	SLU 48	0.02	-0.1	17.99	0	0	0
199	SLU 49	0.02	-0.09	17.99	0	0	0
199	SLU 50	0.02	-0.1	17.9	0	0	0
199	SLU 51	0.02	-0.09	17.9	0	0	0
199	SLU 52	0.02	-0.07	19.4	0	0	0
199	SLU 53	0.02	-0.09	19.65	0	0	0
199	SLU 54	0.02	-0.07	19.66	0	0	0
199	SLU 55	0.02	-0.07	19.57	0	0	0
199	SLU 56	0.02	-0.09	19.82	0	0	0
199	SLU 57	0.02	-0.08	19.83	0	0	0
199	SLU 58	0.02	-0.09	19.73	0	0	0
199	SLU 59	0.02	-0.08	19.74	0	0	0
199	SLU 60	0.02	-0.09	20.17	0	0	0
199	SLU 61	0.02	-0.07	20.18	0	0	0
199	SLU 62	0.02	-0.09	20.35	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
199	SLU 63	0.02	-0.07	20.35	0	0	0
199	SLU 64	0.02	-0.09	19.13	0	0	0
199	SLU 65	0.02	-0.07	19.14	0	0	0
199	SLU 66	0.03	-0.08	19.4	0	0	0
199	SLU 67	0.02	-0.07	19.41	0	0	0
199	SLU 68	0.02	-0.07	19.32	0	0	0
199	SLU 69	0.02	-0.09	19.57	0	0	0
199	SLU 70	0.02	-0.07	19.58	0	0	0
199	SLU 71	0.02	-0.09	19.48	0	0	0
199	SLU 72	0.02	-0.08	19.48	0	0	0
199	SLU 73	0.02	-0.06	20.98	0	0	0
199	SLU 74	0.03	-0.07	21.23	0	0	0
199	SLU 75	0.02	-0.06	21.24	0	0	0
199	SLU 76	0.02	-0.06	21.15	0	0	0
199	SLU 77	0.03	-0.08	21.41	0	0	0
199	SLU 78	0.02	-0.06	21.41	0	0	0
199	SLU 79	0.02	-0.08	21.31	0	0	0
199	SLU 80	0.02	-0.07	21.32	0	0	0
199	SLU 81	0.03	-0.07	21.76	0	0	0
199	SLU 82	0.02	-0.06	21.76	0	0	0
199	SLU 83	0.03	-0.07	21.93	0	0	0
199	SLU 84	0.02	-0.06	21.93	0	0	0
199	SLE RA 1	0.02	-0.07	14.37	0	0	0
199	SLE RA 2	0.02	-0.06	14.38	0	0	0
199	SLE RA 3	0.02	-0.07	14.55	0	0	0
199	SLE RA 4	0.02	-0.06	14.55	0	0	0
199	SLE RA 5	0.02	-0.06	14.49	0	0	0
199	SLE RA 6	0.02	-0.07	14.66	0	0	0
199	SLE RA 7	0.02	-0.06	14.67	0	0	0
199	SLE RA 8	0.02	-0.07	14.6	0	0	0
199	SLE RA 9	0.02	-0.06	14.6	0	0	0
199	SLE RA 10	0.02	-0.05	15.6	0	0	0
199	SLE RA 11	0.02	-0.06	15.77	0	0	0
199	SLE RA 12	0.02	-0.05	15.78	0	0	0
199	SLE RA 13	0.02	-0.05	15.72	0	0	0
199	SLE RA 14	0.02	-0.06	15.89	0	0	0
199	SLE RA 15	0.02	-0.05	15.89	0	0	0
199	SLE RA 16	0.02	-0.07	15.82	0	0	0
199	SLE RA 17	0.02	-0.06	15.83	0	0	0
199	SLE RA 18	0.02	-0.06	16.12	0	0	0
199	SLE RA 19	0.02	-0.05	16.12	0	0	0
199	SLE RA 20	0.02	-0.06	16.23	0	0	0
199	SLE RA 21	0.02	-0.05	16.24	0	0	0
199	SLE FR 1	0.02	-0.07	14.37	0	0	0
199	SLE FR 2	0.02	-0.07	14.37	0	0	0
199	SLE FR 3	0.02	-0.07	14.42	0	0	0
199	SLE FR 4	0.02	-0.06	14.9	0	0	0
199	SLE FR 5	0.02	-0.07	14.94	0	0	0
199	SLE FR 6	0.02	-0.06	15.25	0	0	0
199	SLE QP 1	0.02	-0.07	14.37	0	0	0
199	SLE QP 2	0.02	-0.07	14.9	0	0	0
199	SLD 1	1.28	0.18	14.79	0	0	0
199	SLD 2	1.35	0.19	14.79	0	0	0
199	SLD 3	1.31	-0.25	14.57	0	0	0
199	SLD 4	1.38	-0.23	14.58	0	0	0
199	SLD 5	0.33	0.65	15.18	0	0	0
199	SLD 6	0.38	0.66	15.19	0	0	0
199	SLD 7	0.44	-0.77	14.48	0	0	0
199	SLD 8	0.49	-0.76	14.48	0	0	0
199	SLD 9	-0.45	0.63	15.31	0	0	0
199	SLD 10	-0.41	0.64	15.31	0	0	0
199	SLD 11	-0.34	-0.8	14.6	0	0	0
199	SLD 12	-0.3	-0.79	14.61	0	0	0
199	SLD 13	-1.35	0.1	15.21	0	0	0
199	SLD 14	-1.28	0.12	15.22	0	0	0
199	SLD 15	-1.31	-0.33	15	0	0	0
199	SLD 16	-1.24	-0.31	15.01	0	0	0
199	SLV 1	2.97	0.49	14.63	0	0	0
199	SLV 2	3.13	0.53	14.64	0	0	0
199	SLV 3	3.05	-0.48	14.15	0	0	0
199	SLV 4	3.21	-0.44	14.16	0	0	0
199	SLV 5	0.76	1.57	15.55	0	0	0
199	SLV 6	0.86	1.59	15.55	0	0	0
199	SLV 7	1.02	-1.67	13.94	0	0	0
199	SLV 8	1.12	-1.65	13.95	0	0	0
199	SLV 9	-1.08	1.52	15.84	0	0	0
199	SLV 10	-0.98	1.54	15.85	0	0	0
199	SLV 11	-0.83	-1.73	14.24	0	0	0
199	SLV 12	-0.72	-1.7	14.25	0	0	0
199	SLV 13	-3.17	0.31	15.63	0	0	0
199	SLV 14	-3.01	0.35	15.64	0	0	0
199	SLV 15	-3.09	-0.66	15.15	0	0	0
199	SLV 16	-2.93	-0.63	15.16	0	0	0
200	SLU 1	0.02	-0.09	13.96	0	0	0
200	SLU 2	0.02	-0.07	13.97	0	0	0
200	SLU 3	0.02	-0.08	14.23	0	0	0
200	SLU 4	0.02	-0.07	14.23	0	0	0
200	SLU 5	0.02	-0.07	14.14	0	0	0
200	SLU 6	0.02	-0.09	14.4	0	0	0
200	SLU 7	0.02	-0.07	14.4	0	0	0
200	SLU 8	0.02	-0.09	14.3	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
200	SLU 9	0.02	-0.08	14.31	0	0	0
200	SLU 10	0.02	-0.06	15.8	0	0	0
200	SLU 11	0.02	-0.08	16.06	0	0	0
200	SLU 12	0.02	-0.06	16.07	0	0	0
200	SLU 13	0.02	-0.06	15.98	0	0	0
200	SLU 14	0.02	-0.08	16.23	0	0	0
200	SLU 15	0.02	-0.07	16.24	0	0	0
200	SLU 16	0.02	-0.08	16.14	0	0	0
200	SLU 17	0.02	-0.07	16.14	0	0	0
200	SLU 18	0.02	-0.07	16.58	0	0	0
200	SLU 19	0.02	-0.06	16.59	0	0	0
200	SLU 20	0.02	-0.08	16.75	0	0	0
200	SLU 21	0.02	-0.06	16.76	0	0	0
200	SLU 22	0.02	-0.07	15.55	0	0	0
200	SLU 23	0.02	-0.05	15.56	0	0	0
200	SLU 24	0.02	-0.07	15.81	0	0	0
200	SLU 25	0.02	-0.06	15.82	0	0	0
200	SLU 26	0.02	-0.06	15.73	0	0	0
200	SLU 27	0.02	-0.08	15.99	0	0	0
200	SLU 28	0.02	-0.06	15.99	0	0	0
200	SLU 29	0.02	-0.08	15.89	0	0	0
200	SLU 30	0.02	-0.07	15.9	0	0	0
200	SLU 31	0.02	-0.04	17.39	0	0	0
200	SLU 32	0.03	-0.06	17.65	0	0	0
200	SLU 33	0.02	-0.05	17.65	0	0	0
200	SLU 34	0.02	-0.05	17.56	0	0	0
200	SLU 35	0.02	-0.07	17.82	0	0	0
200	SLU 36	0.02	-0.05	17.82	0	0	0
200	SLU 37	0.02	-0.07	17.73	0	0	0
200	SLU 38	0.02	-0.06	17.73	0	0	0
200	SLU 39	0.03	-0.06	18.17	0	0	0
200	SLU 40	0.02	-0.05	18.17	0	0	0
200	SLU 41	0.02	-0.06	18.34	0	0	0
200	SLU 42	0.02	-0.05	18.35	0	0	0
200	SLU 43	0.02	-0.12	17.61	0	0	0
200	SLU 44	0.02	-0.1	17.61	0	0	0
200	SLU 45	0.02	-0.11	17.87	0	0	0
200	SLU 46	0.02	-0.1	17.88	0	0	0
200	SLU 47	0.02	-0.1	17.79	0	0	0
200	SLU 48	0.02	-0.12	18.04	0	0	0
200	SLU 49	0.02	-0.1	18.05	0	0	0
200	SLU 50	0.02	-0.12	17.95	0	0	0
200	SLU 51	0.02	-0.11	17.95	0	0	0
200	SLU 52	0.02	-0.09	19.45	0	0	0
200	SLU 53	0.02	-0.11	19.71	0	0	0
200	SLU 54	0.02	-0.09	19.71	0	0	0
200	SLU 55	0.02	-0.09	19.62	0	0	0
200	SLU 56	0.02	-0.11	19.88	0	0	0
200	SLU 57	0.02	-0.1	19.88	0	0	0
200	SLU 58	0.02	-0.11	19.78	0	0	0
200	SLU 59	0.02	-0.1	19.79	0	0	0
200	SLU 60	0.02	-0.1	20.23	0	0	0
200	SLU 61	0.02	-0.09	20.23	0	0	0
200	SLU 62	0.02	-0.11	20.4	0	0	0
200	SLU 63	0.02	-0.09	20.4	0	0	0
200	SLU 64	0.03	-0.1	19.19	0	0	0
200	SLU 65	0.03	-0.08	19.2	0	0	0
200	SLU 66	0.03	-0.1	19.46	0	0	0
200	SLU 67	0.03	-0.09	19.46	0	0	0
200	SLU 68	0.03	-0.09	19.37	0	0	0
200	SLU 69	0.03	-0.11	19.63	0	0	0
200	SLU 70	0.03	-0.09	19.63	0	0	0
200	SLU 71	0.03	-0.11	19.54	0	0	0
200	SLU 72	0.03	-0.1	19.54	0	0	0
200	SLU 73	0.03	-0.07	21.04	0	0	0
200	SLU 74	0.03	-0.09	21.29	0	0	0
200	SLU 75	0.03	-0.08	21.3	0	0	0
200	SLU 76	0.03	-0.08	21.21	0	0	0
200	SLU 77	0.03	-0.1	21.46	0	0	0
200	SLU 78	0.03	-0.08	21.47	0	0	0
200	SLU 79	0.03	-0.1	21.37	0	0	0
200	SLU 80	0.03	-0.09	21.38	0	0	0
200	SLU 81	0.03	-0.09	21.81	0	0	0
200	SLU 82	0.03	-0.08	21.82	0	0	0
200	SLU 83	0.03	-0.09	21.98	0	0	0
200	SLU 84	0.03	-0.08	21.99	0	0	0
200	SLE RA 1	0.02	-0.08	14.42	0	0	0
200	SLE RA 2	0.02	-0.07	14.42	0	0	0
200	SLE RA 3	0.02	-0.08	14.59	0	0	0
200	SLE RA 4	0.02	-0.07	14.6	0	0	0
200	SLE RA 5	0.02	-0.07	14.54	0	0	0
200	SLE RA 6	0.02	-0.08	14.71	0	0	0
200	SLE RA 7	0.02	-0.07	14.71	0	0	0
200	SLE RA 8	0.02	-0.09	14.64	0	0	0
200	SLE RA 9	0.02	-0.08	14.65	0	0	0
200	SLE RA 10	0.02	-0.06	15.64	0	0	0
200	SLE RA 11	0.02	-0.08	15.81	0	0	0
200	SLE RA 12	0.02	-0.07	15.82	0	0	0
200	SLE RA 13	0.02	-0.06	15.76	0	0	0
200	SLE RA 14	0.02	-0.08	15.93	0	0	0
200	SLE RA 15	0.02	-0.07	15.93	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
200	SLE RA 16	0.02	-0.08	15.87	0	0	0
200	SLE RA 17	0.02	-0.07	15.87	0	0	0
200	SLE RA 18	0.02	-0.07	16.16	0	0	0
200	SLE RA 19	0.02	-0.07	16.17	0	0	0
200	SLE RA 20	0.02	-0.08	16.28	0	0	0
200	SLE RA 21	0.02	-0.07	16.28	0	0	0
200	SLE FR 1	0.02	-0.08	14.42	0	0	0
200	SLE FR 2	0.02	-0.08	14.42	0	0	0
200	SLE FR 3	0.02	-0.08	14.46	0	0	0
200	SLE FR 4	0.02	-0.08	14.94	0	0	0
200	SLE FR 5	0.02	-0.08	14.99	0	0	0
200	SLE FR 6	0.02	-0.08	15.29	0	0	0
200	SLE QP 1	0.02	-0.08	14.42	0	0	0
200	SLE QP 2	0.02	-0.08	14.94	0	0	0
200	SLD 1	1.29	0.17	14.77	0	0	0
200	SLD 2	1.36	0.19	14.77	0	0	0
200	SLD 3	1.32	-0.25	14.56	0	0	0
200	SLD 4	1.39	-0.24	14.56	0	0	0
200	SLD 5	0.34	0.64	15.2	0	0	0
200	SLD 6	0.38	0.65	15.21	0	0	0
200	SLD 7	0.45	-0.79	14.51	0	0	0
200	SLD 8	0.49	-0.77	14.51	0	0	0
200	SLD 9	-0.45	0.61	15.37	0	0	0
200	SLD 10	-0.41	0.62	15.37	0	0	0
200	SLD 11	-0.34	-0.81	14.67	0	0	0
200	SLD 12	-0.3	-0.8	14.67	0	0	0
200	SLD 13	-1.35	0.07	15.32	0	0	0
200	SLD 14	-1.28	0.09	15.32	0	0	0
200	SLD 15	-1.32	-0.35	15.11	0	0	0
200	SLD 16	-1.25	-0.33	15.11	0	0	0
200	SLV 1	2.99	0.5	14.53	0	0	0
200	SLV 2	3.15	0.54	14.54	0	0	0
200	SLV 3	3.07	-0.48	14.05	0	0	0
200	SLV 4	3.23	-0.43	14.06	0	0	0
200	SLV 5	0.77	1.56	15.54	0	0	0
200	SLV 6	0.87	1.59	15.54	0	0	0
200	SLV 7	1.02	-1.68	13.95	0	0	0
200	SLV 8	1.13	-1.66	13.96	0	0	0
200	SLV 9	-1.09	1.49	15.92	0	0	0
200	SLV 10	-0.98	1.52	15.93	0	0	0
200	SLV 11	-0.83	-1.75	14.34	0	0	0
200	SLV 12	-0.73	-1.72	14.34	0	0	0
200	SLV 13	-3.19	0.27	15.81	0	0	0
200	SLV 14	-3.03	0.31	15.83	0	0	0
200	SLV 15	-3.11	-0.71	15.34	0	0	0
200	SLV 16	-2.95	-0.66	15.35	0	0	0
201	SLU 1	0.02	-0.1	13.98	0	0	0
201	SLU 2	0.02	-0.08	13.99	0	0	0
201	SLU 3	0.02	-0.1	14.25	0	0	0
201	SLU 4	0.02	-0.08	14.25	0	0	0
201	SLU 5	0.02	-0.08	14.16	0	0	0
201	SLU 6	0.02	-0.1	14.42	0	0	0
201	SLU 7	0.02	-0.09	14.42	0	0	0
201	SLU 8	0.02	-0.1	14.33	0	0	0
201	SLU 9	0.02	-0.09	14.33	0	0	0
201	SLU 10	0.02	-0.07	15.82	0	0	0
201	SLU 11	0.02	-0.09	16.08	0	0	0
201	SLU 12	0.02	-0.08	16.08	0	0	0
201	SLU 13	0.02	-0.07	15.99	0	0	0
201	SLU 14	0.02	-0.09	16.25	0	0	0
201	SLU 15	0.02	-0.08	16.25	0	0	0
201	SLU 16	0.02	-0.1	16.16	0	0	0
201	SLU 17	0.02	-0.08	16.16	0	0	0
201	SLU 18	0.02	-0.09	16.6	0	0	0
201	SLU 19	0.02	-0.08	16.6	0	0	0
201	SLU 20	0.02	-0.09	16.77	0	0	0
201	SLU 21	0.02	-0.08	16.77	0	0	0
201	SLU 22	0.03	-0.09	15.57	0	0	0
201	SLU 23	0.02	-0.07	15.58	0	0	0
201	SLU 24	0.03	-0.09	15.84	0	0	0
201	SLU 25	0.03	-0.07	15.84	0	0	0
201	SLU 26	0.02	-0.07	15.75	0	0	0
201	SLU 27	0.03	-0.09	16.01	0	0	0
201	SLU 28	0.03	-0.08	16.01	0	0	0
201	SLU 29	0.03	-0.09	15.92	0	0	0
201	SLU 30	0.02	-0.08	15.92	0	0	0
201	SLU 31	0.03	-0.06	17.41	0	0	0
201	SLU 32	0.03	-0.08	17.67	0	0	0
201	SLU 33	0.03	-0.07	17.67	0	0	0
201	SLU 34	0.02	-0.06	17.58	0	0	0
201	SLU 35	0.03	-0.08	17.84	0	0	0
201	SLU 36	0.03	-0.07	17.84	0	0	0
201	SLU 37	0.03	-0.09	17.75	0	0	0
201	SLU 38	0.03	-0.07	17.75	0	0	0
201	SLU 39	0.03	-0.08	18.19	0	0	0
201	SLU 40	0.03	-0.07	18.19	0	0	0
201	SLU 41	0.03	-0.08	18.36	0	0	0
201	SLU 42	0.03	-0.07	18.36	0	0	0
201	SLU 43	0.02	-0.13	17.63	0	0	0
201	SLU 44	0.02	-0.11	17.64	0	0	0
201	SLU 45	0.02	-0.13	17.9	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
201	SLU 46	0.02	-0.12	17.9	0	0	0
201	SLU 47	0.02	-0.11	17.81	0	0	0
201	SLU 48	0.02	-0.13	18.07	0	0	0
201	SLU 49	0.02	-0.12	18.07	0	0	0
201	SLU 50	0.02	-0.14	17.98	0	0	0
201	SLU 51	0.02	-0.13	17.98	0	0	0
201	SLU 52	0.02	-0.1	19.47	0	0	0
201	SLU 53	0.02	-0.12	19.73	0	0	0
201	SLU 54	0.02	-0.11	19.73	0	0	0
201	SLU 55	0.02	-0.11	19.64	0	0	0
201	SLU 56	0.02	-0.13	19.9	0	0	0
201	SLU 57	0.02	-0.11	19.9	0	0	0
201	SLU 58	0.02	-0.13	19.81	0	0	0
201	SLU 59	0.02	-0.12	19.81	0	0	0
201	SLU 60	0.02	-0.12	20.25	0	0	0
201	SLU 61	0.02	-0.11	20.25	0	0	0
201	SLU 62	0.02	-0.12	20.42	0	0	0
201	SLU 63	0.02	-0.11	20.42	0	0	0
201	SLU 64	0.03	-0.12	19.22	0	0	0
201	SLU 65	0.03	-0.1	19.23	0	0	0
201	SLU 66	0.03	-0.12	19.49	0	0	0
201	SLU 67	0.03	-0.11	19.49	0	0	0
201	SLU 68	0.03	-0.1	19.4	0	0	0
201	SLU 69	0.03	-0.12	19.66	0	0	0
201	SLU 70	0.03	-0.11	19.66	0	0	0
201	SLU 71	0.03	-0.13	19.57	0	0	0
201	SLU 72	0.03	-0.11	19.57	0	0	0
201	SLU 73	0.03	-0.09	21.06	0	0	0
201	SLU 74	0.03	-0.11	21.32	0	0	0
201	SLU 75	0.03	-0.1	21.32	0	0	0
201	SLU 76	0.03	-0.1	21.23	0	0	0
201	SLU 77	0.03	-0.12	21.49	0	0	0
201	SLU 78	0.03	-0.1	21.49	0	0	0
201	SLU 79	0.03	-0.12	21.4	0	0	0
201	SLU 80	0.03	-0.11	21.4	0	0	0
201	SLU 81	0.03	-0.11	21.84	0	0	0
201	SLU 82	0.03	-0.1	21.84	0	0	0
201	SLU 83	0.03	-0.11	22.01	0	0	0
201	SLU 84	0.03	-0.1	22.01	0	0	0
201	SLE RA 1	0.02	-0.1	14.44	0	0	0
201	SLE RA 2	0.02	-0.08	14.44	0	0	0
201	SLE RA 3	0.02	-0.1	14.62	0	0	0
201	SLE RA 4	0.02	-0.09	14.62	0	0	0
201	SLE RA 5	0.02	-0.08	14.56	0	0	0
201	SLE RA 6	0.02	-0.1	14.73	0	0	0
201	SLE RA 7	0.02	-0.09	14.73	0	0	0
201	SLE RA 8	0.02	-0.1	14.67	0	0	0
201	SLE RA 9	0.02	-0.09	14.67	0	0	0
201	SLE RA 10	0.02	-0.08	15.66	0	0	0
201	SLE RA 11	0.02	-0.09	15.84	0	0	0
201	SLE RA 12	0.02	-0.08	15.84	0	0	0
201	SLE RA 13	0.02	-0.08	15.78	0	0	0
201	SLE RA 14	0.02	-0.09	15.95	0	0	0
201	SLE RA 15	0.02	-0.08	15.95	0	0	0
201	SLE RA 16	0.02	-0.09	15.89	0	0	0
201	SLE RA 17	0.02	-0.09	15.89	0	0	0
201	SLE RA 18	0.02	-0.09	16.18	0	0	0
201	SLE RA 19	0.02	-0.08	16.18	0	0	0
201	SLE RA 20	0.02	-0.09	16.3	0	0	0
201	SLE RA 21	0.02	-0.08	16.3	0	0	0
201	SLE FR 1	0.02	-0.1	14.44	0	0	0
201	SLE FR 2	0.02	-0.09	14.44	0	0	0
201	SLE FR 3	0.02	-0.1	14.48	0	0	0
201	SLE FR 4	0.02	-0.09	14.96	0	0	0
201	SLE FR 5	0.02	-0.09	15.01	0	0	0
201	SLE FR 6	0.02	-0.09	15.31	0	0	0
201	SLE QP 1	0.02	-0.1	14.44	0	0	0
201	SLE QP 2	0.02	-0.09	14.96	0	0	0
201	SLD 1	1.3	0.17	14.72	0	0	0
201	SLD 2	1.36	0.19	14.72	0	0	0
201	SLD 3	1.33	-0.26	14.51	0	0	0
201	SLD 4	1.4	-0.24	14.51	0	0	0
201	SLD 5	0.34	0.63	15.2	0	0	0
201	SLD 6	0.39	0.64	15.2	0	0	0
201	SLD 7	0.45	-0.8	14.51	0	0	0
201	SLD 8	0.5	-0.78	14.51	0	0	0
201	SLD 9	-0.45	0.59	15.41	0	0	0
201	SLD 10	-0.41	0.61	15.41	0	0	0
201	SLD 11	-0.34	-0.83	14.72	0	0	0
201	SLD 12	-0.3	-0.82	14.72	0	0	0
201	SLD 13	-1.35	0.05	15.41	0	0	0
201	SLD 14	-1.29	0.07	15.41	0	0	0
201	SLD 15	-1.32	-0.38	15.2	0	0	0
201	SLD 16	-1.25	-0.36	15.21	0	0	0
201	SLV 1	3	0.5	14.38	0	0	0
201	SLV 2	3.16	0.56	14.39	0	0	0
201	SLV 3	3.08	-0.47	13.91	0	0	0
201	SLV 4	3.24	-0.41	13.92	0	0	0
201	SLV 5	0.77	1.55	15.5	0	0	0
201	SLV 6	0.87	1.59	15.5	0	0	0
201	SLV 7	1.03	-1.69	13.93	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
201	SLV 8	1.13	-1.66	13.94	0	0	0
201	SLV 9	-1.09	1.47	15.98	0	0	0
201	SLV 10	-0.99	1.5	15.99	0	0	0
201	SLV 11	-0.83	-1.78	14.42	0	0	0
201	SLV 12	-0.73	-1.74	14.43	0	0	0
201	SLV 13	-3.2	0.23	16	0	0	0
201	SLV 14	-3.03	0.28	16.01	0	0	0
201	SLV 15	-3.12	-0.75	15.53	0	0	0
201	SLV 16	-2.96	-0.69	15.54	0	0	0
202	SLU 1	0.02	-0.11	13.99	0	0	0
202	SLU 2	0.02	-0.09	13.99	0	0	0
202	SLU 3	0.02	-0.11	14.25	0	0	0
202	SLU 4	0.02	-0.1	14.25	0	0	0
202	SLU 5	0.02	-0.09	14.16	0	0	0
202	SLU 6	0.02	-0.11	14.42	0	0	0
202	SLU 7	0.02	-0.1	14.42	0	0	0
202	SLU 8	0.02	-0.12	14.33	0	0	0
202	SLU 9	0.02	-0.1	14.33	0	0	0
202	SLU 10	0.02	-0.08	15.82	0	0	0
202	SLU 11	0.02	-0.11	16.07	0	0	0
202	SLU 12	0.02	-0.09	16.08	0	0	0
202	SLU 13	0.02	-0.09	15.99	0	0	0
202	SLU 14	0.02	-0.11	16.24	0	0	0
202	SLU 15	0.02	-0.1	16.25	0	0	0
202	SLU 16	0.02	-0.11	16.15	0	0	0
202	SLU 17	0.02	-0.1	16.15	0	0	0
202	SLU 18	0.02	-0.1	16.59	0	0	0
202	SLU 19	0.02	-0.09	16.6	0	0	0
202	SLU 20	0.02	-0.11	16.76	0	0	0
202	SLU 21	0.02	-0.09	16.77	0	0	0
202	SLU 22	0.03	-0.1	15.58	0	0	0
202	SLU 23	0.03	-0.08	15.58	0	0	0
202	SLU 24	0.03	-0.1	15.84	0	0	0
202	SLU 25	0.03	-0.09	15.85	0	0	0
202	SLU 26	0.03	-0.08	15.75	0	0	0
202	SLU 27	0.03	-0.1	16.01	0	0	0
202	SLU 28	0.03	-0.09	16.02	0	0	0
202	SLU 29	0.03	-0.11	15.92	0	0	0
202	SLU 30	0.03	-0.1	15.92	0	0	0
202	SLU 31	0.03	-0.08	17.41	0	0	0
202	SLU 32	0.03	-0.1	17.67	0	0	0
202	SLU 33	0.03	-0.08	17.67	0	0	0
202	SLU 34	0.03	-0.08	17.58	0	0	0
202	SLU 35	0.03	-0.1	17.84	0	0	0
202	SLU 36	0.03	-0.09	17.84	0	0	0
202	SLU 37	0.03	-0.1	17.74	0	0	0
202	SLU 38	0.03	-0.09	17.75	0	0	0
202	SLU 39	0.03	-0.09	18.19	0	0	0
202	SLU 40	0.03	-0.08	18.19	0	0	0
202	SLU 41	0.03	-0.1	18.36	0	0	0
202	SLU 42	0.03	-0.08	18.36	0	0	0
202	SLU 43	0.02	-0.15	17.64	0	0	0
202	SLU 44	0.02	-0.13	17.64	0	0	0
202	SLU 45	0.03	-0.15	17.9	0	0	0
202	SLU 46	0.02	-0.13	17.9	0	0	0
202	SLU 47	0.02	-0.13	17.81	0	0	0
202	SLU 48	0.02	-0.15	18.07	0	0	0
202	SLU 49	0.02	-0.14	18.07	0	0	0
202	SLU 50	0.02	-0.15	17.98	0	0	0
202	SLU 51	0.02	-0.14	17.98	0	0	0
202	SLU 52	0.02	-0.12	19.47	0	0	0
202	SLU 53	0.03	-0.14	19.72	0	0	0
202	SLU 54	0.03	-0.13	19.73	0	0	0
202	SLU 55	0.02	-0.12	19.64	0	0	0
202	SLU 56	0.03	-0.14	19.89	0	0	0
202	SLU 57	0.02	-0.13	19.9	0	0	0
202	SLU 58	0.02	-0.15	19.8	0	0	0
202	SLU 59	0.02	-0.14	19.8	0	0	0
202	SLU 60	0.03	-0.14	20.24	0	0	0
202	SLU 61	0.02	-0.13	20.25	0	0	0
202	SLU 62	0.03	-0.14	20.41	0	0	0
202	SLU 63	0.02	-0.13	20.42	0	0	0
202	SLU 64	0.03	-0.14	19.23	0	0	0
202	SLU 65	0.03	-0.12	19.23	0	0	0
202	SLU 66	0.03	-0.14	19.49	0	0	0
202	SLU 67	0.03	-0.13	19.5	0	0	0
202	SLU 68	0.03	-0.12	19.4	0	0	0
202	SLU 69	0.03	-0.14	19.66	0	0	0
202	SLU 70	0.03	-0.13	19.67	0	0	0
202	SLU 71	0.03	-0.15	19.57	0	0	0
202	SLU 72	0.03	-0.13	19.57	0	0	0
202	SLU 73	0.03	-0.11	21.06	0	0	0
202	SLU 74	0.03	-0.13	21.32	0	0	0
202	SLU 75	0.03	-0.12	21.32	0	0	0
202	SLU 76	0.03	-0.12	21.23	0	0	0
202	SLU 77	0.03	-0.14	21.49	0	0	0
202	SLU 78	0.03	-0.12	21.49	0	0	0
202	SLU 79	0.03	-0.14	21.39	0	0	0
202	SLU 80	0.03	-0.13	21.4	0	0	0
202	SLU 81	0.03	-0.13	21.83	0	0	0
202	SLU 82	0.03	-0.12	21.84	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
202	SLU 83	0.03	-0.13	22.01	0	0	0
202	SLU 84	0.03	-0.12	22.01	0	0	0
202	SLE RA 1	0.02	-0.11	14.44	0	0	0
202	SLE RA 2	0.02	-0.1	14.44	0	0	0
202	SLE RA 3	0.02	-0.11	14.62	0	0	0
202	SLE RA 4	0.02	-0.1	14.62	0	0	0
202	SLE RA 5	0.02	-0.1	14.56	0	0	0
202	SLE RA 6	0.02	-0.11	14.73	0	0	0
202	SLE RA 7	0.02	-0.1	14.73	0	0	0
202	SLE RA 8	0.02	-0.11	14.67	0	0	0
202	SLE RA 9	0.02	-0.1	14.67	0	0	0
202	SLE RA 10	0.02	-0.09	15.66	0	0	0
202	SLE RA 11	0.02	-0.1	15.83	0	0	0
202	SLE RA 12	0.02	-0.1	15.84	0	0	0
202	SLE RA 13	0.02	-0.09	15.77	0	0	0
202	SLE RA 14	0.02	-0.11	15.95	0	0	0
202	SLE RA 15	0.02	-0.1	15.95	0	0	0
202	SLE RA 16	0.02	-0.11	15.88	0	0	0
202	SLE RA 17	0.02	-0.1	15.89	0	0	0
202	SLE RA 18	0.02	-0.1	16.18	0	0	0
202	SLE RA 19	0.02	-0.1	16.18	0	0	0
202	SLE RA 20	0.02	-0.11	16.29	0	0	0
202	SLE RA 21	0.02	-0.1	16.29	0	0	0
202	SLE FR 1	0.02	-0.11	14.44	0	0	0
202	SLE FR 2	0.02	-0.11	14.44	0	0	0
202	SLE FR 3	0.02	-0.11	14.49	0	0	0
202	SLE FR 4	0.02	-0.1	14.96	0	0	0
202	SLE FR 5	0.02	-0.11	15.01	0	0	0
202	SLE FR 6	0.02	-0.11	15.31	0	0	0
202	SLE QP 1	0.02	-0.11	14.44	0	0	0
202	SLE QP 2	0.02	-0.11	14.96	0	0	0
202	SLD 1	1.3	0.16	14.64	0	0	0
202	SLD 2	1.37	0.19	14.64	0	0	0
202	SLD 3	1.33	-0.27	14.43	0	0	0
202	SLD 4	1.4	-0.24	14.44	0	0	0
202	SLD 5	0.34	0.61	15.17	0	0	0
202	SLD 6	0.39	0.63	15.18	0	0	0
202	SLD 7	0.45	-0.81	14.49	0	0	0
202	SLD 8	0.5	-0.79	14.5	0	0	0
202	SLD 9	-0.45	0.57	15.43	0	0	0
202	SLD 10	-0.41	0.59	15.43	0	0	0
202	SLD 11	-0.34	-0.85	14.75	0	0	0
202	SLD 12	-0.3	-0.83	14.75	0	0	0
202	SLD 13	-1.35	0.02	15.49	0	0	0
202	SLD 14	-1.28	0.05	15.49	0	0	0
202	SLD 15	-1.32	-0.4	15.28	0	0	0
202	SLD 16	-1.25	-0.38	15.29	0	0	0
202	SLV 1	3	0.51	14.19	0	0	0
202	SLV 2	3.16	0.57	14.2	0	0	0
202	SLV 3	3.08	-0.46	13.73	0	0	0
202	SLV 4	3.24	-0.4	13.74	0	0	0
202	SLV 5	0.77	1.54	15.43	0	0	0
202	SLV 6	0.87	1.58	15.44	0	0	0
202	SLV 7	1.03	-1.7	13.89	0	0	0
202	SLV 8	1.13	-1.66	13.9	0	0	0
202	SLV 9	-1.09	1.44	16.03	0	0	0
202	SLV 10	-0.98	1.48	16.04	0	0	0
202	SLV 11	-0.83	-1.79	14.49	0	0	0
202	SLV 12	-0.72	-1.75	14.49	0	0	0
202	SLV 13	-3.19	0.18	16.18	0	0	0
202	SLV 14	-3.03	0.25	16.2	0	0	0
202	SLV 15	-3.11	-0.79	15.72	0	0	0
202	SLV 16	-2.95	-0.72	15.73	0	0	0
203	SLU 1	0.02	-0.12	13.97	0	0	0
203	SLU 2	0.02	-0.1	13.97	0	0	0
203	SLU 3	0.02	-0.12	14.23	0	0	0
203	SLU 4	0.02	-0.11	14.23	0	0	0
203	SLU 5	0.02	-0.11	14.14	0	0	0
203	SLU 6	0.02	-0.13	14.4	0	0	0
203	SLU 7	0.02	-0.11	14.4	0	0	0
203	SLU 8	0.02	-0.13	14.3	0	0	0
203	SLU 9	0.02	-0.12	14.31	0	0	0
203	SLU 10	0.02	-0.1	15.79	0	0	0
203	SLU 11	0.02	-0.12	16.05	0	0	0
203	SLU 12	0.02	-0.11	16.05	0	0	0
203	SLU 13	0.02	-0.1	15.96	0	0	0
203	SLU 14	0.02	-0.12	16.22	0	0	0
203	SLU 15	0.02	-0.11	16.22	0	0	0
203	SLU 16	0.02	-0.13	16.12	0	0	0
203	SLU 17	0.02	-0.11	16.12	0	0	0
203	SLU 18	0.02	-0.12	16.56	0	0	0
203	SLU 19	0.02	-0.11	16.56	0	0	0
203	SLU 20	0.02	-0.12	16.73	0	0	0
203	SLU 21	0.02	-0.11	16.73	0	0	0
203	SLU 22	0.03	-0.12	15.56	0	0	0
203	SLU 23	0.03	-0.1	15.56	0	0	0
203	SLU 24	0.03	-0.12	15.82	0	0	0
203	SLU 25	0.03	-0.1	15.83	0	0	0
203	SLU 26	0.03	-0.1	15.73	0	0	0
203	SLU 27	0.03	-0.12	15.99	0	0	0
203	SLU 28	0.03	-0.11	15.99	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
203	SLU 29	0.03	-0.12	15.9	0	0	0
203	SLU 30	0.03	-0.11	15.9	0	0	0
203	SLU 31	0.03	-0.09	17.38	0	0	0
203	SLU 32	0.03	-0.11	17.64	0	0	0
203	SLU 33	0.03	-0.1	17.64	0	0	0
203	SLU 34	0.03	-0.09	17.55	0	0	0
203	SLU 35	0.03	-0.12	17.81	0	0	0
203	SLU 36	0.03	-0.1	17.81	0	0	0
203	SLU 37	0.03	-0.12	17.72	0	0	0
203	SLU 38	0.03	-0.11	17.72	0	0	0
203	SLU 39	0.03	-0.11	18.16	0	0	0
203	SLU 40	0.03	-0.1	18.16	0	0	0
203	SLU 41	0.03	-0.11	18.32	0	0	0
203	SLU 42	0.03	-0.1	18.33	0	0	0
203	SLU 43	0.03	-0.16	17.61	0	0	0
203	SLU 44	0.03	-0.14	17.61	0	0	0
203	SLU 45	0.03	-0.16	17.87	0	0	0
203	SLU 46	0.03	-0.15	17.87	0	0	0
203	SLU 47	0.02	-0.15	17.78	0	0	0
203	SLU 48	0.03	-0.17	18.04	0	0	0
203	SLU 49	0.03	-0.15	18.04	0	0	0
203	SLU 50	0.03	-0.17	17.95	0	0	0
203	SLU 51	0.02	-0.16	17.95	0	0	0
203	SLU 52	0.03	-0.14	19.43	0	0	0
203	SLU 53	0.03	-0.16	19.69	0	0	0
203	SLU 54	0.03	-0.15	19.69	0	0	0
203	SLU 55	0.03	-0.14	19.6	0	0	0
203	SLU 56	0.03	-0.16	19.86	0	0	0
203	SLU 57	0.03	-0.15	19.86	0	0	0
203	SLU 58	0.03	-0.17	19.76	0	0	0
203	SLU 59	0.03	-0.15	19.77	0	0	0
203	SLU 60	0.03	-0.16	20.2	0	0	0
203	SLU 61	0.03	-0.14	20.21	0	0	0
203	SLU 62	0.03	-0.16	20.37	0	0	0
203	SLU 63	0.03	-0.15	20.38	0	0	0
203	SLU 64	0.03	-0.16	19.2	0	0	0
203	SLU 65	0.03	-0.13	19.21	0	0	0
203	SLU 66	0.03	-0.16	19.47	0	0	0
203	SLU 67	0.03	-0.14	19.47	0	0	0
203	SLU 68	0.03	-0.14	19.38	0	0	0
203	SLU 69	0.03	-0.16	19.64	0	0	0
203	SLU 70	0.03	-0.15	19.64	0	0	0
203	SLU 71	0.03	-0.16	19.54	0	0	0
203	SLU 72	0.03	-0.15	19.54	0	0	0
203	SLU 73	0.03	-0.13	21.02	0	0	0
203	SLU 74	0.04	-0.15	21.28	0	0	0
203	SLU 75	0.03	-0.14	21.29	0	0	0
203	SLU 76	0.03	-0.13	21.19	0	0	0
203	SLU 77	0.04	-0.15	21.45	0	0	0
203	SLU 78	0.03	-0.14	21.45	0	0	0
203	SLU 79	0.03	-0.16	21.36	0	0	0
203	SLU 80	0.03	-0.15	21.36	0	0	0
203	SLU 81	0.04	-0.15	21.8	0	0	0
203	SLU 82	0.03	-0.14	21.8	0	0	0
203	SLU 83	0.03	-0.15	21.97	0	0	0
203	SLU 84	0.03	-0.14	21.97	0	0	0
203	SLE RA 1	0.02	-0.12	14.42	0	0	0
203	SLE RA 2	0.02	-0.11	14.42	0	0	0
203	SLE RA 3	0.03	-0.12	14.6	0	0	0
203	SLE RA 4	0.02	-0.11	14.6	0	0	0
203	SLE RA 5	0.02	-0.11	14.54	0	0	0
203	SLE RA 6	0.02	-0.12	14.71	0	0	0
203	SLE RA 7	0.02	-0.12	14.71	0	0	0
203	SLE RA 8	0.02	-0.13	14.65	0	0	0
203	SLE RA 9	0.02	-0.12	14.65	0	0	0
203	SLE RA 10	0.02	-0.1	15.64	0	0	0
203	SLE RA 11	0.03	-0.12	15.81	0	0	0
203	SLE RA 12	0.02	-0.11	15.81	0	0	0
203	SLE RA 13	0.02	-0.11	15.75	0	0	0
203	SLE RA 14	0.03	-0.12	15.92	0	0	0
203	SLE RA 15	0.02	-0.11	15.92	0	0	0
203	SLE RA 16	0.02	-0.12	15.86	0	0	0
203	SLE RA 17	0.02	-0.11	15.86	0	0	0
203	SLE RA 18	0.03	-0.12	16.15	0	0	0
203	SLE RA 19	0.02	-0.11	16.15	0	0	0
203	SLE RA 20	0.03	-0.12	16.26	0	0	0
203	SLE RA 21	0.02	-0.11	16.27	0	0	0
203	SLE FR 1	0.02	-0.12	14.42	0	0	0
203	SLE FR 2	0.02	-0.12	14.42	0	0	0
203	SLE FR 3	0.02	-0.12	14.47	0	0	0
203	SLE FR 4	0.02	-0.12	14.94	0	0	0
203	SLE FR 5	0.02	-0.12	14.99	0	0	0
203	SLE FR 6	0.03	-0.12	15.29	0	0	0
203	SLE QP 1	0.02	-0.12	14.42	0	0	0
203	SLE QP 2	0.02	-0.12	14.94	0	0	0
203	SLD 1	1.29	0.15	14.53	0	0	0
203	SLD 2	1.36	0.18	14.53	0	0	0
203	SLD 3	1.32	-0.27	14.33	0	0	0
203	SLD 4	1.39	-0.24	14.33	0	0	0
203	SLD 5	0.34	0.6	15.12	0	0	0
203	SLD 6	0.39	0.62	15.12	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
203	SLD 7	0.45	-0.81	14.45	0	0	0
203	SLD 8	0.5	-0.79	14.45	0	0	0
203	SLD 9	-0.45	0.55	15.43	0	0	0
203	SLD 10	-0.4	0.57	15.43	0	0	0
203	SLD 11	-0.34	-0.86	14.76	0	0	0
203	SLD 12	-0.29	-0.84	14.76	0	0	0
203	SLD 13	-1.34	0	15.55	0	0	0
203	SLD 14	-1.27	0.03	15.55	0	0	0
203	SLD 15	-1.31	-0.42	15.35	0	0	0
203	SLD 16	-1.24	-0.39	15.35	0	0	0
203	SLV 1	2.99	0.51	13.97	0	0	0
203	SLV 2	3.15	0.58	13.98	0	0	0
203	SLV 3	3.06	-0.46	13.51	0	0	0
203	SLV 4	3.22	-0.39	13.53	0	0	0
203	SLV 5	0.77	1.51	15.34	0	0	0
203	SLV 6	0.87	1.56	15.35	0	0	0
203	SLV 7	1.03	-1.69	13.82	0	0	0
203	SLV 8	1.13	-1.65	13.82	0	0	0
203	SLV 9	-1.08	1.4	16.06	0	0	0
203	SLV 10	-0.98	1.45	16.06	0	0	0
203	SLV 11	-0.82	-1.8	14.53	0	0	0
203	SLV 12	-0.72	-1.76	14.54	0	0	0
203	SLV 13	-3.17	0.14	16.35	0	0	0
203	SLV 14	-3.01	0.21	16.37	0	0	0
203	SLV 15	-3.1	-0.82	15.9	0	0	0
203	SLV 16	-2.94	-0.75	15.91	0	0	0
204	SLU 1	0.02	-0.13	13.57	0	0	0
204	SLU 2	0.02	-0.11	13.57	0	0	0
204	SLU 3	0.02	-0.13	13.83	0	0	0
204	SLU 4	0.02	-0.12	13.83	0	0	0
204	SLU 5	0.02	-0.11	13.74	0	0	0
204	SLU 6	0.02	-0.14	13.99	0	0	0
204	SLU 7	0.02	-0.12	13.99	0	0	0
204	SLU 8	0.02	-0.14	13.9	0	0	0
204	SLU 9	0.02	-0.13	13.9	0	0	0
204	SLU 10	0.02	-0.11	15.33	0	0	0
204	SLU 11	0.02	-0.13	15.59	0	0	0
204	SLU 12	0.02	-0.12	15.59	0	0	0
204	SLU 13	0.02	-0.11	15.5	0	0	0
204	SLU 14	0.02	-0.13	15.75	0	0	0
204	SLU 15	0.02	-0.12	15.75	0	0	0
204	SLU 16	0.02	-0.14	15.66	0	0	0
204	SLU 17	0.02	-0.12	15.66	0	0	0
204	SLU 18	0.02	-0.13	16.09	0	0	0
204	SLU 19	0.02	-0.12	16.09	0	0	0
204	SLU 20	0.02	-0.13	16.25	0	0	0
204	SLU 21	0.02	-0.12	16.25	0	0	0
204	SLU 22	0.03	-0.13	15.12	0	0	0
204	SLU 23	0.03	-0.11	15.13	0	0	0
204	SLU 24	0.03	-0.13	15.38	0	0	0
204	SLU 25	0.03	-0.11	15.38	0	0	0
204	SLU 26	0.03	-0.11	15.29	0	0	0
204	SLU 27	0.03	-0.13	15.54	0	0	0
204	SLU 28	0.03	-0.12	15.54	0	0	0
204	SLU 29	0.03	-0.13	15.45	0	0	0
204	SLU 30	0.03	-0.12	15.45	0	0	0
204	SLU 31	0.03	-0.1	16.89	0	0	0
204	SLU 32	0.03	-0.12	17.14	0	0	0
204	SLU 33	0.03	-0.11	17.14	0	0	0
204	SLU 34	0.03	-0.11	17.05	0	0	0
204	SLU 35	0.03	-0.13	17.31	0	0	0
204	SLU 36	0.03	-0.11	17.31	0	0	0
204	SLU 37	0.03	-0.13	17.21	0	0	0
204	SLU 38	0.03	-0.12	17.22	0	0	0
204	SLU 39	0.03	-0.12	17.64	0	0	0
204	SLU 40	0.03	-0.11	17.64	0	0	0
204	SLU 41	0.03	-0.13	17.8	0	0	0
204	SLU 42	0.03	-0.11	17.81	0	0	0
204	SLU 43	0.03	-0.17	17.11	0	0	0
204	SLU 44	0.03	-0.15	17.11	0	0	0
204	SLU 45	0.03	-0.17	17.36	0	0	0
204	SLU 46	0.03	-0.16	17.37	0	0	0
204	SLU 47	0.03	-0.16	17.27	0	0	0
204	SLU 48	0.03	-0.18	17.53	0	0	0
204	SLU 49	0.03	-0.16	17.53	0	0	0
204	SLU 50	0.03	-0.18	17.44	0	0	0
204	SLU 51	0.03	-0.17	17.44	0	0	0
204	SLU 52	0.03	-0.15	18.87	0	0	0
204	SLU 53	0.03	-0.17	19.13	0	0	0
204	SLU 54	0.03	-0.16	19.13	0	0	0
204	SLU 55	0.03	-0.15	19.04	0	0	0
204	SLU 56	0.03	-0.17	19.29	0	0	0
204	SLU 57	0.03	-0.16	19.29	0	0	0
204	SLU 58	0.03	-0.18	19.2	0	0	0
204	SLU 59	0.03	-0.16	19.2	0	0	0
204	SLU 60	0.03	-0.17	19.63	0	0	0
204	SLU 61	0.03	-0.16	19.63	0	0	0
204	SLU 62	0.03	-0.17	19.79	0	0	0
204	SLU 63	0.03	-0.16	19.79	0	0	0
204	SLU 64	0.04	-0.17	18.66	0	0	0
204	SLU 65	0.03	-0.15	18.66	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
204	SLU 66	0.04	-0.17	18.92	0	0	0
204	SLU 67	0.03	-0.16	18.92	0	0	0
204	SLU 68	0.03	-0.15	18.83	0	0	0
204	SLU 69	0.04	-0.17	19.08	0	0	0
204	SLU 70	0.03	-0.16	19.08	0	0	0
204	SLU 71	0.03	-0.17	18.99	0	0	0
204	SLU 72	0.03	-0.16	18.99	0	0	0
204	SLU 73	0.03	-0.14	20.43	0	0	0
204	SLU 74	0.04	-0.17	20.68	0	0	0
204	SLU 75	0.04	-0.15	20.68	0	0	0
204	SLU 76	0.03	-0.15	20.59	0	0	0
204	SLU 77	0.04	-0.17	20.84	0	0	0
204	SLU 78	0.04	-0.16	20.85	0	0	0
204	SLU 79	0.04	-0.17	20.75	0	0	0
204	SLU 80	0.03	-0.16	20.75	0	0	0
204	SLU 81	0.04	-0.16	21.18	0	0	0
204	SLU 82	0.04	-0.15	21.18	0	0	0
204	SLU 83	0.04	-0.17	21.34	0	0	0
204	SLU 84	0.03	-0.15	21.34	0	0	0
204	SLE RA 1	0.03	-0.13	14.01	0	0	0
204	SLE RA 2	0.02	-0.12	14.02	0	0	0
204	SLE RA 3	0.03	-0.13	14.18	0	0	0
204	SLE RA 4	0.03	-0.12	14.18	0	0	0
204	SLE RA 5	0.02	-0.12	14.12	0	0	0
204	SLE RA 6	0.03	-0.13	14.29	0	0	0
204	SLE RA 7	0.02	-0.12	14.29	0	0	0
204	SLE RA 8	0.02	-0.13	14.23	0	0	0
204	SLE RA 9	0.02	-0.13	14.23	0	0	0
204	SLE RA 10	0.02	-0.11	15.19	0	0	0
204	SLE RA 11	0.03	-0.13	15.36	0	0	0
204	SLE RA 12	0.03	-0.12	15.36	0	0	0
204	SLE RA 13	0.02	-0.12	15.3	0	0	0
204	SLE RA 14	0.03	-0.13	15.47	0	0	0
204	SLE RA 15	0.03	-0.12	15.47	0	0	0
204	SLE RA 16	0.03	-0.13	15.41	0	0	0
204	SLE RA 17	0.02	-0.12	15.41	0	0	0
204	SLE RA 18	0.03	-0.13	15.69	0	0	0
204	SLE RA 19	0.03	-0.12	15.69	0	0	0
204	SLE RA 20	0.03	-0.13	15.8	0	0	0
204	SLE RA 21	0.03	-0.12	15.8	0	0	0
204	SLE FR 1	0.03	-0.13	14.01	0	0	0
204	SLE FR 2	0.03	-0.13	14.01	0	0	0
204	SLE FR 3	0.03	-0.13	14.06	0	0	0
204	SLE FR 4	0.03	-0.13	14.52	0	0	0
204	SLE FR 5	0.03	-0.13	14.56	0	0	0
204	SLE FR 6	0.03	-0.13	14.85	0	0	0
204	SLE QP 1	0.03	-0.13	14.01	0	0	0
204	SLE QP 2	0.03	-0.13	14.52	0	0	0
204	SLD 1	1.25	0.14	14.03	0	0	0
204	SLD 2	1.31	0.17	14.04	0	0	0
204	SLD 3	1.28	-0.27	13.84	0	0	0
204	SLD 4	1.35	-0.23	13.84	0	0	0
204	SLD 5	0.33	0.56	14.66	0	0	0
204	SLD 6	0.37	0.58	14.67	0	0	0
204	SLD 7	0.44	-0.79	14.02	0	0	0
204	SLD 8	0.48	-0.77	14.02	0	0	0
204	SLD 9	-0.43	0.51	15.01	0	0	0
204	SLD 10	-0.39	0.53	15.02	0	0	0
204	SLD 11	-0.32	-0.84	14.37	0	0	0
204	SLD 12	-0.28	-0.82	14.37	0	0	0
204	SLD 13	-1.29	-0.03	15.19	0	0	0
204	SLD 14	-1.23	0.01	15.19	0	0	0
204	SLD 15	-1.26	-0.43	15	0	0	0
204	SLD 16	-1.2	-0.4	15	0	0	0
204	SLV 1	2.88	0.49	13.38	0	0	0
204	SLV 2	3.04	0.56	13.39	0	0	0
204	SLV 3	2.96	-0.44	12.94	0	0	0
204	SLV 4	3.11	-0.36	12.95	0	0	0
204	SLV 5	0.74	1.45	14.84	0	0	0
204	SLV 6	0.84	1.5	14.85	0	0	0
204	SLV 7	0.99	-1.64	13.37	0	0	0
204	SLV 8	1.09	-1.59	13.38	0	0	0
204	SLV 9	-1.04	1.33	15.65	0	0	0
204	SLV 10	-0.94	1.38	15.66	0	0	0
204	SLV 11	-0.79	-1.75	14.18	0	0	0
204	SLV 12	-0.69	-1.71	14.19	0	0	0
204	SLV 13	-3.06	0.1	16.09	0	0	0
204	SLV 14	-2.91	0.18	16.1	0	0	0
204	SLV 15	-2.99	-0.82	15.64	0	0	0
204	SLV 16	-2.83	-0.75	15.66	0	0	0
205	SLU 1	0.02	-0.15	13.85	0	0	0
205	SLU 2	0.02	-0.12	13.85	0	0	0
205	SLU 3	0.02	-0.15	14.11	0	0	0
205	SLU 4	0.02	-0.13	14.12	0	0	0
205	SLU 5	0.02	-0.13	14.02	0	0	0
205	SLU 6	0.02	-0.15	14.28	0	0	0
205	SLU 7	0.02	-0.14	14.28	0	0	0
205	SLU 8	0.02	-0.15	14.19	0	0	0
205	SLU 9	0.02	-0.14	14.19	0	0	0
205	SLU 10	0.02	-0.12	15.65	0	0	0
205	SLU 11	0.03	-0.15	15.91	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
205	SLU 12	0.02	-0.13	15.91	0	0	0
205	SLU 13	0.02	-0.13	15.82	0	0	0
205	SLU 14	0.03	-0.15	16.08	0	0	0
205	SLU 15	0.02	-0.14	16.08	0	0	0
205	SLU 16	0.02	-0.15	15.98	0	0	0
205	SLU 17	0.02	-0.14	15.99	0	0	0
205	SLU 18	0.03	-0.14	16.42	0	0	0
205	SLU 19	0.02	-0.13	16.42	0	0	0
205	SLU 20	0.03	-0.15	16.59	0	0	0
205	SLU 21	0.02	-0.13	16.59	0	0	0
205	SLU 22	0.03	-0.14	15.44	0	0	0
205	SLU 23	0.03	-0.12	15.45	0	0	0
205	SLU 24	0.03	-0.14	15.71	0	0	0
205	SLU 25	0.03	-0.13	15.71	0	0	0
205	SLU 26	0.03	-0.12	15.61	0	0	0
205	SLU 27	0.03	-0.15	15.87	0	0	0
205	SLU 28	0.03	-0.13	15.87	0	0	0
205	SLU 29	0.03	-0.15	15.78	0	0	0
205	SLU 30	0.03	-0.14	15.78	0	0	0
205	SLU 31	0.03	-0.12	17.24	0	0	0
205	SLU 32	0.03	-0.14	17.5	0	0	0
205	SLU 33	0.03	-0.13	17.5	0	0	0
205	SLU 34	0.03	-0.12	17.41	0	0	0
205	SLU 35	0.03	-0.14	17.67	0	0	0
205	SLU 36	0.03	-0.13	17.67	0	0	0
205	SLU 37	0.03	-0.15	17.58	0	0	0
205	SLU 38	0.03	-0.13	17.58	0	0	0
205	SLU 39	0.03	-0.14	18.01	0	0	0
205	SLU 40	0.03	-0.13	18.01	0	0	0
205	SLU 41	0.03	-0.14	18.18	0	0	0
205	SLU 42	0.03	-0.13	18.18	0	0	0
205	SLU 43	0.03	-0.19	17.46	0	0	0
205	SLU 44	0.03	-0.17	17.46	0	0	0
205	SLU 45	0.03	-0.19	17.72	0	0	0
205	SLU 46	0.03	-0.18	17.73	0	0	0
205	SLU 47	0.03	-0.17	17.63	0	0	0
205	SLU 48	0.03	-0.19	17.89	0	0	0
205	SLU 49	0.03	-0.18	17.89	0	0	0
205	SLU 50	0.03	-0.2	17.8	0	0	0
205	SLU 51	0.03	-0.19	17.8	0	0	0
205	SLU 52	0.03	-0.17	19.26	0	0	0
205	SLU 53	0.03	-0.19	19.52	0	0	0
205	SLU 54	0.03	-0.18	19.52	0	0	0
205	SLU 55	0.03	-0.17	19.43	0	0	0
205	SLU 56	0.03	-0.19	19.69	0	0	0
205	SLU 57	0.03	-0.18	19.69	0	0	0
205	SLU 58	0.03	-0.2	19.59	0	0	0
205	SLU 59	0.03	-0.18	19.6	0	0	0
205	SLU 60	0.03	-0.19	20.03	0	0	0
205	SLU 61	0.03	-0.18	20.03	0	0	0
205	SLU 62	0.03	-0.19	20.2	0	0	0
205	SLU 63	0.03	-0.18	20.2	0	0	0
205	SLU 64	0.04	-0.19	19.05	0	0	0
205	SLU 65	0.04	-0.17	19.06	0	0	0
205	SLU 66	0.04	-0.19	19.32	0	0	0
205	SLU 67	0.04	-0.17	19.32	0	0	0
205	SLU 68	0.03	-0.17	19.22	0	0	0
205	SLU 69	0.04	-0.19	19.48	0	0	0
205	SLU 70	0.04	-0.18	19.48	0	0	0
205	SLU 71	0.04	-0.19	19.39	0	0	0
205	SLU 72	0.03	-0.18	19.39	0	0	0
205	SLU 73	0.04	-0.16	20.85	0	0	0
205	SLU 74	0.04	-0.19	21.11	0	0	0
205	SLU 75	0.04	-0.17	21.11	0	0	0
205	SLU 76	0.04	-0.17	21.02	0	0	0
205	SLU 77	0.04	-0.19	21.28	0	0	0
205	SLU 78	0.04	-0.18	21.28	0	0	0
205	SLU 79	0.04	-0.19	21.19	0	0	0
205	SLU 80	0.04	-0.18	21.19	0	0	0
205	SLU 81	0.04	-0.19	21.62	0	0	0
205	SLU 82	0.04	-0.17	21.62	0	0	0
205	SLU 83	0.04	-0.19	21.79	0	0	0
205	SLU 84	0.04	-0.18	21.79	0	0	0
205	SLE RA 1	0.03	-0.14	14.31	0	0	0
205	SLE RA 2	0.03	-0.13	14.31	0	0	0
205	SLE RA 3	0.03	-0.14	14.48	0	0	0
205	SLE RA 4	0.03	-0.14	14.48	0	0	0
205	SLE RA 5	0.03	-0.13	14.42	0	0	0
205	SLE RA 6	0.03	-0.15	14.59	0	0	0
205	SLE RA 7	0.03	-0.14	14.59	0	0	0
205	SLE RA 8	0.03	-0.15	14.53	0	0	0
205	SLE RA 9	0.03	-0.14	14.53	0	0	0
205	SLE RA 10	0.03	-0.13	15.51	0	0	0
205	SLE RA 11	0.03	-0.14	15.68	0	0	0
205	SLE RA 12	0.03	-0.14	15.68	0	0	0
205	SLE RA 13	0.03	-0.13	15.62	0	0	0
205	SLE RA 14	0.03	-0.15	15.79	0	0	0
205	SLE RA 15	0.03	-0.14	15.79	0	0	0
205	SLE RA 16	0.03	-0.15	15.73	0	0	0
205	SLE RA 17	0.03	-0.14	15.73	0	0	0
205	SLE RA 18	0.03	-0.14	16.02	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
205	SLE RA 19	0.03	-0.13	16.02	0	0	0
205	SLE RA 20	0.03	-0.15	16.13	0	0	0
205	SLE RA 21	0.03	-0.14	16.13	0	0	0
205	SLE FR 1	0.03	-0.14	14.31	0	0	0
205	SLE FR 2	0.03	-0.14	14.31	0	0	0
205	SLE FR 3	0.03	-0.15	14.35	0	0	0
205	SLE FR 4	0.03	-0.14	14.82	0	0	0
205	SLE FR 5	0.03	-0.15	14.87	0	0	0
205	SLE FR 6	0.03	-0.14	15.16	0	0	0
205	SLE QP 1	0.03	-0.14	14.31	0	0	0
205	SLE QP 2	0.03	-0.14	14.82	0	0	0
205	SLD 1	1.26	0.13	14.24	0	0	0
205	SLD 2	1.33	0.17	14.25	0	0	0
205	SLD 3	1.29	-0.28	14.04	0	0	0
205	SLD 4	1.36	-0.24	14.05	0	0	0
205	SLD 5	0.34	0.55	14.95	0	0	0
205	SLD 6	0.38	0.58	14.95	0	0	0
205	SLD 7	0.44	-0.81	14.29	0	0	0
205	SLD 8	0.49	-0.79	14.29	0	0	0
205	SLD 9	-0.43	0.5	15.35	0	0	0
205	SLD 10	-0.39	0.52	15.35	0	0	0
205	SLD 11	-0.33	-0.87	14.69	0	0	0
205	SLD 12	-0.28	-0.84	14.7	0	0	0
205	SLD 13	-1.31	-0.05	15.59	0	0	0
205	SLD 14	-1.24	-0.01	15.6	0	0	0
205	SLD 15	-1.27	-0.46	15.4	0	0	0
205	SLD 16	-1.21	-0.42	15.4	0	0	0
205	SLV 1	2.91	0.49	13.46	0	0	0
205	SLV 2	3.07	0.58	13.47	0	0	0
205	SLV 3	2.99	-0.44	13.01	0	0	0
205	SLV 4	3.15	-0.35	13.02	0	0	0
205	SLV 5	0.75	1.45	15.09	0	0	0
205	SLV 6	0.85	1.5	15.1	0	0	0
205	SLV 7	1	-1.66	13.6	0	0	0
205	SLV 8	1.1	-1.61	13.6	0	0	0
205	SLV 9	-1.05	1.32	16.04	0	0	0
205	SLV 10	-0.95	1.37	16.05	0	0	0
205	SLV 11	-0.8	-1.79	14.54	0	0	0
205	SLV 12	-0.7	-1.74	14.55	0	0	0
205	SLV 13	-3.09	0.07	16.62	0	0	0
205	SLV 14	-2.94	0.15	16.63	0	0	0
205	SLV 15	-3.02	-0.87	16.17	0	0	0
205	SLV 16	-2.86	-0.78	16.18	0	0	0
206	SLU 1	0.02	-0.16	13.9	0	0	0
206	SLU 2	0.02	-0.14	13.91	0	0	0
206	SLU 3	0.03	-0.16	14.17	0	0	0
206	SLU 4	0.02	-0.15	14.17	0	0	0
206	SLU 5	0.02	-0.14	14.07	0	0	0
206	SLU 6	0.02	-0.16	14.33	0	0	0
206	SLU 7	0.02	-0.15	14.34	0	0	0
206	SLU 8	0.02	-0.17	14.24	0	0	0
206	SLU 9	0.02	-0.15	14.24	0	0	0
206	SLU 10	0.02	-0.14	15.71	0	0	0
206	SLU 11	0.03	-0.16	15.97	0	0	0
206	SLU 12	0.03	-0.15	15.97	0	0	0
206	SLU 13	0.02	-0.14	15.88	0	0	0
206	SLU 14	0.03	-0.16	16.14	0	0	0
206	SLU 15	0.02	-0.15	16.14	0	0	0
206	SLU 16	0.02	-0.17	16.04	0	0	0
206	SLU 17	0.02	-0.15	16.04	0	0	0
206	SLU 18	0.03	-0.16	16.48	0	0	0
206	SLU 19	0.03	-0.15	16.48	0	0	0
206	SLU 20	0.03	-0.16	16.65	0	0	0
206	SLU 21	0.02	-0.15	16.65	0	0	0
206	SLU 22	0.03	-0.16	15.51	0	0	0
206	SLU 23	0.03	-0.13	15.51	0	0	0
206	SLU 24	0.03	-0.16	15.77	0	0	0
206	SLU 25	0.03	-0.14	15.77	0	0	0
206	SLU 26	0.03	-0.14	15.68	0	0	0
206	SLU 27	0.03	-0.16	15.94	0	0	0
206	SLU 28	0.03	-0.15	15.94	0	0	0
206	SLU 29	0.03	-0.16	15.84	0	0	0
206	SLU 30	0.03	-0.15	15.84	0	0	0
206	SLU 31	0.03	-0.13	17.31	0	0	0
206	SLU 32	0.03	-0.16	17.57	0	0	0
206	SLU 33	0.03	-0.14	17.57	0	0	0
206	SLU 34	0.03	-0.14	17.48	0	0	0
206	SLU 35	0.03	-0.16	17.74	0	0	0
206	SLU 36	0.03	-0.15	17.74	0	0	0
206	SLU 37	0.03	-0.16	17.65	0	0	0
206	SLU 38	0.03	-0.15	17.65	0	0	0
206	SLU 39	0.03	-0.16	18.08	0	0	0
206	SLU 40	0.03	-0.14	18.09	0	0	0
206	SLU 41	0.03	-0.16	18.25	0	0	0
206	SLU 42	0.03	-0.15	18.25	0	0	0
206	SLU 43	0.03	-0.21	17.53	0	0	0
206	SLU 44	0.03	-0.18	17.53	0	0	0
206	SLU 45	0.03	-0.21	17.79	0	0	0
206	SLU 46	0.03	-0.19	17.79	0	0	0
206	SLU 47	0.03	-0.19	17.69	0	0	0
206	SLU 48	0.03	-0.21	17.96	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
206	SLU 49	0.03	-0.2	17.96	0	0	0
206	SLU 50	0.03	-0.21	17.86	0	0	0
206	SLU 51	0.03	-0.2	17.86	0	0	0
206	SLU 52	0.03	-0.18	19.33	0	0	0
206	SLU 53	0.03	-0.21	19.59	0	0	0
206	SLU 54	0.03	-0.19	19.59	0	0	0
206	SLU 55	0.03	-0.19	19.5	0	0	0
206	SLU 56	0.03	-0.21	19.76	0	0	0
206	SLU 57	0.03	-0.2	19.76	0	0	0
206	SLU 58	0.03	-0.21	19.66	0	0	0
206	SLU 59	0.03	-0.2	19.67	0	0	0
206	SLU 60	0.03	-0.21	20.1	0	0	0
206	SLU 61	0.03	-0.19	20.1	0	0	0
206	SLU 62	0.03	-0.21	20.27	0	0	0
206	SLU 63	0.03	-0.2	20.27	0	0	0
206	SLU 64	0.04	-0.2	19.13	0	0	0
206	SLU 65	0.04	-0.18	19.13	0	0	0
206	SLU 66	0.04	-0.2	19.39	0	0	0
206	SLU 67	0.04	-0.19	19.39	0	0	0
206	SLU 68	0.04	-0.19	19.3	0	0	0
206	SLU 69	0.04	-0.21	19.56	0	0	0
206	SLU 70	0.04	-0.19	19.56	0	0	0
206	SLU 71	0.04	-0.21	19.46	0	0	0
206	SLU 72	0.04	-0.2	19.47	0	0	0
206	SLU 73	0.04	-0.18	20.93	0	0	0
206	SLU 74	0.04	-0.2	21.2	0	0	0
206	SLU 75	0.04	-0.19	21.2	0	0	0
206	SLU 76	0.04	-0.19	21.1	0	0	0
206	SLU 77	0.04	-0.21	21.36	0	0	0
206	SLU 78	0.04	-0.2	21.36	0	0	0
206	SLU 79	0.04	-0.21	21.27	0	0	0
206	SLU 80	0.04	-0.2	21.27	0	0	0
206	SLU 81	0.04	-0.2	21.71	0	0	0
206	SLU 82	0.04	-0.19	21.71	0	0	0
206	SLU 83	0.04	-0.21	21.87	0	0	0
206	SLU 84	0.04	-0.19	21.87	0	0	0
206	SLE RA 1	0.03	-0.16	14.36	0	0	0
206	SLE RA 2	0.03	-0.14	14.36	0	0	0
206	SLE RA 3	0.03	-0.16	14.54	0	0	0
206	SLE RA 4	0.03	-0.15	14.54	0	0	0
206	SLE RA 5	0.03	-0.15	14.48	0	0	0
206	SLE RA 6	0.03	-0.16	14.65	0	0	0
206	SLE RA 7	0.03	-0.15	14.65	0	0	0
206	SLE RA 8	0.03	-0.16	14.59	0	0	0
206	SLE RA 9	0.03	-0.15	14.59	0	0	0
206	SLE RA 10	0.03	-0.14	15.57	0	0	0
206	SLE RA 11	0.03	-0.16	15.74	0	0	0
206	SLE RA 12	0.03	-0.15	15.74	0	0	0
206	SLE RA 13	0.03	-0.15	15.68	0	0	0
206	SLE RA 14	0.03	-0.16	15.85	0	0	0
206	SLE RA 15	0.03	-0.15	15.85	0	0	0
206	SLE RA 16	0.03	-0.16	15.79	0	0	0
206	SLE RA 17	0.03	-0.15	15.79	0	0	0
206	SLE RA 18	0.03	-0.16	16.08	0	0	0
206	SLE RA 19	0.03	-0.15	16.08	0	0	0
206	SLE RA 20	0.03	-0.16	16.19	0	0	0
206	SLE RA 21	0.03	-0.15	16.19	0	0	0
206	SLE FR 1	0.03	-0.16	14.36	0	0	0
206	SLE FR 2	0.03	-0.15	14.36	0	0	0
206	SLE FR 3	0.03	-0.16	14.41	0	0	0
206	SLE FR 4	0.03	-0.15	14.88	0	0	0
206	SLE FR 5	0.03	-0.16	14.92	0	0	0
206	SLE FR 6	0.03	-0.16	15.22	0	0	0
206	SLE QP 1	0.03	-0.16	14.36	0	0	0
206	SLE QP 2	0.03	-0.16	14.88	0	0	0
206	SLD 1	1.25	0.13	14.21	0	0	0
206	SLD 2	1.32	0.17	14.22	0	0	0
206	SLD 3	1.28	-0.28	14.02	0	0	0
206	SLD 4	1.35	-0.24	14.02	0	0	0
206	SLD 5	0.33	0.54	14.98	0	0	0
206	SLD 6	0.38	0.56	14.98	0	0	0
206	SLD 7	0.44	-0.82	14.32	0	0	0
206	SLD 8	0.49	-0.79	14.32	0	0	0
206	SLD 9	-0.43	0.48	15.44	0	0	0
206	SLD 10	-0.39	0.5	15.44	0	0	0
206	SLD 11	-0.32	-0.88	14.77	0	0	0
206	SLD 12	-0.28	-0.85	14.78	0	0	0
206	SLD 13	-1.3	-0.07	15.74	0	0	0
206	SLD 14	-1.23	-0.03	15.74	0	0	0
206	SLD 15	-1.26	-0.48	15.54	0	0	0
206	SLD 16	-1.2	-0.44	15.54	0	0	0
206	SLV 1	2.89	0.49	13.32	0	0	0
206	SLV 2	3.05	0.59	13.33	0	0	0
206	SLV 3	2.97	-0.43	12.87	0	0	0
206	SLV 4	3.12	-0.34	12.88	0	0	0
206	SLV 5	0.75	1.42	15.09	0	0	0
206	SLV 6	0.85	1.48	15.1	0	0	0
206	SLV 7	1	-1.66	13.59	0	0	0
206	SLV 8	1.1	-1.6	13.6	0	0	0
206	SLV 9	-1.04	1.28	16.16	0	0	0
206	SLV 10	-0.94	1.34	16.17	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
206	SLV 11	-0.79	-1.8	14.66	0	0	0
206	SLV 12	-0.69	-1.74	14.67	0	0	0
206	SLV 13	-3.07	0.02	16.88	0	0	0
206	SLV 14	-2.91	0.12	16.89	0	0	0
206	SLV 15	-2.99	-0.9	16.43	0	0	0
206	SLV 16	-2.84	-0.81	16.44	0	0	0
207	SLU 1	0.01	-0.08	6.92	0	0	0
207	SLU 2	0.01	-0.07	6.92	0	0	0
207	SLU 3	0.01	-0.08	7.05	0	0	0
207	SLU 4	0.01	-0.08	7.05	0	0	0
207	SLU 5	0.01	-0.08	7	0	0	0
207	SLU 6	0.01	-0.09	7.13	0	0	0
207	SLU 7	0.01	-0.08	7.13	0	0	0
207	SLU 8	0.01	-0.09	7.08	0	0	0
207	SLU 9	0.01	-0.08	7.08	0	0	0
207	SLU 10	0.01	-0.07	7.82	0	0	0
207	SLU 11	0.01	-0.09	7.95	0	0	0
207	SLU 12	0.01	-0.08	7.95	0	0	0
207	SLU 13	0.01	-0.08	7.9	0	0	0
207	SLU 14	0.01	-0.09	8.03	0	0	0
207	SLU 15	0.01	-0.08	8.03	0	0	0
207	SLU 16	0.01	-0.09	7.98	0	0	0
207	SLU 17	0.01	-0.08	7.98	0	0	0
207	SLU 18	0.01	-0.09	8.2	0	0	0
207	SLU 19	0.01	-0.08	8.2	0	0	0
207	SLU 20	0.01	-0.09	8.28	0	0	0
207	SLU 21	0.01	-0.08	8.28	0	0	0
207	SLU 22	0.02	-0.08	7.72	0	0	0
207	SLU 23	0.02	-0.07	7.72	0	0	0
207	SLU 24	0.02	-0.08	7.85	0	0	0
207	SLU 25	0.02	-0.08	7.85	0	0	0
207	SLU 26	0.02	-0.07	7.8	0	0	0
207	SLU 27	0.02	-0.09	7.93	0	0	0
207	SLU 28	0.02	-0.08	7.93	0	0	0
207	SLU 29	0.02	-0.09	7.89	0	0	0
207	SLU 30	0.02	-0.08	7.89	0	0	0
207	SLU 31	0.02	-0.07	8.62	0	0	0
207	SLU 32	0.02	-0.08	8.75	0	0	0
207	SLU 33	0.02	-0.08	8.75	0	0	0
207	SLU 34	0.02	-0.08	8.7	0	0	0
207	SLU 35	0.02	-0.09	8.83	0	0	0
207	SLU 36	0.02	-0.08	8.83	0	0	0
207	SLU 37	0.02	-0.09	8.78	0	0	0
207	SLU 38	0.02	-0.08	8.78	0	0	0
207	SLU 39	0.02	-0.08	9	0	0	0
207	SLU 40	0.02	-0.08	9	0	0	0
207	SLU 41	0.02	-0.09	9.08	0	0	0
207	SLU 42	0.02	-0.08	9.08	0	0	0
207	SLU 43	0.01	-0.11	8.72	0	0	0
207	SLU 44	0.01	-0.1	8.72	0	0	0
207	SLU 45	0.01	-0.11	8.85	0	0	0
207	SLU 46	0.01	-0.1	8.85	0	0	0
207	SLU 47	0.01	-0.1	8.8	0	0	0
207	SLU 48	0.01	-0.11	8.93	0	0	0
207	SLU 49	0.01	-0.11	8.93	0	0	0
207	SLU 50	0.01	-0.11	8.89	0	0	0
207	SLU 51	0.01	-0.11	8.89	0	0	0
207	SLU 52	0.01	-0.1	9.62	0	0	0
207	SLU 53	0.02	-0.11	9.75	0	0	0
207	SLU 54	0.01	-0.1	9.75	0	0	0
207	SLU 55	0.01	-0.1	9.7	0	0	0
207	SLU 56	0.02	-0.11	9.83	0	0	0
207	SLU 57	0.01	-0.11	9.83	0	0	0
207	SLU 58	0.01	-0.11	9.78	0	0	0
207	SLU 59	0.01	-0.11	9.78	0	0	0
207	SLU 60	0.02	-0.11	10	0	0	0
207	SLU 61	0.01	-0.1	10	0	0	0
207	SLU 62	0.01	-0.11	10.08	0	0	0
207	SLU 63	0.01	-0.11	10.08	0	0	0
207	SLU 64	0.02	-0.11	9.52	0	0	0
207	SLU 65	0.02	-0.1	9.52	0	0	0
207	SLU 66	0.02	-0.11	9.65	0	0	0
207	SLU 67	0.02	-0.1	9.65	0	0	0
207	SLU 68	0.02	-0.1	9.6	0	0	0
207	SLU 69	0.02	-0.11	9.73	0	0	0
207	SLU 70	0.02	-0.1	9.73	0	0	0
207	SLU 71	0.02	-0.11	9.69	0	0	0
207	SLU 72	0.02	-0.11	9.69	0	0	0
207	SLU 73	0.02	-0.1	10.42	0	0	0
207	SLU 74	0.02	-0.11	10.55	0	0	0
207	SLU 75	0.02	-0.1	10.55	0	0	0
207	SLU 76	0.02	-0.1	10.5	0	0	0
207	SLU 77	0.02	-0.11	10.63	0	0	0
207	SLU 78	0.02	-0.11	10.63	0	0	0
207	SLU 79	0.02	-0.11	10.58	0	0	0
207	SLU 80	0.02	-0.11	10.58	0	0	0
207	SLU 81	0.02	-0.11	10.8	0	0	0
207	SLU 82	0.02	-0.1	10.8	0	0	0
207	SLU 83	0.02	-0.11	10.88	0	0	0
207	SLU 84	0.02	-0.11	10.88	0	0	0
207	SLE RA 1	0.01	-0.08	7.15	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
207	SLE RA 2	0.01	-0.08	7.15	0	0	0
207	SLE RA 3	0.01	-0.08	7.23	0	0	0
207	SLE RA 4	0.01	-0.08	7.23	0	0	0
207	SLE RA 5	0.01	-0.08	7.2	0	0	0
207	SLE RA 6	0.01	-0.09	7.29	0	0	0
207	SLE RA 7	0.01	-0.08	7.29	0	0	0
207	SLE RA 8	0.01	-0.09	7.26	0	0	0
207	SLE RA 9	0.01	-0.08	7.26	0	0	0
207	SLE RA 10	0.01	-0.08	7.75	0	0	0
207	SLE RA 11	0.01	-0.08	7.83	0	0	0
207	SLE RA 12	0.01	-0.08	7.83	0	0	0
207	SLE RA 13	0.01	-0.08	7.8	0	0	0
207	SLE RA 14	0.01	-0.09	7.89	0	0	0
207	SLE RA 15	0.01	-0.08	7.89	0	0	0
207	SLE RA 16	0.01	-0.09	7.86	0	0	0
207	SLE RA 17	0.01	-0.08	7.86	0	0	0
207	SLE RA 18	0.01	-0.08	8	0	0	0
207	SLE RA 19	0.01	-0.08	8	0	0	0
207	SLE RA 20	0.01	-0.09	8.06	0	0	0
207	SLE RA 21	0.01	-0.08	8.06	0	0	0
207	SLE FR 1	0.01	-0.08	7.15	0	0	0
207	SLE FR 2	0.01	-0.08	7.15	0	0	0
207	SLE FR 3	0.01	-0.08	7.17	0	0	0
207	SLE FR 4	0.01	-0.08	7.4	0	0	0
207	SLE FR 5	0.01	-0.08	7.43	0	0	0
207	SLE FR 6	0.01	-0.08	7.57	0	0	0
207	SLE QP 1	0.01	-0.08	7.15	0	0	0
207	SLE QP 2	0.01	-0.08	7.4	0	0	0
207	SLD 1	0.62	0.06	7.03	0	0	0
207	SLD 2	0.65	0.08	7.03	0	0	0
207	SLD 3	0.63	-0.14	6.93	0	0	0
207	SLD 4	0.66	-0.12	6.94	0	0	0
207	SLD 5	0.16	0.26	7.44	0	0	0
207	SLD 6	0.19	0.27	7.44	0	0	0
207	SLD 7	0.22	-0.41	7.11	0	0	0
207	SLD 8	0.24	-0.39	7.11	0	0	0
207	SLD 9	-0.21	0.22	7.69	0	0	0
207	SLD 10	-0.19	0.24	7.69	0	0	0
207	SLD 11	-0.16	-0.44	7.36	0	0	0
207	SLD 12	-0.14	-0.43	7.37	0	0	0
207	SLD 13	-0.64	-0.05	7.87	0	0	0
207	SLD 14	-0.6	-0.03	7.87	0	0	0
207	SLD 15	-0.62	-0.25	7.77	0	0	0
207	SLD 16	-0.59	-0.23	7.77	0	0	0
207	SLV 1	1.42	0.25	6.53	0	0	0
207	SLV 2	1.5	0.3	6.54	0	0	0
207	SLV 3	1.46	-0.21	6.31	0	0	0
207	SLV 4	1.53	-0.16	6.31	0	0	0
207	SLV 5	0.37	0.69	7.48	0	0	0
207	SLV 6	0.42	0.73	7.48	0	0	0
207	SLV 7	0.49	-0.82	6.73	0	0	0
207	SLV 8	0.54	-0.79	6.74	0	0	0
207	SLV 9	-0.51	0.62	8.07	0	0	0
207	SLV 10	-0.46	0.65	8.07	0	0	0
207	SLV 11	-0.39	-0.89	7.32	0	0	0
207	SLV 12	-0.34	-0.86	7.33	0	0	0
207	SLV 13	-1.51	-0.01	8.49	0	0	0
207	SLV 14	-1.43	0.04	8.5	0	0	0
207	SLV 15	-1.47	-0.46	8.27	0	0	0
207	SLV 16	-1.39	-0.41	8.27	0	0	0
208	SLU 1	-0.06	-0.17	12.83	0	0	0
208	SLU 2	-0.06	-0.15	12.83	0	0	0
208	SLU 3	-0.06	-0.17	13.07	0	0	0
208	SLU 4	-0.06	-0.15	13.07	0	0	0
208	SLU 5	-0.06	-0.15	12.98	0	0	0
208	SLU 6	-0.06	-0.17	13.23	0	0	0
208	SLU 7	-0.06	-0.16	13.23	0	0	0
208	SLU 8	-0.06	-0.17	13.14	0	0	0
208	SLU 9	-0.06	-0.16	13.14	0	0	0
208	SLU 10	-0.06	-0.15	14.53	0	0	0
208	SLU 11	-0.06	-0.17	14.78	0	0	0
208	SLU 12	-0.06	-0.16	14.78	0	0	0
208	SLU 13	-0.06	-0.16	14.69	0	0	0
208	SLU 14	-0.06	-0.18	14.93	0	0	0
208	SLU 15	-0.06	-0.16	14.93	0	0	0
208	SLU 16	-0.06	-0.18	14.84	0	0	0
208	SLU 17	-0.06	-0.17	14.84	0	0	0
208	SLU 18	-0.06	-0.18	15.27	0	0	0
208	SLU 19	-0.06	-0.17	15.27	0	0	0
208	SLU 20	-0.06	-0.18	15.42	0	0	0
208	SLU 21	-0.06	-0.17	15.42	0	0	0
208	SLU 22	-0.07	-0.17	14.33	0	0	0
208	SLU 23	-0.07	-0.14	14.33	0	0	0
208	SLU 24	-0.07	-0.17	14.58	0	0	0
208	SLU 25	-0.07	-0.15	14.57	0	0	0
208	SLU 26	-0.07	-0.15	14.48	0	0	0
208	SLU 27	-0.07	-0.17	14.73	0	0	0
208	SLU 28	-0.07	-0.16	14.73	0	0	0
208	SLU 29	-0.07	-0.17	14.64	0	0	0
208	SLU 30	-0.07	-0.16	14.64	0	0	0
208	SLU 31	-0.07	-0.15	16.04	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
208	SLU 32	-0.07	-0.17	16.28	0	0	0
208	SLU 33	-0.07	-0.16	16.28	0	0	0
208	SLU 34	-0.07	-0.15	16.19	0	0	0
208	SLU 35	-0.07	-0.18	16.43	0	0	0
208	SLU 36	-0.07	-0.16	16.43	0	0	0
208	SLU 37	-0.07	-0.18	16.35	0	0	0
208	SLU 38	-0.07	-0.17	16.34	0	0	0
208	SLU 39	-0.07	-0.18	16.77	0	0	0
208	SLU 40	-0.07	-0.16	16.77	0	0	0
208	SLU 41	-0.07	-0.18	16.92	0	0	0
208	SLU 42	-0.07	-0.17	16.92	0	0	0
208	SLU 43	-0.08	-0.22	16.17	0	0	0
208	SLU 44	-0.08	-0.2	16.16	0	0	0
208	SLU 45	-0.08	-0.22	16.41	0	0	0
208	SLU 46	-0.08	-0.21	16.41	0	0	0
208	SLU 47	-0.08	-0.2	16.32	0	0	0
208	SLU 48	-0.08	-0.22	16.56	0	0	0
208	SLU 49	-0.08	-0.21	16.56	0	0	0
208	SLU 50	-0.08	-0.22	16.47	0	0	0
208	SLU 51	-0.08	-0.21	16.47	0	0	0
208	SLU 52	-0.08	-0.2	17.87	0	0	0
208	SLU 53	-0.08	-0.23	18.11	0	0	0
208	SLU 54	-0.08	-0.21	18.11	0	0	0
208	SLU 55	-0.08	-0.21	18.02	0	0	0
208	SLU 56	-0.08	-0.23	18.27	0	0	0
208	SLU 57	-0.08	-0.22	18.27	0	0	0
208	SLU 58	-0.08	-0.23	18.18	0	0	0
208	SLU 59	-0.08	-0.22	18.18	0	0	0
208	SLU 60	-0.08	-0.23	18.6	0	0	0
208	SLU 61	-0.08	-0.22	18.6	0	0	0
208	SLU 62	-0.08	-0.23	18.75	0	0	0
208	SLU 63	-0.08	-0.22	18.75	0	0	0
208	SLU 64	-0.09	-0.22	17.67	0	0	0
208	SLU 65	-0.08	-0.2	17.66	0	0	0
208	SLU 66	-0.09	-0.22	17.91	0	0	0
208	SLU 67	-0.09	-0.2	17.91	0	0	0
208	SLU 68	-0.09	-0.2	17.82	0	0	0
208	SLU 69	-0.09	-0.22	18.06	0	0	0
208	SLU 70	-0.09	-0.21	18.06	0	0	0
208	SLU 71	-0.09	-0.22	17.97	0	0	0
208	SLU 72	-0.09	-0.21	17.97	0	0	0
208	SLU 73	-0.09	-0.2	19.37	0	0	0
208	SLU 74	-0.09	-0.22	19.62	0	0	0
208	SLU 75	-0.09	-0.21	19.61	0	0	0
208	SLU 76	-0.09	-0.21	19.52	0	0	0
208	SLU 77	-0.09	-0.23	19.77	0	0	0
208	SLU 78	-0.09	-0.21	19.77	0	0	0
208	SLU 79	-0.09	-0.23	19.68	0	0	0
208	SLU 80	-0.09	-0.22	19.68	0	0	0
208	SLU 81	-0.09	-0.23	20.1	0	0	0
208	SLU 82	-0.09	-0.21	20.1	0	0	0
208	SLU 83	-0.09	-0.23	20.26	0	0	0
208	SLU 84	-0.09	-0.22	20.26	0	0	0
208	SLE RA 1	-0.06	-0.17	13.26	0	0	0
208	SLE RA 2	-0.06	-0.15	13.26	0	0	0
208	SLE RA 3	-0.07	-0.17	13.42	0	0	0
208	SLE RA 4	-0.06	-0.16	13.42	0	0	0
208	SLE RA 5	-0.06	-0.15	13.36	0	0	0
208	SLE RA 6	-0.07	-0.17	13.52	0	0	0
208	SLE RA 7	-0.06	-0.16	13.52	0	0	0
208	SLE RA 8	-0.07	-0.17	13.47	0	0	0
208	SLE RA 9	-0.06	-0.16	13.46	0	0	0
208	SLE RA 10	-0.06	-0.16	14.4	0	0	0
208	SLE RA 11	-0.07	-0.17	14.56	0	0	0
208	SLE RA 12	-0.07	-0.16	14.56	0	0	0
208	SLE RA 13	-0.06	-0.16	14.5	0	0	0
208	SLE RA 14	-0.07	-0.17	14.66	0	0	0
208	SLE RA 15	-0.07	-0.17	14.66	0	0	0
208	SLE RA 16	-0.07	-0.18	14.6	0	0	0
208	SLE RA 17	-0.07	-0.17	14.6	0	0	0
208	SLE RA 18	-0.07	-0.17	14.88	0	0	0
208	SLE RA 19	-0.06	-0.17	14.88	0	0	0
208	SLE RA 20	-0.07	-0.18	14.99	0	0	0
208	SLE RA 21	-0.07	-0.17	14.99	0	0	0
208	SLE FR 1	-0.06	-0.17	13.26	0	0	0
208	SLE FR 2	-0.06	-0.16	13.26	0	0	0
208	SLE FR 3	-0.06	-0.17	13.3	0	0	0
208	SLE FR 4	-0.06	-0.17	13.75	0	0	0
208	SLE FR 5	-0.06	-0.17	13.79	0	0	0
208	SLE FR 6	-0.07	-0.17	14.07	0	0	0
208	SLE QP 1	-0.06	-0.17	13.26	0	0	0
208	SLE QP 2	-0.06	-0.17	13.75	0	0	0
208	SLD 1	1.06	-0.05	14.47	0	0	0
208	SLD 2	1.11	-0.09	14.46	0	0	0
208	SLD 3	1.08	-0.44	14.33	0	0	0
208	SLD 4	1.14	-0.48	14.32	0	0	0
208	SLD 5	0.22	0.46	14.18	0	0	0
208	SLD 6	0.25	0.44	14.18	0	0	0
208	SLD 7	0.31	-0.83	13.71	0	0	0
208	SLD 8	0.35	-0.86	13.71	0	0	0
208	SLD 9	-0.48	0.52	13.79	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
208	SLD 10	-0.44	0.49	13.79	0	0	0
208	SLD 11	-0.38	-0.78	13.32	0	0	0
208	SLD 12	-0.35	-0.8	13.32	0	0	0
208	SLD 13	-1.27	0.14	13.17	0	0	0
208	SLD 14	-1.21	0.1	13.16	0	0	0
208	SLD 15	-1.24	-0.25	13.03	0	0	0
208	SLD 16	-1.18	-0.29	13.02	0	0	0
208	SLV 1	2.56	0.1	15.43	0	0	0
208	SLV 2	2.69	0.01	15.42	0	0	0
208	SLV 3	2.62	-0.78	15.11	0	0	0
208	SLV 4	2.76	-0.88	15.1	0	0	0
208	SLV 5	0.6	1.27	14.74	0	0	0
208	SLV 6	0.68	1.21	14.73	0	0	0
208	SLV 7	0.82	-1.68	13.67	0	0	0
208	SLV 8	0.91	-1.74	13.67	0	0	0
208	SLV 9	-1.04	1.41	13.83	0	0	0
208	SLV 10	-0.95	1.35	13.82	0	0	0
208	SLV 11	-0.81	-1.55	12.76	0	0	0
208	SLV 12	-0.72	-1.61	12.75	0	0	0
208	SLV 13	-2.89	0.54	12.39	0	0	0
208	SLV 14	-2.75	0.45	12.38	0	0	0
208	SLV 15	-2.82	-0.35	12.07	0	0	0
208	SLV 16	-2.68	-0.44	12.06	0	0	0
209	SLU 1	-0.06	-0.15	13.22	0	0	0
209	SLU 2	-0.06	-0.13	13.22	0	0	0
209	SLU 3	-0.07	-0.15	13.47	0	0	0
209	SLU 4	-0.06	-0.14	13.47	0	0	0
209	SLU 5	-0.06	-0.14	13.38	0	0	0
209	SLU 6	-0.07	-0.16	13.63	0	0	0
209	SLU 7	-0.06	-0.14	13.63	0	0	0
209	SLU 8	-0.06	-0.16	13.54	0	0	0
209	SLU 9	-0.06	-0.15	13.54	0	0	0
209	SLU 10	-0.06	-0.14	14.98	0	0	0
209	SLU 11	-0.07	-0.16	15.23	0	0	0
209	SLU 12	-0.07	-0.15	15.23	0	0	0
209	SLU 13	-0.06	-0.14	15.14	0	0	0
209	SLU 14	-0.07	-0.16	15.39	0	0	0
209	SLU 15	-0.07	-0.15	15.39	0	0	0
209	SLU 16	-0.07	-0.17	15.3	0	0	0
209	SLU 17	-0.07	-0.15	15.3	0	0	0
209	SLU 18	-0.07	-0.16	15.73	0	0	0
209	SLU 19	-0.06	-0.15	15.73	0	0	0
209	SLU 20	-0.07	-0.17	15.89	0	0	0
209	SLU 21	-0.07	-0.15	15.89	0	0	0
209	SLU 22	-0.07	-0.15	14.76	0	0	0
209	SLU 23	-0.07	-0.13	14.76	0	0	0
209	SLU 24	-0.08	-0.15	15.01	0	0	0
209	SLU 25	-0.07	-0.14	15.01	0	0	0
209	SLU 26	-0.07	-0.13	14.92	0	0	0
209	SLU 27	-0.08	-0.15	15.17	0	0	0
209	SLU 28	-0.08	-0.14	15.17	0	0	0
209	SLU 29	-0.08	-0.16	15.08	0	0	0
209	SLU 30	-0.07	-0.14	15.08	0	0	0
209	SLU 31	-0.07	-0.13	16.52	0	0	0
209	SLU 32	-0.08	-0.16	16.77	0	0	0
209	SLU 33	-0.08	-0.14	16.77	0	0	0
209	SLU 34	-0.07	-0.14	16.68	0	0	0
209	SLU 35	-0.08	-0.16	16.93	0	0	0
209	SLU 36	-0.08	-0.14	16.93	0	0	0
209	SLU 37	-0.08	-0.16	16.84	0	0	0
209	SLU 38	-0.08	-0.15	16.84	0	0	0
209	SLU 39	-0.08	-0.16	17.27	0	0	0
209	SLU 40	-0.08	-0.15	17.27	0	0	0
209	SLU 41	-0.08	-0.16	17.43	0	0	0
209	SLU 42	-0.08	-0.15	17.43	0	0	0
209	SLU 43	-0.08	-0.2	16.66	0	0	0
209	SLU 44	-0.08	-0.18	16.66	0	0	0
209	SLU 45	-0.08	-0.2	16.91	0	0	0
209	SLU 46	-0.08	-0.19	16.91	0	0	0
209	SLU 47	-0.08	-0.18	16.82	0	0	0
209	SLU 48	-0.08	-0.2	17.07	0	0	0
209	SLU 49	-0.08	-0.19	17.07	0	0	0
209	SLU 50	-0.08	-0.21	16.98	0	0	0
209	SLU 51	-0.08	-0.2	16.98	0	0	0
209	SLU 52	-0.08	-0.19	18.42	0	0	0
209	SLU 53	-0.08	-0.21	18.67	0	0	0
209	SLU 54	-0.08	-0.19	18.67	0	0	0
209	SLU 55	-0.08	-0.19	18.58	0	0	0
209	SLU 56	-0.08	-0.21	18.83	0	0	0
209	SLU 57	-0.08	-0.2	18.83	0	0	0
209	SLU 58	-0.08	-0.21	18.74	0	0	0
209	SLU 59	-0.08	-0.2	18.74	0	0	0
209	SLU 60	-0.08	-0.21	19.17	0	0	0
209	SLU 61	-0.08	-0.2	19.17	0	0	0
209	SLU 62	-0.08	-0.21	19.33	0	0	0
209	SLU 63	-0.08	-0.2	19.33	0	0	0
209	SLU 64	-0.09	-0.2	18.2	0	0	0
209	SLU 65	-0.09	-0.18	18.2	0	0	0
209	SLU 66	-0.09	-0.2	18.45	0	0	0
209	SLU 67	-0.09	-0.18	18.45	0	0	0
209	SLU 68	-0.09	-0.18	18.36	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
209	SLU 69	-0.09	-0.2	18.61	0	0	0
209	SLU 70	-0.09	-0.19	18.61	0	0	0
209	SLU 71	-0.09	-0.2	18.52	0	0	0
209	SLU 72	-0.09	-0.19	18.52	0	0	0
209	SLU 73	-0.09	-0.18	19.96	0	0	0
209	SLU 74	-0.09	-0.2	20.21	0	0	0
209	SLU 75	-0.09	-0.19	20.21	0	0	0
209	SLU 76	-0.09	-0.19	20.12	0	0	0
209	SLU 77	-0.09	-0.21	20.37	0	0	0
209	SLU 78	-0.09	-0.19	20.37	0	0	0
209	SLU 79	-0.09	-0.21	20.28	0	0	0
209	SLU 80	-0.09	-0.2	20.28	0	0	0
209	SLU 81	-0.09	-0.21	20.71	0	0	0
209	SLU 82	-0.09	-0.19	20.71	0	0	0
209	SLU 83	-0.09	-0.21	20.87	0	0	0
209	SLU 84	-0.09	-0.2	20.87	0	0	0
209	SLE RA 1	-0.07	-0.15	13.66	0	0	0
209	SLE RA 2	-0.07	-0.14	13.66	0	0	0
209	SLE RA 3	-0.07	-0.15	13.83	0	0	0
209	SLE RA 4	-0.07	-0.14	13.83	0	0	0
209	SLE RA 5	-0.07	-0.14	13.77	0	0	0
209	SLE RA 6	-0.07	-0.15	13.94	0	0	0
209	SLE RA 7	-0.07	-0.15	13.94	0	0	0
209	SLE RA 8	-0.07	-0.16	13.88	0	0	0
209	SLE RA 9	-0.07	-0.15	13.88	0	0	0
209	SLE RA 10	-0.07	-0.14	14.83	0	0	0
209	SLE RA 11	-0.07	-0.16	15	0	0	0
209	SLE RA 12	-0.07	-0.15	15	0	0	0
209	SLE RA 13	-0.07	-0.14	14.94	0	0	0
209	SLE RA 14	-0.07	-0.16	15.11	0	0	0
209	SLE RA 15	-0.07	-0.15	15.11	0	0	0
209	SLE RA 16	-0.07	-0.16	15.05	0	0	0
209	SLE RA 17	-0.07	-0.15	15.05	0	0	0
209	SLE RA 18	-0.07	-0.16	15.34	0	0	0
209	SLE RA 19	-0.07	-0.15	15.34	0	0	0
209	SLE RA 20	-0.07	-0.16	15.44	0	0	0
209	SLE RA 21	-0.07	-0.15	15.44	0	0	0
209	SLE FR 1	-0.07	-0.15	13.66	0	0	0
209	SLE FR 2	-0.07	-0.15	13.66	0	0	0
209	SLE FR 3	-0.07	-0.15	13.71	0	0	0
209	SLE FR 4	-0.07	-0.15	14.17	0	0	0
209	SLE FR 5	-0.07	-0.16	14.21	0	0	0
209	SLE FR 6	-0.07	-0.16	14.5	0	0	0
209	SLE QP 1	-0.07	-0.15	13.66	0	0	0
209	SLE QP 2	-0.07	-0.16	14.17	0	0	0
209	SLD 1	1.11	-0.02	14.83	0	0	0
209	SLD 2	1.17	-0.06	14.82	0	0	0
209	SLD 3	1.14	-0.43	14.68	0	0	0
209	SLD 4	1.2	-0.47	14.68	0	0	0
209	SLD 5	0.23	0.51	14.59	0	0	0
209	SLD 6	0.27	0.48	14.58	0	0	0
209	SLD 7	0.33	-0.85	14.1	0	0	0
209	SLD 8	0.37	-0.87	14.1	0	0	0
209	SLD 9	-0.5	0.56	14.23	0	0	0
209	SLD 10	-0.46	0.54	14.23	0	0	0
209	SLD 11	-0.4	-0.8	13.75	0	0	0
209	SLD 12	-0.36	-0.82	13.74	0	0	0
209	SLD 13	-1.33	0.16	13.65	0	0	0
209	SLD 14	-1.27	0.12	13.65	0	0	0
209	SLD 15	-1.3	-0.25	13.51	0	0	0
209	SLD 16	-1.24	-0.29	13.5	0	0	0
209	SLV 1	2.68	0.14	15.71	0	0	0
209	SLV 2	2.82	0.05	15.7	0	0	0
209	SLV 3	2.75	-0.79	15.38	0	0	0
209	SLV 4	2.89	-0.88	15.37	0	0	0
209	SLV 5	0.62	1.36	15.13	0	0	0
209	SLV 6	0.72	1.3	15.13	0	0	0
209	SLV 7	0.86	-1.74	14.03	0	0	0
209	SLV 8	0.95	-1.8	14.02	0	0	0
209	SLV 9	-1.09	1.49	14.31	0	0	0
209	SLV 10	-1	1.43	14.3	0	0	0
209	SLV 11	-0.85	-1.61	13.21	0	0	0
209	SLV 12	-0.76	-1.67	13.2	0	0	0
209	SLV 13	-3.02	0.57	12.96	0	0	0
209	SLV 14	-2.88	0.48	12.95	0	0	0
209	SLV 15	-2.95	-0.36	12.63	0	0	0
209	SLV 16	-2.81	-0.45	12.62	0	0	0
210	SLU 1	-0.06	-0.14	13.6	0	0	0
210	SLU 2	-0.06	-0.12	13.6	0	0	0
210	SLU 3	-0.07	-0.14	13.86	0	0	0
210	SLU 4	-0.07	-0.13	13.86	0	0	0
210	SLU 5	-0.06	-0.12	13.77	0	0	0
210	SLU 6	-0.07	-0.14	14.03	0	0	0
210	SLU 7	-0.07	-0.13	14.03	0	0	0
210	SLU 8	-0.07	-0.15	13.93	0	0	0
210	SLU 9	-0.06	-0.13	13.93	0	0	0
210	SLU 10	-0.06	-0.12	15.41	0	0	0
210	SLU 11	-0.07	-0.14	15.67	0	0	0
210	SLU 12	-0.07	-0.13	15.67	0	0	0
210	SLU 13	-0.06	-0.13	15.58	0	0	0
210	SLU 14	-0.07	-0.15	15.83	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
210	SLU 15	-0.07	-0.13	15.83	0	0	0
210	SLU 16	-0.07	-0.15	15.74	0	0	0
210	SLU 17	-0.07	-0.14	15.74	0	0	0
210	SLU 18	-0.07	-0.15	16.19	0	0	0
210	SLU 19	-0.07	-0.13	16.19	0	0	0
210	SLU 20	-0.07	-0.15	16.35	0	0	0
210	SLU 21	-0.07	-0.14	16.35	0	0	0
210	SLU 22	-0.08	-0.13	15.18	0	0	0
210	SLU 23	-0.07	-0.11	15.18	0	0	0
210	SLU 24	-0.08	-0.13	15.44	0	0	0
210	SLU 25	-0.08	-0.12	15.44	0	0	0
210	SLU 26	-0.07	-0.11	15.35	0	0	0
210	SLU 27	-0.08	-0.13	15.6	0	0	0
210	SLU 28	-0.08	-0.12	15.6	0	0	0
210	SLU 29	-0.08	-0.14	15.51	0	0	0
210	SLU 30	-0.07	-0.13	15.51	0	0	0
210	SLU 31	-0.07	-0.12	16.99	0	0	0
210	SLU 32	-0.08	-0.14	17.25	0	0	0
210	SLU 33	-0.08	-0.12	17.25	0	0	0
210	SLU 34	-0.07	-0.12	17.15	0	0	0
210	SLU 35	-0.08	-0.14	17.41	0	0	0
210	SLU 36	-0.08	-0.12	17.41	0	0	0
210	SLU 37	-0.08	-0.14	17.32	0	0	0
210	SLU 38	-0.08	-0.13	17.32	0	0	0
210	SLU 39	-0.08	-0.14	17.76	0	0	0
210	SLU 40	-0.08	-0.13	17.76	0	0	0
210	SLU 41	-0.08	-0.14	17.93	0	0	0
210	SLU 42	-0.08	-0.13	17.93	0	0	0
210	SLU 43	-0.08	-0.19	17.14	0	0	0
210	SLU 44	-0.08	-0.16	17.14	0	0	0
210	SLU 45	-0.08	-0.18	17.4	0	0	0
210	SLU 46	-0.08	-0.17	17.4	0	0	0
210	SLU 47	-0.08	-0.17	17.31	0	0	0
210	SLU 48	-0.08	-0.19	17.57	0	0	0
210	SLU 49	-0.08	-0.17	17.57	0	0	0
210	SLU 50	-0.08	-0.19	17.47	0	0	0
210	SLU 51	-0.08	-0.18	17.47	0	0	0
210	SLU 52	-0.08	-0.17	18.95	0	0	0
210	SLU 53	-0.08	-0.19	19.21	0	0	0
210	SLU 54	-0.08	-0.17	19.21	0	0	0
210	SLU 55	-0.08	-0.17	19.12	0	0	0
210	SLU 56	-0.08	-0.19	19.37	0	0	0
210	SLU 57	-0.08	-0.18	19.37	0	0	0
210	SLU 58	-0.08	-0.19	19.28	0	0	0
210	SLU 59	-0.08	-0.18	19.28	0	0	0
210	SLU 60	-0.08	-0.19	19.73	0	0	0
210	SLU 61	-0.08	-0.18	19.73	0	0	0
210	SLU 62	-0.08	-0.19	19.89	0	0	0
210	SLU 63	-0.08	-0.18	19.89	0	0	0
210	SLU 64	-0.09	-0.18	18.72	0	0	0
210	SLU 65	-0.09	-0.16	18.72	0	0	0
210	SLU 66	-0.09	-0.18	18.98	0	0	0
210	SLU 67	-0.09	-0.16	18.98	0	0	0
210	SLU 68	-0.09	-0.16	18.89	0	0	0
210	SLU 69	-0.09	-0.18	19.14	0	0	0
210	SLU 70	-0.09	-0.17	19.14	0	0	0
210	SLU 71	-0.09	-0.18	19.05	0	0	0
210	SLU 72	-0.09	-0.17	19.05	0	0	0
210	SLU 73	-0.09	-0.16	20.53	0	0	0
210	SLU 74	-0.09	-0.18	20.79	0	0	0
210	SLU 75	-0.09	-0.17	20.79	0	0	0
210	SLU 76	-0.09	-0.16	20.69	0	0	0
210	SLU 77	-0.09	-0.18	20.95	0	0	0
210	SLU 78	-0.09	-0.17	20.95	0	0	0
210	SLU 79	-0.09	-0.19	20.86	0	0	0
210	SLU 80	-0.09	-0.17	20.86	0	0	0
210	SLU 81	-0.09	-0.18	21.3	0	0	0
210	SLU 82	-0.09	-0.17	21.3	0	0	0
210	SLU 83	-0.09	-0.19	21.47	0	0	0
210	SLU 84	-0.09	-0.17	21.47	0	0	0
210	SLE RA 1	-0.07	-0.14	14.05	0	0	0
210	SLE RA 2	-0.07	-0.12	14.06	0	0	0
210	SLE RA 3	-0.07	-0.14	14.23	0	0	0
210	SLE RA 4	-0.07	-0.13	14.23	0	0	0
210	SLE RA 5	-0.07	-0.13	14.16	0	0	0
210	SLE RA 6	-0.07	-0.14	14.34	0	0	0
210	SLE RA 7	-0.07	-0.13	14.34	0	0	0
210	SLE RA 8	-0.07	-0.14	14.27	0	0	0
210	SLE RA 9	-0.07	-0.13	14.27	0	0	0
210	SLE RA 10	-0.07	-0.13	15.26	0	0	0
210	SLE RA 11	-0.07	-0.14	15.43	0	0	0
210	SLE RA 12	-0.07	-0.13	15.43	0	0	0
210	SLE RA 13	-0.07	-0.13	15.37	0	0	0
210	SLE RA 14	-0.07	-0.14	15.54	0	0	0
210	SLE RA 15	-0.07	-0.13	15.54	0	0	0
210	SLE RA 16	-0.07	-0.14	15.48	0	0	0
210	SLE RA 17	-0.07	-0.14	15.48	0	0	0
210	SLE RA 18	-0.07	-0.14	15.78	0	0	0
210	SLE RA 19	-0.07	-0.13	15.78	0	0	0
210	SLE RA 20	-0.07	-0.14	15.89	0	0	0
210	SLE RA 21	-0.07	-0.14	15.89	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
210	SLE FR 1	-0.07	-0.14	14.05	0	0	0
210	SLE FR 2	-0.07	-0.14	14.05	0	0	0
210	SLE FR 3	-0.07	-0.14	14.1	0	0	0
210	SLE FR 4	-0.07	-0.14	14.57	0	0	0
210	SLE FR 5	-0.07	-0.14	14.62	0	0	0
210	SLE FR 6	-0.07	-0.14	14.92	0	0	0
210	SLE QP 1	-0.07	-0.14	14.05	0	0	0
210	SLE QP 2	-0.07	-0.14	14.57	0	0	0
210	SLD 1	1.16	0	15.16	0	0	0
210	SLD 2	1.22	-0.03	15.16	0	0	0
210	SLD 3	1.19	-0.42	15.01	0	0	0
210	SLD 4	1.25	-0.46	15.01	0	0	0
210	SLD 5	0.24	0.56	14.98	0	0	0
210	SLD 6	0.28	0.53	14.98	0	0	0
210	SLD 7	0.35	-0.86	14.48	0	0	0
210	SLD 8	0.39	-0.89	14.47	0	0	0
210	SLD 9	-0.52	0.61	14.67	0	0	0
210	SLD 10	-0.48	0.58	14.67	0	0	0
210	SLD 11	-0.42	-0.81	14.17	0	0	0
210	SLD 12	-0.38	-0.84	14.16	0	0	0
210	SLD 13	-1.39	0.18	14.13	0	0	0
210	SLD 14	-1.32	0.14	14.13	0	0	0
210	SLD 15	-1.36	-0.25	13.98	0	0	0
210	SLD 16	-1.29	-0.28	13.98	0	0	0
210	SLV 1	2.8	0.19	15.96	0	0	0
210	SLV 2	2.94	0.1	15.94	0	0	0
210	SLV 3	2.87	-0.79	15.61	0	0	0
210	SLV 4	3.02	-0.87	15.6	0	0	0
210	SLV 5	0.65	1.45	15.51	0	0	0
210	SLV 6	0.75	1.39	15.5	0	0	0
210	SLV 7	0.9	-1.79	14.36	0	0	0
210	SLV 8	1	-1.85	14.36	0	0	0
210	SLV 9	-1.13	1.57	14.79	0	0	0
210	SLV 10	-1.04	1.51	14.78	0	0	0
210	SLV 11	-0.88	-1.67	13.64	0	0	0
210	SLV 12	-0.79	-1.73	13.63	0	0	0
210	SLV 13	-3.15	0.59	13.54	0	0	0
210	SLV 14	-3.01	0.51	13.53	0	0	0
210	SLV 15	-3.08	-0.38	13.2	0	0	0
210	SLV 16	-2.93	-0.46	13.19	0	0	0
211	SLU 1	-0.06	-0.12	13.77	0	0	0
211	SLU 2	-0.06	-0.1	13.77	0	0	0
211	SLU 3	-0.07	-0.12	14.03	0	0	0
211	SLU 4	-0.06	-0.11	14.03	0	0	0
211	SLU 5	-0.06	-0.1	13.94	0	0	0
211	SLU 6	-0.07	-0.12	14.2	0	0	0
211	SLU 7	-0.06	-0.11	14.2	0	0	0
211	SLU 8	-0.06	-0.13	14.1	0	0	0
211	SLU 9	-0.06	-0.11	14.11	0	0	0
211	SLU 10	-0.06	-0.1	15.6	0	0	0
211	SLU 11	-0.07	-0.12	15.86	0	0	0
211	SLU 12	-0.07	-0.11	15.86	0	0	0
211	SLU 13	-0.06	-0.1	15.77	0	0	0
211	SLU 14	-0.07	-0.12	16.03	0	0	0
211	SLU 15	-0.07	-0.11	16.03	0	0	0
211	SLU 16	-0.07	-0.13	15.94	0	0	0
211	SLU 17	-0.06	-0.11	15.94	0	0	0
211	SLU 18	-0.07	-0.12	16.39	0	0	0
211	SLU 19	-0.06	-0.11	16.39	0	0	0
211	SLU 20	-0.07	-0.13	16.55	0	0	0
211	SLU 21	-0.06	-0.11	16.55	0	0	0
211	SLU 22	-0.07	-0.11	15.36	0	0	0
211	SLU 23	-0.07	-0.09	15.36	0	0	0
211	SLU 24	-0.08	-0.11	15.62	0	0	0
211	SLU 25	-0.07	-0.1	15.62	0	0	0
211	SLU 26	-0.07	-0.09	15.53	0	0	0
211	SLU 27	-0.08	-0.11	15.79	0	0	0
211	SLU 28	-0.08	-0.1	15.79	0	0	0
211	SLU 29	-0.08	-0.12	15.7	0	0	0
211	SLU 30	-0.07	-0.1	15.7	0	0	0
211	SLU 31	-0.07	-0.09	17.2	0	0	0
211	SLU 32	-0.08	-0.11	17.45	0	0	0
211	SLU 33	-0.08	-0.1	17.46	0	0	0
211	SLU 34	-0.07	-0.09	17.36	0	0	0
211	SLU 35	-0.08	-0.11	17.62	0	0	0
211	SLU 36	-0.08	-0.1	17.62	0	0	0
211	SLU 37	-0.08	-0.12	17.53	0	0	0
211	SLU 38	-0.08	-0.1	17.53	0	0	0
211	SLU 39	-0.08	-0.11	17.98	0	0	0
211	SLU 40	-0.07	-0.1	17.98	0	0	0
211	SLU 41	-0.08	-0.11	18.15	0	0	0
211	SLU 42	-0.08	-0.1	18.15	0	0	0
211	SLU 43	-0.08	-0.16	17.36	0	0	0
211	SLU 44	-0.08	-0.14	17.36	0	0	0
211	SLU 45	-0.08	-0.16	17.62	0	0	0
211	SLU 46	-0.08	-0.15	17.62	0	0	0
211	SLU 47	-0.08	-0.14	17.52	0	0	0
211	SLU 48	-0.08	-0.16	17.78	0	0	0
211	SLU 49	-0.08	-0.15	17.78	0	0	0
211	SLU 50	-0.08	-0.17	17.69	0	0	0
211	SLU 51	-0.08	-0.15	17.69	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
211	SLU 52	-0.08	-0.14	19.19	0	0	0
211	SLU 53	-0.08	-0.16	19.45	0	0	0
211	SLU 54	-0.08	-0.15	19.45	0	0	0
211	SLU 55	-0.08	-0.14	19.36	0	0	0
211	SLU 56	-0.08	-0.16	19.61	0	0	0
211	SLU 57	-0.08	-0.15	19.62	0	0	0
211	SLU 58	-0.08	-0.17	19.52	0	0	0
211	SLU 59	-0.08	-0.15	19.52	0	0	0
211	SLU 60	-0.08	-0.16	19.97	0	0	0
211	SLU 61	-0.08	-0.15	19.97	0	0	0
211	SLU 62	-0.08	-0.17	20.14	0	0	0
211	SLU 63	-0.08	-0.15	20.14	0	0	0
211	SLU 64	-0.09	-0.15	18.95	0	0	0
211	SLU 65	-0.09	-0.13	18.95	0	0	0
211	SLU 66	-0.09	-0.15	19.21	0	0	0
211	SLU 67	-0.09	-0.14	19.21	0	0	0
211	SLU 68	-0.09	-0.13	19.12	0	0	0
211	SLU 69	-0.09	-0.15	19.37	0	0	0
211	SLU 70	-0.09	-0.14	19.38	0	0	0
211	SLU 71	-0.09	-0.16	19.28	0	0	0
211	SLU 72	-0.09	-0.14	19.28	0	0	0
211	SLU 73	-0.09	-0.13	20.78	0	0	0
211	SLU 74	-0.09	-0.15	21.04	0	0	0
211	SLU 75	-0.09	-0.14	21.04	0	0	0
211	SLU 76	-0.09	-0.13	20.95	0	0	0
211	SLU 77	-0.09	-0.15	21.21	0	0	0
211	SLU 78	-0.09	-0.14	21.21	0	0	0
211	SLU 79	-0.09	-0.16	21.11	0	0	0
211	SLU 80	-0.09	-0.14	21.11	0	0	0
211	SLU 81	-0.09	-0.15	21.56	0	0	0
211	SLU 82	-0.09	-0.14	21.57	0	0	0
211	SLU 83	-0.09	-0.16	21.73	0	0	0
211	SLU 84	-0.09	-0.14	21.73	0	0	0
211	SLE RA 1	-0.07	-0.12	14.23	0	0	0
211	SLE RA 2	-0.07	-0.1	14.23	0	0	0
211	SLE RA 3	-0.07	-0.12	14.4	0	0	0
211	SLE RA 4	-0.07	-0.11	14.4	0	0	0
211	SLE RA 5	-0.07	-0.11	14.34	0	0	0
211	SLE RA 6	-0.07	-0.12	14.51	0	0	0
211	SLE RA 7	-0.07	-0.11	14.51	0	0	0
211	SLE RA 8	-0.07	-0.12	14.45	0	0	0
211	SLE RA 9	-0.07	-0.11	14.45	0	0	0
211	SLE RA 10	-0.07	-0.11	15.45	0	0	0
211	SLE RA 11	-0.07	-0.12	15.62	0	0	0
211	SLE RA 12	-0.07	-0.11	15.62	0	0	0
211	SLE RA 13	-0.07	-0.11	15.56	0	0	0
211	SLE RA 14	-0.07	-0.12	15.73	0	0	0
211	SLE RA 15	-0.07	-0.11	15.73	0	0	0
211	SLE RA 16	-0.07	-0.12	15.67	0	0	0
211	SLE RA 17	-0.07	-0.11	15.67	0	0	0
211	SLE RA 18	-0.07	-0.12	15.97	0	0	0
211	SLE RA 19	-0.07	-0.11	15.97	0	0	0
211	SLE RA 20	-0.07	-0.12	16.08	0	0	0
211	SLE RA 21	-0.07	-0.11	16.08	0	0	0
211	SLE FR 1	-0.07	-0.12	14.23	0	0	0
211	SLE FR 2	-0.07	-0.12	14.23	0	0	0
211	SLE FR 3	-0.07	-0.12	14.27	0	0	0
211	SLE FR 4	-0.07	-0.12	14.75	0	0	0
211	SLE FR 5	-0.07	-0.12	14.79	0	0	0
211	SLE FR 6	-0.07	-0.12	15.1	0	0	0
211	SLE QP 1	-0.07	-0.12	14.23	0	0	0
211	SLE QP 2	-0.07	-0.12	14.75	0	0	0
211	SLD 1	1.18	0.03	15.26	0	0	0
211	SLD 2	1.25	0	15.25	0	0	0
211	SLD 3	1.22	-0.4	15.1	0	0	0
211	SLD 4	1.28	-0.44	15.1	0	0	0
211	SLD 5	0.25	0.59	15.14	0	0	0
211	SLD 6	0.29	0.57	15.13	0	0	0
211	SLD 7	0.36	-0.86	14.62	0	0	0
211	SLD 8	0.4	-0.88	14.62	0	0	0
211	SLD 9	-0.53	0.64	14.88	0	0	0
211	SLD 10	-0.49	0.62	14.88	0	0	0
211	SLD 11	-0.42	-0.81	14.36	0	0	0
211	SLD 12	-0.38	-0.83	14.36	0	0	0
211	SLD 13	-1.42	0.2	14.4	0	0	0
211	SLD 14	-1.35	0.16	14.4	0	0	0
211	SLD 15	-1.38	-0.24	14.25	0	0	0
211	SLD 16	-1.32	-0.27	14.24	0	0	0
211	SLV 1	2.86	0.23	15.93	0	0	0
211	SLV 2	3.01	0.15	15.92	0	0	0
211	SLV 3	2.94	-0.77	15.58	0	0	0
211	SLV 4	3.09	-0.85	15.57	0	0	0
211	SLV 5	0.67	1.51	15.64	0	0	0
211	SLV 6	0.77	1.46	15.63	0	0	0
211	SLV 7	0.92	-1.81	14.46	0	0	0
211	SLV 8	1.02	-1.86	14.46	0	0	0
211	SLV 9	-1.15	1.62	15.04	0	0	0
211	SLV 10	-1.06	1.57	15.03	0	0	0
211	SLV 11	-0.9	-1.69	13.86	0	0	0
211	SLV 12	-0.81	-1.74	13.85	0	0	0
211	SLV 13	-3.22	0.61	13.93	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
211	SLV 14	-3.07	0.53	13.92	0	0	0
211	SLV 15	-3.15	-0.39	13.58	0	0	0
211	SLV 16	-2.99	-0.47	13.56	0	0	0
212	SLU 1	-0.06	-0.1	13.85	0	0	0
212	SLU 2	-0.06	-0.08	13.86	0	0	0
212	SLU 3	-0.06	-0.1	14.11	0	0	0
212	SLU 4	-0.06	-0.08	14.12	0	0	0
212	SLU 5	-0.06	-0.08	14.02	0	0	0
212	SLU 6	-0.06	-0.1	14.28	0	0	0
212	SLU 7	-0.06	-0.09	14.29	0	0	0
212	SLU 8	-0.06	-0.1	14.19	0	0	0
212	SLU 9	-0.06	-0.09	14.19	0	0	0
212	SLU 10	-0.06	-0.08	15.7	0	0	0
212	SLU 11	-0.07	-0.1	15.96	0	0	0
212	SLU 12	-0.06	-0.08	15.96	0	0	0
212	SLU 13	-0.06	-0.08	15.87	0	0	0
212	SLU 14	-0.07	-0.1	16.13	0	0	0
212	SLU 15	-0.06	-0.08	16.13	0	0	0
212	SLU 16	-0.06	-0.1	16.04	0	0	0
212	SLU 17	-0.06	-0.09	16.04	0	0	0
212	SLU 18	-0.06	-0.1	16.49	0	0	0
212	SLU 19	-0.06	-0.08	16.49	0	0	0
212	SLU 20	-0.06	-0.1	16.66	0	0	0
212	SLU 21	-0.06	-0.09	16.66	0	0	0
212	SLU 22	-0.07	-0.09	15.45	0	0	0
212	SLU 23	-0.07	-0.06	15.45	0	0	0
212	SLU 24	-0.07	-0.08	15.71	0	0	0
212	SLU 25	-0.07	-0.07	15.71	0	0	0
212	SLU 26	-0.07	-0.07	15.62	0	0	0
212	SLU 27	-0.07	-0.09	15.88	0	0	0
212	SLU 28	-0.07	-0.07	15.88	0	0	0
212	SLU 29	-0.07	-0.09	15.79	0	0	0
212	SLU 30	-0.07	-0.08	15.79	0	0	0
212	SLU 31	-0.07	-0.06	17.3	0	0	0
212	SLU 32	-0.08	-0.08	17.56	0	0	0
212	SLU 33	-0.07	-0.07	17.56	0	0	0
212	SLU 34	-0.07	-0.06	17.47	0	0	0
212	SLU 35	-0.08	-0.08	17.73	0	0	0
212	SLU 36	-0.07	-0.07	17.73	0	0	0
212	SLU 37	-0.07	-0.09	17.63	0	0	0
212	SLU 38	-0.07	-0.08	17.63	0	0	0
212	SLU 39	-0.07	-0.08	18.09	0	0	0
212	SLU 40	-0.07	-0.07	18.09	0	0	0
212	SLU 41	-0.08	-0.09	18.25	0	0	0
212	SLU 42	-0.07	-0.07	18.26	0	0	0
212	SLU 43	-0.08	-0.14	17.46	0	0	0
212	SLU 44	-0.08	-0.11	17.46	0	0	0
212	SLU 45	-0.08	-0.13	17.72	0	0	0
212	SLU 46	-0.08	-0.12	17.72	0	0	0
212	SLU 47	-0.08	-0.12	17.63	0	0	0
212	SLU 48	-0.08	-0.13	17.89	0	0	0
212	SLU 49	-0.08	-0.12	17.89	0	0	0
212	SLU 50	-0.08	-0.14	17.8	0	0	0
212	SLU 51	-0.08	-0.13	17.8	0	0	0
212	SLU 52	-0.08	-0.11	19.31	0	0	0
212	SLU 53	-0.08	-0.13	19.57	0	0	0
212	SLU 54	-0.08	-0.12	19.57	0	0	0
212	SLU 55	-0.08	-0.11	19.48	0	0	0
212	SLU 56	-0.08	-0.13	19.74	0	0	0
212	SLU 57	-0.08	-0.12	19.74	0	0	0
212	SLU 58	-0.08	-0.14	19.64	0	0	0
212	SLU 59	-0.08	-0.12	19.65	0	0	0
212	SLU 60	-0.08	-0.13	20.1	0	0	0
212	SLU 61	-0.08	-0.12	20.1	0	0	0
212	SLU 62	-0.08	-0.13	20.27	0	0	0
212	SLU 63	-0.08	-0.12	20.27	0	0	0
212	SLU 64	-0.09	-0.12	19.06	0	0	0
212	SLU 65	-0.09	-0.1	19.06	0	0	0
212	SLU 66	-0.09	-0.12	19.32	0	0	0
212	SLU 67	-0.09	-0.11	19.32	0	0	0
212	SLU 68	-0.09	-0.1	19.23	0	0	0
212	SLU 69	-0.09	-0.12	19.49	0	0	0
212	SLU 70	-0.09	-0.11	19.49	0	0	0
212	SLU 71	-0.09	-0.13	19.39	0	0	0
212	SLU 72	-0.09	-0.11	19.4	0	0	0
212	SLU 73	-0.09	-0.1	20.91	0	0	0
212	SLU 74	-0.09	-0.12	21.17	0	0	0
212	SLU 75	-0.09	-0.1	21.17	0	0	0
212	SLU 76	-0.09	-0.1	21.08	0	0	0
212	SLU 77	-0.09	-0.12	21.33	0	0	0
212	SLU 78	-0.09	-0.11	21.34	0	0	0
212	SLU 79	-0.09	-0.12	21.24	0	0	0
212	SLU 80	-0.09	-0.11	21.24	0	0	0
212	SLU 81	-0.09	-0.12	21.69	0	0	0
212	SLU 82	-0.09	-0.11	21.7	0	0	0
212	SLU 83	-0.09	-0.12	21.86	0	0	0
212	SLU 84	-0.09	-0.11	21.87	0	0	0
212	SLE RA 1	-0.07	-0.1	14.31	0	0	0
212	SLE RA 2	-0.06	-0.08	14.31	0	0	0
212	SLE RA 3	-0.07	-0.09	14.48	0	0	0
212	SLE RA 4	-0.07	-0.09	14.48	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
212	SLE RA 5	-0.06	-0.08	14.42	0	0	0
212	SLE RA 6	-0.07	-0.1	14.6	0	0	0
212	SLE RA 7	-0.07	-0.09	14.6	0	0	0
212	SLE RA 8	-0.07	-0.1	14.53	0	0	0
212	SLE RA 9	-0.07	-0.09	14.53	0	0	0
212	SLE RA 10	-0.07	-0.08	15.54	0	0	0
212	SLE RA 11	-0.07	-0.09	15.71	0	0	0
212	SLE RA 12	-0.07	-0.08	15.72	0	0	0
212	SLE RA 13	-0.07	-0.08	15.65	0	0	0
212	SLE RA 14	-0.07	-0.09	15.83	0	0	0
212	SLE RA 15	-0.07	-0.09	15.83	0	0	0
212	SLE RA 16	-0.07	-0.1	15.76	0	0	0
212	SLE RA 17	-0.07	-0.09	15.77	0	0	0
212	SLE RA 18	-0.07	-0.09	16.07	0	0	0
212	SLE RA 19	-0.07	-0.09	16.07	0	0	0
212	SLE RA 20	-0.07	-0.1	16.18	0	0	0
212	SLE RA 21	-0.07	-0.09	16.18	0	0	0
212	SLE FR 1	-0.07	-0.1	14.31	0	0	0
212	SLE FR 2	-0.07	-0.09	14.31	0	0	0
212	SLE FR 3	-0.07	-0.1	14.35	0	0	0
212	SLE FR 4	-0.07	-0.09	14.84	0	0	0
212	SLE FR 5	-0.07	-0.1	14.88	0	0	0
212	SLE FR 6	-0.07	-0.1	15.19	0	0	0
212	SLE QP 1	-0.07	-0.1	14.31	0	0	0
212	SLE QP 2	-0.07	-0.1	14.84	0	0	0
212	SLD 1	1.2	0.07	15.25	0	0	0
212	SLD 2	1.26	0.04	15.25	0	0	0
212	SLD 3	1.23	-0.37	15.1	0	0	0
212	SLD 4	1.29	-0.41	15.09	0	0	0
212	SLD 5	0.25	0.63	15.2	0	0	0
212	SLD 6	0.29	0.61	15.2	0	0	0
212	SLD 7	0.36	-0.84	14.67	0	0	0
212	SLD 8	0.4	-0.86	14.67	0	0	0
212	SLD 9	-0.54	0.67	15	0	0	0
212	SLD 10	-0.49	0.65	15	0	0	0
212	SLD 11	-0.43	-0.8	14.47	0	0	0
212	SLD 12	-0.38	-0.82	14.47	0	0	0
212	SLD 13	-1.43	0.21	14.58	0	0	0
212	SLD 14	-1.36	0.18	14.58	0	0	0
212	SLD 15	-1.39	-0.23	14.42	0	0	0
212	SLD 16	-1.33	-0.26	14.42	0	0	0
212	SLV 1	2.89	0.27	15.81	0	0	0
212	SLV 2	3.04	0.2	15.8	0	0	0
212	SLV 3	2.96	-0.74	15.45	0	0	0
212	SLV 4	3.12	-0.81	15.44	0	0	0
212	SLV 5	0.68	1.55	15.68	0	0	0
212	SLV 6	0.78	1.51	15.67	0	0	0
212	SLV 7	0.93	-1.8	14.47	0	0	0
212	SLV 8	1.03	-1.85	14.46	0	0	0
212	SLV 9	-1.16	1.65	15.21	0	0	0
212	SLV 10	-1.06	1.61	15.2	0	0	0
212	SLV 11	-0.91	-1.7	14	0	0	0
212	SLV 12	-0.81	-1.74	13.99	0	0	0
212	SLV 13	-3.25	0.62	14.24	0	0	0
212	SLV 14	-3.1	0.54	14.22	0	0	0
212	SLV 15	-3.17	-0.39	13.87	0	0	0
212	SLV 16	-3.02	-0.46	13.86	0	0	0
213	SLU 1	-0.06	-0.08	13.91	0	0	0
213	SLU 2	-0.06	-0.06	13.92	0	0	0
213	SLU 3	-0.06	-0.07	14.18	0	0	0
213	SLU 4	-0.06	-0.06	14.18	0	0	0
213	SLU 5	-0.06	-0.06	14.09	0	0	0
213	SLU 6	-0.06	-0.08	14.35	0	0	0
213	SLU 7	-0.06	-0.06	14.35	0	0	0
213	SLU 8	-0.06	-0.08	14.25	0	0	0
213	SLU 9	-0.06	-0.07	14.26	0	0	0
213	SLU 10	-0.06	-0.05	15.78	0	0	0
213	SLU 11	-0.06	-0.07	16.04	0	0	0
213	SLU 12	-0.06	-0.06	16.04	0	0	0
213	SLU 13	-0.06	-0.05	15.95	0	0	0
213	SLU 14	-0.06	-0.07	16.21	0	0	0
213	SLU 15	-0.06	-0.06	16.21	0	0	0
213	SLU 16	-0.06	-0.08	16.12	0	0	0
213	SLU 17	-0.06	-0.06	16.12	0	0	0
213	SLU 18	-0.06	-0.07	16.57	0	0	0
213	SLU 19	-0.06	-0.06	16.58	0	0	0
213	SLU 20	-0.06	-0.07	16.74	0	0	0
213	SLU 21	-0.06	-0.06	16.75	0	0	0
213	SLU 22	-0.07	-0.06	15.51	0	0	0
213	SLU 23	-0.07	-0.04	15.52	0	0	0
213	SLU 24	-0.07	-0.06	15.78	0	0	0
213	SLU 25	-0.07	-0.04	15.78	0	0	0
213	SLU 26	-0.07	-0.04	15.69	0	0	0
213	SLU 27	-0.07	-0.06	15.95	0	0	0
213	SLU 28	-0.07	-0.05	15.95	0	0	0
213	SLU 29	-0.07	-0.06	15.86	0	0	0
213	SLU 30	-0.07	-0.05	15.86	0	0	0
213	SLU 31	-0.07	-0.03	17.38	0	0	0
213	SLU 32	-0.07	-0.05	17.64	0	0	0
213	SLU 33	-0.07	-0.04	17.64	0	0	0
213	SLU 34	-0.07	-0.04	17.55	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
213	SLU 35	-0.07	-0.05	17.81	0	0	0
213	SLU 36	-0.07	-0.04	17.81	0	0	0
213	SLU 37	-0.07	-0.06	17.72	0	0	0
213	SLU 38	-0.07	-0.05	17.72	0	0	0
213	SLU 39	-0.07	-0.05	18.17	0	0	0
213	SLU 40	-0.07	-0.04	18.18	0	0	0
213	SLU 41	-0.07	-0.05	18.34	0	0	0
213	SLU 42	-0.07	-0.04	18.35	0	0	0
213	SLU 43	-0.08	-0.11	17.54	0	0	0
213	SLU 44	-0.08	-0.09	17.54	0	0	0
213	SLU 45	-0.08	-0.1	17.8	0	0	0
213	SLU 46	-0.08	-0.09	17.81	0	0	0
213	SLU 47	-0.08	-0.09	17.72	0	0	0
213	SLU 48	-0.08	-0.1	17.97	0	0	0
213	SLU 49	-0.08	-0.09	17.98	0	0	0
213	SLU 50	-0.08	-0.11	17.88	0	0	0
213	SLU 51	-0.08	-0.1	17.88	0	0	0
213	SLU 52	-0.08	-0.08	19.41	0	0	0
213	SLU 53	-0.08	-0.1	19.66	0	0	0
213	SLU 54	-0.08	-0.09	19.67	0	0	0
213	SLU 55	-0.08	-0.08	19.58	0	0	0
213	SLU 56	-0.08	-0.1	19.84	0	0	0
213	SLU 57	-0.08	-0.09	19.84	0	0	0
213	SLU 58	-0.08	-0.11	19.74	0	0	0
213	SLU 59	-0.08	-0.09	19.74	0	0	0
213	SLU 60	-0.08	-0.1	20.2	0	0	0
213	SLU 61	-0.08	-0.09	20.2	0	0	0
213	SLU 62	-0.08	-0.1	20.37	0	0	0
213	SLU 63	-0.08	-0.09	20.37	0	0	0
213	SLU 64	-0.09	-0.09	19.14	0	0	0
213	SLU 65	-0.09	-0.07	19.15	0	0	0
213	SLU 66	-0.09	-0.09	19.4	0	0	0
213	SLU 67	-0.09	-0.07	19.41	0	0	0
213	SLU 68	-0.09	-0.07	19.32	0	0	0
213	SLU 69	-0.09	-0.09	19.57	0	0	0
213	SLU 70	-0.09	-0.07	19.58	0	0	0
213	SLU 71	-0.09	-0.09	19.48	0	0	0
213	SLU 72	-0.09	-0.08	19.48	0	0	0
213	SLU 73	-0.09	-0.06	21.01	0	0	0
213	SLU 74	-0.09	-0.08	21.27	0	0	0
213	SLU 75	-0.09	-0.07	21.27	0	0	0
213	SLU 76	-0.09	-0.06	21.18	0	0	0
213	SLU 77	-0.09	-0.08	21.44	0	0	0
213	SLU 78	-0.09	-0.07	21.44	0	0	0
213	SLU 79	-0.09	-0.09	21.34	0	0	0
213	SLU 80	-0.09	-0.07	21.35	0	0	0
213	SLU 81	-0.09	-0.08	21.8	0	0	0
213	SLU 82	-0.09	-0.07	21.8	0	0	0
213	SLU 83	-0.09	-0.08	21.97	0	0	0
213	SLU 84	-0.09	-0.07	21.97	0	0	0
213	SLE RA 1	-0.06	-0.07	14.37	0	0	0
213	SLE RA 2	-0.06	-0.06	14.37	0	0	0
213	SLE RA 3	-0.07	-0.07	14.55	0	0	0
213	SLE RA 4	-0.06	-0.06	14.55	0	0	0
213	SLE RA 5	-0.06	-0.06	14.49	0	0	0
213	SLE RA 6	-0.07	-0.07	14.66	0	0	0
213	SLE RA 7	-0.07	-0.06	14.66	0	0	0
213	SLE RA 8	-0.07	-0.07	14.6	0	0	0
213	SLE RA 9	-0.06	-0.07	14.6	0	0	0
213	SLE RA 10	-0.06	-0.05	15.62	0	0	0
213	SLE RA 11	-0.07	-0.07	15.79	0	0	0
213	SLE RA 12	-0.07	-0.06	15.79	0	0	0
213	SLE RA 13	-0.06	-0.06	15.73	0	0	0
213	SLE RA 14	-0.07	-0.07	15.9	0	0	0
213	SLE RA 15	-0.07	-0.06	15.9	0	0	0
213	SLE RA 16	-0.07	-0.07	15.84	0	0	0
213	SLE RA 17	-0.07	-0.06	15.84	0	0	0
213	SLE RA 18	-0.07	-0.07	16.14	0	0	0
213	SLE RA 19	-0.06	-0.06	16.15	0	0	0
213	SLE RA 20	-0.07	-0.07	16.26	0	0	0
213	SLE RA 21	-0.07	-0.06	16.26	0	0	0
213	SLE FR 1	-0.06	-0.07	14.37	0	0	0
213	SLE FR 2	-0.06	-0.07	14.37	0	0	0
213	SLE FR 3	-0.06	-0.07	14.42	0	0	0
213	SLE FR 4	-0.06	-0.07	14.9	0	0	0
213	SLE FR 5	-0.07	-0.07	14.95	0	0	0
213	SLE FR 6	-0.07	-0.07	15.26	0	0	0
213	SLE QP 1	-0.06	-0.07	14.37	0	0	0
213	SLE QP 2	-0.06	-0.07	14.9	0	0	0
213	SLD 1	1.2	0.1	15.23	0	0	0
213	SLD 2	1.26	0.07	15.23	0	0	0
213	SLD 3	1.23	-0.34	15.07	0	0	0
213	SLD 4	1.3	-0.37	15.06	0	0	0
213	SLD 5	0.25	0.66	15.25	0	0	0
213	SLD 6	0.3	0.64	15.25	0	0	0
213	SLD 7	0.36	-0.82	14.71	0	0	0
213	SLD 8	0.4	-0.84	14.7	0	0	0
213	SLD 9	-0.53	0.69	15.1	0	0	0
213	SLD 10	-0.49	0.68	15.1	0	0	0
213	SLD 11	-0.43	-0.78	14.56	0	0	0
213	SLD 12	-0.38	-0.8	14.56	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
213	SLD 13	-1.43	0.23	14.74	0	0	0
213	SLD 14	-1.36	0.2	14.74	0	0	0
213	SLD 15	-1.39	-0.21	14.58	0	0	0
213	SLD 16	-1.33	-0.24	14.57	0	0	0
213	SLV 1	2.89	0.31	15.67	0	0	0
213	SLV 2	3.04	0.25	15.66	0	0	0
213	SLV 3	2.96	-0.69	15.3	0	0	0
213	SLV 4	3.12	-0.76	15.29	0	0	0
213	SLV 5	0.68	1.58	15.7	0	0	0
213	SLV 6	0.78	1.54	15.69	0	0	0
213	SLV 7	0.93	-1.78	14.46	0	0	0
213	SLV 8	1.03	-1.82	14.45	0	0	0
213	SLV 9	-1.16	1.68	15.35	0	0	0
213	SLV 10	-1.06	1.64	15.34	0	0	0
213	SLV 11	-0.91	-1.69	14.12	0	0	0
213	SLV 12	-0.81	-1.73	14.11	0	0	0
213	SLV 13	-3.25	0.62	14.52	0	0	0
213	SLV 14	-3.09	0.55	14.51	0	0	0
213	SLV 15	-3.17	-0.39	14.15	0	0	0
213	SLV 16	-3.02	-0.46	14.13	0	0	0
214	SLU 1	-0.06	-0.05	13.95	0	0	0
214	SLU 2	-0.06	-0.03	13.96	0	0	0
214	SLU 3	-0.06	-0.05	14.22	0	0	0
214	SLU 4	-0.06	-0.04	14.22	0	0	0
214	SLU 5	-0.06	-0.03	14.13	0	0	0
214	SLU 6	-0.06	-0.05	14.39	0	0	0
214	SLU 7	-0.06	-0.04	14.39	0	0	0
214	SLU 8	-0.06	-0.06	14.3	0	0	0
214	SLU 9	-0.06	-0.04	14.3	0	0	0
214	SLU 10	-0.06	-0.03	15.83	0	0	0
214	SLU 11	-0.06	-0.04	16.09	0	0	0
214	SLU 12	-0.06	-0.03	16.1	0	0	0
214	SLU 13	-0.06	-0.03	16.01	0	0	0
214	SLU 14	-0.06	-0.04	16.26	0	0	0
214	SLU 15	-0.06	-0.03	16.27	0	0	0
214	SLU 16	-0.06	-0.05	16.17	0	0	0
214	SLU 17	-0.06	-0.04	16.17	0	0	0
214	SLU 18	-0.06	-0.04	16.63	0	0	0
214	SLU 19	-0.06	-0.03	16.63	0	0	0
214	SLU 20	-0.06	-0.04	16.8	0	0	0
214	SLU 21	-0.06	-0.03	16.81	0	0	0
214	SLU 22	-0.07	-0.03	15.56	0	0	0
214	SLU 23	-0.07	-0.01	15.56	0	0	0
214	SLU 24	-0.07	-0.03	15.82	0	0	0
214	SLU 25	-0.07	-0.02	15.83	0	0	0
214	SLU 26	-0.07	-0.01	15.74	0	0	0
214	SLU 27	-0.07	-0.03	15.99	0	0	0
214	SLU 28	-0.07	-0.02	16	0	0	0
214	SLU 29	-0.07	-0.04	15.9	0	0	0
214	SLU 30	-0.07	-0.02	15.9	0	0	0
214	SLU 31	-0.07	0	17.44	0	0	0
214	SLU 32	-0.07	-0.02	17.7	0	0	0
214	SLU 33	-0.07	-0.01	17.7	0	0	0
214	SLU 34	-0.07	-0.01	17.61	0	0	0
214	SLU 35	-0.07	-0.02	17.87	0	0	0
214	SLU 36	-0.07	-0.01	17.87	0	0	0
214	SLU 37	-0.07	-0.03	17.77	0	0	0
214	SLU 38	-0.07	-0.02	17.78	0	0	0
214	SLU 39	-0.07	-0.02	18.23	0	0	0
214	SLU 40	-0.07	-0.01	18.24	0	0	0
214	SLU 41	-0.07	-0.02	18.41	0	0	0
214	SLU 42	-0.07	-0.01	18.41	0	0	0
214	SLU 43	-0.08	-0.08	17.59	0	0	0
214	SLU 44	-0.07	-0.06	17.59	0	0	0
214	SLU 45	-0.08	-0.07	17.85	0	0	0
214	SLU 46	-0.08	-0.06	17.86	0	0	0
214	SLU 47	-0.07	-0.06	17.77	0	0	0
214	SLU 48	-0.08	-0.07	18.03	0	0	0
214	SLU 49	-0.08	-0.06	18.03	0	0	0
214	SLU 50	-0.08	-0.08	17.93	0	0	0
214	SLU 51	-0.08	-0.07	17.94	0	0	0
214	SLU 52	-0.08	-0.05	19.47	0	0	0
214	SLU 53	-0.08	-0.07	19.73	0	0	0
214	SLU 54	-0.08	-0.05	19.73	0	0	0
214	SLU 55	-0.08	-0.05	19.64	0	0	0
214	SLU 56	-0.08	-0.07	19.9	0	0	0
214	SLU 57	-0.08	-0.05	19.9	0	0	0
214	SLU 58	-0.08	-0.07	19.81	0	0	0
214	SLU 59	-0.08	-0.06	19.81	0	0	0
214	SLU 60	-0.08	-0.07	20.27	0	0	0
214	SLU 61	-0.08	-0.05	20.27	0	0	0
214	SLU 62	-0.08	-0.07	20.44	0	0	0
214	SLU 63	-0.08	-0.06	20.44	0	0	0
214	SLU 64	-0.09	-0.06	19.19	0	0	0
214	SLU 65	-0.08	-0.04	19.2	0	0	0
214	SLU 66	-0.09	-0.05	19.46	0	0	0
214	SLU 67	-0.09	-0.04	19.46	0	0	0
214	SLU 68	-0.08	-0.04	19.37	0	0	0
214	SLU 69	-0.09	-0.05	19.63	0	0	0
214	SLU 70	-0.09	-0.04	19.63	0	0	0
214	SLU 71	-0.09	-0.06	19.54	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
214	SLU 72	-0.09	-0.05	19.54	0	0	0
214	SLU 73	-0.08	-0.03	21.07	0	0	0
214	SLU 74	-0.09	-0.04	21.33	0	0	0
214	SLU 75	-0.09	-0.03	21.34	0	0	0
214	SLU 76	-0.09	-0.03	21.25	0	0	0
214	SLU 77	-0.09	-0.05	21.5	0	0	0
214	SLU 78	-0.09	-0.03	21.51	0	0	0
214	SLU 79	-0.09	-0.05	21.41	0	0	0
214	SLU 80	-0.09	-0.04	21.41	0	0	0
214	SLU 81	-0.09	-0.05	21.87	0	0	0
214	SLU 82	-0.09	-0.03	21.87	0	0	0
214	SLU 83	-0.09	-0.05	22.04	0	0	0
214	SLU 84	-0.09	-0.03	22.05	0	0	0
214	SLE RA 1	-0.06	-0.05	14.41	0	0	0
214	SLE RA 2	-0.06	-0.03	14.42	0	0	0
214	SLE RA 3	-0.06	-0.05	14.59	0	0	0
214	SLE RA 4	-0.06	-0.04	14.59	0	0	0
214	SLE RA 5	-0.06	-0.04	14.53	0	0	0
214	SLE RA 6	-0.06	-0.05	14.7	0	0	0
214	SLE RA 7	-0.06	-0.04	14.7	0	0	0
214	SLE RA 8	-0.06	-0.05	14.64	0	0	0
214	SLE RA 9	-0.06	-0.04	14.64	0	0	0
214	SLE RA 10	-0.06	-0.03	15.66	0	0	0
214	SLE RA 11	-0.07	-0.04	15.84	0	0	0
214	SLE RA 12	-0.06	-0.03	15.84	0	0	0
214	SLE RA 13	-0.06	-0.03	15.78	0	0	0
214	SLE RA 14	-0.07	-0.04	15.95	0	0	0
214	SLE RA 15	-0.06	-0.03	15.95	0	0	0
214	SLE RA 16	-0.06	-0.04	15.89	0	0	0
214	SLE RA 17	-0.06	-0.04	15.89	0	0	0
214	SLE RA 18	-0.06	-0.04	16.2	0	0	0
214	SLE RA 19	-0.06	-0.03	16.2	0	0	0
214	SLE RA 20	-0.06	-0.04	16.31	0	0	0
214	SLE RA 21	-0.06	-0.03	16.31	0	0	0
214	SLE FR 1	-0.06	-0.05	14.41	0	0	0
214	SLE FR 2	-0.06	-0.05	14.41	0	0	0
214	SLE FR 3	-0.06	-0.05	14.46	0	0	0
214	SLE FR 4	-0.06	-0.04	14.95	0	0	0
214	SLE FR 5	-0.06	-0.05	14.99	0	0	0
214	SLE FR 6	-0.06	-0.04	15.3	0	0	0
214	SLE QP 1	-0.06	-0.05	14.41	0	0	0
214	SLE QP 2	-0.06	-0.05	14.95	0	0	0
214	SLD 1	1.19	0.13	15.19	0	0	0
214	SLD 2	1.25	0.11	15.19	0	0	0
214	SLD 3	1.22	-0.31	15.03	0	0	0
214	SLD 4	1.28	-0.33	15.02	0	0	0
214	SLD 5	0.25	0.68	15.27	0	0	0
214	SLD 6	0.29	0.66	15.27	0	0	0
214	SLD 7	0.36	-0.79	14.72	0	0	0
214	SLD 8	0.4	-0.8	14.71	0	0	0
214	SLD 9	-0.53	0.71	15.18	0	0	0
214	SLD 10	-0.49	0.7	15.17	0	0	0
214	SLD 11	-0.42	-0.76	14.62	0	0	0
214	SLD 12	-0.38	-0.77	14.62	0	0	0
214	SLD 13	-1.41	0.24	14.87	0	0	0
214	SLD 14	-1.35	0.22	14.87	0	0	0
214	SLD 15	-1.38	-0.2	14.71	0	0	0
214	SLD 16	-1.31	-0.22	14.7	0	0	0
214	SLV 1	2.86	0.36	15.52	0	0	0
214	SLV 2	3.01	0.3	15.5	0	0	0
214	SLV 3	2.94	-0.65	15.14	0	0	0
214	SLV 4	3.09	-0.7	15.12	0	0	0
214	SLV 5	0.67	1.61	15.7	0	0	0
214	SLV 6	0.77	1.57	15.69	0	0	0
214	SLV 7	0.93	-1.74	14.43	0	0	0
214	SLV 8	1.02	-1.77	14.42	0	0	0
214	SLV 9	-1.15	1.68	15.47	0	0	0
214	SLV 10	-1.05	1.65	15.46	0	0	0
214	SLV 11	-0.9	-1.66	14.21	0	0	0
214	SLV 12	-0.8	-1.7	14.2	0	0	0
214	SLV 13	-3.22	0.61	14.77	0	0	0
214	SLV 14	-3.07	0.56	14.75	0	0	0
214	SLV 15	-3.14	-0.39	14.39	0	0	0
214	SLV 16	-2.99	-0.45	14.37	0	0	0
215	SLU 1	-0.06	-0.03	13.88	0	0	0
215	SLU 2	-0.06	-0.01	13.88	0	0	0
215	SLU 3	-0.06	-0.03	14.14	0	0	0
215	SLU 4	-0.06	-0.01	14.15	0	0	0
215	SLU 5	-0.06	-0.01	14.06	0	0	0
215	SLU 6	-0.06	-0.03	14.31	0	0	0
215	SLU 7	-0.06	-0.02	14.32	0	0	0
215	SLU 8	-0.06	-0.03	14.22	0	0	0
215	SLU 9	-0.06	-0.02	14.22	0	0	0
215	SLU 10	-0.06	0	15.76	0	0	0
215	SLU 11	-0.06	-0.02	16.01	0	0	0
215	SLU 12	-0.06	0	16.02	0	0	0
215	SLU 13	-0.06	0	15.93	0	0	0
215	SLU 14	-0.06	-0.02	16.19	0	0	0
215	SLU 15	-0.06	-0.01	16.19	0	0	0
215	SLU 16	-0.06	-0.02	16.09	0	0	0
215	SLU 17	-0.06	-0.01	16.1	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
215	SLU 18	-0.06	-0.02	16.55	0	0	0
215	SLU 19	-0.06	0	16.56	0	0	0
215	SLU 20	-0.06	-0.02	16.72	0	0	0
215	SLU 21	-0.06	-0.01	16.73	0	0	0
215	SLU 22	-0.07	-0.01	15.47	0	0	0
215	SLU 23	-0.07	0.01	15.48	0	0	0
215	SLU 24	-0.07	0	15.74	0	0	0
215	SLU 25	-0.07	0.01	15.74	0	0	0
215	SLU 26	-0.07	0.01	15.65	0	0	0
215	SLU 27	-0.07	0	15.91	0	0	0
215	SLU 28	-0.07	0.01	15.91	0	0	0
215	SLU 29	-0.07	-0.01	15.82	0	0	0
215	SLU 30	-0.07	0	15.82	0	0	0
215	SLU 31	-0.07	0.02	17.35	0	0	0
215	SLU 32	-0.07	0.01	17.61	0	0	0
215	SLU 33	-0.07	0.02	17.61	0	0	0
215	SLU 34	-0.07	0.02	17.52	0	0	0
215	SLU 35	-0.07	0.01	17.78	0	0	0
215	SLU 36	-0.07	0.02	17.79	0	0	0
215	SLU 37	-0.07	0	17.69	0	0	0
215	SLU 38	-0.07	0.01	17.69	0	0	0
215	SLU 39	-0.07	0.01	18.15	0	0	0
215	SLU 40	-0.07	0.02	18.15	0	0	0
215	SLU 41	-0.07	0.01	18.32	0	0	0
215	SLU 42	-0.07	0.02	18.32	0	0	0
215	SLU 43	-0.07	-0.05	17.49	0	0	0
215	SLU 44	-0.07	-0.03	17.5	0	0	0
215	SLU 45	-0.07	-0.04	17.76	0	0	0
215	SLU 46	-0.07	-0.03	17.76	0	0	0
215	SLU 47	-0.07	-0.03	17.67	0	0	0
215	SLU 48	-0.07	-0.05	17.93	0	0	0
215	SLU 49	-0.07	-0.03	17.93	0	0	0
215	SLU 50	-0.07	-0.05	17.83	0	0	0
215	SLU 51	-0.07	-0.04	17.84	0	0	0
215	SLU 52	-0.07	-0.02	19.37	0	0	0
215	SLU 53	-0.08	-0.03	19.63	0	0	0
215	SLU 54	-0.07	-0.02	19.63	0	0	0
215	SLU 55	-0.07	-0.02	19.54	0	0	0
215	SLU 56	-0.08	-0.04	19.8	0	0	0
215	SLU 57	-0.07	-0.02	19.81	0	0	0
215	SLU 58	-0.08	-0.04	19.71	0	0	0
215	SLU 59	-0.07	-0.03	19.71	0	0	0
215	SLU 60	-0.07	-0.03	20.17	0	0	0
215	SLU 61	-0.07	-0.02	20.17	0	0	0
215	SLU 62	-0.08	-0.04	20.34	0	0	0
215	SLU 63	-0.07	-0.02	20.34	0	0	0
215	SLU 64	-0.08	-0.02	19.09	0	0	0
215	SLU 65	-0.08	0	19.1	0	0	0
215	SLU 66	-0.08	-0.02	19.35	0	0	0
215	SLU 67	-0.08	-0.01	19.36	0	0	0
215	SLU 68	-0.08	-0.01	19.27	0	0	0
215	SLU 69	-0.08	-0.02	19.52	0	0	0
215	SLU 70	-0.08	-0.01	19.53	0	0	0
215	SLU 71	-0.08	-0.03	19.43	0	0	0
215	SLU 72	-0.08	-0.02	19.44	0	0	0
215	SLU 73	-0.08	0.01	20.97	0	0	0
215	SLU 74	-0.09	-0.01	21.22	0	0	0
215	SLU 75	-0.08	0	21.23	0	0	0
215	SLU 76	-0.08	0	21.14	0	0	0
215	SLU 77	-0.09	-0.01	21.4	0	0	0
215	SLU 78	-0.08	0	21.4	0	0	0
215	SLU 79	-0.08	-0.02	21.3	0	0	0
215	SLU 80	-0.08	-0.01	21.31	0	0	0
215	SLU 81	-0.08	-0.01	21.76	0	0	0
215	SLU 82	-0.08	0	21.77	0	0	0
215	SLU 83	-0.08	-0.01	21.93	0	0	0
215	SLU 84	-0.08	0	21.94	0	0	0
215	SLE RA 1	-0.06	-0.02	14.33	0	0	0
215	SLE RA 2	-0.06	-0.01	14.34	0	0	0
215	SLE RA 3	-0.06	-0.02	14.51	0	0	0
215	SLE RA 4	-0.06	-0.01	14.51	0	0	0
215	SLE RA 5	-0.06	-0.01	14.45	0	0	0
215	SLE RA 6	-0.06	-0.02	14.62	0	0	0
215	SLE RA 7	-0.06	-0.01	14.63	0	0	0
215	SLE RA 8	-0.06	-0.03	14.56	0	0	0
215	SLE RA 9	-0.06	-0.02	14.56	0	0	0
215	SLE RA 10	-0.06	0	15.59	0	0	0
215	SLE RA 11	-0.06	-0.01	15.76	0	0	0
215	SLE RA 12	-0.06	-0.01	15.76	0	0	0
215	SLE RA 13	-0.06	-0.01	15.7	0	0	0
215	SLE RA 14	-0.06	-0.02	15.87	0	0	0
215	SLE RA 15	-0.06	-0.01	15.87	0	0	0
215	SLE RA 16	-0.06	-0.02	15.81	0	0	0
215	SLE RA 17	-0.06	-0.01	15.81	0	0	0
215	SLE RA 18	-0.06	-0.01	16.12	0	0	0
215	SLE RA 19	-0.06	-0.01	16.12	0	0	0
215	SLE RA 20	-0.06	-0.02	16.23	0	0	0
215	SLE RA 21	-0.06	-0.01	16.23	0	0	0
215	SLE FR 1	-0.06	-0.02	14.33	0	0	0
215	SLE FR 2	-0.06	-0.02	14.33	0	0	0
215	SLE FR 3	-0.06	-0.02	14.38	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
215	SLE FR 4	-0.06	-0.02	14.87	0	0	0
215	SLE FR 5	-0.06	-0.02	14.91	0	0	0
215	SLE FR 6	-0.06	-0.02	15.22	0	0	0
215	SLE QP 1	-0.06	-0.02	14.33	0	0	0
215	SLE QP 2	-0.06	-0.02	14.87	0	0	0
215	SLD 1	1.16	0.16	15.04	0	0	0
215	SLD 2	1.23	0.14	15.03	0	0	0
215	SLD 3	1.19	-0.27	14.87	0	0	0
215	SLD 4	1.26	-0.29	14.86	0	0	0
215	SLD 5	0.25	0.69	15.18	0	0	0
215	SLD 6	0.29	0.68	15.17	0	0	0
215	SLD 7	0.35	-0.75	14.61	0	0	0
215	SLD 8	0.39	-0.76	14.61	0	0	0
215	SLD 9	-0.52	0.72	15.13	0	0	0
215	SLD 10	-0.48	0.71	15.12	0	0	0
215	SLD 11	-0.41	-0.72	14.56	0	0	0
215	SLD 12	-0.37	-0.73	14.56	0	0	0
215	SLD 13	-1.38	0.25	14.87	0	0	0
215	SLD 14	-1.32	0.23	14.86	0	0	0
215	SLD 15	-1.35	-0.18	14.7	0	0	0
215	SLD 16	-1.29	-0.2	14.7	0	0	0
215	SLV 1	2.8	0.39	15.26	0	0	0
215	SLV 2	2.95	0.35	15.25	0	0	0
215	SLV 3	2.87	-0.59	14.88	0	0	0
215	SLV 4	3.02	-0.64	14.86	0	0	0
215	SLV 5	0.66	1.6	15.57	0	0	0
215	SLV 6	0.75	1.58	15.56	0	0	0
215	SLV 7	0.91	-1.68	14.29	0	0	0
215	SLV 8	1	-1.71	14.28	0	0	0
215	SLV 9	-1.12	1.67	15.45	0	0	0
215	SLV 10	-1.03	1.64	15.44	0	0	0
215	SLV 11	-0.88	-1.62	14.17	0	0	0
215	SLV 12	-0.78	-1.65	14.16	0	0	0
215	SLV 13	-3.15	0.6	14.87	0	0	0
215	SLV 14	-3	0.55	14.85	0	0	0
215	SLV 15	-3.07	-0.39	14.49	0	0	0
215	SLV 16	-2.92	-0.43	14.47	0	0	0
217	SLU 1	-0.03	-0.09	6.44	0	0	0
217	SLU 2	-0.03	-0.08	6.44	0	0	0
217	SLU 3	-0.03	-0.09	6.57	0	0	0
217	SLU 4	-0.03	-0.09	6.56	0	0	0
217	SLU 5	-0.03	-0.08	6.52	0	0	0
217	SLU 6	-0.03	-0.09	6.64	0	0	0
217	SLU 7	-0.03	-0.09	6.64	0	0	0
217	SLU 8	-0.03	-0.1	6.6	0	0	0
217	SLU 9	-0.03	-0.09	6.6	0	0	0
217	SLU 10	-0.03	-0.09	7.3	0	0	0
217	SLU 11	-0.03	-0.1	7.42	0	0	0
217	SLU 12	-0.03	-0.09	7.42	0	0	0
217	SLU 13	-0.03	-0.09	7.38	0	0	0
217	SLU 14	-0.03	-0.1	7.5	0	0	0
217	SLU 15	-0.03	-0.09	7.5	0	0	0
217	SLU 16	-0.03	-0.1	7.45	0	0	0
217	SLU 17	-0.03	-0.09	7.45	0	0	0
217	SLU 18	-0.03	-0.1	7.67	0	0	0
217	SLU 19	-0.03	-0.09	7.67	0	0	0
217	SLU 20	-0.03	-0.1	7.74	0	0	0
217	SLU 21	-0.03	-0.1	7.74	0	0	0
217	SLU 22	-0.04	-0.09	7.2	0	0	0
217	SLU 23	-0.03	-0.08	7.2	0	0	0
217	SLU 24	-0.04	-0.09	7.32	0	0	0
217	SLU 25	-0.04	-0.09	7.32	0	0	0
217	SLU 26	-0.03	-0.08	7.28	0	0	0
217	SLU 27	-0.04	-0.1	7.4	0	0	0
217	SLU 28	-0.04	-0.09	7.4	0	0	0
217	SLU 29	-0.04	-0.1	7.35	0	0	0
217	SLU 30	-0.04	-0.09	7.35	0	0	0
217	SLU 31	-0.04	-0.09	8.06	0	0	0
217	SLU 32	-0.04	-0.1	8.18	0	0	0
217	SLU 33	-0.04	-0.09	8.18	0	0	0
217	SLU 34	-0.04	-0.09	8.13	0	0	0
217	SLU 35	-0.04	-0.1	8.26	0	0	0
217	SLU 36	-0.04	-0.09	8.26	0	0	0
217	SLU 37	-0.04	-0.1	8.21	0	0	0
217	SLU 38	-0.04	-0.1	8.21	0	0	0
217	SLU 39	-0.04	-0.1	8.42	0	0	0
217	SLU 40	-0.04	-0.09	8.42	0	0	0
217	SLU 41	-0.04	-0.1	8.5	0	0	0
217	SLU 42	-0.04	-0.1	8.5	0	0	0
217	SLU 43	-0.04	-0.12	8.12	0	0	0
217	SLU 44	-0.04	-0.11	8.11	0	0	0
217	SLU 45	-0.04	-0.12	8.24	0	0	0
217	SLU 46	-0.04	-0.11	8.24	0	0	0
217	SLU 47	-0.04	-0.11	8.19	0	0	0
217	SLU 48	-0.04	-0.12	8.32	0	0	0
217	SLU 49	-0.04	-0.12	8.31	0	0	0
217	SLU 50	-0.04	-0.12	8.27	0	0	0
217	SLU 51	-0.04	-0.12	8.27	0	0	0
217	SLU 52	-0.04	-0.12	8.97	0	0	0
217	SLU 53	-0.04	-0.13	9.09	0	0	0
217	SLU 54	-0.04	-0.12	9.09	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
217	SLU 55	-0.04	-0.12	9.05	0	0	0
217	SLU 56	-0.04	-0.13	9.17	0	0	0
217	SLU 57	-0.04	-0.12	9.17	0	0	0
217	SLU 58	-0.04	-0.13	9.13	0	0	0
217	SLU 59	-0.04	-0.12	9.13	0	0	0
217	SLU 60	-0.04	-0.13	9.34	0	0	0
217	SLU 61	-0.04	-0.12	9.34	0	0	0
217	SLU 62	-0.04	-0.13	9.42	0	0	0
217	SLU 63	-0.04	-0.12	9.42	0	0	0
217	SLU 64	-0.04	-0.12	8.87	0	0	0
217	SLU 65	-0.04	-0.11	8.87	0	0	0
217	SLU 66	-0.04	-0.12	9	0	0	0
217	SLU 67	-0.04	-0.12	8.99	0	0	0
217	SLU 68	-0.04	-0.11	8.95	0	0	0
217	SLU 69	-0.04	-0.12	9.07	0	0	0
217	SLU 70	-0.04	-0.12	9.07	0	0	0
217	SLU 71	-0.04	-0.12	9.03	0	0	0
217	SLU 72	-0.04	-0.12	9.03	0	0	0
217	SLU 73	-0.04	-0.12	9.73	0	0	0
217	SLU 74	-0.04	-0.13	9.85	0	0	0
217	SLU 75	-0.04	-0.12	9.85	0	0	0
217	SLU 76	-0.04	-0.12	9.81	0	0	0
217	SLU 77	-0.04	-0.13	9.93	0	0	0
217	SLU 78	-0.04	-0.12	9.93	0	0	0
217	SLU 79	-0.04	-0.13	9.88	0	0	0
217	SLU 80	-0.04	-0.12	9.88	0	0	0
217	SLU 81	-0.04	-0.13	10.1	0	0	0
217	SLU 82	-0.04	-0.12	10.1	0	0	0
217	SLU 83	-0.04	-0.13	10.17	0	0	0
217	SLU 84	-0.04	-0.12	10.17	0	0	0
217	SLE RA 1	-0.03	-0.09	6.66	0	0	0
217	SLE RA 2	-0.03	-0.09	6.66	0	0	0
217	SLE RA 3	-0.03	-0.09	6.74	0	0	0
217	SLE RA 4	-0.03	-0.09	6.74	0	0	0
217	SLE RA 5	-0.03	-0.09	6.71	0	0	0
217	SLE RA 6	-0.03	-0.09	6.79	0	0	0
217	SLE RA 7	-0.03	-0.09	6.79	0	0	0
217	SLE RA 8	-0.03	-0.1	6.76	0	0	0
217	SLE RA 9	-0.03	-0.09	6.76	0	0	0
217	SLE RA 10	-0.03	-0.09	7.23	0	0	0
217	SLE RA 11	-0.03	-0.1	7.31	0	0	0
217	SLE RA 12	-0.03	-0.09	7.31	0	0	0
217	SLE RA 13	-0.03	-0.09	7.28	0	0	0
217	SLE RA 14	-0.03	-0.1	7.36	0	0	0
217	SLE RA 15	-0.03	-0.09	7.36	0	0	0
217	SLE RA 16	-0.03	-0.1	7.33	0	0	0
217	SLE RA 17	-0.03	-0.09	7.33	0	0	0
217	SLE RA 18	-0.03	-0.1	7.47	0	0	0
217	SLE RA 19	-0.03	-0.09	7.47	0	0	0
217	SLE RA 20	-0.03	-0.1	7.53	0	0	0
217	SLE RA 21	-0.03	-0.09	7.53	0	0	0
217	SLE FR 1	-0.03	-0.09	6.66	0	0	0
217	SLE FR 2	-0.03	-0.09	6.66	0	0	0
217	SLE FR 3	-0.03	-0.09	6.68	0	0	0
217	SLE FR 4	-0.03	-0.09	6.9	0	0	0
217	SLE FR 5	-0.03	-0.1	6.92	0	0	0
217	SLE FR 6	-0.03	-0.1	7.07	0	0	0
217	SLE QP 1	-0.03	-0.09	6.66	0	0	0
217	SLE QP 2	-0.03	-0.09	6.9	0	0	0
217	SLD 1	0.52	-0.04	7.31	0	0	0
217	SLD 2	0.55	-0.06	7.3	0	0	0
217	SLD 3	0.54	-0.23	7.23	0	0	0
217	SLD 4	0.56	-0.25	7.23	0	0	0
217	SLD 5	0.11	0.22	7.13	0	0	0
217	SLD 6	0.13	0.2	7.13	0	0	0
217	SLD 7	0.16	-0.42	6.9	0	0	0
217	SLD 8	0.17	-0.44	6.89	0	0	0
217	SLD 9	-0.24	0.25	6.91	0	0	0
217	SLD 10	-0.22	0.23	6.91	0	0	0
217	SLD 11	-0.19	-0.39	6.68	0	0	0
217	SLD 12	-0.17	-0.41	6.68	0	0	0
217	SLD 13	-0.63	0.06	6.58	0	0	0
217	SLD 14	-0.6	0.04	6.57	0	0	0
217	SLD 15	-0.61	-0.13	6.5	0	0	0
217	SLD 16	-0.59	-0.15	6.5	0	0	0
217	SLV 1	1.26	0.03	7.84	0	0	0
217	SLV 2	1.33	-0.02	7.84	0	0	0
217	SLV 3	1.3	-0.41	7.68	0	0	0
217	SLV 4	1.36	-0.46	7.67	0	0	0
217	SLV 5	0.29	0.62	7.43	0	0	0
217	SLV 6	0.34	0.58	7.43	0	0	0
217	SLV 7	0.41	-0.84	6.89	0	0	0
217	SLV 8	0.45	-0.88	6.89	0	0	0
217	SLV 9	-0.51	0.69	6.92	0	0	0
217	SLV 10	-0.47	0.65	6.91	0	0	0
217	SLV 11	-0.4	-0.77	6.38	0	0	0
217	SLV 12	-0.36	-0.81	6.38	0	0	0
217	SLV 13	-1.43	0.27	6.13	0	0	0
217	SLV 14	-1.36	0.22	6.13	0	0	0
217	SLV 15	-1.39	-0.17	5.97	0	0	0
217	SLV 16	-1.33	-0.22	5.97	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
218	SLU 1	-0.03	0	7	0	1.0514	0.0006
218	SLU 2	-0.03	0.01	7	0	1.0522	-0.0008
218	SLU 3	-0.03	0	7.13	0	1.0716	0.0003
218	SLU 4	-0.03	0	7.14	0	1.072	-0.0006
218	SLU 5	-0.03	0	7.09	0	1.0653	-0.0007
218	SLU 6	-0.03	0	7.22	0	1.0847	0.0004
218	SLU 7	-0.03	0	7.22	0	1.0851	-0.0005
218	SLU 8	-0.03	-0.01	7.17	0	1.0776	0.0008
218	SLU 9	-0.03	0	7.18	0	1.0781	0
218	SLU 10	-0.03	0.01	7.95	0	1.1948	-0.0018
218	SLU 11	-0.03	0	8.08	0	1.2142	-0.0007
218	SLU 12	-0.03	0.01	8.09	0	1.2146	-0.0016
218	SLU 13	-0.03	0.01	8.04	0	1.2079	-0.0017
218	SLU 14	-0.03	0	8.17	0	1.2273	-0.0006
218	SLU 15	-0.03	0.01	8.17	0	1.2277	-0.0015
218	SLU 16	-0.03	0	8.12	0	1.2202	-0.0002
218	SLU 17	-0.03	0.01	8.13	0	1.2207	-0.001
218	SLU 18	-0.03	0	8.36	0	1.2551	-0.0007
218	SLU 19	-0.03	0.01	8.36	0	1.2556	-0.0016
218	SLU 20	-0.03	0	8.44	0	1.2682	-0.0007
218	SLU 21	-0.03	0.01	8.45	0	1.2687	-0.0015
218	SLU 22	-0.03	0.01	7.81	0	1.1725	-0.0014
218	SLU 23	-0.03	0.02	7.81	0	1.1732	-0.0028
218	SLU 24	-0.03	0.01	7.94	0	1.1926	-0.0018
218	SLU 25	-0.03	0.02	7.94	0	1.1931	-0.0026
218	SLU 26	-0.03	0.02	7.9	0	1.1863	-0.0027
218	SLU 27	-0.03	0.01	8.03	0	1.2058	-0.0017
218	SLU 28	-0.03	0.02	8.03	0	1.2062	-0.0025
218	SLU 29	-0.03	0.01	7.98	0	1.1987	-0.0012
218	SLU 30	-0.03	0.01	7.98	0	1.1991	-0.0021
218	SLU 31	-0.03	0.03	8.76	0	1.3158	-0.0038
218	SLU 32	-0.04	0.02	8.89	0	1.3353	-0.0027
218	SLU 33	-0.03	0.02	8.89	0	1.3357	-0.0036
218	SLU 34	-0.03	0.02	8.85	0	1.3289	-0.0037
218	SLU 35	-0.04	0.02	8.98	0	1.3484	-0.0026
218	SLU 36	-0.03	0.02	8.98	0	1.3488	-0.0035
218	SLU 37	-0.03	0.01	8.93	0	1.3413	-0.0022
218	SLU 38	-0.03	0.02	8.93	0	1.3418	-0.003
218	SLU 39	-0.03	0.02	9.16	0	1.3762	-0.0028
218	SLU 40	-0.03	0.02	9.16	0	1.3767	-0.0036
218	SLU 41	-0.04	0.02	9.25	0	1.3893	-0.0027
218	SLU 42	-0.03	0.02	9.25	0	1.3898	-0.0035
218	SLU 43	-0.04	-0.01	8.82	0	1.3253	0.0015
218	SLU 44	-0.04	0	8.83	0	1.3261	0.0001
218	SLU 45	-0.04	-0.01	8.96	0	1.3455	0.0012
218	SLU 46	-0.04	0	8.96	0	1.3459	0.0003
218	SLU 47	-0.04	0	8.91	0	1.3392	0.0002
218	SLU 48	-0.04	-0.01	9.04	0	1.3586	0.0012
218	SLU 49	-0.04	0	9.05	0	1.359	0.0004
218	SLU 50	-0.04	-0.01	9	0	1.3515	0.0017
218	SLU 51	-0.04	-0.01	9	0	1.352	0.0008
218	SLU 52	-0.04	0.01	9.78	0	1.4687	-0.0009
218	SLU 53	-0.04	0	9.91	0	1.4881	0.0002
218	SLU 54	-0.04	0	9.91	0	1.4885	-0.0007
218	SLU 55	-0.04	0.01	9.86	0	1.4818	-0.0008
218	SLU 56	-0.04	0	9.99	0	1.5012	0.0003
218	SLU 57	-0.04	0	10	0	1.5016	-0.0006
218	SLU 58	-0.04	0	9.95	0	1.4941	0.0007
218	SLU 59	-0.04	0	9.95	0	1.4946	-0.0001
218	SLU 60	-0.04	0	10.18	0	1.529	0.0001
218	SLU 61	-0.04	0	10.18	0	1.5295	-0.0007
218	SLU 62	-0.04	0	10.27	0	1.5422	0.0002
218	SLU 63	-0.04	0	10.27	0	1.5426	-0.0006
218	SLU 64	-0.04	0	9.63	0	1.4464	-0.0005
218	SLU 65	-0.04	0.01	9.63	0	1.4471	-0.0019
218	SLU 66	-0.04	0.01	9.76	0	1.4666	-0.0009
218	SLU 67	-0.04	0.01	9.77	0	1.467	-0.0017
218	SLU 68	-0.04	0.01	9.72	0	1.4602	-0.0019
218	SLU 69	-0.04	0.01	9.85	0	1.4797	-0.0008
218	SLU 70	-0.04	0.01	9.85	0	1.4801	-0.0016
218	SLU 71	-0.04	0	9.8	0	1.4726	-0.0003
218	SLU 72	-0.04	0.01	9.81	0	1.4731	-0.0012
218	SLU 73	-0.04	0.02	10.58	0	1.5897	-0.0029
218	SLU 74	-0.04	0.01	10.71	0	1.6092	-0.0018
218	SLU 75	-0.04	0.02	10.72	0	1.6096	-0.0027
218	SLU 76	-0.04	0.02	10.67	0	1.6029	-0.0028
218	SLU 77	-0.04	0.01	10.8	0	1.6223	-0.0018
218	SLU 78	-0.04	0.02	10.8	0	1.6227	-0.0026
218	SLU 79	-0.04	0.01	10.75	0	1.6152	-0.0013
218	SLU 80	-0.04	0.01	10.76	0	1.6157	-0.0022
218	SLU 81	-0.04	0.01	10.98	0	1.6501	-0.0019
218	SLU 82	-0.04	0.02	10.99	0	1.6506	-0.0027
218	SLU 83	-0.04	0.01	11.07	0	1.6632	-0.0018
218	SLU 84	-0.04	0.02	11.07	0	1.6637	-0.0027
218	SLE RA 1	-0.03	0	7.23	0	1.086	0.0001
218	SLE RA 2	-0.03	0.01	7.23	0	1.0865	-0.0009
218	SLE RA 3	-0.03	0	7.32	0	1.0994	-0.0002
218	SLE RA 4	-0.03	0.01	7.32	0	1.0997	-0.0008
218	SLE RA 5	-0.03	0.01	7.29	0	1.0952	-0.0008
218	SLE RA 6	-0.03	0	7.38	0	1.1082	-0.0001
218	SLE RA 7	-0.03	0	7.38	0	1.1085	-0.0007

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
218	SLE RA 8	-0.03	0	7.35	0	1.1035	0.0002
218	SLE RA 9	-0.03	0	7.35	0	1.1038	-0.0004
218	SLE RA 10	-0.03	0.01	7.87	0	1.1816	-0.0015
218	SLE RA 11	-0.03	0.01	7.95	0	1.1945	-0.0008
218	SLE RA 12	-0.03	0.01	7.95	0	1.1948	-0.0014
218	SLE RA 13	-0.03	0.01	7.92	0	1.1903	-0.0015
218	SLE RA 14	-0.03	0.01	8.01	0	1.2033	-0.0008
218	SLE RA 15	-0.03	0.01	8.01	0	1.2035	-0.0013
218	SLE RA 16	-0.03	0	7.98	0	1.1986	-0.0005
218	SLE RA 17	-0.03	0.01	7.98	0	1.1988	-0.001
218	SLE RA 18	-0.03	0.01	8.13	0	1.2218	-0.0009
218	SLE RA 19	-0.03	0.01	8.14	0	1.2221	-0.0014
218	SLE RA 20	-0.03	0.01	8.19	0	1.2306	-0.0008
218	SLE RA 21	-0.03	0.01	8.19	0	1.2309	-0.0014
218	SLE FR 1	-0.03	0	7.23	0	1.086	0.0001
218	SLE FR 2	-0.03	0	7.23	0	1.0861	-0.0001
218	SLE FR 3	-0.03	0	7.25	0	1.0895	0.0001
218	SLE FR 4	-0.03	0	7.5	0	1.1269	-0.0004
218	SLE FR 5	-0.03	0	7.52	0	1.1302	-0.0002
218	SLE FR 6	-0.03	0	7.68	0	1.1539	-0.0004
218	SLE QP 1	-0.03	0	7.23	0	1.086	0.0001
218	SLE QP 2	-0.03	0	7.5	0	1.1268	-0.0002
218	SLD 1	0.57	0.09	7.52	0	1.1301	-0.0141
218	SLD 2	0.61	0.09	7.52	0	1.1297	-0.0131
218	SLD 3	0.59	-0.12	7.44	0	1.1171	0.0182
218	SLD 4	0.62	-0.13	7.43	0	1.1167	0.0193
218	SLD 5	0.12	0.36	7.64	0	1.1476	-0.0536
218	SLD 6	0.14	0.35	7.64	0	1.1473	-0.0529
218	SLD 7	0.17	-0.36	7.35	0	1.1042	0.0541
218	SLD 8	0.19	-0.36	7.35	0	1.1039	0.0548
218	SLD 9	-0.26	0.37	7.65	0	1.1496	-0.0553
218	SLD 10	-0.24	0.36	7.65	0	1.1493	-0.0546
218	SLD 11	-0.2	-0.35	7.36	0	1.1062	0.0524
218	SLD 12	-0.18	-0.35	7.36	0	1.1059	0.0532
218	SLD 13	-0.68	0.13	7.57	0	1.1368	-0.0197
218	SLD 14	-0.65	0.12	7.56	0	1.1364	-0.0186
218	SLD 15	-0.67	-0.08	7.48	0	1.1238	0.0126
218	SLD 16	-0.64	-0.09	7.48	0	1.1234	0.0137
218	SLV 1	1.38	0.21	7.55	0	1.1341	-0.0318
218	SLV 2	1.46	0.19	7.54	0	1.133	-0.0293
218	SLV 3	1.42	-0.28	7.35	0	1.1046	0.0418
218	SLV 4	1.49	-0.3	7.35	0	1.1035	0.0444
218	SLV 5	0.33	0.81	7.82	0	1.174	-0.1218
218	SLV 6	0.37	0.8	7.81	0	1.1733	-0.1202
218	SLV 7	0.45	-0.82	7.16	0	1.0754	0.1236
218	SLV 8	0.49	-0.83	7.15	0	1.0748	0.1253
218	SLV 9	-0.56	0.84	7.85	0	1.1788	-0.1257
218	SLV 10	-0.51	0.83	7.84	0	1.1781	-0.1241
218	SLV 11	-0.43	-0.8	7.19	0	1.0802	0.1198
218	SLV 12	-0.39	-0.81	7.19	0	1.0795	0.1214
218	SLV 13	-1.56	0.3	7.66	0	1.15	-0.0448
218	SLV 14	-1.48	0.28	7.65	0	1.1489	-0.0423
218	SLV 15	-1.52	-0.19	7.46	0	1.1205	0.0288
218	SLV 16	-1.45	-0.21	7.45	0	1.1194	0.0314
221	SLU 1	0.09	-0.14	41.94	-0.0261	11.3621	0.0324
221	SLU 2	0.08	-0.08	41.97	-0.0262	11.3718	0.0156
221	SLU 3	0.09	-0.13	42.74	-0.0267	11.5792	0.0297
221	SLU 4	0.09	-0.09	42.76	-0.0267	11.585	0.0196
221	SLU 5	0.08	-0.08	42.49	-0.0267	11.512	0.0171
221	SLU 6	0.09	-0.14	43.26	-0.0271	11.7194	0.0312
221	SLU 7	0.09	-0.1	43.28	-0.0272	11.7252	0.0211
221	SLU 8	0.09	-0.15	42.97	-0.027	11.6426	0.0353
221	SLU 9	0.08	-0.11	42.99	-0.0271	11.6484	0.0253
221	SLU 10	0.09	-0.04	47.59	-0.0287	12.8976	0.0037
221	SLU 11	0.1	-0.09	48.35	-0.0292	13.105	0.0178
221	SLU 12	0.09	-0.05	48.37	-0.0292	13.1108	0.0077
221	SLU 13	0.09	-0.04	48.1	-0.0292	13.0379	0.0051
221	SLU 14	0.1	-0.09	48.87	-0.0296	13.2452	0.0192
221	SLU 15	0.09	-0.06	48.89	-0.0297	13.2511	0.0092
221	SLU 16	0.09	-0.11	48.59	-0.0295	13.1684	0.0234
221	SLU 17	0.09	-0.07	48.61	-0.0296	13.1742	0.0133
221	SLU 18	0.1	-0.08	49.96	-0.0297	13.5419	0.0153
221	SLU 19	0.09	-0.04	49.98	-0.0298	13.5477	0.0053
221	SLU 20	0.1	-0.09	50.48	-0.0301	13.6821	0.0168
221	SLU 21	0.09	-0.05	50.49	-0.0302	13.6879	0.0067
221	SLU 22	0.11	-0.09	46.72	-0.0289	12.656	0.0176
221	SLU 23	0.11	-0.03	46.75	-0.029	12.6657	0.0008
221	SLU 24	0.11	-0.08	47.52	-0.0295	12.8731	0.0149
221	SLU 25	0.11	-0.04	47.54	-0.0295	12.8789	0.0048
221	SLU 26	0.11	-0.03	47.27	-0.0295	12.806	0.0023
221	SLU 27	0.11	-0.08	48.03	-0.0299	13.0133	0.0164
221	SLU 28	0.11	-0.05	48.05	-0.03	13.0191	0.0063
221	SLU 29	0.11	-0.1	47.75	-0.0298	12.9365	0.0205
221	SLU 30	0.11	-0.06	47.77	-0.0299	12.9423	0.0104
221	SLU 31	0.11	0.02	52.36	-0.0315	14.1916	-0.0112
221	SLU 32	0.12	-0.04	53.13	-0.032	14.3989	0.0029
221	SLU 33	0.12	0	53.15	-0.032	14.4048	-0.0071
221	SLU 34	0.11	0.01	52.88	-0.032	14.3318	-0.0097
221	SLU 35	0.12	-0.04	53.65	-0.0324	14.5392	0.0044
221	SLU 36	0.12	0	53.66	-0.0325	14.545	-0.0057
221	SLU 37	0.12	-0.06	53.36	-0.0323	14.4623	0.0086

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
221	SLU 38	0.11	-0.02	53.38	-0.0324	14.4682	-0.0015
221	SLU 39	0.12	-0.03	54.74	-0.0325	14.8358	0.0005
221	SLU 40	0.12	0.01	54.75	-0.0326	14.8416	-0.0096
221	SLU 41	0.12	-0.03	55.25	-0.033	14.976	0.002
221	SLU 42	0.12	0	55.27	-0.033	14.9819	-0.0081
221	SLU 43	0.11	-0.2	52.89	-0.033	14.3271	0.0472
221	SLU 44	0.1	-0.14	52.92	-0.0331	14.3368	0.0304
221	SLU 45	0.11	-0.19	53.69	-0.0335	14.5442	0.0445
221	SLU 46	0.11	-0.15	53.71	-0.0336	14.55	0.0345
221	SLU 47	0.1	-0.14	53.44	-0.0335	14.477	0.0319
221	SLU 48	0.11	-0.2	54.2	-0.034	14.6844	0.046
221	SLU 49	0.1	-0.16	54.22	-0.034	14.6902	0.0359
221	SLU 50	0.1	-0.21	53.92	-0.0339	14.6076	0.0502
221	SLU 51	0.1	-0.17	53.94	-0.0339	14.6134	0.0401
221	SLU 52	0.11	-0.1	58.53	-0.0356	15.8626	0.0185
221	SLU 53	0.11	-0.15	59.3	-0.036	16.07	0.0326
221	SLU 54	0.11	-0.11	59.32	-0.0361	16.0758	0.0225
221	SLU 55	0.11	-0.1	59.05	-0.036	16.0029	0.02
221	SLU 56	0.11	-0.15	59.81	-0.0365	16.2102	0.034
221	SLU 57	0.11	-0.12	59.83	-0.0365	16.2161	0.024
221	SLU 58	0.11	-0.17	59.53	-0.0364	16.1334	0.0382
221	SLU 59	0.11	-0.13	59.55	-0.0364	16.1392	0.0281
221	SLU 60	0.12	-0.14	60.9	-0.0366	16.5069	0.0301
221	SLU 61	0.11	-0.1	60.92	-0.0366	16.5127	0.0201
221	SLU 62	0.11	-0.15	61.42	-0.037	16.6471	0.0316
221	SLU 63	0.11	-0.11	61.44	-0.0371	16.6529	0.0215
221	SLU 64	0.13	-0.15	57.66	-0.0358	15.621	0.0324
221	SLU 65	0.12	-0.09	57.7	-0.0359	15.6307	0.0156
221	SLU 66	0.13	-0.14	58.46	-0.0364	15.8381	0.0297
221	SLU 67	0.13	-0.1	58.48	-0.0364	15.8439	0.0196
221	SLU 68	0.12	-0.09	58.21	-0.0364	15.7709	0.0171
221	SLU 69	0.13	-0.14	58.98	-0.0368	15.9783	0.0312
221	SLU 70	0.13	-0.11	59	-0.0369	15.9841	0.0211
221	SLU 71	0.13	-0.16	58.69	-0.0367	15.9015	0.0353
221	SLU 72	0.12	-0.12	58.71	-0.0368	15.9073	0.0253
221	SLU 73	0.13	-0.04	63.31	-0.0384	17.1566	0.0037
221	SLU 74	0.14	-0.1	64.07	-0.0389	17.3639	0.0177
221	SLU 75	0.14	-0.06	64.09	-0.0389	17.3698	0.0077
221	SLU 76	0.13	-0.05	63.82	-0.0389	17.2968	0.0051
221	SLU 77	0.14	-0.1	64.59	-0.0393	17.5042	0.0192
221	SLU 78	0.13	-0.06	64.61	-0.0394	17.51	0.0091
221	SLU 79	0.13	-0.12	64.31	-0.0392	17.4273	0.0234
221	SLU 80	0.13	-0.08	64.33	-0.0393	17.4332	0.0133
221	SLU 81	0.14	-0.09	65.68	-0.0394	17.8008	0.0153
221	SLU 82	0.14	-0.05	65.7	-0.0394	17.8066	0.0052
221	SLU 83	0.14	-0.09	66.2	-0.0398	17.941	0.0168
221	SLU 84	0.13	-0.06	66.22	-0.0399	17.9469	0.0067
221	SLE RA 1	0.09	-0.13	43.31	-0.0269	11.7318	0.0282
221	SLE RA 2	0.09	-0.08	43.33	-0.027	11.7382	0.017
221	SLE RA 3	0.1	-0.12	43.84	-0.0273	11.8765	0.0264
221	SLE RA 4	0.09	-0.09	43.85	-0.0273	11.8804	0.0197
221	SLE RA 5	0.09	-0.09	43.67	-0.0273	11.8317	0.018
221	SLE RA 6	0.1	-0.12	44.18	-0.0276	11.97	0.0274
221	SLE RA 7	0.09	-0.1	44.2	-0.0276	11.9739	0.0206
221	SLE RA 8	0.09	-0.13	43.99	-0.0275	11.9188	0.0301
221	SLE RA 9	0.09	-0.11	44.01	-0.0276	11.9226	0.0234
221	SLE RA 10	0.1	-0.06	47.07	-0.0287	12.7555	0.009
221	SLE RA 11	0.1	-0.09	47.58	-0.029	12.8937	0.0184
221	SLE RA 12	0.1	-0.07	47.59	-0.029	12.8976	0.0117
221	SLE RA 13	0.09	-0.06	47.41	-0.029	12.849	0.01
221	SLE RA 14	0.1	-0.09	47.92	-0.0293	12.9872	0.0194
221	SLE RA 15	0.1	-0.07	47.94	-0.0293	12.9911	0.0127
221	SLE RA 16	0.1	-0.1	47.74	-0.0292	12.936	0.0222
221	SLE RA 17	0.1	-0.08	47.75	-0.0292	12.9399	0.0154
221	SLE RA 18	0.1	-0.09	48.65	-0.0293	13.185	0.0168
221	SLE RA 19	0.1	-0.06	48.66	-0.0293	13.1889	0.0101
221	SLE RA 20	0.1	-0.09	49	-0.0296	13.2785	0.0178
221	SLE RA 21	0.1	-0.06	49.01	-0.0296	13.2823	0.0111
221	SLE FR 1	0.09	-0.13	43.31	-0.0269	11.7318	0.0282
221	SLE FR 2	0.09	-0.12	43.31	-0.0269	11.7331	0.0259
221	SLE FR 3	0.09	-0.13	43.44	-0.027	11.7692	0.0286
221	SLE FR 4	0.1	-0.1	44.91	-0.0277	12.169	0.0225
221	SLE FR 5	0.1	-0.11	45.05	-0.0278	12.2051	0.0251
221	SLE FR 6	0.1	-0.11	45.98	-0.0281	12.4584	0.0225
221	SLE QP 1	0.09	-0.13	43.31	-0.0269	11.7318	0.0282
221	SLE QP 2	0.1	-0.11	44.91	-0.0276	12.1677	0.0248
221	SLD 1	3.93	0.45	44.92	-0.0265	12.2001	-0.1269
221	SLD 2	4.12	0.47	44.92	-0.0265	12.2014	-0.1316
221	SLD 3	4.03	-0.87	44.36	-0.0236	12.0465	0.2303
221	SLD 4	4.22	-0.85	44.37	-0.0237	12.0478	0.2256
221	SLD 5	1.06	2.06	45.76	-0.0316	12.4103	-0.5617
221	SLD 6	1.19	2.07	45.76	-0.0316	12.4112	-0.5648
221	SLD 7	1.39	-2.35	43.9	-0.0221	11.8981	0.6291
221	SLD 8	1.52	-2.34	43.9	-0.0222	11.8989	0.626
221	SLD 9	-1.33	2.11	45.92	-0.0331	12.4366	-0.5765
221	SLD 10	-1.2	2.12	45.92	-0.0332	12.4374	-0.5796
221	SLD 11	-0.99	-2.3	44.06	-0.0237	11.9243	0.6143
221	SLD 12	-0.87	-2.28	44.06	-0.0237	11.9252	0.6113
221	SLD 13	-4.03	0.62	45.45	-0.0316	12.2877	-0.1761
221	SLD 14	-3.83	0.64	45.46	-0.0317	12.289	-0.1808
221	SLD 15	-3.93	-0.7	44.9	-0.0287	12.134	0.1811

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
221	SLD 16	-3.73	-0.68	44.9	-0.0288	12.1353	0.1764
221	SLV 1	9.05	1.17	44.9	-0.0248	12.2375	-0.3194
221	SLV 2	9.51	1.22	44.92	-0.025	12.2405	-0.3304
221	SLV 3	9.29	-1.84	43.64	-0.0183	11.8881	0.4943
221	SLV 4	9.75	-1.79	43.65	-0.0185	11.8911	0.4834
221	SLV 5	2.35	4.83	46.83	-0.0365	12.718	-1.3108
221	SLV 6	2.65	4.87	46.83	-0.0367	12.7199	-1.3178
221	SLV 7	3.13	-5.21	42.61	-0.015	11.5535	1.4017
221	SLV 8	3.42	-5.18	42.62	-0.0152	11.5554	1.3947
221	SLV 9	-3.23	4.95	47.2	-0.0401	12.7801	-1.3452
221	SLV 10	-2.94	4.98	47.21	-0.0402	12.782	-1.3522
221	SLV 11	-2.45	-5.09	42.98	-0.0186	11.6155	1.3673
221	SLV 12	-2.16	-5.06	42.99	-0.0187	11.6175	1.3603
221	SLV 13	-9.55	1.56	46.17	-0.0368	12.4443	-0.4339
221	SLV 14	-9.09	1.62	46.18	-0.0369	12.4474	-0.4448
221	SLV 15	-9.32	-1.45	44.9	-0.0303	12.095	0.3799
221	SLV 16	-8.86	-1.4	44.92	-0.0305	12.098	0.3689
221	CRTFP Ux+	0	0	0	0	0	0
221	CRTFP Ux-	0	0	0	0	0	0
221	CRTFP Uy+	0	0	0	0	0	0
221	CRTFP Uy-	0	0	0	0	0	0
223	SLU 1	0.03	-0.07	13.56	0	0	0
223	SLU 2	0.03	-0.05	13.57	0	0	0
223	SLU 3	0.03	-0.07	13.82	0	0	0
223	SLU 4	0.03	-0.06	13.82	0	0	0
223	SLU 5	0.03	-0.06	13.74	0	0	0
223	SLU 6	0.03	-0.07	13.98	0	0	0
223	SLU 7	0.03	-0.06	13.99	0	0	0
223	SLU 8	0.03	-0.08	13.89	0	0	0
223	SLU 9	0.03	-0.07	13.9	0	0	0
223	SLU 10	0.03	-0.04	15.37	0	0	0
223	SLU 11	0.03	-0.06	15.62	0	0	0
223	SLU 12	0.03	-0.05	15.62	0	0	0
223	SLU 13	0.03	-0.05	15.53	0	0	0
223	SLU 14	0.03	-0.06	15.78	0	0	0
223	SLU 15	0.03	-0.05	15.79	0	0	0
223	SLU 16	0.03	-0.07	15.69	0	0	0
223	SLU 17	0.03	-0.06	15.7	0	0	0
223	SLU 18	0.03	-0.06	16.13	0	0	0
223	SLU 19	0.03	-0.05	16.14	0	0	0
223	SLU 20	0.03	-0.06	16.3	0	0	0
223	SLU 21	0.03	-0.05	16.3	0	0	0
223	SLU 22	0.04	-0.06	15.11	0	0	0
223	SLU 23	0.04	-0.04	15.11	0	0	0
223	SLU 24	0.04	-0.06	15.36	0	0	0
223	SLU 25	0.04	-0.05	15.37	0	0	0
223	SLU 26	0.04	-0.04	15.28	0	0	0
223	SLU 27	0.04	-0.06	15.53	0	0	0
223	SLU 28	0.04	-0.05	15.53	0	0	0
223	SLU 29	0.04	-0.07	15.44	0	0	0
223	SLU 30	0.04	-0.05	15.44	0	0	0
223	SLU 31	0.04	-0.03	16.91	0	0	0
223	SLU 32	0.04	-0.05	17.16	0	0	0
223	SLU 33	0.04	-0.04	17.17	0	0	0
223	SLU 34	0.04	-0.03	17.08	0	0	0
223	SLU 35	0.04	-0.05	17.33	0	0	0
223	SLU 36	0.04	-0.04	17.33	0	0	0
223	SLU 37	0.04	-0.05	17.24	0	0	0
223	SLU 38	0.04	-0.04	17.24	0	0	0
223	SLU 39	0.04	-0.05	17.68	0	0	0
223	SLU 40	0.04	-0.03	17.68	0	0	0
223	SLU 41	0.04	-0.05	17.84	0	0	0
223	SLU 42	0.04	-0.04	17.85	0	0	0
223	SLU 43	0.04	-0.1	17.1	0	0	0
223	SLU 44	0.03	-0.08	17.11	0	0	0
223	SLU 45	0.04	-0.1	17.36	0	0	0
223	SLU 46	0.04	-0.09	17.36	0	0	0
223	SLU 47	0.03	-0.08	17.27	0	0	0
223	SLU 48	0.04	-0.1	17.52	0	0	0
223	SLU 49	0.04	-0.09	17.53	0	0	0
223	SLU 50	0.04	-0.11	17.43	0	0	0
223	SLU 51	0.03	-0.09	17.44	0	0	0
223	SLU 52	0.04	-0.07	18.91	0	0	0
223	SLU 53	0.04	-0.09	19.16	0	0	0
223	SLU 54	0.04	-0.08	19.16	0	0	0
223	SLU 55	0.04	-0.07	19.07	0	0	0
223	SLU 56	0.04	-0.09	19.32	0	0	0
223	SLU 57	0.04	-0.08	19.33	0	0	0
223	SLU 58	0.04	-0.1	19.23	0	0	0
223	SLU 59	0.04	-0.08	19.24	0	0	0
223	SLU 60	0.04	-0.09	19.67	0	0	0
223	SLU 61	0.04	-0.07	19.68	0	0	0
223	SLU 62	0.04	-0.09	19.84	0	0	0
223	SLU 63	0.04	-0.08	19.84	0	0	0
223	SLU 64	0.04	-0.09	18.65	0	0	0
223	SLU 65	0.04	-0.07	18.65	0	0	0
223	SLU 66	0.05	-0.09	18.9	0	0	0
223	SLU 67	0.04	-0.07	18.91	0	0	0
223	SLU 68	0.04	-0.07	18.82	0	0	0
223	SLU 69	0.04	-0.09	19.07	0	0	0
223	SLU 70	0.04	-0.08	19.07	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
223	SLU 71	0.04	-0.09	18.98	0	0	0
223	SLU 72	0.04	-0.08	18.98	0	0	0
223	SLU 73	0.04	-0.06	20.45	0	0	0
223	SLU 74	0.05	-0.07	20.7	0	0	0
223	SLU 75	0.05	-0.06	20.71	0	0	0
223	SLU 76	0.04	-0.06	20.62	0	0	0
223	SLU 77	0.05	-0.08	20.87	0	0	0
223	SLU 78	0.05	-0.06	20.87	0	0	0
223	SLU 79	0.05	-0.08	20.77	0	0	0
223	SLU 80	0.04	-0.07	20.78	0	0	0
223	SLU 81	0.05	-0.07	21.21	0	0	0
223	SLU 82	0.05	-0.06	21.22	0	0	0
223	SLU 83	0.05	-0.07	21.38	0	0	0
223	SLU 84	0.05	-0.06	21.39	0	0	0
223	SLE RA 1	0.03	-0.07	14	0	0	0
223	SLE RA 2	0.03	-0.06	14.01	0	0	0
223	SLE RA 3	0.03	-0.07	14.17	0	0	0
223	SLE RA 4	0.03	-0.06	14.18	0	0	0
223	SLE RA 5	0.03	-0.06	14.12	0	0	0
223	SLE RA 6	0.03	-0.07	14.28	0	0	0
223	SLE RA 7	0.03	-0.06	14.29	0	0	0
223	SLE RA 8	0.03	-0.07	14.22	0	0	0
223	SLE RA 9	0.03	-0.07	14.23	0	0	0
223	SLE RA 10	0.03	-0.05	15.21	0	0	0
223	SLE RA 11	0.03	-0.06	15.37	0	0	0
223	SLE RA 12	0.03	-0.05	15.38	0	0	0
223	SLE RA 13	0.03	-0.05	15.32	0	0	0
223	SLE RA 14	0.03	-0.06	15.48	0	0	0
223	SLE RA 15	0.03	-0.06	15.49	0	0	0
223	SLE RA 16	0.03	-0.07	15.42	0	0	0
223	SLE RA 17	0.03	-0.06	15.43	0	0	0
223	SLE RA 18	0.03	-0.06	15.72	0	0	0
223	SLE RA 19	0.03	-0.05	15.72	0	0	0
223	SLE RA 20	0.03	-0.06	15.83	0	0	0
223	SLE RA 21	0.03	-0.05	15.83	0	0	0
223	SLE FR 1	0.03	-0.07	14	0	0	0
223	SLE FR 2	0.03	-0.07	14	0	0	0
223	SLE FR 3	0.03	-0.07	14.05	0	0	0
223	SLE FR 4	0.03	-0.06	14.52	0	0	0
223	SLE FR 5	0.03	-0.07	14.56	0	0	0
223	SLE FR 6	0.03	-0.07	14.86	0	0	0
223	SLE QP 1	0.03	-0.07	14	0	0	0
223	SLE QP 2	0.03	-0.07	14.52	0	0	0
223	SLD 1	1.29	0.18	14.42	0	0	0
223	SLD 2	1.35	0.19	14.42	0	0	0
223	SLD 3	1.32	-0.25	14.25	0	0	0
223	SLD 4	1.38	-0.23	14.25	0	0	0
223	SLD 5	0.35	0.65	14.75	0	0	0
223	SLD 6	0.39	0.66	14.75	0	0	0
223	SLD 7	0.46	-0.77	14.17	0	0	0
223	SLD 8	0.5	-0.76	14.18	0	0	0
223	SLD 9	-0.43	0.63	14.86	0	0	0
223	SLD 10	-0.39	0.64	14.86	0	0	0
223	SLD 11	-0.32	-0.8	14.28	0	0	0
223	SLD 12	-0.28	-0.79	14.29	0	0	0
223	SLD 13	-1.32	0.1	14.78	0	0	0
223	SLD 14	-1.25	0.12	14.79	0	0	0
223	SLD 15	-1.28	-0.33	14.61	0	0	0
223	SLD 16	-1.22	-0.31	14.62	0	0	0
223	SLV 1	2.96	0.49	14.28	0	0	0
223	SLV 2	3.11	0.53	14.29	0	0	0
223	SLV 3	3.04	-0.48	13.89	0	0	0
223	SLV 4	3.19	-0.44	13.9	0	0	0
223	SLV 5	0.77	1.58	15.04	0	0	0
223	SLV 6	0.87	1.6	15.04	0	0	0
223	SLV 7	1.03	-1.68	13.73	0	0	0
223	SLV 8	1.12	-1.65	13.74	0	0	0
223	SLV 9	-1.06	1.52	15.29	0	0	0
223	SLV 10	-0.96	1.54	15.3	0	0	0
223	SLV 11	-0.8	-1.73	13.99	0	0	0
223	SLV 12	-0.71	-1.71	14	0	0	0
223	SLV 13	-3.13	0.31	15.14	0	0	0
223	SLV 14	-2.97	0.35	15.14	0	0	0
223	SLV 15	-3.05	-0.67	14.75	0	0	0
223	SLV 16	-2.9	-0.63	14.75	0	0	0
224	SLU 1	0.03	-0.09	13.73	0	0	0
224	SLU 2	0.03	-0.07	13.73	0	0	0
224	SLU 3	0.03	-0.09	13.99	0	0	0
224	SLU 4	0.03	-0.07	13.99	0	0	0
224	SLU 5	0.03	-0.07	13.9	0	0	0
224	SLU 6	0.03	-0.09	14.15	0	0	0
224	SLU 7	0.03	-0.08	14.16	0	0	0
224	SLU 8	0.03	-0.09	14.06	0	0	0
224	SLU 9	0.03	-0.08	14.07	0	0	0
224	SLU 10	0.03	-0.06	15.55	0	0	0
224	SLU 11	0.04	-0.08	15.8	0	0	0
224	SLU 12	0.03	-0.06	15.8	0	0	0
224	SLU 13	0.03	-0.06	15.71	0	0	0
224	SLU 14	0.03	-0.08	15.97	0	0	0
224	SLU 15	0.03	-0.07	15.97	0	0	0
224	SLU 16	0.03	-0.08	15.87	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
224	SLU 17	0.03	-0.07	15.88	0	0	0
224	SLU 18	0.04	-0.07	16.32	0	0	0
224	SLU 19	0.03	-0.06	16.32	0	0	0
224	SLU 20	0.04	-0.08	16.48	0	0	0
224	SLU 21	0.03	-0.06	16.49	0	0	0
224	SLU 22	0.04	-0.08	15.29	0	0	0
224	SLU 23	0.04	-0.05	15.3	0	0	0
224	SLU 24	0.04	-0.07	15.55	0	0	0
224	SLU 25	0.04	-0.06	15.55	0	0	0
224	SLU 26	0.04	-0.06	15.46	0	0	0
224	SLU 27	0.04	-0.08	15.72	0	0	0
224	SLU 28	0.04	-0.06	15.72	0	0	0
224	SLU 29	0.04	-0.08	15.62	0	0	0
224	SLU 30	0.04	-0.07	15.63	0	0	0
224	SLU 31	0.04	-0.04	17.11	0	0	0
224	SLU 32	0.04	-0.06	17.36	0	0	0
224	SLU 33	0.04	-0.05	17.37	0	0	0
224	SLU 34	0.04	-0.05	17.28	0	0	0
224	SLU 35	0.04	-0.07	17.53	0	0	0
224	SLU 36	0.04	-0.05	17.53	0	0	0
224	SLU 37	0.04	-0.07	17.44	0	0	0
224	SLU 38	0.04	-0.06	17.44	0	0	0
224	SLU 39	0.04	-0.06	17.88	0	0	0
224	SLU 40	0.04	-0.05	17.88	0	0	0
224	SLU 41	0.04	-0.07	18.05	0	0	0
224	SLU 42	0.04	-0.05	18.05	0	0	0
224	SLU 43	0.04	-0.12	17.31	0	0	0
224	SLU 44	0.04	-0.1	17.32	0	0	0
224	SLU 45	0.04	-0.12	17.57	0	0	0
224	SLU 46	0.04	-0.1	17.57	0	0	0
224	SLU 47	0.04	-0.1	17.48	0	0	0
224	SLU 48	0.04	-0.12	17.74	0	0	0
224	SLU 49	0.04	-0.11	17.74	0	0	0
224	SLU 50	0.04	-0.12	17.64	0	0	0
224	SLU 51	0.04	-0.11	17.65	0	0	0
224	SLU 52	0.04	-0.09	19.13	0	0	0
224	SLU 53	0.04	-0.11	19.38	0	0	0
224	SLU 54	0.04	-0.09	19.39	0	0	0
224	SLU 55	0.04	-0.09	19.3	0	0	0
224	SLU 56	0.04	-0.11	19.55	0	0	0
224	SLU 57	0.04	-0.1	19.55	0	0	0
224	SLU 58	0.04	-0.11	19.46	0	0	0
224	SLU 59	0.04	-0.1	19.46	0	0	0
224	SLU 60	0.04	-0.11	19.9	0	0	0
224	SLU 61	0.04	-0.09	19.9	0	0	0
224	SLU 62	0.04	-0.11	20.07	0	0	0
224	SLU 63	0.04	-0.09	20.07	0	0	0
224	SLU 64	0.05	-0.11	18.87	0	0	0
224	SLU 65	0.05	-0.08	18.88	0	0	0
224	SLU 66	0.05	-0.1	19.13	0	0	0
224	SLU 67	0.05	-0.09	19.14	0	0	0
224	SLU 68	0.05	-0.09	19.05	0	0	0
224	SLU 69	0.05	-0.11	19.3	0	0	0
224	SLU 70	0.05	-0.09	19.3	0	0	0
224	SLU 71	0.05	-0.11	19.21	0	0	0
224	SLU 72	0.05	-0.1	19.21	0	0	0
224	SLU 73	0.05	-0.08	20.69	0	0	0
224	SLU 74	0.05	-0.1	20.95	0	0	0
224	SLU 75	0.05	-0.08	20.95	0	0	0
224	SLU 76	0.05	-0.08	20.86	0	0	0
224	SLU 77	0.05	-0.1	21.11	0	0	0
224	SLU 78	0.05	-0.08	21.12	0	0	0
224	SLU 79	0.05	-0.1	21.02	0	0	0
224	SLU 80	0.05	-0.09	21.02	0	0	0
224	SLU 81	0.05	-0.09	21.46	0	0	0
224	SLU 82	0.05	-0.08	21.47	0	0	0
224	SLU 83	0.05	-0.1	21.63	0	0	0
224	SLU 84	0.05	-0.08	21.63	0	0	0
224	SLE RA 1	0.03	-0.08	14.17	0	0	0
224	SLE RA 2	0.03	-0.07	14.18	0	0	0
224	SLE RA 3	0.04	-0.08	14.35	0	0	0
224	SLE RA 4	0.03	-0.07	14.35	0	0	0
224	SLE RA 5	0.03	-0.07	14.29	0	0	0
224	SLE RA 6	0.03	-0.08	14.46	0	0	0
224	SLE RA 7	0.03	-0.08	14.46	0	0	0
224	SLE RA 8	0.03	-0.09	14.4	0	0	0
224	SLE RA 9	0.03	-0.08	14.4	0	0	0
224	SLE RA 10	0.03	-0.06	15.39	0	0	0
224	SLE RA 11	0.04	-0.08	15.56	0	0	0
224	SLE RA 12	0.04	-0.07	15.56	0	0	0
224	SLE RA 13	0.03	-0.07	15.5	0	0	0
224	SLE RA 14	0.04	-0.08	15.67	0	0	0
224	SLE RA 15	0.04	-0.07	15.67	0	0	0
224	SLE RA 16	0.04	-0.08	15.6	0	0	0
224	SLE RA 17	0.03	-0.07	15.61	0	0	0
224	SLE RA 18	0.04	-0.08	15.9	0	0	0
224	SLE RA 19	0.04	-0.07	15.9	0	0	0
224	SLE RA 20	0.04	-0.08	16.01	0	0	0
224	SLE RA 21	0.04	-0.07	16.01	0	0	0
224	SLE FR 1	0.03	-0.08	14.17	0	0	0
224	SLE FR 2	0.03	-0.08	14.18	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
224	SLE FR 3	0.03	-0.08	14.22	0	0	0
224	SLE FR 4	0.03	-0.08	14.69	0	0	0
224	SLE FR 5	0.04	-0.08	14.74	0	0	0
224	SLE FR 6	0.04	-0.08	15.04	0	0	0
224	SLE QP 1	0.03	-0.08	14.17	0	0	0
224	SLE QP 2	0.04	-0.08	14.69	0	0	0
224	SLD 1	1.31	0.18	14.53	0	0	0
224	SLD 2	1.38	0.2	14.54	0	0	0
224	SLD 3	1.34	-0.26	14.36	0	0	0
224	SLD 4	1.41	-0.24	14.37	0	0	0
224	SLD 5	0.36	0.65	14.9	0	0	0
224	SLD 6	0.4	0.66	14.9	0	0	0
224	SLD 7	0.47	-0.8	14.34	0	0	0
224	SLD 8	0.51	-0.78	14.34	0	0	0
224	SLD 9	-0.44	0.62	15.05	0	0	0
224	SLD 10	-0.4	0.63	15.05	0	0	0
224	SLD 11	-0.33	-0.83	14.48	0	0	0
224	SLD 12	-0.29	-0.81	14.48	0	0	0
224	SLD 13	-1.34	0.08	15.02	0	0	0
224	SLD 14	-1.27	0.1	15.02	0	0	0
224	SLD 15	-1.31	-0.36	14.85	0	0	0
224	SLD 16	-1.24	-0.34	14.85	0	0	0
224	SLV 1	3.02	0.51	14.31	0	0	0
224	SLV 2	3.17	0.55	14.32	0	0	0
224	SLV 3	3.1	-0.48	13.93	0	0	0
224	SLV 4	3.25	-0.44	13.94	0	0	0
224	SLV 5	0.79	1.59	15.16	0	0	0
224	SLV 6	0.88	1.62	15.17	0	0	0
224	SLV 7	1.05	-1.71	13.88	0	0	0
224	SLV 8	1.14	-1.68	13.88	0	0	0
224	SLV 9	-1.07	1.52	15.5	0	0	0
224	SLV 10	-0.98	1.55	15.51	0	0	0
224	SLV 11	-0.81	-1.78	14.22	0	0	0
224	SLV 12	-0.72	-1.75	14.22	0	0	0
224	SLV 13	-3.18	0.27	15.45	0	0	0
224	SLV 14	-3.03	0.32	15.46	0	0	0
224	SLV 15	-3.1	-0.72	15.06	0	0	0
224	SLV 16	-2.95	-0.67	15.07	0	0	0
225	SLU 1	0.03	-0.1	13.79	0	0	0
225	SLU 2	0.03	-0.08	13.79	0	0	0
225	SLU 3	0.03	-0.1	14.05	0	0	0
225	SLU 4	0.03	-0.09	14.05	0	0	0
225	SLU 5	0.03	-0.08	13.96	0	0	0
225	SLU 6	0.03	-0.1	14.21	0	0	0
225	SLU 7	0.03	-0.09	14.22	0	0	0
225	SLU 8	0.03	-0.11	14.12	0	0	0
225	SLU 9	0.03	-0.09	14.12	0	0	0
225	SLU 10	0.03	-0.07	15.6	0	0	0
225	SLU 11	0.04	-0.09	15.86	0	0	0
225	SLU 12	0.04	-0.08	15.86	0	0	0
225	SLU 13	0.03	-0.08	15.77	0	0	0
225	SLU 14	0.04	-0.1	16.02	0	0	0
225	SLU 15	0.04	-0.08	16.03	0	0	0
225	SLU 16	0.04	-0.1	15.93	0	0	0
225	SLU 17	0.03	-0.09	15.93	0	0	0
225	SLU 18	0.04	-0.09	16.37	0	0	0
225	SLU 19	0.04	-0.08	16.38	0	0	0
225	SLU 20	0.04	-0.09	16.54	0	0	0
225	SLU 21	0.04	-0.08	16.54	0	0	0
225	SLU 22	0.04	-0.09	15.36	0	0	0
225	SLU 23	0.04	-0.07	15.36	0	0	0
225	SLU 24	0.04	-0.09	15.62	0	0	0
225	SLU 25	0.04	-0.08	15.62	0	0	0
225	SLU 26	0.04	-0.07	15.53	0	0	0
225	SLU 27	0.04	-0.09	15.78	0	0	0
225	SLU 28	0.04	-0.08	15.79	0	0	0
225	SLU 29	0.04	-0.1	15.69	0	0	0
225	SLU 30	0.04	-0.08	15.69	0	0	0
225	SLU 31	0.04	-0.06	17.17	0	0	0
225	SLU 32	0.05	-0.08	17.43	0	0	0
225	SLU 33	0.04	-0.07	17.43	0	0	0
225	SLU 34	0.04	-0.06	17.34	0	0	0
225	SLU 35	0.05	-0.08	17.6	0	0	0
225	SLU 36	0.04	-0.07	17.6	0	0	0
225	SLU 37	0.04	-0.09	17.5	0	0	0
225	SLU 38	0.04	-0.08	17.5	0	0	0
225	SLU 39	0.05	-0.08	17.94	0	0	0
225	SLU 40	0.05	-0.07	17.95	0	0	0
225	SLU 41	0.05	-0.08	18.11	0	0	0
225	SLU 42	0.04	-0.07	18.11	0	0	0
225	SLU 43	0.04	-0.14	17.38	0	0	0
225	SLU 44	0.04	-0.11	17.39	0	0	0
225	SLU 45	0.04	-0.13	17.64	0	0	0
225	SLU 46	0.04	-0.12	17.65	0	0	0
225	SLU 47	0.04	-0.12	17.56	0	0	0
225	SLU 48	0.04	-0.14	17.81	0	0	0
225	SLU 49	0.04	-0.12	17.81	0	0	0
225	SLU 50	0.04	-0.14	17.72	0	0	0
225	SLU 51	0.04	-0.13	17.72	0	0	0
225	SLU 52	0.04	-0.11	19.2	0	0	0
225	SLU 53	0.04	-0.13	19.46	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
225	SLU 54	0.04	-0.11	19.46	0	0	0
225	SLU 55	0.04	-0.11	19.37	0	0	0
225	SLU 56	0.04	-0.13	19.62	0	0	0
225	SLU 57	0.04	-0.12	19.63	0	0	0
225	SLU 58	0.04	-0.13	19.53	0	0	0
225	SLU 59	0.04	-0.12	19.53	0	0	0
225	SLU 60	0.04	-0.13	19.97	0	0	0
225	SLU 61	0.04	-0.11	19.97	0	0	0
225	SLU 62	0.04	-0.13	20.14	0	0	0
225	SLU 63	0.04	-0.11	20.14	0	0	0
225	SLU 64	0.05	-0.13	18.95	0	0	0
225	SLU 65	0.05	-0.1	18.96	0	0	0
225	SLU 66	0.05	-0.12	19.21	0	0	0
225	SLU 67	0.05	-0.11	19.22	0	0	0
225	SLU 68	0.05	-0.11	19.13	0	0	0
225	SLU 69	0.05	-0.13	19.38	0	0	0
225	SLU 70	0.05	-0.11	19.38	0	0	0
225	SLU 71	0.05	-0.13	19.29	0	0	0
225	SLU 72	0.05	-0.12	19.29	0	0	0
225	SLU 73	0.05	-0.1	20.77	0	0	0
225	SLU 74	0.05	-0.12	21.03	0	0	0
225	SLU 75	0.05	-0.1	21.03	0	0	0
225	SLU 76	0.05	-0.1	20.94	0	0	0
225	SLU 77	0.05	-0.12	21.19	0	0	0
225	SLU 78	0.05	-0.11	21.2	0	0	0
225	SLU 79	0.05	-0.12	21.1	0	0	0
225	SLU 80	0.05	-0.11	21.1	0	0	0
225	SLU 81	0.05	-0.11	21.54	0	0	0
225	SLU 82	0.05	-0.1	21.55	0	0	0
225	SLU 83	0.05	-0.12	21.71	0	0	0
225	SLU 84	0.05	-0.1	21.71	0	0	0
225	SLE RA 1	0.04	-0.1	14.23	0	0	0
225	SLE RA 2	0.04	-0.08	14.24	0	0	0
225	SLE RA 3	0.04	-0.1	14.41	0	0	0
225	SLE RA 4	0.04	-0.09	14.41	0	0	0
225	SLE RA 5	0.04	-0.09	14.35	0	0	0
225	SLE RA 6	0.04	-0.1	14.52	0	0	0
225	SLE RA 7	0.04	-0.09	14.52	0	0	0
225	SLE RA 8	0.04	-0.1	14.46	0	0	0
225	SLE RA 9	0.04	-0.09	14.46	0	0	0
225	SLE RA 10	0.04	-0.08	15.45	0	0	0
225	SLE RA 11	0.04	-0.09	15.62	0	0	0
225	SLE RA 12	0.04	-0.08	15.62	0	0	0
225	SLE RA 13	0.04	-0.08	15.56	0	0	0
225	SLE RA 14	0.04	-0.09	15.73	0	0	0
225	SLE RA 15	0.04	-0.09	15.73	0	0	0
225	SLE RA 16	0.04	-0.1	15.67	0	0	0
225	SLE RA 17	0.04	-0.09	15.67	0	0	0
225	SLE RA 18	0.04	-0.09	15.96	0	0	0
225	SLE RA 19	0.04	-0.08	15.96	0	0	0
225	SLE RA 20	0.04	-0.09	16.07	0	0	0
225	SLE RA 21	0.04	-0.08	16.07	0	0	0
225	SLE FR 1	0.04	-0.1	14.23	0	0	0
225	SLE FR 2	0.04	-0.1	14.24	0	0	0
225	SLE FR 3	0.04	-0.1	14.28	0	0	0
225	SLE FR 4	0.04	-0.09	14.75	0	0	0
225	SLE FR 5	0.04	-0.1	14.8	0	0	0
225	SLE FR 6	0.04	-0.1	15.1	0	0	0
225	SLE QP 1	0.04	-0.1	14.23	0	0	0
225	SLE QP 2	0.04	-0.1	14.75	0	0	0
225	SLD 1	1.32	0.17	14.52	0	0	0
225	SLD 2	1.39	0.2	14.53	0	0	0
225	SLD 3	1.36	-0.27	14.36	0	0	0
225	SLD 4	1.42	-0.24	14.36	0	0	0
225	SLD 5	0.36	0.64	14.93	0	0	0
225	SLD 6	0.4	0.66	14.94	0	0	0
225	SLD 7	0.47	-0.81	14.38	0	0	0
225	SLD 8	0.52	-0.8	14.38	0	0	0
225	SLD 9	-0.44	0.6	15.12	0	0	0
225	SLD 10	-0.4	0.62	15.12	0	0	0
225	SLD 11	-0.33	-0.85	14.57	0	0	0
225	SLD 12	-0.29	-0.83	14.57	0	0	0
225	SLD 13	-1.35	0.05	15.14	0	0	0
225	SLD 14	-1.28	0.07	15.15	0	0	0
225	SLD 15	-1.32	-0.39	14.98	0	0	0
225	SLD 16	-1.25	-0.36	14.98	0	0	0
225	SLV 1	3.05	0.52	14.21	0	0	0
225	SLV 2	3.2	0.57	14.22	0	0	0
225	SLV 3	3.13	-0.48	13.83	0	0	0
225	SLV 4	3.28	-0.42	13.84	0	0	0
225	SLV 5	0.8	1.58	15.16	0	0	0
225	SLV 6	0.89	1.62	15.16	0	0	0
225	SLV 7	1.06	-1.73	13.9	0	0	0
225	SLV 8	1.16	-1.69	13.91	0	0	0
225	SLV 9	-1.08	1.5	15.6	0	0	0
225	SLV 10	-0.98	1.53	15.6	0	0	0
225	SLV 11	-0.82	-1.81	14.34	0	0	0
225	SLV 12	-0.72	-1.78	14.35	0	0	0
225	SLV 13	-3.21	0.23	15.66	0	0	0
225	SLV 14	-3.05	0.28	15.67	0	0	0
225	SLV 15	-3.13	-0.77	15.29	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
225	SLV 16	-2.97	-0.71	15.3	0	0	0
226	SLU 1	0.04	-0.12	13.79	0	0	0
226	SLU 2	0.03	-0.09	13.79	0	0	0
226	SLU 3	0.04	-0.11	14.05	0	0	0
226	SLU 4	0.04	-0.1	14.05	0	0	0
226	SLU 5	0.03	-0.1	13.96	0	0	0
226	SLU 6	0.04	-0.12	14.22	0	0	0
226	SLU 7	0.04	-0.1	14.22	0	0	0
226	SLU 8	0.04	-0.12	14.12	0	0	0
226	SLU 9	0.03	-0.11	14.12	0	0	0
226	SLU 10	0.04	-0.09	15.6	0	0	0
226	SLU 11	0.04	-0.11	15.85	0	0	0
226	SLU 12	0.04	-0.1	15.86	0	0	0
226	SLU 13	0.04	-0.09	15.76	0	0	0
226	SLU 14	0.04	-0.11	16.02	0	0	0
226	SLU 15	0.04	-0.1	16.02	0	0	0
226	SLU 16	0.04	-0.12	15.93	0	0	0
226	SLU 17	0.04	-0.1	15.93	0	0	0
226	SLU 18	0.04	-0.11	16.37	0	0	0
226	SLU 19	0.04	-0.09	16.37	0	0	0
226	SLU 20	0.04	-0.11	16.53	0	0	0
226	SLU 21	0.04	-0.1	16.54	0	0	0
226	SLU 22	0.05	-0.11	15.36	0	0	0
226	SLU 23	0.04	-0.08	15.37	0	0	0
226	SLU 24	0.05	-0.11	15.62	0	0	0
226	SLU 25	0.04	-0.09	15.63	0	0	0
226	SLU 26	0.04	-0.09	15.53	0	0	0
226	SLU 27	0.05	-0.11	15.79	0	0	0
226	SLU 28	0.04	-0.1	15.79	0	0	0
226	SLU 29	0.04	-0.11	15.7	0	0	0
226	SLU 30	0.04	-0.1	15.7	0	0	0
226	SLU 31	0.05	-0.08	17.17	0	0	0
226	SLU 32	0.05	-0.1	17.43	0	0	0
226	SLU 33	0.05	-0.09	17.43	0	0	0
226	SLU 34	0.05	-0.08	17.34	0	0	0
226	SLU 35	0.05	-0.1	17.59	0	0	0
226	SLU 36	0.05	-0.09	17.6	0	0	0
226	SLU 37	0.05	-0.11	17.5	0	0	0
226	SLU 38	0.05	-0.09	17.5	0	0	0
226	SLU 39	0.05	-0.1	17.94	0	0	0
226	SLU 40	0.05	-0.08	17.94	0	0	0
226	SLU 41	0.05	-0.1	18.11	0	0	0
226	SLU 42	0.05	-0.09	18.11	0	0	0
226	SLU 43	0.04	-0.15	17.39	0	0	0
226	SLU 44	0.04	-0.13	17.39	0	0	0
226	SLU 45	0.04	-0.15	17.65	0	0	0
226	SLU 46	0.04	-0.14	17.65	0	0	0
226	SLU 47	0.04	-0.13	17.56	0	0	0
226	SLU 48	0.04	-0.16	17.81	0	0	0
226	SLU 49	0.04	-0.14	17.82	0	0	0
226	SLU 50	0.04	-0.16	17.72	0	0	0
226	SLU 51	0.04	-0.15	17.72	0	0	0
226	SLU 52	0.04	-0.13	19.2	0	0	0
226	SLU 53	0.05	-0.15	19.45	0	0	0
226	SLU 54	0.05	-0.13	19.45	0	0	0
226	SLU 55	0.04	-0.13	19.36	0	0	0
226	SLU 56	0.05	-0.15	19.62	0	0	0
226	SLU 57	0.05	-0.14	19.62	0	0	0
226	SLU 58	0.05	-0.15	19.52	0	0	0
226	SLU 59	0.04	-0.14	19.53	0	0	0
226	SLU 60	0.05	-0.14	19.97	0	0	0
226	SLU 61	0.05	-0.13	19.97	0	0	0
226	SLU 62	0.05	-0.15	20.13	0	0	0
226	SLU 63	0.05	-0.13	20.13	0	0	0
226	SLU 64	0.05	-0.14	18.96	0	0	0
226	SLU 65	0.05	-0.12	18.96	0	0	0
226	SLU 66	0.05	-0.14	19.22	0	0	0
226	SLU 67	0.05	-0.13	19.22	0	0	0
226	SLU 68	0.05	-0.13	19.13	0	0	0
226	SLU 69	0.05	-0.15	19.39	0	0	0
226	SLU 70	0.05	-0.13	19.39	0	0	0
226	SLU 71	0.05	-0.15	19.29	0	0	0
226	SLU 72	0.05	-0.14	19.3	0	0	0
226	SLU 73	0.05	-0.12	20.77	0	0	0
226	SLU 74	0.06	-0.14	21.03	0	0	0
226	SLU 75	0.06	-0.12	21.03	0	0	0
226	SLU 76	0.05	-0.12	20.94	0	0	0
226	SLU 77	0.06	-0.14	21.19	0	0	0
226	SLU 78	0.05	-0.13	21.19	0	0	0
226	SLU 79	0.05	-0.14	21.1	0	0	0
226	SLU 80	0.05	-0.13	21.1	0	0	0
226	SLU 81	0.06	-0.14	21.54	0	0	0
226	SLU 82	0.06	-0.12	21.54	0	0	0
226	SLU 83	0.06	-0.14	21.71	0	0	0
226	SLU 84	0.05	-0.13	21.71	0	0	0
226	SLE RA 1	0.04	-0.11	14.24	0	0	0
226	SLE RA 2	0.04	-0.1	14.24	0	0	0
226	SLE RA 3	0.04	-0.11	14.41	0	0	0
226	SLE RA 4	0.04	-0.1	14.41	0	0	0
226	SLE RA 5	0.04	-0.1	14.35	0	0	0
226	SLE RA 6	0.04	-0.11	14.52	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
226	SLE RA 7	0.04	-0.11	14.53	0	0	0
226	SLE RA 8	0.04	-0.12	14.46	0	0	0
226	SLE RA 9	0.04	-0.11	14.46	0	0	0
226	SLE RA 10	0.04	-0.09	15.45	0	0	0
226	SLE RA 11	0.04	-0.11	15.62	0	0	0
226	SLE RA 12	0.04	-0.1	15.62	0	0	0
226	SLE RA 13	0.04	-0.1	15.56	0	0	0
226	SLE RA 14	0.04	-0.11	15.73	0	0	0
226	SLE RA 15	0.04	-0.1	15.73	0	0	0
226	SLE RA 16	0.04	-0.11	15.66	0	0	0
226	SLE RA 17	0.04	-0.1	15.67	0	0	0
226	SLE RA 18	0.04	-0.11	15.96	0	0	0
226	SLE RA 19	0.04	-0.1	15.96	0	0	0
226	SLE RA 20	0.04	-0.11	16.07	0	0	0
226	SLE RA 21	0.04	-0.1	16.07	0	0	0
226	SLE FR 1	0.04	-0.11	14.24	0	0	0
226	SLE FR 2	0.04	-0.11	14.24	0	0	0
226	SLE FR 3	0.04	-0.11	14.28	0	0	0
226	SLE FR 4	0.04	-0.11	14.76	0	0	0
226	SLE FR 5	0.04	-0.11	14.8	0	0	0
226	SLE FR 6	0.04	-0.11	15.1	0	0	0
226	SLE QP 1	0.04	-0.11	14.24	0	0	0
226	SLE QP 2	0.04	-0.11	14.76	0	0	0
226	SLD 1	1.33	0.16	14.45	0	0	0
226	SLD 2	1.39	0.19	14.45	0	0	0
226	SLD 3	1.36	-0.27	14.29	0	0	0
226	SLD 4	1.43	-0.24	14.29	0	0	0
226	SLD 5	0.36	0.63	14.91	0	0	0
226	SLD 6	0.41	0.64	14.91	0	0	0
226	SLD 7	0.48	-0.82	14.37	0	0	0
226	SLD 8	0.52	-0.81	14.37	0	0	0
226	SLD 9	-0.44	0.58	15.14	0	0	0
226	SLD 10	-0.4	0.6	15.14	0	0	0
226	SLD 11	-0.33	-0.87	14.6	0	0	0
226	SLD 12	-0.28	-0.85	14.6	0	0	0
226	SLD 13	-1.35	0.02	15.22	0	0	0
226	SLD 14	-1.28	0.05	15.22	0	0	0
226	SLD 15	-1.32	-0.41	15.06	0	0	0
226	SLD 16	-1.25	-0.39	15.06	0	0	0
226	SLV 1	3.05	0.52	14.03	0	0	0
226	SLV 2	3.21	0.58	14.04	0	0	0
226	SLV 3	3.13	-0.47	13.67	0	0	0
226	SLV 4	3.29	-0.41	13.67	0	0	0
226	SLV 5	0.8	1.57	15.09	0	0	0
226	SLV 6	0.9	1.61	15.1	0	0	0
226	SLV 7	1.06	-1.73	13.87	0	0	0
226	SLV 8	1.16	-1.69	13.88	0	0	0
226	SLV 9	-1.08	1.47	15.63	0	0	0
226	SLV 10	-0.98	1.51	15.64	0	0	0
226	SLV 11	-0.82	-1.83	14.41	0	0	0
226	SLV 12	-0.72	-1.79	14.42	0	0	0
226	SLV 13	-3.21	0.18	15.84	0	0	0
226	SLV 14	-3.05	0.25	15.85	0	0	0
226	SLV 15	-3.13	-0.81	15.47	0	0	0
226	SLV 16	-2.97	-0.74	15.48	0	0	0
227	SLU 1	0.04	-0.13	13.75	0	0	0
227	SLU 2	0.04	-0.11	13.75	0	0	0
227	SLU 3	0.04	-0.13	14.01	0	0	0
227	SLU 4	0.04	-0.11	14.01	0	0	0
227	SLU 5	0.04	-0.11	13.91	0	0	0
227	SLU 6	0.04	-0.13	14.17	0	0	0
227	SLU 7	0.04	-0.12	14.17	0	0	0
227	SLU 8	0.04	-0.13	14.08	0	0	0
227	SLU 9	0.04	-0.12	14.08	0	0	0
227	SLU 10	0.04	-0.1	15.54	0	0	0
227	SLU 11	0.04	-0.12	15.8	0	0	0
227	SLU 12	0.04	-0.11	15.8	0	0	0
227	SLU 13	0.04	-0.1	15.71	0	0	0
227	SLU 14	0.04	-0.13	15.96	0	0	0
227	SLU 15	0.04	-0.11	15.96	0	0	0
227	SLU 16	0.04	-0.13	15.87	0	0	0
227	SLU 17	0.04	-0.12	15.87	0	0	0
227	SLU 18	0.04	-0.12	16.31	0	0	0
227	SLU 19	0.04	-0.11	16.31	0	0	0
227	SLU 20	0.04	-0.12	16.47	0	0	0
227	SLU 21	0.04	-0.11	16.47	0	0	0
227	SLU 22	0.05	-0.12	15.32	0	0	0
227	SLU 23	0.05	-0.1	15.32	0	0	0
227	SLU 24	0.05	-0.12	15.58	0	0	0
227	SLU 25	0.05	-0.11	15.58	0	0	0
227	SLU 26	0.05	-0.1	15.49	0	0	0
227	SLU 27	0.05	-0.12	15.74	0	0	0
227	SLU 28	0.05	-0.11	15.74	0	0	0
227	SLU 29	0.05	-0.13	15.65	0	0	0
227	SLU 30	0.05	-0.11	15.65	0	0	0
227	SLU 31	0.05	-0.09	17.11	0	0	0
227	SLU 32	0.05	-0.12	17.37	0	0	0
227	SLU 33	0.05	-0.1	17.37	0	0	0
227	SLU 34	0.05	-0.1	17.28	0	0	0
227	SLU 35	0.05	-0.12	17.54	0	0	0
227	SLU 36	0.05	-0.11	17.54	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
227	SLU 37	0.05	-0.12	17.44	0	0	0
227	SLU 38	0.05	-0.11	17.44	0	0	0
227	SLU 39	0.05	-0.11	17.88	0	0	0
227	SLU 40	0.05	-0.1	17.88	0	0	0
227	SLU 41	0.05	-0.12	18.05	0	0	0
227	SLU 42	0.05	-0.1	18.05	0	0	0
227	SLU 43	0.05	-0.17	17.33	0	0	0
227	SLU 44	0.04	-0.15	17.33	0	0	0
227	SLU 45	0.05	-0.17	17.59	0	0	0
227	SLU 46	0.05	-0.15	17.59	0	0	0
227	SLU 47	0.04	-0.15	17.5	0	0	0
227	SLU 48	0.05	-0.17	17.76	0	0	0
227	SLU 49	0.05	-0.16	17.76	0	0	0
227	SLU 50	0.05	-0.17	17.66	0	0	0
227	SLU 51	0.04	-0.16	17.66	0	0	0
227	SLU 52	0.05	-0.14	19.13	0	0	0
227	SLU 53	0.05	-0.16	19.38	0	0	0
227	SLU 54	0.05	-0.15	19.38	0	0	0
227	SLU 55	0.05	-0.15	19.29	0	0	0
227	SLU 56	0.05	-0.17	19.55	0	0	0
227	SLU 57	0.05	-0.15	19.55	0	0	0
227	SLU 58	0.05	-0.17	19.45	0	0	0
227	SLU 59	0.05	-0.16	19.46	0	0	0
227	SLU 60	0.05	-0.16	19.89	0	0	0
227	SLU 61	0.05	-0.15	19.89	0	0	0
227	SLU 62	0.05	-0.17	20.06	0	0	0
227	SLU 63	0.05	-0.15	20.06	0	0	0
227	SLU 64	0.06	-0.16	18.9	0	0	0
227	SLU 65	0.05	-0.14	18.91	0	0	0
227	SLU 66	0.06	-0.16	19.16	0	0	0
227	SLU 67	0.06	-0.15	19.16	0	0	0
227	SLU 68	0.05	-0.14	19.07	0	0	0
227	SLU 69	0.06	-0.16	19.33	0	0	0
227	SLU 70	0.05	-0.15	19.33	0	0	0
227	SLU 71	0.05	-0.17	19.23	0	0	0
227	SLU 72	0.05	-0.15	19.24	0	0	0
227	SLU 73	0.06	-0.13	20.7	0	0	0
227	SLU 74	0.06	-0.16	20.96	0	0	0
227	SLU 75	0.06	-0.14	20.96	0	0	0
227	SLU 76	0.06	-0.14	20.86	0	0	0
227	SLU 77	0.06	-0.16	21.12	0	0	0
227	SLU 78	0.06	-0.15	21.12	0	0	0
227	SLU 79	0.06	-0.16	21.03	0	0	0
227	SLU 80	0.06	-0.15	21.03	0	0	0
227	SLU 81	0.06	-0.16	21.47	0	0	0
227	SLU 82	0.06	-0.14	21.47	0	0	0
227	SLU 83	0.06	-0.16	21.63	0	0	0
227	SLU 84	0.06	-0.15	21.63	0	0	0
227	SLE RA 1	0.04	-0.13	14.2	0	0	0
227	SLE RA 2	0.04	-0.11	14.2	0	0	0
227	SLE RA 3	0.04	-0.13	14.37	0	0	0
227	SLE RA 4	0.04	-0.12	14.37	0	0	0
227	SLE RA 5	0.04	-0.11	14.31	0	0	0
227	SLE RA 6	0.04	-0.13	14.48	0	0	0
227	SLE RA 7	0.04	-0.12	14.48	0	0	0
227	SLE RA 8	0.04	-0.13	14.42	0	0	0
227	SLE RA 9	0.04	-0.12	14.42	0	0	0
227	SLE RA 10	0.04	-0.11	15.39	0	0	0
227	SLE RA 11	0.04	-0.12	15.56	0	0	0
227	SLE RA 12	0.04	-0.11	15.56	0	0	0
227	SLE RA 13	0.04	-0.11	15.5	0	0	0
227	SLE RA 14	0.04	-0.12	15.67	0	0	0
227	SLE RA 15	0.04	-0.12	15.67	0	0	0
227	SLE RA 16	0.04	-0.13	15.61	0	0	0
227	SLE RA 17	0.04	-0.12	15.61	0	0	0
227	SLE RA 18	0.04	-0.12	15.9	0	0	0
227	SLE RA 19	0.04	-0.11	15.9	0	0	0
227	SLE RA 20	0.04	-0.12	16.01	0	0	0
227	SLE RA 21	0.04	-0.11	16.01	0	0	0
227	SLE FR 1	0.04	-0.13	14.2	0	0	0
227	SLE FR 2	0.04	-0.12	14.2	0	0	0
227	SLE FR 3	0.04	-0.13	14.24	0	0	0
227	SLE FR 4	0.04	-0.12	14.71	0	0	0
227	SLE FR 5	0.04	-0.13	14.75	0	0	0
227	SLE FR 6	0.04	-0.12	15.05	0	0	0
227	SLE QP 1	0.04	-0.13	14.2	0	0	0
227	SLE QP 2	0.04	-0.12	14.71	0	0	0
227	SLD 1	1.32	0.15	14.32	0	0	0
227	SLD 2	1.39	0.19	14.32	0	0	0
227	SLD 3	1.35	-0.28	14.16	0	0	0
227	SLD 4	1.42	-0.24	14.17	0	0	0
227	SLD 5	0.36	0.61	14.83	0	0	0
227	SLD 6	0.41	0.63	14.83	0	0	0
227	SLD 7	0.47	-0.83	14.31	0	0	0
227	SLD 8	0.52	-0.81	14.31	0	0	0
227	SLD 9	-0.43	0.56	15.11	0	0	0
227	SLD 10	-0.39	0.58	15.11	0	0	0
227	SLD 11	-0.32	-0.87	14.59	0	0	0
227	SLD 12	-0.28	-0.85	14.59	0	0	0
227	SLD 13	-1.34	-0.01	15.25	0	0	0
227	SLD 14	-1.27	0.03	15.25	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
227	SLD 15	-1.3	-0.43	15.09	0	0	0
227	SLD 16	-1.24	-0.4	15.1	0	0	0
227	SLV 1	3.03	0.52	13.8	0	0	0
227	SLV 2	3.19	0.59	13.8	0	0	0
227	SLV 3	3.11	-0.46	13.44	0	0	0
227	SLV 4	3.26	-0.39	13.45	0	0	0
227	SLV 5	0.79	1.54	14.97	0	0	0
227	SLV 6	0.89	1.59	14.98	0	0	0
227	SLV 7	1.05	-1.72	13.79	0	0	0
227	SLV 8	1.15	-1.68	13.79	0	0	0
227	SLV 9	-1.07	1.43	15.62	0	0	0
227	SLV 10	-0.97	1.47	15.63	0	0	0
227	SLV 11	-0.81	-1.84	14.44	0	0	0
227	SLV 12	-0.71	-1.79	14.45	0	0	0
227	SLV 13	-3.18	0.14	15.97	0	0	0
227	SLV 14	-3.03	0.21	15.98	0	0	0
227	SLV 15	-3.1	-0.84	15.61	0	0	0
227	SLV 16	-2.95	-0.76	15.62	0	0	0
228	SLU 1	0.04	-0.14	13.59	0	0	0
228	SLU 2	0.04	-0.12	13.59	0	0	0
228	SLU 3	0.04	-0.14	13.85	0	0	0
228	SLU 4	0.04	-0.12	13.85	0	0	0
228	SLU 5	0.04	-0.12	13.76	0	0	0
228	SLU 6	0.04	-0.14	14.01	0	0	0
228	SLU 7	0.04	-0.13	14.01	0	0	0
228	SLU 8	0.04	-0.14	13.92	0	0	0
228	SLU 9	0.04	-0.13	13.92	0	0	0
228	SLU 10	0.04	-0.11	15.36	0	0	0
228	SLU 11	0.04	-0.13	15.62	0	0	0
228	SLU 12	0.04	-0.12	15.62	0	0	0
228	SLU 13	0.04	-0.12	15.52	0	0	0
228	SLU 14	0.04	-0.14	15.78	0	0	0
228	SLU 15	0.04	-0.13	15.78	0	0	0
228	SLU 16	0.04	-0.14	15.69	0	0	0
228	SLU 17	0.04	-0.13	15.69	0	0	0
228	SLU 18	0.04	-0.13	16.12	0	0	0
228	SLU 19	0.04	-0.12	16.12	0	0	0
228	SLU 20	0.04	-0.14	16.28	0	0	0
228	SLU 21	0.04	-0.12	16.28	0	0	0
228	SLU 22	0.05	-0.13	15.15	0	0	0
228	SLU 23	0.05	-0.11	15.15	0	0	0
228	SLU 24	0.05	-0.13	15.41	0	0	0
228	SLU 25	0.05	-0.12	15.41	0	0	0
228	SLU 26	0.05	-0.11	15.32	0	0	0
228	SLU 27	0.05	-0.14	15.57	0	0	0
228	SLU 28	0.05	-0.12	15.57	0	0	0
228	SLU 29	0.05	-0.14	15.48	0	0	0
228	SLU 30	0.05	-0.13	15.48	0	0	0
228	SLU 31	0.05	-0.11	16.92	0	0	0
228	SLU 32	0.05	-0.13	17.18	0	0	0
228	SLU 33	0.05	-0.12	17.18	0	0	0
228	SLU 34	0.05	-0.11	17.09	0	0	0
228	SLU 35	0.05	-0.13	17.34	0	0	0
228	SLU 36	0.05	-0.12	17.34	0	0	0
228	SLU 37	0.05	-0.14	17.25	0	0	0
228	SLU 38	0.05	-0.12	17.25	0	0	0
228	SLU 39	0.05	-0.13	17.68	0	0	0
228	SLU 40	0.05	-0.12	17.68	0	0	0
228	SLU 41	0.05	-0.13	17.84	0	0	0
228	SLU 42	0.05	-0.12	17.84	0	0	0
228	SLU 43	0.05	-0.18	17.13	0	0	0
228	SLU 44	0.05	-0.16	17.14	0	0	0
228	SLU 45	0.05	-0.18	17.39	0	0	0
228	SLU 46	0.05	-0.17	17.39	0	0	0
228	SLU 47	0.05	-0.16	17.3	0	0	0
228	SLU 48	0.05	-0.18	17.55	0	0	0
228	SLU 49	0.05	-0.17	17.55	0	0	0
228	SLU 50	0.05	-0.19	17.46	0	0	0
228	SLU 51	0.05	-0.17	17.46	0	0	0
228	SLU 52	0.05	-0.16	18.9	0	0	0
228	SLU 53	0.05	-0.18	19.16	0	0	0
228	SLU 54	0.05	-0.16	19.16	0	0	0
228	SLU 55	0.05	-0.16	19.07	0	0	0
228	SLU 56	0.05	-0.18	19.32	0	0	0
228	SLU 57	0.05	-0.17	19.32	0	0	0
228	SLU 58	0.05	-0.18	19.23	0	0	0
228	SLU 59	0.05	-0.17	19.23	0	0	0
228	SLU 60	0.05	-0.18	19.66	0	0	0
228	SLU 61	0.05	-0.16	19.66	0	0	0
228	SLU 62	0.05	-0.18	19.82	0	0	0
228	SLU 63	0.05	-0.17	19.83	0	0	0
228	SLU 64	0.06	-0.18	18.7	0	0	0
228	SLU 65	0.06	-0.15	18.7	0	0	0
228	SLU 66	0.06	-0.18	18.95	0	0	0
228	SLU 67	0.06	-0.16	18.95	0	0	0
228	SLU 68	0.06	-0.16	18.86	0	0	0
228	SLU 69	0.06	-0.18	19.11	0	0	0
228	SLU 70	0.06	-0.17	19.11	0	0	0
228	SLU 71	0.06	-0.18	19.02	0	0	0
228	SLU 72	0.06	-0.17	19.02	0	0	0
228	SLU 73	0.06	-0.15	20.47	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
228	SLU 74	0.06	-0.17	20.72	0	0	0
228	SLU 75	0.06	-0.16	20.72	0	0	0
228	SLU 76	0.06	-0.15	20.63	0	0	0
228	SLU 77	0.06	-0.18	20.88	0	0	0
228	SLU 78	0.06	-0.16	20.88	0	0	0
228	SLU 79	0.06	-0.18	20.79	0	0	0
228	SLU 80	0.06	-0.17	20.79	0	0	0
228	SLU 81	0.06	-0.17	21.22	0	0	0
228	SLU 82	0.06	-0.16	21.22	0	0	0
228	SLU 83	0.06	-0.17	21.39	0	0	0
228	SLU 84	0.06	-0.16	21.39	0	0	0
228	SLE RA 1	0.04	-0.14	14.04	0	0	0
228	SLE RA 2	0.04	-0.12	14.04	0	0	0
228	SLE RA 3	0.04	-0.14	14.21	0	0	0
228	SLE RA 4	0.04	-0.13	14.21	0	0	0
228	SLE RA 5	0.04	-0.12	14.15	0	0	0
228	SLE RA 6	0.04	-0.14	14.32	0	0	0
228	SLE RA 7	0.04	-0.13	14.32	0	0	0
228	SLE RA 8	0.04	-0.14	14.25	0	0	0
228	SLE RA 9	0.04	-0.13	14.26	0	0	0
228	SLE RA 10	0.04	-0.12	15.22	0	0	0
228	SLE RA 11	0.04	-0.13	15.39	0	0	0
228	SLE RA 12	0.04	-0.13	15.39	0	0	0
228	SLE RA 13	0.04	-0.12	15.33	0	0	0
228	SLE RA 14	0.04	-0.14	15.5	0	0	0
228	SLE RA 15	0.04	-0.13	15.5	0	0	0
228	SLE RA 16	0.04	-0.14	15.43	0	0	0
228	SLE RA 17	0.04	-0.13	15.43	0	0	0
228	SLE RA 18	0.04	-0.13	15.72	0	0	0
228	SLE RA 19	0.04	-0.12	15.72	0	0	0
228	SLE RA 20	0.04	-0.14	15.83	0	0	0
228	SLE RA 21	0.04	-0.13	15.83	0	0	0
228	SLE FR 1	0.04	-0.14	14.04	0	0	0
228	SLE FR 2	0.04	-0.13	14.04	0	0	0
228	SLE FR 3	0.04	-0.14	14.08	0	0	0
228	SLE FR 4	0.04	-0.13	14.54	0	0	0
228	SLE FR 5	0.04	-0.14	14.59	0	0	0
228	SLE FR 6	0.04	-0.13	14.88	0	0	0
228	SLE QP 1	0.04	-0.14	14.04	0	0	0
228	SLE QP 2	0.04	-0.14	14.54	0	0	0
228	SLD 1	1.29	0.14	14.08	0	0	0
228	SLD 2	1.36	0.18	14.08	0	0	0
228	SLD 3	1.33	-0.28	13.93	0	0	0
228	SLD 4	1.39	-0.24	13.93	0	0	0
228	SLD 5	0.36	0.58	14.63	0	0	0
228	SLD 6	0.4	0.6	14.63	0	0	0
228	SLD 7	0.47	-0.82	14.13	0	0	0
228	SLD 8	0.51	-0.8	14.13	0	0	0
228	SLD 9	-0.42	0.53	14.96	0	0	0
228	SLD 10	-0.38	0.55	14.96	0	0	0
228	SLD 11	-0.31	-0.87	14.45	0	0	0
228	SLD 12	-0.27	-0.85	14.45	0	0	0
228	SLD 13	-1.31	-0.03	15.16	0	0	0
228	SLD 14	-1.24	0.01	15.16	0	0	0
228	SLD 15	-1.27	-0.45	15.01	0	0	0
228	SLD 16	-1.21	-0.41	15.01	0	0	0
228	SLV 1	2.97	0.5	13.45	0	0	0
228	SLV 2	3.12	0.58	13.46	0	0	0
228	SLV 3	3.05	-0.45	13.11	0	0	0
228	SLV 4	3.2	-0.37	13.11	0	0	0
228	SLV 5	0.78	1.49	14.73	0	0	0
228	SLV 6	0.87	1.54	14.74	0	0	0
228	SLV 7	1.03	-1.69	13.59	0	0	0
228	SLV 8	1.13	-1.64	13.6	0	0	0
228	SLV 9	-1.05	1.37	15.49	0	0	0
228	SLV 10	-0.95	1.42	15.5	0	0	0
228	SLV 11	-0.79	-1.81	14.35	0	0	0
228	SLV 12	-0.69	-1.76	14.35	0	0	0
228	SLV 13	-3.11	0.1	15.97	0	0	0
228	SLV 14	-2.96	0.18	15.98	0	0	0
228	SLV 15	-3.03	-0.86	15.63	0	0	0
228	SLV 16	-2.88	-0.77	15.64	0	0	0
229	SLU 1	0.04	-0.14	13.14	0	0	0
229	SLU 2	0.04	-0.12	13.14	0	0	0
229	SLU 3	0.04	-0.14	13.39	0	0	0
229	SLU 4	0.04	-0.13	13.39	0	0	0
229	SLU 5	0.04	-0.13	13.3	0	0	0
229	SLU 6	0.04	-0.15	13.55	0	0	0
229	SLU 7	0.04	-0.13	13.55	0	0	0
229	SLU 8	0.04	-0.15	13.46	0	0	0
229	SLU 9	0.04	-0.14	13.46	0	0	0
229	SLU 10	0.04	-0.12	14.85	0	0	0
229	SLU 11	0.04	-0.14	15.1	0	0	0
229	SLU 12	0.04	-0.13	15.1	0	0	0
229	SLU 13	0.04	-0.12	15.01	0	0	0
229	SLU 14	0.04	-0.15	15.26	0	0	0
229	SLU 15	0.04	-0.13	15.26	0	0	0
229	SLU 16	0.04	-0.15	15.17	0	0	0
229	SLU 17	0.04	-0.14	15.17	0	0	0
229	SLU 18	0.04	-0.14	15.58	0	0	0
229	SLU 19	0.04	-0.13	15.58	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
229	SLU 20	0.04	-0.14	15.74	0	0	0
229	SLU 21	0.04	-0.13	15.74	0	0	0
229	SLU 22	0.05	-0.14	14.66	0	0	0
229	SLU 23	0.05	-0.12	14.66	0	0	0
229	SLU 24	0.05	-0.14	14.91	0	0	0
229	SLU 25	0.05	-0.13	14.91	0	0	0
229	SLU 26	0.05	-0.12	14.81	0	0	0
229	SLU 27	0.05	-0.14	15.06	0	0	0
229	SLU 28	0.05	-0.13	15.06	0	0	0
229	SLU 29	0.05	-0.15	14.97	0	0	0
229	SLU 30	0.05	-0.13	14.97	0	0	0
229	SLU 31	0.05	-0.12	16.37	0	0	0
229	SLU 32	0.05	-0.14	16.61	0	0	0
229	SLU 33	0.05	-0.13	16.61	0	0	0
229	SLU 34	0.05	-0.12	16.52	0	0	0
229	SLU 35	0.05	-0.14	16.77	0	0	0
229	SLU 36	0.05	-0.13	16.77	0	0	0
229	SLU 37	0.05	-0.14	16.68	0	0	0
229	SLU 38	0.05	-0.13	16.68	0	0	0
229	SLU 39	0.05	-0.14	17.1	0	0	0
229	SLU 40	0.05	-0.12	17.1	0	0	0
229	SLU 41	0.05	-0.14	17.26	0	0	0
229	SLU 42	0.05	-0.13	17.26	0	0	0
229	SLU 43	0.05	-0.19	16.57	0	0	0
229	SLU 44	0.05	-0.17	16.57	0	0	0
229	SLU 45	0.05	-0.19	16.81	0	0	0
229	SLU 46	0.05	-0.17	16.81	0	0	0
229	SLU 47	0.05	-0.17	16.72	0	0	0
229	SLU 48	0.05	-0.19	16.97	0	0	0
229	SLU 49	0.05	-0.18	16.97	0	0	0
229	SLU 50	0.05	-0.19	16.88	0	0	0
229	SLU 51	0.05	-0.18	16.88	0	0	0
229	SLU 52	0.05	-0.16	18.27	0	0	0
229	SLU 53	0.05	-0.19	18.52	0	0	0
229	SLU 54	0.05	-0.17	18.52	0	0	0
229	SLU 55	0.05	-0.17	18.43	0	0	0
229	SLU 56	0.05	-0.19	18.68	0	0	0
229	SLU 57	0.05	-0.18	18.68	0	0	0
229	SLU 58	0.05	-0.19	18.59	0	0	0
229	SLU 59	0.05	-0.18	18.59	0	0	0
229	SLU 60	0.05	-0.19	19.01	0	0	0
229	SLU 61	0.05	-0.17	19.01	0	0	0
229	SLU 62	0.05	-0.19	19.16	0	0	0
229	SLU 63	0.05	-0.18	19.16	0	0	0
229	SLU 64	0.06	-0.18	18.08	0	0	0
229	SLU 65	0.06	-0.16	18.08	0	0	0
229	SLU 66	0.06	-0.18	18.33	0	0	0
229	SLU 67	0.06	-0.17	18.33	0	0	0
229	SLU 68	0.05	-0.17	18.24	0	0	0
229	SLU 69	0.06	-0.19	18.49	0	0	0
229	SLU 70	0.06	-0.17	18.49	0	0	0
229	SLU 71	0.06	-0.19	18.4	0	0	0
229	SLU 72	0.06	-0.18	18.4	0	0	0
229	SLU 73	0.06	-0.16	19.79	0	0	0
229	SLU 74	0.06	-0.18	20.04	0	0	0
229	SLU 75	0.06	-0.17	20.04	0	0	0
229	SLU 76	0.06	-0.16	19.95	0	0	0
229	SLU 77	0.06	-0.19	20.2	0	0	0
229	SLU 78	0.06	-0.17	20.19	0	0	0
229	SLU 79	0.06	-0.19	20.1	0	0	0
229	SLU 80	0.06	-0.18	20.1	0	0	0
229	SLU 81	0.06	-0.18	20.52	0	0	0
229	SLU 82	0.06	-0.17	20.52	0	0	0
229	SLU 83	0.06	-0.18	20.68	0	0	0
229	SLU 84	0.06	-0.17	20.68	0	0	0
229	SLE RA 1	0.04	-0.14	13.58	0	0	0
229	SLE RA 2	0.04	-0.13	13.58	0	0	0
229	SLE RA 3	0.04	-0.14	13.74	0	0	0
229	SLE RA 4	0.04	-0.13	13.74	0	0	0
229	SLE RA 5	0.04	-0.13	13.68	0	0	0
229	SLE RA 6	0.04	-0.14	13.85	0	0	0
229	SLE RA 7	0.04	-0.14	13.85	0	0	0
229	SLE RA 8	0.04	-0.15	13.79	0	0	0
229	SLE RA 9	0.04	-0.14	13.79	0	0	0
229	SLE RA 10	0.04	-0.13	14.71	0	0	0
229	SLE RA 11	0.04	-0.14	14.88	0	0	0
229	SLE RA 12	0.04	-0.13	14.88	0	0	0
229	SLE RA 13	0.04	-0.13	14.82	0	0	0
229	SLE RA 14	0.04	-0.14	14.98	0	0	0
229	SLE RA 15	0.04	-0.13	14.98	0	0	0
229	SLE RA 16	0.04	-0.15	14.92	0	0	0
229	SLE RA 17	0.04	-0.14	14.92	0	0	0
229	SLE RA 18	0.04	-0.14	15.2	0	0	0
229	SLE RA 19	0.04	-0.13	15.2	0	0	0
229	SLE RA 20	0.04	-0.14	15.31	0	0	0
229	SLE RA 21	0.04	-0.13	15.31	0	0	0
229	SLE FR 1	0.04	-0.14	13.58	0	0	0
229	SLE FR 2	0.04	-0.14	13.58	0	0	0
229	SLE FR 3	0.04	-0.14	13.62	0	0	0
229	SLE FR 4	0.04	-0.14	14.06	0	0	0
229	SLE FR 5	0.04	-0.14	14.11	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
229	SLE FR 6	0.04	-0.14	14.39	0	0	0
229	SLE QP 1	0.04	-0.14	13.58	0	0	0
229	SLE QP 2	0.04	-0.14	14.06	0	0	0
229	SLD 1	1.24	0.13	13.54	0	0	0
229	SLD 2	1.3	0.17	13.54	0	0	0
229	SLD 3	1.27	-0.27	13.39	0	0	0
229	SLD 4	1.33	-0.23	13.4	0	0	0
229	SLD 5	0.34	0.54	14.12	0	0	0
229	SLD 6	0.38	0.56	14.13	0	0	0
229	SLD 7	0.45	-0.79	13.64	0	0	0
229	SLD 8	0.49	-0.77	13.65	0	0	0
229	SLD 9	-0.4	0.49	14.48	0	0	0
229	SLD 10	-0.36	0.51	14.48	0	0	0
229	SLD 11	-0.3	-0.85	14	0	0	0
229	SLD 12	-0.26	-0.82	14.01	0	0	0
229	SLD 13	-1.24	-0.05	14.73	0	0	0
229	SLD 14	-1.18	-0.01	14.74	0	0	0
229	SLD 15	-1.21	-0.45	14.59	0	0	0
229	SLD 16	-1.15	-0.41	14.59	0	0	0
229	SLV 1	2.83	0.48	12.82	0	0	0
229	SLV 2	2.98	0.56	12.83	0	0	0
229	SLV 3	2.91	-0.43	12.5	0	0	0
229	SLV 4	3.05	-0.35	12.5	0	0	0
229	SLV 5	0.74	1.41	14.19	0	0	0
229	SLV 6	0.84	1.46	14.19	0	0	0
229	SLV 7	0.99	-1.62	13.1	0	0	0
229	SLV 8	1.08	-1.57	13.1	0	0	0
229	SLV 9	-1	1.29	15.03	0	0	0
229	SLV 10	-0.9	1.34	15.03	0	0	0
229	SLV 11	-0.75	-1.75	13.94	0	0	0
229	SLV 12	-0.66	-1.69	13.94	0	0	0
229	SLV 13	-2.97	0.06	15.62	0	0	0
229	SLV 14	-2.82	0.15	15.63	0	0	0
229	SLV 15	-2.89	-0.85	15.3	0	0	0
229	SLV 16	-2.75	-0.76	15.31	0	0	0
230	SLU 1	0.04	-0.15	12.8	0	0	0
230	SLU 2	0.04	-0.13	12.79	0	0	0
230	SLU 3	0.04	-0.15	13.04	0	0	0
230	SLU 4	0.04	-0.14	13.04	0	0	0
230	SLU 5	0.04	-0.13	12.95	0	0	0
230	SLU 6	0.04	-0.15	13.19	0	0	0
230	SLU 7	0.04	-0.14	13.19	0	0	0
230	SLU 8	0.04	-0.16	13.1	0	0	0
230	SLU 9	0.04	-0.14	13.1	0	0	0
230	SLU 10	0.04	-0.13	14.46	0	0	0
230	SLU 11	0.04	-0.15	14.7	0	0	0
230	SLU 12	0.04	-0.14	14.7	0	0	0
230	SLU 13	0.04	-0.13	14.61	0	0	0
230	SLU 14	0.04	-0.15	14.85	0	0	0
230	SLU 15	0.04	-0.14	14.85	0	0	0
230	SLU 16	0.04	-0.16	14.76	0	0	0
230	SLU 17	0.04	-0.14	14.76	0	0	0
230	SLU 18	0.04	-0.15	15.17	0	0	0
230	SLU 19	0.04	-0.14	15.17	0	0	0
230	SLU 20	0.04	-0.15	15.32	0	0	0
230	SLU 21	0.04	-0.14	15.32	0	0	0
230	SLU 22	0.05	-0.15	14.28	0	0	0
230	SLU 23	0.05	-0.13	14.28	0	0	0
230	SLU 24	0.05	-0.15	14.52	0	0	0
230	SLU 25	0.05	-0.13	14.52	0	0	0
230	SLU 26	0.04	-0.13	14.43	0	0	0
230	SLU 27	0.05	-0.15	14.67	0	0	0
230	SLU 28	0.05	-0.14	14.67	0	0	0
230	SLU 29	0.05	-0.15	14.58	0	0	0
230	SLU 30	0.05	-0.14	14.58	0	0	0
230	SLU 31	0.05	-0.13	15.94	0	0	0
230	SLU 32	0.05	-0.15	16.18	0	0	0
230	SLU 33	0.05	-0.13	16.18	0	0	0
230	SLU 34	0.05	-0.13	16.09	0	0	0
230	SLU 35	0.05	-0.15	16.33	0	0	0
230	SLU 36	0.05	-0.14	16.33	0	0	0
230	SLU 37	0.05	-0.15	16.25	0	0	0
230	SLU 38	0.05	-0.14	16.24	0	0	0
230	SLU 39	0.05	-0.15	16.65	0	0	0
230	SLU 40	0.05	-0.13	16.65	0	0	0
230	SLU 41	0.05	-0.15	16.81	0	0	0
230	SLU 42	0.05	-0.14	16.8	0	0	0
230	SLU 43	0.05	-0.19	16.13	0	0	0
230	SLU 44	0.04	-0.17	16.12	0	0	0
230	SLU 45	0.05	-0.19	16.37	0	0	0
230	SLU 46	0.05	-0.18	16.37	0	0	0
230	SLU 47	0.04	-0.18	16.28	0	0	0
230	SLU 48	0.05	-0.2	16.52	0	0	0
230	SLU 49	0.05	-0.19	16.52	0	0	0
230	SLU 50	0.05	-0.2	16.43	0	0	0
230	SLU 51	0.04	-0.19	16.43	0	0	0
230	SLU 52	0.05	-0.17	17.79	0	0	0
230	SLU 53	0.05	-0.19	18.03	0	0	0
230	SLU 54	0.05	-0.18	18.03	0	0	0
230	SLU 55	0.05	-0.18	17.94	0	0	0
230	SLU 56	0.05	-0.2	18.18	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
230	SLU 57	0.05	-0.19	18.18	0	0	0
230	SLU 58	0.05	-0.2	18.09	0	0	0
230	SLU 59	0.05	-0.19	18.09	0	0	0
230	SLU 60	0.05	-0.19	18.5	0	0	0
230	SLU 61	0.05	-0.18	18.5	0	0	0
230	SLU 62	0.05	-0.2	18.65	0	0	0
230	SLU 63	0.05	-0.19	18.65	0	0	0
230	SLU 64	0.06	-0.19	17.61	0	0	0
230	SLU 65	0.05	-0.17	17.61	0	0	0
230	SLU 66	0.06	-0.19	17.85	0	0	0
230	SLU 67	0.06	-0.18	17.85	0	0	0
230	SLU 68	0.05	-0.17	17.76	0	0	0
230	SLU 69	0.06	-0.2	18	0	0	0
230	SLU 70	0.05	-0.18	18	0	0	0
230	SLU 71	0.05	-0.2	17.91	0	0	0
230	SLU 72	0.05	-0.19	17.91	0	0	0
230	SLU 73	0.06	-0.17	19.27	0	0	0
230	SLU 74	0.06	-0.19	19.51	0	0	0
230	SLU 75	0.06	-0.18	19.51	0	0	0
230	SLU 76	0.06	-0.17	19.42	0	0	0
230	SLU 77	0.06	-0.2	19.66	0	0	0
230	SLU 78	0.06	-0.18	19.66	0	0	0
230	SLU 79	0.06	-0.2	19.58	0	0	0
230	SLU 80	0.06	-0.19	19.58	0	0	0
230	SLU 81	0.06	-0.19	19.98	0	0	0
230	SLU 82	0.06	-0.18	19.98	0	0	0
230	SLU 83	0.06	-0.2	20.14	0	0	0
230	SLU 84	0.06	-0.18	20.14	0	0	0
230	SLE RA 1	0.04	-0.15	13.22	0	0	0
230	SLE RA 2	0.04	-0.13	13.22	0	0	0
230	SLE RA 3	0.04	-0.15	13.38	0	0	0
230	SLE RA 4	0.04	-0.14	13.38	0	0	0
230	SLE RA 5	0.04	-0.14	13.32	0	0	0
230	SLE RA 6	0.04	-0.15	13.48	0	0	0
230	SLE RA 7	0.04	-0.14	13.48	0	0	0
230	SLE RA 8	0.04	-0.15	13.42	0	0	0
230	SLE RA 9	0.04	-0.14	13.42	0	0	0
230	SLE RA 10	0.04	-0.13	14.33	0	0	0
230	SLE RA 11	0.04	-0.15	14.49	0	0	0
230	SLE RA 12	0.04	-0.14	14.49	0	0	0
230	SLE RA 13	0.04	-0.14	14.43	0	0	0
230	SLE RA 14	0.04	-0.15	14.59	0	0	0
230	SLE RA 15	0.04	-0.14	14.59	0	0	0
230	SLE RA 16	0.04	-0.15	14.53	0	0	0
230	SLE RA 17	0.04	-0.14	14.53	0	0	0
230	SLE RA 18	0.04	-0.15	14.8	0	0	0
230	SLE RA 19	0.04	-0.14	14.8	0	0	0
230	SLE RA 20	0.04	-0.15	14.9	0	0	0
230	SLE RA 21	0.04	-0.14	14.9	0	0	0
230	SLE FR 1	0.04	-0.15	13.22	0	0	0
230	SLE FR 2	0.04	-0.15	13.22	0	0	0
230	SLE FR 3	0.04	-0.15	13.26	0	0	0
230	SLE FR 4	0.04	-0.15	13.69	0	0	0
230	SLE FR 5	0.04	-0.15	13.73	0	0	0
230	SLE FR 6	0.04	-0.15	14.01	0	0	0
230	SLE QP 1	0.04	-0.15	13.22	0	0	0
230	SLE QP 2	0.04	-0.15	13.69	0	0	0
230	SLD 1	1.19	0.12	13.11	0	0	0
230	SLD 2	1.24	0.16	13.11	0	0	0
230	SLD 3	1.22	-0.26	12.97	0	0	0
230	SLD 4	1.27	-0.23	12.97	0	0	0
230	SLD 5	0.33	0.51	13.73	0	0	0
230	SLD 6	0.37	0.53	13.73	0	0	0
230	SLD 7	0.43	-0.77	13.27	0	0	0
230	SLD 8	0.47	-0.75	13.27	0	0	0
230	SLD 9	-0.39	0.45	14.12	0	0	0
230	SLD 10	-0.35	0.47	14.12	0	0	0
230	SLD 11	-0.28	-0.83	13.66	0	0	0
230	SLD 12	-0.25	-0.8	13.66	0	0	0
230	SLD 13	-1.19	-0.07	14.42	0	0	0
230	SLD 14	-1.13	-0.03	14.42	0	0	0
230	SLD 15	-1.16	-0.45	14.28	0	0	0
230	SLD 16	-1.1	-0.41	14.28	0	0	0
230	SLV 1	2.72	0.46	12.32	0	0	0
230	SLV 2	2.86	0.55	12.32	0	0	0
230	SLV 3	2.79	-0.41	12	0	0	0
230	SLV 4	2.93	-0.32	12.01	0	0	0
230	SLV 5	0.71	1.34	13.76	0	0	0
230	SLV 6	0.8	1.4	13.76	0	0	0
230	SLV 7	0.95	-1.56	12.71	0	0	0
230	SLV 8	1.04	-1.51	12.71	0	0	0
230	SLV 9	-0.95	1.21	14.68	0	0	0
230	SLV 10	-0.87	1.27	14.68	0	0	0
230	SLV 11	-0.72	-1.69	13.63	0	0	0
230	SLV 12	-0.63	-1.64	13.63	0	0	0
230	SLV 13	-2.84	0.03	15.38	0	0	0
230	SLV 14	-2.71	0.11	15.39	0	0	0
230	SLV 15	-2.77	-0.85	15.06	0	0	0
230	SLV 16	-2.64	-0.76	15.07	0	0	0
231	SLU 1	0.02	-0.08	6.4	0	0	0
231	SLU 2	0.02	-0.07	6.4	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
231	SLU 3	0.02	-0.08	6.52	0	0	0
231	SLU 4	0.02	-0.07	6.52	0	0	0
231	SLU 5	0.02	-0.07	6.48	0	0	0
231	SLU 6	0.02	-0.08	6.6	0	0	0
231	SLU 7	0.02	-0.08	6.6	0	0	0
231	SLU 8	0.02	-0.08	6.55	0	0	0
231	SLU 9	0.02	-0.08	6.55	0	0	0
231	SLU 10	0.02	-0.07	7.23	0	0	0
231	SLU 11	0.02	-0.08	7.35	0	0	0
231	SLU 12	0.02	-0.08	7.35	0	0	0
231	SLU 13	0.02	-0.07	7.31	0	0	0
231	SLU 14	0.02	-0.08	7.43	0	0	0
231	SLU 15	0.02	-0.08	7.43	0	0	0
231	SLU 16	0.02	-0.08	7.39	0	0	0
231	SLU 17	0.02	-0.08	7.38	0	0	0
231	SLU 18	0.02	-0.08	7.59	0	0	0
231	SLU 19	0.02	-0.07	7.59	0	0	0
231	SLU 20	0.02	-0.08	7.67	0	0	0
231	SLU 21	0.02	-0.08	7.66	0	0	0
231	SLU 22	0.02	-0.08	7.14	0	0	0
231	SLU 23	0.02	-0.07	7.14	0	0	0
231	SLU 24	0.02	-0.08	7.27	0	0	0
231	SLU 25	0.02	-0.07	7.27	0	0	0
231	SLU 26	0.02	-0.07	7.22	0	0	0
231	SLU 27	0.02	-0.08	7.34	0	0	0
231	SLU 28	0.02	-0.08	7.34	0	0	0
231	SLU 29	0.02	-0.08	7.3	0	0	0
231	SLU 30	0.02	-0.08	7.3	0	0	0
231	SLU 31	0.02	-0.07	7.98	0	0	0
231	SLU 32	0.02	-0.08	8.1	0	0	0
231	SLU 33	0.02	-0.07	8.1	0	0	0
231	SLU 34	0.02	-0.07	8.05	0	0	0
231	SLU 35	0.02	-0.08	8.17	0	0	0
231	SLU 36	0.02	-0.08	8.17	0	0	0
231	SLU 37	0.02	-0.08	8.13	0	0	0
231	SLU 38	0.02	-0.08	8.13	0	0	0
231	SLU 39	0.02	-0.08	8.33	0	0	0
231	SLU 40	0.02	-0.07	8.33	0	0	0
231	SLU 41	0.02	-0.08	8.41	0	0	0
231	SLU 42	0.02	-0.08	8.41	0	0	0
231	SLU 43	0.02	-0.1	8.07	0	0	0
231	SLU 44	0.02	-0.09	8.06	0	0	0
231	SLU 45	0.02	-0.1	8.19	0	0	0
231	SLU 46	0.02	-0.1	8.19	0	0	0
231	SLU 47	0.02	-0.1	8.14	0	0	0
231	SLU 48	0.02	-0.11	8.26	0	0	0
231	SLU 49	0.02	-0.1	8.26	0	0	0
231	SLU 50	0.02	-0.11	8.22	0	0	0
231	SLU 51	0.02	-0.1	8.22	0	0	0
231	SLU 52	0.02	-0.09	8.9	0	0	0
231	SLU 53	0.02	-0.11	9.02	0	0	0
231	SLU 54	0.02	-0.1	9.02	0	0	0
231	SLU 55	0.02	-0.1	8.97	0	0	0
231	SLU 56	0.02	-0.11	9.09	0	0	0
231	SLU 57	0.02	-0.1	9.09	0	0	0
231	SLU 58	0.02	-0.11	9.05	0	0	0
231	SLU 59	0.02	-0.1	9.05	0	0	0
231	SLU 60	0.02	-0.11	9.25	0	0	0
231	SLU 61	0.02	-0.1	9.25	0	0	0
231	SLU 62	0.02	-0.11	9.33	0	0	0
231	SLU 63	0.02	-0.1	9.33	0	0	0
231	SLU 64	0.03	-0.1	8.81	0	0	0
231	SLU 65	0.03	-0.09	8.81	0	0	0
231	SLU 66	0.03	-0.1	8.93	0	0	0
231	SLU 67	0.03	-0.1	8.93	0	0	0
231	SLU 68	0.03	-0.1	8.88	0	0	0
231	SLU 69	0.03	-0.11	9.01	0	0	0
231	SLU 70	0.03	-0.1	9.01	0	0	0
231	SLU 71	0.03	-0.11	8.96	0	0	0
231	SLU 72	0.03	-0.1	8.96	0	0	0
231	SLU 73	0.03	-0.09	9.64	0	0	0
231	SLU 74	0.03	-0.1	9.76	0	0	0
231	SLU 75	0.03	-0.1	9.76	0	0	0
231	SLU 76	0.03	-0.1	9.72	0	0	0
231	SLU 77	0.03	-0.11	9.84	0	0	0
231	SLU 78	0.03	-0.1	9.84	0	0	0
231	SLU 79	0.03	-0.11	9.79	0	0	0
231	SLU 80	0.03	-0.1	9.79	0	0	0
231	SLU 81	0.03	-0.1	10	0	0	0
231	SLU 82	0.03	-0.1	10	0	0	0
231	SLU 83	0.03	-0.11	10.07	0	0	0
231	SLU 84	0.03	-0.1	10.07	0	0	0
231	SLE RA 1	0.02	-0.08	6.61	0	0	0
231	SLE RA 2	0.02	-0.07	6.61	0	0	0
231	SLE RA 3	0.02	-0.08	6.69	0	0	0
231	SLE RA 4	0.02	-0.08	6.69	0	0	0
231	SLE RA 5	0.02	-0.07	6.66	0	0	0
231	SLE RA 6	0.02	-0.08	6.74	0	0	0
231	SLE RA 7	0.02	-0.08	6.74	0	0	0
231	SLE RA 8	0.02	-0.08	6.72	0	0	0
231	SLE RA 9	0.02	-0.08	6.71	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
231	SLE RA 10	0.02	-0.07	7.17	0	0	0
231	SLE RA 11	0.02	-0.08	7.25	0	0	0
231	SLE RA 12	0.02	-0.08	7.25	0	0	0
231	SLE RA 13	0.02	-0.07	7.22	0	0	0
231	SLE RA 14	0.02	-0.08	7.3	0	0	0
231	SLE RA 15	0.02	-0.08	7.3	0	0	0
231	SLE RA 16	0.02	-0.08	7.27	0	0	0
231	SLE RA 17	0.02	-0.08	7.27	0	0	0
231	SLE RA 18	0.02	-0.08	7.41	0	0	0
231	SLE RA 19	0.02	-0.08	7.4	0	0	0
231	SLE RA 20	0.02	-0.08	7.46	0	0	0
231	SLE RA 21	0.02	-0.08	7.46	0	0	0
231	SLE FR 1	0.02	-0.08	6.61	0	0	0
231	SLE FR 2	0.02	-0.08	6.61	0	0	0
231	SLE FR 3	0.02	-0.08	6.63	0	0	0
231	SLE FR 4	0.02	-0.08	6.85	0	0	0
231	SLE FR 5	0.02	-0.08	6.87	0	0	0
231	SLE FR 6	0.02	-0.08	7.01	0	0	0
231	SLE QP 1	0.02	-0.08	6.61	0	0	0
231	SLE QP 2	0.02	-0.08	6.85	0	0	0
231	SLD 1	0.58	0.05	6.52	0	0	0
231	SLD 2	0.61	0.07	6.52	0	0	0
231	SLD 3	0.6	-0.13	6.45	0	0	0
231	SLD 4	0.63	-0.11	6.45	0	0	0
231	SLD 5	0.16	0.24	6.86	0	0	0
231	SLD 6	0.18	0.26	6.86	0	0	0
231	SLD 7	0.21	-0.38	6.63	0	0	0
231	SLD 8	0.23	-0.37	6.63	0	0	0
231	SLD 9	-0.19	0.21	7.07	0	0	0
231	SLD 10	-0.17	0.22	7.08	0	0	0
231	SLD 11	-0.14	-0.42	6.84	0	0	0
231	SLD 12	-0.12	-0.4	6.84	0	0	0
231	SLD 13	-0.59	-0.05	7.25	0	0	0
231	SLD 14	-0.56	-0.03	7.25	0	0	0
231	SLD 15	-0.57	-0.23	7.18	0	0	0
231	SLD 16	-0.54	-0.21	7.18	0	0	0
231	SLV 1	1.34	0.23	6.08	0	0	0
231	SLV 2	1.41	0.28	6.08	0	0	0
231	SLV 3	1.37	-0.2	5.92	0	0	0
231	SLV 4	1.44	-0.15	5.93	0	0	0
231	SLV 5	0.35	0.65	6.86	0	0	0
231	SLV 6	0.4	0.68	6.86	0	0	0
231	SLV 7	0.47	-0.77	6.33	0	0	0
231	SLV 8	0.51	-0.74	6.34	0	0	0
231	SLV 9	-0.47	0.58	7.37	0	0	0
231	SLV 10	-0.43	0.61	7.37	0	0	0
231	SLV 11	-0.35	-0.84	6.84	0	0	0
231	SLV 12	-0.31	-0.81	6.84	0	0	0
231	SLV 13	-1.4	-0.01	7.78	0	0	0
231	SLV 14	-1.33	0.04	7.78	0	0	0
231	SLV 15	-1.37	-0.44	7.62	0	0	0
231	SLV 16	-1.3	-0.39	7.62	0	0	0
232	SLU 1	-0.08	-0.15	11.55	0	0	0
232	SLU 2	-0.08	-0.13	11.54	0	0	0
232	SLU 3	-0.08	-0.15	11.76	0	0	0
232	SLU 4	-0.08	-0.14	11.76	0	0	0
232	SLU 5	-0.08	-0.14	11.68	0	0	0
232	SLU 6	-0.09	-0.16	11.9	0	0	0
232	SLU 7	-0.08	-0.14	11.9	0	0	0
232	SLU 8	-0.08	-0.16	11.82	0	0	0
232	SLU 9	-0.08	-0.15	11.82	0	0	0
232	SLU 10	-0.08	-0.14	13.08	0	0	0
232	SLU 11	-0.09	-0.16	13.3	0	0	0
232	SLU 12	-0.09	-0.15	13.3	0	0	0
232	SLU 13	-0.09	-0.14	13.21	0	0	0
232	SLU 14	-0.09	-0.16	13.44	0	0	0
232	SLU 15	-0.09	-0.15	13.43	0	0	0
232	SLU 16	-0.09	-0.16	13.35	0	0	0
232	SLU 17	-0.09	-0.15	13.35	0	0	0
232	SLU 18	-0.09	-0.16	13.74	0	0	0
232	SLU 19	-0.09	-0.15	13.74	0	0	0
232	SLU 20	-0.09	-0.17	13.88	0	0	0
232	SLU 21	-0.09	-0.15	13.87	0	0	0
232	SLU 22	-0.1	-0.15	12.9	0	0	0
232	SLU 23	-0.09	-0.13	12.9	0	0	0
232	SLU 24	-0.1	-0.15	13.12	0	0	0
232	SLU 25	-0.1	-0.14	13.12	0	0	0
232	SLU 26	-0.09	-0.13	13.04	0	0	0
232	SLU 27	-0.1	-0.15	13.26	0	0	0
232	SLU 28	-0.1	-0.14	13.26	0	0	0
232	SLU 29	-0.1	-0.16	13.18	0	0	0
232	SLU 30	-0.1	-0.14	13.17	0	0	0
232	SLU 31	-0.1	-0.14	14.43	0	0	0
232	SLU 32	-0.1	-0.16	14.66	0	0	0
232	SLU 33	-0.1	-0.15	14.65	0	0	0
232	SLU 34	-0.1	-0.14	14.57	0	0	0
232	SLU 35	-0.1	-0.16	14.79	0	0	0
232	SLU 36	-0.1	-0.15	14.79	0	0	0
232	SLU 37	-0.1	-0.16	14.71	0	0	0
232	SLU 38	-0.1	-0.15	14.71	0	0	0
232	SLU 39	-0.1	-0.16	15.1	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
232	SLU 40	-0.1	-0.15	15.09	0	0	0
232	SLU 41	-0.1	-0.16	15.23	0	0	0
232	SLU 42	-0.1	-0.15	15.23	0	0	0
232	SLU 43	-0.1	-0.2	14.54	0	0	0
232	SLU 44	-0.1	-0.18	14.54	0	0	0
232	SLU 45	-0.11	-0.2	14.76	0	0	0
232	SLU 46	-0.1	-0.19	14.76	0	0	0
232	SLU 47	-0.1	-0.18	14.68	0	0	0
232	SLU 48	-0.11	-0.2	14.9	0	0	0
232	SLU 49	-0.1	-0.19	14.9	0	0	0
232	SLU 50	-0.1	-0.2	14.82	0	0	0
232	SLU 51	-0.1	-0.19	14.82	0	0	0
232	SLU 52	-0.11	-0.19	16.07	0	0	0
232	SLU 53	-0.11	-0.21	16.3	0	0	0
232	SLU 54	-0.11	-0.19	16.29	0	0	0
232	SLU 55	-0.11	-0.19	16.21	0	0	0
232	SLU 56	-0.11	-0.21	16.43	0	0	0
232	SLU 57	-0.11	-0.2	16.43	0	0	0
232	SLU 58	-0.11	-0.21	16.35	0	0	0
232	SLU 59	-0.11	-0.2	16.35	0	0	0
232	SLU 60	-0.11	-0.21	16.74	0	0	0
232	SLU 61	-0.11	-0.2	16.73	0	0	0
232	SLU 62	-0.11	-0.21	16.87	0	0	0
232	SLU 63	-0.11	-0.2	16.87	0	0	0
232	SLU 64	-0.12	-0.2	15.9	0	0	0
232	SLU 65	-0.11	-0.18	15.9	0	0	0
232	SLU 66	-0.12	-0.2	16.12	0	0	0
232	SLU 67	-0.12	-0.19	16.12	0	0	0
232	SLU 68	-0.11	-0.18	16.03	0	0	0
232	SLU 69	-0.12	-0.2	16.26	0	0	0
232	SLU 70	-0.12	-0.19	16.25	0	0	0
232	SLU 71	-0.12	-0.2	16.18	0	0	0
232	SLU 72	-0.12	-0.19	16.17	0	0	0
232	SLU 73	-0.12	-0.19	17.43	0	0	0
232	SLU 74	-0.12	-0.2	17.65	0	0	0
232	SLU 75	-0.12	-0.19	17.65	0	0	0
232	SLU 76	-0.12	-0.19	17.57	0	0	0
232	SLU 77	-0.12	-0.21	17.79	0	0	0
232	SLU 78	-0.12	-0.2	17.79	0	0	0
232	SLU 79	-0.12	-0.21	17.71	0	0	0
232	SLU 80	-0.12	-0.2	17.71	0	0	0
232	SLU 81	-0.12	-0.21	18.09	0	0	0
232	SLU 82	-0.12	-0.2	18.09	0	0	0
232	SLU 83	-0.12	-0.21	18.23	0	0	0
232	SLU 84	-0.12	-0.2	18.23	0	0	0
232	SLE RA 1	-0.09	-0.15	11.93	0	0	0
232	SLE RA 2	-0.09	-0.14	11.93	0	0	0
232	SLE RA 3	-0.09	-0.15	12.08	0	0	0
232	SLE RA 4	-0.09	-0.14	12.08	0	0	0
232	SLE RA 5	-0.09	-0.14	12.02	0	0	0
232	SLE RA 6	-0.09	-0.15	12.17	0	0	0
232	SLE RA 7	-0.09	-0.15	12.17	0	0	0
232	SLE RA 8	-0.09	-0.16	12.12	0	0	0
232	SLE RA 9	-0.09	-0.15	12.11	0	0	0
232	SLE RA 10	-0.09	-0.14	12.95	0	0	0
232	SLE RA 11	-0.09	-0.16	13.1	0	0	0
232	SLE RA 12	-0.09	-0.15	13.1	0	0	0
232	SLE RA 13	-0.09	-0.15	13.04	0	0	0
232	SLE RA 14	-0.09	-0.16	13.19	0	0	0
232	SLE RA 15	-0.09	-0.15	13.19	0	0	0
232	SLE RA 16	-0.09	-0.16	13.14	0	0	0
232	SLE RA 17	-0.09	-0.15	13.14	0	0	0
232	SLE RA 18	-0.09	-0.16	13.4	0	0	0
232	SLE RA 19	-0.09	-0.15	13.39	0	0	0
232	SLE RA 20	-0.09	-0.16	13.49	0	0	0
232	SLE RA 21	-0.09	-0.15	13.48	0	0	0
232	SLE FR 1	-0.09	-0.15	11.93	0	0	0
232	SLE FR 2	-0.09	-0.15	11.93	0	0	0
232	SLE FR 3	-0.09	-0.15	11.97	0	0	0
232	SLE FR 4	-0.09	-0.15	12.37	0	0	0
232	SLE FR 5	-0.09	-0.16	12.41	0	0	0
232	SLE FR 6	-0.09	-0.16	12.66	0	0	0
232	SLE QP 1	-0.09	-0.15	11.93	0	0	0
232	SLE QP 2	-0.09	-0.15	12.37	0	0	0
232	SLD 1	0.94	-0.04	12.96	0	0	0
232	SLD 2	0.99	-0.08	12.96	0	0	0
232	SLD 3	0.97	-0.4	12.88	0	0	0
232	SLD 4	1.02	-0.44	12.87	0	0	0
232	SLD 5	0.17	0.43	12.68	0	0	0
232	SLD 6	0.21	0.41	12.68	0	0	0
232	SLD 7	0.26	-0.77	12.39	0	0	0
232	SLD 8	0.29	-0.79	12.39	0	0	0
232	SLD 9	-0.47	0.48	12.35	0	0	0
232	SLD 10	-0.44	0.46	12.35	0	0	0
232	SLD 11	-0.38	-0.72	12.07	0	0	0
232	SLD 12	-0.35	-0.74	12.06	0	0	0
232	SLD 13	-1.19	0.13	11.87	0	0	0
232	SLD 14	-1.14	0.09	11.87	0	0	0
232	SLD 15	-1.17	-0.23	11.78	0	0	0
232	SLD 16	-1.12	-0.27	11.78	0	0	0
232	SLV 1	2.32	0.1	13.75	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
232	SLV 2	2.44	0.02	13.74	0	0	0
232	SLV 3	2.38	-0.72	13.55	0	0	0
232	SLV 4	2.5	-0.81	13.55	0	0	0
232	SLV 5	0.52	1.19	13.08	0	0	0
232	SLV 6	0.6	1.13	13.08	0	0	0
232	SLV 7	0.73	-1.56	12.43	0	0	0
232	SLV 8	0.8	-1.61	12.43	0	0	0
232	SLV 9	-0.98	1.3	12.32	0	0	0
232	SLV 10	-0.9	1.25	12.31	0	0	0
232	SLV 11	-0.77	-1.44	11.67	0	0	0
232	SLV 12	-0.7	-1.49	11.66	0	0	0
232	SLV 13	-2.68	0.5	11.2	0	0	0
232	SLV 14	-2.56	0.41	11.19	0	0	0
232	SLV 15	-2.61	-0.33	11	0	0	0
232	SLV 16	-2.5	-0.41	10.99	0	0	0
233	SLU 1	-0.09	-0.16	12.64	0	0	0
233	SLU 2	-0.09	-0.13	12.64	0	0	0
233	SLU 3	-0.09	-0.15	12.88	0	0	0
233	SLU 4	-0.09	-0.14	12.88	0	0	0
233	SLU 5	-0.09	-0.14	12.79	0	0	0
233	SLU 6	-0.09	-0.16	13.03	0	0	0
233	SLU 7	-0.09	-0.14	13.03	0	0	0
233	SLU 8	-0.09	-0.16	12.94	0	0	0
233	SLU 9	-0.09	-0.15	12.94	0	0	0
233	SLU 10	-0.09	-0.14	14.32	0	0	0
233	SLU 11	-0.1	-0.16	14.56	0	0	0
233	SLU 12	-0.09	-0.15	14.56	0	0	0
233	SLU 13	-0.09	-0.14	14.47	0	0	0
233	SLU 14	-0.1	-0.16	14.71	0	0	0
233	SLU 15	-0.09	-0.15	14.71	0	0	0
233	SLU 16	-0.09	-0.17	14.62	0	0	0
233	SLU 17	-0.09	-0.15	14.62	0	0	0
233	SLU 18	-0.09	-0.16	15.04	0	0	0
233	SLU 19	-0.09	-0.15	15.04	0	0	0
233	SLU 20	-0.1	-0.17	15.19	0	0	0
233	SLU 21	-0.09	-0.15	15.19	0	0	0
233	SLU 22	-0.1	-0.15	14.12	0	0	0
233	SLU 23	-0.1	-0.13	14.12	0	0	0
233	SLU 24	-0.1	-0.15	14.36	0	0	0
233	SLU 25	-0.1	-0.14	14.36	0	0	0
233	SLU 26	-0.1	-0.13	14.27	0	0	0
233	SLU 27	-0.11	-0.15	14.51	0	0	0
233	SLU 28	-0.1	-0.14	14.51	0	0	0
233	SLU 29	-0.1	-0.16	14.42	0	0	0
233	SLU 30	-0.1	-0.14	14.42	0	0	0
233	SLU 31	-0.1	-0.14	15.8	0	0	0
233	SLU 32	-0.11	-0.16	16.04	0	0	0
233	SLU 33	-0.11	-0.14	16.04	0	0	0
233	SLU 34	-0.11	-0.14	15.95	0	0	0
233	SLU 35	-0.11	-0.16	16.19	0	0	0
233	SLU 36	-0.11	-0.15	16.19	0	0	0
233	SLU 37	-0.11	-0.16	16.1	0	0	0
233	SLU 38	-0.11	-0.15	16.1	0	0	0
233	SLU 39	-0.11	-0.16	16.52	0	0	0
233	SLU 40	-0.11	-0.15	16.52	0	0	0
233	SLU 41	-0.11	-0.16	16.67	0	0	0
233	SLU 42	-0.11	-0.15	16.67	0	0	0
233	SLU 43	-0.11	-0.2	15.93	0	0	0
233	SLU 44	-0.11	-0.18	15.93	0	0	0
233	SLU 45	-0.11	-0.2	16.17	0	0	0
233	SLU 46	-0.11	-0.19	16.17	0	0	0
233	SLU 47	-0.11	-0.18	16.08	0	0	0
233	SLU 48	-0.11	-0.2	16.32	0	0	0
233	SLU 49	-0.11	-0.19	16.32	0	0	0
233	SLU 50	-0.11	-0.21	16.23	0	0	0
233	SLU 51	-0.11	-0.2	16.23	0	0	0
233	SLU 52	-0.11	-0.19	17.61	0	0	0
233	SLU 53	-0.12	-0.21	17.85	0	0	0
233	SLU 54	-0.12	-0.2	17.85	0	0	0
233	SLU 55	-0.11	-0.19	17.76	0	0	0
233	SLU 56	-0.12	-0.21	18	0	0	0
233	SLU 57	-0.12	-0.2	18	0	0	0
233	SLU 58	-0.12	-0.21	17.91	0	0	0
233	SLU 59	-0.12	-0.2	17.91	0	0	0
233	SLU 60	-0.12	-0.21	18.33	0	0	0
233	SLU 61	-0.12	-0.2	18.33	0	0	0
233	SLU 62	-0.12	-0.21	18.48	0	0	0
233	SLU 63	-0.12	-0.2	18.48	0	0	0
233	SLU 64	-0.12	-0.2	17.41	0	0	0
233	SLU 65	-0.12	-0.18	17.4	0	0	0
233	SLU 66	-0.13	-0.2	17.65	0	0	0
233	SLU 67	-0.13	-0.19	17.65	0	0	0
233	SLU 68	-0.12	-0.18	17.56	0	0	0
233	SLU 69	-0.13	-0.2	17.8	0	0	0
233	SLU 70	-0.13	-0.19	17.8	0	0	0
233	SLU 71	-0.13	-0.2	17.71	0	0	0
233	SLU 72	-0.12	-0.19	17.71	0	0	0
233	SLU 73	-0.13	-0.18	19.08	0	0	0
233	SLU 74	-0.13	-0.2	19.33	0	0	0
233	SLU 75	-0.13	-0.19	19.33	0	0	0
233	SLU 76	-0.13	-0.19	19.24	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
233	SLU 77	-0.13	-0.21	19.48	0	0	0
233	SLU 78	-0.13	-0.19	19.48	0	0	0
233	SLU 79	-0.13	-0.21	19.39	0	0	0
233	SLU 80	-0.13	-0.2	19.39	0	0	0
233	SLU 81	-0.13	-0.21	19.81	0	0	0
233	SLU 82	-0.13	-0.19	19.81	0	0	0
233	SLU 83	-0.13	-0.21	19.96	0	0	0
233	SLU 84	-0.13	-0.2	19.96	0	0	0
233	SLE RA 1	-0.09	-0.15	13.07	0	0	0
233	SLE RA 2	-0.09	-0.14	13.06	0	0	0
233	SLE RA 3	-0.09	-0.15	13.23	0	0	0
233	SLE RA 4	-0.09	-0.14	13.22	0	0	0
233	SLE RA 5	-0.09	-0.14	13.16	0	0	0
233	SLE RA 6	-0.09	-0.16	13.33	0	0	0
233	SLE RA 7	-0.09	-0.15	13.32	0	0	0
233	SLE RA 8	-0.09	-0.16	13.27	0	0	0
233	SLE RA 9	-0.09	-0.15	13.27	0	0	0
233	SLE RA 10	-0.09	-0.14	14.18	0	0	0
233	SLE RA 11	-0.1	-0.16	14.35	0	0	0
233	SLE RA 12	-0.1	-0.15	14.34	0	0	0
233	SLE RA 13	-0.09	-0.15	14.28	0	0	0
233	SLE RA 14	-0.1	-0.16	14.45	0	0	0
233	SLE RA 15	-0.1	-0.15	14.44	0	0	0
233	SLE RA 16	-0.1	-0.16	14.39	0	0	0
233	SLE RA 17	-0.1	-0.15	14.39	0	0	0
233	SLE RA 18	-0.1	-0.16	14.67	0	0	0
233	SLE RA 19	-0.1	-0.15	14.66	0	0	0
233	SLE RA 20	-0.1	-0.16	14.77	0	0	0
233	SLE RA 21	-0.1	-0.15	14.76	0	0	0
233	SLE FR 1	-0.09	-0.15	13.07	0	0	0
233	SLE FR 2	-0.09	-0.15	13.07	0	0	0
233	SLE FR 3	-0.09	-0.15	13.11	0	0	0
233	SLE FR 4	-0.09	-0.15	13.55	0	0	0
233	SLE FR 5	-0.09	-0.16	13.59	0	0	0
233	SLE FR 6	-0.09	-0.16	13.87	0	0	0
233	SLE QP 1	-0.09	-0.15	13.07	0	0	0
233	SLE QP 2	-0.09	-0.16	13.55	0	0	0
233	SLD 1	1.06	-0.02	14.12	0	0	0
233	SLD 2	1.11	-0.06	14.12	0	0	0
233	SLD 3	1.09	-0.43	14.02	0	0	0
233	SLD 4	1.14	-0.47	14.02	0	0	0
233	SLD 5	0.2	0.5	13.86	0	0	0
233	SLD 6	0.23	0.48	13.86	0	0	0
233	SLD 7	0.29	-0.84	13.55	0	0	0
233	SLD 8	0.33	-0.87	13.54	0	0	0
233	SLD 9	-0.52	0.56	13.55	0	0	0
233	SLD 10	-0.48	0.53	13.55	0	0	0
233	SLD 11	-0.42	-0.79	13.23	0	0	0
233	SLD 12	-0.38	-0.81	13.23	0	0	0
233	SLD 13	-1.33	0.16	13.07	0	0	0
233	SLD 14	-1.27	0.12	13.07	0	0	0
233	SLD 15	-1.3	-0.25	12.98	0	0	0
233	SLD 16	-1.24	-0.29	12.97	0	0	0
233	SLV 1	2.6	0.14	14.88	0	0	0
233	SLV 2	2.73	0.05	14.88	0	0	0
233	SLV 3	2.66	-0.78	14.67	0	0	0
233	SLV 4	2.8	-0.87	14.66	0	0	0
233	SLV 5	0.59	1.34	14.27	0	0	0
233	SLV 6	0.67	1.28	14.27	0	0	0
233	SLV 7	0.82	-1.72	13.56	0	0	0
233	SLV 8	0.9	-1.78	13.55	0	0	0
233	SLV 9	-1.09	1.47	13.54	0	0	0
233	SLV 10	-1	1.41	13.53	0	0	0
233	SLV 11	-0.86	-1.59	12.82	0	0	0
233	SLV 12	-0.77	-1.65	12.82	0	0	0
233	SLV 13	-2.98	0.56	12.43	0	0	0
233	SLV 14	-2.85	0.47	12.42	0	0	0
233	SLV 15	-2.92	-0.36	12.22	0	0	0
233	SLV 16	-2.78	-0.45	12.21	0	0	0
234	SLU 1	-0.09	-0.15	13.44	0	0	0
234	SLU 2	-0.09	-0.13	13.44	0	0	0
234	SLU 3	-0.09	-0.15	13.7	0	0	0
234	SLU 4	-0.09	-0.13	13.7	0	0	0
234	SLU 5	-0.09	-0.13	13.6	0	0	0
234	SLU 6	-0.1	-0.15	13.86	0	0	0
234	SLU 7	-0.09	-0.14	13.86	0	0	0
234	SLU 8	-0.09	-0.15	13.76	0	0	0
234	SLU 9	-0.09	-0.14	13.76	0	0	0
234	SLU 10	-0.09	-0.13	15.23	0	0	0
234	SLU 11	-0.1	-0.15	15.48	0	0	0
234	SLU 12	-0.1	-0.14	15.48	0	0	0
234	SLU 13	-0.09	-0.13	15.39	0	0	0
234	SLU 14	-0.1	-0.15	15.64	0	0	0
234	SLU 15	-0.1	-0.14	15.64	0	0	0
234	SLU 16	-0.1	-0.16	15.55	0	0	0
234	SLU 17	-0.1	-0.14	15.55	0	0	0
234	SLU 18	-0.1	-0.15	16	0	0	0
234	SLU 19	-0.1	-0.14	15.99	0	0	0
234	SLU 20	-0.1	-0.16	16.16	0	0	0
234	SLU 21	-0.1	-0.14	16.15	0	0	0
234	SLU 22	-0.11	-0.14	15.01	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
234	SLU 23	-0.1	-0.12	15.01	0	0	0
234	SLU 24	-0.11	-0.14	15.26	0	0	0
234	SLU 25	-0.11	-0.13	15.26	0	0	0
234	SLU 26	-0.1	-0.12	15.17	0	0	0
234	SLU 27	-0.11	-0.14	15.42	0	0	0
234	SLU 28	-0.11	-0.13	15.42	0	0	0
234	SLU 29	-0.11	-0.15	15.33	0	0	0
234	SLU 30	-0.11	-0.13	15.33	0	0	0
234	SLU 31	-0.11	-0.12	16.79	0	0	0
234	SLU 32	-0.11	-0.14	17.05	0	0	0
234	SLU 33	-0.11	-0.13	17.05	0	0	0
234	SLU 34	-0.11	-0.12	16.95	0	0	0
234	SLU 35	-0.11	-0.15	17.21	0	0	0
234	SLU 36	-0.11	-0.13	17.21	0	0	0
234	SLU 37	-0.11	-0.15	17.12	0	0	0
234	SLU 38	-0.11	-0.14	17.11	0	0	0
234	SLU 39	-0.11	-0.15	17.56	0	0	0
234	SLU 40	-0.11	-0.13	17.56	0	0	0
234	SLU 41	-0.11	-0.15	17.72	0	0	0
234	SLU 42	-0.11	-0.13	17.72	0	0	0
234	SLU 43	-0.12	-0.19	16.94	0	0	0
234	SLU 44	-0.11	-0.17	16.94	0	0	0
234	SLU 45	-0.12	-0.19	17.19	0	0	0
234	SLU 46	-0.12	-0.18	17.19	0	0	0
234	SLU 47	-0.11	-0.17	17.1	0	0	0
234	SLU 48	-0.12	-0.2	17.35	0	0	0
234	SLU 49	-0.12	-0.18	17.35	0	0	0
234	SLU 50	-0.12	-0.2	17.26	0	0	0
234	SLU 51	-0.12	-0.19	17.26	0	0	0
234	SLU 52	-0.12	-0.18	18.72	0	0	0
234	SLU 53	-0.12	-0.2	18.98	0	0	0
234	SLU 54	-0.12	-0.18	18.98	0	0	0
234	SLU 55	-0.12	-0.18	18.88	0	0	0
234	SLU 56	-0.12	-0.2	19.14	0	0	0
234	SLU 57	-0.12	-0.19	19.14	0	0	0
234	SLU 58	-0.12	-0.2	19.05	0	0	0
234	SLU 59	-0.12	-0.19	19.05	0	0	0
234	SLU 60	-0.12	-0.2	19.49	0	0	0
234	SLU 61	-0.12	-0.19	19.49	0	0	0
234	SLU 62	-0.12	-0.2	19.65	0	0	0
234	SLU 63	-0.12	-0.19	19.65	0	0	0
234	SLU 64	-0.13	-0.19	18.5	0	0	0
234	SLU 65	-0.13	-0.16	18.5	0	0	0
234	SLU 66	-0.13	-0.19	18.76	0	0	0
234	SLU 67	-0.13	-0.17	18.76	0	0	0
234	SLU 68	-0.13	-0.17	18.66	0	0	0
234	SLU 69	-0.13	-0.19	18.92	0	0	0
234	SLU 70	-0.13	-0.17	18.92	0	0	0
234	SLU 71	-0.13	-0.19	18.83	0	0	0
234	SLU 72	-0.13	-0.18	18.82	0	0	0
234	SLU 73	-0.13	-0.17	20.29	0	0	0
234	SLU 74	-0.14	-0.19	20.55	0	0	0
234	SLU 75	-0.13	-0.18	20.54	0	0	0
234	SLU 76	-0.13	-0.17	20.45	0	0	0
234	SLU 77	-0.14	-0.19	20.71	0	0	0
234	SLU 78	-0.14	-0.18	20.7	0	0	0
234	SLU 79	-0.14	-0.2	20.61	0	0	0
234	SLU 80	-0.13	-0.18	20.61	0	0	0
234	SLU 81	-0.14	-0.19	21.06	0	0	0
234	SLU 82	-0.13	-0.18	21.06	0	0	0
234	SLU 83	-0.14	-0.2	21.22	0	0	0
234	SLU 84	-0.13	-0.18	21.22	0	0	0
234	SLE RA 1	-0.1	-0.15	13.89	0	0	0
234	SLE RA 2	-0.09	-0.13	13.89	0	0	0
234	SLE RA 3	-0.1	-0.14	14.06	0	0	0
234	SLE RA 4	-0.1	-0.14	14.06	0	0	0
234	SLE RA 5	-0.1	-0.13	14	0	0	0
234	SLE RA 6	-0.1	-0.15	14.17	0	0	0
234	SLE RA 7	-0.1	-0.14	14.17	0	0	0
234	SLE RA 8	-0.1	-0.15	14.1	0	0	0
234	SLE RA 9	-0.1	-0.14	14.1	0	0	0
234	SLE RA 10	-0.1	-0.13	15.08	0	0	0
234	SLE RA 11	-0.1	-0.15	15.25	0	0	0
234	SLE RA 12	-0.1	-0.14	15.25	0	0	0
234	SLE RA 13	-0.1	-0.13	15.19	0	0	0
234	SLE RA 14	-0.1	-0.15	15.36	0	0	0
234	SLE RA 15	-0.1	-0.14	15.36	0	0	0
234	SLE RA 16	-0.1	-0.15	15.3	0	0	0
234	SLE RA 17	-0.1	-0.14	15.29	0	0	0
234	SLE RA 18	-0.1	-0.15	15.59	0	0	0
234	SLE RA 19	-0.1	-0.14	15.59	0	0	0
234	SLE RA 20	-0.1	-0.15	15.7	0	0	0
234	SLE RA 21	-0.1	-0.14	15.7	0	0	0
234	SLE FR 1	-0.1	-0.15	13.89	0	0	0
234	SLE FR 2	-0.1	-0.14	13.89	0	0	0
234	SLE FR 3	-0.1	-0.15	13.93	0	0	0
234	SLE FR 4	-0.1	-0.14	14.4	0	0	0
234	SLE FR 5	-0.1	-0.15	14.44	0	0	0
234	SLE FR 6	-0.1	-0.15	14.74	0	0	0
234	SLE QP 1	-0.1	-0.15	13.89	0	0	0
234	SLE QP 2	-0.1	-0.15	14.4	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
234	SLD 1	1.15	0	14.92	0	0	0
234	SLD 2	1.21	-0.04	14.92	0	0	0
234	SLD 3	1.18	-0.44	14.82	0	0	0
234	SLD 4	1.24	-0.48	14.82	0	0	0
234	SLD 5	0.22	0.57	14.71	0	0	0
234	SLD 6	0.26	0.54	14.71	0	0	0
234	SLD 7	0.32	-0.89	14.37	0	0	0
234	SLD 8	0.36	-0.91	14.37	0	0	0
234	SLD 9	-0.56	0.62	14.43	0	0	0
234	SLD 10	-0.52	0.6	14.43	0	0	0
234	SLD 11	-0.45	-0.83	14.09	0	0	0
234	SLD 12	-0.41	-0.86	14.09	0	0	0
234	SLD 13	-1.44	0.18	13.98	0	0	0
234	SLD 14	-1.38	0.14	13.98	0	0	0
234	SLD 15	-1.41	-0.25	13.88	0	0	0
234	SLD 16	-1.34	-0.29	13.88	0	0	0
234	SLV 1	2.82	0.18	15.62	0	0	0
234	SLV 2	2.96	0.09	15.61	0	0	0
234	SLV 3	2.89	-0.81	15.39	0	0	0
234	SLV 4	3.04	-0.9	15.38	0	0	0
234	SLV 5	0.64	1.48	15.12	0	0	0
234	SLV 6	0.73	1.42	15.12	0	0	0
234	SLV 7	0.89	-1.84	14.34	0	0	0
234	SLV 8	0.98	-1.9	14.34	0	0	0
234	SLV 9	-1.17	1.61	14.46	0	0	0
234	SLV 10	-1.08	1.55	14.46	0	0	0
234	SLV 11	-0.93	-1.71	13.68	0	0	0
234	SLV 12	-0.84	-1.77	13.68	0	0	0
234	SLV 13	-3.23	0.61	13.42	0	0	0
234	SLV 14	-3.09	0.52	13.41	0	0	0
234	SLV 15	-3.16	-0.39	13.19	0	0	0
234	SLV 16	-3.01	-0.48	13.18	0	0	0
235	SLU 1	-0.09	-0.13	13.56	0	0	0
235	SLU 2	-0.09	-0.11	13.56	0	0	0
235	SLU 3	-0.09	-0.13	13.82	0	0	0
235	SLU 4	-0.09	-0.11	13.82	0	0	0
235	SLU 5	-0.09	-0.11	13.72	0	0	0
235	SLU 6	-0.09	-0.13	13.98	0	0	0
235	SLU 7	-0.09	-0.11	13.98	0	0	0
235	SLU 8	-0.09	-0.13	13.89	0	0	0
235	SLU 9	-0.09	-0.12	13.89	0	0	0
235	SLU 10	-0.09	-0.11	15.37	0	0	0
235	SLU 11	-0.1	-0.13	15.62	0	0	0
235	SLU 12	-0.1	-0.11	15.62	0	0	0
235	SLU 13	-0.09	-0.11	15.53	0	0	0
235	SLU 14	-0.1	-0.13	15.79	0	0	0
235	SLU 15	-0.1	-0.12	15.79	0	0	0
235	SLU 16	-0.1	-0.13	15.69	0	0	0
235	SLU 17	-0.1	-0.12	15.69	0	0	0
235	SLU 18	-0.1	-0.13	16.14	0	0	0
235	SLU 19	-0.1	-0.12	16.14	0	0	0
235	SLU 20	-0.1	-0.13	16.3	0	0	0
235	SLU 21	-0.1	-0.12	16.3	0	0	0
235	SLU 22	-0.11	-0.12	15.13	0	0	0
235	SLU 23	-0.1	-0.09	15.13	0	0	0
235	SLU 24	-0.11	-0.11	15.39	0	0	0
235	SLU 25	-0.11	-0.1	15.39	0	0	0
235	SLU 26	-0.1	-0.1	15.3	0	0	0
235	SLU 27	-0.11	-0.12	15.55	0	0	0
235	SLU 28	-0.11	-0.1	15.55	0	0	0
235	SLU 29	-0.11	-0.12	15.46	0	0	0
235	SLU 30	-0.11	-0.11	15.46	0	0	0
235	SLU 31	-0.11	-0.1	16.94	0	0	0
235	SLU 32	-0.11	-0.12	17.19	0	0	0
235	SLU 33	-0.11	-0.1	17.19	0	0	0
235	SLU 34	-0.11	-0.1	17.1	0	0	0
235	SLU 35	-0.11	-0.12	17.36	0	0	0
235	SLU 36	-0.11	-0.1	17.36	0	0	0
235	SLU 37	-0.11	-0.12	17.26	0	0	0
235	SLU 38	-0.11	-0.11	17.26	0	0	0
235	SLU 39	-0.11	-0.12	17.71	0	0	0
235	SLU 40	-0.11	-0.11	17.71	0	0	0
235	SLU 41	-0.11	-0.12	17.87	0	0	0
235	SLU 42	-0.11	-0.11	17.87	0	0	0
235	SLU 43	-0.11	-0.17	17.09	0	0	0
235	SLU 44	-0.11	-0.15	17.09	0	0	0
235	SLU 45	-0.12	-0.17	17.35	0	0	0
235	SLU 46	-0.11	-0.15	17.35	0	0	0
235	SLU 47	-0.11	-0.15	17.25	0	0	0
235	SLU 48	-0.12	-0.17	17.51	0	0	0
235	SLU 49	-0.11	-0.16	17.51	0	0	0
235	SLU 50	-0.11	-0.17	17.42	0	0	0
235	SLU 51	-0.11	-0.16	17.42	0	0	0
235	SLU 52	-0.12	-0.15	18.9	0	0	0
235	SLU 53	-0.12	-0.17	19.15	0	0	0
235	SLU 54	-0.12	-0.16	19.15	0	0	0
235	SLU 55	-0.12	-0.15	19.06	0	0	0
235	SLU 56	-0.12	-0.17	19.32	0	0	0
235	SLU 57	-0.12	-0.16	19.32	0	0	0
235	SLU 58	-0.12	-0.18	19.22	0	0	0
235	SLU 59	-0.12	-0.16	19.22	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
235	SLU 60	-0.12	-0.17	19.67	0	0	0
235	SLU 61	-0.12	-0.16	19.67	0	0	0
235	SLU 62	-0.12	-0.17	19.83	0	0	0
235	SLU 63	-0.12	-0.16	19.83	0	0	0
235	SLU 64	-0.13	-0.16	18.66	0	0	0
235	SLU 65	-0.13	-0.14	18.66	0	0	0
235	SLU 66	-0.13	-0.16	18.92	0	0	0
235	SLU 67	-0.13	-0.14	18.92	0	0	0
235	SLU 68	-0.13	-0.14	18.83	0	0	0
235	SLU 69	-0.13	-0.16	19.08	0	0	0
235	SLU 70	-0.13	-0.15	19.08	0	0	0
235	SLU 71	-0.13	-0.16	18.99	0	0	0
235	SLU 72	-0.13	-0.15	18.99	0	0	0
235	SLU 73	-0.13	-0.14	20.47	0	0	0
235	SLU 74	-0.13	-0.16	20.72	0	0	0
235	SLU 75	-0.13	-0.14	20.72	0	0	0
235	SLU 76	-0.13	-0.14	20.63	0	0	0
235	SLU 77	-0.13	-0.16	20.89	0	0	0
235	SLU 78	-0.13	-0.15	20.89	0	0	0
235	SLU 79	-0.13	-0.16	20.79	0	0	0
235	SLU 80	-0.13	-0.15	20.79	0	0	0
235	SLU 81	-0.13	-0.16	21.24	0	0	0
235	SLU 82	-0.13	-0.15	21.24	0	0	0
235	SLU 83	-0.13	-0.16	21.4	0	0	0
235	SLU 84	-0.13	-0.15	21.4	0	0	0
235	SLE RA 1	-0.1	-0.12	14.01	0	0	0
235	SLE RA 2	-0.09	-0.11	14.01	0	0	0
235	SLE RA 3	-0.1	-0.12	14.18	0	0	0
235	SLE RA 4	-0.1	-0.11	14.18	0	0	0
235	SLE RA 5	-0.09	-0.11	14.12	0	0	0
235	SLE RA 6	-0.1	-0.12	14.29	0	0	0
235	SLE RA 7	-0.1	-0.12	14.29	0	0	0
235	SLE RA 8	-0.1	-0.13	14.23	0	0	0
235	SLE RA 9	-0.1	-0.12	14.23	0	0	0
235	SLE RA 10	-0.1	-0.11	15.21	0	0	0
235	SLE RA 11	-0.1	-0.12	15.39	0	0	0
235	SLE RA 12	-0.1	-0.12	15.39	0	0	0
235	SLE RA 13	-0.1	-0.11	15.32	0	0	0
235	SLE RA 14	-0.1	-0.13	15.49	0	0	0
235	SLE RA 15	-0.1	-0.12	15.49	0	0	0
235	SLE RA 16	-0.1	-0.13	15.43	0	0	0
235	SLE RA 17	-0.1	-0.12	15.43	0	0	0
235	SLE RA 18	-0.1	-0.13	15.73	0	0	0
235	SLE RA 19	-0.1	-0.12	15.73	0	0	0
235	SLE RA 20	-0.1	-0.13	15.84	0	0	0
235	SLE RA 21	-0.1	-0.12	15.84	0	0	0
235	SLE FR 1	-0.1	-0.12	14.01	0	0	0
235	SLE FR 2	-0.09	-0.12	14.01	0	0	0
235	SLE FR 3	-0.1	-0.13	14.06	0	0	0
235	SLE FR 4	-0.1	-0.12	14.53	0	0	0
235	SLE FR 5	-0.1	-0.13	14.57	0	0	0
235	SLE FR 6	-0.1	-0.13	14.87	0	0	0
235	SLE QP 1	-0.1	-0.12	14.01	0	0	0
235	SLE QP 2	-0.1	-0.12	14.53	0	0	0
235	SLD 1	1.18	0.03	14.97	0	0	0
235	SLD 2	1.24	0	14.96	0	0	0
235	SLD 3	1.21	-0.42	14.86	0	0	0
235	SLD 4	1.27	-0.45	14.86	0	0	0
235	SLD 5	0.23	0.61	14.82	0	0	0
235	SLD 6	0.27	0.58	14.82	0	0	0
235	SLD 7	0.33	-0.88	14.46	0	0	0
235	SLD 8	0.38	-0.91	14.46	0	0	0
235	SLD 9	-0.57	0.66	14.59	0	0	0
235	SLD 10	-0.53	0.63	14.59	0	0	0
235	SLD 11	-0.46	-0.83	14.23	0	0	0
235	SLD 12	-0.42	-0.86	14.23	0	0	0
235	SLD 13	-1.47	0.2	14.2	0	0	0
235	SLD 14	-1.4	0.17	14.2	0	0	0
235	SLD 15	-1.43	-0.25	14.09	0	0	0
235	SLD 16	-1.37	-0.28	14.09	0	0	0
235	SLV 1	2.89	0.23	15.55	0	0	0
235	SLV 2	3.03	0.14	15.54	0	0	0
235	SLV 3	2.96	-0.79	15.31	0	0	0
235	SLV 4	3.11	-0.88	15.3	0	0	0
235	SLV 5	0.66	1.54	15.21	0	0	0
235	SLV 6	0.75	1.49	15.2	0	0	0
235	SLV 7	0.91	-1.86	14.39	0	0	0
235	SLV 8	1	-1.91	14.39	0	0	0
235	SLV 9	-1.2	1.66	14.67	0	0	0
235	SLV 10	-1.1	1.61	14.66	0	0	0
235	SLV 11	-0.94	-1.74	13.85	0	0	0
235	SLV 12	-0.85	-1.79	13.85	0	0	0
235	SLV 13	-3.3	0.63	13.76	0	0	0
235	SLV 14	-3.15	0.54	13.75	0	0	0
235	SLV 15	-3.22	-0.39	13.51	0	0	0
235	SLV 16	-3.08	-0.48	13.5	0	0	0
236	SLU 1	-0.09	-0.1	13.61	0	0	0
236	SLU 2	-0.09	-0.08	13.61	0	0	0
236	SLU 3	-0.09	-0.1	13.87	0	0	0
236	SLU 4	-0.09	-0.09	13.87	0	0	0
236	SLU 5	-0.09	-0.08	13.78	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
236	SLU 6	-0.09	-0.1	14.03	0	0	0
236	SLU 7	-0.09	-0.09	14.03	0	0	0
236	SLU 8	-0.09	-0.11	13.94	0	0	0
236	SLU 9	-0.09	-0.1	13.94	0	0	0
236	SLU 10	-0.09	-0.08	15.43	0	0	0
236	SLU 11	-0.1	-0.1	15.68	0	0	0
236	SLU 12	-0.09	-0.09	15.68	0	0	0
236	SLU 13	-0.09	-0.08	15.59	0	0	0
236	SLU 14	-0.1	-0.1	15.85	0	0	0
236	SLU 15	-0.1	-0.09	15.85	0	0	0
236	SLU 16	-0.1	-0.11	15.75	0	0	0
236	SLU 17	-0.09	-0.09	15.75	0	0	0
236	SLU 18	-0.1	-0.1	16.2	0	0	0
236	SLU 19	-0.09	-0.09	16.2	0	0	0
236	SLU 20	-0.1	-0.1	16.37	0	0	0
236	SLU 21	-0.09	-0.09	16.37	0	0	0
236	SLU 22	-0.1	-0.09	15.18	0	0	0
236	SLU 23	-0.1	-0.07	15.18	0	0	0
236	SLU 24	-0.11	-0.09	15.44	0	0	0
236	SLU 25	-0.1	-0.07	15.44	0	0	0
236	SLU 26	-0.1	-0.07	15.35	0	0	0
236	SLU 27	-0.11	-0.09	15.6	0	0	0
236	SLU 28	-0.11	-0.08	15.6	0	0	0
236	SLU 29	-0.11	-0.09	15.51	0	0	0
236	SLU 30	-0.1	-0.08	15.51	0	0	0
236	SLU 31	-0.11	-0.07	17	0	0	0
236	SLU 32	-0.11	-0.09	17.25	0	0	0
236	SLU 33	-0.11	-0.07	17.26	0	0	0
236	SLU 34	-0.11	-0.07	17.16	0	0	0
236	SLU 35	-0.11	-0.09	17.42	0	0	0
236	SLU 36	-0.11	-0.07	17.42	0	0	0
236	SLU 37	-0.11	-0.09	17.33	0	0	0
236	SLU 38	-0.11	-0.08	17.33	0	0	0
236	SLU 39	-0.11	-0.09	17.78	0	0	0
236	SLU 40	-0.11	-0.07	17.78	0	0	0
236	SLU 41	-0.11	-0.09	17.94	0	0	0
236	SLU 42	-0.11	-0.08	17.94	0	0	0
236	SLU 43	-0.11	-0.14	17.16	0	0	0
236	SLU 44	-0.11	-0.12	17.16	0	0	0
236	SLU 45	-0.11	-0.14	17.41	0	0	0
236	SLU 46	-0.11	-0.12	17.41	0	0	0
236	SLU 47	-0.11	-0.12	17.32	0	0	0
236	SLU 48	-0.11	-0.14	17.58	0	0	0
236	SLU 49	-0.11	-0.13	17.58	0	0	0
236	SLU 50	-0.11	-0.14	17.48	0	0	0
236	SLU 51	-0.11	-0.13	17.48	0	0	0
236	SLU 52	-0.11	-0.12	18.97	0	0	0
236	SLU 53	-0.12	-0.14	19.23	0	0	0
236	SLU 54	-0.12	-0.12	19.23	0	0	0
236	SLU 55	-0.11	-0.12	19.14	0	0	0
236	SLU 56	-0.12	-0.14	19.39	0	0	0
236	SLU 57	-0.12	-0.12	19.39	0	0	0
236	SLU 58	-0.12	-0.14	19.3	0	0	0
236	SLU 59	-0.12	-0.13	19.3	0	0	0
236	SLU 60	-0.12	-0.14	19.75	0	0	0
236	SLU 61	-0.12	-0.12	19.75	0	0	0
236	SLU 62	-0.12	-0.14	19.91	0	0	0
236	SLU 63	-0.12	-0.13	19.91	0	0	0
236	SLU 64	-0.13	-0.13	18.73	0	0	0
236	SLU 65	-0.12	-0.1	18.73	0	0	0
236	SLU 66	-0.13	-0.12	18.98	0	0	0
236	SLU 67	-0.13	-0.11	18.98	0	0	0
236	SLU 68	-0.12	-0.11	18.89	0	0	0
236	SLU 69	-0.13	-0.13	19.15	0	0	0
236	SLU 70	-0.13	-0.11	19.15	0	0	0
236	SLU 71	-0.13	-0.13	19.05	0	0	0
236	SLU 72	-0.13	-0.12	19.06	0	0	0
236	SLU 73	-0.13	-0.1	20.54	0	0	0
236	SLU 74	-0.13	-0.12	20.8	0	0	0
236	SLU 75	-0.13	-0.11	20.8	0	0	0
236	SLU 76	-0.13	-0.1	20.71	0	0	0
236	SLU 77	-0.13	-0.12	20.96	0	0	0
236	SLU 78	-0.13	-0.11	20.96	0	0	0
236	SLU 79	-0.13	-0.13	20.87	0	0	0
236	SLU 80	-0.13	-0.12	20.87	0	0	0
236	SLU 81	-0.13	-0.12	21.32	0	0	0
236	SLU 82	-0.13	-0.11	21.32	0	0	0
236	SLU 83	-0.13	-0.13	21.48	0	0	0
236	SLU 84	-0.13	-0.11	21.48	0	0	0
236	SLE RA 1	-0.09	-0.1	14.06	0	0	0
236	SLE RA 2	-0.09	-0.09	14.06	0	0	0
236	SLE RA 3	-0.1	-0.1	14.23	0	0	0
236	SLE RA 4	-0.09	-0.09	14.23	0	0	0
236	SLE RA 5	-0.09	-0.09	14.17	0	0	0
236	SLE RA 6	-0.1	-0.1	14.34	0	0	0
236	SLE RA 7	-0.09	-0.09	14.34	0	0	0
236	SLE RA 8	-0.09	-0.1	14.28	0	0	0
236	SLE RA 9	-0.09	-0.09	14.28	0	0	0
236	SLE RA 10	-0.09	-0.08	15.27	0	0	0
236	SLE RA 11	-0.1	-0.1	15.44	0	0	0
236	SLE RA 12	-0.1	-0.09	15.44	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
236	SLE RA 13	-0.1	-0.09	15.38	0	0	0
236	SLE RA 14	-0.1	-0.1	15.55	0	0	0
236	SLE RA 15	-0.1	-0.09	15.55	0	0	0
236	SLE RA 16	-0.1	-0.1	15.49	0	0	0
236	SLE RA 17	-0.1	-0.09	15.49	0	0	0
236	SLE RA 18	-0.1	-0.1	15.79	0	0	0
236	SLE RA 19	-0.1	-0.09	15.79	0	0	0
236	SLE RA 20	-0.1	-0.1	15.9	0	0	0
236	SLE RA 21	-0.1	-0.09	15.9	0	0	0
236	SLE FR 1	-0.09	-0.1	14.06	0	0	0
236	SLE FR 2	-0.09	-0.1	14.06	0	0	0
236	SLE FR 3	-0.09	-0.1	14.1	0	0	0
236	SLE FR 4	-0.09	-0.1	14.58	0	0	0
236	SLE FR 5	-0.09	-0.1	14.62	0	0	0
236	SLE FR 6	-0.1	-0.1	14.92	0	0	0
236	SLE QP 1	-0.09	-0.1	14.06	0	0	0
236	SLE QP 2	-0.09	-0.1	14.58	0	0	0
236	SLD 1	1.19	0.07	14.93	0	0	0
236	SLD 2	1.25	0.03	14.93	0	0	0
236	SLD 3	1.22	-0.39	14.82	0	0	0
236	SLD 4	1.29	-0.42	14.81	0	0	0
236	SLD 5	0.23	0.64	14.86	0	0	0
236	SLD 6	0.27	0.62	14.85	0	0	0
236	SLD 7	0.34	-0.87	14.48	0	0	0
236	SLD 8	0.38	-0.89	14.48	0	0	0
236	SLD 9	-0.57	0.69	14.68	0	0	0
236	SLD 10	-0.53	0.67	14.68	0	0	0
236	SLD 11	-0.46	-0.82	14.3	0	0	0
236	SLD 12	-0.42	-0.84	14.3	0	0	0
236	SLD 13	-1.48	0.22	14.34	0	0	0
236	SLD 14	-1.41	0.19	14.34	0	0	0
236	SLD 15	-1.44	-0.23	14.23	0	0	0
236	SLD 16	-1.38	-0.26	14.23	0	0	0
236	SLV 1	2.91	0.27	15.4	0	0	0
236	SLV 2	3.06	0.2	15.39	0	0	0
236	SLV 3	2.99	-0.76	15.14	0	0	0
236	SLV 4	3.13	-0.83	15.13	0	0	0
236	SLV 5	0.67	1.59	15.21	0	0	0
236	SLV 6	0.76	1.54	15.21	0	0	0
236	SLV 7	0.92	-1.85	14.36	0	0	0
236	SLV 8	1.01	-1.89	14.35	0	0	0
236	SLV 9	-1.2	1.7	14.8	0	0	0
236	SLV 10	-1.11	1.65	14.8	0	0	0
236	SLV 11	-0.95	-1.74	13.95	0	0	0
236	SLV 12	-0.86	-1.79	13.94	0	0	0
236	SLV 13	-3.32	0.63	14.02	0	0	0
236	SLV 14	-3.18	0.56	14.02	0	0	0
236	SLV 15	-3.25	-0.4	13.77	0	0	0
236	SLV 16	-3.1	-0.47	13.76	0	0	0
237	SLU 1	-0.09	-0.08	13.69	0	0	0
237	SLU 2	-0.09	-0.06	13.69	0	0	0
237	SLU 3	-0.09	-0.08	13.95	0	0	0
237	SLU 4	-0.09	-0.06	13.95	0	0	0
237	SLU 5	-0.09	-0.06	13.86	0	0	0
237	SLU 6	-0.09	-0.08	14.12	0	0	0
237	SLU 7	-0.09	-0.07	14.12	0	0	0
237	SLU 8	-0.09	-0.08	14.02	0	0	0
237	SLU 9	-0.09	-0.07	14.02	0	0	0
237	SLU 10	-0.09	-0.05	15.53	0	0	0
237	SLU 11	-0.09	-0.07	15.78	0	0	0
237	SLU 12	-0.09	-0.06	15.78	0	0	0
237	SLU 13	-0.09	-0.06	15.69	0	0	0
237	SLU 14	-0.1	-0.07	15.95	0	0	0
237	SLU 15	-0.09	-0.06	15.95	0	0	0
237	SLU 16	-0.09	-0.08	15.85	0	0	0
237	SLU 17	-0.09	-0.07	15.86	0	0	0
237	SLU 18	-0.09	-0.07	16.31	0	0	0
237	SLU 19	-0.09	-0.06	16.31	0	0	0
237	SLU 20	-0.09	-0.07	16.47	0	0	0
237	SLU 21	-0.09	-0.06	16.48	0	0	0
237	SLU 22	-0.1	-0.06	15.27	0	0	0
237	SLU 23	-0.1	-0.04	15.27	0	0	0
237	SLU 24	-0.1	-0.06	15.53	0	0	0
237	SLU 25	-0.1	-0.05	15.53	0	0	0
237	SLU 26	-0.1	-0.04	15.44	0	0	0
237	SLU 27	-0.11	-0.06	15.69	0	0	0
237	SLU 28	-0.1	-0.05	15.69	0	0	0
237	SLU 29	-0.1	-0.07	15.6	0	0	0
237	SLU 30	-0.1	-0.05	15.6	0	0	0
237	SLU 31	-0.1	-0.04	17.1	0	0	0
237	SLU 32	-0.11	-0.05	17.36	0	0	0
237	SLU 33	-0.11	-0.04	17.36	0	0	0
237	SLU 34	-0.1	-0.04	17.27	0	0	0
237	SLU 35	-0.11	-0.06	17.53	0	0	0
237	SLU 36	-0.11	-0.04	17.53	0	0	0
237	SLU 37	-0.11	-0.06	17.43	0	0	0
237	SLU 38	-0.11	-0.05	17.43	0	0	0
237	SLU 39	-0.11	-0.06	17.89	0	0	0
237	SLU 40	-0.11	-0.04	17.89	0	0	0
237	SLU 41	-0.11	-0.06	18.05	0	0	0
237	SLU 42	-0.11	-0.04	18.05	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
237	SLU 43	-0.11	-0.11	17.26	0	0	0
237	SLU 44	-0.11	-0.09	17.26	0	0	0
237	SLU 45	-0.11	-0.11	17.52	0	0	0
237	SLU 46	-0.11	-0.09	17.52	0	0	0
237	SLU 47	-0.11	-0.09	17.43	0	0	0
237	SLU 48	-0.11	-0.11	17.68	0	0	0
237	SLU 49	-0.11	-0.1	17.68	0	0	0
237	SLU 50	-0.11	-0.11	17.59	0	0	0
237	SLU 51	-0.11	-0.1	17.59	0	0	0
237	SLU 52	-0.11	-0.08	19.09	0	0	0
237	SLU 53	-0.12	-0.1	19.35	0	0	0
237	SLU 54	-0.11	-0.09	19.35	0	0	0
237	SLU 55	-0.11	-0.09	19.26	0	0	0
237	SLU 56	-0.12	-0.1	19.51	0	0	0
237	SLU 57	-0.12	-0.09	19.52	0	0	0
237	SLU 58	-0.12	-0.11	19.42	0	0	0
237	SLU 59	-0.11	-0.1	19.42	0	0	0
237	SLU 60	-0.12	-0.1	19.87	0	0	0
237	SLU 61	-0.11	-0.09	19.88	0	0	0
237	SLU 62	-0.12	-0.11	20.04	0	0	0
237	SLU 63	-0.12	-0.09	20.04	0	0	0
237	SLU 64	-0.12	-0.09	18.83	0	0	0
237	SLU 65	-0.12	-0.07	18.84	0	0	0
237	SLU 66	-0.13	-0.09	19.09	0	0	0
237	SLU 67	-0.12	-0.08	19.09	0	0	0
237	SLU 68	-0.12	-0.07	19	0	0	0
237	SLU 69	-0.13	-0.09	19.26	0	0	0
237	SLU 70	-0.13	-0.08	19.26	0	0	0
237	SLU 71	-0.13	-0.1	19.17	0	0	0
237	SLU 72	-0.12	-0.08	19.17	0	0	0
237	SLU 73	-0.13	-0.07	20.67	0	0	0
237	SLU 74	-0.13	-0.08	20.93	0	0	0
237	SLU 75	-0.13	-0.07	20.93	0	0	0
237	SLU 76	-0.13	-0.07	20.84	0	0	0
237	SLU 77	-0.13	-0.09	21.09	0	0	0
237	SLU 78	-0.13	-0.07	21.09	0	0	0
237	SLU 79	-0.13	-0.09	21	0	0	0
237	SLU 80	-0.13	-0.08	21	0	0	0
237	SLU 81	-0.13	-0.09	21.45	0	0	0
237	SLU 82	-0.13	-0.07	21.45	0	0	0
237	SLU 83	-0.13	-0.09	21.62	0	0	0
237	SLU 84	-0.13	-0.07	21.62	0	0	0
237	SLE RA 1	-0.09	-0.07	14.14	0	0	0
237	SLE RA 2	-0.09	-0.06	14.14	0	0	0
237	SLE RA 3	-0.09	-0.07	14.31	0	0	0
237	SLE RA 4	-0.09	-0.06	14.31	0	0	0
237	SLE RA 5	-0.09	-0.06	14.25	0	0	0
237	SLE RA 6	-0.09	-0.07	14.42	0	0	0
237	SLE RA 7	-0.09	-0.06	14.43	0	0	0
237	SLE RA 8	-0.09	-0.08	14.36	0	0	0
237	SLE RA 9	-0.09	-0.07	14.36	0	0	0
237	SLE RA 10	-0.09	-0.06	15.36	0	0	0
237	SLE RA 11	-0.1	-0.07	15.54	0	0	0
237	SLE RA 12	-0.1	-0.06	15.54	0	0	0
237	SLE RA 13	-0.09	-0.06	15.48	0	0	0
237	SLE RA 14	-0.1	-0.07	15.65	0	0	0
237	SLE RA 15	-0.1	-0.06	15.65	0	0	0
237	SLE RA 16	-0.1	-0.07	15.58	0	0	0
237	SLE RA 17	-0.1	-0.07	15.59	0	0	0
237	SLE RA 18	-0.1	-0.07	15.89	0	0	0
237	SLE RA 19	-0.1	-0.06	15.89	0	0	0
237	SLE RA 20	-0.1	-0.07	16	0	0	0
237	SLE RA 21	-0.1	-0.06	16	0	0	0
237	SLE FR 1	-0.09	-0.07	14.14	0	0	0
237	SLE FR 2	-0.09	-0.07	14.14	0	0	0
237	SLE FR 3	-0.09	-0.07	14.19	0	0	0
237	SLE FR 4	-0.09	-0.07	14.66	0	0	0
237	SLE FR 5	-0.09	-0.07	14.71	0	0	0
237	SLE FR 6	-0.09	-0.07	15.01	0	0	0
237	SLE QP 1	-0.09	-0.07	14.14	0	0	0
237	SLE QP 2	-0.09	-0.07	14.66	0	0	0
237	SLD 1	1.19	0.1	14.93	0	0	0
237	SLD 2	1.25	0.07	14.93	0	0	0
237	SLD 3	1.22	-0.35	14.81	0	0	0
237	SLD 4	1.29	-0.38	14.81	0	0	0
237	SLD 5	0.23	0.67	14.93	0	0	0
237	SLD 6	0.27	0.65	14.92	0	0	0
237	SLD 7	0.34	-0.84	14.53	0	0	0
237	SLD 8	0.38	-0.86	14.53	0	0	0
237	SLD 9	-0.57	0.71	14.8	0	0	0
237	SLD 10	-0.53	0.69	14.8	0	0	0
237	SLD 11	-0.46	-0.8	14.41	0	0	0
237	SLD 12	-0.42	-0.82	14.4	0	0	0
237	SLD 13	-1.47	0.23	14.52	0	0	0
237	SLD 14	-1.41	0.21	14.52	0	0	0
237	SLD 15	-1.44	-0.22	14.4	0	0	0
237	SLD 16	-1.38	-0.25	14.4	0	0	0
237	SLV 1	2.91	0.32	15.29	0	0	0
237	SLV 2	3.06	0.26	15.28	0	0	0
237	SLV 3	2.98	-0.71	15.01	0	0	0
237	SLV 4	3.13	-0.78	15.01	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
237	SLV 5	0.67	1.62	15.26	0	0	0
237	SLV 6	0.76	1.58	15.26	0	0	0
237	SLV 7	0.92	-1.82	14.36	0	0	0
237	SLV 8	1.01	-1.86	14.36	0	0	0
237	SLV 9	-1.2	1.72	14.97	0	0	0
237	SLV 10	-1.11	1.68	14.97	0	0	0
237	SLV 11	-0.95	-1.73	14.07	0	0	0
237	SLV 12	-0.85	-1.77	14.07	0	0	0
237	SLV 13	-3.32	0.63	14.32	0	0	0
237	SLV 14	-3.17	0.57	14.31	0	0	0
237	SLV 15	-3.24	-0.4	14.05	0	0	0
237	SLV 16	-3.1	-0.47	14.04	0	0	0
238	SLU 1	-0.09	-0.06	13.8	0	0	0
238	SLU 2	-0.08	-0.03	13.81	0	0	0
238	SLU 3	-0.09	-0.05	14.07	0	0	0
238	SLU 4	-0.09	-0.04	14.07	0	0	0
238	SLU 5	-0.09	-0.04	13.98	0	0	0
238	SLU 6	-0.09	-0.05	14.24	0	0	0
238	SLU 7	-0.09	-0.04	14.24	0	0	0
238	SLU 8	-0.09	-0.06	14.14	0	0	0
238	SLU 9	-0.09	-0.05	14.14	0	0	0
238	SLU 10	-0.09	-0.03	15.67	0	0	0
238	SLU 11	-0.09	-0.04	15.92	0	0	0
238	SLU 12	-0.09	-0.03	15.93	0	0	0
238	SLU 13	-0.09	-0.03	15.84	0	0	0
238	SLU 14	-0.09	-0.05	16.09	0	0	0
238	SLU 15	-0.09	-0.03	16.1	0	0	0
238	SLU 16	-0.09	-0.05	16	0	0	0
238	SLU 17	-0.09	-0.04	16	0	0	0
238	SLU 18	-0.09	-0.05	16.46	0	0	0
238	SLU 19	-0.09	-0.03	16.46	0	0	0
238	SLU 20	-0.09	-0.05	16.63	0	0	0
238	SLU 21	-0.09	-0.03	16.63	0	0	0
238	SLU 22	-0.1	-0.03	15.39	0	0	0
238	SLU 23	-0.1	-0.01	15.4	0	0	0
238	SLU 24	-0.1	-0.03	15.66	0	0	0
238	SLU 25	-0.1	-0.02	15.66	0	0	0
238	SLU 26	-0.1	-0.01	15.57	0	0	0
238	SLU 27	-0.1	-0.03	15.83	0	0	0
238	SLU 28	-0.1	-0.02	15.83	0	0	0
238	SLU 29	-0.1	-0.04	15.73	0	0	0
238	SLU 30	-0.1	-0.02	15.73	0	0	0
238	SLU 31	-0.1	-0.01	17.26	0	0	0
238	SLU 32	-0.11	-0.02	17.51	0	0	0
238	SLU 33	-0.11	-0.01	17.52	0	0	0
238	SLU 34	-0.1	-0.01	17.43	0	0	0
238	SLU 35	-0.11	-0.02	17.68	0	0	0
238	SLU 36	-0.11	-0.01	17.69	0	0	0
238	SLU 37	-0.11	-0.03	17.59	0	0	0
238	SLU 38	-0.1	-0.02	17.59	0	0	0
238	SLU 39	-0.11	-0.02	18.05	0	0	0
238	SLU 40	-0.11	-0.01	18.05	0	0	0
238	SLU 41	-0.11	-0.03	18.22	0	0	0
238	SLU 42	-0.11	-0.01	18.22	0	0	0
238	SLU 43	-0.11	-0.08	17.4	0	0	0
238	SLU 44	-0.11	-0.06	17.41	0	0	0
238	SLU 45	-0.11	-0.08	17.66	0	0	0
238	SLU 46	-0.11	-0.06	17.67	0	0	0
238	SLU 47	-0.11	-0.06	17.57	0	0	0
238	SLU 48	-0.11	-0.08	17.83	0	0	0
238	SLU 49	-0.11	-0.06	17.83	0	0	0
238	SLU 50	-0.11	-0.08	17.74	0	0	0
238	SLU 51	-0.11	-0.07	17.74	0	0	0
238	SLU 52	-0.11	-0.05	19.26	0	0	0
238	SLU 53	-0.11	-0.07	19.52	0	0	0
238	SLU 54	-0.11	-0.06	19.52	0	0	0
238	SLU 55	-0.11	-0.05	19.43	0	0	0
238	SLU 56	-0.12	-0.07	19.69	0	0	0
238	SLU 57	-0.11	-0.06	19.69	0	0	0
238	SLU 58	-0.11	-0.08	19.6	0	0	0
238	SLU 59	-0.11	-0.06	19.6	0	0	0
238	SLU 60	-0.11	-0.07	20.05	0	0	0
238	SLU 61	-0.11	-0.06	20.06	0	0	0
238	SLU 62	-0.11	-0.07	20.22	0	0	0
238	SLU 63	-0.11	-0.06	20.23	0	0	0
238	SLU 64	-0.12	-0.06	18.99	0	0	0
238	SLU 65	-0.12	-0.04	19	0	0	0
238	SLU 66	-0.12	-0.05	19.25	0	0	0
238	SLU 67	-0.12	-0.04	19.26	0	0	0
238	SLU 68	-0.12	-0.04	19.16	0	0	0
238	SLU 69	-0.13	-0.06	19.42	0	0	0
238	SLU 70	-0.12	-0.04	19.42	0	0	0
238	SLU 71	-0.12	-0.06	19.33	0	0	0
238	SLU 72	-0.12	-0.05	19.33	0	0	0
238	SLU 73	-0.12	-0.03	20.85	0	0	0
238	SLU 74	-0.13	-0.05	21.11	0	0	0
238	SLU 75	-0.13	-0.03	21.11	0	0	0
238	SLU 76	-0.12	-0.03	21.02	0	0	0
238	SLU 77	-0.13	-0.05	21.28	0	0	0
238	SLU 78	-0.13	-0.04	21.28	0	0	0
238	SLU 79	-0.13	-0.05	21.19	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
238	SLU 80	-0.13	-0.04	21.19	0	0	0
238	SLU 81	-0.13	-0.05	21.64	0	0	0
238	SLU 82	-0.13	-0.03	21.65	0	0	0
238	SLU 83	-0.13	-0.05	21.81	0	0	0
238	SLU 84	-0.13	-0.04	21.82	0	0	0
238	SLE RA 1	-0.09	-0.05	14.26	0	0	0
238	SLE RA 2	-0.09	-0.04	14.26	0	0	0
238	SLE RA 3	-0.09	-0.05	14.43	0	0	0
238	SLE RA 4	-0.09	-0.04	14.44	0	0	0
238	SLE RA 5	-0.09	-0.04	14.37	0	0	0
238	SLE RA 6	-0.09	-0.05	14.55	0	0	0
238	SLE RA 7	-0.09	-0.04	14.55	0	0	0
238	SLE RA 8	-0.09	-0.05	14.48	0	0	0
238	SLE RA 9	-0.09	-0.04	14.49	0	0	0
238	SLE RA 10	-0.09	-0.03	15.5	0	0	0
238	SLE RA 11	-0.1	-0.04	15.67	0	0	0
238	SLE RA 12	-0.09	-0.03	15.67	0	0	0
238	SLE RA 13	-0.09	-0.03	15.61	0	0	0
238	SLE RA 14	-0.1	-0.04	15.78	0	0	0
238	SLE RA 15	-0.09	-0.03	15.79	0	0	0
238	SLE RA 16	-0.09	-0.05	15.72	0	0	0
238	SLE RA 17	-0.09	-0.04	15.72	0	0	0
238	SLE RA 18	-0.09	-0.04	16.03	0	0	0
238	SLE RA 19	-0.09	-0.03	16.03	0	0	0
238	SLE RA 20	-0.1	-0.04	16.14	0	0	0
238	SLE RA 21	-0.09	-0.04	16.14	0	0	0
238	SLE FR 1	-0.09	-0.05	14.26	0	0	0
238	SLE FR 2	-0.09	-0.05	14.26	0	0	0
238	SLE FR 3	-0.09	-0.05	14.3	0	0	0
238	SLE FR 4	-0.09	-0.04	14.79	0	0	0
238	SLE FR 5	-0.09	-0.05	14.83	0	0	0
238	SLE FR 6	-0.09	-0.05	15.14	0	0	0
238	SLE QP 1	-0.09	-0.05	14.26	0	0	0
238	SLE QP 2	-0.09	-0.05	14.79	0	0	0
238	SLD 1	1.18	0.13	14.98	0	0	0
238	SLD 2	1.24	0.11	14.97	0	0	0
238	SLD 3	1.21	-0.32	14.85	0	0	0
238	SLD 4	1.28	-0.34	14.85	0	0	0
238	SLD 5	0.23	0.7	15.04	0	0	0
238	SLD 6	0.27	0.68	15.03	0	0	0
238	SLD 7	0.34	-0.81	14.62	0	0	0
238	SLD 8	0.38	-0.83	14.62	0	0	0
238	SLD 9	-0.56	0.73	14.96	0	0	0
238	SLD 10	-0.52	0.72	14.96	0	0	0
238	SLD 11	-0.45	-0.78	14.55	0	0	0
238	SLD 12	-0.41	-0.79	14.54	0	0	0
238	SLD 13	-1.46	0.25	14.73	0	0	0
238	SLD 14	-1.4	0.22	14.73	0	0	0
238	SLD 15	-1.43	-0.21	14.61	0	0	0
238	SLD 16	-1.37	-0.23	14.6	0	0	0
238	SLV 1	2.89	0.37	15.22	0	0	0
238	SLV 2	3.03	0.31	15.21	0	0	0
238	SLV 3	2.96	-0.67	14.94	0	0	0
238	SLV 4	3.11	-0.72	14.93	0	0	0
238	SLV 5	0.66	1.65	15.35	0	0	0
238	SLV 6	0.76	1.61	15.35	0	0	0
238	SLV 7	0.91	-1.79	14.4	0	0	0
238	SLV 8	1.01	-1.82	14.4	0	0	0
238	SLV 9	-1.19	1.73	15.18	0	0	0
238	SLV 10	-1.1	1.69	15.17	0	0	0
238	SLV 11	-0.94	-1.71	14.23	0	0	0
238	SLV 12	-0.85	-1.74	14.23	0	0	0
238	SLV 13	-3.29	0.63	14.65	0	0	0
238	SLV 14	-3.15	0.57	14.64	0	0	0
238	SLV 15	-3.22	-0.41	14.37	0	0	0
238	SLV 16	-3.07	-0.46	14.36	0	0	0
239	SLU 1	-0.08	-0.03	13.35	0	0	0
239	SLU 2	-0.08	-0.01	13.36	0	0	0
239	SLU 3	-0.08	-0.03	13.6	0	0	0
239	SLU 4	-0.08	-0.01	13.61	0	0	0
239	SLU 5	-0.08	-0.01	13.52	0	0	0
239	SLU 6	-0.08	-0.03	13.77	0	0	0
239	SLU 7	-0.08	-0.02	13.77	0	0	0
239	SLU 8	-0.08	-0.03	13.68	0	0	0
239	SLU 9	-0.08	-0.02	13.68	0	0	0
239	SLU 10	-0.08	0	15.16	0	0	0
239	SLU 11	-0.09	-0.02	15.41	0	0	0
239	SLU 12	-0.09	-0.01	15.41	0	0	0
239	SLU 13	-0.08	0	15.33	0	0	0
239	SLU 14	-0.09	-0.02	15.57	0	0	0
239	SLU 15	-0.09	-0.01	15.58	0	0	0
239	SLU 16	-0.09	-0.02	15.48	0	0	0
239	SLU 17	-0.09	-0.01	15.49	0	0	0
239	SLU 18	-0.09	-0.02	15.93	0	0	0
239	SLU 19	-0.09	-0.01	15.93	0	0	0
239	SLU 20	-0.09	-0.02	16.09	0	0	0
239	SLU 21	-0.09	-0.01	16.1	0	0	0
239	SLU 22	-0.1	-0.01	14.89	0	0	0
239	SLU 23	-0.09	0.01	14.89	0	0	0
239	SLU 24	-0.1	0	15.14	0	0	0
239	SLU 25	-0.1	0.01	15.15	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
239	SLU 26	-0.09	0.01	15.06	0	0	0
239	SLU 27	-0.1	0	15.31	0	0	0
239	SLU 28	-0.1	0.01	15.31	0	0	0
239	SLU 29	-0.1	-0.01	15.22	0	0	0
239	SLU 30	-0.1	0	15.22	0	0	0
239	SLU 31	-0.1	0.02	16.7	0	0	0
239	SLU 32	-0.1	0.01	16.95	0	0	0
239	SLU 33	-0.1	0.02	16.95	0	0	0
239	SLU 34	-0.1	0.02	16.86	0	0	0
239	SLU 35	-0.1	0.01	17.11	0	0	0
239	SLU 36	-0.1	0.02	17.12	0	0	0
239	SLU 37	-0.1	0	17.02	0	0	0
239	SLU 38	-0.1	0.01	17.03	0	0	0
239	SLU 39	-0.1	0.01	17.47	0	0	0
239	SLU 40	-0.1	0.02	17.47	0	0	0
239	SLU 41	-0.1	0	17.63	0	0	0
239	SLU 42	-0.1	0.02	17.64	0	0	0
239	SLU 43	-0.1	-0.05	16.83	0	0	0
239	SLU 44	-0.1	-0.03	16.83	0	0	0
239	SLU 45	-0.1	-0.04	17.08	0	0	0
239	SLU 46	-0.1	-0.03	17.08	0	0	0
239	SLU 47	-0.1	-0.03	17	0	0	0
239	SLU 48	-0.11	-0.05	17.24	0	0	0
239	SLU 49	-0.1	-0.03	17.25	0	0	0
239	SLU 50	-0.1	-0.05	17.15	0	0	0
239	SLU 51	-0.1	-0.04	17.16	0	0	0
239	SLU 52	-0.1	-0.02	18.64	0	0	0
239	SLU 53	-0.11	-0.03	18.89	0	0	0
239	SLU 54	-0.11	-0.02	18.89	0	0	0
239	SLU 55	-0.1	-0.02	18.8	0	0	0
239	SLU 56	-0.11	-0.04	19.05	0	0	0
239	SLU 57	-0.11	-0.02	19.05	0	0	0
239	SLU 58	-0.11	-0.04	18.96	0	0	0
239	SLU 59	-0.11	-0.03	18.96	0	0	0
239	SLU 60	-0.11	-0.03	19.41	0	0	0
239	SLU 61	-0.11	-0.02	19.41	0	0	0
239	SLU 62	-0.11	-0.04	19.57	0	0	0
239	SLU 63	-0.11	-0.02	19.57	0	0	0
239	SLU 64	-0.12	-0.02	18.36	0	0	0
239	SLU 65	-0.11	-0.01	18.37	0	0	0
239	SLU 66	-0.12	-0.02	18.62	0	0	0
239	SLU 67	-0.12	-0.01	18.62	0	0	0
239	SLU 68	-0.11	-0.01	18.54	0	0	0
239	SLU 69	-0.12	-0.02	18.78	0	0	0
239	SLU 70	-0.12	-0.01	18.79	0	0	0
239	SLU 71	-0.12	-0.03	18.69	0	0	0
239	SLU 72	-0.12	-0.02	18.7	0	0	0
239	SLU 73	-0.12	0	20.18	0	0	0
239	SLU 74	-0.12	-0.01	20.43	0	0	0
239	SLU 75	-0.12	0	20.43	0	0	0
239	SLU 76	-0.12	0	20.34	0	0	0
239	SLU 77	-0.12	-0.01	20.59	0	0	0
239	SLU 78	-0.12	0	20.59	0	0	0
239	SLU 79	-0.12	-0.02	20.5	0	0	0
239	SLU 80	-0.12	-0.01	20.5	0	0	0
239	SLU 81	-0.12	-0.01	20.94	0	0	0
239	SLU 82	-0.12	0	20.95	0	0	0
239	SLU 83	-0.12	-0.01	21.11	0	0	0
239	SLU 84	-0.12	0	21.11	0	0	0
239	SLE RA 1	-0.09	-0.02	13.79	0	0	0
239	SLE RA 2	-0.08	-0.01	13.79	0	0	0
239	SLE RA 3	-0.09	-0.02	13.96	0	0	0
239	SLE RA 4	-0.09	-0.01	13.96	0	0	0
239	SLE RA 5	-0.09	-0.01	13.9	0	0	0
239	SLE RA 6	-0.09	-0.02	14.07	0	0	0
239	SLE RA 7	-0.09	-0.01	14.07	0	0	0
239	SLE RA 8	-0.09	-0.03	14.01	0	0	0
239	SLE RA 9	-0.09	-0.02	14.01	0	0	0
239	SLE RA 10	-0.09	0	15	0	0	0
239	SLE RA 11	-0.09	-0.01	15.16	0	0	0
239	SLE RA 12	-0.09	-0.01	15.16	0	0	0
239	SLE RA 13	-0.09	-0.01	15.11	0	0	0
239	SLE RA 14	-0.09	-0.02	15.27	0	0	0
239	SLE RA 15	-0.09	-0.01	15.27	0	0	0
239	SLE RA 16	-0.09	-0.02	15.21	0	0	0
239	SLE RA 17	-0.09	-0.01	15.21	0	0	0
239	SLE RA 18	-0.09	-0.02	15.51	0	0	0
239	SLE RA 19	-0.09	-0.01	15.51	0	0	0
239	SLE RA 20	-0.09	-0.02	15.62	0	0	0
239	SLE RA 21	-0.09	-0.01	15.62	0	0	0
239	SLE FR 1	-0.09	-0.02	13.79	0	0	0
239	SLE FR 2	-0.09	-0.02	13.79	0	0	0
239	SLE FR 3	-0.09	-0.02	13.83	0	0	0
239	SLE FR 4	-0.09	-0.02	14.31	0	0	0
239	SLE FR 5	-0.09	-0.02	14.35	0	0	0
239	SLE FR 6	-0.09	-0.02	14.65	0	0	0
239	SLE QP 1	-0.09	-0.02	13.79	0	0	0
239	SLE QP 2	-0.09	-0.02	14.3	0	0	0
239	SLD 1	1.12	0.16	14.42	0	0	0
239	SLD 2	1.18	0.14	14.41	0	0	0
239	SLD 3	1.15	-0.27	14.29	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
239	SLD 4	1.21	-0.29	14.29	0	0	0
239	SLD 5	0.22	0.69	14.53	0	0	0
239	SLD 6	0.26	0.68	14.53	0	0	0
239	SLD 7	0.32	-0.74	14.11	0	0	0
239	SLD 8	0.36	-0.76	14.11	0	0	0
239	SLD 9	-0.53	0.71	14.5	0	0	0
239	SLD 10	-0.49	0.7	14.5	0	0	0
239	SLD 11	-0.43	-0.72	14.08	0	0	0
239	SLD 12	-0.39	-0.73	14.08	0	0	0
239	SLD 13	-1.38	0.25	14.32	0	0	0
239	SLD 14	-1.32	0.23	14.32	0	0	0
239	SLD 15	-1.35	-0.18	14.2	0	0	0
239	SLD 16	-1.29	-0.2	14.19	0	0	0
239	SLV 1	2.73	0.39	14.57	0	0	0
239	SLV 2	2.86	0.35	14.56	0	0	0
239	SLV 3	2.8	-0.59	14.28	0	0	0
239	SLV 4	2.94	-0.63	14.27	0	0	0
239	SLV 5	0.63	1.59	14.82	0	0	0
239	SLV 6	0.71	1.57	14.81	0	0	0
239	SLV 7	0.86	-1.67	13.87	0	0	0
239	SLV 8	0.95	-1.7	13.86	0	0	0
239	SLV 9	-1.13	1.65	14.75	0	0	0
239	SLV 10	-1.04	1.63	14.74	0	0	0
239	SLV 11	-0.89	-1.61	13.8	0	0	0
239	SLV 12	-0.8	-1.64	13.79	0	0	0
239	SLV 13	-3.11	0.59	14.34	0	0	0
239	SLV 14	-2.97	0.55	14.33	0	0	0
239	SLV 15	-3.04	-0.39	14.05	0	0	0
239	SLV 16	-2.9	-0.43	14.04	0	0	0
241	SLU 1	-0.04	-0.09	5.82	0	0	0
241	SLU 2	-0.04	-0.08	5.82	0	0	0
241	SLU 3	-0.04	-0.09	5.93	0	0	0
241	SLU 4	-0.04	-0.08	5.93	0	0	0
241	SLU 5	-0.04	-0.08	5.88	0	0	0
241	SLU 6	-0.04	-0.09	6	0	0	0
241	SLU 7	-0.04	-0.08	6	0	0	0
241	SLU 8	-0.04	-0.09	5.96	0	0	0
241	SLU 9	-0.04	-0.08	5.96	0	0	0
241	SLU 10	-0.04	-0.08	6.59	0	0	0
241	SLU 11	-0.04	-0.09	6.7	0	0	0
241	SLU 12	-0.04	-0.08	6.7	0	0	0
241	SLU 13	-0.04	-0.08	6.66	0	0	0
241	SLU 14	-0.04	-0.09	6.77	0	0	0
241	SLU 15	-0.04	-0.09	6.77	0	0	0
241	SLU 16	-0.04	-0.09	6.73	0	0	0
241	SLU 17	-0.04	-0.09	6.73	0	0	0
241	SLU 18	-0.04	-0.09	6.92	0	0	0
241	SLU 19	-0.04	-0.09	6.92	0	0	0
241	SLU 20	-0.04	-0.09	6.99	0	0	0
241	SLU 21	-0.04	-0.09	6.99	0	0	0
241	SLU 22	-0.05	-0.09	6.51	0	0	0
241	SLU 23	-0.05	-0.08	6.5	0	0	0
241	SLU 24	-0.05	-0.09	6.62	0	0	0
241	SLU 25	-0.05	-0.08	6.61	0	0	0
241	SLU 26	-0.05	-0.08	6.57	0	0	0
241	SLU 27	-0.05	-0.09	6.69	0	0	0
241	SLU 28	-0.05	-0.08	6.68	0	0	0
241	SLU 29	-0.05	-0.09	6.64	0	0	0
241	SLU 30	-0.05	-0.08	6.64	0	0	0
241	SLU 31	-0.05	-0.08	7.28	0	0	0
241	SLU 32	-0.05	-0.09	7.39	0	0	0
241	SLU 33	-0.05	-0.08	7.39	0	0	0
241	SLU 34	-0.05	-0.08	7.35	0	0	0
241	SLU 35	-0.05	-0.09	7.46	0	0	0
241	SLU 36	-0.05	-0.09	7.46	0	0	0
241	SLU 37	-0.05	-0.09	7.42	0	0	0
241	SLU 38	-0.05	-0.09	7.42	0	0	0
241	SLU 39	-0.05	-0.09	7.61	0	0	0
241	SLU 40	-0.05	-0.09	7.61	0	0	0
241	SLU 41	-0.05	-0.09	7.68	0	0	0
241	SLU 42	-0.05	-0.09	7.68	0	0	0
241	SLU 43	-0.05	-0.11	7.33	0	0	0
241	SLU 44	-0.05	-0.1	7.33	0	0	0
241	SLU 45	-0.05	-0.11	7.44	0	0	0
241	SLU 46	-0.05	-0.11	7.44	0	0	0
241	SLU 47	-0.05	-0.1	7.39	0	0	0
241	SLU 48	-0.05	-0.11	7.51	0	0	0
241	SLU 49	-0.05	-0.11	7.51	0	0	0
241	SLU 50	-0.05	-0.11	7.47	0	0	0
241	SLU 51	-0.05	-0.11	7.47	0	0	0
241	SLU 52	-0.05	-0.11	8.1	0	0	0
241	SLU 53	-0.05	-0.12	8.21	0	0	0
241	SLU 54	-0.05	-0.11	8.21	0	0	0
241	SLU 55	-0.05	-0.11	8.17	0	0	0
241	SLU 56	-0.05	-0.12	8.28	0	0	0
241	SLU 57	-0.05	-0.11	8.28	0	0	0
241	SLU 58	-0.05	-0.12	8.24	0	0	0
241	SLU 59	-0.05	-0.11	8.24	0	0	0
241	SLU 60	-0.05	-0.12	8.43	0	0	0
241	SLU 61	-0.05	-0.11	8.43	0	0	0
241	SLU 62	-0.05	-0.12	8.5	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
241	SLU 63	-0.05	-0.11	8.5	0	0	0
241	SLU 64	-0.06	-0.11	8.02	0	0	0
241	SLU 65	-0.06	-0.1	8.01	0	0	0
241	SLU 66	-0.06	-0.11	8.13	0	0	0
241	SLU 67	-0.06	-0.11	8.12	0	0	0
241	SLU 68	-0.06	-0.1	8.08	0	0	0
241	SLU 69	-0.06	-0.11	8.2	0	0	0
241	SLU 70	-0.06	-0.11	8.19	0	0	0
241	SLU 71	-0.06	-0.11	8.15	0	0	0
241	SLU 72	-0.06	-0.11	8.15	0	0	0
241	SLU 73	-0.06	-0.11	8.79	0	0	0
241	SLU 74	-0.06	-0.12	8.9	0	0	0
241	SLU 75	-0.06	-0.11	8.9	0	0	0
241	SLU 76	-0.06	-0.11	8.86	0	0	0
241	SLU 77	-0.06	-0.12	8.97	0	0	0
241	SLU 78	-0.06	-0.11	8.97	0	0	0
241	SLU 79	-0.06	-0.12	8.93	0	0	0
241	SLU 80	-0.06	-0.11	8.93	0	0	0
241	SLU 81	-0.06	-0.12	9.12	0	0	0
241	SLU 82	-0.06	-0.11	9.12	0	0	0
241	SLU 83	-0.06	-0.12	9.19	0	0	0
241	SLU 84	-0.06	-0.11	9.19	0	0	0
241	SLE RA 1	-0.04	-0.09	6.01	0	0	0
241	SLE RA 2	-0.04	-0.08	6.01	0	0	0
241	SLE RA 3	-0.04	-0.09	6.09	0	0	0
241	SLE RA 4	-0.04	-0.08	6.09	0	0	0
241	SLE RA 5	-0.04	-0.08	6.06	0	0	0
241	SLE RA 6	-0.04	-0.09	6.13	0	0	0
241	SLE RA 7	-0.04	-0.08	6.13	0	0	0
241	SLE RA 8	-0.04	-0.09	6.11	0	0	0
241	SLE RA 9	-0.04	-0.08	6.11	0	0	0
241	SLE RA 10	-0.04	-0.08	6.53	0	0	0
241	SLE RA 11	-0.04	-0.09	6.6	0	0	0
241	SLE RA 12	-0.04	-0.08	6.6	0	0	0
241	SLE RA 13	-0.04	-0.08	6.58	0	0	0
241	SLE RA 14	-0.05	-0.09	6.65	0	0	0
241	SLE RA 15	-0.04	-0.09	6.65	0	0	0
241	SLE RA 16	-0.04	-0.09	6.62	0	0	0
241	SLE RA 17	-0.04	-0.09	6.62	0	0	0
241	SLE RA 18	-0.04	-0.09	6.75	0	0	0
241	SLE RA 19	-0.04	-0.09	6.75	0	0	0
241	SLE RA 20	-0.04	-0.09	6.8	0	0	0
241	SLE RA 21	-0.04	-0.09	6.8	0	0	0
241	SLE FR 1	-0.04	-0.09	6.01	0	0	0
241	SLE FR 2	-0.04	-0.08	6.01	0	0	0
241	SLE FR 3	-0.04	-0.09	6.03	0	0	0
241	SLE FR 4	-0.04	-0.09	6.24	0	0	0
241	SLE FR 5	-0.04	-0.09	6.25	0	0	0
241	SLE FR 6	-0.04	-0.09	6.38	0	0	0
241	SLE QP 1	-0.04	-0.09	6.01	0	0	0
241	SLE QP 2	-0.04	-0.09	6.24	0	0	0
241	SLD 1	0.47	-0.03	6.57	0	0	0
241	SLD 2	0.49	-0.05	6.56	0	0	0
241	SLD 3	0.48	-0.21	6.52	0	0	0
241	SLD 4	0.5	-0.23	6.52	0	0	0
241	SLD 5	0.09	0.2	6.4	0	0	0
241	SLD 6	0.1	0.19	6.4	0	0	0
241	SLD 7	0.13	-0.39	6.26	0	0	0
241	SLD 8	0.15	-0.4	6.26	0	0	0
241	SLD 9	-0.23	0.23	6.22	0	0	0
241	SLD 10	-0.22	0.22	6.22	0	0	0
241	SLD 11	-0.19	-0.36	6.07	0	0	0
241	SLD 12	-0.17	-0.38	6.07	0	0	0
241	SLD 13	-0.59	0.06	5.95	0	0	0
241	SLD 14	-0.57	0.04	5.95	0	0	0
241	SLD 15	-0.58	-0.12	5.91	0	0	0
241	SLD 16	-0.55	-0.14	5.91	0	0	0
241	SLV 1	1.15	0.03	7.01	0	0	0
241	SLV 2	1.21	-0.01	7	0	0	0
241	SLV 3	1.18	-0.37	6.91	0	0	0
241	SLV 4	1.24	-0.42	6.9	0	0	0
241	SLV 5	0.26	0.57	6.62	0	0	0
241	SLV 6	0.3	0.54	6.62	0	0	0
241	SLV 7	0.36	-0.78	6.29	0	0	0
241	SLV 8	0.4	-0.81	6.29	0	0	0
241	SLV 9	-0.48	0.64	6.19	0	0	0
241	SLV 10	-0.45	0.61	6.18	0	0	0
241	SLV 11	-0.38	-0.72	5.86	0	0	0
241	SLV 12	-0.34	-0.75	5.85	0	0	0
241	SLV 13	-1.32	0.25	5.57	0	0	0
241	SLV 14	-1.27	0.2	5.56	0	0	0
241	SLV 15	-1.29	-0.16	5.47	0	0	0
241	SLV 16	-1.24	-0.21	5.47	0	0	0
242	SLU 1	-0.04	-0.01	6.63	0	0.9961	0.0009
242	SLU 2	-0.04	0	6.63	0	0.9967	-0.0005
242	SLU 3	-0.04	0	6.76	0	1.0152	0.0005
242	SLU 4	-0.04	0	6.76	0	1.0155	-0.0003
242	SLU 5	-0.04	0	6.72	0	1.009	-0.0005
242	SLU 6	-0.04	0	6.84	0	1.0275	0.0006
242	SLU 7	-0.04	0	6.84	0	1.0279	-0.0003
242	SLU 8	-0.04	-0.01	6.8	0	1.0208	0.001

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
242	SLU 9	-0.04	0	6.8	0	1.0211	0.0002
242	SLU 10	-0.04	0.01	7.54	0	1.1322	-0.0014
242	SLU 11	-0.04	0	7.66	0	1.1507	-0.0004
242	SLU 12	-0.04	0.01	7.66	0	1.151	-0.0012
242	SLU 13	-0.04	0.01	7.62	0	1.1445	-0.0014
242	SLU 14	-0.04	0	7.74	0	1.163	-0.0003
242	SLU 15	-0.04	0.01	7.74	0	1.1634	-0.0011
242	SLU 16	-0.04	0	7.7	0	1.1563	0.0001
242	SLU 17	-0.04	0	7.7	0	1.1566	-0.0007
242	SLU 18	-0.04	0	7.92	0	1.1897	-0.0004
242	SLU 19	-0.04	0.01	7.92	0	1.19	-0.0013
242	SLU 20	-0.04	0	8	0	1.202	-0.0003
242	SLU 21	-0.04	0.01	8	0	1.2024	-0.0012
242	SLU 22	-0.05	0.01	7.4	0	1.1111	-0.0011
242	SLU 23	-0.04	0.02	7.4	0	1.1117	-0.0025
242	SLU 24	-0.05	0.01	7.52	0	1.1302	-0.0014
242	SLU 25	-0.05	0.02	7.53	0	1.1305	-0.0023
242	SLU 26	-0.05	0.02	7.48	0	1.124	-0.0024
242	SLU 27	-0.05	0.01	7.61	0	1.1425	-0.0013
242	SLU 28	-0.05	0.01	7.61	0	1.1429	-0.0022
242	SLU 29	-0.05	0.01	7.56	0	1.1358	-0.0009
242	SLU 30	-0.05	0.01	7.56	0	1.1361	-0.0017
242	SLU 31	-0.05	0.02	8.3	0	1.2472	-0.0034
242	SLU 32	-0.05	0.02	8.43	0	1.2657	-0.0023
242	SLU 33	-0.05	0.02	8.43	0	1.2661	-0.0032
242	SLU 34	-0.05	0.02	8.38	0	1.2595	-0.0033
242	SLU 35	-0.05	0.01	8.51	0	1.2781	-0.0022
242	SLU 36	-0.05	0.02	8.51	0	1.2784	-0.0031
242	SLU 37	-0.05	0.01	8.46	0	1.2713	-0.0018
242	SLU 38	-0.05	0.02	8.47	0	1.2717	-0.0026
242	SLU 39	-0.05	0.02	8.69	0	1.3047	-0.0024
242	SLU 40	-0.05	0.02	8.69	0	1.305	-0.0032
242	SLU 41	-0.05	0.02	8.77	0	1.317	-0.0023
242	SLU 42	-0.05	0.02	8.77	0	1.3174	-0.0031
242	SLU 43	-0.05	-0.01	8.36	0	1.2555	0.0018
242	SLU 44	-0.05	0	8.36	0	1.256	0.0004
242	SLU 45	-0.05	-0.01	8.48	0	1.2746	0.0014
242	SLU 46	-0.05	0	8.49	0	1.2749	0.0006
242	SLU 47	-0.05	0	8.44	0	1.2684	0.0005
242	SLU 48	-0.05	-0.01	8.57	0	1.2869	0.0015
242	SLU 49	-0.05	0	8.57	0	1.2873	0.0007
242	SLU 50	-0.05	-0.01	8.52	0	1.2802	0.0019
242	SLU 51	-0.05	-0.01	8.52	0	1.2805	0.0011
242	SLU 52	-0.05	0	9.26	0	1.3916	-0.0005
242	SLU 53	-0.05	0	9.39	0	1.4101	0.0005
242	SLU 54	-0.05	0	9.39	0	1.4104	-0.0003
242	SLU 55	-0.05	0	9.35	0	1.4039	-0.0004
242	SLU 56	-0.05	0	9.47	0	1.4224	0.0006
242	SLU 57	-0.05	0	9.47	0	1.4228	-0.0002
242	SLU 58	-0.05	-0.01	9.42	0	1.4157	0.001
242	SLU 59	-0.05	0	9.43	0	1.416	0.0002
242	SLU 60	-0.05	0	9.65	0	1.4491	0.0005
242	SLU 61	-0.05	0	9.65	0	1.4494	-0.0004
242	SLU 62	-0.05	0	9.73	0	1.4614	0.0006
242	SLU 63	-0.05	0	9.73	0	1.4618	-0.0003
242	SLU 64	-0.06	0	9.12	0	1.3705	-0.0002
242	SLU 65	-0.05	0.01	9.13	0	1.3711	-0.0016
242	SLU 66	-0.06	0	9.25	0	1.3896	-0.0005
242	SLU 67	-0.06	0.01	9.25	0	1.3899	-0.0013
242	SLU 68	-0.05	0.01	9.21	0	1.3834	-0.0015
242	SLU 69	-0.06	0	9.33	0	1.4019	-0.0004
242	SLU 70	-0.06	0.01	9.33	0	1.4023	-0.0013
242	SLU 71	-0.06	0	9.29	0	1.3952	0
242	SLU 72	-0.06	0.01	9.29	0	1.3955	-0.0008
242	SLU 73	-0.06	0.02	10.03	0	1.5066	-0.0024
242	SLU 74	-0.06	0.01	10.15	0	1.5251	-0.0014
242	SLU 75	-0.06	0.01	10.15	0	1.5254	-0.0022
242	SLU 76	-0.06	0.02	10.11	0	1.5189	-0.0024
242	SLU 77	-0.06	0.01	10.23	0	1.5374	-0.0013
242	SLU 78	-0.06	0.01	10.24	0	1.5378	-0.0022
242	SLU 79	-0.06	0.01	10.19	0	1.5307	-0.0009
242	SLU 80	-0.06	0.01	10.19	0	1.531	-0.0017
242	SLU 81	-0.06	0.01	10.41	0	1.5641	-0.0014
242	SLU 82	-0.06	0.02	10.41	0	1.5644	-0.0023
242	SLU 83	-0.06	0.01	10.49	0	1.5764	-0.0014
242	SLU 84	-0.06	0.01	10.5	0	1.5768	-0.0022
242	SLE RA 1	-0.04	0	6.85	0	1.0289	0.0003
242	SLE RA 2	-0.04	0	6.85	0	1.0293	-0.0006
242	SLE RA 3	-0.04	0	6.93	0	1.0417	0.0001
242	SLE RA 4	-0.04	0	6.94	0	1.0419	-0.0005
242	SLE RA 5	-0.04	0	6.91	0	1.0376	-0.0006
242	SLE RA 6	-0.04	0	6.99	0	1.0499	0.0001
242	SLE RA 7	-0.04	0	6.99	0	1.0501	-0.0004
242	SLE RA 8	-0.04	0	6.96	0	1.0454	0.0004
242	SLE RA 9	-0.04	0	6.96	0	1.0456	-0.0001
242	SLE RA 10	-0.04	0.01	7.45	0	1.1197	-0.0012
242	SLE RA 11	-0.04	0	7.54	0	1.132	-0.0005
242	SLE RA 12	-0.04	0.01	7.54	0	1.1322	-0.0011
242	SLE RA 13	-0.04	0.01	7.51	0	1.1279	-0.0012
242	SLE RA 14	-0.04	0	7.59	0	1.1402	-0.0005
242	SLE RA 15	-0.04	0.01	7.59	0	1.1405	-0.001

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
242	SLE RA 16	-0.04	0	7.56	0	1.1357	-0.0002
242	SLE RA 17	-0.04	0	7.56	0	1.136	-0.0007
242	SLE RA 18	-0.04	0	7.71	0	1.158	-0.0006
242	SLE RA 19	-0.04	0.01	7.71	0	1.1582	-0.0011
242	SLE RA 20	-0.04	0	7.76	0	1.1662	-0.0005
242	SLE RA 21	-0.04	0.01	7.77	0	1.1665	-0.0011
242	SLE FR 1	-0.04	0	6.85	0	1.0289	0.0003
242	SLE FR 2	-0.04	0	6.85	0	1.029	0.0001
242	SLE FR 3	-0.04	0	6.87	0	1.0322	0.0003
242	SLE FR 4	-0.04	0	7.11	0	1.0677	-0.0001
242	SLE FR 5	-0.04	0	7.13	0	1.0709	0.0001
242	SLE FR 6	-0.04	0	7.28	0	1.0935	-0.0001
242	SLE QP 1	-0.04	0	6.85	0	1.0289	0.0003
242	SLE QP 2	-0.04	0	7.11	0	1.0677	0
242	SLD 1	0.54	0.09	7.11	0	1.0682	-0.0135
242	SLD 2	0.57	0.08	7.11	0	1.0679	-0.0124
242	SLD 3	0.56	-0.12	7.05	0	1.0586	0.0179
242	SLD 4	0.58	-0.13	7.04	0	1.0582	0.019
242	SLD 5	0.11	0.34	7.21	0	1.0825	-0.0518
242	SLD 6	0.12	0.34	7.21	0	1.0823	-0.0511
242	SLD 7	0.15	-0.35	6.99	0	1.0503	0.0528
242	SLD 8	0.17	-0.36	6.99	0	1.0501	0.0535
242	SLD 9	-0.26	0.36	7.22	0	1.0852	-0.0534
242	SLD 10	-0.24	0.35	7.22	0	1.085	-0.0527
242	SLD 11	-0.21	-0.34	7.01	0	1.053	0.0512
242	SLD 12	-0.19	-0.35	7.01	0	1.0528	0.0519
242	SLD 13	-0.67	0.13	7.17	0	1.0771	-0.0189
242	SLD 14	-0.64	0.12	7.17	0	1.0767	-0.0178
242	SLD 15	-0.65	-0.08	7.11	0	1.0674	0.0125
242	SLD 16	-0.62	-0.09	7.1	0	1.0671	0.0136
242	SLV 1	1.32	0.2	7.11	0	1.0686	-0.0306
242	SLV 2	1.39	0.19	7.11	0	1.0679	-0.0282
242	SLV 3	1.35	-0.27	6.97	0	1.0467	0.0409
242	SLV 4	1.42	-0.29	6.96	0	1.0459	0.0434
242	SLV 5	0.3	0.79	7.33	0	1.1014	-0.1181
242	SLV 6	0.35	0.78	7.33	0	1.1009	-0.1165
242	SLV 7	0.42	-0.8	6.84	0	1.0281	0.1204
242	SLV 8	0.46	-0.81	6.84	0	1.0277	0.122
242	SLV 9	-0.54	0.81	7.37	0	1.1076	-0.1219
242	SLV 10	-0.5	0.8	7.37	0	1.1072	-0.1203
242	SLV 11	-0.43	-0.78	6.89	0	1.0344	0.1166
242	SLV 12	-0.39	-0.79	6.88	0	1.0339	0.1182
242	SLV 13	-1.51	0.29	7.25	0	1.0894	-0.0433
242	SLV 14	-1.44	0.27	7.25	0	1.0886	-0.0408
242	SLV 15	-1.47	-0.19	7.11	0	1.0674	0.0283
242	SLV 16	-1.4	-0.2	7.1	0	1.0667	0.0307
244	SLU 1	0.11	-0.12	35.56	-0.8336	9.339	0.0301
244	SLU 2	0.11	-0.07	35.58	-0.8343	9.3463	0.0158
244	SLU 3	0.12	-0.11	36.23	-0.8495	9.517	0.0279
244	SLU 4	0.11	-0.08	36.25	-0.8499	9.5214	0.0193
244	SLU 5	0.11	-0.07	36.02	-0.8445	9.4606	0.0171
244	SLU 6	0.12	-0.12	36.67	-0.8598	9.6313	0.0291
244	SLU 7	0.11	-0.09	36.68	-0.8602	9.6357	0.0206
244	SLU 8	0.11	-0.13	36.42	-0.8541	9.5675	0.0325
244	SLU 9	0.11	-0.1	36.44	-0.8545	9.572	0.024
244	SLU 10	0.12	-0.03	40.37	-0.9461	10.6084	0.0062
244	SLU 11	0.13	-0.08	41.02	-0.9613	10.7791	0.0182
244	SLU 12	0.12	-0.05	41.04	-0.9617	10.7836	0.0097
244	SLU 13	0.12	-0.04	40.8	-0.9563	10.7227	0.0074
244	SLU 14	0.13	-0.08	41.45	-0.9716	10.8934	0.0194
244	SLU 15	0.12	-0.05	41.47	-0.972	10.8978	0.0109
244	SLU 16	0.12	-0.1	41.21	-0.9659	10.8297	0.0229
244	SLU 17	0.12	-0.06	41.23	-0.9663	10.8341	0.0143
244	SLU 18	0.13	-0.07	42.4	-0.9934	11.142	0.0163
244	SLU 19	0.12	-0.04	42.41	-0.9937	11.1464	0.0077
244	SLU 20	0.13	-0.08	42.83	-1.0036	11.2563	0.0175
244	SLU 21	0.12	-0.04	42.84	-1.004	11.2607	0.009
244	SLU 22	0.14	-0.08	39.61	-0.9286	10.4036	0.0183
244	SLU 23	0.13	-0.02	39.64	-0.9293	10.411	0.004
244	SLU 24	0.14	-0.07	40.29	-0.9445	10.5817	0.0161
244	SLU 25	0.14	-0.04	40.3	-0.9449	10.5861	0.0075
244	SLU 26	0.13	-0.03	40.07	-0.9395	10.5252	0.0053
244	SLU 27	0.14	-0.07	40.72	-0.9548	10.6959	0.0173
244	SLU 28	0.14	-0.04	40.74	-0.9551	10.7004	0.0088
244	SLU 29	0.14	-0.09	40.48	-0.9491	10.6322	0.0207
244	SLU 30	0.14	-0.05	40.49	-0.9495	10.6366	0.0122
244	SLU 31	0.14	0.01	44.42	-1.041	11.6731	-0.0056
244	SLU 32	0.15	-0.03	45.07	-1.0563	11.8438	0.0064
244	SLU 33	0.15	0	45.09	-1.0567	11.8482	-0.0021
244	SLU 34	0.14	0.01	44.86	-1.0513	11.7873	-0.0044
244	SLU 35	0.15	-0.04	45.51	-1.0665	11.9581	0.0076
244	SLU 36	0.15	-0.01	45.52	-1.0669	11.9625	-0.0009
244	SLU 37	0.15	-0.05	45.27	-1.0609	11.8943	0.0111
244	SLU 38	0.15	-0.02	45.28	-1.0613	11.8987	0.0025
244	SLU 39	0.15	-0.03	46.45	-1.0883	12.2066	0.0045
244	SLU 40	0.15	0.01	46.46	-1.0887	12.211	-0.0041
244	SLU 41	0.15	-0.03	46.88	-1.0986	12.3209	0.0057
244	SLU 42	0.15	0	46.9	-1.099	12.3253	-0.0028
244	SLU 43	0.14	-0.17	44.84	-1.0512	11.7757	0.0431
244	SLU 44	0.13	-0.12	44.86	-1.0518	11.783	0.0289
244	SLU 45	0.14	-0.17	45.51	-1.0671	11.9537	0.0409

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
244	SLU 46	0.14	-0.13	45.53	-1.0675	11.9581	0.0324
244	SLU 47	0.13	-0.13	45.29	-1.0621	11.8973	0.0301
244	SLU 48	0.14	-0.17	45.95	-1.0773	12.068	0.0422
244	SLU 49	0.14	-0.14	45.96	-1.0777	12.0724	0.0336
244	SLU 50	0.14	-0.18	45.7	-1.0717	12.0042	0.0456
244	SLU 51	0.14	-0.15	45.72	-1.0721	12.0086	0.037
244	SLU 52	0.14	-0.08	49.65	-1.1636	13.0451	0.0192
244	SLU 53	0.15	-0.13	50.3	-1.1789	13.2158	0.0313
244	SLU 54	0.15	-0.1	50.31	-1.1793	13.2202	0.0227
244	SLU 55	0.14	-0.09	50.08	-1.1739	13.1594	0.0205
244	SLU 56	0.15	-0.14	50.73	-1.1891	13.3301	0.0325
244	SLU 57	0.15	-0.1	50.75	-1.1895	13.3345	0.024
244	SLU 58	0.15	-0.15	50.49	-1.1835	13.2663	0.0359
244	SLU 59	0.15	-0.12	50.5	-1.1839	13.2707	0.0274
244	SLU 60	0.15	-0.12	51.67	-1.2109	13.5787	0.0293
244	SLU 61	0.15	-0.09	51.69	-1.2113	13.5831	0.0208
244	SLU 62	0.15	-0.13	52.11	-1.2211	13.693	0.0306
244	SLU 63	0.15	-0.1	52.12	-1.2215	13.6974	0.022
244	SLU 64	0.16	-0.13	48.89	-1.1461	12.8403	0.0313
244	SLU 65	0.16	-0.07	48.91	-1.1468	12.8476	0.0171
244	SLU 66	0.17	-0.12	49.57	-1.162	13.0183	0.0291
244	SLU 67	0.17	-0.09	49.58	-1.1624	13.0227	0.0206
244	SLU 68	0.16	-0.08	49.35	-1.157	12.9619	0.0183
244	SLU 69	0.17	-0.13	50	-1.1723	13.1326	0.0304
244	SLU 70	0.17	-0.09	50.01	-1.1727	13.137	0.0218
244	SLU 71	0.16	-0.14	49.76	-1.1666	13.0688	0.0338
244	SLU 72	0.16	-0.11	49.77	-1.167	13.0733	0.0252
244	SLU 73	0.17	-0.04	53.7	-1.2586	14.1097	0.0074
244	SLU 74	0.18	-0.09	54.35	-1.2738	14.2805	0.0195
244	SLU 75	0.18	-0.05	54.37	-1.2742	14.2849	0.0109
244	SLU 76	0.17	-0.04	54.13	-1.2688	14.224	0.0087
244	SLU 77	0.18	-0.09	54.79	-1.2841	14.3947	0.0207
244	SLU 78	0.17	-0.06	54.8	-1.2845	14.3991	0.0122
244	SLU 79	0.17	-0.1	54.54	-1.2784	14.331	0.0241
244	SLU 80	0.17	-0.07	54.56	-1.2788	14.3354	0.0156
244	SLU 81	0.18	-0.08	55.73	-1.3058	14.6433	0.0175
244	SLU 82	0.18	-0.05	55.74	-1.3062	14.6477	0.009
244	SLU 83	0.18	-0.08	56.16	-1.3161	14.7576	0.0188
244	SLU 84	0.18	-0.05	56.18	-1.3165	14.762	0.0102
244	SLE RA 1	0.12	-0.11	36.72	-0.8608	9.6432	0.0267
244	SLE RA 2	0.12	-0.07	36.73	-0.8612	9.6481	0.0172
244	SLE RA 3	0.12	-0.1	37.17	-0.8714	9.7619	0.0252
244	SLE RA 4	0.12	-0.08	37.18	-0.8716	9.7648	0.0195
244	SLE RA 5	0.12	-0.08	37.02	-0.868	9.7242	0.018
244	SLE RA 6	0.12	-0.11	37.46	-0.8782	9.8381	0.026
244	SLE RA 7	0.12	-0.09	37.47	-0.8785	9.841	0.0204
244	SLE RA 8	0.12	-0.12	37.29	-0.8744	9.7955	0.0283
244	SLE RA 9	0.12	-0.09	37.3	-0.8747	9.7985	0.0226
244	SLE RA 10	0.12	-0.05	39.92	-0.9357	10.4895	0.0108
244	SLE RA 11	0.13	-0.08	40.36	-0.9459	10.6033	0.0188
244	SLE RA 12	0.13	-0.06	40.37	-0.9462	10.6062	0.0131
244	SLE RA 13	0.12	-0.05	40.21	-0.9426	10.5657	0.0116
244	SLE RA 14	0.13	-0.08	40.65	-0.9527	10.6795	0.0196
244	SLE RA 15	0.13	-0.06	40.66	-0.953	10.6824	0.0139
244	SLE RA 16	0.13	-0.09	40.49	-0.949	10.6369	0.0219
244	SLE RA 17	0.13	-0.07	40.5	-0.9492	10.6399	0.0162
244	SLE RA 18	0.13	-0.08	41.27	-0.9672	10.8452	0.0175
244	SLE RA 19	0.13	-0.05	41.28	-0.9675	10.8481	0.0118
244	SLE RA 20	0.13	-0.08	41.56	-0.9741	10.9214	0.0183
244	SLE RA 21	0.13	-0.06	41.57	-0.9743	10.9243	0.0126
244	SLE FR 1	0.12	-0.11	36.72	-0.8608	9.6432	0.0267
244	SLE FR 2	0.12	-0.1	36.72	-0.8609	9.6441	0.0248
244	SLE FR 3	0.12	-0.11	36.83	-0.8635	9.6736	0.027
244	SLE FR 4	0.12	-0.09	38.09	-0.8928	10.0047	0.022
244	SLE FR 5	0.12	-0.1	38.2	-0.8954	10.0342	0.0243
244	SLE FR 6	0.13	-0.09	39	-0.914	10.2442	0.0221
244	SLE QP 1	0.12	-0.11	36.72	-0.8608	9.6432	0.0267
244	SLE QP 2	0.12	-0.1	38.08	-0.8927	10.0038	0.0239
244	SLD 1	3.5	0.39	38.12	-0.8936	10.034	-0.0374
244	SLD 2	3.66	0.41	38.12	-0.8937	10.0346	-0.0377
244	SLD 3	3.41	-0.76	37.72	-0.8827	9.9262	0.2625
244	SLD 4	3.57	-0.74	37.72	-0.8828	9.9268	0.2622
244	SLD 5	1.24	1.79	38.69	-0.9094	10.1761	-0.4493
244	SLD 6	1.34	1.8	38.69	-0.9094	10.1765	-0.4494
244	SLD 7	0.95	-2.04	37.37	-0.8733	9.817	0.5504
244	SLD 8	1.06	-2.03	37.38	-0.8734	9.8174	0.5502
244	SLD 9	-0.81	1.83	38.79	-0.9121	10.1901	-0.5023
244	SLD 10	-0.7	1.84	38.79	-0.9121	10.1905	-0.5025
244	SLD 11	-1.1	-2	37.47	-0.876	9.831	0.4973
244	SLD 12	-0.99	-1.99	37.48	-0.8761	9.8314	0.4971
244	SLD 13	-3.32	0.54	38.44	-0.9026	10.0807	-0.2144
244	SLD 14	-3.16	0.56	38.45	-0.9027	10.0813	-0.2146
244	SLD 15	-3.41	-0.61	38.05	-0.8918	9.973	0.0855
244	SLD 16	-3.25	-0.59	38.05	-0.8919	9.9735	0.0853
244	SLV 1	8.01	1.02	38.14	-0.8943	10.0694	-0.1106
244	SLV 2	8.39	1.06	38.15	-0.8945	10.0708	-0.1112
244	SLV 3	7.81	-1.6	37.25	-0.8697	9.8244	0.5725
244	SLV 4	8.19	-1.56	37.25	-0.8699	9.8258	0.5719
244	SLV 5	2.73	4.2	39.46	-0.9305	10.3947	-1.0524
244	SLV 6	2.97	4.23	39.47	-0.9306	10.3956	-1.0528
244	SLV 7	2.06	-4.53	36.47	-0.8484	9.5782	1.2247

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
244	SLV 8	2.3	-4.5	36.47	-0.8486	9.5791	1.2243
244	SLV 9	-2.05	4.3	39.69	-0.9368	10.4284	-1.1765
244	SLV 10	-1.81	4.33	39.7	-0.937	10.4293	-1.1768
244	SLV 11	-2.72	-4.42	36.7	-0.8548	9.6119	1.1006
244	SLV 12	-2.48	-4.4	36.7	-0.855	9.6128	1.1003
244	SLV 13	-7.94	1.36	38.91	-0.9155	10.1817	-0.5241
244	SLV 14	-7.56	1.4	38.92	-0.9158	10.1831	-0.5247
244	SLV 15	-8.14	-1.26	38.02	-0.8909	9.9368	0.159
244	SLV 16	-7.77	-1.21	38.02	-0.8911	9.9381	0.1585
244	CRTFP Ux+	0	0	0	0	0	0
244	CRTFP Ux-	0	0	0	0	0	0
244	CRTFP Uy+	0	0	0	0	0	0
244	CRTFP Uy-	0	0	0	0	0	0
246	SLU 1	0.04	-0.07	13.19	0	0	0
246	SLU 2	0.04	-0.05	13.2	0	0	0
246	SLU 3	0.05	-0.07	13.44	0	0	0
246	SLU 4	0.04	-0.06	13.44	0	0	0
246	SLU 5	0.04	-0.05	13.36	0	0	0
246	SLU 6	0.05	-0.07	13.6	0	0	0
246	SLU 7	0.04	-0.06	13.6	0	0	0
246	SLU 8	0.04	-0.08	13.51	0	0	0
246	SLU 9	0.04	-0.07	13.51	0	0	0
246	SLU 10	0.05	-0.04	14.96	0	0	0
246	SLU 11	0.05	-0.06	15.2	0	0	0
246	SLU 12	0.05	-0.05	15.21	0	0	0
246	SLU 13	0.05	-0.04	15.12	0	0	0
246	SLU 14	0.05	-0.06	15.36	0	0	0
246	SLU 15	0.05	-0.05	15.36	0	0	0
246	SLU 16	0.05	-0.07	15.27	0	0	0
246	SLU 17	0.05	-0.05	15.27	0	0	0
246	SLU 18	0.05	-0.06	15.71	0	0	0
246	SLU 19	0.05	-0.05	15.71	0	0	0
246	SLU 20	0.05	-0.06	15.87	0	0	0
246	SLU 21	0.05	-0.05	15.87	0	0	0
246	SLU 22	0.05	-0.06	14.7	0	0	0
246	SLU 23	0.05	-0.04	14.7	0	0	0
246	SLU 24	0.06	-0.06	14.94	0	0	0
246	SLU 25	0.05	-0.04	14.95	0	0	0
246	SLU 26	0.05	-0.04	14.86	0	0	0
246	SLU 27	0.06	-0.06	15.1	0	0	0
246	SLU 28	0.05	-0.05	15.11	0	0	0
246	SLU 29	0.05	-0.06	15.01	0	0	0
246	SLU 30	0.05	-0.05	15.02	0	0	0
246	SLU 31	0.06	-0.03	16.46	0	0	0
246	SLU 32	0.06	-0.05	16.71	0	0	0
246	SLU 33	0.06	-0.03	16.71	0	0	0
246	SLU 34	0.06	-0.03	16.62	0	0	0
246	SLU 35	0.06	-0.05	16.86	0	0	0
246	SLU 36	0.06	-0.04	16.87	0	0	0
246	SLU 37	0.06	-0.05	16.77	0	0	0
246	SLU 38	0.06	-0.04	16.78	0	0	0
246	SLU 39	0.06	-0.04	17.21	0	0	0
246	SLU 40	0.06	-0.03	17.21	0	0	0
246	SLU 41	0.06	-0.05	17.37	0	0	0
246	SLU 42	0.06	-0.03	17.37	0	0	0
246	SLU 43	0.05	-0.1	16.63	0	0	0
246	SLU 44	0.05	-0.08	16.64	0	0	0
246	SLU 45	0.06	-0.1	16.88	0	0	0
246	SLU 46	0.05	-0.08	16.89	0	0	0
246	SLU 47	0.05	-0.08	16.8	0	0	0
246	SLU 48	0.06	-0.1	17.04	0	0	0
246	SLU 49	0.05	-0.09	17.05	0	0	0
246	SLU 50	0.05	-0.1	16.95	0	0	0
246	SLU 51	0.05	-0.09	16.96	0	0	0
246	SLU 52	0.06	-0.07	18.4	0	0	0
246	SLU 53	0.06	-0.09	18.64	0	0	0
246	SLU 54	0.06	-0.07	18.65	0	0	0
246	SLU 55	0.06	-0.07	18.56	0	0	0
246	SLU 56	0.06	-0.09	18.8	0	0	0
246	SLU 57	0.06	-0.08	18.81	0	0	0
246	SLU 58	0.06	-0.09	18.71	0	0	0
246	SLU 59	0.06	-0.08	18.72	0	0	0
246	SLU 60	0.06	-0.08	19.15	0	0	0
246	SLU 61	0.06	-0.07	19.15	0	0	0
246	SLU 62	0.06	-0.09	19.31	0	0	0
246	SLU 63	0.06	-0.07	19.31	0	0	0
246	SLU 64	0.06	-0.09	18.14	0	0	0
246	SLU 65	0.06	-0.07	18.14	0	0	0
246	SLU 66	0.07	-0.08	18.39	0	0	0
246	SLU 67	0.06	-0.07	18.39	0	0	0
246	SLU 68	0.06	-0.07	18.3	0	0	0
246	SLU 69	0.07	-0.09	18.55	0	0	0
246	SLU 70	0.06	-0.07	18.55	0	0	0
246	SLU 71	0.06	-0.09	18.46	0	0	0
246	SLU 72	0.06	-0.08	18.46	0	0	0
246	SLU 73	0.07	-0.05	19.9	0	0	0
246	SLU 74	0.07	-0.07	20.15	0	0	0
246	SLU 75	0.07	-0.06	20.15	0	0	0
246	SLU 76	0.07	-0.06	20.06	0	0	0
246	SLU 77	0.07	-0.08	20.31	0	0	0
246	SLU 78	0.07	-0.06	20.31	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
246	SLU 79	0.07	-0.08	20.22	0	0	0
246	SLU 80	0.07	-0.07	20.22	0	0	0
246	SLU 81	0.07	-0.07	20.65	0	0	0
246	SLU 82	0.07	-0.06	20.66	0	0	0
246	SLU 83	0.07	-0.07	20.81	0	0	0
246	SLU 84	0.07	-0.06	20.81	0	0	0
246	SLE RA 1	0.05	-0.07	13.62	0	0	0
246	SLE RA 2	0.05	-0.06	13.63	0	0	0
246	SLE RA 3	0.05	-0.07	13.79	0	0	0
246	SLE RA 4	0.05	-0.06	13.79	0	0	0
246	SLE RA 5	0.05	-0.06	13.73	0	0	0
246	SLE RA 6	0.05	-0.07	13.89	0	0	0
246	SLE RA 7	0.05	-0.06	13.9	0	0	0
246	SLE RA 8	0.05	-0.07	13.83	0	0	0
246	SLE RA 9	0.05	-0.06	13.84	0	0	0
246	SLE RA 10	0.05	-0.05	14.8	0	0	0
246	SLE RA 11	0.05	-0.06	14.96	0	0	0
246	SLE RA 12	0.05	-0.05	14.96	0	0	0
246	SLE RA 13	0.05	-0.05	14.91	0	0	0
246	SLE RA 14	0.05	-0.06	15.07	0	0	0
246	SLE RA 15	0.05	-0.05	15.07	0	0	0
246	SLE RA 16	0.05	-0.07	15.01	0	0	0
246	SLE RA 17	0.05	-0.06	15.01	0	0	0
246	SLE RA 18	0.05	-0.06	15.3	0	0	0
246	SLE RA 19	0.05	-0.05	15.3	0	0	0
246	SLE RA 20	0.05	-0.06	15.4	0	0	0
246	SLE RA 21	0.05	-0.05	15.41	0	0	0
246	SLE FR 1	0.05	-0.07	13.62	0	0	0
246	SLE FR 2	0.05	-0.07	13.62	0	0	0
246	SLE FR 3	0.05	-0.07	13.66	0	0	0
246	SLE FR 4	0.05	-0.06	14.12	0	0	0
246	SLE FR 5	0.05	-0.07	14.17	0	0	0
246	SLE FR 6	0.05	-0.06	14.46	0	0	0
246	SLE QP 1	0.05	-0.07	13.62	0	0	0
246	SLE QP 2	0.05	-0.07	14.12	0	0	0
246	SLD 1	1.32	0.18	14.04	0	0	0
246	SLD 2	1.38	0.2	14.04	0	0	0
246	SLD 3	1.29	-0.25	13.91	0	0	0
246	SLD 4	1.35	-0.23	13.91	0	0	0
246	SLD 5	0.47	0.66	14.3	0	0	0
246	SLD 6	0.51	0.67	14.3	0	0	0
246	SLD 7	0.36	-0.77	13.86	0	0	0
246	SLD 8	0.4	-0.76	13.86	0	0	0
246	SLD 9	-0.3	0.63	14.39	0	0	0
246	SLD 10	-0.26	0.64	14.39	0	0	0
246	SLD 11	-0.41	-0.8	13.95	0	0	0
246	SLD 12	-0.37	-0.79	13.95	0	0	0
246	SLD 13	-1.25	0.1	14.34	0	0	0
246	SLD 14	-1.19	0.12	14.34	0	0	0
246	SLD 15	-1.29	-0.33	14.21	0	0	0
246	SLD 16	-1.22	-0.31	14.21	0	0	0
246	SLV 1	3.03	0.5	13.92	0	0	0
246	SLV 2	3.17	0.53	13.93	0	0	0
246	SLV 3	2.95	-0.48	13.62	0	0	0
246	SLV 4	3.09	-0.44	13.62	0	0	0
246	SLV 5	1.03	1.58	14.52	0	0	0
246	SLV 6	1.12	1.6	14.53	0	0	0
246	SLV 7	0.78	-1.68	13.51	0	0	0
246	SLV 8	0.87	-1.66	13.51	0	0	0
246	SLV 9	-0.77	1.52	14.73	0	0	0
246	SLV 10	-0.68	1.55	14.74	0	0	0
246	SLV 11	-1.03	-1.73	13.72	0	0	0
246	SLV 12	-0.94	-1.71	13.72	0	0	0
246	SLV 13	-2.99	0.31	14.63	0	0	0
246	SLV 14	-2.85	0.35	14.63	0	0	0
246	SLV 15	-3.07	-0.67	14.32	0	0	0
246	SLV 16	-2.93	-0.63	14.33	0	0	0
247	SLU 1	0.05	-0.09	13.62	0	0	0
247	SLU 2	0.05	-0.07	13.63	0	0	0
247	SLU 3	0.05	-0.09	13.88	0	0	0
247	SLU 4	0.05	-0.07	13.88	0	0	0
247	SLU 5	0.04	-0.07	13.79	0	0	0
247	SLU 6	0.05	-0.09	14.04	0	0	0
247	SLU 7	0.05	-0.08	14.04	0	0	0
247	SLU 8	0.05	-0.09	13.95	0	0	0
247	SLU 9	0.05	-0.08	13.95	0	0	0
247	SLU 10	0.05	-0.06	15.43	0	0	0
247	SLU 11	0.05	-0.08	15.69	0	0	0
247	SLU 12	0.05	-0.07	15.69	0	0	0
247	SLU 13	0.05	-0.06	15.6	0	0	0
247	SLU 14	0.05	-0.08	15.85	0	0	0
247	SLU 15	0.05	-0.07	15.85	0	0	0
247	SLU 16	0.05	-0.09	15.76	0	0	0
247	SLU 17	0.05	-0.07	15.76	0	0	0
247	SLU 18	0.05	-0.08	16.2	0	0	0
247	SLU 19	0.05	-0.06	16.21	0	0	0
247	SLU 20	0.05	-0.08	16.37	0	0	0
247	SLU 21	0.05	-0.07	16.37	0	0	0
247	SLU 22	0.06	-0.08	15.17	0	0	0
247	SLU 23	0.06	-0.06	15.18	0	0	0
247	SLU 24	0.06	-0.08	15.43	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
247	SLU 25	0.06	-0.06	15.43	0	0	0
247	SLU 26	0.06	-0.06	15.34	0	0	0
247	SLU 27	0.06	-0.08	15.59	0	0	0
247	SLU 28	0.06	-0.06	15.6	0	0	0
247	SLU 29	0.06	-0.08	15.5	0	0	0
247	SLU 30	0.06	-0.07	15.5	0	0	0
247	SLU 31	0.06	-0.05	16.99	0	0	0
247	SLU 32	0.06	-0.07	17.24	0	0	0
247	SLU 33	0.06	-0.05	17.24	0	0	0
247	SLU 34	0.06	-0.05	17.15	0	0	0
247	SLU 35	0.06	-0.07	17.4	0	0	0
247	SLU 36	0.06	-0.06	17.41	0	0	0
247	SLU 37	0.06	-0.07	17.31	0	0	0
247	SLU 38	0.06	-0.06	17.31	0	0	0
247	SLU 39	0.06	-0.06	17.76	0	0	0
247	SLU 40	0.06	-0.05	17.76	0	0	0
247	SLU 41	0.06	-0.07	17.92	0	0	0
247	SLU 42	0.06	-0.05	17.92	0	0	0
247	SLU 43	0.06	-0.12	17.17	0	0	0
247	SLU 44	0.06	-0.1	17.18	0	0	0
247	SLU 45	0.06	-0.12	17.43	0	0	0
247	SLU 46	0.06	-0.11	17.43	0	0	0
247	SLU 47	0.06	-0.1	17.34	0	0	0
247	SLU 48	0.06	-0.12	17.6	0	0	0
247	SLU 49	0.06	-0.11	17.6	0	0	0
247	SLU 50	0.06	-0.13	17.5	0	0	0
247	SLU 51	0.06	-0.11	17.51	0	0	0
247	SLU 52	0.06	-0.09	18.99	0	0	0
247	SLU 53	0.06	-0.11	19.24	0	0	0
247	SLU 54	0.06	-0.1	19.24	0	0	0
247	SLU 55	0.06	-0.09	19.15	0	0	0
247	SLU 56	0.06	-0.11	19.4	0	0	0
247	SLU 57	0.06	-0.1	19.41	0	0	0
247	SLU 58	0.06	-0.12	19.31	0	0	0
247	SLU 59	0.06	-0.1	19.31	0	0	0
247	SLU 60	0.06	-0.11	19.76	0	0	0
247	SLU 61	0.06	-0.09	19.76	0	0	0
247	SLU 62	0.06	-0.11	19.92	0	0	0
247	SLU 63	0.06	-0.1	19.92	0	0	0
247	SLU 64	0.07	-0.11	18.73	0	0	0
247	SLU 65	0.07	-0.09	18.73	0	0	0
247	SLU 66	0.07	-0.11	18.98	0	0	0
247	SLU 67	0.07	-0.09	18.99	0	0	0
247	SLU 68	0.07	-0.09	18.9	0	0	0
247	SLU 69	0.07	-0.11	19.15	0	0	0
247	SLU 70	0.07	-0.1	19.15	0	0	0
247	SLU 71	0.07	-0.11	19.06	0	0	0
247	SLU 72	0.07	-0.1	19.06	0	0	0
247	SLU 73	0.07	-0.08	20.54	0	0	0
247	SLU 74	0.07	-0.1	20.79	0	0	0
247	SLU 75	0.07	-0.08	20.8	0	0	0
247	SLU 76	0.07	-0.08	20.7	0	0	0
247	SLU 77	0.07	-0.1	20.96	0	0	0
247	SLU 78	0.07	-0.09	20.96	0	0	0
247	SLU 79	0.07	-0.1	20.86	0	0	0
247	SLU 80	0.07	-0.09	20.87	0	0	0
247	SLU 81	0.07	-0.09	21.31	0	0	0
247	SLU 82	0.07	-0.08	21.31	0	0	0
247	SLU 83	0.07	-0.1	21.47	0	0	0
247	SLU 84	0.07	-0.08	21.48	0	0	0
247	SLE RA 1	0.05	-0.09	14.06	0	0	0
247	SLE RA 2	0.05	-0.07	14.07	0	0	0
247	SLE RA 3	0.05	-0.08	14.24	0	0	0
247	SLE RA 4	0.05	-0.08	14.24	0	0	0
247	SLE RA 5	0.05	-0.07	14.18	0	0	0
247	SLE RA 6	0.05	-0.09	14.35	0	0	0
247	SLE RA 7	0.05	-0.08	14.35	0	0	0
247	SLE RA 8	0.05	-0.09	14.28	0	0	0
247	SLE RA 9	0.05	-0.08	14.28	0	0	0
247	SLE RA 10	0.05	-0.07	15.27	0	0	0
247	SLE RA 11	0.05	-0.08	15.44	0	0	0
247	SLE RA 12	0.05	-0.07	15.44	0	0	0
247	SLE RA 13	0.05	-0.07	15.38	0	0	0
247	SLE RA 14	0.05	-0.08	15.55	0	0	0
247	SLE RA 15	0.05	-0.07	15.55	0	0	0
247	SLE RA 16	0.05	-0.08	15.49	0	0	0
247	SLE RA 17	0.05	-0.07	15.49	0	0	0
247	SLE RA 18	0.05	-0.08	15.79	0	0	0
247	SLE RA 19	0.05	-0.07	15.79	0	0	0
247	SLE RA 20	0.05	-0.08	15.9	0	0	0
247	SLE RA 21	0.05	-0.07	15.9	0	0	0
247	SLE FR 1	0.05	-0.09	14.06	0	0	0
247	SLE FR 2	0.05	-0.08	14.07	0	0	0
247	SLE FR 3	0.05	-0.09	14.11	0	0	0
247	SLE FR 4	0.05	-0.08	14.58	0	0	0
247	SLE FR 5	0.05	-0.08	14.62	0	0	0
247	SLE FR 6	0.05	-0.08	14.93	0	0	0
247	SLE QP 1	0.05	-0.09	14.06	0	0	0
247	SLE QP 2	0.05	-0.08	14.58	0	0	0
247	SLD 1	1.38	0.18	14.43	0	0	0
247	SLD 2	1.44	0.2	14.44	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
247	SLD 3	1.35	-0.26	14.3	0	0	0
247	SLD 4	1.41	-0.24	14.31	0	0	0
247	SLD 5	0.49	0.67	14.74	0	0	0
247	SLD 6	0.53	0.68	14.74	0	0	0
247	SLD 7	0.38	-0.82	14.3	0	0	0
247	SLD 8	0.42	-0.8	14.3	0	0	0
247	SLD 9	-0.32	0.64	14.86	0	0	0
247	SLD 10	-0.27	0.65	14.87	0	0	0
247	SLD 11	-0.43	-0.85	14.42	0	0	0
247	SLD 12	-0.39	-0.83	14.43	0	0	0
247	SLD 13	-1.31	0.08	14.86	0	0	0
247	SLD 14	-1.24	0.1	14.86	0	0	0
247	SLD 15	-1.34	-0.37	14.72	0	0	0
247	SLD 16	-1.28	-0.35	14.73	0	0	0
247	SLV 1	3.16	0.52	14.24	0	0	0
247	SLV 2	3.3	0.57	14.24	0	0	0
247	SLV 3	3.08	-0.49	13.94	0	0	0
247	SLV 4	3.22	-0.44	13.94	0	0	0
247	SLV 5	1.08	1.63	14.93	0	0	0
247	SLV 6	1.17	1.66	14.93	0	0	0
247	SLV 7	0.81	-1.75	13.93	0	0	0
247	SLV 8	0.91	-1.72	13.93	0	0	0
247	SLV 9	-0.81	1.55	15.23	0	0	0
247	SLV 10	-0.71	1.58	15.23	0	0	0
247	SLV 11	-1.07	-1.82	14.23	0	0	0
247	SLV 12	-0.98	-1.79	14.23	0	0	0
247	SLV 13	-3.12	0.28	15.22	0	0	0
247	SLV 14	-2.98	0.33	15.23	0	0	0
247	SLV 15	-3.2	-0.74	14.92	0	0	0
247	SLV 16	-3.05	-0.69	14.93	0	0	0
248	SLU 1	0.05	-0.1	13.66	0	0	0
248	SLU 2	0.05	-0.08	13.66	0	0	0
248	SLU 3	0.05	-0.1	13.91	0	0	0
248	SLU 4	0.05	-0.09	13.91	0	0	0
248	SLU 5	0.05	-0.09	13.82	0	0	0
248	SLU 6	0.05	-0.11	14.08	0	0	0
248	SLU 7	0.05	-0.09	14.08	0	0	0
248	SLU 8	0.05	-0.11	13.98	0	0	0
248	SLU 9	0.05	-0.1	13.98	0	0	0
248	SLU 10	0.05	-0.07	15.46	0	0	0
248	SLU 11	0.05	-0.1	15.71	0	0	0
248	SLU 12	0.05	-0.08	15.72	0	0	0
248	SLU 13	0.05	-0.08	15.62	0	0	0
248	SLU 14	0.05	-0.1	15.88	0	0	0
248	SLU 15	0.05	-0.09	15.88	0	0	0
248	SLU 16	0.05	-0.1	15.78	0	0	0
248	SLU 17	0.05	-0.09	15.79	0	0	0
248	SLU 18	0.06	-0.09	16.23	0	0	0
248	SLU 19	0.05	-0.08	16.23	0	0	0
248	SLU 20	0.06	-0.1	16.39	0	0	0
248	SLU 21	0.05	-0.08	16.4	0	0	0
248	SLU 22	0.06	-0.09	15.21	0	0	0
248	SLU 23	0.06	-0.07	15.22	0	0	0
248	SLU 24	0.06	-0.09	15.47	0	0	0
248	SLU 25	0.06	-0.08	15.47	0	0	0
248	SLU 26	0.06	-0.07	15.38	0	0	0
248	SLU 27	0.06	-0.1	15.63	0	0	0
248	SLU 28	0.06	-0.08	15.64	0	0	0
248	SLU 29	0.06	-0.1	15.54	0	0	0
248	SLU 30	0.06	-0.09	15.54	0	0	0
248	SLU 31	0.06	-0.06	17.02	0	0	0
248	SLU 32	0.07	-0.08	17.27	0	0	0
248	SLU 33	0.06	-0.07	17.27	0	0	0
248	SLU 34	0.06	-0.07	17.18	0	0	0
248	SLU 35	0.07	-0.09	17.44	0	0	0
248	SLU 36	0.06	-0.07	17.44	0	0	0
248	SLU 37	0.06	-0.09	17.34	0	0	0
248	SLU 38	0.06	-0.08	17.34	0	0	0
248	SLU 39	0.07	-0.08	17.79	0	0	0
248	SLU 40	0.07	-0.07	17.79	0	0	0
248	SLU 41	0.07	-0.09	17.95	0	0	0
248	SLU 42	0.06	-0.07	17.95	0	0	0
248	SLU 43	0.06	-0.14	17.22	0	0	0
248	SLU 44	0.06	-0.12	17.22	0	0	0
248	SLU 45	0.06	-0.14	17.47	0	0	0
248	SLU 46	0.06	-0.13	17.48	0	0	0
248	SLU 47	0.06	-0.12	17.38	0	0	0
248	SLU 48	0.06	-0.14	17.64	0	0	0
248	SLU 49	0.06	-0.13	17.64	0	0	0
248	SLU 50	0.06	-0.15	17.54	0	0	0
248	SLU 51	0.06	-0.13	17.55	0	0	0
248	SLU 52	0.06	-0.11	19.02	0	0	0
248	SLU 53	0.07	-0.13	19.28	0	0	0
248	SLU 54	0.06	-0.12	19.28	0	0	0
248	SLU 55	0.06	-0.11	19.19	0	0	0
248	SLU 56	0.07	-0.13	19.44	0	0	0
248	SLU 57	0.06	-0.12	19.44	0	0	0
248	SLU 58	0.06	-0.14	19.35	0	0	0
248	SLU 59	0.06	-0.12	19.35	0	0	0
248	SLU 60	0.07	-0.13	19.79	0	0	0
248	SLU 61	0.07	-0.12	19.79	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
248	SLU 62	0.07	-0.13	19.96	0	0	0
248	SLU 63	0.07	-0.12	19.96	0	0	0
248	SLU 64	0.07	-0.13	18.78	0	0	0
248	SLU 65	0.07	-0.11	18.78	0	0	0
248	SLU 66	0.07	-0.13	19.03	0	0	0
248	SLU 67	0.07	-0.11	19.04	0	0	0
248	SLU 68	0.07	-0.11	18.94	0	0	0
248	SLU 69	0.07	-0.13	19.2	0	0	0
248	SLU 70	0.07	-0.12	19.2	0	0	0
248	SLU 71	0.07	-0.13	19.1	0	0	0
248	SLU 72	0.07	-0.12	19.1	0	0	0
248	SLU 73	0.07	-0.1	20.58	0	0	0
248	SLU 74	0.08	-0.12	20.84	0	0	0
248	SLU 75	0.08	-0.11	20.84	0	0	0
248	SLU 76	0.07	-0.1	20.74	0	0	0
248	SLU 77	0.08	-0.12	21	0	0	0
248	SLU 78	0.08	-0.11	21	0	0	0
248	SLU 79	0.08	-0.13	20.91	0	0	0
248	SLU 80	0.07	-0.11	20.91	0	0	0
248	SLU 81	0.08	-0.12	21.35	0	0	0
248	SLU 82	0.08	-0.1	21.35	0	0	0
248	SLU 83	0.08	-0.12	21.51	0	0	0
248	SLU 84	0.08	-0.11	21.52	0	0	0
248	SLE RA 1	0.05	-0.1	14.1	0	0	0
248	SLE RA 2	0.05	-0.09	14.1	0	0	0
248	SLE RA 3	0.05	-0.1	14.27	0	0	0
248	SLE RA 4	0.05	-0.09	14.27	0	0	0
248	SLE RA 5	0.05	-0.09	14.21	0	0	0
248	SLE RA 6	0.05	-0.1	14.38	0	0	0
248	SLE RA 7	0.05	-0.09	14.38	0	0	0
248	SLE RA 8	0.05	-0.11	14.32	0	0	0
248	SLE RA 9	0.05	-0.1	14.32	0	0	0
248	SLE RA 10	0.05	-0.08	15.3	0	0	0
248	SLE RA 11	0.06	-0.1	15.47	0	0	0
248	SLE RA 12	0.06	-0.09	15.47	0	0	0
248	SLE RA 13	0.05	-0.08	15.41	0	0	0
248	SLE RA 14	0.06	-0.1	15.58	0	0	0
248	SLE RA 15	0.06	-0.09	15.58	0	0	0
248	SLE RA 16	0.06	-0.1	15.52	0	0	0
248	SLE RA 17	0.05	-0.09	15.52	0	0	0
248	SLE RA 18	0.06	-0.09	15.82	0	0	0
248	SLE RA 19	0.06	-0.09	15.82	0	0	0
248	SLE RA 20	0.06	-0.1	15.93	0	0	0
248	SLE RA 21	0.06	-0.09	15.93	0	0	0
248	SLE FR 1	0.05	-0.1	14.1	0	0	0
248	SLE FR 2	0.05	-0.1	14.1	0	0	0
248	SLE FR 3	0.05	-0.1	14.14	0	0	0
248	SLE FR 4	0.05	-0.1	14.62	0	0	0
248	SLE FR 5	0.05	-0.1	14.66	0	0	0
248	SLE FR 6	0.05	-0.1	14.96	0	0	0
248	SLE QP 1	0.05	-0.1	14.1	0	0	0
248	SLE QP 2	0.05	-0.1	14.62	0	0	0
248	SLD 1	1.4	0.18	14.4	0	0	0
248	SLD 2	1.46	0.2	14.4	0	0	0
248	SLD 3	1.36	-0.27	14.28	0	0	0
248	SLD 4	1.43	-0.25	14.28	0	0	0
248	SLD 5	0.5	0.66	14.74	0	0	0
248	SLD 6	0.54	0.67	14.74	0	0	0
248	SLD 7	0.38	-0.83	14.32	0	0	0
248	SLD 8	0.42	-0.82	14.32	0	0	0
248	SLD 9	-0.32	0.62	14.91	0	0	0
248	SLD 10	-0.28	0.63	14.91	0	0	0
248	SLD 11	-0.43	-0.87	14.49	0	0	0
248	SLD 12	-0.39	-0.86	14.49	0	0	0
248	SLD 13	-1.32	0.05	14.95	0	0	0
248	SLD 14	-1.25	0.07	14.95	0	0	0
248	SLD 15	-1.35	-0.4	14.83	0	0	0
248	SLD 16	-1.29	-0.37	14.83	0	0	0
248	SLV 1	3.19	0.53	14.11	0	0	0
248	SLV 2	3.34	0.59	14.12	0	0	0
248	SLV 3	3.11	-0.49	13.83	0	0	0
248	SLV 4	3.26	-0.43	13.83	0	0	0
248	SLV 5	1.09	1.62	14.9	0	0	0
248	SLV 6	1.19	1.66	14.9	0	0	0
248	SLV 7	0.82	-1.77	13.95	0	0	0
248	SLV 8	0.92	-1.73	13.95	0	0	0
248	SLV 9	-0.81	1.53	15.28	0	0	0
248	SLV 10	-0.72	1.57	15.28	0	0	0
248	SLV 11	-1.08	-1.86	14.33	0	0	0
248	SLV 12	-0.98	-1.82	14.34	0	0	0
248	SLV 13	-3.15	0.23	15.4	0	0	0
248	SLV 14	-3	0.29	15.4	0	0	0
248	SLV 15	-3.23	-0.79	15.11	0	0	0
248	SLV 16	-3.08	-0.73	15.12	0	0	0
249	SLU 1	0.05	-0.12	13.65	0	0	0
249	SLU 2	0.05	-0.1	13.65	0	0	0
249	SLU 3	0.05	-0.12	13.91	0	0	0
249	SLU 4	0.05	-0.1	13.91	0	0	0
249	SLU 5	0.05	-0.1	13.81	0	0	0
249	SLU 6	0.05	-0.12	14.07	0	0	0
249	SLU 7	0.05	-0.11	14.07	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
249	SLU 8	0.05	-0.13	13.98	0	0	0
249	SLU 9	0.05	-0.11	13.98	0	0	0
249	SLU 10	0.05	-0.09	15.44	0	0	0
249	SLU 11	0.06	-0.11	15.7	0	0	0
249	SLU 12	0.06	-0.1	15.7	0	0	0
249	SLU 13	0.05	-0.09	15.61	0	0	0
249	SLU 14	0.06	-0.12	15.86	0	0	0
249	SLU 15	0.06	-0.1	15.86	0	0	0
249	SLU 16	0.06	-0.12	15.77	0	0	0
249	SLU 17	0.05	-0.11	15.77	0	0	0
249	SLU 18	0.06	-0.11	16.21	0	0	0
249	SLU 19	0.06	-0.1	16.21	0	0	0
249	SLU 20	0.06	-0.11	16.37	0	0	0
249	SLU 21	0.06	-0.1	16.37	0	0	0
249	SLU 22	0.06	-0.11	15.21	0	0	0
249	SLU 23	0.06	-0.09	15.21	0	0	0
249	SLU 24	0.06	-0.11	15.47	0	0	0
249	SLU 25	0.06	-0.1	15.47	0	0	0
249	SLU 26	0.06	-0.09	15.37	0	0	0
249	SLU 27	0.06	-0.11	15.63	0	0	0
249	SLU 28	0.06	-0.1	15.63	0	0	0
249	SLU 29	0.06	-0.12	15.54	0	0	0
249	SLU 30	0.06	-0.1	15.54	0	0	0
249	SLU 31	0.06	-0.08	17	0	0	0
249	SLU 32	0.07	-0.1	17.26	0	0	0
249	SLU 33	0.07	-0.09	17.26	0	0	0
249	SLU 34	0.06	-0.08	17.17	0	0	0
249	SLU 35	0.07	-0.11	17.42	0	0	0
249	SLU 36	0.07	-0.09	17.42	0	0	0
249	SLU 37	0.07	-0.11	17.33	0	0	0
249	SLU 38	0.07	-0.1	17.33	0	0	0
249	SLU 39	0.07	-0.1	17.77	0	0	0
249	SLU 40	0.07	-0.09	17.77	0	0	0
249	SLU 41	0.07	-0.1	17.93	0	0	0
249	SLU 42	0.07	-0.09	17.93	0	0	0
249	SLU 43	0.06	-0.16	17.21	0	0	0
249	SLU 44	0.06	-0.14	17.21	0	0	0
249	SLU 45	0.06	-0.16	17.47	0	0	0
249	SLU 46	0.06	-0.14	17.47	0	0	0
249	SLU 47	0.06	-0.14	17.37	0	0	0
249	SLU 48	0.06	-0.16	17.63	0	0	0
249	SLU 49	0.06	-0.15	17.63	0	0	0
249	SLU 50	0.06	-0.16	17.53	0	0	0
249	SLU 51	0.06	-0.15	17.54	0	0	0
249	SLU 52	0.07	-0.13	19	0	0	0
249	SLU 53	0.07	-0.15	19.26	0	0	0
249	SLU 54	0.07	-0.14	19.26	0	0	0
249	SLU 55	0.07	-0.13	19.17	0	0	0
249	SLU 56	0.07	-0.15	19.42	0	0	0
249	SLU 57	0.07	-0.14	19.42	0	0	0
249	SLU 58	0.07	-0.16	19.33	0	0	0
249	SLU 59	0.07	-0.15	19.33	0	0	0
249	SLU 60	0.07	-0.15	19.77	0	0	0
249	SLU 61	0.07	-0.14	19.77	0	0	0
249	SLU 62	0.07	-0.15	19.93	0	0	0
249	SLU 63	0.07	-0.14	19.93	0	0	0
249	SLU 64	0.07	-0.15	18.77	0	0	0
249	SLU 65	0.07	-0.13	18.77	0	0	0
249	SLU 66	0.08	-0.15	19.03	0	0	0
249	SLU 67	0.07	-0.13	19.03	0	0	0
249	SLU 68	0.07	-0.13	18.93	0	0	0
249	SLU 69	0.08	-0.15	19.19	0	0	0
249	SLU 70	0.07	-0.14	19.19	0	0	0
249	SLU 71	0.07	-0.16	19.1	0	0	0
249	SLU 72	0.07	-0.14	19.1	0	0	0
249	SLU 73	0.08	-0.12	20.56	0	0	0
249	SLU 74	0.08	-0.14	20.82	0	0	0
249	SLU 75	0.08	-0.13	20.82	0	0	0
249	SLU 76	0.08	-0.12	20.73	0	0	0
249	SLU 77	0.08	-0.15	20.98	0	0	0
249	SLU 78	0.08	-0.13	20.98	0	0	0
249	SLU 79	0.08	-0.15	20.89	0	0	0
249	SLU 80	0.08	-0.14	20.89	0	0	0
249	SLU 81	0.08	-0.14	21.33	0	0	0
249	SLU 82	0.08	-0.13	21.33	0	0	0
249	SLU 83	0.08	-0.14	21.49	0	0	0
249	SLU 84	0.08	-0.13	21.49	0	0	0
249	SLE RA 1	0.05	-0.12	14.1	0	0	0
249	SLE RA 2	0.05	-0.1	14.1	0	0	0
249	SLE RA 3	0.06	-0.12	14.27	0	0	0
249	SLE RA 4	0.05	-0.11	14.27	0	0	0
249	SLE RA 5	0.05	-0.1	14.21	0	0	0
249	SLE RA 6	0.06	-0.12	14.38	0	0	0
249	SLE RA 7	0.05	-0.11	14.38	0	0	0
249	SLE RA 8	0.05	-0.12	14.31	0	0	0
249	SLE RA 9	0.05	-0.11	14.31	0	0	0
249	SLE RA 10	0.06	-0.1	15.29	0	0	0
249	SLE RA 11	0.06	-0.11	15.46	0	0	0
249	SLE RA 12	0.06	-0.1	15.46	0	0	0
249	SLE RA 13	0.06	-0.1	15.4	0	0	0
249	SLE RA 14	0.06	-0.11	15.57	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
249	SLE RA 15	0.06	-0.11	15.57	0	0	0
249	SLE RA 16	0.06	-0.12	15.51	0	0	0
249	SLE RA 17	0.06	-0.11	15.51	0	0	0
249	SLE RA 18	0.06	-0.11	15.8	0	0	0
249	SLE RA 19	0.06	-0.1	15.8	0	0	0
249	SLE RA 20	0.06	-0.11	15.91	0	0	0
249	SLE RA 21	0.06	-0.1	15.91	0	0	0
249	SLE FR 1	0.05	-0.12	14.1	0	0	0
249	SLE FR 2	0.05	-0.11	14.1	0	0	0
249	SLE FR 3	0.05	-0.12	14.14	0	0	0
249	SLE FR 4	0.06	-0.11	14.61	0	0	0
249	SLE FR 5	0.06	-0.12	14.65	0	0	0
249	SLE FR 6	0.06	-0.11	14.95	0	0	0
249	SLE QP 1	0.05	-0.12	14.1	0	0	0
249	SLE QP 2	0.06	-0.12	14.61	0	0	0
249	SLD 1	1.4	0.17	14.32	0	0	0
249	SLD 2	1.46	0.2	14.32	0	0	0
249	SLD 3	1.37	-0.28	14.2	0	0	0
249	SLD 4	1.43	-0.25	14.2	0	0	0
249	SLD 5	0.5	0.64	14.7	0	0	0
249	SLD 6	0.54	0.66	14.7	0	0	0
249	SLD 7	0.39	-0.84	14.31	0	0	0
249	SLD 8	0.43	-0.83	14.31	0	0	0
249	SLD 9	-0.31	0.6	14.91	0	0	0
249	SLD 10	-0.27	0.61	14.91	0	0	0
249	SLD 11	-0.43	-0.89	14.51	0	0	0
249	SLD 12	-0.39	-0.87	14.52	0	0	0
249	SLD 13	-1.32	0.02	15.01	0	0	0
249	SLD 14	-1.25	0.05	15.01	0	0	0
249	SLD 15	-1.35	-0.43	14.89	0	0	0
249	SLD 16	-1.29	-0.4	14.9	0	0	0
249	SLV 1	3.2	0.53	13.93	0	0	0
249	SLV 2	3.35	0.6	13.93	0	0	0
249	SLV 3	3.12	-0.48	13.66	0	0	0
249	SLV 4	3.27	-0.41	13.67	0	0	0
249	SLV 5	1.1	1.61	14.81	0	0	0
249	SLV 6	1.19	1.65	14.81	0	0	0
249	SLV 7	0.83	-1.78	13.92	0	0	0
249	SLV 8	0.92	-1.73	13.92	0	0	0
249	SLV 9	-0.81	1.5	15.3	0	0	0
249	SLV 10	-0.72	1.55	15.3	0	0	0
249	SLV 11	-1.08	-1.88	14.4	0	0	0
249	SLV 12	-0.98	-1.84	14.41	0	0	0
249	SLV 13	-3.16	0.18	15.55	0	0	0
249	SLV 14	-3.01	0.25	15.55	0	0	0
249	SLV 15	-3.24	-0.83	15.28	0	0	0
249	SLV 16	-3.09	-0.76	15.29	0	0	0
250	SLU 1	0.05	-0.13	13.64	0	0	0
250	SLU 2	0.05	-0.11	13.64	0	0	0
250	SLU 3	0.06	-0.13	13.9	0	0	0
250	SLU 4	0.05	-0.12	13.9	0	0	0
250	SLU 5	0.05	-0.11	13.8	0	0	0
250	SLU 6	0.06	-0.14	14.06	0	0	0
250	SLU 7	0.05	-0.12	14.06	0	0	0
250	SLU 8	0.05	-0.14	13.97	0	0	0
250	SLU 9	0.05	-0.13	13.97	0	0	0
250	SLU 10	0.06	-0.11	15.43	0	0	0
250	SLU 11	0.06	-0.13	15.68	0	0	0
250	SLU 12	0.06	-0.11	15.68	0	0	0
250	SLU 13	0.06	-0.11	15.59	0	0	0
250	SLU 14	0.06	-0.13	15.85	0	0	0
250	SLU 15	0.06	-0.12	15.85	0	0	0
250	SLU 16	0.06	-0.14	15.75	0	0	0
250	SLU 17	0.06	-0.12	15.75	0	0	0
250	SLU 18	0.06	-0.13	16.19	0	0	0
250	SLU 19	0.06	-0.11	16.19	0	0	0
250	SLU 20	0.06	-0.13	16.35	0	0	0
250	SLU 21	0.06	-0.12	16.35	0	0	0
250	SLU 22	0.07	-0.13	15.21	0	0	0
250	SLU 23	0.06	-0.1	15.21	0	0	0
250	SLU 24	0.07	-0.13	15.46	0	0	0
250	SLU 25	0.07	-0.11	15.46	0	0	0
250	SLU 26	0.06	-0.11	15.37	0	0	0
250	SLU 27	0.07	-0.13	15.63	0	0	0
250	SLU 28	0.07	-0.11	15.63	0	0	0
250	SLU 29	0.07	-0.13	15.53	0	0	0
250	SLU 30	0.06	-0.12	15.53	0	0	0
250	SLU 31	0.07	-0.1	16.99	0	0	0
250	SLU 32	0.07	-0.12	17.25	0	0	0
250	SLU 33	0.07	-0.11	17.25	0	0	0
250	SLU 34	0.07	-0.1	17.15	0	0	0
250	SLU 35	0.07	-0.12	17.41	0	0	0
250	SLU 36	0.07	-0.11	17.41	0	0	0
250	SLU 37	0.07	-0.13	17.32	0	0	0
250	SLU 38	0.07	-0.11	17.32	0	0	0
250	SLU 39	0.07	-0.12	17.76	0	0	0
250	SLU 40	0.07	-0.11	17.76	0	0	0
250	SLU 41	0.07	-0.12	17.92	0	0	0
250	SLU 42	0.07	-0.11	17.92	0	0	0
250	SLU 43	0.07	-0.18	17.2	0	0	0
250	SLU 44	0.06	-0.15	17.2	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
250	SLU 45	0.07	-0.17	17.46	0	0	0
250	SLU 46	0.07	-0.16	17.45	0	0	0
250	SLU 47	0.06	-0.16	17.36	0	0	0
250	SLU 48	0.07	-0.18	17.62	0	0	0
250	SLU 49	0.07	-0.16	17.62	0	0	0
250	SLU 50	0.07	-0.18	17.52	0	0	0
250	SLU 51	0.06	-0.17	17.52	0	0	0
250	SLU 52	0.07	-0.15	18.98	0	0	0
250	SLU 53	0.07	-0.17	19.24	0	0	0
250	SLU 54	0.07	-0.16	19.24	0	0	0
250	SLU 55	0.07	-0.15	19.15	0	0	0
250	SLU 56	0.07	-0.17	19.4	0	0	0
250	SLU 57	0.07	-0.16	19.4	0	0	0
250	SLU 58	0.07	-0.18	19.31	0	0	0
250	SLU 59	0.07	-0.16	19.31	0	0	0
250	SLU 60	0.07	-0.17	19.75	0	0	0
250	SLU 61	0.07	-0.16	19.75	0	0	0
250	SLU 62	0.07	-0.17	19.91	0	0	0
250	SLU 63	0.07	-0.16	19.91	0	0	0
250	SLU 64	0.08	-0.17	18.76	0	0	0
250	SLU 65	0.08	-0.15	18.76	0	0	0
250	SLU 66	0.08	-0.17	19.02	0	0	0
250	SLU 67	0.08	-0.15	19.02	0	0	0
250	SLU 68	0.08	-0.15	18.93	0	0	0
250	SLU 69	0.08	-0.17	19.18	0	0	0
250	SLU 70	0.08	-0.16	19.18	0	0	0
250	SLU 71	0.08	-0.17	19.09	0	0	0
250	SLU 72	0.08	-0.16	19.09	0	0	0
250	SLU 73	0.08	-0.14	20.55	0	0	0
250	SLU 74	0.08	-0.16	20.8	0	0	0
250	SLU 75	0.08	-0.15	20.8	0	0	0
250	SLU 76	0.08	-0.14	20.71	0	0	0
250	SLU 77	0.08	-0.17	20.97	0	0	0
250	SLU 78	0.08	-0.15	20.97	0	0	0
250	SLU 79	0.08	-0.17	20.87	0	0	0
250	SLU 80	0.08	-0.16	20.87	0	0	0
250	SLU 81	0.08	-0.16	21.31	0	0	0
250	SLU 82	0.08	-0.15	21.31	0	0	0
250	SLU 83	0.08	-0.17	21.48	0	0	0
250	SLU 84	0.08	-0.15	21.48	0	0	0
250	SLE RA 1	0.06	-0.13	14.09	0	0	0
250	SLE RA 2	0.06	-0.12	14.09	0	0	0
250	SLE RA 3	0.06	-0.13	14.26	0	0	0
250	SLE RA 4	0.06	-0.12	14.26	0	0	0
250	SLE RA 5	0.06	-0.12	14.2	0	0	0
250	SLE RA 6	0.06	-0.13	14.37	0	0	0
250	SLE RA 7	0.06	-0.12	14.37	0	0	0
250	SLE RA 8	0.06	-0.14	14.31	0	0	0
250	SLE RA 9	0.06	-0.13	14.31	0	0	0
250	SLE RA 10	0.06	-0.11	15.28	0	0	0
250	SLE RA 11	0.06	-0.13	15.45	0	0	0
250	SLE RA 12	0.06	-0.12	15.45	0	0	0
250	SLE RA 13	0.06	-0.12	15.39	0	0	0
250	SLE RA 14	0.06	-0.13	15.56	0	0	0
250	SLE RA 15	0.06	-0.12	15.56	0	0	0
250	SLE RA 16	0.06	-0.13	15.5	0	0	0
250	SLE RA 17	0.06	-0.12	15.5	0	0	0
250	SLE RA 18	0.06	-0.13	15.79	0	0	0
250	SLE RA 19	0.06	-0.12	15.79	0	0	0
250	SLE RA 20	0.06	-0.13	15.9	0	0	0
250	SLE RA 21	0.06	-0.12	15.9	0	0	0
250	SLE FR 1	0.06	-0.13	14.09	0	0	0
250	SLE FR 2	0.06	-0.13	14.09	0	0	0
250	SLE FR 3	0.06	-0.13	14.13	0	0	0
250	SLE FR 4	0.06	-0.13	14.6	0	0	0
250	SLE FR 5	0.06	-0.13	14.64	0	0	0
250	SLE FR 6	0.06	-0.13	14.94	0	0	0
250	SLE QP 1	0.06	-0.13	14.09	0	0	0
250	SLE QP 2	0.06	-0.13	14.6	0	0	0
250	SLD 1	1.39	0.16	14.23	0	0	0
250	SLD 2	1.46	0.19	14.23	0	0	0
250	SLD 3	1.36	-0.28	14.12	0	0	0
250	SLD 4	1.42	-0.25	14.12	0	0	0
250	SLD 5	0.5	0.62	14.66	0	0	0
250	SLD 6	0.54	0.64	14.66	0	0	0
250	SLD 7	0.39	-0.85	14.29	0	0	0
250	SLD 8	0.43	-0.83	14.29	0	0	0
250	SLD 9	-0.31	0.57	14.91	0	0	0
250	SLD 10	-0.27	0.59	14.91	0	0	0
250	SLD 11	-0.43	-0.9	14.54	0	0	0
250	SLD 12	-0.38	-0.88	14.54	0	0	0
250	SLD 13	-1.31	-0.01	15.08	0	0	0
250	SLD 14	-1.24	0.02	15.08	0	0	0
250	SLD 15	-1.34	-0.45	14.97	0	0	0
250	SLD 16	-1.28	-0.42	14.97	0	0	0
250	SLV 1	3.18	0.53	13.74	0	0	0
250	SLV 2	3.33	0.61	13.74	0	0	0
250	SLV 3	3.1	-0.47	13.48	0	0	0
250	SLV 4	3.25	-0.4	13.49	0	0	0
250	SLV 5	1.09	1.58	14.72	0	0	0
250	SLV 6	1.19	1.63	14.73	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
250	SLV 7	0.83	-1.77	13.88	0	0	0
250	SLV 8	0.92	-1.72	13.88	0	0	0
250	SLV 9	-0.8	1.46	15.32	0	0	0
250	SLV 10	-0.71	1.51	15.32	0	0	0
250	SLV 11	-1.07	-1.89	14.47	0	0	0
250	SLV 12	-0.98	-1.84	14.48	0	0	0
250	SLV 13	-3.14	0.14	15.71	0	0	0
250	SLV 14	-2.99	0.22	15.72	0	0	0
250	SLV 15	-3.22	-0.87	15.46	0	0	0
250	SLV 16	-3.07	-0.79	15.46	0	0	0
251	SLU 1	0.06	-0.14	13.59	0	0	0
251	SLU 2	0.05	-0.12	13.58	0	0	0
251	SLU 3	0.06	-0.14	13.84	0	0	0
251	SLU 4	0.06	-0.13	13.84	0	0	0
251	SLU 5	0.05	-0.12	13.74	0	0	0
251	SLU 6	0.06	-0.15	14	0	0	0
251	SLU 7	0.06	-0.13	14	0	0	0
251	SLU 8	0.06	-0.15	13.91	0	0	0
251	SLU 9	0.05	-0.14	13.91	0	0	0
251	SLU 10	0.06	-0.12	15.36	0	0	0
251	SLU 11	0.06	-0.14	15.61	0	0	0
251	SLU 12	0.06	-0.13	15.61	0	0	0
251	SLU 13	0.06	-0.12	15.52	0	0	0
251	SLU 14	0.06	-0.15	15.77	0	0	0
251	SLU 15	0.06	-0.13	15.77	0	0	0
251	SLU 16	0.06	-0.15	15.68	0	0	0
251	SLU 17	0.06	-0.14	15.68	0	0	0
251	SLU 18	0.06	-0.14	16.12	0	0	0
251	SLU 19	0.06	-0.13	16.12	0	0	0
251	SLU 20	0.06	-0.14	16.28	0	0	0
251	SLU 21	0.06	-0.13	16.28	0	0	0
251	SLU 22	0.07	-0.14	15.15	0	0	0
251	SLU 23	0.07	-0.12	15.15	0	0	0
251	SLU 24	0.07	-0.14	15.41	0	0	0
251	SLU 25	0.07	-0.12	15.4	0	0	0
251	SLU 26	0.07	-0.12	15.31	0	0	0
251	SLU 27	0.07	-0.14	15.57	0	0	0
251	SLU 28	0.07	-0.13	15.57	0	0	0
251	SLU 29	0.07	-0.15	15.47	0	0	0
251	SLU 30	0.07	-0.13	15.47	0	0	0
251	SLU 31	0.07	-0.11	16.92	0	0	0
251	SLU 32	0.07	-0.14	17.18	0	0	0
251	SLU 33	0.07	-0.12	17.18	0	0	0
251	SLU 34	0.07	-0.12	17.08	0	0	0
251	SLU 35	0.07	-0.14	17.34	0	0	0
251	SLU 36	0.07	-0.13	17.34	0	0	0
251	SLU 37	0.07	-0.14	17.24	0	0	0
251	SLU 38	0.07	-0.13	17.24	0	0	0
251	SLU 39	0.07	-0.13	17.68	0	0	0
251	SLU 40	0.07	-0.12	17.68	0	0	0
251	SLU 41	0.07	-0.14	17.84	0	0	0
251	SLU 42	0.07	-0.12	17.84	0	0	0
251	SLU 43	0.07	-0.19	17.12	0	0	0
251	SLU 44	0.07	-0.17	17.12	0	0	0
251	SLU 45	0.07	-0.19	17.38	0	0	0
251	SLU 46	0.07	-0.18	17.38	0	0	0
251	SLU 47	0.07	-0.17	17.28	0	0	0
251	SLU 48	0.07	-0.19	17.54	0	0	0
251	SLU 49	0.07	-0.18	17.54	0	0	0
251	SLU 50	0.07	-0.2	17.45	0	0	0
251	SLU 51	0.07	-0.18	17.44	0	0	0
251	SLU 52	0.07	-0.16	18.89	0	0	0
251	SLU 53	0.07	-0.19	19.15	0	0	0
251	SLU 54	0.07	-0.17	19.15	0	0	0
251	SLU 55	0.07	-0.17	19.06	0	0	0
251	SLU 56	0.07	-0.19	19.31	0	0	0
251	SLU 57	0.07	-0.18	19.31	0	0	0
251	SLU 58	0.07	-0.19	19.22	0	0	0
251	SLU 59	0.07	-0.18	19.22	0	0	0
251	SLU 60	0.07	-0.19	19.66	0	0	0
251	SLU 61	0.07	-0.17	19.65	0	0	0
251	SLU 62	0.07	-0.19	19.82	0	0	0
251	SLU 63	0.07	-0.18	19.82	0	0	0
251	SLU 64	0.08	-0.18	18.69	0	0	0
251	SLU 65	0.08	-0.16	18.69	0	0	0
251	SLU 66	0.08	-0.18	18.94	0	0	0
251	SLU 67	0.08	-0.17	18.94	0	0	0
251	SLU 68	0.08	-0.16	18.85	0	0	0
251	SLU 69	0.08	-0.19	19.11	0	0	0
251	SLU 70	0.08	-0.17	19.1	0	0	0
251	SLU 71	0.08	-0.19	19.01	0	0	0
251	SLU 72	0.08	-0.18	19.01	0	0	0
251	SLU 73	0.08	-0.16	20.46	0	0	0
251	SLU 74	0.09	-0.18	20.72	0	0	0
251	SLU 75	0.08	-0.17	20.72	0	0	0
251	SLU 76	0.08	-0.16	20.62	0	0	0
251	SLU 77	0.09	-0.18	20.88	0	0	0
251	SLU 78	0.09	-0.17	20.88	0	0	0
251	SLU 79	0.08	-0.19	20.78	0	0	0
251	SLU 80	0.08	-0.17	20.78	0	0	0
251	SLU 81	0.09	-0.18	21.22	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
251	SLU 82	0.09	-0.17	21.22	0	0	0
251	SLU 83	0.09	-0.18	21.38	0	0	0
251	SLU 84	0.09	-0.17	21.38	0	0	0
251	SLE RA 1	0.06	-0.14	14.03	0	0	0
251	SLE RA 2	0.06	-0.13	14.03	0	0	0
251	SLE RA 3	0.06	-0.14	14.2	0	0	0
251	SLE RA 4	0.06	-0.13	14.2	0	0	0
251	SLE RA 5	0.06	-0.13	14.14	0	0	0
251	SLE RA 6	0.06	-0.14	14.31	0	0	0
251	SLE RA 7	0.06	-0.14	14.31	0	0	0
251	SLE RA 8	0.06	-0.15	14.25	0	0	0
251	SLE RA 9	0.06	-0.14	14.25	0	0	0
251	SLE RA 10	0.06	-0.13	15.21	0	0	0
251	SLE RA 11	0.06	-0.14	15.38	0	0	0
251	SLE RA 12	0.06	-0.13	15.38	0	0	0
251	SLE RA 13	0.06	-0.13	15.32	0	0	0
251	SLE RA 14	0.06	-0.14	15.49	0	0	0
251	SLE RA 15	0.06	-0.13	15.49	0	0	0
251	SLE RA 16	0.06	-0.15	15.43	0	0	0
251	SLE RA 17	0.06	-0.14	15.43	0	0	0
251	SLE RA 18	0.06	-0.14	15.72	0	0	0
251	SLE RA 19	0.06	-0.13	15.72	0	0	0
251	SLE RA 20	0.06	-0.14	15.83	0	0	0
251	SLE RA 21	0.06	-0.13	15.83	0	0	0
251	SLE FR 1	0.06	-0.14	14.03	0	0	0
251	SLE FR 2	0.06	-0.14	14.03	0	0	0
251	SLE FR 3	0.06	-0.14	14.08	0	0	0
251	SLE FR 4	0.06	-0.14	14.54	0	0	0
251	SLE FR 5	0.06	-0.14	14.58	0	0	0
251	SLE FR 6	0.06	-0.14	14.88	0	0	0
251	SLE QP 1	0.06	-0.14	14.03	0	0	0
251	SLE QP 2	0.06	-0.14	14.54	0	0	0
251	SLD 1	1.37	0.15	14.09	0	0	0
251	SLD 2	1.44	0.18	14.09	0	0	0
251	SLD 3	1.34	-0.29	13.99	0	0	0
251	SLD 4	1.4	-0.25	13.99	0	0	0
251	SLD 5	0.5	0.59	14.56	0	0	0
251	SLD 6	0.54	0.62	14.57	0	0	0
251	SLD 7	0.38	-0.85	14.21	0	0	0
251	SLD 8	0.42	-0.82	14.21	0	0	0
251	SLD 9	-0.3	0.54	14.86	0	0	0
251	SLD 10	-0.26	0.56	14.87	0	0	0
251	SLD 11	-0.41	-0.9	14.51	0	0	0
251	SLD 12	-0.37	-0.88	14.51	0	0	0
251	SLD 13	-1.28	-0.03	15.09	0	0	0
251	SLD 14	-1.22	0	15.09	0	0	0
251	SLD 15	-1.32	-0.47	14.98	0	0	0
251	SLD 16	-1.25	-0.43	14.99	0	0	0
251	SLV 1	3.13	0.52	13.49	0	0	0
251	SLV 2	3.28	0.6	13.49	0	0	0
251	SLV 3	3.06	-0.46	13.25	0	0	0
251	SLV 4	3.2	-0.38	13.25	0	0	0
251	SLV 5	1.08	1.54	14.59	0	0	0
251	SLV 6	1.17	1.59	14.59	0	0	0
251	SLV 7	0.81	-1.75	13.79	0	0	0
251	SLV 8	0.91	-1.69	13.79	0	0	0
251	SLV 9	-0.79	1.41	15.29	0	0	0
251	SLV 10	-0.69	1.46	15.29	0	0	0
251	SLV 11	-1.05	-1.87	14.49	0	0	0
251	SLV 12	-0.96	-1.82	14.49	0	0	0
251	SLV 13	-3.08	0.1	15.83	0	0	0
251	SLV 14	-2.93	0.18	15.83	0	0	0
251	SLV 15	-3.16	-0.89	15.59	0	0	0
251	SLV 16	-3.01	-0.8	15.59	0	0	0
252	SLU 1	0.05	-0.14	12.47	0	0	0
252	SLU 2	0.05	-0.12	12.47	0	0	0
252	SLU 3	0.05	-0.14	12.71	0	0	0
252	SLU 4	0.05	-0.13	12.71	0	0	0
252	SLU 5	0.05	-0.12	12.62	0	0	0
252	SLU 6	0.05	-0.14	12.86	0	0	0
252	SLU 7	0.05	-0.13	12.85	0	0	0
252	SLU 8	0.05	-0.15	12.77	0	0	0
252	SLU 9	0.05	-0.13	12.77	0	0	0
252	SLU 10	0.06	-0.12	14.1	0	0	0
252	SLU 11	0.06	-0.14	14.33	0	0	0
252	SLU 12	0.06	-0.13	14.33	0	0	0
252	SLU 13	0.06	-0.12	14.24	0	0	0
252	SLU 14	0.06	-0.14	14.48	0	0	0
252	SLU 15	0.06	-0.13	14.48	0	0	0
252	SLU 16	0.06	-0.15	14.39	0	0	0
252	SLU 17	0.06	-0.13	14.39	0	0	0
252	SLU 18	0.06	-0.14	14.8	0	0	0
252	SLU 19	0.06	-0.13	14.79	0	0	0
252	SLU 20	0.06	-0.14	14.94	0	0	0
252	SLU 21	0.06	-0.13	14.94	0	0	0
252	SLU 22	0.06	-0.14	13.92	0	0	0
252	SLU 23	0.06	-0.12	13.91	0	0	0
252	SLU 24	0.07	-0.14	14.15	0	0	0
252	SLU 25	0.06	-0.12	14.15	0	0	0
252	SLU 26	0.06	-0.12	14.06	0	0	0
252	SLU 27	0.07	-0.14	14.3	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
252	SLU 28	0.06	-0.13	14.3	0	0	0
252	SLU 29	0.06	-0.14	14.21	0	0	0
252	SLU 30	0.06	-0.13	14.21	0	0	0
252	SLU 31	0.07	-0.12	15.54	0	0	0
252	SLU 32	0.07	-0.14	15.78	0	0	0
252	SLU 33	0.07	-0.12	15.78	0	0	0
252	SLU 34	0.07	-0.12	15.69	0	0	0
252	SLU 35	0.07	-0.14	15.93	0	0	0
252	SLU 36	0.07	-0.13	15.92	0	0	0
252	SLU 37	0.07	-0.14	15.84	0	0	0
252	SLU 38	0.07	-0.13	15.84	0	0	0
252	SLU 39	0.07	-0.14	16.24	0	0	0
252	SLU 40	0.07	-0.12	16.24	0	0	0
252	SLU 41	0.07	-0.14	16.39	0	0	0
252	SLU 42	0.07	-0.13	16.39	0	0	0
252	SLU 43	0.07	-0.18	15.72	0	0	0
252	SLU 44	0.06	-0.16	15.72	0	0	0
252	SLU 45	0.07	-0.18	15.95	0	0	0
252	SLU 46	0.07	-0.17	15.95	0	0	0
252	SLU 47	0.06	-0.17	15.86	0	0	0
252	SLU 48	0.07	-0.19	16.1	0	0	0
252	SLU 49	0.07	-0.18	16.1	0	0	0
252	SLU 50	0.07	-0.19	16.02	0	0	0
252	SLU 51	0.06	-0.18	16.01	0	0	0
252	SLU 52	0.07	-0.16	17.34	0	0	0
252	SLU 53	0.07	-0.18	17.58	0	0	0
252	SLU 54	0.07	-0.17	17.58	0	0	0
252	SLU 55	0.07	-0.17	17.49	0	0	0
252	SLU 56	0.07	-0.19	17.73	0	0	0
252	SLU 57	0.07	-0.17	17.73	0	0	0
252	SLU 58	0.07	-0.19	17.64	0	0	0
252	SLU 59	0.07	-0.18	17.64	0	0	0
252	SLU 60	0.07	-0.18	18.04	0	0	0
252	SLU 61	0.07	-0.17	18.04	0	0	0
252	SLU 62	0.07	-0.19	18.19	0	0	0
252	SLU 63	0.07	-0.17	18.19	0	0	0
252	SLU 64	0.08	-0.18	17.16	0	0	0
252	SLU 65	0.07	-0.16	17.16	0	0	0
252	SLU 66	0.08	-0.18	17.4	0	0	0
252	SLU 67	0.08	-0.17	17.4	0	0	0
252	SLU 68	0.07	-0.16	17.31	0	0	0
252	SLU 69	0.08	-0.18	17.55	0	0	0
252	SLU 70	0.08	-0.17	17.54	0	0	0
252	SLU 71	0.08	-0.19	17.46	0	0	0
252	SLU 72	0.08	-0.17	17.46	0	0	0
252	SLU 73	0.08	-0.16	18.79	0	0	0
252	SLU 74	0.08	-0.18	19.02	0	0	0
252	SLU 75	0.08	-0.17	19.02	0	0	0
252	SLU 76	0.08	-0.16	18.93	0	0	0
252	SLU 77	0.08	-0.18	19.17	0	0	0
252	SLU 78	0.08	-0.17	19.17	0	0	0
252	SLU 79	0.08	-0.19	19.09	0	0	0
252	SLU 80	0.08	-0.17	19.08	0	0	0
252	SLU 81	0.08	-0.18	19.49	0	0	0
252	SLU 82	0.08	-0.17	19.48	0	0	0
252	SLU 83	0.08	-0.18	19.63	0	0	0
252	SLU 84	0.08	-0.17	19.63	0	0	0
252	SLE RA 1	0.06	-0.14	12.89	0	0	0
252	SLE RA 2	0.06	-0.13	12.88	0	0	0
252	SLE RA 3	0.06	-0.14	13.04	0	0	0
252	SLE RA 4	0.06	-0.13	13.04	0	0	0
252	SLE RA 5	0.06	-0.13	12.98	0	0	0
252	SLE RA 6	0.06	-0.14	13.14	0	0	0
252	SLE RA 7	0.06	-0.13	13.14	0	0	0
252	SLE RA 8	0.06	-0.14	13.08	0	0	0
252	SLE RA 9	0.06	-0.14	13.08	0	0	0
252	SLE RA 10	0.06	-0.13	13.97	0	0	0
252	SLE RA 11	0.06	-0.14	14.13	0	0	0
252	SLE RA 12	0.06	-0.13	14.12	0	0	0
252	SLE RA 13	0.06	-0.13	14.07	0	0	0
252	SLE RA 14	0.06	-0.14	14.22	0	0	0
252	SLE RA 15	0.06	-0.13	14.22	0	0	0
252	SLE RA 16	0.06	-0.14	14.17	0	0	0
252	SLE RA 17	0.06	-0.14	14.17	0	0	0
252	SLE RA 18	0.06	-0.14	14.43	0	0	0
252	SLE RA 19	0.06	-0.13	14.43	0	0	0
252	SLE RA 20	0.06	-0.14	14.53	0	0	0
252	SLE RA 21	0.06	-0.13	14.53	0	0	0
252	SLE FR 1	0.06	-0.14	12.89	0	0	0
252	SLE FR 2	0.06	-0.14	12.89	0	0	0
252	SLE FR 3	0.06	-0.14	12.93	0	0	0
252	SLE FR 4	0.06	-0.14	13.35	0	0	0
252	SLE FR 5	0.06	-0.14	13.39	0	0	0
252	SLE FR 6	0.06	-0.14	13.66	0	0	0
252	SLE QP 1	0.06	-0.14	12.89	0	0	0
252	SLE QP 2	0.06	-0.14	13.35	0	0	0
252	SLD 1	1.24	0.12	12.87	0	0	0
252	SLD 2	1.3	0.16	12.87	0	0	0
252	SLD 3	1.21	-0.26	12.77	0	0	0
252	SLD 4	1.27	-0.23	12.77	0	0	0
252	SLD 5	0.45	0.52	13.35	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
252	SLD 6	0.49	0.55	13.35	0	0	0
252	SLD 7	0.35	-0.77	13.03	0	0	0
252	SLD 8	0.38	-0.75	13.04	0	0	0
252	SLD 9	-0.27	0.47	13.67	0	0	0
252	SLD 10	-0.23	0.5	13.67	0	0	0
252	SLD 11	-0.37	-0.83	13.35	0	0	0
252	SLD 12	-0.33	-0.8	13.35	0	0	0
252	SLD 13	-1.15	-0.05	13.93	0	0	0
252	SLD 14	-1.1	-0.01	13.93	0	0	0
252	SLD 15	-1.18	-0.44	13.83	0	0	0
252	SLD 16	-1.13	-0.4	13.83	0	0	0
252	SLV 1	2.83	0.47	12.21	0	0	0
252	SLV 2	2.96	0.55	12.22	0	0	0
252	SLV 3	2.76	-0.42	12	0	0	0
252	SLV 4	2.89	-0.34	12.01	0	0	0
252	SLV 5	0.97	1.37	13.33	0	0	0
252	SLV 6	1.06	1.43	13.34	0	0	0
252	SLV 7	0.74	-1.58	12.62	0	0	0
252	SLV 8	0.82	-1.53	12.62	0	0	0
252	SLV 9	-0.71	1.25	14.08	0	0	0
252	SLV 10	-0.62	1.3	14.08	0	0	0
252	SLV 11	-0.94	-1.71	13.37	0	0	0
252	SLV 12	-0.86	-1.65	13.37	0	0	0
252	SLV 13	-2.77	0.06	14.7	0	0	0
252	SLV 14	-2.64	0.14	14.7	0	0	0
252	SLV 15	-2.84	-0.83	14.48	0	0	0
252	SLV 16	-2.71	-0.75	14.49	0	0	0
253	SLU 1	0.05	-0.14	11.64	0	0	0
253	SLU 2	0.05	-0.12	11.64	0	0	0
253	SLU 3	0.05	-0.14	11.86	0	0	0
253	SLU 4	0.05	-0.13	11.86	0	0	0
253	SLU 5	0.05	-0.12	11.78	0	0	0
253	SLU 6	0.05	-0.14	12	0	0	0
253	SLU 7	0.05	-0.13	12	0	0	0
253	SLU 8	0.05	-0.14	11.92	0	0	0
253	SLU 9	0.05	-0.13	11.92	0	0	0
253	SLU 10	0.05	-0.12	13.16	0	0	0
253	SLU 11	0.06	-0.14	13.38	0	0	0
253	SLU 12	0.06	-0.13	13.38	0	0	0
253	SLU 13	0.05	-0.12	13.29	0	0	0
253	SLU 14	0.06	-0.14	13.52	0	0	0
253	SLU 15	0.06	-0.13	13.51	0	0	0
253	SLU 16	0.06	-0.14	13.44	0	0	0
253	SLU 17	0.05	-0.13	13.43	0	0	0
253	SLU 18	0.06	-0.14	13.81	0	0	0
253	SLU 19	0.06	-0.13	13.81	0	0	0
253	SLU 20	0.06	-0.14	13.95	0	0	0
253	SLU 21	0.06	-0.13	13.94	0	0	0
253	SLU 22	0.06	-0.13	13	0	0	0
253	SLU 23	0.06	-0.12	12.99	0	0	0
253	SLU 24	0.06	-0.14	13.22	0	0	0
253	SLU 25	0.06	-0.12	13.21	0	0	0
253	SLU 26	0.06	-0.12	13.13	0	0	0
253	SLU 27	0.06	-0.14	13.35	0	0	0
253	SLU 28	0.06	-0.13	13.35	0	0	0
253	SLU 29	0.06	-0.14	13.27	0	0	0
253	SLU 30	0.06	-0.13	13.27	0	0	0
253	SLU 31	0.06	-0.12	14.51	0	0	0
253	SLU 32	0.07	-0.14	14.73	0	0	0
253	SLU 33	0.07	-0.12	14.73	0	0	0
253	SLU 34	0.06	-0.12	14.65	0	0	0
253	SLU 35	0.07	-0.14	14.87	0	0	0
253	SLU 36	0.07	-0.13	14.87	0	0	0
253	SLU 37	0.07	-0.14	14.79	0	0	0
253	SLU 38	0.07	-0.13	14.79	0	0	0
253	SLU 39	0.07	-0.13	15.16	0	0	0
253	SLU 40	0.07	-0.12	15.16	0	0	0
253	SLU 41	0.07	-0.14	15.3	0	0	0
253	SLU 42	0.07	-0.13	15.3	0	0	0
253	SLU 43	0.06	-0.18	14.67	0	0	0
253	SLU 44	0.06	-0.16	14.67	0	0	0
253	SLU 45	0.07	-0.18	14.89	0	0	0
253	SLU 46	0.06	-0.17	14.89	0	0	0
253	SLU 47	0.06	-0.16	14.81	0	0	0
253	SLU 48	0.07	-0.18	15.03	0	0	0
253	SLU 49	0.06	-0.17	15.03	0	0	0
253	SLU 50	0.06	-0.19	14.95	0	0	0
253	SLU 51	0.06	-0.17	14.94	0	0	0
253	SLU 52	0.07	-0.16	16.18	0	0	0
253	SLU 53	0.07	-0.18	16.41	0	0	0
253	SLU 54	0.07	-0.17	16.41	0	0	0
253	SLU 55	0.07	-0.16	16.32	0	0	0
253	SLU 56	0.07	-0.18	16.55	0	0	0
253	SLU 57	0.07	-0.17	16.54	0	0	0
253	SLU 58	0.07	-0.19	16.46	0	0	0
253	SLU 59	0.07	-0.17	16.46	0	0	0
253	SLU 60	0.07	-0.18	16.84	0	0	0
253	SLU 61	0.07	-0.17	16.84	0	0	0
253	SLU 62	0.07	-0.18	16.98	0	0	0
253	SLU 63	0.07	-0.17	16.97	0	0	0
253	SLU 64	0.07	-0.18	16.03	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
253	SLU 65	0.07	-0.16	16.02	0	0	0
253	SLU 66	0.08	-0.18	16.25	0	0	0
253	SLU 67	0.07	-0.17	16.24	0	0	0
253	SLU 68	0.07	-0.16	16.16	0	0	0
253	SLU 69	0.08	-0.18	16.38	0	0	0
253	SLU 70	0.07	-0.17	16.38	0	0	0
253	SLU 71	0.07	-0.18	16.3	0	0	0
253	SLU 72	0.07	-0.17	16.3	0	0	0
253	SLU 73	0.08	-0.16	17.54	0	0	0
253	SLU 74	0.08	-0.18	17.76	0	0	0
253	SLU 75	0.08	-0.17	17.76	0	0	0
253	SLU 76	0.08	-0.16	17.68	0	0	0
253	SLU 77	0.08	-0.18	17.9	0	0	0
253	SLU 78	0.08	-0.17	17.9	0	0	0
253	SLU 79	0.08	-0.18	17.82	0	0	0
253	SLU 80	0.08	-0.17	17.82	0	0	0
253	SLU 81	0.08	-0.18	18.19	0	0	0
253	SLU 82	0.08	-0.17	18.19	0	0	0
253	SLU 83	0.08	-0.18	18.33	0	0	0
253	SLU 84	0.08	-0.17	18.33	0	0	0
253	SLE RA 1	0.05	-0.14	12.03	0	0	0
253	SLE RA 2	0.05	-0.12	12.03	0	0	0
253	SLE RA 3	0.06	-0.14	12.18	0	0	0
253	SLE RA 4	0.05	-0.13	12.17	0	0	0
253	SLE RA 5	0.05	-0.13	12.12	0	0	0
253	SLE RA 6	0.06	-0.14	12.27	0	0	0
253	SLE RA 7	0.05	-0.13	12.27	0	0	0
253	SLE RA 8	0.05	-0.14	12.21	0	0	0
253	SLE RA 9	0.05	-0.13	12.21	0	0	0
253	SLE RA 10	0.06	-0.12	13.04	0	0	0
253	SLE RA 11	0.06	-0.14	13.19	0	0	0
253	SLE RA 12	0.06	-0.13	13.19	0	0	0
253	SLE RA 13	0.06	-0.13	13.13	0	0	0
253	SLE RA 14	0.06	-0.14	13.28	0	0	0
253	SLE RA 15	0.06	-0.13	13.28	0	0	0
253	SLE RA 16	0.06	-0.14	13.22	0	0	0
253	SLE RA 17	0.06	-0.13	13.22	0	0	0
253	SLE RA 18	0.06	-0.14	13.47	0	0	0
253	SLE RA 19	0.06	-0.13	13.47	0	0	0
253	SLE RA 20	0.06	-0.14	13.57	0	0	0
253	SLE RA 21	0.06	-0.13	13.56	0	0	0
253	SLE FR 1	0.05	-0.14	12.03	0	0	0
253	SLE FR 2	0.05	-0.13	12.03	0	0	0
253	SLE FR 3	0.05	-0.14	12.07	0	0	0
253	SLE FR 4	0.06	-0.13	12.46	0	0	0
253	SLE FR 5	0.06	-0.14	12.5	0	0	0
253	SLE FR 6	0.06	-0.14	12.75	0	0	0
253	SLE QP 1	0.05	-0.14	12.03	0	0	0
253	SLE QP 2	0.06	-0.14	12.46	0	0	0
253	SLD 1	1.14	0.11	11.95	0	0	0
253	SLD 2	1.19	0.14	11.95	0	0	0
253	SLD 3	1.11	-0.25	11.86	0	0	0
253	SLD 4	1.17	-0.21	11.87	0	0	0
253	SLD 5	0.42	0.47	12.44	0	0	0
253	SLD 6	0.45	0.5	12.44	0	0	0
253	SLD 7	0.32	-0.72	12.15	0	0	0
253	SLD 8	0.36	-0.69	12.15	0	0	0
253	SLD 9	-0.24	0.42	12.77	0	0	0
253	SLD 10	-0.21	0.44	12.77	0	0	0
253	SLD 11	-0.34	-0.77	12.49	0	0	0
253	SLD 12	-0.3	-0.74	12.49	0	0	0
253	SLD 13	-1.05	-0.06	13.06	0	0	0
253	SLD 14	-1	-0.02	13.06	0	0	0
253	SLD 15	-1.08	-0.42	12.97	0	0	0
253	SLD 16	-1.03	-0.38	12.98	0	0	0
253	SLV 1	2.6	0.43	11.26	0	0	0
253	SLV 2	2.72	0.51	11.26	0	0	0
253	SLV 3	2.53	-0.39	11.06	0	0	0
253	SLV 4	2.65	-0.3	11.07	0	0	0
253	SLV 5	0.9	1.25	12.4	0	0	0
253	SLV 6	0.97	1.3	12.4	0	0	0
253	SLV 7	0.68	-1.46	11.75	0	0	0
253	SLV 8	0.76	-1.41	11.75	0	0	0
253	SLV 9	-0.64	1.13	13.18	0	0	0
253	SLV 10	-0.57	1.19	13.18	0	0	0
253	SLV 11	-0.86	-1.58	12.52	0	0	0
253	SLV 12	-0.78	-1.52	12.53	0	0	0
253	SLV 13	-2.54	0.03	13.86	0	0	0
253	SLV 14	-2.42	0.11	13.86	0	0	0
253	SLV 15	-2.6	-0.78	13.66	0	0	0
253	SLV 16	-2.48	-0.7	13.67	0	0	0
254	SLU 1	0.03	-0.07	5.81	0	0	0
254	SLU 2	0.02	-0.06	5.81	0	0	0
254	SLU 3	0.03	-0.07	5.92	0	0	0
254	SLU 4	0.03	-0.07	5.92	0	0	0
254	SLU 5	0.02	-0.07	5.88	0	0	0
254	SLU 6	0.03	-0.08	5.99	0	0	0
254	SLU 7	0.03	-0.07	5.99	0	0	0
254	SLU 8	0.03	-0.08	5.95	0	0	0
254	SLU 9	0.03	-0.07	5.95	0	0	0
254	SLU 10	0.03	-0.06	6.57	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
254	SLU 11	0.03	-0.07	6.68	0	0	0
254	SLU 12	0.03	-0.07	6.68	0	0	0
254	SLU 13	0.03	-0.07	6.64	0	0	0
254	SLU 14	0.03	-0.08	6.75	0	0	0
254	SLU 15	0.03	-0.07	6.75	0	0	0
254	SLU 16	0.03	-0.08	6.71	0	0	0
254	SLU 17	0.03	-0.07	6.71	0	0	0
254	SLU 18	0.03	-0.07	6.89	0	0	0
254	SLU 19	0.03	-0.07	6.89	0	0	0
254	SLU 20	0.03	-0.08	6.96	0	0	0
254	SLU 21	0.03	-0.07	6.96	0	0	0
254	SLU 22	0.03	-0.07	6.49	0	0	0
254	SLU 23	0.03	-0.06	6.49	0	0	0
254	SLU 24	0.03	-0.07	6.6	0	0	0
254	SLU 25	0.03	-0.07	6.6	0	0	0
254	SLU 26	0.03	-0.07	6.56	0	0	0
254	SLU 27	0.03	-0.08	6.67	0	0	0
254	SLU 28	0.03	-0.07	6.67	0	0	0
254	SLU 29	0.03	-0.08	6.63	0	0	0
254	SLU 30	0.03	-0.07	6.63	0	0	0
254	SLU 31	0.03	-0.06	7.25	0	0	0
254	SLU 32	0.03	-0.07	7.36	0	0	0
254	SLU 33	0.03	-0.07	7.36	0	0	0
254	SLU 34	0.03	-0.07	7.32	0	0	0
254	SLU 35	0.03	-0.08	7.43	0	0	0
254	SLU 36	0.03	-0.07	7.43	0	0	0
254	SLU 37	0.03	-0.08	7.39	0	0	0
254	SLU 38	0.03	-0.07	7.39	0	0	0
254	SLU 39	0.03	-0.07	7.57	0	0	0
254	SLU 40	0.03	-0.07	7.57	0	0	0
254	SLU 41	0.03	-0.08	7.64	0	0	0
254	SLU 42	0.03	-0.07	7.64	0	0	0
254	SLU 43	0.03	-0.1	7.32	0	0	0
254	SLU 44	0.03	-0.09	7.32	0	0	0
254	SLU 45	0.03	-0.1	7.43	0	0	0
254	SLU 46	0.03	-0.09	7.43	0	0	0
254	SLU 47	0.03	-0.09	7.39	0	0	0
254	SLU 48	0.03	-0.1	7.5	0	0	0
254	SLU 49	0.03	-0.09	7.5	0	0	0
254	SLU 50	0.03	-0.1	7.46	0	0	0
254	SLU 51	0.03	-0.09	7.46	0	0	0
254	SLU 52	0.03	-0.09	8.08	0	0	0
254	SLU 53	0.03	-0.1	8.19	0	0	0
254	SLU 54	0.03	-0.09	8.19	0	0	0
254	SLU 55	0.03	-0.09	8.15	0	0	0
254	SLU 56	0.03	-0.1	8.26	0	0	0
254	SLU 57	0.03	-0.09	8.26	0	0	0
254	SLU 58	0.03	-0.1	8.22	0	0	0
254	SLU 59	0.03	-0.09	8.22	0	0	0
254	SLU 60	0.03	-0.1	8.41	0	0	0
254	SLU 61	0.03	-0.09	8.4	0	0	0
254	SLU 62	0.03	-0.1	8.47	0	0	0
254	SLU 63	0.03	-0.09	8.47	0	0	0
254	SLU 64	0.04	-0.1	8	0	0	0
254	SLU 65	0.04	-0.09	8	0	0	0
254	SLU 66	0.04	-0.1	8.11	0	0	0
254	SLU 67	0.04	-0.09	8.11	0	0	0
254	SLU 68	0.04	-0.09	8.07	0	0	0
254	SLU 69	0.04	-0.1	8.18	0	0	0
254	SLU 70	0.04	-0.09	8.18	0	0	0
254	SLU 71	0.04	-0.1	8.14	0	0	0
254	SLU 72	0.04	-0.09	8.14	0	0	0
254	SLU 73	0.04	-0.09	8.76	0	0	0
254	SLU 74	0.04	-0.1	8.87	0	0	0
254	SLU 75	0.04	-0.09	8.87	0	0	0
254	SLU 76	0.04	-0.09	8.83	0	0	0
254	SLU 77	0.04	-0.1	8.94	0	0	0
254	SLU 78	0.04	-0.09	8.94	0	0	0
254	SLU 79	0.04	-0.1	8.9	0	0	0
254	SLU 80	0.04	-0.09	8.9	0	0	0
254	SLU 81	0.04	-0.1	9.08	0	0	0
254	SLU 82	0.04	-0.09	9.08	0	0	0
254	SLU 83	0.04	-0.1	9.15	0	0	0
254	SLU 84	0.04	-0.09	9.15	0	0	0
254	SLE RA 1	0.03	-0.07	6.01	0	0	0
254	SLE RA 2	0.03	-0.07	6.01	0	0	0
254	SLE RA 3	0.03	-0.07	6.08	0	0	0
254	SLE RA 4	0.03	-0.07	6.08	0	0	0
254	SLE RA 5	0.03	-0.07	6.05	0	0	0
254	SLE RA 6	0.03	-0.07	6.13	0	0	0
254	SLE RA 7	0.03	-0.07	6.12	0	0	0
254	SLE RA 8	0.03	-0.08	6.1	0	0	0
254	SLE RA 9	0.03	-0.07	6.1	0	0	0
254	SLE RA 10	0.03	-0.07	6.51	0	0	0
254	SLE RA 11	0.03	-0.07	6.58	0	0	0
254	SLE RA 12	0.03	-0.07	6.58	0	0	0
254	SLE RA 13	0.03	-0.07	6.56	0	0	0
254	SLE RA 14	0.03	-0.08	6.63	0	0	0
254	SLE RA 15	0.03	-0.07	6.63	0	0	0
254	SLE RA 16	0.03	-0.08	6.6	0	0	0
254	SLE RA 17	0.03	-0.07	6.6	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
254	SLE RA 18	0.03	-0.07	6.73	0	0	0
254	SLE RA 19	0.03	-0.07	6.73	0	0	0
254	SLE RA 20	0.03	-0.08	6.77	0	0	0
254	SLE RA 21	0.03	-0.07	6.77	0	0	0
254	SLE FR 1	0.03	-0.07	6.01	0	0	0
254	SLE FR 2	0.03	-0.07	6.01	0	0	0
254	SLE FR 3	0.03	-0.07	6.03	0	0	0
254	SLE FR 4	0.03	-0.07	6.22	0	0	0
254	SLE FR 5	0.03	-0.07	6.24	0	0	0
254	SLE FR 6	0.03	-0.07	6.37	0	0	0
254	SLE QP 1	0.03	-0.07	6.01	0	0	0
254	SLE QP 2	0.03	-0.07	6.22	0	0	0
254	SLD 1	0.56	0.05	5.94	0	0	0
254	SLD 2	0.59	0.07	5.94	0	0	0
254	SLD 3	0.55	-0.13	5.9	0	0	0
254	SLD 4	0.57	-0.11	5.9	0	0	0
254	SLD 5	0.2	0.23	6.2	0	0	0
254	SLD 6	0.22	0.24	6.2	0	0	0
254	SLD 7	0.16	-0.36	6.06	0	0	0
254	SLD 8	0.17	-0.35	6.06	0	0	0
254	SLD 9	-0.12	0.2	6.39	0	0	0
254	SLD 10	-0.1	0.21	6.39	0	0	0
254	SLD 11	-0.17	-0.38	6.24	0	0	0
254	SLD 12	-0.15	-0.37	6.24	0	0	0
254	SLD 13	-0.52	-0.04	6.55	0	0	0
254	SLD 14	-0.49	-0.02	6.55	0	0	0
254	SLD 15	-0.53	-0.22	6.51	0	0	0
254	SLD 16	-0.51	-0.2	6.51	0	0	0
254	SLV 1	1.27	0.21	5.55	0	0	0
254	SLV 2	1.33	0.25	5.56	0	0	0
254	SLV 3	1.24	-0.19	5.46	0	0	0
254	SLV 4	1.3	-0.15	5.46	0	0	0
254	SLV 5	0.44	0.61	6.17	0	0	0
254	SLV 6	0.48	0.64	6.17	0	0	0
254	SLV 7	0.33	-0.72	5.84	0	0	0
254	SLV 8	0.37	-0.69	5.85	0	0	0
254	SLV 9	-0.32	0.54	6.6	0	0	0
254	SLV 10	-0.28	0.57	6.6	0	0	0
254	SLV 11	-0.42	-0.78	6.27	0	0	0
254	SLV 12	-0.39	-0.76	6.28	0	0	0
254	SLV 13	-1.25	0	6.99	0	0	0
254	SLV 14	-1.19	0.04	6.99	0	0	0
254	SLV 15	-1.28	-0.4	6.89	0	0	0
254	SLV 16	-1.22	-0.36	6.89	0	0	0
255	SLU 1	-0.46	-0.06	44.25	10.7759	-7.864	0.1058
255	SLU 2	-0.46	0.05	44.17	10.7566	-7.8484	0.1265
255	SLU 3	-0.47	-0.05	45.13	10.9885	-8.0192	0.1107
255	SLU 4	-0.47	0.02	45.08	10.9769	-8.0098	0.1232
255	SLU 5	-0.47	0.06	44.68	10.8816	-7.9399	0.1289
255	SLU 6	-0.48	-0.04	45.64	11.1135	-8.1106	0.1132
255	SLU 7	-0.48	0.02	45.59	11.1019	-8.1013	0.1256
255	SLU 8	-0.47	-0.05	45.28	11.0259	-8.0469	0.1106
255	SLU 9	-0.47	0.02	45.23	11.0143	-8.0376	0.123
255	SLU 10	-0.48	0.08	49.82	12.1285	-8.8504	0.1353
255	SLU 11	-0.49	-0.03	50.78	12.3604	-9.0211	0.1196
255	SLU 12	-0.49	0.04	50.73	12.3488	-9.0118	0.132
255	SLU 13	-0.49	0.08	50.33	12.2535	-8.9419	0.1377
255	SLU 14	-0.5	-0.02	51.3	12.4854	-9.1126	0.122
255	SLU 15	-0.5	0.05	51.24	12.4738	-9.1033	0.1344
255	SLU 16	-0.49	-0.02	50.94	12.3979	-9.0489	0.1194
255	SLU 17	-0.49	0.04	50.88	12.3863	-9.0395	0.1319
255	SLU 18	-0.48	-0.02	52.33	12.7358	-9.2954	0.1184
255	SLU 19	-0.49	0.04	52.27	12.7242	-9.286	0.1308
255	SLU 20	-0.49	-0.02	52.84	12.8608	-9.3868	0.1208
255	SLU 21	-0.49	0.05	52.79	12.8492	-9.3775	0.1332
255	SLU 22	-0.52	-0.03	49.66	12.0886	-8.8214	0.1275
255	SLU 23	-0.53	0.08	49.57	12.0693	-8.8059	0.1482
255	SLU 24	-0.54	-0.02	50.53	12.3012	-8.9766	0.1325
255	SLU 25	-0.54	0.05	50.48	12.2896	-8.9673	0.145
255	SLU 26	-0.53	0.09	50.09	12.1943	-8.8973	0.1507
255	SLU 27	-0.54	-0.02	51.05	12.4262	-9.0681	0.1349
255	SLU 28	-0.54	0.05	51	12.4146	-9.0588	0.1474
255	SLU 29	-0.54	-0.02	50.69	12.3386	-9.0044	0.1323
255	SLU 30	-0.54	0.05	50.64	12.327	-8.995	0.1448
255	SLU 31	-0.55	0.11	55.22	13.4413	-9.8079	0.1571
255	SLU 32	-0.56	0	56.18	13.6732	-9.9786	0.1414
255	SLU 33	-0.56	0.07	56.13	13.6616	-9.9693	0.1538
255	SLU 34	-0.55	0.11	55.74	13.5663	-9.8993	0.1595
255	SLU 35	-0.56	0.01	56.7	13.7982	-10.0701	0.1438
255	SLU 36	-0.56	0.08	56.65	13.7866	-10.0607	0.1562
255	SLU 37	-0.55	0.01	56.34	13.7106	-10.0063	0.1412
255	SLU 38	-0.55	0.07	56.29	13.699	-9.997	0.1536
255	SLU 39	-0.55	0	57.73	14.0486	-10.2529	0.1402
255	SLU 40	-0.55	0.07	57.68	14.037	-10.2435	0.1526
255	SLU 41	-0.56	0.01	58.24	14.1736	-10.3443	0.1426
255	SLU 42	-0.56	0.08	58.19	14.162	-10.335	0.155
255	SLU 43	-0.58	-0.09	55.68	13.5586	-9.8949	0.13
255	SLU 44	-0.58	0.03	55.59	13.5393	-9.8793	0.1507
255	SLU 45	-0.59	-0.08	56.55	13.7712	-10.0501	0.135
255	SLU 46	-0.59	-0.01	56.5	13.7596	-10.0407	0.1474
255	SLU 47	-0.58	0.03	56.11	13.6643	-9.9708	0.1531

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
255	SLU 48	-0.59	-0.07	57.07	13.8962	-10.1415	0.1374
255	SLU 49	-0.6	0	57.02	13.8846	-10.1322	0.1499
255	SLU 50	-0.59	-0.07	56.71	13.8086	-10.0778	0.1348
255	SLU 51	-0.59	-0.01	56.66	13.797	-10.0685	0.1473
255	SLU 52	-0.6	0.05	61.24	14.9112	-10.8813	0.1596
255	SLU 53	-0.61	-0.05	62.2	15.1431	-11.0521	0.1439
255	SLU 54	-0.61	0.01	62.15	15.1315	-11.0427	0.1563
255	SLU 55	-0.6	0.06	61.76	15.0362	-10.9728	0.162
255	SLU 56	-0.61	-0.05	62.72	15.2681	-11.1435	0.1463
255	SLU 57	-0.61	0.02	62.67	15.2565	-11.1342	0.1587
255	SLU 58	-0.6	-0.05	62.36	15.1805	-11.0798	0.1437
255	SLU 59	-0.6	0.02	62.31	15.1689	-11.0705	0.1561
255	SLU 60	-0.6	-0.05	63.75	15.5185	-11.3263	0.1427
255	SLU 61	-0.6	0.02	63.7	15.5069	-11.317	0.1551
255	SLU 62	-0.61	-0.05	64.26	15.6435	-11.4177	0.1451
255	SLU 63	-0.61	0.02	64.21	15.6319	-11.4084	0.1575
255	SLU 64	-0.64	-0.06	61.08	14.8713	-10.8524	0.1518
255	SLU 65	-0.64	0.05	60.99	14.852	-10.8368	0.1725
255	SLU 66	-0.65	-0.05	61.96	15.0839	-11.0075	0.1568
255	SLU 67	-0.66	0.02	61.9	15.0723	-10.9982	0.1692
255	SLU 68	-0.65	0.06	61.51	14.977	-10.9283	0.1749
255	SLU 69	-0.66	-0.04	62.47	15.2089	-11.099	0.1592
255	SLU 70	-0.66	0.02	62.42	15.1973	-11.0897	0.1716
255	SLU 71	-0.65	-0.05	62.11	15.1213	-11.0353	0.1566
255	SLU 72	-0.65	0.02	62.06	15.1097	-11.0259	0.169
255	SLU 73	-0.66	0.08	66.64	16.224	-11.8388	0.1814
255	SLU 74	-0.67	-0.02	67.61	16.4559	-12.0095	0.1656
255	SLU 75	-0.67	0.04	67.55	16.4443	-12.0002	0.1781
255	SLU 76	-0.67	0.08	67.16	16.349	-11.9302	0.1838
255	SLU 77	-0.68	-0.02	68.12	16.5809	-12.101	0.168
255	SLU 78	-0.68	0.05	68.07	16.5693	-12.0917	0.1805
255	SLU 79	-0.67	-0.02	67.76	16.4933	-12.0373	0.1655
255	SLU 80	-0.67	0.05	67.71	16.4817	-12.0279	0.1779
255	SLU 81	-0.67	-0.02	69.15	16.8313	-12.2838	0.1644
255	SLU 82	-0.67	0.04	69.1	16.8197	-12.2744	0.1769
255	SLU 83	-0.67	-0.02	69.67	16.9563	-12.3752	0.1668
255	SLU 84	-0.67	0.05	69.62	16.9447	-12.3659	0.1793
255	SLE RA 1	-0.48	-0.05	45.8	11.151	-8.1375	0.112
255	SLE RA 2	-0.48	0.02	45.74	11.1381	-8.1272	0.1258
255	SLE RA 3	-0.49	-0.04	46.38	11.2927	-8.241	0.1153
255	SLE RA 4	-0.49	0	46.35	11.285	-8.2348	0.1236
255	SLE RA 5	-0.48	0.03	46.08	11.2214	-8.1881	0.1274
255	SLE RA 6	-0.49	-0.04	46.72	11.376	-8.302	0.1169
255	SLE RA 7	-0.49	0	46.69	11.3683	-8.2957	0.1252
255	SLE RA 8	-0.49	-0.04	46.48	11.3176	-8.2595	0.1152
255	SLE RA 9	-0.49	0	46.45	11.3099	-8.2533	0.1235
255	SLE RA 10	-0.49	0.04	49.51	12.0527	-8.7952	0.1317
255	SLE RA 11	-0.5	-0.03	50.15	12.2073	-8.909	0.1212
255	SLE RA 12	-0.5	0.02	50.11	12.1996	-8.9028	0.1295
255	SLE RA 13	-0.5	0.04	49.85	12.1361	-8.8561	0.1333
255	SLE RA 14	-0.5	-0.02	50.49	12.2907	-8.97	0.1228
255	SLE RA 15	-0.5	0.02	50.46	12.2829	-8.9637	0.1311
255	SLE RA 16	-0.5	-0.03	50.25	12.2323	-8.9275	0.1211
255	SLE RA 17	-0.5	0.02	50.22	12.2245	-8.9212	0.1294
255	SLE RA 18	-0.49	-0.03	51.18	12.4576	-9.0918	0.1204
255	SLE RA 19	-0.5	0.02	51.14	12.4499	-9.0856	0.1287
255	SLE RA 20	-0.5	-0.02	51.52	12.5409	-9.1528	0.122
255	SLE RA 21	-0.5	0.02	51.49	12.5332	-9.1466	0.1303
255	SLE FR 1	-0.48	-0.05	45.8	11.151	-8.1375	0.112
255	SLE FR 2	-0.48	-0.04	45.79	11.1484	-8.1355	0.1147
255	SLE FR 3	-0.48	-0.05	45.93	11.1843	-8.1619	0.1126
255	SLE FR 4	-0.48	-0.03	47.4	11.5404	-8.4217	0.1173
255	SLE FR 5	-0.48	-0.04	47.55	11.5763	-8.4482	0.1151
255	SLE FR 6	-0.49	-0.04	48.49	11.8043	-8.6147	0.1162
255	SLE QP 1	-0.48	-0.05	45.8	11.151	-8.1375	0.112
255	SLE QP 2	-0.48	-0.04	47.41	11.543	-8.4238	0.1145
255	SLD 1	3.34	1.33	57.14	13.9098	-10.131	-0.6448
255	SLD 2	3.52	0.87	57.05	13.8909	-10.1163	-0.7744
255	SLD 3	3.44	-0.49	56.76	13.8214	-10.0639	-0.9867
255	SLD 4	3.62	-0.95	56.68	13.8026	-10.0492	-1.1163
255	SLD 5	0.47	3.21	50.92	12.3903	-9.0403	0.4279
255	SLD 6	0.59	2.91	50.86	12.3781	-9.0308	0.3438
255	SLD 7	0.82	-2.85	49.65	12.0958	-8.8166	-0.7118
255	SLD 8	0.94	-3.16	49.6	12.0835	-8.8071	-0.7959
255	SLD 9	-1.9	3.07	45.22	11.0024	-8.0405	1.0249
255	SLD 10	-1.79	2.77	45.17	10.9901	-8.031	0.9408
255	SLD 11	-1.56	-3	43.96	10.7078	-7.8168	-0.1148
255	SLD 12	-1.44	-3.3	43.9	10.6956	-7.8073	-0.1989
255	SLD 13	-4.59	0.86	38.15	9.2833	-6.7984	1.3453
255	SLD 14	-4.41	0.4	38.06	9.2645	-6.7837	1.2157
255	SLD 15	-4.48	-0.96	37.77	9.195	-6.7313	1.0034
255	SLD 16	-4.3	-1.42	37.68	9.1761	-6.7166	0.8738
255	SLV 1	8.45	3.13	70.16	17.08	-12.4174	-1.6711
255	SLV 2	8.87	2.04	69.97	17.0361	-12.3833	-1.9728
255	SLV 3	8.69	-1.02	69.29	16.8763	-12.263	-2.4513
255	SLV 4	9.11	-2.11	69.1	16.8323	-12.2289	-2.7531
255	SLV 5	1.76	7.39	55.59	13.5205	-9.8618	0.8134
255	SLV 6	2.02	6.69	55.47	13.4925	-9.84	0.6207
255	SLV 7	2.57	-6.45	52.68	12.8413	-9.3472	-1.7876
255	SLV 8	2.84	-7.14	52.56	12.8133	-9.3254	-1.9803
255	SLV 9	-3.8	7.05	42.26	10.2726	-7.5222	2.2093

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
255	SLV 10	-3.53	6.36	42.14	10.2446	-7.5004	2.0166
255	SLV 11	-2.99	-6.78	39.35	9.5934	-7.0076	-0.3917
255	SLV 12	-2.72	-7.47	39.23	9.5654	-6.9858	-0.5844
255	SLV 13	-10.08	2.02	25.72	6.2536	-4.6187	2.9821
255	SLV 14	-9.66	0.93	25.53	6.2097	-4.5846	2.6803
255	SLV 15	-9.84	-2.13	24.85	6.0498	-4.4643	2.2018
255	SLV 16	-9.42	-3.22	24.66	6.0059	-4.4302	1.9001
255	CRTFP Ux+	0	0	0	0	0	0
255	CRTFP Ux-	0	0	0	0	0	0
255	CRTFP Uy+	0	0	0	0	0	0
255	CRTFP Uy-	0	0	0	0	0	0
257	SLU 1	-0.35	-0.04	31.11	9.7459	-0.7964	0.1214
257	SLU 2	-0.35	0.03	31.06	9.732	-0.795	0.1233
257	SLU 3	-0.36	-0.04	31.72	9.9354	-0.8119	0.125
257	SLU 4	-0.36	0.01	31.69	9.9271	-0.811	0.1261
257	SLU 5	-0.35	0.04	31.42	9.8434	-0.8041	0.1247
257	SLU 6	-0.36	-0.03	32.08	10.0469	-0.821	0.1265
257	SLU 7	-0.36	0.01	32.05	10.0386	-0.8202	0.1276
257	SLU 8	-0.36	-0.04	31.83	9.9687	-0.8147	0.1243
257	SLU 9	-0.36	0.01	31.8	9.9604	-0.8138	0.1254
257	SLU 10	-0.36	0.05	35.01	10.9558	-0.8954	0.1285
257	SLU 11	-0.37	-0.02	35.68	11.1593	-0.9123	0.1303
257	SLU 12	-0.37	0.03	35.64	11.151	-0.9114	0.1314
257	SLU 13	-0.37	0.06	35.37	11.0673	-0.9045	0.13
257	SLU 14	-0.38	-0.01	36.04	11.2707	-0.9214	0.1317
257	SLU 15	-0.38	0.03	36	11.2624	-0.9206	0.1328
257	SLU 16	-0.37	-0.02	35.78	11.1925	-0.9151	0.1296
257	SLU 17	-0.37	0.03	35.75	11.1842	-0.9142	0.1307
257	SLU 18	-0.37	-0.02	36.76	11.4942	-0.9398	0.1289
257	SLU 19	-0.37	0.03	36.72	11.4859	-0.939	0.13
257	SLU 20	-0.37	-0.01	37.12	11.6056	-0.949	0.1304
257	SLU 21	-0.37	0.03	37.08	11.5973	-0.9481	0.1315
257	SLU 22	-0.4	-0.02	34.89	10.9168	-0.8922	0.1395
257	SLU 23	-0.4	0.06	34.83	10.903	-0.8907	0.1414
257	SLU 24	-0.41	-0.02	35.5	11.1064	-0.9076	0.1431
257	SLU 25	-0.41	0.03	35.46	11.0981	-0.9068	0.1442
257	SLU 26	-0.4	0.06	35.19	11.0144	-0.8999	0.1428
257	SLU 27	-0.41	-0.01	35.86	11.2178	-0.9168	0.1445
257	SLU 28	-0.41	0.04	35.82	11.2095	-0.9159	0.1457
257	SLU 29	-0.41	-0.01	35.61	11.1397	-0.9104	0.1424
257	SLU 30	-0.41	0.03	35.57	11.1313	-0.9096	0.1435
257	SLU 31	-0.41	0.08	38.78	12.1268	-0.9911	0.1466
257	SLU 32	-0.42	0	39.45	12.3302	-1.0081	0.1483
257	SLU 33	-0.42	0.05	39.41	12.3219	-1.0072	0.1494
257	SLU 34	-0.42	0.08	39.14	12.2382	-1.0003	0.148
257	SLU 35	-0.43	0.01	39.81	12.4416	-1.0172	0.1498
257	SLU 36	-0.43	0.05	39.77	12.4333	-1.0163	0.1509
257	SLU 37	-0.42	0	39.56	12.3635	-1.0108	0.1476
257	SLU 38	-0.42	0.05	39.52	12.3552	-1.01	0.1487
257	SLU 39	-0.42	0	40.53	12.6651	-1.0356	0.147
257	SLU 40	-0.42	0.05	40.5	12.6568	-1.0347	0.1481
257	SLU 41	-0.42	0.01	40.89	12.7766	-1.0447	0.1484
257	SLU 42	-0.42	0.06	40.86	12.7683	-1.0439	0.1495
257	SLU 43	-0.44	-0.07	39.15	12.2682	-1.0025	0.1517
257	SLU 44	-0.44	0.01	39.1	12.2543	-1.001	0.1535
257	SLU 45	-0.45	-0.06	39.76	12.4577	-1.018	0.1553
257	SLU 46	-0.45	-0.01	39.73	12.4494	-1.0171	0.1564
257	SLU 47	-0.44	0.02	39.46	12.3657	-1.0102	0.155
257	SLU 48	-0.45	-0.05	40.12	12.5692	-1.0271	0.1567
257	SLU 49	-0.45	-0.01	40.09	12.5608	-1.0262	0.1578
257	SLU 50	-0.45	-0.06	39.87	12.491	-1.0207	0.1546
257	SLU 51	-0.45	-0.01	39.84	12.4827	-1.0199	0.1557
257	SLU 52	-0.45	0.03	43.05	13.4781	-1.1015	0.1588
257	SLU 53	-0.46	-0.04	43.72	13.6816	-1.1184	0.1605
257	SLU 54	-0.46	0.01	43.68	13.6733	-1.1175	0.1616
257	SLU 55	-0.46	0.04	43.41	13.5896	-1.1106	0.1602
257	SLU 56	-0.47	-0.04	44.08	13.793	-1.1275	0.1619
257	SLU 57	-0.47	0.01	44.04	13.7847	-1.1267	0.163
257	SLU 58	-0.46	-0.04	43.82	13.7148	-1.1212	0.1598
257	SLU 59	-0.46	0.01	43.79	13.7065	-1.1203	0.1609
257	SLU 60	-0.46	-0.04	44.8	14.0165	-1.1459	0.1591
257	SLU 61	-0.46	0.01	44.76	14.0082	-1.1451	0.1603
257	SLU 62	-0.46	-0.03	45.16	14.1279	-1.1551	0.1606
257	SLU 63	-0.46	0.01	45.12	14.1196	-1.1542	0.1617
257	SLU 64	-0.49	-0.04	42.93	13.4391	-1.0982	0.1697
257	SLU 65	-0.49	0.04	42.87	13.4253	-1.0968	0.1716
257	SLU 66	-0.5	-0.04	43.54	13.6287	-1.1137	0.1733
257	SLU 67	-0.5	0.01	43.5	13.6204	-1.1129	0.1745
257	SLU 68	-0.49	0.04	43.23	13.5367	-1.1059	0.173
257	SLU 69	-0.5	-0.03	43.9	13.7401	-1.1229	0.1748
257	SLU 70	-0.5	0.02	43.86	13.7318	-1.122	0.1759
257	SLU 71	-0.5	-0.03	43.65	13.6619	-1.1165	0.1726
257	SLU 72	-0.5	0.01	43.61	13.6536	-1.1156	0.1737
257	SLU 73	-0.5	0.05	46.82	14.6491	-1.1972	0.1768
257	SLU 74	-0.51	-0.02	47.49	14.8525	-1.2141	0.1786
257	SLU 75	-0.51	0.03	47.45	14.8442	-1.2133	0.1797
257	SLU 76	-0.51	0.06	47.18	14.7605	-1.2064	0.1783
257	SLU 77	-0.52	-0.01	47.85	14.9639	-1.2233	0.18
257	SLU 78	-0.52	0.03	47.81	14.9556	-1.2224	0.1811
257	SLU 79	-0.51	-0.02	47.6	14.8858	-1.2169	0.1779
257	SLU 80	-0.51	0.03	47.56	14.8775	-1.2161	0.179

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
257	SLU 81	-0.51	-0.02	48.57	15.1874	-1.2417	0.1772
257	SLU 82	-0.51	0.03	48.54	15.1791	-1.2408	0.1783
257	SLU 83	-0.51	-0.01	48.93	15.2989	-1.2508	0.1787
257	SLU 84	-0.51	0.03	48.9	15.2905	-1.25	0.1798
257	SLE RA 1	-0.36	-0.04	32.19	10.0804	-0.8238	0.1266
257	SLE RA 2	-0.36	0.01	32.15	10.0712	-0.8228	0.1278
257	SLE RA 3	-0.37	-0.03	32.6	10.2068	-0.8341	0.129
257	SLE RA 4	-0.37	0	32.58	10.2013	-0.8335	0.1297
257	SLE RA 5	-0.37	0.02	32.39	10.1455	-0.8289	0.1288
257	SLE RA 6	-0.37	-0.03	32.84	10.2811	-0.8402	0.13
257	SLE RA 7	-0.37	0	32.82	10.2755	-0.8396	0.1307
257	SLE RA 8	-0.37	-0.03	32.67	10.229	-0.8359	0.1285
257	SLE RA 9	-0.37	0	32.65	10.2234	-0.8354	0.1293
257	SLE RA 10	-0.37	0.03	34.79	10.8871	-0.8897	0.1313
257	SLE RA 11	-0.38	-0.02	35.23	11.0227	-0.901	0.1325
257	SLE RA 12	-0.38	0.01	35.21	11.0172	-0.9005	0.1332
257	SLE RA 13	-0.38	0.03	35.03	10.9614	-0.8958	0.1323
257	SLE RA 14	-0.38	-0.02	35.47	11.097	-0.9071	0.1334
257	SLE RA 15	-0.38	0.01	35.45	11.0914	-0.9065	0.1342
257	SLE RA 16	-0.38	-0.02	35.31	11.0449	-0.9029	0.132
257	SLE RA 17	-0.38	0.01	35.28	11.0393	-0.9023	0.1328
257	SLE RA 18	-0.38	-0.02	35.95	11.246	-0.9194	0.1316
257	SLE RA 19	-0.38	0.01	35.93	11.2404	-0.9188	0.1323
257	SLE RA 20	-0.38	-0.02	36.19	11.3203	-0.9255	0.1325
257	SLE RA 21	-0.38	0.01	36.17	11.3147	-0.9249	0.1333
257	SLE FR 1	-0.36	-0.04	32.19	10.0804	-0.8238	0.1266
257	SLE FR 2	-0.36	-0.03	32.18	10.0786	-0.8236	0.1268
257	SLE FR 3	-0.37	-0.04	32.29	10.1101	-0.8262	0.127
257	SLE FR 4	-0.37	-0.02	33.31	10.4282	-0.8523	0.1283
257	SLE FR 5	-0.37	-0.03	33.42	10.4598	-0.8549	0.1285
257	SLE FR 6	-0.37	-0.03	34.07	10.6632	-0.8716	0.1291
257	SLE QP 1	-0.36	-0.04	32.19	10.0804	-0.8238	0.1266
257	SLE QP 2	-0.37	-0.03	33.32	10.4301	-0.8524	0.1281
257	SLD 1	2.54	0.98	39.98	12.5268	-1.0159	-0.8703
257	SLD 2	2.67	0.64	39.92	12.5108	-1.0147	-0.9251
257	SLD 3	2.61	-0.36	39.72	12.4422	-1.0093	-0.92
257	SLD 4	2.74	-0.7	39.67	12.4261	-1.008	-0.9748
257	SLD 5	0.37	2.36	35.71	11.1903	-0.9118	-0.0866
257	SLD 6	0.45	2.14	35.68	11.1798	-0.911	-0.1221
257	SLD 7	0.61	-2.1	34.86	10.9082	-0.8896	-0.2521
257	SLD 8	0.7	-2.32	34.83	10.8977	-0.8888	-0.2876
257	SLD 9	-1.44	2.26	31.81	9.9624	-0.8161	0.5438
257	SLD 10	-1.35	2.04	31.78	9.952	-0.8153	0.5083
257	SLD 11	-1.19	-2.21	30.96	9.6803	-0.7939	0.3783
257	SLD 12	-1.11	-2.43	30.93	9.6699	-0.7931	0.3428
257	SLD 13	-3.48	0.63	26.97	8.434	-0.6969	1.231
257	SLD 14	-3.35	0.29	26.92	8.418	-0.6956	1.1762
257	SLD 15	-3.4	-0.71	26.72	8.3494	-0.6902	1.1813
257	SLD 16	-3.27	-1.05	26.66	8.3333	-0.689	1.1265
257	SLV 1	6.42	2.3	48.89	15.3348	-1.2349	-2.2079
257	SLV 2	6.73	1.52	48.77	15.2974	-1.2319	-2.3355
257	SLV 3	6.6	-0.75	48.31	15.1403	-1.2196	-2.3222
257	SLV 4	6.9	-1.54	48.18	15.1029	-1.2167	-2.4498
257	SLV 5	1.36	5.44	38.9	12.2028	-0.9908	-0.3778
257	SLV 6	1.55	4.93	38.82	12.1789	-0.989	-0.4593
257	SLV 7	1.93	-4.75	36.95	11.5545	-0.9399	-0.7587
257	SLV 8	2.12	-5.25	36.87	11.5307	-0.938	-0.8401
257	SLV 9	-2.86	5.19	29.77	9.3295	-0.7668	1.0963
257	SLV 10	-2.66	4.68	29.69	9.3056	-0.765	1.0148
257	SLV 11	-2.29	-5	27.82	8.6813	-0.7159	0.7155
257	SLV 12	-2.1	-5.5	27.74	8.6574	-0.714	0.634
257	SLV 13	-7.64	1.47	18.46	5.7573	-0.4882	2.706
257	SLV 14	-7.33	0.68	18.33	5.7198	-0.4853	2.5784
257	SLV 15	-7.47	-1.58	17.87	5.5628	-0.4729	2.5917
257	SLV 16	-7.16	-2.37	17.75	5.5254	-0.47	2.4641
257	CRTFP Ux+	0	0	0	0	0	0
257	CRTFP Ux-	0	0	0	0	0	0
257	CRTFP Uy+	0	0	0	0	0	0
257	CRTFP Uy-	0	0	0	0	0	0
258	SLU 1	-0.41	-0.05	33.12	9.673	0.0979	0.1433
258	SLU 2	-0.41	0.03	33.06	9.6637	0.0976	0.1426
258	SLU 3	-0.42	-0.04	33.77	9.8578	0.1	0.1472
258	SLU 4	-0.42	0.01	33.73	9.8523	0.0999	0.1469
258	SLU 5	-0.41	0.04	33.44	9.7724	0.0989	0.1442
258	SLU 6	-0.42	-0.04	34.15	9.9665	0.1013	0.1488
258	SLU 7	-0.42	0.01	34.11	9.9609	0.1011	0.1484
258	SLU 8	-0.42	-0.04	33.88	9.8904	0.1004	0.1463
258	SLU 9	-0.42	0.01	33.85	9.8848	0.1002	0.146
258	SLU 10	-0.42	0.05	37.24	10.8578	0.111	0.1483
258	SLU 11	-0.44	-0.02	37.94	11.0518	0.1134	0.1529
258	SLU 12	-0.44	0.03	37.91	11.0463	0.1132	0.1525
258	SLU 13	-0.43	0.06	37.62	10.9664	0.1122	0.1498
258	SLU 14	-0.44	-0.02	38.32	11.1605	0.1146	0.1544
258	SLU 15	-0.44	0.03	38.29	11.1549	0.1144	0.154
258	SLU 16	-0.43	-0.02	38.06	11.0844	0.1137	0.152
258	SLU 17	-0.43	0.03	38.02	11.0788	0.1136	0.1516
258	SLU 18	-0.43	-0.02	39.09	11.3787	0.1169	0.1513
258	SLU 19	-0.43	0.03	39.05	11.3732	0.1168	0.1509
258	SLU 20	-0.44	-0.01	39.47	11.4874	0.1182	0.1528
258	SLU 21	-0.44	0.03	39.43	11.4819	0.118	0.1525
258	SLU 22	-0.47	-0.02	37.1	10.8143	0.1109	0.1637

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
258	SLU 23	-0.47	0.06	37.05	10.8051	0.1107	0.1631
258	SLU 24	-0.48	-0.02	37.75	10.9992	0.113	0.1677
258	SLU 25	-0.48	0.03	37.71	10.9936	0.1129	0.1673
258	SLU 26	-0.47	0.06	37.43	10.9138	0.1119	0.1646
258	SLU 27	-0.48	-0.01	38.13	11.1078	0.1143	0.1692
258	SLU 28	-0.48	0.04	38.09	11.1023	0.1141	0.1688
258	SLU 29	-0.48	-0.01	37.86	11.0317	0.1134	0.1668
258	SLU 30	-0.48	0.03	37.83	11.0262	0.1132	0.1664
258	SLU 31	-0.48	0.08	41.22	11.9991	0.124	0.1687
258	SLU 32	-0.49	0.01	41.93	12.1932	0.1264	0.1733
258	SLU 33	-0.49	0.05	41.89	12.1876	0.1262	0.1729
258	SLU 34	-0.49	0.08	41.6	12.1078	0.1252	0.1702
258	SLU 35	-0.5	0.01	42.31	12.3018	0.1276	0.1748
258	SLU 36	-0.5	0.06	42.27	12.2963	0.1275	0.1744
258	SLU 37	-0.49	0.01	42.04	12.2257	0.1267	0.1724
258	SLU 38	-0.49	0.06	42.01	12.2202	0.1266	0.172
258	SLU 39	-0.49	0.01	43.07	12.5201	0.13	0.1717
258	SLU 40	-0.49	0.06	43.04	12.5145	0.1298	0.1714
258	SLU 41	-0.49	0.01	43.45	12.6288	0.1312	0.1733
258	SLU 42	-0.49	0.06	43.42	12.6232	0.1311	0.1729
258	SLU 43	-0.51	-0.07	41.69	12.1836	0.1228	0.1793
258	SLU 44	-0.51	0.01	41.63	12.1743	0.1225	0.1786
258	SLU 45	-0.52	-0.06	42.34	12.3684	0.1249	0.1832
258	SLU 46	-0.52	-0.02	42.3	12.3628	0.1248	0.1828
258	SLU 47	-0.52	0.01	42.01	12.283	0.1238	0.1802
258	SLU 48	-0.53	-0.06	42.72	12.4771	0.1261	0.1847
258	SLU 49	-0.53	-0.01	42.68	12.4715	0.126	0.1844
258	SLU 50	-0.52	-0.06	42.45	12.4009	0.1253	0.1823
258	SLU 51	-0.52	-0.02	42.42	12.3954	0.1251	0.1819
258	SLU 52	-0.53	0.03	45.81	13.3683	0.1359	0.1843
258	SLU 53	-0.54	-0.04	46.51	13.5624	0.1383	0.1888
258	SLU 54	-0.54	0.01	46.48	13.5568	0.1381	0.1885
258	SLU 55	-0.53	0.03	46.19	13.477	0.1371	0.1858
258	SLU 56	-0.54	-0.04	46.89	13.6711	0.1395	0.1904
258	SLU 57	-0.54	0.01	46.86	13.6655	0.1393	0.19
258	SLU 58	-0.54	-0.04	46.63	13.5949	0.1386	0.1879
258	SLU 59	-0.54	0.01	46.59	13.5894	0.1384	0.1876
258	SLU 60	-0.53	-0.04	47.66	13.8893	0.1418	0.1873
258	SLU 61	-0.53	0.01	47.62	13.8837	0.1417	0.1869
258	SLU 62	-0.54	-0.04	48.04	13.998	0.1431	0.1888
258	SLU 63	-0.54	0.01	48	13.9924	0.1429	0.1884
258	SLU 64	-0.57	-0.05	45.68	13.3249	0.1358	0.1997
258	SLU 65	-0.57	0.03	45.62	13.3157	0.1356	0.1991
258	SLU 66	-0.58	-0.04	46.32	13.5097	0.1379	0.2036
258	SLU 67	-0.58	0.01	46.28	13.5042	0.1378	0.2033
258	SLU 68	-0.57	0.04	46	13.4244	0.1368	0.2006
258	SLU 69	-0.59	-0.03	46.7	13.6184	0.1392	0.2052
258	SLU 70	-0.59	0.01	46.66	13.6129	0.139	0.2048
258	SLU 71	-0.58	-0.04	46.44	13.5423	0.1383	0.2027
258	SLU 72	-0.58	0.01	46.4	13.5367	0.1381	0.2024
258	SLU 73	-0.59	0.06	49.79	14.5097	0.1489	0.2047
258	SLU 74	-0.6	-0.02	50.5	14.7037	0.1513	0.2093
258	SLU 75	-0.6	0.03	50.46	14.6982	0.1511	0.2089
258	SLU 76	-0.59	0.06	50.17	14.6184	0.1501	0.2062
258	SLU 77	-0.6	-0.01	50.88	14.8124	0.1525	0.2108
258	SLU 78	-0.6	0.04	50.84	14.8069	0.1524	0.2104
258	SLU 79	-0.59	-0.02	50.61	14.7363	0.1516	0.2084
258	SLU 80	-0.59	0.03	50.58	14.7308	0.1515	0.208
258	SLU 81	-0.59	-0.01	51.64	15.0306	0.1549	0.2077
258	SLU 82	-0.59	0.03	51.61	15.0251	0.1547	0.2073
258	SLU 83	-0.6	-0.01	52.02	15.1393	0.1561	0.2093
258	SLU 84	-0.6	0.04	51.99	15.1338	0.156	0.2089
258	SLE RA 1	-0.43	-0.04	34.26	9.9991	0.1016	0.1491
258	SLE RA 2	-0.43	0.01	34.22	9.9929	0.1014	0.1487
258	SLE RA 3	-0.43	-0.04	34.69	10.1223	0.103	0.1518
258	SLE RA 4	-0.43	0	34.67	10.1186	0.1029	0.1515
258	SLE RA 5	-0.43	0.02	34.47	10.0654	0.1023	0.1497
258	SLE RA 6	-0.44	-0.03	34.94	10.1948	0.1038	0.1528
258	SLE RA 7	-0.44	0	34.92	10.1911	0.1037	0.1525
258	SLE RA 8	-0.43	-0.04	34.77	10.144	0.1033	0.1512
258	SLE RA 9	-0.43	0	34.74	10.1403	0.1032	0.1509
258	SLE RA 10	-0.44	0.03	37	10.7889	0.1103	0.1524
258	SLE RA 11	-0.44	-0.02	37.47	10.9183	0.1119	0.1555
258	SLE RA 12	-0.44	0.01	37.45	10.9146	0.1118	0.1552
258	SLE RA 13	-0.44	0.03	37.26	10.8614	0.1112	0.1535
258	SLE RA 14	-0.45	-0.02	37.73	10.9908	0.1127	0.1565
258	SLE RA 15	-0.45	0.01	37.7	10.9871	0.1126	0.1563
258	SLE RA 16	-0.44	-0.02	37.55	10.94	0.1121	0.1549
258	SLE RA 17	-0.44	0.01	37.53	10.9363	0.1121	0.1547
258	SLE RA 18	-0.44	-0.02	38.24	11.1362	0.1143	0.1545
258	SLE RA 19	-0.44	0.01	38.21	11.1325	0.1142	0.1542
258	SLE RA 20	-0.44	-0.02	38.49	11.2087	0.1151	0.1555
258	SLE RA 21	-0.44	0.01	38.47	11.205	0.115	0.1552
258	SLE FR 1	-0.43	-0.04	34.26	9.9991	0.1016	0.1491
258	SLE FR 2	-0.43	-0.03	34.25	9.9979	0.1016	0.149
258	SLE FR 3	-0.43	-0.04	34.36	10.0281	0.1019	0.1495
258	SLE FR 4	-0.43	-0.02	35.45	10.339	0.1054	0.1506
258	SLE FR 5	-0.43	-0.03	35.55	10.3692	0.1057	0.1511
258	SLE FR 6	-0.43	-0.03	36.25	10.5677	0.108	0.1518
258	SLE QP 1	-0.43	-0.04	34.26	9.9991	0.1016	0.1491
258	SLE QP 2	-0.43	-0.03	35.45	10.3402	0.1054	0.1507

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
258	SLD 1	2.94	1.08	42.24	12.3562	0.1379	-1.0293
258	SLD 2	3.09	0.72	42.19	12.3412	0.1375	-1.0815
258	SLD 3	3.02	-0.39	41.97	12.2465	0.1352	-1.0583
258	SLD 4	3.18	-0.76	41.92	12.2316	0.1349	-1.1105
258	SLD 5	0.43	2.6	37.92	11.114	0.1192	-0.1502
258	SLD 6	0.52	2.36	37.89	11.1043	0.119	-0.1841
258	SLD 7	0.71	-2.31	37	10.7484	0.1104	-0.2468
258	SLD 8	0.81	-2.55	36.96	10.7387	0.1102	-0.2807
258	SLD 9	-1.67	2.48	33.94	9.9418	0.1007	0.5822
258	SLD 10	-1.57	2.24	33.91	9.9321	0.1004	0.5483
258	SLD 11	-1.38	-2.43	33.02	9.5762	0.0918	0.4856
258	SLD 12	-1.29	-2.67	32.99	9.5665	0.0916	0.4517
258	SLD 13	-4.04	0.69	28.99	8.4489	0.0759	1.412
258	SLD 14	-3.88	0.32	28.94	8.4339	0.0756	1.3597
258	SLD 15	-3.95	-0.79	28.71	8.3392	0.0733	1.383
258	SLD 16	-3.8	-1.15	28.66	8.3242	0.073	1.3308
258	SLV 1	7.45	2.54	51.34	15.0555	0.1814	-2.6092
258	SLV 2	7.8	1.69	51.22	15.0206	0.1806	-2.7308
258	SLV 3	7.65	-0.83	50.7	14.8033	0.1752	-2.6768
258	SLV 4	8	-1.68	50.58	14.7684	0.1744	-2.7985
258	SLV 5	1.57	5.98	41.2	12.1432	0.1377	-0.5541
258	SLV 6	1.8	5.44	41.13	12.1209	0.1372	-0.6318
258	SLV 7	2.23	-5.23	39.08	11.3026	0.1171	-0.7795
258	SLV 8	2.46	-5.78	39.01	11.2803	0.1166	-0.8572
258	SLV 9	-3.32	5.71	31.9	9.4002	0.0943	1.1586
258	SLV 10	-3.09	5.16	31.82	9.3779	0.0938	1.0809
258	SLV 11	-2.66	-5.51	29.78	8.5595	0.0736	0.9332
258	SLV 12	-2.44	-6.05	29.7	8.5373	0.0731	0.8555
258	SLV 13	-8.86	1.61	20.33	5.912	0.0365	3.0999
258	SLV 14	-8.51	0.76	20.2	5.8771	0.0357	2.9782
258	SLV 15	-8.66	-1.76	19.69	5.6598	0.0303	3.0323
258	SLV 16	-8.31	-2.61	19.57	5.6249	0.0295	2.9106
258	CRTFP Ux+	0	0	0	0	0	0
258	CRTFP Ux-	0	0	0	0	0	0
258	CRTFP Uy+	0	0	0	0	0	0
258	CRTFP Uy-	0	0	0	0	0	0
259	SLU 1	-0.41	-0.04	30.46	8.2461	0.0793	0.1444
259	SLU 2	-0.41	0.02	30.41	8.2434	0.0791	0.1436
259	SLU 3	-0.42	-0.04	31.05	8.4001	0.0811	0.1484
259	SLU 4	-0.42	0	31.02	8.3985	0.0809	0.1479
259	SLU 5	-0.42	0.03	30.76	8.3341	0.0801	0.1451
259	SLU 6	-0.43	-0.03	31.4	8.4908	0.0821	0.1499
259	SLU 7	-0.43	0.01	31.36	8.4892	0.0819	0.1494
259	SLU 8	-0.42	-0.04	31.16	8.4275	0.0813	0.1475
259	SLU 9	-0.42	0	31.12	8.4259	0.0812	0.147
259	SLU 10	-0.43	0.05	34.23	9.2405	0.0899	0.1494
259	SLU 11	-0.44	-0.02	34.87	9.3972	0.0918	0.1542
259	SLU 12	-0.44	0.03	34.83	9.3956	0.0917	0.1537
259	SLU 13	-0.43	0.05	34.57	9.3312	0.0909	0.151
259	SLU 14	-0.44	-0.01	35.21	9.488	0.0928	0.1557
259	SLU 15	-0.44	0.03	35.18	9.4863	0.0927	0.1552
259	SLU 16	-0.44	-0.02	34.97	9.4246	0.0921	0.1533
259	SLU 17	-0.44	0.03	34.94	9.423	0.092	0.1528
259	SLU 18	-0.44	-0.01	35.92	9.6705	0.0947	0.1527
259	SLU 19	-0.44	0.03	35.88	9.6689	0.0946	0.1522
259	SLU 20	-0.44	-0.01	36.26	9.7612	0.0957	0.1542
259	SLU 21	-0.44	0.03	36.23	9.7596	0.0956	0.1538
259	SLU 22	-0.47	-0.02	34.09	9.1977	0.0899	0.165
259	SLU 23	-0.47	0.05	34.04	9.195	0.0897	0.1642
259	SLU 24	-0.48	-0.01	34.68	9.3517	0.0916	0.169
259	SLU 25	-0.48	0.03	34.65	9.3501	0.0915	0.1685
259	SLU 26	-0.47	0.05	34.39	9.2857	0.0907	0.1658
259	SLU 27	-0.49	-0.01	35.03	9.4425	0.0926	0.1705
259	SLU 28	-0.49	0.03	34.99	9.4408	0.0925	0.1701
259	SLU 29	-0.48	-0.01	34.79	9.3791	0.0919	0.1681
259	SLU 30	-0.48	0.03	34.75	9.3775	0.0918	0.1676
259	SLU 31	-0.49	0.07	37.86	10.1921	0.1004	0.1701
259	SLU 32	-0.5	0.01	38.5	10.3488	0.1024	0.1748
259	SLU 33	-0.5	0.05	38.46	10.3472	0.1022	0.1743
259	SLU 34	-0.49	0.08	38.2	10.2828	0.1014	0.1716
259	SLU 35	-0.5	0.01	38.84	10.4396	0.1034	0.1763
259	SLU 36	-0.5	0.06	38.81	10.4379	0.1032	0.1759
259	SLU 37	-0.5	0.01	38.6	10.3762	0.1026	0.1739
259	SLU 38	-0.5	0.05	38.57	10.3746	0.1025	0.1734
259	SLU 39	-0.49	0.01	39.55	10.6221	0.1052	0.1733
259	SLU 40	-0.49	0.06	39.51	10.6205	0.1051	0.1729
259	SLU 41	-0.5	0.02	39.89	10.7128	0.1062	0.1749
259	SLU 42	-0.5	0.06	39.86	10.7112	0.1061	0.1744
259	SLU 43	-0.52	-0.07	38.36	10.3936	0.0995	0.1806
259	SLU 44	-0.51	0	38.31	10.3909	0.0993	0.1798
259	SLU 45	-0.53	-0.06	38.94	10.5477	0.1012	0.1846
259	SLU 46	-0.53	-0.02	38.91	10.5461	0.1011	0.1841
259	SLU 47	-0.52	0	38.65	10.4816	0.1003	0.1814
259	SLU 48	-0.53	-0.06	39.29	10.6384	0.1023	0.1861
259	SLU 49	-0.53	-0.02	39.26	10.6368	0.1021	0.1857
259	SLU 50	-0.52	-0.06	39.05	10.575	0.1015	0.1837
259	SLU 51	-0.52	-0.02	39.02	10.5734	0.1014	0.1832
259	SLU 52	-0.53	0.02	42.12	11.388	0.11	0.1857
259	SLU 53	-0.54	-0.04	42.76	11.5448	0.112	0.1904
259	SLU 54	-0.54	0	42.73	11.5432	0.1119	0.19
259	SLU 55	-0.54	0.03	42.47	11.4787	0.1111	0.1872

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
259	SLU 56	-0.55	-0.04	43.11	11.6355	0.113	0.192
259	SLU 57	-0.55	0.01	43.08	11.6339	0.1129	0.1915
259	SLU 58	-0.54	-0.04	42.87	11.5721	0.1123	0.1895
259	SLU 59	-0.54	0	42.84	11.5705	0.1121	0.189
259	SLU 60	-0.54	-0.04	43.81	11.818	0.1149	0.1889
259	SLU 61	-0.54	0	43.78	11.8164	0.1147	0.1885
259	SLU 62	-0.54	-0.03	44.16	11.9088	0.1159	0.1905
259	SLU 63	-0.54	0.01	44.12	11.9071	0.1157	0.19
259	SLU 64	-0.57	-0.04	41.99	11.3452	0.1101	0.2013
259	SLU 65	-0.57	0.03	41.94	11.3425	0.1099	0.2005
259	SLU 66	-0.59	-0.03	42.57	11.4993	0.1118	0.2052
259	SLU 67	-0.59	0.01	42.54	11.4977	0.1117	0.2048
259	SLU 68	-0.58	0.03	42.28	11.4332	0.1109	0.202
259	SLU 69	-0.59	-0.03	42.92	11.59	0.1128	0.2068
259	SLU 70	-0.59	0.01	42.89	11.5884	0.1127	0.2063
259	SLU 71	-0.58	-0.03	42.68	11.5266	0.1121	0.2043
259	SLU 72	-0.58	0.01	42.65	11.525	0.112	0.2039
259	SLU 73	-0.59	0.05	45.75	12.3396	0.1206	0.2063
259	SLU 74	-0.6	-0.01	46.39	12.4964	0.1225	0.2111
259	SLU 75	-0.6	0.03	46.36	12.4948	0.1224	0.2106
259	SLU 76	-0.59	0.05	46.1	12.4303	0.1216	0.2078
259	SLU 77	-0.61	-0.01	46.74	12.5871	0.1236	0.2126
259	SLU 78	-0.61	0.03	46.71	12.5855	0.1234	0.2121
259	SLU 79	-0.6	-0.01	46.5	12.5237	0.1228	0.2101
259	SLU 80	-0.6	0.03	46.47	12.5221	0.1227	0.2097
259	SLU 81	-0.6	-0.01	47.44	12.7696	0.1254	0.2096
259	SLU 82	-0.6	0.03	47.41	12.768	0.1253	0.2091
259	SLU 83	-0.6	-0.01	47.79	12.8604	0.1264	0.2111
259	SLU 84	-0.6	0.04	47.75	12.8587	0.1263	0.2106
259	SLE RA 1	-0.43	-0.04	31.5	8.5179	0.0823	0.1503
259	SLE RA 2	-0.43	0.01	31.47	8.5161	0.0822	0.1498
259	SLE RA 3	-0.44	-0.03	31.89	8.6207	0.0835	0.1529
259	SLE RA 4	-0.44	-0.01	31.87	8.6196	0.0834	0.1526
259	SLE RA 5	-0.43	0.01	31.7	8.5766	0.0829	0.1508
259	SLE RA 6	-0.44	-0.03	32.12	8.6811	0.0842	0.154
259	SLE RA 7	-0.44	0	32.1	8.6801	0.0841	0.1536
259	SLE RA 8	-0.43	-0.03	31.96	8.6389	0.0837	0.1523
259	SLE RA 9	-0.43	-0.01	31.94	8.6378	0.0836	0.152
259	SLE RA 10	-0.44	0.02	34.01	9.1809	0.0894	0.1536
259	SLE RA 11	-0.45	-0.02	34.44	9.2854	0.0907	0.1568
259	SLE RA 12	-0.45	0.01	34.41	9.2843	0.0906	0.1565
259	SLE RA 13	-0.44	0.03	34.24	9.2414	0.09	0.1547
259	SLE RA 14	-0.45	-0.02	34.67	9.3459	0.0913	0.1578
259	SLE RA 15	-0.45	0.01	34.65	9.3448	0.0913	0.1575
259	SLE RA 16	-0.45	-0.02	34.51	9.3036	0.0909	0.1562
259	SLE RA 17	-0.45	0.01	34.49	9.3025	0.0908	0.1559
259	SLE RA 18	-0.44	-0.02	35.14	9.4676	0.0926	0.1558
259	SLE RA 19	-0.44	0.01	35.11	9.4665	0.0925	0.1555
259	SLE RA 20	-0.45	-0.01	35.37	9.528	0.0932	0.1568
259	SLE RA 21	-0.45	0.01	35.35	9.527	0.0932	0.1565
259	SLE FR 1	-0.43	-0.04	31.5	8.5179	0.0823	0.1503
259	SLE FR 2	-0.43	-0.03	31.49	8.5176	0.0823	0.1502
259	SLE FR 3	-0.43	-0.04	31.59	8.5421	0.0826	0.1507
259	SLE FR 4	-0.43	-0.02	32.58	8.8025	0.0854	0.1518
259	SLE FR 5	-0.43	-0.03	32.68	8.827	0.0857	0.1524
259	SLE FR 6	-0.44	-0.03	33.32	8.9928	0.0875	0.1531
259	SLE QP 1	-0.43	-0.04	31.5	8.5179	0.0823	0.1503
259	SLE QP 2	-0.43	-0.03	32.59	8.8028	0.0854	0.1519
259	SLD 1	2.94	1.02	38.51	10.4486	0.1136	-1.0296
259	SLD 2	3.09	0.68	38.47	10.4371	0.1133	-1.0818
259	SLD 3	3.02	-0.37	38.23	10.3139	0.1113	-1.0586
259	SLD 4	3.18	-0.71	38.19	10.3024	0.111	-1.1108
259	SLD 5	0.42	2.45	34.8	9.503	0.0974	-0.1495
259	SLD 6	0.52	2.24	34.77	9.4955	0.0973	-0.1834
259	SLD 7	0.7	-2.19	33.87	9.0538	0.0897	-0.246
259	SLD 8	0.8	-2.4	33.84	9.0463	0.0895	-0.2799
259	SLD 9	-1.67	2.34	31.34	8.5594	0.0813	0.5838
259	SLD 10	-1.57	2.12	31.32	8.5519	0.0811	0.5499
259	SLD 11	-1.39	-2.3	30.41	8.1102	0.0736	0.4873
259	SLD 12	-1.29	-2.52	30.38	8.1027	0.0734	0.4534
259	SLD 13	-4.04	0.65	26.99	7.3033	0.0599	1.4147
259	SLD 14	-3.89	0.31	26.95	7.2918	0.0596	1.3625
259	SLD 15	-3.96	-0.74	26.71	7.1686	0.0575	1.3857
259	SLD 16	-3.81	-1.08	26.67	7.157	0.0572	1.3335
259	SLV 1	7.45	2.39	46.44	12.6519	0.1514	-2.6115
259	SLV 2	7.81	1.6	46.35	12.625	0.1507	-2.7332
259	SLV 3	7.65	-0.79	45.8	12.341	0.1459	-2.6791
259	SLV 4	8.01	-1.57	45.7	12.3141	0.1452	-2.8008
259	SLV 5	1.57	5.65	37.74	10.4337	0.1136	-0.554
259	SLV 6	1.8	5.15	37.68	10.4165	0.1131	-0.6317
259	SLV 7	2.23	-4.94	35.59	9.3972	0.0955	-0.7793
259	SLV 8	2.46	-5.45	35.53	9.3801	0.095	-0.857
259	SLV 9	-3.32	5.38	29.65	8.2256	0.0758	1.1609
259	SLV 10	-3.1	4.88	29.59	8.2084	0.0754	1.0832
259	SLV 11	-2.67	-5.21	27.5	7.1891	0.0577	0.9356
259	SLV 12	-2.44	-5.71	27.44	7.172	0.0573	0.8579
259	SLV 13	-8.87	1.51	19.48	5.2916	0.0256	3.1047
259	SLV 14	-8.52	0.73	19.38	5.2647	0.0249	2.983
259	SLV 15	-8.68	-1.66	18.84	4.9806	0.0202	3.0371
259	SLV 16	-8.32	-2.45	18.74	4.9538	0.0195	2.9154
259	CRTFP Ux+	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
259	CRTFP Ux-	0	0	0	0	0	0
259	CRTFP Uy+	0	0	0	0	0	0
259	CRTFP Uy-	0	0	0	0	0	0
260	SLU 1	-0.41	-0.04	28.39	7.1469	0.0592	0.1453
260	SLU 2	-0.41	0.02	28.34	7.1497	0.059	0.1443
260	SLU 3	-0.43	-0.03	28.93	7.2773	0.0605	0.1493
260	SLU 4	-0.43	0	28.9	7.279	0.0604	0.1487
260	SLU 5	-0.42	0.02	28.66	7.2266	0.0598	0.1459
260	SLU 6	-0.43	-0.03	29.25	7.3542	0.0612	0.1508
260	SLU 7	-0.43	0	29.22	7.3559	0.0611	0.1502
260	SLU 8	-0.42	-0.04	29.03	7.3007	0.0607	0.1484
260	SLU 9	-0.42	0	29	7.3024	0.0606	0.1478
260	SLU 10	-0.43	0.04	31.88	7.9959	0.0669	0.1504
260	SLU 11	-0.44	-0.01	32.47	8.1234	0.0684	0.1553
260	SLU 12	-0.44	0.02	32.44	8.1251	0.0683	0.1547
260	SLU 13	-0.43	0.04	32.2	8.0728	0.0677	0.1519
260	SLU 14	-0.45	-0.01	32.79	8.2003	0.0691	0.1568
260	SLU 15	-0.45	0.02	32.76	8.202	0.069	0.1563
260	SLU 16	-0.44	-0.01	32.56	8.1468	0.0686	0.1544
260	SLU 17	-0.44	0.02	32.54	8.1485	0.0685	0.1538
260	SLU 18	-0.44	-0.01	33.44	8.3557	0.0705	0.1539
260	SLU 19	-0.44	0.02	33.41	8.3574	0.0704	0.1533
260	SLU 20	-0.44	-0.01	33.76	8.4326	0.0712	0.1554
260	SLU 21	-0.44	0.03	33.73	8.4343	0.0711	0.1549
260	SLU 22	-0.47	-0.01	31.74	7.9524	0.067	0.1661
260	SLU 23	-0.47	0.05	31.69	7.9553	0.0669	0.1652
260	SLU 24	-0.49	-0.01	32.28	8.0828	0.0683	0.1701
260	SLU 25	-0.48	0.03	32.25	8.0845	0.0682	0.1695
260	SLU 26	-0.48	0.05	32.01	8.0321	0.0676	0.1667
260	SLU 27	-0.49	0	32.6	8.1597	0.0691	0.1716
260	SLU 28	-0.49	0.03	32.57	8.1614	0.069	0.1711
260	SLU 29	-0.48	-0.01	32.38	8.1062	0.0685	0.1692
260	SLU 30	-0.48	0.03	32.35	8.1079	0.0684	0.1686
260	SLU 31	-0.49	0.07	35.23	8.8014	0.0748	0.1712
260	SLU 32	-0.5	0.02	35.82	8.9289	0.0762	0.1761
260	SLU 33	-0.5	0.05	35.79	8.9306	0.0762	0.1756
260	SLU 34	-0.49	0.07	35.55	8.8783	0.0755	0.1727
260	SLU 35	-0.51	0.02	36.14	9.0058	0.077	0.1777
260	SLU 36	-0.51	0.05	36.11	9.0075	0.0769	0.1771
260	SLU 37	-0.5	0.02	35.92	8.9523	0.0764	0.1752
260	SLU 38	-0.5	0.05	35.89	8.954	0.0763	0.1746
260	SLU 39	-0.5	0.02	36.79	9.1612	0.0783	0.1747
260	SLU 40	-0.5	0.05	36.77	9.1629	0.0782	0.1742
260	SLU 41	-0.5	0.02	37.11	9.2381	0.0791	0.1763
260	SLU 42	-0.5	0.06	37.09	9.2398	0.079	0.1757
260	SLU 43	-0.52	-0.06	35.75	9.0148	0.0742	0.1818
260	SLU 44	-0.52	-0.01	35.71	9.0176	0.0741	0.1808
260	SLU 45	-0.53	-0.06	36.3	9.1452	0.0755	0.1857
260	SLU 46	-0.53	-0.02	36.27	9.1469	0.0754	0.1852
260	SLU 47	-0.52	0	36.03	9.0945	0.0748	0.1823
260	SLU 48	-0.53	-0.05	36.62	9.222	0.0763	0.1873
260	SLU 49	-0.53	-0.02	36.59	9.2237	0.0762	0.1867
260	SLU 50	-0.53	-0.06	36.39	9.1686	0.0757	0.1848
260	SLU 51	-0.53	-0.02	36.37	9.1703	0.0756	0.1842
260	SLU 52	-0.53	0.02	39.24	9.8638	0.082	0.1868
260	SLU 53	-0.55	-0.03	39.83	9.9913	0.0834	0.1918
260	SLU 54	-0.55	0	39.8	9.993	0.0833	0.1912
260	SLU 55	-0.54	0.02	39.56	9.9406	0.0827	0.1884
260	SLU 56	-0.55	-0.03	40.15	10.0682	0.0842	0.1933
260	SLU 57	-0.55	0	40.12	10.0699	0.0841	0.1927
260	SLU 58	-0.55	-0.04	39.93	10.0147	0.0836	0.1908
260	SLU 59	-0.54	0	39.9	10.0164	0.0835	0.1903
260	SLU 60	-0.54	-0.03	40.81	10.2236	0.0855	0.1904
260	SLU 61	-0.54	0	40.78	10.2253	0.0854	0.1898
260	SLU 62	-0.55	-0.03	41.13	10.3004	0.0863	0.1919
260	SLU 63	-0.55	0.01	41.1	10.3021	0.0862	0.1913
260	SLU 64	-0.58	-0.03	39.11	9.8203	0.0821	0.2026
260	SLU 65	-0.58	0.02	39.06	9.8231	0.0819	0.2016
260	SLU 66	-0.59	-0.03	39.65	9.9507	0.0834	0.2066
260	SLU 67	-0.59	0.01	39.62	9.9524	0.0833	0.206
260	SLU 68	-0.58	0.03	39.38	9.9	0.0827	0.2032
260	SLU 69	-0.59	-0.03	39.97	10.0276	0.0841	0.2081
260	SLU 70	-0.59	0.01	39.94	10.0293	0.084	0.2075
260	SLU 71	-0.59	-0.03	39.75	9.9741	0.0836	0.2056
260	SLU 72	-0.59	0.01	39.72	9.9758	0.0835	0.2051
260	SLU 73	-0.59	0.05	42.6	10.6693	0.0898	0.2077
260	SLU 74	-0.61	-0.01	43.19	10.7968	0.0913	0.2126
260	SLU 75	-0.61	0.03	43.16	10.7985	0.0912	0.212
260	SLU 76	-0.6	0.05	42.92	10.7462	0.0906	0.2092
260	SLU 77	-0.61	0	43.51	10.8737	0.092	0.2141
260	SLU 78	-0.61	0.03	43.48	10.8754	0.092	0.2135
260	SLU 79	-0.6	-0.01	43.29	10.8202	0.0915	0.2117
260	SLU 80	-0.6	0.03	43.26	10.8219	0.0914	0.2111
260	SLU 81	-0.6	0	44.16	11.0291	0.0934	0.2112
260	SLU 82	-0.6	0.03	44.13	11.0308	0.0933	0.2106
260	SLU 83	-0.61	0	44.48	11.106	0.0941	0.2127
260	SLU 84	-0.61	0.03	44.45	11.1077	0.094	0.2121
260	SLE RA 1	-0.43	-0.03	29.35	7.377	0.0614	0.1513
260	SLE RA 2	-0.43	0.01	29.31	7.3789	0.0613	0.1506
260	SLE RA 3	-0.44	-0.03	29.71	7.464	0.0623	0.1539
260	SLE RA 4	-0.44	-0.01	29.69	7.4651	0.0622	0.1535

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
260	SLE RA 5	-0.43	0.01	29.53	7.4302	0.0618	0.1516
260	SLE RA 6	-0.44	-0.03	29.92	7.5152	0.0628	0.1549
260	SLE RA 7	-0.44	0	29.9	7.5164	0.0627	0.1545
260	SLE RA 8	-0.44	-0.03	29.77	7.4796	0.0624	0.1533
260	SLE RA 9	-0.44	-0.01	29.75	7.4807	0.0624	0.1529
260	SLE RA 10	-0.44	0.02	31.67	7.943	0.0666	0.1546
260	SLE RA 11	-0.45	-0.01	32.06	8.0281	0.0676	0.1579
260	SLE RA 12	-0.45	0.01	32.05	8.0292	0.0675	0.1575
260	SLE RA 13	-0.45	0.02	31.89	7.9943	0.0671	0.1557
260	SLE RA 14	-0.45	-0.01	32.28	8.0793	0.0681	0.1589
260	SLE RA 15	-0.45	0.01	32.26	8.0804	0.068	0.1586
260	SLE RA 16	-0.45	-0.01	32.13	8.0437	0.0677	0.1573
260	SLE RA 17	-0.45	0.01	32.11	8.0448	0.0676	0.1569
260	SLE RA 18	-0.45	-0.01	32.71	8.1829	0.0689	0.157
260	SLE RA 19	-0.45	0.01	32.7	8.184	0.0689	0.1566
260	SLE RA 20	-0.45	-0.01	32.93	8.2342	0.0694	0.158
260	SLE RA 21	-0.45	0.01	32.91	8.2353	0.0694	0.1576
260	SLE FR 1	-0.43	-0.03	29.35	7.377	0.0614	0.1513
260	SLE FR 2	-0.43	-0.03	29.34	7.3774	0.0614	0.1511
260	SLE FR 3	-0.43	-0.03	29.43	7.3975	0.0616	0.1517
260	SLE FR 4	-0.44	-0.02	30.35	7.6192	0.0637	0.1528
260	SLE FR 5	-0.44	-0.03	30.44	7.6393	0.0639	0.1534
260	SLE FR 6	-0.44	-0.02	31.03	7.78	0.0652	0.1541
260	SLE QP 1	-0.43	-0.03	29.35	7.377	0.0614	0.1513
260	SLE QP 2	-0.44	-0.03	30.36	7.6188	0.0637	0.153
260	SLD 1	2.94	0.96	35.55	8.9643	0.0873	-1.0299
260	SLD 2	3.09	0.65	35.51	8.9556	0.0871	-1.0822
260	SLD 3	3.02	-0.36	35.25	8.802	0.0854	-1.0589
260	SLD 4	3.18	-0.67	35.21	8.7933	0.0852	-1.1112
260	SLD 5	0.42	2.32	32.37	8.2702	0.0736	-0.1488
260	SLD 6	0.52	2.12	32.35	8.2645	0.0735	-0.1827
260	SLD 7	0.7	-2.07	31.38	7.7291	0.0674	-0.2454
260	SLD 8	0.8	-2.27	31.35	7.7235	0.0673	-0.2793
260	SLD 9	-1.67	2.21	29.36	7.5141	0.0601	0.5853
260	SLD 10	-1.58	2.01	29.34	7.5085	0.0599	0.5514
260	SLD 11	-1.39	-2.17	28.36	6.9731	0.0539	0.4887
260	SLD 12	-1.3	-2.37	28.34	6.9674	0.0537	0.4548
260	SLD 13	-4.05	0.61	25.5	6.4443	0.0422	1.4171
260	SLD 14	-3.9	0.3	25.47	6.4356	0.0419	1.3649
260	SLD 15	-3.96	-0.7	25.2	6.282	0.0403	1.3881
260	SLD 16	-3.81	-1.01	25.17	6.2733	0.04	1.3359
260	SLV 1	7.46	2.24	42.49	10.7652	0.119	-2.6136
260	SLV 2	7.81	1.52	42.41	10.7449	0.1184	-2.7354
260	SLV 3	7.66	-0.76	41.81	10.3897	0.1146	-2.6813
260	SLV 4	8.01	-1.48	41.72	10.3694	0.114	-2.803
260	SLV 5	1.57	5.33	35.06	9.1357	0.087	-0.5538
260	SLV 6	1.8	4.87	35	9.1227	0.0866	-0.6316
260	SLV 7	2.23	-4.68	32.76	7.884	0.0724	-0.7793
260	SLV 8	2.45	-5.14	32.71	7.871	0.0721	-0.857
260	SLV 9	-3.33	5.09	28.01	7.3665	0.0553	1.1629
260	SLV 10	-3.1	4.63	27.95	7.3536	0.0549	1.0852
260	SLV 11	-2.67	-4.92	25.71	6.1149	0.0407	0.9375
260	SLV 12	-2.45	-5.39	25.66	6.1019	0.0404	0.8598
260	SLV 13	-8.88	1.43	18.99	4.8682	0.0133	3.1089
260	SLV 14	-8.53	0.71	18.91	4.8479	0.0127	2.9872
260	SLV 15	-8.69	-1.57	18.3	4.4927	0.009	3.0413
260	SLV 16	-8.33	-2.3	18.22	4.4724	0.0084	2.9196
260	CRTFP Ux+	0	0	0	0	0	0
260	CRTFP Ux-	0	0	0	0	0	0
260	CRTFP Uy+	0	0	0	0	0	0
260	CRTFP Uy-	0	0	0	0	0	0
261	SLU 1	-0.42	-0.04	26.93	6.386	0.0385	0.146
261	SLU 2	-0.41	0.01	26.88	6.3932	0.0384	0.1448
261	SLU 3	-0.43	-0.03	27.43	6.4999	0.0394	0.15
261	SLU 4	-0.43	0	27.41	6.5042	0.0393	0.1493
261	SLU 5	-0.42	0.01	27.18	6.4605	0.0389	0.1464
261	SLU 6	-0.43	-0.03	27.74	6.5673	0.0399	0.1515
261	SLU 7	-0.43	0	27.71	6.5716	0.0398	0.1508
261	SLU 8	-0.43	-0.03	27.53	6.5207	0.0395	0.149
261	SLU 9	-0.42	-0.01	27.5	6.525	0.0394	0.1483
261	SLU 10	-0.43	0.03	30.23	7.1359	0.0434	0.1511
261	SLU 11	-0.45	-0.01	30.78	7.2427	0.0444	0.1562
261	SLU 12	-0.44	0.02	30.75	7.247	0.0443	0.1555
261	SLU 13	-0.44	0.03	30.53	7.2032	0.0439	0.1526
261	SLU 14	-0.45	-0.01	31.08	7.31	0.0448	0.1577
261	SLU 15	-0.45	0.02	31.05	7.3143	0.0448	0.157
261	SLU 16	-0.44	-0.01	30.87	7.2634	0.0445	0.1553
261	SLU 17	-0.44	0.02	30.85	7.2677	0.0444	0.1546
261	SLU 18	-0.44	-0.01	31.7	7.447	0.0456	0.1549
261	SLU 19	-0.44	0.02	31.68	7.4514	0.0456	0.1542
261	SLU 20	-0.45	0	32	7.5144	0.0461	0.1564
261	SLU 21	-0.45	0.02	31.98	7.5187	0.0461	0.1557
261	SLU 22	-0.48	-0.01	30.08	7.0905	0.0436	0.167
261	SLU 23	-0.47	0.04	30.04	7.0977	0.0435	0.1658
261	SLU 24	-0.49	0	30.59	7.2044	0.0445	0.1709
261	SLU 25	-0.49	0.03	30.57	7.2087	0.0444	0.1703
261	SLU 26	-0.48	0.04	30.34	7.165	0.044	0.1673
261	SLU 27	-0.49	0	30.89	7.2717	0.045	0.1725
261	SLU 28	-0.49	0.03	30.87	7.276	0.0449	0.1718
261	SLU 29	-0.49	0	30.69	7.2251	0.0446	0.17
261	SLU 30	-0.48	0.03	30.66	7.2295	0.0445	0.1693

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
261	SLU 31	-0.49	0.06	33.39	7.8404	0.0485	0.1721
261	SLU 32	-0.51	0.02	33.94	7.9471	0.0495	0.1772
261	SLU 33	-0.5	0.05	33.91	7.9514	0.0494	0.1765
261	SLU 34	-0.5	0.07	33.69	7.9077	0.049	0.1736
261	SLU 35	-0.51	0.02	34.24	8.0145	0.05	0.1787
261	SLU 36	-0.51	0.05	34.21	8.0188	0.0499	0.178
261	SLU 37	-0.5	0.02	34.03	7.9679	0.0496	0.1763
261	SLU 38	-0.5	0.05	34.01	7.9722	0.0495	0.1756
261	SLU 39	-0.5	0.02	34.86	8.1515	0.0508	0.1759
261	SLU 40	-0.5	0.05	34.84	8.1558	0.0507	0.1752
261	SLU 41	-0.51	0.03	35.16	8.2189	0.0512	0.1774
261	SLU 42	-0.5	0.06	35.14	8.2232	0.0512	0.1767
261	SLU 43	-0.52	-0.06	33.92	8.0603	0.0483	0.1826
261	SLU 44	-0.52	-0.01	33.88	8.0675	0.0482	0.1814
261	SLU 45	-0.53	-0.05	34.43	8.1742	0.0492	0.1865
261	SLU 46	-0.53	-0.02	34.4	8.1785	0.0491	0.1859
261	SLU 47	-0.52	-0.01	34.18	8.1348	0.0487	0.1829
261	SLU 48	-0.54	-0.05	34.73	8.2415	0.0497	0.1881
261	SLU 49	-0.54	-0.02	34.7	8.2458	0.0496	0.1874
261	SLU 50	-0.53	-0.06	34.52	8.1949	0.0493	0.1856
261	SLU 51	-0.53	-0.03	34.5	8.1992	0.0492	0.1849
261	SLU 52	-0.54	0.01	37.22	8.8102	0.0532	0.1877
261	SLU 53	-0.55	-0.03	37.77	8.9169	0.0542	0.1928
261	SLU 54	-0.55	0	37.75	8.9212	0.0541	0.1921
261	SLU 55	-0.54	0.01	37.52	8.8775	0.0537	0.1892
261	SLU 56	-0.55	-0.03	38.07	8.9843	0.0546	0.1943
261	SLU 57	-0.55	0	38.05	8.9886	0.0546	0.1936
261	SLU 58	-0.55	-0.03	37.87	8.9377	0.0543	0.1919
261	SLU 59	-0.55	-0.01	37.84	8.942	0.0542	0.1912
261	SLU 60	-0.55	-0.03	38.7	9.1213	0.0554	0.1915
261	SLU 61	-0.55	0	38.67	9.1256	0.0554	0.1908
261	SLU 62	-0.55	-0.03	39	9.1886	0.0559	0.193
261	SLU 63	-0.55	0	38.97	9.193	0.0558	0.1923
261	SLU 64	-0.58	-0.03	37.08	8.7647	0.0534	0.2036
261	SLU 65	-0.58	0.02	37.04	8.7719	0.0533	0.2024
261	SLU 66	-0.59	-0.02	37.59	8.8787	0.0543	0.2075
261	SLU 67	-0.59	0.01	37.56	8.883	0.0542	0.2069
261	SLU 68	-0.58	0.02	37.34	8.8393	0.0538	0.2039
261	SLU 69	-0.6	-0.02	37.89	8.946	0.0548	0.2091
261	SLU 70	-0.6	0.01	37.86	8.9503	0.0547	0.2084
261	SLU 71	-0.59	-0.03	37.68	8.8994	0.0544	0.2066
261	SLU 72	-0.59	0	37.66	8.9037	0.0543	0.2059
261	SLU 73	-0.6	0.04	40.38	9.5147	0.0583	0.2087
261	SLU 74	-0.61	0	40.93	9.6214	0.0593	0.2138
261	SLU 75	-0.61	0.03	40.91	9.6257	0.0592	0.2131
261	SLU 76	-0.6	0.04	40.68	9.582	0.0588	0.2102
261	SLU 77	-0.61	0	41.23	9.6887	0.0598	0.2153
261	SLU 78	-0.61	0.03	41.21	9.693	0.0597	0.2146
261	SLU 79	-0.61	0	41.03	9.6421	0.0594	0.2129
261	SLU 80	-0.61	0.03	41	9.6464	0.0593	0.2122
261	SLU 81	-0.61	0	41.86	9.8258	0.0605	0.2125
261	SLU 82	-0.61	0.03	41.83	9.8301	0.0605	0.2118
261	SLU 83	-0.61	0	42.16	9.8931	0.061	0.214
261	SLU 84	-0.61	0.03	42.13	9.8974	0.061	0.2133
261	SLE RA 1	-0.43	-0.03	27.83	6.5873	0.04	0.152
261	SLE RA 2	-0.43	0	27.8	6.5921	0.0399	0.1512
261	SLE RA 3	-0.44	-0.02	28.17	6.6632	0.0405	0.1546
261	SLE RA 4	-0.44	-0.01	28.15	6.6661	0.0405	0.1542
261	SLE RA 5	-0.44	0	28	6.637	0.0402	0.1522
261	SLE RA 6	-0.44	-0.02	28.37	6.7081	0.0409	0.1556
261	SLE RA 7	-0.44	0	28.35	6.711	0.0408	0.1552
261	SLE RA 8	-0.44	-0.03	28.23	6.6771	0.0406	0.154
261	SLE RA 9	-0.44	-0.01	28.21	6.6799	0.0406	0.1535
261	SLE RA 10	-0.44	0.02	30.03	7.0872	0.0432	0.1554
261	SLE RA 11	-0.45	-0.01	30.4	7.1584	0.0439	0.1588
261	SLE RA 12	-0.45	0.01	30.38	7.1613	0.0438	0.1583
261	SLE RA 13	-0.45	0.02	30.23	7.1321	0.0435	0.1564
261	SLE RA 14	-0.46	-0.01	30.6	7.2033	0.0442	0.1598
261	SLE RA 15	-0.46	0.01	30.58	7.2061	0.0441	0.1593
261	SLE RA 16	-0.45	-0.01	30.46	7.1722	0.0439	0.1582
261	SLE RA 17	-0.45	0.01	30.44	7.1751	0.0439	0.1577
261	SLE RA 18	-0.45	-0.01	31.01	7.2946	0.0447	0.1579
261	SLE RA 19	-0.45	0.01	31	7.2975	0.0447	0.1575
261	SLE RA 20	-0.45	-0.01	31.21	7.3395	0.045	0.1589
261	SLE RA 21	-0.45	0.01	31.2	7.3424	0.045	0.1585
261	SLE FR 1	-0.43	-0.03	27.83	6.5873	0.04	0.152
261	SLE FR 2	-0.43	-0.02	27.82	6.5882	0.04	0.1518
261	SLE FR 3	-0.44	-0.03	27.91	6.6052	0.0401	0.1524
261	SLE FR 4	-0.44	-0.02	28.78	6.8004	0.0414	0.1536
261	SLE FR 5	-0.44	-0.02	28.86	6.8174	0.0415	0.1542
261	SLE FR 6	-0.44	-0.02	29.42	6.941	0.0423	0.1549
261	SLE QP 1	-0.43	-0.03	27.83	6.5873	0.04	0.152
261	SLE QP 2	-0.44	-0.02	28.78	6.7995	0.0414	0.1538
261	SLD 1	2.94	0.91	33.37	7.9105	0.0605	-1.0303
261	SLD 2	3.09	0.62	33.34	7.9039	0.0603	-1.0826
261	SLD 3	3.02	-0.34	33.05	7.7247	0.0592	-1.0593
261	SLD 4	3.18	-0.63	33.02	7.7182	0.059	-1.1116
261	SLD 5	0.42	2.2	30.65	7.4157	0.0492	-0.1483
261	SLD 6	0.52	2.01	30.63	7.4114	0.049	-0.1823
261	SLD 7	0.7	-1.96	29.58	6.7965	0.0448	-0.2451
261	SLD 8	0.8	-2.15	29.56	6.7922	0.0446	-0.279

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
261	SLD 9	-1.68	2.1	28	6.8068	0.0382	0.5865
261	SLD 10	-1.58	1.92	27.99	6.8025	0.038	0.5526
261	SLD 11	-1.4	-2.06	26.93	6.1876	0.0338	0.4898
261	SLD 12	-1.3	-2.24	26.92	6.1833	0.0336	0.4558
261	SLD 13	-4.05	0.58	24.55	5.8808	0.0238	1.4191
261	SLD 14	-3.9	0.3	24.52	5.8742	0.0236	1.3668
261	SLD 15	-3.97	-0.66	24.23	5.695	0.0225	1.3901
261	SLD 16	-3.82	-0.95	24.2	5.6885	0.0223	1.3378
261	SLV 1	7.46	2.11	39.51	9.397	0.0861	-2.6155
261	SLV 2	7.82	1.45	39.44	9.3817	0.0857	-2.7374
261	SLV 3	7.66	-0.74	38.77	8.9667	0.083	-2.6833
261	SLV 4	8.01	-1.4	38.7	8.9513	0.0826	-2.8051
261	SLV 5	1.58	5.06	33.14	8.2341	0.0596	-0.5537
261	SLV 6	1.8	4.63	33.09	8.2243	0.0593	-0.6315
261	SLV 7	2.23	-4.45	30.67	6.7995	0.0493	-0.7794
261	SLV 8	2.45	-4.87	30.62	6.7897	0.049	-0.8572
261	SLV 9	-3.33	4.83	26.94	6.8093	0.0338	1.1647
261	SLV 10	-3.11	4.4	26.9	6.7995	0.0335	1.0869
261	SLV 11	-2.68	-4.68	24.47	5.3747	0.0235	0.939
261	SLV 12	-2.45	-5.1	24.43	5.3649	0.0232	0.8612
261	SLV 13	-8.89	1.36	18.87	4.6476	0.0002	3.1126
261	SLV 14	-8.54	0.69	18.8	4.6323	-0.0002	2.9908
261	SLV 15	-8.7	-1.49	18.12	4.2173	-0.0029	3.0449
261	SLV 16	-8.34	-2.16	18.06	4.2019	-0.0033	2.923
261	CRTFP Ux+	0	0	0	0	0	0
261	CRTFP Ux-	0	0	0	0	0	0
261	CRTFP Uy+	0	0	0	0	0	0
261	CRTFP Uy-	0	0	0	0	0	0
262	SLU 1	-0.42	-0.04	26.08	5.9621	0.0181	0.1464
262	SLU 2	-0.41	0.01	26.04	5.9723	0.018	0.145
262	SLU 3	-0.43	-0.03	26.57	6.0668	0.0185	0.1504
262	SLU 4	-0.43	0	26.54	6.0729	0.0184	0.1495
262	SLU 5	-0.42	0.01	26.33	6.0344	0.0182	0.1465
262	SLU 6	-0.43	-0.03	26.86	6.1288	0.0187	0.1519
262	SLU 7	-0.43	0	26.84	6.1349	0.0187	0.1511
262	SLU 8	-0.43	-0.03	26.66	6.0862	0.0185	0.1494
262	SLU 9	-0.42	-0.01	26.64	6.0923	0.0185	0.1486
262	SLU 10	-0.43	0.03	29.28	6.6591	0.0201	0.1515
262	SLU 11	-0.45	-0.01	29.81	6.7535	0.0206	0.1568
262	SLU 12	-0.45	0.02	29.78	6.7597	0.0205	0.156
262	SLU 13	-0.44	0.03	29.57	6.7212	0.0203	0.153
262	SLU 14	-0.45	-0.01	30.1	6.8156	0.0208	0.1583
262	SLU 15	-0.45	0.02	30.07	6.8217	0.0208	0.1575
262	SLU 16	-0.45	-0.01	29.9	6.773	0.0206	0.1559
262	SLU 17	-0.44	0.01	29.87	6.7791	0.0206	0.1551
262	SLU 18	-0.44	0	30.71	6.9432	0.0211	0.1556
262	SLU 19	-0.44	0.02	30.68	6.9494	0.021	0.1548
262	SLU 20	-0.45	0	31	7.0053	0.0213	0.1571
262	SLU 21	-0.45	0.02	30.97	7.0114	0.0212	0.1563
262	SLU 22	-0.48	0	29.13	6.6103	0.0205	0.1675
262	SLU 23	-0.47	0.04	29.09	6.6205	0.0204	0.1662
262	SLU 24	-0.49	0	29.62	6.715	0.0209	0.1715
262	SLU 25	-0.49	0.03	29.59	6.7211	0.0208	0.1707
262	SLU 26	-0.48	0.04	29.38	6.6826	0.0206	0.1677
262	SLU 27	-0.49	0	29.91	6.777	0.0211	0.173
262	SLU 28	-0.49	0.03	29.88	6.7831	0.0211	0.1722
262	SLU 29	-0.49	0	29.71	6.7344	0.0209	0.1706
262	SLU 30	-0.49	0.02	29.68	6.7405	0.0209	0.1697
262	SLU 31	-0.49	0.06	32.32	7.3073	0.0225	0.1726
262	SLU 32	-0.51	0.03	32.85	7.4017	0.023	0.178
262	SLU 33	-0.51	0.05	32.83	7.4079	0.0229	0.1771
262	SLU 34	-0.5	0.06	32.61	7.3694	0.0227	0.1741
262	SLU 35	-0.51	0.03	33.14	7.4638	0.0232	0.1795
262	SLU 36	-0.51	0.05	33.12	7.4699	0.0232	0.1787
262	SLU 37	-0.51	0.02	32.95	7.4212	0.023	0.177
262	SLU 38	-0.5	0.05	32.92	7.4273	0.023	0.1762
262	SLU 39	-0.5	0.03	33.75	7.5914	0.0235	0.1767
262	SLU 40	-0.5	0.05	33.73	7.5976	0.0234	0.1759
262	SLU 41	-0.51	0.03	34.04	7.6535	0.0237	0.1783
262	SLU 42	-0.51	0.06	34.02	7.6596	0.0236	0.1774
262	SLU 43	-0.52	-0.06	32.86	7.5285	0.0227	0.183
262	SLU 44	-0.52	-0.02	32.82	7.5387	0.0226	0.1817
262	SLU 45	-0.53	-0.05	33.35	7.6332	0.0231	0.187
262	SLU 46	-0.53	-0.03	33.32	7.6393	0.023	0.1862
262	SLU 47	-0.52	-0.02	33.11	7.6008	0.0228	0.1832
262	SLU 48	-0.54	-0.05	33.64	7.6952	0.0233	0.1885
262	SLU 49	-0.54	-0.03	33.61	7.7013	0.0233	0.1877
262	SLU 50	-0.53	-0.06	33.44	7.6526	0.0231	0.1861
262	SLU 51	-0.53	-0.03	33.42	7.6587	0.0231	0.1853
262	SLU 52	-0.54	0.01	36.06	8.2255	0.0247	0.1881
262	SLU 53	-0.55	-0.03	36.59	8.3199	0.0252	0.1935
262	SLU 54	-0.55	0	36.56	8.3261	0.0251	0.1927
262	SLU 55	-0.54	0.01	36.35	8.2876	0.0249	0.1897
262	SLU 56	-0.56	-0.03	36.88	8.382	0.0254	0.195
262	SLU 57	-0.56	0	36.85	8.3881	0.0254	0.1942
262	SLU 58	-0.55	-0.03	36.68	8.3394	0.0252	0.1925
262	SLU 59	-0.55	-0.01	36.65	8.3455	0.0252	0.1917
262	SLU 60	-0.55	-0.03	37.48	8.5096	0.0257	0.1923
262	SLU 61	-0.55	0	37.46	8.5158	0.0256	0.1914
262	SLU 62	-0.55	-0.02	37.78	8.5717	0.0259	0.1938
262	SLU 63	-0.55	0	37.75	8.5778	0.0258	0.193

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
262	SLU 64	-0.58	-0.02	35.91	8.1767	0.0251	0.2042
262	SLU 65	-0.58	0.02	35.87	8.1869	0.025	0.2028
262	SLU 66	-0.59	-0.02	36.4	8.2813	0.0255	0.2082
262	SLU 67	-0.59	0.01	36.37	8.2875	0.0254	0.2074
262	SLU 68	-0.58	0.02	36.16	8.249	0.0252	0.2043
262	SLU 69	-0.6	-0.02	36.69	8.3434	0.0257	0.2097
262	SLU 70	-0.6	0.01	36.66	8.3495	0.0257	0.2089
262	SLU 71	-0.59	-0.02	36.49	8.3008	0.0255	0.2072
262	SLU 72	-0.59	0	36.46	8.3069	0.0255	0.2064
262	SLU 73	-0.6	0.04	39.1	8.8737	0.0271	0.2093
262	SLU 74	-0.61	0	39.63	8.9681	0.0276	0.2146
262	SLU 75	-0.61	0.03	39.61	8.9743	0.0275	0.2138
262	SLU 76	-0.6	0.04	39.39	8.9357	0.0273	0.2108
262	SLU 77	-0.62	0.01	39.92	9.0302	0.0278	0.2161
262	SLU 78	-0.62	0.03	39.9	9.0363	0.0278	0.2153
262	SLU 79	-0.61	0	39.73	8.9876	0.0276	0.2137
262	SLU 80	-0.61	0.02	39.7	8.9937	0.0276	0.2129
262	SLU 81	-0.61	0.01	40.53	9.1578	0.0281	0.2134
262	SLU 82	-0.61	0.03	40.51	9.164	0.028	0.2126
262	SLU 83	-0.61	0.01	40.82	9.2199	0.0283	0.2149
262	SLU 84	-0.61	0.03	40.8	9.226	0.0282	0.2141
262	SLE RA 1	-0.44	-0.03	26.95	6.1473	0.0188	0.1524
262	SLE RA 2	-0.43	0	26.92	6.1541	0.0187	0.1515
262	SLE RA 3	-0.44	-0.02	27.28	6.2171	0.019	0.1551
262	SLE RA 4	-0.44	-0.01	27.26	6.2212	0.019	0.1545
262	SLE RA 5	-0.44	0	27.12	6.1955	0.0189	0.1525
262	SLE RA 6	-0.45	-0.02	27.47	6.2584	0.0192	0.1561
262	SLE RA 7	-0.44	0	27.45	6.2625	0.0192	0.1555
262	SLE RA 8	-0.44	-0.02	27.34	6.23	0.0191	0.1544
262	SLE RA 9	-0.44	-0.01	27.32	6.2341	0.019	0.1539
262	SLE RA 10	-0.45	0.02	29.08	6.612	0.0201	0.1558
262	SLE RA 11	-0.46	-0.01	29.44	6.6749	0.0204	0.1594
262	SLE RA 12	-0.45	0.01	29.42	6.679	0.0204	0.1588
262	SLE RA 13	-0.45	0.02	29.28	6.6533	0.0203	0.1568
262	SLE RA 14	-0.46	-0.01	29.63	6.7163	0.0206	0.1604
262	SLE RA 15	-0.46	0.01	29.61	6.7204	0.0206	0.1598
262	SLE RA 16	-0.45	-0.01	29.5	6.6879	0.0205	0.1587
262	SLE RA 17	-0.45	0.01	29.48	6.692	0.0204	0.1582
262	SLE RA 18	-0.45	0	30.03	6.8014	0.0207	0.1586
262	SLE RA 19	-0.45	0.01	30.02	6.8055	0.0207	0.158
262	SLE RA 20	-0.46	0	30.23	6.8428	0.0209	0.1596
262	SLE RA 21	-0.45	0.01	30.21	6.8468	0.0209	0.159
262	SLE FR 1	-0.44	-0.03	26.95	6.1473	0.0188	0.1524
262	SLE FR 2	-0.43	-0.02	26.94	6.1487	0.0187	0.1522
262	SLE FR 3	-0.44	-0.03	27.03	6.1639	0.0188	0.1528
262	SLE FR 4	-0.44	-0.01	27.87	6.3449	0.0193	0.1541
262	SLE FR 5	-0.44	-0.02	27.95	6.3601	0.0194	0.1547
262	SLE FR 6	-0.44	-0.02	28.49	6.4744	0.0198	0.1555
262	SLE QP 1	-0.44	-0.03	26.95	6.1473	0.0188	0.1524
262	SLE QP 2	-0.44	-0.02	27.88	6.3435	0.0194	0.1543
262	SLD 1	2.94	0.86	31.98	7.281	0.0342	-1.0307
262	SLD 2	3.09	0.6	31.95	7.2758	0.034	-1.083
262	SLD 3	3.03	-0.33	31.64	7.0794	0.0335	-1.0598
262	SLD 4	3.18	-0.6	31.62	7.0742	0.0333	-1.1121
262	SLD 5	0.42	2.1	29.62	6.9314	0.0249	-0.148
262	SLD 6	0.52	1.93	29.61	6.9281	0.0248	-0.182
262	SLD 7	0.7	-1.88	28.5	6.2594	0.0225	-0.2449
262	SLD 8	0.8	-2.05	28.48	6.2561	0.0224	-0.2789
262	SLD 9	-1.68	2.01	27.27	6.431	0.0163	0.5874
262	SLD 10	-1.58	1.84	27.25	6.4276	0.0162	0.5534
262	SLD 11	-1.4	-1.97	26.14	5.759	0.0139	0.4905
262	SLD 12	-1.3	-2.14	26.13	5.7556	0.0138	0.4565
262	SLD 13	-4.06	0.56	24.13	5.6129	0.0054	1.4207
262	SLD 14	-3.91	0.3	24.11	5.6077	0.0053	1.3683
262	SLD 15	-3.97	-0.63	23.8	5.4113	0.0047	1.3916
262	SLD 16	-3.82	-0.9	23.77	5.4061	0.0045	1.3392
262	SLV 1	7.47	2	37.47	8.5348	0.0541	-2.6171
262	SLV 2	7.82	1.39	37.42	8.5227	0.0537	-2.7391
262	SLV 3	7.67	-0.72	36.69	8.0674	0.0524	-2.685
262	SLV 4	8.02	-1.34	36.64	8.0554	0.052	-2.8069
262	SLV 5	1.58	4.83	31.94	7.7117	0.0324	-0.5536
262	SLV 6	1.8	4.44	31.91	7.704	0.0322	-0.6315
262	SLV 7	2.23	-4.26	29.35	6.154	0.0267	-0.7798
262	SLV 8	2.45	-4.66	29.31	6.1463	0.0265	-0.8577
262	SLV 9	-3.33	4.62	26.44	6.5408	0.0122	1.1662
262	SLV 10	-3.11	4.22	26.4	6.5331	0.012	1.0883
262	SLV 11	-2.68	-4.47	23.84	4.983	0.0065	0.94
262	SLV 12	-2.46	-4.87	23.81	4.9753	0.0063	0.8621
262	SLV 13	-8.9	1.3	19.11	4.6317	-0.0133	3.1155
262	SLV 14	-8.55	0.69	19.06	4.6197	-0.0137	2.9935
262	SLV 15	-8.7	-1.43	18.33	4.1644	-0.015	3.0476
262	SLV 16	-8.35	-2.04	18.28	4.1523	-0.0154	2.9257
262	CRTFP Ux+	0	0	0	0	0	0
262	CRTFP Ux-	0	0	0	0	0	0
262	CRTFP Uy+	0	0	0	0	0	0
262	CRTFP Uy-	0	0	0	0	0	0
263	SLU 1	-0.42	-0.03	25.84	5.8659	-0.0017	0.1465
263	SLU 2	-0.41	0	25.8	5.8778	-0.0017	0.145
263	SLU 3	-0.43	-0.03	26.32	5.9683	-0.0017	0.1505
263	SLU 4	-0.43	-0.01	26.3	5.9754	-0.0017	0.1496
263	SLU 5	-0.42	0	26.08	5.9387	-0.0017	0.1465

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
263	SLU 6	-0.43	-0.03	26.61	6.0291	-0.0017	0.152
263	SLU 7	-0.43	-0.01	26.58	6.0363	-0.0017	0.1511
263	SLU 8	-0.43	-0.03	26.41	5.9876	-0.0017	0.1496
263	SLU 9	-0.42	-0.01	26.39	5.9948	-0.0017	0.1486
263	SLU 10	-0.43	0.02	29.01	6.555	-0.0024	0.1516
263	SLU 11	-0.45	-0.01	29.54	6.6455	-0.0024	0.1572
263	SLU 12	-0.45	0.02	29.51	6.6526	-0.0024	0.1562
263	SLU 13	-0.44	0.02	29.3	6.6159	-0.0024	0.1531
263	SLU 14	-0.45	-0.01	29.82	6.7063	-0.0024	0.1587
263	SLU 15	-0.45	0.02	29.8	6.7134	-0.0024	0.1577
263	SLU 16	-0.45	-0.01	29.63	6.6648	-0.0024	0.1562
263	SLU 17	-0.44	0.01	29.61	6.672	-0.0024	0.1553
263	SLU 18	-0.45	0	30.43	6.8333	-0.0027	0.1561
263	SLU 19	-0.44	0.02	30.41	6.8405	-0.0027	0.1551
263	SLU 20	-0.45	0	30.72	6.8942	-0.0027	0.1576
263	SLU 21	-0.45	0.02	30.7	6.9013	-0.0027	0.1566
263	SLU 22	-0.48	0	28.85	6.5013	-0.0019	0.1678
263	SLU 23	-0.48	0.04	28.81	6.5132	-0.0019	0.1662
263	SLU 24	-0.49	0.01	29.33	6.6037	-0.0019	0.1718
263	SLU 25	-0.49	0.03	29.31	6.6108	-0.0019	0.1708
263	SLU 26	-0.48	0.04	29.1	6.5741	-0.0019	0.1677
263	SLU 27	-0.49	0.01	29.62	6.6645	-0.0019	0.1733
263	SLU 28	-0.49	0.03	29.6	6.6717	-0.0019	0.1723
263	SLU 29	-0.49	0	29.43	6.623	-0.0019	0.1708
263	SLU 30	-0.49	0.02	29.4	6.6302	-0.0019	0.1699
263	SLU 31	-0.49	0.06	32.03	7.1904	-0.0026	0.1729
263	SLU 32	-0.51	0.03	32.55	7.2809	-0.0026	0.1785
263	SLU 33	-0.51	0.05	32.53	7.288	-0.0026	0.1775
263	SLU 34	-0.5	0.06	32.32	7.2513	-0.0026	0.1744
263	SLU 35	-0.51	0.03	32.84	7.3417	-0.0026	0.18
263	SLU 36	-0.51	0.05	32.82	7.3488	-0.0026	0.179
263	SLU 37	-0.51	0.02	32.64	7.3002	-0.0026	0.1775
263	SLU 38	-0.5	0.05	32.62	7.3074	-0.0026	0.1765
263	SLU 39	-0.51	0.03	33.45	7.4687	-0.0029	0.1773
263	SLU 40	-0.5	0.06	33.42	7.4759	-0.0029	0.1764
263	SLU 41	-0.51	0.03	33.73	7.5296	-0.0029	0.1789
263	SLU 42	-0.51	0.06	33.71	7.5367	-0.0029	0.1779
263	SLU 43	-0.52	-0.06	32.55	7.4078	-0.0021	0.1832
263	SLU 44	-0.52	-0.02	32.51	7.4197	-0.0021	0.1816
263	SLU 45	-0.53	-0.05	33.04	7.5102	-0.0021	0.1872
263	SLU 46	-0.53	-0.03	33.01	7.5173	-0.0021	0.1862
263	SLU 47	-0.52	-0.02	32.8	7.4806	-0.0021	0.1831
263	SLU 48	-0.54	-0.05	33.32	7.571	-0.0021	0.1887
263	SLU 49	-0.54	-0.03	33.3	7.5782	-0.0021	0.1877
263	SLU 50	-0.53	-0.06	33.13	7.5296	-0.0021	0.1862
263	SLU 51	-0.53	-0.03	33.11	7.5367	-0.0021	0.1853
263	SLU 52	-0.54	0	35.73	8.0969	-0.0028	0.1883
263	SLU 53	-0.55	-0.03	36.25	8.1874	-0.0028	0.1938
263	SLU 54	-0.55	-0.01	36.23	8.1945	-0.0028	0.1929
263	SLU 55	-0.54	0	36.02	8.1578	-0.0028	0.1898
263	SLU 56	-0.56	-0.03	36.54	8.2482	-0.0028	0.1954
263	SLU 57	-0.56	-0.01	36.52	8.2554	-0.0028	0.1944
263	SLU 58	-0.55	-0.03	36.35	8.2068	-0.0028	0.1929
263	SLU 59	-0.55	-0.01	36.32	8.2139	-0.0028	0.1919
263	SLU 60	-0.55	-0.02	37.15	8.3753	-0.0031	0.1927
263	SLU 61	-0.55	0	37.13	8.3824	-0.0031	0.1918
263	SLU 62	-0.56	-0.02	37.44	8.4361	-0.0031	0.1942
263	SLU 63	-0.55	0	37.41	8.4433	-0.0031	0.1933
263	SLU 64	-0.58	-0.02	35.57	8.0433	-0.0023	0.2045
263	SLU 65	-0.58	0.01	35.53	8.0551	-0.0023	0.2029
263	SLU 66	-0.6	-0.02	36.05	8.1456	-0.0023	0.2085
263	SLU 67	-0.59	0.01	36.03	8.1527	-0.0023	0.2075
263	SLU 68	-0.58	0.01	35.82	8.116	-0.0023	0.2044
263	SLU 69	-0.6	-0.02	36.34	8.2064	-0.0023	0.21
263	SLU 70	-0.6	0.01	36.32	8.2136	-0.0023	0.209
263	SLU 71	-0.59	-0.02	36.14	8.165	-0.0023	0.2075
263	SLU 72	-0.59	0	36.12	8.1721	-0.0024	0.2065
263	SLU 73	-0.6	0.04	38.75	8.7323	-0.003	0.2096
263	SLU 74	-0.61	0.01	39.27	8.8228	-0.003	0.2151
263	SLU 75	-0.61	0.03	39.24	8.8299	-0.003	0.2142
263	SLU 76	-0.6	0.04	39.03	8.7932	-0.003	0.2111
263	SLU 77	-0.62	0.01	39.56	8.8836	-0.003	0.2166
263	SLU 78	-0.62	0.03	39.53	8.8908	-0.003	0.2157
263	SLU 79	-0.61	0	39.36	8.8422	-0.003	0.2142
263	SLU 80	-0.61	0.02	39.34	8.8493	-0.0031	0.2132
263	SLU 81	-0.61	0.01	40.16	9.0107	-0.0033	0.214
263	SLU 82	-0.61	0.03	40.14	9.0178	-0.0033	0.2131
263	SLU 83	-0.62	0.01	40.45	9.0715	-0.0033	0.2155
263	SLU 84	-0.61	0.03	40.43	9.0787	-0.0033	0.2146
263	SLE RA 1	-0.44	-0.02	26.7	6.0475	-0.0017	0.1526
263	SLE RA 2	-0.43	0	26.67	6.0554	-0.0017	0.1516
263	SLE RA 3	-0.44	-0.02	27.02	6.1157	-0.0017	0.1553
263	SLE RA 4	-0.44	-0.01	27	6.1204	-0.0017	0.1546
263	SLE RA 5	-0.44	0	26.86	6.096	-0.0017	0.1526
263	SLE RA 6	-0.45	-0.02	27.21	6.1563	-0.0017	0.1563
263	SLE RA 7	-0.44	-0.01	27.2	6.161	-0.0017	0.1556
263	SLE RA 8	-0.44	-0.02	27.08	6.1286	-0.0017	0.1546
263	SLE RA 9	-0.44	-0.01	27.07	6.1334	-0.0018	0.154
263	SLE RA 10	-0.45	0.01	28.82	6.5069	-0.0022	0.156
263	SLE RA 11	-0.46	-0.01	29.16	6.5672	-0.0022	0.1597
263	SLE RA 12	-0.45	0.01	29.15	6.5719	-0.0022	0.1591

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
263	SLE RA 13	-0.45	0.02	29.01	6.5474	-0.0022	0.157
263	SLE RA 14	-0.46	0	29.36	6.6077	-0.0022	0.1607
263	SLE RA 15	-0.46	0.01	29.34	6.6125	-0.0022	0.1601
263	SLE RA 16	-0.45	-0.01	29.23	6.5801	-0.0022	0.1591
263	SLE RA 17	-0.45	0.01	29.21	6.5848	-0.0022	0.1584
263	SLE RA 18	-0.45	0	29.76	6.6924	-0.0024	0.159
263	SLE RA 19	-0.45	0.01	29.75	6.6972	-0.0024	0.1583
263	SLE RA 20	-0.46	0	29.95	6.733	-0.0024	0.16
263	SLE RA 21	-0.46	0.01	29.94	6.7377	-0.0024	0.1593
263	SLE FR 1	-0.44	-0.02	26.7	6.0475	-0.0017	0.1526
263	SLE FR 2	-0.44	-0.02	26.69	6.0491	-0.0017	0.1524
263	SLE FR 3	-0.44	-0.02	26.77	6.0637	-0.0017	0.153
263	SLE FR 4	-0.44	-0.01	27.61	6.2425	-0.0019	0.1543
263	SLE FR 5	-0.44	-0.02	27.69	6.2572	-0.0019	0.1549
263	SLE FR 6	-0.45	-0.01	28.23	6.3699	-0.002	0.1558
263	SLE QP 1	-0.44	-0.02	26.7	6.0475	-0.0017	0.1526
263	SLE QP 2	-0.44	-0.02	27.62	6.241	-0.0019	0.1545
263	SLD 1	2.94	0.54	31.34	7.0599	0.0091	-1.0311
263	SLD 2	3.09	0.29	31.32	7.0555	0.009	-1.0835
263	SLD 3	3.03	-0.61	31	6.852	0.0088	-1.0602
263	SLD 4	3.18	-0.86	30.98	6.8475	0.0087	-1.1126
263	SLD 5	0.42	1.94	29.26	6.8028	0.0018	-0.1478
263	SLD 6	0.52	1.78	29.24	6.7999	0.0018	-0.1818
263	SLD 7	0.7	-1.9	28.12	6.1096	0.0009	-0.245
263	SLD 8	0.8	-2.06	28.1	6.1067	0.0008	-0.279
263	SLD 9	-1.68	2.03	27.13	6.3752	-0.0047	0.588
263	SLD 10	-1.58	1.87	27.12	6.3723	-0.0047	0.554
263	SLD 11	-1.4	-1.82	25.99	5.682	-0.0056	0.4909
263	SLD 12	-1.3	-1.98	25.98	5.6791	-0.0057	0.4569
263	SLD 13	-4.06	0.82	24.25	5.6344	-0.0125	1.4217
263	SLD 14	-3.91	0.58	24.23	5.6299	-0.0126	1.3693
263	SLD 15	-3.98	-0.33	23.91	5.4264	-0.0128	1.3925
263	SLD 16	-3.83	-0.57	23.89	5.422	-0.0129	1.3401
263	SLV 1	7.47	1.25	36.33	8.1548	0.0238	-2.6184
263	SLV 2	7.83	0.68	36.29	8.1444	0.0236	-2.7405
263	SLV 3	7.67	-1.38	35.54	7.6728	0.0231	-2.6864
263	SLV 4	8.02	-1.96	35.5	7.6624	0.023	-2.8085
263	SLV 5	1.58	4.46	31.44	7.548	0.0068	-0.5535
263	SLV 6	1.8	4.09	31.41	7.5414	0.0067	-0.6315
263	SLV 7	2.23	-4.33	28.8	5.9411	0.0046	-0.7802
263	SLV 8	2.45	-4.69	28.77	5.9345	0.0045	-0.8582
263	SLV 9	-3.34	4.66	26.46	6.5474	-0.0083	1.1672
263	SLV 10	-3.11	4.29	26.43	6.5408	-0.0085	1.0893
263	SLV 11	-2.68	-4.13	23.82	4.9405	-0.0106	0.9405
263	SLV 12	-2.46	-4.49	23.79	4.9339	-0.0107	0.8626
263	SLV 13	-8.9	1.92	19.74	4.8195	-0.0268	3.1175
263	SLV 14	-8.55	1.35	19.69	4.8091	-0.027	2.9955
263	SLV 15	-8.71	-0.71	18.94	4.3375	-0.0275	3.0495
263	SLV 16	-8.36	-1.29	18.9	4.3271	-0.0276	2.9274
263	CRTFP Ux+	0	0	0	0	0	0
263	CRTFP Ux-	0	0	0	0	0	0
263	CRTFP Uy+	0	0	0	0	0	0
263	CRTFP Uy-	0	0	0	0	0	0
264	SLU 1	-0.42	-0.04	26.17	6.0817	-0.0202	0.1465
264	SLU 2	-0.41	0	26.13	6.0938	-0.0202	0.1447
264	SLU 3	-0.43	-0.03	26.66	6.1883	-0.0206	0.1504
264	SLU 4	-0.43	-0.01	26.63	6.1956	-0.0206	0.1493
264	SLU 5	-0.42	0	26.42	6.1574	-0.0204	0.1462
264	SLU 6	-0.43	-0.03	26.95	6.2519	-0.0208	0.1519
264	SLU 7	-0.43	-0.01	26.92	6.2592	-0.0208	0.1508
264	SLU 8	-0.43	-0.04	26.75	6.2089	-0.0207	0.1495
264	SLU 9	-0.42	-0.02	26.73	6.2162	-0.0207	0.1484
264	SLU 10	-0.43	0.02	29.41	6.8057	-0.0235	0.1516
264	SLU 11	-0.45	-0.01	29.93	6.9002	-0.0239	0.1573
264	SLU 12	-0.45	0.01	29.91	6.9075	-0.0239	0.1562
264	SLU 13	-0.44	0.02	29.7	6.8693	-0.0238	0.153
264	SLU 14	-0.45	-0.01	30.23	6.9638	-0.0242	0.1588
264	SLU 15	-0.45	0.01	30.2	6.9711	-0.0242	0.1577
264	SLU 16	-0.45	-0.01	30.03	6.9208	-0.024	0.1564
264	SLU 17	-0.44	0.01	30	6.928	-0.024	0.1553
264	SLU 18	-0.45	0	30.85	7.0986	-0.0249	0.1563
264	SLU 19	-0.44	0.02	30.83	7.1059	-0.0249	0.1552
264	SLU 20	-0.45	0	31.14	7.1622	-0.0252	0.1578
264	SLU 21	-0.45	0.02	31.12	7.1695	-0.0252	0.1567
264	SLU 22	-0.48	0	29.22	6.7456	-0.0229	0.1679
264	SLU 23	-0.47	0.03	29.18	6.7577	-0.0228	0.166
264	SLU 24	-0.49	0.01	29.71	6.8523	-0.0233	0.1718
264	SLU 25	-0.49	0.03	29.69	6.8595	-0.0232	0.1707
264	SLU 26	-0.48	0.03	29.48	6.8214	-0.0231	0.1675
264	SLU 27	-0.5	0.01	30.01	6.9159	-0.0235	0.1733
264	SLU 28	-0.49	0.03	29.98	6.9231	-0.0235	0.1722
264	SLU 29	-0.49	0	29.81	6.8728	-0.0234	0.1708
264	SLU 30	-0.49	0.02	29.78	6.8801	-0.0234	0.1698
264	SLU 31	-0.49	0.06	32.46	7.4696	-0.0262	0.1729
264	SLU 32	-0.51	0.03	32.99	7.5641	-0.0266	0.1787
264	SLU 33	-0.51	0.05	32.97	7.5714	-0.0266	0.1776
264	SLU 34	-0.5	0.06	32.76	7.5332	-0.0264	0.1744
264	SLU 35	-0.52	0.03	33.28	7.6277	-0.0268	0.1802
264	SLU 36	-0.51	0.05	33.26	7.635	-0.0268	0.1791
264	SLU 37	-0.51	0.02	33.09	7.5847	-0.0267	0.1777
264	SLU 38	-0.51	0.04	33.06	7.592	-0.0267	0.1766

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
264	SLU 39	-0.51	0.03	33.91	7.7626	-0.0276	0.1777
264	SLU 40	-0.5	0.05	33.88	7.7699	-0.0276	0.1766
264	SLU 41	-0.51	0.03	34.2	7.8262	-0.0279	0.1792
264	SLU 42	-0.51	0.05	34.18	7.8335	-0.0279	0.1781
264	SLU 43	-0.52	-0.06	32.97	7.6785	-0.0253	0.1831
264	SLU 44	-0.52	-0.03	32.93	7.6907	-0.0253	0.1813
264	SLU 45	-0.54	-0.05	33.46	7.7852	-0.0257	0.187
264	SLU 46	-0.53	-0.03	33.43	7.7924	-0.0257	0.186
264	SLU 47	-0.52	-0.03	33.22	7.7543	-0.0256	0.1828
264	SLU 48	-0.54	-0.06	33.75	7.8488	-0.026	0.1885
264	SLU 49	-0.54	-0.03	33.73	7.856	-0.026	0.1874
264	SLU 50	-0.53	-0.06	33.55	7.8057	-0.0258	0.1861
264	SLU 51	-0.53	-0.04	33.53	7.813	-0.0258	0.185
264	SLU 52	-0.54	0	36.21	8.4025	-0.0286	0.1882
264	SLU 53	-0.55	-0.03	36.73	8.497	-0.0291	0.1939
264	SLU 54	-0.55	-0.01	36.71	8.5043	-0.0291	0.1928
264	SLU 55	-0.54	0	36.5	8.4661	-0.0289	0.1897
264	SLU 56	-0.56	-0.03	37.03	8.5606	-0.0293	0.1954
264	SLU 57	-0.56	-0.01	37	8.5679	-0.0293	0.1943
264	SLU 58	-0.55	-0.04	36.83	8.5176	-0.0292	0.193
264	SLU 59	-0.55	-0.02	36.81	8.5249	-0.0292	0.1919
264	SLU 60	-0.55	-0.03	37.65	8.6955	-0.0301	0.193
264	SLU 61	-0.55	-0.01	37.63	8.7028	-0.0301	0.1919
264	SLU 62	-0.56	-0.03	37.94	8.7591	-0.0303	0.1944
264	SLU 63	-0.55	-0.01	37.92	8.7664	-0.0303	0.1933
264	SLU 64	-0.58	-0.02	36.03	8.3425	-0.028	0.2045
264	SLU 65	-0.58	0.01	35.99	8.3546	-0.028	0.2027
264	SLU 66	-0.6	-0.02	36.51	8.4491	-0.0284	0.2084
264	SLU 67	-0.59	0	36.49	8.4564	-0.0284	0.2073
264	SLU 68	-0.58	0.01	36.28	8.4182	-0.0282	0.2041
264	SLU 69	-0.6	-0.02	36.81	8.5127	-0.0286	0.2099
264	SLU 70	-0.6	0	36.78	8.52	-0.0286	0.2088
264	SLU 71	-0.59	-0.02	36.61	8.4697	-0.0285	0.2075
264	SLU 72	-0.59	0	36.59	8.477	-0.0285	0.2064
264	SLU 73	-0.6	0.03	39.26	9.0665	-0.0313	0.2096
264	SLU 74	-0.62	0.01	39.79	9.161	-0.0317	0.2153
264	SLU 75	-0.61	0.03	39.77	9.1683	-0.0317	0.2142
264	SLU 76	-0.6	0.03	39.56	9.1301	-0.0316	0.211
264	SLU 77	-0.62	0.01	40.08	9.2246	-0.032	0.2168
264	SLU 78	-0.62	0.03	40.06	9.2319	-0.032	0.2157
264	SLU 79	-0.61	0	39.89	9.1816	-0.0318	0.2144
264	SLU 80	-0.61	0.02	39.86	9.1888	-0.0318	0.2133
264	SLU 81	-0.61	0.01	40.71	9.3594	-0.0328	0.2143
264	SLU 82	-0.61	0.03	40.69	9.3667	-0.0328	0.2132
264	SLU 83	-0.62	0.01	41	9.423	-0.033	0.2158
264	SLU 84	-0.61	0.03	40.98	9.4303	-0.033	0.2147
264	SLE RA 1	-0.44	-0.03	27.04	6.2714	-0.0209	0.1526
264	SLE RA 2	-0.43	0	27.01	6.2795	-0.0209	0.1514
264	SLE RA 3	-0.44	-0.02	27.37	6.3425	-0.0212	0.1552
264	SLE RA 4	-0.44	-0.01	27.35	6.3473	-0.0212	0.1545
264	SLE RA 5	-0.44	0	27.21	6.3219	-0.0211	0.1524
264	SLE RA 6	-0.45	-0.02	27.56	6.3849	-0.0214	0.1562
264	SLE RA 7	-0.44	-0.01	27.54	6.3897	-0.0214	0.1555
264	SLE RA 8	-0.44	-0.03	27.43	6.3562	-0.0213	0.1546
264	SLE RA 9	-0.44	-0.01	27.41	6.361	-0.0213	0.1539
264	SLE RA 10	-0.45	0.01	29.2	6.754	-0.0232	0.156
264	SLE RA 11	-0.46	-0.01	29.55	6.817	-0.0234	0.1598
264	SLE RA 12	-0.45	0.01	29.54	6.8219	-0.0234	0.1591
264	SLE RA 13	-0.45	0.01	29.39	6.7964	-0.0233	0.157
264	SLE RA 14	-0.46	-0.01	29.75	6.8594	-0.0236	0.1608
264	SLE RA 15	-0.46	0.01	29.73	6.8643	-0.0236	0.1601
264	SLE RA 16	-0.46	-0.01	29.61	6.8308	-0.0235	0.1592
264	SLE RA 17	-0.45	0	29.6	6.8356	-0.0235	0.1584
264	SLE RA 18	-0.46	0	30.16	6.9493	-0.0241	0.1592
264	SLE RA 19	-0.45	0.01	30.15	6.9542	-0.0241	0.1584
264	SLE RA 20	-0.46	0	30.36	6.9917	-0.0243	0.1602
264	SLE RA 21	-0.46	0.01	30.34	6.9966	-0.0243	0.1594
264	SLE FR 1	-0.44	-0.03	27.04	6.2714	-0.0209	0.1526
264	SLE FR 2	-0.44	-0.02	27.03	6.273	-0.0209	0.1524
264	SLE FR 3	-0.44	-0.03	27.12	6.2883	-0.021	0.153
264	SLE FR 4	-0.44	-0.02	27.97	6.4764	-0.0219	0.1543
264	SLE FR 5	-0.44	-0.02	28.05	6.4917	-0.022	0.155
264	SLE FR 6	-0.45	-0.02	28.6	6.6104	-0.0225	0.1559
264	SLE QP 1	-0.44	-0.03	27.04	6.2714	-0.0209	0.1526
264	SLE QP 2	-0.44	-0.02	27.98	6.4748	-0.0219	0.1546
264	SLD 1	2.94	0.52	31.43	7.2242	-0.0146	-1.0314
264	SLD 2	3.09	0.29	31.41	7.2198	-0.0146	-1.0839
264	SLD 3	3.03	-0.61	31.09	7.02	-0.0139	-1.0606
264	SLD 4	3.18	-0.84	31.07	7.0156	-0.0139	-1.1131
264	SLD 5	0.42	1.89	29.52	7.0101	-0.0207	-0.1478
264	SLD 6	0.52	1.74	29.51	7.0072	-0.0207	-0.1818
264	SLD 7	0.7	-1.86	28.41	6.3294	-0.0185	-0.2452
264	SLD 8	0.8	-2.01	28.39	6.3265	-0.0185	-0.2792
264	SLD 9	-1.68	1.97	27.56	6.623	-0.0253	0.5883
264	SLD 10	-1.58	1.83	27.55	6.6202	-0.0253	0.5543
264	SLD 11	-1.4	-1.78	26.44	5.9423	-0.0231	0.4909
264	SLD 12	-1.3	-1.93	26.43	5.9395	-0.0231	0.4569
264	SLD 13	-4.06	0.8	24.88	5.9339	-0.0299	1.4222
264	SLD 14	-3.91	0.57	24.86	5.9295	-0.0299	1.3698
264	SLD 15	-3.98	-0.33	24.55	5.7297	-0.0292	1.393
264	SLD 16	-3.83	-0.56	24.53	5.7253	-0.0292	1.3406

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
264	SLV 1	7.48	1.21	36.04	8.2257	-0.0047	-2.6193
264	SLV 2	7.83	0.67	36	8.2156	-0.0048	-2.7414
264	SLV 3	7.67	-1.37	35.27	7.7526	-0.0032	-2.6874
264	SLV 4	8.02	-1.9	35.23	7.7425	-0.0033	-2.8096
264	SLV 5	1.58	4.34	31.57	7.7193	-0.019	-0.5535
264	SLV 6	1.8	4	31.55	7.7129	-0.0191	-0.6315
264	SLV 7	2.23	-4.24	29	6.1423	-0.014	-0.7807
264	SLV 8	2.45	-4.58	28.97	6.1358	-0.014	-0.8587
264	SLV 9	-3.34	4.54	26.98	6.8137	-0.0298	1.1679
264	SLV 10	-3.11	4.2	26.95	6.8073	-0.0298	1.0899
264	SLV 11	-2.69	-4.04	24.41	5.2367	-0.0247	0.9406
264	SLV 12	-2.46	-4.38	24.38	5.2302	-0.0248	0.8626
264	SLV 13	-8.91	1.86	20.73	5.207	-0.0405	3.1187
264	SLV 14	-8.56	1.33	20.68	5.1969	-0.0406	2.9966
264	SLV 15	-8.71	-0.71	19.95	4.7339	-0.039	3.0505
264	SLV 16	-8.36	-1.24	19.91	4.7238	-0.0391	2.9284
264	CRTFP Ux+	0	0	0	0	0	0
264	CRTFP Ux-	0	0	0	0	0	0
264	CRTFP Uy+	0	0	0	0	0	0
264	CRTFP Uy-	0	0	0	0	0	0
265	SLU 1	-0.42	-0.04	27.03	6.5873	-0.037	0.1462
265	SLU 2	-0.41	-0.01	26.99	6.5982	-0.0369	0.1442
265	SLU 3	-0.43	-0.04	27.53	6.7043	-0.0377	0.1502
265	SLU 4	-0.43	-0.02	27.51	6.7109	-0.0377	0.1489
265	SLU 5	-0.42	-0.01	27.29	6.6682	-0.0374	0.1456
265	SLU 6	-0.43	-0.04	27.84	6.7743	-0.0382	0.1516
265	SLU 7	-0.43	-0.02	27.81	6.7809	-0.0382	0.1504
265	SLU 8	-0.43	-0.05	27.63	6.7273	-0.0379	0.1492
265	SLU 9	-0.42	-0.03	27.61	6.7338	-0.0379	0.1479
265	SLU 10	-0.43	0.01	30.4	7.3861	-0.0426	0.1513
265	SLU 11	-0.45	-0.02	30.95	7.4922	-0.0434	0.1573
265	SLU 12	-0.45	0	30.92	7.4988	-0.0434	0.156
265	SLU 13	-0.44	0.01	30.7	7.4561	-0.0431	0.1528
265	SLU 14	-0.45	-0.02	31.25	7.5623	-0.0439	0.1588
265	SLU 15	-0.45	0	31.23	7.5688	-0.0439	0.1575
265	SLU 16	-0.45	-0.02	31.05	7.5152	-0.0436	0.1563
265	SLU 17	-0.44	0	31.02	7.5218	-0.0436	0.1551
265	SLU 18	-0.45	-0.01	31.9	7.7129	-0.0451	0.1564
265	SLU 19	-0.44	0.01	31.88	7.7194	-0.0451	0.1552
265	SLU 20	-0.45	-0.01	32.21	7.7829	-0.0456	0.1579
265	SLU 21	-0.45	0.01	32.18	7.7894	-0.0456	0.1567
265	SLU 22	-0.48	-0.01	30.2	7.3182	-0.0418	0.1677
265	SLU 23	-0.47	0.03	30.16	7.3291	-0.0418	0.1656
265	SLU 24	-0.49	0	30.7	7.4352	-0.0426	0.1716
265	SLU 25	-0.49	0.02	30.68	7.4418	-0.0426	0.1704
265	SLU 26	-0.48	0.03	30.46	7.3991	-0.0423	0.1671
265	SLU 27	-0.5	0	31.01	7.5052	-0.0431	0.1731
265	SLU 28	-0.49	0.02	30.98	7.5118	-0.043	0.1719
265	SLU 29	-0.49	-0.01	30.8	7.4582	-0.0428	0.1706
265	SLU 30	-0.49	0.01	30.78	7.4647	-0.0428	0.1694
265	SLU 31	-0.49	0.05	33.57	8.117	-0.0475	0.1728
265	SLU 32	-0.51	0.02	34.12	8.2231	-0.0483	0.1788
265	SLU 33	-0.51	0.04	34.09	8.2297	-0.0483	0.1775
265	SLU 34	-0.5	0.05	33.88	8.187	-0.048	0.1742
265	SLU 35	-0.52	0.02	34.42	8.2931	-0.0488	0.1802
265	SLU 36	-0.51	0.04	34.4	8.2997	-0.0488	0.179
265	SLU 37	-0.51	0.02	34.22	8.2461	-0.0485	0.1778
265	SLU 38	-0.51	0.04	34.19	8.2526	-0.0485	0.1765
265	SLU 39	-0.51	0.03	35.08	8.4437	-0.05	0.1779
265	SLU 40	-0.51	0.05	35.05	8.4503	-0.05	0.1767
265	SLU 41	-0.51	0.03	35.38	8.5137	-0.0505	0.1794
265	SLU 42	-0.51	0.05	35.35	8.5203	-0.0505	0.1781
265	SLU 43	-0.52	-0.07	34.05	8.3129	-0.0464	0.1827
265	SLU 44	-0.52	-0.04	34.01	8.3238	-0.0463	0.1807
265	SLU 45	-0.53	-0.07	34.55	8.4299	-0.0471	0.1867
265	SLU 46	-0.53	-0.05	34.53	8.4365	-0.0471	0.1854
265	SLU 47	-0.52	-0.04	34.31	8.3938	-0.0468	0.1821
265	SLU 48	-0.54	-0.07	34.86	8.4999	-0.0476	0.1881
265	SLU 49	-0.54	-0.05	34.83	8.5065	-0.0476	0.1869
265	SLU 50	-0.53	-0.07	34.65	8.4529	-0.0473	0.1857
265	SLU 51	-0.53	-0.05	34.63	8.4594	-0.0473	0.1844
265	SLU 52	-0.54	-0.02	37.42	9.1117	-0.0521	0.1878
265	SLU 53	-0.56	-0.04	37.97	9.2178	-0.0529	0.1938
265	SLU 54	-0.55	-0.02	37.94	9.2244	-0.0528	0.1926
265	SLU 55	-0.54	-0.02	37.72	9.1817	-0.0525	0.1893
265	SLU 56	-0.56	-0.04	38.27	9.2878	-0.0533	0.1953
265	SLU 57	-0.56	-0.02	38.25	9.2944	-0.0533	0.194
265	SLU 58	-0.55	-0.05	38.07	9.2408	-0.053	0.1928
265	SLU 59	-0.55	-0.03	38.04	9.2473	-0.053	0.1916
265	SLU 60	-0.55	-0.04	38.92	9.4385	-0.0545	0.1929
265	SLU 61	-0.55	-0.02	38.9	9.445	-0.0545	0.1917
265	SLU 62	-0.56	-0.04	39.23	9.5085	-0.055	0.1944
265	SLU 63	-0.55	-0.02	39.2	9.515	-0.055	0.1932
265	SLU 64	-0.58	-0.03	37.22	9.0438	-0.0513	0.2042
265	SLU 65	-0.58	0	37.18	9.0547	-0.0512	0.2021
265	SLU 66	-0.6	-0.03	37.72	9.1608	-0.052	0.2081
265	SLU 67	-0.59	-0.01	37.7	9.1674	-0.052	0.2069
265	SLU 68	-0.58	0	37.48	9.1247	-0.0517	0.2036
265	SLU 69	-0.6	-0.03	38.03	9.2308	-0.0525	0.2096
265	SLU 70	-0.6	-0.01	38	9.2374	-0.0525	0.2084
265	SLU 71	-0.59	-0.03	37.82	9.1838	-0.0522	0.2072

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
265	SLU 72	-0.59	-0.01	37.8	9.1903	-0.0522	0.2059
265	SLU 73	-0.6	0.02	40.59	9.8426	-0.0569	0.2093
265	SLU 74	-0.62	0	41.14	9.9487	-0.0577	0.2153
265	SLU 75	-0.61	0.02	41.12	9.9553	-0.0577	0.214
265	SLU 76	-0.6	0.02	40.9	9.9126	-0.0574	0.2107
265	SLU 77	-0.62	0	41.44	10.0187	-0.0582	0.2167
265	SLU 78	-0.62	0.02	41.42	10.0253	-0.0582	0.2155
265	SLU 79	-0.61	-0.01	41.24	9.9717	-0.0579	0.2143
265	SLU 80	-0.61	0.01	41.21	9.9782	-0.0579	0.213
265	SLU 81	-0.61	0	42.1	10.1693	-0.0594	0.2144
265	SLU 82	-0.61	0.02	42.07	10.1759	-0.0594	0.2132
265	SLU 83	-0.62	0	42.4	10.2393	-0.0599	0.2159
265	SLU 84	-0.61	0.02	42.37	10.2459	-0.0599	0.2146
265	SLE RA 1	-0.44	-0.03	27.93	6.7961	-0.0384	0.1524
265	SLE RA 2	-0.43	-0.01	27.91	6.8034	-0.0383	0.151
265	SLE RA 3	-0.44	-0.03	28.27	6.8741	-0.0389	0.155
265	SLE RA 4	-0.44	-0.02	28.25	6.8785	-0.0388	0.1542
265	SLE RA 5	-0.44	-0.01	28.11	6.8501	-0.0386	0.152
265	SLE RA 6	-0.45	-0.03	28.47	6.9208	-0.0392	0.156
265	SLE RA 7	-0.44	-0.02	28.46	6.9252	-0.0392	0.1551
265	SLE RA 8	-0.44	-0.03	28.34	6.8894	-0.039	0.1543
265	SLE RA 9	-0.44	-0.02	28.32	6.8938	-0.039	0.1535
265	SLE RA 10	-0.45	0	30.18	7.3287	-0.0421	0.1557
265	SLE RA 11	-0.46	-0.01	30.55	7.3994	-0.0427	0.1597
265	SLE RA 12	-0.46	0	30.53	7.4038	-0.0427	0.1589
265	SLE RA 13	-0.45	0	30.38	7.3753	-0.0425	0.1567
265	SLE RA 14	-0.46	-0.01	30.75	7.4461	-0.043	0.1607
265	SLE RA 15	-0.46	0	30.73	7.4505	-0.043	0.1599
265	SLE RA 16	-0.46	-0.02	30.61	7.4147	-0.0428	0.1591
265	SLE RA 17	-0.45	-0.01	30.6	7.4191	-0.0428	0.1583
265	SLE RA 18	-0.46	-0.01	31.18	7.5465	-0.0438	0.1592
265	SLE RA 19	-0.45	0	31.17	7.5509	-0.0438	0.1583
265	SLE RA 20	-0.46	-0.01	31.39	7.5932	-0.0441	0.1601
265	SLE RA 21	-0.46	0	31.37	7.5975	-0.0441	0.1593
265	SLE FR 1	-0.44	-0.03	27.93	6.7961	-0.0384	0.1524
265	SLE FR 2	-0.44	-0.03	27.93	6.7976	-0.0383	0.1521
265	SLE FR 3	-0.44	-0.03	28.01	6.8148	-0.0385	0.1528
265	SLE FR 4	-0.44	-0.02	28.9	7.0227	-0.04	0.1541
265	SLE FR 5	-0.44	-0.03	28.99	7.0399	-0.0401	0.1548
265	SLE FR 6	-0.45	-0.02	29.56	7.1713	-0.0411	0.1558
265	SLE QP 1	-0.44	-0.03	27.93	6.7961	-0.0384	0.1524
265	SLE QP 2	-0.44	-0.03	28.91	7.0212	-0.04	0.1544
265	SLD 1	2.94	0.49	32.16	7.7432	-0.0356	-1.0317
265	SLD 2	3.09	0.28	32.14	7.7386	-0.0356	-1.0841
265	SLD 3	3.03	-0.62	31.85	7.5525	-0.0344	-1.061
265	SLD 4	3.18	-0.84	31.83	7.5478	-0.0344	-1.1134
265	SLD 5	0.42	1.86	30.36	7.528	-0.0404	-0.1479
265	SLD 6	0.52	1.72	30.35	7.5249	-0.0404	-0.1819
265	SLD 7	0.7	-1.86	29.32	6.8921	-0.0365	-0.2455
265	SLD 8	0.8	-2	29.3	6.8891	-0.0365	-0.2795
265	SLD 9	-1.68	1.94	28.51	7.1534	-0.0434	0.5883
265	SLD 10	-1.58	1.8	28.5	7.1504	-0.0434	0.5543
265	SLD 11	-1.4	-1.77	27.46	6.5175	-0.0395	0.4907
265	SLD 12	-1.3	-1.91	27.45	6.5145	-0.0395	0.4567
265	SLD 13	-4.06	0.78	25.99	6.4946	-0.0456	1.4222
265	SLD 14	-3.91	0.57	25.97	6.49	-0.0456	1.3698
265	SLD 15	-3.98	-0.33	25.67	6.3039	-0.0444	1.393
265	SLD 16	-3.83	-0.55	25.66	6.2992	-0.0444	1.3405
265	SLV 1	7.48	1.16	36.51	8.7079	-0.0297	-2.6197
265	SLV 2	7.83	0.66	36.47	8.697	-0.0296	-2.7419
265	SLV 3	7.67	-1.38	35.79	8.2664	-0.0269	-2.688
265	SLV 4	8.02	-1.89	35.74	8.2555	-0.0269	-2.8102
265	SLV 5	1.58	4.28	32.29	8.1986	-0.041	-0.5535
265	SLV 6	1.8	3.95	32.27	8.1917	-0.041	-0.6315
265	SLV 7	2.23	-4.21	29.88	6.7271	-0.0319	-0.7813
265	SLV 8	2.45	-4.53	29.85	6.7201	-0.0319	-0.8593
265	SLV 9	-3.34	4.48	27.96	7.3223	-0.0481	1.1681
265	SLV 10	-3.11	4.15	27.94	7.3154	-0.0481	1.0901
265	SLV 11	-2.69	-4.01	25.55	5.8508	-0.039	0.9403
265	SLV 12	-2.46	-4.33	25.52	5.8438	-0.0389	0.8623
265	SLV 13	-8.91	1.83	22.07	5.7869	-0.0531	3.119
265	SLV 14	-8.56	1.33	22.03	5.776	-0.0531	2.9968
265	SLV 15	-8.71	-0.71	21.35	5.3455	-0.0504	3.0507
265	SLV 16	-8.36	-1.22	21.3	5.3346	-0.0503	2.9285
265	CRTFP Ux+	0	0	0	0	0	0
265	CRTFP Ux-	0	0	0	0	0	0
265	CRTFP Uy+	0	0	0	0	0	0
265	CRTFP Uy-	0	0	0	0	0	0
266	SLU 1	-0.42	-0.06	28.35	7.351	-0.0511	0.1458
266	SLU 2	-0.41	-0.02	28.31	7.3593	-0.0511	0.1435
266	SLU 3	-0.43	-0.05	28.88	7.4839	-0.0522	0.1497
266	SLU 4	-0.43	-0.03	28.86	7.4889	-0.0522	0.1483
266	SLU 5	-0.42	-0.03	28.63	7.439	-0.0517	0.1449
266	SLU 6	-0.43	-0.06	29.2	7.5635	-0.0528	0.1511
266	SLU 7	-0.43	-0.03	29.18	7.5685	-0.0528	0.1497
266	SLU 8	-0.43	-0.06	28.99	7.5103	-0.0524	0.1487
266	SLU 9	-0.42	-0.04	28.97	7.5153	-0.0524	0.1473
266	SLU 10	-0.43	0	31.93	8.2602	-0.0588	0.1508
266	SLU 11	-0.45	-0.03	32.5	8.3848	-0.0599	0.157
266	SLU 12	-0.45	-0.01	32.48	8.3898	-0.0599	0.1557
266	SLU 13	-0.44	0	32.25	8.3398	-0.0595	0.1523

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
266	SLU 14	-0.46	-0.03	32.82	8.4644	-0.0606	0.1585
266	SLU 15	-0.45	-0.01	32.8	8.4694	-0.0606	0.1571
266	SLU 16	-0.45	-0.04	32.61	8.4111	-0.0602	0.1561
266	SLU 17	-0.44	-0.02	32.58	8.4161	-0.0602	0.1547
266	SLU 18	-0.45	-0.03	33.52	8.6379	-0.0622	0.1563
266	SLU 19	-0.44	-0.01	33.49	8.6429	-0.0622	0.1549
266	SLU 20	-0.45	-0.03	33.84	8.7176	-0.0629	0.1578
266	SLU 21	-0.45	-0.01	33.81	8.7226	-0.0628	0.1564
266	SLU 22	-0.48	-0.02	31.7	8.1829	-0.0579	0.1673
266	SLU 23	-0.47	0.02	31.66	8.1913	-0.0578	0.165
266	SLU 24	-0.49	-0.01	32.23	8.3159	-0.0589	0.1712
266	SLU 25	-0.49	0.01	32.21	8.3209	-0.0589	0.1698
266	SLU 26	-0.48	0.01	31.98	8.2709	-0.0585	0.1665
266	SLU 27	-0.5	-0.02	32.55	8.3955	-0.0596	0.1727
266	SLU 28	-0.49	0.01	32.53	8.4005	-0.0596	0.1713
266	SLU 29	-0.49	-0.02	32.34	8.3422	-0.0592	0.1702
266	SLU 30	-0.48	0	32.31	8.3472	-0.0592	0.1688
266	SLU 31	-0.49	0.04	35.27	9.0922	-0.0656	0.1724
266	SLU 32	-0.51	0.01	35.85	9.2167	-0.0667	0.1786
266	SLU 33	-0.51	0.03	35.82	9.2217	-0.0667	0.1772
266	SLU 34	-0.5	0.04	35.59	9.1718	-0.0662	0.1738
266	SLU 35	-0.52	0.01	36.17	9.2964	-0.0673	0.18
266	SLU 36	-0.51	0.03	36.14	9.3014	-0.0673	0.1786
266	SLU 37	-0.51	0	35.95	9.2431	-0.0669	0.1776
266	SLU 38	-0.51	0.02	35.93	9.2481	-0.0669	0.1762
266	SLU 39	-0.51	0.01	36.87	9.4699	-0.0689	0.1779
266	SLU 40	-0.51	0.03	36.84	9.4749	-0.0689	0.1765
266	SLU 41	-0.51	0.01	37.19	9.5496	-0.0696	0.1793
266	SLU 42	-0.51	0.03	37.16	9.5546	-0.0696	0.1779
266	SLU 43	-0.52	-0.09	35.71	9.271	-0.0642	0.1821
266	SLU 44	-0.52	-0.06	35.67	9.2793	-0.0641	0.1798
266	SLU 45	-0.53	-0.09	36.24	9.4039	-0.0652	0.186
266	SLU 46	-0.53	-0.06	36.22	9.4089	-0.0652	0.1846
266	SLU 47	-0.52	-0.06	35.99	9.359	-0.0648	0.1813
266	SLU 48	-0.54	-0.09	36.56	9.4836	-0.0659	0.1875
266	SLU 49	-0.53	-0.07	36.54	9.4886	-0.0658	0.1861
266	SLU 50	-0.53	-0.1	36.35	9.4303	-0.0655	0.185
266	SLU 51	-0.53	-0.07	36.32	9.4353	-0.0654	0.1837
266	SLU 52	-0.54	-0.04	39.29	10.1802	-0.0719	0.1872
266	SLU 53	-0.56	-0.07	39.86	10.3048	-0.073	0.1934
266	SLU 54	-0.55	-0.04	39.84	10.3098	-0.0729	0.192
266	SLU 55	-0.54	-0.04	39.61	10.2599	-0.0725	0.1886
266	SLU 56	-0.56	-0.07	40.18	10.3845	-0.0736	0.1948
266	SLU 57	-0.56	-0.04	40.16	10.3895	-0.0736	0.1935
266	SLU 58	-0.55	-0.07	39.97	10.3312	-0.0732	0.1924
266	SLU 59	-0.55	-0.05	39.94	10.3362	-0.0732	0.191
266	SLU 60	-0.55	-0.06	40.88	10.558	-0.0752	0.1927
266	SLU 61	-0.55	-0.04	40.85	10.563	-0.0752	0.1913
266	SLU 62	-0.56	-0.06	41.2	10.6376	-0.0759	0.1941
266	SLU 63	-0.55	-0.04	41.17	10.6426	-0.0759	0.1927
266	SLU 64	-0.58	-0.05	39.06	10.103	-0.0709	0.2037
266	SLU 65	-0.58	-0.02	39.01	10.1113	-0.0709	0.2014
266	SLU 66	-0.6	-0.05	39.59	10.2359	-0.072	0.2076
266	SLU 67	-0.59	-0.02	39.56	10.2409	-0.0719	0.2062
266	SLU 68	-0.58	-0.02	39.33	10.191	-0.0715	0.2028
266	SLU 69	-0.6	-0.05	39.91	10.3155	-0.0726	0.209
266	SLU 70	-0.6	-0.03	39.88	10.3205	-0.0726	0.2076
266	SLU 71	-0.59	-0.06	39.7	10.2623	-0.0722	0.2066
266	SLU 72	-0.59	-0.03	39.67	10.2673	-0.0722	0.2052
266	SLU 73	-0.6	0.01	42.63	11.0122	-0.0786	0.2087
266	SLU 74	-0.62	-0.02	43.21	11.1368	-0.0797	0.2149
266	SLU 75	-0.61	0	43.18	11.1418	-0.0797	0.2135
266	SLU 76	-0.6	0	42.95	11.0918	-0.0793	0.2102
266	SLU 77	-0.62	-0.03	43.53	11.2164	-0.0804	0.2164
266	SLU 78	-0.62	0	43.5	11.2214	-0.0803	0.215
266	SLU 79	-0.61	-0.03	43.31	11.1632	-0.08	0.214
266	SLU 80	-0.61	-0.01	43.29	11.1682	-0.0799	0.2126
266	SLU 81	-0.61	-0.02	44.22	11.39	-0.082	0.2142
266	SLU 82	-0.61	0	44.2	11.395	-0.0819	0.2128
266	SLU 83	-0.62	-0.02	44.54	11.4696	-0.0826	0.2157
266	SLU 84	-0.61	0	44.52	11.4746	-0.0826	0.2143
266	SLE RA 1	-0.44	-0.05	29.31	7.5887	-0.0531	0.1519
266	SLE RA 2	-0.43	-0.03	29.28	7.5942	-0.053	0.1504
266	SLE RA 3	-0.44	-0.05	29.66	7.6773	-0.0538	0.1545
266	SLE RA 4	-0.44	-0.03	29.65	7.6806	-0.0537	0.1536
266	SLE RA 5	-0.43	-0.03	29.49	7.6473	-0.0535	0.1514
266	SLE RA 6	-0.45	-0.05	29.88	7.7304	-0.0542	0.1555
266	SLE RA 7	-0.44	-0.03	29.86	7.7337	-0.0542	0.1546
266	SLE RA 8	-0.44	-0.05	29.73	7.6949	-0.0539	0.1539
266	SLE RA 9	-0.44	-0.04	29.72	7.6982	-0.0539	0.153
266	SLE RA 10	-0.45	-0.01	31.69	8.1948	-0.0582	0.1553
266	SLE RA 11	-0.46	-0.03	32.07	8.2779	-0.0589	0.1594
266	SLE RA 12	-0.45	-0.02	32.06	8.2812	-0.0589	0.1585
266	SLE RA 13	-0.45	-0.01	31.9	8.2479	-0.0586	0.1563
266	SLE RA 14	-0.46	-0.03	32.29	8.331	-0.0594	0.1604
266	SLE RA 15	-0.46	-0.02	32.27	8.3343	-0.0593	0.1595
266	SLE RA 16	-0.46	-0.04	32.15	8.2955	-0.0591	0.1588
266	SLE RA 17	-0.45	-0.02	32.13	8.2988	-0.0591	0.1579
266	SLE RA 18	-0.46	-0.03	32.75	8.4467	-0.0604	0.159
266	SLE RA 19	-0.45	-0.01	32.74	8.45	-0.0604	0.158
266	SLE RA 20	-0.46	-0.03	32.97	8.4998	-0.0609	0.1599

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
266	SLE RA 21	-0.46	-0.02	32.95	8.5031	-0.0609	0.159
266	SLE FR 1	-0.44	-0.05	29.31	7.5887	-0.0531	0.1519
266	SLE FR 2	-0.44	-0.04	29.3	7.5898	-0.0531	0.1516
266	SLE FR 3	-0.44	-0.05	29.39	7.6099	-0.0532	0.1523
266	SLE FR 4	-0.44	-0.04	30.34	7.8472	-0.0553	0.1537
266	SLE FR 5	-0.44	-0.04	30.43	7.8673	-0.0555	0.1544
266	SLE FR 6	-0.45	-0.04	31.03	8.0177	-0.0568	0.1555
266	SLE QP 1	-0.44	-0.05	29.31	7.5887	-0.0531	0.1519
266	SLE QP 2	-0.44	-0.04	30.34	7.8461	-0.0553	0.154
266	SLD 1	2.94	0.47	33.46	8.5755	-0.0532	-1.0319
266	SLD 2	3.09	0.26	33.44	8.5702	-0.0531	-1.0843
266	SLD 3	3.03	-0.65	33.18	8.4064	-0.0516	-1.0613
266	SLD 4	3.18	-0.85	33.16	8.4011	-0.0515	-1.1137
266	SLD 5	0.42	1.83	31.71	8.3224	-0.0571	-0.1481
266	SLD 6	0.52	1.7	31.7	8.3189	-0.057	-0.1821
266	SLD 7	0.7	-1.88	30.76	7.7585	-0.0518	-0.2459
266	SLD 8	0.8	-2.01	30.75	7.7551	-0.0517	-0.2799
266	SLD 9	-1.68	1.92	29.93	7.9371	-0.0588	0.588
266	SLD 10	-1.58	1.79	29.92	7.9336	-0.0588	0.554
266	SLD 11	-1.4	-1.79	28.98	7.3732	-0.0535	0.4902
266	SLD 12	-1.3	-1.92	28.97	7.3697	-0.0535	0.4562
266	SLD 13	-4.06	0.77	27.52	7.2911	-0.059	1.4218
266	SLD 14	-3.91	0.56	27.5	7.2858	-0.059	1.3694
266	SLD 15	-3.98	-0.35	27.24	7.1219	-0.0574	1.3924
266	SLD 16	-3.83	-0.55	27.22	7.1166	-0.0574	1.34
266	SLV 1	7.48	1.12	37.64	9.55	-0.0503	-2.6198
266	SLV 2	7.83	0.64	37.6	9.5376	-0.0502	-2.7419
266	SLV 3	7.67	-1.43	36.98	9.1593	-0.0466	-2.6882
266	SLV 4	8.02	-1.91	36.94	9.1469	-0.0465	-2.8103
266	SLV 5	1.58	4.25	33.53	8.9519	-0.0595	-0.5536
266	SLV 6	1.8	3.94	33.51	8.944	-0.0594	-0.6316
266	SLV 7	2.23	-4.24	31.34	7.6495	-0.047	-0.7818
266	SLV 8	2.45	-4.54	31.32	7.6416	-0.047	-0.8598
266	SLV 9	-3.34	4.46	29.36	8.0505	-0.0636	1.1679
266	SLV 10	-3.11	4.15	29.34	8.0426	-0.0635	1.0899
266	SLV 11	-2.69	-4.03	27.18	6.7481	-0.0512	0.9397
266	SLV 12	-2.46	-4.33	27.15	6.7402	-0.0511	0.8617
266	SLV 13	-8.91	1.82	23.74	6.5452	-0.0641	3.1184
266	SLV 14	-8.56	1.34	23.7	6.5329	-0.064	2.9963
266	SLV 15	-8.71	-0.72	23.08	6.1545	-0.0603	3.05
266	SLV 16	-8.36	-1.2	23.04	6.1421	-0.0602	2.9279
266	CRTFP Ux+	0	0	0	0	0	0
266	CRTFP Ux-	0	0	0	0	0	0
266	CRTFP Uy+	0	0	0	0	0	0
266	CRTFP Uy-	0	0	0	0	0	0
267	SLU 1	-0.42	-0.09	30.05	8.3258	-0.0615	0.1451
267	SLU 2	-0.41	-0.05	30	8.3303	-0.0614	0.1426
267	SLU 3	-0.43	-0.08	30.62	8.479	-0.0627	0.149
267	SLU 4	-0.42	-0.06	30.59	8.4817	-0.0627	0.1474
267	SLU 5	-0.41	-0.05	30.35	8.4223	-0.0622	0.144
267	SLU 6	-0.43	-0.08	30.96	8.5709	-0.0635	0.1504
267	SLU 7	-0.43	-0.06	30.93	8.5737	-0.0635	0.1489
267	SLU 8	-0.43	-0.09	30.73	8.5096	-0.063	0.148
267	SLU 9	-0.42	-0.07	30.7	8.5124	-0.063	0.1464
267	SLU 10	-0.43	-0.03	33.88	9.3745	-0.0706	0.1502
267	SLU 11	-0.45	-0.06	34.49	9.5232	-0.0719	0.1566
267	SLU 12	-0.45	-0.04	34.46	9.5259	-0.0719	0.155
267	SLU 13	-0.44	-0.03	34.22	9.4665	-0.0714	0.1516
267	SLU 14	-0.46	-0.07	34.83	9.6152	-0.0727	0.158
267	SLU 15	-0.45	-0.04	34.8	9.6179	-0.0727	0.1565
267	SLU 16	-0.45	-0.07	34.6	9.5539	-0.0722	0.1556
267	SLU 17	-0.44	-0.05	34.58	9.5566	-0.0722	0.1541
267	SLU 18	-0.45	-0.06	35.58	9.8175	-0.0746	0.156
267	SLU 19	-0.44	-0.04	35.55	9.8202	-0.0746	0.1545
267	SLU 20	-0.45	-0.06	35.92	9.9094	-0.0754	0.1574
267	SLU 21	-0.45	-0.04	35.89	9.9122	-0.0754	0.1559
267	SLU 22	-0.48	-0.05	33.62	9.2867	-0.0695	0.1667
267	SLU 23	-0.47	-0.01	33.57	9.2912	-0.0695	0.1641
267	SLU 24	-0.49	-0.04	34.19	9.4399	-0.0708	0.1705
267	SLU 25	-0.49	-0.02	34.16	9.4426	-0.0708	0.169
267	SLU 26	-0.48	-0.01	33.92	9.3832	-0.0703	0.1656
267	SLU 27	-0.49	-0.04	34.53	9.5319	-0.0716	0.172
267	SLU 28	-0.49	-0.02	34.5	9.5346	-0.0716	0.1704
267	SLU 29	-0.49	-0.05	34.3	9.4706	-0.0711	0.1696
267	SLU 30	-0.48	-0.03	34.27	9.4733	-0.0711	0.168
267	SLU 31	-0.49	0.01	37.45	10.3354	-0.0787	0.1717
267	SLU 32	-0.51	-0.02	38.06	10.4841	-0.08	0.1782
267	SLU 33	-0.51	0	38.03	10.4869	-0.08	0.1766
267	SLU 34	-0.5	0.01	37.79	10.4274	-0.0795	0.1732
267	SLU 35	-0.52	-0.03	38.4	10.5761	-0.0808	0.1796
267	SLU 36	-0.51	0	38.37	10.5788	-0.0808	0.178
267	SLU 37	-0.51	-0.03	38.17	10.5148	-0.0803	0.1772
267	SLU 38	-0.51	-0.01	38.15	10.5175	-0.0803	0.1756
267	SLU 39	-0.51	-0.02	39.15	10.7784	-0.0827	0.1776
267	SLU 40	-0.51	0	39.12	10.7811	-0.0827	0.176
267	SLU 41	-0.52	-0.02	39.49	10.8704	-0.0835	0.179
267	SLU 42	-0.51	0	39.46	10.8731	-0.0835	0.1775
267	SLU 43	-0.52	-0.13	37.84	10.494	-0.0771	0.1813
267	SLU 44	-0.51	-0.09	37.79	10.4986	-0.0771	0.1787
267	SLU 45	-0.53	-0.12	38.41	10.6473	-0.0784	0.1851
267	SLU 46	-0.53	-0.1	38.38	10.65	-0.0784	0.1836

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
267	SLU 47	-0.52	-0.09	38.13	10.5905	-0.0778	0.1801
267	SLU 48	-0.54	-0.13	38.75	10.7392	-0.0792	0.1865
267	SLU 49	-0.53	-0.1	38.72	10.7419	-0.0791	0.185
267	SLU 50	-0.53	-0.13	38.52	10.6779	-0.0787	0.1841
267	SLU 51	-0.53	-0.11	38.49	10.6807	-0.0786	0.1826
267	SLU 52	-0.54	-0.07	41.67	11.5428	-0.0863	0.1863
267	SLU 53	-0.56	-0.1	42.28	11.6915	-0.0876	0.1927
267	SLU 54	-0.55	-0.08	42.25	11.6942	-0.0876	0.1912
267	SLU 55	-0.54	-0.07	42.01	11.6347	-0.0871	0.1877
267	SLU 56	-0.56	-0.11	42.62	11.7834	-0.0884	0.1941
267	SLU 57	-0.55	-0.08	42.59	11.7862	-0.0884	0.1926
267	SLU 58	-0.55	-0.12	42.39	11.7221	-0.0879	0.1917
267	SLU 59	-0.55	-0.09	42.37	11.7249	-0.0879	0.1902
267	SLU 60	-0.55	-0.1	43.37	11.9858	-0.0903	0.1921
267	SLU 61	-0.55	-0.08	43.34	11.9885	-0.0902	0.1906
267	SLU 62	-0.56	-0.11	43.71	12.0777	-0.0911	0.1936
267	SLU 63	-0.55	-0.08	43.68	12.0804	-0.091	0.192
267	SLU 64	-0.58	-0.09	41.41	11.455	-0.0852	0.2028
267	SLU 65	-0.58	-0.05	41.36	11.4595	-0.0851	0.2003
267	SLU 66	-0.59	-0.08	41.98	11.6082	-0.0865	0.2067
267	SLU 67	-0.59	-0.06	41.95	11.6109	-0.0864	0.2051
267	SLU 68	-0.58	-0.05	41.7	11.5514	-0.0859	0.2017
267	SLU 69	-0.6	-0.09	42.32	11.7001	-0.0873	0.2081
267	SLU 70	-0.59	-0.06	42.29	11.7029	-0.0872	0.2066
267	SLU 71	-0.59	-0.09	42.09	11.6388	-0.0868	0.2057
267	SLU 72	-0.59	-0.07	42.06	11.6416	-0.0867	0.2042
267	SLU 73	-0.6	-0.03	45.24	12.5037	-0.0944	0.2079
267	SLU 74	-0.62	-0.06	45.85	12.6524	-0.0957	0.2143
267	SLU 75	-0.61	-0.04	45.82	12.6551	-0.0957	0.2128
267	SLU 76	-0.6	-0.03	45.58	12.5957	-0.0951	0.2093
267	SLU 77	-0.62	-0.07	46.19	12.7443	-0.0965	0.2157
267	SLU 78	-0.62	-0.04	46.16	12.7471	-0.0964	0.2142
267	SLU 79	-0.61	-0.08	45.96	12.683	-0.096	0.2133
267	SLU 80	-0.61	-0.05	45.94	12.6858	-0.096	0.2118
267	SLU 81	-0.62	-0.06	46.94	12.9467	-0.0984	0.2137
267	SLU 82	-0.61	-0.04	46.91	12.9494	-0.0983	0.2122
267	SLU 83	-0.62	-0.07	47.28	13.0386	-0.0992	0.2151
267	SLU 84	-0.62	-0.04	47.25	13.0414	-0.0991	0.2136
267	SLE RA 1	-0.44	-0.08	31.07	8.6003	-0.0638	0.1513
267	SLE RA 2	-0.43	-0.05	31.04	8.6034	-0.0637	0.1496
267	SLE RA 3	-0.44	-0.07	31.45	8.7025	-0.0646	0.1538
267	SLE RA 4	-0.44	-0.06	31.43	8.7043	-0.0646	0.1528
267	SLE RA 5	-0.43	-0.05	31.27	8.6646	-0.0642	0.1505
267	SLE RA 6	-0.45	-0.07	31.67	8.7638	-0.0651	0.1548
267	SLE RA 7	-0.44	-0.06	31.66	8.7656	-0.0651	0.1538
267	SLE RA 8	-0.44	-0.08	31.52	8.7229	-0.0648	0.1532
267	SLE RA 9	-0.44	-0.06	31.5	8.7247	-0.0648	0.1522
267	SLE RA 10	-0.45	-0.04	33.62	9.2995	-0.0699	0.1547
267	SLE RA 11	-0.46	-0.06	34.03	9.3986	-0.0708	0.1589
267	SLE RA 12	-0.45	-0.04	34.01	9.4004	-0.0707	0.1579
267	SLE RA 13	-0.45	-0.04	33.85	9.3608	-0.0704	0.1556
267	SLE RA 14	-0.46	-0.06	34.26	9.4599	-0.0713	0.1599
267	SLE RA 15	-0.46	-0.05	34.24	9.4617	-0.0713	0.1588
267	SLE RA 16	-0.46	-0.07	34.1	9.419	-0.071	0.1583
267	SLE RA 17	-0.45	-0.05	34.09	9.4209	-0.0709	0.1572
267	SLE RA 18	-0.46	-0.06	34.75	9.5948	-0.0725	0.1585
267	SLE RA 19	-0.45	-0.04	34.74	9.5966	-0.0725	0.1575
267	SLE RA 20	-0.46	-0.06	34.98	9.6561	-0.0731	0.1595
267	SLE RA 21	-0.46	-0.04	34.96	9.6579	-0.073	0.1585
267	SLE FR 1	-0.44	-0.08	31.07	8.6003	-0.0638	0.1513
267	SLE FR 2	-0.43	-0.07	31.06	8.6009	-0.0638	0.1509
267	SLE FR 3	-0.44	-0.08	31.16	8.6248	-0.064	0.1517
267	SLE FR 4	-0.44	-0.07	32.17	8.8993	-0.0664	0.1531
267	SLE FR 5	-0.44	-0.07	32.26	8.9232	-0.0666	0.1538
267	SLE FR 6	-0.45	-0.07	32.91	9.0976	-0.0682	0.1549
267	SLE QP 1	-0.44	-0.08	31.07	8.6003	-0.0638	0.1513
267	SLE QP 2	-0.44	-0.07	32.17	8.8987	-0.0664	0.1535
267	SLD 1	2.94	0.43	35.22	9.6622	-0.0658	-1.0322
267	SLD 2	3.09	0.23	35.2	9.6561	-0.0657	-1.0845
267	SLD 3	3.03	-0.7	34.96	9.5201	-0.0639	-1.0615
267	SLD 4	3.18	-0.89	34.94	9.5141	-0.0639	-1.1139
267	SLD 5	0.42	1.82	33.48	9.3442	-0.069	-0.1485
267	SLD 6	0.52	1.69	33.46	9.3402	-0.069	-0.1825
267	SLD 7	0.7	-1.93	32.63	8.8708	-0.0628	-0.2465
267	SLD 8	0.8	-2.06	32.61	8.8668	-0.0628	-0.2804
267	SLD 9	-1.68	1.91	31.73	8.9305	-0.07	0.5874
267	SLD 10	-1.58	1.78	31.72	8.9266	-0.07	0.5534
267	SLD 11	-1.4	-1.83	30.88	8.4571	-0.0638	0.4894
267	SLD 12	-1.3	-1.96	30.87	8.4531	-0.0638	0.4554
267	SLD 13	-4.06	0.75	29.4	8.2832	-0.0689	1.4208
267	SLD 14	-3.91	0.55	29.38	8.2772	-0.0689	1.3685
267	SLD 15	-3.98	-0.38	29.15	8.1412	-0.0671	1.3914
267	SLD 16	-3.83	-0.57	29.13	8.1352	-0.067	1.3391
267	SLV 1	7.48	1.07	39.29	10.6821	-0.0649	-2.6195
267	SLV 2	7.83	0.61	39.24	10.668	-0.0648	-2.7415
267	SLV 3	7.67	-1.5	38.71	10.355	-0.0605	-2.6881
267	SLV 4	8.02	-1.96	38.66	10.3409	-0.0604	-2.81
267	SLV 5	1.58	4.24	35.2	9.9321	-0.0726	-0.5538
267	SLV 6	1.8	3.95	35.17	9.9231	-0.0725	-0.6317
267	SLV 7	2.23	-4.32	33.26	8.8419	-0.0581	-0.7823
267	SLV 8	2.45	-4.61	33.23	8.8329	-0.058	-0.8602

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
267	SLV 9	-3.34	4.47	31.12	8.9644	-0.0748	1.1671
267	SLV 10	-3.11	4.17	31.09	8.9554	-0.0747	1.0893
267	SLV 11	-2.68	-4.09	29.18	7.8742	-0.0603	0.9386
267	SLV 12	-2.46	-4.39	29.15	7.8652	-0.0602	0.8607
267	SLV 13	-8.91	1.82	25.68	7.4564	-0.0724	3.1169
267	SLV 14	-8.56	1.35	25.63	7.4423	-0.0723	2.995
267	SLV 15	-8.71	-0.75	25.1	7.1294	-0.068	3.0484
267	SLV 16	-8.36	-1.21	25.05	7.1152	-0.0679	2.9264
267	CRTFP Ux+	0	0	0	0	0	0
267	CRTFP Ux-	0	0	0	0	0	0
267	CRTFP Uy+	0	0	0	0	0	0
267	CRTFP Uy-	0	0	0	0	0	0
268	SLU 1	-0.42	-0.13	31.97	9.4419	-0.066	0.1441
268	SLU 2	-0.41	-0.09	31.92	9.4418	-0.066	0.1413
268	SLU 3	-0.43	-0.13	32.58	9.6184	-0.0674	0.1479
268	SLU 4	-0.42	-0.1	32.55	9.6184	-0.0673	0.1463
268	SLU 5	-0.41	-0.09	32.29	9.5478	-0.0668	0.1427
268	SLU 6	-0.43	-0.13	32.94	9.7244	-0.0682	0.1493
268	SLU 7	-0.43	-0.1	32.92	9.7244	-0.0682	0.1477
268	SLU 8	-0.42	-0.14	32.7	9.6539	-0.0677	0.1469
268	SLU 9	-0.42	-0.11	32.67	9.6538	-0.0677	0.1453
268	SLU 10	-0.43	-0.07	36.08	10.6497	-0.0758	0.1492
268	SLU 11	-0.45	-0.11	36.74	10.8264	-0.0773	0.1558
268	SLU 12	-0.45	-0.08	36.71	10.8263	-0.0772	0.1541
268	SLU 13	-0.44	-0.07	36.45	10.7557	-0.0767	0.1506
268	SLU 14	-0.45	-0.11	37.1	10.9324	-0.0781	0.1572
268	SLU 15	-0.45	-0.09	37.08	10.9323	-0.0781	0.1555
268	SLU 16	-0.45	-0.12	36.86	10.8619	-0.0776	0.1548
268	SLU 17	-0.44	-0.1	36.83	10.8618	-0.0775	0.1531
268	SLU 18	-0.45	-0.11	37.91	11.1676	-0.0801	0.1553
268	SLU 19	-0.44	-0.08	37.89	11.1675	-0.0801	0.1537
268	SLU 20	-0.45	-0.11	38.28	11.2736	-0.081	0.1567
268	SLU 21	-0.45	-0.09	38.25	11.2735	-0.0809	0.1551
268	SLU 22	-0.48	-0.1	35.79	10.5504	-0.0747	0.1657
268	SLU 23	-0.47	-0.05	35.75	10.5502	-0.0746	0.1629
268	SLU 24	-0.49	-0.09	36.4	10.7269	-0.076	0.1695
268	SLU 25	-0.48	-0.06	36.37	10.7268	-0.076	0.1678
268	SLU 26	-0.47	-0.05	36.11	10.6562	-0.0754	0.1643
268	SLU 27	-0.49	-0.09	36.77	10.8329	-0.0769	0.1709
268	SLU 28	-0.49	-0.06	36.74	10.8328	-0.0768	0.1692
268	SLU 29	-0.49	-0.1	36.52	10.7623	-0.0764	0.1685
268	SLU 30	-0.48	-0.07	36.5	10.7623	-0.0763	0.1668
268	SLU 31	-0.49	-0.03	39.91	11.7582	-0.0845	0.1707
268	SLU 32	-0.51	-0.07	40.56	11.9348	-0.0859	0.1773
268	SLU 33	-0.51	-0.05	40.53	11.9347	-0.0859	0.1757
268	SLU 34	-0.5	-0.04	40.27	11.8642	-0.0853	0.1721
268	SLU 35	-0.52	-0.08	40.93	12.0408	-0.0867	0.1787
268	SLU 36	-0.51	-0.05	40.9	12.0407	-0.0867	0.1771
268	SLU 37	-0.51	-0.09	40.68	11.9703	-0.0862	0.1763
268	SLU 38	-0.5	-0.06	40.66	11.9702	-0.0862	0.1747
268	SLU 39	-0.51	-0.08	41.73	12.276	-0.0888	0.1769
268	SLU 40	-0.51	-0.05	41.71	12.2759	-0.0887	0.1752
268	SLU 41	-0.52	-0.08	42.1	12.382	-0.0896	0.1783
268	SLU 42	-0.51	-0.05	42.07	12.3819	-0.0896	0.1766
268	SLU 43	-0.52	-0.18	40.25	11.8945	-0.0829	0.18
268	SLU 44	-0.51	-0.14	40.2	11.8944	-0.0828	0.1772
268	SLU 45	-0.53	-0.18	40.86	12.071	-0.0842	0.1838
268	SLU 46	-0.53	-0.15	40.83	12.0709	-0.0842	0.1821
268	SLU 47	-0.52	-0.14	40.57	12.0003	-0.0836	0.1786
268	SLU 48	-0.54	-0.18	41.22	12.177	-0.0851	0.1852
268	SLU 49	-0.53	-0.15	41.2	12.1769	-0.085	0.1835
268	SLU 50	-0.53	-0.19	40.98	12.1065	-0.0845	0.1828
268	SLU 51	-0.52	-0.16	40.95	12.1064	-0.0845	0.1811
268	SLU 52	-0.53	-0.12	44.36	13.1023	-0.0927	0.185
268	SLU 53	-0.55	-0.16	45.02	13.2789	-0.0941	0.1916
268	SLU 54	-0.55	-0.14	44.99	13.2789	-0.0941	0.1899
268	SLU 55	-0.54	-0.13	44.73	13.2083	-0.0935	0.1864
268	SLU 56	-0.56	-0.17	45.38	13.3849	-0.0949	0.193
268	SLU 57	-0.55	-0.14	45.36	13.3848	-0.0949	0.1913
268	SLU 58	-0.55	-0.18	45.14	13.3144	-0.0944	0.1906
268	SLU 59	-0.55	-0.15	45.11	13.3143	-0.0944	0.1889
268	SLU 60	-0.55	-0.16	46.19	13.6201	-0.097	0.1912
268	SLU 61	-0.55	-0.14	46.17	13.62	-0.0969	0.1895
268	SLU 62	-0.56	-0.17	46.56	13.7261	-0.0978	0.1926
268	SLU 63	-0.55	-0.14	46.53	13.726	-0.0978	0.1909
268	SLU 64	-0.58	-0.15	44.07	13.0029	-0.0915	0.2015
268	SLU 65	-0.57	-0.1	44.03	13.0028	-0.0914	0.1988
268	SLU 66	-0.59	-0.14	44.68	13.1794	-0.0929	0.2053
268	SLU 67	-0.59	-0.11	44.65	13.1793	-0.0928	0.2037
268	SLU 68	-0.58	-0.1	44.39	13.1088	-0.0923	0.2002
268	SLU 69	-0.6	-0.14	45.05	13.2854	-0.0937	0.2067
268	SLU 70	-0.59	-0.12	45.02	13.2853	-0.0937	0.2051
268	SLU 71	-0.59	-0.15	44.8	13.2149	-0.0932	0.2043
268	SLU 72	-0.59	-0.12	44.78	13.2148	-0.0932	0.2027
268	SLU 73	-0.6	-0.09	48.19	14.2107	-0.1013	0.2066
268	SLU 74	-0.62	-0.13	48.84	14.3874	-0.1027	0.2132
268	SLU 75	-0.61	-0.1	48.81	14.3873	-0.1027	0.2115
268	SLU 76	-0.6	-0.09	48.55	14.3167	-0.1021	0.208
268	SLU 77	-0.62	-0.13	49.21	14.4933	-0.1036	0.2146
268	SLU 78	-0.62	-0.1	49.18	14.4933	-0.1035	0.2129
268	SLU 79	-0.61	-0.14	48.96	14.4228	-0.1031	0.2122

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
268	SLU 80	-0.61	-0.11	48.94	14.4228	-0.103	0.2105
268	SLU 81	-0.62	-0.13	50.01	14.7285	-0.1056	0.2127
268	SLU 82	-0.61	-0.1	49.99	14.7285	-0.1056	0.2111
268	SLU 83	-0.62	-0.13	50.38	14.8345	-0.1064	0.2141
268	SLU 84	-0.61	-0.1	50.35	14.8344	-0.1064	0.2125
268	SLE RA 1	-0.43	-0.12	33.06	9.7586	-0.0685	0.1503
268	SLE RA 2	-0.43	-0.09	33.03	9.7585	-0.0684	0.1484
268	SLE RA 3	-0.44	-0.12	33.47	9.8763	-0.0694	0.1528
268	SLE RA 4	-0.44	-0.1	33.45	9.8762	-0.0694	0.1517
268	SLE RA 5	-0.43	-0.09	33.28	9.8292	-0.069	0.1494
268	SLE RA 6	-0.44	-0.12	33.71	9.947	-0.07	0.1538
268	SLE RA 7	-0.44	-0.1	33.69	9.9469	-0.0699	0.1526
268	SLE RA 8	-0.44	-0.13	33.55	9.9	-0.0696	0.1522
268	SLE RA 9	-0.44	-0.11	33.53	9.8999	-0.0696	0.151
268	SLE RA 10	-0.44	-0.08	35.8	10.5638	-0.075	0.1537
268	SLE RA 11	-0.46	-0.11	36.24	10.6816	-0.076	0.158
268	SLE RA 12	-0.45	-0.09	36.22	10.6815	-0.076	0.1569
268	SLE RA 13	-0.45	-0.08	36.05	10.6345	-0.0756	0.1546
268	SLE RA 14	-0.46	-0.11	36.48	10.7523	-0.0765	0.159
268	SLE RA 15	-0.46	-0.09	36.47	10.7522	-0.0765	0.1579
268	SLE RA 16	-0.46	-0.12	36.32	10.7052	-0.0762	0.1574
268	SLE RA 17	-0.45	-0.1	36.3	10.7052	-0.0762	0.1563
268	SLE RA 18	-0.46	-0.11	37.02	10.909	-0.0779	0.1578
268	SLE RA 19	-0.45	-0.09	37.01	10.909	-0.0779	0.1566
268	SLE RA 20	-0.46	-0.11	37.27	10.9797	-0.0784	0.1587
268	SLE RA 21	-0.46	-0.09	37.25	10.9797	-0.0784	0.1576
268	SLE FR 1	-0.43	-0.12	33.06	9.7586	-0.0685	0.1503
268	SLE FR 2	-0.43	-0.12	33.06	9.7586	-0.0685	0.1499
268	SLE FR 3	-0.44	-0.12	33.16	9.7869	-0.0687	0.1507
268	SLE FR 4	-0.44	-0.11	34.24	10.1037	-0.0713	0.1522
268	SLE FR 5	-0.44	-0.12	34.35	10.132	-0.0715	0.1529
268	SLE FR 6	-0.45	-0.12	35.04	10.3338	-0.0732	0.154
268	SLE QP 1	-0.43	-0.12	33.06	9.7586	-0.0685	0.1503
268	SLE QP 2	-0.44	-0.12	34.25	10.1038	-0.0713	0.1525
268	SLD 1	2.94	0.38	37.25	10.9176	-0.0712	-1.0325
268	SLD 2	3.09	0.19	37.23	10.9109	-0.0712	-1.0847
268	SLD 3	3.03	-0.76	37.03	10.8047	-0.0693	-1.0619
268	SLD 4	3.18	-0.95	37	10.798	-0.0693	-1.1141
268	SLD 5	0.42	1.8	35.5	10.5204	-0.0742	-0.1493
268	SLD 6	0.52	1.67	35.48	10.516	-0.0741	-0.1832
268	SLD 7	0.7	-2.01	34.74	10.1439	-0.0678	-0.2473
268	SLD 8	0.8	-2.13	34.73	10.1396	-0.0678	-0.2812
268	SLD 9	-1.68	1.9	33.77	10.0679	-0.0748	0.5862
268	SLD 10	-1.58	1.78	33.76	10.0636	-0.0748	0.5523
268	SLD 11	-1.4	-1.91	33.02	9.6915	-0.0685	0.4882
268	SLD 12	-1.3	-2.03	33	9.6871	-0.0684	0.4543
268	SLD 13	-4.06	0.72	31.5	9.4095	-0.0734	1.4192
268	SLD 14	-3.91	0.53	31.47	9.4028	-0.0733	1.3669
268	SLD 15	-3.98	-0.43	31.27	9.2966	-0.0715	1.3898
268	SLD 16	-3.83	-0.62	31.25	9.2899	-0.0714	1.3375
268	SLV 1	7.47	1.01	41.27	12.005	-0.071	-2.619
268	SLV 2	7.82	0.57	41.22	11.9894	-0.0709	-2.7407
268	SLV 3	7.67	-1.59	40.75	11.7461	-0.0666	-2.6876
268	SLV 4	8.02	-2.04	40.7	11.7305	-0.0665	-2.8093
268	SLV 5	1.58	4.25	37.15	11.0695	-0.078	-0.5543
268	SLV 6	1.8	3.97	37.11	11.0595	-0.0779	-0.632
268	SLV 7	2.23	-4.44	35.43	10.2064	-0.0632	-0.783
268	SLV 8	2.45	-4.73	35.39	10.1964	-0.0631	-0.8607
268	SLV 9	-3.33	4.49	33.11	10.0111	-0.0795	1.1658
268	SLV 10	-3.11	4.21	33.07	10.0011	-0.0795	1.088
268	SLV 11	-2.68	-4.21	31.39	9.148	-0.0647	0.937
268	SLV 12	-2.46	-4.49	31.35	9.138	-0.0646	0.8593
268	SLV 13	-8.9	1.8	27.8	8.477	-0.0762	3.1144
268	SLV 14	-8.55	1.36	27.75	8.4615	-0.0761	2.9927
268	SLV 15	-8.71	-0.81	27.28	8.2181	-0.0717	3.0458
268	SLV 16	-8.36	-1.25	27.23	8.2025	-0.0716	2.9241
268	CRTFP Ux+	0	0	0	0	0	0
268	CRTFP Ux-	0	0	0	0	0	0
268	CRTFP Uy+	0	0	0	0	0	0
268	CRTFP Uy-	0	0	0	0	0	0
269	SLU 1	-0.41	-0.19	33.91	10.5983	-0.0621	0.1426
269	SLU 2	-0.4	-0.14	33.86	10.593	-0.0621	0.1396
269	SLU 3	-0.42	-0.19	34.56	10.799	-0.0634	0.1464
269	SLU 4	-0.42	-0.15	34.53	10.7958	-0.0634	0.1446
269	SLU 5	-0.41	-0.14	34.25	10.7135	-0.0629	0.141
269	SLU 6	-0.43	-0.19	34.95	10.9195	-0.0642	0.1478
269	SLU 7	-0.42	-0.16	34.92	10.9163	-0.0642	0.146
269	SLU 8	-0.42	-0.2	34.69	10.8394	-0.0637	0.1454
269	SLU 9	-0.42	-0.17	34.66	10.8362	-0.0637	0.1436
269	SLU 10	-0.43	-0.13	38.31	11.9706	-0.0714	0.1477
269	SLU 11	-0.45	-0.18	39.01	12.1765	-0.0727	0.1544
269	SLU 12	-0.44	-0.15	38.98	12.1733	-0.0727	0.1526
269	SLU 13	-0.43	-0.13	38.7	12.0911	-0.0721	0.149
269	SLU 14	-0.45	-0.18	39.4	12.2971	-0.0735	0.1558
269	SLU 15	-0.45	-0.15	39.37	12.2939	-0.0735	0.154
269	SLU 16	-0.45	-0.19	39.14	12.217	-0.073	0.1534
269	SLU 17	-0.44	-0.16	39.11	12.2138	-0.073	0.1516
269	SLU 18	-0.45	-0.18	40.27	12.5663	-0.0754	0.1541
269	SLU 19	-0.44	-0.15	40.24	12.5631	-0.0754	0.1523
269	SLU 20	-0.45	-0.18	40.66	12.6868	-0.0762	0.1555
269	SLU 21	-0.45	-0.15	40.63	12.6836	-0.0762	0.1537

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
269	SLU 22	-0.48	-0.16	37.98	11.8594	-0.0702	0.1641
269	SLU 23	-0.47	-0.11	37.94	11.854	-0.0702	0.1611
269	SLU 24	-0.49	-0.15	38.63	12.06	-0.0715	0.1679
269	SLU 25	-0.48	-0.12	38.6	12.0568	-0.0715	0.1661
269	SLU 26	-0.47	-0.11	38.33	11.9746	-0.0709	0.1625
269	SLU 27	-0.49	-0.16	39.02	12.1805	-0.0723	0.1692
269	SLU 28	-0.49	-0.13	39	12.1773	-0.0723	0.1674
269	SLU 29	-0.48	-0.17	38.77	12.1004	-0.0718	0.1669
269	SLU 30	-0.48	-0.13	38.74	12.0972	-0.0718	0.1651
269	SLU 31	-0.49	-0.1	42.39	13.2316	-0.0795	0.1691
269	SLU 32	-0.51	-0.15	43.08	13.4375	-0.0808	0.1759
269	SLU 33	-0.5	-0.11	43.05	13.4344	-0.0808	0.1741
269	SLU 34	-0.49	-0.1	42.78	13.3521	-0.0802	0.1705
269	SLU 35	-0.51	-0.15	43.47	13.5581	-0.0816	0.1772
269	SLU 36	-0.51	-0.12	43.45	13.5549	-0.0815	0.1754
269	SLU 37	-0.51	-0.16	43.22	13.478	-0.0811	0.1749
269	SLU 38	-0.5	-0.13	43.19	13.4748	-0.0811	0.1731
269	SLU 39	-0.51	-0.15	44.34	13.8273	-0.0835	0.1756
269	SLU 40	-0.5	-0.12	44.31	13.8241	-0.0835	0.1738
269	SLU 41	-0.51	-0.15	44.73	13.9478	-0.0843	0.1769
269	SLU 42	-0.51	-0.12	44.7	13.9446	-0.0842	0.1751
269	SLU 43	-0.52	-0.26	42.68	13.3455	-0.078	0.1781
269	SLU 44	-0.51	-0.21	42.64	13.3402	-0.0779	0.1751
269	SLU 45	-0.53	-0.25	43.33	13.5461	-0.0793	0.1818
269	SLU 46	-0.52	-0.22	43.3	13.5429	-0.0792	0.18
269	SLU 47	-0.51	-0.21	43.03	13.4607	-0.0787	0.1765
269	SLU 48	-0.53	-0.26	43.72	13.6666	-0.0801	0.1832
269	SLU 49	-0.53	-0.22	43.69	13.6634	-0.08	0.1814
269	SLU 50	-0.52	-0.27	43.46	13.5865	-0.0796	0.1808
269	SLU 51	-0.52	-0.23	43.44	13.5833	-0.0795	0.179
269	SLU 52	-0.53	-0.2	47.09	14.7177	-0.0872	0.1831
269	SLU 53	-0.55	-0.25	47.78	14.9237	-0.0886	0.1898
269	SLU 54	-0.55	-0.21	47.75	14.9205	-0.0885	0.188
269	SLU 55	-0.54	-0.2	47.48	14.8383	-0.088	0.1845
269	SLU 56	-0.56	-0.25	48.17	15.0442	-0.0894	0.1912
269	SLU 57	-0.55	-0.22	48.14	15.041	-0.0893	0.1894
269	SLU 58	-0.55	-0.26	47.91	14.9641	-0.0889	0.1888
269	SLU 59	-0.54	-0.23	47.89	14.9609	-0.0888	0.187
269	SLU 60	-0.55	-0.25	49.04	15.3135	-0.0913	0.1895
269	SLU 61	-0.55	-0.22	49.01	15.3103	-0.0912	0.1877
269	SLU 62	-0.55	-0.25	49.43	15.434	-0.0921	0.1909
269	SLU 63	-0.55	-0.22	49.4	15.4308	-0.092	0.1891
269	SLU 64	-0.58	-0.23	46.76	14.6065	-0.0861	0.1996
269	SLU 65	-0.57	-0.17	46.71	14.6012	-0.086	0.1966
269	SLU 66	-0.59	-0.22	47.41	14.8071	-0.0874	0.2033
269	SLU 67	-0.58	-0.19	47.38	14.8039	-0.0873	0.2015
269	SLU 68	-0.57	-0.18	47.1	14.7217	-0.0868	0.1979
269	SLU 69	-0.59	-0.23	47.8	14.9276	-0.0882	0.2047
269	SLU 70	-0.59	-0.19	47.77	14.9245	-0.0881	0.2029
269	SLU 71	-0.59	-0.23	47.54	14.8476	-0.0877	0.2023
269	SLU 72	-0.58	-0.2	47.51	14.8444	-0.0876	0.2005
269	SLU 73	-0.59	-0.17	51.16	15.9788	-0.0953	0.2046
269	SLU 74	-0.61	-0.21	51.86	16.1847	-0.0967	0.2113
269	SLU 75	-0.61	-0.18	51.83	16.1815	-0.0966	0.2095
269	SLU 76	-0.6	-0.17	51.55	16.0993	-0.0961	0.2059
269	SLU 77	-0.62	-0.22	52.25	16.3052	-0.0974	0.2127
269	SLU 78	-0.61	-0.19	52.22	16.302	-0.0974	0.2109
269	SLU 79	-0.61	-0.23	51.99	16.2251	-0.097	0.2103
269	SLU 80	-0.6	-0.19	51.96	16.2219	-0.0969	0.2085
269	SLU 81	-0.61	-0.22	53.12	16.5745	-0.0994	0.211
269	SLU 82	-0.61	-0.18	53.09	16.5713	-0.0993	0.2092
269	SLU 83	-0.62	-0.22	53.51	16.695	-0.1001	0.2124
269	SLU 84	-0.61	-0.19	53.48	16.6918	-0.1001	0.2106
269	SLE RA 1	-0.43	-0.18	35.07	10.9586	-0.0644	0.1488
269	SLE RA 2	-0.43	-0.15	35.04	10.9551	-0.0644	0.1468
269	SLE RA 3	-0.44	-0.18	35.51	11.0924	-0.0653	0.1513
269	SLE RA 4	-0.44	-0.16	35.49	11.0902	-0.0653	0.1501
269	SLE RA 5	-0.43	-0.15	35.3	11.0354	-0.0649	0.1477
269	SLE RA 6	-0.44	-0.18	35.77	11.1727	-0.0658	0.1522
269	SLE RA 7	-0.44	-0.16	35.75	11.1706	-0.0658	0.151
269	SLE RA 8	-0.44	-0.19	35.59	11.1193	-0.0655	0.1506
269	SLE RA 9	-0.43	-0.17	35.57	11.1172	-0.0655	0.1494
269	SLE RA 10	-0.44	-0.14	38.01	11.8735	-0.0706	0.1521
269	SLE RA 11	-0.45	-0.17	38.47	12.0108	-0.0715	0.1566
269	SLE RA 12	-0.45	-0.15	38.45	12.0086	-0.0715	0.1554
269	SLE RA 13	-0.44	-0.14	38.27	11.9538	-0.0711	0.153
269	SLE RA 14	-0.46	-0.18	38.73	12.0911	-0.072	0.1575
269	SLE RA 15	-0.45	-0.15	38.71	12.089	-0.072	0.1563
269	SLE RA 16	-0.45	-0.18	38.56	12.0377	-0.0717	0.156
269	SLE RA 17	-0.45	-0.16	38.54	12.0356	-0.0717	0.1548
269	SLE RA 18	-0.45	-0.17	39.31	12.2706	-0.0733	0.1564
269	SLE RA 19	-0.45	-0.15	39.29	12.2685	-0.0733	0.1552
269	SLE RA 20	-0.46	-0.18	39.57	12.351	-0.0738	0.1573
269	SLE RA 21	-0.45	-0.16	39.55	12.3488	-0.0738	0.1561
269	SLE FR 1	-0.43	-0.18	35.07	10.9586	-0.0644	0.1488
269	SLE FR 2	-0.43	-0.17	35.07	10.9579	-0.0644	0.1484
269	SLE FR 3	-0.43	-0.18	35.18	10.9908	-0.0646	0.1491
269	SLE FR 4	-0.44	-0.17	36.34	11.3515	-0.0671	0.1507
269	SLE FR 5	-0.44	-0.18	36.45	11.3844	-0.0673	0.1514
269	SLE FR 6	-0.44	-0.18	37.19	11.6146	-0.0689	0.1526
269	SLE QP 1	-0.43	-0.18	35.07	10.9586	-0.0644	0.1488

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
269	SLE QP 2	-0.44	-0.18	36.34	11.3522	-0.0671	0.1511
269	SLD 1	2.94	0.32	39.31	12.2196	-0.0665	-1.0331
269	SLD 2	3.09	0.14	39.29	12.2126	-0.0665	-1.0852
269	SLD 3	3.03	-0.85	39.1	12.1338	-0.0648	-1.0625
269	SLD 4	3.18	-1.03	39.08	12.1269	-0.0648	-1.1146
269	SLD 5	0.42	1.77	37.55	11.7437	-0.0695	-0.1505
269	SLD 6	0.52	1.65	37.53	11.7392	-0.0695	-0.1843
269	SLD 7	0.7	-2.11	36.86	11.4578	-0.0638	-0.2485
269	SLD 8	0.8	-2.23	36.85	11.4533	-0.0638	-0.2823
269	SLD 9	-1.68	1.87	35.84	11.2511	-0.0703	0.5844
269	SLD 10	-1.58	1.75	35.82	11.2466	-0.0703	0.5506
269	SLD 11	-1.4	-2.01	35.15	10.9652	-0.0647	0.4864
269	SLD 12	-1.3	-2.13	35.14	10.9607	-0.0647	0.4526
269	SLD 13	-4.05	0.67	33.61	10.5776	-0.0694	1.4167
269	SLD 14	-3.9	0.49	33.58	10.5706	-0.0693	1.3646
269	SLD 15	-3.97	-0.49	33.4	10.4918	-0.0677	1.3873
269	SLD 16	-3.82	-0.68	33.38	10.4849	-0.0676	1.3352
269	SLV 1	7.47	0.95	43.28	13.3787	-0.0658	-2.6185
269	SLV 2	7.82	0.52	43.22	13.3625	-0.0657	-2.7398
269	SLV 3	7.67	-1.7	42.81	13.183	-0.0618	-2.6871
269	SLV 4	8.02	-2.13	42.75	13.1669	-0.0618	-2.8084
269	SLV 5	1.58	4.26	39.14	12.2596	-0.0727	-0.5552
269	SLV 6	1.8	3.99	39.11	12.2493	-0.0727	-0.6327
269	SLV 7	2.23	-4.59	37.58	11.6075	-0.0595	-0.7839
269	SLV 8	2.45	-4.87	37.55	11.5972	-0.0595	-0.8614
269	SLV 9	-3.33	4.51	35.14	11.1073	-0.0747	1.1635
269	SLV 10	-3.11	4.23	35.1	11.097	-0.0747	1.0861
269	SLV 11	-2.68	-4.35	33.58	10.4551	-0.0615	0.9348
269	SLV 12	-2.46	-4.62	33.55	10.4448	-0.0615	0.8573
269	SLV 13	-8.89	1.77	29.93	9.5375	-0.0724	3.1106
269	SLV 14	-8.54	1.35	29.88	9.5214	-0.0724	2.9893
269	SLV 15	-8.7	-0.88	29.47	9.3419	-0.0684	3.042
269	SLV 16	-8.35	-1.31	29.41	9.3258	-0.0684	2.9207
269	CRTFP Ux+	0	0	0	0	0	0
269	CRTFP Ux-	0	0	0	0	0	0
269	CRTFP Uy+	0	0	0	0	0	0
269	CRTFP Uy-	0	0	0	0	0	0
270	SLU 1	-0.37	-0.24	32.26	10.5657	0.5648	0.1324
270	SLU 2	-0.36	-0.18	32.21	10.5563	0.564	0.1285
270	SLU 3	-0.38	-0.23	32.87	10.7675	0.5756	0.1356
270	SLU 4	-0.38	-0.2	32.85	10.7618	0.5752	0.1333
270	SLU 5	-0.37	-0.19	32.58	10.6775	0.5705	0.1298
270	SLU 6	-0.38	-0.24	33.25	10.8887	0.5821	0.1369
270	SLU 7	-0.38	-0.2	33.22	10.8831	0.5817	0.1346
270	SLU 8	-0.38	-0.24	33	10.8082	0.5778	0.135
270	SLU 9	-0.37	-0.21	32.98	10.8025	0.5774	0.1326
270	SLU 10	-0.38	-0.18	36.47	11.9456	0.638	0.1359
270	SLU 11	-0.4	-0.23	37.13	12.1568	0.6496	0.143
270	SLU 12	-0.4	-0.2	37.11	12.1512	0.6491	0.1407
270	SLU 13	-0.39	-0.19	36.85	12.0668	0.6445	0.1372
270	SLU 14	-0.41	-0.24	37.51	12.2781	0.6561	0.1443
270	SLU 15	-0.4	-0.2	37.48	12.2724	0.6556	0.142
270	SLU 16	-0.4	-0.24	37.26	12.1975	0.6518	0.1423
270	SLU 17	-0.39	-0.21	37.24	12.1918	0.6513	0.14
270	SLU 18	-0.4	-0.24	38.34	12.5505	0.6704	0.1429
270	SLU 19	-0.4	-0.2	38.32	12.5448	0.67	0.1406
270	SLU 20	-0.41	-0.24	38.71	12.6717	0.6769	0.1442
270	SLU 21	-0.4	-0.21	38.69	12.666	0.6765	0.1419
270	SLU 22	-0.43	-0.21	36.15	11.8348	0.6327	0.1513
270	SLU 23	-0.42	-0.16	36.1	11.8253	0.6319	0.1474
270	SLU 24	-0.44	-0.21	36.77	12.0365	0.6435	0.1546
270	SLU 25	-0.43	-0.18	36.74	12.0309	0.643	0.1523
270	SLU 26	-0.42	-0.16	36.48	11.9465	0.6384	0.1487
270	SLU 27	-0.44	-0.21	37.14	12.1578	0.65	0.1559
270	SLU 28	-0.44	-0.18	37.11	12.1521	0.6495	0.1535
270	SLU 29	-0.43	-0.22	36.89	12.0772	0.6457	0.1539
270	SLU 30	-0.43	-0.19	36.87	12.0715	0.6452	0.1516
270	SLU 31	-0.44	-0.16	40.36	13.2146	0.7058	0.1548
270	SLU 32	-0.46	-0.21	41.03	13.4259	0.7174	0.162
270	SLU 33	-0.45	-0.18	41	13.4202	0.7169	0.1596
270	SLU 34	-0.44	-0.16	40.74	13.3359	0.7123	0.1561
270	SLU 35	-0.46	-0.21	41.4	13.5471	0.7239	0.1633
270	SLU 36	-0.46	-0.18	41.37	13.5414	0.7234	0.1609
270	SLU 37	-0.46	-0.22	41.15	13.4665	0.7196	0.1613
270	SLU 38	-0.45	-0.19	41.13	13.4609	0.7191	0.159
270	SLU 39	-0.46	-0.21	42.23	13.8195	0.7383	0.1619
270	SLU 40	-0.45	-0.18	42.21	13.8138	0.7378	0.1596
270	SLU 41	-0.46	-0.22	42.61	13.9407	0.7448	0.1632
270	SLU 42	-0.46	-0.19	42.58	13.9351	0.7443	0.1609
270	SLU 43	-0.46	-0.31	40.6	13.3004	0.711	0.1656
270	SLU 44	-0.45	-0.26	40.55	13.2909	0.7102	0.1617
270	SLU 45	-0.47	-0.31	41.22	13.5021	0.7218	0.1688
270	SLU 46	-0.47	-0.28	41.19	13.4965	0.7213	0.1665
270	SLU 47	-0.46	-0.26	40.93	13.4121	0.7167	0.163
270	SLU 48	-0.48	-0.31	41.59	13.6234	0.7283	0.1701
270	SLU 49	-0.47	-0.28	41.56	13.6177	0.7278	0.1678
270	SLU 50	-0.47	-0.32	41.34	13.5428	0.724	0.1682
270	SLU 51	-0.47	-0.29	41.32	13.5371	0.7235	0.1658
270	SLU 52	-0.48	-0.26	44.81	14.6802	0.7842	0.1691
270	SLU 53	-0.49	-0.31	45.48	14.8915	0.7958	0.1762
270	SLU 54	-0.49	-0.28	45.45	14.8858	0.7953	0.1739

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
270	SLU 55	-0.48	-0.26	45.19	14.8015	0.7907	0.1704
270	SLU 56	-0.5	-0.31	45.85	15.0127	0.8023	0.1775
270	SLU 57	-0.49	-0.28	45.82	15.007	0.8018	0.1752
270	SLU 58	-0.49	-0.32	45.6	14.9321	0.7979	0.1756
270	SLU 59	-0.49	-0.29	45.58	14.9265	0.7975	0.1732
270	SLU 60	-0.49	-0.31	46.68	15.2851	0.8166	0.1761
270	SLU 61	-0.49	-0.28	46.66	15.2794	0.8162	0.1738
270	SLU 62	-0.5	-0.32	47.06	15.4063	0.8231	0.1774
270	SLU 63	-0.49	-0.29	47.03	15.4007	0.8227	0.1751
270	SLU 64	-0.52	-0.29	44.49	14.5694	0.7789	0.1845
270	SLU 65	-0.51	-0.24	44.44	14.5599	0.7781	0.1807
270	SLU 66	-0.53	-0.29	45.11	14.7712	0.7897	0.1878
270	SLU 67	-0.52	-0.26	45.08	14.7655	0.7892	0.1855
270	SLU 68	-0.51	-0.24	44.82	14.6811	0.7846	0.1819
270	SLU 69	-0.53	-0.29	45.48	14.8924	0.7962	0.1891
270	SLU 70	-0.53	-0.26	45.45	14.8867	0.7957	0.1867
270	SLU 71	-0.53	-0.3	45.24	14.8118	0.7919	0.1871
270	SLU 72	-0.52	-0.27	45.21	14.8062	0.7914	0.1848
270	SLU 73	-0.53	-0.24	48.7	15.9493	0.852	0.188
270	SLU 74	-0.55	-0.29	49.37	16.1605	0.8636	0.1952
270	SLU 75	-0.55	-0.26	49.34	16.1548	0.8631	0.1929
270	SLU 76	-0.54	-0.24	49.08	16.0705	0.8585	0.1893
270	SLU 77	-0.55	-0.29	49.74	16.2817	0.8701	0.1965
270	SLU 78	-0.55	-0.26	49.72	16.276	0.8696	0.1941
270	SLU 79	-0.55	-0.3	49.5	16.2012	0.8658	0.1945
270	SLU 80	-0.54	-0.27	49.47	16.1955	0.8653	0.1922
270	SLU 81	-0.55	-0.29	50.57	16.5541	0.8845	0.1951
270	SLU 82	-0.55	-0.26	50.55	16.5485	0.884	0.1928
270	SLU 83	-0.55	-0.3	50.95	16.6754	0.891	0.1964
270	SLU 84	-0.55	-0.26	50.92	16.6697	0.8905	0.1941
270	SLE RA 1	-0.39	-0.23	33.37	10.9283	0.5842	0.1378
270	SLE RA 2	-0.38	-0.19	33.34	10.922	0.5837	0.1352
270	SLE RA 3	-0.39	-0.23	33.78	11.0628	0.5914	0.14
270	SLE RA 4	-0.39	-0.21	33.76	11.059	0.5911	0.1384
270	SLE RA 5	-0.38	-0.2	33.59	11.0028	0.588	0.1361
270	SLE RA 6	-0.4	-0.23	34.03	11.1436	0.5958	0.1408
270	SLE RA 7	-0.39	-0.21	34.01	11.1399	0.5954	0.1393
270	SLE RA 8	-0.39	-0.23	33.86	11.0899	0.5929	0.1395
270	SLE RA 9	-0.39	-0.21	33.85	11.0862	0.5926	0.138
270	SLE RA 10	-0.4	-0.19	36.18	11.8482	0.633	0.1401
270	SLE RA 11	-0.41	-0.23	36.62	11.9891	0.6407	0.1449
270	SLE RA 12	-0.4	-0.21	36.6	11.9853	0.6404	0.1433
270	SLE RA 13	-0.4	-0.2	36.43	11.929	0.6373	0.141
270	SLE RA 14	-0.41	-0.23	36.87	12.0699	0.645	0.1457
270	SLE RA 15	-0.41	-0.21	36.85	12.0661	0.6447	0.1442
270	SLE RA 16	-0.41	-0.23	36.7	12.0162	0.6422	0.1444
270	SLE RA 17	-0.4	-0.21	36.69	12.0124	0.6419	0.1429
270	SLE RA 18	-0.41	-0.23	37.42	12.2515	0.6546	0.1448
270	SLE RA 19	-0.4	-0.21	37.41	12.2477	0.6543	0.1433
270	SLE RA 20	-0.41	-0.23	37.67	12.3323	0.659	0.1457
270	SLE RA 21	-0.41	-0.21	37.66	12.3285	0.6586	0.1441
270	SLE FR 1	-0.39	-0.23	33.37	10.9283	0.5842	0.1378
270	SLE FR 2	-0.39	-0.22	33.36	10.9271	0.5841	0.1373
270	SLE FR 3	-0.39	-0.23	33.47	10.9606	0.586	0.1381
270	SLE FR 4	-0.39	-0.22	34.58	11.324	0.6052	0.1394
270	SLE FR 5	-0.39	-0.23	34.68	11.3576	0.6071	0.1402
270	SLE FR 6	-0.4	-0.23	35.4	11.5899	0.6194	0.1413
270	SLE QP 1	-0.39	-0.23	33.37	10.9283	0.5842	0.1378
270	SLE QP 2	-0.39	-0.23	34.58	11.3253	0.6053	0.1399
270	SLD 1	2.68	0.23	37.22	12.1495	0.657	-0.9626
270	SLD 2	2.81	0.07	37.2	12.1436	0.6565	-1.0068
270	SLD 3	2.75	-0.85	37.05	12.0916	0.6532	-0.9326
270	SLD 4	2.89	-1.01	37.03	12.0857	0.6528	-0.9768
270	SLD 5	0.39	1.56	35.64	11.6614	0.6266	-0.2287
270	SLD 6	0.48	1.46	35.63	11.6576	0.6263	-0.2574
270	SLD 7	0.64	-2.02	35.07	11.4684	0.6141	-0.1286
270	SLD 8	0.73	-2.12	35.05	11.4646	0.6138	-0.1573
270	SLD 9	-1.52	1.66	34.12	11.186	0.5969	0.4371
270	SLD 10	-1.43	1.56	34.1	11.1822	0.5966	0.4084
270	SLD 11	-1.26	-1.92	33.54	10.993	0.5843	0.5372
270	SLD 12	-1.18	-2.02	33.53	10.9891	0.5841	0.5085
270	SLD 13	-3.68	0.55	32.14	10.5648	0.5579	1.2566
270	SLD 14	-3.54	0.39	32.12	10.5589	0.5575	1.2124
270	SLD 15	-3.6	-0.52	31.97	10.5069	0.5541	1.2867
270	SLD 16	-3.46	-0.68	31.95	10.501	0.5537	1.2425
270	SLV 1	6.79	0.8	40.74	13.2516	0.726	-2.4383
270	SLV 2	7.1	0.43	40.7	13.2378	0.725	-2.5413
270	SLV 3	6.97	-1.65	40.35	13.1197	0.7174	-2.3689
270	SLV 4	7.28	-2.02	40.3	13.106	0.7164	-2.4718
270	SLV 5	1.44	3.86	37.03	12.1054	0.6547	-0.7215
270	SLV 6	1.64	3.62	37	12.0966	0.6541	-0.7872
270	SLV 7	2.03	-4.31	35.73	11.666	0.6261	-0.49
270	SLV 8	2.23	-4.54	35.7	11.6572	0.6255	-0.5557
270	SLV 9	-3.02	4.09	33.47	10.9933	0.5852	0.8355
270	SLV 10	-2.82	3.85	33.44	10.9845	0.5846	0.7698
270	SLV 11	-2.43	-4.08	32.17	10.5539	0.5566	1.067
270	SLV 12	-2.22	-4.32	32.14	10.5451	0.556	1.0013
270	SLV 13	-8.07	1.56	28.86	9.5445	0.4943	2.7517
270	SLV 14	-7.75	1.19	28.82	9.5308	0.4933	2.6487
270	SLV 15	-7.89	-0.89	28.47	9.4127	0.4857	2.8211
270	SLV 16	-7.58	-1.26	28.43	9.399	0.4847	2.7181

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
270	CRTFP Ux+	0	0	0	0	0	0
270	CRTFP Ux-	0	0	0	0	0	0
270	CRTFP Uy+	0	0	0	0	0	0
270	CRTFP Uy-	0	0	0	0	0	0
272	SLU 1	-0.87	-0.7	76.85	18.5348	0.3123	0.1999
272	SLU 2	-0.85	-0.57	76.74	18.5115	0.3115	0.1944
272	SLU 3	-0.89	-0.69	78.32	18.8911	0.3183	0.2049
272	SLU 4	-0.88	-0.61	78.26	18.8771	0.3178	0.2017
272	SLU 5	-0.86	-0.58	77.64	18.7259	0.315	0.1963
272	SLU 6	-0.9	-0.7	79.22	19.1055	0.3217	0.2068
272	SLU 7	-0.89	-0.62	79.16	19.0915	0.3213	0.2035
272	SLU 8	-0.89	-0.72	78.63	18.9636	0.3192	0.2037
272	SLU 9	-0.87	-0.64	78.57	18.9496	0.3187	0.2004
272	SLU 10	-0.9	-0.59	86.94	20.9705	0.348	0.2056
272	SLU 11	-0.94	-0.71	88.52	21.3501	0.3547	0.2161
272	SLU 12	-0.93	-0.63	88.46	21.3361	0.3543	0.2128
272	SLU 13	-0.91	-0.6	87.83	21.1849	0.3514	0.2075
272	SLU 14	-0.95	-0.72	89.42	21.5645	0.3582	0.218
272	SLU 15	-0.94	-0.64	89.35	21.5505	0.3577	0.2147
272	SLU 16	-0.94	-0.74	88.83	21.4227	0.3557	0.2148
272	SLU 17	-0.93	-0.66	88.77	21.4087	0.3552	0.2116
272	SLU 18	-0.95	-0.72	91.41	22.0477	0.3644	0.2158
272	SLU 19	-0.93	-0.65	91.35	22.0337	0.3639	0.2126
272	SLU 20	-0.95	-0.73	92.31	22.2621	0.3679	0.2177
272	SLU 21	-0.94	-0.66	92.24	22.2481	0.3674	0.2145
272	SLU 22	-1	-0.67	86.12	20.7741	0.35	0.2296
272	SLU 23	-0.98	-0.54	86.01	20.7507	0.3492	0.2242
272	SLU 24	-1.02	-0.66	87.6	21.1303	0.356	0.2347
272	SLU 25	-1.01	-0.58	87.53	21.1163	0.3555	0.2314
272	SLU 26	-0.99	-0.55	86.91	20.9651	0.3527	0.2261
272	SLU 27	-1.03	-0.67	88.49	21.3447	0.3595	0.2366
272	SLU 28	-1.02	-0.59	88.43	21.3307	0.359	0.2333
272	SLU 29	-1.02	-0.69	87.91	21.2029	0.357	0.2334
272	SLU 30	-1	-0.61	87.84	21.1889	0.3565	0.2301
272	SLU 31	-1.03	-0.55	96.21	23.2098	0.3857	0.2353
272	SLU 32	-1.08	-0.68	97.79	23.5893	0.3925	0.2458
272	SLU 33	-1.06	-0.6	97.73	23.5753	0.392	0.2426
272	SLU 34	-1.04	-0.57	97.1	23.4242	0.3891	0.2372
272	SLU 35	-1.08	-0.69	98.69	23.8037	0.3959	0.2477
272	SLU 36	-1.07	-0.61	98.62	23.7897	0.3954	0.2445
272	SLU 37	-1.07	-0.71	98.1	23.6619	0.3934	0.2446
272	SLU 38	-1.06	-0.63	98.04	23.6479	0.3929	0.2413
272	SLU 39	-1.08	-0.69	100.69	24.287	0.4021	0.2456
272	SLU 40	-1.06	-0.61	100.62	24.273	0.4016	0.2423
272	SLU 41	-1.08	-0.7	101.58	24.5014	0.4056	0.2475
272	SLU 42	-1.07	-0.63	101.52	24.4874	0.4051	0.2442
272	SLU 43	-1.08	-0.92	96.72	23.3275	0.3931	0.2497
272	SLU 44	-1.06	-0.79	96.62	23.3042	0.3923	0.2442
272	SLU 45	-1.11	-0.91	98.2	23.6838	0.399	0.2547
272	SLU 46	-1.09	-0.83	98.14	23.6698	0.3986	0.2514
272	SLU 47	-1.07	-0.8	97.51	23.5186	0.3957	0.2461
272	SLU 48	-1.12	-0.92	99.09	23.8982	0.4025	0.2566
272	SLU 49	-1.1	-0.84	99.03	23.8842	0.402	0.2533
272	SLU 50	-1.1	-0.94	98.51	23.7563	0.4	0.2534
272	SLU 51	-1.09	-0.86	98.45	23.7423	0.3995	0.2502
272	SLU 52	-1.12	-0.81	106.81	25.7632	0.4287	0.2554
272	SLU 53	-1.16	-0.93	108.4	26.1428	0.4355	0.2659
272	SLU 54	-1.15	-0.85	108.33	26.1288	0.435	0.2626
272	SLU 55	-1.12	-0.82	107.71	25.9776	0.4322	0.2573
272	SLU 56	-1.17	-0.94	109.29	26.3572	0.439	0.2678
272	SLU 57	-1.16	-0.86	109.23	26.3432	0.4385	0.2645
272	SLU 58	-1.15	-0.96	108.71	26.2154	0.4365	0.2646
272	SLU 59	-1.14	-0.88	108.64	26.2014	0.436	0.2613
272	SLU 60	-1.16	-0.94	111.29	26.8404	0.4452	0.2656
272	SLU 61	-1.15	-0.87	111.22	26.8264	0.4447	0.2623
272	SLU 62	-1.17	-0.95	112.18	27.0548	0.4486	0.2675
272	SLU 63	-1.16	-0.88	112.12	27.0408	0.4481	0.2642
272	SLU 64	-1.22	-0.89	105.99	25.5668	0.4308	0.2794
272	SLU 65	-1.19	-0.76	105.89	25.5434	0.43	0.2739
272	SLU 66	-1.24	-0.88	107.47	25.923	0.4368	0.2844
272	SLU 67	-1.22	-0.8	107.41	25.909	0.4363	0.2812
272	SLU 68	-1.2	-0.77	106.78	25.7578	0.4334	0.2758
272	SLU 69	-1.25	-0.89	108.37	26.1374	0.4402	0.2863
272	SLU 70	-1.23	-0.81	108.3	26.1234	0.4397	0.2831
272	SLU 71	-1.23	-0.91	107.78	25.9956	0.4377	0.2832
272	SLU 72	-1.22	-0.83	107.72	25.9816	0.4372	0.2799
272	SLU 73	-1.25	-0.77	116.09	28.0025	0.4664	0.2851
272	SLU 74	-1.29	-0.9	117.67	28.3821	0.4732	0.2956
272	SLU 75	-1.28	-0.82	117.61	28.3681	0.4727	0.2923
272	SLU 76	-1.26	-0.79	116.98	28.2169	0.4699	0.287
272	SLU 77	-1.3	-0.91	118.56	28.5965	0.4767	0.2975
272	SLU 78	-1.29	-0.83	118.5	28.5825	0.4762	0.2942
272	SLU 79	-1.29	-0.93	117.98	28.4546	0.4742	0.2943
272	SLU 80	-1.27	-0.85	117.92	28.4406	0.4737	0.2911
272	SLU 81	-1.29	-0.91	120.56	29.0797	0.4829	0.2954
272	SLU 82	-1.28	-0.83	120.5	29.0657	0.4824	0.2921
272	SLU 83	-1.3	-0.92	121.45	29.2941	0.4863	0.2972
272	SLU 84	-1.29	-0.84	121.39	29.2801	0.4859	0.294
272	SLE RA 1	-0.91	-0.69	79.5	19.1746	0.3231	0.2084
272	SLE RA 2	-0.89	-0.6	79.43	19.1591	0.3225	0.2048
272	SLE RA 3	-0.92	-0.68	80.48	19.4121	0.3271	0.2118

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
272	SLE RA 4	-0.91	-0.63	80.44	19.4028	0.3267	0.2096
272	SLE RA 5	-0.9	-0.61	80.02	19.302	0.3249	0.206
272	SLE RA 6	-0.93	-0.69	81.08	19.555	0.3294	0.213
272	SLE RA 7	-0.92	-0.64	81.04	19.5457	0.3291	0.2108
272	SLE RA 8	-0.92	-0.7	80.69	19.4605	0.3277	0.2109
272	SLE RA 9	-0.91	-0.65	80.65	19.4511	0.3274	0.2087
272	SLE RA 10	-0.93	-0.61	86.22	20.7984	0.3469	0.2122
272	SLE RA 11	-0.96	-0.7	87.28	21.0515	0.3514	0.2192
272	SLE RA 12	-0.95	-0.64	87.24	21.0421	0.3511	0.217
272	SLE RA 13	-0.93	-0.62	86.82	20.9413	0.3492	0.2135
272	SLE RA 14	-0.96	-0.7	87.88	21.1944	0.3537	0.2205
272	SLE RA 15	-0.95	-0.65	87.83	21.1851	0.3534	0.2183
272	SLE RA 16	-0.95	-0.72	87.49	21.0998	0.352	0.2183
272	SLE RA 17	-0.94	-0.66	87.44	21.0905	0.3517	0.2162
272	SLE RA 18	-0.96	-0.71	89.21	21.5165	0.3578	0.219
272	SLE RA 19	-0.95	-0.65	89.17	21.5072	0.3575	0.2168
272	SLE RA 20	-0.96	-0.71	89.8	21.6595	0.3601	0.2203
272	SLE RA 21	-0.95	-0.66	89.76	21.6501	0.3598	0.2181
272	SLE FR 1	-0.91	-0.69	79.5	19.1746	0.3231	0.2084
272	SLE FR 2	-0.9	-0.67	79.48	19.1715	0.323	0.2077
272	SLE FR 3	-0.91	-0.69	79.73	19.2318	0.324	0.2089
272	SLE FR 4	-0.92	-0.68	82.4	19.8741	0.3334	0.2109
272	SLE FR 5	-0.92	-0.7	82.65	19.9344	0.3344	0.2121
272	SLE FR 6	-0.93	-0.7	84.35	20.3456	0.3405	0.2137
272	SLE QP 1	-0.91	-0.69	79.5	19.1746	0.3231	0.2084
272	SLE QP 2	-0.92	-0.69	82.41	19.8772	0.3335	0.2116
272	SLD 1	6.11	0.36	88.24	21.252	0.4292	-1.524
272	SLD 2	6.43	0.01	88.19	21.2431	0.4277	-1.5965
272	SLD 3	6.29	-2.13	87.86	21.1769	0.4166	-1.5669
272	SLD 4	6.6	-2.47	87.81	21.1681	0.4152	-1.6394
272	SLD 5	0.87	3.45	84.74	20.405	0.3815	-0.2314
272	SLD 6	1.07	3.22	84.71	20.3993	0.3806	-0.2784
272	SLD 7	1.45	-4.83	83.48	20.1548	0.3396	-0.3744
272	SLD 8	1.66	-5.05	83.45	20.1491	0.3387	-0.4214
272	SLD 9	-3.5	3.66	81.37	19.6053	0.3283	0.8446
272	SLD 10	-3.3	3.44	81.34	19.5996	0.3274	0.7975
272	SLD 11	-2.92	-4.61	80.11	19.3551	0.2864	0.7016
272	SLD 12	-2.71	-4.83	80.08	19.3494	0.2855	0.6545
272	SLD 13	-8.45	1.08	77	18.5863	0.2519	2.0626
272	SLD 14	-8.13	0.74	76.96	18.5775	0.2504	1.9901
272	SLD 15	-8.27	-1.4	76.62	18.5112	0.2393	2.0197
272	SLD 16	-7.96	-1.74	76.58	18.5024	0.2378	1.9472
272	SLV 1	15.53	1.69	96.04	23.0912	0.5569	-3.8478
272	SLV 2	16.26	0.89	95.93	23.0707	0.5535	-4.0168
272	SLV 3	15.94	-3.97	95.17	22.9196	0.5283	-3.9477
272	SLV 4	16.67	-4.77	95.07	22.899	0.525	-4.1167
272	SLV 5	3.27	8.74	87.83	21.1052	0.4444	-0.8262
272	SLV 6	3.74	8.23	87.76	21.092	0.4423	-0.9341
272	SLV 7	4.63	-10.13	84.94	20.5331	0.3492	-1.159
272	SLV 8	5.1	-10.64	84.87	20.52	0.347	-1.2669
272	SLV 9	-6.95	9.25	79.94	19.2344	0.32	1.6901
272	SLV 10	-6.48	8.74	79.88	19.2213	0.3178	1.5822
272	SLV 11	-5.58	-9.62	77.06	18.6624	0.2247	1.3573
272	SLV 12	-5.11	-10.13	76.99	18.6492	0.2226	1.2494
272	SLV 13	-18.52	3.39	69.75	16.8553	0.1421	4.5398
272	SLV 14	-17.78	2.58	69.65	16.8348	0.1387	4.3708
272	SLV 15	-18.11	-2.28	68.89	16.6837	0.1135	4.44
272	SLV 16	-17.37	-3.08	68.78	16.6632	0.1101	4.271
272	CRTFP Ux+	0	0	0	0	0	0
272	CRTFP Ux-	0	0	0	0	0	0
272	CRTFP Uy+	0	0	0	0	0	0
272	CRTFP Uy-	0	0	0	0	0	0
274	SLU 1	-0.31	-0.32	29.15	9.9197	-0.5445	0.1006
274	SLU 2	-0.3	-0.27	29.11	9.907	-0.5439	0.0989
274	SLU 3	-0.32	-0.32	29.71	10.1101	-0.555	0.1034
274	SLU 4	-0.31	-0.29	29.69	10.1025	-0.5546	0.1023
274	SLU 5	-0.3	-0.27	29.45	10.0215	-0.5502	0.0998
274	SLU 6	-0.32	-0.32	30.05	10.2245	-0.5613	0.1043
274	SLU 7	-0.31	-0.29	30.03	10.2169	-0.5609	0.1032
274	SLU 8	-0.31	-0.33	29.83	10.1485	-0.5572	0.1024
274	SLU 9	-0.31	-0.3	29.8	10.1409	-0.5568	0.1013
274	SLU 10	-0.32	-0.28	32.99	11.2256	-0.6165	0.105
274	SLU 11	-0.33	-0.33	33.59	11.4287	-0.6275	0.1095
274	SLU 12	-0.33	-0.3	33.57	11.4211	-0.6272	0.1085
274	SLU 13	-0.32	-0.29	33.33	11.3401	-0.6228	0.1059
274	SLU 14	-0.34	-0.34	33.93	11.5431	-0.6339	0.1104
274	SLU 15	-0.33	-0.31	33.9	11.5355	-0.6335	0.1093
274	SLU 16	-0.33	-0.34	33.7	11.4671	-0.6298	0.1085
274	SLU 17	-0.33	-0.31	33.68	11.4595	-0.6294	0.1074
274	SLU 18	-0.33	-0.34	34.69	11.8034	-0.6482	0.1093
274	SLU 19	-0.33	-0.31	34.67	11.7958	-0.6478	0.1083
274	SLU 20	-0.34	-0.34	35.03	11.9178	-0.6545	0.1102
274	SLU 21	-0.33	-0.31	35.01	11.9102	-0.6542	0.1092
274	SLU 22	-0.36	-0.31	32.67	11.1177	-0.61	0.1171
274	SLU 23	-0.35	-0.26	32.63	11.1051	-0.6094	0.1154
274	SLU 24	-0.36	-0.31	33.23	11.3081	-0.6205	0.1199
274	SLU 25	-0.36	-0.28	33.2	11.3006	-0.6201	0.1188
274	SLU 26	-0.35	-0.27	32.97	11.2195	-0.6157	0.1162
274	SLU 27	-0.37	-0.32	33.56	11.4225	-0.6268	0.1207
274	SLU 28	-0.36	-0.29	33.54	11.415	-0.6264	0.1197
274	SLU 29	-0.36	-0.32	33.34	11.3465	-0.6227	0.1189

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
274	SLU 30	-0.36	-0.29	33.32	11.339	-0.6223	0.1178
274	SLU 31	-0.37	-0.28	36.51	12.4237	-0.682	0.1215
274	SLU 32	-0.38	-0.33	37.1	12.6267	-0.6931	0.126
274	SLU 33	-0.38	-0.29	37.08	12.6191	-0.6927	0.1249
274	SLU 34	-0.37	-0.28	36.85	12.5381	-0.6883	0.1224
274	SLU 35	-0.38	-0.33	37.44	12.7411	-0.6994	0.1269
274	SLU 36	-0.38	-0.3	37.42	12.7336	-0.699	0.1258
274	SLU 37	-0.38	-0.34	37.22	12.6651	-0.6953	0.125
274	SLU 38	-0.37	-0.31	37.2	12.6576	-0.6949	0.1239
274	SLU 39	-0.38	-0.33	38.21	13.0014	-0.7137	0.1258
274	SLU 40	-0.38	-0.3	38.18	12.9938	-0.7133	0.1248
274	SLU 41	-0.38	-0.34	38.54	13.1158	-0.7201	0.1267
274	SLU 42	-0.38	-0.31	38.52	13.1082	-0.7197	0.1257
274	SLU 43	-0.38	-0.42	36.69	12.4848	-0.6854	0.1251
274	SLU 44	-0.38	-0.37	36.65	12.4722	-0.6848	0.1234
274	SLU 45	-0.39	-0.42	37.25	12.6752	-0.6959	0.1279
274	SLU 46	-0.39	-0.39	37.23	12.6677	-0.6955	0.1269
274	SLU 47	-0.38	-0.37	36.99	12.5866	-0.6911	0.1243
274	SLU 48	-0.39	-0.42	37.59	12.7897	-0.7022	0.1288
274	SLU 49	-0.39	-0.39	37.56	12.7821	-0.7018	0.1277
274	SLU 50	-0.39	-0.43	37.37	12.7136	-0.6981	0.1269
274	SLU 51	-0.39	-0.4	37.34	12.7061	-0.6977	0.1259
274	SLU 52	-0.39	-0.38	40.53	13.7908	-0.7574	0.1295
274	SLU 53	-0.41	-0.43	41.13	13.9938	-0.7684	0.134
274	SLU 54	-0.41	-0.4	41.1	13.9863	-0.7681	0.133
274	SLU 55	-0.4	-0.38	40.87	13.9052	-0.7637	0.1304
274	SLU 56	-0.41	-0.43	41.47	14.1082	-0.7748	0.1349
274	SLU 57	-0.41	-0.4	41.44	14.1007	-0.7744	0.1339
274	SLU 58	-0.41	-0.44	41.24	14.0322	-0.7707	0.133
274	SLU 59	-0.4	-0.41	41.22	14.0247	-0.7703	0.132
274	SLU 60	-0.41	-0.44	42.23	14.3685	-0.7891	0.1338
274	SLU 61	-0.41	-0.41	42.21	14.3609	-0.7887	0.1328
274	SLU 62	-0.41	-0.44	42.57	14.4829	-0.7954	0.1347
274	SLU 63	-0.41	-0.41	42.54	14.4754	-0.7951	0.1337
274	SLU 64	-0.43	-0.41	40.2	13.6828	-0.7509	0.1416
274	SLU 65	-0.42	-0.36	40.17	13.6702	-0.7503	0.1399
274	SLU 66	-0.44	-0.41	40.76	13.8733	-0.7614	0.1444
274	SLU 67	-0.43	-0.38	40.74	13.8657	-0.761	0.1434
274	SLU 68	-0.43	-0.37	40.51	13.7846	-0.7566	0.1408
274	SLU 69	-0.44	-0.42	41.1	13.9877	-0.7677	0.1453
274	SLU 70	-0.44	-0.38	41.08	13.9801	-0.7673	0.1442
274	SLU 71	-0.44	-0.42	40.88	13.9117	-0.7636	0.1434
274	SLU 72	-0.43	-0.39	40.86	13.9041	-0.7632	0.1423
274	SLU 73	-0.44	-0.37	44.05	14.9888	-0.8229	0.146
274	SLU 74	-0.46	-0.42	44.64	15.1918	-0.834	0.1505
274	SLU 75	-0.45	-0.39	44.62	15.1843	-0.8336	0.1495
274	SLU 76	-0.44	-0.38	44.38	15.1032	-0.8292	0.1469
274	SLU 77	-0.46	-0.43	44.98	15.3063	-0.8403	0.1514
274	SLU 78	-0.46	-0.4	44.96	15.2987	-0.8399	0.1504
274	SLU 79	-0.46	-0.43	44.76	15.2303	-0.8362	0.1495
274	SLU 80	-0.45	-0.4	44.74	15.2227	-0.8358	0.1485
274	SLU 81	-0.46	-0.43	45.74	15.5665	-0.8546	0.1503
274	SLU 82	-0.45	-0.4	45.72	15.559	-0.8542	0.1493
274	SLU 83	-0.46	-0.43	46.08	15.6809	-0.861	0.1512
274	SLU 84	-0.46	-0.4	46.06	15.6734	-0.8606	0.1502
274	SLE RA 1	-0.32	-0.32	30.15	10.2619	-0.5632	0.1053
274	SLE RA 2	-0.32	-0.28	30.13	10.2535	-0.5628	0.1042
274	SLE RA 3	-0.33	-0.32	30.53	10.3889	-0.5702	0.1072
274	SLE RA 4	-0.32	-0.3	30.51	10.3839	-0.5699	0.1065
274	SLE RA 5	-0.32	-0.29	30.36	10.3298	-0.567	0.1047
274	SLE RA 6	-0.33	-0.32	30.75	10.4652	-0.5744	0.1077
274	SLE RA 7	-0.33	-0.3	30.74	10.4601	-0.5742	0.1071
274	SLE RA 8	-0.33	-0.32	30.61	10.4145	-0.5717	0.1065
274	SLE RA 9	-0.32	-0.3	30.59	10.4095	-0.5714	0.1058
274	SLE RA 10	-0.33	-0.29	32.71	11.1326	-0.6112	0.1082
274	SLE RA 11	-0.34	-0.33	33.11	11.268	-0.6186	0.1112
274	SLE RA 12	-0.34	-0.31	33.1	11.2629	-0.6183	0.1105
274	SLE RA 13	-0.33	-0.3	32.94	11.2089	-0.6154	0.1088
274	SLE RA 14	-0.34	-0.33	33.34	11.3442	-0.6228	0.1118
274	SLE RA 15	-0.34	-0.31	33.32	11.3392	-0.6226	0.1111
274	SLE RA 16	-0.34	-0.33	33.19	11.2936	-0.6201	0.1106
274	SLE RA 17	-0.33	-0.31	33.18	11.2885	-0.6198	0.1099
274	SLE RA 18	-0.34	-0.33	33.85	11.5177	-0.6324	0.1111
274	SLE RA 19	-0.34	-0.31	33.83	11.5127	-0.6321	0.1104
274	SLE RA 20	-0.34	-0.33	34.07	11.594	-0.6366	0.1117
274	SLE RA 21	-0.34	-0.31	34.06	11.589	-0.6363	0.111
274	SLE FR 1	-0.32	-0.32	30.15	10.2619	-0.5632	0.1053
274	SLE FR 2	-0.32	-0.31	30.15	10.2603	-0.5632	0.1051
274	SLE FR 3	-0.32	-0.32	30.24	10.2925	-0.5649	0.1055
274	SLE FR 4	-0.33	-0.32	31.26	10.637	-0.5839	0.1068
274	SLE FR 5	-0.33	-0.32	31.35	10.6692	-0.5857	0.1073
274	SLE FR 6	-0.33	-0.32	32	10.8898	-0.5978	0.1082
274	SLE QP 1	-0.32	-0.32	30.15	10.2619	-0.5632	0.1053
274	SLE QP 2	-0.33	-0.32	31.26	10.6387	-0.584	0.107
274	SLD 1	2.34	0.07	33.26	11.3028	-0.6168	-0.8241
274	SLD 2	2.46	-0.05	33.25	11.2997	-0.6166	-0.8673
274	SLD 3	2.41	-0.87	33.15	11.2764	-0.6153	-0.8556
274	SLD 4	2.52	-1	33.14	11.2733	-0.6152	-0.8987
274	SLD 5	0.35	1.25	32.02	10.8786	-0.596	-0.117
274	SLD 6	0.43	1.17	32.01	10.8766	-0.596	-0.145
274	SLD 7	0.57	-1.89	31.67	10.7904	-0.5912	-0.222

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
274	SLD 8	0.65	-1.97	31.66	10.7884	-0.5911	-0.25
274	SLD 9	-1.3	1.33	30.86	10.489	-0.5768	0.4641
274	SLD 10	-1.23	1.25	30.85	10.487	-0.5768	0.4361
274	SLD 11	-1.08	-1.81	30.51	10.4008	-0.572	0.3591
274	SLD 12	-1.01	-1.89	30.5	10.3988	-0.5719	0.3311
274	SLD 13	-3.18	0.35	29.38	10.0041	-0.5528	1.1128
274	SLD 14	-3.06	0.23	29.37	10.001	-0.5526	1.0697
274	SLD 15	-3.11	-0.59	29.28	9.9777	-0.5513	1.0813
274	SLD 16	-2.99	-0.71	29.27	9.9745	-0.5512	1.0382
274	SLV 1	5.91	0.56	35.93	12.1919	-0.6607	-2.0711
274	SLV 2	6.19	0.28	35.9	12.1846	-0.6604	-2.1716
274	SLV 3	6.07	-1.59	35.69	12.1308	-0.6573	-2.1441
274	SLV 4	6.34	-1.87	35.66	12.1235	-0.657	-2.2446
274	SLV 5	1.26	3.25	33.03	11.1985	-0.6121	-0.4187
274	SLV 6	1.44	3.07	33.02	11.1939	-0.6119	-0.4829
274	SLV 7	1.78	-3.91	32.23	10.9949	-0.601	-0.6619
274	SLV 8	1.95	-4.09	32.21	10.9903	-0.6008	-0.7261
274	SLV 9	-2.61	3.45	30.31	10.2871	-0.5672	0.9402
274	SLV 10	-2.43	3.27	30.3	10.2825	-0.567	0.876
274	SLV 11	-2.09	-3.71	29.51	10.0835	-0.5561	0.697
274	SLV 12	-1.92	-3.89	29.49	10.0788	-0.5559	0.6328
274	SLV 13	-6.99	1.23	26.86	9.1538	-0.5109	2.4587
274	SLV 14	-6.72	0.94	26.84	9.1466	-0.5106	2.3582
274	SLV 15	-6.84	-0.92	26.62	9.0927	-0.5076	2.3857
274	SLV 16	-6.57	-1.21	26.6	9.0855	-0.5073	2.2852
274	CRTFP Ux+	0	0	0	0	0	0
274	CRTFP Ux-	0	0	0	0	0	0
274	CRTFP Uy+	0	0	0	0	0	0
274	CRTFP Uy-	0	0	0	0	0	0
275	SLU 1	-0.34	-0.41	32.45	11.0174	0.0067	0.1168
275	SLU 2	-0.33	-0.35	32.42	11.0035	0.0066	0.1138
275	SLU 3	-0.35	-0.41	33.08	11.2283	0.0069	0.1198
275	SLU 4	-0.34	-0.37	33.05	11.22	0.0069	0.118
275	SLU 5	-0.33	-0.36	32.79	11.1305	0.0067	0.1148
275	SLU 6	-0.35	-0.42	33.45	11.3554	0.007	0.1208
275	SLU 7	-0.34	-0.38	33.43	11.347	0.0069	0.119
275	SLU 8	-0.34	-0.42	33.21	11.2715	0.0069	0.1189
275	SLU 9	-0.34	-0.39	33.18	11.2632	0.0068	0.1171
275	SLU 10	-0.35	-0.37	36.74	12.4686	0.0075	0.1209
275	SLU 11	-0.37	-0.43	37.4	12.6935	0.0078	0.1269
275	SLU 12	-0.36	-0.39	37.37	12.6851	0.0077	0.1251
275	SLU 13	-0.35	-0.38	37.11	12.5957	0.0076	0.122
275	SLU 14	-0.37	-0.43	37.77	12.8206	0.0079	0.128
275	SLU 15	-0.37	-0.4	37.75	12.8122	0.0078	0.1262
275	SLU 16	-0.36	-0.44	37.53	12.7367	0.0077	0.126
275	SLU 17	-0.36	-0.41	37.51	12.7283	0.0077	0.1242
275	SLU 18	-0.37	-0.44	38.63	13.1105	0.008	0.127
275	SLU 19	-0.36	-0.4	38.6	13.1021	0.0079	0.1252
275	SLU 20	-0.37	-0.44	39	13.2375	0.008	0.128
275	SLU 21	-0.37	-0.41	38.98	13.2292	0.008	0.1263
275	SLU 22	-0.39	-0.41	36.36	12.3443	0.008	0.1349
275	SLU 23	-0.38	-0.35	36.32	12.3304	0.0079	0.1319
275	SLU 24	-0.4	-0.41	36.98	12.5552	0.0082	0.1379
275	SLU 25	-0.39	-0.37	36.96	12.5469	0.0081	0.1361
275	SLU 26	-0.38	-0.36	36.7	12.4574	0.008	0.1329
275	SLU 27	-0.4	-0.41	37.36	12.6823	0.0083	0.139
275	SLU 28	-0.4	-0.38	37.33	12.6739	0.0082	0.1372
275	SLU 29	-0.4	-0.42	37.11	12.5984	0.0081	0.137
275	SLU 30	-0.39	-0.39	37.09	12.5901	0.0081	0.1352
275	SLU 31	-0.4	-0.37	40.64	13.7955	0.0088	0.1391
275	SLU 32	-0.42	-0.43	41.3	14.0204	0.0091	0.1451
275	SLU 33	-0.41	-0.39	41.28	14.012	0.009	0.1433
275	SLU 34	-0.41	-0.38	41.02	13.9226	0.0088	0.1401
275	SLU 35	-0.42	-0.43	41.68	14.1475	0.0091	0.1461
275	SLU 36	-0.42	-0.4	41.65	14.1391	0.0091	0.1443
275	SLU 37	-0.42	-0.44	41.43	14.0636	0.009	0.1441
275	SLU 38	-0.41	-0.4	41.41	14.0552	0.009	0.1423
275	SLU 39	-0.42	-0.43	42.53	14.4374	0.0092	0.1451
275	SLU 40	-0.41	-0.4	42.51	14.429	0.0092	0.1433
275	SLU 41	-0.42	-0.44	42.91	14.5644	0.0093	0.1462
275	SLU 42	-0.42	-0.41	42.88	14.5561	0.0092	0.1444
275	SLU 43	-0.42	-0.53	40.85	13.8677	0.0083	0.1456
275	SLU 44	-0.41	-0.48	40.81	13.8537	0.0082	0.1426
275	SLU 45	-0.43	-0.53	41.47	14.0786	0.0085	0.1486
275	SLU 46	-0.42	-0.5	41.45	14.0703	0.0085	0.1468
275	SLU 47	-0.42	-0.48	41.19	13.9808	0.0083	0.1437
275	SLU 48	-0.43	-0.54	41.85	14.2057	0.0086	0.1497
275	SLU 49	-0.43	-0.5	41.83	14.1973	0.0085	0.1479
275	SLU 50	-0.43	-0.55	41.61	14.1218	0.0085	0.1477
275	SLU 51	-0.42	-0.51	41.58	14.1134	0.0084	0.1459
275	SLU 52	-0.43	-0.49	45.13	15.3189	0.0091	0.1498
275	SLU 53	-0.45	-0.55	45.79	15.5438	0.0094	0.1558
275	SLU 54	-0.45	-0.52	45.77	15.5354	0.0093	0.154
275	SLU 55	-0.44	-0.5	45.51	15.4459	0.0092	0.1508
275	SLU 56	-0.45	-0.56	46.17	15.6708	0.0095	0.1568
275	SLU 57	-0.45	-0.52	46.15	15.6625	0.0094	0.155
275	SLU 58	-0.45	-0.56	45.93	15.5869	0.0093	0.1549
275	SLU 59	-0.44	-0.53	45.9	15.5786	0.0093	0.1531
275	SLU 60	-0.45	-0.56	47.02	15.9607	0.0096	0.1558
275	SLU 61	-0.45	-0.53	47	15.9524	0.0095	0.154
275	SLU 62	-0.45	-0.57	47.4	16.0878	0.0096	0.1569

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
275	SLU 63	-0.45	-0.53	47.38	16.0794	0.0096	0.1551
275	SLU 64	-0.47	-0.53	44.76	15.1946	0.0096	0.1637
275	SLU 65	-0.46	-0.47	44.72	15.1806	0.0095	0.1607
275	SLU 66	-0.48	-0.53	45.38	15.4055	0.0098	0.1667
275	SLU 67	-0.48	-0.5	45.35	15.3972	0.0097	0.1649
275	SLU 68	-0.47	-0.48	45.09	15.3077	0.0096	0.1618
275	SLU 69	-0.49	-0.54	45.75	15.5326	0.0099	0.1678
275	SLU 70	-0.48	-0.5	45.73	15.5242	0.0098	0.166
275	SLU 71	-0.48	-0.54	45.51	15.4487	0.0097	0.1658
275	SLU 72	-0.47	-0.51	45.49	15.4403	0.0097	0.164
275	SLU 73	-0.49	-0.49	49.04	16.6458	0.0104	0.1679
275	SLU 74	-0.5	-0.55	49.7	16.8707	0.0106	0.1739
275	SLU 75	-0.5	-0.51	49.67	16.8623	0.0106	0.1721
275	SLU 76	-0.49	-0.5	49.41	16.7728	0.0104	0.1689
275	SLU 77	-0.51	-0.56	50.08	16.9977	0.0107	0.1749
275	SLU 78	-0.5	-0.52	50.05	16.9894	0.0107	0.1731
275	SLU 79	-0.5	-0.56	49.83	16.9138	0.0106	0.173
275	SLU 80	-0.5	-0.53	49.81	16.9055	0.0105	0.1712
275	SLU 81	-0.5	-0.56	50.93	17.2876	0.0108	0.1739
275	SLU 82	-0.5	-0.52	50.9	17.2793	0.0108	0.1721
275	SLU 83	-0.51	-0.56	51.31	17.4147	0.0109	0.175
275	SLU 84	-0.5	-0.53	51.28	17.4063	0.0108	0.1732
275	SLE RA 1	-0.35	-0.41	33.57	11.3965	0.0071	0.122
275	SLE RA 2	-0.35	-0.37	33.54	11.3872	0.007	0.12
275	SLE RA 3	-0.36	-0.41	33.98	11.5371	0.0072	0.124
275	SLE RA 4	-0.36	-0.39	33.97	11.5316	0.0072	0.1228
275	SLE RA 5	-0.35	-0.37	33.79	11.4719	0.0071	0.1207
275	SLE RA 6	-0.36	-0.41	34.24	11.6218	0.0073	0.1247
275	SLE RA 7	-0.36	-0.39	34.22	11.6163	0.0072	0.1235
275	SLE RA 8	-0.36	-0.42	34.07	11.5659	0.0072	0.1234
275	SLE RA 9	-0.35	-0.39	34.06	11.5603	0.0072	0.1222
275	SLE RA 10	-0.36	-0.38	36.42	12.364	0.0076	0.1247
275	SLE RA 11	-0.37	-0.42	36.86	12.5139	0.0078	0.1287
275	SLE RA 12	-0.37	-0.4	36.85	12.5083	0.0078	0.1275
275	SLE RA 13	-0.36	-0.39	36.68	12.4487	0.0077	0.1254
275	SLE RA 14	-0.37	-0.43	37.12	12.5986	0.0079	0.1294
275	SLE RA 15	-0.37	-0.4	37.1	12.593	0.0078	0.1282
275	SLE RA 16	-0.37	-0.43	36.95	12.5427	0.0078	0.1281
275	SLE RA 17	-0.37	-0.41	36.94	12.5371	0.0077	0.1269
275	SLE RA 18	-0.37	-0.43	37.68	12.7919	0.0079	0.1288
275	SLE RA 19	-0.37	-0.4	37.67	12.7863	0.0079	0.1276
275	SLE RA 20	-0.37	-0.43	37.94	12.8766	0.008	0.1295
275	SLE RA 21	-0.37	-0.41	37.92	12.871	0.0079	0.1283
275	SLE FR 1	-0.35	-0.41	33.57	11.3965	0.0071	0.122
275	SLE FR 2	-0.35	-0.4	33.56	11.3946	0.0071	0.1216
275	SLE FR 3	-0.35	-0.41	33.67	11.4304	0.0071	0.1222
275	SLE FR 4	-0.36	-0.41	34.8	11.8133	0.0073	0.1236
275	SLE FR 5	-0.36	-0.42	34.9	11.849	0.0074	0.1243
275	SLE FR 6	-0.36	-0.42	35.63	12.0942	0.0075	0.1254
275	SLE QP 1	-0.35	-0.41	33.57	11.3965	0.0071	0.122
275	SLE QP 2	-0.36	-0.41	34.8	11.8151	0.0073	0.124
275	SLD 1	2.62	-0.01	36.82	12.4833	0.0146	-0.92
275	SLD 2	2.75	-0.14	36.81	12.481	0.0145	-0.9655
275	SLD 3	2.69	-1.06	36.72	12.46	0.0137	-0.9459
275	SLD 4	2.83	-1.19	36.71	12.4576	0.0136	-0.9914
275	SLD 5	0.4	1.32	35.55	12.0514	0.011	-0.1419
275	SLD 6	0.48	1.24	35.54	12.0499	0.0109	-0.1715
275	SLD 7	0.65	-2.18	35.24	11.9736	0.0079	-0.2283
275	SLD 8	0.73	-2.26	35.23	11.972	0.0078	-0.2579
275	SLD 9	-1.45	1.43	34.37	11.6582	0.0069	0.5059
275	SLD 10	-1.36	1.35	34.37	11.6567	0.0068	0.4763
275	SLD 11	-1.2	-2.07	34.06	11.5803	0.0038	0.4195
275	SLD 12	-1.12	-2.15	34.06	11.5788	0.0037	0.3899
275	SLD 13	-3.54	0.36	32.89	11.1726	0.0011	1.2394
275	SLD 14	-3.41	0.23	32.89	11.1703	0.001	1.1939
275	SLD 15	-3.47	-0.69	32.8	11.1493	0.0002	1.2135
275	SLD 16	-3.34	-0.82	32.79	11.1469	0.0001	1.168
275	SLV 1	6.61	0.51	39.51	13.3782	0.0244	-2.3178
275	SLV 2	6.91	0.21	39.49	13.3727	0.0241	-2.4239
275	SLV 3	6.78	-1.88	39.29	13.3237	0.0223	-2.3782
275	SLV 4	7.09	-2.19	39.27	13.3182	0.022	-2.4843
275	SLV 5	1.42	3.54	36.54	12.3676	0.0157	-0.4988
275	SLV 6	1.61	3.35	36.53	12.3641	0.0155	-0.5666
275	SLV 7	1.99	-4.43	35.83	12.186	0.0086	-0.7004
275	SLV 8	2.19	-4.63	35.82	12.1825	0.0085	-0.7682
275	SLV 9	-2.91	3.8	33.79	11.4477	0.0062	1.0162
275	SLV 10	-2.71	3.6	33.78	11.4442	0.006	0.9484
275	SLV 11	-2.33	-4.18	33.08	11.2662	-0.0008	0.8146
275	SLV 12	-2.14	-4.37	33.06	11.2627	-0.001	0.7468
275	SLV 13	-7.8	1.36	30.33	10.312	-0.0073	2.7323
275	SLV 14	-7.5	1.05	30.31	10.3065	-0.0076	2.6262
275	SLV 15	-7.63	-1.04	30.12	10.2576	-0.0094	2.6719
275	SLV 16	-7.33	-1.34	30.1	10.2521	-0.0097	2.5658
275	CRTFP Ux+	0	0	0	0	0	0
275	CRTFP Ux-	0	0	0	0	0	0
275	CRTFP Uy+	0	0	0	0	0	0
275	CRTFP Uy-	0	0	0	0	0	0
276	SLU 1	-0.28	-0.38	27.13	9.2098	0.7656	0.1088
276	SLU 2	-0.27	-0.33	27.1	9.1985	0.7647	0.1049
276	SLU 3	-0.29	-0.38	27.65	9.3855	0.7802	0.1113
276	SLU 4	-0.29	-0.35	27.63	9.3788	0.7797	0.109

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
276	SLU 5	-0.28	-0.33	27.41	9.3048	0.7736	0.1059
276	SLU 6	-0.29	-0.38	27.96	9.4918	0.7891	0.1123
276	SLU 7	-0.29	-0.35	27.94	9.4851	0.7886	0.11
276	SLU 8	-0.29	-0.39	27.76	9.4223	0.7834	0.1109
276	SLU 9	-0.28	-0.36	27.74	9.4156	0.7828	0.1085
276	SLU 10	-0.29	-0.35	30.71	10.4233	0.8666	0.1117
276	SLU 11	-0.31	-0.4	31.26	10.6103	0.8822	0.1181
276	SLU 12	-0.3	-0.37	31.24	10.6036	0.8816	0.1157
276	SLU 13	-0.3	-0.35	31.03	10.5296	0.8755	0.1127
276	SLU 14	-0.31	-0.4	31.57	10.7166	0.8911	0.1191
276	SLU 15	-0.31	-0.37	31.56	10.7099	0.8905	0.1168
276	SLU 16	-0.31	-0.41	31.37	10.6471	0.8853	0.1176
276	SLU 17	-0.3	-0.38	31.35	10.6404	0.8848	0.1153
276	SLU 18	-0.31	-0.4	32.29	10.9595	0.9112	0.1184
276	SLU 19	-0.3	-0.37	32.27	10.9528	0.9107	0.1161
276	SLU 20	-0.31	-0.41	32.6	11.0658	0.9201	0.1195
276	SLU 21	-0.31	-0.38	32.59	11.059	0.9196	0.1172
276	SLU 22	-0.33	-0.38	30.38	10.3147	0.8576	0.1241
276	SLU 23	-0.32	-0.33	30.35	10.3035	0.8567	0.1202
276	SLU 24	-0.33	-0.38	30.9	10.4905	0.8723	0.1266
276	SLU 25	-0.33	-0.35	30.88	10.4837	0.8717	0.1242
276	SLU 26	-0.32	-0.34	30.66	10.4098	0.8656	0.1212
276	SLU 27	-0.34	-0.38	31.21	10.5967	0.8812	0.1276
276	SLU 28	-0.33	-0.35	31.19	10.59	0.8806	0.1253
276	SLU 29	-0.33	-0.39	31.01	10.5273	0.8754	0.1261
276	SLU 30	-0.33	-0.36	30.99	10.5205	0.8749	0.1238
276	SLU 31	-0.34	-0.35	33.96	11.5283	0.9587	0.1269
276	SLU 32	-0.35	-0.4	34.51	11.7153	0.9742	0.1333
276	SLU 33	-0.35	-0.37	34.49	11.7086	0.9737	0.131
276	SLU 34	-0.34	-0.35	34.27	11.6346	0.9676	0.128
276	SLU 35	-0.35	-0.4	34.82	11.8216	0.9831	0.1344
276	SLU 36	-0.35	-0.37	34.8	11.8148	0.9826	0.132
276	SLU 37	-0.35	-0.41	34.62	11.7521	0.9774	0.1329
276	SLU 38	-0.34	-0.38	34.6	11.7453	0.9768	0.1305
276	SLU 39	-0.35	-0.4	35.54	12.0644	1.0033	0.1337
276	SLU 40	-0.35	-0.38	35.52	12.0577	1.0027	0.1314
276	SLU 41	-0.35	-0.41	35.85	12.1707	1.0122	0.1347
276	SLU 42	-0.35	-0.38	35.83	12.164	1.0116	0.1324
276	SLU 43	-0.35	-0.49	34.15	11.5939	0.9637	0.1362
276	SLU 44	-0.34	-0.44	34.12	11.5826	0.9628	0.1323
276	SLU 45	-0.36	-0.49	34.67	11.7696	0.9783	0.1387
276	SLU 46	-0.35	-0.46	34.65	11.7629	0.9778	0.1364
276	SLU 47	-0.35	-0.45	34.44	11.6889	0.9717	0.1334
276	SLU 48	-0.36	-0.5	34.99	11.8759	0.9872	0.1398
276	SLU 49	-0.36	-0.47	34.97	11.8691	0.9867	0.1374
276	SLU 50	-0.36	-0.5	34.78	11.8064	0.9815	0.1383
276	SLU 51	-0.35	-0.47	34.77	11.7997	0.9809	0.1359
276	SLU 52	-0.36	-0.46	37.73	12.8074	1.0647	0.1391
276	SLU 53	-0.38	-0.51	38.28	12.9944	1.0803	0.1455
276	SLU 54	-0.37	-0.48	38.26	12.9877	1.0798	0.1431
276	SLU 55	-0.37	-0.47	38.05	12.9137	1.0736	0.1401
276	SLU 56	-0.38	-0.51	38.6	13.1007	1.0892	0.1465
276	SLU 57	-0.38	-0.49	38.58	13.094	1.0887	0.1442
276	SLU 58	-0.37	-0.52	38.4	13.0312	1.0834	0.145
276	SLU 59	-0.37	-0.49	38.38	13.0245	1.0829	0.1427
276	SLU 60	-0.38	-0.52	39.31	13.3436	1.1093	0.1459
276	SLU 61	-0.37	-0.49	39.29	13.3368	1.1088	0.1435
276	SLU 62	-0.38	-0.52	39.63	13.4498	1.1182	0.1469
276	SLU 63	-0.38	-0.49	39.61	13.4431	1.1177	0.1446
276	SLU 64	-0.4	-0.49	37.4	12.6988	1.0557	0.1515
276	SLU 65	-0.39	-0.44	37.37	12.6876	1.0548	0.1476
276	SLU 66	-0.4	-0.49	37.92	12.8746	1.0704	0.154
276	SLU 67	-0.4	-0.46	37.9	12.8678	1.0698	0.1516
276	SLU 68	-0.39	-0.45	37.69	12.7938	1.0637	0.1486
276	SLU 69	-0.41	-0.5	38.24	12.9808	1.0793	0.155
276	SLU 70	-0.4	-0.47	38.22	12.9741	1.0787	0.1527
276	SLU 71	-0.4	-0.5	38.03	12.9113	1.0735	0.1535
276	SLU 72	-0.4	-0.47	38.02	12.9046	1.073	0.1512
276	SLU 73	-0.41	-0.46	40.98	13.9124	1.1568	0.1543
276	SLU 74	-0.42	-0.51	41.53	14.0994	1.1723	0.1607
276	SLU 75	-0.42	-0.48	41.51	14.0926	1.1718	0.1584
276	SLU 76	-0.41	-0.47	41.3	14.0187	1.1657	0.1554
276	SLU 77	-0.42	-0.52	41.85	14.2056	1.1812	0.1618
276	SLU 78	-0.42	-0.49	41.83	14.1989	1.1807	0.1594
276	SLU 79	-0.42	-0.52	41.64	14.1361	1.1755	0.1603
276	SLU 80	-0.41	-0.49	41.63	14.1294	1.1749	0.158
276	SLU 81	-0.42	-0.52	42.56	14.4485	1.2014	0.1611
276	SLU 82	-0.42	-0.49	42.54	14.4418	1.2008	0.1588
276	SLU 83	-0.42	-0.52	42.88	14.5548	1.2103	0.1621
276	SLU 84	-0.42	-0.49	42.86	14.5481	1.2097	0.1598
276	SLE RA 1	-0.29	-0.38	28.06	9.5255	0.7919	0.1132
276	SLE RA 2	-0.29	-0.35	28.04	9.518	0.7913	0.1106
276	SLE RA 3	-0.3	-0.38	28.4	9.6426	0.8016	0.1148
276	SLE RA 4	-0.3	-0.36	28.39	9.6382	0.8013	0.1133
276	SLE RA 5	-0.29	-0.35	28.25	9.5888	0.7972	0.1113
276	SLE RA 6	-0.3	-0.38	28.61	9.7135	0.8076	0.1155
276	SLE RA 7	-0.3	-0.36	28.6	9.709	0.8072	0.114
276	SLE RA 8	-0.3	-0.39	28.48	9.6672	0.8037	0.1145
276	SLE RA 9	-0.3	-0.37	28.47	9.6627	0.8034	0.113
276	SLE RA 10	-0.3	-0.36	30.44	10.3345	0.8592	0.1151
276	SLE RA 11	-0.31	-0.39	30.81	10.4592	0.8696	0.1193

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
276	SLE RA 12	-0.31	-0.37	30.8	10.4547	0.8693	0.1178
276	SLE RA 13	-0.3	-0.36	30.65	10.4054	0.8652	0.1158
276	SLE RA 14	-0.31	-0.39	31.02	10.53	0.8755	0.12
276	SLE RA 15	-0.31	-0.37	31.01	10.5255	0.8752	0.1185
276	SLE RA 16	-0.31	-0.4	30.89	10.4837	0.8717	0.119
276	SLE RA 17	-0.31	-0.38	30.87	10.4792	0.8713	0.1175
276	SLE RA 18	-0.31	-0.4	31.5	10.692	0.889	0.1196
276	SLE RA 19	-0.31	-0.38	31.48	10.6875	0.8886	0.118
276	SLE RA 20	-0.31	-0.4	31.71	10.7628	0.8949	0.1203
276	SLE RA 21	-0.31	-0.38	31.69	10.7583	0.8945	0.1187
276	SLE FR 1	-0.29	-0.38	28.06	9.5255	0.7919	0.1132
276	SLE FR 2	-0.29	-0.37	28.05	9.524	0.7917	0.1126
276	SLE FR 3	-0.3	-0.38	28.14	9.5538	0.7942	0.1134
276	SLE FR 4	-0.3	-0.38	29.08	9.8739	0.8209	0.1146
276	SLE FR 5	-0.3	-0.38	29.17	9.9037	0.8234	0.1154
276	SLE FR 6	-0.3	-0.39	29.78	10.1087	0.8404	0.1164
276	SLE QP 1	-0.29	-0.38	28.06	9.5255	0.7919	0.1132
276	SLE QP 2	-0.3	-0.38	29.09	9.8754	0.821	0.1151
276	SLD 1	2.22	-0.07	30.59	10.3731	0.8675	-0.7891
276	SLD 2	2.33	-0.17	30.59	10.3719	0.8673	-0.8247
276	SLD 3	2.28	-0.95	30.53	10.3545	0.8655	-0.7593
276	SLD 4	2.39	-1.05	30.52	10.3534	0.8653	-0.7948
276	SLD 5	0.34	1.07	29.63	10.0531	0.8381	-0.1952
276	SLD 6	0.41	1	29.63	10.0523	0.838	-0.2183
276	SLD 7	0.55	-1.88	29.43	9.9912	0.8312	-0.0958
276	SLD 8	0.62	-1.94	29.42	9.9905	0.8311	-0.1188
276	SLD 9	-1.22	1.18	28.75	9.7604	0.8109	0.349
276	SLD 10	-1.15	1.11	28.75	9.7596	0.8108	0.3259
276	SLD 11	-1.01	-1.77	28.55	9.6985	0.804	0.4485
276	SLD 12	-0.94	-1.84	28.54	9.6978	0.8039	0.4254
276	SLD 13	-2.99	0.29	27.65	9.3974	0.7767	1.025
276	SLD 14	-2.88	0.18	27.65	9.3963	0.7765	0.9895
276	SLD 15	-2.93	-0.6	27.59	9.3789	0.7747	1.0549
276	SLD 16	-2.82	-0.7	27.59	9.3778	0.7745	1.0193
276	SLV 1	5.59	0.33	32.6	11.0396	0.9298	-1.9991
276	SLV 2	5.84	0.09	32.59	11.0369	0.9294	-2.0819
276	SLV 3	5.73	-1.68	32.46	10.9962	0.9251	-1.9305
276	SLV 4	5.99	-1.92	32.45	10.9936	0.9246	-2.0133
276	SLV 5	1.2	2.93	30.36	10.2909	0.861	-0.6092
276	SLV 6	1.36	2.77	30.36	10.2892	0.8607	-0.6621
276	SLV 7	1.69	-3.79	29.88	10.1463	0.8451	-0.3806
276	SLV 8	1.85	-3.94	29.88	10.1446	0.8448	-0.4334
276	SLV 9	-2.45	3.18	28.3	9.6062	0.7972	0.6636
276	SLV 10	-2.29	3.02	28.3	9.6045	0.7969	0.6107
276	SLV 11	-1.96	-3.54	27.82	9.4616	0.7813	0.8922
276	SLV 12	-1.8	-3.7	27.81	9.4599	0.781	0.8393
276	SLV 13	-6.59	1.16	25.73	8.7573	0.7174	2.2435
276	SLV 14	-6.33	0.92	25.72	8.7546	0.7169	2.1607
276	SLV 15	-6.44	-0.86	25.59	8.7139	0.7126	2.3121
276	SLV 16	-6.18	-1.1	25.58	8.7113	0.7122	2.2293
276	CRTFP Ux+	0	0	0	0	0	0
276	CRTFP Ux-	0	0	0	0	0	0
276	CRTFP Uy+	0	0	0	0	0	0
276	CRTFP Uy-	0	0	0	0	0	0
277	SLU 1	-0.42	-0.57	39.99	12.6997	0.9229	0.1496
277	SLU 2	-0.41	-0.5	39.95	12.6853	0.9218	0.1445
277	SLU 3	-0.43	-0.57	40.75	12.9412	0.9405	0.1531
277	SLU 4	-0.42	-0.53	40.72	12.9325	0.9399	0.1501
277	SLU 5	-0.41	-0.51	40.41	12.8321	0.9325	0.1459
277	SLU 6	-0.43	-0.58	41.21	13.088	0.9513	0.1545
277	SLU 7	-0.43	-0.54	41.19	13.0794	0.9506	0.1515
277	SLU 8	-0.42	-0.59	40.92	12.9933	0.9443	0.1524
277	SLU 9	-0.42	-0.55	40.89	12.9846	0.9437	0.1494
277	SLU 10	-0.43	-0.53	45.27	14.3746	1.0447	0.1541
277	SLU 11	-0.46	-0.6	46.07	14.6305	1.0635	0.1627
277	SLU 12	-0.45	-0.56	46.04	14.6218	1.0628	0.1596
277	SLU 13	-0.44	-0.54	45.73	14.5214	1.0555	0.1555
277	SLU 14	-0.46	-0.61	46.53	14.7773	1.0742	0.1641
277	SLU 15	-0.45	-0.57	46.51	14.7686	1.0736	0.161
277	SLU 16	-0.45	-0.62	46.24	14.6826	1.0673	0.162
277	SLU 17	-0.45	-0.58	46.21	14.6739	1.0666	0.1589
277	SLU 18	-0.46	-0.61	47.59	15.1129	1.0985	0.1633
277	SLU 19	-0.45	-0.57	47.56	15.1043	1.0979	0.1602
277	SLU 20	-0.46	-0.62	48.05	15.2597	1.1092	0.1647
277	SLU 21	-0.45	-0.58	48.03	15.2511	1.1086	0.1616
277	SLU 22	-0.48	-0.57	44.75	14.2159	1.0339	0.1709
277	SLU 23	-0.47	-0.5	44.71	14.2015	1.0328	0.1658
277	SLU 24	-0.49	-0.57	45.51	14.4575	1.0515	0.1744
277	SLU 25	-0.49	-0.53	45.49	14.4488	1.0509	0.1713
277	SLU 26	-0.48	-0.51	45.18	14.3483	1.0435	0.1672
277	SLU 27	-0.5	-0.58	45.97	14.6043	1.0623	0.1758
277	SLU 28	-0.49	-0.54	45.95	14.5956	1.0616	0.1727
277	SLU 29	-0.49	-0.59	45.68	14.5095	1.0553	0.1737
277	SLU 30	-0.48	-0.55	45.66	14.5009	1.0547	0.1706
277	SLU 31	-0.5	-0.53	50.03	15.8908	1.1557	0.1753
277	SLU 32	-0.52	-0.6	50.83	16.1468	1.1745	0.1839
277	SLU 33	-0.51	-0.56	50.81	16.1381	1.1738	0.1809
277	SLU 34	-0.5	-0.54	50.5	16.0376	1.1664	0.1767
277	SLU 35	-0.52	-0.61	51.29	16.2936	1.1852	0.1853
277	SLU 36	-0.52	-0.57	51.27	16.2849	1.1845	0.1823
277	SLU 37	-0.52	-0.62	51	16.1988	1.1783	0.1832

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
277	SLU 38	-0.51	-0.58	50.98	16.1902	1.1776	0.1802
277	SLU 39	-0.52	-0.61	52.35	16.6292	1.2095	0.1845
277	SLU 40	-0.51	-0.57	52.33	16.6206	1.2088	0.1815
277	SLU 41	-0.52	-0.62	52.81	16.776	1.2202	0.1859
277	SLU 42	-0.52	-0.58	52.79	16.7674	1.2196	0.1829
277	SLU 43	-0.52	-0.75	50.35	15.9897	1.1617	0.1873
277	SLU 44	-0.51	-0.68	50.31	15.9753	1.1606	0.1821
277	SLU 45	-0.53	-0.75	51.11	16.2312	1.1794	0.1907
277	SLU 46	-0.52	-0.7	51.09	16.2226	1.1787	0.1877
277	SLU 47	-0.51	-0.68	50.78	16.1221	1.1713	0.1835
277	SLU 48	-0.53	-0.76	51.58	16.378	1.1901	0.1921
277	SLU 49	-0.53	-0.71	51.55	16.3694	1.1894	0.1891
277	SLU 50	-0.53	-0.77	51.28	16.2833	1.1831	0.1901
277	SLU 51	-0.52	-0.72	51.26	16.2747	1.1825	0.187
277	SLU 52	-0.54	-0.7	55.63	17.6646	1.2835	0.1917
277	SLU 53	-0.56	-0.77	56.43	17.9205	1.3023	0.2003
277	SLU 54	-0.55	-0.73	56.41	17.9119	1.3017	0.1972
277	SLU 55	-0.54	-0.71	56.1	17.8114	1.2943	0.1931
277	SLU 56	-0.56	-0.78	56.9	18.0673	1.313	0.2017
277	SLU 57	-0.56	-0.74	56.87	18.0587	1.3124	0.1986
277	SLU 58	-0.56	-0.79	56.6	17.9726	1.3061	0.1996
277	SLU 59	-0.55	-0.75	56.58	17.964	1.3054	0.1966
277	SLU 60	-0.56	-0.79	57.95	18.403	1.3373	0.2009
277	SLU 61	-0.55	-0.74	57.93	18.3943	1.3367	0.1979
277	SLU 62	-0.56	-0.8	58.42	18.5498	1.3481	0.2023
277	SLU 63	-0.56	-0.75	58.39	18.5411	1.3474	0.1993
277	SLU 64	-0.59	-0.75	55.11	17.506	1.2727	0.2085
277	SLU 65	-0.57	-0.67	55.07	17.4916	1.2716	0.2034
277	SLU 66	-0.6	-0.75	55.87	17.7475	1.2903	0.212
277	SLU 67	-0.59	-0.7	55.85	17.7389	1.2897	0.2089
277	SLU 68	-0.58	-0.68	55.54	17.6384	1.2823	0.2048
277	SLU 69	-0.6	-0.75	56.34	17.8943	1.3011	0.2134
277	SLU 70	-0.59	-0.71	56.31	17.8857	1.3004	0.2103
277	SLU 71	-0.59	-0.76	56.04	17.7996	1.2941	0.2113
277	SLU 72	-0.59	-0.72	56.02	17.7909	1.2935	0.2082
277	SLU 73	-0.6	-0.7	60.39	19.1809	1.3945	0.2129
277	SLU 74	-0.62	-0.77	61.19	19.4368	1.4133	0.2215
277	SLU 75	-0.62	-0.73	61.17	19.4282	1.4126	0.2185
277	SLU 76	-0.61	-0.71	60.86	19.3277	1.4053	0.2143
277	SLU 77	-0.63	-0.78	61.66	19.5836	1.424	0.2229
277	SLU 78	-0.62	-0.74	61.63	19.575	1.4234	0.2199
277	SLU 79	-0.62	-0.79	61.36	19.4889	1.4171	0.2209
277	SLU 80	-0.61	-0.75	61.34	19.4802	1.4164	0.2178
277	SLU 81	-0.62	-0.79	62.71	19.9193	1.4483	0.2222
277	SLU 82	-0.62	-0.74	62.69	19.9106	1.4477	0.2191
277	SLU 83	-0.63	-0.79	63.18	20.0661	1.459	0.2236
277	SLU 84	-0.62	-0.75	63.15	20.0574	1.4584	0.2205
277	SLE RA 1	-0.44	-0.57	41.35	13.1329	0.9546	0.1557
277	SLE RA 2	-0.43	-0.53	41.32	13.1233	0.9539	0.1523
277	SLE RA 3	-0.44	-0.57	41.85	13.2939	0.9664	0.158
277	SLE RA 4	-0.44	-0.54	41.84	13.2881	0.9659	0.156
277	SLE RA 5	-0.43	-0.53	41.63	13.2212	0.961	0.1532
277	SLE RA 6	-0.45	-0.58	42.16	13.3918	0.9735	0.159
277	SLE RA 7	-0.44	-0.55	42.15	13.386	0.9731	0.1569
277	SLE RA 8	-0.44	-0.59	41.97	13.3286	0.9689	0.1576
277	SLE RA 9	-0.44	-0.56	41.95	13.3229	0.9685	0.1555
277	SLE RA 10	-0.45	-0.54	44.87	14.2495	1.0358	0.1587
277	SLE RA 11	-0.46	-0.59	45.4	14.4201	1.0483	0.1644
277	SLE RA 12	-0.46	-0.56	45.39	14.4143	1.0479	0.1624
277	SLE RA 13	-0.45	-0.55	45.18	14.3473	1.043	0.1596
277	SLE RA 14	-0.46	-0.6	45.71	14.518	1.0555	0.1653
277	SLE RA 15	-0.46	-0.57	45.7	14.5122	1.055	0.1633
277	SLE RA 16	-0.46	-0.6	45.51	14.4548	1.0509	0.164
277	SLE RA 17	-0.45	-0.58	45.5	14.4491	1.0504	0.1619
277	SLE RA 18	-0.46	-0.6	46.41	14.7417	1.0717	0.1648
277	SLE RA 19	-0.46	-0.57	46.4	14.736	1.0712	0.1628
277	SLE RA 20	-0.46	-0.61	46.72	14.8396	1.0788	0.1658
277	SLE RA 21	-0.46	-0.58	46.71	14.8338	1.0784	0.1637
277	SLE FR 1	-0.44	-0.57	41.35	13.1329	0.9546	0.1557
277	SLE FR 2	-0.43	-0.56	41.34	13.131	0.9544	0.155
277	SLE FR 3	-0.44	-0.58	41.47	13.172	0.9574	0.1561
277	SLE FR 4	-0.44	-0.57	42.86	13.6136	0.9896	0.1578
277	SLE FR 5	-0.44	-0.58	42.99	13.6547	0.9926	0.1588
277	SLE FR 6	-0.45	-0.59	43.88	13.9373	1.0131	0.1603
277	SLE QP 1	-0.44	-0.57	41.35	13.1329	0.9546	0.1557
277	SLE QP 2	-0.44	-0.58	42.87	13.6155	0.9897	0.1584
277	SLD 1	3.32	-0.14	44.79	14.205	1.0454	-1.1015
277	SLD 2	3.49	-0.28	44.79	14.2045	1.0452	-1.1516
277	SLD 3	3.41	-1.46	44.71	14.1757	1.0431	-1.0631
277	SLD 4	3.58	-1.61	44.71	14.1752	1.0429	-1.1132
277	SLD 5	0.51	1.58	43.57	13.8369	1.01	-0.269
277	SLD 6	0.62	1.49	43.56	13.8366	1.0098	-0.3015
277	SLD 7	0.83	-2.82	43.3	13.7392	1.0023	-0.1411
277	SLD 8	0.93	-2.92	43.3	13.7389	1.0021	-0.1736
277	SLD 9	-1.82	1.75	42.44	13.4922	0.9773	0.4905
277	SLD 10	-1.71	1.66	42.43	13.4919	0.9772	0.458
277	SLD 11	-1.51	-2.65	42.17	13.3944	0.9696	0.6184
277	SLD 12	-1.4	-2.74	42.17	13.3941	0.9695	0.5859
277	SLD 13	-4.47	0.44	41.03	13.0559	0.9365	1.4301
277	SLD 14	-4.3	0.3	41.02	13.0554	0.9363	1.38
277	SLD 15	-4.37	-0.88	40.95	13.0266	0.9342	1.4685

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
277	SLD 16	-4.21	-1.03	40.94	13.0261	0.934	1.4183
277	SLV 1	8.36	0.42	47.37	14.9942	1.12	-2.7876
277	SLV 2	8.75	0.08	47.36	14.9931	1.1196	-2.9043
277	SLV 3	8.58	-2.6	47.18	14.9261	1.1146	-2.6992
277	SLV 4	8.97	-2.94	47.18	14.925	1.1142	-2.816
277	SLV 5	1.8	4.34	44.5	14.1326	1.037	-0.8396
277	SLV 6	2.05	4.13	44.5	14.1319	1.0367	-0.9142
277	SLV 7	2.53	-5.7	43.88	13.9056	1.0191	-0.5451
277	SLV 8	2.78	-5.92	43.88	13.9049	1.0189	-0.6196
277	SLV 9	-3.66	4.75	41.86	13.3262	0.9606	0.9365
277	SLV 10	-3.42	4.53	41.85	13.3255	0.9603	0.862
277	SLV 11	-2.93	-5.29	41.24	13.0991	0.9427	1.2311
277	SLV 12	-2.69	-5.51	41.23	13.0984	0.9424	1.1565
277	SLV 13	-9.85	1.77	38.56	12.3061	0.8652	3.1329
277	SLV 14	-9.47	1.43	38.55	12.305	0.8648	3.0161
277	SLV 15	-9.63	-1.24	38.37	12.238	0.8599	3.2212
277	SLV 16	-9.25	-1.58	38.36	12.2369	0.8594	3.1044
277	CRTFP Ux+	0	0	0	0	0	0
277	CRTFP Ux-	0	0	0	0	0	0
277	CRTFP Uy+	0	0	0	0	0	0
277	CRTFP Uy-	0	0	0	0	0	0
278	SLU 1	-0.24	-0.33	23.32	6.1185	-0.4953	0.0599
278	SLU 2	-0.24	-0.29	23.3	6.1122	-0.4949	0.0591
278	SLU 3	-0.25	-0.33	23.77	6.2344	-0.5047	0.0616
278	SLU 4	-0.24	-0.3	23.75	6.2306	-0.5044	0.0612
278	SLU 5	-0.24	-0.29	23.58	6.1829	-0.5006	0.0596
278	SLU 6	-0.25	-0.33	24.04	6.3052	-0.5104	0.0621
278	SLU 7	-0.25	-0.31	24.03	6.3014	-0.5102	0.0616
278	SLU 8	-0.25	-0.34	23.87	6.26	-0.5068	0.0609
278	SLU 9	-0.24	-0.32	23.86	6.2562	-0.5066	0.0604
278	SLU 10	-0.25	-0.3	26.4	6.9255	-0.5607	0.0633
278	SLU 11	-0.26	-0.34	26.87	7.0478	-0.5705	0.0658
278	SLU 12	-0.26	-0.32	26.85	7.044	-0.5702	0.0653
278	SLU 13	-0.25	-0.31	26.68	6.9963	-0.5665	0.0637
278	SLU 14	-0.27	-0.35	27.14	7.1186	-0.5763	0.0662
278	SLU 15	-0.26	-0.32	27.13	7.1148	-0.576	0.0658
278	SLU 16	-0.26	-0.36	26.97	7.0734	-0.5727	0.065
278	SLU 17	-0.26	-0.33	26.96	7.0696	-0.5724	0.0645
278	SLU 18	-0.26	-0.35	27.75	7.2804	-0.5893	0.0658
278	SLU 19	-0.26	-0.33	27.74	7.2767	-0.5891	0.0653
278	SLU 20	-0.27	-0.36	28.03	7.3512	-0.5951	0.0663
278	SLU 21	-0.26	-0.33	28.01	7.3474	-0.5948	0.0658
278	SLU 22	-0.28	-0.33	26.09	6.8452	-0.5539	0.0703
278	SLU 23	-0.27	-0.28	26.07	6.8389	-0.5534	0.0696
278	SLU 24	-0.29	-0.33	26.53	6.9612	-0.5632	0.0721
278	SLU 25	-0.28	-0.3	26.52	6.9574	-0.563	0.0716
278	SLU 26	-0.28	-0.29	26.34	6.9097	-0.5592	0.07
278	SLU 27	-0.29	-0.33	26.8	7.0319	-0.569	0.0725
278	SLU 28	-0.28	-0.31	26.79	7.0282	-0.5688	0.0721
278	SLU 29	-0.28	-0.34	26.63	6.9868	-0.5654	0.0713
278	SLU 30	-0.28	-0.31	26.62	6.983	-0.5651	0.0708
278	SLU 31	-0.29	-0.3	29.17	7.6523	-0.6193	0.0737
278	SLU 32	-0.3	-0.34	29.63	7.7745	-0.6291	0.0762
278	SLU 33	-0.3	-0.32	29.62	7.7708	-0.6288	0.0757
278	SLU 34	-0.29	-0.3	29.44	7.7231	-0.625	0.0742
278	SLU 35	-0.3	-0.35	29.9	7.8453	-0.6348	0.0767
278	SLU 36	-0.3	-0.32	29.89	7.8415	-0.6346	0.0762
278	SLU 37	-0.3	-0.35	29.73	7.8002	-0.6312	0.0754
278	SLU 38	-0.3	-0.33	29.72	7.7964	-0.631	0.075
278	SLU 39	-0.3	-0.35	30.52	8.0072	-0.6479	0.0762
278	SLU 40	-0.3	-0.32	30.5	8.0034	-0.6477	0.0758
278	SLU 41	-0.3	-0.35	30.79	8.078	-0.6537	0.0767
278	SLU 42	-0.3	-0.33	30.78	8.0742	-0.6534	0.0762
278	SLU 43	-0.3	-0.43	29.37	7.7048	-0.6238	0.0743
278	SLU 44	-0.3	-0.39	29.35	7.6985	-0.6234	0.0735
278	SLU 45	-0.31	-0.43	29.82	7.8208	-0.6332	0.076
278	SLU 46	-0.3	-0.4	29.8	7.817	-0.6329	0.0756
278	SLU 47	-0.3	-0.39	29.63	7.7693	-0.6291	0.074
278	SLU 48	-0.31	-0.43	30.09	7.8916	-0.6389	0.0765
278	SLU 49	-0.31	-0.41	30.08	7.8878	-0.6387	0.076
278	SLU 50	-0.31	-0.44	29.92	7.8464	-0.6353	0.0753
278	SLU 51	-0.3	-0.42	29.91	7.8426	-0.6351	0.0748
278	SLU 52	-0.31	-0.4	32.45	8.5119	-0.6892	0.0777
278	SLU 53	-0.32	-0.44	32.92	8.6342	-0.699	0.0802
278	SLU 54	-0.32	-0.42	32.9	8.6304	-0.6987	0.0797
278	SLU 55	-0.31	-0.41	32.73	8.5827	-0.695	0.0781
278	SLU 56	-0.33	-0.45	33.19	8.7049	-0.7048	0.0806
278	SLU 57	-0.32	-0.42	33.18	8.7012	-0.7045	0.0802
278	SLU 58	-0.32	-0.46	33.02	8.6598	-0.7012	0.0794
278	SLU 59	-0.32	-0.43	33.01	8.656	-0.7009	0.0789
278	SLU 60	-0.32	-0.45	33.8	8.8668	-0.7178	0.0802
278	SLU 61	-0.32	-0.43	33.79	8.863	-0.7176	0.0797
278	SLU 62	-0.33	-0.46	34.08	8.9376	-0.7236	0.0807
278	SLU 63	-0.32	-0.43	34.06	8.9338	-0.7233	0.0802
278	SLU 64	-0.34	-0.43	32.14	8.4316	-0.6824	0.0847
278	SLU 65	-0.33	-0.38	32.12	8.4253	-0.6819	0.084
278	SLU 66	-0.35	-0.43	32.58	8.5475	-0.6917	0.0865
278	SLU 67	-0.34	-0.4	32.57	8.5437	-0.6915	0.086
278	SLU 68	-0.34	-0.39	32.39	8.496	-0.6877	0.0844
278	SLU 69	-0.35	-0.43	32.85	8.6183	-0.6975	0.0869
278	SLU 70	-0.34	-0.41	32.84	8.6145	-0.6973	0.0865

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
278	SLU 71	-0.34	-0.44	32.68	8.5731	-0.6939	0.0857
278	SLU 72	-0.34	-0.41	32.67	8.5694	-0.6936	0.0852
278	SLU 73	-0.35	-0.4	35.22	9.2387	-0.7478	0.0881
278	SLU 74	-0.36	-0.44	35.68	9.3609	-0.7576	0.0906
278	SLU 75	-0.36	-0.42	35.67	9.3571	-0.7573	0.0901
278	SLU 76	-0.35	-0.4	35.49	9.3094	-0.7535	0.0886
278	SLU 77	-0.36	-0.45	35.95	9.4317	-0.7633	0.0911
278	SLU 78	-0.36	-0.42	35.94	9.4279	-0.7631	0.0906
278	SLU 79	-0.36	-0.45	35.78	9.3865	-0.7597	0.0898
278	SLU 80	-0.36	-0.43	35.77	9.3827	-0.7595	0.0894
278	SLU 81	-0.36	-0.45	36.57	9.5936	-0.7764	0.0906
278	SLU 82	-0.36	-0.42	36.55	9.5898	-0.7762	0.0902
278	SLU 83	-0.36	-0.45	36.84	9.6643	-0.7822	0.0911
278	SLU 84	-0.36	-0.43	36.83	9.6605	-0.7819	0.0907
278	SLE RA 1	-0.25	-0.33	24.11	6.3261	-0.512	0.0629
278	SLE RA 2	-0.25	-0.3	24.1	6.3219	-0.5117	0.0624
278	SLE RA 3	-0.26	-0.33	24.41	6.4034	-0.5183	0.064
278	SLE RA 4	-0.25	-0.31	24.4	6.4009	-0.5181	0.0637
278	SLE RA 5	-0.25	-0.3	24.28	6.3691	-0.5156	0.0627
278	SLE RA 6	-0.26	-0.33	24.59	6.4506	-0.5221	0.0644
278	SLE RA 7	-0.26	-0.32	24.58	6.4481	-0.522	0.064
278	SLE RA 8	-0.26	-0.34	24.48	6.4205	-0.5197	0.0635
278	SLE RA 9	-0.25	-0.32	24.47	6.418	-0.5195	0.0632
278	SLE RA 10	-0.26	-0.31	26.17	6.8642	-0.5556	0.0651
278	SLE RA 11	-0.27	-0.34	26.47	6.9457	-0.5622	0.0668
278	SLE RA 12	-0.27	-0.32	26.47	6.9431	-0.562	0.0665
278	SLE RA 13	-0.26	-0.31	26.35	6.9113	-0.5595	0.0654
278	SLE RA 14	-0.27	-0.34	26.66	6.9928	-0.566	0.0671
278	SLE RA 15	-0.27	-0.33	26.65	6.9903	-0.5658	0.0668
278	SLE RA 16	-0.27	-0.35	26.54	6.9627	-0.5636	0.0663
278	SLE RA 17	-0.26	-0.33	26.53	6.9602	-0.5634	0.066
278	SLE RA 18	-0.27	-0.34	27.07	7.1008	-0.5747	0.0668
278	SLE RA 19	-0.27	-0.33	27.06	7.0982	-0.5745	0.0665
278	SLE RA 20	-0.27	-0.35	27.25	7.1479	-0.5786	0.0672
278	SLE RA 21	-0.27	-0.33	27.24	7.1454	-0.5784	0.0668
278	SLE FR 1	-0.25	-0.33	24.11	6.3261	-0.512	0.0629
278	SLE FR 2	-0.25	-0.32	24.11	6.3253	-0.512	0.0628
278	SLE FR 3	-0.25	-0.33	24.18	6.345	-0.5136	0.063
278	SLE FR 4	-0.26	-0.33	25	6.5577	-0.5308	0.064
278	SLE FR 5	-0.26	-0.33	25.07	6.5774	-0.5324	0.0642
278	SLE FR 6	-0.26	-0.34	25.59	6.7134	-0.5434	0.0649
278	SLE QP 1	-0.25	-0.33	24.11	6.3261	-0.512	0.0629
278	SLE QP 2	-0.26	-0.33	25	6.5585	-0.5308	0.0641
278	SLD 1	1.96	-0.08	25.99	6.803	-0.5501	-0.5359
278	SLD 2	2.06	-0.16	25.99	6.8032	-0.5501	-0.564
278	SLD 3	2.02	-0.86	25.94	6.7874	-0.5492	-0.5605
278	SLD 4	2.12	-0.94	25.94	6.7876	-0.5492	-0.5885
278	SLD 5	0.31	0.94	25.37	6.6556	-0.5379	-0.0738
278	SLD 6	0.37	0.89	25.37	6.6557	-0.5379	-0.092
278	SLD 7	0.49	-1.66	25.21	6.6034	-0.5351	-0.1557
278	SLD 8	0.56	-1.71	25.21	6.6035	-0.535	-0.1739
278	SLD 9	-1.07	1.05	24.79	6.5135	-0.5266	0.302
278	SLD 10	-1.01	0.99	24.79	6.5136	-0.5266	0.2838
278	SLD 11	-0.89	-1.55	24.63	6.4613	-0.5238	0.2201
278	SLD 12	-0.82	-1.61	24.63	6.4614	-0.5238	0.2019
278	SLD 13	-2.63	0.28	24.06	6.3294	-0.5124	0.7167
278	SLD 14	-2.53	0.19	24.05	6.3296	-0.5124	0.6886
278	SLD 15	-2.58	-0.5	24.01	6.3138	-0.5116	0.6921
278	SLD 16	-2.48	-0.59	24.01	6.314	-0.5116	0.6641
278	SLV 1	4.93	0.24	27.31	7.1304	-0.5759	-1.3396
278	SLV 2	5.16	0.05	27.31	7.1308	-0.5759	-1.4049
278	SLV 3	5.06	-1.54	27.21	7.0941	-0.5739	-1.3963
278	SLV 4	5.29	-1.73	27.2	7.0946	-0.5739	-1.4616
278	SLV 5	1.07	2.57	25.86	6.7849	-0.5474	-0.26
278	SLV 6	1.21	2.44	25.86	6.7852	-0.5474	-0.3017
278	SLV 7	1.5	-3.36	25.5	6.6642	-0.5407	-0.449
278	SLV 8	1.64	-3.48	25.49	6.6644	-0.5407	-0.4907
278	SLV 9	-2.16	2.81	24.5	6.4526	-0.521	0.6188
278	SLV 10	-2.01	2.69	24.5	6.4528	-0.5209	0.5771
278	SLV 11	-1.73	-3.11	24.14	6.3318	-0.5143	0.4299
278	SLV 12	-1.58	-3.23	24.14	6.3321	-0.5143	0.3881
278	SLV 13	-5.81	1.07	22.79	6.0224	-0.4878	1.5898
278	SLV 14	-5.58	0.88	22.79	6.0229	-0.4878	1.5244
278	SLV 15	-5.68	-0.71	22.69	5.9862	-0.4858	1.5331
278	SLV 16	-5.45	-0.9	22.68	5.9866	-0.4858	1.4678
278	CRTFP Ux+	0	0	0	0	0	0
278	CRTFP Ux-	0	0	0	0	0	0
278	CRTFP Uy+	0	0	0	0	0	0
278	CRTFP Uy-	0	0	0	0	0	0
279	SLU 1	-0.35	-0.45	33.04	9.3359	-0.7859	0.0941
279	SLU 2	-0.34	-0.39	33.02	9.3272	-0.7853	0.0929
279	SLU 3	-0.36	-0.45	33.67	9.5124	-0.8007	0.0968
279	SLU 4	-0.35	-0.41	33.65	9.5071	-0.8004	0.0961
279	SLU 5	-0.34	-0.4	33.4	9.4353	-0.7945	0.0937
279	SLU 6	-0.36	-0.45	34.05	9.6205	-0.8099	0.0975
279	SLU 7	-0.36	-0.42	34.04	9.6152	-0.8095	0.0968
279	SLU 8	-0.36	-0.46	33.81	9.5521	-0.8042	0.0956
279	SLU 9	-0.35	-0.43	33.8	9.5469	-0.8039	0.0949
279	SLU 10	-0.37	-0.41	37.41	10.5677	-0.8897	0.0996
279	SLU 11	-0.38	-0.46	38.06	10.7529	-0.9051	0.1035
279	SLU 12	-0.38	-0.43	38.04	10.7477	-0.9048	0.1028

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
279	SLU 13	-0.37	-0.41	37.8	10.6758	-0.8989	0.1004
279	SLU 14	-0.39	-0.47	38.45	10.861	-0.9143	0.1042
279	SLU 15	-0.38	-0.44	38.43	10.8558	-0.9139	0.1035
279	SLU 16	-0.38	-0.48	38.21	10.7927	-0.9086	0.1023
279	SLU 17	-0.37	-0.44	38.19	10.7874	-0.9083	0.1016
279	SLU 18	-0.38	-0.47	39.32	11.1081	-0.935	0.1037
279	SLU 19	-0.38	-0.44	39.3	11.1029	-0.9347	0.103
279	SLU 20	-0.39	-0.48	39.7	11.2162	-0.9442	0.1044
279	SLU 21	-0.38	-0.45	39.69	11.211	-0.9438	0.1037
279	SLU 22	-0.4	-0.44	36.94	10.4396	-0.8781	0.1105
279	SLU 23	-0.4	-0.38	36.91	10.4309	-0.8776	0.1093
279	SLU 24	-0.41	-0.44	37.56	10.6161	-0.8929	0.1131
279	SLU 25	-0.41	-0.4	37.55	10.6108	-0.8926	0.1124
279	SLU 26	-0.4	-0.39	37.3	10.539	-0.8867	0.11
279	SLU 27	-0.42	-0.44	37.95	10.7242	-0.9021	0.1139
279	SLU 28	-0.41	-0.41	37.94	10.7189	-0.9018	0.1132
279	SLU 29	-0.41	-0.45	37.71	10.6558	-0.8964	0.1119
279	SLU 30	-0.41	-0.42	37.7	10.6506	-0.8961	0.1113
279	SLU 31	-0.42	-0.4	41.31	11.6714	-0.982	0.116
279	SLU 32	-0.44	-0.45	41.96	11.8566	-0.9973	0.1198
279	SLU 33	-0.43	-0.42	41.94	11.8514	-0.997	0.1192
279	SLU 34	-0.42	-0.4	41.69	11.7795	-0.9911	0.1168
279	SLU 35	-0.44	-0.46	42.34	11.9647	-1.0065	0.1206
279	SLU 36	-0.43	-0.43	42.33	11.9595	-1.0062	0.1199
279	SLU 37	-0.43	-0.47	42.1	11.8964	-1.0008	0.1187
279	SLU 38	-0.43	-0.44	42.09	11.8911	-1.0005	0.118
279	SLU 39	-0.44	-0.46	43.21	12.2118	-1.0272	0.12
279	SLU 40	-0.43	-0.43	43.2	12.2066	-1.0269	0.1193
279	SLU 41	-0.44	-0.47	43.6	12.3199	-1.0364	0.1208
279	SLU 42	-0.44	-0.44	43.58	12.3147	-1.0361	0.1201
279	SLU 43	-0.44	-0.59	41.62	11.7583	-0.99	0.1167
279	SLU 44	-0.43	-0.53	41.6	11.7495	-0.9895	0.1155
279	SLU 45	-0.45	-0.58	42.25	11.9347	-1.0048	0.1194
279	SLU 46	-0.44	-0.55	42.23	11.9295	-1.0045	0.1187
279	SLU 47	-0.43	-0.53	41.98	11.8576	-0.9986	0.1163
279	SLU 48	-0.45	-0.59	42.63	12.0428	-1.014	0.1201
279	SLU 49	-0.44	-0.56	42.62	12.0376	-1.0137	0.1194
279	SLU 50	-0.44	-0.6	42.39	11.9745	-1.0084	0.1182
279	SLU 51	-0.44	-0.56	42.38	11.9692	-1.008	0.1175
279	SLU 52	-0.45	-0.54	45.99	12.9901	-1.0939	0.1222
279	SLU 53	-0.47	-0.6	46.64	13.1753	-1.1092	0.1261
279	SLU 54	-0.46	-0.57	46.62	13.17	-1.1089	0.1254
279	SLU 55	-0.45	-0.55	46.37	13.0982	-1.103	0.123
279	SLU 56	-0.47	-0.61	47.02	13.2834	-1.1184	0.1268
279	SLU 57	-0.47	-0.57	47.01	13.2781	-1.1181	0.1261
279	SLU 58	-0.47	-0.62	46.78	13.215	-1.1127	0.1249
279	SLU 59	-0.46	-0.58	46.77	13.2098	-1.1124	0.1242
279	SLU 60	-0.47	-0.61	47.89	13.5305	-1.1391	0.1263
279	SLU 61	-0.47	-0.58	47.88	13.5252	-1.1388	0.1256
279	SLU 62	-0.47	-0.62	48.28	13.6386	-1.1483	0.127
279	SLU 63	-0.47	-0.58	48.26	13.6333	-1.148	0.1263
279	SLU 64	-0.49	-0.58	45.52	12.862	-1.0822	0.1331
279	SLU 65	-0.48	-0.52	45.49	12.8532	-1.0817	0.1319
279	SLU 66	-0.5	-0.57	46.14	13.0384	-1.0971	0.1357
279	SLU 67	-0.49	-0.54	46.13	13.0332	-1.0967	0.1351
279	SLU 68	-0.49	-0.52	45.88	12.9613	-1.0909	0.1327
279	SLU 69	-0.5	-0.58	46.53	13.1465	-1.1062	0.1365
279	SLU 70	-0.5	-0.55	46.51	13.1413	-1.1059	0.1358
279	SLU 71	-0.5	-0.59	46.29	13.0782	-1.1006	0.1346
279	SLU 72	-0.49	-0.55	46.27	13.0729	-1.1003	0.1339
279	SLU 73	-0.51	-0.53	49.88	14.0938	-1.1861	0.1386
279	SLU 74	-0.52	-0.59	50.53	14.279	-1.2015	0.1425
279	SLU 75	-0.52	-0.56	50.52	14.2737	-1.2011	0.1418
279	SLU 76	-0.51	-0.54	50.27	14.2019	-1.1953	0.1394
279	SLU 77	-0.53	-0.6	50.92	14.3871	-1.2106	0.1432
279	SLU 78	-0.52	-0.56	50.9	14.3818	-1.2103	0.1425
279	SLU 79	-0.52	-0.61	50.68	14.3187	-1.205	0.1413
279	SLU 80	-0.52	-0.57	50.66	14.3135	-1.2047	0.1406
279	SLU 81	-0.52	-0.6	51.79	14.6342	-1.2314	0.1426
279	SLU 82	-0.52	-0.57	51.77	14.629	-1.2311	0.142
279	SLU 83	-0.53	-0.61	52.18	14.7423	-1.2405	0.1434
279	SLU 84	-0.52	-0.57	52.16	14.7371	-1.2402	0.1427
279	SLE RA 1	-0.37	-0.45	34.16	9.6513	-0.8122	0.0988
279	SLE RA 2	-0.36	-0.41	34.14	9.6454	-0.8119	0.098
279	SLE RA 3	-0.37	-0.44	34.57	9.7689	-0.8221	0.1005
279	SLE RA 4	-0.37	-0.42	34.56	9.7654	-0.8219	0.1001
279	SLE RA 5	-0.36	-0.41	34.4	9.7175	-0.818	0.0985
279	SLE RA 6	-0.37	-0.45	34.83	9.841	-0.8282	0.101
279	SLE RA 7	-0.37	-0.42	34.82	9.8375	-0.828	0.1006
279	SLE RA 8	-0.37	-0.45	34.67	9.7954	-0.8245	0.0998
279	SLE RA 9	-0.37	-0.43	34.66	9.7919	-0.8242	0.0993
279	SLE RA 10	-0.38	-0.42	37.07	10.4725	-0.8815	0.1025
279	SLE RA 11	-0.39	-0.46	37.5	10.5959	-0.8917	0.105
279	SLE RA 12	-0.38	-0.43	37.49	10.5924	-0.8915	0.1046
279	SLE RA 13	-0.38	-0.42	37.32	10.5445	-0.8876	0.103
279	SLE RA 14	-0.39	-0.46	37.76	10.668	-0.8978	0.1055
279	SLE RA 15	-0.39	-0.44	37.75	10.6645	-0.8976	0.1051
279	SLE RA 16	-0.39	-0.47	37.6	10.6224	-0.894	0.1042
279	SLE RA 17	-0.38	-0.44	37.59	10.6189	-0.8938	0.1038
279	SLE RA 18	-0.39	-0.46	38.34	10.8327	-0.9116	0.1051
279	SLE RA 19	-0.38	-0.44	38.33	10.8292	-0.9114	0.1047

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
279	SLE RA 20	-0.39	-0.47	38.6	10.9048	-0.9178	0.1056
279	SLE RA 21	-0.39	-0.44	38.59	10.9013	-0.9175	0.1052
279	SLE FR 1	-0.37	-0.45	34.16	9.6513	-0.8122	0.0988
279	SLE FR 2	-0.36	-0.44	34.15	9.6501	-0.8122	0.0986
279	SLE FR 3	-0.37	-0.45	34.26	9.6801	-0.8147	0.099
279	SLE FR 4	-0.37	-0.44	35.41	10.0045	-0.842	0.1005
279	SLE FR 5	-0.37	-0.45	35.51	10.0345	-0.8445	0.1009
279	SLE FR 6	-0.38	-0.45	36.25	10.242	-0.8619	0.102
279	SLE QP 1	-0.37	-0.45	34.16	9.6513	-0.8122	0.0988
279	SLE QP 2	-0.37	-0.45	35.41	10.0057	-0.8421	0.1007
279	SLD 1	2.83	-0.08	36.63	10.3298	-0.866	-0.8289
279	SLD 2	2.97	-0.2	36.63	10.3303	-0.866	-0.8722
279	SLD 3	2.91	-1.21	36.57	10.3052	-0.8647	-0.8683
279	SLD 4	3.05	-1.32	36.57	10.3058	-0.8647	-0.9116
279	SLD 5	0.44	1.39	35.87	10.1401	-0.8512	-0.1109
279	SLD 6	0.54	1.32	35.87	10.1405	-0.8512	-0.139
279	SLD 7	0.71	-2.37	35.67	10.0582	-0.8469	-0.2422
279	SLD 8	0.8	-2.44	35.67	10.0586	-0.8469	-0.2703
279	SLD 9	-1.55	1.54	35.15	9.9529	-0.8372	0.4716
279	SLD 10	-1.45	1.47	35.15	9.9532	-0.8372	0.4435
279	SLD 11	-1.28	-2.22	34.95	9.8709	-0.8329	0.3404
279	SLD 12	-1.19	-2.29	34.95	9.8713	-0.8329	0.3123
279	SLD 13	-3.8	0.42	34.25	9.7056	-0.8194	1.113
279	SLD 14	-3.66	0.31	34.25	9.7062	-0.8194	1.0696
279	SLD 15	-3.72	-0.7	34.19	9.6811	-0.8181	1.0736
279	SLD 16	-3.58	-0.82	34.19	9.6817	-0.8181	1.0303
279	SLV 1	7.12	0.37	38.27	10.7634	-0.8981	-2.0742
279	SLV 2	7.45	0.11	38.27	10.7648	-0.8981	-2.1751
279	SLV 3	7.31	-2.2	38.13	10.7066	-0.8951	-2.165
279	SLV 4	7.64	-2.46	38.13	10.708	-0.8951	-2.2659
279	SLV 5	1.54	3.74	36.48	10.3189	-0.8635	-0.397
279	SLV 6	1.75	3.57	36.48	10.3198	-0.8635	-0.4614
279	SLV 7	2.16	-4.83	36.01	10.1296	-0.8534	-0.6996
279	SLV 8	2.37	-5	36.01	10.1305	-0.8534	-0.7641
279	SLV 9	-3.12	4.1	34.81	9.8809	-0.8307	0.9654
279	SLV 10	-2.9	3.93	34.81	9.8818	-0.8307	0.901
279	SLV 11	-2.49	-4.47	34.34	9.6916	-0.8206	0.6628
279	SLV 12	-2.28	-4.64	34.34	9.6925	-0.8207	0.5983
279	SLV 13	-8.39	1.56	32.7	9.3034	-0.789	2.4672
279	SLV 14	-8.06	1.3	32.69	9.3048	-0.789	2.3663
279	SLV 15	-8.2	-1.01	32.56	9.2466	-0.786	2.3764
279	SLV 16	-7.87	-1.27	32.55	9.248	-0.786	2.2755
279	CRTFP Ux+	0	0	0	0	0	0
279	CRTFP Ux-	0	0	0	0	0	0
279	CRTFP Uy+	0	0	0	0	0	0
279	CRTFP Uy-	0	0	0	0	0	0
280	SLU 1	-0.41	-0.47	38.2	10.7942	0.0214	0.1242
280	SLU 2	-0.4	-0.4	38.18	10.7857	0.0212	0.1212
280	SLU 3	-0.42	-0.46	38.92	10.9977	0.0219	0.1273
280	SLU 4	-0.41	-0.42	38.91	10.9925	0.0217	0.1255
280	SLU 5	-0.4	-0.41	38.62	10.9109	0.0214	0.1223
280	SLU 6	-0.42	-0.47	39.37	11.1229	0.0221	0.1284
280	SLU 7	-0.42	-0.43	39.35	11.1178	0.022	0.1266
280	SLU 8	-0.42	-0.48	39.1	11.0447	0.0218	0.1264
280	SLU 9	-0.41	-0.44	39.08	11.0396	0.0217	0.1246
280	SLU 10	-0.43	-0.41	43.25	12.2201	0.024	0.1298
280	SLU 11	-0.45	-0.48	44	12.432	0.0246	0.136
280	SLU 12	-0.44	-0.44	43.98	12.4269	0.0245	0.1341
280	SLU 13	-0.43	-0.42	43.7	12.3453	0.0242	0.1309
280	SLU 14	-0.45	-0.49	44.45	12.5573	0.0248	0.137
280	SLU 15	-0.44	-0.44	44.43	12.5522	0.0247	0.1352
280	SLU 16	-0.44	-0.5	44.17	12.4791	0.0246	0.135
280	SLU 17	-0.44	-0.46	44.16	12.474	0.0245	0.1332
280	SLU 18	-0.45	-0.49	45.45	12.8434	0.0254	0.1366
280	SLU 19	-0.44	-0.45	45.44	12.8382	0.0253	0.1347
280	SLU 20	-0.45	-0.5	45.9	12.9686	0.0256	0.1377
280	SLU 21	-0.45	-0.45	45.89	12.9635	0.0255	0.1358
280	SLU 22	-0.47	-0.45	42.68	12.0622	0.0247	0.1432
280	SLU 23	-0.46	-0.38	42.65	12.0537	0.0245	0.1402
280	SLU 24	-0.48	-0.44	43.4	12.2656	0.0251	0.1463
280	SLU 25	-0.48	-0.4	43.38	12.2605	0.025	0.1445
280	SLU 26	-0.46	-0.39	43.1	12.1789	0.0247	0.1413
280	SLU 27	-0.49	-0.45	43.85	12.3909	0.0253	0.1474
280	SLU 28	-0.48	-0.41	43.83	12.3857	0.0252	0.1456
280	SLU 29	-0.48	-0.46	43.57	12.3127	0.0251	0.1454
280	SLU 30	-0.47	-0.42	43.56	12.3076	0.025	0.1436
280	SLU 31	-0.49	-0.39	47.73	13.4881	0.0273	0.1488
280	SLU 32	-0.51	-0.46	48.47	13.7	0.0279	0.155
280	SLU 33	-0.5	-0.42	48.46	13.6949	0.0278	0.1531
280	SLU 34	-0.49	-0.4	48.18	13.6133	0.0275	0.1499
280	SLU 35	-0.51	-0.46	48.92	13.8253	0.0281	0.1561
280	SLU 36	-0.51	-0.42	48.91	13.8201	0.028	0.1542
280	SLU 37	-0.51	-0.48	48.65	13.7471	0.0279	0.154
280	SLU 38	-0.5	-0.44	48.63	13.742	0.0278	0.1522
280	SLU 39	-0.51	-0.47	49.93	14.1114	0.0286	0.1556
280	SLU 40	-0.5	-0.43	49.92	14.1062	0.0285	0.1538
280	SLU 41	-0.51	-0.47	50.38	14.2366	0.0289	0.1567
280	SLU 42	-0.51	-0.43	50.36	14.2315	0.0288	0.1548
280	SLU 43	-0.51	-0.61	48.13	13.5978	0.0267	0.155
280	SLU 44	-0.5	-0.55	48.1	13.5892	0.0265	0.1519
280	SLU 45	-0.52	-0.61	48.85	13.8012	0.0272	0.1581

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
280	SLU 46	-0.51	-0.57	48.83	13.7961	0.027	0.1562
280	SLU 47	-0.5	-0.55	48.55	13.7145	0.0267	0.153
280	SLU 48	-0.52	-0.62	49.29	13.9264	0.0274	0.1592
280	SLU 49	-0.52	-0.58	49.28	13.9213	0.0273	0.1573
280	SLU 50	-0.52	-0.63	49.02	13.8483	0.0271	0.1571
280	SLU 51	-0.51	-0.59	49.01	13.8431	0.027	0.1553
280	SLU 52	-0.53	-0.56	53.18	15.0236	0.0293	0.1606
280	SLU 53	-0.55	-0.62	53.92	15.2356	0.0299	0.1667
280	SLU 54	-0.54	-0.58	53.91	15.2305	0.0298	0.1649
280	SLU 55	-0.53	-0.57	53.63	15.1489	0.0295	0.1617
280	SLU 56	-0.55	-0.63	54.37	15.3608	0.0301	0.1678
280	SLU 57	-0.55	-0.59	54.36	15.3557	0.03	0.166
280	SLU 58	-0.54	-0.64	54.1	15.2827	0.0299	0.1658
280	SLU 59	-0.54	-0.6	54.08	15.2775	0.0298	0.164
280	SLU 60	-0.55	-0.63	55.38	15.6469	0.0307	0.1673
280	SLU 61	-0.54	-0.59	55.36	15.6418	0.0306	0.1655
280	SLU 62	-0.55	-0.64	55.83	15.7722	0.0309	0.1684
280	SLU 63	-0.55	-0.6	55.81	15.767	0.0308	0.1666
280	SLU 64	-0.57	-0.59	52.6	14.8658	0.03	0.174
280	SLU 65	-0.56	-0.52	52.58	14.8572	0.0298	0.1709
280	SLU 66	-0.58	-0.59	53.32	15.0692	0.0304	0.1771
280	SLU 67	-0.58	-0.55	53.31	15.064	0.0303	0.1753
280	SLU 68	-0.57	-0.53	53.03	14.9824	0.03	0.172
280	SLU 69	-0.59	-0.6	53.77	15.1944	0.0306	0.1782
280	SLU 70	-0.58	-0.56	53.76	15.1893	0.0305	0.1763
280	SLU 71	-0.58	-0.61	53.5	15.1162	0.0304	0.1762
280	SLU 72	-0.57	-0.57	53.48	15.1111	0.0303	0.1743
280	SLU 73	-0.59	-0.54	57.66	16.2916	0.0326	0.1796
280	SLU 74	-0.61	-0.6	58.4	16.5036	0.0332	0.1857
280	SLU 75	-0.6	-0.56	58.39	16.4984	0.0331	0.1839
280	SLU 76	-0.59	-0.55	58.1	16.4168	0.0328	0.1807
280	SLU 77	-0.61	-0.61	58.85	16.6288	0.0334	0.1868
280	SLU 78	-0.61	-0.57	58.83	16.6237	0.0333	0.185
280	SLU 79	-0.61	-0.62	58.57	16.5506	0.0332	0.1848
280	SLU 80	-0.6	-0.58	58.56	16.5455	0.0331	0.183
280	SLU 81	-0.61	-0.61	59.86	16.9149	0.0339	0.1863
280	SLU 82	-0.61	-0.57	59.84	16.9098	0.0338	0.1845
280	SLU 83	-0.62	-0.62	60.3	17.0401	0.0342	0.1874
280	SLU 84	-0.61	-0.58	60.29	17.035	0.0341	0.1856
280	SLE RA 1	-0.43	-0.46	39.48	11.1565	0.0223	0.1297
280	SLE RA 2	-0.42	-0.42	39.46	11.1508	0.0222	0.1276
280	SLE RA 3	-0.43	-0.46	39.96	11.2921	0.0226	0.1317
280	SLE RA 4	-0.43	-0.43	39.95	11.2887	0.0226	0.1305
280	SLE RA 5	-0.42	-0.42	39.76	11.2343	0.0224	0.1284
280	SLE RA 6	-0.44	-0.46	40.26	11.3756	0.0228	0.1324
280	SLE RA 7	-0.43	-0.44	40.25	11.3722	0.0227	0.1312
280	SLE RA 8	-0.43	-0.47	40.08	11.3235	0.0226	0.1311
280	SLE RA 9	-0.43	-0.44	40.07	11.3201	0.0226	0.1299
280	SLE RA 10	-0.44	-0.42	42.85	12.1071	0.0241	0.1334
280	SLE RA 11	-0.45	-0.47	43.34	12.2484	0.0245	0.1375
280	SLE RA 12	-0.45	-0.44	43.34	12.245	0.0244	0.1363
280	SLE RA 13	-0.44	-0.43	43.15	12.1906	0.0242	0.1341
280	SLE RA 14	-0.45	-0.47	43.64	12.3319	0.0246	0.1382
280	SLE RA 15	-0.45	-0.45	43.63	12.3285	0.0246	0.137
280	SLE RA 16	-0.45	-0.48	43.46	12.2798	0.0245	0.1369
280	SLE RA 17	-0.45	-0.45	43.45	12.2763	0.0244	0.1357
280	SLE RA 18	-0.45	-0.47	44.31	12.5226	0.025	0.1379
280	SLE RA 19	-0.45	-0.45	44.31	12.5192	0.0249	0.1367
280	SLE RA 20	-0.46	-0.48	44.61	12.6061	0.0251	0.1386
280	SLE RA 21	-0.45	-0.45	44.6	12.6027	0.0251	0.1374
280	SLE FR 1	-0.43	-0.46	39.48	11.1565	0.0223	0.1297
280	SLE FR 2	-0.43	-0.45	39.48	11.1554	0.0223	0.1293
280	SLE FR 3	-0.43	-0.46	39.6	11.1899	0.0224	0.1299
280	SLE FR 4	-0.43	-0.46	40.93	11.5652	0.0231	0.1317
280	SLE FR 5	-0.44	-0.47	41.05	11.5998	0.0232	0.1324
280	SLE FR 6	-0.44	-0.47	41.9	11.8396	0.0237	0.1338
280	SLE QP 1	-0.43	-0.46	39.48	11.1565	0.0223	0.1297
280	SLE QP 2	-0.43	-0.47	40.93	11.5664	0.0231	0.1321
280	SLD 1	3.35	-0.02	42.09	11.8686	0.0304	-0.9688
280	SLD 2	3.52	-0.14	42.09	11.8696	0.0304	-1.0166
280	SLD 3	3.44	-1.36	42.02	11.8411	0.0309	-0.9962
280	SLD 4	3.61	-1.48	42.02	11.8421	0.0309	-1.044
280	SLD 5	0.53	1.71	41.38	11.6986	0.0247	-0.1482
280	SLD 6	0.64	1.64	41.38	11.6992	0.0247	-0.1792
280	SLD 7	0.84	-2.74	41.15	11.6069	0.0261	-0.2397
280	SLD 8	0.95	-2.82	41.15	11.6075	0.0261	-0.2707
280	SLD 9	-1.82	1.88	40.71	11.5252	0.0202	0.5349
280	SLD 10	-1.71	1.81	40.71	11.5258	0.0201	0.5039
280	SLD 11	-1.51	-2.57	40.48	11.4335	0.0216	0.4435
280	SLD 12	-1.4	-2.64	40.48	11.4341	0.0216	0.4124
280	SLD 13	-4.48	0.55	39.84	11.2906	0.0154	1.3083
280	SLD 14	-4.31	0.43	39.84	11.2916	0.0154	1.2605
280	SLD 15	-4.38	-0.79	39.77	11.2631	0.0158	1.2808
280	SLD 16	-4.22	-0.91	39.77	11.2641	0.0158	1.233
280	SLV 1	8.41	0.53	43.64	12.273	0.0402	-2.4428
280	SLV 2	8.8	0.25	43.64	12.2754	0.0402	-2.5541
280	SLV 3	8.63	-2.51	43.48	12.2095	0.0413	-2.5068
280	SLV 4	9.02	-2.79	43.47	12.2118	0.0412	-2.6182
280	SLV 5	1.82	4.5	41.99	11.8743	0.0267	-0.5244
280	SLV 6	2.07	4.32	41.99	11.8758	0.0267	-0.5955
280	SLV 7	2.55	-5.65	41.45	11.6625	0.0301	-0.7378

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
280	SLV 8	2.8	-5.83	41.45	11.664	0.0301	-0.8089
280	SLV 9	-3.67	4.9	40.41	11.4687	0.0162	1.0732
280	SLV 10	-3.42	4.72	40.41	11.4702	0.0162	1.0021
280	SLV 11	-2.94	-5.25	39.88	11.2569	0.0195	0.8597
280	SLV 12	-2.69	-5.43	39.88	11.2584	0.0195	0.7886
280	SLV 13	-9.89	1.86	38.39	10.9209	0.005	2.8824
280	SLV 14	-9.5	1.58	38.39	10.9232	0.005	2.7711
280	SLV 15	-9.67	-1.18	38.23	10.8573	0.0061	2.8184
280	SLV 16	-9.28	-1.46	38.23	10.8597	0.006	2.7071
280	CRTFP Ux+	0	0	0	0	0	0
280	CRTFP Ux-	0	0	0	0	0	0
280	CRTFP Uy+	0	0	0	0	0	0
280	CRTFP Uy-	0	0	0	0	0	0
281	SLU 1	-0.4	-0.39	37.64	10.6025	0.0116	0.123
281	SLU 2	-0.39	-0.32	37.62	10.596	0.0114	0.12
281	SLU 3	-0.41	-0.39	38.34	10.802	0.0118	0.126
281	SLU 4	-0.41	-0.35	38.33	10.798	0.0117	0.1242
281	SLU 5	-0.4	-0.33	38.06	10.7195	0.0115	0.1211
281	SLU 6	-0.42	-0.39	38.79	10.9255	0.0119	0.1271
281	SLU 7	-0.41	-0.35	38.78	10.9216	0.0118	0.1253
281	SLU 8	-0.41	-0.41	38.52	10.8496	0.0118	0.1251
281	SLU 9	-0.41	-0.37	38.51	10.8456	0.0117	0.1233
281	SLU 10	-0.42	-0.33	42.63	12.0069	0.0127	0.1287
281	SLU 11	-0.44	-0.39	43.35	12.2129	0.0131	0.1347
281	SLU 12	-0.44	-0.35	43.34	12.209	0.013	0.1329
281	SLU 13	-0.43	-0.34	43.07	12.1304	0.0128	0.1297
281	SLU 14	-0.45	-0.4	43.79	12.3364	0.0132	0.1357
281	SLU 15	-0.44	-0.36	43.78	12.3325	0.0131	0.134
281	SLU 16	-0.44	-0.41	43.53	12.2605	0.013	0.1338
281	SLU 17	-0.43	-0.37	43.52	12.2566	0.0129	0.132
281	SLU 18	-0.44	-0.4	44.79	12.6182	0.0134	0.1354
281	SLU 19	-0.44	-0.36	44.78	12.6142	0.0133	0.1336
281	SLU 20	-0.45	-0.41	45.23	12.7417	0.0135	0.1364
281	SLU 21	-0.44	-0.37	45.22	12.7377	0.0134	0.1346
281	SLU 22	-0.47	-0.36	42.02	11.84	0.0136	0.1418
281	SLU 23	-0.46	-0.29	42	11.8334	0.0134	0.1388
281	SLU 24	-0.48	-0.35	42.73	12.0394	0.0138	0.1448
281	SLU 25	-0.47	-0.31	42.72	12.0355	0.0137	0.143
281	SLU 26	-0.46	-0.3	42.44	11.9569	0.0135	0.1399
281	SLU 27	-0.48	-0.36	43.17	12.1629	0.0139	0.1459
281	SLU 28	-0.47	-0.32	43.16	12.159	0.0138	0.1441
281	SLU 29	-0.47	-0.37	42.9	12.087	0.0137	0.1439
281	SLU 30	-0.47	-0.33	42.89	12.0831	0.0136	0.1421
281	SLU 31	-0.48	-0.3	47.01	13.2444	0.0147	0.1475
281	SLU 32	-0.5	-0.36	47.74	13.4503	0.0151	0.1535
281	SLU 33	-0.5	-0.32	47.73	13.4464	0.015	0.1517
281	SLU 34	-0.49	-0.31	47.45	13.3679	0.0148	0.1485
281	SLU 35	-0.51	-0.37	48.18	13.5739	0.0152	0.1546
281	SLU 36	-0.5	-0.33	48.17	13.5699	0.0151	0.1528
281	SLU 37	-0.5	-0.38	47.91	13.4979	0.015	0.1526
281	SLU 38	-0.49	-0.34	47.9	13.494	0.0149	0.1508
281	SLU 39	-0.51	-0.37	49.17	13.8556	0.0154	0.1542
281	SLU 40	-0.5	-0.33	49.16	13.8517	0.0153	0.1524
281	SLU 41	-0.51	-0.37	49.62	13.9791	0.0155	0.1552
281	SLU 42	-0.5	-0.33	49.61	13.9752	0.0154	0.1534
281	SLU 43	-0.5	-0.52	47.42	13.359	0.0144	0.1534
281	SLU 44	-0.49	-0.45	47.41	13.3525	0.0142	0.1504
281	SLU 45	-0.51	-0.51	48.13	13.5585	0.0146	0.1564
281	SLU 46	-0.51	-0.47	48.12	13.5545	0.0145	0.1547
281	SLU 47	-0.5	-0.46	47.85	13.476	0.0143	0.1515
281	SLU 48	-0.52	-0.52	48.57	13.682	0.0147	0.1575
281	SLU 49	-0.51	-0.48	48.56	13.6781	0.0146	0.1557
281	SLU 50	-0.51	-0.53	48.31	13.6061	0.0146	0.1555
281	SLU 51	-0.51	-0.49	48.3	13.6021	0.0145	0.1537
281	SLU 52	-0.52	-0.46	52.41	14.7634	0.0155	0.1591
281	SLU 53	-0.54	-0.52	53.14	14.9694	0.0159	0.1651
281	SLU 54	-0.54	-0.48	53.13	14.9655	0.0158	0.1633
281	SLU 55	-0.53	-0.47	52.86	14.8869	0.0156	0.1602
281	SLU 56	-0.55	-0.53	53.58	15.0929	0.016	0.1662
281	SLU 57	-0.54	-0.49	53.57	15.089	0.0159	0.1644
281	SLU 58	-0.54	-0.54	53.32	15.017	0.0158	0.1642
281	SLU 59	-0.53	-0.5	53.31	15.0131	0.0157	0.1624
281	SLU 60	-0.54	-0.53	54.58	15.3747	0.0162	0.1658
281	SLU 61	-0.54	-0.49	54.57	15.3707	0.0161	0.164
281	SLU 62	-0.55	-0.53	55.02	15.4982	0.0163	0.1669
281	SLU 63	-0.54	-0.49	55.01	15.4942	0.0162	0.1651
281	SLU 64	-0.57	-0.49	51.81	14.5965	0.0164	0.1722
281	SLU 65	-0.56	-0.42	51.79	14.5899	0.0162	0.1692
281	SLU 66	-0.58	-0.48	52.52	14.7959	0.0166	0.1753
281	SLU 67	-0.57	-0.44	52.51	14.792	0.0165	0.1735
281	SLU 68	-0.56	-0.43	52.23	14.7134	0.0163	0.1703
281	SLU 69	-0.58	-0.49	52.96	14.9194	0.0167	0.1763
281	SLU 70	-0.57	-0.45	52.95	14.9155	0.0166	0.1745
281	SLU 71	-0.57	-0.5	52.69	14.8435	0.0166	0.1743
281	SLU 72	-0.57	-0.46	52.68	14.8396	0.0164	0.1726
281	SLU 73	-0.58	-0.43	56.8	16.0009	0.0175	0.1779
281	SLU 74	-0.6	-0.49	57.52	16.2068	0.0179	0.1839
281	SLU 75	-0.6	-0.45	57.51	16.2029	0.0178	0.1821
281	SLU 76	-0.59	-0.43	57.24	16.1244	0.0176	0.179
281	SLU 77	-0.61	-0.49	57.97	16.3304	0.018	0.185
281	SLU 78	-0.6	-0.45	57.96	16.3264	0.0179	0.1832

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
281	SLU 79	-0.6	-0.51	57.7	16.2544	0.0178	0.183
281	SLU 80	-0.59	-0.47	57.69	16.2505	0.0177	0.1812
281	SLU 81	-0.61	-0.5	58.96	16.6121	0.0182	0.1846
281	SLU 82	-0.6	-0.46	58.95	16.6082	0.0181	0.1828
281	SLU 83	-0.61	-0.5	59.4	16.7356	0.0183	0.1857
281	SLU 84	-0.6	-0.46	59.39	16.7317	0.0182	0.1839
281	SLE RA 1	-0.42	-0.38	38.89	10.9561	0.0122	0.1283
281	SLE RA 2	-0.42	-0.34	38.88	10.9517	0.0121	0.1264
281	SLE RA 3	-0.43	-0.38	39.36	11.089	0.0123	0.1304
281	SLE RA 4	-0.42	-0.35	39.35	11.0864	0.0123	0.1292
281	SLE RA 5	-0.42	-0.34	39.17	11.0341	0.0121	0.1271
281	SLE RA 6	-0.43	-0.38	39.66	11.1714	0.0124	0.1311
281	SLE RA 7	-0.43	-0.36	39.65	11.1688	0.0123	0.1299
281	SLE RA 8	-0.43	-0.39	39.48	11.1208	0.0123	0.1298
281	SLE RA 9	-0.42	-0.37	39.47	11.1182	0.0122	0.1286
281	SLE RA 10	-0.43	-0.34	42.22	11.8923	0.0129	0.1321
281	SLE RA 11	-0.45	-0.38	42.7	12.0297	0.0132	0.1361
281	SLE RA 12	-0.44	-0.36	42.69	12.027	0.0131	0.135
281	SLE RA 13	-0.44	-0.35	42.51	11.9747	0.013	0.1329
281	SLE RA 14	-0.45	-0.39	42.99	12.112	0.0132	0.1369
281	SLE RA 15	-0.45	-0.36	42.99	12.1094	0.0132	0.1357
281	SLE RA 16	-0.44	-0.4	42.82	12.0614	0.0131	0.1355
281	SLE RA 17	-0.44	-0.37	42.81	12.0588	0.0131	0.1344
281	SLE RA 18	-0.45	-0.39	43.66	12.2998	0.0134	0.1366
281	SLE RA 19	-0.44	-0.36	43.65	12.2972	0.0133	0.1354
281	SLE RA 20	-0.45	-0.39	43.95	12.3822	0.0134	0.1373
281	SLE RA 21	-0.45	-0.37	43.95	12.3796	0.0134	0.1361
281	SLE FR 1	-0.42	-0.38	38.89	10.9561	0.0122	0.1283
281	SLE FR 2	-0.42	-0.37	38.89	10.9552	0.0122	0.1279
281	SLE FR 3	-0.42	-0.38	39.01	10.989	0.0122	0.1286
281	SLE FR 4	-0.43	-0.38	40.32	11.3583	0.0125	0.1304
281	SLE FR 5	-0.43	-0.39	40.44	11.3922	0.0126	0.1311
281	SLE FR 6	-0.43	-0.39	41.27	11.628	0.0128	0.1325
281	SLE QP 1	-0.42	-0.38	38.89	10.9561	0.0122	0.1283
281	SLE QP 2	-0.43	-0.38	40.32	11.3592	0.0125	0.1308
281	SLD 1	3.35	0.08	41.2	11.5824	0.019	-0.9676
281	SLD 2	3.52	-0.03	41.2	11.5835	0.019	-1.0153
281	SLD 3	3.45	-1.26	41.13	11.5584	0.0196	-0.9951
281	SLD 4	3.62	-1.37	41.13	11.5595	0.0196	-1.0427
281	SLD 5	0.53	1.81	40.7	11.4623	0.0136	-0.1488
281	SLD 6	0.64	1.74	40.7	11.463	0.0136	-0.1797
281	SLD 7	0.85	-2.66	40.45	11.3825	0.0156	-0.2403
281	SLD 8	0.96	-2.73	40.45	11.3832	0.0156	-0.2712
281	SLD 9	-1.82	1.97	40.19	11.3353	0.0095	0.5328
281	SLD 10	-1.71	1.9	40.19	11.336	0.0095	0.5019
281	SLD 11	-1.5	-2.51	39.94	11.2554	0.0115	0.4413
281	SLD 12	-1.39	-2.58	39.94	11.2561	0.0115	0.4104
281	SLD 13	-4.48	0.6	39.51	11.1589	0.0054	1.3044
281	SLD 14	-4.31	0.49	39.51	11.16	0.0054	1.2567
281	SLD 15	-4.38	-0.74	39.43	11.1349	0.006	1.2769
281	SLD 16	-4.21	-0.85	39.43	11.1361	0.006	1.2293
281	SLV 1	8.42	0.66	42.39	11.8811	0.0278	-2.4384
281	SLV 2	8.81	0.41	42.39	11.8837	0.0278	-2.5494
281	SLV 3	8.64	-2.4	42.22	11.8256	0.0291	-2.5024
281	SLV 4	9.03	-2.65	42.22	11.8282	0.0291	-2.6134
281	SLV 5	1.82	4.61	41.2	11.5995	0.015	-0.524
281	SLV 6	2.07	4.45	41.2	11.6012	0.015	-0.5949
281	SLV 7	2.56	-5.58	40.62	11.4145	0.0196	-0.7375
281	SLV 8	2.81	-5.75	40.62	11.4162	0.0196	-0.8084
281	SLV 9	-3.67	4.98	40.01	11.3023	0.0055	1.07
281	SLV 10	-3.42	4.82	40.01	11.3039	0.0055	0.9991
281	SLV 11	-2.93	-5.22	39.43	11.1172	0.0101	0.8565
281	SLV 12	-2.68	-5.38	39.43	11.1189	0.0101	0.7856
281	SLV 13	-9.89	1.88	38.42	10.8903	-0.0041	2.8751
281	SLV 14	-9.5	1.63	38.42	10.8929	-0.0041	2.7641
281	SLV 15	-9.67	-1.18	38.25	10.8348	-0.0027	2.811
281	SLV 16	-9.28	-1.43	38.25	10.8374	-0.0027	2.7
281	CRTFP Ux+	0	0	0	0	0	0
281	CRTFP Ux-	0	0	0	0	0	0
281	CRTFP Uy+	0	0	0	0	0	0
281	CRTFP Uy-	0	0	0	0	0	0
282	SLU 1	-0.4	-0.31	37.45	10.5402	-0.0011	0.1212
282	SLU 2	-0.39	-0.25	37.44	10.5358	-0.0013	0.1183
282	SLU 3	-0.41	-0.31	38.15	10.7385	-0.0011	0.1242
282	SLU 4	-0.4	-0.27	38.15	10.7358	-0.0012	0.1224
282	SLU 5	-0.39	-0.25	37.88	10.6593	-0.0014	0.1193
282	SLU 6	-0.41	-0.31	38.6	10.8621	-0.0012	0.1252
282	SLU 7	-0.41	-0.27	38.59	10.8594	-0.0013	0.1235
282	SLU 8	-0.41	-0.33	38.33	10.7874	-0.0013	0.1233
282	SLU 9	-0.4	-0.29	38.33	10.7847	-0.0014	0.1215
282	SLU 10	-0.42	-0.24	42.44	11.9431	-0.0019	0.1269
282	SLU 11	-0.44	-0.3	43.15	12.1459	-0.0018	0.1328
282	SLU 12	-0.43	-0.26	43.15	12.1432	-0.0019	0.1311
282	SLU 13	-0.42	-0.25	42.88	12.0666	-0.002	0.128
282	SLU 14	-0.44	-0.31	43.6	12.2694	-0.0019	0.1339
282	SLU 15	-0.43	-0.27	43.59	12.2667	-0.002	0.1321
282	SLU 16	-0.43	-0.32	43.33	12.1947	-0.002	0.1319
282	SLU 17	-0.43	-0.28	43.33	12.192	-0.0021	0.1302
282	SLU 18	-0.44	-0.31	44.59	12.5507	-0.0021	0.1335
282	SLU 19	-0.43	-0.27	44.58	12.548	-0.0022	0.1318
282	SLU 20	-0.44	-0.32	45.03	12.6743	-0.0021	0.1346

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
282	SLU 21	-0.44	-0.28	45.03	12.6716	-0.0023	0.1328
282	SLU 22	-0.46	-0.27	41.79	11.7641	-0.0008	0.1398
282	SLU 23	-0.45	-0.21	41.78	11.7596	-0.001	0.1369
282	SLU 24	-0.47	-0.26	42.5	11.9624	-0.0008	0.1428
282	SLU 25	-0.46	-0.22	42.49	11.9597	-0.0009	0.141
282	SLU 26	-0.45	-0.21	42.22	11.8832	-0.0011	0.1379
282	SLU 27	-0.47	-0.27	42.94	12.086	-0.0009	0.1438
282	SLU 28	-0.47	-0.23	42.93	12.0833	-0.001	0.1421
282	SLU 29	-0.47	-0.28	42.68	12.0113	-0.001	0.1419
282	SLU 30	-0.46	-0.24	42.67	12.0086	-0.0011	0.1401
282	SLU 31	-0.48	-0.2	46.78	13.167	-0.0016	0.1455
282	SLU 32	-0.5	-0.26	47.49	13.3697	-0.0015	0.1514
282	SLU 33	-0.49	-0.22	47.49	13.367	-0.0016	0.1497
282	SLU 34	-0.48	-0.21	47.22	13.2905	-0.0017	0.1466
282	SLU 35	-0.5	-0.27	47.94	13.4933	-0.0016	0.1524
282	SLU 36	-0.49	-0.23	47.93	13.4906	-0.0017	0.1507
282	SLU 37	-0.49	-0.28	47.67	13.4186	-0.0016	0.1505
282	SLU 38	-0.49	-0.24	47.67	13.4159	-0.0018	0.1488
282	SLU 39	-0.5	-0.27	48.93	13.7746	-0.0017	0.1521
282	SLU 40	-0.49	-0.23	48.92	13.7719	-0.0019	0.1504
282	SLU 41	-0.5	-0.27	49.37	13.8981	-0.0018	0.1532
282	SLU 42	-0.5	-0.23	49.37	13.8954	-0.0019	0.1514
282	SLU 43	-0.5	-0.42	47.2	13.2827	-0.0015	0.1512
282	SLU 44	-0.49	-0.36	47.19	13.2782	-0.0017	0.1483
282	SLU 45	-0.51	-0.42	47.9	13.481	-0.0016	0.1542
282	SLU 46	-0.5	-0.38	47.89	13.4783	-0.0017	0.1524
282	SLU 47	-0.49	-0.36	47.63	13.4018	-0.0018	0.1493
282	SLU 48	-0.51	-0.42	48.34	13.6046	-0.0017	0.1552
282	SLU 49	-0.5	-0.38	48.34	13.6019	-0.0018	0.1535
282	SLU 50	-0.5	-0.44	48.08	13.5298	-0.0017	0.1533
282	SLU 51	-0.5	-0.4	48.07	13.5271	-0.0018	0.1515
282	SLU 52	-0.51	-0.35	52.18	14.6855	-0.0024	0.1569
282	SLU 53	-0.53	-0.41	52.9	14.8883	-0.0022	0.1628
282	SLU 54	-0.53	-0.37	52.89	14.8856	-0.0024	0.1611
282	SLU 55	-0.52	-0.36	52.63	14.8091	-0.0025	0.158
282	SLU 56	-0.54	-0.42	53.34	15.0119	-0.0023	0.1638
282	SLU 57	-0.53	-0.38	53.34	15.0092	-0.0024	0.1621
282	SLU 58	-0.53	-0.43	53.08	14.9371	-0.0024	0.1619
282	SLU 59	-0.53	-0.39	53.07	14.9344	-0.0025	0.1602
282	SLU 60	-0.54	-0.42	54.34	15.2931	-0.0025	0.1635
282	SLU 61	-0.53	-0.38	54.33	15.2905	-0.0026	0.1618
282	SLU 62	-0.54	-0.42	54.78	15.4167	-0.0026	0.1646
282	SLU 63	-0.53	-0.38	54.77	15.414	-0.0027	0.1628
282	SLU 64	-0.56	-0.38	51.54	14.5066	-0.0012	0.1698
282	SLU 65	-0.55	-0.31	51.53	14.5021	-0.0014	0.1669
282	SLU 66	-0.57	-0.37	52.24	14.7049	-0.0013	0.1728
282	SLU 67	-0.56	-0.33	52.24	14.7022	-0.0014	0.171
282	SLU 68	-0.55	-0.32	51.97	14.6257	-0.0015	0.1679
282	SLU 69	-0.57	-0.38	52.69	14.8284	-0.0014	0.1738
282	SLU 70	-0.57	-0.34	52.68	14.8258	-0.0015	0.172
282	SLU 71	-0.56	-0.39	52.42	14.7537	-0.0014	0.1718
282	SLU 72	-0.56	-0.35	52.42	14.751	-0.0015	0.1701
282	SLU 73	-0.58	-0.31	56.52	15.9094	-0.0021	0.1755
282	SLU 74	-0.6	-0.37	57.24	16.1122	-0.0019	0.1814
282	SLU 75	-0.59	-0.33	57.23	16.1095	-0.002	0.1797
282	SLU 76	-0.58	-0.32	56.97	16.033	-0.0022	0.1765
282	SLU 77	-0.6	-0.37	57.68	16.2358	-0.002	0.1824
282	SLU 78	-0.59	-0.34	57.68	16.2331	-0.0021	0.1807
282	SLU 79	-0.59	-0.39	57.42	16.161	-0.0021	0.1805
282	SLU 80	-0.59	-0.35	57.41	16.1583	-0.0022	0.1787
282	SLU 81	-0.6	-0.37	58.68	16.517	-0.0022	0.1821
282	SLU 82	-0.59	-0.34	58.67	16.5143	-0.0023	0.1804
282	SLU 83	-0.6	-0.38	59.12	16.6406	-0.0023	0.1832
282	SLU 84	-0.59	-0.34	59.11	16.6379	-0.0024	0.1814
282	SLE RA 1	-0.42	-0.3	38.69	10.8899	-0.001	0.1265
282	SLE RA 2	-0.41	-0.26	38.68	10.8869	-0.0011	0.1246
282	SLE RA 3	-0.42	-0.3	39.16	11.0221	-0.001	0.1285
282	SLE RA 4	-0.42	-0.27	39.16	11.0203	-0.0011	0.1273
282	SLE RA 5	-0.41	-0.26	38.98	10.9693	-0.0012	0.1253
282	SLE RA 6	-0.42	-0.3	39.46	11.1045	-0.0011	0.1292
282	SLE RA 7	-0.42	-0.27	39.45	11.1027	-0.0012	0.128
282	SLE RA 8	-0.42	-0.31	39.28	11.0547	-0.0011	0.1279
282	SLE RA 9	-0.42	-0.28	39.28	11.0529	-0.0012	0.1267
282	SLE RA 10	-0.43	-0.26	42.01	11.8251	-0.0016	0.1303
282	SLE RA 11	-0.44	-0.29	42.49	11.9603	-0.0015	0.1343
282	SLE RA 12	-0.44	-0.27	42.49	11.9585	-0.0016	0.1331
282	SLE RA 13	-0.43	-0.26	42.31	11.9075	-0.0016	0.131
282	SLE RA 14	-0.44	-0.3	42.79	12.0427	-0.0015	0.1349
282	SLE RA 15	-0.44	-0.27	42.78	12.0409	-0.0016	0.1338
282	SLE RA 16	-0.44	-0.31	42.61	11.9929	-0.0016	0.1336
282	SLE RA 17	-0.43	-0.28	42.61	11.9911	-0.0017	0.1325
282	SLE RA 18	-0.44	-0.3	43.45	12.2302	-0.0016	0.1347
282	SLE RA 19	-0.44	-0.27	43.45	12.2284	-0.0017	0.1336
282	SLE RA 20	-0.44	-0.3	43.75	12.3126	-0.0017	0.1354
282	SLE RA 21	-0.44	-0.28	43.74	12.3108	-0.0018	0.1343
282	SLE FR 1	-0.42	-0.3	38.69	10.8899	-0.001	0.1265
282	SLE FR 2	-0.41	-0.29	38.69	10.8893	-0.001	0.1261
282	SLE FR 3	-0.42	-0.3	38.81	10.9229	-0.001	0.1268
282	SLE FR 4	-0.42	-0.29	40.12	11.2914	-0.0012	0.1286
282	SLE FR 5	-0.42	-0.3	40.24	11.325	-0.0012	0.1293
282	SLE FR 6	-0.43	-0.3	41.07	11.5601	-0.0013	0.1306

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
282	SLE QP 1	-0.42	-0.3	38.69	10.8899	-0.001	0.1265
282	SLE QP 2	-0.42	-0.3	40.12	11.292	-0.0012	0.129
282	SLD 1	3.36	0.19	40.76	11.444	0.0047	-0.9673
282	SLD 2	3.52	0.09	40.76	11.4451	0.0047	-1.0148
282	SLD 3	3.45	-1.16	40.67	11.4239	0.0055	-0.9948
282	SLD 4	3.62	-1.25	40.67	11.425	0.0055	-1.0423
282	SLD 5	0.54	1.91	40.45	11.3679	-0.0006	-0.1499
282	SLD 6	0.65	1.84	40.45	11.3686	-0.0006	-0.1808
282	SLD 7	0.85	-2.59	40.15	11.3009	0.0019	-0.2415
282	SLD 8	0.96	-2.65	40.15	11.3016	0.002	-0.2724
282	SLD 9	-1.81	2.05	40.09	11.2824	-0.0044	0.5303
282	SLD 10	-1.7	1.98	40.09	11.2831	-0.0044	0.4995
282	SLD 11	-1.49	-2.45	39.79	11.2155	-0.0018	0.4387
282	SLD 12	-1.38	-2.51	39.79	11.2162	-0.0018	0.4079
282	SLD 13	-4.46	0.65	39.57	11.1591	-0.0079	1.3003
282	SLD 14	-4.3	0.56	39.57	11.1601	-0.0079	1.2527
282	SLD 15	-4.37	-0.7	39.48	11.139	-0.0071	1.2728
282	SLD 16	-4.2	-0.79	39.48	11.1401	-0.0071	1.2252
282	SLV 1	8.42	0.81	41.62	11.6475	0.0126	-2.4351
282	SLV 2	8.8	0.58	41.62	11.65	0.0126	-2.5458
282	SLV 3	8.64	-2.27	41.41	11.6007	0.0144	-2.4992
282	SLV 4	9.02	-2.49	41.41	11.6032	0.0144	-2.6099
282	SLV 5	1.83	4.73	40.89	11.4692	0.0003	-0.5243
282	SLV 6	2.07	4.59	40.88	11.4708	0.0003	-0.595
282	SLV 7	2.56	-5.51	40.19	11.3132	0.0061	-0.738
282	SLV 8	2.81	-5.65	40.19	11.3148	0.0061	-0.8087
282	SLV 9	-3.66	5.05	40.05	11.2692	-0.0085	1.0666
282	SLV 10	-3.41	4.91	40.05	11.2708	-0.0085	0.9959
282	SLV 11	-2.92	-5.19	39.35	11.1132	-0.0027	0.8529
282	SLV 12	-2.67	-5.33	39.35	11.1148	-0.0027	0.7822
282	SLV 13	-9.87	1.89	38.83	10.9808	-0.0168	2.8679
282	SLV 14	-9.48	1.66	38.83	10.9833	-0.0168	2.7572
282	SLV 15	-9.65	-1.18	38.62	10.934	-0.015	2.8038
282	SLV 16	-9.26	-1.41	38.62	10.9365	-0.015	2.693
282	CRTFP Ux+	0	0	0	0	0	0
282	CRTFP Ux-	0	0	0	0	0	0
282	CRTFP Uy+	0	0	0	0	0	0
282	CRTFP Uy-	0	0	0	0	0	0
283	SLU 1	-0.39	-0.24	37.73	10.6301	-0.0145	0.1191
283	SLU 2	-0.38	-0.17	37.73	10.6277	-0.0147	0.1163
283	SLU 3	-0.4	-0.23	38.44	10.8305	-0.0148	0.122
283	SLU 4	-0.4	-0.19	38.44	10.829	-0.0149	0.1203
283	SLU 5	-0.39	-0.18	38.18	10.7533	-0.0149	0.1173
283	SLU 6	-0.4	-0.23	38.89	10.9562	-0.0151	0.123
283	SLU 7	-0.4	-0.19	38.89	10.9547	-0.0152	0.1213
283	SLU 8	-0.4	-0.25	38.63	10.8814	-0.015	0.1211
283	SLU 9	-0.39	-0.21	38.63	10.8799	-0.0151	0.1194
283	SLU 10	-0.41	-0.16	42.79	12.0544	-0.0173	0.1248
283	SLU 11	-0.43	-0.22	43.5	12.2572	-0.0175	0.1306
283	SLU 12	-0.42	-0.18	43.5	12.2558	-0.0176	0.1289
283	SLU 13	-0.41	-0.17	43.24	12.18	-0.0176	0.1258
283	SLU 14	-0.43	-0.22	43.95	12.3829	-0.0178	0.1316
283	SLU 15	-0.43	-0.18	43.95	12.3814	-0.0179	0.1299
283	SLU 16	-0.43	-0.24	43.69	12.3081	-0.0177	0.1297
283	SLU 17	-0.42	-0.2	43.69	12.3067	-0.0178	0.128
283	SLU 18	-0.43	-0.22	44.96	12.6683	-0.0183	0.1313
283	SLU 19	-0.42	-0.18	44.96	12.6668	-0.0184	0.1296
283	SLU 20	-0.43	-0.23	45.41	12.7939	-0.0186	0.1323
283	SLU 21	-0.43	-0.19	45.41	12.7925	-0.0187	0.1306
283	SLU 22	-0.45	-0.18	42.09	11.8605	-0.0159	0.1375
283	SLU 23	-0.44	-0.12	42.09	11.858	-0.0161	0.1346
283	SLU 24	-0.46	-0.17	42.8	12.0609	-0.0163	0.1404
283	SLU 25	-0.46	-0.14	42.8	12.0594	-0.0164	0.1387
283	SLU 26	-0.45	-0.13	42.54	11.9837	-0.0164	0.1356
283	SLU 27	-0.46	-0.18	43.25	12.1865	-0.0165	0.1414
283	SLU 28	-0.46	-0.14	43.25	12.1851	-0.0166	0.1397
283	SLU 29	-0.46	-0.2	42.99	12.1118	-0.0165	0.1395
283	SLU 30	-0.45	-0.16	42.99	12.1103	-0.0166	0.1378
283	SLU 31	-0.47	-0.11	47.15	13.2848	-0.0188	0.1432
283	SLU 32	-0.49	-0.16	47.86	13.4876	-0.019	0.1489
283	SLU 33	-0.48	-0.12	47.86	13.4862	-0.0191	0.1472
283	SLU 34	-0.47	-0.11	47.6	13.4104	-0.0191	0.1442
283	SLU 35	-0.49	-0.17	48.31	13.6133	-0.0192	0.1499
283	SLU 36	-0.49	-0.13	48.31	13.6118	-0.0193	0.1482
283	SLU 37	-0.49	-0.18	48.05	13.5385	-0.0192	0.148
283	SLU 38	-0.48	-0.14	48.05	13.5371	-0.0193	0.1463
283	SLU 39	-0.49	-0.17	49.32	13.8986	-0.0198	0.1497
283	SLU 40	-0.49	-0.13	49.32	13.8972	-0.0199	0.148
283	SLU 41	-0.49	-0.17	49.77	14.0243	-0.02	0.1507
283	SLU 42	-0.49	-0.13	49.77	14.0229	-0.0202	0.149
283	SLU 43	-0.49	-0.33	47.55	13.3972	-0.0183	0.1486
283	SLU 44	-0.48	-0.26	47.55	13.3948	-0.0185	0.1457
283	SLU 45	-0.5	-0.32	48.27	13.5977	-0.0186	0.1515
283	SLU 46	-0.49	-0.28	48.26	13.5962	-0.0188	0.1498
283	SLU 47	-0.48	-0.27	48	13.5205	-0.0188	0.1467
283	SLU 48	-0.5	-0.32	48.71	13.7233	-0.0189	0.1525
283	SLU 49	-0.5	-0.28	48.71	13.7219	-0.019	0.1508
283	SLU 50	-0.49	-0.34	48.45	13.6486	-0.0189	0.1506
283	SLU 51	-0.49	-0.3	48.45	13.6471	-0.019	0.1489
283	SLU 52	-0.51	-0.25	52.61	14.8216	-0.0212	0.1543
283	SLU 53	-0.53	-0.3	53.33	15.0244	-0.0213	0.16

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
283	SLU 54	-0.52	-0.27	53.32	15.023	-0.0214	0.1583
283	SLU 55	-0.51	-0.26	53.06	14.9472	-0.0215	0.1553
283	SLU 56	-0.53	-0.31	53.77	15.1501	-0.0216	0.161
283	SLU 57	-0.52	-0.27	53.77	15.1486	-0.0217	0.1593
283	SLU 58	-0.52	-0.33	53.51	15.0753	-0.0216	0.1591
283	SLU 59	-0.52	-0.29	53.51	15.0738	-0.0217	0.1574
283	SLU 60	-0.53	-0.31	54.78	15.4354	-0.0222	0.1608
283	SLU 61	-0.52	-0.27	54.78	15.434	-0.0223	0.1591
283	SLU 62	-0.53	-0.32	55.23	15.5611	-0.0224	0.1618
283	SLU 63	-0.52	-0.28	55.23	15.5596	-0.0225	0.1601
283	SLU 64	-0.55	-0.27	51.91	14.6276	-0.0198	0.1669
283	SLU 65	-0.54	-0.21	51.91	14.6252	-0.02	0.1641
283	SLU 66	-0.56	-0.26	52.63	14.8281	-0.0201	0.1698
283	SLU 67	-0.55	-0.23	52.62	14.8266	-0.0202	0.1681
283	SLU 68	-0.54	-0.22	52.36	14.7509	-0.0202	0.1651
283	SLU 69	-0.56	-0.27	53.08	14.9537	-0.0204	0.1708
283	SLU 70	-0.56	-0.23	53.07	14.9523	-0.0205	0.1691
283	SLU 71	-0.56	-0.29	52.81	14.879	-0.0203	0.1689
283	SLU 72	-0.55	-0.25	52.81	14.8775	-0.0204	0.1672
283	SLU 73	-0.57	-0.2	56.97	16.052	-0.0226	0.1726
283	SLU 74	-0.59	-0.25	57.69	16.2548	-0.0228	0.1784
283	SLU 75	-0.58	-0.21	57.68	16.2533	-0.0229	0.1767
283	SLU 76	-0.57	-0.2	57.42	16.1776	-0.0229	0.1736
283	SLU 77	-0.59	-0.26	58.14	16.3805	-0.0231	0.1794
283	SLU 78	-0.58	-0.22	58.13	16.379	-0.0232	0.1777
283	SLU 79	-0.58	-0.27	57.87	16.3057	-0.023	0.1775
283	SLU 80	-0.58	-0.23	57.87	16.3042	-0.0231	0.1758
283	SLU 81	-0.59	-0.26	59.14	16.6658	-0.0236	0.1791
283	SLU 82	-0.58	-0.22	59.14	16.6644	-0.0237	0.1774
283	SLU 83	-0.59	-0.26	59.59	16.7915	-0.0239	0.1801
283	SLU 84	-0.59	-0.22	59.59	16.79	-0.024	0.1784
283	SLE RA 1	-0.41	-0.22	38.98	10.9816	-0.0149	0.1244
283	SLE RA 2	-0.4	-0.18	38.97	10.98	-0.015	0.1225
283	SLE RA 3	-0.42	-0.22	39.45	11.1152	-0.0151	0.1263
283	SLE RA 4	-0.41	-0.19	39.45	11.1143	-0.0152	0.1252
283	SLE RA 5	-0.4	-0.18	39.27	11.0638	-0.0152	0.1231
283	SLE RA 6	-0.42	-0.22	39.75	11.199	-0.0153	0.127
283	SLE RA 7	-0.41	-0.19	39.75	11.198	-0.0154	0.1258
283	SLE RA 8	-0.41	-0.23	39.57	11.1492	-0.0153	0.1257
283	SLE RA 9	-0.41	-0.2	39.57	11.1482	-0.0153	0.1246
283	SLE RA 10	-0.42	-0.17	42.35	11.9312	-0.0168	0.1282
283	SLE RA 11	-0.43	-0.21	42.82	12.0664	-0.0169	0.132
283	SLE RA 12	-0.43	-0.18	42.82	12.0654	-0.017	0.1309
283	SLE RA 13	-0.42	-0.17	42.65	12.0149	-0.017	0.1288
283	SLE RA 14	-0.44	-0.21	43.12	12.1502	-0.0171	0.1327
283	SLE RA 15	-0.43	-0.19	43.12	12.1492	-0.0172	0.1315
283	SLE RA 16	-0.43	-0.22	42.95	12.1003	-0.017	0.1314
283	SLE RA 17	-0.43	-0.2	42.95	12.0993	-0.0171	0.1303
283	SLE RA 18	-0.43	-0.21	43.79	12.3404	-0.0175	0.1325
283	SLE RA 19	-0.43	-0.18	43.79	12.3394	-0.0175	0.1314
283	SLE RA 20	-0.44	-0.21	44.09	12.4242	-0.0176	0.1332
283	SLE RA 21	-0.43	-0.19	44.09	12.4232	-0.0177	0.132
283	SLE FR 1	-0.41	-0.22	38.98	10.9816	-0.0149	0.1244
283	SLE FR 2	-0.41	-0.21	38.97	10.9813	-0.0149	0.124
283	SLE FR 3	-0.41	-0.22	39.1	11.0151	-0.015	0.1246
283	SLE FR 4	-0.42	-0.21	40.42	11.3889	-0.0157	0.1264
283	SLE FR 5	-0.42	-0.22	40.54	11.4228	-0.0157	0.1271
283	SLE FR 6	-0.42	-0.22	41.38	11.661	-0.0162	0.1284
283	SLE QP 1	-0.41	-0.22	38.98	10.9816	-0.0149	0.1244
283	SLE QP 2	-0.42	-0.22	40.42	11.3892	-0.0157	0.1268
283	SLD 1	3.35	0.3	40.84	11.4778	-0.0101	-0.9673
283	SLD 2	3.52	0.22	40.84	11.4787	-0.0101	-1.0147
283	SLD 3	3.45	-1.05	40.73	11.4588	-0.0092	-0.9948
283	SLD 4	3.62	-1.14	40.73	11.4598	-0.0092	-1.0422
283	SLD 5	0.54	2	40.72	11.4443	-0.0153	-0.1515
283	SLD 6	0.65	1.95	40.72	11.4449	-0.0153	-0.1822
283	SLD 7	0.86	-2.51	40.34	11.3813	-0.0124	-0.2431
283	SLD 8	0.97	-2.56	40.34	11.3819	-0.0124	-0.2739
283	SLD 9	-1.8	2.12	40.5	11.3966	-0.0189	0.5275
283	SLD 10	-1.69	2.07	40.5	11.3972	-0.0189	0.4967
283	SLD 11	-1.48	-2.39	40.12	11.3336	-0.016	0.4358
283	SLD 12	-1.38	-2.44	40.12	11.3342	-0.016	0.4051
283	SLD 13	-4.45	0.7	40.12	11.3187	-0.0221	1.2958
283	SLD 14	-4.28	0.62	40.11	11.3197	-0.0221	1.2484
283	SLD 15	-4.35	-0.65	40	11.2998	-0.0212	1.2683
283	SLD 16	-4.19	-0.74	40	11.3007	-0.0212	1.2209
283	SLV 1	8.4	0.95	41.41	11.5964	-0.0026	-2.4323
283	SLV 2	8.79	0.76	41.4	11.5986	-0.0026	-2.5427
283	SLV 3	8.62	-2.13	41.14	11.5522	-0.0006	-2.4964
283	SLV 4	9.01	-2.33	41.14	11.5544	-0.0006	-2.6069
283	SLV 5	1.83	4.84	41.12	11.5181	-0.0148	-0.5249
283	SLV 6	2.08	4.72	41.11	11.5195	-0.0148	-0.5955
283	SLV 7	2.57	-5.44	40.24	11.3707	-0.0081	-0.7388
283	SLV 8	2.81	-5.56	40.24	11.3721	-0.0081	-0.8093
283	SLV 9	-3.65	5.12	40.61	11.4064	-0.0232	1.0629
283	SLV 10	-3.4	5	40.6	11.4078	-0.0232	0.9924
283	SLV 11	-2.91	-5.16	39.73	11.259	-0.0165	0.8491
283	SLV 12	-2.66	-5.28	39.73	11.2604	-0.0165	0.7785
283	SLV 13	-9.84	1.89	39.7	11.2241	-0.0308	2.8605
283	SLV 14	-9.46	1.69	39.7	11.2263	-0.0307	2.75
283	SLV 15	-9.62	-1.2	39.44	11.1799	-0.0287	2.7963

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
283	SLV 16	-9.24	-1.39	39.44	11.1821	-0.0287	2.6859
283	CRTFP Ux+	0	0	0	0	0	0
283	CRTFP Ux-	0	0	0	0	0	0
283	CRTFP Uy+	0	0	0	0	0	0
283	CRTFP Uy-	0	0	0	0	0	0
284	SLU 1	-0.38	-0.17	38.44	10.8668	-0.0264	0.1168
284	SLU 2	-0.37	-0.1	38.45	10.8664	-0.0266	0.114
284	SLU 3	-0.39	-0.15	39.17	11.0725	-0.027	0.1196
284	SLU 4	-0.39	-0.12	39.17	11.0723	-0.0271	0.118
284	SLU 5	-0.38	-0.11	38.91	10.9961	-0.027	0.115
284	SLU 6	-0.4	-0.16	39.64	11.2022	-0.0275	0.1206
284	SLU 7	-0.39	-0.12	39.64	11.202	-0.0276	0.1189
284	SLU 8	-0.39	-0.17	39.37	11.1262	-0.0273	0.1187
284	SLU 9	-0.38	-0.14	39.37	11.126	-0.0274	0.117
284	SLU 10	-0.4	-0.08	43.64	12.3346	-0.0311	0.1225
284	SLU 11	-0.42	-0.13	44.36	12.5407	-0.0315	0.1281
284	SLU 12	-0.41	-0.09	44.36	12.5405	-0.0316	0.1264
284	SLU 13	-0.4	-0.09	44.1	12.4644	-0.0315	0.1234
284	SLU 14	-0.42	-0.14	44.82	12.6704	-0.0319	0.129
284	SLU 15	-0.42	-0.1	44.83	12.6702	-0.032	0.1274
284	SLU 16	-0.42	-0.15	44.56	12.5944	-0.0318	0.1272
284	SLU 17	-0.41	-0.12	44.56	12.5942	-0.0319	0.1255
284	SLU 18	-0.42	-0.13	45.86	12.9642	-0.0328	0.1289
284	SLU 19	-0.42	-0.1	45.86	12.964	-0.0329	0.1272
284	SLU 20	-0.43	-0.14	46.32	13.0939	-0.0333	0.1298
284	SLU 21	-0.42	-0.1	46.32	13.0937	-0.0334	0.1282
284	SLU 22	-0.44	-0.1	42.88	12.1231	-0.0295	0.1348
284	SLU 23	-0.43	-0.04	42.89	12.1228	-0.0297	0.1321
284	SLU 24	-0.45	-0.09	43.61	12.3288	-0.0301	0.1377
284	SLU 25	-0.45	-0.05	43.62	12.3286	-0.0302	0.136
284	SLU 26	-0.44	-0.04	43.35	12.2525	-0.0301	0.133
284	SLU 27	-0.46	-0.09	44.08	12.4585	-0.0305	0.1386
284	SLU 28	-0.45	-0.06	44.08	12.4583	-0.0306	0.137
284	SLU 29	-0.45	-0.11	43.81	12.3825	-0.0303	0.1368
284	SLU 30	-0.44	-0.07	43.81	12.3823	-0.0305	0.1351
284	SLU 31	-0.46	-0.02	48.08	13.591	-0.0341	0.1405
284	SLU 32	-0.48	-0.07	48.8	13.797	-0.0345	0.1461
284	SLU 33	-0.47	-0.03	48.8	13.7968	-0.0347	0.1445
284	SLU 34	-0.46	-0.02	48.54	13.7207	-0.0346	0.1415
284	SLU 35	-0.48	-0.07	49.26	13.9268	-0.035	0.1471
284	SLU 36	-0.48	-0.03	49.27	13.9266	-0.0351	0.1454
284	SLU 37	-0.48	-0.09	49	13.8508	-0.0348	0.1452
284	SLU 38	-0.47	-0.05	49	13.8506	-0.0349	0.1435
284	SLU 39	-0.48	-0.07	50.3	14.2206	-0.0359	0.1469
284	SLU 40	-0.48	-0.03	50.3	14.2204	-0.036	0.1452
284	SLU 41	-0.49	-0.08	50.76	14.3503	-0.0363	0.1479
284	SLU 42	-0.48	-0.04	50.76	14.3501	-0.0364	0.1462
284	SLU 43	-0.48	-0.24	48.46	13.696	-0.0333	0.1456
284	SLU 44	-0.47	-0.17	48.46	13.6957	-0.0335	0.1429
284	SLU 45	-0.49	-0.22	49.18	13.9017	-0.0339	0.1485
284	SLU 46	-0.48	-0.19	49.19	13.9015	-0.034	0.1468
284	SLU 47	-0.47	-0.18	48.92	13.8254	-0.0339	0.1438
284	SLU 48	-0.49	-0.23	49.65	14.0315	-0.0343	0.1494
284	SLU 49	-0.49	-0.19	49.65	14.0313	-0.0344	0.1478
284	SLU 50	-0.49	-0.25	49.38	13.9555	-0.0342	0.1475
284	SLU 51	-0.48	-0.21	49.38	13.9553	-0.0343	0.1459
284	SLU 52	-0.5	-0.15	53.65	15.1639	-0.038	0.1513
284	SLU 53	-0.52	-0.2	54.37	15.37	-0.0384	0.1569
284	SLU 54	-0.51	-0.17	54.37	15.3698	-0.0385	0.1553
284	SLU 55	-0.5	-0.16	54.11	15.2936	-0.0384	0.1523
284	SLU 56	-0.52	-0.21	54.83	15.4997	-0.0388	0.1579
284	SLU 57	-0.51	-0.17	54.84	15.4995	-0.0389	0.1562
284	SLU 58	-0.51	-0.23	54.57	15.4237	-0.0387	0.156
284	SLU 59	-0.51	-0.19	54.57	15.4235	-0.0388	0.1543
284	SLU 60	-0.52	-0.21	55.87	15.7935	-0.0397	0.1577
284	SLU 61	-0.51	-0.17	55.87	15.7933	-0.0398	0.156
284	SLU 62	-0.52	-0.21	56.33	15.9232	-0.0401	0.1587
284	SLU 63	-0.51	-0.17	56.33	15.923	-0.0403	0.157
284	SLU 64	-0.54	-0.17	52.9	14.9524	-0.0364	0.1637
284	SLU 65	-0.53	-0.11	52.9	14.9521	-0.0365	0.1609
284	SLU 66	-0.55	-0.16	53.62	15.1581	-0.037	0.1665
284	SLU 67	-0.54	-0.12	53.63	15.1579	-0.0371	0.1649
284	SLU 68	-0.53	-0.11	53.36	15.0818	-0.037	0.1619
284	SLU 69	-0.55	-0.17	54.09	15.2878	-0.0374	0.1675
284	SLU 70	-0.55	-0.13	54.09	15.2876	-0.0375	0.1658
284	SLU 71	-0.54	-0.18	53.82	15.2118	-0.0372	0.1656
284	SLU 72	-0.54	-0.14	53.82	15.2116	-0.0373	0.1639
284	SLU 73	-0.56	-0.09	58.09	16.4203	-0.041	0.1694
284	SLU 74	-0.57	-0.14	58.81	16.6263	-0.0414	0.175
284	SLU 75	-0.57	-0.1	58.81	16.6261	-0.0415	0.1733
284	SLU 76	-0.56	-0.09	58.55	16.55	-0.0415	0.1703
284	SLU 77	-0.58	-0.14	59.27	16.756	-0.0419	0.1759
284	SLU 78	-0.57	-0.11	59.28	16.7558	-0.042	0.1743
284	SLU 79	-0.57	-0.16	59.01	16.68	-0.0417	0.174
284	SLU 80	-0.57	-0.12	59.01	16.6798	-0.0418	0.1724
284	SLU 81	-0.58	-0.14	60.31	17.0499	-0.0428	0.1757
284	SLU 82	-0.57	-0.1	60.31	17.0497	-0.0429	0.1741
284	SLU 83	-0.58	-0.15	60.77	17.1796	-0.0432	0.1767
284	SLU 84	-0.57	-0.11	60.77	17.1794	-0.0433	0.175
284	SLE RA 1	-0.4	-0.15	39.71	11.2257	-0.0273	0.1219
284	SLE RA 2	-0.39	-0.1	39.71	11.2255	-0.0274	0.1201

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
284	SLE RA 3	-0.41	-0.14	40.2	11.3629	-0.0277	0.1238
284	SLE RA 4	-0.4	-0.11	40.2	11.3627	-0.0278	0.1227
284	SLE RA 5	-0.4	-0.11	40.02	11.312	-0.0277	0.1207
284	SLE RA 6	-0.41	-0.14	40.51	11.4493	-0.028	0.1245
284	SLE RA 7	-0.41	-0.12	40.51	11.4492	-0.0281	0.1234
284	SLE RA 8	-0.41	-0.15	40.33	11.3987	-0.0279	0.1232
284	SLE RA 9	-0.4	-0.13	40.33	11.3985	-0.028	0.1221
284	SLE RA 10	-0.41	-0.09	43.17	12.2043	-0.0304	0.1257
284	SLE RA 11	-0.43	-0.12	43.66	12.3417	-0.0307	0.1295
284	SLE RA 12	-0.42	-0.1	43.66	12.3415	-0.0308	0.1284
284	SLE RA 13	-0.41	-0.09	43.48	12.2908	-0.0307	0.1264
284	SLE RA 14	-0.43	-0.13	43.97	12.4282	-0.031	0.1301
284	SLE RA 15	-0.42	-0.1	43.97	12.428	-0.031	0.129
284	SLE RA 16	-0.42	-0.14	43.79	12.3775	-0.0309	0.1289
284	SLE RA 17	-0.42	-0.11	43.79	12.3774	-0.0309	0.1277
284	SLE RA 18	-0.43	-0.13	44.65	12.624	-0.0316	0.13
284	SLE RA 19	-0.42	-0.1	44.66	12.6239	-0.0316	0.1289
284	SLE RA 20	-0.43	-0.13	44.96	12.7105	-0.0319	0.1306
284	SLE RA 21	-0.43	-0.1	44.96	12.7104	-0.0319	0.1295
284	SLE FR 1	-0.4	-0.15	39.71	11.2257	-0.0273	0.1219
284	SLE FR 2	-0.4	-0.14	39.71	11.2257	-0.0273	0.1216
284	SLE FR 3	-0.4	-0.15	39.84	11.2603	-0.0274	0.1222
284	SLE FR 4	-0.41	-0.13	41.2	11.6452	-0.0286	0.124
284	SLE FR 5	-0.41	-0.14	41.32	11.6798	-0.0287	0.1246
284	SLE FR 6	-0.41	-0.14	42.18	11.9249	-0.0294	0.126
284	SLE QP 1	-0.4	-0.15	39.71	11.2257	-0.0273	0.1219
284	SLE QP 2	-0.41	-0.14	41.2	11.6452	-0.0286	0.1243
284	SLD 1	3.35	0.41	41.42	11.6887	-0.023	-0.9675
284	SLD 2	3.51	0.33	41.42	11.6893	-0.0229	-1.0148
284	SLD 3	3.44	-0.95	41.28	11.6657	-0.022	-0.995
284	SLD 4	3.61	-1.02	41.28	11.6663	-0.022	-1.0423
284	SLD 5	0.55	2.09	41.48	11.693	-0.0283	-0.1533
284	SLD 6	0.65	2.05	41.48	11.6934	-0.0283	-0.184
284	SLD 7	0.86	-2.43	41	11.6164	-0.0252	-0.2449
284	SLD 8	0.97	-2.48	41	11.6168	-0.0252	-0.2756
284	SLD 9	-1.79	2.2	41.39	11.6736	-0.032	0.5243
284	SLD 10	-1.68	2.15	41.39	11.674	-0.032	0.4936
284	SLD 11	-1.47	-2.33	40.91	11.597	-0.0289	0.4327
284	SLD 12	-1.36	-2.38	40.91	11.5975	-0.0288	0.402
284	SLD 13	-4.43	0.74	41.11	11.6241	-0.0352	1.291
284	SLD 14	-4.26	0.67	41.11	11.6247	-0.0351	1.2437
284	SLD 15	-4.33	-0.62	40.97	11.6011	-0.0342	1.2635
284	SLD 16	-4.17	-0.69	40.97	11.6018	-0.0342	1.2162
284	SLV 1	8.38	1.1	41.73	11.7467	-0.0154	-2.4295
284	SLV 2	8.76	0.93	41.72	11.7482	-0.0154	-2.5396
284	SLV 3	8.6	-2	41.4	11.6935	-0.0133	-2.4936
284	SLV 4	8.98	-2.16	41.39	11.695	-0.0132	-2.6038
284	SLV 5	1.83	4.95	41.86	11.7562	-0.0279	-0.5259
284	SLV 6	2.07	4.85	41.85	11.7572	-0.0278	-0.5962
284	SLV 7	2.56	-5.36	40.76	11.5786	-0.0208	-0.7397
284	SLV 8	2.81	-5.47	40.75	11.5796	-0.0207	-0.81
284	SLV 9	-3.63	5.19	41.64	11.7108	-0.0364	1.0587
284	SLV 10	-3.38	5.08	41.64	11.7118	-0.0364	0.9884
284	SLV 11	-2.89	-5.13	40.54	11.5333	-0.0293	0.8449
284	SLV 12	-2.65	-5.23	40.53	11.5342	-0.0293	0.7746
284	SLV 13	-9.8	1.88	41	11.5955	-0.0439	2.8524
284	SLV 14	-9.42	1.72	40.99	11.597	-0.0439	2.7423
284	SLV 15	-9.58	-1.21	40.67	11.5422	-0.0418	2.7883
284	SLV 16	-9.2	-1.38	40.66	11.5437	-0.0417	2.6782
284	CRTFP Ux+	0	0	0	0	0	0
284	CRTFP Ux-	0	0	0	0	0	0
284	CRTFP Uy+	0	0	0	0	0	0
284	CRTFP Uy-	0	0	0	0	0	0
285	SLU 1	-0.95	-0.23	101.57	33.1711	-7.1797	0.3109
285	SLU 2	-0.93	-0.07	101.6	33.1779	-7.1831	0.314
285	SLU 3	-0.98	-0.2	103.51	33.8029	-7.3174	0.3212
285	SLU 4	-0.96	-0.1	103.53	33.8069	-7.3194	0.323
285	SLU 5	-0.94	-0.08	102.83	33.579	-7.2714	0.3159
285	SLU 6	-0.98	-0.21	104.74	34.204	-7.4056	0.3231
285	SLU 7	-0.97	-0.11	104.76	34.208	-7.4077	0.3249
285	SLU 8	-0.97	-0.25	104.04	33.9733	-7.3561	0.3148
285	SLU 9	-0.95	-0.16	104.06	33.9774	-7.3582	0.3166
285	SLU 10	-1	0	115.43	37.6994	-8.1708	0.3436
285	SLU 11	-1.04	-0.12	117.34	38.3244	-8.3051	0.3508
285	SLU 12	-1.03	-0.03	117.35	38.3285	-8.3072	0.3526
285	SLU 13	-1.01	-0.01	116.66	38.1005	-8.2591	0.3455
285	SLU 14	-1.05	-0.13	118.57	38.7255	-8.3933	0.3527
285	SLU 15	-1.04	-0.04	118.59	38.7296	-8.3954	0.3545
285	SLU 16	-1.04	-0.18	117.87	38.4948	-8.3438	0.3443
285	SLU 17	-1.02	-0.08	117.89	38.4989	-8.3459	0.3462
285	SLU 18	-1.05	-0.12	121.33	39.6304	-8.5907	0.3532
285	SLU 19	-1.04	-0.03	121.34	39.6345	-8.5928	0.355
285	SLU 20	-1.06	-0.13	122.56	40.0315	-8.6789	0.3551
285	SLU 21	-1.05	-0.04	122.58	40.0356	-8.681	0.3569
285	SLU 22	-1.1	-0.04	113.32	37.0092	-8.011	0.3745
285	SLU 23	-1.08	0.12	113.35	37.016	-8.0145	0.3775
285	SLU 24	-1.12	0	115.26	37.641	-8.1488	0.3847
285	SLU 25	-1.11	0.09	115.27	37.6451	-8.1508	0.3866
285	SLU 26	-1.09	0.11	114.58	37.4171	-8.1028	0.3794
285	SLU 27	-1.13	-0.02	116.49	38.0421	-8.237	0.3866
285	SLU 28	-1.12	0.08	116.51	38.0462	-8.2391	0.3885

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
285	SLU 29	-1.12	-0.06	115.79	37.8114	-8.1875	0.3783
285	SLU 30	-1.1	0.03	115.8	37.8155	-8.1896	0.3801
285	SLU 31	-1.15	0.19	127.17	41.5376	-9.0022	0.4071
285	SLU 32	-1.19	0.07	129.08	42.1626	-9.1365	0.4143
285	SLU 33	-1.18	0.17	129.1	42.1666	-9.1385	0.4161
285	SLU 34	-1.15	0.18	128.41	41.9387	-9.0905	0.409
285	SLU 35	-1.2	0.06	130.32	42.5637	-9.2247	0.4162
285	SLU 36	-1.19	0.16	130.33	42.5677	-9.2268	0.418
285	SLU 37	-1.19	0.01	129.61	42.333	-9.1752	0.4079
285	SLU 38	-1.17	0.11	129.63	42.3371	-9.1773	0.4097
285	SLU 39	-1.2	0.07	133.07	43.4686	-9.4221	0.4167
285	SLU 40	-1.19	0.16	133.09	43.4727	-9.4241	0.4185
285	SLU 41	-1.21	0.06	134.31	43.8697	-9.5103	0.4186
285	SLU 42	-1.19	0.15	134.32	43.8738	-9.5124	0.4204
285	SLU 43	-1.19	-0.37	128.02	41.8065	-9.0485	0.3824
285	SLU 44	-1.17	-0.21	128.05	41.8132	-9.052	0.3855
285	SLU 45	-1.21	-0.33	129.96	42.4382	-9.1862	0.3927
285	SLU 46	-1.2	-0.24	129.97	42.4423	-9.1883	0.3945
285	SLU 47	-1.17	-0.22	129.28	42.2143	-9.1402	0.3874
285	SLU 48	-1.22	-0.34	131.19	42.8393	-9.2745	0.3946
285	SLU 49	-1.21	-0.25	131.21	42.8434	-9.2765	0.3964
285	SLU 50	-1.2	-0.39	130.49	42.6087	-9.225	0.3863
285	SLU 51	-1.19	-0.29	130.5	42.6127	-9.2271	0.3881
285	SLU 52	-1.23	-0.13	141.87	46.3348	-10.0397	0.4151
285	SLU 53	-1.28	-0.26	143.78	46.9598	-10.1739	0.4223
285	SLU 54	-1.27	-0.16	143.8	46.9638	-10.176	0.4241
285	SLU 55	-1.24	-0.14	143.11	46.7359	-10.1279	0.417
285	SLU 56	-1.29	-0.27	145.02	47.3609	-10.2622	0.4242
285	SLU 57	-1.27	-0.17	145.03	47.3649	-10.2642	0.426
285	SLU 58	-1.27	-0.31	144.31	47.1302	-10.2127	0.4158
285	SLU 59	-1.26	-0.22	144.33	47.1343	-10.2148	0.4177
285	SLU 60	-1.29	-0.26	147.77	48.2658	-10.4595	0.4247
285	SLU 61	-1.27	-0.16	147.79	48.2699	-10.4616	0.4265
285	SLU 62	-1.29	-0.27	149.01	48.6669	-10.5478	0.4266
285	SLU 63	-1.28	-0.17	149.02	48.671	-10.5498	0.4284
285	SLU 64	-1.34	-0.18	139.77	45.6446	-9.8799	0.446
285	SLU 65	-1.31	-0.02	139.79	45.6514	-9.8834	0.449
285	SLU 66	-1.36	-0.14	141.7	46.2764	-10.0176	0.4562
285	SLU 67	-1.35	-0.05	141.72	46.2805	-10.0197	0.4581
285	SLU 68	-1.32	-0.03	141.03	46.0525	-9.9716	0.4509
285	SLU 69	-1.37	-0.15	142.94	46.6775	-10.1058	0.4581
285	SLU 70	-1.35	-0.06	142.95	46.6816	-10.1079	0.46
285	SLU 71	-1.35	-0.2	142.23	46.4468	-10.0564	0.4498
285	SLU 72	-1.34	-0.1	142.25	46.4509	-10.0585	0.4516
285	SLU 73	-1.38	0.06	153.62	50.1729	-10.8711	0.4786
285	SLU 74	-1.43	-0.06	155.53	50.7979	-11.0053	0.4858
285	SLU 75	-1.41	0.03	155.55	50.802	-11.0074	0.4876
285	SLU 76	-1.39	0.05	154.85	50.574	-10.9593	0.4805
285	SLU 77	-1.44	-0.07	156.76	51.199	-11.0935	0.4877
285	SLU 78	-1.42	0.02	156.78	51.2031	-11.0956	0.4895
285	SLU 79	-1.42	-0.12	156.06	50.9684	-11.0441	0.4793
285	SLU 80	-1.41	-0.03	156.08	50.9724	-11.0462	0.4812
285	SLU 81	-1.43	-0.07	159.52	52.104	-11.2909	0.4882
285	SLU 82	-1.42	0.03	159.54	52.108	-11.293	0.49
285	SLU 83	-1.44	-0.08	160.75	52.5051	-11.3791	0.4901
285	SLU 84	-1.43	0.02	160.77	52.5091	-11.3812	0.4919
285	SLE RA 1	-1	-0.18	104.93	34.2677	-7.4172	0.3291
285	SLE RA 2	-0.98	-0.07	104.95	34.2722	-7.4195	0.3311
285	SLE RA 3	-1.01	-0.15	106.22	34.6889	-7.509	0.3359
285	SLE RA 4	-1	-0.09	106.23	34.6916	-7.5104	0.3371
285	SLE RA 5	-0.99	-0.08	105.77	34.5396	-7.4783	0.3324
285	SLE RA 6	-1.02	-0.16	107.04	34.9563	-7.5678	0.3372
285	SLE RA 7	-1.01	-0.1	107.05	34.959	-7.5692	0.3384
285	SLE RA 8	-1.01	-0.19	106.58	34.8025	-7.5348	0.3316
285	SLE RA 9	-1	-0.13	106.59	34.8052	-7.5362	0.3329
285	SLE RA 10	-1.03	-0.02	114.17	37.2866	-8.078	0.3508
285	SLE RA 11	-1.06	-0.1	115.44	37.7032	-8.1675	0.3556
285	SLE RA 12	-1.05	-0.04	115.45	37.706	-8.1689	0.3569
285	SLE RA 13	-1.03	-0.03	114.99	37.554	-8.1368	0.3521
285	SLE RA 14	-1.06	-0.11	116.26	37.9706	-8.2263	0.3569
285	SLE RA 15	-1.05	-0.05	116.27	37.9734	-8.2277	0.3581
285	SLE RA 16	-1.05	-0.14	115.79	37.8168	-8.1933	0.3513
285	SLE RA 17	-1.04	-0.08	115.8	37.8196	-8.1947	0.3526
285	SLE RA 18	-1.06	-0.11	118.1	38.5739	-8.3579	0.3572
285	SLE RA 19	-1.05	-0.04	118.11	38.5766	-8.3593	0.3585
285	SLE RA 20	-1.07	-0.11	118.92	38.8413	-8.4167	0.3585
285	SLE RA 21	-1.06	-0.05	118.93	38.844	-8.4181	0.3597
285	SLE FR 1	-1	-0.18	104.93	34.2677	-7.4172	0.3291
285	SLE FR 2	-0.99	-0.16	104.93	34.2686	-7.4177	0.3295
285	SLE FR 3	-1	-0.18	105.26	34.3747	-7.4407	0.3296
285	SLE FR 4	-1.01	-0.13	108.88	35.5605	-7.6999	0.3379
285	SLE FR 5	-1.02	-0.16	109.21	35.6665	-7.7229	0.338
285	SLE FR 6	-1.03	-0.14	111.51	36.4208	-7.8875	0.3432
285	SLE QP 1	-1	-0.18	104.93	34.2677	-7.4172	0.3291
285	SLE QP 2	-1.02	-0.16	108.88	35.5596	-7.6994	0.3375
285	SLD 1	8.55	1.33	108.56	35.3946	-7.6185	-2.738
285	SLD 2	8.96	1.19	108.55	35.3945	-7.6177	-2.8818
285	SLD 3	8.79	-2.16	108.12	35.2876	-7.5817	-3.0029
285	SLD 4	9.2	-2.3	108.11	35.2875	-7.5809	-3.1467
285	SLD 5	1.42	5.61	109.45	35.6723	-7.7311	-0.1583
285	SLD 6	1.69	5.52	109.45	35.6723	-7.7306	-0.2516

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
285	SLD 7	2.22	-6.03	107.99	35.3158	-7.6084	-1.0413
285	SLD 8	2.49	-6.12	107.98	35.3157	-7.6079	-1.1346
285	SLD 9	-4.52	5.81	109.78	35.8034	-7.7909	1.8096
285	SLD 10	-4.25	5.72	109.78	35.8034	-7.7904	1.7163
285	SLD 11	-3.72	-5.83	108.31	35.4469	-7.6682	0.9266
285	SLD 12	-3.45	-5.92	108.31	35.4468	-7.6677	0.8333
285	SLD 13	-11.23	1.99	109.65	35.8316	-7.8179	3.8217
285	SLD 14	-10.82	1.85	109.64	35.8315	-7.8171	3.6779
285	SLD 15	-10.99	-1.5	109.21	35.7246	-7.7811	3.5568
285	SLD 16	-10.58	-1.64	109.2	35.7245	-7.7803	3.4131
285	SLV 1	21.35	3.21	108.12	35.1717	-7.5092	-6.8625
285	SLV 2	22.32	2.89	108.1	35.1714	-7.5074	-7.1974
285	SLV 3	21.91	-4.75	107.12	34.9264	-7.4253	-7.4686
285	SLV 4	22.88	-5.07	107.1	34.9262	-7.4235	-7.8035
285	SLV 5	4.68	12.98	110.18	35.8151	-7.7699	-0.8465
285	SLV 6	5.3	12.77	110.17	35.815	-7.7687	-1.0604
285	SLV 7	6.55	-13.55	106.83	34.9978	-7.4902	-2.8669
285	SLV 8	7.17	-13.76	106.82	34.9976	-7.489	-3.0808
285	SLV 9	-9.2	13.45	110.94	36.1215	-7.9098	3.7559
285	SLV 10	-8.58	13.24	110.93	36.1214	-7.9086	3.5419
285	SLV 11	-7.33	-13.09	107.59	35.3041	-7.6301	1.7354
285	SLV 12	-6.71	-13.29	107.58	35.304	-7.6289	1.5215
285	SLV 13	-24.91	4.76	110.66	36.1929	-7.9753	8.4786
285	SLV 14	-23.94	4.43	110.65	36.1927	-7.9735	8.1436
285	SLV 15	-24.35	-3.2	109.66	35.9477	-7.8914	7.8725
285	SLV 16	-23.38	-3.53	109.64	35.9475	-7.8896	7.5375
285	CRTFP Ux+	0	0	0	0	0	0
285	CRTFP Ux-	0	0	0	0	0	0
285	CRTFP Uy+	0	0	0	0	0	0
285	CRTFP Uy-	0	0	0	0	0	0
288	SLU 1	-0.25	-0.03	26.61	8.076	3.5824	0.0836
288	SLU 2	-0.24	0.01	26.62	8.0783	3.5836	0.0764
288	SLU 3	-0.26	-0.02	27.12	8.2304	3.6509	0.0842
288	SLU 4	-0.25	0.01	27.12	8.2318	3.6517	0.0799
288	SLU 5	-0.25	0.01	26.94	8.1766	3.6274	0.0774
288	SLU 6	-0.26	-0.02	27.44	8.3286	3.6947	0.0852
288	SLU 7	-0.26	0	27.45	8.33	3.6955	0.0809
288	SLU 8	-0.25	-0.03	27.26	8.2725	3.6699	0.0856
288	SLU 9	-0.25	-0.01	27.26	8.2739	3.6707	0.0812
288	SLU 10	-0.26	0.04	30.25	9.184	4.073	0.079
288	SLU 11	-0.27	0.01	30.75	9.3361	4.1403	0.0869
288	SLU 12	-0.27	0.03	30.76	9.3375	4.1411	0.0825
288	SLU 13	-0.27	0.04	30.58	9.2823	4.1168	0.08
288	SLU 14	-0.28	0	31.08	9.4343	4.1841	0.0879
288	SLU 15	-0.27	0.03	31.08	9.4357	4.1848	0.0835
288	SLU 16	-0.27	-0.01	30.89	9.3782	4.1593	0.0883
288	SLU 17	-0.27	0.02	30.9	9.3796	4.1601	0.0839
288	SLU 18	-0.28	0.01	31.8	9.6556	4.2815	0.0874
288	SLU 19	-0.27	0.03	31.81	9.657	4.2823	0.0831
288	SLU 20	-0.28	0.01	32.13	9.7538	4.3253	0.0884
288	SLU 21	-0.28	0.03	32.13	9.7552	4.326	0.084
288	SLU 22	-0.29	0.03	29.69	9.0117	3.9971	0.0888
288	SLU 23	-0.28	0.07	29.7	9.014	3.9983	0.0815
288	SLU 24	-0.3	0.04	30.2	9.1661	4.0656	0.0894
288	SLU 25	-0.29	0.06	30.2	9.1675	4.0664	0.085
288	SLU 26	-0.29	0.06	30.02	9.1123	4.0421	0.0825
288	SLU 27	-0.3	0.03	30.52	9.2644	4.1094	0.0904
288	SLU 28	-0.29	0.06	30.53	9.2657	4.1101	0.086
288	SLU 29	-0.29	0.02	30.34	9.2082	4.0846	0.0908
288	SLU 30	-0.29	0.05	30.34	9.2096	4.0854	0.0864
288	SLU 31	-0.3	0.09	33.33	10.1197	4.4877	0.0842
288	SLU 32	-0.31	0.06	33.83	10.2718	4.555	0.0921
288	SLU 33	-0.31	0.09	33.84	10.2732	4.5557	0.0877
288	SLU 34	-0.3	0.09	33.66	10.218	4.5315	0.0852
288	SLU 35	-0.32	0.06	34.16	10.37	4.5988	0.093
288	SLU 36	-0.31	0.08	34.17	10.3714	4.5995	0.0887
288	SLU 37	-0.31	0.05	33.98	10.3139	4.574	0.0934
288	SLU 38	-0.31	0.07	33.98	10.3153	4.5748	0.0891
288	SLU 39	-0.32	0.06	34.88	10.5913	4.6962	0.0926
288	SLU 40	-0.31	0.09	34.89	10.5927	4.697	0.0882
288	SLU 41	-0.32	0.06	35.21	10.6895	4.74	0.0936
288	SLU 42	-0.31	0.08	35.21	10.6909	4.7407	0.0892
288	SLU 43	-0.31	-0.05	33.53	10.178	4.5149	0.107
288	SLU 44	-0.31	-0.01	33.54	10.1803	4.5162	0.0997
288	SLU 45	-0.32	-0.04	34.04	10.3324	4.5834	0.1076
288	SLU 46	-0.31	-0.02	34.05	10.3338	4.5842	0.1032
288	SLU 47	-0.31	-0.02	33.87	10.2786	4.56	0.1007
288	SLU 48	-0.32	-0.05	34.37	10.4306	4.6272	0.1085
288	SLU 49	-0.32	-0.02	34.37	10.432	4.628	0.1042
288	SLU 50	-0.32	-0.06	34.18	10.3745	4.6025	0.1089
288	SLU 51	-0.31	-0.03	34.19	10.3759	4.6032	0.1046
288	SLU 52	-0.32	0.01	37.18	11.286	5.0056	0.1023
288	SLU 53	-0.34	-0.02	37.68	11.4381	5.0728	0.1102
288	SLU 54	-0.33	0	37.68	11.4395	5.0736	0.1058
288	SLU 55	-0.33	0.01	37.5	11.3842	5.0494	0.1033
288	SLU 56	-0.34	-0.02	38	11.5363	5.1166	0.1112
288	SLU 57	-0.34	0	38.01	11.5377	5.1174	0.1068
288	SLU 58	-0.33	-0.03	37.82	11.4802	5.0919	0.1116
288	SLU 59	-0.33	-0.01	37.83	11.4816	5.0926	0.1072
288	SLU 60	-0.34	-0.02	38.73	11.7576	5.214	0.1108
288	SLU 61	-0.33	0.01	38.73	11.759	5.2148	0.1064

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
288	SLU 62	-0.34	-0.02	39.05	11.8558	5.2578	0.1117
288	SLU 63	-0.34	0	39.06	11.8572	5.2586	0.1074
288	SLU 64	-0.35	0	36.61	11.1137	4.9296	0.1121
288	SLU 65	-0.35	0.04	36.62	11.116	4.9309	0.1049
288	SLU 66	-0.36	0.01	37.12	11.2681	4.9981	0.1127
288	SLU 67	-0.35	0.03	37.13	11.2695	4.9989	0.1084
288	SLU 68	-0.35	0.04	36.95	11.2143	4.9747	0.1058
288	SLU 69	-0.36	0.01	37.45	11.3663	5.0419	0.1137
288	SLU 70	-0.36	0.03	37.45	11.3677	5.0427	0.1093
288	SLU 71	-0.36	0	37.26	11.3102	5.0172	0.1141
288	SLU 72	-0.35	0.02	37.27	11.3116	5.0179	0.1097
288	SLU 73	-0.36	0.06	40.26	12.2217	5.4203	0.1075
288	SLU 74	-0.38	0.03	40.76	12.3738	5.4875	0.1154
288	SLU 75	-0.37	0.06	40.77	12.3752	5.4883	0.111
288	SLU 76	-0.37	0.06	40.59	12.32	5.464	0.1085
288	SLU 77	-0.38	0.03	41.09	12.472	5.5313	0.1164
288	SLU 78	-0.37	0.06	41.09	12.4734	5.5321	0.112
288	SLU 79	-0.37	0.02	40.9	12.4159	5.5066	0.1167
288	SLU 80	-0.37	0.04	40.91	12.4173	5.5073	0.1124
288	SLU 81	-0.38	0.04	41.81	12.6933	5.6287	0.1159
288	SLU 82	-0.37	0.06	41.82	12.6947	5.6295	0.1115
288	SLU 83	-0.38	0.03	42.13	12.7915	5.6725	0.1169
288	SLU 84	-0.38	0.06	42.14	12.7929	5.6733	0.1125
288	SLE RA 1	-0.26	-0.01	27.49	8.3434	3.7009	0.0851
288	SLE RA 2	-0.26	0.01	27.49	8.3449	3.7017	0.0803
288	SLE RA 3	-0.27	-0.01	27.83	8.4463	3.7465	0.0855
288	SLE RA 4	-0.26	0.01	27.83	8.4472	3.7471	0.0826
288	SLE RA 5	-0.26	0.01	27.71	8.4104	3.7309	0.0809
288	SLE RA 6	-0.27	-0.01	28.04	8.5118	3.7757	0.0862
288	SLE RA 7	-0.26	0.01	28.05	8.5127	3.7762	0.0833
288	SLE RA 8	-0.26	-0.01	27.92	8.4743	3.7592	0.0864
288	SLE RA 9	-0.26	0	27.92	8.4753	3.7597	0.0835
288	SLE RA 10	-0.27	0.03	29.92	9.082	4.028	0.082
288	SLE RA 11	-0.28	0.01	30.25	9.1834	4.0728	0.0873
288	SLE RA 12	-0.28	0.03	30.26	9.1843	4.0733	0.0844
288	SLE RA 13	-0.27	0.03	30.14	9.1475	4.0572	0.0827
288	SLE RA 14	-0.28	0.01	30.47	9.2489	4.102	0.0879
288	SLE RA 15	-0.28	0.03	30.47	9.2498	4.1025	0.085
288	SLE RA 16	-0.28	0	30.35	9.2115	4.0855	0.0882
288	SLE RA 17	-0.27	0.02	30.35	9.2124	4.086	0.0853
288	SLE RA 18	-0.28	0.01	30.95	9.3964	4.1669	0.0876
288	SLE RA 19	-0.28	0.03	30.95	9.3973	4.1675	0.0847
288	SLE RA 20	-0.28	0.01	31.17	9.4619	4.1961	0.0883
288	SLE RA 21	-0.28	0.03	31.17	9.4628	4.1966	0.0854
288	SLE FR 1	-0.26	-0.01	27.49	8.3434	3.7009	0.0851
288	SLE FR 2	-0.26	-0.01	27.49	8.3437	3.701	0.0842
288	SLE FR 3	-0.26	-0.01	27.57	8.3696	3.7125	0.0854
288	SLE FR 4	-0.27	0	28.53	8.6596	3.8409	0.0849
288	SLE FR 5	-0.27	-0.01	28.61	8.6855	3.8524	0.0861
288	SLE FR 6	-0.27	0	29.22	8.8699	3.9339	0.0864
288	SLE QP 1	-0.26	-0.01	27.49	8.3434	3.7009	0.0851
288	SLE QP 2	-0.27	0	28.53	8.6593	3.8407	0.0859
288	SLD 1	2.18	0.38	28.34	8.5819	3.8183	-0.742
288	SLD 2	2.29	0.35	28.34	8.5818	3.818	-0.771
288	SLD 3	2.24	-0.51	28.22	8.556	3.8012	-0.6244
288	SLD 4	2.35	-0.54	28.21	8.5559	3.8009	-0.6534
288	SLD 5	0.35	1.47	28.67	8.6754	3.86	-0.3358
288	SLD 6	0.42	1.45	28.66	8.6754	3.8598	-0.3546
288	SLD 7	0.56	-1.51	28.24	8.5889	3.803	0.0562
288	SLD 8	0.63	-1.53	28.24	8.5889	3.8027	0.0374
288	SLD 9	-1.16	1.52	28.81	8.7297	3.8786	0.1343
288	SLD 10	-1.09	1.5	28.81	8.7296	3.8784	0.1155
288	SLD 11	-0.96	-1.46	28.39	8.6432	3.8216	0.5264
288	SLD 12	-0.89	-1.48	28.39	8.6431	3.8214	0.5076
288	SLD 13	-2.88	0.53	28.84	8.7627	3.8805	0.8252
288	SLD 14	-2.77	0.5	28.84	8.7626	3.8802	0.7962
288	SLD 15	-2.82	-0.36	28.71	8.7367	3.8634	0.9428
288	SLD 16	-2.71	-0.39	28.71	8.7367	3.863	0.9138
288	SLV 1	5.45	0.88	28.09	8.4778	3.7879	-1.8468
288	SLV 2	5.7	0.81	28.09	8.4777	3.7872	-1.9143
288	SLV 3	5.6	-1.16	27.8	8.4183	3.7489	-1.5789
288	SLV 4	5.85	-1.23	27.8	8.4182	3.7481	-1.6465
288	SLV 5	1.19	3.36	28.84	8.6952	3.8841	-0.8887
288	SLV 6	1.35	3.32	28.84	8.6951	3.8837	-0.9319
288	SLV 7	1.67	-3.43	27.87	8.4967	3.7541	0.0041
288	SLV 8	1.83	-3.48	27.86	8.4966	3.7536	-0.039
288	SLV 9	-2.36	3.47	29.19	8.8219	3.9277	0.2108
288	SLV 10	-2.2	3.42	29.18	8.8218	3.9272	0.1676
288	SLV 11	-1.88	-3.33	28.22	8.6235	3.7977	1.1036
288	SLV 12	-1.72	-3.37	28.21	8.6234	3.7972	1.0605
288	SLV 13	-6.38	1.22	29.25	8.9004	3.9332	1.8182
288	SLV 14	-6.13	1.15	29.25	8.9002	3.9324	1.7507
288	SLV 15	-6.24	-0.82	28.96	8.8409	3.8942	2.0861
288	SLV 16	-5.99	-0.89	28.96	8.8407	3.8934	2.0185
288	CRTFP Ux+	0	0	0	0	0	0
288	CRTFP Ux-	0	0	0	0	0	0
288	CRTFP Uy+	0	0	0	0	0	0
288	CRTFP Uy-	0	0	0	0	0	0
290	SLU 1	0.32	-0.26	68.73	7.6498	11.4383	-0.0128
290	SLU 2	0.31	-0.15	68.77	7.652	11.447	-0.029
290	SLU 3	0.33	-0.25	70.03	7.7937	11.6559	-0.017

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
290	SLU 4	0.33	-0.18	70.05	7.795	11.6612	-0.0268
290	SLU 5	0.31	-0.16	69.59	7.7418	11.586	-0.0278
290	SLU 6	0.34	-0.26	70.86	7.8835	11.7949	-0.0158
290	SLU 7	0.33	-0.19	70.88	7.8848	11.8001	-0.0255
290	SLU 8	0.33	-0.28	70.38	7.8294	11.7161	-0.0103
290	SLU 9	0.32	-0.22	70.4	7.8307	11.7214	-0.02
290	SLU 10	0.34	-0.08	78.08	8.6927	13.0021	-0.0458
290	SLU 11	0.36	-0.18	79.34	8.8343	13.211	-0.0337
290	SLU 12	0.36	-0.11	79.37	8.8357	13.2163	-0.0435
290	SLU 13	0.35	-0.09	78.9	8.7825	13.141	-0.0445
290	SLU 14	0.37	-0.19	80.17	8.9241	13.3499	-0.0325
290	SLU 15	0.36	-0.12	80.19	8.9255	13.3552	-0.0422
290	SLU 16	0.36	-0.21	79.69	8.87	13.2712	-0.027
290	SLU 17	0.35	-0.15	79.71	8.8714	13.2764	-0.0368
290	SLU 18	0.37	-0.16	82.03	9.1364	13.6598	-0.0367
290	SLU 19	0.36	-0.1	82.05	9.1378	13.665	-0.0464
290	SLU 20	0.37	-0.17	82.86	9.2262	13.7987	-0.0354
290	SLU 21	0.36	-0.11	82.88	9.2276	13.804	-0.0452
290	SLU 22	0.39	-0.17	76.58	8.5241	12.7422	-0.0369
290	SLU 23	0.38	-0.06	76.61	8.5264	12.751	-0.0531
290	SLU 24	0.4	-0.16	77.88	8.668	12.9598	-0.0411
290	SLU 25	0.39	-0.09	77.9	8.6693	12.9651	-0.0508
290	SLU 26	0.38	-0.07	77.44	8.6162	12.8899	-0.0518
290	SLU 27	0.4	-0.17	78.7	8.7578	13.0988	-0.0398
290	SLU 28	0.39	-0.1	78.72	8.7591	13.104	-0.0496
290	SLU 29	0.39	-0.19	78.22	8.7037	13.02	-0.0344
290	SLU 30	0.38	-0.13	78.25	8.7051	13.0253	-0.0441
290	SLU 31	0.41	0.01	85.92	9.567	14.306	-0.0698
290	SLU 32	0.43	-0.09	87.19	9.7087	14.5149	-0.0578
290	SLU 33	0.42	-0.02	87.21	9.71	14.5202	-0.0675
290	SLU 34	0.41	0	86.75	9.6568	14.4449	-0.0686
290	SLU 35	0.43	-0.1	88.01	9.7985	14.6538	-0.0565
290	SLU 36	0.42	-0.03	88.04	9.7998	14.6591	-0.0663
290	SLU 37	0.42	-0.12	87.54	9.7444	14.5751	-0.0511
290	SLU 38	0.41	-0.06	87.56	9.7457	14.5804	-0.0608
290	SLU 39	0.43	-0.07	89.88	10.0108	14.9637	-0.0607
290	SLU 40	0.43	-0.01	89.9	10.0121	14.9689	-0.0705
290	SLU 41	0.43	-0.08	90.7	10.1006	15.1026	-0.0595
290	SLU 42	0.43	-0.02	90.72	10.1019	15.1079	-0.0692
290	SLU 43	0.4	-0.37	86.66	9.6449	14.4227	-0.0084
290	SLU 44	0.39	-0.26	86.7	9.6472	14.4315	-0.0246
290	SLU 45	0.41	-0.35	87.96	9.7888	14.6403	-0.0126
290	SLU 46	0.4	-0.29	87.98	9.7902	14.6456	-0.0224
290	SLU 47	0.39	-0.27	87.52	9.737	14.5704	-0.0234
290	SLU 48	0.41	-0.37	88.79	9.8786	14.7793	-0.0114
290	SLU 49	0.4	-0.3	88.81	9.88	14.7846	-0.0211
290	SLU 50	0.4	-0.39	88.31	9.8246	14.7005	-0.0059
290	SLU 51	0.4	-0.33	88.33	9.8259	14.7058	-0.0156
290	SLU 52	0.42	-0.19	96.01	10.6879	15.9865	-0.0414
290	SLU 53	0.44	-0.29	97.27	10.8295	16.1954	-0.0293
290	SLU 54	0.43	-0.22	97.29	10.8308	16.2007	-0.0391
290	SLU 55	0.42	-0.2	96.83	10.7777	16.1254	-0.0401
290	SLU 56	0.44	-0.3	98.1	10.9193	16.3343	-0.0281
290	SLU 57	0.43	-0.23	98.12	10.9206	16.3396	-0.0378
290	SLU 58	0.43	-0.32	97.62	10.8652	16.2556	-0.0226
290	SLU 59	0.43	-0.26	97.64	10.8666	16.2609	-0.0323
290	SLU 60	0.44	-0.27	99.96	11.1316	16.6442	-0.0323
290	SLU 61	0.44	-0.21	99.98	11.133	16.6495	-0.042
290	SLU 62	0.44	-0.28	100.79	11.2214	16.7831	-0.031
290	SLU 63	0.44	-0.22	100.81	11.2228	16.7884	-0.0408
290	SLU 64	0.46	-0.28	94.5	10.5193	15.7266	-0.0325
290	SLU 65	0.45	-0.17	94.54	10.5215	15.7354	-0.0487
290	SLU 66	0.47	-0.27	95.81	10.6632	15.9443	-0.0367
290	SLU 67	0.47	-0.2	95.83	10.6645	15.9495	-0.0464
290	SLU 68	0.45	-0.18	95.37	10.6113	15.8743	-0.0474
290	SLU 69	0.47	-0.28	96.63	10.753	16.0832	-0.0354
290	SLU 70	0.47	-0.21	96.65	10.7543	16.0885	-0.0452
290	SLU 71	0.47	-0.3	96.15	10.6989	16.0044	-0.0299
290	SLU 72	0.46	-0.24	96.18	10.7002	16.0097	-0.0397
290	SLU 73	0.48	-0.1	103.85	11.5622	17.2904	-0.0654
290	SLU 74	0.5	-0.2	105.12	11.7038	17.4993	-0.0534
290	SLU 75	0.5	-0.13	105.14	11.7052	17.5046	-0.0631
290	SLU 76	0.48	-0.11	104.68	11.652	17.4294	-0.0642
290	SLU 77	0.51	-0.21	105.94	11.7936	17.6382	-0.0521
290	SLU 78	0.5	-0.14	105.96	11.795	17.6435	-0.0619
290	SLU 79	0.5	-0.23	105.47	11.7396	17.5595	-0.0467
290	SLU 80	0.49	-0.17	105.49	11.7409	17.5648	-0.0564
290	SLU 81	0.51	-0.18	107.81	12.006	17.9481	-0.0563
290	SLU 82	0.5	-0.12	107.83	12.0073	17.9534	-0.0661
290	SLU 83	0.51	-0.19	108.63	12.0958	18.087	-0.0551
290	SLU 84	0.5	-0.13	108.65	12.0971	18.0923	-0.0648
290	SLE RA 1	0.34	-0.24	70.97	7.8996	11.8108	-0.0197
290	SLE RA 2	0.34	-0.16	71	7.9011	11.8167	-0.0305
290	SLE RA 3	0.35	-0.23	71.84	7.9955	11.9559	-0.0225
290	SLE RA 4	0.34	-0.18	71.85	7.9964	11.9594	-0.029
290	SLE RA 5	0.34	-0.17	71.55	7.961	11.9093	-0.0297
290	SLE RA 6	0.35	-0.23	72.39	8.0554	12.0485	-0.0217
290	SLE RA 7	0.35	-0.19	72.4	8.0563	12.0521	-0.0282
290	SLE RA 8	0.34	-0.25	72.07	8.0193	11.996	-0.018
290	SLE RA 9	0.34	-0.21	72.09	8.0202	11.9996	-0.0245
290	SLE RA 10	0.36	-0.12	77.2	8.5949	12.8534	-0.0416

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
290	SLE RA 11	0.37	-0.18	78.05	8.6893	12.9926	-0.0336
290	SLE RA 12	0.37	-0.14	78.06	8.6902	12.9961	-0.0401
290	SLE RA 13	0.36	-0.12	77.75	8.6547	12.946	-0.0408
290	SLE RA 14	0.37	-0.19	78.6	8.7492	13.0852	-0.0328
290	SLE RA 15	0.37	-0.14	78.61	8.75	13.0888	-0.0393
290	SLE RA 16	0.36	-0.2	78.28	8.7131	13.0327	-0.0291
290	SLE RA 17	0.36	-0.16	78.29	8.714	13.0363	-0.0356
290	SLE RA 18	0.37	-0.17	79.84	8.8907	13.2918	-0.0356
290	SLE RA 19	0.37	-0.13	79.85	8.8916	13.2953	-0.0421
290	SLE RA 20	0.37	-0.18	80.39	8.9506	13.3844	-0.0348
290	SLE RA 21	0.37	-0.13	80.4	8.9515	13.3879	-0.0413
290	SLE FR 1	0.34	-0.24	70.97	7.8996	11.8108	-0.0197
290	SLE FR 2	0.34	-0.22	70.98	7.8999	11.812	-0.0218
290	SLE FR 3	0.34	-0.24	71.19	7.9235	11.8478	-0.0193
290	SLE FR 4	0.35	-0.2	73.64	8.1972	12.2563	-0.0266
290	SLE FR 5	0.35	-0.22	73.85	8.2209	12.2921	-0.0241
290	SLE FR 6	0.36	-0.2	75.41	8.3952	12.5513	-0.0276
290	SLE QP 1	0.34	-0.24	70.97	7.8996	11.8108	-0.0197
290	SLE QP 2	0.35	-0.22	73.63	8.1969	12.2551	-0.0245
290	SLD 1	7.03	1.06	73.69	8.1885	12.3518	-0.9646
290	SLD 2	7.33	1.11	73.69	8.188	12.3519	-1.0007
290	SLD 3	6.86	-1.25	73.15	8.1581	12.2365	-0.5795
290	SLD 4	7.15	-1.2	73.15	8.1575	12.2366	-0.6156
290	SLD 5	2.57	3.67	74.47	8.2407	12.459	-0.8843
290	SLD 6	2.76	3.7	74.47	8.2403	12.4591	-0.9077
290	SLD 7	1.99	-4.04	72.67	8.1392	12.0746	0.3994
290	SLD 8	2.18	-4.01	72.67	8.1388	12.0747	0.376
290	SLD 9	-1.47	3.58	74.6	8.255	12.4355	-0.4249
290	SLD 10	-1.28	3.61	74.6	8.2547	12.4356	-0.4483
290	SLD 11	-2.06	-4.13	72.79	8.1535	12.0511	0.8588
290	SLD 12	-1.87	-4.1	72.8	8.1532	12.0512	0.8354
290	SLD 13	-6.45	0.77	74.11	8.2363	12.2736	0.5667
290	SLD 14	-6.16	0.82	74.11	8.2358	12.2737	0.5306
290	SLD 15	-6.62	-1.54	73.57	8.2059	12.1583	0.9518
290	SLD 16	-6.33	-1.5	73.57	8.2053	12.1584	0.9157
290	SLV 1	15.98	2.7	73.75	8.1759	12.4794	-2.2117
290	SLV 2	16.66	2.81	73.75	8.1746	12.4797	-2.2957
290	SLV 3	15.57	-2.56	72.52	8.1064	12.2171	-1.3347
290	SLV 4	16.26	-2.46	72.52	8.1052	12.2174	-1.4187
290	SLV 5	5.54	8.63	75.53	8.2962	12.7202	-1.9964
290	SLV 6	5.98	8.7	75.53	8.2954	12.7204	-2.0501
290	SLV 7	4.19	-8.93	71.43	8.0647	11.8458	0.9267
290	SLV 8	4.62	-8.86	71.43	8.0639	11.846	0.8731
290	SLV 9	-3.92	8.43	75.83	8.33	12.6642	-0.922
290	SLV 10	-3.48	8.49	75.83	8.3292	12.6644	-0.9757
290	SLV 11	-5.27	-9.13	71.73	8.0985	11.7898	2.0012
290	SLV 12	-4.84	-9.06	71.73	8.0977	11.79	1.9475
290	SLV 13	-15.55	2.02	74.74	8.2887	12.2928	1.3698
290	SLV 14	-14.87	2.13	74.75	8.2874	12.2931	1.2858
290	SLV 15	-15.96	-3.24	73.52	8.2192	12.0305	2.2468
290	SLV 16	-15.27	-3.14	73.52	8.218	12.0308	2.1628
290	CRTFP Ux+	0	0	0	0	0	0
290	CRTFP Ux-	0	0	0	0	0	0
290	CRTFP Uy+	0	0	0	0	0	0
290	CRTFP Uy-	0	0	0	0	0	0
292	SLU 1	0.21	-0.22	38.77	11.2123	0.0288	-0.0655
292	SLU 2	0.2	-0.15	38.78	11.2146	0.029	-0.0634
292	SLU 3	0.22	-0.21	39.5	11.4229	0.0294	-0.0674
292	SLU 4	0.21	-0.17	39.5	11.4243	0.0295	-0.0662
292	SLU 5	0.21	-0.16	39.24	11.3462	0.0294	-0.0637
292	SLU 6	0.22	-0.22	39.95	11.5545	0.0298	-0.0677
292	SLU 7	0.21	-0.18	39.96	11.5559	0.0299	-0.0665
292	SLU 8	0.21	-0.23	39.68	11.4755	0.0296	-0.0661
292	SLU 9	0.21	-0.19	39.69	11.4769	0.0297	-0.0649
292	SLU 10	0.22	-0.12	44	12.7306	0.0336	-0.0697
292	SLU 11	0.24	-0.18	44.72	12.9389	0.0341	-0.0737
292	SLU 12	0.23	-0.14	44.73	12.9403	0.0342	-0.0724
292	SLU 13	0.23	-0.13	44.46	12.8623	0.0341	-0.07
292	SLU 14	0.24	-0.19	45.18	13.0705	0.0345	-0.074
292	SLU 15	0.23	-0.15	45.18	13.0719	0.0346	-0.0728
292	SLU 16	0.23	-0.2	44.91	12.9915	0.0343	-0.0724
292	SLU 17	0.23	-0.16	44.91	12.9929	0.0344	-0.0712
292	SLU 18	0.24	-0.17	46.23	13.378	0.0355	-0.0744
292	SLU 19	0.24	-0.13	46.23	13.3794	0.0356	-0.0732
292	SLU 20	0.24	-0.18	46.69	13.5097	0.0359	-0.0747
292	SLU 21	0.24	-0.14	46.69	13.5111	0.036	-0.0735
292	SLU 22	0.25	-0.18	43.19	12.494	0.0321	-0.0777
292	SLU 23	0.24	-0.11	43.2	12.4963	0.0322	-0.0757
292	SLU 24	0.26	-0.17	43.92	12.7046	0.0327	-0.0797
292	SLU 25	0.25	-0.13	43.93	12.706	0.0328	-0.0784
292	SLU 26	0.25	-0.12	43.66	12.6279	0.0326	-0.076
292	SLU 27	0.26	-0.18	44.38	12.8362	0.0331	-0.08
292	SLU 28	0.25	-0.14	44.39	12.8376	0.0332	-0.0788
292	SLU 29	0.25	-0.19	44.11	12.7572	0.0329	-0.0784
292	SLU 30	0.25	-0.15	44.12	12.7586	0.033	-0.0772
292	SLU 31	0.26	-0.08	48.43	14.0123	0.0369	-0.0819
292	SLU 32	0.28	-0.14	49.15	14.2206	0.0374	-0.0859
292	SLU 33	0.27	-0.1	49.15	14.222	0.0374	-0.0847
292	SLU 34	0.27	-0.09	48.89	14.1439	0.0373	-0.0823
292	SLU 35	0.28	-0.14	49.61	14.3522	0.0378	-0.0863
292	SLU 36	0.27	-0.1	49.61	14.3536	0.0378	-0.085

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
292	SLU 37	0.27	-0.16	49.34	14.2732	0.0376	-0.0847
292	SLU 38	0.27	-0.12	49.34	14.2746	0.0376	-0.0834
292	SLU 39	0.28	-0.13	50.66	14.6597	0.0388	-0.0867
292	SLU 40	0.28	-0.09	50.66	14.6611	0.0389	-0.0854
292	SLU 41	0.28	-0.14	51.12	14.7914	0.0392	-0.087
292	SLU 42	0.28	-0.1	51.12	14.7927	0.0393	-0.0858
292	SLU 43	0.26	-0.3	48.88	14.1365	0.0363	-0.0809
292	SLU 44	0.25	-0.24	48.89	14.1388	0.0365	-0.0788
292	SLU 45	0.27	-0.29	49.61	14.3471	0.0369	-0.0828
292	SLU 46	0.26	-0.25	49.61	14.3485	0.037	-0.0816
292	SLU 47	0.25	-0.24	49.35	14.2704	0.0369	-0.0792
292	SLU 48	0.27	-0.3	50.07	14.4787	0.0373	-0.0832
292	SLU 49	0.26	-0.26	50.07	14.4801	0.0374	-0.0819
292	SLU 50	0.26	-0.31	49.79	14.3997	0.0371	-0.0816
292	SLU 51	0.26	-0.28	49.8	14.4011	0.0372	-0.0803
292	SLU 52	0.27	-0.2	54.11	15.6549	0.0412	-0.0851
292	SLU 53	0.29	-0.26	54.83	15.8632	0.0416	-0.0891
292	SLU 54	0.28	-0.22	54.84	15.8646	0.0417	-0.0879
292	SLU 55	0.27	-0.21	54.57	15.7865	0.0416	-0.0854
292	SLU 56	0.29	-0.27	55.29	15.9948	0.042	-0.0894
292	SLU 57	0.28	-0.23	55.3	15.9962	0.0421	-0.0882
292	SLU 58	0.28	-0.28	55.02	15.9158	0.0418	-0.0878
292	SLU 59	0.28	-0.24	55.02	15.9172	0.0419	-0.0866
292	SLU 60	0.29	-0.25	56.34	16.3023	0.043	-0.0898
292	SLU 61	0.28	-0.21	56.35	16.3037	0.0431	-0.0886
292	SLU 62	0.29	-0.26	56.8	16.4339	0.0434	-0.0902
292	SLU 63	0.29	-0.22	56.8	16.4353	0.0435	-0.0889
292	SLU 64	0.3	-0.26	53.3	15.4182	0.0396	-0.0932
292	SLU 65	0.29	-0.19	53.32	15.4205	0.0397	-0.0911
292	SLU 66	0.31	-0.25	54.03	15.6288	0.0402	-0.0951
292	SLU 67	0.3	-0.21	54.04	15.6302	0.0403	-0.0939
292	SLU 68	0.29	-0.2	53.77	15.5521	0.0401	-0.0914
292	SLU 69	0.31	-0.26	54.49	15.7604	0.0406	-0.0954
292	SLU 70	0.3	-0.22	54.5	15.7618	0.0407	-0.0942
292	SLU 71	0.3	-0.27	54.22	15.6814	0.0404	-0.0938
292	SLU 72	0.3	-0.23	54.23	15.6828	0.0405	-0.0926
292	SLU 73	0.31	-0.16	58.54	16.9366	0.0444	-0.0974
292	SLU 74	0.33	-0.22	59.26	17.1448	0.0449	-0.1014
292	SLU 75	0.32	-0.18	59.27	17.1462	0.045	-0.1001
292	SLU 76	0.31	-0.17	59	17.0682	0.0448	-0.0977
292	SLU 77	0.33	-0.22	59.72	17.2765	0.0453	-0.1017
292	SLU 78	0.32	-0.19	59.72	17.2779	0.0454	-0.1005
292	SLU 79	0.32	-0.24	59.45	17.1975	0.0451	-0.1001
292	SLU 80	0.32	-0.2	59.45	17.1989	0.0452	-0.0989
292	SLU 81	0.33	-0.21	60.77	17.584	0.0463	-0.1021
292	SLU 82	0.33	-0.17	60.77	17.5854	0.0464	-0.1009
292	SLU 83	0.33	-0.22	61.23	17.7156	0.0467	-0.1024
292	SLU 84	0.33	-0.18	61.23	17.717	0.0468	-0.1012
292	SLE RA 1	0.22	-0.21	40.03	11.5785	0.0297	-0.069
292	SLE RA 2	0.22	-0.16	40.04	11.58	0.0298	-0.0676
292	SLE RA 3	0.23	-0.2	40.52	11.7189	0.0301	-0.0703
292	SLE RA 4	0.22	-0.18	40.52	11.7198	0.0302	-0.0694
292	SLE RA 5	0.22	-0.17	40.34	11.6678	0.0301	-0.0678
292	SLE RA 6	0.23	-0.21	40.82	11.8066	0.0304	-0.0705
292	SLE RA 7	0.22	-0.18	40.83	11.8075	0.0305	-0.0697
292	SLE RA 8	0.22	-0.22	40.64	11.7539	0.0303	-0.0694
292	SLE RA 9	0.22	-0.19	40.65	11.7549	0.0303	-0.0686
292	SLE RA 10	0.23	-0.14	43.52	12.5907	0.033	-0.0718
292	SLE RA 11	0.24	-0.18	44	12.7296	0.0333	-0.0744
292	SLE RA 12	0.24	-0.15	44	12.7305	0.0333	-0.0736
292	SLE RA 13	0.23	-0.15	43.83	12.6785	0.0332	-0.072
292	SLE RA 14	0.24	-0.19	44.31	12.8173	0.0335	-0.0747
292	SLE RA 15	0.24	-0.16	44.31	12.8182	0.0336	-0.0738
292	SLE RA 16	0.24	-0.19	44.12	12.7646	0.0334	-0.0736
292	SLE RA 17	0.23	-0.17	44.13	12.7656	0.0335	-0.0728
292	SLE RA 18	0.24	-0.18	45.01	13.0223	0.0342	-0.0749
292	SLE RA 19	0.24	-0.15	45.01	13.0232	0.0343	-0.0741
292	SLE RA 20	0.24	-0.18	45.31	13.1101	0.0345	-0.0752
292	SLE RA 21	0.24	-0.15	45.32	13.111	0.0345	-0.0743
292	SLE FR 1	0.22	-0.21	40.03	11.5785	0.0297	-0.069
292	SLE FR 2	0.22	-0.2	40.03	11.5788	0.0298	-0.0687
292	SLE FR 3	0.22	-0.21	40.15	11.6136	0.0298	-0.0691
292	SLE FR 4	0.23	-0.19	41.52	12.0119	0.0311	-0.0705
292	SLE FR 5	0.23	-0.2	41.65	12.0467	0.0312	-0.0708
292	SLE FR 6	0.23	-0.19	42.52	12.3004	0.032	-0.0719
292	SLE QP 1	0.22	-0.21	40.03	11.5785	0.0297	-0.069
292	SLE QP 2	0.23	-0.2	41.52	12.0116	0.0311	-0.0708
292	SLD 1	4.1	0.57	41.34	11.9667	0.0352	-1.2134
292	SLD 2	4.27	0.61	41.34	11.9661	0.0352	-1.2615
292	SLD 3	4	-0.77	41.13	11.9223	0.0342	-1.1828
292	SLD 4	4.17	-0.72	41.13	11.9218	0.0342	-1.2308
292	SLD 5	1.52	2.04	41.8	12.0654	0.0339	-0.4517
292	SLD 6	1.62	2.07	41.8	12.0651	0.0339	-0.4828
292	SLD 7	1.18	-2.4	41.07	11.9177	0.0304	-0.3495
292	SLD 8	1.28	-2.37	41.07	11.9173	0.0304	-0.3807
292	SLD 9	-0.83	1.97	41.97	12.1059	0.0317	0.2392
292	SLD 10	-0.72	2	41.97	12.1055	0.0317	0.208
292	SLD 11	-1.17	-2.47	41.24	11.9582	0.0283	0.3413
292	SLD 12	-1.06	-2.44	41.24	11.9578	0.0283	0.3102
292	SLD 13	-3.71	0.32	41.92	12.1015	0.028	1.0893
292	SLD 14	-3.54	0.37	41.92	12.1009	0.028	1.0413

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
292	SLD 15	-3.81	-1.01	41.7	12.0572	0.0269	1.1199
292	SLD 16	-3.65	-0.96	41.7	12.0566	0.0269	1.0719
292	SLV 1	9.29	1.55	41.1	11.905	0.0408	-2.7431
292	SLV 2	9.68	1.66	41.1	11.9036	0.0408	-2.8549
292	SLV 3	9.05	-1.49	40.6	11.804	0.0384	-2.672
292	SLV 4	9.44	-1.38	40.6	11.8027	0.0384	-2.7838
292	SLV 5	3.24	4.91	42.15	12.133	0.0376	-0.9613
292	SLV 6	3.49	4.98	42.15	12.1321	0.0376	-1.0327
292	SLV 7	2.45	-5.21	40.49	11.7965	0.0297	-0.7244
292	SLV 8	2.7	-5.14	40.49	11.7956	0.0297	-0.7958
292	SLV 9	-2.24	4.74	42.56	12.2276	0.0325	0.6543
292	SLV 10	-1.99	4.81	42.56	12.2268	0.0325	0.5829
292	SLV 11	-3.03	-5.38	40.89	11.8911	0.0246	0.8912
292	SLV 12	-2.79	-5.31	40.89	11.8903	0.0246	0.8198
292	SLV 13	-8.98	0.98	42.45	12.2206	0.0237	2.6423
292	SLV 14	-8.6	1.09	42.45	12.2192	0.0237	2.5305
292	SLV 15	-9.22	-2.05	41.95	12.1196	0.0214	2.7134
292	SLV 16	-8.83	-1.94	41.95	12.1183	0.0214	2.6015
292	CRTFP Ux+	0	0	0	0	0	0
292	CRTFP Ux-	0	0	0	0	0	0
292	CRTFP Uy+	0	0	0	0	0	0
292	CRTFP Uy-	0	0	0	0	0	0
293	SLU 1	0.22	-0.27	38.72	11.0051	0.0149	-0.0671
293	SLU 2	0.21	-0.2	38.73	11.0056	0.015	-0.065
293	SLU 3	0.23	-0.26	39.45	11.2112	0.0152	-0.0691
293	SLU 4	0.22	-0.22	39.45	11.2115	0.0153	-0.0678
293	SLU 5	0.21	-0.21	39.18	11.1341	0.0153	-0.0653
293	SLU 6	0.23	-0.27	39.9	11.3397	0.0154	-0.0695
293	SLU 7	0.22	-0.23	39.91	11.34	0.0155	-0.0682
293	SLU 8	0.22	-0.28	39.63	11.2621	0.0153	-0.0678
293	SLU 9	0.22	-0.24	39.64	11.2623	0.0154	-0.0666
293	SLU 10	0.23	-0.17	43.91	12.4841	0.0179	-0.0714
293	SLU 11	0.25	-0.23	44.63	12.6897	0.0181	-0.0755
293	SLU 12	0.24	-0.19	44.64	12.69	0.0182	-0.0743
293	SLU 13	0.23	-0.18	44.37	12.6126	0.0181	-0.0718
293	SLU 14	0.25	-0.24	45.09	12.8182	0.0183	-0.0759
293	SLU 15	0.24	-0.2	45.09	12.8185	0.0184	-0.0746
293	SLU 16	0.24	-0.26	44.82	12.7406	0.0182	-0.0743
293	SLU 17	0.24	-0.22	44.82	12.7409	0.0183	-0.073
293	SLU 18	0.25	-0.23	46.13	13.1173	0.019	-0.0763
293	SLU 19	0.25	-0.19	46.13	13.1176	0.0191	-0.075
293	SLU 20	0.25	-0.24	46.58	13.2458	0.0192	-0.0767
293	SLU 21	0.25	-0.2	46.59	13.2461	0.0193	-0.0754
293	SLU 22	0.26	-0.23	43.15	12.2641	0.0164	-0.0796
293	SLU 23	0.25	-0.16	43.15	12.2646	0.0166	-0.0775
293	SLU 24	0.27	-0.22	43.87	12.4702	0.0168	-0.0816
293	SLU 25	0.26	-0.19	43.88	12.4705	0.0169	-0.0803
293	SLU 26	0.26	-0.17	43.61	12.393	0.0168	-0.0778
293	SLU 27	0.27	-0.23	44.33	12.5987	0.017	-0.082
293	SLU 28	0.26	-0.19	44.33	12.5989	0.0171	-0.0807
293	SLU 29	0.26	-0.25	44.06	12.5211	0.0169	-0.0803
293	SLU 30	0.26	-0.21	44.06	12.5213	0.017	-0.079
293	SLU 31	0.27	-0.14	48.34	13.7431	0.0195	-0.0839
293	SLU 32	0.29	-0.2	49.06	13.9487	0.0197	-0.088
293	SLU 33	0.28	-0.16	49.06	13.949	0.0198	-0.0867
293	SLU 34	0.28	-0.14	48.79	13.8716	0.0197	-0.0843
293	SLU 35	0.29	-0.2	49.51	14.0772	0.0199	-0.0884
293	SLU 36	0.29	-0.16	49.52	14.0775	0.02	-0.0871
293	SLU 37	0.28	-0.22	49.24	13.9996	0.0198	-0.0867
293	SLU 38	0.28	-0.18	49.25	13.9999	0.0199	-0.0855
293	SLU 39	0.29	-0.19	50.55	14.3763	0.0206	-0.0888
293	SLU 40	0.29	-0.15	50.56	14.3766	0.0207	-0.0875
293	SLU 41	0.29	-0.2	51.01	14.5048	0.0208	-0.0891
293	SLU 42	0.29	-0.16	51.01	14.505	0.0209	-0.0879
293	SLU 43	0.27	-0.36	48.82	13.875	0.0188	-0.083
293	SLU 44	0.26	-0.3	48.83	13.8755	0.0189	-0.0808
293	SLU 45	0.28	-0.36	49.55	14.0811	0.0191	-0.085
293	SLU 46	0.27	-0.32	49.55	14.0814	0.0192	-0.0837
293	SLU 47	0.27	-0.3	49.28	14.0039	0.0192	-0.0812
293	SLU 48	0.28	-0.36	50	14.2095	0.0193	-0.0853
293	SLU 49	0.27	-0.32	50.01	14.2098	0.0194	-0.084
293	SLU 50	0.27	-0.38	49.73	14.1319	0.0192	-0.0837
293	SLU 51	0.27	-0.34	49.74	14.1322	0.0193	-0.0824
293	SLU 52	0.28	-0.27	54.01	15.354	0.0218	-0.0873
293	SLU 53	0.3	-0.33	54.73	15.5596	0.022	-0.0914
293	SLU 54	0.29	-0.29	54.74	15.5599	0.0221	-0.0901
293	SLU 55	0.29	-0.28	54.47	15.4825	0.0221	-0.0876
293	SLU 56	0.3	-0.34	55.19	15.6881	0.0222	-0.0917
293	SLU 57	0.3	-0.3	55.19	15.6884	0.0223	-0.0905
293	SLU 58	0.29	-0.35	54.92	15.6105	0.0221	-0.0901
293	SLU 59	0.29	-0.31	54.92	15.6107	0.0222	-0.0888
293	SLU 60	0.3	-0.32	56.23	15.9872	0.0229	-0.0922
293	SLU 61	0.3	-0.28	56.23	15.9875	0.023	-0.0909
293	SLU 62	0.3	-0.33	56.68	16.1156	0.0231	-0.0925
293	SLU 63	0.3	-0.29	56.69	16.1159	0.0232	-0.0912
293	SLU 64	0.31	-0.32	53.25	15.134	0.0204	-0.0955
293	SLU 65	0.31	-0.26	53.25	15.1344	0.0205	-0.0933
293	SLU 66	0.32	-0.32	53.97	15.3401	0.0207	-0.0975
293	SLU 67	0.32	-0.28	53.98	15.3403	0.0208	-0.0962
293	SLU 68	0.31	-0.27	53.71	15.2629	0.0208	-0.0937
293	SLU 69	0.32	-0.33	54.43	15.4685	0.0209	-0.0978

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
293	SLU 70	0.32	-0.29	54.43	15.4688	0.021	-0.0965
293	SLU 71	0.32	-0.34	54.16	15.3909	0.0208	-0.0962
293	SLU 72	0.31	-0.3	54.16	15.3912	0.0209	-0.0949
293	SLU 73	0.33	-0.23	58.44	16.613	0.0234	-0.0998
293	SLU 74	0.34	-0.29	59.16	16.8186	0.0236	-0.1039
293	SLU 75	0.34	-0.25	59.16	16.8189	0.0237	-0.1026
293	SLU 76	0.33	-0.24	58.89	16.7415	0.0236	-0.1001
293	SLU 77	0.34	-0.3	59.61	16.9471	0.0238	-0.1042
293	SLU 78	0.34	-0.26	59.62	16.9474	0.0239	-0.103
293	SLU 79	0.34	-0.31	59.34	16.8695	0.0237	-0.1026
293	SLU 80	0.33	-0.27	59.35	16.8697	0.0238	-0.1013
293	SLU 81	0.34	-0.28	60.65	17.2462	0.0245	-0.1046
293	SLU 82	0.34	-0.24	60.66	17.2464	0.0246	-0.1034
293	SLU 83	0.34	-0.29	61.11	17.3746	0.0247	-0.105
293	SLU 84	0.34	-0.25	61.11	17.3749	0.0248	-0.1037
293	SLE RA 1	0.23	-0.26	39.99	11.3648	0.0153	-0.0707
293	SLE RA 2	0.23	-0.21	39.99	11.3651	0.0154	-0.0693
293	SLE RA 3	0.24	-0.25	40.47	11.5022	0.0155	-0.072
293	SLE RA 4	0.23	-0.23	40.47	11.5024	0.0156	-0.0712
293	SLE RA 5	0.23	-0.22	40.29	11.4508	0.0156	-0.0695
293	SLE RA 6	0.24	-0.26	40.77	11.5879	0.0157	-0.0723
293	SLE RA 7	0.23	-0.23	40.78	11.588	0.0158	-0.0714
293	SLE RA 8	0.23	-0.27	40.59	11.5361	0.0156	-0.0712
293	SLE RA 9	0.23	-0.24	40.6	11.5363	0.0157	-0.0703
293	SLE RA 10	0.24	-0.19	43.45	12.3508	0.0173	-0.0735
293	SLE RA 11	0.25	-0.24	43.93	12.4879	0.0175	-0.0763
293	SLE RA 12	0.25	-0.21	43.93	12.4881	0.0175	-0.0754
293	SLE RA 13	0.24	-0.2	43.75	12.4365	0.0175	-0.0738
293	SLE RA 14	0.25	-0.24	44.23	12.5735	0.0176	-0.0765
293	SLE RA 15	0.25	-0.21	44.23	12.5737	0.0177	-0.0757
293	SLE RA 16	0.25	-0.25	44.05	12.5218	0.0176	-0.0754
293	SLE RA 17	0.24	-0.22	44.05	12.522	0.0176	-0.0746
293	SLE RA 18	0.25	-0.23	44.92	12.7729	0.0181	-0.0768
293	SLE RA 19	0.25	-0.2	44.93	12.7731	0.0181	-0.076
293	SLE RA 20	0.25	-0.24	45.23	12.8586	0.0182	-0.077
293	SLE RA 21	0.25	-0.21	45.23	12.8588	0.0183	-0.0762
293	SLE FR 1	0.23	-0.26	39.99	11.3648	0.0153	-0.0707
293	SLE FR 2	0.23	-0.25	39.99	11.3649	0.0153	-0.0704
293	SLE FR 3	0.23	-0.26	40.11	11.3991	0.0154	-0.0708
293	SLE FR 4	0.24	-0.24	41.47	11.7873	0.0162	-0.0722
293	SLE FR 5	0.24	-0.25	41.59	11.8215	0.0162	-0.0726
293	SLE FR 6	0.24	-0.24	42.45	12.0689	0.0167	-0.0738
293	SLE QP 1	0.23	-0.26	39.99	11.3648	0.0153	-0.0707
293	SLE QP 2	0.24	-0.25	41.47	11.7873	0.0161	-0.0725
293	SLD 1	4.17	0.55	41.13	11.6988	0.0205	-1.2153
293	SLD 2	4.34	0.61	41.13	11.6981	0.0205	-1.2633
293	SLD 3	4.07	-0.79	40.94	11.6666	0.0194	-1.1848
293	SLD 4	4.24	-0.73	40.94	11.6659	0.0195	-1.2329
293	SLD 5	1.55	2.01	41.65	11.8097	0.019	-0.4531
293	SLD 6	1.66	2.05	41.65	11.8093	0.019	-0.4843
293	SLD 7	1.2	-2.46	41.03	11.7023	0.0155	-0.3517
293	SLD 8	1.31	-2.42	41.03	11.7019	0.0155	-0.3829
293	SLD 9	-0.83	1.92	41.91	11.8726	0.0167	0.2378
293	SLD 10	-0.73	1.96	41.91	11.8722	0.0167	0.2067
293	SLD 11	-1.18	-2.55	41.29	11.7653	0.0132	0.3392
293	SLD 12	-1.07	-2.51	41.29	11.7648	0.0132	0.308
293	SLD 13	-3.76	0.23	41.99	11.9086	0.0128	1.0878
293	SLD 14	-3.6	0.29	41.99	11.9079	0.0128	1.0398
293	SLD 15	-3.87	-1.11	41.81	11.8764	0.0118	1.1182
293	SLD 16	-3.7	-1.05	41.81	11.8757	0.0118	1.0702
293	SLV 1	9.44	1.57	40.66	11.5795	0.0263	-2.7449
293	SLV 2	9.84	1.72	40.66	11.578	0.0264	-2.8568
293	SLV 3	9.2	-1.48	40.24	11.5061	0.0239	-2.6744
293	SLV 4	9.59	-1.34	40.24	11.5046	0.0239	-2.7863
293	SLV 5	3.3	4.91	41.87	11.8365	0.0228	-0.9623
293	SLV 6	3.55	5	41.87	11.8355	0.0229	-1.0338
293	SLV 7	2.49	-5.28	40.46	11.5919	0.0148	-0.7271
293	SLV 8	2.74	-5.19	40.46	11.5909	0.0148	-0.7986
293	SLV 9	-2.27	4.69	42.48	11.9837	0.0174	0.6535
293	SLV 10	-2.02	4.78	42.48	11.9826	0.0174	0.5821
293	SLV 11	-3.07	-5.5	41.07	11.739	0.0094	0.8887
293	SLV 12	-2.82	-5.41	41.07	11.738	0.0094	0.8173
293	SLV 13	-9.12	0.84	42.69	12.07	0.0083	2.6412
293	SLV 14	-8.73	0.98	42.69	12.0684	0.0083	2.5293
293	SLV 15	-9.36	-2.22	42.27	11.9966	0.0059	2.7118
293	SLV 16	-8.97	-2.07	42.27	11.995	0.0059	2.5999
293	CRTFP Ux+	0	0	0	0	0	0
293	CRTFP Ux-	0	0	0	0	0	0
293	CRTFP Uy+	0	0	0	0	0	0
293	CRTFP Uy-	0	0	0	0	0	0
294	SLU 1	0.23	-0.31	38.3	10.8604	0.0087	-0.0689
294	SLU 2	0.22	-0.25	38.3	10.8589	0.0089	-0.0667
294	SLU 3	0.23	-0.31	39.02	11.0633	0.0089	-0.0709
294	SLU 4	0.23	-0.27	39.02	11.0624	0.009	-0.0696
294	SLU 5	0.22	-0.26	38.75	10.985	0.009	-0.067
294	SLU 6	0.23	-0.32	39.47	11.1894	0.009	-0.0713
294	SLU 7	0.23	-0.28	39.46	11.1885	0.0091	-0.07
294	SLU 8	0.23	-0.33	39.2	11.1126	0.009	-0.0696
294	SLU 9	0.22	-0.29	39.2	11.1117	0.0091	-0.0683
294	SLU 10	0.24	-0.22	43.39	12.3079	0.0109	-0.0733
294	SLU 11	0.25	-0.29	44.11	12.5122	0.0109	-0.0775

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
294	SLU 12	0.25	-0.25	44.11	12.5113	0.011	-0.0762
294	SLU 13	0.24	-0.23	43.84	12.434	0.011	-0.0736
294	SLU 14	0.26	-0.3	44.56	12.6383	0.0111	-0.0779
294	SLU 15	0.25	-0.26	44.56	12.6374	0.0112	-0.0766
294	SLU 16	0.25	-0.31	44.29	12.5616	0.011	-0.0762
294	SLU 17	0.25	-0.27	44.29	12.5607	0.0111	-0.0749
294	SLU 18	0.26	-0.28	45.58	12.9304	0.0116	-0.0783
294	SLU 19	0.25	-0.24	45.58	12.9295	0.0117	-0.077
294	SLU 20	0.26	-0.29	46.03	13.0565	0.0117	-0.0787
294	SLU 21	0.25	-0.25	46.02	13.0556	0.0118	-0.0774
294	SLU 22	0.27	-0.28	42.68	12.1051	0.0094	-0.0816
294	SLU 23	0.26	-0.22	42.68	12.1036	0.0096	-0.0794
294	SLU 24	0.28	-0.28	43.4	12.3079	0.0096	-0.0837
294	SLU 25	0.27	-0.24	43.4	12.307	0.0097	-0.0823
294	SLU 26	0.26	-0.22	43.13	12.2297	0.0098	-0.0798
294	SLU 27	0.28	-0.29	43.85	12.434	0.0098	-0.084
294	SLU 28	0.27	-0.25	43.85	12.4331	0.0099	-0.0827
294	SLU 29	0.27	-0.3	43.58	12.3573	0.0097	-0.0824
294	SLU 30	0.27	-0.26	43.58	12.3564	0.0098	-0.0811
294	SLU 31	0.28	-0.19	47.78	13.5525	0.0116	-0.086
294	SLU 32	0.3	-0.25	48.49	13.7569	0.0116	-0.0903
294	SLU 33	0.29	-0.21	48.49	13.756	0.0118	-0.0889
294	SLU 34	0.28	-0.2	48.22	13.6786	0.0118	-0.0864
294	SLU 35	0.3	-0.26	48.94	13.883	0.0118	-0.0906
294	SLU 36	0.29	-0.22	48.94	13.8821	0.0119	-0.0893
294	SLU 37	0.29	-0.28	48.67	13.8062	0.0118	-0.089
294	SLU 38	0.29	-0.24	48.67	13.8053	0.0119	-0.0877
294	SLU 39	0.3	-0.25	49.96	14.175	0.0123	-0.0911
294	SLU 40	0.29	-0.21	49.96	14.1741	0.0124	-0.0897
294	SLU 41	0.3	-0.26	50.41	14.3011	0.0125	-0.0914
294	SLU 42	0.3	-0.22	50.41	14.3002	0.0126	-0.0901
294	SLU 43	0.28	-0.42	48.29	13.6918	0.011	-0.0852
294	SLU 44	0.27	-0.35	48.29	13.6903	0.0112	-0.083
294	SLU 45	0.29	-0.42	49	13.8947	0.0112	-0.0872
294	SLU 46	0.28	-0.38	49	13.8938	0.0113	-0.0859
294	SLU 47	0.27	-0.36	48.73	13.8164	0.0114	-0.0833
294	SLU 48	0.29	-0.42	49.45	14.0208	0.0114	-0.0876
294	SLU 49	0.28	-0.38	49.45	14.0199	0.0115	-0.0863
294	SLU 50	0.28	-0.44	49.18	13.944	0.0113	-0.0859
294	SLU 51	0.28	-0.4	49.18	13.9431	0.0114	-0.0846
294	SLU 52	0.29	-0.33	53.38	15.1393	0.0132	-0.0896
294	SLU 53	0.31	-0.39	54.1	15.3436	0.0133	-0.0938
294	SLU 54	0.3	-0.35	54.1	15.3427	0.0134	-0.0925
294	SLU 55	0.29	-0.34	53.83	15.2654	0.0134	-0.0899
294	SLU 56	0.31	-0.4	54.55	15.4697	0.0134	-0.0942
294	SLU 57	0.3	-0.36	54.55	15.4688	0.0135	-0.0929
294	SLU 58	0.3	-0.41	54.28	15.393	0.0134	-0.0925
294	SLU 59	0.3	-0.37	54.28	15.3921	0.0135	-0.0912
294	SLU 60	0.31	-0.39	55.56	15.7618	0.0139	-0.0946
294	SLU 61	0.31	-0.35	55.56	15.7609	0.014	-0.0933
294	SLU 62	0.31	-0.4	56.01	15.8879	0.0141	-0.095
294	SLU 63	0.31	-0.36	56.01	15.887	0.0142	-0.0936
294	SLU 64	0.32	-0.39	52.67	14.9365	0.0118	-0.0979
294	SLU 65	0.31	-0.32	52.67	14.935	0.0119	-0.0957
294	SLU 66	0.33	-0.38	53.39	15.1393	0.012	-0.1
294	SLU 67	0.32	-0.34	53.39	15.1384	0.0121	-0.0986
294	SLU 68	0.32	-0.33	53.12	15.061	0.0121	-0.0961
294	SLU 69	0.33	-0.39	53.84	15.2654	0.0121	-0.1003
294	SLU 70	0.32	-0.35	53.83	15.2645	0.0122	-0.099
294	SLU 71	0.32	-0.4	53.57	15.1887	0.0121	-0.0987
294	SLU 72	0.32	-0.36	53.57	15.1877	0.0122	-0.0973
294	SLU 73	0.34	-0.3	57.76	16.3839	0.014	-0.1023
294	SLU 74	0.35	-0.36	58.48	16.5883	0.014	-0.1066
294	SLU 75	0.35	-0.32	58.48	16.5874	0.0141	-0.1052
294	SLU 76	0.34	-0.31	58.21	16.51	0.0141	-0.1027
294	SLU 77	0.35	-0.37	58.93	16.7144	0.0142	-0.1069
294	SLU 78	0.35	-0.33	58.93	16.7135	0.0143	-0.1056
294	SLU 79	0.35	-0.38	58.66	16.6376	0.0141	-0.1053
294	SLU 80	0.34	-0.34	58.66	16.6367	0.0142	-0.1039
294	SLU 81	0.35	-0.35	59.95	17.0064	0.0147	-0.1074
294	SLU 82	0.35	-0.31	59.95	17.0055	0.0148	-0.106
294	SLU 83	0.35	-0.36	60.4	17.1325	0.0148	-0.1077
294	SLU 84	0.35	-0.32	60.39	17.1316	0.0149	-0.1064
294	SLE RA 1	0.24	-0.31	39.55	11.216	0.0089	-0.0725
294	SLE RA 2	0.23	-0.26	39.55	11.215	0.009	-0.071
294	SLE RA 3	0.24	-0.3	40.03	11.3513	0.009	-0.0739
294	SLE RA 4	0.24	-0.28	40.03	11.3507	0.0091	-0.073
294	SLE RA 5	0.23	-0.27	39.85	11.2991	0.0091	-0.0713
294	SLE RA 6	0.24	-0.31	40.33	11.4353	0.0091	-0.0741
294	SLE RA 7	0.24	-0.28	40.33	11.4347	0.0092	-0.0732
294	SLE RA 8	0.24	-0.32	40.15	11.3842	0.0091	-0.073
294	SLE RA 9	0.24	-0.29	40.15	11.3836	0.0092	-0.0721
294	SLE RA 10	0.25	-0.25	42.95	12.181	0.0104	-0.0755
294	SLE RA 11	0.26	-0.29	43.43	12.3173	0.0104	-0.0783
294	SLE RA 12	0.25	-0.26	43.43	12.3166	0.0104	-0.0774
294	SLE RA 13	0.25	-0.25	43.25	12.2651	0.0105	-0.0757
294	SLE RA 14	0.26	-0.29	43.72	12.4013	0.0105	-0.0785
294	SLE RA 15	0.25	-0.27	43.72	12.4007	0.0106	-0.0776
294	SLE RA 16	0.25	-0.3	43.55	12.3501	0.0105	-0.0774
294	SLE RA 17	0.25	-0.27	43.55	12.3495	0.0105	-0.0765
294	SLE RA 18	0.26	-0.28	44.4	12.596	0.0108	-0.0788

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
294	SLE RA 19	0.26	-0.26	44.4	12.5954	0.0109	-0.0779
294	SLE RA 20	0.26	-0.29	44.7	12.6801	0.0109	-0.0791
294	SLE RA 21	0.26	-0.26	44.7	12.6795	0.011	-0.0782
294	SLE FR 1	0.24	-0.31	39.55	11.216	0.0089	-0.0725
294	SLE FR 2	0.24	-0.3	39.55	11.2158	0.0089	-0.0722
294	SLE FR 3	0.24	-0.31	39.67	11.2497	0.0089	-0.0726
294	SLE FR 4	0.24	-0.29	41.01	11.6298	0.0095	-0.0741
294	SLE FR 5	0.24	-0.3	41.13	11.6637	0.0095	-0.0745
294	SLE FR 6	0.25	-0.29	41.98	11.906	0.0099	-0.0757
294	SLE QP 1	0.24	-0.31	39.55	11.216	0.0089	-0.0725
294	SLE QP 2	0.24	-0.3	41.01	11.63	0.0095	-0.0744
294	SLD 1	4.19	0.52	40.49	11.4943	0.0143	-1.2194
294	SLD 2	4.36	0.6	40.49	11.4935	0.0143	-1.2676
294	SLD 3	4.09	-0.81	40.34	11.4737	0.0133	-1.1891
294	SLD 4	4.26	-0.74	40.34	11.4728	0.0133	-1.2372
294	SLD 5	1.56	1.96	41.08	11.6207	0.0125	-0.4556
294	SLD 6	1.67	2.01	41.08	11.6202	0.0125	-0.4868
294	SLD 7	1.21	-2.49	40.58	11.552	0.009	-0.3544
294	SLD 8	1.32	-2.44	40.58	11.5514	0.009	-0.3856
294	SLD 9	-0.83	1.84	41.43	11.7086	0.0099	0.2368
294	SLD 10	-0.72	1.89	41.43	11.7081	0.0099	0.2055
294	SLD 11	-1.18	-2.6	40.94	11.6399	0.0064	0.338
294	SLD 12	-1.07	-2.56	40.94	11.6393	0.0065	0.3067
294	SLD 13	-3.77	0.14	41.67	11.7872	0.0057	1.0884
294	SLD 14	-3.6	0.21	41.67	11.7864	0.0057	1.0402
294	SLD 15	-3.87	-1.19	41.52	11.7666	0.0046	1.1188
294	SLD 16	-3.7	-1.12	41.52	11.7658	0.0046	1.0706
294	SLV 1	9.48	1.58	39.8	11.3121	0.0207	-2.7521
294	SLV 2	9.87	1.76	39.79	11.3102	0.0208	-2.8643
294	SLV 3	9.23	-1.46	39.46	11.265	0.0184	-2.6817
294	SLV 4	9.63	-1.28	39.46	11.2631	0.0184	-2.7939
294	SLV 5	3.31	4.85	41.16	11.6064	0.0164	-0.9656
294	SLV 6	3.56	4.96	41.16	11.6052	0.0164	-1.0372
294	SLV 7	2.51	-5.29	40.03	11.4494	0.0086	-0.7308
294	SLV 8	2.76	-5.17	40.03	11.4482	0.0086	-0.8024
294	SLV 9	-2.27	4.58	41.99	11.8119	0.0104	0.6536
294	SLV 10	-2.02	4.69	41.99	11.8106	0.0104	0.5819
294	SLV 11	-3.08	-5.55	40.86	11.6549	0.0025	0.8884
294	SLV 12	-2.83	-5.44	40.86	11.6537	0.0025	0.8168
294	SLV 13	-9.14	0.69	42.56	11.997	0.0005	2.6451
294	SLV 14	-8.75	0.86	42.56	11.9951	0.0006	2.5329
294	SLV 15	-9.38	-2.35	42.22	11.9499	-0.0018	2.7155
294	SLV 16	-8.99	-2.18	42.22	11.948	-0.0018	2.6033
294	CRTFP Ux+	0	0	0	0	0	0
294	CRTFP Ux-	0	0	0	0	0	0
294	CRTFP Uy+	0	0	0	0	0	0
294	CRTFP Uy-	0	0	0	0	0	0
295	SLU 1	0.23	-0.36	38.14	10.8079	-0.0007	-0.0706
295	SLU 2	0.22	-0.29	38.13	10.8043	-0.0005	-0.0684
295	SLU 3	0.24	-0.36	38.85	11.0095	-0.0007	-0.0727
295	SLU 4	0.23	-0.32	38.85	11.0074	-0.0006	-0.0714
295	SLU 5	0.23	-0.3	38.58	10.9293	-0.0005	-0.0688
295	SLU 6	0.24	-0.37	39.3	11.1344	-0.0007	-0.0731
295	SLU 7	0.24	-0.33	39.29	11.1323	-0.0006	-0.0718
295	SLU 8	0.23	-0.38	39.03	11.0578	-0.0006	-0.0714
295	SLU 9	0.23	-0.34	39.03	11.0556	-0.0005	-0.0701
295	SLU 10	0.25	-0.27	43.17	12.2369	0.0001	-0.0751
295	SLU 11	0.26	-0.34	43.89	12.4421	-0.0001	-0.0795
295	SLU 12	0.26	-0.3	43.89	12.4399	0	-0.0781
295	SLU 13	0.25	-0.28	43.62	12.3618	0.0001	-0.0755
295	SLU 14	0.26	-0.35	44.34	12.567	0	-0.0799
295	SLU 15	0.26	-0.31	44.33	12.5648	0.0001	-0.0785
295	SLU 16	0.26	-0.36	44.07	12.4903	0	-0.0782
295	SLU 17	0.25	-0.32	44.07	12.4882	0.0001	-0.0768
295	SLU 18	0.26	-0.33	45.34	12.8544	0.0002	-0.0803
295	SLU 19	0.26	-0.29	45.34	12.8523	0.0003	-0.079
295	SLU 20	0.26	-0.34	45.79	12.9794	0.0002	-0.0807
295	SLU 21	0.26	-0.3	45.78	12.9772	0.0004	-0.0794
295	SLU 22	0.28	-0.33	42.52	12.0506	-0.0012	-0.0837
295	SLU 23	0.27	-0.27	42.51	12.047	-0.001	-0.0814
295	SLU 24	0.28	-0.33	43.23	12.2522	-0.0012	-0.0858
295	SLU 25	0.28	-0.29	43.23	12.25	-0.0011	-0.0844
295	SLU 26	0.27	-0.27	42.96	12.1719	-0.001	-0.0818
295	SLU 27	0.28	-0.34	43.68	12.3771	-0.0012	-0.0862
295	SLU 28	0.28	-0.3	43.67	12.3749	-0.0011	-0.0848
295	SLU 29	0.28	-0.35	43.41	12.3004	-0.0011	-0.0845
295	SLU 30	0.27	-0.31	43.4	12.2983	-0.001	-0.0831
295	SLU 31	0.29	-0.25	47.55	13.4796	-0.0004	-0.0882
295	SLU 32	0.3	-0.31	48.27	13.6847	-0.0006	-0.0926
295	SLU 33	0.3	-0.27	48.27	13.6826	-0.0005	-0.0912
295	SLU 34	0.29	-0.26	48	13.6045	-0.0004	-0.0886
295	SLU 35	0.31	-0.32	48.72	13.8096	-0.0005	-0.0929
295	SLU 36	0.3	-0.28	48.71	13.8075	-0.0004	-0.0916
295	SLU 37	0.3	-0.33	48.45	13.733	-0.0005	-0.0912
295	SLU 38	0.3	-0.29	48.45	13.7308	-0.0004	-0.0899
295	SLU 39	0.31	-0.31	49.72	14.0971	-0.0003	-0.0934
295	SLU 40	0.3	-0.27	49.72	14.095	-0.0002	-0.092
295	SLU 41	0.31	-0.32	50.17	14.222	-0.0003	-0.0938
295	SLU 42	0.3	-0.28	50.16	14.2199	-0.0002	-0.0924
295	SLU 43	0.29	-0.48	48.08	13.6243	-0.0008	-0.0874
295	SLU 44	0.28	-0.41	48.07	13.6207	-0.0006	-0.0851

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
295	SLU 45	0.29	-0.47	48.79	13.8258	-0.0008	-0.0895
295	SLU 46	0.29	-0.43	48.79	13.8237	-0.0006	-0.0881
295	SLU 47	0.28	-0.42	48.52	13.7456	-0.0005	-0.0855
295	SLU 48	0.29	-0.48	49.24	13.9507	-0.0007	-0.0898
295	SLU 49	0.29	-0.44	49.23	13.9486	-0.0006	-0.0885
295	SLU 50	0.29	-0.5	48.97	13.8741	-0.0007	-0.0881
295	SLU 51	0.28	-0.45	48.97	13.8719	-0.0006	-0.0868
295	SLU 52	0.3	-0.39	53.12	15.0532	0.0001	-0.0919
295	SLU 53	0.32	-0.46	53.84	15.2584	-0.0001	-0.0962
295	SLU 54	0.31	-0.42	53.83	15.2562	0	-0.0949
295	SLU 55	0.3	-0.4	53.56	15.1781	0.0001	-0.0923
295	SLU 56	0.32	-0.47	54.28	15.3833	-0.0001	-0.0966
295	SLU 57	0.31	-0.43	54.28	15.3811	0	-0.0953
295	SLU 58	0.31	-0.48	54.01	15.3066	0	-0.0949
295	SLU 59	0.31	-0.44	54.01	15.3045	0.0001	-0.0936
295	SLU 60	0.32	-0.45	55.28	15.6708	0.0002	-0.097
295	SLU 61	0.31	-0.41	55.28	15.6686	0.0003	-0.0957
295	SLU 62	0.32	-0.46	55.73	15.7957	0.0002	-0.0974
295	SLU 63	0.31	-0.42	55.72	15.7935	0.0003	-0.0961
295	SLU 64	0.33	-0.45	52.46	14.8669	-0.0013	-0.1004
295	SLU 65	0.32	-0.38	52.45	14.8633	-0.0011	-0.0981
295	SLU 66	0.34	-0.45	53.17	15.0685	-0.0013	-0.1025
295	SLU 67	0.33	-0.41	53.17	15.0663	-0.0012	-0.1011
295	SLU 68	0.32	-0.39	52.9	14.9882	-0.001	-0.0985
295	SLU 69	0.34	-0.46	53.62	15.1934	-0.0012	-0.1029
295	SLU 70	0.33	-0.42	53.61	15.1913	-0.0011	-0.1015
295	SLU 71	0.33	-0.47	53.35	15.1167	-0.0012	-0.1012
295	SLU 72	0.33	-0.43	53.34	15.1146	-0.0011	-0.0998
295	SLU 73	0.34	-0.36	57.49	16.2959	-0.0004	-0.1049
295	SLU 74	0.36	-0.43	58.21	16.5011	-0.0006	-0.1093
295	SLU 75	0.35	-0.39	58.21	16.4989	-0.0005	-0.1079
295	SLU 76	0.35	-0.37	57.94	16.4208	-0.0004	-0.1053
295	SLU 77	0.36	-0.44	58.66	16.626	-0.0006	-0.1097
295	SLU 78	0.36	-0.4	58.65	16.6238	-0.0005	-0.1083
295	SLU 79	0.35	-0.45	58.39	16.5493	-0.0005	-0.108
295	SLU 80	0.35	-0.41	58.39	16.5471	-0.0004	-0.1066
295	SLU 81	0.36	-0.42	59.66	16.9134	-0.0003	-0.1101
295	SLU 82	0.36	-0.38	59.66	16.9113	-0.0002	-0.1087
295	SLU 83	0.36	-0.43	60.11	17.0383	-0.0003	-0.1105
295	SLU 84	0.36	-0.39	60.1	17.0362	-0.0002	-0.1091
295	SLE RA 1	0.24	-0.35	39.39	11.163	-0.0009	-0.0744
295	SLE RA 2	0.24	-0.31	39.39	11.1606	-0.0007	-0.0729
295	SLE RA 3	0.25	-0.35	39.87	11.2974	-0.0009	-0.0758
295	SLE RA 4	0.25	-0.32	39.86	11.2959	-0.0008	-0.0749
295	SLE RA 5	0.24	-0.31	39.68	11.2439	-0.0007	-0.0731
295	SLE RA 6	0.25	-0.36	40.16	11.3806	-0.0008	-0.076
295	SLE RA 7	0.25	-0.33	40.16	11.3792	-0.0008	-0.0751
295	SLE RA 8	0.25	-0.36	39.98	11.3295	-0.0008	-0.0749
295	SLE RA 9	0.24	-0.34	39.98	11.3281	-0.0007	-0.074
295	SLE RA 10	0.25	-0.3	42.75	12.1156	-0.0003	-0.0774
295	SLE RA 11	0.26	-0.34	43.23	12.2524	-0.0004	-0.0803
295	SLE RA 12	0.26	-0.31	43.22	12.251	-0.0004	-0.0794
295	SLE RA 13	0.25	-0.3	43.04	12.1989	-0.0003	-0.0776
295	SLE RA 14	0.26	-0.34	43.52	12.3357	-0.0004	-0.0805
295	SLE RA 15	0.26	-0.32	43.52	12.3342	-0.0003	-0.0796
295	SLE RA 16	0.26	-0.35	43.35	12.2846	-0.0004	-0.0794
295	SLE RA 17	0.26	-0.33	43.34	12.2831	-0.0003	-0.0785
295	SLE RA 18	0.27	-0.34	44.19	12.5273	-0.0002	-0.0808
295	SLE RA 19	0.26	-0.31	44.19	12.5259	-0.0002	-0.0799
295	SLE RA 20	0.27	-0.34	44.49	12.6106	-0.0002	-0.0811
295	SLE RA 21	0.26	-0.31	44.49	12.6092	-0.0001	-0.0802
295	SLE FR 1	0.24	-0.35	39.39	11.163	-0.0009	-0.0744
295	SLE FR 2	0.24	-0.34	39.39	11.1625	-0.0008	-0.0741
295	SLE FR 3	0.24	-0.35	39.51	11.1963	-0.0008	-0.0745
295	SLE FR 4	0.25	-0.34	40.83	11.5718	-0.0007	-0.076
295	SLE FR 5	0.25	-0.35	40.95	11.6056	-0.0007	-0.0764
295	SLE FR 6	0.25	-0.34	41.79	11.8451	-0.0006	-0.0776
295	SLE QP 1	0.24	-0.35	39.39	11.163	-0.0009	-0.0744
295	SLE QP 2	0.25	-0.35	40.83	11.5723	-0.0007	-0.0763
295	SLD 1	4.2	0.5	40.12	11.3841	0.0048	-1.2234
295	SLD 2	4.37	0.58	40.12	11.3831	0.0048	-1.2717
295	SLD 3	4.1	-0.83	40	11.3716	0.0039	-1.1932
295	SLD 4	4.27	-0.74	40	11.3706	0.0039	-1.2414
295	SLD 5	1.56	1.9	40.79	11.5349	0.0024	-0.4579
295	SLD 6	1.67	1.96	40.79	11.5343	0.0024	-0.4892
295	SLD 7	1.22	-2.52	40.41	11.4933	-0.0007	-0.357
295	SLD 8	1.33	-2.46	40.41	11.4927	-0.0007	-0.3883
295	SLD 9	-0.83	1.77	41.26	11.6519	-0.0006	0.2357
295	SLD 10	-0.72	1.83	41.25	11.6512	-0.0006	0.2044
295	SLD 11	-1.17	-2.65	40.87	11.6103	-0.0037	0.3366
295	SLD 12	-1.06	-2.6	40.87	11.6096	-0.0037	0.3053
295	SLD 13	-3.77	0.05	41.66	11.7739	-0.0052	1.0888
295	SLD 14	-3.6	0.14	41.66	11.7729	-0.0052	1.0406
295	SLD 15	-3.87	-1.28	41.55	11.7614	-0.0061	1.1191
295	SLD 16	-3.7	-1.19	41.54	11.7604	-0.0061	1.0708
295	SLV 1	9.5	1.59	39.16	11.1321	0.0121	-2.759
295	SLV 2	9.89	1.79	39.16	11.1298	0.0121	-2.8714
295	SLV 3	9.26	-1.43	38.9	11.1033	0.01	-2.6888
295	SLV 4	9.65	-1.23	38.9	11.101	0.01	-2.8012
295	SLV 5	3.32	4.78	40.73	11.4843	0.0064	-0.9686
295	SLV 6	3.58	4.91	40.73	11.4828	0.0064	-1.0404

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
295	SLV 7	2.52	-5.29	39.86	11.3883	-0.0007	-0.7345
295	SLV 8	2.77	-5.16	39.85	11.3868	-0.0007	-0.8062
295	SLV 9	-2.27	4.47	41.81	11.7578	-0.0007	0.6536
295	SLV 10	-2.02	4.6	41.81	11.7562	-0.0006	0.5818
295	SLV 11	-3.07	-5.61	40.94	11.6617	-0.0077	0.8878
295	SLV 12	-2.82	-5.48	40.94	11.6602	-0.0077	0.816
295	SLV 13	-9.15	0.54	42.77	12.0436	-0.0113	2.6485
295	SLV 14	-8.76	0.74	42.76	12.0412	-0.0113	2.5361
295	SLV 15	-9.39	-2.48	42.5	12.0148	-0.0135	2.7188
295	SLV 16	-9	-2.28	42.5	12.0124	-0.0134	2.6064
295	CRTFP Ux+	0	0	0	0	0	0
295	CRTFP Ux-	0	0	0	0	0	0
295	CRTFP Uy+	0	0	0	0	0	0
295	CRTFP Uy-	0	0	0	0	0	0
296	SLU 1	0.24	-0.4	38.31	10.8709	-0.0109	-0.0724
296	SLU 2	0.23	-0.34	38.3	10.8652	-0.0107	-0.07
296	SLU 3	0.24	-0.4	39.03	11.0737	-0.0111	-0.0745
296	SLU 4	0.24	-0.36	39.02	11.0703	-0.011	-0.0731
296	SLU 5	0.23	-0.35	38.75	10.9905	-0.0108	-0.0704
296	SLU 6	0.25	-0.41	39.48	11.199	-0.0112	-0.0749
296	SLU 7	0.24	-0.37	39.47	11.1956	-0.0111	-0.0735
296	SLU 8	0.24	-0.42	39.21	11.1214	-0.011	-0.0732
296	SLU 9	0.24	-0.38	39.2	11.118	-0.0109	-0.0718
296	SLU 10	0.25	-0.32	43.34	12.2985	-0.0116	-0.0769
296	SLU 11	0.27	-0.39	44.07	12.507	-0.0119	-0.0814
296	SLU 12	0.26	-0.35	44.06	12.5036	-0.0118	-0.08
296	SLU 13	0.25	-0.33	43.79	12.4237	-0.0116	-0.0773
296	SLU 14	0.27	-0.4	44.52	12.6322	-0.012	-0.0818
296	SLU 15	0.26	-0.36	44.51	12.6288	-0.0119	-0.0804
296	SLU 16	0.26	-0.41	44.25	12.5547	-0.0119	-0.0801
296	SLU 17	0.26	-0.37	44.24	12.5513	-0.0118	-0.0787
296	SLU 18	0.27	-0.39	45.51	12.9184	-0.0121	-0.0823
296	SLU 19	0.27	-0.35	45.51	12.915	-0.012	-0.0808
296	SLU 20	0.27	-0.4	45.96	13.0437	-0.0122	-0.0827
296	SLU 21	0.27	-0.36	45.95	13.0403	-0.0121	-0.0813
296	SLU 22	0.28	-0.38	42.73	12.1269	-0.0127	-0.0857
296	SLU 23	0.27	-0.32	42.72	12.1212	-0.0125	-0.0834
296	SLU 24	0.29	-0.38	43.45	12.3297	-0.0129	-0.0879
296	SLU 25	0.28	-0.34	43.44	12.3263	-0.0128	-0.0864
296	SLU 26	0.28	-0.33	43.16	12.2465	-0.0126	-0.0838
296	SLU 27	0.29	-0.39	43.89	12.4549	-0.013	-0.0883
296	SLU 28	0.29	-0.35	43.89	12.4515	-0.0129	-0.0868
296	SLU 29	0.28	-0.4	43.62	12.3774	-0.0129	-0.0865
296	SLU 30	0.28	-0.36	43.61	12.374	-0.0128	-0.0851
296	SLU 31	0.3	-0.3	47.76	13.5545	-0.0134	-0.0903
296	SLU 32	0.31	-0.37	48.49	13.7629	-0.0138	-0.0948
296	SLU 33	0.31	-0.33	48.48	13.7595	-0.0137	-0.0934
296	SLU 34	0.3	-0.31	48.2	13.6797	-0.0135	-0.0907
296	SLU 35	0.31	-0.38	48.93	13.8882	-0.0139	-0.0952
296	SLU 36	0.31	-0.34	48.93	13.8848	-0.0138	-0.0938
296	SLU 37	0.31	-0.39	48.66	13.8106	-0.0138	-0.0934
296	SLU 38	0.3	-0.35	48.65	13.8072	-0.0137	-0.092
296	SLU 39	0.31	-0.37	49.93	14.1744	-0.014	-0.0956
296	SLU 40	0.31	-0.33	49.92	14.171	-0.0138	-0.0942
296	SLU 41	0.32	-0.38	50.38	14.2996	-0.0141	-0.096
296	SLU 42	0.31	-0.34	50.37	14.2962	-0.0139	-0.0946
296	SLU 43	0.29	-0.53	48.29	13.7016	-0.0135	-0.0895
296	SLU 44	0.29	-0.47	48.28	13.6959	-0.0133	-0.0871
296	SLU 45	0.3	-0.53	49.01	13.9044	-0.0137	-0.0916
296	SLU 46	0.3	-0.49	49	13.901	-0.0136	-0.0902
296	SLU 47	0.29	-0.48	48.73	13.8212	-0.0134	-0.0875
296	SLU 48	0.3	-0.54	49.46	14.0296	-0.0138	-0.092
296	SLU 49	0.3	-0.5	49.45	14.0262	-0.0137	-0.0906
296	SLU 50	0.3	-0.55	49.19	13.9521	-0.0137	-0.0903
296	SLU 51	0.29	-0.51	49.18	13.9487	-0.0136	-0.0889
296	SLU 52	0.31	-0.45	53.32	15.1291	-0.0142	-0.0941
296	SLU 53	0.32	-0.52	54.05	15.3376	-0.0146	-0.0986
296	SLU 54	0.32	-0.48	54.04	15.3342	-0.0145	-0.0971
296	SLU 55	0.31	-0.46	53.77	15.2544	-0.0143	-0.0945
296	SLU 56	0.32	-0.53	54.5	15.4629	-0.0147	-0.099
296	SLU 57	0.32	-0.49	54.49	15.4595	-0.0146	-0.0976
296	SLU 58	0.32	-0.54	54.23	15.3853	-0.0145	-0.0972
296	SLU 59	0.31	-0.5	54.22	15.3819	-0.0144	-0.0958
296	SLU 60	0.33	-0.52	55.49	15.7491	-0.0147	-0.0994
296	SLU 61	0.32	-0.48	55.49	15.7457	-0.0146	-0.098
296	SLU 62	0.33	-0.53	55.94	15.8743	-0.0148	-0.0998
296	SLU 63	0.32	-0.49	55.93	15.8709	-0.0147	-0.0984
296	SLU 64	0.34	-0.51	52.71	14.9575	-0.0153	-0.1028
296	SLU 65	0.33	-0.44	52.7	14.9519	-0.0151	-0.1005
296	SLU 66	0.35	-0.51	53.43	15.1603	-0.0155	-0.105
296	SLU 67	0.34	-0.47	53.42	15.1569	-0.0154	-0.1036
296	SLU 68	0.33	-0.45	53.14	15.0771	-0.0152	-0.1009
296	SLU 69	0.35	-0.52	53.87	15.2856	-0.0156	-0.1054
296	SLU 70	0.34	-0.48	53.87	15.2822	-0.0155	-0.104
296	SLU 71	0.34	-0.53	53.6	15.208	-0.0155	-0.1036
296	SLU 72	0.34	-0.49	53.59	15.2046	-0.0154	-0.1022
296	SLU 73	0.35	-0.43	57.74	16.3851	-0.016	-0.1074
296	SLU 74	0.37	-0.5	58.47	16.5936	-0.0164	-0.1119
296	SLU 75	0.36	-0.46	58.46	16.5902	-0.0163	-0.1105
296	SLU 76	0.35	-0.44	58.18	16.5104	-0.0161	-0.1078
296	SLU 77	0.37	-0.51	58.91	16.7188	-0.0165	-0.1123

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
296	SLU 78	0.36	-0.47	58.91	16.7154	-0.0164	-0.1109
296	SLU 79	0.36	-0.52	58.64	16.6413	-0.0164	-0.1106
296	SLU 80	0.36	-0.48	58.63	16.6379	-0.0163	-0.1092
296	SLU 81	0.37	-0.49	59.91	17.005	-0.0166	-0.1127
296	SLU 82	0.37	-0.45	59.9	17.0016	-0.0165	-0.1113
296	SLU 83	0.37	-0.5	60.36	17.1303	-0.0167	-0.1131
296	SLU 84	0.37	-0.46	60.35	17.1269	-0.0166	-0.1117
296	SLE RA 1	0.25	-0.4	39.58	11.2298	-0.0114	-0.0762
296	SLE RA 2	0.25	-0.35	39.57	11.226	-0.0113	-0.0746
296	SLE RA 3	0.26	-0.4	40.05	11.365	-0.0115	-0.0776
296	SLE RA 4	0.25	-0.37	40.05	11.3627	-0.0115	-0.0767
296	SLE RA 5	0.25	-0.36	39.86	11.3095	-0.0113	-0.0749
296	SLE RA 6	0.26	-0.4	40.35	11.4485	-0.0116	-0.0779
296	SLE RA 7	0.25	-0.38	40.35	11.4462	-0.0115	-0.0769
296	SLE RA 8	0.25	-0.41	40.17	11.3968	-0.0115	-0.0767
296	SLE RA 9	0.25	-0.38	40.17	11.3945	-0.0114	-0.0758
296	SLE RA 10	0.26	-0.35	42.93	12.1815	-0.0118	-0.0792
296	SLE RA 11	0.27	-0.39	43.41	12.3205	-0.0121	-0.0822
296	SLE RA 12	0.27	-0.36	43.41	12.3182	-0.012	-0.0813
296	SLE RA 13	0.26	-0.35	43.22	12.265	-0.0119	-0.0795
296	SLE RA 14	0.27	-0.4	43.71	12.404	-0.0122	-0.0825
296	SLE RA 15	0.27	-0.37	43.71	12.4017	-0.0121	-0.0815
296	SLE RA 16	0.27	-0.4	43.53	12.3523	-0.0121	-0.0813
296	SLE RA 17	0.26	-0.38	43.53	12.35	-0.012	-0.0804
296	SLE RA 18	0.27	-0.39	44.38	12.5948	-0.0122	-0.0828
296	SLE RA 19	0.27	-0.36	44.37	12.5925	-0.0121	-0.0818
296	SLE RA 20	0.27	-0.39	44.67	12.6783	-0.0123	-0.083
296	SLE RA 21	0.27	-0.37	44.67	12.676	-0.0122	-0.0821
296	SLE FR 1	0.25	-0.4	39.58	11.2298	-0.0114	-0.0762
296	SLE FR 2	0.25	-0.39	39.58	11.229	-0.0114	-0.0759
296	SLE FR 3	0.25	-0.4	39.7	11.2632	-0.0114	-0.0763
296	SLE FR 4	0.26	-0.39	41.02	11.6385	-0.0116	-0.0778
296	SLE FR 5	0.26	-0.4	41.14	11.6727	-0.0117	-0.0783
296	SLE FR 6	0.26	-0.39	41.98	11.9123	-0.0118	-0.0795
296	SLE QP 1	0.25	-0.4	39.58	11.2298	-0.0114	-0.0762
296	SLE QP 2	0.26	-0.4	41.02	11.6393	-0.0116	-0.0782
296	SLD 1	4.21	0.47	40.08	11.3939	-0.0054	-1.2274
296	SLD 2	4.38	0.57	40.08	11.3927	-0.0054	-1.2758
296	SLD 3	4.11	-0.85	39.99	11.3813	-0.0062	-1.1973
296	SLD 4	4.28	-0.75	39.99	11.3802	-0.0062	-1.2456
296	SLD 5	1.57	1.85	40.87	11.5848	-0.0086	-0.4602
296	SLD 6	1.68	1.91	40.87	11.5841	-0.0086	-0.4916
296	SLD 7	1.23	-2.55	40.57	11.5431	-0.0111	-0.3597
296	SLD 8	1.34	-2.49	40.57	11.5424	-0.0111	-0.3911
296	SLD 9	-0.82	1.7	41.46	11.7362	-0.0121	0.2348
296	SLD 10	-0.71	1.76	41.46	11.7354	-0.0121	0.2034
296	SLD 11	-1.17	-2.7	41.16	11.6945	-0.0146	0.3353
296	SLD 12	-1.06	-2.64	41.16	11.6937	-0.0146	0.3039
296	SLD 13	-3.76	-0.04	42.04	11.8983	-0.0171	1.0893
296	SLD 14	-3.6	0.06	42.04	11.8972	-0.0171	1.041
296	SLD 15	-3.87	-1.36	41.95	11.8858	-0.0178	1.1195
296	SLD 16	-3.7	-1.26	41.95	11.8847	-0.0178	1.0711
296	SLV 1	9.51	1.59	38.83	11.0653	0.0028	-2.7659
296	SLV 2	9.9	1.82	38.83	11.0626	0.0029	-2.8785
296	SLV 3	9.27	-1.42	38.63	11.0362	0.0011	-2.6958
296	SLV 4	9.66	-1.19	38.62	11.0334	0.0011	-2.8085
296	SLV 5	3.33	4.72	40.67	11.5118	-0.0047	-0.9716
296	SLV 6	3.58	4.86	40.67	11.5101	-0.0047	-1.0435
296	SLV 7	2.53	-5.3	39.99	11.4145	-0.0104	-0.7382
296	SLV 8	2.78	-5.15	39.99	11.4128	-0.0104	-0.8101
296	SLV 9	-2.27	4.36	42.04	11.8657	-0.0128	0.6538
296	SLV 10	-2.02	4.51	42.04	11.864	-0.0128	0.5819
296	SLV 11	-3.07	-5.65	41.37	11.7685	-0.0186	0.8872
296	SLV 12	-2.82	-5.51	41.36	11.7667	-0.0186	0.8153
296	SLV 13	-9.15	0.4	43.41	12.2451	-0.0244	2.6522
296	SLV 14	-8.75	0.63	43.41	12.2424	-0.0244	2.5395
296	SLV 15	-9.39	-2.61	43.21	12.2159	-0.0261	2.7222
296	SLV 16	-8.99	-2.38	43.2	12.2132	-0.0261	2.6096
296	CRTFP Ux+	0	0	0	0	0	0
296	CRTFP Ux-	0	0	0	0	0	0
296	CRTFP Uy+	0	0	0	0	0	0
296	CRTFP Uy-	0	0	0	0	0	0
297	SLU 1	0.24	-0.45	38.76	11.042	-0.0193	-0.0738
297	SLU 2	0.23	-0.38	38.74	11.0343	-0.0191	-0.0714
297	SLU 3	0.25	-0.45	39.48	11.2484	-0.0197	-0.076
297	SLU 4	0.24	-0.41	39.47	11.2438	-0.0196	-0.0745
297	SLU 5	0.24	-0.39	39.19	11.1614	-0.0193	-0.0718
297	SLU 6	0.25	-0.46	39.93	11.3755	-0.0199	-0.0764
297	SLU 7	0.25	-0.42	39.92	11.3708	-0.0198	-0.075
297	SLU 8	0.25	-0.47	39.66	11.2961	-0.0197	-0.0746
297	SLU 9	0.24	-0.43	39.64	11.2915	-0.0196	-0.0732
297	SLU 10	0.26	-0.37	43.82	12.4847	-0.0213	-0.0784
297	SLU 11	0.27	-0.44	44.56	12.6988	-0.0219	-0.0831
297	SLU 12	0.27	-0.4	44.55	12.6942	-0.0218	-0.0816
297	SLU 13	0.26	-0.38	44.27	12.6118	-0.0215	-0.0788
297	SLU 14	0.27	-0.45	45.01	12.8259	-0.0221	-0.0835
297	SLU 15	0.27	-0.41	45	12.8212	-0.022	-0.082
297	SLU 16	0.27	-0.46	44.74	12.7465	-0.0219	-0.0817
297	SLU 17	0.26	-0.42	44.72	12.7419	-0.0218	-0.0802
297	SLU 18	0.28	-0.44	46.02	13.114	-0.0224	-0.0839
297	SLU 19	0.27	-0.4	46	13.1094	-0.0223	-0.0824

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
297	SLU 20	0.28	-0.45	46.46	13.2411	-0.0226	-0.0843
297	SLU 21	0.27	-0.41	46.45	13.2364	-0.0225	-0.0828
297	SLU 22	0.29	-0.43	43.25	12.3256	-0.0223	-0.0875
297	SLU 23	0.28	-0.36	43.23	12.3179	-0.0221	-0.0851
297	SLU 24	0.3	-0.43	43.98	12.532	-0.0227	-0.0897
297	SLU 25	0.29	-0.39	43.96	12.5273	-0.0226	-0.0882
297	SLU 26	0.28	-0.37	43.68	12.4449	-0.0223	-0.0855
297	SLU 27	0.3	-0.44	44.43	12.659	-0.0229	-0.0901
297	SLU 28	0.29	-0.4	44.41	12.6544	-0.0228	-0.0886
297	SLU 29	0.29	-0.45	44.15	12.5797	-0.0227	-0.0883
297	SLU 30	0.29	-0.41	44.14	12.575	-0.0226	-0.0869
297	SLU 31	0.3	-0.36	48.31	13.7683	-0.0243	-0.0921
297	SLU 32	0.32	-0.43	49.06	13.9824	-0.0248	-0.0967
297	SLU 33	0.31	-0.38	49.05	13.9777	-0.0247	-0.0953
297	SLU 34	0.3	-0.37	48.76	13.8953	-0.0245	-0.0925
297	SLU 35	0.32	-0.44	49.51	14.1094	-0.0251	-0.0972
297	SLU 36	0.31	-0.39	49.49	14.1048	-0.025	-0.0957
297	SLU 37	0.31	-0.45	49.23	14.0301	-0.0249	-0.0954
297	SLU 38	0.31	-0.41	49.22	14.0254	-0.0248	-0.0939
297	SLU 39	0.32	-0.42	50.51	14.3976	-0.0254	-0.0976
297	SLU 40	0.32	-0.38	50.5	14.393	-0.0253	-0.0961
297	SLU 41	0.32	-0.43	50.96	14.5246	-0.0256	-0.098
297	SLU 42	0.32	-0.39	50.95	14.52	-0.0255	-0.0965
297	SLU 43	0.3	-0.59	48.84	13.9145	-0.0241	-0.0913
297	SLU 44	0.29	-0.52	48.82	13.9068	-0.0239	-0.0888
297	SLU 45	0.31	-0.59	49.57	14.1209	-0.0245	-0.0935
297	SLU 46	0.3	-0.55	49.56	14.1163	-0.0244	-0.092
297	SLU 47	0.29	-0.53	49.27	14.0339	-0.0241	-0.0892
297	SLU 48	0.31	-0.6	50.02	14.248	-0.0247	-0.0939
297	SLU 49	0.3	-0.56	50.01	14.2434	-0.0246	-0.0924
297	SLU 50	0.3	-0.61	49.74	14.1686	-0.0245	-0.0921
297	SLU 51	0.3	-0.57	49.73	14.164	-0.0244	-0.0906
297	SLU 52	0.31	-0.51	53.9	15.3572	-0.0261	-0.0959
297	SLU 53	0.33	-0.58	54.65	15.5713	-0.0266	-0.1005
297	SLU 54	0.32	-0.54	54.64	15.5667	-0.0265	-0.0991
297	SLU 55	0.32	-0.52	54.35	15.4843	-0.0263	-0.0963
297	SLU 56	0.33	-0.59	55.1	15.6984	-0.0269	-0.1009
297	SLU 57	0.33	-0.55	55.09	15.6938	-0.0268	-0.0995
297	SLU 58	0.33	-0.6	54.82	15.619	-0.0267	-0.0991
297	SLU 59	0.32	-0.56	54.81	15.6144	-0.0266	-0.0977
297	SLU 60	0.33	-0.58	56.1	15.9865	-0.0272	-0.1013
297	SLU 61	0.33	-0.54	56.09	15.9819	-0.0271	-0.0999
297	SLU 62	0.33	-0.59	56.55	16.1136	-0.0274	-0.1018
297	SLU 63	0.33	-0.55	56.54	16.109	-0.0273	-0.1003
297	SLU 64	0.35	-0.57	53.34	15.1981	-0.027	-0.1049
297	SLU 65	0.34	-0.5	53.32	15.1904	-0.0269	-0.1025
297	SLU 66	0.35	-0.57	54.06	15.4045	-0.0274	-0.1071
297	SLU 67	0.35	-0.53	54.05	15.3999	-0.0273	-0.1057
297	SLU 68	0.34	-0.51	53.77	15.3174	-0.0271	-0.1029
297	SLU 69	0.35	-0.58	54.51	15.5315	-0.0276	-0.1076
297	SLU 70	0.35	-0.54	54.5	15.5269	-0.0275	-0.1061
297	SLU 71	0.35	-0.59	54.24	15.4522	-0.0274	-0.1058
297	SLU 72	0.34	-0.55	54.22	15.4476	-0.0273	-0.1043
297	SLU 73	0.36	-0.5	58.4	16.6408	-0.029	-0.1096
297	SLU 74	0.38	-0.56	59.14	16.8549	-0.0296	-0.1142
297	SLU 75	0.37	-0.52	59.13	16.8503	-0.0295	-0.1127
297	SLU 76	0.36	-0.51	58.85	16.7678	-0.0292	-0.11
297	SLU 77	0.38	-0.58	59.59	16.9819	-0.0298	-0.1146
297	SLU 78	0.37	-0.53	59.58	16.9773	-0.0297	-0.1131
297	SLU 79	0.37	-0.59	59.32	16.9026	-0.0296	-0.1128
297	SLU 80	0.37	-0.55	59.31	16.898	-0.0295	-0.1114
297	SLU 81	0.38	-0.56	60.6	17.2701	-0.0301	-0.115
297	SLU 82	0.37	-0.52	60.58	17.2655	-0.03	-0.1136
297	SLU 83	0.38	-0.57	61.05	17.3972	-0.0304	-0.1154
297	SLU 84	0.37	-0.53	61.03	17.3925	-0.0303	-0.114
297	SLE RA 1	0.26	-0.44	40.04	11.4087	-0.0201	-0.0777
297	SLE RA 2	0.25	-0.4	40.03	11.4036	-0.02	-0.0761
297	SLE RA 3	0.26	-0.44	40.52	11.5463	-0.0204	-0.0792
297	SLE RA 4	0.26	-0.42	40.52	11.5433	-0.0203	-0.0782
297	SLE RA 5	0.25	-0.4	40.33	11.4883	-0.0202	-0.0764
297	SLE RA 6	0.26	-0.45	40.82	11.631	-0.0205	-0.0795
297	SLE RA 7	0.26	-0.42	40.82	11.628	-0.0205	-0.0785
297	SLE RA 8	0.26	-0.46	40.64	11.5781	-0.0204	-0.0783
297	SLE RA 9	0.25	-0.43	40.63	11.5751	-0.0204	-0.0773
297	SLE RA 10	0.27	-0.39	43.41	12.3705	-0.0215	-0.0808
297	SLE RA 11	0.28	-0.44	43.91	12.5133	-0.0219	-0.0839
297	SLE RA 12	0.27	-0.41	43.9	12.5102	-0.0218	-0.0829
297	SLE RA 13	0.27	-0.4	43.71	12.4552	-0.0216	-0.0811
297	SLE RA 14	0.28	-0.45	44.21	12.598	-0.022	-0.0842
297	SLE RA 15	0.27	-0.42	44.2	12.5949	-0.0219	-0.0832
297	SLE RA 16	0.27	-0.45	44.03	12.5451	-0.0219	-0.083
297	SLE RA 17	0.27	-0.43	44.02	12.542	-0.0218	-0.082
297	SLE RA 18	0.28	-0.44	44.88	12.7901	-0.0222	-0.0844
297	SLE RA 19	0.27	-0.41	44.87	12.787	-0.0221	-0.0835
297	SLE RA 20	0.28	-0.44	45.18	12.8748	-0.0224	-0.0847
297	SLE RA 21	0.27	-0.42	45.17	12.8717	-0.0223	-0.0837
297	SLE FR 1	0.26	-0.44	40.04	11.4087	-0.0201	-0.0777
297	SLE FR 2	0.25	-0.43	40.04	11.4077	-0.0201	-0.0774
297	SLE FR 3	0.26	-0.45	40.16	11.4426	-0.0202	-0.0778
297	SLE FR 4	0.26	-0.43	41.49	11.8221	-0.0207	-0.0794
297	SLE FR 5	0.26	-0.44	41.61	11.857	-0.0208	-0.0798

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
297	SLE FR 6	0.27	-0.44	42.46	12.0994	-0.0212	-0.0811
297	SLE QP 1	0.26	-0.44	40.04	11.4087	-0.0201	-0.0777
297	SLE QP 2	0.26	-0.44	41.49	11.8231	-0.0208	-0.0797
297	SLD 1	4.21	0.44	40.31	11.5125	-0.0138	-1.2314
297	SLD 2	4.38	0.55	40.31	11.5113	-0.0138	-1.2799
297	SLD 3	4.11	-0.87	40.24	11.4952	-0.0143	-1.2013
297	SLD 4	4.28	-0.76	40.24	11.494	-0.0143	-1.2498
297	SLD 5	1.57	1.79	41.25	11.7564	-0.0179	-0.4624
297	SLD 6	1.68	1.86	41.25	11.7556	-0.0179	-0.4938
297	SLD 7	1.23	-2.58	41	11.6987	-0.0196	-0.3622
297	SLD 8	1.34	-2.5	41	11.6979	-0.0196	-0.3936
297	SLD 9	-0.82	1.62	41.98	11.9483	-0.0219	0.2341
297	SLD 10	-0.71	1.69	41.98	11.9475	-0.0219	0.2027
297	SLD 11	-1.16	-2.74	41.73	11.8907	-0.0237	0.3344
297	SLD 12	-1.05	-2.67	41.73	11.8899	-0.0237	0.3029
297	SLD 13	-3.75	-0.12	42.75	12.1523	-0.0272	1.0903
297	SLD 14	-3.58	-0.01	42.75	12.1511	-0.0272	1.0419
297	SLD 15	-3.85	-1.43	42.67	12.135	-0.0277	1.1204
297	SLD 16	-3.69	-1.32	42.67	12.1338	-0.0277	1.0719
297	SLV 1	9.5	1.58	38.74	11.0964	-0.0044	-2.7731
297	SLV 2	9.89	1.83	38.73	11.0936	-0.0044	-2.886
297	SLV 3	9.26	-1.41	38.56	11.0562	-0.0057	-2.7033
297	SLV 4	9.65	-1.15	38.56	11.0534	-0.0057	-2.8162
297	SLV 5	3.33	4.64	40.93	11.6666	-0.014	-0.9745
297	SLV 6	3.58	4.81	40.92	11.6647	-0.014	-1.0466
297	SLV 7	2.53	-5.3	40.36	11.5326	-0.0181	-0.7418
297	SLV 8	2.78	-5.13	40.35	11.5308	-0.0181	-0.8139
297	SLV 9	-2.26	4.25	42.63	12.1155	-0.0234	0.6544
297	SLV 10	-2.01	4.42	42.63	12.1137	-0.0234	0.5823
297	SLV 11	-3.05	-5.69	42.06	11.9815	-0.0275	0.8872
297	SLV 12	-2.8	-5.53	42.06	11.9797	-0.0275	0.815
297	SLV 13	-9.13	0.27	44.42	12.5929	-0.0358	2.6567
297	SLV 14	-8.73	0.52	44.42	12.5901	-0.0358	2.5438
297	SLV 15	-9.36	-2.72	44.25	12.5527	-0.0371	2.7265
297	SLV 16	-8.97	-2.46	44.25	12.5499	-0.0371	2.6136
297	CRTFP Ux+	0	0	0	0	0	0
297	CRTFP Ux-	0	0	0	0	0	0
297	CRTFP Uy+	0	0	0	0	0	0
297	CRTFP Uy-	0	0	0	0	0	0
298	SLU 1	0.21	-0.42	34.06	9.5236	0.8	-0.0529
298	SLU 2	0.21	-0.36	34.04	9.5156	0.7995	-0.0522
298	SLU 3	0.22	-0.42	34.7	9.7021	0.815	-0.0548
298	SLU 4	0.22	-0.38	34.68	9.6973	0.8147	-0.0544
298	SLU 5	0.21	-0.37	34.43	9.6251	0.8088	-0.0523
298	SLU 6	0.22	-0.43	35.09	9.8117	0.8243	-0.0549
298	SLU 7	0.22	-0.39	35.08	9.8069	0.824	-0.0545
298	SLU 8	0.22	-0.44	34.85	9.7427	0.8186	-0.0531
298	SLU 9	0.21	-0.4	34.84	9.7379	0.8183	-0.0527
298	SLU 10	0.23	-0.35	38.49	10.764	0.9044	-0.0583
298	SLU 11	0.24	-0.42	39.15	10.9506	0.9198	-0.0608
298	SLU 12	0.24	-0.38	39.14	10.9457	0.9196	-0.0604
298	SLU 13	0.23	-0.36	38.89	10.8736	0.9136	-0.0584
298	SLU 14	0.24	-0.43	39.55	11.0601	0.9291	-0.0609
298	SLU 15	0.24	-0.39	39.54	11.0553	0.9288	-0.0605
298	SLU 16	0.24	-0.43	39.31	10.9911	0.9234	-0.0592
298	SLU 17	0.23	-0.4	39.29	10.9863	0.9231	-0.0588
298	SLU 18	0.24	-0.41	40.43	11.3071	0.9498	-0.0615
298	SLU 19	0.24	-0.38	40.41	11.3022	0.9495	-0.0611
298	SLU 20	0.24	-0.42	40.82	11.4166	0.9591	-0.0616
298	SLU 21	0.24	-0.39	40.81	11.4118	0.9588	-0.0612
298	SLU 22	0.25	-0.41	38.03	10.6375	0.8929	-0.0649
298	SLU 23	0.25	-0.35	38.01	10.6295	0.8925	-0.0643
298	SLU 24	0.26	-0.41	38.67	10.816	0.9079	-0.0668
298	SLU 25	0.26	-0.37	38.66	10.8112	0.9076	-0.0664
298	SLU 26	0.25	-0.36	38.4	10.739	0.9017	-0.0644
298	SLU 27	0.26	-0.42	39.07	10.9256	0.9172	-0.0669
298	SLU 28	0.26	-0.38	39.05	10.9208	0.9169	-0.0665
298	SLU 29	0.26	-0.43	38.82	10.8566	0.9115	-0.0652
298	SLU 30	0.25	-0.39	38.81	10.8518	0.9112	-0.0648
298	SLU 31	0.27	-0.34	42.47	11.8779	0.9973	-0.0703
298	SLU 32	0.28	-0.41	43.13	12.0645	1.0128	-0.0728
298	SLU 33	0.28	-0.37	43.11	12.0596	1.0125	-0.0724
298	SLU 34	0.27	-0.35	42.86	11.9875	1.0066	-0.0704
298	SLU 35	0.28	-0.42	43.52	12.174	1.022	-0.0729
298	SLU 36	0.28	-0.38	43.51	12.1692	1.0217	-0.0725
298	SLU 37	0.28	-0.42	43.28	12.1051	1.0163	-0.0712
298	SLU 38	0.27	-0.39	43.27	12.1002	1.016	-0.0708
298	SLU 39	0.28	-0.4	44.4	12.421	1.0427	-0.0736
298	SLU 40	0.28	-0.37	44.39	12.4161	1.0424	-0.0732
298	SLU 41	0.28	-0.41	44.79	12.5305	1.052	-0.0737
298	SLU 42	0.28	-0.38	44.78	12.5257	1.0517	-0.0733
298	SLU 43	0.26	-0.54	42.91	11.9988	1.0082	-0.0647
298	SLU 44	0.26	-0.48	42.89	11.9907	1.0077	-0.064
298	SLU 45	0.27	-0.55	43.55	12.1773	1.0232	-0.0665
298	SLU 46	0.27	-0.51	43.54	12.1725	1.0229	-0.0661
298	SLU 47	0.26	-0.49	43.29	12.1003	1.017	-0.0641
298	SLU 48	0.27	-0.55	43.95	12.2869	1.0324	-0.0666
298	SLU 49	0.27	-0.52	43.93	12.282	1.0321	-0.0662
298	SLU 50	0.27	-0.56	43.7	12.2179	1.0267	-0.0649
298	SLU 51	0.26	-0.53	43.69	12.2131	1.0264	-0.0645
298	SLU 52	0.28	-0.48	47.35	13.2392	1.1125	-0.07

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
298	SLU 53	0.29	-0.54	48.01	13.4257	1.128	-0.0726
298	SLU 54	0.29	-0.51	48	13.4209	1.1277	-0.0722
298	SLU 55	0.28	-0.49	47.74	13.3487	1.1218	-0.0701
298	SLU 56	0.29	-0.55	48.41	13.5353	1.1373	-0.0727
298	SLU 57	0.29	-0.52	48.39	13.5305	1.137	-0.0723
298	SLU 58	0.29	-0.56	48.16	13.4663	1.1316	-0.0709
298	SLU 59	0.28	-0.53	48.15	13.4615	1.1313	-0.0705
298	SLU 60	0.29	-0.54	49.28	13.7822	1.158	-0.0733
298	SLU 61	0.29	-0.51	49.27	13.7774	1.1577	-0.0729
298	SLU 62	0.29	-0.55	49.68	13.8918	1.1672	-0.0734
298	SLU 63	0.29	-0.52	49.66	13.887	1.1669	-0.073
298	SLU 64	0.3	-0.53	46.89	13.1127	1.1011	-0.0767
298	SLU 65	0.3	-0.47	46.86	13.1046	1.1006	-0.076
298	SLU 66	0.31	-0.54	47.53	13.2912	1.1161	-0.0785
298	SLU 67	0.31	-0.5	47.51	13.2864	1.1158	-0.0781
298	SLU 68	0.3	-0.48	47.26	13.2142	1.1099	-0.0761
298	SLU 69	0.31	-0.55	47.92	13.4008	1.1253	-0.0787
298	SLU 70	0.31	-0.51	47.91	13.3959	1.125	-0.0782
298	SLU 71	0.31	-0.55	47.68	13.3318	1.1196	-0.0769
298	SLU 72	0.3	-0.52	47.66	13.327	1.1193	-0.0765
298	SLU 73	0.32	-0.47	51.32	14.3531	1.2055	-0.082
298	SLU 74	0.33	-0.53	51.98	14.5396	1.2209	-0.0846
298	SLU 75	0.33	-0.5	51.97	14.5348	1.2206	-0.0842
298	SLU 76	0.32	-0.48	51.72	14.4626	1.2147	-0.0822
298	SLU 77	0.33	-0.54	52.38	14.6492	1.2302	-0.0847
298	SLU 78	0.33	-0.51	52.36	14.6444	1.2299	-0.0843
298	SLU 79	0.33	-0.55	52.13	14.5802	1.2245	-0.0829
298	SLU 80	0.32	-0.52	52.12	14.5754	1.2242	-0.0825
298	SLU 81	0.33	-0.53	53.25	14.8961	1.2509	-0.0853
298	SLU 82	0.33	-0.5	53.24	14.8913	1.2506	-0.0849
298	SLU 83	0.33	-0.54	53.65	15.0057	1.2601	-0.0854
298	SLU 84	0.33	-0.51	53.64	15.0009	1.2598	-0.085
298	SLE RA 1	0.22	-0.41	35.19	9.8418	0.8266	-0.0564
298	SLE RA 2	0.22	-0.37	35.18	9.8365	0.8263	-0.0559
298	SLE RA 3	0.23	-0.41	35.62	9.9609	0.8366	-0.0576
298	SLE RA 4	0.23	-0.39	35.61	9.9577	0.8364	-0.0573
298	SLE RA 5	0.22	-0.38	35.44	9.9095	0.8324	-0.056
298	SLE RA 6	0.23	-0.42	35.88	10.0339	0.8427	-0.0577
298	SLE RA 7	0.23	-0.4	35.87	10.0307	0.8425	-0.0574
298	SLE RA 8	0.23	-0.43	35.72	9.9879	0.8389	-0.0565
298	SLE RA 9	0.22	-0.4	35.71	9.9847	0.8387	-0.0562
298	SLE RA 10	0.23	-0.37	38.15	10.6688	0.8961	-0.0599
298	SLE RA 11	0.24	-0.41	38.59	10.7932	0.9065	-0.0616
298	SLE RA 12	0.24	-0.39	38.58	10.7899	0.9063	-0.0613
298	SLE RA 13	0.23	-0.38	38.41	10.7418	0.9023	-0.06
298	SLE RA 14	0.24	-0.42	38.85	10.8662	0.9126	-0.0617
298	SLE RA 15	0.24	-0.4	38.85	10.863	0.9124	-0.0614
298	SLE RA 16	0.24	-0.43	38.69	10.8202	0.9088	-0.0605
298	SLE RA 17	0.24	-0.4	38.68	10.817	0.9086	-0.0602
298	SLE RA 18	0.24	-0.41	39.44	11.0308	0.9264	-0.0621
298	SLE RA 19	0.24	-0.39	39.43	11.0276	0.9262	-0.0618
298	SLE RA 20	0.24	-0.42	39.7	11.1039	0.9326	-0.0622
298	SLE RA 21	0.24	-0.39	39.69	11.1007	0.9324	-0.0619
298	SLE FR 1	0.22	-0.41	35.19	9.8418	0.8266	-0.0564
298	SLE FR 2	0.22	-0.41	35.19	9.8408	0.8265	-0.0563
298	SLE FR 3	0.23	-0.42	35.3	9.8711	0.829	-0.0564
298	SLE FR 4	0.23	-0.4	36.46	10.1975	0.8565	-0.058
298	SLE FR 5	0.23	-0.42	36.57	10.2278	0.859	-0.0581
298	SLE FR 6	0.23	-0.41	37.32	10.4363	0.8765	-0.0592
298	SLE QP 1	0.22	-0.41	35.19	9.8418	0.8266	-0.0564
298	SLE QP 2	0.23	-0.41	36.47	10.1985	0.8565	-0.0581
298	SLD 1	3.64	0.35	35.23	9.8761	0.8319	-1.0475
298	SLD 2	3.78	0.46	35.23	9.8752	0.8318	-1.0912
298	SLD 3	3.55	-0.77	35.17	9.8585	0.8307	-1.0048
298	SLD 4	3.69	-0.67	35.16	9.8576	0.8307	-1.0485
298	SLD 5	1.36	1.5	36.19	10.1287	0.8509	-0.4121
298	SLD 6	1.46	1.57	36.19	10.1281	0.8509	-0.4404
298	SLD 7	1.07	-2.24	35.98	10.07	0.847	-0.2697
298	SLD 8	1.16	-2.18	35.98	10.0694	0.847	-0.298
298	SLD 9	-0.7	1.35	36.96	10.3277	0.8661	0.1819
298	SLD 10	-0.6	1.42	36.96	10.3271	0.8661	0.1535
298	SLD 11	-0.99	-2.4	36.74	10.269	0.8622	0.3243
298	SLD 12	-0.9	-2.33	36.74	10.2684	0.8621	0.2959
298	SLD 13	-3.23	-0.16	37.77	10.5395	0.8824	0.9323
298	SLD 14	-3.09	-0.05	37.77	10.5386	0.8824	0.8887
298	SLD 15	-3.32	-1.28	37.71	10.5219	0.8812	0.9751
298	SLD 16	-3.17	-1.18	37.71	10.521	0.8812	0.9314
298	SLV 1	8.19	1.34	33.57	9.4442	0.7989	-2.3712
298	SLV 2	8.53	1.59	33.57	9.4421	0.7987	-2.473
298	SLV 3	7.99	-1.22	33.42	9.4033	0.7961	-2.2735
298	SLV 4	8.33	-0.97	33.42	9.4012	0.796	-2.3752
298	SLV 5	2.87	3.96	35.82	10.0347	0.8434	-0.8831
298	SLV 6	3.09	4.11	35.82	10.0333	0.8433	-0.9481
298	SLV 7	2.19	-4.58	35.33	9.8983	0.8343	-0.5572
298	SLV 8	2.41	-4.42	35.33	9.8969	0.8342	-0.6222
298	SLV 9	-1.94	3.6	37.61	10.5002	0.8788	0.506
298	SLV 10	-1.73	3.75	37.6	10.4988	0.8788	0.441
298	SLV 11	-2.63	-4.94	37.11	10.3638	0.8698	0.8319
298	SLV 12	-2.41	-4.78	37.11	10.3624	0.8697	0.7669
298	SLV 13	-7.87	0.15	39.51	10.9959	0.917	2.2591
298	SLV 14	-7.53	0.39	39.51	10.9938	0.9169	2.1573

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
298	SLV 15	-8.07	-2.41	39.37	10.955	0.9143	2.3568
298	SLV 16	-7.73	-2.17	39.36	10.9528	0.9142	2.2551
298	CRTFP Ux+	0	0	0	0	0	0
298	CRTFP Ux-	0	0	0	0	0	0
298	CRTFP Uy+	0	0	0	0	0	0
298	CRTFP Uy-	0	0	0	0	0	0
299	SLU 1	0.15	-0.29	23.52	6.2288	0.5026	-0.0341
299	SLU 2	0.14	-0.25	23.5	6.223	0.5022	-0.0336
299	SLU 3	0.15	-0.29	23.96	6.3459	0.512	-0.0353
299	SLU 4	0.15	-0.27	23.95	6.3424	0.5118	-0.035
299	SLU 5	0.14	-0.26	23.77	6.2946	0.508	-0.0337
299	SLU 6	0.15	-0.3	24.24	6.4176	0.5179	-0.0354
299	SLU 7	0.15	-0.28	24.22	6.4141	0.5176	-0.0351
299	SLU 8	0.15	-0.31	24.07	6.3722	0.5142	-0.0342
299	SLU 9	0.15	-0.28	24.05	6.3687	0.514	-0.034
299	SLU 10	0.16	-0.25	26.58	7.0389	0.568	-0.0374
299	SLU 11	0.16	-0.29	27.04	7.1618	0.5778	-0.0391
299	SLU 12	0.16	-0.27	27.03	7.1583	0.5776	-0.0388
299	SLU 13	0.16	-0.26	26.85	7.1105	0.5738	-0.0375
299	SLU 14	0.17	-0.3	27.31	7.2335	0.5836	-0.0392
299	SLU 15	0.16	-0.28	27.3	7.23	0.5834	-0.0389
299	SLU 16	0.16	-0.31	27.14	7.1881	0.58	-0.0381
299	SLU 17	0.16	-0.28	27.13	7.1846	0.5798	-0.0378
299	SLU 18	0.17	-0.29	27.91	7.3944	0.5965	-0.0396
299	SLU 19	0.16	-0.27	27.9	7.3909	0.5963	-0.0393
299	SLU 20	0.17	-0.3	28.19	7.466	0.6024	-0.0396
299	SLU 21	0.16	-0.28	28.18	7.4625	0.6021	-0.0393
299	SLU 22	0.17	-0.29	26.28	6.9607	0.5614	-0.0419
299	SLU 23	0.17	-0.25	26.26	6.9549	0.561	-0.0414
299	SLU 24	0.18	-0.29	26.72	7.0778	0.5708	-0.0431
299	SLU 25	0.18	-0.26	26.71	7.0743	0.5706	-0.0428
299	SLU 26	0.17	-0.25	26.53	7.0266	0.5668	-0.0415
299	SLU 27	0.18	-0.3	26.99	7.1495	0.5767	-0.0431
299	SLU 28	0.18	-0.27	26.98	7.146	0.5764	-0.0428
299	SLU 29	0.18	-0.3	26.82	7.1041	0.573	-0.042
299	SLU 30	0.17	-0.28	26.81	7.1006	0.5728	-0.0417
299	SLU 31	0.18	-0.25	29.33	7.7708	0.6268	-0.0452
299	SLU 32	0.19	-0.29	29.79	7.8937	0.6366	-0.0469
299	SLU 33	0.19	-0.26	29.78	7.8902	0.6364	-0.0466
299	SLU 34	0.18	-0.25	29.61	7.8425	0.6326	-0.0453
299	SLU 35	0.19	-0.3	30.07	7.9654	0.6424	-0.047
299	SLU 36	0.19	-0.27	30.06	7.9619	0.6422	-0.0467
299	SLU 37	0.19	-0.3	29.9	7.92	0.6388	-0.0458
299	SLU 38	0.19	-0.28	29.89	7.9165	0.6386	-0.0456
299	SLU 39	0.19	-0.29	30.67	8.1263	0.6554	-0.0474
299	SLU 40	0.19	-0.26	30.66	8.1228	0.6551	-0.0471
299	SLU 41	0.19	-0.29	30.94	8.198	0.6612	-0.0474
299	SLU 42	0.19	-0.27	30.93	8.1945	0.6609	-0.0471
299	SLU 43	0.18	-0.38	29.63	7.8465	0.6332	-0.0417
299	SLU 44	0.18	-0.34	29.61	7.8407	0.6328	-0.0412
299	SLU 45	0.19	-0.38	30.07	7.9636	0.6427	-0.0429
299	SLU 46	0.18	-0.36	30.06	7.9601	0.6424	-0.0426
299	SLU 47	0.18	-0.35	29.89	7.9123	0.6386	-0.0413
299	SLU 48	0.19	-0.39	30.35	8.0353	0.6485	-0.0429
299	SLU 49	0.18	-0.36	30.34	8.0318	0.6482	-0.0426
299	SLU 50	0.18	-0.4	30.18	7.9899	0.6449	-0.0418
299	SLU 51	0.18	-0.37	30.17	7.9864	0.6446	-0.0415
299	SLU 52	0.19	-0.34	32.69	8.6565	0.6986	-0.045
299	SLU 53	0.2	-0.38	33.15	8.7795	0.7084	-0.0467
299	SLU 54	0.2	-0.36	33.14	8.776	0.7082	-0.0464
299	SLU 55	0.19	-0.35	32.96	8.7282	0.7044	-0.0451
299	SLU 56	0.2	-0.39	33.42	8.8512	0.7142	-0.0468
299	SLU 57	0.2	-0.37	33.41	8.8477	0.714	-0.0465
299	SLU 58	0.2	-0.4	33.25	8.8058	0.7106	-0.0456
299	SLU 59	0.19	-0.37	33.24	8.8023	0.7104	-0.0453
299	SLU 60	0.2	-0.38	34.02	9.0121	0.7272	-0.0471
299	SLU 61	0.2	-0.36	34.01	9.0086	0.7269	-0.0468
299	SLU 62	0.2	-0.39	34.3	9.0837	0.733	-0.0472
299	SLU 63	0.2	-0.36	34.29	9.0802	0.7327	-0.0469
299	SLU 64	0.21	-0.38	32.39	8.5784	0.692	-0.0495
299	SLU 65	0.2	-0.34	32.37	8.5726	0.6916	-0.049
299	SLU 66	0.21	-0.38	32.83	8.6955	0.7015	-0.0506
299	SLU 67	0.21	-0.35	32.82	8.692	0.7012	-0.0503
299	SLU 68	0.2	-0.34	32.64	8.6443	0.6975	-0.049
299	SLU 69	0.21	-0.38	33.1	8.7672	0.7073	-0.0507
299	SLU 70	0.21	-0.36	33.09	8.7637	0.707	-0.0504
299	SLU 71	0.21	-0.39	32.93	8.7218	0.7037	-0.0496
299	SLU 72	0.21	-0.37	32.92	8.7183	0.7034	-0.0493
299	SLU 73	0.22	-0.34	35.44	9.3885	0.7574	-0.0528
299	SLU 74	0.23	-0.38	35.9	9.5114	0.7672	-0.0545
299	SLU 75	0.22	-0.35	35.89	9.5079	0.767	-0.0542
299	SLU 76	0.22	-0.34	35.72	9.4602	0.7632	-0.0529
299	SLU 77	0.23	-0.39	36.18	9.5831	0.773	-0.0545
299	SLU 78	0.22	-0.36	36.17	9.5796	0.7728	-0.0542
299	SLU 79	0.22	-0.39	36.01	9.5377	0.7694	-0.0534
299	SLU 80	0.22	-0.37	36	9.5342	0.7692	-0.0531
299	SLU 81	0.23	-0.38	36.78	9.744	0.786	-0.0549
299	SLU 82	0.23	-0.35	36.77	9.7405	0.7857	-0.0546
299	SLU 83	0.23	-0.38	37.05	9.8157	0.7918	-0.055
299	SLU 84	0.23	-0.36	37.04	9.8122	0.7916	-0.0547
299	SLE RA 1	0.15	-0.29	24.31	6.4379	0.5194	-0.0363

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
299	SLE RA 2	0.15	-0.26	24.29	6.434	0.5191	-0.036
299	SLE RA 3	0.16	-0.29	24.6	6.516	0.5257	-0.0371
299	SLE RA 4	0.16	-0.28	24.59	6.5136	0.5255	-0.0369
299	SLE RA 5	0.15	-0.27	24.48	6.4818	0.523	-0.036
299	SLE RA 6	0.16	-0.3	24.78	6.5638	0.5296	-0.0372
299	SLE RA 7	0.16	-0.28	24.78	6.5614	0.5294	-0.037
299	SLE RA 8	0.16	-0.3	24.67	6.5335	0.5272	-0.0364
299	SLE RA 9	0.15	-0.28	24.66	6.5312	0.527	-0.0362
299	SLE RA 10	0.16	-0.26	26.35	6.978	0.563	-0.0386
299	SLE RA 11	0.17	-0.29	26.65	7.0599	0.5695	-0.0397
299	SLE RA 12	0.16	-0.28	26.64	7.0576	0.5694	-0.0395
299	SLE RA 13	0.16	-0.27	26.53	7.0257	0.5669	-0.0386
299	SLE RA 14	0.17	-0.3	26.83	7.1077	0.5734	-0.0397
299	SLE RA 15	0.17	-0.28	26.83	7.1054	0.5733	-0.0395
299	SLE RA 16	0.16	-0.3	26.72	7.0774	0.571	-0.039
299	SLE RA 17	0.16	-0.28	26.71	7.0751	0.5708	-0.0388
299	SLE RA 18	0.17	-0.29	27.24	7.215	0.582	-0.04
299	SLE RA 19	0.17	-0.27	27.23	7.2126	0.5819	-0.0398
299	SLE RA 20	0.17	-0.3	27.42	7.2628	0.5859	-0.04
299	SLE RA 21	0.17	-0.28	27.41	7.2604	0.5858	-0.0398
299	SLE FR 1	0.15	-0.29	24.31	6.4379	0.5194	-0.0363
299	SLE FR 2	0.15	-0.29	24.3	6.4371	0.5193	-0.0363
299	SLE FR 3	0.15	-0.29	24.38	6.457	0.5209	-0.0364
299	SLE FR 4	0.16	-0.29	25.18	6.6703	0.5381	-0.0374
299	SLE FR 5	0.16	-0.29	25.26	6.6901	0.5397	-0.0374
299	SLE FR 6	0.16	-0.29	25.77	6.8264	0.5507	-0.0382
299	SLE QP 1	0.15	-0.29	24.31	6.4379	0.5194	-0.0363
299	SLE QP 2	0.16	-0.29	25.19	6.671	0.5382	-0.0374
299	SLD 1	2.47	0.23	24.22	6.4308	0.519	-0.6751
299	SLD 2	2.57	0.3	24.22	6.4304	0.519	-0.7034
299	SLD 3	2.41	-0.53	24.17	6.4189	0.5182	-0.6485
299	SLD 4	2.51	-0.46	24.17	6.4184	0.5182	-0.6767
299	SLD 5	0.93	1.01	24.97	6.6172	0.5336	-0.2643
299	SLD 6	0.99	1.06	24.97	6.6169	0.5336	-0.2826
299	SLD 7	0.73	-1.53	24.81	6.5773	0.531	-0.1753
299	SLD 8	0.79	-1.48	24.81	6.577	0.531	-0.1937
299	SLD 9	-0.47	0.9	25.56	6.765	0.5454	0.1188
299	SLD 10	-0.41	0.95	25.56	6.7647	0.5454	0.1005
299	SLD 11	-0.67	-1.64	25.4	6.7252	0.5427	0.2078
299	SLD 12	-0.61	-1.59	25.4	6.7249	0.5427	0.1894
299	SLD 13	-2.19	-0.12	26.2	6.9237	0.5582	0.6019
299	SLD 14	-2.09	-0.05	26.2	6.9232	0.5582	0.5736
299	SLD 15	-2.25	-0.89	26.15	6.9117	0.5574	0.6286
299	SLD 16	-2.15	-0.81	26.15	6.9112	0.5574	0.6003
299	SLV 1	5.57	0.9	22.93	6.1091	0.4933	-1.5283
299	SLV 2	5.8	1.08	22.93	6.108	0.4932	-1.5942
299	SLV 3	5.43	-0.84	22.81	6.0813	0.4914	-1.4672
299	SLV 4	5.66	-0.66	22.81	6.0802	0.4914	-1.5331
299	SLV 5	1.95	2.67	24.68	6.5448	0.5275	-0.5662
299	SLV 6	2.1	2.78	24.68	6.5441	0.5275	-0.6083
299	SLV 7	1.49	-3.12	24.3	6.4521	0.5214	-0.3625
299	SLV 8	1.64	-3.01	24.3	6.4514	0.5213	-0.4046
299	SLV 9	-1.32	2.42	26.07	6.8906	0.555	0.3297
299	SLV 10	-1.17	2.54	26.07	6.89	0.555	0.2877
299	SLV 11	-1.78	-3.36	25.69	6.798	0.5489	0.5334
299	SLV 12	-1.64	-3.25	25.69	6.7973	0.5488	0.4914
299	SLV 13	-5.34	0.08	27.56	7.2619	0.585	1.4582
299	SLV 14	-5.11	0.25	27.56	7.2608	0.5849	1.3924
299	SLV 15	-5.48	-1.66	27.45	7.2341	0.5831	1.5193
299	SLV 16	-5.25	-1.48	27.44	7.233	0.5831	1.4535
299	CRTFP Ux+	0	0	0	0	0	0
299	CRTFP Ux-	0	0	0	0	0	0
299	CRTFP Uy+	0	0	0	0	0	0
299	CRTFP Uy-	0	0	0	0	0	0
300	SLU 1	0.25	-0.5	40.32	12.9399	-0.9567	-0.0943
300	SLU 2	0.24	-0.43	40.29	12.9265	-0.9556	-0.0897
300	SLU 3	0.26	-0.5	41.08	13.184	-0.9748	-0.0968
300	SLU 4	0.26	-0.46	41.06	13.176	-0.9742	-0.0941
300	SLU 5	0.25	-0.44	40.75	13.0755	-0.9667	-0.0904
300	SLU 6	0.26	-0.51	41.55	13.333	-0.9859	-0.0975
300	SLU 7	0.26	-0.47	41.53	13.325	-0.9853	-0.0948
300	SLU 8	0.26	-0.52	41.26	13.2379	-0.9789	-0.0956
300	SLU 9	0.25	-0.48	41.23	13.2299	-0.9782	-0.0929
300	SLU 10	0.27	-0.43	45.56	14.6207	-1.0807	-0.0976
300	SLU 11	0.28	-0.5	46.36	14.8782	-1.0999	-0.1047
300	SLU 12	0.28	-0.46	46.33	14.8702	-1.0993	-0.102
300	SLU 13	0.27	-0.44	46.03	14.7697	-1.0918	-0.0983
300	SLU 14	0.29	-0.51	46.82	15.0272	-1.111	-0.1054
300	SLU 15	0.28	-0.47	46.8	15.0192	-1.1104	-0.1027
300	SLU 16	0.28	-0.52	46.53	14.9321	-1.1039	-0.1036
300	SLU 17	0.27	-0.48	46.51	14.9241	-1.1033	-0.1008
300	SLU 18	0.29	-0.5	47.85	15.3602	-1.1353	-0.1056
300	SLU 19	0.28	-0.46	47.83	15.3522	-1.1347	-0.1028
300	SLU 20	0.29	-0.51	48.32	15.5092	-1.1464	-0.1063
300	SLU 21	0.28	-0.47	48.3	15.5012	-1.1458	-0.1035
300	SLU 22	0.3	-0.49	45.07	14.4684	-1.0705	-0.11
300	SLU 23	0.29	-0.42	45.04	14.455	-1.0695	-0.1055
300	SLU 24	0.31	-0.49	45.83	14.7125	-1.0887	-0.1126
300	SLU 25	0.3	-0.45	45.81	14.7045	-1.088	-0.1098
300	SLU 26	0.29	-0.43	45.5	14.604	-1.0805	-0.1062
300	SLU 27	0.31	-0.5	46.3	14.8615	-1.0998	-0.1133

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
300	SLU 28	0.3	-0.46	46.28	14.8535	-1.0991	-0.1105
300	SLU 29	0.3	-0.51	46.01	14.7664	-1.0927	-0.1114
300	SLU 30	0.3	-0.47	45.99	14.7584	-1.0921	-0.1087
300	SLU 31	0.32	-0.42	50.31	16.1492	-1.1945	-0.1134
300	SLU 32	0.33	-0.5	51.11	16.4067	-1.2137	-0.1205
300	SLU 33	0.33	-0.45	51.08	16.3987	-1.2131	-0.1178
300	SLU 34	0.32	-0.43	50.78	16.2982	-1.2056	-0.1141
300	SLU 35	0.33	-0.51	51.57	16.5557	-1.2248	-0.1212
300	SLU 36	0.33	-0.46	51.55	16.5477	-1.2242	-0.1185
300	SLU 37	0.33	-0.52	51.28	16.4606	-1.2177	-0.1193
300	SLU 38	0.32	-0.47	51.26	16.4526	-1.2171	-0.1166
300	SLU 39	0.34	-0.49	52.6	16.8887	-1.2491	-0.1213
300	SLU 40	0.33	-0.45	52.58	16.8807	-1.2485	-0.1186
300	SLU 41	0.34	-0.51	53.07	17.0377	-1.2602	-0.122
300	SLU 42	0.33	-0.46	53.05	17.0297	-1.2596	-0.1193
300	SLU 43	0.31	-0.65	50.79	16.2978	-1.2046	-0.1171
300	SLU 44	0.3	-0.58	50.75	16.2844	-1.2036	-0.1126
300	SLU 45	0.32	-0.65	51.55	16.5419	-1.2228	-0.1197
300	SLU 46	0.31	-0.61	51.53	16.5339	-1.2222	-0.117
300	SLU 47	0.31	-0.59	51.22	16.4334	-1.2147	-0.1133
300	SLU 48	0.32	-0.66	52.02	16.6909	-1.2339	-0.1204
300	SLU 49	0.32	-0.62	52	16.6829	-1.2333	-0.1177
300	SLU 50	0.32	-0.67	51.72	16.5958	-1.2268	-0.1185
300	SLU 51	0.31	-0.63	51.7	16.5878	-1.2262	-0.1158
300	SLU 52	0.33	-0.58	56.03	17.9786	-1.3287	-0.1205
300	SLU 53	0.34	-0.65	56.82	18.2361	-1.3479	-0.1276
300	SLU 54	0.34	-0.61	56.8	18.2281	-1.3472	-0.1249
300	SLU 55	0.33	-0.59	56.49	18.1276	-1.3398	-0.1212
300	SLU 56	0.35	-0.66	57.29	18.3851	-1.359	-0.1283
300	SLU 57	0.34	-0.62	57.27	18.3771	-1.3583	-0.1256
300	SLU 58	0.34	-0.67	57	18.29	-1.3519	-0.1264
300	SLU 59	0.33	-0.63	56.98	18.282	-1.3513	-0.1237
300	SLU 60	0.35	-0.65	58.32	18.7181	-1.3833	-0.1284
300	SLU 61	0.34	-0.61	58.3	18.7101	-1.3827	-0.1257
300	SLU 62	0.35	-0.66	58.79	18.8671	-1.3944	-0.1291
300	SLU 63	0.34	-0.62	58.77	18.8591	-1.3938	-0.1264
300	SLU 64	0.36	-0.64	55.54	17.8263	-1.3185	-0.1329
300	SLU 65	0.35	-0.57	55.5	17.8129	-1.3174	-0.1283
300	SLU 66	0.37	-0.64	56.3	18.0704	-1.3366	-0.1354
300	SLU 67	0.36	-0.6	56.28	18.0624	-1.336	-0.1327
300	SLU 68	0.35	-0.58	55.97	17.9619	-1.3285	-0.129
300	SLU 69	0.37	-0.66	56.77	18.2194	-1.3477	-0.1361
300	SLU 70	0.36	-0.61	56.75	18.2114	-1.3471	-0.1334
300	SLU 71	0.36	-0.66	56.48	18.1243	-1.3407	-0.1343
300	SLU 72	0.36	-0.62	56.45	18.1163	-1.34	-0.1315
300	SLU 73	0.38	-0.57	60.78	19.5071	-1.4425	-0.1363
300	SLU 74	0.39	-0.65	61.57	19.7646	-1.4617	-0.1434
300	SLU 75	0.39	-0.6	61.55	19.7566	-1.4611	-0.1406
300	SLU 76	0.38	-0.59	61.24	19.6561	-1.4536	-0.1369
300	SLU 77	0.39	-0.66	62.04	19.9136	-1.4728	-0.1441
300	SLU 78	0.39	-0.62	62.02	19.9056	-1.4722	-0.1413
300	SLU 79	0.39	-0.67	61.75	19.8185	-1.4657	-0.1422
300	SLU 80	0.38	-0.63	61.73	19.8105	-1.4651	-0.1395
300	SLU 81	0.39	-0.65	63.07	20.2466	-1.4971	-0.1442
300	SLU 82	0.39	-0.6	63.05	20.2386	-1.4965	-0.1415
300	SLU 83	0.4	-0.66	63.54	20.3956	-1.5082	-0.1449
300	SLU 84	0.39	-0.61	63.52	20.3876	-1.5076	-0.1422
300	SLE RA 1	0.27	-0.5	41.68	13.3766	-0.9892	-0.0988
300	SLE RA 2	0.26	-0.45	41.65	13.3677	-0.9885	-0.0957
300	SLE RA 3	0.27	-0.5	42.19	13.5394	-1.0013	-0.1005
300	SLE RA 4	0.27	-0.47	42.17	13.534	-1.0009	-0.0986
300	SLE RA 5	0.26	-0.46	41.97	13.467	-0.9959	-0.0962
300	SLE RA 6	0.27	-0.5	42.5	13.6387	-1.0087	-0.1009
300	SLE RA 7	0.27	-0.48	42.48	13.6333	-1.0083	-0.0991
300	SLE RA 8	0.27	-0.51	42.3	13.5753	-1.004	-0.0997
300	SLE RA 9	0.27	-0.48	42.29	13.5699	-1.0036	-0.0979
300	SLE RA 10	0.28	-0.45	45.17	14.4972	-1.0719	-0.101
300	SLE RA 11	0.29	-0.5	45.7	14.6688	-1.0847	-0.1057
300	SLE RA 12	0.28	-0.47	45.69	14.6635	-1.0843	-0.1039
300	SLE RA 13	0.28	-0.46	45.48	14.5965	-1.0793	-0.1015
300	SLE RA 14	0.29	-0.51	46.01	14.7682	-1.0921	-0.1062
300	SLE RA 15	0.29	-0.48	46	14.7628	-1.0917	-0.1044
300	SLE RA 16	0.28	-0.51	45.82	14.7047	-1.0874	-0.105
300	SLE RA 17	0.28	-0.48	45.8	14.6994	-1.0869	-0.1031
300	SLE RA 18	0.29	-0.5	46.7	14.9902	-1.1083	-0.1063
300	SLE RA 19	0.29	-0.47	46.69	14.9848	-1.1079	-0.1045
300	SLE RA 20	0.29	-0.51	47.01	15.0895	-1.1157	-0.1068
300	SLE RA 21	0.29	-0.48	47	15.0841	-1.1153	-0.1049
300	SLE FR 1	0.27	-0.5	41.68	13.3766	-0.9892	-0.0988
300	SLE FR 2	0.27	-0.49	41.67	13.3748	-0.989	-0.0981
300	SLE FR 3	0.27	-0.5	41.8	13.4164	-0.9921	-0.0989
300	SLE FR 4	0.27	-0.49	43.18	13.8589	-1.0248	-0.1004
300	SLE FR 5	0.27	-0.5	43.31	13.9004	-1.0279	-0.1012
300	SLE FR 6	0.28	-0.5	44.19	14.1834	-1.0487	-0.1025
300	SLE QP 1	0.27	-0.5	41.68	13.3766	-0.9892	-0.0988
300	SLE QP 2	0.27	-0.5	43.19	13.8607	-1.0249	-0.101
300	SLD 1	4.2	0.37	41.32	13.2838	-0.9707	-1.3508
300	SLD 2	4.37	0.51	41.32	13.2835	-0.9708	-1.4019
300	SLD 3	4.1	-0.92	41.24	13.26	-0.9683	-1.3878
300	SLD 4	4.27	-0.79	41.24	13.2597	-0.9684	-1.4389
300	SLD 5	1.58	1.7	42.75	13.7238	-1.0123	-0.4108

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
300	SLD 6	1.69	1.79	42.75	13.7236	-1.0123	-0.444
300	SLD 7	1.24	-2.61	42.48	13.6444	-1.0043	-0.5343
300	SLD 8	1.35	-2.52	42.48	13.6442	-1.0044	-0.5675
300	SLD 9	-0.8	1.53	43.89	14.0771	-1.0455	0.3655
300	SLD 10	-0.69	1.62	43.89	14.077	-1.0455	0.3323
300	SLD 11	-1.14	-2.78	43.62	13.9978	-1.0375	0.242
300	SLD 12	-1.03	-2.69	43.62	13.9976	-1.0376	0.2088
300	SLD 13	-3.72	-0.2	45.13	14.4617	-1.0814	1.2369
300	SLD 14	-3.55	-0.07	45.13	14.4614	-1.0815	1.1858
300	SLD 15	-3.82	-1.5	45.05	14.4379	-1.079	1.1999
300	SLD 16	-3.65	-1.36	45.05	14.4376	-1.0791	1.1487
300	SLV 1	9.46	1.49	38.82	12.5111	-0.898	-3.0242
300	SLV 2	9.85	1.81	38.83	12.5104	-0.8983	-3.1433
300	SLV 3	9.22	-1.46	38.64	12.4555	-0.8925	-3.1104
300	SLV 4	9.61	-1.14	38.64	12.4548	-0.8928	-3.2294
300	SLV 5	3.32	4.51	42.16	13.5402	-0.9951	-0.8272
300	SLV 6	3.57	4.71	42.16	13.5397	-0.9953	-0.9032
300	SLV 7	2.53	-5.3	41.54	13.355	-0.9768	-1.1143
300	SLV 8	2.78	-5.1	41.54	13.3546	-0.977	-1.1903
300	SLV 9	-2.23	4.11	44.83	14.3668	-1.0729	0.9883
300	SLV 10	-1.99	4.31	44.83	14.3664	-1.073	0.9123
300	SLV 11	-3.02	-5.7	44.21	14.1816	-1.0545	0.7012
300	SLV 12	-2.77	-5.5	44.21	14.1812	-1.0547	0.6252
300	SLV 13	-9.06	0.15	47.73	15.2665	-1.1571	3.0274
300	SLV 14	-8.67	0.47	47.73	15.2659	-1.1573	2.9084
300	SLV 15	-9.3	-2.8	47.54	15.211	-1.1516	2.9413
300	SLV 16	-8.91	-2.48	47.55	15.2103	-1.1518	2.8222
300	CRTFP Ux+	0	0	0	0	0	0
300	CRTFP Ux-	0	0	0	0	0	0
300	CRTFP Uy+	0	0	0	0	0	0
300	CRTFP Uy-	0	0	0	0	0	0
301	SLU 1	0.17	-0.32	27.61	9.4192	-0.7778	-0.0693
301	SLU 2	0.17	-0.28	27.58	9.4087	-0.777	-0.0658
301	SLU 3	0.18	-0.33	28.13	9.5975	-0.7926	-0.0711
301	SLU 4	0.18	-0.3	28.12	9.5912	-0.7921	-0.0691
301	SLU 5	0.17	-0.28	27.9	9.5171	-0.786	-0.0663
301	SLU 6	0.18	-0.33	28.45	9.7059	-0.8016	-0.0717
301	SLU 7	0.18	-0.3	28.44	9.6996	-0.8011	-0.0696
301	SLU 8	0.18	-0.34	28.25	9.636	-0.7958	-0.0703
301	SLU 9	0.17	-0.31	28.23	9.6297	-0.7953	-0.0682
301	SLU 10	0.18	-0.28	31.19	10.6403	-0.8786	-0.0715
301	SLU 11	0.19	-0.33	31.74	10.8291	-0.8943	-0.0768
301	SLU 12	0.19	-0.3	31.73	10.8228	-0.8937	-0.0747
301	SLU 13	0.18	-0.28	31.51	10.7487	-0.8877	-0.072
301	SLU 14	0.2	-0.33	32.06	10.9375	-0.9033	-0.0773
301	SLU 15	0.19	-0.31	32.05	10.9312	-0.9028	-0.0753
301	SLU 16	0.19	-0.34	31.86	10.8676	-0.8975	-0.076
301	SLU 17	0.19	-0.31	31.84	10.8613	-0.897	-0.0739
301	SLU 18	0.2	-0.33	32.77	11.1786	-0.923	-0.0773
301	SLU 19	0.19	-0.3	32.75	11.1723	-0.9225	-0.0753
301	SLU 20	0.2	-0.33	33.09	11.287	-0.9321	-0.0779
301	SLU 21	0.19	-0.3	33.07	11.2807	-0.9316	-0.0758
301	SLU 22	0.21	-0.32	30.88	10.5375	-0.8703	-0.0807
301	SLU 23	0.2	-0.27	30.85	10.527	-0.8695	-0.0773
301	SLU 24	0.21	-0.32	31.41	10.7158	-0.8851	-0.0826
301	SLU 25	0.21	-0.29	31.39	10.7095	-0.8846	-0.0805
301	SLU 26	0.2	-0.28	31.17	10.6354	-0.8785	-0.0778
301	SLU 27	0.21	-0.33	31.73	10.8242	-0.8941	-0.0831
301	SLU 28	0.21	-0.3	31.71	10.8179	-0.8936	-0.0811
301	SLU 29	0.21	-0.33	31.52	10.7543	-0.8884	-0.0818
301	SLU 30	0.2	-0.31	31.51	10.748	-0.8879	-0.0797
301	SLU 31	0.22	-0.27	34.46	11.7586	-0.9712	-0.0829
301	SLU 32	0.23	-0.32	35.02	11.9474	-0.9868	-0.0883
301	SLU 33	0.22	-0.29	35	11.9411	-0.9863	-0.0862
301	SLU 34	0.22	-0.28	34.78	11.867	-0.9802	-0.0835
301	SLU 35	0.23	-0.33	35.34	12.0558	-0.9958	-0.0888
301	SLU 36	0.23	-0.3	35.32	12.0495	-0.9953	-0.0867
301	SLU 37	0.22	-0.34	35.13	11.9859	-0.9901	-0.0874
301	SLU 38	0.22	-0.31	35.12	11.9796	-0.9896	-0.0854
301	SLU 39	0.23	-0.32	36.04	12.2969	-1.0156	-0.0888
301	SLU 40	0.23	-0.29	36.02	12.2906	-1.0151	-0.0867
301	SLU 41	0.23	-0.33	36.36	12.4053	-1.0246	-0.0893
301	SLU 42	0.23	-0.3	36.34	12.399	-1.0241	-0.0873
301	SLU 43	0.21	-0.42	34.77	11.8615	-0.9794	-0.0861
301	SLU 44	0.21	-0.37	34.74	11.851	-0.9786	-0.0826
301	SLU 45	0.22	-0.42	35.29	12.0398	-0.9942	-0.088
301	SLU 46	0.22	-0.39	35.28	12.0335	-0.9937	-0.0859
301	SLU 47	0.21	-0.38	35.06	11.9594	-0.9876	-0.0832
301	SLU 48	0.22	-0.43	35.61	12.1482	-1.0032	-0.0885
301	SLU 49	0.22	-0.4	35.6	12.1419	-1.0027	-0.0864
301	SLU 50	0.22	-0.44	35.41	12.0783	-0.9974	-0.0872
301	SLU 51	0.21	-0.41	35.39	12.072	-0.9969	-0.0851
301	SLU 52	0.22	-0.38	38.35	13.0826	-1.0802	-0.0883
301	SLU 53	0.24	-0.43	38.9	13.2714	-1.0959	-0.0937
301	SLU 54	0.23	-0.4	38.89	13.2651	-1.0954	-0.0916
301	SLU 55	0.23	-0.38	38.67	13.191	-1.0893	-0.0888
301	SLU 56	0.24	-0.43	39.22	13.3798	-1.1049	-0.0942
301	SLU 57	0.23	-0.4	39.21	13.3735	-1.1044	-0.0921
301	SLU 58	0.23	-0.44	39.02	13.3099	-1.0991	-0.0928
301	SLU 59	0.23	-0.41	39	13.3036	-1.0986	-0.0907
301	SLU 60	0.24	-0.42	39.93	13.6209	-1.1247	-0.0942

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
301	SLU 61	0.23	-0.4	39.91	13.6146	-1.1242	-0.0921
301	SLU 62	0.24	-0.43	40.25	13.7293	-1.1337	-0.0947
301	SLU 63	0.23	-0.4	40.23	13.723	-1.1332	-0.0927
301	SLU 64	0.25	-0.42	38.04	12.9798	-1.072	-0.0976
301	SLU 65	0.24	-0.37	38.02	12.9693	-1.0711	-0.0941
301	SLU 66	0.25	-0.42	38.57	13.1581	-1.0867	-0.0994
301	SLU 67	0.25	-0.39	38.55	13.1518	-1.0862	-0.0974
301	SLU 68	0.24	-0.38	38.34	13.0777	-1.0801	-0.0946
301	SLU 69	0.25	-0.43	38.89	13.2665	-1.0958	-0.1
301	SLU 70	0.25	-0.4	38.87	13.2602	-1.0952	-0.0979
301	SLU 71	0.25	-0.43	38.68	13.1966	-1.09	-0.0986
301	SLU 72	0.25	-0.4	38.67	13.1903	-1.0895	-0.0965
301	SLU 73	0.26	-0.37	41.63	14.2009	-1.1728	-0.0998
301	SLU 74	0.27	-0.42	42.18	14.3897	-1.1884	-0.1051
301	SLU 75	0.27	-0.39	42.16	14.3834	-1.1879	-0.103
301	SLU 76	0.26	-0.38	41.95	14.3093	-1.1818	-0.1003
301	SLU 77	0.27	-0.43	42.5	14.4981	-1.1974	-0.1056
301	SLU 78	0.27	-0.4	42.48	14.4918	-1.1969	-0.1036
301	SLU 79	0.27	-0.43	42.29	14.4282	-1.1917	-0.1043
301	SLU 80	0.26	-0.41	42.28	14.4219	-1.1912	-0.1022
301	SLU 81	0.27	-0.42	43.2	14.7392	-1.2172	-0.1057
301	SLU 82	0.27	-0.39	43.18	14.7329	-1.2167	-0.1036
301	SLU 83	0.27	-0.43	43.52	14.8476	-1.2262	-0.1062
301	SLU 84	0.27	-0.4	43.5	14.8413	-1.2257	-0.1041
301	SLE RA 1	0.18	-0.32	28.55	9.7387	-0.8042	-0.0725
301	SLE RA 2	0.18	-0.29	28.53	9.7317	-0.8037	-0.0702
301	SLE RA 3	0.19	-0.32	28.89	9.8576	-0.8141	-0.0738
301	SLE RA 4	0.18	-0.3	28.88	9.8534	-0.8138	-0.0724
301	SLE RA 5	0.18	-0.3	28.74	9.804	-0.8097	-0.0706
301	SLE RA 6	0.19	-0.33	29.11	9.9298	-0.8201	-0.0741
301	SLE RA 7	0.18	-0.31	29.1	9.9256	-0.8198	-0.0728
301	SLE RA 8	0.18	-0.33	28.97	9.8832	-0.8163	-0.0732
301	SLE RA 9	0.18	-0.31	28.96	9.879	-0.8159	-0.0719
301	SLE RA 10	0.19	-0.29	30.93	10.5528	-0.8715	-0.074
301	SLE RA 11	0.2	-0.32	31.3	10.6786	-0.8819	-0.0776
301	SLE RA 12	0.19	-0.31	31.29	10.6744	-0.8815	-0.0762
301	SLE RA 13	0.19	-0.3	31.15	10.625	-0.8775	-0.0744
301	SLE RA 14	0.2	-0.33	31.51	10.7509	-0.8879	-0.0779
301	SLE RA 15	0.2	-0.31	31.5	10.7467	-0.8876	-0.0765
301	SLE RA 16	0.19	-0.33	31.38	10.7043	-0.8841	-0.077
301	SLE RA 17	0.19	-0.31	31.37	10.7001	-0.8837	-0.0756
301	SLE RA 18	0.2	-0.32	31.98	10.9116	-0.9011	-0.0779
301	SLE RA 19	0.2	-0.3	31.97	10.9074	-0.9007	-0.0765
301	SLE RA 20	0.2	-0.33	32.2	10.9839	-0.9071	-0.0783
301	SLE RA 21	0.2	-0.31	32.19	10.9797	-0.9068	-0.0769
301	SLE FR 1	0.18	-0.32	28.55	9.7387	-0.8042	-0.0725
301	SLE FR 2	0.18	-0.32	28.54	9.7373	-0.8041	-0.0721
301	SLE FR 3	0.18	-0.32	28.63	9.7676	-0.8066	-0.0727
301	SLE FR 4	0.19	-0.32	29.57	10.0892	-0.8332	-0.0737
301	SLE FR 5	0.19	-0.32	29.66	10.1195	-0.8357	-0.0743
301	SLE FR 6	0.19	-0.32	30.26	10.3252	-0.8527	-0.0752
301	SLE QP 1	0.18	-0.32	28.55	9.7387	-0.8042	-0.0725
301	SLE QP 2	0.19	-0.32	29.58	10.0906	-0.8333	-0.0742
301	SLD 1	2.84	0.24	28.13	9.603	-0.7889	-0.9737
301	SLD 2	2.95	0.34	28.13	9.6035	-0.7891	-1.0102
301	SLD 3	2.77	-0.63	28.06	9.5859	-0.7868	-1.0021
301	SLD 4	2.88	-0.53	28.07	9.5864	-0.7869	-1.0386
301	SLD 5	1.07	1.15	29.24	9.9701	-0.8232	-0.2946
301	SLD 6	1.14	1.22	29.24	9.9704	-0.8233	-0.3183
301	SLD 7	0.84	-1.76	29.03	9.9132	-0.8161	-0.3892
301	SLD 8	0.91	-1.69	29.03	9.9135	-0.8162	-0.4129
301	SLD 9	-0.54	1.05	30.13	10.2676	-0.8504	0.2646
301	SLD 10	-0.46	1.11	30.13	10.2679	-0.8505	0.2409
301	SLD 11	-0.77	-1.86	29.91	10.2108	-0.8433	0.17
301	SLD 12	-0.69	-1.8	29.91	10.2111	-0.8434	0.1463
301	SLD 13	-2.51	-0.11	31.09	10.5947	-0.8797	0.8903
301	SLD 14	-2.4	-0.01	31.09	10.5952	-0.8798	0.8538
301	SLD 15	-2.58	-0.99	31.02	10.5777	-0.8775	0.8619
301	SLD 16	-2.47	-0.89	31.03	10.5781	-0.8776	0.8254
301	SLV 1	6.39	0.97	26.19	8.9499	-0.7295	-2.1784
301	SLV 2	6.65	1.2	26.19	8.951	-0.7298	-2.2634
301	SLV 3	6.23	-1.02	26.04	8.9101	-0.7246	-2.2442
301	SLV 4	6.49	-0.79	26.04	8.9112	-0.7249	-2.3292
301	SLV 5	2.25	3.04	28.78	9.8086	-0.8095	-0.5912
301	SLV 6	2.41	3.19	28.79	9.8093	-0.8097	-0.6455
301	SLV 7	1.71	-3.59	28.29	9.6758	-0.7932	-0.8106
301	SLV 8	1.88	-3.44	28.29	9.6765	-0.7934	-0.8649
301	SLV 9	-1.51	2.8	30.86	10.5046	-0.8732	0.7166
301	SLV 10	-1.34	2.94	30.86	10.5053	-0.8733	0.6623
301	SLV 11	-2.04	-3.84	30.37	10.3718	-0.8569	0.4972
301	SLV 12	-1.87	-3.69	30.37	10.3725	-0.8571	0.4429
301	SLV 13	-6.12	0.14	33.11	11.2699	-0.9417	2.1809
301	SLV 14	-5.86	0.37	33.11	11.271	-0.942	2.0959
301	SLV 15	-6.28	-1.85	32.96	11.2301	-0.9368	2.1151
301	SLV 16	-6.02	-1.62	32.97	11.2312	-0.9371	2.0301
301	CRTFP Ux+	0	0	0	0	0	0
301	CRTFP Ux-	0	0	0	0	0	0
301	CRTFP Uy+	0	0	0	0	0	0
301	CRTFP Uy-	0	0	0	0	0	0
302	SLU 1	0.21	-0.35	32.89	11.2232	-0.0033	-0.0719
302	SLU 2	0.2	-0.29	32.86	11.2103	-0.0032	-0.0694

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
302	SLU 3	0.22	-0.35	33.52	11.4363	-0.0034	-0.0742
302	SLU 4	0.21	-0.32	33.5	11.4286	-0.0034	-0.0726
302	SLU 5	0.2	-0.3	33.24	11.3396	-0.0032	-0.0698
302	SLU 6	0.22	-0.36	33.9	11.5656	-0.0034	-0.0745
302	SLU 7	0.21	-0.32	33.88	11.5579	-0.0034	-0.073
302	SLU 8	0.21	-0.37	33.66	11.4817	-0.0034	-0.0727
302	SLU 9	0.21	-0.33	33.63	11.474	-0.0033	-0.0712
302	SLU 10	0.22	-0.29	37.16	12.6766	-0.0035	-0.076
302	SLU 11	0.23	-0.35	37.82	12.9026	-0.0037	-0.0807
302	SLU 12	0.23	-0.32	37.8	12.8948	-0.0037	-0.0792
302	SLU 13	0.22	-0.3	37.54	12.8058	-0.0036	-0.0764
302	SLU 14	0.24	-0.36	38.2	13.0318	-0.0038	-0.0811
302	SLU 15	0.23	-0.33	38.18	13.0241	-0.0037	-0.0796
302	SLU 16	0.23	-0.37	37.96	12.948	-0.0037	-0.0793
302	SLU 17	0.23	-0.33	37.93	12.9402	-0.0037	-0.0778
302	SLU 18	0.24	-0.35	39.03	13.3178	-0.0038	-0.0813
302	SLU 19	0.23	-0.32	39.01	13.3101	-0.0037	-0.0798
302	SLU 20	0.24	-0.36	39.42	13.4471	-0.0038	-0.0817
302	SLU 21	0.23	-0.32	39.39	13.4394	-0.0038	-0.0802
302	SLU 22	0.25	-0.34	36.81	12.5611	-0.0041	-0.0858
302	SLU 23	0.24	-0.28	36.77	12.5482	-0.0041	-0.0833
302	SLU 24	0.26	-0.34	37.43	12.7742	-0.0043	-0.088
302	SLU 25	0.25	-0.31	37.41	12.7665	-0.0042	-0.0865
302	SLU 26	0.24	-0.29	37.15	12.6775	-0.0041	-0.0837
302	SLU 27	0.26	-0.35	37.82	12.9035	-0.0043	-0.0884
302	SLU 28	0.25	-0.32	37.79	12.8957	-0.0043	-0.0869
302	SLU 29	0.25	-0.36	37.57	12.8196	-0.0042	-0.0866
302	SLU 30	0.25	-0.32	37.55	12.8119	-0.0042	-0.0851
302	SLU 31	0.26	-0.29	41.07	14.0144	-0.0044	-0.0899
302	SLU 32	0.27	-0.34	41.73	14.2404	-0.0046	-0.0946
302	SLU 33	0.27	-0.31	41.71	14.2327	-0.0046	-0.0931
302	SLU 34	0.26	-0.29	41.45	14.1437	-0.0044	-0.0903
302	SLU 35	0.28	-0.35	42.11	14.3697	-0.0046	-0.095
302	SLU 36	0.27	-0.32	42.09	14.362	-0.0046	-0.0935
302	SLU 37	0.27	-0.36	41.87	14.2858	-0.0046	-0.0932
302	SLU 38	0.27	-0.33	41.85	14.2781	-0.0045	-0.0916
302	SLU 39	0.28	-0.34	42.95	14.6557	-0.0046	-0.0952
302	SLU 40	0.27	-0.31	42.93	14.648	-0.0046	-0.0937
302	SLU 41	0.28	-0.35	43.33	14.785	-0.0047	-0.0956
302	SLU 42	0.27	-0.32	43.31	14.7772	-0.0046	-0.0941
302	SLU 43	0.26	-0.46	41.42	14.1314	-0.004	-0.0888
302	SLU 44	0.25	-0.4	41.38	14.1186	-0.0039	-0.0862
302	SLU 45	0.26	-0.46	42.04	14.3446	-0.0041	-0.091
302	SLU 46	0.26	-0.42	42.02	14.3369	-0.004	-0.0895
302	SLU 47	0.25	-0.41	41.76	14.2478	-0.0039	-0.0866
302	SLU 48	0.27	-0.47	42.43	14.4738	-0.0041	-0.0914
302	SLU 49	0.26	-0.43	42.4	14.4661	-0.0041	-0.0898
302	SLU 50	0.26	-0.47	42.18	14.39	-0.004	-0.0895
302	SLU 51	0.26	-0.44	42.16	14.3823	-0.004	-0.088
302	SLU 52	0.27	-0.4	45.68	15.5848	-0.0042	-0.0928
302	SLU 53	0.28	-0.46	46.34	15.8108	-0.0044	-0.0976
302	SLU 54	0.28	-0.42	46.32	15.8031	-0.0044	-0.096
302	SLU 55	0.27	-0.41	46.06	15.7141	-0.0043	-0.0932
302	SLU 56	0.28	-0.47	46.72	15.9401	-0.0045	-0.0979
302	SLU 57	0.28	-0.43	46.7	15.9324	-0.0044	-0.0964
302	SLU 58	0.28	-0.47	46.48	15.8562	-0.0044	-0.0961
302	SLU 59	0.28	-0.44	46.46	15.8485	-0.0043	-0.0946
302	SLU 60	0.29	-0.46	47.56	16.2261	-0.0044	-0.0982
302	SLU 61	0.28	-0.42	47.54	16.2184	-0.0044	-0.0967
302	SLU 62	0.29	-0.47	47.94	16.3553	-0.0045	-0.0985
302	SLU 63	0.28	-0.43	47.92	16.3476	-0.0044	-0.097
302	SLU 64	0.3	-0.45	45.33	15.4693	-0.0048	-0.1026
302	SLU 65	0.29	-0.39	45.3	15.4564	-0.0047	-0.1001
302	SLU 66	0.3	-0.45	45.96	15.6825	-0.0049	-0.1049
302	SLU 67	0.3	-0.42	45.94	15.6747	-0.0049	-0.1033
302	SLU 68	0.29	-0.4	45.68	15.5857	-0.0048	-0.1005
302	SLU 69	0.31	-0.46	46.34	15.8117	-0.005	-0.1052
302	SLU 70	0.3	-0.42	46.32	15.804	-0.0049	-0.1037
302	SLU 71	0.3	-0.47	46.1	15.7278	-0.0049	-0.1034
302	SLU 72	0.3	-0.43	46.08	15.7201	-0.0049	-0.1019
302	SLU 73	0.31	-0.39	49.6	16.9227	-0.0051	-0.1067
302	SLU 74	0.32	-0.45	50.26	17.1487	-0.0053	-0.1114
302	SLU 75	0.32	-0.42	50.24	17.141	-0.0052	-0.1099
302	SLU 76	0.31	-0.4	49.98	17.052	-0.0051	-0.1071
302	SLU 77	0.32	-0.46	50.64	17.278	-0.0053	-0.1118
302	SLU 78	0.32	-0.43	50.62	17.2702	-0.0053	-0.1103
302	SLU 79	0.32	-0.47	50.4	17.1941	-0.0053	-0.11
302	SLU 80	0.31	-0.43	50.37	17.1864	-0.0052	-0.1085
302	SLU 81	0.33	-0.45	51.48	17.5639	-0.0053	-0.1121
302	SLU 82	0.32	-0.42	51.45	17.5562	-0.0053	-0.1105
302	SLU 83	0.33	-0.46	51.86	17.6932	-0.0054	-0.1124
302	SLU 84	0.32	-0.42	51.84	17.6855	-0.0053	-0.1109
302	SLE RA 1	0.22	-0.35	34.01	11.6054	-0.0035	-0.0759
302	SLE RA 2	0.22	-0.31	33.99	11.5969	-0.0035	-0.0742
302	SLE RA 3	0.22	-0.35	34.43	11.7475	-0.0036	-0.0774
302	SLE RA 4	0.22	-0.32	34.41	11.7424	-0.0036	-0.0764
302	SLE RA 5	0.22	-0.31	34.24	11.683	-0.0035	-0.0745
302	SLE RA 6	0.23	-0.35	34.68	11.8337	-0.0036	-0.0776
302	SLE RA 7	0.22	-0.33	34.67	11.8286	-0.0036	-0.0766
302	SLE RA 8	0.22	-0.36	34.52	11.7778	-0.0036	-0.0764
302	SLE RA 9	0.22	-0.34	34.51	11.7726	-0.0035	-0.0754

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
302	SLE RA 10	0.23	-0.31	36.85	12.5743	-0.0037	-0.0786
302	SLE RA 11	0.24	-0.35	37.29	12.725	-0.0038	-0.0818
302	SLE RA 12	0.23	-0.33	37.28	12.7199	-0.0038	-0.0808
302	SLE RA 13	0.23	-0.32	37.11	12.6605	-0.0037	-0.0789
302	SLE RA 14	0.24	-0.35	37.55	12.8112	-0.0039	-0.082
302	SLE RA 15	0.24	-0.33	37.53	12.8061	-0.0038	-0.081
302	SLE RA 16	0.23	-0.36	37.39	12.7553	-0.0038	-0.0808
302	SLE RA 17	0.23	-0.34	37.37	12.7501	-0.0038	-0.0798
302	SLE RA 18	0.24	-0.35	38.11	13.0019	-0.0038	-0.0822
302	SLE RA 19	0.24	-0.32	38.09	12.9967	-0.0038	-0.0812
302	SLE RA 20	0.24	-0.35	38.36	13.088	-0.0039	-0.0824
302	SLE RA 21	0.24	-0.33	38.35	13.0829	-0.0038	-0.0814
302	SLE FR 1	0.22	-0.35	34.01	11.6054	-0.0035	-0.0759
302	SLE FR 2	0.22	-0.34	34.01	11.6037	-0.0035	-0.0756
302	SLE FR 3	0.22	-0.35	34.11	11.6399	-0.0035	-0.076
302	SLE FR 4	0.22	-0.34	35.24	12.0226	-0.0036	-0.0775
302	SLE FR 5	0.23	-0.35	35.34	12.0588	-0.0036	-0.0779
302	SLE FR 6	0.23	-0.35	36.06	12.3036	-0.0037	-0.079
302	SLE QP 1	0.22	-0.35	34.01	11.6054	-0.0035	-0.0759
302	SLE QP 2	0.23	-0.35	35.24	12.0244	-0.0036	-0.0778
302	SLD 1	3.36	0.29	33.34	11.3815	0.0016	-1.1766
302	SLD 2	3.5	0.42	33.35	11.3828	0.0015	-1.223
302	SLD 3	3.28	-0.74	33.25	11.3582	0.0025	-1.1482
302	SLD 4	3.41	-0.62	33.25	11.3595	0.0024	-1.1946
302	SLD 5	1.27	1.39	34.81	11.8666	-0.0033	-0.4425
302	SLD 6	1.35	1.47	34.82	11.8675	-0.0034	-0.4726
302	SLD 7	1	-2.06	34.5	11.7889	-0.0005	-0.3477
302	SLD 8	1.08	-1.98	34.5	11.7898	-0.0005	-0.3778
302	SLD 9	-0.63	1.28	35.98	12.2589	-0.0067	0.2222
302	SLD 10	-0.54	1.36	35.98	12.2598	-0.0068	0.1921
302	SLD 11	-0.9	-2.17	35.66	12.1812	-0.0038	0.317
302	SLD 12	-0.82	-2.09	35.67	12.1821	-0.0039	0.2869
302	SLD 13	-2.96	-0.07	37.23	12.6892	-0.0096	1.039
302	SLD 14	-2.83	0.05	37.23	12.6906	-0.0097	0.9926
302	SLD 15	-3.04	-1.11	37.13	12.6659	-0.0087	1.0675
302	SLD 16	-2.91	-0.99	37.14	12.6672	-0.0088	1.021
302	SLV 1	7.56	1.12	30.8	10.5201	0.0086	-2.6476
302	SLV 2	7.87	1.4	30.81	10.5233	0.0084	-2.7557
302	SLV 3	7.37	-1.24	30.58	10.4661	0.0106	-2.5815
302	SLV 4	7.68	-0.95	30.59	10.4693	0.0103	-2.6897
302	SLV 5	2.66	3.62	34.24	11.6545	-0.0029	-0.9306
302	SLV 6	2.86	3.8	34.24	11.6565	-0.003	-0.9997
302	SLV 7	2.03	-4.24	33.51	11.4744	0.0037	-0.7104
302	SLV 8	2.23	-4.06	33.52	11.4764	0.0035	-0.7794
302	SLV 9	-1.78	3.36	36.96	12.5723	-0.0107	0.6239
302	SLV 10	-1.58	3.55	36.97	12.5743	-0.0109	0.5548
302	SLV 11	-2.41	-4.5	36.24	12.3922	-0.0042	0.8441
302	SLV 12	-2.21	-4.31	36.24	12.3942	-0.0043	0.7751
302	SLV 13	-7.23	0.26	39.89	13.5795	-0.0176	2.5341
302	SLV 14	-6.92	0.55	39.9	13.5826	-0.0178	2.4259
302	SLV 15	-7.42	-2.1	39.67	13.5254	-0.0156	2.6002
302	SLV 16	-7.11	-1.81	39.68	13.5286	-0.0159	2.492
302	CRTFP Ux+	0	0	0	0	0	0
302	CRTFP Ux-	0	0	0	0	0	0
302	CRTFP Uy+	0	0	0	0	0	0
302	CRTFP Uy-	0	0	0	0	0	0
303	SLU 1	0.14	-0.21	21.57	7.3615	1.3397	-0.036
303	SLU 2	0.14	-0.17	21.54	7.3532	1.3382	-0.0366
303	SLU 3	0.14	-0.21	21.98	7.5016	1.3652	-0.0374
303	SLU 4	0.14	-0.18	21.96	7.4966	1.3643	-0.0378
303	SLU 5	0.14	-0.17	21.79	7.438	1.3537	-0.0365
303	SLU 6	0.15	-0.21	22.23	7.5865	1.3808	-0.0374
303	SLU 7	0.14	-0.19	22.21	7.5815	1.3798	-0.0377
303	SLU 8	0.14	-0.22	22.07	7.5313	1.3708	-0.0358
303	SLU 9	0.14	-0.19	22.05	7.5262	1.3699	-0.0362
303	SLU 10	0.15	-0.17	24.36	8.3139	1.5132	-0.041
303	SLU 11	0.16	-0.21	24.79	8.4623	1.5402	-0.0418
303	SLU 12	0.15	-0.18	24.78	8.4573	1.5393	-0.0422
303	SLU 13	0.15	-0.17	24.61	8.3988	1.5287	-0.0409
303	SLU 14	0.16	-0.21	25.04	8.5472	1.5557	-0.0418
303	SLU 15	0.15	-0.19	25.03	8.5422	1.5548	-0.0421
303	SLU 16	0.15	-0.22	24.88	8.492	1.5458	-0.0402
303	SLU 17	0.15	-0.19	24.87	8.487	1.5449	-0.0406
303	SLU 18	0.16	-0.2	25.59	8.734	1.5897	-0.0423
303	SLU 19	0.16	-0.18	25.57	8.729	1.5888	-0.0426
303	SLU 20	0.16	-0.21	25.84	8.8188	1.6052	-0.0422
303	SLU 21	0.16	-0.19	25.82	8.8138	1.6043	-0.0426
303	SLU 22	0.17	-0.2	24.14	8.2413	1.4995	-0.0457
303	SLU 23	0.16	-0.16	24.11	8.2329	1.498	-0.0463
303	SLU 24	0.17	-0.2	24.55	8.3814	1.5251	-0.0471
303	SLU 25	0.17	-0.18	24.54	8.3764	1.5241	-0.0475
303	SLU 26	0.16	-0.17	24.36	8.3178	1.5136	-0.0462
303	SLU 27	0.17	-0.2	24.8	8.4662	1.5406	-0.0471
303	SLU 28	0.17	-0.18	24.79	8.4612	1.5397	-0.0474
303	SLU 29	0.17	-0.21	24.64	8.411	1.5306	-0.0455
303	SLU 30	0.17	-0.19	24.62	8.406	1.5297	-0.0459
303	SLU 31	0.17	-0.16	26.93	9.1936	1.673	-0.0507
303	SLU 32	0.18	-0.2	27.37	9.3421	1.7	-0.0515
303	SLU 33	0.18	-0.18	27.35	9.3371	1.6991	-0.0519
303	SLU 34	0.18	-0.17	27.18	9.2785	1.6886	-0.0506
303	SLU 35	0.18	-0.2	27.62	9.427	1.7156	-0.0515

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
303	SLU 36	0.18	-0.18	27.6	9.4219	1.7147	-0.0518
303	SLU 37	0.18	-0.21	27.46	9.3717	1.7056	-0.0499
303	SLU 38	0.18	-0.19	27.44	9.3667	1.7047	-0.0503
303	SLU 39	0.18	-0.2	28.16	9.6137	1.7495	-0.052
303	SLU 40	0.18	-0.18	28.15	9.6087	1.7486	-0.0523
303	SLU 41	0.19	-0.2	28.41	9.6986	1.7651	-0.0519
303	SLU 42	0.18	-0.18	28.4	9.6936	1.7642	-0.0523
303	SLU 43	0.17	-0.27	27.15	9.2684	1.6868	-0.0434
303	SLU 44	0.17	-0.23	27.13	9.26	1.6853	-0.044
303	SLU 45	0.18	-0.27	27.56	9.4084	1.7123	-0.0449
303	SLU 46	0.17	-0.25	27.55	9.4034	1.7114	-0.0452
303	SLU 47	0.17	-0.24	27.38	9.3449	1.7008	-0.044
303	SLU 48	0.18	-0.28	27.81	9.4933	1.7279	-0.0448
303	SLU 49	0.18	-0.25	27.8	9.4883	1.7269	-0.0452
303	SLU 50	0.17	-0.28	27.65	9.4381	1.7179	-0.0433
303	SLU 51	0.17	-0.26	27.64	9.4331	1.717	-0.0437
303	SLU 52	0.18	-0.23	29.94	10.2207	1.8603	-0.0484
303	SLU 53	0.19	-0.27	30.38	10.3692	1.8873	-0.0493
303	SLU 54	0.19	-0.25	30.36	10.3642	1.8864	-0.0497
303	SLU 55	0.18	-0.24	30.19	10.3056	1.8758	-0.0484
303	SLU 56	0.19	-0.27	30.63	10.454	1.9029	-0.0492
303	SLU 57	0.19	-0.25	30.61	10.449	1.9019	-0.0496
303	SLU 58	0.19	-0.28	30.47	10.3988	1.8929	-0.0477
303	SLU 59	0.18	-0.26	30.45	10.3938	1.892	-0.0481
303	SLU 60	0.19	-0.27	31.17	10.6408	1.9368	-0.0497
303	SLU 61	0.19	-0.25	31.16	10.6358	1.9359	-0.0501
303	SLU 62	0.19	-0.27	31.42	10.7257	1.9523	-0.0497
303	SLU 63	0.19	-0.25	31.41	10.7207	1.9514	-0.05
303	SLU 64	0.2	-0.26	29.73	10.1481	1.8466	-0.0531
303	SLU 65	0.19	-0.23	29.7	10.1398	1.8451	-0.0537
303	SLU 66	0.2	-0.26	30.14	10.2882	1.8722	-0.0546
303	SLU 67	0.2	-0.24	30.12	10.2832	1.8712	-0.055
303	SLU 68	0.2	-0.23	29.95	10.2246	1.8607	-0.0537
303	SLU 69	0.2	-0.27	30.39	10.3731	1.8877	-0.0545
303	SLU 70	0.2	-0.25	30.37	10.368	1.8868	-0.0549
303	SLU 71	0.2	-0.27	30.23	10.3178	1.8777	-0.053
303	SLU 72	0.2	-0.25	30.21	10.3128	1.8768	-0.0534
303	SLU 73	0.21	-0.23	32.52	11.1005	2.0201	-0.0581
303	SLU 74	0.22	-0.26	32.95	11.2489	2.0472	-0.059
303	SLU 75	0.21	-0.24	32.94	11.2439	2.0462	-0.0594
303	SLU 76	0.21	-0.23	32.77	11.1853	2.0357	-0.0581
303	SLU 77	0.22	-0.27	33.2	11.3338	2.0627	-0.0589
303	SLU 78	0.21	-0.25	33.19	11.3288	2.0618	-0.0593
303	SLU 79	0.21	-0.27	33.04	11.2786	2.0527	-0.0574
303	SLU 80	0.21	-0.25	33.03	11.2735	2.0518	-0.0578
303	SLU 81	0.22	-0.26	33.75	11.5206	2.0966	-0.0594
303	SLU 82	0.21	-0.24	33.73	11.5156	2.0957	-0.0598
303	SLU 83	0.22	-0.27	34	11.6054	2.1122	-0.0594
303	SLU 84	0.22	-0.25	33.98	11.6004	2.1113	-0.0597
303	SLE RA 1	0.15	-0.2	22.3	7.6129	1.3854	-0.0387
303	SLE RA 2	0.14	-0.18	22.28	7.6073	1.3844	-0.0391
303	SLE RA 3	0.15	-0.2	22.57	7.7063	1.4024	-0.0397
303	SLE RA 4	0.15	-0.19	22.56	7.7029	1.4018	-0.04
303	SLE RA 5	0.15	-0.18	22.45	7.6639	1.3947	-0.0391
303	SLE RA 6	0.15	-0.21	22.74	7.7629	1.4127	-0.0397
303	SLE RA 7	0.15	-0.19	22.73	7.7595	1.4121	-0.0399
303	SLE RA 8	0.15	-0.21	22.63	7.726	1.4061	-0.0387
303	SLE RA 9	0.15	-0.2	22.62	7.7227	1.4055	-0.0389
303	SLE RA 10	0.15	-0.18	24.16	8.2478	1.501	-0.0421
303	SLE RA 11	0.16	-0.2	24.45	8.3468	1.519	-0.0426
303	SLE RA 12	0.16	-0.19	24.44	8.3434	1.5184	-0.0429
303	SLE RA 13	0.15	-0.18	24.33	8.3044	1.5114	-0.042
303	SLE RA 14	0.16	-0.21	24.62	8.4033	1.5294	-0.0426
303	SLE RA 15	0.16	-0.19	24.61	8.4	1.5288	-0.0428
303	SLE RA 16	0.16	-0.21	24.51	8.3665	1.5227	-0.0416
303	SLE RA 17	0.16	-0.2	24.5	8.3632	1.5221	-0.0418
303	SLE RA 18	0.16	-0.2	24.98	8.5279	1.552	-0.0429
303	SLE RA 19	0.16	-0.19	24.97	8.5245	1.5514	-0.0432
303	SLE RA 20	0.16	-0.21	25.15	8.5844	1.5624	-0.0429
303	SLE RA 21	0.16	-0.19	25.14	8.5811	1.5618	-0.0431
303	SLE FR 1	0.15	-0.2	22.3	7.6129	1.3854	-0.0387
303	SLE FR 2	0.15	-0.2	22.3	7.6118	1.3852	-0.0388
303	SLE FR 3	0.15	-0.21	22.37	7.6355	1.3895	-0.0387
303	SLE FR 4	0.15	-0.2	23.1	7.8863	1.4352	-0.0401
303	SLE FR 5	0.15	-0.2	23.17	7.91	1.4395	-0.04
303	SLE FR 6	0.15	-0.2	23.64	8.0704	1.4687	-0.0408
303	SLE QP 1	0.15	-0.2	22.3	7.6129	1.3854	-0.0387
303	SLE QP 2	0.15	-0.2	23.11	7.8874	1.4354	-0.04
303	SLD 1	2.21	0.2	21.78	7.4385	1.3539	-0.7799
303	SLD 2	2.3	0.29	21.78	7.4399	1.3542	-0.8157
303	SLD 3	2.16	-0.48	21.7	7.4195	1.3494	-0.7286
303	SLD 4	2.24	-0.39	21.71	7.4208	1.3497	-0.7645
303	SLD 5	0.83	0.94	22.82	7.7813	1.4177	-0.3334
303	SLD 6	0.89	0.99	22.82	7.7822	1.4179	-0.3567
303	SLD 7	0.66	-1.33	22.57	7.7179	1.4027	-0.1626
303	SLD 8	0.71	-1.28	22.57	7.7188	1.4029	-0.1859
303	SLD 9	-0.41	0.87	23.64	8.056	1.4678	0.1059
303	SLD 10	-0.35	0.93	23.64	8.0568	1.468	0.0826
303	SLD 11	-0.59	-1.4	23.39	7.9925	1.4528	0.2767
303	SLD 12	-0.53	-1.34	23.39	7.9934	1.453	0.2534
303	SLD 13	-1.94	-0.01	24.5	8.3539	1.521	0.6845

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
303	SLD 14	-1.85	0.07	24.51	8.3553	1.5213	0.6487
303	SLD 15	-1.99	-0.7	24.43	8.3349	1.5165	0.7358
303	SLD 16	-1.91	-0.61	24.43	8.3362	1.5168	0.6999
303	SLV 1	4.96	0.73	19.99	6.8369	1.2447	-1.769
303	SLV 2	5.17	0.93	20.01	6.84	1.2454	-1.8525
303	SLV 3	4.84	-0.82	19.82	6.7932	1.2344	-1.6522
303	SLV 4	5.04	-0.62	19.83	6.7963	1.2352	-1.7358
303	SLV 5	1.75	2.39	22.43	7.6379	1.3936	-0.7217
303	SLV 6	1.88	2.52	22.44	7.6399	1.3941	-0.775
303	SLV 7	1.33	-2.77	21.86	7.4924	1.3594	-0.3324
303	SLV 8	1.47	-2.65	21.86	7.4944	1.3599	-0.3857
303	SLV 9	-1.16	2.24	24.35	8.2804	1.5108	0.3058
303	SLV 10	-1.03	2.37	24.35	8.2824	1.5113	0.2524
303	SLV 11	-1.58	-2.93	23.77	8.1348	1.4767	0.695
303	SLV 12	-1.45	-2.8	23.78	8.1368	1.4771	0.6417
303	SLV 13	-4.74	0.22	26.38	8.9784	1.6355	1.6558
303	SLV 14	-4.54	0.42	26.39	8.9816	1.6363	1.5722
303	SLV 15	-4.86	-1.33	26.2	8.9348	1.6253	1.7726
303	SLV 16	-4.66	-1.13	26.22	8.9379	1.626	1.689
303	CRTFP Ux+	0	0	0	0	0	0
303	CRTFP Ux-	0	0	0	0	0	0
303	CRTFP Uy+	0	0	0	0	0	0
303	CRTFP Uy-	0	0	0	0	0	0
305	SLU 1	0.34	-0.39	47.9	8.6439	-0.4577	-0.056
305	SLU 2	0.33	-0.31	47.84	8.6338	-0.4567	-0.0533
305	SLU 3	0.35	-0.38	48.81	8.8087	-0.4665	-0.0576
305	SLU 4	0.35	-0.34	48.78	8.8027	-0.466	-0.056
305	SLU 5	0.33	-0.32	48.4	8.734	-0.462	-0.0537
305	SLU 6	0.36	-0.4	49.37	8.9089	-0.4718	-0.058
305	SLU 7	0.35	-0.35	49.34	8.9029	-0.4713	-0.0564
305	SLU 8	0.35	-0.41	49.02	8.8443	-0.4682	-0.0568
305	SLU 9	0.34	-0.36	48.98	8.8383	-0.4676	-0.0552
305	SLU 10	0.36	-0.3	54.08	9.7589	-0.5121	-0.0579
305	SLU 11	0.38	-0.38	55.05	9.9339	-0.5219	-0.0622
305	SLU 12	0.38	-0.33	55.01	9.9278	-0.5214	-0.0606
305	SLU 13	0.36	-0.31	54.63	9.8592	-0.5174	-0.0583
305	SLU 14	0.39	-0.39	55.61	10.0341	-0.5272	-0.0626
305	SLU 15	0.38	-0.34	55.57	10.028	-0.5266	-0.061
305	SLU 16	0.38	-0.4	55.25	9.9695	-0.5236	-0.0613
305	SLU 17	0.37	-0.35	55.22	9.9634	-0.523	-0.0597
305	SLU 18	0.39	-0.38	56.81	10.2512	-0.5368	-0.0625
305	SLU 19	0.38	-0.33	56.77	10.2452	-0.5362	-0.0609
305	SLU 20	0.39	-0.39	57.37	10.3515	-0.5421	-0.0629
305	SLU 21	0.38	-0.34	57.33	10.3454	-0.5415	-0.0613
305	SLU 22	0.41	-0.36	53.62	9.6776	-0.5145	-0.0658
305	SLU 23	0.4	-0.28	53.56	9.6675	-0.5136	-0.0632
305	SLU 24	0.42	-0.36	54.54	9.8424	-0.5234	-0.0675
305	SLU 25	0.41	-0.32	54.5	9.8364	-0.5228	-0.0659
305	SLU 26	0.4	-0.3	54.12	9.7677	-0.5188	-0.0636
305	SLU 27	0.42	-0.37	55.09	9.9426	-0.5287	-0.0679
305	SLU 28	0.41	-0.33	55.06	9.9366	-0.5281	-0.0663
305	SLU 29	0.41	-0.38	54.74	9.878	-0.525	-0.0666
305	SLU 30	0.4	-0.34	54.7	9.872	-0.5245	-0.065
305	SLU 31	0.43	-0.28	59.8	10.7926	-0.569	-0.0677
305	SLU 32	0.45	-0.36	60.77	10.9676	-0.5788	-0.072
305	SLU 33	0.44	-0.31	60.74	10.9615	-0.5782	-0.0704
305	SLU 34	0.43	-0.29	60.36	10.8929	-0.5742	-0.0681
305	SLU 35	0.45	-0.37	61.33	11.0678	-0.5841	-0.0724
305	SLU 36	0.44	-0.32	61.3	11.0617	-0.5835	-0.0708
305	SLU 37	0.44	-0.38	60.98	11.0032	-0.5804	-0.0712
305	SLU 38	0.43	-0.33	60.94	10.9971	-0.5799	-0.0696
305	SLU 39	0.45	-0.35	62.53	11.2849	-0.5936	-0.0723
305	SLU 40	0.44	-0.31	62.5	11.2789	-0.5931	-0.0707
305	SLU 41	0.45	-0.36	63.09	11.3852	-0.5989	-0.0727
305	SLU 42	0.44	-0.32	63.05	11.3791	-0.5983	-0.0711
305	SLU 43	0.43	-0.51	60.31	10.8826	-0.5755	-0.0694
305	SLU 44	0.41	-0.43	60.25	10.8725	-0.5745	-0.0668
305	SLU 45	0.44	-0.51	61.22	11.0475	-0.5844	-0.0711
305	SLU 46	0.43	-0.46	61.19	11.0414	-0.5838	-0.0695
305	SLU 47	0.42	-0.44	60.8	10.9728	-0.5798	-0.0672
305	SLU 48	0.44	-0.52	61.78	11.1477	-0.5896	-0.0715
305	SLU 49	0.43	-0.47	61.74	11.1416	-0.5891	-0.0699
305	SLU 50	0.43	-0.53	61.42	11.0831	-0.586	-0.0702
305	SLU 51	0.42	-0.48	61.39	11.077	-0.5854	-0.0686
305	SLU 52	0.44	-0.42	66.48	11.9977	-0.6299	-0.0713
305	SLU 53	0.47	-0.5	67.46	12.1726	-0.6397	-0.0756
305	SLU 54	0.46	-0.45	67.42	12.1666	-0.6392	-0.074
305	SLU 55	0.45	-0.43	67.04	12.0979	-0.6352	-0.0717
305	SLU 56	0.47	-0.51	68.02	12.2728	-0.645	-0.076
305	SLU 57	0.46	-0.47	67.98	12.2668	-0.6445	-0.0744
305	SLU 58	0.46	-0.52	67.66	12.2082	-0.6414	-0.0747
305	SLU 59	0.45	-0.48	67.62	12.2022	-0.6408	-0.0732
305	SLU 60	0.47	-0.5	69.22	12.49	-0.6546	-0.0759
305	SLU 61	0.46	-0.45	69.18	12.4839	-0.654	-0.0743
305	SLU 62	0.47	-0.51	69.78	12.5902	-0.6599	-0.0763
305	SLU 63	0.46	-0.46	69.74	12.5842	-0.6593	-0.0747
305	SLU 64	0.49	-0.49	66.03	11.9163	-0.6323	-0.0793
305	SLU 65	0.48	-0.41	65.97	11.9062	-0.6314	-0.0766
305	SLU 66	0.5	-0.49	66.94	12.0812	-0.6412	-0.0809
305	SLU 67	0.49	-0.44	66.91	12.0751	-0.6406	-0.0793
305	SLU 68	0.48	-0.42	66.53	12.0065	-0.6367	-0.077

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
305	SLU 69	0.5	-0.5	67.5	12.1814	-0.6465	-0.0813
305	SLU 70	0.49	-0.45	67.47	12.1753	-0.6459	-0.0797
305	SLU 71	0.49	-0.51	67.15	12.1168	-0.6429	-0.0801
305	SLU 72	0.49	-0.46	67.11	12.1107	-0.6423	-0.0785
305	SLU 73	0.51	-0.4	72.21	13.0314	-0.6868	-0.0811
305	SLU 74	0.53	-0.48	73.18	13.2063	-0.6966	-0.0854
305	SLU 75	0.52	-0.43	73.15	13.2003	-0.696	-0.0838
305	SLU 76	0.51	-0.41	72.76	13.1316	-0.692	-0.0815
305	SLU 77	0.53	-0.49	73.74	13.3065	-0.7019	-0.0858
305	SLU 78	0.52	-0.44	73.7	13.3005	-0.7013	-0.0842
305	SLU 79	0.52	-0.5	73.38	13.2419	-0.6982	-0.0846
305	SLU 80	0.52	-0.45	73.35	13.2359	-0.6977	-0.083
305	SLU 81	0.53	-0.48	74.94	13.5237	-0.7114	-0.0857
305	SLU 82	0.52	-0.43	74.9	13.5176	-0.7109	-0.0841
305	SLU 83	0.53	-0.49	75.5	13.6239	-0.7167	-0.0861
305	SLU 84	0.53	-0.44	75.46	13.6178	-0.7161	-0.0845
305	SLE RA 1	0.36	-0.38	49.53	8.9392	-0.4739	-0.0588
305	SLE RA 2	0.35	-0.33	49.49	8.9325	-0.4733	-0.057
305	SLE RA 3	0.37	-0.38	50.14	9.0491	-0.4798	-0.0599
305	SLE RA 4	0.36	-0.35	50.12	9.0451	-0.4795	-0.0588
305	SLE RA 5	0.36	-0.33	49.87	8.9993	-0.4768	-0.0573
305	SLE RA 6	0.37	-0.39	50.52	9.1159	-0.4833	-0.0602
305	SLE RA 7	0.37	-0.35	50.49	9.1119	-0.483	-0.0591
305	SLE RA 8	0.36	-0.39	50.28	9.0729	-0.4809	-0.0593
305	SLE RA 9	0.36	-0.36	50.25	9.0688	-0.4806	-0.0583
305	SLE RA 10	0.37	-0.32	53.65	9.6826	-0.5102	-0.0601
305	SLE RA 11	0.39	-0.37	54.3	9.7992	-0.5168	-0.0629
305	SLE RA 12	0.38	-0.34	54.28	9.7952	-0.5164	-0.0619
305	SLE RA 13	0.38	-0.33	54.02	9.7494	-0.5137	-0.0603
305	SLE RA 14	0.39	-0.38	54.67	9.866	-0.5203	-0.0632
305	SLE RA 15	0.39	-0.35	54.65	9.862	-0.5199	-0.0621
305	SLE RA 16	0.38	-0.39	54.44	9.823	-0.5179	-0.0624
305	SLE RA 17	0.38	-0.36	54.41	9.8189	-0.5175	-0.0613
305	SLE RA 18	0.39	-0.37	55.48	10.0108	-0.5267	-0.0631
305	SLE RA 19	0.39	-0.34	55.45	10.0067	-0.5263	-0.0621
305	SLE RA 20	0.39	-0.38	55.85	10.0776	-0.5302	-0.0634
305	SLE RA 21	0.39	-0.35	55.82	10.0736	-0.5298	-0.0623
305	SLE FR 1	0.36	-0.38	49.53	8.9392	-0.4739	-0.0588
305	SLE FR 2	0.36	-0.37	49.53	8.9379	-0.4738	-0.0585
305	SLE FR 3	0.36	-0.38	49.68	8.9659	-0.4753	-0.0589
305	SLE FR 4	0.37	-0.37	51.31	9.2593	-0.4896	-0.0597
305	SLE FR 5	0.37	-0.38	51.47	9.2874	-0.4911	-0.0602
305	SLE FR 6	0.38	-0.38	52.51	9.475	-0.5003	-0.061
305	SLE QP 1	0.36	-0.38	49.53	8.9392	-0.4739	-0.0588
305	SLE QP 2	0.37	-0.38	51.32	9.2607	-0.4897	-0.0601
305	SLD 1	4.94	0.52	48.12	8.6927	-0.4186	-0.8748
305	SLD 2	5.14	0.72	48.14	8.6959	-0.4199	-0.906
305	SLD 3	4.82	-0.99	47.87	8.6537	-0.4045	-0.8994
305	SLD 4	5.02	-0.79	47.89	8.6569	-0.4059	-0.9305
305	SLD 5	1.89	2.15	50.73	9.1489	-0.4895	-0.2618
305	SLD 6	2.02	2.28	50.74	9.151	-0.4904	-0.282
305	SLD 7	1.49	-2.89	49.91	9.0188	-0.4426	-0.3437
305	SLD 8	1.62	-2.75	49.92	9.0209	-0.4435	-0.3639
305	SLD 9	-0.88	2	52.71	9.5005	-0.536	0.2437
305	SLD 10	-0.75	2.13	52.73	9.5026	-0.5369	0.2235
305	SLD 11	-1.28	-3.03	51.89	9.3703	-0.4891	0.1618
305	SLD 12	-1.15	-2.9	51.91	9.3724	-0.49	0.1416
305	SLD 13	-4.28	0.03	54.74	9.8645	-0.5736	0.8103
305	SLD 14	-4.08	0.24	54.76	9.8677	-0.5749	0.7792
305	SLD 15	-4.4	-1.48	54.5	9.8254	-0.5595	0.7857
305	SLD 16	-4.2	-1.27	54.52	9.8287	-0.5609	0.7546
305	SLV 1	11.05	1.67	43.82	7.9306	-0.3228	-1.9657
305	SLV 2	11.52	2.15	43.87	7.9382	-0.326	-2.0383
305	SLV 3	10.78	-1.76	43.26	7.8419	-0.2909	-2.0228
305	SLV 4	11.24	-1.29	43.31	7.8494	-0.294	-2.0954
305	SLV 5	3.92	5.37	49.91	8.9949	-0.4876	-0.533
305	SLV 6	4.21	5.68	49.94	8.9998	-0.4896	-0.5793
305	SLV 7	2.99	-6.09	48.05	8.6992	-0.3811	-0.7232
305	SLV 8	3.29	-5.78	48.08	8.704	-0.3831	-0.7695
305	SLV 9	-2.55	5.03	54.56	9.8173	-0.5964	0.6493
305	SLV 10	-2.25	5.34	54.59	9.8222	-0.5984	0.603
305	SLV 11	-3.47	-6.43	52.7	9.5216	-0.4899	0.4591
305	SLV 12	-3.17	-6.13	52.73	9.5264	-0.4918	0.4128
305	SLV 13	-10.5	0.53	59.32	10.6719	-0.6855	1.9751
305	SLV 14	-10.04	1.01	59.37	10.6795	-0.6886	1.9026
305	SLV 15	-10.78	-2.91	58.76	10.5832	-0.6535	1.9181
305	SLV 16	-10.31	-2.43	58.81	10.5908	-0.6566	1.8455
305	CRTFP Ux+	0	0	0	0	0	0
305	CRTFP Ux-	0	0	0	0	0	0
305	CRTFP Uy+	0	0	0	0	0	0
305	CRTFP Uy-	0	0	0	0	0	0
307	SLU 1	0.17	-0.16	24.72	8.1479	-1.5198	-0.0699
307	SLU 2	0.17	-0.12	24.69	8.1417	-1.5179	-0.0655
307	SLU 3	0.18	-0.16	25.19	8.3025	-1.5487	-0.0717
307	SLU 4	0.17	-0.14	25.17	8.2989	-1.5476	-0.0691
307	SLU 5	0.17	-0.13	24.98	8.2355	-1.5355	-0.0662
307	SLU 6	0.18	-0.17	25.48	8.3963	-1.5663	-0.0724
307	SLU 7	0.18	-0.15	25.46	8.3926	-1.5652	-0.0698
307	SLU 8	0.17	-0.18	25.29	8.3354	-1.555	-0.0713
307	SLU 9	0.17	-0.15	25.28	8.3317	-1.5538	-0.0686
307	SLU 10	0.18	-0.12	27.9	9.1942	-1.7148	-0.0704

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
307	SLU 11	0.19	-0.16	28.4	9.355	-1.7457	-0.0765
307	SLU 12	0.19	-0.13	28.38	9.3513	-1.7446	-0.0739
307	SLU 13	0.18	-0.12	28.18	9.2879	-1.7324	-0.071
307	SLU 14	0.19	-0.16	28.69	9.4487	-1.7633	-0.0772
307	SLU 15	0.19	-0.14	28.67	9.4451	-1.7622	-0.0746
307	SLU 16	0.19	-0.17	28.5	9.3878	-1.7519	-0.0761
307	SLU 17	0.19	-0.14	28.48	9.3842	-1.7508	-0.0735
307	SLU 18	0.19	-0.15	29.3	9.6513	-1.8011	-0.0768
307	SLU 19	0.19	-0.13	29.28	9.6476	-1.8	-0.0742
307	SLU 20	0.2	-0.16	29.59	9.7451	-1.8187	-0.0775
307	SLU 21	0.19	-0.14	29.57	9.7414	-1.8176	-0.0749
307	SLU 22	0.21	-0.15	27.68	9.1206	-1.7017	-0.0802
307	SLU 23	0.2	-0.11	27.65	9.1145	-1.6999	-0.0758
307	SLU 24	0.21	-0.15	28.15	9.2753	-1.7307	-0.082
307	SLU 25	0.21	-0.12	28.14	9.2716	-1.7296	-0.0793
307	SLU 26	0.2	-0.11	27.94	9.2083	-1.7175	-0.0765
307	SLU 27	0.21	-0.15	28.44	9.3691	-1.7483	-0.0826
307	SLU 28	0.21	-0.13	28.42	9.3654	-1.7472	-0.08
307	SLU 29	0.21	-0.16	28.25	9.3081	-1.7369	-0.0815
307	SLU 30	0.2	-0.13	28.24	9.3045	-1.7358	-0.0789
307	SLU 31	0.21	-0.1	30.86	10.1669	-1.8968	-0.0806
307	SLU 32	0.23	-0.14	31.36	10.3277	-1.9276	-0.0868
307	SLU 33	0.22	-0.12	31.34	10.324	-1.9265	-0.0841
307	SLU 34	0.22	-0.11	31.15	10.2607	-1.9144	-0.0813
307	SLU 35	0.23	-0.15	31.65	10.4215	-1.9452	-0.0875
307	SLU 36	0.22	-0.12	31.63	10.4178	-1.9441	-0.0848
307	SLU 37	0.22	-0.15	31.46	10.3606	-1.9339	-0.0863
307	SLU 38	0.22	-0.13	31.44	10.3569	-1.9327	-0.0837
307	SLU 39	0.23	-0.14	32.26	10.6241	-1.9831	-0.0871
307	SLU 40	0.22	-0.11	32.25	10.6204	-1.9819	-0.0844
307	SLU 41	0.23	-0.14	32.55	10.7178	-2.0007	-0.0877
307	SLU 42	0.22	-0.12	32.53	10.7142	-1.9995	-0.0851
307	SLU 43	0.21	-0.22	31.12	10.2587	-1.9133	-0.0874
307	SLU 44	0.21	-0.18	31.09	10.2526	-1.9114	-0.083
307	SLU 45	0.22	-0.22	31.59	10.4134	-1.9423	-0.0892
307	SLU 46	0.22	-0.19	31.58	10.4097	-1.9412	-0.0866
307	SLU 47	0.21	-0.19	31.38	10.3464	-1.929	-0.0837
307	SLU 48	0.22	-0.22	31.88	10.5072	-1.9599	-0.0899
307	SLU 49	0.22	-0.2	31.86	10.5035	-1.9588	-0.0872
307	SLU 50	0.22	-0.23	31.7	10.4463	-1.9485	-0.0887
307	SLU 51	0.21	-0.21	31.68	10.4426	-1.9474	-0.0861
307	SLU 52	0.22	-0.17	34.3	11.305	-2.1084	-0.0878
307	SLU 53	0.23	-0.21	34.8	11.4658	-2.1392	-0.094
307	SLU 54	0.23	-0.19	34.78	11.4621	-2.1381	-0.0914
307	SLU 55	0.22	-0.18	34.59	11.3988	-2.126	-0.0885
307	SLU 56	0.23	-0.22	35.09	11.5596	-2.1568	-0.0947
307	SLU 57	0.23	-0.19	35.07	11.5559	-2.1557	-0.092
307	SLU 58	0.23	-0.22	34.9	11.4987	-2.1454	-0.0936
307	SLU 59	0.23	-0.2	34.88	11.495	-2.1443	-0.0909
307	SLU 60	0.24	-0.21	35.7	11.7622	-2.1946	-0.0943
307	SLU 61	0.23	-0.19	35.69	11.7585	-2.1935	-0.0917
307	SLU 62	0.24	-0.22	35.99	11.8559	-2.2122	-0.095
307	SLU 63	0.23	-0.19	35.97	11.8523	-2.2111	-0.0923
307	SLU 64	0.25	-0.2	34.08	11.2314	-2.0953	-0.0977
307	SLU 65	0.24	-0.16	34.05	11.2253	-2.0934	-0.0933
307	SLU 66	0.25	-0.2	34.55	11.3861	-2.1243	-0.0994
307	SLU 67	0.25	-0.18	34.54	11.3825	-2.1231	-0.0968
307	SLU 68	0.24	-0.17	34.34	11.3191	-2.111	-0.0939
307	SLU 69	0.25	-0.21	34.84	11.4799	-2.1419	-0.1001
307	SLU 70	0.25	-0.18	34.82	11.4762	-2.1407	-0.0975
307	SLU 71	0.25	-0.21	34.66	11.419	-2.1305	-0.099
307	SLU 72	0.24	-0.19	34.64	11.4153	-2.1293	-0.0964
307	SLU 73	0.26	-0.16	37.26	12.2777	-2.2903	-0.0981
307	SLU 74	0.27	-0.2	37.76	12.4386	-2.3212	-0.1043
307	SLU 75	0.26	-0.17	37.74	12.4349	-2.3201	-0.1016
307	SLU 76	0.26	-0.16	37.55	12.3715	-2.3079	-0.0987
307	SLU 77	0.27	-0.2	38.05	12.5323	-2.3388	-0.1049
307	SLU 78	0.26	-0.18	38.03	12.5287	-2.3377	-0.1023
307	SLU 79	0.26	-0.21	37.86	12.4714	-2.3274	-0.1038
307	SLU 80	0.26	-0.18	37.85	12.4677	-2.3263	-0.1012
307	SLU 81	0.27	-0.19	38.66	12.7349	-2.3766	-0.1045
307	SLU 82	0.26	-0.17	38.65	12.7312	-2.3755	-0.1019
307	SLU 83	0.27	-0.2	38.95	12.8287	-2.3942	-0.1052
307	SLU 84	0.27	-0.17	38.93	12.825	-2.3931	-0.1026
307	SLE RA 1	0.18	-0.16	25.57	8.4258	-1.5717	-0.0729
307	SLE RA 2	0.18	-0.13	25.55	8.4217	-1.5705	-0.0699
307	SLE RA 3	0.19	-0.16	25.88	8.5289	-1.5911	-0.0741
307	SLE RA 4	0.18	-0.14	25.87	8.5265	-1.5903	-0.0723
307	SLE RA 5	0.18	-0.14	25.74	8.4842	-1.5822	-0.0704
307	SLE RA 6	0.19	-0.16	26.07	8.5914	-1.6028	-0.0745
307	SLE RA 7	0.18	-0.15	26.06	8.589	-1.6021	-0.0727
307	SLE RA 8	0.18	-0.17	25.95	8.5508	-1.5952	-0.0738
307	SLE RA 9	0.18	-0.15	25.94	8.5484	-1.5945	-0.072
307	SLE RA 10	0.19	-0.13	27.69	9.1233	-1.7018	-0.0731
307	SLE RA 11	0.2	-0.15	28.02	9.2305	-1.7224	-0.0773
307	SLE RA 12	0.19	-0.14	28.01	9.2281	-1.7216	-0.0755
307	SLE RA 13	0.19	-0.13	27.88	9.1858	-1.7135	-0.0736
307	SLE RA 14	0.2	-0.16	28.21	9.293	-1.7341	-0.0777
307	SLE RA 15	0.19	-0.14	28.2	9.2906	-1.7333	-0.076
307	SLE RA 16	0.19	-0.16	28.09	9.2524	-1.7265	-0.077
307	SLE RA 17	0.19	-0.15	28.08	9.25	-1.7258	-0.0752

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
307	SLE RA 18	0.2	-0.15	28.62	9.4281	-1.7593	-0.0775
307	SLE RA 19	0.19	-0.14	28.61	9.4256	-1.7586	-0.0757
307	SLE RA 20	0.2	-0.16	28.81	9.4906	-1.771	-0.0779
307	SLE RA 21	0.19	-0.14	28.8	9.4882	-1.7703	-0.0761
307	SLE FR 1	0.18	-0.16	25.57	8.4258	-1.5717	-0.0729
307	SLE FR 2	0.18	-0.15	25.56	8.425	-1.5715	-0.0723
307	SLE FR 3	0.18	-0.16	25.64	8.4508	-1.5764	-0.073
307	SLE FR 4	0.19	-0.15	26.48	8.7257	-1.6278	-0.0737
307	SLE FR 5	0.19	-0.16	26.56	8.7515	-1.6327	-0.0744
307	SLE FR 6	0.19	-0.16	27.09	8.9269	-1.6655	-0.0752
307	SLE QP 1	0.18	-0.16	25.57	8.4258	-1.5717	-0.0729
307	SLE QP 2	0.19	-0.16	26.48	8.7265	-1.628	-0.0742
307	SLD 1	2.64	0.32	24.75	8.2014	-1.52	-0.8938
307	SLD 2	2.74	0.44	24.76	8.2048	-1.5207	-0.923
307	SLD 3	2.58	-0.49	24.61	8.1532	-1.5112	-0.9417
307	SLD 4	2.68	-0.37	24.63	8.1566	-1.512	-0.9709
307	SLD 5	1	1.19	26.17	8.6415	-1.6087	-0.2424
307	SLD 6	1.07	1.27	26.18	8.6437	-1.6092	-0.2613
307	SLD 7	0.79	-1.5	25.71	8.4808	-1.5796	-0.4021
307	SLD 8	0.86	-1.42	25.72	8.483	-1.5801	-0.421
307	SLD 9	-0.48	1.11	27.25	8.97	-1.6759	0.2725
307	SLD 10	-0.42	1.19	27.25	8.9722	-1.6764	0.2536
307	SLD 11	-0.7	-1.58	26.79	8.8092	-1.6468	0.1128
307	SLD 12	-0.63	-1.51	26.8	8.8114	-1.6473	0.0939
307	SLD 13	-2.31	0.05	28.34	9.2964	-1.744	0.8224
307	SLD 14	-2.2	0.17	28.35	9.2997	-1.7448	0.7933
307	SLD 15	-2.37	-0.76	28.2	9.2481	-1.7353	0.7745
307	SLD 16	-2.27	-0.64	28.22	9.2515	-1.7361	0.7454
307	SLV 1	5.92	0.94	22.43	7.4966	-1.3749	-1.9921
307	SLV 2	6.17	1.21	22.45	7.5044	-1.3767	-2.06
307	SLV 3	5.78	-0.9	22.12	7.387	-1.3551	-2.102
307	SLV 4	6.02	-0.62	22.14	7.3949	-1.3569	-2.1699
307	SLV 5	2.09	2.91	25.73	8.5223	-1.5818	-0.4714
307	SLV 6	2.25	3.09	25.75	8.5273	-1.583	-0.5148
307	SLV 7	1.6	-3.22	24.7	8.1572	-1.5158	-0.8378
307	SLV 8	1.75	-3.04	24.72	8.1622	-1.5169	-0.8811
307	SLV 9	-1.38	2.72	28.25	9.2908	-1.7391	0.7326
307	SLV 10	-1.22	2.9	28.27	9.2958	-1.7402	0.6893
307	SLV 11	-1.87	-3.41	27.22	8.9256	-1.6731	0.3663
307	SLV 12	-1.72	-3.23	27.24	8.9306	-1.6742	0.323
307	SLV 13	-5.65	0.31	30.82	10.0581	-1.8992	2.0214
307	SLV 14	-5.4	0.59	30.85	10.0659	-1.9009	1.9536
307	SLV 15	-5.79	-1.53	30.51	9.9485	-1.8793	1.9115
307	SLV 16	-5.55	-1.25	30.54	9.9564	-1.8811	1.8437
307	CRTFP Ux+	0	0	0	0	0	0
307	CRTFP Ux-	0	0	0	0	0	0
307	CRTFP Uy+	0	0	0	0	0	0
307	CRTFP Uy-	0	0	0	0	0	0
308	SLU 1	0.25	-0.18	34.33	10.9085	0.0561	-0.0851
308	SLU 2	0.24	-0.13	34.29	10.904	0.0561	-0.0826
308	SLU 3	0.26	-0.18	34.98	11.1144	0.0573	-0.0878
308	SLU 4	0.25	-0.14	34.96	11.1117	0.0573	-0.0862
308	SLU 5	0.24	-0.13	34.69	11.0289	0.0568	-0.083
308	SLU 6	0.26	-0.18	35.38	11.2393	0.058	-0.0882
308	SLU 7	0.25	-0.15	35.36	11.2366	0.058	-0.0867
308	SLU 8	0.25	-0.19	35.12	11.1582	0.0576	-0.086
308	SLU 9	0.25	-0.16	35.1	11.1555	0.0575	-0.0845
308	SLU 10	0.26	-0.11	38.72	12.3008	0.0643	-0.0898
308	SLU 11	0.28	-0.16	39.42	12.5112	0.0655	-0.095
308	SLU 12	0.27	-0.13	39.39	12.5085	0.0654	-0.0935
308	SLU 13	0.27	-0.12	39.12	12.4256	0.065	-0.0903
308	SLU 14	0.28	-0.17	39.81	12.6361	0.0662	-0.0955
308	SLU 15	0.28	-0.14	39.79	12.6334	0.0661	-0.094
308	SLU 16	0.27	-0.18	39.56	12.555	0.0657	-0.0933
308	SLU 17	0.27	-0.15	39.53	12.5523	0.0657	-0.0918
308	SLU 18	0.28	-0.16	40.66	12.9039	0.0678	-0.0955
308	SLU 19	0.28	-0.13	40.64	12.9012	0.0678	-0.094
308	SLU 20	0.28	-0.16	41.06	13.0287	0.0685	-0.0959
308	SLU 21	0.28	-0.13	41.04	13.0261	0.0685	-0.0944
308	SLU 22	0.3	-0.15	38.44	12.2036	0.0633	-0.1013
308	SLU 23	0.29	-0.1	38.39	12.1991	0.0632	-0.0987
308	SLU 24	0.3	-0.15	39.09	12.4095	0.0644	-0.1039
308	SLU 25	0.3	-0.11	39.06	12.4068	0.0644	-0.1024
308	SLU 26	0.29	-0.1	38.79	12.324	0.0639	-0.0992
308	SLU 27	0.31	-0.15	39.49	12.5344	0.0651	-0.1044
308	SLU 28	0.3	-0.12	39.46	12.5317	0.0651	-0.1029
308	SLU 29	0.3	-0.16	39.23	12.4533	0.0647	-0.1022
308	SLU 30	0.29	-0.13	39.2	12.4506	0.0646	-0.1007
308	SLU 31	0.31	-0.08	42.83	13.5959	0.0714	-0.106
308	SLU 32	0.33	-0.13	43.52	13.8063	0.0726	-0.1112
308	SLU 33	0.32	-0.1	43.5	13.8036	0.0726	-0.1096
308	SLU 34	0.31	-0.09	43.22	13.7207	0.0721	-0.1064
308	SLU 35	0.33	-0.14	43.92	13.9311	0.0733	-0.1116
308	SLU 36	0.32	-0.11	43.89	13.9285	0.0733	-0.1101
308	SLU 37	0.32	-0.15	43.66	13.8501	0.0729	-0.1095
308	SLU 38	0.32	-0.12	43.64	13.8474	0.0728	-0.1079
308	SLU 39	0.33	-0.13	44.77	14.199	0.075	-0.1116
308	SLU 40	0.32	-0.1	44.74	14.1963	0.0749	-0.1101
308	SLU 41	0.33	-0.13	45.17	14.3238	0.0757	-0.1121
308	SLU 42	0.32	-0.1	45.14	14.3211	0.0756	-0.1106
308	SLU 43	0.31	-0.24	43.22	13.737	0.0705	-0.1051

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
308	SLU 44	0.3	-0.19	43.18	13.7326	0.0705	-0.1026
308	SLU 45	0.32	-0.24	43.88	13.943	0.0717	-0.1078
308	SLU 46	0.31	-0.21	43.85	13.9403	0.0717	-0.1062
308	SLU 47	0.3	-0.2	43.58	13.8574	0.0712	-0.103
308	SLU 48	0.32	-0.25	44.27	14.0678	0.0724	-0.1082
308	SLU 49	0.31	-0.22	44.25	14.0651	0.0724	-0.1067
308	SLU 50	0.31	-0.26	44.02	13.9868	0.072	-0.106
308	SLU 51	0.31	-0.23	43.99	13.9841	0.0719	-0.1045
308	SLU 52	0.32	-0.17	47.61	15.1293	0.0787	-0.1098
308	SLU 53	0.34	-0.23	48.31	15.3397	0.0799	-0.115
308	SLU 54	0.33	-0.19	48.28	15.337	0.0798	-0.1135
308	SLU 55	0.32	-0.18	48.01	15.2542	0.0794	-0.1103
308	SLU 56	0.34	-0.23	48.71	15.4646	0.0806	-0.1155
308	SLU 57	0.33	-0.2	48.68	15.4619	0.0805	-0.114
308	SLU 58	0.33	-0.24	48.45	15.3835	0.0801	-0.1133
308	SLU 59	0.33	-0.21	48.42	15.3808	0.0801	-0.1118
308	SLU 60	0.34	-0.22	49.56	15.7324	0.0822	-0.1155
308	SLU 61	0.33	-0.19	49.53	15.7297	0.0822	-0.1139
308	SLU 62	0.34	-0.23	49.95	15.8573	0.0829	-0.1159
308	SLU 63	0.34	-0.2	49.93	15.8546	0.0829	-0.1144
308	SLU 64	0.36	-0.21	47.33	15.0321	0.0777	-0.1213
308	SLU 65	0.35	-0.16	47.29	15.0276	0.0776	-0.1187
308	SLU 66	0.36	-0.21	47.98	15.2381	0.0788	-0.1239
308	SLU 67	0.36	-0.18	47.96	15.2354	0.0788	-0.1224
308	SLU 68	0.35	-0.17	47.68	15.1525	0.0783	-0.1192
308	SLU 69	0.36	-0.22	48.38	15.3629	0.0795	-0.1244
308	SLU 70	0.36	-0.19	48.35	15.3602	0.0795	-0.1229
308	SLU 71	0.36	-0.23	48.12	15.2819	0.0791	-0.1222
308	SLU 72	0.35	-0.2	48.1	15.2792	0.079	-0.1207
308	SLU 73	0.37	-0.14	51.72	16.4244	0.0858	-0.126
308	SLU 74	0.38	-0.2	52.41	16.6348	0.087	-0.1312
308	SLU 75	0.38	-0.16	52.39	16.6321	0.087	-0.1296
308	SLU 76	0.37	-0.15	52.11	16.5493	0.0865	-0.1264
308	SLU 77	0.39	-0.2	52.81	16.7597	0.0877	-0.1316
308	SLU 78	0.38	-0.17	52.79	16.757	0.0877	-0.1301
308	SLU 79	0.38	-0.21	52.55	16.6786	0.0873	-0.1295
308	SLU 80	0.38	-0.18	52.53	16.6759	0.0872	-0.1279
308	SLU 81	0.39	-0.19	53.66	17.0275	0.0894	-0.1316
308	SLU 82	0.38	-0.16	53.64	17.0248	0.0893	-0.1301
308	SLU 83	0.39	-0.2	54.06	17.1524	0.0901	-0.1321
308	SLU 84	0.38	-0.17	54.03	17.1497	0.09	-0.1306
308	SLE RA 1	0.26	-0.17	35.5	11.2785	0.0582	-0.0897
308	SLE RA 2	0.26	-0.13	35.48	11.2756	0.0581	-0.088
308	SLE RA 3	0.27	-0.17	35.94	11.4158	0.0589	-0.0915
308	SLE RA 4	0.27	-0.15	35.92	11.414	0.0589	-0.0905
308	SLE RA 5	0.26	-0.14	35.74	11.3588	0.0586	-0.0883
308	SLE RA 6	0.27	-0.17	36.2	11.4991	0.0594	-0.0918
308	SLE RA 7	0.27	-0.15	36.19	11.4973	0.0594	-0.0908
308	SLE RA 8	0.27	-0.18	36.03	11.445	0.0591	-0.0904
308	SLE RA 9	0.26	-0.16	36.02	11.4432	0.0591	-0.0893
308	SLE RA 10	0.27	-0.12	38.43	12.2067	0.0636	-0.0929
308	SLE RA 11	0.28	-0.16	38.9	12.347	0.0644	-0.0963
308	SLE RA 12	0.28	-0.14	38.88	12.3452	0.0644	-0.0953
308	SLE RA 13	0.27	-0.13	38.7	12.29	0.0641	-0.0932
308	SLE RA 14	0.28	-0.16	39.16	12.4302	0.0649	-0.0966
308	SLE RA 15	0.28	-0.14	39.14	12.4284	0.0648	-0.0956
308	SLE RA 16	0.28	-0.17	38.99	12.3762	0.0646	-0.0952
308	SLE RA 17	0.28	-0.15	38.97	12.3744	0.0646	-0.0942
308	SLE RA 18	0.28	-0.16	39.73	12.6088	0.066	-0.0966
308	SLE RA 19	0.28	-0.13	39.71	12.607	0.066	-0.0956
308	SLE RA 20	0.28	-0.16	39.99	12.692	0.0664	-0.0969
308	SLE RA 21	0.28	-0.14	39.97	12.6902	0.0664	-0.0959
308	SLE FR 1	0.26	-0.17	35.5	11.2785	0.0582	-0.0897
308	SLE FR 2	0.26	-0.16	35.5	11.2779	0.0582	-0.0894
308	SLE FR 3	0.26	-0.17	35.61	11.3118	0.0584	-0.0899
308	SLE FR 4	0.27	-0.16	36.76	11.677	0.0605	-0.0915
308	SLE FR 5	0.27	-0.17	36.88	11.7109	0.0607	-0.0919
308	SLE FR 6	0.27	-0.16	37.61	11.9437	0.0621	-0.0932
308	SLE QP 1	0.26	-0.17	35.5	11.2785	0.0582	-0.0897
308	SLE QP 2	0.27	-0.17	36.77	11.6776	0.0605	-0.0918
308	SLD 1	3.8	0.51	34.25	10.9833	0.0624	-1.328
308	SLD 2	3.95	0.69	34.27	10.9888	0.0624	-1.3805
308	SLD 3	3.71	-0.64	34.03	10.8926	0.0609	-1.2957
308	SLD 4	3.86	-0.47	34.05	10.8982	0.0608	-1.3482
308	SLD 5	1.44	1.75	36.34	11.6058	0.0635	-0.5024
308	SLD 6	1.54	1.87	36.35	11.6094	0.0634	-0.5365
308	SLD 7	1.14	-2.09	35.62	11.3037	0.0583	-0.3949
308	SLD 8	1.23	-1.97	35.63	11.3073	0.0582	-0.4289
308	SLD 9	-0.69	1.64	37.91	12.0479	0.0628	0.2453
308	SLD 10	-0.6	1.76	37.92	12.0515	0.0628	0.2113
308	SLD 11	-1	-2.2	37.19	11.7459	0.0576	0.3529
308	SLD 12	-0.9	-2.09	37.2	11.7495	0.0576	0.3188
308	SLD 13	-3.32	0.13	39.49	12.4571	0.0602	1.1646
308	SLD 14	-3.17	0.31	39.51	12.4626	0.0602	1.1121
308	SLD 15	-3.41	-1.02	39.28	12.3665	0.0586	1.1969
308	SLD 16	-3.26	-0.84	39.29	12.372	0.0586	1.1444
308	SLV 1	8.53	1.38	30.86	10.0505	0.065	-2.9828
308	SLV 2	8.88	1.8	30.9	10.0633	0.0649	-3.105
308	SLV 3	8.31	-1.25	30.37	9.8441	0.0613	-2.9079
308	SLV 4	8.66	-0.83	30.41	9.8569	0.0613	-3.0301
308	SLV 5	3.01	4.21	35.73	11.5003	0.0674	-1.0521

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
308	SLV 6	3.24	4.48	35.76	11.5085	0.0673	-1.1302
308	SLV 7	2.3	-4.55	34.1	10.8124	0.0553	-0.8022
308	SLV 8	2.52	-4.28	34.13	10.8206	0.0552	-0.8803
308	SLV 9	-1.98	3.95	39.41	12.5347	0.0658	0.6967
308	SLV 10	-1.76	4.21	39.44	12.5429	0.0658	0.6186
308	SLV 11	-2.7	-4.81	37.78	11.8467	0.0537	0.9465
308	SLV 12	-2.47	-4.54	37.81	11.8549	0.0537	0.8685
308	SLV 13	-8.13	0.5	43.13	13.4983	0.0597	2.8465
308	SLV 14	-7.77	0.91	43.17	13.5112	0.0597	2.7243
308	SLV 15	-8.34	-2.13	42.64	13.2919	0.0561	2.9214
308	SLV 16	-7.99	-1.71	42.68	13.3048	0.0561	2.7992
308	CRTFP Ux+	0	0	0	0	0	0
308	CRTFP Ux-	0	0	0	0	0	0
308	CRTFP Uy+	0	0	0	0	0	0
308	CRTFP Uy-	0	0	0	0	0	0
309	SLU 1	0.25	-0.11	32.49	9.8183	0.0648	-0.0848
309	SLU 2	0.24	-0.06	32.45	9.8187	0.0647	-0.0825
309	SLU 3	0.26	-0.1	33.11	10.0018	0.0661	-0.0875
309	SLU 4	0.25	-0.08	33.08	10.0021	0.0661	-0.0861
309	SLU 5	0.24	-0.07	32.82	9.93	0.0655	-0.0829
309	SLU 6	0.26	-0.11	33.48	10.113	0.0669	-0.0879
309	SLU 7	0.25	-0.08	33.46	10.1133	0.0669	-0.0865
309	SLU 8	0.25	-0.12	33.24	10.0408	0.0664	-0.0857
309	SLU 9	0.25	-0.09	33.21	10.041	0.0664	-0.0843
309	SLU 10	0.26	-0.04	36.62	11.0588	0.0741	-0.0894
309	SLU 11	0.28	-0.08	37.27	11.2418	0.0755	-0.0944
309	SLU 12	0.27	-0.05	37.25	11.2421	0.0755	-0.093
309	SLU 13	0.26	-0.04	36.99	11.17	0.075	-0.0899
309	SLU 14	0.28	-0.09	37.65	11.353	0.0764	-0.0949
309	SLU 15	0.27	-0.06	37.62	11.3533	0.0763	-0.0935
309	SLU 16	0.27	-0.1	37.4	11.2808	0.0759	-0.0927
309	SLU 17	0.27	-0.07	37.38	11.281	0.0758	-0.0913
309	SLU 18	0.28	-0.08	38.44	11.5898	0.0782	-0.0947
309	SLU 19	0.27	-0.05	38.42	11.59	0.0782	-0.0933
309	SLU 20	0.28	-0.08	38.82	11.701	0.0791	-0.0952
309	SLU 21	0.28	-0.05	38.79	11.7013	0.079	-0.0938
309	SLU 22	0.3	-0.07	36.36	10.9719	0.0731	-0.1009
309	SLU 23	0.29	-0.02	36.32	10.9724	0.0731	-0.0986
309	SLU 24	0.3	-0.07	36.98	11.1554	0.0745	-0.1036
309	SLU 25	0.3	-0.04	36.95	11.1557	0.0744	-0.1022
309	SLU 26	0.29	-0.03	36.69	11.0836	0.0739	-0.099
309	SLU 27	0.3	-0.07	37.35	11.2666	0.0753	-0.104
309	SLU 28	0.3	-0.04	37.33	11.2669	0.0753	-0.1026
309	SLU 29	0.3	-0.08	37.11	11.1944	0.0748	-0.1018
309	SLU 30	0.29	-0.05	37.08	11.1946	0.0748	-0.1004
309	SLU 31	0.31	0	40.49	12.2124	0.0825	-0.1055
309	SLU 32	0.32	-0.05	41.14	12.3954	0.0839	-0.1105
309	SLU 33	0.32	-0.02	41.12	12.3957	0.0839	-0.1091
309	SLU 34	0.31	-0.01	40.86	12.3236	0.0833	-0.106
309	SLU 35	0.33	-0.05	41.52	12.5067	0.0847	-0.111
309	SLU 36	0.32	-0.02	41.49	12.5069	0.0847	-0.1096
309	SLU 37	0.32	-0.06	41.27	12.4344	0.0842	-0.1088
309	SLU 38	0.31	-0.03	41.25	12.4347	0.0842	-0.1074
309	SLU 39	0.33	-0.04	42.31	12.7434	0.0866	-0.1108
309	SLU 40	0.32	-0.01	42.29	12.7436	0.0866	-0.1094
309	SLU 41	0.33	-0.05	42.68	12.8546	0.0874	-0.1113
309	SLU 42	0.32	-0.02	42.66	12.8549	0.0874	-0.1099
309	SLU 43	0.31	-0.15	40.91	12.3683	0.0814	-0.1047
309	SLU 44	0.3	-0.1	40.87	12.3687	0.0813	-0.1024
309	SLU 45	0.32	-0.15	41.53	12.5518	0.0827	-0.1074
309	SLU 46	0.31	-0.12	41.5	12.552	0.0826	-0.106
309	SLU 47	0.3	-0.11	41.25	12.4799	0.0821	-0.1029
309	SLU 48	0.32	-0.16	41.9	12.663	0.0835	-0.1079
309	SLU 49	0.31	-0.13	41.88	12.6632	0.0835	-0.1065
309	SLU 50	0.31	-0.16	41.66	12.5907	0.083	-0.1056
309	SLU 51	0.31	-0.14	41.64	12.591	0.083	-0.1042
309	SLU 52	0.32	-0.08	45.04	13.6087	0.0907	-0.1094
309	SLU 53	0.34	-0.13	45.69	13.7918	0.0921	-0.1144
309	SLU 54	0.33	-0.1	45.67	13.792	0.0921	-0.113
309	SLU 55	0.32	-0.09	45.41	13.72	0.0915	-0.1098
309	SLU 56	0.34	-0.13	46.07	13.903	0.0929	-0.1148
309	SLU 57	0.33	-0.1	46.04	13.9033	0.0929	-0.1134
309	SLU 58	0.33	-0.14	45.83	13.8308	0.0924	-0.1126
309	SLU 59	0.33	-0.11	45.8	13.831	0.0924	-0.1112
309	SLU 60	0.34	-0.12	46.86	14.1397	0.0948	-0.1147
309	SLU 61	0.33	-0.09	46.84	14.14	0.0948	-0.1133
309	SLU 62	0.34	-0.13	47.24	14.251	0.0956	-0.1151
309	SLU 63	0.33	-0.1	47.21	14.2512	0.0956	-0.1137
309	SLU 64	0.35	-0.12	44.78	13.5219	0.0897	-0.1208
309	SLU 65	0.35	-0.07	44.74	13.5223	0.0896	-0.1185
309	SLU 66	0.36	-0.11	45.4	13.7054	0.091	-0.1235
309	SLU 67	0.36	-0.08	45.37	13.7056	0.091	-0.1221
309	SLU 68	0.35	-0.07	45.11	13.6335	0.0905	-0.119
309	SLU 69	0.36	-0.12	45.77	13.8166	0.0919	-0.124
309	SLU 70	0.36	-0.09	45.75	13.8169	0.0918	-0.1226
309	SLU 71	0.36	-0.13	45.53	13.7443	0.0914	-0.1217
309	SLU 72	0.35	-0.1	45.5	13.7446	0.0913	-0.1203
309	SLU 73	0.37	-0.05	48.91	14.7623	0.0991	-0.1254
309	SLU 74	0.38	-0.09	49.56	14.9454	0.1005	-0.1304
309	SLU 75	0.38	-0.06	49.54	14.9457	0.1004	-0.1291
309	SLU 76	0.37	-0.05	49.28	14.8736	0.0999	-0.1259

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
309	SLU 77	0.38	-0.1	49.94	15.0566	0.1013	-0.1309
309	SLU 78	0.38	-0.07	49.91	15.0569	0.1012	-0.1295
309	SLU 79	0.38	-0.11	49.69	14.9844	0.1008	-0.1287
309	SLU 80	0.37	-0.08	49.67	14.9846	0.1007	-0.1273
309	SLU 81	0.38	-0.08	50.73	15.2934	0.1032	-0.1308
309	SLU 82	0.38	-0.06	50.71	15.2936	0.1031	-0.1294
309	SLU 83	0.39	-0.09	51.11	15.4046	0.104	-0.1312
309	SLU 84	0.38	-0.06	51.08	15.4048	0.104	-0.1298
309	SLE RA 1	0.26	-0.1	33.6	10.1479	0.0672	-0.0894
309	SLE RA 2	0.26	-0.06	33.57	10.1482	0.0671	-0.0879
309	SLE RA 3	0.27	-0.1	34.01	10.2702	0.0681	-0.0912
309	SLE RA 4	0.26	-0.08	33.99	10.2704	0.068	-0.0903
309	SLE RA 5	0.26	-0.07	33.82	10.2224	0.0677	-0.0882
309	SLE RA 6	0.27	-0.1	34.26	10.3444	0.0686	-0.0915
309	SLE RA 7	0.27	-0.08	34.24	10.3446	0.0686	-0.0906
309	SLE RA 8	0.26	-0.11	34.1	10.2962	0.0683	-0.09
309	SLE RA 9	0.26	-0.09	34.08	10.2964	0.0682	-0.0891
309	SLE RA 10	0.27	-0.05	36.35	10.9749	0.0734	-0.0925
309	SLE RA 11	0.28	-0.08	36.79	11.0969	0.0743	-0.0958
309	SLE RA 12	0.28	-0.06	36.77	11.0971	0.0743	-0.0949
309	SLE RA 13	0.27	-0.05	36.6	11.049	0.074	-0.0928
309	SLE RA 14	0.28	-0.08	37.03	11.1711	0.0749	-0.0961
309	SLE RA 15	0.28	-0.06	37.02	11.1712	0.0749	-0.0952
309	SLE RA 16	0.28	-0.09	36.87	11.1229	0.0746	-0.0946
309	SLE RA 17	0.28	-0.07	36.86	11.1231	0.0745	-0.0937
309	SLE RA 18	0.28	-0.08	37.56	11.3289	0.0761	-0.096
309	SLE RA 19	0.28	-0.06	37.55	11.3291	0.0761	-0.0951
309	SLE RA 20	0.28	-0.08	37.81	11.403	0.0767	-0.0963
309	SLE RA 21	0.28	-0.06	37.8	11.4032	0.0767	-0.0954
309	SLE FR 1	0.26	-0.1	33.6	10.1479	0.0672	-0.0894
309	SLE FR 2	0.26	-0.09	33.59	10.148	0.0672	-0.0891
309	SLE FR 3	0.26	-0.1	33.7	10.1776	0.0674	-0.0895
309	SLE FR 4	0.27	-0.08	34.78	10.5023	0.0699	-0.0911
309	SLE FR 5	0.27	-0.09	34.89	10.5319	0.0701	-0.0915
309	SLE FR 6	0.27	-0.09	35.58	10.7384	0.0717	-0.0927
309	SLE QP 1	0.26	-0.1	33.6	10.1479	0.0672	-0.0894
309	SLE QP 2	0.27	-0.09	34.79	10.5022	0.0699	-0.0914
309	SLD 1	3.8	0.56	32.25	9.8869	0.0716	-1.3284
309	SLD 2	3.95	0.75	32.27	9.8925	0.0716	-1.381
309	SLD 3	3.71	-0.58	32.01	9.77	0.0698	-1.296
309	SLD 4	3.86	-0.39	32.03	9.7756	0.0698	-1.3486
309	SLD 5	1.44	1.8	34.39	10.494	0.0731	-0.5024
309	SLD 6	1.54	1.92	34.4	10.4976	0.0731	-0.5366
309	SLD 7	1.13	-2	33.59	10.1042	0.0671	-0.3945
309	SLD 8	1.23	-1.88	33.6	10.1079	0.0671	-0.4286
309	SLD 9	-0.7	1.7	35.97	10.8966	0.0726	0.2458
309	SLD 10	-0.6	1.82	35.98	10.9002	0.0726	0.2117
309	SLD 11	-1	-2.11	35.18	10.5068	0.0666	0.3538
309	SLD 12	-0.9	-1.99	35.19	10.5104	0.0666	0.3197
309	SLD 13	-3.32	0.21	37.54	11.2288	0.0699	1.1658
309	SLD 14	-3.17	0.4	37.56	11.2344	0.0699	1.1132
309	SLD 15	-3.41	-0.93	37.3	11.1119	0.0681	1.1982
309	SLD 16	-3.26	-0.74	37.32	11.1175	0.0681	1.1456
309	SLV 1	8.53	1.4	28.85	9.0598	0.074	-2.9842
309	SLV 2	8.88	1.84	28.89	9.073	0.074	-3.1068
309	SLV 3	8.31	-1.2	28.31	8.7922	0.0697	-2.909
309	SLV 4	8.67	-0.76	28.35	8.8054	0.0698	-3.0315
309	SLV 5	3.01	4.23	33.82	10.4732	0.0775	-1.0526
309	SLV 6	3.24	4.51	33.85	10.4815	0.0775	-1.1309
309	SLV 7	2.3	-4.44	32.01	9.5811	0.0634	-0.8018
309	SLV 8	2.52	-4.16	32.04	9.5895	0.0634	-0.88
309	SLV 9	-1.99	3.98	37.54	11.4149	0.0763	0.6973
309	SLV 10	-1.76	4.26	37.56	11.4233	0.0763	0.619
309	SLV 11	-2.7	-4.69	35.73	10.5229	0.0622	0.9481
309	SLV 12	-2.47	-4.41	35.75	10.5313	0.0622	0.8699
309	SLV 13	-8.13	0.58	41.23	12.1991	0.0699	2.8487
309	SLV 14	-7.78	1.02	41.27	12.2122	0.07	2.7262
309	SLV 15	-8.34	-2.02	40.68	11.9314	0.0657	2.924
309	SLV 16	-7.99	-1.58	40.73	11.9446	0.0658	2.8015
309	CRTFP Ux+	0	0	0	0	0	0
309	CRTFP Ux-	0	0	0	0	0	0
309	CRTFP Uy+	0	0	0	0	0	0
309	CRTFP Uy-	0	0	0	0	0	0
310	SLU 1	0.25	-0.04	30.55	8.7047	0.0635	-0.0841
310	SLU 2	0.24	0.01	30.51	8.7097	0.0634	-0.0821
310	SLU 3	0.25	-0.03	31.13	8.8652	0.0648	-0.0868
310	SLU 4	0.25	-0.01	31.1	8.8682	0.0647	-0.0856
310	SLU 5	0.24	0	30.86	8.8069	0.0642	-0.0825
310	SLU 6	0.26	-0.04	31.48	8.9624	0.0656	-0.0873
310	SLU 7	0.25	-0.01	31.45	8.9654	0.0655	-0.086
310	SLU 8	0.25	-0.05	31.25	8.8991	0.0651	-0.085
310	SLU 9	0.25	-0.02	31.22	8.9021	0.065	-0.0838
310	SLU 10	0.26	0.04	34.39	9.7897	0.0726	-0.0887
310	SLU 11	0.27	0	35.01	9.9452	0.074	-0.0934
310	SLU 12	0.27	0.02	34.99	9.9482	0.074	-0.0922
310	SLU 13	0.26	0.03	34.74	9.8869	0.0734	-0.0891
310	SLU 14	0.28	-0.01	35.36	10.0424	0.0748	-0.0939
310	SLU 15	0.27	0.02	35.34	10.0454	0.0748	-0.0926
310	SLU 16	0.27	-0.02	35.13	9.9792	0.0743	-0.0916
310	SLU 17	0.27	0.01	35.11	9.9822	0.0743	-0.0904
310	SLU 18	0.27	0	36.1	10.2477	0.0767	-0.0936

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
310	SLU 19	0.27	0.03	36.07	10.2506	0.0766	-0.0923
310	SLU 20	0.28	0	36.45	10.3449	0.0775	-0.094
310	SLU 21	0.27	0.03	36.42	10.3478	0.0774	-0.0928
310	SLU 22	0.29	0	34.17	9.7127	0.0717	-0.1001
310	SLU 23	0.29	0.05	34.13	9.7177	0.0716	-0.098
310	SLU 24	0.3	0.01	34.74	9.8732	0.073	-0.1028
310	SLU 25	0.3	0.03	34.72	9.8762	0.073	-0.1015
310	SLU 26	0.29	0.04	34.48	9.8149	0.0725	-0.0985
310	SLU 27	0.3	0	35.09	9.9704	0.0738	-0.1032
310	SLU 28	0.3	0.03	35.07	9.9734	0.0738	-0.102
310	SLU 29	0.3	-0.01	34.87	9.9072	0.0733	-0.101
310	SLU 30	0.29	0.02	34.84	9.9101	0.0733	-0.0998
310	SLU 31	0.31	0.08	38.01	10.7978	0.0809	-0.1046
310	SLU 32	0.32	0.04	38.63	10.9533	0.0823	-0.1094
310	SLU 33	0.32	0.06	38.6	10.9563	0.0822	-0.1082
310	SLU 34	0.31	0.07	38.36	10.895	0.0817	-0.1051
310	SLU 35	0.32	0.03	38.98	11.0505	0.0831	-0.1099
310	SLU 36	0.32	0.06	38.95	11.0535	0.083	-0.1086
310	SLU 37	0.32	0.02	38.75	10.9872	0.0826	-0.1076
310	SLU 38	0.31	0.05	38.72	10.9902	0.0825	-0.1064
310	SLU 39	0.32	0.05	39.71	11.2557	0.0849	-0.1096
310	SLU 40	0.32	0.07	39.69	11.2587	0.0849	-0.1083
310	SLU 41	0.32	0.04	40.06	11.3529	0.0857	-0.11
310	SLU 42	0.32	0.07	40.04	11.3559	0.0857	-0.1088
310	SLU 43	0.31	-0.06	38.48	10.9705	0.0797	-0.1039
310	SLU 44	0.3	-0.02	38.44	10.9755	0.0796	-0.1018
310	SLU 45	0.31	-0.06	39.05	11.131	0.081	-0.1066
310	SLU 46	0.31	-0.03	39.03	11.1339	0.0809	-0.1053
310	SLU 47	0.3	-0.03	38.79	11.0727	0.0804	-0.1023
310	SLU 48	0.31	-0.06	39.4	11.2282	0.0818	-0.107
310	SLU 49	0.31	-0.04	39.38	11.2312	0.0817	-0.1058
310	SLU 50	0.31	-0.07	39.17	11.1649	0.0813	-0.1048
310	SLU 51	0.3	-0.05	39.15	11.1679	0.0812	-0.1036
310	SLU 52	0.32	0.01	42.32	12.0555	0.0888	-0.1084
310	SLU 53	0.33	-0.03	42.93	12.211	0.0902	-0.1132
310	SLU 54	0.33	0	42.91	12.214	0.0902	-0.112
310	SLU 55	0.32	0	42.67	12.1527	0.0896	-0.1089
310	SLU 56	0.33	-0.04	43.28	12.3082	0.091	-0.1137
310	SLU 57	0.33	-0.01	43.26	12.3112	0.091	-0.1124
310	SLU 58	0.33	-0.04	43.06	12.245	0.0905	-0.1114
310	SLU 59	0.32	-0.02	43.03	12.248	0.0905	-0.1102
310	SLU 60	0.33	-0.02	44.02	12.5135	0.0929	-0.1134
310	SLU 61	0.33	0	44	12.5164	0.0928	-0.1121
310	SLU 62	0.33	-0.03	44.37	12.6107	0.0937	-0.1138
310	SLU 63	0.33	0	44.35	12.6136	0.0936	-0.1126
310	SLU 64	0.35	-0.02	42.09	11.9785	0.0879	-0.1199
310	SLU 65	0.34	0.02	42.05	11.9835	0.0878	-0.1178
310	SLU 66	0.36	-0.02	42.67	12.139	0.0892	-0.1226
310	SLU 67	0.36	0.01	42.65	12.142	0.0892	-0.1213
310	SLU 68	0.35	0.02	42.4	12.0807	0.0887	-0.1182
310	SLU 69	0.36	-0.02	43.02	12.2362	0.09	-0.123
310	SLU 70	0.36	0	42.99	12.2392	0.09	-0.1218
310	SLU 71	0.35	-0.03	42.79	12.173	0.0895	-0.1208
310	SLU 72	0.35	-0.01	42.77	12.1759	0.0895	-0.1195
310	SLU 73	0.36	0.05	45.94	13.0636	0.0971	-0.1244
310	SLU 74	0.38	0.01	46.55	13.2191	0.0985	-0.1292
310	SLU 75	0.37	0.04	46.53	13.2221	0.0984	-0.1279
310	SLU 76	0.37	0.05	46.29	13.1608	0.0979	-0.1249
310	SLU 77	0.38	0.01	46.9	13.3163	0.0993	-0.1296
310	SLU 78	0.38	0.03	46.88	13.3193	0.0992	-0.1284
310	SLU 79	0.37	0	46.67	13.253	0.0988	-0.1274
310	SLU 80	0.37	0.02	46.65	13.256	0.0987	-0.1261
310	SLU 81	0.38	0.02	47.64	13.5215	0.1011	-0.1293
310	SLU 82	0.38	0.05	47.62	13.5245	0.1011	-0.1281
310	SLU 83	0.38	0.02	47.99	13.6187	0.1019	-0.1298
310	SLU 84	0.38	0.04	47.96	13.6217	0.1019	-0.1285
310	SLE RA 1	0.26	-0.03	31.58	8.9927	0.0658	-0.0887
310	SLE RA 2	0.26	0	31.56	8.996	0.0658	-0.0873
310	SLE RA 3	0.27	-0.02	31.97	9.0997	0.0667	-0.0905
310	SLE RA 4	0.26	-0.01	31.95	9.1017	0.0667	-0.0897
310	SLE RA 5	0.26	0	31.79	9.0608	0.0663	-0.0876
310	SLE RA 6	0.27	-0.03	32.2	9.1645	0.0672	-0.0908
310	SLE RA 7	0.26	-0.01	32.19	9.1665	0.0672	-0.09
310	SLE RA 8	0.26	-0.03	32.05	9.1223	0.0669	-0.0893
310	SLE RA 9	0.26	-0.02	32.03	9.1243	0.0669	-0.0885
310	SLE RA 10	0.27	0.02	34.15	9.7161	0.0719	-0.0917
310	SLE RA 11	0.28	0	34.56	9.8197	0.0728	-0.0949
310	SLE RA 12	0.28	0.01	34.54	9.8217	0.0728	-0.0941
310	SLE RA 13	0.27	0.02	34.38	9.7809	0.0725	-0.092
310	SLE RA 14	0.28	-0.01	34.79	9.8845	0.0734	-0.0952
310	SLE RA 15	0.28	0.01	34.77	9.8865	0.0734	-0.0944
310	SLE RA 16	0.28	-0.01	34.64	9.8424	0.0731	-0.0937
310	SLE RA 17	0.27	0	34.62	9.8444	0.073	-0.0929
310	SLE RA 18	0.28	0	35.28	10.0214	0.0746	-0.095
310	SLE RA 19	0.28	0.02	35.27	10.0233	0.0746	-0.0942
310	SLE RA 20	0.28	0	35.51	10.0862	0.0752	-0.0953
310	SLE RA 21	0.28	0.02	35.5	10.0881	0.0751	-0.0945
310	SLE FR 1	0.26	-0.03	31.58	8.9927	0.0658	-0.0887
310	SLE FR 2	0.26	-0.02	31.58	8.9934	0.0658	-0.0884
310	SLE FR 3	0.26	-0.03	31.68	9.0186	0.066	-0.0888
310	SLE FR 4	0.26	-0.01	32.69	9.302	0.0684	-0.0903

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
310	SLE FR 5	0.27	-0.02	32.79	9.3272	0.0687	-0.0907
310	SLE FR 6	0.27	-0.01	33.43	9.507	0.0702	-0.0919
310	SLE QP 1	0.26	-0.03	31.58	8.9927	0.0658	-0.0887
310	SLE QP 2	0.27	-0.02	32.69	9.3013	0.0685	-0.0906
310	SLD 1	3.8	0.61	30.14	8.7623	0.0708	-1.328
310	SLD 2	3.95	0.8	30.16	8.7676	0.0708	-1.3807
310	SLD 3	3.71	-0.53	29.88	8.6179	0.069	-1.2956
310	SLD 4	3.86	-0.33	29.89	8.6232	0.069	-1.3482
310	SLD 5	1.44	1.85	32.33	9.3577	0.0719	-0.5019
310	SLD 6	1.54	1.98	32.34	9.3611	0.0719	-0.5361
310	SLD 7	1.13	-1.92	31.44	8.8764	0.0658	-0.3936
310	SLD 8	1.23	-1.79	31.45	8.8798	0.0659	-0.4278
310	SLD 9	-0.7	1.76	33.94	9.7228	0.071	0.2466
310	SLD 10	-0.6	1.89	33.95	9.7262	0.0711	0.2124
310	SLD 11	-1.01	-2.02	33.05	9.2415	0.065	0.3549
310	SLD 12	-0.91	-1.89	33.06	9.245	0.065	0.3207
310	SLD 13	-3.33	0.29	35.49	9.9794	0.0679	1.1671
310	SLD 14	-3.17	0.49	35.51	9.9847	0.0679	1.1144
310	SLD 15	-3.42	-0.84	35.23	9.835	0.0661	1.1996
310	SLD 16	-3.27	-0.64	35.24	9.8403	0.0661	1.1469
310	SLV 1	8.53	1.41	26.72	8.0374	0.0739	-2.9845
310	SLV 2	8.88	1.87	26.76	8.0498	0.074	-3.1073
310	SLV 3	8.31	-1.17	26.11	7.7055	0.0697	-2.9091
310	SLV 4	8.67	-0.71	26.15	7.7179	0.0697	-3.0318
310	SLV 5	3.01	4.25	31.82	9.4235	0.0765	-1.0524
310	SLV 6	3.24	4.54	31.85	9.4314	0.0766	-1.1308
310	SLV 7	2.29	-4.36	29.79	8.317	0.0624	-0.8009
310	SLV 8	2.52	-4.06	29.81	8.3249	0.0624	-0.8793
310	SLV 9	-1.99	4.03	35.57	10.2777	0.0745	0.6981
310	SLV 10	-1.76	4.32	35.6	10.2856	0.0746	0.6197
310	SLV 11	-2.7	-4.57	33.54	9.1712	0.0603	0.9497
310	SLV 12	-2.48	-4.28	33.57	9.1791	0.0604	0.8713
310	SLV 13	-8.13	0.68	39.24	10.8848	0.0672	2.8506
310	SLV 14	-7.78	1.14	39.27	10.8971	0.0673	2.7279
310	SLV 15	-8.35	-1.9	38.63	10.5528	0.0629	2.9261
310	SLV 16	-8	-1.44	38.66	10.5652	0.063	2.8033
310	CRTFP Ux+	0	0	0	0	0	0
310	CRTFP Ux-	0	0	0	0	0	0
310	CRTFP Uy+	0	0	0	0	0	0
310	CRTFP Uy-	0	0	0	0	0	0
311	SLU 1	0.24	0.03	28.76	7.6893	0.0553	-0.0833
311	SLU 2	0.24	0.07	28.72	7.698	0.0552	-0.0815
311	SLU 3	0.25	0.03	29.3	7.8288	0.0564	-0.086
311	SLU 4	0.25	0.06	29.28	7.834	0.0563	-0.0849
311	SLU 5	0.24	0.06	29.05	7.7824	0.0559	-0.082
311	SLU 6	0.25	0.03	29.62	7.9131	0.0571	-0.0865
311	SLU 7	0.25	0.05	29.6	7.9183	0.0571	-0.0854
311	SLU 8	0.25	0.02	29.41	7.858	0.0567	-0.0842
311	SLU 9	0.24	0.04	29.39	7.8633	0.0566	-0.0831
311	SLU 10	0.26	0.11	32.34	8.6321	0.0633	-0.0878
311	SLU 11	0.27	0.07	32.92	8.7629	0.0645	-0.0923
311	SLU 12	0.27	0.09	32.9	8.7681	0.0644	-0.0912
311	SLU 13	0.26	0.1	32.67	8.7165	0.064	-0.0882
311	SLU 14	0.27	0.07	33.24	8.8472	0.0652	-0.0927
311	SLU 15	0.27	0.09	33.22	8.8524	0.0651	-0.0916
311	SLU 16	0.27	0.06	33.03	8.7921	0.0648	-0.0905
311	SLU 17	0.26	0.08	33.01	8.7973	0.0647	-0.0894
311	SLU 18	0.27	0.08	33.93	9.0237	0.0668	-0.0923
311	SLU 19	0.27	0.1	33.91	9.029	0.0668	-0.0912
311	SLU 20	0.27	0.08	34.26	9.1081	0.0675	-0.0927
311	SLU 21	0.27	0.1	34.23	9.1133	0.0675	-0.0916
311	SLU 22	0.29	0.08	32.14	8.564	0.0625	-0.0991
311	SLU 23	0.28	0.12	32.1	8.5727	0.0624	-0.0973
311	SLU 24	0.3	0.08	32.68	8.7035	0.0636	-0.1018
311	SLU 25	0.29	0.11	32.66	8.7087	0.0636	-0.1007
311	SLU 26	0.29	0.11	32.43	8.6571	0.0631	-0.0978
311	SLU 27	0.3	0.08	33.01	8.7878	0.0643	-0.1023
311	SLU 28	0.3	0.1	32.98	8.7931	0.0643	-0.1012
311	SLU 29	0.29	0.07	32.79	8.7327	0.0639	-0.1
311	SLU 30	0.29	0.09	32.77	8.738	0.0639	-0.0989
311	SLU 31	0.3	0.15	35.72	9.5068	0.0705	-0.1036
311	SLU 32	0.32	0.12	36.3	9.6376	0.0717	-0.1081
311	SLU 33	0.31	0.14	36.28	9.6428	0.0717	-0.107
311	SLU 34	0.3	0.15	36.05	9.5912	0.0712	-0.104
311	SLU 35	0.32	0.11	36.63	9.7219	0.0724	-0.1085
311	SLU 36	0.31	0.14	36.6	9.7272	0.0724	-0.1074
311	SLU 37	0.31	0.1	36.41	9.6668	0.072	-0.1063
311	SLU 38	0.31	0.13	36.39	9.6721	0.072	-0.1052
311	SLU 39	0.32	0.13	37.31	9.8984	0.0741	-0.1081
311	SLU 40	0.31	0.15	37.29	9.9037	0.074	-0.107
311	SLU 41	0.32	0.12	37.64	9.9828	0.0748	-0.1085
311	SLU 42	0.31	0.15	37.62	9.988	0.0747	-0.1074
311	SLU 43	0.3	0.02	36.22	9.6962	0.0693	-0.1029
311	SLU 44	0.3	0.06	36.19	9.7049	0.0693	-0.1011
311	SLU 45	0.31	0.03	36.76	9.8356	0.0705	-0.1056
311	SLU 46	0.31	0.05	36.74	9.8409	0.0704	-0.1045
311	SLU 47	0.3	0.06	36.51	9.7893	0.07	-0.1015
311	SLU 48	0.31	0.02	37.09	9.92	0.0712	-0.1061
311	SLU 49	0.31	0.05	37.07	9.9252	0.0711	-0.105
311	SLU 50	0.3	0.01	36.88	9.8649	0.0708	-0.1038
311	SLU 51	0.3	0.04	36.85	9.8701	0.0707	-0.1027

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
311	SLU 52	0.32	0.1	39.81	10.639	0.0774	-0.1074
311	SLU 53	0.33	0.06	40.39	10.7697	0.0786	-0.1119
311	SLU 54	0.33	0.09	40.36	10.775	0.0785	-0.1108
311	SLU 55	0.32	0.09	40.13	10.7234	0.0781	-0.1078
311	SLU 56	0.33	0.06	40.71	10.8541	0.0793	-0.1123
311	SLU 57	0.33	0.08	40.69	10.8593	0.0792	-0.1112
311	SLU 58	0.32	0.05	40.5	10.799	0.0789	-0.1101
311	SLU 59	0.32	0.07	40.48	10.8042	0.0788	-0.109
311	SLU 60	0.33	0.07	41.4	11.0306	0.0809	-0.1119
311	SLU 61	0.33	0.1	41.38	11.0358	0.0809	-0.1108
311	SLU 62	0.33	0.07	41.72	11.115	0.0816	-0.1123
311	SLU 63	0.33	0.09	41.7	11.1202	0.0816	-0.1112
311	SLU 64	0.35	0.07	39.61	10.5709	0.0766	-0.1187
311	SLU 65	0.34	0.11	39.57	10.5796	0.0765	-0.1169
311	SLU 66	0.36	0.07	40.15	10.7104	0.0777	-0.1214
311	SLU 67	0.35	0.1	40.13	10.7156	0.0777	-0.1203
311	SLU 68	0.34	0.1	39.9	10.664	0.0772	-0.1173
311	SLU 69	0.36	0.07	40.47	10.7947	0.0784	-0.1219
311	SLU 70	0.35	0.09	40.45	10.8	0.0784	-0.1208
311	SLU 71	0.35	0.06	40.26	10.7396	0.078	-0.1196
311	SLU 72	0.35	0.08	40.24	10.7449	0.078	-0.1185
311	SLU 73	0.36	0.14	43.19	11.5137	0.0846	-0.1232
311	SLU 74	0.37	0.11	43.77	11.6445	0.0858	-0.1277
311	SLU 75	0.37	0.13	43.75	11.6497	0.0858	-0.1266
311	SLU 76	0.36	0.14	43.52	11.5981	0.0853	-0.1236
311	SLU 77	0.38	0.11	44.09	11.7288	0.0865	-0.1281
311	SLU 78	0.37	0.13	44.07	11.734	0.0865	-0.127
311	SLU 79	0.37	0.1	43.88	11.6737	0.0861	-0.1259
311	SLU 80	0.37	0.12	43.86	11.679	0.0861	-0.1248
311	SLU 81	0.37	0.12	44.78	11.9053	0.0881	-0.1277
311	SLU 82	0.37	0.14	44.76	11.9106	0.0881	-0.1266
311	SLU 83	0.38	0.12	45.11	11.9897	0.0889	-0.1281
311	SLU 84	0.37	0.14	45.08	11.9949	0.0888	-0.127
311	SLE RA 1	0.26	0.04	29.72	7.9392	0.0573	-0.0878
311	SLE RA 2	0.25	0.07	29.7	7.945	0.0573	-0.0866
311	SLE RA 3	0.26	0.05	30.08	8.0322	0.0581	-0.0896
311	SLE RA 4	0.26	0.06	30.07	8.0357	0.058	-0.0889
311	SLE RA 5	0.25	0.07	29.92	8.0013	0.0577	-0.0869
311	SLE RA 6	0.26	0.04	30.3	8.0884	0.0585	-0.0899
311	SLE RA 7	0.26	0.06	30.29	8.0919	0.0585	-0.0892
311	SLE RA 8	0.26	0.04	30.16	8.0517	0.0583	-0.0884
311	SLE RA 9	0.26	0.05	30.14	8.0552	0.0582	-0.0877
311	SLE RA 10	0.27	0.09	32.11	8.5678	0.0627	-0.0908
311	SLE RA 11	0.27	0.07	32.5	8.6549	0.0635	-0.0938
311	SLE RA 12	0.27	0.09	32.48	8.6584	0.0634	-0.0931
311	SLE RA 13	0.27	0.09	32.33	8.624	0.0631	-0.0911
311	SLE RA 14	0.28	0.07	32.71	8.7112	0.0639	-0.0941
311	SLE RA 15	0.27	0.08	32.7	8.7146	0.0639	-0.0934
311	SLE RA 16	0.27	0.06	32.57	8.6744	0.0637	-0.0926
311	SLE RA 17	0.27	0.08	32.56	8.6779	0.0636	-0.0919
311	SLE RA 18	0.28	0.08	33.17	8.8288	0.065	-0.0938
311	SLE RA 19	0.27	0.09	33.16	8.8323	0.065	-0.0931
311	SLE RA 20	0.28	0.07	33.39	8.8851	0.0655	-0.0941
311	SLE RA 21	0.27	0.09	33.38	8.8886	0.0655	-0.0934
311	SLE FR 1	0.26	0.04	29.72	7.9392	0.0573	-0.0878
311	SLE FR 2	0.26	0.05	29.72	7.9404	0.0573	-0.0876
311	SLE FR 3	0.26	0.04	29.81	7.9617	0.0575	-0.088
311	SLE FR 4	0.26	0.06	30.75	8.2073	0.0596	-0.0894
311	SLE FR 5	0.26	0.05	30.85	8.2286	0.0598	-0.0898
311	SLE FR 6	0.27	0.06	31.45	8.384	0.0612	-0.0908
311	SLE QP 1	0.26	0.04	29.72	7.9392	0.0573	-0.0878
311	SLE QP 2	0.26	0.05	30.76	8.2061	0.0596	-0.0896
311	SLD 1	3.8	0.65	28.17	7.7256	0.0632	-1.3273
311	SLD 2	3.95	0.86	28.18	7.7304	0.0632	-1.38
311	SLD 3	3.7	-0.48	27.87	7.5556	0.0616	-1.2947
311	SLD 4	3.85	-0.27	27.88	7.5604	0.0616	-1.3475
311	SLD 5	1.44	1.91	30.43	8.319	0.0631	-0.5011
311	SLD 6	1.54	2.04	30.44	8.3222	0.0631	-0.5353
311	SLD 7	1.13	-1.86	29.44	7.7522	0.0578	-0.3926
311	SLD 8	1.23	-1.72	29.45	7.7553	0.0578	-0.4268
311	SLD 9	-0.7	1.83	32.07	8.6569	0.0615	0.2475
311	SLD 10	-0.6	1.96	32.08	8.66	0.0615	0.2133
311	SLD 11	-1.01	-1.94	31.08	8.0901	0.0561	0.356
311	SLD 12	-0.91	-1.8	31.09	8.0932	0.0561	0.3218
311	SLD 13	-3.33	0.38	33.63	8.8518	0.0576	1.1682
311	SLD 14	-3.18	0.59	33.65	8.8567	0.0577	1.1154
311	SLD 15	-3.42	-0.75	33.34	8.6818	0.056	1.2007
311	SLD 16	-3.27	-0.54	33.35	8.6866	0.0561	1.148
311	SLV 1	8.52	1.41	24.69	7.0793	0.068	-2.984
311	SLV 2	8.88	1.9	24.72	7.0905	0.068	-3.1069
311	SLV 3	8.31	-1.16	24	6.687	0.0642	-2.9084
311	SLV 4	8.66	-0.68	24.04	6.6982	0.0643	-3.0313
311	SLV 5	3.01	4.29	29.97	8.4611	0.0678	-1.0518
311	SLV 6	3.24	4.59	29.99	8.4683	0.0679	-1.1303
311	SLV 7	2.29	-4.3	27.69	7.1535	0.0553	-0.7998
311	SLV 8	2.51	-3.99	27.71	7.1607	0.0553	-0.8783
311	SLV 9	-1.99	4.1	33.8	9.2515	0.0639	0.699
311	SLV 10	-1.76	4.41	33.83	9.2587	0.064	0.6205
311	SLV 11	-2.71	-4.49	31.53	7.944	0.0514	0.951
311	SLV 12	-2.48	-4.18	31.55	7.9511	0.0514	0.8725
311	SLV 13	-8.14	0.78	37.48	9.714	0.055	2.852

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
311	SLV 14	-7.78	1.27	37.52	9.7252	0.055	2.7291
311	SLV 15	-8.35	-1.79	36.79	9.3218	0.0512	2.9276
311	SLV 16	-8	-1.31	36.83	9.333	0.0513	2.8047
311	CRTFP Ux+	0	0	0	0	0	0
311	CRTFP Ux-	0	0	0	0	0	0
311	CRTFP Uy+	0	0	0	0	0	0
311	CRTFP Uy-	0	0	0	0	0	0
312	SLU 1	0.24	0.09	27.28	6.8576	0.0424	-0.0825
312	SLU 2	0.24	0.13	27.25	6.8689	0.0423	-0.0809
312	SLU 3	0.25	0.1	27.79	6.9798	0.0433	-0.0852
312	SLU 4	0.25	0.12	27.77	6.9866	0.0432	-0.0843
312	SLU 5	0.24	0.13	27.56	6.9427	0.0429	-0.0814
312	SLU 6	0.25	0.1	28.1	7.0536	0.0438	-0.0856
312	SLU 7	0.25	0.12	28.08	7.0604	0.0438	-0.0847
312	SLU 8	0.24	0.09	27.9	7.0051	0.0435	-0.0834
312	SLU 9	0.24	0.11	27.88	7.0119	0.0435	-0.0824
312	SLU 10	0.25	0.17	30.65	7.6831	0.0486	-0.0869
312	SLU 11	0.27	0.14	31.2	7.7939	0.0495	-0.0911
312	SLU 12	0.26	0.16	31.18	7.8008	0.0495	-0.0902
312	SLU 13	0.26	0.17	30.96	7.7568	0.0492	-0.0873
312	SLU 14	0.27	0.14	31.5	7.8677	0.0501	-0.0916
312	SLU 15	0.27	0.16	31.48	7.8745	0.0501	-0.0906
312	SLU 16	0.26	0.13	31.3	7.8193	0.0498	-0.0893
312	SLU 17	0.26	0.15	31.28	7.8261	0.0497	-0.0884
312	SLU 18	0.27	0.16	32.15	8.0206	0.0514	-0.091
312	SLU 19	0.26	0.18	32.13	8.0274	0.0513	-0.09
312	SLU 20	0.27	0.15	32.45	8.0944	0.0519	-0.0914
312	SLU 21	0.27	0.17	32.43	8.1012	0.0519	-0.0905
312	SLU 22	0.29	0.14	30.47	7.6227	0.048	-0.0981
312	SLU 23	0.28	0.18	30.44	7.6341	0.0479	-0.0966
312	SLU 24	0.29	0.15	30.98	7.745	0.0488	-0.1008
312	SLU 25	0.29	0.17	30.96	7.7518	0.0488	-0.0999
312	SLU 26	0.28	0.18	30.75	7.7079	0.0485	-0.097
312	SLU 27	0.3	0.15	31.29	7.8187	0.0494	-0.1013
312	SLU 28	0.29	0.17	31.27	7.8256	0.0493	-0.1003
312	SLU 29	0.29	0.14	31.09	7.7703	0.0491	-0.099
312	SLU 30	0.29	0.16	31.07	7.7771	0.049	-0.0981
312	SLU 31	0.3	0.23	33.84	8.4482	0.0542	-0.1025
312	SLU 32	0.31	0.19	34.39	8.5591	0.0551	-0.1068
312	SLU 33	0.31	0.22	34.37	8.5659	0.0551	-0.1058
312	SLU 34	0.3	0.22	34.15	8.522	0.0547	-0.1029
312	SLU 35	0.31	0.19	34.69	8.6329	0.0557	-0.1072
312	SLU 36	0.31	0.21	34.67	8.6397	0.0556	-0.1063
312	SLU 37	0.31	0.18	34.49	8.5844	0.0553	-0.1049
312	SLU 38	0.3	0.21	34.47	8.5912	0.0553	-0.104
312	SLU 39	0.31	0.21	35.34	8.7858	0.0569	-0.1066
312	SLU 40	0.31	0.23	35.32	8.7926	0.0569	-0.1057
312	SLU 41	0.31	0.2	35.64	8.8595	0.0575	-0.107
312	SLU 42	0.31	0.23	35.62	8.8664	0.0575	-0.1061
312	SLU 43	0.3	0.1	34.38	8.6525	0.0532	-0.1019
312	SLU 44	0.29	0.14	34.34	8.6639	0.0531	-0.1003
312	SLU 45	0.31	0.11	34.89	8.7747	0.0541	-0.1046
312	SLU 46	0.3	0.13	34.86	8.7816	0.054	-0.1037
312	SLU 47	0.3	0.14	34.65	8.7377	0.0537	-0.1008
312	SLU 48	0.31	0.11	35.19	8.8485	0.0546	-0.105
312	SLU 49	0.31	0.13	35.17	8.8553	0.0546	-0.1041
312	SLU 50	0.3	0.1	34.99	8.8001	0.0543	-0.1027
312	SLU 51	0.3	0.12	34.97	8.8069	0.0543	-0.1018
312	SLU 52	0.31	0.18	37.74	9.478	0.0594	-0.1063
312	SLU 53	0.32	0.15	38.29	9.5889	0.0603	-0.1105
312	SLU 54	0.32	0.17	38.27	9.5957	0.0603	-0.1096
312	SLU 55	0.31	0.18	38.05	9.5518	0.06	-0.1067
312	SLU 56	0.33	0.15	38.6	9.6627	0.0609	-0.111
312	SLU 57	0.32	0.17	38.57	9.6695	0.0609	-0.11
312	SLU 58	0.32	0.14	38.39	9.6142	0.0606	-0.1087
312	SLU 59	0.32	0.16	38.37	9.621	0.0605	-0.1078
312	SLU 60	0.32	0.16	39.24	9.8155	0.0622	-0.1104
312	SLU 61	0.32	0.19	39.22	9.8224	0.0621	-0.1094
312	SLU 62	0.33	0.16	39.55	9.8893	0.0627	-0.1108
312	SLU 63	0.32	0.18	39.52	9.8961	0.0627	-0.1099
312	SLU 64	0.34	0.15	37.57	9.4176	0.0588	-0.1175
312	SLU 65	0.34	0.19	37.53	9.429	0.0587	-0.116
312	SLU 66	0.35	0.16	38.08	9.5399	0.0596	-0.1202
312	SLU 67	0.35	0.18	38.05	9.5467	0.0596	-0.1193
312	SLU 68	0.34	0.19	37.84	9.5028	0.0593	-0.1164
312	SLU 69	0.35	0.16	38.38	9.6137	0.0602	-0.1206
312	SLU 70	0.35	0.18	38.36	9.6205	0.0602	-0.1197
312	SLU 71	0.35	0.15	38.18	9.5652	0.0599	-0.1184
312	SLU 72	0.34	0.17	38.16	9.572	0.0598	-0.1174
312	SLU 73	0.36	0.24	40.93	10.2431	0.065	-0.1219
312	SLU 74	0.37	0.2	41.48	10.354	0.0659	-0.1261
312	SLU 75	0.37	0.23	41.46	10.3608	0.0659	-0.1252
312	SLU 76	0.36	0.23	41.24	10.3169	0.0656	-0.1223
312	SLU 77	0.37	0.2	41.79	10.4278	0.0665	-0.1266
312	SLU 78	0.37	0.22	41.76	10.4346	0.0664	-0.1257
312	SLU 79	0.36	0.19	41.58	10.3793	0.0662	-0.1243
312	SLU 80	0.36	0.21	41.56	10.3862	0.0661	-0.1234
312	SLU 81	0.37	0.22	42.43	10.5807	0.0678	-0.126
312	SLU 82	0.37	0.24	42.41	10.5875	0.0677	-0.1251
312	SLU 83	0.37	0.21	42.74	10.6545	0.0683	-0.1264
312	SLU 84	0.37	0.24	42.71	10.6613	0.0683	-0.1255

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
312	SLE RA 1	0.25	0.11	28.2	7.0762	0.044	-0.087
312	SLE RA 2	0.25	0.13	28.17	7.0838	0.0439	-0.0859
312	SLE RA 3	0.26	0.11	28.54	7.1577	0.0446	-0.0888
312	SLE RA 4	0.26	0.13	28.52	7.1622	0.0445	-0.0881
312	SLE RA 5	0.25	0.13	28.38	7.1329	0.0443	-0.0862
312	SLE RA 6	0.26	0.11	28.74	7.2069	0.0449	-0.089
312	SLE RA 7	0.26	0.12	28.73	7.2114	0.0449	-0.0884
312	SLE RA 8	0.26	0.1	28.6	7.1746	0.0447	-0.0875
312	SLE RA 9	0.25	0.12	28.59	7.1791	0.0447	-0.0869
312	SLE RA 10	0.26	0.16	30.44	7.6265	0.0481	-0.0899
312	SLE RA 11	0.27	0.14	30.8	7.7004	0.0488	-0.0927
312	SLE RA 12	0.27	0.16	30.79	7.705	0.0487	-0.0921
312	SLE RA 13	0.26	0.16	30.65	7.6757	0.0485	-0.0902
312	SLE RA 14	0.27	0.14	31.01	7.7496	0.0491	-0.093
312	SLE RA 15	0.27	0.15	31	7.7542	0.0491	-0.0924
312	SLE RA 16	0.27	0.13	30.87	7.7173	0.0489	-0.0915
312	SLE RA 17	0.27	0.15	30.86	7.7219	0.0489	-0.0909
312	SLE RA 18	0.27	0.15	31.44	7.8515	0.05	-0.0926
312	SLE RA 19	0.27	0.16	31.42	7.8561	0.0499	-0.092
312	SLE RA 20	0.27	0.15	31.64	7.9007	0.0503	-0.0929
312	SLE RA 21	0.27	0.16	31.63	7.9053	0.0503	-0.0923
312	SLE FR 1	0.25	0.11	28.2	7.0762	0.044	-0.087
312	SLE FR 2	0.25	0.11	28.19	7.0777	0.044	-0.0867
312	SLE FR 3	0.25	0.11	28.28	7.0959	0.0441	-0.0871
312	SLE FR 4	0.26	0.12	29.16	7.3103	0.0458	-0.0884
312	SLE FR 5	0.26	0.12	29.25	7.3285	0.0459	-0.0888
312	SLE FR 6	0.26	0.13	29.82	7.4639	0.047	-0.0898
312	SLE QP 1	0.25	0.11	28.2	7.0762	0.044	-0.087
312	SLE QP 2	0.26	0.12	29.17	7.3088	0.0458	-0.0887
312	SLD 1	3.79	0.69	26.48	6.8564	0.0511	-1.3261
312	SLD 2	3.94	0.91	26.5	6.8608	0.0511	-1.3789
312	SLD 3	3.7	-0.44	26.15	6.6657	0.0499	-1.2936
312	SLD 4	3.85	-0.22	26.17	6.67	0.0499	-1.3463
312	SLD 5	1.43	1.98	28.85	7.4616	0.0492	-0.5001
312	SLD 6	1.53	2.12	28.86	7.4644	0.0492	-0.5344
312	SLD 7	1.12	-1.81	27.77	6.8258	0.0452	-0.3915
312	SLD 8	1.22	-1.67	27.78	6.8286	0.0452	-0.4257
312	SLD 9	-0.7	1.91	30.56	7.7889	0.0464	0.2484
312	SLD 10	-0.6	2.05	30.57	7.7918	0.0464	0.2142
312	SLD 11	-1.01	-1.88	29.47	7.1532	0.0423	0.3571
312	SLD 12	-0.92	-1.74	29.48	7.156	0.0423	0.3228
312	SLD 13	-3.33	0.46	32.17	7.9476	0.0416	1.169
312	SLD 14	-3.18	0.68	32.18	7.9519	0.0416	1.1163
312	SLD 15	-3.42	-0.68	31.84	7.7568	0.0404	1.2016
312	SLD 16	-3.27	-0.46	31.86	7.7612	0.0404	1.1488
312	SLV 1	8.52	1.43	22.87	6.2478	0.0583	-2.9827
312	SLV 2	8.87	1.94	22.91	6.2579	0.0583	-3.1056
312	SLV 3	8.3	-1.16	22.12	5.8068	0.0554	-2.907
312	SLV 4	8.66	-0.65	22.16	5.817	0.0554	-3.0299
312	SLV 5	3.01	4.36	28.41	7.6575	0.0539	-1.0509
312	SLV 6	3.23	4.69	28.44	7.664	0.0539	-1.1294
312	SLV 7	2.28	-4.28	25.91	6.1877	0.0443	-0.7985
312	SLV 8	2.51	-3.96	25.93	6.1942	0.0443	-0.877
312	SLV 9	-1.99	4.19	32.4	8.4234	0.0472	0.6997
312	SLV 10	-1.76	4.52	32.43	8.4299	0.0472	0.6212
312	SLV 11	-2.71	-4.45	29.9	6.9536	0.0377	0.9521
312	SLV 12	-2.49	-4.12	29.92	6.96	0.0377	0.8736
312	SLV 13	-8.14	0.89	36.18	8.8006	0.0361	2.8526
312	SLV 14	-7.78	1.4	36.22	8.8107	0.0361	2.7297
312	SLV 15	-8.36	-1.71	35.43	8.3597	0.0332	2.9283
312	SLV 16	-8	-1.19	35.47	8.3698	0.0332	2.8054
312	CRTFP Ux+	0	0	0	0	0	0
312	CRTFP Ux-	0	0	0	0	0	0
312	CRTFP Uy+	0	0	0	0	0	0
312	CRTFP Uy-	0	0	0	0	0	0
313	SLU 1	0.24	0.15	26.25	6.2677	0.0264	-0.0817
313	SLU 2	0.24	0.19	26.21	6.2804	0.0263	-0.0804
313	SLU 3	0.25	0.16	26.74	6.3778	0.0269	-0.0844
313	SLU 4	0.24	0.18	26.71	6.3854	0.0269	-0.0836
313	SLU 5	0.24	0.19	26.51	6.3466	0.0267	-0.0808
313	SLU 6	0.25	0.16	27.03	6.444	0.0272	-0.0848
313	SLU 7	0.25	0.18	27.01	6.4516	0.0272	-0.084
313	SLU 8	0.24	0.15	26.83	6.4001	0.0271	-0.0825
313	SLU 9	0.24	0.17	26.81	6.4078	0.027	-0.0818
313	SLU 10	0.25	0.24	29.46	7.0087	0.0304	-0.086
313	SLU 11	0.26	0.21	29.98	7.1061	0.0309	-0.09
313	SLU 12	0.26	0.24	29.96	7.1137	0.0309	-0.0892
313	SLU 13	0.25	0.24	29.75	7.075	0.0307	-0.0864
313	SLU 14	0.27	0.21	30.28	7.1723	0.0313	-0.0904
313	SLU 15	0.26	0.23	30.26	7.18	0.0313	-0.0897
313	SLU 16	0.26	0.2	30.08	7.1285	0.0311	-0.0881
313	SLU 17	0.26	0.22	30.06	7.1361	0.0311	-0.0874
313	SLU 18	0.26	0.23	30.89	7.3082	0.0321	-0.0897
313	SLU 19	0.26	0.25	30.87	7.3158	0.0321	-0.0889
313	SLU 20	0.26	0.23	31.18	7.3744	0.0325	-0.0901
313	SLU 21	0.26	0.25	31.16	7.382	0.0325	-0.0894
313	SLU 22	0.28	0.21	29.3	6.9548	0.0298	-0.0971
313	SLU 23	0.28	0.25	29.27	6.9676	0.0298	-0.0958
313	SLU 24	0.29	0.22	29.79	7.0649	0.0304	-0.0998
313	SLU 25	0.29	0.24	29.77	7.0726	0.0304	-0.099
313	SLU 26	0.28	0.25	29.56	7.0338	0.0302	-0.0963

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
313	SLU 27	0.29	0.22	30.08	7.1311	0.0307	-0.1002
313	SLU 28	0.29	0.24	30.06	7.1388	0.0307	-0.0995
313	SLU 29	0.29	0.21	29.89	7.0873	0.0305	-0.098
313	SLU 30	0.28	0.23	29.87	7.0949	0.0305	-0.0972
313	SLU 31	0.3	0.3	32.51	7.6959	0.0339	-0.1015
313	SLU 32	0.31	0.27	33.04	7.7933	0.0344	-0.1054
313	SLU 33	0.31	0.29	33.02	7.8009	0.0344	-0.1047
313	SLU 34	0.3	0.3	32.81	7.7621	0.0342	-0.1019
313	SLU 35	0.31	0.27	33.33	7.8595	0.0348	-0.1059
313	SLU 36	0.31	0.29	33.31	7.8671	0.0347	-0.1051
313	SLU 37	0.3	0.26	33.13	7.8156	0.0346	-0.1036
313	SLU 38	0.3	0.28	33.11	7.8233	0.0346	-0.1028
313	SLU 39	0.31	0.28	33.94	7.9953	0.0356	-0.1051
313	SLU 40	0.31	0.31	33.92	8.003	0.0356	-0.1044
313	SLU 41	0.31	0.28	34.23	8.0615	0.036	-0.1056
313	SLU 42	0.31	0.3	34.21	8.0692	0.0359	-0.1048
313	SLU 43	0.3	0.18	33.07	7.9124	0.0331	-0.1009
313	SLU 44	0.29	0.22	33.04	7.9251	0.0331	-0.0996
313	SLU 45	0.3	0.19	33.56	8.0225	0.0336	-0.1036
313	SLU 46	0.3	0.21	33.54	8.0301	0.0336	-0.1028
313	SLU 47	0.29	0.22	33.33	7.9913	0.0334	-0.1
313	SLU 48	0.3	0.19	33.86	8.0887	0.034	-0.104
313	SLU 49	0.3	0.21	33.84	8.0963	0.0339	-0.1032
313	SLU 50	0.3	0.18	33.66	8.0448	0.0338	-0.1017
313	SLU 51	0.3	0.2	33.64	8.0525	0.0338	-0.101
313	SLU 52	0.31	0.27	36.29	8.6534	0.0371	-0.1052
313	SLU 53	0.32	0.24	36.81	8.7508	0.0377	-0.1092
313	SLU 54	0.32	0.26	36.79	8.7584	0.0376	-0.1084
313	SLU 55	0.31	0.27	36.58	8.7197	0.0374	-0.1056
313	SLU 56	0.32	0.24	37.1	8.817	0.038	-0.1096
313	SLU 57	0.32	0.26	37.08	8.8247	0.038	-0.1089
313	SLU 58	0.32	0.23	36.91	8.7732	0.0378	-0.1073
313	SLU 59	0.31	0.25	36.89	8.7808	0.0378	-0.1066
313	SLU 60	0.32	0.25	37.71	8.9529	0.0389	-0.1089
313	SLU 61	0.32	0.28	37.69	8.9605	0.0388	-0.1081
313	SLU 62	0.32	0.25	38.01	9.0191	0.0392	-0.1093
313	SLU 63	0.32	0.28	37.99	9.0267	0.0392	-0.1086
313	SLU 64	0.34	0.24	36.13	8.5995	0.0366	-0.1163
313	SLU 65	0.34	0.27	36.09	8.6123	0.0365	-0.115
313	SLU 66	0.35	0.24	36.62	8.7096	0.0371	-0.119
313	SLU 67	0.35	0.27	36.6	8.7173	0.0371	-0.1183
313	SLU 68	0.34	0.27	36.39	8.6785	0.0369	-0.1155
313	SLU 69	0.35	0.24	36.91	8.7758	0.0374	-0.1194
313	SLU 70	0.35	0.27	36.89	8.7835	0.0374	-0.1187
313	SLU 71	0.34	0.23	36.71	8.732	0.0373	-0.1172
313	SLU 72	0.34	0.26	36.69	8.7396	0.0372	-0.1164
313	SLU 73	0.35	0.33	39.34	9.3406	0.0406	-0.1207
313	SLU 74	0.36	0.3	39.86	9.438	0.0411	-0.1246
313	SLU 75	0.36	0.32	39.84	9.4456	0.0411	-0.1239
313	SLU 76	0.35	0.32	39.63	9.4068	0.0409	-0.1211
313	SLU 77	0.37	0.29	40.16	9.5042	0.0415	-0.1251
313	SLU 78	0.36	0.32	40.14	9.5118	0.0415	-0.1243
313	SLU 79	0.36	0.29	39.96	9.4603	0.0413	-0.1228
313	SLU 80	0.36	0.31	39.94	9.468	0.0413	-0.122
313	SLU 81	0.36	0.31	40.77	9.64	0.0423	-0.1243
313	SLU 82	0.36	0.33	40.75	9.6477	0.0423	-0.1236
313	SLU 83	0.37	0.31	41.06	9.7062	0.0427	-0.1248
313	SLU 84	0.36	0.33	41.04	9.7139	0.0427	-0.124
313	SLE RA 1	0.25	0.17	27.12	6.464	0.0274	-0.0861
313	SLE RA 2	0.25	0.2	27.1	6.4725	0.0273	-0.0852
313	SLE RA 3	0.26	0.17	27.44	6.5374	0.0277	-0.0879
313	SLE RA 4	0.26	0.19	27.43	6.5425	0.0277	-0.0874
313	SLE RA 5	0.25	0.19	27.29	6.5166	0.0276	-0.0855
313	SLE RA 6	0.26	0.17	27.64	6.5815	0.0279	-0.0882
313	SLE RA 7	0.26	0.19	27.63	6.5866	0.0279	-0.0877
313	SLE RA 8	0.25	0.17	27.51	6.5523	0.0278	-0.0866
313	SLE RA 9	0.25	0.18	27.5	6.5574	0.0278	-0.0861
313	SLE RA 10	0.26	0.23	29.26	6.9581	0.03	-0.089
313	SLE RA 11	0.27	0.21	29.61	7.023	0.0304	-0.0916
313	SLE RA 12	0.27	0.22	29.6	7.028	0.0304	-0.0911
313	SLE RA 13	0.26	0.23	29.46	7.0022	0.0303	-0.0893
313	SLE RA 14	0.27	0.21	29.81	7.0671	0.0306	-0.0919
313	SLE RA 15	0.27	0.22	29.79	7.0722	0.0306	-0.0914
313	SLE RA 16	0.26	0.2	29.68	7.0379	0.0305	-0.0904
313	SLE RA 17	0.26	0.22	29.66	7.043	0.0305	-0.0899
313	SLE RA 18	0.27	0.22	30.21	7.1577	0.0312	-0.0914
313	SLE RA 19	0.27	0.23	30.2	7.1628	0.0312	-0.0909
313	SLE RA 20	0.27	0.22	30.41	7.2018	0.0314	-0.0917
313	SLE RA 21	0.27	0.23	30.39	7.2069	0.0314	-0.0912
313	SLE FR 1	0.25	0.17	27.12	6.464	0.0274	-0.0861
313	SLE FR 2	0.25	0.18	27.11	6.4657	0.0274	-0.0859
313	SLE FR 3	0.25	0.17	27.2	6.4817	0.0275	-0.0862
313	SLE FR 4	0.26	0.19	28.04	6.6738	0.0285	-0.0875
313	SLE FR 5	0.26	0.18	28.13	6.6898	0.0286	-0.0878
313	SLE FR 6	0.26	0.19	28.67	6.8108	0.0293	-0.0887
313	SLE QP 1	0.25	0.17	27.12	6.464	0.0274	-0.0861
313	SLE QP 2	0.26	0.18	28.05	6.6721	0.0285	-0.0877
313	SLD 1	3.79	0.75	25.19	6.2071	0.0362	-1.3247
313	SLD 2	3.94	0.99	25.21	6.2113	0.0361	-1.3775
313	SLD 3	3.69	-0.4	24.84	6.0033	0.0354	-1.2921
313	SLD 4	3.85	-0.17	24.86	6.0074	0.0354	-1.3449

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
313	SLD 5	1.43	2.07	27.71	6.8411	0.0319	-0.4991
313	SLD 6	1.53	2.22	27.72	6.8438	0.0319	-0.5333
313	SLD 7	1.12	-1.79	26.56	6.1616	0.0295	-0.3903
313	SLD 8	1.22	-1.63	26.57	6.1642	0.0294	-0.4246
313	SLD 9	-0.7	2	29.53	7.18	0.0276	0.2492
313	SLD 10	-0.61	2.15	29.54	7.1827	0.0276	0.215
313	SLD 11	-1.02	-1.85	28.37	6.5005	0.0251	0.358
313	SLD 12	-0.92	-1.7	28.38	6.5031	0.0251	0.3237
313	SLD 13	-3.33	0.54	31.23	7.3368	0.0217	1.1695
313	SLD 14	-3.18	0.77	31.25	7.3409	0.0216	1.1168
313	SLD 15	-3.43	-0.62	30.89	7.133	0.0209	1.2022
313	SLD 16	-3.27	-0.38	30.9	7.1371	0.0209	1.1494
313	SLV 1	8.52	1.48	21.36	5.5818	0.0464	-2.9807
313	SLV 2	8.87	2.02	21.4	5.5913	0.0463	-3.1036
313	SLV 3	8.3	-1.16	20.56	5.1098	0.0446	-2.9049
313	SLV 4	8.65	-0.61	20.6	5.1194	0.0446	-3.0278
313	SLV 5	3.01	4.47	27.25	7.0592	0.0365	-1.0497
313	SLV 6	3.23	4.82	27.27	7.0653	0.0365	-1.1283
313	SLV 7	2.28	-4.3	24.58	5.486	0.0307	-0.7971
313	SLV 8	2.5	-3.96	24.61	5.4921	0.0307	-0.8756
313	SLV 9	-1.99	4.33	31.49	7.8521	0.0264	0.7002
313	SLV 10	-1.76	4.67	31.51	7.8582	0.0263	0.6217
313	SLV 11	-2.72	-4.45	28.82	6.2789	0.0206	0.9529
313	SLV 12	-2.49	-4.1	28.85	6.285	0.0205	0.8744
313	SLV 13	-8.14	0.98	35.5	8.2248	0.0125	2.8525
313	SLV 14	-7.78	1.53	35.54	8.2344	0.0124	2.7295
313	SLV 15	-8.36	-1.65	34.7	7.7529	0.0107	2.9283
313	SLV 16	-8	-1.11	34.74	7.7625	0.0106	2.8053
313	CRTFP Ux+	0	0	0	0	0	0
313	CRTFP Ux-	0	0	0	0	0	0
313	CRTFP Uy+	0	0	0	0	0	0
313	CRTFP Uy-	0	0	0	0	0	0
314	SLU 1	0.24	0.21	25.72	5.9595	0.0082	-0.0808
314	SLU 2	0.23	0.25	25.69	5.9722	0.0082	-0.0798
314	SLU 3	0.24	0.22	26.2	6.0633	0.0083	-0.0836
314	SLU 4	0.24	0.25	26.18	6.0709	0.0083	-0.083
314	SLU 5	0.24	0.25	25.98	6.0344	0.0083	-0.0803
314	SLU 6	0.25	0.22	26.49	6.1255	0.0085	-0.084
314	SLU 7	0.24	0.25	26.47	6.1331	0.0085	-0.0834
314	SLU 8	0.24	0.21	26.3	6.0838	0.0084	-0.0817
314	SLU 9	0.24	0.24	26.28	6.0915	0.0084	-0.0811
314	SLU 10	0.25	0.31	28.86	6.6544	0.0097	-0.0852
314	SLU 11	0.26	0.28	29.37	6.7455	0.0098	-0.0889
314	SLU 12	0.26	0.31	29.35	6.7531	0.0098	-0.0883
314	SLU 13	0.25	0.31	29.14	6.7166	0.0098	-0.0856
314	SLU 14	0.26	0.28	29.65	6.8077	0.0099	-0.0893
314	SLU 15	0.26	0.31	29.63	6.8153	0.0099	-0.0887
314	SLU 16	0.26	0.27	29.46	6.766	0.0099	-0.087
314	SLU 17	0.25	0.3	29.44	6.7737	0.0099	-0.0864
314	SLU 18	0.26	0.3	30.24	6.934	0.0103	-0.0885
314	SLU 19	0.26	0.32	30.22	6.9417	0.0103	-0.0879
314	SLU 20	0.26	0.3	30.53	6.9962	0.0104	-0.0889
314	SLU 21	0.26	0.32	30.51	7.0039	0.0104	-0.0883
314	SLU 22	0.28	0.28	28.71	6.6056	0.0093	-0.0961
314	SLU 23	0.28	0.32	28.67	6.6184	0.0093	-0.0951
314	SLU 24	0.29	0.28	29.19	6.7095	0.0094	-0.0988
314	SLU 25	0.29	0.31	29.17	6.7171	0.0094	-0.0982
314	SLU 26	0.28	0.31	28.96	6.6806	0.0094	-0.0955
314	SLU 27	0.29	0.28	29.47	6.7717	0.0095	-0.0992
314	SLU 28	0.29	0.31	29.45	6.7793	0.0095	-0.0986
314	SLU 29	0.28	0.27	29.28	6.73	0.0095	-0.097
314	SLU 30	0.28	0.3	29.26	6.7377	0.0095	-0.0964
314	SLU 31	0.29	0.37	31.84	7.3006	0.0108	-0.1004
314	SLU 32	0.3	0.34	32.35	7.3917	0.0109	-0.1042
314	SLU 33	0.3	0.37	32.33	7.3993	0.0109	-0.1036
314	SLU 34	0.3	0.37	32.13	7.3628	0.0109	-0.1009
314	SLU 35	0.31	0.34	32.64	7.4539	0.011	-0.1046
314	SLU 36	0.3	0.37	32.62	7.4615	0.011	-0.104
314	SLU 37	0.3	0.33	32.44	7.4122	0.011	-0.1023
314	SLU 38	0.3	0.36	32.43	7.4199	0.011	-0.1017
314	SLU 39	0.3	0.36	33.23	7.5802	0.0114	-0.1037
314	SLU 40	0.3	0.38	33.21	7.5879	0.0114	-0.1031
314	SLU 41	0.31	0.36	33.52	7.6424	0.0115	-0.1042
314	SLU 42	0.3	0.38	33.5	7.6501	0.0115	-0.1036
314	SLU 43	0.29	0.26	32.42	7.5258	0.0103	-0.0999
314	SLU 44	0.29	0.3	32.38	7.5385	0.0103	-0.0989
314	SLU 45	0.3	0.27	32.9	7.6296	0.0104	-0.1026
314	SLU 46	0.3	0.29	32.88	7.6372	0.0104	-0.102
314	SLU 47	0.29	0.3	32.67	7.6007	0.0104	-0.0993
314	SLU 48	0.3	0.27	33.18	7.6918	0.0105	-0.103
314	SLU 49	0.3	0.29	33.16	7.6994	0.0105	-0.1024
314	SLU 50	0.3	0.26	32.99	7.6501	0.0105	-0.1007
314	SLU 51	0.29	0.28	32.97	7.6578	0.0105	-0.1001
314	SLU 52	0.31	0.36	35.55	8.2207	0.0118	-0.1042
314	SLU 53	0.32	0.33	36.06	8.3118	0.0119	-0.1079
314	SLU 54	0.32	0.35	36.04	8.3194	0.0119	-0.1073
314	SLU 55	0.31	0.36	35.84	8.2829	0.0119	-0.1046
314	SLU 56	0.32	0.32	36.35	8.374	0.012	-0.1084
314	SLU 57	0.32	0.35	36.33	8.3816	0.012	-0.1078
314	SLU 58	0.31	0.32	36.15	8.3323	0.012	-0.1061
314	SLU 59	0.31	0.34	36.13	8.34	0.012	-0.1055

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
314	SLU 60	0.32	0.34	36.94	8.5003	0.0124	-0.1075
314	SLU 61	0.31	0.37	36.92	8.508	0.0124	-0.1069
314	SLU 62	0.32	0.34	37.22	8.5625	0.0125	-0.1079
314	SLU 63	0.32	0.37	37.21	8.5702	0.0125	-0.1073
314	SLU 64	0.34	0.32	35.4	8.1719	0.0114	-0.1151
314	SLU 65	0.33	0.36	35.37	8.1847	0.0114	-0.1141
314	SLU 66	0.34	0.33	35.88	8.2758	0.0115	-0.1178
314	SLU 67	0.34	0.35	35.86	8.2834	0.0115	-0.1172
314	SLU 68	0.34	0.36	35.65	8.2469	0.0115	-0.1146
314	SLU 69	0.35	0.33	36.17	8.338	0.0116	-0.1183
314	SLU 70	0.34	0.35	36.15	8.3456	0.0116	-0.1177
314	SLU 71	0.34	0.32	35.97	8.2963	0.0116	-0.116
314	SLU 72	0.34	0.34	35.95	8.304	0.0116	-0.1154
314	SLU 73	0.35	0.42	38.53	8.8669	0.0128	-0.1195
314	SLU 74	0.36	0.39	39.04	8.958	0.013	-0.1232
314	SLU 75	0.36	0.41	39.02	8.9656	0.013	-0.1226
314	SLU 76	0.35	0.42	38.82	8.9291	0.013	-0.1199
314	SLU 77	0.36	0.39	39.33	9.0202	0.0131	-0.1236
314	SLU 78	0.36	0.41	39.31	9.0278	0.0131	-0.123
314	SLU 79	0.36	0.38	39.14	8.9785	0.0131	-0.1213
314	SLU 80	0.35	0.4	39.12	8.9862	0.0131	-0.1207
314	SLU 81	0.36	0.4	39.92	9.1465	0.0135	-0.1228
314	SLU 82	0.36	0.43	39.9	9.1542	0.0135	-0.1222
314	SLU 83	0.36	0.4	40.21	9.2087	0.0136	-0.1232
314	SLU 84	0.36	0.43	40.19	9.2163	0.0136	-0.1226
314	SLE RA 1	0.25	0.23	26.58	6.1441	0.0085	-0.0852
314	SLE RA 2	0.25	0.26	26.55	6.1526	0.0085	-0.0845
314	SLE RA 3	0.25	0.24	26.89	6.2133	0.0086	-0.087
314	SLE RA 4	0.25	0.25	26.88	6.2184	0.0086	-0.0866
314	SLE RA 5	0.25	0.26	26.74	6.194	0.0086	-0.0848
314	SLE RA 6	0.26	0.24	27.09	6.2548	0.0087	-0.0873
314	SLE RA 7	0.25	0.25	27.07	6.2599	0.0087	-0.0869
314	SLE RA 8	0.25	0.23	26.96	6.227	0.0087	-0.0858
314	SLE RA 9	0.25	0.25	26.94	6.2321	0.0087	-0.0854
314	SLE RA 10	0.26	0.3	28.66	6.6074	0.0095	-0.0881
314	SLE RA 11	0.27	0.28	29	6.6681	0.0096	-0.0906
314	SLE RA 12	0.26	0.29	28.99	6.6732	0.0096	-0.0902
314	SLE RA 13	0.26	0.3	28.85	6.6488	0.0096	-0.0884
314	SLE RA 14	0.27	0.28	29.2	6.7096	0.0097	-0.0909
314	SLE RA 15	0.27	0.29	29.18	6.7147	0.0097	-0.0905
314	SLE RA 16	0.26	0.27	29.07	6.6818	0.0096	-0.0893
314	SLE RA 17	0.26	0.29	29.05	6.6869	0.0096	-0.0889
314	SLE RA 18	0.26	0.29	29.59	6.7938	0.0099	-0.0903
314	SLE RA 19	0.26	0.3	29.58	6.7989	0.0099	-0.0899
314	SLE RA 20	0.27	0.29	29.78	6.8353	0.01	-0.0906
314	SLE RA 21	0.26	0.3	29.77	6.8404	0.01	-0.0902
314	SLE FR 1	0.25	0.23	26.58	6.1441	0.0085	-0.0852
314	SLE FR 2	0.25	0.24	26.57	6.1458	0.0085	-0.0851
314	SLE FR 3	0.25	0.23	26.65	6.1607	0.0085	-0.0853
314	SLE FR 4	0.25	0.25	27.48	6.3407	0.0089	-0.0866
314	SLE FR 5	0.25	0.25	27.56	6.3556	0.009	-0.0868
314	SLE FR 6	0.26	0.26	28.08	6.469	0.0092	-0.0877
314	SLE QP 1	0.25	0.23	26.58	6.1441	0.0085	-0.0852
314	SLE QP 2	0.25	0.25	27.48	6.339	0.0089	-0.0867
314	SLD 1	3.78	0.82	24.37	5.8123	0.019	-1.3231
314	SLD 2	3.94	1.07	24.38	5.8165	0.019	-1.3758
314	SLD 3	3.69	-0.36	24.01	5.6044	0.0194	-1.2904
314	SLD 4	3.84	-0.11	24.03	5.6086	0.0193	-1.3431
314	SLD 5	1.43	2.18	27.08	6.4956	0.0115	-0.498
314	SLD 6	1.53	2.34	27.09	6.4983	0.0115	-0.5322
314	SLD 7	1.11	-1.78	25.9	5.8025	0.0125	-0.3891
314	SLD 8	1.21	-1.61	25.91	5.8053	0.0125	-0.4233
314	SLD 9	-0.71	2.11	29.05	6.8727	0.0054	0.2498
314	SLD 10	-0.61	2.27	29.06	6.8755	0.0053	0.2156
314	SLD 11	-1.02	-1.84	27.87	6.1797	0.0064	0.3588
314	SLD 12	-0.92	-1.68	27.88	6.1824	0.0063	0.3245
314	SLD 13	-3.33	0.61	30.93	7.0694	-0.0014	1.1697
314	SLD 14	-3.18	0.86	30.95	7.0737	-0.0015	1.1169
314	SLD 15	-3.43	-0.58	30.58	6.8615	-0.0011	1.2024
314	SLD 16	-3.28	-0.33	30.59	6.8657	-0.0012	1.1496
314	SLV 1	8.51	1.56	20.19	5.1042	0.0326	-2.978
314	SLV 2	8.86	2.14	20.23	5.1141	0.0324	-3.1009
314	SLV 3	8.29	-1.14	19.37	4.6225	0.0333	-2.9021
314	SLV 4	8.64	-0.56	19.41	4.6324	0.0332	-3.025
314	SLV 5	3	4.64	26.53	6.6975	0.015	-1.0484
314	SLV 6	3.23	5.01	26.56	6.7038	0.0148	-1.1269
314	SLV 7	2.27	-4.37	23.79	5.0918	0.0174	-0.7954
314	SLV 8	2.5	-3.99	23.82	5.0981	0.0173	-0.8739
314	SLV 9	-1.99	4.49	31.14	7.5799	0.0006	0.7004
314	SLV 10	-1.76	4.86	31.17	7.5862	0.0005	0.6219
314	SLV 11	-2.72	-4.52	28.4	5.9742	0.003	0.9535
314	SLV 12	-2.5	-4.14	28.43	5.9805	0.0029	0.875
314	SLV 13	-8.14	1.06	35.55	8.0456	-0.0153	2.8516
314	SLV 14	-7.78	1.64	35.59	8.0555	-0.0155	2.7286
314	SLV 15	-8.36	-1.65	34.73	7.5639	-0.0146	2.9275
314	SLV 16	-8	-1.06	34.77	7.5738	-0.0148	2.8045
314	CRTFP Ux+	0	0	0	0	0	0
314	CRTFP Ux-	0	0	0	0	0	0
314	CRTFP Uy+	0	0	0	0	0	0
314	CRTFP Uy-	0	0	0	0	0	0
315	SLU 1	0.23	0.27	25.77	5.961	-0.0115	-0.08

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
315	SLU 2	0.23	0.32	25.74	5.9724	-0.0115	-0.0793
315	SLU 3	0.24	0.28	26.25	6.0651	-0.0118	-0.0828
315	SLU 4	0.24	0.31	26.23	6.0719	-0.0118	-0.0823
315	SLU 5	0.23	0.32	26.02	6.0344	-0.0116	-0.0797
315	SLU 6	0.24	0.28	26.54	6.1271	-0.0119	-0.0832
315	SLU 7	0.24	0.31	26.52	6.134	-0.0119	-0.0827
315	SLU 8	0.24	0.27	26.34	6.0851	-0.0118	-0.0809
315	SLU 9	0.24	0.3	26.32	6.0919	-0.0117	-0.0805
315	SLU 10	0.25	0.39	28.9	6.652	-0.0127	-0.0844
315	SLU 11	0.26	0.35	29.41	6.7446	-0.0131	-0.0878
315	SLU 12	0.26	0.38	29.39	6.7515	-0.013	-0.0874
315	SLU 13	0.25	0.39	29.18	6.714	-0.0129	-0.0848
315	SLU 14	0.26	0.35	29.7	6.8067	-0.0132	-0.0883
315	SLU 15	0.26	0.38	29.68	6.8135	-0.0132	-0.0878
315	SLU 16	0.25	0.34	29.5	6.7646	-0.013	-0.086
315	SLU 17	0.25	0.37	29.48	6.7715	-0.013	-0.0855
315	SLU 18	0.26	0.37	30.29	6.9318	-0.0133	-0.0873
315	SLU 19	0.26	0.4	30.27	6.9386	-0.0133	-0.0869
315	SLU 20	0.26	0.37	30.57	6.9938	-0.0135	-0.0877
315	SLU 21	0.26	0.4	30.55	7.0007	-0.0134	-0.0873
315	SLU 22	0.28	0.34	28.76	6.607	-0.013	-0.0951
315	SLU 23	0.28	0.38	28.73	6.6184	-0.013	-0.0944
315	SLU 24	0.29	0.35	29.24	6.711	-0.0133	-0.0978
315	SLU 25	0.28	0.38	29.22	6.7179	-0.0133	-0.0974
315	SLU 26	0.28	0.38	29.01	6.6804	-0.0131	-0.0948
315	SLU 27	0.29	0.35	29.53	6.7731	-0.0134	-0.0983
315	SLU 28	0.29	0.38	29.51	6.7799	-0.0134	-0.0978
315	SLU 29	0.28	0.34	29.33	6.731	-0.0133	-0.096
315	SLU 30	0.28	0.37	29.31	6.7379	-0.0133	-0.0955
315	SLU 31	0.29	0.45	31.89	7.2979	-0.0143	-0.0995
315	SLU 32	0.3	0.42	32.4	7.3906	-0.0146	-0.1029
315	SLU 33	0.3	0.44	32.38	7.3975	-0.0146	-0.1025
315	SLU 34	0.29	0.45	32.17	7.36	-0.0144	-0.0999
315	SLU 35	0.3	0.42	32.69	7.4526	-0.0147	-0.1033
315	SLU 36	0.3	0.44	32.67	7.4595	-0.0147	-0.1029
315	SLU 37	0.3	0.41	32.49	7.4106	-0.0146	-0.101
315	SLU 38	0.29	0.43	32.47	7.4174	-0.0145	-0.1006
315	SLU 39	0.3	0.44	33.28	7.5777	-0.0148	-0.1024
315	SLU 40	0.3	0.46	33.26	7.5846	-0.0148	-0.1019
315	SLU 41	0.3	0.44	33.56	7.6398	-0.015	-0.1028
315	SLU 42	0.3	0.46	33.54	7.6466	-0.015	-0.1024
315	SLU 43	0.29	0.33	32.48	7.5278	-0.0144	-0.0989
315	SLU 44	0.29	0.38	32.44	7.5392	-0.0144	-0.0982
315	SLU 45	0.3	0.34	32.96	7.6319	-0.0147	-0.1016
315	SLU 46	0.3	0.37	32.94	7.6388	-0.0147	-0.1012
315	SLU 47	0.29	0.38	32.73	7.6013	-0.0145	-0.0986
315	SLU 48	0.3	0.34	33.24	7.6939	-0.0148	-0.102
315	SLU 49	0.3	0.37	33.22	7.7008	-0.0148	-0.1016
315	SLU 50	0.29	0.33	33.05	7.6519	-0.0147	-0.0997
315	SLU 51	0.29	0.36	33.03	7.6587	-0.0147	-0.0993
315	SLU 52	0.3	0.45	35.6	8.2188	-0.0157	-0.1032
315	SLU 53	0.31	0.41	36.12	8.3114	-0.016	-0.1067
315	SLU 54	0.31	0.44	36.1	8.3183	-0.016	-0.1062
315	SLU 55	0.3	0.45	35.89	8.2808	-0.0158	-0.1037
315	SLU 56	0.31	0.41	36.4	8.3735	-0.0161	-0.1071
315	SLU 57	0.31	0.44	36.38	8.3803	-0.0161	-0.1067
315	SLU 58	0.31	0.4	36.21	8.3314	-0.016	-0.1048
315	SLU 59	0.31	0.43	36.19	8.3383	-0.016	-0.1044
315	SLU 60	0.31	0.43	36.99	8.4986	-0.0163	-0.1061
315	SLU 61	0.31	0.46	36.97	8.5054	-0.0162	-0.1057
315	SLU 62	0.31	0.43	37.28	8.5606	-0.0164	-0.1066
315	SLU 63	0.31	0.46	37.26	8.5675	-0.0164	-0.1061
315	SLU 64	0.33	0.4	35.47	8.1738	-0.0159	-0.114
315	SLU 65	0.33	0.44	35.43	8.1852	-0.0159	-0.1132
315	SLU 66	0.34	0.41	35.95	8.2779	-0.0162	-0.1167
315	SLU 67	0.34	0.44	35.93	8.2847	-0.0162	-0.1162
315	SLU 68	0.33	0.44	35.72	8.2472	-0.016	-0.1136
315	SLU 69	0.34	0.41	36.23	8.3399	-0.0163	-0.1171
315	SLU 70	0.34	0.44	36.21	8.3468	-0.0163	-0.1167
315	SLU 71	0.34	0.4	36.04	8.2978	-0.0162	-0.1148
315	SLU 72	0.33	0.43	36.02	8.3047	-0.0162	-0.1144
315	SLU 73	0.35	0.51	38.59	8.8648	-0.0172	-0.1183
315	SLU 74	0.36	0.48	39.11	8.9574	-0.0175	-0.1218
315	SLU 75	0.36	0.5	39.09	8.9643	-0.0175	-0.1213
315	SLU 76	0.35	0.51	38.88	8.9268	-0.0173	-0.1187
315	SLU 77	0.36	0.48	39.39	9.0194	-0.0176	-0.1222
315	SLU 78	0.36	0.5	39.37	9.0263	-0.0176	-0.1217
315	SLU 79	0.35	0.47	39.2	8.9774	-0.0175	-0.1199
315	SLU 80	0.35	0.49	39.18	8.9843	-0.0175	-0.1195
315	SLU 81	0.36	0.5	39.98	9.1446	-0.0178	-0.1212
315	SLU 82	0.35	0.52	39.96	9.1514	-0.0178	-0.1208
315	SLU 83	0.36	0.5	40.27	9.2066	-0.0179	-0.1216
315	SLU 84	0.36	0.52	40.25	9.2135	-0.0179	-0.1212
315	SLE RA 1	0.25	0.29	26.62	6.1456	-0.0119	-0.0843
315	SLE RA 2	0.25	0.32	26.6	6.1532	-0.0119	-0.0839
315	SLE RA 3	0.25	0.3	26.94	6.2149	-0.0121	-0.0862
315	SLE RA 4	0.25	0.32	26.93	6.2195	-0.0121	-0.0859
315	SLE RA 5	0.25	0.32	26.79	6.1945	-0.012	-0.0841
315	SLE RA 6	0.25	0.3	27.13	6.2563	-0.0122	-0.0864
315	SLE RA 7	0.25	0.32	27.12	6.2609	-0.0122	-0.0862
315	SLE RA 8	0.25	0.29	27.01	6.2283	-0.0121	-0.0849

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
315	SLE RA 9	0.25	0.31	26.99	6.2328	-0.0121	-0.0846
315	SLE RA 10	0.26	0.37	28.71	6.6062	-0.0128	-0.0872
315	SLE RA 11	0.26	0.34	29.05	6.668	-0.013	-0.0895
315	SLE RA 12	0.26	0.36	29.04	6.6725	-0.013	-0.0893
315	SLE RA 13	0.26	0.37	28.9	6.6476	-0.0128	-0.0875
315	SLE RA 14	0.26	0.34	29.24	6.7093	-0.0131	-0.0898
315	SLE RA 15	0.26	0.36	29.23	6.7139	-0.013	-0.0895
315	SLE RA 16	0.26	0.34	29.11	6.6813	-0.013	-0.0883
315	SLE RA 17	0.26	0.36	29.1	6.6859	-0.0129	-0.088
315	SLE RA 18	0.26	0.36	29.63	6.7927	-0.0132	-0.0892
315	SLE RA 19	0.26	0.37	29.62	6.7973	-0.0131	-0.0889
315	SLE RA 20	0.26	0.36	29.83	6.8341	-0.0132	-0.0895
315	SLE RA 21	0.26	0.38	29.81	6.8387	-0.0132	-0.0892
315	SLE FR 1	0.25	0.29	26.62	6.1456	-0.0119	-0.0843
315	SLE FR 2	0.25	0.3	26.62	6.1471	-0.0119	-0.0842
315	SLE FR 3	0.25	0.29	26.7	6.1621	-0.012	-0.0845
315	SLE FR 4	0.25	0.32	27.52	6.3412	-0.0123	-0.0857
315	SLE FR 5	0.25	0.31	27.6	6.3563	-0.0123	-0.0859
315	SLE FR 6	0.25	0.33	28.13	6.4691	-0.0125	-0.0868
315	SLE QP 1	0.25	0.29	26.62	6.1456	-0.0119	-0.0843
315	SLE QP 2	0.25	0.31	27.53	6.3397	-0.0123	-0.0858
315	SLD 1	3.78	0.67	24.05	5.6949	0.0012	-1.3211
315	SLD 2	3.93	0.94	24.07	5.6997	0.001	-1.3738
315	SLD 3	3.68	-0.55	23.7	5.4925	0.0017	-1.2883
315	SLD 4	3.84	-0.28	23.72	5.4973	0.0016	-1.3411
315	SLD 5	1.43	2.23	27.02	6.4524	-0.0091	-0.4968
315	SLD 6	1.53	2.41	27.03	6.4556	-0.0092	-0.5311
315	SLD 7	1.11	-1.86	25.84	5.7777	-0.0072	-0.3877
315	SLD 8	1.21	-1.68	25.85	5.7808	-0.0073	-0.4219
315	SLD 9	-0.71	2.3	29.2	6.8986	-0.0173	0.2503
315	SLD 10	-0.61	2.48	29.21	6.9017	-0.0174	0.2161
315	SLD 11	-1.02	-1.79	28.02	6.2239	-0.0154	0.3595
315	SLD 12	-0.93	-1.61	28.04	6.227	-0.0155	0.3253
315	SLD 13	-3.33	0.91	31.33	7.1821	-0.0262	1.1695
315	SLD 14	-3.18	1.18	31.35	7.187	-0.0263	1.1167
315	SLD 15	-3.43	-0.32	30.98	6.9797	-0.0256	1.2022
315	SLD 16	-3.28	-0.05	31	6.9845	-0.0257	1.1495
315	SLV 1	8.5	1.12	19.39	4.8287	0.0192	-2.9746
315	SLV 2	8.86	1.75	19.44	4.84	0.0189	-3.0975
315	SLV 3	8.28	-1.68	18.58	4.3596	0.0205	-2.8985
315	SLV 4	8.63	-1.05	18.63	4.3709	0.0202	-3.0215
315	SLV 5	3	4.69	26.31	6.5959	-0.0048	-1.047
315	SLV 6	3.23	5.09	26.34	6.6031	-0.005	-1.1255
315	SLV 7	2.26	-4.63	23.6	5.0323	-0.0004	-0.7934
315	SLV 8	2.49	-4.23	23.63	5.0396	-0.0006	-0.8719
315	SLV 9	-1.99	4.85	31.42	7.6399	-0.024	0.7003
315	SLV 10	-1.76	5.26	31.45	7.6471	-0.0241	0.6218
315	SLV 11	-2.73	-4.47	28.71	6.0763	-0.0196	0.9539
315	SLV 12	-2.5	-4.06	28.74	6.0835	-0.0198	0.8754
315	SLV 13	-8.13	1.67	36.42	8.3085	-0.0448	2.8499
315	SLV 14	-7.78	2.3	36.47	8.3198	-0.0451	2.7269
315	SLV 15	-8.35	-1.12	35.61	7.8394	-0.0435	2.9259
315	SLV 16	-8	-0.49	35.66	7.8508	-0.0438	2.803
315	CRTFP Ux+	0	0	0	0	0	0
315	CRTFP Ux-	0	0	0	0	0	0
315	CRTFP Uy+	0	0	0	0	0	0
315	CRTFP Uy-	0	0	0	0	0	0
316	SLU 1	0.23	0.33	26.42	6.293	-0.0322	-0.0792
316	SLU 2	0.23	0.38	26.39	6.3018	-0.0321	-0.0787
316	SLU 3	0.24	0.34	26.92	6.4044	-0.0329	-0.082
316	SLU 4	0.24	0.37	26.9	6.4097	-0.0329	-0.0817
316	SLU 5	0.23	0.38	26.68	6.3679	-0.0325	-0.0792
316	SLU 6	0.24	0.34	27.21	6.4704	-0.0333	-0.0824
316	SLU 7	0.24	0.37	27.19	6.4757	-0.0333	-0.0821
316	SLU 8	0.23	0.33	27.01	6.4251	-0.033	-0.0801
316	SLU 9	0.23	0.36	26.99	6.4304	-0.033	-0.0798
316	SLU 10	0.25	0.46	29.63	7.025	-0.0363	-0.0836
316	SLU 11	0.25	0.42	30.16	7.1275	-0.0371	-0.0868
316	SLU 12	0.25	0.45	30.14	7.1328	-0.0371	-0.0865
316	SLU 13	0.25	0.46	29.92	7.091	-0.0367	-0.084
316	SLU 14	0.26	0.42	30.45	7.1936	-0.0375	-0.0872
316	SLU 15	0.26	0.45	30.43	7.1989	-0.0375	-0.0869
316	SLU 16	0.25	0.41	30.25	7.1483	-0.0372	-0.0849
316	SLU 17	0.25	0.44	30.23	7.1535	-0.0371	-0.0846
316	SLU 18	0.25	0.44	31.06	7.3261	-0.0382	-0.0862
316	SLU 19	0.25	0.47	31.03	7.3314	-0.0381	-0.0859
316	SLU 20	0.25	0.44	31.35	7.3922	-0.0386	-0.0866
316	SLU 21	0.25	0.47	31.33	7.3974	-0.0385	-0.0863
316	SLU 22	0.27	0.4	29.5	6.9825	-0.0365	-0.0941
316	SLU 23	0.27	0.45	29.46	6.9913	-0.0364	-0.0936
316	SLU 24	0.28	0.41	29.99	7.0938	-0.0372	-0.0968
316	SLU 25	0.28	0.44	29.97	7.0991	-0.0371	-0.0965
316	SLU 26	0.28	0.45	29.76	7.0573	-0.0368	-0.0941
316	SLU 27	0.28	0.41	30.29	7.1598	-0.0376	-0.0973
316	SLU 28	0.28	0.45	30.27	7.1651	-0.0375	-0.097
316	SLU 29	0.28	0.41	30.09	7.1145	-0.0373	-0.095
316	SLU 30	0.28	0.44	30.07	7.1198	-0.0372	-0.0947
316	SLU 31	0.29	0.53	32.71	7.7144	-0.0406	-0.0985
316	SLU 32	0.3	0.49	33.24	7.817	-0.0414	-0.1017
316	SLU 33	0.3	0.52	33.22	7.8223	-0.0413	-0.1014
316	SLU 34	0.29	0.53	33	7.7805	-0.041	-0.0989

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
316	SLU 35	0.3	0.49	33.53	7.883	-0.0418	-0.1021
316	SLU 36	0.3	0.52	33.51	7.8883	-0.0417	-0.1018
316	SLU 37	0.29	0.48	33.33	7.8377	-0.0414	-0.0998
316	SLU 38	0.29	0.51	33.31	7.843	-0.0414	-0.0995
316	SLU 39	0.3	0.51	34.13	8.0156	-0.0424	-0.101
316	SLU 40	0.3	0.54	34.11	8.0208	-0.0424	-0.1007
316	SLU 41	0.3	0.51	34.43	8.0816	-0.0428	-0.1015
316	SLU 42	0.3	0.54	34.4	8.0869	-0.0428	-0.1012
316	SLU 43	0.29	0.41	33.29	7.9446	-0.0404	-0.0979
316	SLU 44	0.29	0.46	33.26	7.9534	-0.0403	-0.0974
316	SLU 45	0.29	0.42	33.79	8.0559	-0.0411	-0.1006
316	SLU 46	0.29	0.45	33.77	8.0612	-0.0411	-0.1003
316	SLU 47	0.29	0.46	33.55	8.0194	-0.0407	-0.0978
316	SLU 48	0.3	0.42	34.08	8.1219	-0.0415	-0.101
316	SLU 49	0.3	0.45	34.06	8.1272	-0.0415	-0.1008
316	SLU 50	0.29	0.41	33.88	8.0766	-0.0412	-0.0988
316	SLU 51	0.29	0.44	33.86	8.0819	-0.0412	-0.0985
316	SLU 52	0.3	0.53	36.5	8.6766	-0.0445	-0.1023
316	SLU 53	0.31	0.49	37.03	8.7791	-0.0453	-0.1055
316	SLU 54	0.31	0.52	37.01	8.7844	-0.0453	-0.1052
316	SLU 55	0.3	0.53	36.8	8.7426	-0.0449	-0.1027
316	SLU 56	0.31	0.5	37.33	8.8451	-0.0457	-0.1059
316	SLU 57	0.31	0.53	37.31	8.8504	-0.0457	-0.1056
316	SLU 58	0.3	0.49	37.13	8.7998	-0.0454	-0.1036
316	SLU 59	0.3	0.52	37.1	8.8051	-0.0453	-0.1033
316	SLU 60	0.31	0.52	37.93	8.9777	-0.0464	-0.1048
316	SLU 61	0.31	0.55	37.91	8.983	-0.0464	-0.1045
316	SLU 62	0.31	0.52	38.22	9.0437	-0.0468	-0.1053
316	SLU 63	0.31	0.55	38.2	9.049	-0.0467	-0.105
316	SLU 64	0.33	0.48	36.37	8.634	-0.0447	-0.1128
316	SLU 65	0.33	0.53	36.33	8.6428	-0.0446	-0.1123
316	SLU 66	0.34	0.49	36.87	8.7453	-0.0454	-0.1155
316	SLU 67	0.34	0.52	36.84	8.7506	-0.0453	-0.1152
316	SLU 68	0.33	0.53	36.63	8.7088	-0.045	-0.1127
316	SLU 69	0.34	0.49	37.16	8.8114	-0.0458	-0.1159
316	SLU 70	0.34	0.52	37.14	8.8166	-0.0457	-0.1156
316	SLU 71	0.33	0.48	36.96	8.766	-0.0455	-0.1136
316	SLU 72	0.33	0.51	36.94	8.7713	-0.0454	-0.1133
316	SLU 73	0.34	0.6	39.58	9.366	-0.0488	-0.1171
316	SLU 74	0.35	0.56	40.11	9.4685	-0.0496	-0.1203
316	SLU 75	0.35	0.59	40.09	9.4738	-0.0495	-0.1201
316	SLU 76	0.34	0.61	39.87	9.432	-0.0492	-0.1176
316	SLU 77	0.35	0.57	40.4	9.5345	-0.05	-0.1208
316	SLU 78	0.35	0.6	40.38	9.5398	-0.0499	-0.1205
316	SLU 79	0.35	0.56	40.2	9.4892	-0.0496	-0.1185
316	SLU 80	0.35	0.59	40.18	9.4945	-0.0496	-0.1182
316	SLU 81	0.35	0.59	41	9.6671	-0.0507	-0.1197
316	SLU 82	0.35	0.62	40.98	9.6724	-0.0506	-0.1194
316	SLU 83	0.35	0.59	41.3	9.7331	-0.051	-0.1201
316	SLU 84	0.35	0.62	41.28	9.7384	-0.051	-0.1198
316	SLE RA 1	0.24	0.35	27.3	6.49	-0.0334	-0.0835
316	SLE RA 2	0.24	0.39	27.28	6.4959	-0.0334	-0.0832
316	SLE RA 3	0.25	0.36	27.63	6.5642	-0.0339	-0.0853
316	SLE RA 4	0.25	0.38	27.62	6.5678	-0.0339	-0.0851
316	SLE RA 5	0.24	0.39	27.47	6.5399	-0.0336	-0.0834
316	SLE RA 6	0.25	0.36	27.83	6.6082	-0.0342	-0.0856
316	SLE RA 7	0.25	0.38	27.81	6.6118	-0.0341	-0.0854
316	SLE RA 8	0.25	0.35	27.69	6.578	-0.0339	-0.0841
316	SLE RA 9	0.25	0.37	27.68	6.5816	-0.0339	-0.0839
316	SLE RA 10	0.25	0.44	29.44	6.978	-0.0362	-0.0864
316	SLE RA 11	0.26	0.41	29.79	7.0463	-0.0367	-0.0885
316	SLE RA 12	0.26	0.43	29.78	7.0499	-0.0367	-0.0883
316	SLE RA 13	0.25	0.44	29.64	7.022	-0.0364	-0.0867
316	SLE RA 14	0.26	0.41	29.99	7.0904	-0.037	-0.0888
316	SLE RA 15	0.26	0.43	29.98	7.0939	-0.0369	-0.0886
316	SLE RA 16	0.26	0.4	29.86	7.0602	-0.0367	-0.0873
316	SLE RA 17	0.26	0.42	29.84	7.0637	-0.0367	-0.0871
316	SLE RA 18	0.26	0.42	30.39	7.1787	-0.0374	-0.0881
316	SLE RA 19	0.26	0.44	30.38	7.1823	-0.0374	-0.0879
316	SLE RA 20	0.26	0.43	30.59	7.2228	-0.0377	-0.0884
316	SLE RA 21	0.26	0.45	30.57	7.2263	-0.0376	-0.0882
316	SLE FR 1	0.24	0.35	27.3	6.49	-0.0334	-0.0835
316	SLE FR 2	0.24	0.36	27.3	6.4912	-0.0334	-0.0834
316	SLE FR 3	0.24	0.35	27.38	6.5076	-0.0335	-0.0836
316	SLE FR 4	0.25	0.38	28.22	6.6978	-0.0346	-0.0848
316	SLE FR 5	0.25	0.37	28.31	6.7142	-0.0347	-0.085
316	SLE FR 6	0.25	0.39	28.85	6.8344	-0.0354	-0.0858
316	SLE QP 1	0.24	0.35	27.3	6.49	-0.0334	-0.0835
316	SLE QP 2	0.25	0.37	28.23	6.6966	-0.0346	-0.0849
316	SLD 1	3.77	0.73	24.28	5.8714	-0.0176	-1.3188
316	SLD 2	3.93	1.03	24.3	5.8775	-0.0177	-1.3716
316	SLD 3	3.68	-0.55	23.94	5.6835	-0.0165	-1.286
316	SLD 4	3.83	-0.25	23.97	5.6896	-0.0167	-1.3387
316	SLD 5	1.42	2.37	27.55	6.733	-0.0311	-0.4957
316	SLD 6	1.52	2.56	27.57	6.7369	-0.0312	-0.5299
316	SLD 7	1.1	-1.89	26.42	6.1067	-0.0275	-0.3862
316	SLD 8	1.2	-1.7	26.44	6.1106	-0.0276	-0.4204
316	SLD 9	-0.71	2.45	30.01	7.2827	-0.0416	0.2507
316	SLD 10	-0.61	2.64	30.03	7.2866	-0.0417	0.2164
316	SLD 11	-1.03	-1.81	28.89	6.6563	-0.038	0.3602
316	SLD 12	-0.93	-1.62	28.9	6.6603	-0.0381	0.326

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
316	SLD 13	-3.33	1	32.49	7.7037	-0.0526	1.169
316	SLD 14	-3.18	1.29	32.51	7.7097	-0.0527	1.1162
316	SLD 15	-3.43	-0.28	32.15	7.5158	-0.0515	1.2018
316	SLD 16	-3.28	0.01	32.18	7.5218	-0.0517	1.1491
316	SLV 1	8.49	1.18	18.98	4.7636	0.0053	-2.9706
316	SLV 2	8.85	1.86	19.04	4.7777	0.0049	-3.0935
316	SLV 3	8.27	-1.74	18.2	4.3283	0.0078	-2.8943
316	SLV 4	8.62	-1.06	18.26	4.3424	0.0074	-3.0172
316	SLV 5	3	4.92	26.63	6.7745	-0.0264	-1.0455
316	SLV 6	3.23	5.35	26.66	6.7835	-0.0267	-1.124
316	SLV 7	2.25	-4.79	24.03	5.3236	-0.018	-0.7911
316	SLV 8	2.48	-4.36	24.07	5.3326	-0.0183	-0.8696
316	SLV 9	-1.99	5.11	32.39	8.0607	-0.051	0.6999
316	SLV 10	-1.76	5.54	32.43	8.0697	-0.0512	0.6214
316	SLV 11	-2.73	-4.6	29.79	6.6098	-0.0426	0.9543
316	SLV 12	-2.5	-4.17	29.83	6.6188	-0.0428	0.8758
316	SLV 13	-8.13	1.8	38.19	9.0509	-0.0766	2.8474
316	SLV 14	-7.77	2.49	38.25	9.065	-0.077	2.7245
316	SLV 15	-8.35	-1.11	37.41	8.6156	-0.0741	2.9238
316	SLV 16	-7.99	-0.43	37.47	8.6297	-0.0745	2.8009
316	CRTFP Ux+	0	0	0	0	0	0
316	CRTFP Ux-	0	0	0	0	0	0
316	CRTFP Uy+	0	0	0	0	0	0
316	CRTFP Uy-	0	0	0	0	0	0
317	SLU 1	0.23	0.39	27.71	6.9704	-0.0535	-0.0784
317	SLU 2	0.23	0.44	27.67	6.9753	-0.0534	-0.0782
317	SLU 3	0.24	0.4	28.23	7.0963	-0.0547	-0.0811
317	SLU 4	0.24	0.43	28.21	7.0993	-0.0546	-0.081
317	SLU 5	0.23	0.45	27.98	7.0497	-0.054	-0.0786
317	SLU 6	0.24	0.4	28.54	7.1706	-0.0553	-0.0816
317	SLU 7	0.24	0.43	28.52	7.1736	-0.0553	-0.0814
317	SLU 8	0.23	0.39	28.33	7.1191	-0.0548	-0.0793
317	SLU 9	0.23	0.43	28.3	7.1221	-0.0547	-0.0791
317	SLU 10	0.24	0.53	31.08	7.7904	-0.0605	-0.0828
317	SLU 11	0.25	0.48	31.64	7.9113	-0.0618	-0.0858
317	SLU 12	0.25	0.52	31.62	7.9143	-0.0618	-0.0856
317	SLU 13	0.24	0.53	31.39	7.8647	-0.0612	-0.0832
317	SLU 14	0.25	0.48	31.95	7.9857	-0.0625	-0.0862
317	SLU 15	0.25	0.52	31.93	7.9887	-0.0624	-0.086
317	SLU 16	0.25	0.47	31.74	7.9341	-0.062	-0.0839
317	SLU 17	0.25	0.51	31.72	7.9371	-0.0619	-0.0838
317	SLU 18	0.25	0.51	32.58	8.1347	-0.0637	-0.085
317	SLU 19	0.25	0.54	32.56	8.1377	-0.0637	-0.0849
317	SLU 20	0.25	0.51	32.89	8.2091	-0.0644	-0.0855
317	SLU 21	0.25	0.54	32.87	8.212	-0.0643	-0.0853
317	SLU 22	0.27	0.46	30.95	7.7489	-0.0606	-0.0931
317	SLU 23	0.27	0.52	30.91	7.7539	-0.0605	-0.0928
317	SLU 24	0.28	0.47	31.47	7.8749	-0.0617	-0.0958
317	SLU 25	0.28	0.51	31.45	7.8778	-0.0617	-0.0957
317	SLU 26	0.27	0.52	31.22	7.8283	-0.0611	-0.0933
317	SLU 27	0.28	0.48	31.78	7.9492	-0.0624	-0.0962
317	SLU 28	0.28	0.51	31.76	7.9522	-0.0623	-0.0961
317	SLU 29	0.27	0.47	31.57	7.8976	-0.0619	-0.0939
317	SLU 30	0.27	0.5	31.55	7.9006	-0.0618	-0.0938
317	SLU 31	0.29	0.6	34.33	8.569	-0.0676	-0.0975
317	SLU 32	0.29	0.56	34.89	8.6899	-0.0689	-0.1004
317	SLU 33	0.29	0.59	34.86	8.6929	-0.0688	-0.1003
317	SLU 34	0.29	0.61	34.64	8.6433	-0.0683	-0.0979
317	SLU 35	0.29	0.56	35.2	8.7642	-0.0696	-0.1009
317	SLU 36	0.29	0.6	35.18	8.7672	-0.0695	-0.1007
317	SLU 37	0.29	0.55	34.98	8.7127	-0.0691	-0.0986
317	SLU 38	0.29	0.59	34.96	8.7157	-0.069	-0.0984
317	SLU 39	0.29	0.58	35.83	8.9133	-0.0708	-0.0997
317	SLU 40	0.29	0.62	35.8	8.9163	-0.0707	-0.0996
317	SLU 41	0.29	0.58	36.14	8.9876	-0.0715	-0.1001
317	SLU 42	0.29	0.62	36.11	8.9906	-0.0714	-0.1
317	SLU 43	0.28	0.47	34.9	8.7945	-0.0671	-0.0969
317	SLU 44	0.28	0.53	34.87	8.7995	-0.067	-0.0967
317	SLU 45	0.29	0.49	35.43	8.9204	-0.0683	-0.0996
317	SLU 46	0.29	0.52	35.4	8.9234	-0.0682	-0.0995
317	SLU 47	0.28	0.54	35.18	8.8739	-0.0677	-0.0971
317	SLU 48	0.29	0.49	35.74	8.9948	-0.0689	-0.1
317	SLU 49	0.29	0.52	35.71	8.9978	-0.0689	-0.0999
317	SLU 50	0.29	0.48	35.52	8.9432	-0.0684	-0.0978
317	SLU 51	0.29	0.51	35.5	8.9462	-0.0684	-0.0976
317	SLU 52	0.3	0.62	38.28	9.6145	-0.0742	-0.1013
317	SLU 53	0.3	0.57	38.84	9.7355	-0.0754	-0.1043
317	SLU 54	0.31	0.61	38.82	9.7385	-0.0754	-0.1041
317	SLU 55	0.3	0.62	38.59	9.6889	-0.0748	-0.1017
317	SLU 56	0.31	0.57	39.15	9.8098	-0.0761	-0.1047
317	SLU 57	0.31	0.61	39.13	9.8128	-0.076	-0.1045
317	SLU 58	0.3	0.56	38.94	9.7583	-0.0756	-0.1024
317	SLU 59	0.3	0.6	38.91	9.7613	-0.0755	-0.1022
317	SLU 60	0.3	0.6	39.78	9.9589	-0.0773	-0.1035
317	SLU 61	0.3	0.63	39.76	9.9618	-0.0773	-0.1034
317	SLU 62	0.3	0.6	40.09	10.0332	-0.078	-0.104
317	SLU 63	0.3	0.63	40.07	10.0362	-0.0779	-0.1038
317	SLU 64	0.33	0.55	38.15	9.5731	-0.0742	-0.1116
317	SLU 65	0.33	0.61	38.11	9.5781	-0.0741	-0.1113
317	SLU 66	0.33	0.56	38.67	9.699	-0.0754	-0.1143
317	SLU 67	0.33	0.6	38.65	9.702	-0.0753	-0.1141

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
317	SLU 68	0.33	0.61	38.42	9.6524	-0.0747	-0.1118
317	SLU 69	0.33	0.57	38.98	9.7734	-0.076	-0.1147
317	SLU 70	0.33	0.6	38.96	9.7764	-0.076	-0.1146
317	SLU 71	0.33	0.56	38.77	9.7218	-0.0755	-0.1124
317	SLU 72	0.33	0.59	38.75	9.7248	-0.0754	-0.1123
317	SLU 73	0.34	0.69	41.52	10.3931	-0.0812	-0.116
317	SLU 74	0.35	0.65	42.09	10.5141	-0.0825	-0.1189
317	SLU 75	0.35	0.68	42.06	10.517	-0.0825	-0.1188
317	SLU 76	0.34	0.7	41.83	10.4675	-0.0819	-0.1164
317	SLU 77	0.35	0.65	42.4	10.5884	-0.0832	-0.1194
317	SLU 78	0.35	0.69	42.37	10.5914	-0.0831	-0.1192
317	SLU 79	0.34	0.64	42.18	10.5369	-0.0827	-0.1171
317	SLU 80	0.34	0.68	42.16	10.5398	-0.0826	-0.1169
317	SLU 81	0.35	0.67	43.03	10.7374	-0.0844	-0.1182
317	SLU 82	0.35	0.71	43	10.7404	-0.0844	-0.1181
317	SLU 83	0.35	0.67	43.34	10.8118	-0.0851	-0.1186
317	SLU 84	0.35	0.71	43.31	10.8148	-0.085	-0.1185
317	SLE RA 1	0.24	0.41	28.63	7.1928	-0.0555	-0.0826
317	SLE RA 2	0.24	0.45	28.61	7.1961	-0.0554	-0.0824
317	SLE RA 3	0.25	0.42	28.98	7.2768	-0.0563	-0.0844
317	SLE RA 4	0.25	0.44	28.97	7.2787	-0.0562	-0.0843
317	SLE RA 5	0.24	0.45	28.81	7.2457	-0.0559	-0.0827
317	SLE RA 6	0.25	0.42	29.19	7.3263	-0.0567	-0.0847
317	SLE RA 7	0.25	0.44	29.17	7.3283	-0.0567	-0.0846
317	SLE RA 8	0.24	0.41	29.05	7.2919	-0.0564	-0.0832
317	SLE RA 9	0.24	0.43	29.03	7.2939	-0.0563	-0.0831
317	SLE RA 10	0.25	0.5	30.88	7.7395	-0.0602	-0.0855
317	SLE RA 11	0.26	0.47	31.26	7.8201	-0.0611	-0.0875
317	SLE RA 12	0.26	0.49	31.24	7.8221	-0.061	-0.0874
317	SLE RA 13	0.25	0.5	31.09	7.7891	-0.0607	-0.0858
317	SLE RA 14	0.26	0.47	31.46	7.8697	-0.0615	-0.0878
317	SLE RA 15	0.26	0.5	31.45	7.8717	-0.0615	-0.0877
317	SLE RA 16	0.25	0.47	31.32	7.8353	-0.0612	-0.0863
317	SLE RA 17	0.25	0.49	31.31	7.8373	-0.0611	-0.0862
317	SLE RA 18	0.25	0.49	31.88	7.969	-0.0623	-0.087
317	SLE RA 19	0.25	0.51	31.87	7.971	-0.0623	-0.0869
317	SLE RA 20	0.26	0.49	32.09	8.0186	-0.0628	-0.0873
317	SLE RA 21	0.26	0.51	32.07	8.0206	-0.0627	-0.0872
317	SLE FR 1	0.24	0.41	28.63	7.1928	-0.0555	-0.0826
317	SLE FR 2	0.24	0.41	28.63	7.1935	-0.0555	-0.0826
317	SLE FR 3	0.24	0.41	28.72	7.2126	-0.0557	-0.0827
317	SLE FR 4	0.25	0.44	29.6	7.4263	-0.0575	-0.0839
317	SLE FR 5	0.25	0.43	29.69	7.4455	-0.0577	-0.084
317	SLE FR 6	0.25	0.45	30.26	7.5809	-0.0589	-0.0848
317	SLE QP 1	0.24	0.41	28.63	7.1928	-0.0555	-0.0826
317	SLE QP 2	0.25	0.43	29.61	7.4257	-0.0576	-0.0839
317	SLD 1	3.77	0.79	25.06	6.3529	-0.0366	-1.3163
317	SLD 2	3.92	1.11	25.09	6.3608	-0.0368	-1.3691
317	SLD 3	3.67	-0.55	24.74	6.187	-0.035	-1.2833
317	SLD 4	3.82	-0.23	24.78	6.1948	-0.0352	-1.336
317	SLD 5	1.42	2.52	28.72	7.3541	-0.0536	-0.4945
317	SLD 6	1.52	2.72	28.74	7.3592	-0.0537	-0.5288
317	SLD 7	1.1	-1.95	27.66	6.801	-0.0484	-0.3844
317	SLD 8	1.2	-1.74	27.68	6.8061	-0.0485	-0.4187
317	SLD 9	-0.71	2.61	31.53	8.0452	-0.0666	0.2508
317	SLD 10	-0.61	2.81	31.55	8.0503	-0.0667	0.2166
317	SLD 11	-1.03	-1.86	30.48	7.4921	-0.0614	0.3609
317	SLD 12	-0.93	-1.65	30.5	7.4972	-0.0615	0.3267
317	SLD 13	-3.33	1.09	34.44	8.6565	-0.0799	1.1682
317	SLD 14	-3.18	1.41	34.47	8.6644	-0.0801	1.1154
317	SLD 15	-3.43	-0.25	34.13	8.4906	-0.0783	1.2012
317	SLD 16	-3.28	0.07	34.16	8.4984	-0.0785	1.1485
317	SLV 1	8.48	1.24	18.96	4.9134	-0.0085	-2.966
317	SLV 2	8.83	1.97	19.03	4.9317	-0.009	-3.0889
317	SLV 3	8.25	-1.81	18.23	4.5294	-0.0048	-2.8893
317	SLV 4	8.61	-1.08	18.31	4.5477	-0.0053	-3.0122
317	SLV 5	3	5.17	27.5	7.2513	-0.0483	-1.0441
317	SLV 6	3.22	5.64	27.55	7.263	-0.0486	-1.1226
317	SLV 7	2.24	-4.99	25.08	5.9713	-0.0361	-0.7884
317	SLV 8	2.47	-4.52	25.13	5.983	-0.0364	-0.8669
317	SLV 9	-1.98	5.38	34.09	8.8684	-0.0787	0.699
317	SLV 10	-1.75	5.85	34.14	8.88	-0.079	0.6205
317	SLV 11	-2.73	-4.78	31.67	7.5884	-0.0665	0.9547
317	SLV 12	-2.51	-4.31	31.71	7.6001	-0.0668	0.8762
317	SLV 13	-8.12	1.94	40.91	10.3037	-0.1098	2.8443
317	SLV 14	-7.76	2.68	40.98	10.322	-0.1103	2.7214
317	SLV 15	-8.34	-1.11	40.18	9.9197	-0.1061	2.921
317	SLV 16	-7.99	-0.37	40.26	9.938	-0.1066	2.7981
317	CRTFP Ux+	0	0	0	0	0	0
317	CRTFP Ux-	0	0	0	0	0	0
317	CRTFP Uy+	0	0	0	0	0	0
317	CRTFP Uy-	0	0	0	0	0	0
318	SLU 1	0.23	0.43	29.63	8.0014	-0.0747	-0.0776
318	SLU 2	0.23	0.5	29.59	8.0014	-0.0746	-0.0776
318	SLU 3	0.23	0.45	30.19	8.1494	-0.0764	-0.0803
318	SLU 4	0.23	0.49	30.17	8.1494	-0.0763	-0.0803
318	SLU 5	0.23	0.5	29.92	8.0885	-0.0755	-0.078
318	SLU 6	0.23	0.45	30.53	8.2365	-0.0773	-0.0807
318	SLU 7	0.24	0.49	30.5	8.2365	-0.0772	-0.0807
318	SLU 8	0.23	0.44	30.3	8.1756	-0.0766	-0.0785
318	SLU 9	0.23	0.48	30.27	8.1756	-0.0765	-0.0784

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
318	SLU 10	0.24	0.59	33.26	8.9576	-0.0847	-0.082
318	SLU 11	0.25	0.54	33.87	9.1056	-0.0865	-0.0848
318	SLU 12	0.25	0.58	33.84	9.1056	-0.0864	-0.0847
318	SLU 13	0.24	0.6	33.59	9.0447	-0.0856	-0.0825
318	SLU 14	0.25	0.54	34.2	9.1928	-0.0874	-0.0852
318	SLU 15	0.25	0.58	34.17	9.1928	-0.0873	-0.0852
318	SLU 16	0.24	0.53	33.97	9.1319	-0.0867	-0.0829
318	SLU 17	0.24	0.57	33.94	9.1319	-0.0866	-0.0829
318	SLU 18	0.24	0.56	34.87	9.3674	-0.0892	-0.084
318	SLU 19	0.25	0.6	34.85	9.3674	-0.0891	-0.0839
318	SLU 20	0.25	0.57	35.21	9.4546	-0.0901	-0.0844
318	SLU 21	0.25	0.61	35.18	9.4546	-0.0901	-0.0844
318	SLU 22	0.27	0.51	33.13	8.916	-0.0846	-0.0921
318	SLU 23	0.27	0.58	33.09	8.916	-0.0845	-0.0921
318	SLU 24	0.28	0.53	33.69	9.0641	-0.0863	-0.0948
318	SLU 25	0.28	0.57	33.67	9.0641	-0.0862	-0.0948
318	SLU 26	0.27	0.58	33.42	9.0032	-0.0854	-0.0925
318	SLU 27	0.28	0.53	34.03	9.1512	-0.0872	-0.0952
318	SLU 28	0.28	0.57	34	9.1512	-0.0871	-0.0952
318	SLU 29	0.27	0.52	33.8	9.0903	-0.0865	-0.0929
318	SLU 30	0.27	0.56	33.77	9.0903	-0.0864	-0.0929
318	SLU 31	0.28	0.67	36.76	9.8723	-0.0946	-0.0965
318	SLU 32	0.29	0.62	37.37	10.0203	-0.0964	-0.0992
318	SLU 33	0.29	0.66	37.34	10.0203	-0.0963	-0.0992
318	SLU 34	0.28	0.68	37.09	9.9594	-0.0955	-0.0969
318	SLU 35	0.29	0.62	37.7	10.1074	-0.0973	-0.0997
318	SLU 36	0.29	0.66	37.67	10.1074	-0.0972	-0.0997
318	SLU 37	0.28	0.61	37.47	10.0465	-0.0966	-0.0974
318	SLU 38	0.28	0.65	37.44	10.0465	-0.0965	-0.0974
318	SLU 39	0.29	0.65	38.37	10.2821	-0.0991	-0.0984
318	SLU 40	0.29	0.69	38.35	10.2821	-0.099	-0.0984
318	SLU 41	0.29	0.65	38.71	10.3692	-0.1001	-0.0989
318	SLU 42	0.29	0.69	38.68	10.3692	-0.1	-0.0989
318	SLU 43	0.28	0.53	37.32	10.0882	-0.0938	-0.0959
318	SLU 44	0.28	0.6	37.27	10.0882	-0.0936	-0.0959
318	SLU 45	0.29	0.55	37.88	10.2362	-0.0954	-0.0986
318	SLU 46	0.29	0.59	37.86	10.2362	-0.0953	-0.0986
318	SLU 47	0.28	0.6	37.61	10.1753	-0.0945	-0.0963
318	SLU 48	0.29	0.55	38.21	10.3233	-0.0963	-0.099
318	SLU 49	0.29	0.59	38.19	10.3233	-0.0962	-0.099
318	SLU 50	0.28	0.54	37.98	10.2624	-0.0956	-0.0968
318	SLU 51	0.28	0.58	37.96	10.2624	-0.0955	-0.0968
318	SLU 52	0.29	0.69	40.95	11.0444	-0.1037	-0.1003
318	SLU 53	0.3	0.64	41.55	11.1925	-0.1055	-0.1031
318	SLU 54	0.3	0.68	41.53	11.1925	-0.1054	-0.1031
318	SLU 55	0.29	0.7	41.28	11.1316	-0.1047	-0.1008
318	SLU 56	0.3	0.64	41.89	11.2796	-0.1065	-0.1035
318	SLU 57	0.3	0.68	41.86	11.2796	-0.1064	-0.1035
318	SLU 58	0.3	0.63	41.66	11.2187	-0.1058	-0.1012
318	SLU 59	0.3	0.67	41.63	11.2187	-0.1057	-0.1012
318	SLU 60	0.3	0.67	42.56	11.4542	-0.1082	-0.1023
318	SLU 61	0.3	0.71	42.54	11.4542	-0.1081	-0.1023
318	SLU 62	0.3	0.67	42.9	11.5414	-0.1092	-0.1027
318	SLU 63	0.3	0.71	42.87	11.5414	-0.1091	-0.1027
318	SLU 64	0.32	0.62	40.82	11.0028	-0.1037	-0.1104
318	SLU 65	0.32	0.68	40.77	11.0028	-0.1035	-0.1104
318	SLU 66	0.33	0.63	41.38	11.1509	-0.1053	-0.1131
318	SLU 67	0.33	0.67	41.36	11.1509	-0.1052	-0.1131
318	SLU 68	0.32	0.69	41.11	11.09	-0.1044	-0.1108
318	SLU 69	0.33	0.63	41.72	11.238	-0.1062	-0.1135
318	SLU 70	0.33	0.67	41.69	11.238	-0.1061	-0.1135
318	SLU 71	0.32	0.62	41.48	11.1771	-0.1055	-0.1113
318	SLU 72	0.32	0.66	41.46	11.1771	-0.1054	-0.1112
318	SLU 73	0.34	0.77	44.45	11.9591	-0.1136	-0.1148
318	SLU 74	0.34	0.72	45.05	12.1071	-0.1154	-0.1176
318	SLU 75	0.34	0.76	45.03	12.1071	-0.1153	-0.1175
318	SLU 76	0.34	0.78	44.78	12.0462	-0.1146	-0.1153
318	SLU 77	0.34	0.72	45.39	12.1942	-0.1164	-0.118
318	SLU 78	0.34	0.76	45.36	12.1942	-0.1163	-0.118
318	SLU 79	0.34	0.71	45.16	12.1333	-0.1157	-0.1157
318	SLU 80	0.34	0.75	45.13	12.1333	-0.1156	-0.1157
318	SLU 81	0.34	0.75	46.06	12.3689	-0.1181	-0.1168
318	SLU 82	0.34	0.79	46.04	12.3689	-0.118	-0.1167
318	SLU 83	0.34	0.75	46.4	12.456	-0.1191	-0.1172
318	SLU 84	0.34	0.79	46.37	12.456	-0.119	-0.1172
318	SLE RA 1	0.24	0.46	30.63	8.2627	-0.0776	-0.0817
318	SLE RA 2	0.24	0.5	30.6	8.2627	-0.0775	-0.0817
318	SLE RA 3	0.24	0.46	31	8.3614	-0.0787	-0.0835
318	SLE RA 4	0.24	0.49	30.99	8.3614	-0.0786	-0.0835
318	SLE RA 5	0.24	0.5	30.82	8.3208	-0.0781	-0.082
318	SLE RA 6	0.24	0.47	31.23	8.4195	-0.0793	-0.0838
318	SLE RA 7	0.24	0.49	31.21	8.4195	-0.0792	-0.0838
318	SLE RA 8	0.24	0.46	31.07	8.3789	-0.0788	-0.0823
318	SLE RA 9	0.24	0.49	31.06	8.3789	-0.0787	-0.0823
318	SLE RA 10	0.25	0.56	33.05	8.9002	-0.0842	-0.0847
318	SLE RA 11	0.25	0.53	33.45	8.9989	-0.0854	-0.0865
318	SLE RA 12	0.25	0.55	33.44	8.9989	-0.0853	-0.0865
318	SLE RA 13	0.25	0.56	33.27	8.9583	-0.0848	-0.085
318	SLE RA 14	0.25	0.53	33.68	9.057	-0.086	-0.0868
318	SLE RA 15	0.25	0.56	33.66	9.057	-0.086	-0.0868
318	SLE RA 16	0.25	0.52	33.52	9.0164	-0.0856	-0.0853

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
318	SLE RA 17	0.25	0.55	33.5	9.0164	-0.0855	-0.0853
318	SLE RA 18	0.25	0.54	34.13	9.1734	-0.0872	-0.086
318	SLE RA 19	0.25	0.57	34.11	9.1734	-0.0872	-0.086
318	SLE RA 20	0.25	0.55	34.35	9.2315	-0.0878	-0.0863
318	SLE RA 21	0.25	0.57	34.33	9.2315	-0.0878	-0.0863
318	SLE FR 1	0.24	0.46	30.63	8.2627	-0.0776	-0.0817
318	SLE FR 2	0.24	0.46	30.62	8.2627	-0.0775	-0.0817
318	SLE FR 3	0.24	0.46	30.72	8.2859	-0.0778	-0.0818
318	SLE FR 4	0.24	0.49	31.67	8.5359	-0.0804	-0.083
318	SLE FR 5	0.24	0.48	31.77	8.5591	-0.0807	-0.0831
318	SLE FR 6	0.24	0.5	32.38	8.718	-0.0824	-0.0839
318	SLE QP 1	0.24	0.46	30.63	8.2627	-0.0776	-0.0817
318	SLE QP 2	0.24	0.48	31.68	8.5359	-0.0805	-0.083
318	SLD 1	3.76	0.85	26.4	7.1452	-0.0553	-1.3136
318	SLD 2	3.91	1.19	26.44	7.1555	-0.0556	-1.3664
318	SLD 3	3.66	-0.55	26.11	7.0058	-0.0534	-1.2803
318	SLD 4	3.81	-0.21	26.15	7.0161	-0.0536	-1.3331
318	SLD 5	1.42	2.66	30.53	8.3283	-0.0758	-0.4935
318	SLD 6	1.52	2.88	30.56	8.335	-0.076	-0.5277
318	SLD 7	1.09	-2.02	29.56	7.8637	-0.0693	-0.3825
318	SLD 8	1.19	-1.8	29.58	7.8703	-0.0695	-0.4168
318	SLD 9	-0.71	2.76	33.77	9.2015	-0.0914	0.2508
318	SLD 10	-0.61	2.98	33.8	9.2081	-0.0916	0.2165
318	SLD 11	-1.04	-1.92	32.8	8.7368	-0.0849	0.3617
318	SLD 12	-0.94	-1.7	32.82	8.7435	-0.0851	0.3275
318	SLD 13	-3.33	1.17	37.21	10.0557	-0.1073	1.1671
318	SLD 14	-3.18	1.52	37.25	10.066	-0.1076	1.1143
318	SLD 15	-3.43	-0.23	36.92	9.9163	-0.1053	1.2004
318	SLD 16	-3.27	0.11	36.95	9.9266	-0.1056	1.1476
318	SLV 1	8.46	1.3	19.32	5.2797	-0.0216	-2.9609
318	SLV 2	8.82	2.1	19.41	5.3036	-0.0222	-3.0839
318	SLV 3	8.24	-1.89	18.65	4.9578	-0.0171	-2.8836
318	SLV 4	8.59	-1.1	18.74	4.9817	-0.0177	-3.0066
318	SLV 5	2.99	5.44	28.97	8.0432	-0.0696	-1.0427
318	SLV 6	3.22	5.95	29.03	8.0584	-0.07	-1.1213
318	SLV 7	2.23	-5.21	26.74	6.9703	-0.0544	-0.7852
318	SLV 8	2.46	-4.7	26.79	6.9855	-0.0548	-0.8637
318	SLV 9	-1.98	5.67	36.56	10.0863	-0.1061	0.6977
318	SLV 10	-1.75	6.18	36.62	10.1015	-0.1065	0.6192
318	SLV 11	-2.74	-4.99	34.32	9.0134	-0.0909	0.9553
318	SLV 12	-2.51	-4.48	34.38	9.0287	-0.0913	0.8767
318	SLV 13	-8.11	2.06	44.61	12.0901	-0.1433	2.8406
318	SLV 14	-7.75	2.85	44.7	12.114	-0.1439	2.7176
318	SLV 15	-8.34	-1.14	43.94	11.7682	-0.1387	2.9179
318	SLV 16	-7.98	-0.34	44.03	11.7921	-0.1393	2.7949
318	CRTFP Ux+	0	0	0	0	0	0
318	CRTFP Ux-	0	0	0	0	0	0
318	CRTFP Uy+	0	0	0	0	0	0
318	CRTFP Uy-	0	0	0	0	0	0
319	SLU 1	0.22	0.47	32.18	9.3861	-0.095	-0.0768
319	SLU 2	0.22	0.55	32.13	9.3802	-0.0948	-0.077
319	SLU 3	0.23	0.48	32.8	9.5638	-0.0971	-0.0795
319	SLU 4	0.23	0.53	32.77	9.5603	-0.097	-0.0796
319	SLU 5	0.23	0.55	32.49	9.4846	-0.096	-0.0774
319	SLU 6	0.23	0.49	33.16	9.6682	-0.0983	-0.08
319	SLU 7	0.23	0.53	33.13	9.6647	-0.0982	-0.0801
319	SLU 8	0.23	0.48	32.91	9.5949	-0.0974	-0.0777
319	SLU 9	0.23	0.52	32.88	9.5913	-0.0973	-0.0778
319	SLU 10	0.24	0.64	36.15	10.5269	-0.1078	-0.0813
319	SLU 11	0.24	0.58	36.82	10.7106	-0.1101	-0.0839
319	SLU 12	0.24	0.63	36.79	10.707	-0.11	-0.084
319	SLU 13	0.24	0.65	36.51	10.6313	-0.109	-0.0818
319	SLU 14	0.24	0.59	37.18	10.8149	-0.1113	-0.0843
319	SLU 15	0.25	0.63	37.15	10.8114	-0.1111	-0.0844
319	SLU 16	0.24	0.58	36.93	10.7416	-0.1104	-0.082
319	SLU 17	0.24	0.62	36.9	10.738	-0.1103	-0.0821
319	SLU 18	0.24	0.61	37.92	11.0243	-0.1136	-0.083
319	SLU 19	0.24	0.66	37.89	11.0207	-0.1134	-0.0831
319	SLU 20	0.24	0.61	38.28	11.1287	-0.1148	-0.0834
319	SLU 21	0.24	0.66	38.25	11.1251	-0.1146	-0.0835
319	SLU 22	0.26	0.55	36.01	10.4838	-0.1076	-0.0911
319	SLU 23	0.27	0.63	35.97	10.4779	-0.1074	-0.0913
319	SLU 24	0.27	0.57	36.63	10.6615	-0.1097	-0.0938
319	SLU 25	0.27	0.62	36.61	10.658	-0.1096	-0.094
319	SLU 26	0.27	0.64	36.33	10.5823	-0.1086	-0.0917
319	SLU 27	0.27	0.57	37	10.7659	-0.1109	-0.0943
319	SLU 28	0.27	0.62	36.97	10.7624	-0.1108	-0.0944
319	SLU 29	0.27	0.56	36.74	10.6926	-0.11	-0.092
319	SLU 30	0.27	0.61	36.72	10.689	-0.1099	-0.0921
319	SLU 31	0.28	0.73	39.99	11.6246	-0.1204	-0.0956
319	SLU 32	0.28	0.67	40.65	11.8083	-0.1227	-0.0982
319	SLU 33	0.29	0.71	40.63	11.8047	-0.1226	-0.0983
319	SLU 34	0.28	0.73	40.35	11.729	-0.1216	-0.0961
319	SLU 35	0.29	0.67	41.02	11.9126	-0.1239	-0.0986
319	SLU 36	0.29	0.72	40.99	11.9091	-0.1237	-0.0987
319	SLU 37	0.28	0.66	40.76	11.8393	-0.123	-0.0963
319	SLU 38	0.28	0.71	40.74	11.8357	-0.1229	-0.0964
319	SLU 39	0.28	0.7	41.76	12.122	-0.1262	-0.0973
319	SLU 40	0.28	0.74	41.73	12.1185	-0.1261	-0.0974
319	SLU 41	0.28	0.7	42.12	12.2264	-0.1274	-0.0977
319	SLU 42	0.28	0.75	42.09	12.2228	-0.1272	-0.0978

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
319	SLU 43	0.28	0.58	40.51	11.8256	-0.1192	-0.095
319	SLU 44	0.28	0.66	40.46	11.8197	-0.119	-0.0952
319	SLU 45	0.28	0.59	41.13	12.0033	-0.1213	-0.0977
319	SLU 46	0.28	0.64	41.1	11.9998	-0.1212	-0.0978
319	SLU 47	0.28	0.66	40.83	11.9241	-0.1202	-0.0956
319	SLU 48	0.28	0.6	41.5	12.1077	-0.1225	-0.0981
319	SLU 49	0.29	0.64	41.47	12.1041	-0.1224	-0.0982
319	SLU 50	0.28	0.59	41.24	12.0343	-0.1216	-0.0959
319	SLU 51	0.28	0.63	41.21	12.0308	-0.1215	-0.096
319	SLU 52	0.29	0.76	44.48	12.9664	-0.132	-0.0995
319	SLU 53	0.3	0.69	45.15	13.15	-0.1343	-0.102
319	SLU 54	0.3	0.74	45.12	13.1465	-0.1341	-0.1021
319	SLU 55	0.29	0.76	44.85	13.0708	-0.1332	-0.0999
319	SLU 56	0.3	0.7	45.52	13.2544	-0.1355	-0.1024
319	SLU 57	0.3	0.74	45.49	13.2508	-0.1353	-0.1025
319	SLU 58	0.29	0.69	45.26	13.1811	-0.1346	-0.1002
319	SLU 59	0.29	0.73	45.23	13.1775	-0.1345	-0.1003
319	SLU 60	0.29	0.72	46.25	13.4638	-0.1378	-0.1011
319	SLU 61	0.29	0.77	46.23	13.4602	-0.1376	-0.1012
319	SLU 62	0.29	0.73	46.62	13.5681	-0.1389	-0.1016
319	SLU 63	0.3	0.77	46.59	13.5646	-0.1388	-0.1017
319	SLU 64	0.32	0.67	44.35	12.9233	-0.1318	-0.1093
319	SLU 65	0.32	0.74	44.3	12.9174	-0.1316	-0.1095
319	SLU 66	0.32	0.68	44.97	13.101	-0.1339	-0.112
319	SLU 67	0.33	0.73	44.94	13.0975	-0.1338	-0.1121
319	SLU 68	0.32	0.75	44.67	13.0218	-0.1328	-0.1099
319	SLU 69	0.33	0.68	45.34	13.2054	-0.1351	-0.1124
319	SLU 70	0.33	0.73	45.31	13.2018	-0.135	-0.1125
319	SLU 71	0.32	0.67	45.08	13.132	-0.1342	-0.1102
319	SLU 72	0.32	0.72	45.05	13.1285	-0.1341	-0.1103
319	SLU 73	0.33	0.84	48.32	14.0641	-0.1446	-0.1138
319	SLU 74	0.34	0.78	48.99	14.2477	-0.1469	-0.1163
319	SLU 75	0.34	0.83	48.96	14.2442	-0.1467	-0.1164
319	SLU 76	0.33	0.85	48.69	14.1685	-0.1458	-0.1142
319	SLU 77	0.34	0.78	49.36	14.3521	-0.1481	-0.1167
319	SLU 78	0.34	0.83	49.33	14.3486	-0.1479	-0.1168
319	SLU 79	0.33	0.77	49.1	14.2788	-0.1472	-0.1145
319	SLU 80	0.33	0.82	49.07	14.2752	-0.1471	-0.1146
319	SLU 81	0.33	0.81	50.09	14.5615	-0.1504	-0.1154
319	SLU 82	0.34	0.85	50.06	14.5579	-0.1502	-0.1155
319	SLU 83	0.34	0.81	50.46	14.6658	-0.1515	-0.1159
319	SLU 84	0.34	0.86	50.43	14.6623	-0.1514	-0.116
319	SLE RA 1	0.23	0.49	33.27	9.6998	-0.0986	-0.0809
319	SLE RA 2	0.24	0.54	33.24	9.6958	-0.0985	-0.081
319	SLE RA 3	0.24	0.5	33.69	9.8182	-0.1	-0.0827
319	SLE RA 4	0.24	0.53	33.67	9.8159	-0.0999	-0.0828
319	SLE RA 5	0.24	0.55	33.48	9.7654	-0.0993	-0.0813
319	SLE RA 6	0.24	0.51	33.93	9.8878	-0.1008	-0.083
319	SLE RA 7	0.24	0.54	33.91	9.8854	-0.1007	-0.0831
319	SLE RA 8	0.24	0.5	33.76	9.8389	-0.1002	-0.0815
319	SLE RA 9	0.24	0.53	33.74	9.8365	-0.1001	-0.0816
319	SLE RA 10	0.24	0.61	35.92	10.4603	-0.1072	-0.0839
319	SLE RA 11	0.25	0.57	36.37	10.5827	-0.1087	-0.0856
319	SLE RA 12	0.25	0.6	36.35	10.5803	-0.1086	-0.0857
319	SLE RA 13	0.24	0.61	36.16	10.5299	-0.1079	-0.0842
319	SLE RA 14	0.25	0.57	36.61	10.6523	-0.1095	-0.0859
319	SLE RA 15	0.25	0.6	36.59	10.6499	-0.1094	-0.086
319	SLE RA 16	0.24	0.56	36.44	10.6034	-0.1089	-0.0844
319	SLE RA 17	0.25	0.6	36.42	10.601	-0.1088	-0.0844
319	SLE RA 18	0.25	0.59	37.1	10.7919	-0.111	-0.085
319	SLE RA 19	0.25	0.62	37.08	10.7895	-0.1109	-0.0851
319	SLE RA 20	0.25	0.59	37.34	10.8614	-0.1118	-0.0853
319	SLE RA 21	0.25	0.62	37.32	10.8591	-0.1117	-0.0854
319	SLE FR 1	0.23	0.49	33.27	9.6998	-0.0986	-0.0809
319	SLE FR 2	0.23	0.5	33.27	9.699	-0.0986	-0.0809
319	SLE FR 3	0.23	0.49	33.37	9.7276	-0.099	-0.081
319	SLE FR 4	0.24	0.53	34.41	10.0266	-0.1023	-0.0822
319	SLE FR 5	0.24	0.52	34.52	10.0552	-0.1027	-0.0823
319	SLE FR 6	0.24	0.54	35.19	10.2458	-0.1048	-0.083
319	SLE QP 1	0.23	0.49	33.27	9.6998	-0.0986	-0.0809
319	SLE QP 2	0.24	0.52	34.42	10.0274	-0.1023	-0.0822
319	SLD 1	3.75	0.91	28.29	8.2475	-0.073	-1.3109
319	SLD 2	3.9	1.28	28.33	8.2607	-0.0733	-1.3637
319	SLD 3	3.65	-0.56	28.01	8.1343	-0.0708	-1.2772
319	SLD 4	3.8	-0.19	28.06	8.1475	-0.0711	-1.3301
319	SLD 5	1.42	2.8	32.99	9.6628	-0.0969	-0.4926
319	SLD 6	1.52	3.04	33.02	9.6713	-0.0971	-0.5269
319	SLD 7	1.08	-2.09	32.07	9.2855	-0.0895	-0.3804
319	SLD 8	1.18	-1.86	32.1	9.294	-0.0896	-0.4147
319	SLD 9	-0.71	2.9	36.74	10.7607	-0.1151	0.2504
319	SLD 10	-0.61	3.14	36.77	10.7693	-0.1152	0.2161
319	SLD 11	-1.04	-2	35.82	10.3834	-0.1076	0.3626
319	SLD 12	-0.94	-1.76	35.85	10.392	-0.1078	0.3283
319	SLD 13	-3.33	1.24	40.78	11.9073	-0.1336	1.1658
319	SLD 14	-3.18	1.6	40.83	11.9205	-0.1339	1.1129
319	SLD 15	-3.43	-0.23	40.51	11.7941	-0.1314	1.1994
319	SLD 16	-3.27	0.14	40.55	11.8073	-0.1317	1.1466
319	SLV 1	8.45	1.38	20.07	5.8604	-0.0337	-2.9555
319	SLV 2	8.81	2.24	20.17	5.8911	-0.0344	-3.0787
319	SLV 3	8.22	-1.96	19.43	5.5999	-0.0285	-2.8775
319	SLV 4	8.58	-1.11	19.54	5.6306	-0.0292	-3.0006

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
319	SLV 5	2.99	5.7	31.06	9.1671	-0.0895	-1.0417
319	SLV 6	3.22	6.25	31.13	9.1867	-0.09	-1.1204
319	SLV 7	2.22	-5.44	28.94	8.2989	-0.0722	-0.7815
319	SLV 8	2.45	-4.89	29.01	8.3185	-0.0726	-0.8602
319	SLV 9	-1.98	5.93	39.83	11.7363	-0.1321	0.6958
319	SLV 10	-1.75	6.48	39.9	11.7559	-0.1325	0.6172
319	SLV 11	-2.74	-5.21	37.71	10.868	-0.1147	0.9561
319	SLV 12	-2.51	-4.66	37.78	10.8877	-0.1152	0.8774
319	SLV 13	-8.1	2.15	49.3	14.4242	-0.1755	2.8363
319	SLV 14	-7.75	3.01	49.41	14.4549	-0.1762	2.7132
319	SLV 15	-8.33	-1.19	48.67	14.1637	-0.1703	2.9144
319	SLV 16	-7.98	-0.34	48.77	14.1944	-0.171	2.7912
319	CRTFP Ux+	0	0	0	0	0	0
319	CRTFP Ux-	0	0	0	0	0	0
319	CRTFP Uy+	0	0	0	0	0	0
319	CRTFP Uy-	0	0	0	0	0	0
320	SLU 1	0.19	0.42	30.25	9.4952	0.7726	-0.0778
320	SLU 2	0.19	0.5	30.2	9.4847	0.7714	-0.0802
320	SLU 3	0.2	0.44	30.84	9.6784	0.7875	-0.0805
320	SLU 4	0.2	0.48	30.81	9.6721	0.7868	-0.0819
320	SLU 5	0.19	0.5	30.55	9.5922	0.7802	-0.0807
320	SLU 6	0.2	0.44	31.19	9.7859	0.7963	-0.081
320	SLU 7	0.2	0.48	31.16	9.7796	0.7956	-0.0824
320	SLU 8	0.19	0.43	30.94	9.7101	0.7901	-0.0787
320	SLU 9	0.19	0.48	30.92	9.7038	0.7894	-0.0802
320	SLU 10	0.2	0.59	34.01	10.6666	0.8679	-0.0863
320	SLU 11	0.21	0.53	34.65	10.8603	0.884	-0.0866
320	SLU 12	0.21	0.57	34.62	10.8541	0.8833	-0.0881
320	SLU 13	0.2	0.59	34.36	10.7741	0.8767	-0.0868
320	SLU 14	0.21	0.53	35	10.9678	0.8927	-0.0871
320	SLU 15	0.21	0.57	34.97	10.9615	0.892	-0.0886
320	SLU 16	0.2	0.52	34.75	10.892	0.8866	-0.0849
320	SLU 17	0.2	0.56	34.72	10.8858	0.8859	-0.0864
320	SLU 18	0.2	0.55	35.69	11.1836	0.9104	-0.0866
320	SLU 19	0.21	0.6	35.66	11.1773	0.9097	-0.088
320	SLU 20	0.21	0.56	36.04	11.2911	0.9192	-0.0871
320	SLU 21	0.21	0.6	36.01	11.2848	0.9185	-0.0885
320	SLU 22	0.22	0.5	33.89	10.627	0.8647	-0.0922
320	SLU 23	0.23	0.57	33.85	10.6166	0.8636	-0.0946
320	SLU 24	0.23	0.51	34.48	10.8103	0.8796	-0.0949
320	SLU 25	0.23	0.56	34.45	10.804	0.8789	-0.0963
320	SLU 26	0.23	0.58	34.19	10.724	0.8723	-0.0951
320	SLU 27	0.23	0.52	34.83	10.9178	0.8884	-0.0954
320	SLU 28	0.23	0.56	34.8	10.9115	0.8877	-0.0968
320	SLU 29	0.23	0.51	34.59	10.842	0.8823	-0.0931
320	SLU 30	0.23	0.55	34.56	10.8357	0.8816	-0.0946
320	SLU 31	0.24	0.66	37.65	11.7985	0.96	-0.1007
320	SLU 32	0.24	0.6	38.29	11.9922	0.9761	-0.101
320	SLU 33	0.24	0.65	38.26	11.9859	0.9754	-0.1025
320	SLU 34	0.24	0.67	38	11.906	0.9688	-0.1012
320	SLU 35	0.24	0.61	38.64	12.0997	0.9849	-0.1015
320	SLU 36	0.24	0.65	38.61	12.0934	0.9842	-0.103
320	SLU 37	0.24	0.6	38.39	12.0239	0.9787	-0.0993
320	SLU 38	0.24	0.64	38.37	12.0176	0.9781	-0.1008
320	SLU 39	0.24	0.63	39.33	12.3155	1.0025	-0.101
320	SLU 40	0.24	0.67	39.31	12.3092	1.0018	-0.1024
320	SLU 41	0.24	0.63	39.68	12.423	1.0113	-0.1015
320	SLU 42	0.24	0.68	39.65	12.4167	1.0106	-0.1029
320	SLU 43	0.23	0.52	38.08	11.9556	0.9728	-0.0961
320	SLU 44	0.24	0.6	38.03	11.9452	0.9716	-0.0986
320	SLU 45	0.24	0.54	38.67	12.1389	0.9877	-0.0989
320	SLU 46	0.24	0.58	38.64	12.1326	0.987	-0.1003
320	SLU 47	0.24	0.6	38.38	12.0526	0.9804	-0.099
320	SLU 48	0.24	0.54	39.01	12.2464	0.9964	-0.0993
320	SLU 49	0.24	0.59	38.99	12.2401	0.9958	-0.1008
320	SLU 50	0.24	0.53	38.77	12.1706	0.9903	-0.0971
320	SLU 51	0.24	0.58	38.74	12.1643	0.9896	-0.0986
320	SLU 52	0.25	0.69	41.84	13.1271	1.0681	-0.1047
320	SLU 53	0.25	0.63	42.47	13.3208	1.0841	-0.105
320	SLU 54	0.25	0.67	42.45	13.3145	1.0835	-0.1065
320	SLU 55	0.25	0.69	42.19	13.2346	1.0769	-0.1052
320	SLU 56	0.25	0.63	42.82	13.4283	1.0929	-0.1055
320	SLU 57	0.25	0.67	42.79	13.422	1.0922	-0.107
320	SLU 58	0.25	0.62	42.58	13.3525	1.0868	-0.1033
320	SLU 59	0.25	0.67	42.55	13.3462	1.0861	-0.1047
320	SLU 60	0.25	0.65	43.52	13.6441	1.1106	-0.105
320	SLU 61	0.25	0.7	43.49	13.6378	1.1099	-0.1064
320	SLU 62	0.25	0.66	43.86	13.7516	1.1194	-0.1054
320	SLU 63	0.25	0.7	43.84	13.7453	1.1187	-0.1069
320	SLU 64	0.27	0.6	41.72	13.0875	1.0649	-0.1106
320	SLU 65	0.27	0.67	41.67	13.077	1.0637	-0.113
320	SLU 66	0.28	0.61	42.31	13.2708	1.0798	-0.1133
320	SLU 67	0.28	0.66	42.28	13.2645	1.0791	-0.1147
320	SLU 68	0.27	0.68	42.02	13.1845	1.0725	-0.1134
320	SLU 69	0.28	0.62	42.66	13.3782	1.0886	-0.1138
320	SLU 70	0.28	0.66	42.63	13.372	1.0879	-0.1152
320	SLU 71	0.27	0.61	42.41	13.3025	1.0824	-0.1115
320	SLU 72	0.27	0.65	42.38	13.2962	1.0818	-0.113
320	SLU 73	0.28	0.76	45.48	14.259	1.1602	-0.1191
320	SLU 74	0.29	0.7	46.12	14.4527	1.1763	-0.1194
320	SLU 75	0.29	0.75	46.09	14.4464	1.1756	-0.1209

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
320	SLU 76	0.28	0.77	45.83	14.3664	1.169	-0.1196
320	SLU 77	0.29	0.71	46.46	14.5602	1.1851	-0.1199
320	SLU 78	0.29	0.75	46.44	14.5539	1.1844	-0.1214
320	SLU 79	0.28	0.7	46.22	14.4844	1.1789	-0.1177
320	SLU 80	0.28	0.74	46.19	14.4781	1.1782	-0.1191
320	SLU 81	0.28	0.73	47.16	14.776	1.2027	-0.1194
320	SLU 82	0.29	0.77	47.13	14.7697	1.202	-0.1208
320	SLU 83	0.29	0.73	47.51	14.8835	1.2115	-0.1199
320	SLU 84	0.29	0.78	47.48	14.8772	1.2108	-0.1213
320	SLE RA 1	0.2	0.45	31.29	9.8186	0.7989	-0.0819
320	SLE RA 2	0.2	0.49	31.26	9.8116	0.7981	-0.0835
320	SLE RA 3	0.2	0.45	31.68	9.9407	0.8088	-0.0837
320	SLE RA 4	0.2	0.48	31.67	9.9365	0.8084	-0.0846
320	SLE RA 5	0.2	0.5	31.49	9.8832	0.804	-0.0838
320	SLE RA 6	0.2	0.46	31.92	10.0124	0.8147	-0.084
320	SLE RA 7	0.21	0.49	31.9	10.0082	0.8142	-0.085
320	SLE RA 8	0.2	0.45	31.75	9.9619	0.8106	-0.0825
320	SLE RA 9	0.2	0.48	31.73	9.9577	0.8101	-0.0835
320	SLE RA 10	0.21	0.55	33.8	10.5995	0.8625	-0.0876
320	SLE RA 11	0.21	0.51	34.22	10.7287	0.8732	-0.0878
320	SLE RA 12	0.21	0.54	34.2	10.7245	0.8727	-0.0888
320	SLE RA 13	0.21	0.56	34.03	10.6712	0.8683	-0.0879
320	SLE RA 14	0.21	0.52	34.45	10.8003	0.879	-0.0881
320	SLE RA 15	0.21	0.55	34.44	10.7961	0.8785	-0.0891
320	SLE RA 16	0.21	0.51	34.29	10.7498	0.8749	-0.0866
320	SLE RA 17	0.21	0.54	34.27	10.7456	0.8745	-0.0876
320	SLE RA 18	0.21	0.53	34.92	10.9442	0.8908	-0.0878
320	SLE RA 19	0.21	0.56	34.9	10.94	0.8903	-0.0887
320	SLE RA 20	0.21	0.53	35.15	11.0158	0.8966	-0.0881
320	SLE RA 21	0.21	0.56	35.13	11.0117	0.8962	-0.089
320	SLE FR 1	0.2	0.45	31.29	9.8186	0.7989	-0.0819
320	SLE FR 2	0.2	0.46	31.28	9.8172	0.7987	-0.0822
320	SLE FR 3	0.2	0.45	31.38	9.8472	0.8012	-0.082
320	SLE FR 4	0.2	0.48	32.37	10.1549	0.8263	-0.084
320	SLE FR 5	0.2	0.47	32.47	10.1849	0.8288	-0.0838
320	SLE FR 6	0.2	0.49	33.1	10.3814	0.8448	-0.0848
320	SLE QP 1	0.2	0.45	31.29	9.8186	0.7989	-0.0819
320	SLE QP 2	0.2	0.47	32.38	10.1562	0.8265	-0.0836
320	SLD 1	3.23	0.82	26.31	8.2512	0.679	-1.1489
320	SLD 2	3.36	1.16	26.36	8.2653	0.6801	-1.2042
320	SLD 3	3.14	-0.49	26.07	8.1683	0.6724	-1.0926
320	SLD 4	3.28	-0.15	26.12	8.1824	0.6735	-1.1479
320	SLD 5	1.22	2.51	30.91	9.708	0.7921	-0.479
320	SLD 6	1.3	2.73	30.94	9.7172	0.7928	-0.5149
320	SLD 7	0.93	-1.87	30.12	9.4317	0.77	-0.2913
320	SLD 8	1.02	-1.65	30.15	9.4408	0.7707	-0.3272
320	SLD 9	-0.61	2.59	34.61	10.8717	0.8822	0.1599
320	SLD 10	-0.53	2.81	34.64	10.8808	0.8829	0.124
320	SLD 11	-0.9	-1.79	33.81	10.5953	0.8601	0.3476
320	SLD 12	-0.81	-1.57	33.84	10.6045	0.8608	0.3117
320	SLD 13	-2.87	1.1	38.64	12.1301	0.9795	0.9806
320	SLD 14	-2.74	1.43	38.69	12.1442	0.9806	0.9253
320	SLD 15	-2.96	-0.22	38.4	12.0471	0.9728	1.0369
320	SLD 16	-2.82	0.12	38.45	12.0613	0.9739	0.9816
320	SLV 1	7.28	1.25	18.18	5.6968	0.4813	-2.5735
320	SLV 2	7.59	2.04	18.29	5.7297	0.4838	-2.7024
320	SLV 3	7.08	-1.74	17.63	5.5066	0.466	-2.445
320	SLV 4	7.39	-0.95	17.74	5.5394	0.4686	-2.5739
320	SLV 5	2.58	5.1	28.93	9.1014	0.7455	-1.0037
320	SLV 6	2.77	5.61	29	9.1224	0.7472	-1.086
320	SLV 7	1.91	-4.86	27.1	8.4672	0.6948	-0.5753
320	SLV 8	2.11	-4.35	27.17	8.4882	0.6965	-0.6576
320	SLV 9	-1.7	5.3	37.59	11.8243	0.9564	0.4903
320	SLV 10	-1.5	5.8	37.66	11.8452	0.9581	0.408
320	SLV 11	-2.37	-4.66	35.76	11.1901	0.9057	0.9187
320	SLV 12	-2.17	-4.16	35.83	11.2111	0.9074	0.8365
320	SLV 13	-6.98	1.89	47.02	14.773	1.1843	2.4066
320	SLV 14	-6.68	2.68	47.13	14.8059	1.1869	2.2778
320	SLV 15	-7.18	-1.1	46.47	14.5828	1.1691	2.5351
320	SLV 16	-6.88	-0.31	46.58	14.6157	1.1717	2.4063
320	CRTFP Ux+	0	0	0	0	0	0
320	CRTFP Ux-	0	0	0	0	0	0
320	CRTFP Uy+	0	0	0	0	0	0
320	CRTFP Uy-	0	0	0	0	0	0
322	SLU 1	0.28	0.62	46.92	10.9451	10.6771	-0.2146
322	SLU 2	0.28	0.74	46.84	10.929	10.6595	-0.2418
322	SLU 3	0.28	0.65	47.84	11.1595	10.8856	-0.2217
322	SLU 4	0.29	0.71	47.8	11.1497	10.875	-0.238
322	SLU 5	0.28	0.74	47.39	11.0547	10.7822	-0.2436
322	SLU 6	0.29	0.65	48.38	11.2852	11.0083	-0.2234
322	SLU 7	0.29	0.72	48.34	11.2755	10.9978	-0.2398
322	SLU 8	0.28	0.64	48	11.1966	10.9226	-0.2181
322	SLU 9	0.28	0.7	47.96	11.1869	10.912	-0.2344
322	SLU 10	0.3	0.87	52.78	12.3113	12.0053	-0.2771
322	SLU 11	0.3	0.78	53.78	12.5417	12.2315	-0.257
322	SLU 12	0.3	0.85	53.73	12.532	12.2209	-0.2734
322	SLU 13	0.3	0.88	53.32	12.437	12.1281	-0.2789
322	SLU 14	0.3	0.78	54.32	12.6675	12.3542	-0.2588
322	SLU 15	0.31	0.85	54.27	12.6578	12.3436	-0.2751
322	SLU 16	0.29	0.77	53.94	12.5789	12.2684	-0.2534
322	SLU 17	0.3	0.84	53.89	12.5692	12.2578	-0.2698

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
322	SLU 18	0.3	0.81	55.4	12.9198	12.5998	-0.265
322	SLU 19	0.3	0.88	55.36	12.9101	12.5892	-0.2814
322	SLU 20	0.3	0.82	55.94	13.0456	12.7225	-0.2668
322	SLU 21	0.3	0.89	55.9	13.0359	12.7119	-0.2831
322	SLU 22	0.33	0.74	52.6	12.2685	11.9637	-0.2541
322	SLU 23	0.33	0.85	52.52	12.2523	11.946	-0.2814
322	SLU 24	0.34	0.76	53.52	12.4828	12.1722	-0.2612
322	SLU 25	0.34	0.83	53.48	12.4731	12.1616	-0.2776
322	SLU 26	0.33	0.86	53.07	12.378	12.0688	-0.2831
322	SLU 27	0.34	0.77	54.06	12.6085	12.2949	-0.263
322	SLU 28	0.34	0.83	54.02	12.5988	12.2843	-0.2793
322	SLU 29	0.33	0.75	53.68	12.5199	12.2092	-0.2576
322	SLU 30	0.33	0.82	53.64	12.5102	12.1986	-0.274
322	SLU 31	0.35	0.98	58.46	13.6346	13.2919	-0.3167
322	SLU 32	0.35	0.89	59.46	13.8651	13.5181	-0.2965
322	SLU 33	0.36	0.96	59.41	13.8554	13.5075	-0.3129
322	SLU 34	0.35	0.99	59	13.7603	13.4146	-0.3184
322	SLU 35	0.35	0.9	60	13.9908	13.6408	-0.2983
322	SLU 36	0.36	0.97	59.96	13.9811	13.6302	-0.3147
322	SLU 37	0.35	0.88	59.62	13.9022	13.555	-0.2929
322	SLU 38	0.35	0.95	59.58	13.8925	13.5444	-0.3093
322	SLU 39	0.35	0.93	61.08	14.2432	13.8864	-0.3046
322	SLU 40	0.35	1	61.04	14.2335	13.8758	-0.3209
322	SLU 41	0.35	0.94	61.63	14.3689	14.0091	-0.3063
322	SLU 42	0.35	1	61.58	14.3592	13.9985	-0.3227
322	SLU 43	0.34	0.77	59.05	13.775	13.4391	-0.2654
322	SLU 44	0.34	0.89	58.97	13.7588	13.4215	-0.2926
322	SLU 45	0.35	0.79	59.97	13.9893	13.6476	-0.2725
322	SLU 46	0.35	0.86	59.92	13.9796	13.637	-0.2888
322	SLU 47	0.35	0.89	59.51	13.8845	13.5442	-0.2944
322	SLU 48	0.35	0.8	60.51	14.115	13.7704	-0.2742
322	SLU 49	0.35	0.87	60.46	14.1053	13.7598	-0.2906
322	SLU 50	0.34	0.78	60.13	14.0264	13.6846	-0.2689
322	SLU 51	0.35	0.85	60.09	14.0167	13.674	-0.2852
322	SLU 52	0.36	1.02	64.91	15.1411	14.7674	-0.3279
322	SLU 53	0.37	0.93	65.91	15.3716	14.9935	-0.3078
322	SLU 54	0.37	0.99	65.86	15.3619	14.9829	-0.3242
322	SLU 55	0.36	1.02	65.45	15.2668	14.8901	-0.3297
322	SLU 56	0.37	0.93	66.45	15.4973	15.1162	-0.3096
322	SLU 57	0.37	1	66.4	15.4876	15.1056	-0.3259
322	SLU 58	0.36	0.92	66.07	15.4087	15.0305	-0.3042
322	SLU 59	0.36	0.98	66.02	15.399	15.0199	-0.3206
322	SLU 60	0.36	0.96	67.53	15.7497	15.3618	-0.3158
322	SLU 61	0.37	1.03	67.49	15.74	15.3512	-0.3322
322	SLU 62	0.36	0.97	68.07	15.8754	15.4845	-0.3176
322	SLU 63	0.37	1.04	68.03	15.8657	15.4739	-0.3339
322	SLU 64	0.39	0.89	64.73	15.0983	14.7257	-0.3049
322	SLU 65	0.4	1	64.65	15.0821	14.7081	-0.3322
322	SLU 66	0.4	0.91	65.65	15.3126	14.9342	-0.312
322	SLU 67	0.4	0.98	65.6	15.3029	14.9236	-0.3284
322	SLU 68	0.4	1.01	65.19	15.2079	14.8308	-0.3339
322	SLU 69	0.4	0.91	66.19	15.4384	15.0569	-0.3138
322	SLU 70	0.41	0.98	66.15	15.4286	15.0464	-0.3301
322	SLU 71	0.39	0.9	65.81	15.3498	14.9712	-0.3084
322	SLU 72	0.4	0.97	65.77	15.3401	14.9606	-0.3248
322	SLU 73	0.41	1.13	70.59	16.4644	16.0539	-0.3675
322	SLU 74	0.42	1.04	71.59	16.6949	16.2801	-0.3474
322	SLU 75	0.42	1.11	71.54	16.6852	16.2695	-0.3637
322	SLU 76	0.41	1.14	71.13	16.5902	16.1767	-0.3692
322	SLU 77	0.42	1.05	72.13	16.8206	16.4028	-0.3491
322	SLU 78	0.42	1.11	72.08	16.8109	16.3922	-0.3655
322	SLU 79	0.41	1.03	71.75	16.7321	16.317	-0.3437
322	SLU 80	0.41	1.1	71.7	16.7224	16.3065	-0.3601
322	SLU 81	0.41	1.08	73.21	17.073	16.6484	-0.3554
322	SLU 82	0.42	1.15	73.17	17.0633	16.6378	-0.3717
322	SLU 83	0.42	1.08	73.75	17.1987	16.7711	-0.3571
322	SLU 84	0.42	1.15	73.71	17.189	16.7605	-0.3735
322	SLE RA 1	0.29	0.66	48.54	11.3232	11.0447	-0.2259
322	SLE RA 2	0.29	0.73	48.49	11.3124	11.0329	-0.244
322	SLE RA 3	0.3	0.67	49.16	11.4661	11.1837	-0.2306
322	SLE RA 4	0.3	0.72	49.13	11.4596	11.1766	-0.2415
322	SLE RA 5	0.29	0.74	48.85	11.3963	11.1148	-0.2452
322	SLE RA 6	0.3	0.68	49.52	11.5499	11.2655	-0.2318
322	SLE RA 7	0.3	0.72	49.49	11.5435	11.2585	-0.2427
322	SLE RA 8	0.29	0.67	49.27	11.4909	11.2084	-0.2282
322	SLE RA 9	0.29	0.71	49.23	11.4844	11.2013	-0.2391
322	SLE RA 10	0.3	0.82	52.45	12.234	11.9302	-0.2676
322	SLE RA 11	0.31	0.76	53.12	12.3876	12.0809	-0.2542
322	SLE RA 12	0.31	0.8	53.09	12.3812	12.0739	-0.2651
322	SLE RA 13	0.3	0.82	52.81	12.3178	12.012	-0.2687
322	SLE RA 14	0.31	0.76	53.48	12.4715	12.1628	-0.2553
322	SLE RA 15	0.31	0.81	53.45	12.465	12.1557	-0.2662
322	SLE RA 16	0.3	0.75	53.22	12.4124	12.1056	-0.2517
322	SLE RA 17	0.3	0.8	53.19	12.4059	12.0985	-0.2627
322	SLE RA 18	0.31	0.78	54.2	12.6397	12.3265	-0.2595
322	SLE RA 19	0.31	0.83	54.17	12.6332	12.3194	-0.2704
322	SLE RA 20	0.31	0.79	54.56	12.7235	12.4083	-0.2607
322	SLE RA 21	0.31	0.83	54.53	12.7171	12.4012	-0.2716
322	SLE FR 1	0.29	0.66	48.54	11.3232	11.0447	-0.2259
322	SLE FR 2	0.29	0.67	48.53	11.3211	11.0424	-0.2295
322	SLE FR 3	0.29	0.66	48.69	11.3568	11.0774	-0.2263

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
322	SLE FR 4	0.3	0.71	50.23	11.716	11.4269	-0.2396
322	SLE FR 5	0.29	0.7	50.38	11.7517	11.462	-0.2364
322	SLE FR 6	0.3	0.72	51.37	11.9815	11.6856	-0.2427
322	SLE QP 1	0.29	0.66	48.54	11.3232	11.0447	-0.2259
322	SLE QP 2	0.29	0.7	50.24	11.7182	11.4292	-0.2359
322	SLD 1	4.71	1.22	40.6	9.4622	9.2832	-1.435
322	SLD 2	4.91	1.73	40.68	9.4794	9.3009	-1.6017
322	SLD 3	4.57	-0.72	40.22	9.3789	9.1955	-0.9572
322	SLD 4	4.78	-0.21	40.3	9.3961	9.2131	-1.1239
322	SLD 5	1.79	3.71	47.9	11.1647	10.9154	-1.2913
322	SLD 6	1.92	4.04	47.95	11.1759	10.9269	-1.3995
322	SLD 7	1.34	-2.76	46.65	10.887	10.623	0.3015
322	SLD 8	1.47	-2.44	46.71	10.8982	10.6344	0.1934
322	SLD 9	-0.88	3.83	53.77	12.5381	12.2241	-0.6652
322	SLD 10	-0.75	4.16	53.82	12.5493	12.2355	-0.7734
322	SLD 11	-1.33	-2.65	52.53	12.2604	11.9316	0.9276
322	SLD 12	-1.2	-2.32	52.58	12.2716	11.9431	0.8195
322	SLD 13	-4.19	1.61	60.18	14.0402	13.6453	0.652
322	SLD 14	-3.99	2.11	60.26	14.0574	13.663	0.4853
322	SLD 15	-4.32	-0.34	59.8	13.9569	13.5576	1.1299
322	SLD 16	-4.12	0.17	59.88	13.9741	13.5753	0.9632
322	SLV 1	10.62	1.87	27.67	6.4376	6.4056	-3.0256
322	SLV 2	11.09	3.04	27.85	6.4777	6.4467	-3.414
322	SLV 3	10.31	-2.55	26.81	6.2464	6.2047	-1.939
322	SLV 4	10.78	-1.37	27	6.2865	6.2458	-2.3273
322	SLV 5	3.79	7.55	44.74	10.4172	10.22	-2.6551
322	SLV 6	4.09	8.3	44.85	10.4428	10.2462	-2.9032
322	SLV 7	2.75	-7.18	41.88	9.7798	9.5501	0.967
322	SLV 8	3.04	-6.43	42	9.8054	9.5764	0.7189
322	SLV 9	-2.46	7.82	58.48	13.6309	13.2821	-1.1908
322	SLV 10	-2.16	8.57	58.6	13.6565	13.3084	-1.4388
322	SLV 11	-3.5	-6.91	55.63	12.9935	12.6123	2.4313
322	SLV 12	-3.2	-6.16	55.74	13.0191	12.6385	2.1833
322	SLV 13	-10.19	2.77	73.48	17.1498	16.6127	1.8554
322	SLV 14	-9.72	3.94	73.67	17.1899	16.6538	1.4671
322	SLV 15	-10.5	-1.65	72.63	16.9586	16.4118	2.9421
322	SLV 16	-10.03	-0.47	72.81	16.9987	16.4529	2.5537
322	CRTFP Ux+	0	0	0	0	0	0
322	CRTFP Ux-	0	0	0	0	0	0
322	CRTFP Uy+	0	0	0	0	0	0
322	CRTFP Uy-	0	0	0	0	0	0
384	SLU 1	0.13	-0.09	26.05	0.7138	8.7946	0.0271
384	SLU 2	0.13	-0.05	26.07	0.7142	8.7996	0.0125
384	SLU 3	0.14	-0.08	26.55	0.7273	8.9599	0.0248
384	SLU 4	0.13	-0.06	26.55	0.7275	8.9629	0.016
384	SLU 5	0.13	-0.05	26.38	0.7226	8.9038	0.0138
384	SLU 6	0.14	-0.09	26.86	0.7357	9.0641	0.0261
384	SLU 7	0.14	-0.06	26.86	0.7359	9.0671	0.0173
384	SLU 8	0.13	-0.1	26.67	0.7307	9.003	0.0297
384	SLU 9	0.13	-0.07	26.68	0.7309	9.006	0.021
384	SLU 10	0.14	-0.02	29.62	0.8117	9.9956	0.0025
384	SLU 11	0.15	-0.05	30.09	0.8248	10.1559	0.0148
384	SLU 12	0.15	-0.03	30.1	0.825	10.1589	0.006
384	SLU 13	0.14	-0.02	29.93	0.8201	10.0998	0.0038
384	SLU 14	0.15	-0.06	30.4	0.8333	10.2601	0.0161
384	SLU 15	0.15	-0.03	30.41	0.8334	10.2631	0.0073
384	SLU 16	0.15	-0.07	30.22	0.8282	10.199	0.0198
384	SLU 17	0.15	-0.04	30.23	0.8284	10.202	0.011
384	SLU 18	0.15	-0.05	31.12	0.8532	10.5031	0.0129
384	SLU 19	0.15	-0.02	31.13	0.8534	10.5061	0.0041
384	SLU 20	0.15	-0.05	31.43	0.8616	10.6073	0.0142
384	SLU 21	0.15	-0.03	31.44	0.8618	10.6103	0.0054
384	SLU 22	0.16	-0.05	29.03	0.7954	9.7927	0.0139
384	SLU 23	0.15	-0.01	29.04	0.7957	9.7977	-0.0007
384	SLU 24	0.16	-0.05	29.52	0.8088	9.958	0.0115
384	SLU 25	0.16	-0.02	29.53	0.809	9.961	0.0028
384	SLU 26	0.16	-0.01	29.35	0.8041	9.9019	0.0006
384	SLU 27	0.16	-0.05	29.83	0.8173	10.0622	0.0128
384	SLU 28	0.16	-0.02	29.84	0.8175	10.0652	0.0041
384	SLU 29	0.16	-0.06	29.65	0.8122	10.0011	0.0165
384	SLU 30	0.16	-0.03	29.66	0.8124	10.0041	0.0077
384	SLU 31	0.17	0.02	32.59	0.8932	10.9937	-0.0107
384	SLU 32	0.18	-0.02	33.07	0.9064	11.154	0.0016
384	SLU 33	0.17	0.01	33.08	0.9066	11.157	-0.0072
384	SLU 34	0.17	0.01	32.9	0.9017	11.0979	-0.0094
384	SLU 35	0.18	-0.02	33.38	0.9148	11.2582	0.0029
384	SLU 36	0.17	0	33.39	0.915	11.2612	-0.0059
384	SLU 37	0.17	-0.03	33.2	0.9097	11.1971	0.0065
384	SLU 38	0.17	-0.01	33.2	0.9099	11.2001	-0.0022
384	SLU 39	0.18	-0.01	34.1	0.9347	11.5013	-0.0003
384	SLU 40	0.17	0.01	34.11	0.9349	11.5043	-0.0091
384	SLU 41	0.18	-0.02	34.41	0.9431	11.6055	0.001
384	SLU 42	0.18	0.01	34.42	0.9433	11.6085	-0.0078
384	SLU 43	0.16	-0.13	32.85	0.9	11.0907	0.0398
384	SLU 44	0.16	-0.08	32.86	0.9004	11.0957	0.0252
384	SLU 45	0.17	-0.12	33.34	0.9135	11.2561	0.0374
384	SLU 46	0.17	-0.1	33.35	0.9137	11.2591	0.0287
384	SLU 47	0.16	-0.09	33.17	0.9088	11.1999	0.0265
384	SLU 48	0.17	-0.12	33.65	0.9219	11.3603	0.0387
384	SLU 49	0.17	-0.1	33.66	0.9221	11.3633	0.0299
384	SLU 50	0.17	-0.13	33.47	0.9169	11.2991	0.0424

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
384	SLU 51	0.16	-0.11	33.48	0.9171	11.3021	0.0336
384	SLU 52	0.17	-0.06	36.41	0.9979	12.2917	0.0152
384	SLU 53	0.18	-0.09	36.89	1.011	12.4521	0.0275
384	SLU 54	0.18	-0.07	36.9	1.0112	12.455	0.0187
384	SLU 55	0.17	-0.06	36.72	1.0063	12.3959	0.0165
384	SLU 56	0.18	-0.1	37.2	1.0195	12.5563	0.0287
384	SLU 57	0.18	-0.07	37.21	1.0196	12.5592	0.02
384	SLU 58	0.18	-0.11	37.02	1.0144	12.4951	0.0324
384	SLU 59	0.18	-0.08	37.03	1.0146	12.4981	0.0237
384	SLU 60	0.18	-0.09	37.92	1.0394	12.7993	0.0256
384	SLU 61	0.18	-0.06	37.93	1.0396	12.8023	0.0168
384	SLU 62	0.18	-0.09	38.23	1.0478	12.9035	0.0269
384	SLU 63	0.18	-0.07	38.24	1.048	12.9065	0.0181
384	SLU 64	0.19	-0.09	35.82	0.9816	12.0889	0.0266
384	SLU 65	0.19	-0.05	35.84	0.9819	12.0939	0.012
384	SLU 66	0.19	-0.08	36.32	0.995	12.2542	0.0242
384	SLU 67	0.19	-0.06	36.32	0.9952	12.2572	0.0154
384	SLU 68	0.19	-0.05	36.15	0.9903	12.1981	0.0133
384	SLU 69	0.19	-0.09	36.63	1.0035	12.3584	0.0255
384	SLU 70	0.19	-0.06	36.63	1.0037	12.3614	0.0167
384	SLU 71	0.19	-0.1	36.44	0.9984	12.2973	0.0292
384	SLU 72	0.19	-0.07	36.45	0.9986	12.3003	0.0204
384	SLU 73	0.2	-0.02	39.39	1.0794	13.2899	0.002
384	SLU 74	0.21	-0.06	39.86	1.0926	13.4502	0.0142
384	SLU 75	0.2	-0.03	39.87	1.0928	13.4532	0.0055
384	SLU 76	0.2	-0.03	39.7	1.0879	13.3941	0.0033
384	SLU 77	0.21	-0.06	40.17	1.101	13.5544	0.0155
384	SLU 78	0.21	-0.04	40.18	1.1012	13.5574	0.0068
384	SLU 79	0.2	-0.07	39.99	1.0959	13.4933	0.0192
384	SLU 80	0.2	-0.05	40	1.0961	13.4963	0.0104
384	SLU 81	0.21	-0.05	40.89	1.1209	13.7974	0.0124
384	SLU 82	0.21	-0.03	40.9	1.1211	13.8004	0.0036
384	SLU 83	0.21	-0.06	41.2	1.1293	13.9016	0.0137
384	SLU 84	0.21	-0.03	41.21	1.1295	13.9046	0.0049
384	SLE RA 1	0.14	-0.08	26.9	0.7371	9.0798	0.0234
384	SLE RA 2	0.14	-0.05	26.91	0.7374	9.0831	0.0136
384	SLE RA 3	0.14	-0.07	27.23	0.7461	9.19	0.0218
384	SLE RA 4	0.14	-0.06	27.24	0.7462	9.192	0.0159
384	SLE RA 5	0.14	-0.05	27.12	0.743	9.1526	0.0145
384	SLE RA 6	0.14	-0.08	27.44	0.7517	9.2594	0.0226
384	SLE RA 7	0.14	-0.06	27.44	0.7519	9.2614	0.0168
384	SLE RA 8	0.14	-0.08	27.32	0.7484	9.2187	0.0251
384	SLE RA 9	0.14	-0.07	27.32	0.7485	9.2207	0.0192
384	SLE RA 10	0.15	-0.03	29.28	0.8024	9.8804	0.007
384	SLE RA 11	0.15	-0.06	29.6	0.8111	9.9873	0.0151
384	SLE RA 12	0.15	-0.04	29.6	0.8113	9.9893	0.0093
384	SLE RA 13	0.15	-0.03	29.48	0.808	9.9499	0.0078
384	SLE RA 14	0.15	-0.06	29.8	0.8167	10.0568	0.016
384	SLE RA 15	0.15	-0.04	29.81	0.8169	10.0588	0.0101
384	SLE RA 16	0.15	-0.06	29.68	0.8134	10.016	0.0184
384	SLE RA 17	0.15	-0.05	29.69	0.8135	10.018	0.0126
384	SLE RA 18	0.15	-0.05	30.28	0.83	10.2188	0.0139
384	SLE RA 19	0.15	-0.04	30.29	0.8302	10.2208	0.008
384	SLE RA 20	0.15	-0.05	30.49	0.8356	10.2883	0.0147
384	SLE RA 21	0.15	-0.04	30.49	0.8358	10.2903	0.0089
384	SLE FR 1	0.14	-0.08	26.9	0.7371	9.0798	0.0234
384	SLE FR 2	0.14	-0.07	26.9	0.7372	9.0804	0.0214
384	SLE FR 3	0.14	-0.08	26.99	0.7394	9.1076	0.0237
384	SLE FR 4	0.14	-0.06	27.92	0.765	9.4221	0.0186
384	SLE FR 5	0.14	-0.07	28	0.7672	9.4493	0.0209
384	SLE FR 6	0.15	-0.07	28.59	0.7836	9.6493	0.0186
384	SLE QP 1	0.14	-0.08	26.9	0.7371	9.0798	0.0234
384	SLE QP 2	0.14	-0.07	27.92	0.765	9.4215	0.0205
384	SLD 1	2.68	0.31	28.07	0.7693	9.4847	-0.2
384	SLD 2	2.79	0.32	28.07	0.7692	9.4843	-0.2075
384	SLD 3	2.62	-0.58	27.9	0.7655	9.425	0.1136
384	SLD 4	2.72	-0.57	27.9	0.7655	9.4245	0.1061
384	SLD 5	0.99	1.4	28.23	0.772	9.5311	-0.5199
384	SLD 6	1.06	1.41	28.23	0.7719	9.5308	-0.5248
384	SLD 7	0.77	-1.58	27.65	0.7595	9.332	0.5254
384	SLD 8	0.84	-1.57	27.65	0.7595	9.3317	0.5205
384	SLD 9	-0.55	1.43	28.18	0.7705	9.5112	-0.4794
384	SLD 10	-0.48	1.44	28.18	0.7705	9.5109	-0.4843
384	SLD 11	-0.77	-1.55	27.61	0.7581	9.3121	0.5659
384	SLD 12	-0.7	-1.54	27.61	0.758	9.3118	0.561
384	SLD 13	-2.43	0.43	27.94	0.7645	9.4184	-0.065
384	SLD 14	-2.33	0.44	27.93	0.7645	9.418	-0.0725
384	SLD 15	-2.5	-0.46	27.76	0.7608	9.3587	0.2485
384	SLD 16	-2.4	-0.45	27.76	0.7607	9.3582	0.241
384	SLV 1	6.08	0.79	28.28	0.7749	9.5687	-0.4857
384	SLV 2	6.33	0.83	28.28	0.7748	9.5676	-0.5032
384	SLV 3	5.93	-1.24	27.88	0.7664	9.4326	0.2286
384	SLV 4	6.18	-1.21	27.88	0.7663	9.4316	0.2111
384	SLV 5	2.12	3.27	28.62	0.7809	9.6721	-1.2117
384	SLV 6	2.28	3.29	28.62	0.7809	9.6715	-1.2229
384	SLV 7	1.6	-3.52	27.31	0.7525	9.2187	1.1692
384	SLV 8	1.76	-3.5	27.31	0.7524	9.218	1.158
384	SLV 9	-1.47	3.35	28.53	0.7776	9.625	-1.117
384	SLV 10	-1.31	3.37	28.52	0.7775	9.6243	-1.1282
384	SLV 11	-1.99	-3.43	27.21	0.7491	9.1715	1.2639
384	SLV 12	-1.83	-3.41	27.21	0.7491	9.1708	1.2527

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
384	SLV 13	-5.89	1.07	27.95	0.7637	9.4114	-0.17
384	SLV 14	-5.64	1.1	27.95	0.7636	9.4103	-0.1875
384	SLV 15	-6.04	-0.97	27.56	0.7552	9.2753	0.5442
384	SLV 16	-5.8	-0.94	27.55	0.7551	9.2743	0.5267
384	CRTFP Ux+	0	0	0	0	0	0
384	CRTFP Ux-	0	0	0	0	0	0
384	CRTFP Uy+	0	0	0	0	0	0
384	CRTFP Uy-	0	0	0	0	0	0
387	SLU 1	-0.5	-0.42	46.68	1.2742	-0.2014	-0.0003
387	SLU 2	-0.49	-0.34	46.62	1.2727	-0.2015	-0.0001
387	SLU 3	-0.51	-0.42	47.58	1.2987	-0.2053	-0.0003
387	SLU 4	-0.5	-0.37	47.54	1.2978	-0.2054	-0.0001
387	SLU 5	-0.49	-0.35	47.16	1.2873	-0.204	-0.0001
387	SLU 6	-0.52	-0.42	48.12	1.3133	-0.2078	-0.0003
387	SLU 7	-0.51	-0.38	48.08	1.3125	-0.2079	-0.0001
387	SLU 8	-0.51	-0.44	47.76	1.3035	-0.2064	-0.0003
387	SLU 9	-0.5	-0.39	47.73	1.3026	-0.2065	-0.0002
387	SLU 10	-0.52	-0.35	52.82	1.4421	-0.2338	-0.0009
387	SLU 11	-0.54	-0.43	53.78	1.4682	-0.2376	-0.0012
387	SLU 12	-0.53	-0.38	53.74	1.4673	-0.2377	-0.001
387	SLU 13	-0.52	-0.36	53.36	1.4568	-0.2363	-0.001
387	SLU 14	-0.55	-0.43	54.32	1.4828	-0.2401	-0.0012
387	SLU 15	-0.54	-0.39	54.28	1.4819	-0.2402	-0.001
387	SLU 16	-0.54	-0.45	53.96	1.4729	-0.2387	-0.0012
387	SLU 17	-0.53	-0.4	53.93	1.472	-0.2387	-0.0011
387	SLU 18	-0.54	-0.44	55.54	1.5162	-0.2475	-0.0016
387	SLU 19	-0.53	-0.39	55.5	1.5153	-0.2476	-0.0014
387	SLU 20	-0.54	-0.44	56.08	1.5309	-0.25	-0.0016
387	SLU 21	-0.54	-0.4	56.04	1.53	-0.2501	-0.0014
387	SLU 22	-0.57	-0.4	52.33	1.4288	-0.2258	-0.0002
387	SLU 23	-0.56	-0.32	52.27	1.4273	-0.2259	0.0001
387	SLU 24	-0.59	-0.4	53.22	1.4533	-0.2297	-0.0001
387	SLU 25	-0.58	-0.35	53.19	1.4524	-0.2298	0
387	SLU 26	-0.57	-0.33	52.81	1.442	-0.2284	0.0001
387	SLU 27	-0.59	-0.4	53.77	1.468	-0.2322	-0.0002
387	SLU 28	-0.58	-0.36	53.73	1.4671	-0.2323	0
387	SLU 29	-0.58	-0.42	53.41	1.4581	-0.2308	-0.0002
387	SLU 30	-0.58	-0.37	53.37	1.4572	-0.2308	-0.0001
387	SLU 31	-0.59	-0.33	58.46	1.5968	-0.2582	-0.0008
387	SLU 32	-0.62	-0.41	59.42	1.6228	-0.2619	-0.001
387	SLU 33	-0.61	-0.36	59.39	1.6219	-0.262	-0.0009
387	SLU 34	-0.6	-0.34	59.01	1.6114	-0.2607	-0.0008
387	SLU 35	-0.62	-0.41	59.96	1.6374	-0.2644	-0.0011
387	SLU 36	-0.61	-0.37	59.93	1.6365	-0.2645	-0.0009
387	SLU 37	-0.61	-0.43	59.61	1.6275	-0.263	-0.0011
387	SLU 38	-0.61	-0.38	59.57	1.6267	-0.2631	-0.001
387	SLU 39	-0.62	-0.42	61.18	1.6709	-0.2719	-0.0015
387	SLU 40	-0.61	-0.37	61.15	1.67	-0.2719	-0.0013
387	SLU 41	-0.62	-0.42	61.72	1.6855	-0.2743	-0.0015
387	SLU 42	-0.61	-0.38	61.69	1.6846	-0.2744	-0.0013
387	SLU 43	-0.62	-0.56	58.75	1.6034	-0.2535	-0.0004
387	SLU 44	-0.61	-0.47	58.69	1.6019	-0.2536	-0.0002
387	SLU 45	-0.64	-0.55	59.65	1.6279	-0.2574	-0.0004
387	SLU 46	-0.63	-0.5	59.61	1.627	-0.2575	-0.0003
387	SLU 47	-0.62	-0.48	59.23	1.6165	-0.2561	-0.0002
387	SLU 48	-0.64	-0.56	60.19	1.6426	-0.2599	-0.0004
387	SLU 49	-0.63	-0.51	60.15	1.6417	-0.26	-0.0003
387	SLU 50	-0.63	-0.57	59.83	1.6327	-0.2585	-0.0005
387	SLU 51	-0.62	-0.52	59.8	1.6318	-0.2586	-0.0003
387	SLU 52	-0.64	-0.49	64.89	1.7714	-0.2859	-0.0011
387	SLU 53	-0.66	-0.56	65.85	1.7974	-0.2897	-0.0013
387	SLU 54	-0.66	-0.51	65.81	1.7965	-0.2897	-0.0012
387	SLU 55	-0.64	-0.49	65.43	1.786	-0.2884	-0.0011
387	SLU 56	-0.67	-0.57	66.39	1.812	-0.2922	-0.0013
387	SLU 57	-0.66	-0.52	66.35	1.8111	-0.2922	-0.0012
387	SLU 58	-0.66	-0.58	66.03	1.8021	-0.2907	-0.0014
387	SLU 59	-0.65	-0.53	66	1.8012	-0.2908	-0.0012
387	SLU 60	-0.66	-0.57	67.61	1.8455	-0.2996	-0.0017
387	SLU 61	-0.66	-0.52	67.57	1.8446	-0.2997	-0.0016
387	SLU 62	-0.67	-0.58	68.15	1.8601	-0.3021	-0.0017
387	SLU 63	-0.66	-0.53	68.11	1.8592	-0.3021	-0.0016
387	SLU 64	-0.7	-0.54	64.4	1.758	-0.2778	-0.0003
387	SLU 65	-0.69	-0.46	64.33	1.7565	-0.278	-0.0001
387	SLU 66	-0.71	-0.53	65.29	1.7826	-0.2818	-0.0003
387	SLU 67	-0.7	-0.48	65.26	1.7817	-0.2818	-0.0001
387	SLU 68	-0.69	-0.46	64.88	1.7712	-0.2805	-0.0001
387	SLU 69	-0.72	-0.54	65.83	1.7972	-0.2842	-0.0003
387	SLU 70	-0.71	-0.49	65.8	1.7963	-0.2843	-0.0001
387	SLU 71	-0.71	-0.55	65.48	1.7873	-0.2828	-0.0003
387	SLU 72	-0.7	-0.5	65.44	1.7864	-0.2829	-0.0002
387	SLU 73	-0.71	-0.47	70.53	1.926	-0.3102	-0.001
387	SLU 74	-0.74	-0.54	71.49	1.952	-0.314	-0.0012
387	SLU 75	-0.73	-0.49	71.46	1.9511	-0.3141	-0.001
387	SLU 76	-0.72	-0.47	71.07	1.9406	-0.3127	-0.001
387	SLU 77	-0.74	-0.55	72.03	1.9667	-0.3165	-0.0012
387	SLU 78	-0.74	-0.5	72	1.9658	-0.3166	-0.001
387	SLU 79	-0.74	-0.56	71.68	1.9568	-0.3151	-0.0012
387	SLU 80	-0.73	-0.51	71.64	1.9559	-0.3152	-0.0011
387	SLU 81	-0.74	-0.55	73.25	2.0001	-0.3239	-0.0016
387	SLU 82	-0.73	-0.5	73.21	1.9992	-0.324	-0.0014
387	SLU 83	-0.74	-0.56	73.79	2.0147	-0.3264	-0.0016

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
387	SLU 84	-0.74	-0.51	73.76	2.0139	-0.3265	-0.0015
387	SLE RA 1	-0.52	-0.42	48.29	1.3183	-0.2084	-0.0003
387	SLE RA 2	-0.51	-0.36	48.25	1.3173	-0.2085	-0.0001
387	SLE RA 3	-0.53	-0.41	48.89	1.3347	-0.211	-0.0002
387	SLE RA 4	-0.52	-0.38	48.87	1.3341	-0.211	-0.0001
387	SLE RA 5	-0.52	-0.37	48.61	1.3271	-0.2101	-0.0001
387	SLE RA 6	-0.53	-0.42	49.25	1.3445	-0.2126	-0.0003
387	SLE RA 7	-0.53	-0.39	49.23	1.3439	-0.2127	-0.0002
387	SLE RA 8	-0.53	-0.43	49.02	1.3379	-0.2117	-0.0003
387	SLE RA 9	-0.52	-0.39	48.99	1.3373	-0.2117	-0.0002
387	SLE RA 10	-0.53	-0.37	52.39	1.4303	-0.23	-0.0007
387	SLE RA 11	-0.55	-0.42	53.03	1.4477	-0.2325	-0.0008
387	SLE RA 12	-0.54	-0.39	53	1.4471	-0.2325	-0.0007
387	SLE RA 13	-0.53	-0.37	52.75	1.4401	-0.2316	-0.0007
387	SLE RA 14	-0.55	-0.42	53.39	1.4574	-0.2342	-0.0009
387	SLE RA 15	-0.55	-0.39	53.36	1.4568	-0.2342	-0.0008
387	SLE RA 16	-0.55	-0.43	53.15	1.4508	-0.2332	-0.0009
387	SLE RA 17	-0.54	-0.4	53.12	1.4502	-0.2333	-0.0008
387	SLE RA 18	-0.55	-0.43	54.2	1.4797	-0.2391	-0.0011
387	SLE RA 19	-0.54	-0.39	54.17	1.4791	-0.2391	-0.001
387	SLE RA 20	-0.55	-0.43	54.56	1.4895	-0.2408	-0.0011
387	SLE RA 21	-0.55	-0.4	54.53	1.4889	-0.2408	-0.001
387	SLE FR 1	-0.52	-0.42	48.29	1.3183	-0.2084	-0.0003
387	SLE FR 2	-0.52	-0.41	48.29	1.3181	-0.2084	-0.0002
387	SLE FR 3	-0.52	-0.42	48.44	1.3222	-0.209	-0.0003
387	SLE FR 4	-0.53	-0.41	50.06	1.3666	-0.2176	-0.0005
387	SLE FR 5	-0.53	-0.42	50.21	1.3707	-0.2182	-0.0005
387	SLE FR 6	-0.53	-0.42	51.25	1.399	-0.2237	-0.0007
387	SLE QP 1	-0.52	-0.42	48.29	1.3183	-0.2084	-0.0003
387	SLE QP 2	-0.53	-0.42	50.07	1.3668	-0.2176	-0.0005
387	SLD 1	3.78	0.23	53.55	1.4593	-0.1522	-0.1154
387	SLD 2	3.96	0.02	53.53	1.4589	-0.1535	-0.1177
387	SLD 3	3.88	-1.29	53.36	1.4556	-0.1641	-0.1185
387	SLD 4	4.07	-1.51	53.33	1.4552	-0.1654	-0.1209
387	SLD 5	0.57	2.13	51.41	1.4002	-0.1797	-0.0298
387	SLD 6	0.69	1.99	51.4	1.3999	-0.1805	-0.0313
387	SLD 7	0.92	-2.96	50.76	1.3879	-0.2193	-0.0403
387	SLD 8	1.05	-3.1	50.74	1.3876	-0.2202	-0.0418
387	SLD 9	-2.1	2.26	49.39	1.3459	-0.2149	0.0407
387	SLD 10	-1.98	2.12	49.37	1.3456	-0.2158	0.0392
387	SLD 11	-1.75	-2.83	48.73	1.3336	-0.2546	0.0303
387	SLD 12	-1.63	-2.97	48.72	1.3333	-0.2555	0.0288
387	SLD 13	-5.13	0.67	46.8	1.2783	-0.2697	0.1198
387	SLD 14	-4.94	0.46	46.78	1.2779	-0.2711	0.1175
387	SLD 15	-5.02	-0.86	46.6	1.2746	-0.2816	0.1167
387	SLD 16	-4.83	-1.07	46.58	1.2742	-0.283	0.1144
387	SLV 1	9.54	1.06	58.22	1.5832	-0.065	-0.2692
387	SLV 2	9.98	0.57	58.16	1.5822	-0.0681	-0.2746
387	SLV 3	9.79	-2.42	57.77	1.5747	-0.092	-0.2765
387	SLV 4	10.23	-2.92	57.71	1.5737	-0.0951	-0.2819
387	SLV 5	2.04	5.39	53.2	1.4447	-0.1303	-0.0692
387	SLV 6	2.32	5.07	53.17	1.4441	-0.1322	-0.0726
387	SLV 7	2.87	-6.22	51.71	1.4164	-0.2204	-0.0934
387	SLV 8	3.15	-6.53	51.67	1.4158	-0.2224	-0.0969
387	SLV 9	-4.21	5.7	48.46	1.3177	-0.2128	0.0958
387	SLV 10	-3.93	5.38	48.43	1.3171	-0.2148	0.0924
387	SLV 11	-3.38	-5.91	46.97	1.2894	-0.3029	0.0716
387	SLV 12	-3.1	-6.23	46.93	1.2888	-0.3049	0.0681
387	SLV 13	-11.28	2.08	42.42	1.1598	-0.34	0.2808
387	SLV 14	-10.85	1.59	42.36	1.1588	-0.3431	0.2754
387	SLV 15	-11.03	-1.4	41.97	1.1513	-0.3671	0.2736
387	SLV 16	-10.6	-1.9	41.91	1.1503	-0.3702	0.2682
387	CRTFP Ux+	0	0	0	0	0	0
387	CRTFP Ux-	0	0	0	0	0	0
391	SLU 1	0.31	-0.38	46.59	1.2712	0.1936	-0.0011
391	SLU 2	0.3	-0.3	46.54	1.2699	0.1937	-0.0013
391	SLU 3	0.32	-0.38	47.48	1.2954	0.1971	-0.0012
391	SLU 4	0.32	-0.33	47.45	1.2947	0.1972	-0.0013
391	SLU 5	0.3	-0.31	47.08	1.2845	0.196	-0.0013
391	SLU 6	0.32	-0.39	48.02	1.3101	0.1994	-0.0012
391	SLU 7	0.32	-0.34	47.99	1.3093	0.1995	-0.0013
391	SLU 8	0.32	-0.4	47.67	1.3004	0.1981	-0.001
391	SLU 9	0.31	-0.35	47.64	1.2997	0.1982	-0.0012
391	SLU 10	0.33	-0.29	52.61	1.4357	0.2233	-0.0015
391	SLU 11	0.35	-0.37	53.55	1.4613	0.2267	-0.0014
391	SLU 12	0.34	-0.32	53.52	1.4605	0.2268	-0.0015
391	SLU 13	0.33	-0.3	53.15	1.4504	0.2256	-0.0015
391	SLU 14	0.35	-0.38	54.09	1.4759	0.229	-0.0014
391	SLU 15	0.35	-0.33	54.06	1.4751	0.2291	-0.0015
391	SLU 16	0.34	-0.39	53.74	1.4663	0.2277	-0.0013
391	SLU 17	0.34	-0.34	53.71	1.4655	0.2278	-0.0014
391	SLU 18	0.35	-0.37	55.26	1.5081	0.2359	-0.0014
391	SLU 19	0.35	-0.32	55.23	1.5073	0.236	-0.0015
391	SLU 20	0.35	-0.38	55.8	1.5227	0.2381	-0.0014
391	SLU 21	0.35	-0.33	55.77	1.5219	0.2382	-0.0015
391	SLU 22	0.37	-0.35	52.17	1.4239	0.2145	-0.0016
391	SLU 23	0.36	-0.28	52.12	1.4227	0.2146	-0.0018
391	SLU 24	0.38	-0.35	53.06	1.4482	0.218	-0.0017
391	SLU 25	0.37	-0.31	53.03	1.4474	0.2181	-0.0019
391	SLU 26	0.36	-0.29	52.66	1.4373	0.2169	-0.0018
391	SLU 27	0.38	-0.36	53.6	1.4628	0.2203	-0.0017

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
391	SLU 28	0.38	-0.32	53.57	1.462	0.2204	-0.0019
391	SLU 29	0.37	-0.38	53.25	1.4532	0.219	-0.0016
391	SLU 30	0.37	-0.33	53.22	1.4524	0.2191	-0.0017
391	SLU 31	0.39	-0.27	58.19	1.5885	0.2442	-0.0021
391	SLU 32	0.41	-0.35	59.13	1.614	0.2476	-0.002
391	SLU 33	0.4	-0.3	59.1	1.6132	0.2477	-0.0021
391	SLU 34	0.39	-0.28	58.73	1.6031	0.2465	-0.0021
391	SLU 35	0.41	-0.36	59.67	1.6286	0.2499	-0.002
391	SLU 36	0.4	-0.31	59.64	1.6279	0.25	-0.0021
391	SLU 37	0.4	-0.37	59.32	1.619	0.2486	-0.0019
391	SLU 38	0.4	-0.32	59.29	1.6182	0.2487	-0.002
391	SLU 39	0.41	-0.34	60.84	1.6608	0.2568	-0.002
391	SLU 40	0.4	-0.3	60.81	1.6601	0.2569	-0.0021
391	SLU 41	0.41	-0.36	61.38	1.6754	0.259	-0.002
391	SLU 42	0.41	-0.31	61.35	1.6747	0.2591	-0.0021
391	SLU 43	0.39	-0.5	58.66	1.6002	0.2445	-0.0012
391	SLU 44	0.38	-0.42	58.6	1.5989	0.2447	-0.0014
391	SLU 45	0.4	-0.5	59.54	1.6244	0.2481	-0.0013
391	SLU 46	0.39	-0.45	59.51	1.6237	0.2481	-0.0014
391	SLU 47	0.38	-0.43	59.14	1.6135	0.2469	-0.0014
391	SLU 48	0.4	-0.51	60.08	1.6391	0.2503	-0.0013
391	SLU 49	0.39	-0.46	60.05	1.6383	0.2504	-0.0014
391	SLU 50	0.39	-0.52	59.74	1.6294	0.249	-0.0012
391	SLU 51	0.38	-0.47	59.7	1.6287	0.2491	-0.0013
391	SLU 52	0.4	-0.41	64.67	1.7647	0.2743	-0.0016
391	SLU 53	0.42	-0.49	65.62	1.7903	0.2777	-0.0015
391	SLU 54	0.42	-0.44	65.58	1.7895	0.2777	-0.0017
391	SLU 55	0.41	-0.42	65.21	1.7794	0.2765	-0.0016
391	SLU 56	0.42	-0.5	66.16	1.8049	0.2799	-0.0015
391	SLU 57	0.42	-0.45	66.12	1.8041	0.28	-0.0017
391	SLU 58	0.42	-0.51	65.81	1.7952	0.2786	-0.0014
391	SLU 59	0.41	-0.47	65.77	1.7945	0.2787	-0.0015
391	SLU 60	0.43	-0.49	67.33	1.8371	0.2868	-0.0015
391	SLU 61	0.42	-0.44	67.3	1.8363	0.2869	-0.0017
391	SLU 62	0.43	-0.5	67.87	1.8517	0.2891	-0.0015
391	SLU 63	0.42	-0.45	67.84	1.8509	0.2891	-0.0016
391	SLU 64	0.44	-0.47	64.23	1.7529	0.2654	-0.0017
391	SLU 65	0.43	-0.4	64.18	1.7517	0.2656	-0.0019
391	SLU 66	0.45	-0.47	65.12	1.7772	0.269	-0.0019
391	SLU 67	0.45	-0.43	65.09	1.7764	0.269	-0.002
391	SLU 68	0.44	-0.41	64.72	1.7663	0.2678	-0.0019
391	SLU 69	0.46	-0.49	65.66	1.7918	0.2712	-0.0019
391	SLU 70	0.45	-0.44	65.63	1.791	0.2713	-0.002
391	SLU 71	0.45	-0.5	65.31	1.7822	0.2699	-0.0017
391	SLU 72	0.44	-0.45	65.28	1.7814	0.27	-0.0019
391	SLU 73	0.46	-0.39	70.25	1.9175	0.2952	-0.0022
391	SLU 74	0.48	-0.47	71.19	1.943	0.2985	-0.0021
391	SLU 75	0.48	-0.42	71.16	1.9422	0.2986	-0.0022
391	SLU 76	0.46	-0.4	70.79	1.9321	0.2974	-0.0022
391	SLU 77	0.48	-0.48	71.73	1.9576	0.3008	-0.0021
391	SLU 78	0.48	-0.43	71.7	1.9569	0.3009	-0.0022
391	SLU 79	0.48	-0.49	71.38	1.948	0.2995	-0.002
391	SLU 80	0.47	-0.44	71.35	1.9472	0.2996	-0.0021
391	SLU 81	0.48	-0.47	72.91	1.9898	0.3077	-0.0021
391	SLU 82	0.48	-0.42	72.87	1.9891	0.3078	-0.0022
391	SLU 83	0.49	-0.48	73.45	2.0044	0.31	-0.0021
391	SLU 84	0.48	-0.43	73.41	2.0037	0.31	-0.0022
391	SLE RA 1	0.33	-0.37	48.19	1.3148	0.1996	-0.0012
391	SLE RA 2	0.32	-0.32	48.15	1.314	0.1997	-0.0014
391	SLE RA 3	0.34	-0.37	48.78	1.331	0.2019	-0.0013
391	SLE RA 4	0.33	-0.34	48.76	1.3305	0.202	-0.0014
391	SLE RA 5	0.32	-0.33	48.51	1.3237	0.2012	-0.0013
391	SLE RA 6	0.34	-0.38	49.14	1.3408	0.2034	-0.0013
391	SLE RA 7	0.33	-0.35	49.12	1.3402	0.2035	-0.0014
391	SLE RA 8	0.33	-0.38	48.9	1.3343	0.2026	-0.0012
391	SLE RA 9	0.33	-0.35	48.88	1.3338	0.2026	-0.0013
391	SLE RA 10	0.34	-0.31	52.2	1.4245	0.2194	-0.0015
391	SLE RA 11	0.35	-0.37	52.83	1.4416	0.2217	-0.0015
391	SLE RA 12	0.35	-0.33	52.8	1.441	0.2217	-0.0015
391	SLE RA 13	0.34	-0.32	52.56	1.4343	0.2209	-0.0015
391	SLE RA 14	0.35	-0.37	53.18	1.4513	0.2232	-0.0015
391	SLE RA 15	0.35	-0.34	53.16	1.4508	0.2232	-0.0015
391	SLE RA 16	0.35	-0.38	52.95	1.4449	0.2223	-0.0014
391	SLE RA 17	0.35	-0.35	52.93	1.4444	0.2224	-0.0015
391	SLE RA 18	0.36	-0.36	53.97	1.4728	0.2278	-0.0014
391	SLE RA 19	0.35	-0.33	53.95	1.4723	0.2278	-0.0015
391	SLE RA 20	0.36	-0.37	54.33	1.4825	0.2293	-0.0014
391	SLE RA 21	0.35	-0.34	54.31	1.482	0.2293	-0.0015
391	SLE FR 1	0.33	-0.37	48.19	1.3148	0.1996	-0.0012
391	SLE FR 2	0.33	-0.36	48.18	1.3147	0.1996	-0.0012
391	SLE FR 3	0.33	-0.37	48.33	1.3187	0.2002	-0.0012
391	SLE FR 4	0.34	-0.36	49.91	1.362	0.2081	-0.0013
391	SLE FR 5	0.34	-0.37	50.06	1.3661	0.2086	-0.0013
391	SLE FR 6	0.34	-0.37	51.08	1.3938	0.2137	-0.0013
391	SLE QP 1	0.33	-0.37	48.19	1.3148	0.1996	-0.0012
391	SLE QP 2	0.34	-0.37	49.92	1.3622	0.208	-0.0013
391	SLD 1	4.84	0.51	46.87	1.281	0.2361	-0.1206
391	SLD 2	5.03	0.72	46.88	1.2812	0.235	-0.123
391	SLD 3	4.72	-0.98	46.67	1.2772	0.2483	-0.1175
391	SLD 4	4.91	-0.78	46.69	1.2775	0.2471	-0.1199
391	SLD 5	1.83	2.13	49.3	1.3436	0.1982	-0.0415

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
391	SLD 6	1.95	2.26	49.31	1.3437	0.1975	-0.043
391	SLD 7	1.44	-2.86	48.65	1.3309	0.2388	-0.0309
391	SLD 8	1.57	-2.73	48.66	1.3311	0.238	-0.0325
391	SLD 9	-0.89	1.99	51.18	1.3934	0.1781	0.0299
391	SLD 10	-0.77	2.12	51.19	1.3935	0.1773	0.0284
391	SLD 11	-1.28	-3	50.53	1.3807	0.2186	0.0404
391	SLD 12	-1.16	-2.87	50.54	1.3809	0.2179	0.0389
391	SLD 13	-4.24	0.04	53.15	1.447	0.169	0.1173
391	SLD 14	-4.05	0.25	53.17	1.4472	0.1678	0.1149
391	SLD 15	-4.35	-1.45	52.96	1.4432	0.1811	0.1204
391	SLD 16	-4.17	-1.25	52.97	1.4434	0.18	0.118
391	SLV 1	10.87	1.65	42.77	1.1721	0.2741	-0.2803
391	SLV 2	11.31	2.12	42.81	1.1727	0.2714	-0.2859
391	SLV 3	10.59	-1.76	42.33	1.1635	0.3018	-0.273
391	SLV 4	11.03	-1.29	42.37	1.164	0.2991	-0.2786
391	SLV 5	3.83	5.32	48.44	1.3182	0.1864	-0.0952
391	SLV 6	4.11	5.62	48.47	1.3186	0.1846	-0.0987
391	SLV 7	2.93	-6.03	46.96	1.2894	0.2786	-0.0708
391	SLV 8	3.21	-5.73	46.99	1.2897	0.2768	-0.0743
391	SLV 9	-2.54	4.99	52.85	1.4347	0.1392	0.0718
391	SLV 10	-2.26	5.29	52.88	1.4351	0.1375	0.0682
391	SLV 11	-3.44	-6.36	51.37	1.4058	0.2314	0.0961
391	SLV 12	-3.16	-6.06	51.4	1.4062	0.2297	0.0926
391	SLV 13	-10.36	0.55	57.47	1.5604	0.117	0.276
391	SLV 14	-9.92	1.02	57.51	1.561	0.1143	0.2705
391	SLV 15	-10.63	-2.86	57.03	1.5518	0.1447	0.2833
391	SLV 16	-10.19	-2.39	57.07	1.5523	0.142	0.2778
391	CRTFP Ux+	0	0	0	0	0	0
391	CRTFP Ux-	0	0	0	0	0	0
392	SLU 1	0.18	0.41	29.19	0.7765	9.2256	-0.1482
392	SLU 2	0.18	0.48	29.14	0.7755	9.2109	-0.1733
392	SLU 3	0.19	0.42	29.76	0.7915	9.4035	-0.153
392	SLU 4	0.19	0.46	29.73	0.7909	9.3947	-0.168
392	SLU 5	0.18	0.48	29.48	0.7843	9.3155	-0.1747
392	SLU 6	0.19	0.43	30.09	0.8004	9.5081	-0.1543
392	SLU 7	0.19	0.47	30.07	0.7998	9.4993	-0.1694
392	SLU 8	0.18	0.42	29.86	0.7941	9.4348	-0.1509
392	SLU 9	0.19	0.46	29.83	0.7935	9.4259	-0.166
392	SLU 10	0.19	0.57	32.82	0.873	10.3632	-0.2039
392	SLU 11	0.2	0.51	33.44	0.8891	10.5559	-0.1836
392	SLU 12	0.2	0.55	33.41	0.8885	10.5471	-0.1986
392	SLU 13	0.2	0.57	33.16	0.8818	10.4678	-0.2053
392	SLU 14	0.2	0.51	33.77	0.8979	10.6604	-0.1849
392	SLU 15	0.2	0.56	33.75	0.8973	10.6516	-0.2
392	SLU 16	0.19	0.5	33.54	0.8916	10.5871	-0.1815
392	SLU 17	0.2	0.55	33.51	0.891	10.5783	-0.1966
392	SLU 18	0.2	0.53	34.44	0.9158	10.8718	-0.1919
392	SLU 19	0.2	0.58	34.42	0.9152	10.863	-0.207
392	SLU 20	0.2	0.54	34.78	0.9246	10.9764	-0.1933
392	SLU 21	0.2	0.58	34.75	0.924	10.9676	-0.2084
392	SLU 22	0.22	0.48	32.71	0.8698	10.3269	-0.1752
392	SLU 23	0.22	0.56	32.66	0.8688	10.3122	-0.2004
392	SLU 24	0.22	0.5	33.28	0.8849	10.5048	-0.18
392	SLU 25	0.22	0.54	33.25	0.8843	10.496	-0.1951
392	SLU 26	0.22	0.56	33	0.8777	10.4168	-0.2017
392	SLU 27	0.22	0.5	33.61	0.8937	10.6094	-0.1813
392	SLU 28	0.22	0.54	33.59	0.8931	10.6006	-0.1964
392	SLU 29	0.22	0.49	33.38	0.8875	10.5361	-0.1779
392	SLU 30	0.22	0.53	33.35	0.8869	10.5273	-0.193
392	SLU 31	0.23	0.64	36.34	0.9663	11.4646	-0.231
392	SLU 32	0.23	0.58	36.96	0.9824	11.6572	-0.2106
392	SLU 33	0.23	0.63	36.93	0.9818	11.6484	-0.2257
392	SLU 34	0.23	0.65	36.68	0.9752	11.5691	-0.2323
392	SLU 35	0.23	0.59	37.29	0.9913	11.7618	-0.2119
392	SLU 36	0.23	0.63	37.27	0.9907	11.7529	-0.227
392	SLU 37	0.23	0.58	37.06	0.985	11.6884	-0.2086
392	SLU 38	0.23	0.62	37.03	0.9844	11.6796	-0.2236
392	SLU 39	0.23	0.61	37.96	1.0091	11.9731	-0.219
392	SLU 40	0.23	0.65	37.94	1.0085	11.9643	-0.234
392	SLU 41	0.23	0.61	38.3	1.018	12.0777	-0.2203
392	SLU 42	0.23	0.65	38.27	1.0174	12.0689	-0.2354
392	SLU 43	0.23	0.51	36.74	0.9774	11.6157	-0.1834
392	SLU 44	0.23	0.58	36.69	0.9764	11.601	-0.2085
392	SLU 45	0.23	0.52	37.31	0.9925	11.7936	-0.1882
392	SLU 46	0.23	0.56	37.28	0.9919	11.7848	-0.2032
392	SLU 47	0.23	0.58	37.03	0.9852	11.7056	-0.2099
392	SLU 48	0.23	0.52	37.64	1.0013	11.8982	-0.1895
392	SLU 49	0.23	0.57	37.62	1.0007	11.8894	-0.2046
392	SLU 50	0.23	0.51	37.41	0.995	11.8248	-0.1861
392	SLU 51	0.23	0.56	37.38	0.9944	11.816	-0.2012
392	SLU 52	0.24	0.66	40.37	1.0739	12.7533	-0.2391
392	SLU 53	0.24	0.61	40.99	1.09	12.946	-0.2188
392	SLU 54	0.24	0.65	40.96	1.0894	12.9371	-0.2338
392	SLU 55	0.24	0.67	40.71	1.0827	12.8579	-0.2405
392	SLU 56	0.24	0.61	41.32	1.0988	13.0505	-0.2201
392	SLU 57	0.24	0.65	41.3	1.0982	13.0417	-0.2352
392	SLU 58	0.24	0.6	41.09	1.0926	12.9772	-0.2167
392	SLU 59	0.24	0.64	41.06	1.092	12.9684	-0.2318
392	SLU 60	0.24	0.63	41.99	1.1167	13.2619	-0.2271
392	SLU 61	0.24	0.67	41.97	1.1161	13.2531	-0.2422
392	SLU 62	0.24	0.63	42.33	1.1255	13.3665	-0.2285

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
392	SLU 63	0.24	0.68	42.3	1.1249	13.3576	-0.2436
392	SLU 64	0.26	0.58	40.26	1.0707	12.717	-0.2104
392	SLU 65	0.26	0.65	40.21	1.0697	12.7023	-0.2356
392	SLU 66	0.27	0.59	40.83	1.0858	12.8949	-0.2152
392	SLU 67	0.27	0.64	40.8	1.0852	12.8861	-0.2303
392	SLU 68	0.26	0.66	40.55	1.0786	12.8069	-0.2369
392	SLU 69	0.27	0.6	41.16	1.0947	12.9995	-0.2165
392	SLU 70	0.27	0.64	41.14	1.0941	12.9907	-0.2316
392	SLU 71	0.26	0.59	40.93	1.0884	12.9262	-0.2131
392	SLU 72	0.26	0.63	40.9	1.0878	12.9173	-0.2282
392	SLU 73	0.27	0.74	43.89	1.1673	13.8547	-0.2662
392	SLU 74	0.28	0.68	44.51	1.1834	14.0473	-0.2458
392	SLU 75	0.28	0.72	44.48	1.1828	14.0385	-0.2609
392	SLU 76	0.27	0.74	44.23	1.1761	13.9592	-0.2675
392	SLU 77	0.28	0.68	44.84	1.1922	14.1519	-0.2471
392	SLU 78	0.28	0.73	44.82	1.1916	14.143	-0.2622
392	SLU 79	0.27	0.67	44.61	1.1859	14.0785	-0.2438
392	SLU 80	0.27	0.72	44.58	1.1853	14.0697	-0.2588
392	SLU 81	0.27	0.7	45.51	1.2101	14.3632	-0.2542
392	SLU 82	0.27	0.75	45.49	1.2095	14.3544	-0.2692
392	SLU 83	0.27	0.71	45.85	1.2189	14.4678	-0.2555
392	SLU 84	0.28	0.75	45.82	1.2183	14.459	-0.2706
392	SLE RA 1	0.19	0.43	30.19	0.8031	9.5403	-0.1559
392	SLE RA 2	0.19	0.48	30.17	0.8025	9.5305	-0.1727
392	SLE RA 3	0.2	0.44	30.57	0.8132	9.6589	-0.1591
392	SLE RA 4	0.2	0.47	30.56	0.8128	9.653	-0.1691
392	SLE RA 5	0.19	0.48	30.39	0.8084	9.6002	-0.1736
392	SLE RA 6	0.2	0.44	30.8	0.8191	9.7286	-0.16
392	SLE RA 7	0.2	0.47	30.78	0.8187	9.7227	-0.1701
392	SLE RA 8	0.19	0.44	30.64	0.8149	9.6797	-0.1577
392	SLE RA 9	0.19	0.46	30.62	0.8145	9.6738	-0.1678
392	SLE RA 10	0.2	0.54	32.62	0.8675	10.2987	-0.1931
392	SLE RA 11	0.2	0.5	33.03	0.8782	10.4271	-0.1795
392	SLE RA 12	0.2	0.53	33.01	0.8778	10.4212	-0.1895
392	SLE RA 13	0.2	0.54	32.84	0.8734	10.3684	-0.194
392	SLE RA 14	0.2	0.5	33.25	0.8841	10.4968	-0.1804
392	SLE RA 15	0.2	0.53	33.23	0.8837	10.4909	-0.1905
392	SLE RA 16	0.2	0.49	33.09	0.8799	10.4479	-0.1781
392	SLE RA 17	0.2	0.52	33.08	0.8795	10.442	-0.1882
392	SLE RA 18	0.2	0.51	33.7	0.896	10.6377	-0.1851
392	SLE RA 19	0.2	0.54	33.68	0.8956	10.6319	-0.1951
392	SLE RA 20	0.2	0.52	33.92	0.9019	10.7075	-0.186
392	SLE RA 21	0.2	0.54	33.9	0.9015	10.7016	-0.196
392	SLE FR 1	0.19	0.43	30.19	0.8031	9.5403	-0.1559
392	SLE FR 2	0.19	0.44	30.19	0.803	9.5383	-0.1593
392	SLE FR 3	0.19	0.43	30.28	0.8055	9.5682	-0.1563
392	SLE FR 4	0.2	0.46	31.24	0.8309	9.8675	-0.168
392	SLE FR 5	0.2	0.46	31.33	0.8333	9.8974	-0.165
392	SLE FR 6	0.2	0.47	31.95	0.8496	10.089	-0.1705
392	SLE QP 1	0.19	0.43	30.19	0.8031	9.5403	-0.1559
392	SLE QP 2	0.19	0.45	31.25	0.831	9.8695	-0.1647
392	SLD 1	3.07	0.79	25.34	0.6749	8.0571	-0.3968
392	SLD 2	3.19	1.12	25.38	0.676	8.0709	-0.5144
392	SLD 3	2.99	-0.47	25.12	0.6695	7.9859	0.0475
392	SLD 4	3.11	-0.15	25.16	0.6706	7.9998	-0.0701
392	SLD 5	1.16	2.42	29.8	0.7922	9.4312	-0.8877
392	SLD 6	1.24	2.63	29.83	0.7928	9.4402	-0.964
392	SLD 7	0.89	-1.8	29.06	0.7742	9.1942	0.5934
392	SLD 8	0.97	-1.59	29.09	0.7749	9.2031	0.5171
392	SLD 9	-0.58	2.5	33.4	0.8871	10.5359	-0.8464
392	SLD 10	-0.5	2.71	33.43	0.8878	10.5449	-0.9228
392	SLD 11	-0.85	-1.73	32.66	0.8692	10.2988	0.6347
392	SLD 12	-0.77	-1.51	32.69	0.8698	10.3078	0.5584
392	SLD 13	-2.72	1.06	37.33	0.9914	11.7393	-0.2592
392	SLD 14	-2.6	1.38	37.37	0.9924	11.7531	-0.3769
392	SLD 15	-2.8	-0.21	37.11	0.986	11.6681	0.1851
392	SLD 16	-2.68	0.12	37.15	0.9871	11.6819	0.0675
392	SLV 1	6.92	1.21	17.42	0.4657	5.6269	-0.6941
392	SLV 2	7.21	1.97	17.53	0.4681	5.6591	-0.9681
392	SLV 3	6.72	-1.68	16.91	0.4533	5.4638	0.3166
392	SLV 4	7.01	-0.91	17.01	0.4557	5.496	0.0426
392	SLV 5	2.45	4.93	27.86	0.7398	8.8387	-1.81
392	SLV 6	2.64	5.41	27.92	0.7413	8.8592	-1.9849
392	SLV 7	1.82	-4.69	26.15	0.6985	8.295	1.559
392	SLV 8	2	-4.2	26.22	0.7	8.3155	1.384
392	SLV 9	-1.61	5.11	36.27	0.9619	11.4235	-1.7133
392	SLV 10	-1.43	5.6	36.34	0.9635	11.444	-1.8883
392	SLV 11	-2.25	-4.5	34.57	0.9207	10.8798	1.6556
392	SLV 12	-2.06	-4.02	34.63	0.9222	10.9004	1.4806
392	SLV 13	-6.62	1.82	45.48	1.2063	14.243	-0.3719
392	SLV 14	-6.34	2.59	45.58	1.2087	14.2752	-0.6459
392	SLV 15	-6.82	-1.06	44.96	1.1939	14.0799	0.6387
392	SLV 16	-6.53	-0.3	45.07	1.1963	14.1121	0.3647
392	CRTFP Ux+	0	0	0	0	0	0
392	CRTFP Ux-	0	0	0	0	0	0
392	CRTFP Uy+	0	0	0	0	0	0
392	CRTFP Uy-	0	0	0	0	0	0
394	SLU 1	-0.27	-0.04	25.2	0.659	-5.6713	-0.0023
394	SLU 2	-0.27	0.03	25.15	0.6579	-5.6603	0.0141
394	SLU 3	-0.28	-0.03	25.7	0.6719	-5.7818	-0.0007
394	SLU 4	-0.28	0.01	25.67	0.6712	-5.7752	0.0091

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
394	SLU 5	-0.27	0.03	25.45	0.6655	-5.7253	0.0151
394	SLU 6	-0.28	-0.03	25.99	0.6794	-5.8468	0.0003
394	SLU 7	-0.28	0.01	25.96	0.6788	-5.8402	0.0101
394	SLU 8	-0.27	-0.03	25.78	0.6741	-5.8013	-0.0003
394	SLU 9	-0.27	0.01	25.76	0.6735	-5.7947	0.0095
394	SLU 10	-0.28	0.04	28.36	0.7415	-6.3764	0.0179
394	SLU 11	-0.29	-0.02	28.91	0.7554	-6.498	0.0031
394	SLU 12	-0.29	0.02	28.88	0.7548	-6.4913	0.013
394	SLU 13	-0.28	0.05	28.65	0.7491	-6.4415	0.0189
394	SLU 14	-0.29	-0.01	29.2	0.763	-6.563	0.0041
394	SLU 15	-0.29	0.03	29.17	0.7624	-6.5564	0.0139
394	SLU 16	-0.28	-0.02	28.99	0.7577	-6.5175	0.0035
394	SLU 17	-0.28	0.02	28.97	0.757	-6.5109	0.0133
394	SLU 18	-0.28	-0.02	29.78	0.7783	-6.6944	0.0032
394	SLU 19	-0.28	0.02	29.76	0.7777	-6.6878	0.013
394	SLU 20	-0.29	-0.01	30.08	0.7859	-6.7594	0.0042
394	SLU 21	-0.29	0.03	30.05	0.7853	-6.7528	0.014
394	SLU 22	-0.31	-0.02	28.27	0.7389	-6.3553	0.0029
394	SLU 23	-0.31	0.05	28.22	0.7379	-6.3443	0.0193
394	SLU 24	-0.31	-0.02	28.77	0.7518	-6.4658	0.0045
394	SLU 25	-0.31	0.02	28.74	0.7512	-6.4592	0.0143
394	SLU 26	-0.31	0.05	28.51	0.7455	-6.4093	0.0203
394	SLU 27	-0.32	-0.01	29.06	0.7594	-6.5308	0.0055
394	SLU 28	-0.32	0.03	29.03	0.7588	-6.5242	0.0153
394	SLU 29	-0.31	-0.01	28.85	0.7541	-6.4853	0.0049
394	SLU 30	-0.31	0.03	28.83	0.7534	-6.4787	0.0147
394	SLU 31	-0.32	0.06	31.43	0.8214	-7.0604	0.0231
394	SLU 32	-0.32	0	31.97	0.8354	-7.182	0.0083
394	SLU 33	-0.32	0.04	31.95	0.8348	-7.1753	0.0182
394	SLU 34	-0.32	0.06	31.72	0.829	-7.1254	0.0241
394	SLU 35	-0.33	0	32.27	0.843	-7.247	0.0093
394	SLU 36	-0.33	0.04	32.24	0.8423	-7.2404	0.0191
394	SLU 37	-0.32	0	32.06	0.8376	-7.2015	0.0087
394	SLU 38	-0.32	0.04	32.03	0.837	-7.1949	0.0185
394	SLU 39	-0.32	0	32.85	0.8583	-7.3784	0.0084
394	SLU 40	-0.32	0.04	32.82	0.8577	-7.3718	0.0182
394	SLU 41	-0.32	0	33.14	0.8659	-7.4434	0.0094
394	SLU 42	-0.32	0.04	33.12	0.8652	-7.4368	0.0192
394	SLU 43	-0.34	-0.05	31.71	0.8292	-7.1382	-0.0047
394	SLU 44	-0.34	0.01	31.66	0.8282	-7.1271	0.0117
394	SLU 45	-0.34	-0.05	32.21	0.8421	-7.2487	-0.0032
394	SLU 46	-0.34	-0.01	32.18	0.8415	-7.2421	0.0067
394	SLU 47	-0.34	0.01	31.95	0.8358	-7.1922	0.0126
394	SLU 48	-0.35	-0.05	32.5	0.8497	-7.3137	-0.0022
394	SLU 49	-0.35	-0.01	32.47	0.8491	-7.3071	0.0076
394	SLU 50	-0.34	-0.05	32.29	0.8444	-7.2682	-0.0028
394	SLU 51	-0.34	-0.01	32.27	0.8437	-7.2616	0.007
394	SLU 52	-0.35	0.03	34.87	0.9117	-7.8433	0.0155
394	SLU 53	-0.35	-0.04	35.41	0.9257	-7.9648	0.0007
394	SLU 54	-0.35	0	35.39	0.9251	-7.9582	0.0105
394	SLU 55	-0.35	0.03	35.16	0.9193	-7.9083	0.0165
394	SLU 56	-0.36	-0.03	35.71	0.9333	-8.0299	0.0016
394	SLU 57	-0.36	0.01	35.68	0.9326	-8.0232	0.0115
394	SLU 58	-0.35	-0.03	35.5	0.9279	-7.9844	0.001
394	SLU 59	-0.35	0.01	35.47	0.9273	-7.9778	0.0109
394	SLU 60	-0.35	-0.03	36.29	0.9486	-8.1613	0.0008
394	SLU 61	-0.35	0.01	36.26	0.948	-8.1547	0.0106
394	SLU 62	-0.35	-0.03	36.58	0.9562	-8.2263	0.0017
394	SLU 63	-0.35	0.01	36.56	0.9555	-8.2197	0.0115
394	SLU 64	-0.37	-0.04	34.78	0.9092	-7.8222	0.0005
394	SLU 65	-0.37	0.03	34.73	0.9082	-7.8111	0.0168
394	SLU 66	-0.38	-0.03	35.27	0.9221	-7.9327	0.002
394	SLU 67	-0.38	0.01	35.25	0.9215	-7.926	0.0119
394	SLU 68	-0.38	0.03	35.02	0.9157	-7.8762	0.0178
394	SLU 69	-0.38	-0.03	35.57	0.9297	-7.9977	0.003
394	SLU 70	-0.38	0.01	35.54	0.9291	-7.9911	0.0128
394	SLU 71	-0.38	-0.03	35.36	0.9243	-7.9522	0.0024
394	SLU 72	-0.38	0.01	35.33	0.9237	-7.9456	0.0122
394	SLU 73	-0.38	0.04	37.94	0.9917	-8.5273	0.0207
394	SLU 74	-0.39	-0.02	38.48	1.0057	-8.6488	0.0059
394	SLU 75	-0.39	0.02	38.45	1.005	-8.6422	0.0157
394	SLU 76	-0.39	0.05	38.23	0.9993	-8.5923	0.0216
394	SLU 77	-0.39	-0.01	38.77	1.0132	-8.7138	0.0068
394	SLU 78	-0.39	0.02	38.75	1.0126	-8.7072	0.0167
394	SLU 79	-0.39	-0.02	38.57	1.0079	-8.6684	0.0062
394	SLU 80	-0.39	0.02	38.54	1.0073	-8.6618	0.0161
394	SLU 81	-0.39	-0.02	39.36	1.0286	-8.8453	0.0059
394	SLU 82	-0.39	0.02	39.33	1.0279	-8.8386	0.0158
394	SLU 83	-0.39	-0.01	39.65	1.0361	-8.9103	0.0069
394	SLU 84	-0.39	0.03	39.62	1.0355	-8.9037	0.0167
394	SLE RA 1	-0.28	-0.03	26.08	0.6818	-5.8667	-0.0008
394	SLE RA 2	-0.28	0.01	26.05	0.6811	-5.8594	0.0101
394	SLE RA 3	-0.28	-0.03	26.41	0.6904	-5.9404	0.0003
394	SLE RA 4	-0.28	0	26.39	0.69	-5.936	0.0068
394	SLE RA 5	-0.28	0.01	26.24	0.6862	-5.9027	0.0108
394	SLE RA 6	-0.29	-0.03	26.6	0.6955	-5.9837	0.0009
394	SLE RA 7	-0.29	0	26.58	0.695	-5.9793	0.0075
394	SLE RA 8	-0.28	-0.03	26.47	0.6919	-5.9534	0.0005
394	SLE RA 9	-0.28	0	26.45	0.6915	-5.949	0.0071
394	SLE RA 10	-0.29	0.02	28.19	0.7368	-6.3368	0.0127
394	SLE RA 11	-0.29	-0.02	28.55	0.7461	-6.4178	0.0028

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
394	SLE RA 12	-0.29	0.01	28.53	0.7457	-6.4134	0.0094
394	SLE RA 13	-0.29	0.02	28.38	0.7419	-6.3802	0.0133
394	SLE RA 14	-0.29	-0.02	28.74	0.7512	-6.4612	0.0035
394	SLE RA 15	-0.29	0.01	28.72	0.7507	-6.4568	0.01
394	SLE RA 16	-0.29	-0.02	28.61	0.7476	-6.4309	0.0031
394	SLE RA 17	-0.29	0.01	28.59	0.7472	-6.4264	0.0096
394	SLE RA 18	-0.29	-0.02	29.13	0.7614	-6.5488	0.0029
394	SLE RA 19	-0.29	0.01	29.11	0.761	-6.5444	0.0094
394	SLE RA 20	-0.29	-0.02	29.33	0.7664	-6.5921	0.0035
394	SLE RA 21	-0.29	0.01	29.31	0.766	-6.5877	0.0101
394	SLE FR 1	-0.28	-0.03	26.08	0.6818	-5.8667	-0.0008
394	SLE FR 2	-0.28	-0.02	26.07	0.6817	-5.8653	0.0014
394	SLE FR 3	-0.28	-0.03	26.15	0.6838	-5.8841	-0.0005
394	SLE FR 4	-0.28	-0.02	26.99	0.7055	-6.0699	0.0025
394	SLE FR 5	-0.28	-0.03	27.07	0.7077	-6.0887	0.0006
394	SLE FR 6	-0.28	-0.03	27.6	0.7216	-6.2078	0.001
394	SLE QP 1	-0.28	-0.03	26.08	0.6818	-5.8667	-0.0008
394	SLE QP 2	-0.28	-0.03	26.99	0.7057	-6.0713	0.0003
394	SLD 1	1.98	0.79	32.47	0.8477	-7.2742	0.1065
394	SLD 2	2.08	0.51	32.43	0.8467	-7.2646	0.0352
394	SLD 3	2.04	-0.29	32.27	0.8429	-7.2296	-0.1631
394	SLD 4	2.14	-0.57	32.23	0.842	-7.2201	-0.2344
394	SLD 5	0.29	1.9	28.95	0.7557	-6.5014	0.4535
394	SLD 6	0.36	1.72	28.93	0.755	-6.4952	0.4072
394	SLD 7	0.48	-1.7	28.28	0.7398	-6.3529	-0.4452
394	SLD 8	0.55	-1.88	28.25	0.7392	-6.3467	-0.4915
394	SLD 9	-1.11	1.82	25.74	0.6722	-5.7959	0.4921
394	SLD 10	-1.05	1.64	25.71	0.6716	-5.7898	0.4458
394	SLD 11	-0.92	-1.78	25.06	0.6563	-5.6474	-0.4066
394	SLD 12	-0.86	-1.96	25.03	0.6557	-5.6413	-0.4529
394	SLD 13	-2.71	0.51	21.76	0.5694	-4.9226	0.2351
394	SLD 14	-2.61	0.23	21.72	0.5685	-4.913	0.1638
394	SLD 15	-2.65	-0.57	21.56	0.5646	-4.878	-0.0345
394	SLD 16	-2.55	-0.85	21.51	0.5637	-4.8685	-0.1059
394	SLV 1	5.02	1.86	39.81	1.0379	-8.8853	0.2406
394	SLV 2	5.25	1.21	39.71	1.0357	-8.863	0.0745
394	SLV 3	5.15	-0.61	39.35	1.0268	-8.7826	-0.3744
394	SLV 4	5.38	-1.25	39.24	1.0246	-8.7604	-0.5405
394	SLV 5	1.07	4.38	31.57	0.8224	-7.0749	1.0332
394	SLV 6	1.22	3.97	31.5	0.821	-7.0607	0.9271
394	SLV 7	1.51	-3.83	30	0.7857	-6.7328	-1.0167
394	SLV 8	1.66	-4.24	29.94	0.7843	-6.7186	-1.1228
394	SLV 9	-2.22	4.18	24.05	0.6271	-5.424	1.1234
394	SLV 10	-2.07	3.77	23.98	0.6257	-5.4098	1.0173
394	SLV 11	-1.78	-4.03	22.48	0.5903	-5.0819	-0.9265
394	SLV 12	-1.63	-4.44	22.42	0.5889	-5.0677	-1.0326
394	SLV 13	-5.95	1.19	14.74	0.3867	-3.3823	0.5411
394	SLV 14	-5.72	0.55	14.64	0.3845	-3.36	0.375
394	SLV 15	-5.82	-1.27	14.27	0.3757	-3.2796	-0.0739
394	SLV 16	-5.58	-1.91	14.17	0.3735	-3.2574	-0.24
394	CRTFP Ux+	0	0	0	0	0	0
394	CRTFP Ux-	0	0	0	0	0	0
394	CRTFP Uy+	0	0	0	0	0	0
394	CRTFP Uy-	0	0	0	0	0	0
398	SLU 1	0.15	-0.11	30.3	-0.0168	10.0155	0.0382
398	SLU 2	0.15	-0.06	30.31	-0.0169	10.0202	0.0207
398	SLU 3	0.16	-0.1	30.87	-0.0172	10.2021	0.0355
398	SLU 4	0.15	-0.07	30.88	-0.0172	10.2049	0.025
398	SLU 5	0.15	-0.06	30.67	-0.0172	10.1367	0.0222
398	SLU 6	0.16	-0.1	31.23	-0.0175	10.3186	0.0371
398	SLU 7	0.16	-0.07	31.24	-0.0176	10.3215	0.0266
398	SLU 8	0.15	-0.12	31.01	-0.0175	10.2485	0.0414
398	SLU 9	0.15	-0.09	31.02	-0.0175	10.2513	0.0308
398	SLU 10	0.16	-0.03	34.46	-0.0188	11.3844	0.0098
398	SLU 11	0.17	-0.07	35.01	-0.0191	11.5663	0.0247
398	SLU 12	0.17	-0.04	35.02	-0.0191	11.5692	0.0142
398	SLU 13	0.16	-0.03	34.81	-0.0191	11.501	0.0114
398	SLU 14	0.17	-0.07	35.37	-0.0194	11.6829	0.0263
398	SLU 15	0.17	-0.04	35.38	-0.0195	11.6857	0.0157
398	SLU 16	0.17	-0.09	35.16	-0.0194	11.6127	0.0305
398	SLU 17	0.17	-0.06	35.16	-0.0194	11.6156	0.02
398	SLU 18	0.18	-0.06	36.22	-0.0195	11.9644	0.0227
398	SLU 19	0.17	-0.03	36.23	-0.0196	11.9672	0.0122
398	SLU 20	0.18	-0.07	36.57	-0.0199	12.0809	0.0243
398	SLU 21	0.17	-0.04	36.58	-0.0199	12.0837	0.0138
398	SLU 22	0.18	-0.07	33.76	-0.0186	11.1488	0.0236
398	SLU 23	0.18	-0.02	33.78	-0.0187	11.1535	0.0061
398	SLU 24	0.19	-0.06	34.33	-0.019	11.3354	0.0209
398	SLU 25	0.18	-0.03	34.34	-0.0191	11.3382	0.0104
398	SLU 26	0.18	-0.02	34.13	-0.0191	11.27	0.0077
398	SLU 27	0.19	-0.06	34.69	-0.0194	11.4519	0.0225
398	SLU 28	0.18	-0.03	34.7	-0.0194	11.4547	0.012
398	SLU 29	0.18	-0.08	34.48	-0.0193	11.3818	0.0268
398	SLU 30	0.18	-0.05	34.48	-0.0194	11.3846	0.0163
398	SLU 31	0.19	0.01	37.92	-0.0206	12.5177	-0.0048
398	SLU 32	0.2	-0.03	38.48	-0.0209	12.6996	0.0101
398	SLU 33	0.2	0	38.48	-0.021	12.7024	-0.0004
398	SLU 34	0.19	0.01	38.27	-0.021	12.6342	-0.0032
398	SLU 35	0.2	-0.03	38.83	-0.0213	12.8161	0.0117
398	SLU 36	0.2	0	38.84	-0.0213	12.819	0.0012
398	SLU 37	0.2	-0.04	38.62	-0.0212	12.746	0.0159

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
398	SLU 38	0.2	-0.01	38.63	-0.0213	12.7488	0.0054
398	SLU 39	0.2	-0.02	39.68	-0.0214	13.0977	0.0081
398	SLU 40	0.2	0.01	39.69	-0.0214	13.1005	-0.0024
398	SLU 41	0.2	-0.03	40.04	-0.0217	13.2142	0.0097
398	SLU 42	0.2	0	40.04	-0.0218	13.217	-0.0008
398	SLU 43	0.19	-0.15	38.2	-0.0212	12.6316	0.0547
398	SLU 44	0.18	-0.1	38.22	-0.0213	12.6363	0.0371
398	SLU 45	0.19	-0.15	38.78	-0.0216	12.8182	0.052
398	SLU 46	0.19	-0.12	38.78	-0.0216	12.821	0.0415
398	SLU 47	0.18	-0.11	38.57	-0.0216	12.7528	0.0387
398	SLU 48	0.19	-0.15	39.13	-0.0219	12.9347	0.0536
398	SLU 49	0.19	-0.12	39.14	-0.022	12.9376	0.043
398	SLU 50	0.19	-0.16	38.92	-0.0219	12.8646	0.0578
398	SLU 51	0.19	-0.13	38.93	-0.0219	12.8674	0.0473
398	SLU 52	0.2	-0.07	42.36	-0.0232	14.0005	0.0263
398	SLU 53	0.21	-0.12	42.92	-0.0235	14.1824	0.0412
398	SLU 54	0.21	-0.09	42.93	-0.0235	14.1853	0.0306
398	SLU 55	0.2	-0.08	42.72	-0.0235	14.117	0.0279
398	SLU 56	0.21	-0.12	43.27	-0.0238	14.299	0.0427
398	SLU 57	0.21	-0.09	43.28	-0.0239	14.3018	0.0322
398	SLU 58	0.21	-0.13	43.06	-0.0238	14.2288	0.047
398	SLU 59	0.2	-0.1	43.07	-0.0239	14.2317	0.0365
398	SLU 60	0.21	-0.11	44.12	-0.0239	14.5805	0.0392
398	SLU 61	0.21	-0.08	44.13	-0.024	14.5833	0.0287
398	SLU 62	0.21	-0.12	44.48	-0.0243	14.697	0.0408
398	SLU 63	0.21	-0.09	44.49	-0.0243	14.6998	0.0302
398	SLU 64	0.22	-0.11	41.67	-0.023	13.7649	0.0401
398	SLU 65	0.21	-0.06	41.68	-0.0231	13.7696	0.0225
398	SLU 66	0.22	-0.11	42.24	-0.0234	13.9515	0.0374
398	SLU 67	0.22	-0.08	42.25	-0.0235	13.9543	0.0269
398	SLU 68	0.21	-0.07	42.04	-0.0235	13.8861	0.0241
398	SLU 69	0.22	-0.11	42.59	-0.0238	14.068	0.039
398	SLU 70	0.22	-0.08	42.6	-0.0238	14.0708	0.0285
398	SLU 71	0.22	-0.12	42.38	-0.0237	13.9979	0.0432
398	SLU 72	0.22	-0.09	42.39	-0.0238	14.0007	0.0327
398	SLU 73	0.23	-0.03	45.82	-0.025	15.1338	0.0117
398	SLU 74	0.24	-0.07	46.38	-0.0253	15.3157	0.0266
398	SLU 75	0.23	-0.04	46.39	-0.0254	15.3185	0.016
398	SLU 76	0.23	-0.04	46.18	-0.0254	15.2503	0.0133
398	SLU 77	0.24	-0.08	46.74	-0.0257	15.4322	0.0281
398	SLU 78	0.24	-0.05	46.74	-0.0257	15.4351	0.0176
398	SLU 79	0.23	-0.09	46.52	-0.0256	15.3621	0.0324
398	SLU 80	0.23	-0.06	46.53	-0.0257	15.3649	0.0219
398	SLU 81	0.24	-0.07	47.58	-0.0258	15.7138	0.0246
398	SLU 82	0.24	-0.04	47.59	-0.0258	15.7166	0.0141
398	SLU 83	0.24	-0.07	47.94	-0.0261	15.8303	0.0262
398	SLU 84	0.24	-0.04	47.95	-0.0262	15.8331	0.0156
398	SLE RA 1	0.16	-0.1	31.29	-0.0173	10.3393	0.034
398	SLE RA 2	0.16	-0.06	31.3	-0.0174	10.3424	0.0223
398	SLE RA 3	0.16	-0.09	31.67	-0.0176	10.4637	0.0323
398	SLE RA 4	0.16	-0.07	31.68	-0.0176	10.4656	0.0252
398	SLE RA 5	0.16	-0.07	31.54	-0.0176	10.4201	0.0234
398	SLE RA 6	0.16	-0.09	31.91	-0.0178	10.5414	0.0333
398	SLE RA 7	0.16	-0.07	31.91	-0.0178	10.5433	0.0263
398	SLE RA 8	0.16	-0.1	31.77	-0.0178	10.4946	0.0361
398	SLE RA 9	0.16	-0.08	31.77	-0.0178	10.4965	0.0291
398	SLE RA 10	0.17	-0.04	34.06	-0.0187	11.2519	0.0151
398	SLE RA 11	0.17	-0.07	34.43	-0.0188	11.3732	0.025
398	SLE RA 12	0.17	-0.05	34.44	-0.0189	11.3751	0.018
398	SLE RA 13	0.17	-0.05	34.3	-0.0189	11.3296	0.0162
398	SLE RA 14	0.18	-0.07	34.67	-0.0191	11.4509	0.0261
398	SLE RA 15	0.17	-0.05	34.67	-0.0191	11.4527	0.0191
398	SLE RA 16	0.17	-0.08	34.53	-0.0191	11.4041	0.0289
398	SLE RA 17	0.17	-0.06	34.53	-0.0191	11.406	0.0219
398	SLE RA 18	0.18	-0.07	35.23	-0.0191	11.6385	0.0237
398	SLE RA 19	0.17	-0.05	35.24	-0.0192	11.6404	0.0167
398	SLE RA 20	0.18	-0.07	35.47	-0.0194	11.7162	0.0248
398	SLE RA 21	0.17	-0.05	35.48	-0.0194	11.7181	0.0177
398	SLE FR 1	0.16	-0.1	31.29	-0.0173	10.3393	0.034
398	SLE FR 2	0.16	-0.09	31.29	-0.0173	10.3399	0.0317
398	SLE FR 3	0.16	-0.1	31.39	-0.0174	10.3703	0.0345
398	SLE FR 4	0.16	-0.08	32.48	-0.0179	10.7297	0.0286
398	SLE FR 5	0.17	-0.09	32.57	-0.018	10.7601	0.0314
398	SLE FR 6	0.17	-0.08	33.26	-0.0182	10.9889	0.0289
398	SLE QP 1	0.16	-0.1	31.29	-0.0173	10.3393	0.034
398	SLE QP 2	0.17	-0.09	32.47	-0.0179	10.7291	0.0309
398	SLD 1	3.11	0.37	32.65	-0.0179	10.8044	-0.127
398	SLD 2	3.23	0.38	32.65	-0.0179	10.8036	-0.1323
398	SLD 3	3.04	-0.7	32.5	-0.0163	10.7544	0.2447
398	SLD 4	3.15	-0.68	32.5	-0.0163	10.7536	0.2394
398	SLD 5	1.15	1.66	32.76	-0.0203	10.8276	-0.5794
398	SLD 6	1.22	1.67	32.76	-0.0203	10.8271	-0.5828
398	SLD 7	0.89	-1.88	32.25	-0.015	10.661	0.6598
398	SLD 8	0.96	-1.87	32.25	-0.015	10.6605	0.6564
398	SLD 9	-0.63	1.7	32.7	-0.0208	10.7976	-0.5945
398	SLD 10	-0.56	1.71	32.7	-0.0208	10.7972	-0.5979
398	SLD 11	-0.89	-1.84	32.19	-0.0154	10.631	0.6447
398	SLD 12	-0.82	-1.83	32.19	-0.0154	10.6305	0.6412
398	SLD 13	-2.82	0.51	32.45	-0.0195	10.7045	-0.1775
398	SLD 14	-2.71	0.52	32.45	-0.0195	10.7037	-0.1828
398	SLD 15	-2.9	-0.56	32.3	-0.0179	10.6545	0.1942

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
398	SLD 16	-2.78	-0.54	32.3	-0.0179	10.6537	0.1889
398	SLV 1	7.06	0.94	32.89	-0.0178	10.9047	-0.3276
398	SLV 2	7.33	0.98	32.89	-0.0178	10.903	-0.3399
398	SLV 3	6.88	-1.48	32.54	-0.0142	10.7906	0.5192
398	SLV 4	7.15	-1.44	32.54	-0.0142	10.7889	0.5068
398	SLV 5	2.46	3.89	33.13	-0.0234	10.9551	-1.3588
398	SLV 6	2.63	3.91	33.12	-0.0234	10.954	-1.3667
398	SLV 7	1.86	-4.18	31.97	-0.0112	10.5748	1.4638
398	SLV 8	2.03	-4.16	31.96	-0.0113	10.5737	1.4559
398	SLV 9	-1.7	3.98	32.98	-0.0245	10.8844	-1.394
398	SLV 10	-1.53	4.01	32.98	-0.0245	10.8833	-1.4019
398	SLV 11	-2.3	-4.08	31.82	-0.0124	10.5041	1.4286
398	SLV 12	-2.13	-4.06	31.82	-0.0124	10.503	1.4207
398	SLV 13	-6.82	1.27	32.41	-0.0215	10.6692	-0.445
398	SLV 14	-6.55	1.3	32.41	-0.0216	10.6675	-0.4573
398	SLV 15	-7	-1.15	32.06	-0.0179	10.5551	0.4018
398	SLV 16	-6.73	-1.12	32.06	-0.0179	10.5534	0.3895
398	CRTFP Ux+	0	0	0	0	0	0
398	CRTFP Ux-	0	0	0	0	0	0
398	CRTFP Uy+	0	0	0	0	0	0
398	CRTFP Uy-	0	0	0	0	0	0
401	SLU 1	-0.5	-0.48	53.37	-0.0307	-0.2186	-0.0147
401	SLU 2	-0.49	-0.38	53.31	-0.0304	-0.2187	-0.0141
401	SLU 3	-0.52	-0.47	54.4	-0.0312	-0.2229	-0.0151
401	SLU 4	-0.51	-0.42	54.36	-0.0311	-0.2229	-0.0147
401	SLU 5	-0.5	-0.39	53.92	-0.0309	-0.2213	-0.0142
401	SLU 6	-0.52	-0.48	55.02	-0.0317	-0.2255	-0.0152
401	SLU 7	-0.52	-0.42	54.98	-0.0316	-0.2256	-0.0149
401	SLU 8	-0.51	-0.49	54.6	-0.0317	-0.2239	-0.015
401	SLU 9	-0.51	-0.44	54.56	-0.0316	-0.224	-0.0146
401	SLU 10	-0.52	-0.39	60.41	-0.0339	-0.2542	-0.016
401	SLU 11	-0.54	-0.48	61.51	-0.0347	-0.2584	-0.017
401	SLU 12	-0.53	-0.43	61.47	-0.0345	-0.2585	-0.0167
401	SLU 13	-0.52	-0.4	61.03	-0.0344	-0.2569	-0.0162
401	SLU 14	-0.55	-0.49	62.12	-0.0352	-0.2611	-0.0172
401	SLU 15	-0.54	-0.43	62.08	-0.035	-0.2611	-0.0168
401	SLU 16	-0.54	-0.5	61.7	-0.0352	-0.2594	-0.0169
401	SLU 17	-0.53	-0.45	61.67	-0.035	-0.2595	-0.0165
401	SLU 18	-0.54	-0.49	63.52	-0.0356	-0.2693	-0.0175
401	SLU 19	-0.53	-0.44	63.48	-0.0354	-0.2694	-0.0171
401	SLU 20	-0.54	-0.5	64.13	-0.0361	-0.272	-0.0176
401	SLU 21	-0.54	-0.44	64.1	-0.036	-0.272	-0.0172
401	SLU 22	-0.58	-0.45	59.86	-0.0333	-0.2451	-0.0171
401	SLU 23	-0.57	-0.36	59.79	-0.033	-0.2452	-0.0165
401	SLU 24	-0.59	-0.45	60.89	-0.0338	-0.2494	-0.0175
401	SLU 25	-0.59	-0.39	60.85	-0.0336	-0.2495	-0.0171
401	SLU 26	-0.57	-0.37	60.41	-0.0335	-0.2479	-0.0166
401	SLU 27	-0.6	-0.46	61.5	-0.0343	-0.2521	-0.0176
401	SLU 28	-0.59	-0.4	61.46	-0.0341	-0.2522	-0.0173
401	SLU 29	-0.59	-0.47	61.08	-0.0343	-0.2505	-0.0174
401	SLU 30	-0.58	-0.41	61.05	-0.0341	-0.2505	-0.017
401	SLU 31	-0.59	-0.37	66.9	-0.0364	-0.2808	-0.0184
401	SLU 32	-0.62	-0.46	67.99	-0.0372	-0.285	-0.0194
401	SLU 33	-0.61	-0.4	67.95	-0.0371	-0.285	-0.0191
401	SLU 34	-0.6	-0.38	67.51	-0.0369	-0.2834	-0.0186
401	SLU 35	-0.62	-0.47	68.6	-0.0377	-0.2876	-0.0196
401	SLU 36	-0.62	-0.41	68.56	-0.0376	-0.2877	-0.0192
401	SLU 37	-0.61	-0.48	68.19	-0.0377	-0.286	-0.0193
401	SLU 38	-0.61	-0.42	68.15	-0.0376	-0.2861	-0.0189
401	SLU 39	-0.61	-0.47	70	-0.0382	-0.2959	-0.0199
401	SLU 40	-0.61	-0.41	69.97	-0.038	-0.2959	-0.0195
401	SLU 41	-0.62	-0.48	70.62	-0.0387	-0.2986	-0.02
401	SLU 42	-0.61	-0.42	70.58	-0.0385	-0.2986	-0.0196
401	SLU 43	-0.63	-0.63	67.16	-0.039	-0.275	-0.0183
401	SLU 44	-0.62	-0.54	67.1	-0.0387	-0.2751	-0.0177
401	SLU 45	-0.64	-0.62	68.19	-0.0395	-0.2793	-0.0187
401	SLU 46	-0.64	-0.57	68.15	-0.0394	-0.2794	-0.0183
401	SLU 47	-0.62	-0.54	67.71	-0.0393	-0.2778	-0.0178
401	SLU 48	-0.65	-0.63	68.8	-0.0401	-0.282	-0.0188
401	SLU 49	-0.64	-0.58	68.77	-0.0399	-0.2821	-0.0185
401	SLU 50	-0.64	-0.64	68.39	-0.0401	-0.2804	-0.0186
401	SLU 51	-0.63	-0.59	68.35	-0.0399	-0.2804	-0.0182
401	SLU 52	-0.64	-0.55	74.2	-0.0422	-0.3106	-0.0196
401	SLU 53	-0.67	-0.63	75.29	-0.043	-0.3149	-0.0206
401	SLU 54	-0.66	-0.58	75.26	-0.0428	-0.3149	-0.0203
401	SLU 55	-0.65	-0.55	74.82	-0.0427	-0.3133	-0.0198
401	SLU 56	-0.67	-0.64	75.91	-0.0435	-0.3175	-0.0208
401	SLU 57	-0.66	-0.59	75.87	-0.0433	-0.3176	-0.0204
401	SLU 58	-0.66	-0.65	75.49	-0.0435	-0.3159	-0.0205
401	SLU 59	-0.66	-0.6	75.46	-0.0433	-0.316	-0.0201
401	SLU 60	-0.66	-0.64	77.31	-0.0439	-0.3258	-0.0211
401	SLU 61	-0.66	-0.59	77.27	-0.0438	-0.3258	-0.0207
401	SLU 62	-0.67	-0.65	77.92	-0.0445	-0.3285	-0.0212
401	SLU 63	-0.66	-0.6	77.89	-0.0443	-0.3285	-0.0208
401	SLU 64	-0.71	-0.6	73.65	-0.0416	-0.3016	-0.0207
401	SLU 65	-0.69	-0.51	73.58	-0.0413	-0.3017	-0.0201
401	SLU 66	-0.72	-0.6	74.67	-0.0421	-0.3059	-0.0211
401	SLU 67	-0.71	-0.54	74.64	-0.0419	-0.306	-0.0207
401	SLU 68	-0.7	-0.52	74.2	-0.0418	-0.3044	-0.0202
401	SLU 69	-0.72	-0.61	75.29	-0.0426	-0.3086	-0.0212
401	SLU 70	-0.72	-0.55	75.25	-0.0425	-0.3086	-0.0209

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
401	SLU 71	-0.71	-0.62	74.87	-0.0426	-0.3069	-0.021
401	SLU 72	-0.71	-0.56	74.84	-0.0425	-0.307	-0.0206
401	SLU 73	-0.72	-0.52	80.69	-0.0448	-0.3372	-0.022
401	SLU 74	-0.74	-0.61	81.78	-0.0455	-0.3414	-0.023
401	SLU 75	-0.74	-0.55	81.74	-0.0454	-0.3415	-0.0227
401	SLU 76	-0.72	-0.53	81.3	-0.0453	-0.3399	-0.0222
401	SLU 77	-0.75	-0.62	82.39	-0.0461	-0.3441	-0.0232
401	SLU 78	-0.74	-0.56	82.35	-0.0459	-0.3442	-0.0228
401	SLU 79	-0.74	-0.63	81.98	-0.0461	-0.3425	-0.0229
401	SLU 80	-0.73	-0.57	81.94	-0.0459	-0.3425	-0.0225
401	SLU 81	-0.74	-0.62	83.79	-0.0465	-0.3523	-0.0235
401	SLU 82	-0.73	-0.56	83.76	-0.0463	-0.3524	-0.0231
401	SLU 83	-0.74	-0.63	84.41	-0.047	-0.355	-0.0236
401	SLU 84	-0.74	-0.57	84.37	-0.0469	-0.3551	-0.0232
401	SLE RA 1	-0.53	-0.47	55.23	-0.0314	-0.2262	-0.0154
401	SLE RA 2	-0.52	-0.41	55.18	-0.0312	-0.2262	-0.015
401	SLE RA 3	-0.53	-0.47	55.91	-0.0318	-0.229	-0.0157
401	SLE RA 4	-0.53	-0.43	55.89	-0.0317	-0.2291	-0.0154
401	SLE RA 5	-0.52	-0.41	55.59	-0.0316	-0.228	-0.0151
401	SLE RA 6	-0.54	-0.47	56.32	-0.0321	-0.2308	-0.0158
401	SLE RA 7	-0.53	-0.43	56.3	-0.032	-0.2308	-0.0155
401	SLE RA 8	-0.53	-0.48	56.04	-0.0321	-0.2297	-0.0156
401	SLE RA 9	-0.53	-0.44	56.02	-0.032	-0.2298	-0.0153
401	SLE RA 10	-0.53	-0.41	59.92	-0.0335	-0.2499	-0.0163
401	SLE RA 11	-0.55	-0.47	60.65	-0.0341	-0.2527	-0.017
401	SLE RA 12	-0.55	-0.44	60.62	-0.034	-0.2527	-0.0167
401	SLE RA 13	-0.54	-0.42	60.33	-0.0339	-0.2517	-0.0164
401	SLE RA 14	-0.55	-0.48	61.06	-0.0344	-0.2545	-0.017
401	SLE RA 15	-0.55	-0.44	61.03	-0.0343	-0.2545	-0.0168
401	SLE RA 16	-0.55	-0.49	60.78	-0.0344	-0.2534	-0.0169
401	SLE RA 17	-0.54	-0.45	60.75	-0.0343	-0.2534	-0.0166
401	SLE RA 18	-0.55	-0.48	61.99	-0.0347	-0.26	-0.0172
401	SLE RA 19	-0.54	-0.44	61.97	-0.0346	-0.26	-0.017
401	SLE RA 20	-0.55	-0.49	62.4	-0.0351	-0.2618	-0.0173
401	SLE RA 21	-0.55	-0.45	62.37	-0.0349	-0.2618	-0.0171
401	SLE FR 1	-0.53	-0.47	55.23	-0.0314	-0.2262	-0.0154
401	SLE FR 2	-0.52	-0.46	55.22	-0.0314	-0.2262	-0.0153
401	SLE FR 3	-0.53	-0.47	55.39	-0.0316	-0.2269	-0.0155
401	SLE FR 4	-0.53	-0.46	57.25	-0.0324	-0.2363	-0.0159
401	SLE FR 5	-0.53	-0.48	57.42	-0.0326	-0.237	-0.016
401	SLE FR 6	-0.54	-0.48	58.61	-0.0331	-0.2431	-0.0163
401	SLE QP 1	-0.53	-0.47	55.23	-0.0314	-0.2262	-0.0154
401	SLE QP 2	-0.53	-0.47	57.26	-0.0324	-0.2363	-0.016
401	SLD 1	4.44	0.29	61.13	-0.0389	-0.1585	-0.0054
401	SLD 2	4.64	0.05	61.12	-0.0386	-0.1601	-0.0014
401	SLD 3	4.57	-1.49	60.98	-0.0357	-0.1725	-0.0035
401	SLD 4	4.77	-1.74	60.97	-0.0354	-0.1741	0.0004
401	SLD 5	0.74	2.5	58.65	-0.0393	-0.1913	-0.0163
401	SLD 6	0.87	2.34	58.64	-0.039	-0.1924	-0.0137
401	SLD 7	1.15	-3.44	58.15	-0.0286	-0.2382	-0.0102
401	SLD 8	1.28	-3.6	58.14	-0.0284	-0.2393	-0.0076
401	SLD 9	-2.34	2.65	56.37	-0.0364	-0.2333	-0.0244
401	SLD 10	-2.21	2.49	56.36	-0.0362	-0.2344	-0.0218
401	SLD 11	-1.94	-3.29	55.87	-0.0258	-0.2802	-0.0183
401	SLD 12	-1.81	-3.45	55.86	-0.0256	-0.2813	-0.0157
401	SLD 13	-5.83	0.79	53.54	-0.0294	-0.2985	-0.0324
401	SLD 14	-5.63	0.54	53.53	-0.0291	-0.3001	-0.0284
401	SLD 15	-5.71	-0.99	53.39	-0.0262	-0.3126	-0.0305
401	SLD 16	-5.51	-1.24	53.38	-0.0259	-0.3141	-0.0266
401	SLV 1	11.11	1.27	66.32	-0.0478	-0.0547	0.0089
401	SLV 2	11.57	0.69	66.28	-0.047	-0.0584	0.0181
401	SLV 3	11.39	-2.8	65.98	-0.0405	-0.0866	0.0131
401	SLV 4	11.86	-3.37	65.94	-0.0397	-0.0904	0.0224
401	SLV 5	2.45	6.32	60.51	-0.0481	-0.1327	-0.0165
401	SLV 6	2.75	5.95	60.48	-0.0476	-0.1351	-0.0106
401	SLV 7	3.4	-7.24	59.35	-0.024	-0.2393	-0.0024
401	SLV 8	3.69	-7.61	59.33	-0.0235	-0.2416	0.0035
401	SLV 9	-4.76	6.66	55.18	-0.0413	-0.231	-0.0355
401	SLV 10	-4.46	6.3	55.16	-0.0408	-0.2333	-0.0296
401	SLV 11	-3.81	-6.9	54.03	-0.0172	-0.3375	-0.0213
401	SLV 12	-3.52	-7.26	54	-0.0167	-0.3399	-0.0154
401	SLV 13	-12.92	2.43	48.57	-0.0251	-0.3823	-0.0543
401	SLV 14	-12.46	1.85	48.53	-0.0243	-0.386	-0.0451
401	SLV 15	-12.64	-1.64	48.23	-0.0179	-0.4142	-0.0501
401	SLV 16	-12.17	-2.22	48.19	-0.0171	-0.4179	-0.0408
401	CRTFP Ux+	0	0	0	0	0	0
401	CRTFP Ux-	0	0	0	0	0	0
405	SLU 1	0.33	-0.43	53.23	-0.0323	0.2048	0.0046
405	SLU 2	0.32	-0.34	53.18	-0.032	0.2049	0.0041
405	SLU 3	0.34	-0.43	54.25	-0.0329	0.2085	0.0047
405	SLU 4	0.34	-0.37	54.22	-0.0327	0.2086	0.0044
405	SLU 5	0.32	-0.35	53.79	-0.0325	0.2072	0.0041
405	SLU 6	0.34	-0.44	54.86	-0.0335	0.2108	0.0047
405	SLU 7	0.34	-0.38	54.83	-0.0333	0.2109	0.0044
405	SLU 8	0.34	-0.45	54.46	-0.0334	0.2094	0.0046
405	SLU 9	0.33	-0.4	54.43	-0.0332	0.2095	0.0043
405	SLU 10	0.35	-0.33	60.13	-0.0357	0.2366	0.0044
405	SLU 11	0.37	-0.42	61.2	-0.0366	0.2403	0.005
405	SLU 12	0.37	-0.36	61.17	-0.0364	0.2403	0.0047
405	SLU 13	0.36	-0.34	60.74	-0.0362	0.2389	0.0044
405	SLU 14	0.37	-0.43	61.81	-0.0371	0.2426	0.005

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
405	SLU 15	0.37	-0.38	61.78	-0.037	0.2426	0.0047
405	SLU 16	0.37	-0.44	61.41	-0.0371	0.2412	0.0049
405	SLU 17	0.36	-0.39	61.37	-0.0369	0.2412	0.0046
405	SLU 18	0.38	-0.41	63.16	-0.0376	0.2502	0.0051
405	SLU 19	0.37	-0.36	63.13	-0.0374	0.2502	0.0048
405	SLU 20	0.38	-0.43	63.77	-0.0381	0.2525	0.005
405	SLU 21	0.37	-0.37	63.74	-0.0379	0.2525	0.0047
405	SLU 22	0.39	-0.4	59.64	-0.0351	0.2265	0.0057
405	SLU 23	0.39	-0.31	59.58	-0.0348	0.2266	0.0052
405	SLU 24	0.41	-0.4	60.65	-0.0357	0.2302	0.0058
405	SLU 25	0.4	-0.35	60.62	-0.0356	0.2303	0.0055
405	SLU 26	0.39	-0.32	60.19	-0.0354	0.2289	0.0052
405	SLU 27	0.41	-0.41	61.26	-0.0363	0.2325	0.0058
405	SLU 28	0.4	-0.36	61.23	-0.0361	0.2326	0.0055
405	SLU 29	0.4	-0.42	60.86	-0.0362	0.2311	0.0056
405	SLU 30	0.39	-0.37	60.83	-0.036	0.2312	0.0053
405	SLU 31	0.42	-0.3	66.53	-0.0385	0.2583	0.0055
405	SLU 32	0.44	-0.39	67.6	-0.0394	0.262	0.0061
405	SLU 33	0.43	-0.34	67.57	-0.0393	0.262	0.0058
405	SLU 34	0.42	-0.31	67.14	-0.0391	0.2606	0.0055
405	SLU 35	0.44	-0.4	68.21	-0.04	0.2643	0.0061
405	SLU 36	0.43	-0.35	68.18	-0.0398	0.2643	0.0058
405	SLU 37	0.43	-0.42	67.81	-0.0399	0.2629	0.0059
405	SLU 38	0.42	-0.36	67.78	-0.0397	0.2629	0.0056
405	SLU 39	0.44	-0.39	69.56	-0.0404	0.2719	0.0061
405	SLU 40	0.43	-0.33	69.53	-0.0402	0.2719	0.0058
405	SLU 41	0.44	-0.4	70.17	-0.041	0.2742	0.0061
405	SLU 42	0.43	-0.34	70.14	-0.0408	0.2742	0.0058
405	SLU 43	0.41	-0.57	67.01	-0.0411	0.2588	0.0057
405	SLU 44	0.4	-0.47	66.96	-0.0407	0.2589	0.0052
405	SLU 45	0.42	-0.56	68.03	-0.0417	0.2625	0.0058
405	SLU 46	0.42	-0.51	67.99	-0.0415	0.2625	0.0055
405	SLU 47	0.4	-0.49	67.57	-0.0413	0.2612	0.0051
405	SLU 48	0.42	-0.58	68.64	-0.0422	0.2648	0.0057
405	SLU 49	0.42	-0.52	68.61	-0.042	0.2649	0.0054
405	SLU 50	0.41	-0.59	68.23	-0.0421	0.2634	0.0056
405	SLU 51	0.41	-0.54	68.2	-0.0419	0.2635	0.0053
405	SLU 52	0.43	-0.47	73.9	-0.0444	0.2906	0.0055
405	SLU 53	0.45	-0.56	74.97	-0.0453	0.2943	0.0061
405	SLU 54	0.45	-0.5	74.94	-0.0452	0.2943	0.0058
405	SLU 55	0.43	-0.48	74.52	-0.045	0.2929	0.0054
405	SLU 56	0.45	-0.57	75.59	-0.0459	0.2966	0.006
405	SLU 57	0.45	-0.51	75.55	-0.0457	0.2966	0.0057
405	SLU 58	0.44	-0.58	75.18	-0.0458	0.2952	0.0059
405	SLU 59	0.44	-0.53	75.15	-0.0456	0.2952	0.0056
405	SLU 60	0.45	-0.55	76.94	-0.0463	0.3042	0.0061
405	SLU 61	0.45	-0.5	76.9	-0.0461	0.3042	0.0058
405	SLU 62	0.46	-0.56	77.55	-0.0469	0.3065	0.0061
405	SLU 63	0.45	-0.51	77.52	-0.0467	0.3065	0.0058
405	SLU 64	0.47	-0.54	73.41	-0.0439	0.2805	0.0067
405	SLU 65	0.46	-0.45	73.36	-0.0436	0.2806	0.0062
405	SLU 66	0.48	-0.54	74.43	-0.0445	0.2842	0.0068
405	SLU 67	0.48	-0.48	74.39	-0.0443	0.2842	0.0065
405	SLU 68	0.47	-0.46	73.97	-0.0441	0.2829	0.0062
405	SLU 69	0.49	-0.55	75.04	-0.045	0.2865	0.0068
405	SLU 70	0.48	-0.5	75.01	-0.0448	0.2866	0.0065
405	SLU 71	0.48	-0.56	74.64	-0.0449	0.2851	0.0067
405	SLU 72	0.47	-0.51	74.6	-0.0447	0.2852	0.0064
405	SLU 73	0.49	-0.44	80.31	-0.0473	0.3123	0.0065
405	SLU 74	0.51	-0.53	81.38	-0.0482	0.316	0.0071
405	SLU 75	0.51	-0.47	81.34	-0.048	0.316	0.0068
405	SLU 76	0.5	-0.45	80.92	-0.0478	0.3146	0.0065
405	SLU 77	0.52	-0.54	81.99	-0.0487	0.3183	0.0071
405	SLU 78	0.51	-0.49	81.96	-0.0485	0.3183	0.0068
405	SLU 79	0.51	-0.55	81.58	-0.0486	0.3169	0.007
405	SLU 80	0.5	-0.5	81.55	-0.0484	0.3169	0.0067
405	SLU 81	0.52	-0.52	83.34	-0.0492	0.3259	0.0071
405	SLU 82	0.51	-0.47	83.31	-0.049	0.3259	0.0068
405	SLU 83	0.52	-0.54	83.95	-0.0497	0.3282	0.0071
405	SLU 84	0.51	-0.48	83.92	-0.0495	0.3282	0.0068
405	SLE RA 1	0.35	-0.42	55.06	-0.0331	0.211	0.0049
405	SLE RA 2	0.34	-0.36	55.03	-0.0329	0.211	0.0046
405	SLE RA 3	0.36	-0.42	55.74	-0.0335	0.2135	0.005
405	SLE RA 4	0.35	-0.38	55.72	-0.0334	0.2135	0.0048
405	SLE RA 5	0.35	-0.37	55.44	-0.0333	0.2126	0.0046
405	SLE RA 6	0.36	-0.43	56.15	-0.0339	0.215	0.005
405	SLE RA 7	0.35	-0.39	56.13	-0.0338	0.215	0.0048
405	SLE RA 8	0.35	-0.44	55.88	-0.0338	0.2141	0.0049
405	SLE RA 9	0.35	-0.4	55.86	-0.0337	0.2141	0.0047
405	SLE RA 10	0.36	-0.35	59.66	-0.0354	0.2322	0.0048
405	SLE RA 11	0.38	-0.41	60.37	-0.036	0.2346	0.0052
405	SLE RA 12	0.37	-0.38	60.35	-0.0359	0.2347	0.005
405	SLE RA 13	0.37	-0.36	60.07	-0.0357	0.2338	0.0048
405	SLE RA 14	0.38	-0.42	60.78	-0.0363	0.2362	0.0052
405	SLE RA 15	0.37	-0.39	60.76	-0.0362	0.2362	0.005
405	SLE RA 16	0.37	-0.43	60.51	-0.0363	0.2352	0.0051
405	SLE RA 17	0.37	-0.39	60.49	-0.0362	0.2353	0.0049
405	SLE RA 18	0.38	-0.41	61.68	-0.0367	0.2412	0.0052
405	SLE RA 19	0.38	-0.37	61.66	-0.0365	0.2413	0.005
405	SLE RA 20	0.38	-0.42	62.09	-0.037	0.2428	0.0052
405	SLE RA 21	0.38	-0.38	62.07	-0.0369	0.2428	0.005

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
405	SLE FR 1	0.35	-0.42	55.06	-0.0331	0.211	0.0049
405	SLE FR 2	0.35	-0.41	55.06	-0.0331	0.211	0.0049
405	SLE FR 3	0.35	-0.42	55.23	-0.0333	0.2116	0.0049
405	SLE FR 4	0.36	-0.4	57.04	-0.0341	0.2201	0.0049
405	SLE FR 5	0.36	-0.42	57.21	-0.0343	0.2207	0.005
405	SLE FR 6	0.36	-0.42	58.37	-0.0349	0.2261	0.0051
405	SLE QP 1	0.35	-0.42	55.06	-0.0331	0.211	0.0049
405	SLE QP 2	0.36	-0.42	57.05	-0.0342	0.2201	0.005
405	SLD 1	5.55	0.6	53.64	-0.0297	0.2495	0.02
405	SLD 2	5.75	0.84	53.65	-0.03	0.2481	0.0239
405	SLD 3	5.42	-1.14	53.49	-0.027	0.2638	0.0187
405	SLD 4	5.62	-0.91	53.5	-0.0273	0.2625	0.0226
405	SLD 5	2.08	2.5	56.26	-0.0369	0.2073	0.0108
405	SLD 6	2.21	2.65	56.27	-0.0371	0.2064	0.0134
405	SLD 7	1.64	-3.33	55.74	-0.0278	0.2552	0.0064
405	SLD 8	1.77	-3.17	55.75	-0.028	0.2543	0.009
405	SLD 9	-1.05	2.34	58.35	-0.0404	0.1858	0.0011
405	SLD 10	-0.92	2.49	58.35	-0.0405	0.1849	0.0036
405	SLD 11	-1.5	-3.48	57.83	-0.0312	0.2337	-0.0034
405	SLD 12	-1.37	-3.33	57.84	-0.0314	0.2328	-0.0008
405	SLD 13	-4.9	0.07	60.6	-0.0411	0.1777	-0.0126
405	SLD 14	-4.7	0.31	60.61	-0.0414	0.1763	-0.0086
405	SLD 15	-5.04	-1.67	60.44	-0.0384	0.192	-0.0139
405	SLD 16	-4.83	-1.44	60.45	-0.0387	0.1907	-0.0099
405	SLV 1	12.5	1.92	49.08	-0.0237	0.2893	0.04
405	SLV 2	12.97	2.47	49.1	-0.0243	0.2861	0.0492
405	SLV 3	12.19	-2.06	48.73	-0.0174	0.322	0.0369
405	SLV 4	12.66	-1.51	48.75	-0.0181	0.3188	0.0461
405	SLV 5	4.39	6.22	55.19	-0.0403	0.1918	0.0187
405	SLV 6	4.69	6.58	55.21	-0.0408	0.1898	0.0246
405	SLV 7	3.36	-7.04	54.01	-0.0196	0.3007	0.0083
405	SLV 8	3.66	-6.69	54.02	-0.0201	0.2987	0.0142
405	SLV 9	-2.94	5.85	60.07	-0.0483	0.1415	-0.0042
405	SLV 10	-2.64	6.2	60.09	-0.0487	0.1394	0.0017
405	SLV 11	-3.97	-7.41	58.89	-0.0276	0.2503	-0.0145
405	SLV 12	-3.67	-7.06	58.91	-0.0281	0.2483	-0.0086
405	SLV 13	-11.95	0.68	65.35	-0.0502	0.1214	-0.0361
405	SLV 14	-11.48	1.23	65.37	-0.0509	0.1182	-0.0269
405	SLV 15	-12.25	-3.3	64.99	-0.044	0.154	-0.0392
405	SLV 16	-11.78	-2.75	65.02	-0.0447	0.1508	-0.03
405	CRTFP Ux+	0	0	0	0	0	0
405	CRTFP Ux-	0	0	0	0	0	0
406	SLU 1	0.22	0.48	32.54	-0.0447	9.8918	-0.167
406	SLU 2	0.22	0.56	32.49	-0.0443	9.8777	-0.1963
406	SLU 3	0.23	0.49	33.17	-0.0456	10.0805	-0.1723
406	SLU 4	0.23	0.54	33.14	-0.0454	10.0721	-0.1899
406	SLU 5	0.22	0.56	32.86	-0.0449	9.9882	-0.1979
406	SLU 6	0.23	0.5	33.54	-0.0462	10.191	-0.1739
406	SLU 7	0.23	0.55	33.51	-0.046	10.1826	-0.1915
406	SLU 8	0.23	0.48	33.28	-0.0459	10.1128	-0.1701
406	SLU 9	0.23	0.53	33.25	-0.0457	10.1044	-0.1877
406	SLU 10	0.23	0.66	36.58	-0.0503	11.1051	-0.2317
406	SLU 11	0.24	0.59	37.26	-0.0515	11.3079	-0.2077
406	SLU 12	0.24	0.64	37.23	-0.0514	11.2995	-0.2253
406	SLU 13	0.24	0.67	36.95	-0.0509	11.2156	-0.2333
406	SLU 14	0.25	0.6	37.63	-0.0522	11.4184	-0.2093
406	SLU 15	0.24	0.65	37.6	-0.052	11.41	-0.2269
406	SLU 16	0.24	0.59	37.36	-0.0518	11.3402	-0.2055
406	SLU 17	0.24	0.64	37.34	-0.0516	11.3317	-0.2231
406	SLU 18	0.24	0.62	38.38	-0.0531	11.6452	-0.2176
406	SLU 19	0.24	0.67	38.35	-0.0529	11.6367	-0.2352
406	SLU 20	0.24	0.62	38.75	-0.0537	11.7557	-0.2191
406	SLU 21	0.24	0.67	38.72	-0.0535	11.7472	-0.2367
406	SLU 22	0.26	0.56	36.45	-0.0502	11.0652	-0.1974
406	SLU 23	0.26	0.65	36.41	-0.0499	11.0511	-0.2267
406	SLU 24	0.27	0.58	37.08	-0.0512	11.2539	-0.2027
406	SLU 25	0.27	0.63	37.06	-0.051	11.2455	-0.2203
406	SLU 26	0.26	0.65	36.78	-0.0505	11.1616	-0.2282
406	SLU 27	0.27	0.58	37.45	-0.0518	11.3644	-0.2043
406	SLU 28	0.27	0.63	37.43	-0.0516	11.356	-0.2218
406	SLU 29	0.26	0.57	37.19	-0.0515	11.2862	-0.2005
406	SLU 30	0.26	0.62	37.17	-0.0513	11.2778	-0.2181
406	SLU 31	0.27	0.75	40.5	-0.0559	12.2785	-0.2621
406	SLU 32	0.28	0.68	41.17	-0.0571	12.4813	-0.2381
406	SLU 33	0.28	0.73	41.15	-0.0569	12.4728	-0.2557
406	SLU 34	0.27	0.75	40.87	-0.0565	12.389	-0.2636
406	SLU 35	0.28	0.68	41.54	-0.0577	12.5918	-0.2397
406	SLU 36	0.28	0.73	41.52	-0.0576	12.5833	-0.2572
406	SLU 37	0.28	0.67	41.28	-0.0574	12.5136	-0.2359
406	SLU 38	0.27	0.72	41.25	-0.0572	12.5051	-0.2535
406	SLU 39	0.28	0.71	42.29	-0.0587	12.8186	-0.248
406	SLU 40	0.28	0.76	42.27	-0.0585	12.8101	-0.2655
406	SLU 41	0.28	0.71	42.66	-0.0593	12.9291	-0.2495
406	SLU 42	0.28	0.76	42.64	-0.0591	12.9206	-0.2671
406	SLU 43	0.28	0.59	40.95	-0.0561	12.4571	-0.2067
406	SLU 44	0.28	0.67	40.91	-0.0558	12.443	-0.236
406	SLU 45	0.29	0.6	41.59	-0.0571	12.6458	-0.212
406	SLU 46	0.28	0.65	41.56	-0.0569	12.6373	-0.2296
406	SLU 47	0.28	0.68	41.28	-0.0564	12.5535	-0.2375
406	SLU 48	0.29	0.61	41.96	-0.0577	12.7563	-0.2136
406	SLU 49	0.29	0.66	41.93	-0.0575	12.7478	-0.2311

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
406	SLU 50	0.28	0.6	41.69	-0.0574	12.6781	-0.2098
406	SLU 51	0.28	0.65	41.67	-0.0572	12.6696	-0.2274
406	SLU 52	0.29	0.77	45	-0.0618	13.6703	-0.2714
406	SLU 53	0.3	0.7	45.68	-0.063	13.8731	-0.2474
406	SLU 54	0.3	0.76	45.65	-0.0628	13.8647	-0.265
406	SLU 55	0.29	0.78	45.37	-0.0624	13.7808	-0.2729
406	SLU 56	0.3	0.71	46.05	-0.0636	13.9836	-0.249
406	SLU 57	0.3	0.76	46.02	-0.0634	13.9752	-0.2665
406	SLU 58	0.29	0.7	45.78	-0.0633	13.9054	-0.2452
406	SLU 59	0.29	0.75	45.76	-0.0631	13.897	-0.2628
406	SLU 60	0.3	0.73	46.8	-0.0646	14.2104	-0.2573
406	SLU 61	0.29	0.78	46.77	-0.0644	14.202	-0.2748
406	SLU 62	0.3	0.74	47.17	-0.0652	14.3209	-0.2588
406	SLU 63	0.3	0.79	47.14	-0.065	14.3125	-0.2764
406	SLU 64	0.32	0.68	44.87	-0.0617	13.6304	-0.2371
406	SLU 65	0.31	0.76	44.83	-0.0614	13.6164	-0.2664
406	SLU 66	0.32	0.69	45.5	-0.0627	13.8192	-0.2424
406	SLU 67	0.32	0.74	45.48	-0.0625	13.8107	-0.26
406	SLU 68	0.31	0.76	45.2	-0.062	13.7269	-0.2679
406	SLU 69	0.32	0.7	45.87	-0.0633	13.9297	-0.2439
406	SLU 70	0.32	0.75	45.85	-0.0631	13.9212	-0.2615
406	SLU 71	0.32	0.68	45.61	-0.0629	13.8514	-0.2402
406	SLU 72	0.32	0.73	45.58	-0.0627	13.843	-0.2578
406	SLU 73	0.33	0.86	48.92	-0.0673	14.8437	-0.3018
406	SLU 74	0.34	0.79	49.59	-0.0686	15.0465	-0.2778
406	SLU 75	0.33	0.84	49.57	-0.0684	15.0381	-0.2954
406	SLU 76	0.33	0.87	49.29	-0.0679	14.9542	-0.3033
406	SLU 77	0.34	0.8	49.96	-0.0692	15.157	-0.2793
406	SLU 78	0.34	0.85	49.94	-0.069	15.1486	-0.2969
406	SLU 79	0.33	0.79	49.7	-0.0689	15.0788	-0.2756
406	SLU 80	0.33	0.84	49.67	-0.0687	15.0704	-0.2932
406	SLU 81	0.33	0.82	50.71	-0.0702	15.3838	-0.2876
406	SLU 82	0.33	0.87	50.69	-0.07	15.3754	-0.3052
406	SLU 83	0.33	0.82	51.08	-0.0708	15.4943	-0.2892
406	SLU 84	0.33	0.87	51.06	-0.0706	15.4859	-0.3068
406	SLE RA 1	0.23	0.5	33.65	-0.0463	10.2271	-0.1757
406	SLE RA 2	0.23	0.56	33.63	-0.046	10.2177	-0.1952
406	SLE RA 3	0.24	0.51	34.08	-0.0469	10.3529	-0.1792
406	SLE RA 4	0.24	0.54	34.06	-0.0468	10.3473	-0.191
406	SLE RA 5	0.23	0.56	33.87	-0.0464	10.2914	-0.1963
406	SLE RA 6	0.24	0.51	34.32	-0.0473	10.4266	-0.1803
406	SLE RA 7	0.24	0.55	34.31	-0.0472	10.4209	-0.192
406	SLE RA 8	0.24	0.51	34.15	-0.0471	10.3744	-0.1778
406	SLE RA 9	0.24	0.54	34.13	-0.0469	10.3688	-0.1895
406	SLE RA 10	0.24	0.62	36.35	-0.05	11.0359	-0.2188
406	SLE RA 11	0.25	0.58	36.8	-0.0508	11.1711	-0.2028
406	SLE RA 12	0.25	0.61	36.79	-0.0507	11.1655	-0.2146
406	SLE RA 13	0.24	0.63	36.6	-0.0504	11.1096	-0.2199
406	SLE RA 14	0.25	0.58	37.05	-0.0513	11.2448	-0.2039
406	SLE RA 15	0.25	0.61	37.03	-0.0511	11.2392	-0.2156
406	SLE RA 16	0.24	0.57	36.87	-0.051	11.1926	-0.2014
406	SLE RA 17	0.24	0.61	36.86	-0.0509	11.187	-0.2131
406	SLE RA 18	0.25	0.6	37.55	-0.0519	11.396	-0.2094
406	SLE RA 19	0.25	0.63	37.53	-0.0518	11.3903	-0.2211
406	SLE RA 20	0.25	0.6	37.8	-0.0523	11.4696	-0.2104
406	SLE RA 21	0.25	0.63	37.78	-0.0522	11.464	-0.2222
406	SLE FR 1	0.23	0.5	33.65	-0.0463	10.2271	-0.1757
406	SLE FR 2	0.23	0.51	33.65	-0.0462	10.2252	-0.1796
406	SLE FR 3	0.24	0.5	33.75	-0.0464	10.2565	-0.1761
406	SLE FR 4	0.24	0.54	34.82	-0.0479	10.5759	-0.1897
406	SLE FR 5	0.24	0.53	34.92	-0.0481	10.6072	-0.1862
406	SLE FR 6	0.24	0.55	35.6	-0.0491	10.8115	-0.1925
406	SLE QP 1	0.23	0.5	33.65	-0.0463	10.2271	-0.1757
406	SLE QP 2	0.24	0.53	34.82	-0.048	10.5777	-0.1858
406	SLD 1	3.53	0.92	28.28	-0.0375	8.6598	-0.3231
406	SLD 2	3.66	1.31	28.33	-0.0379	8.6722	-0.4563
406	SLD 3	3.45	-0.56	28.06	-0.036	8.5938	0.1951
406	SLD 4	3.57	-0.17	28.11	-0.0363	8.6062	0.0619
406	SLD 5	1.34	2.83	33.19	-0.0471	10.1002	-0.9897
406	SLD 6	1.42	3.08	33.22	-0.0473	10.1083	-1.0761
406	SLD 7	1.05	-2.11	32.45	-0.042	9.8804	0.7377
406	SLD 8	1.13	-1.86	32.48	-0.0422	9.8884	0.6512
406	SLD 9	-0.65	2.92	37.17	-0.0537	11.2671	-1.0228
406	SLD 10	-0.57	3.17	37.19	-0.0539	11.2751	-1.1093
406	SLD 11	-0.94	-2.02	36.43	-0.0486	11.0472	0.7045
406	SLD 12	-0.86	-1.77	36.45	-0.0488	11.0552	0.6181
406	SLD 13	-3.1	1.23	41.54	-0.0596	12.5492	-0.4335
406	SLD 14	-2.97	1.62	41.58	-0.0599	12.5616	-0.5667
406	SLD 15	-3.18	-0.25	41.32	-0.058	12.4833	0.0847
406	SLD 16	-3.06	0.13	41.36	-0.0584	12.4957	-0.0485
406	SLV 1	7.94	1.41	19.52	-0.0236	6.0887	-0.4908
406	SLV 2	8.24	2.3	19.62	-0.0243	6.1175	-0.8012
406	SLV 3	7.74	-1.96	19.01	-0.0201	5.9369	0.6879
406	SLV 4	8.04	-1.07	19.11	-0.0208	5.9658	0.3775
406	SLV 5	2.8	5.75	30.99	-0.0458	9.4563	-2.0124
406	SLV 6	2.99	6.32	31.05	-0.0463	9.4748	-2.2107
406	SLV 7	2.13	-5.48	29.29	-0.0341	8.9504	1.9166
406	SLV 8	2.32	-4.91	29.35	-0.0346	8.9688	1.7183
406	SLV 9	-1.85	5.97	40.3	-0.0613	12.1866	-2.0899
406	SLV 10	-1.66	6.54	40.36	-0.0618	12.2051	-2.2882
406	SLV 11	-2.52	-5.26	38.59	-0.0496	11.6807	1.8391

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
406	SLV 12	-2.33	-4.7	38.65	-0.0501	11.6992	1.6408
406	SLV 13	-7.56	2.13	50.54	-0.0751	15.1897	-0.7491
406	SLV 14	-7.26	3.02	50.64	-0.0758	15.2186	-1.0595
406	SLV 15	-7.76	-1.24	50.03	-0.0716	15.038	0.4296
406	SLV 16	-7.46	-0.35	50.12	-0.0723	15.0668	0.1192
406	CRTFP Ux+	0	0	0	0	0	0
406	CRTFP Ux-	0	0	0	0	0	0
406	CRTFP Uy+	0	0	0	0	0	0
406	CRTFP Uy-	0	0	0	0	0	0
408	SLU 1	-0.29	-0.05	27.51	-0.0507	-5.8702	-0.0128
408	SLU 2	-0.29	0.03	27.47	-0.0504	-5.8599	0.0062
408	SLU 3	-0.3	-0.04	28.05	-0.0518	-5.9831	-0.0112
408	SLU 4	-0.3	0	28.02	-0.0516	-5.9769	0.0002
408	SLU 5	-0.29	0.03	27.78	-0.051	-5.926	0.0073
408	SLU 6	-0.3	-0.04	28.37	-0.0525	-6.0493	-0.0102
408	SLU 7	-0.3	0.01	28.34	-0.0523	-6.0431	0.0012
408	SLU 8	-0.3	-0.04	28.14	-0.0521	-6.0026	-0.0107
408	SLU 9	-0.3	0.01	28.12	-0.0519	-5.9964	0.0007
408	SLU 10	-0.3	0.05	30.96	-0.0571	-6.5956	0.0102
408	SLU 11	-0.31	-0.03	31.54	-0.0585	-6.7189	-0.0072
408	SLU 12	-0.31	0.02	31.52	-0.0583	-6.7127	0.0042
408	SLU 13	-0.3	0.05	31.27	-0.0578	-6.6618	0.0112
408	SLU 14	-0.31	-0.02	31.86	-0.0592	-6.7851	-0.0062
408	SLU 15	-0.31	0.02	31.83	-0.059	-6.7788	0.0052
408	SLU 16	-0.31	-0.02	31.63	-0.0588	-6.7383	-0.0068
408	SLU 17	-0.31	0.02	31.61	-0.0586	-6.7321	0.0047
408	SLU 18	-0.31	-0.02	32.5	-0.0603	-6.9213	-0.0071
408	SLU 19	-0.3	0.02	32.47	-0.0601	-6.9151	0.0043
408	SLU 20	-0.31	-0.02	32.81	-0.061	-6.9875	-0.0061
408	SLU 21	-0.31	0.03	32.79	-0.0608	-6.9813	0.0053
408	SLU 22	-0.33	-0.03	30.85	-0.057	-6.5729	-0.0082
408	SLU 23	-0.33	0.05	30.81	-0.0567	-6.5626	0.0108
408	SLU 24	-0.34	-0.02	31.39	-0.0581	-6.6858	-0.0067
408	SLU 25	-0.34	0.02	31.37	-0.0579	-6.6796	0.0048
408	SLU 26	-0.33	0.05	31.12	-0.0574	-6.6288	0.0118
408	SLU 27	-0.34	-0.02	31.71	-0.0588	-6.752	-0.0056
408	SLU 28	-0.34	0.03	31.68	-0.0586	-6.7458	0.0058
408	SLU 29	-0.34	-0.02	31.48	-0.0584	-6.7053	-0.0062
408	SLU 30	-0.34	0.03	31.46	-0.0582	-6.6991	0.0052
408	SLU 31	-0.34	0.06	34.3	-0.0634	-7.2983	0.0148
408	SLU 32	-0.35	-0.01	34.88	-0.0649	-7.4216	-0.0027
408	SLU 33	-0.35	0.04	34.86	-0.0647	-7.4154	0.0087
408	SLU 34	-0.34	0.07	34.62	-0.0641	-7.3645	0.0158
408	SLU 35	-0.35	0	35.2	-0.0655	-7.4878	-0.0017
408	SLU 36	-0.35	0.04	35.17	-0.0653	-7.4815	0.0098
408	SLU 37	-0.35	0	34.98	-0.0651	-7.441	-0.0022
408	SLU 38	-0.35	0.04	34.95	-0.0649	-7.4348	0.0092
408	SLU 39	-0.35	-0.01	35.84	-0.0667	-7.624	-0.0025
408	SLU 40	-0.34	0.04	35.81	-0.0665	-7.6178	0.0089
408	SLU 41	-0.35	0	36.16	-0.0673	-7.6902	-0.0015
408	SLU 42	-0.35	0.04	36.13	-0.0671	-7.684	0.0099
408	SLU 43	-0.37	-0.07	34.62	-0.0637	-7.3904	-0.0182
408	SLU 44	-0.36	0.01	34.57	-0.0634	-7.38	0.0008
408	SLU 45	-0.37	-0.06	35.16	-0.0648	-7.5033	-0.0166
408	SLU 46	-0.37	-0.02	35.13	-0.0646	-7.4971	-0.0052
408	SLU 47	-0.36	0.01	34.89	-0.0641	-7.4462	0.0019
408	SLU 48	-0.38	-0.06	35.47	-0.0655	-7.5695	-0.0156
408	SLU 49	-0.37	-0.01	35.45	-0.0653	-7.5632	-0.0042
408	SLU 50	-0.37	-0.06	35.25	-0.0651	-7.5227	-0.0161
408	SLU 51	-0.37	-0.01	35.22	-0.0649	-7.5165	-0.0047
408	SLU 52	-0.37	0.02	38.07	-0.0701	-8.1158	0.0048
408	SLU 53	-0.38	-0.05	38.65	-0.0715	-8.239	-0.0126
408	SLU 54	-0.38	0	38.62	-0.0713	-8.2328	-0.0012
408	SLU 55	-0.37	0.03	38.38	-0.0708	-8.1819	0.0058
408	SLU 56	-0.39	-0.04	38.97	-0.0722	-8.3052	-0.0116
408	SLU 57	-0.38	0	38.94	-0.072	-8.299	-0.0002
408	SLU 58	-0.38	-0.04	38.74	-0.0718	-8.2585	-0.0122
408	SLU 59	-0.38	0	38.72	-0.0716	-8.2522	-0.0007
408	SLU 60	-0.38	-0.05	39.61	-0.0733	-8.4414	-0.0125
408	SLU 61	-0.38	0	39.58	-0.0731	-8.4352	-0.0011
408	SLU 62	-0.38	-0.04	39.92	-0.074	-8.5076	-0.0115
408	SLU 63	-0.38	0	39.9	-0.0738	-8.5014	-0.0001
408	SLU 64	-0.41	-0.05	37.96	-0.0701	-8.0931	-0.0136
408	SLU 65	-0.4	0.03	37.92	-0.0698	-8.0827	0.0054
408	SLU 66	-0.42	-0.04	38.5	-0.0712	-8.206	-0.0121
408	SLU 67	-0.41	0	38.47	-0.071	-8.1998	-0.0006
408	SLU 68	-0.4	0.03	38.23	-0.0704	-8.1489	0.0064
408	SLU 69	-0.42	-0.04	38.81	-0.0718	-8.2722	-0.011
408	SLU 70	-0.41	0.01	38.79	-0.0716	-8.2659	0.0004
408	SLU 71	-0.41	-0.04	38.59	-0.0714	-8.2254	-0.0116
408	SLU 72	-0.41	0	38.57	-0.0712	-8.2192	-0.0002
408	SLU 73	-0.41	0.04	41.41	-0.0765	-8.8185	0.0094
408	SLU 74	-0.43	-0.03	41.99	-0.0779	-8.9417	-0.0081
408	SLU 75	-0.42	0.02	41.96	-0.0777	-8.9355	0.0033
408	SLU 76	-0.41	0.05	41.72	-0.0771	-8.8846	0.0104
408	SLU 77	-0.43	-0.02	42.31	-0.0786	-9.0079	-0.0071
408	SLU 78	-0.42	0.02	42.28	-0.0784	-9.0017	0.0044
408	SLU 79	-0.42	-0.03	42.08	-0.0782	-8.9612	-0.0076
408	SLU 80	-0.42	0.02	42.06	-0.078	-8.955	0.0038
408	SLU 81	-0.42	-0.03	42.95	-0.0797	-9.1441	-0.0079
408	SLU 82	-0.42	0.02	42.92	-0.0795	-9.1379	0.0035

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
408	SLU 83	-0.42	-0.02	43.26	-0.0804	-9.2103	-0.0069
408	SLU 84	-0.42	0.02	43.24	-0.0802	-9.2041	0.0045
408	SLE RA 1	-0.3	-0.04	28.47	-0.0525	-6.071	-0.0115
408	SLE RA 2	-0.3	0.01	28.44	-0.0523	-6.0641	0.0012
408	SLE RA 3	-0.31	-0.04	28.82	-0.0532	-6.1463	-0.0104
408	SLE RA 4	-0.31	-0.01	28.81	-0.0531	-6.1421	-0.0028
408	SLE RA 5	-0.3	0.01	28.65	-0.0527	-6.1082	0.0019
408	SLE RA 6	-0.31	-0.04	29.04	-0.0537	-6.1904	-0.0098
408	SLE RA 7	-0.31	0	29.02	-0.0536	-6.1862	-0.0022
408	SLE RA 8	-0.31	-0.04	28.89	-0.0534	-6.1592	-0.0101
408	SLE RA 9	-0.31	-0.01	28.87	-0.0533	-6.1551	-0.0025
408	SLE RA 10	-0.31	0.02	30.76	-0.0568	-6.5546	0.0039
408	SLE RA 11	-0.32	-0.03	31.15	-0.0577	-6.6368	-0.0078
408	SLE RA 12	-0.31	0	31.14	-0.0576	-6.6326	-0.0002
408	SLE RA 13	-0.31	0.02	30.97	-0.0572	-6.5987	0.0045
408	SLE RA 14	-0.32	-0.02	31.36	-0.0582	-6.6809	-0.0071
408	SLE RA 15	-0.32	0.01	31.35	-0.058	-6.6767	0.0005
408	SLE RA 16	-0.32	-0.03	31.21	-0.0579	-6.6497	-0.0075
408	SLE RA 17	-0.31	0	31.2	-0.0578	-6.6456	0.0001
408	SLE RA 18	-0.31	-0.03	31.79	-0.0589	-6.7717	-0.0077
408	SLE RA 19	-0.31	0	31.77	-0.0588	-6.7676	-0.0001
408	SLE RA 20	-0.32	-0.02	32	-0.0594	-6.8158	-0.007
408	SLE RA 21	-0.31	0.01	31.98	-0.0592	-6.8117	0.0006
408	SLE FR 1	-0.3	-0.04	28.47	-0.0525	-6.071	-0.0115
408	SLE FR 2	-0.3	-0.03	28.46	-0.0525	-6.0696	-0.0089
408	SLE FR 3	-0.31	-0.04	28.55	-0.0527	-6.0887	-0.0112
408	SLE FR 4	-0.31	-0.03	29.46	-0.0544	-6.2798	-0.0078
408	SLE FR 5	-0.31	-0.04	29.55	-0.0546	-6.2989	-0.0101
408	SLE FR 6	-0.31	-0.03	30.13	-0.0557	-6.4214	-0.0096
408	SLE QP 1	-0.3	-0.04	28.47	-0.0525	-6.071	-0.0115
408	SLE QP 2	-0.31	-0.04	29.46	-0.0544	-6.2812	-0.0103
408	SLD 1	2.27	0.91	35.39	-0.0677	-7.5029	0.2273
408	SLD 2	2.37	0.59	35.35	-0.0673	-7.495	0.148
408	SLD 3	2.33	-0.34	35.19	-0.0659	-7.463	-0.0851
408	SLD 4	2.43	-0.66	35.15	-0.0656	-7.4551	-0.1644
408	SLD 5	0.35	2.2	31.55	-0.0611	-6.7097	0.5487
408	SLD 6	0.42	2	31.52	-0.0608	-6.7045	0.4972
408	SLD 7	0.56	-1.97	30.89	-0.0554	-6.5766	-0.4928
408	SLD 8	0.63	-2.18	30.86	-0.0551	-6.5714	-0.5443
408	SLD 9	-1.24	2.1	28.06	-0.0538	-5.991	0.5236
408	SLD 10	-1.18	1.9	28.04	-0.0535	-5.9859	0.4721
408	SLD 11	-1.03	-2.07	27.4	-0.0481	-5.8579	-0.5179
408	SLD 12	-0.97	-2.28	27.38	-0.0478	-5.8528	-0.5693
408	SLD 13	-3.04	0.58	23.77	-0.0433	-5.1074	0.1438
408	SLD 14	-2.94	0.26	23.73	-0.0429	-5.0995	0.0644
408	SLD 15	-2.98	-0.67	23.57	-0.0416	-5.0674	-0.1687
408	SLD 16	-2.88	-0.99	23.54	-0.0412	-5.0595	-0.248
408	SLV 1	5.72	2.15	43.33	-0.0853	-9.1396	0.5366
408	SLV 2	5.95	1.41	43.24	-0.0844	-9.1212	0.3519
408	SLV 3	5.86	-0.71	42.87	-0.0814	-9.0471	-0.176
408	SLV 4	6.09	-1.45	42.78	-0.0805	-9.0287	-0.3608
408	SLV 5	1.24	5.08	34.33	-0.0697	-7.2821	1.2659
408	SLV 6	1.39	4.6	34.27	-0.0692	-7.2704	1.1479
408	SLV 7	1.73	-4.44	32.81	-0.0568	-6.9738	-1.1096
408	SLV 8	1.87	-4.92	32.75	-0.0562	-6.9621	-1.2276
408	SLV 9	-2.49	4.84	26.18	-0.0527	-5.6004	1.2069
408	SLV 10	-2.34	4.37	26.12	-0.0521	-5.5886	1.0889
408	SLV 11	-2	-4.68	24.65	-0.0397	-5.2921	-1.1685
408	SLV 12	-1.85	-5.15	24.59	-0.0391	-5.2803	-1.2865
408	SLV 13	-6.71	1.38	16.14	-0.0284	-3.5337	0.3401
408	SLV 14	-6.48	0.63	16.05	-0.0274	-3.5154	0.1553
408	SLV 15	-6.56	-1.48	15.69	-0.0245	-3.4412	-0.3725
408	SLV 16	-6.33	-2.23	15.59	-0.0236	-3.4229	-0.5573
408	CRTFP Ux+	0	0	0	0	0	0
408	CRTFP Ux-	0	0	0	0	0	0
408	CRTFP Uy+	0	0	0	0	0	0
408	CRTFP Uy-	0	0	0	0	0	0
411	SLU 1	0.13	-0.11	29.84	-0.0098	9.7549	0.0402
411	SLU 2	0.13	-0.06	29.85	-0.0098	9.7585	0.0226
411	SLU 3	0.14	-0.11	30.4	-0.01	9.9352	0.0375
411	SLU 4	0.14	-0.08	30.41	-0.01	9.9374	0.027
411	SLU 5	0.13	-0.07	30.2	-0.0101	9.8698	0.0242
411	SLU 6	0.14	-0.11	30.75	-0.0103	10.0465	0.0391
411	SLU 7	0.14	-0.08	30.76	-0.0103	10.0486	0.0286
411	SLU 8	0.14	-0.12	30.54	-0.0103	9.9774	0.0434
411	SLU 9	0.13	-0.09	30.54	-0.0103	9.9796	0.0328
411	SLU 10	0.15	-0.03	33.95	-0.0108	11.0902	0.0125
411	SLU 11	0.15	-0.08	34.5	-0.011	11.267	0.0274
411	SLU 12	0.15	-0.05	34.5	-0.011	11.2691	0.0169
411	SLU 13	0.15	-0.04	34.29	-0.0111	11.2015	0.0141
411	SLU 14	0.16	-0.08	34.84	-0.0112	11.3782	0.029
411	SLU 15	0.15	-0.05	34.85	-0.0113	11.3804	0.0185
411	SLU 16	0.15	-0.09	34.63	-0.0113	11.3092	0.0333
411	SLU 17	0.15	-0.06	34.63	-0.0113	11.3113	0.0227
411	SLU 18	0.16	-0.07	35.69	-0.0112	11.6574	0.0257
411	SLU 19	0.15	-0.04	35.69	-0.0112	11.6596	0.0152
411	SLU 20	0.16	-0.08	36.03	-0.0114	11.7687	0.0273
411	SLU 21	0.16	-0.05	36.04	-0.0115	11.7708	0.0168
411	SLU 22	0.16	-0.07	33.26	-0.0107	10.8571	0.0259
411	SLU 23	0.15	-0.02	33.27	-0.0108	10.8607	0.0083
411	SLU 24	0.16	-0.06	33.82	-0.011	11.0374	0.0233

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
411	SLU 25	0.16	-0.03	33.82	-0.011	11.0395	0.0127
411	SLU 26	0.15	-0.03	33.61	-0.0111	10.9719	0.0099
411	SLU 27	0.16	-0.07	34.16	-0.0112	11.1486	0.0249
411	SLU 28	0.16	-0.04	34.17	-0.0113	11.1508	0.0143
411	SLU 29	0.16	-0.08	33.95	-0.0112	11.0796	0.0291
411	SLU 30	0.16	-0.05	33.96	-0.0113	11.0817	0.0186
411	SLU 31	0.17	0.01	37.36	-0.0118	12.1924	-0.0018
411	SLU 32	0.18	-0.04	37.91	-0.0119	12.3691	0.0131
411	SLU 33	0.18	-0.01	37.92	-0.012	12.3713	0.0026
411	SLU 34	0.17	0	37.7	-0.012	12.3037	-0.0002
411	SLU 35	0.18	-0.04	38.25	-0.0122	12.4804	0.0147
411	SLU 36	0.18	-0.01	38.26	-0.0122	12.4826	0.0042
411	SLU 37	0.18	-0.05	38.04	-0.0122	12.4113	0.019
411	SLU 38	0.17	-0.02	38.05	-0.0123	12.4135	0.0084
411	SLU 39	0.18	-0.03	39.1	-0.0121	12.7596	0.0114
411	SLU 40	0.18	0	39.11	-0.0122	12.7617	0.0009
411	SLU 41	0.18	-0.04	39.45	-0.0124	12.8708	0.013
411	SLU 42	0.18	0	39.45	-0.0124	12.873	0.0025
411	SLU 43	0.17	-0.16	37.63	-0.0124	12.3035	0.0571
411	SLU 44	0.16	-0.11	37.64	-0.0124	12.3071	0.0395
411	SLU 45	0.17	-0.15	38.19	-0.0126	12.4838	0.0545
411	SLU 46	0.17	-0.12	38.19	-0.0126	12.4859	0.0439
411	SLU 47	0.16	-0.12	37.98	-0.0127	12.4183	0.0412
411	SLU 48	0.17	-0.16	38.53	-0.0129	12.595	0.0561
411	SLU 49	0.17	-0.13	38.54	-0.0129	12.5972	0.0455
411	SLU 50	0.17	-0.17	38.32	-0.0129	12.526	0.0603
411	SLU 51	0.17	-0.14	38.32	-0.0129	12.5282	0.0498
411	SLU 52	0.18	-0.08	41.73	-0.0134	13.6388	0.0294
411	SLU 53	0.19	-0.12	42.28	-0.0136	13.8155	0.0444
411	SLU 54	0.18	-0.09	42.28	-0.0136	13.8177	0.0338
411	SLU 55	0.18	-0.09	42.07	-0.0137	13.7501	0.031
411	SLU 56	0.19	-0.13	42.62	-0.0139	13.9268	0.046
411	SLU 57	0.19	-0.1	42.63	-0.0139	13.929	0.0354
411	SLU 58	0.18	-0.14	42.41	-0.0139	13.8577	0.0502
411	SLU 59	0.18	-0.11	42.42	-0.0139	13.8599	0.0397
411	SLU 60	0.19	-0.12	43.47	-0.0138	14.206	0.0427
411	SLU 61	0.19	-0.09	43.48	-0.0138	14.2081	0.0321
411	SLU 62	0.19	-0.12	43.82	-0.014	14.3172	0.0443
411	SLU 63	0.19	-0.09	43.82	-0.0141	14.3194	0.0337
411	SLU 64	0.19	-0.12	41.04	-0.0133	13.4056	0.0428
411	SLU 65	0.19	-0.07	41.05	-0.0134	13.4092	0.0253
411	SLU 66	0.19	-0.11	41.6	-0.0136	13.586	0.0402
411	SLU 67	0.19	-0.08	41.61	-0.0136	13.5881	0.0297
411	SLU 68	0.19	-0.07	41.4	-0.0137	13.5205	0.0269
411	SLU 69	0.19	-0.12	41.95	-0.0138	13.6972	0.0418
411	SLU 70	0.19	-0.09	41.95	-0.0139	13.6994	0.0313
411	SLU 71	0.19	-0.13	41.73	-0.0138	13.6282	0.046
411	SLU 72	0.19	-0.1	41.74	-0.0139	13.6303	0.0355
411	SLU 73	0.2	-0.04	45.14	-0.0144	14.741	0.0152
411	SLU 74	0.21	-0.08	45.69	-0.0145	14.9177	0.0301
411	SLU 75	0.21	-0.05	45.7	-0.0146	14.9199	0.0196
411	SLU 76	0.2	-0.05	45.49	-0.0146	14.8523	0.0168
411	SLU 77	0.21	-0.09	46.04	-0.0148	15.029	0.0317
411	SLU 78	0.21	-0.06	46.04	-0.0149	15.0311	0.0212
411	SLU 79	0.21	-0.1	45.82	-0.0148	14.9599	0.0359
411	SLU 80	0.21	-0.07	45.83	-0.0149	14.9621	0.0254
411	SLU 81	0.21	-0.08	46.88	-0.0147	15.3081	0.0284
411	SLU 82	0.21	-0.05	46.89	-0.0148	15.3103	0.0178
411	SLU 83	0.21	-0.08	47.23	-0.015	15.4194	0.03
411	SLU 84	0.21	-0.05	47.24	-0.015	15.4216	0.0195
411	SLE RA 1	0.14	-0.1	30.82	-0.01	10.0698	0.0361
411	SLE RA 2	0.14	-0.07	30.83	-0.0101	10.0722	0.0244
411	SLE RA 3	0.14	-0.1	31.19	-0.0102	10.19	0.0343
411	SLE RA 4	0.14	-0.08	31.2	-0.0102	10.1914	0.0273
411	SLE RA 5	0.14	-0.07	31.06	-0.0103	10.1464	0.0254
411	SLE RA 6	0.14	-0.1	31.42	-0.0104	10.2642	0.0354
411	SLE RA 7	0.14	-0.08	31.43	-0.0104	10.2656	0.0284
411	SLE RA 8	0.14	-0.11	31.28	-0.0104	10.2181	0.0382
411	SLE RA 9	0.14	-0.09	31.28	-0.0104	10.2196	0.0312
411	SLE RA 10	0.15	-0.05	33.55	-0.0107	10.96	0.0176
411	SLE RA 11	0.15	-0.08	33.92	-0.0109	11.0778	0.0276
411	SLE RA 12	0.15	-0.06	33.92	-0.0109	11.0793	0.0206
411	SLE RA 13	0.15	-0.05	33.78	-0.0109	11.0342	0.0187
411	SLE RA 14	0.16	-0.08	34.15	-0.011	11.152	0.0287
411	SLE RA 15	0.15	-0.06	34.15	-0.0111	11.1535	0.0216
411	SLE RA 16	0.15	-0.09	34.01	-0.011	11.106	0.0315
411	SLE RA 17	0.15	-0.07	34.01	-0.0111	11.1074	0.0245
411	SLE RA 18	0.16	-0.07	34.72	-0.011	11.3381	0.0264
411	SLE RA 19	0.15	-0.05	34.72	-0.011	11.3396	0.0194
411	SLE RA 20	0.16	-0.08	34.95	-0.0112	11.4123	0.0275
411	SLE RA 21	0.16	-0.06	34.95	-0.0112	11.4137	0.0205
411	SLE FR 1	0.14	-0.1	30.82	-0.01	10.0698	0.0361
411	SLE FR 2	0.14	-0.09	30.82	-0.01	10.0703	0.0337
411	SLE FR 3	0.14	-0.1	30.91	-0.0101	10.0995	0.0365
411	SLE FR 4	0.14	-0.09	31.99	-0.0103	10.4508	0.0309
411	SLE FR 5	0.15	-0.09	32.08	-0.0104	10.48	0.0336
411	SLE FR 6	0.15	-0.09	32.77	-0.0105	10.704	0.0313
411	SLE QP 1	0.14	-0.1	30.82	-0.01	10.0698	0.0361
411	SLE QP 2	0.15	-0.09	31.99	-0.0103	10.4503	0.0332
411	SLD 1	3.01	0.36	32.16	-0.0106	10.5229	-0.125
411	SLD 2	3.11	0.38	32.16	-0.0106	10.5222	-0.1303

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
411	SLD 3	2.94	-0.7	32.05	-0.0092	10.4899	0.247
411	SLD 4	3.04	-0.69	32.05	-0.0092	10.4891	0.2417
411	SLD 5	1.1	1.65	32.2	-0.0125	10.5223	-0.5776
411	SLD 6	1.16	1.66	32.2	-0.0125	10.5218	-0.581
411	SLD 7	0.85	-1.89	31.85	-0.0079	10.4122	0.6625
411	SLD 8	0.92	-1.88	31.84	-0.0079	10.4117	0.659
411	SLD 9	-0.63	1.7	32.13	-0.0127	10.4889	-0.5926
411	SLD 10	-0.56	1.71	32.13	-0.0127	10.4884	-0.5961
411	SLD 11	-0.87	-1.85	31.78	-0.0082	10.3787	0.6474
411	SLD 12	-0.81	-1.84	31.77	-0.0082	10.3783	0.6439
411	SLD 13	-2.75	0.5	31.93	-0.0114	10.4115	-0.1753
411	SLD 14	-2.64	0.52	31.92	-0.0114	10.4107	-0.1806
411	SLD 15	-2.82	-0.56	31.82	-0.01	10.3784	0.1967
411	SLD 16	-2.72	-0.55	31.82	-0.01	10.3777	0.1914
411	SLV 1	6.84	0.94	32.39	-0.0109	10.6202	-0.3258
411	SLV 2	7.07	0.98	32.38	-0.0109	10.6184	-0.3383
411	SLV 3	6.67	-1.48	32.14	-0.0078	10.5444	0.5215
411	SLV 4	6.91	-1.45	32.14	-0.0078	10.5427	0.5091
411	SLV 5	2.37	3.88	32.48	-0.0152	10.6165	-1.3576
411	SLV 6	2.52	3.91	32.48	-0.0152	10.6154	-1.3655
411	SLV 7	1.81	-4.19	31.67	-0.0049	10.3639	1.467
411	SLV 8	1.96	-4.17	31.66	-0.0049	10.3628	1.4591
411	SLV 9	-1.67	3.98	32.31	-0.0158	10.5378	-1.3927
411	SLV 10	-1.52	4.01	32.31	-0.0158	10.5367	-1.4006
411	SLV 11	-2.23	-4.09	31.5	-0.0054	10.2852	1.4319
411	SLV 12	-2.08	-4.07	31.5	-0.0054	10.2841	1.424
411	SLV 13	-6.62	1.26	31.84	-0.0128	10.3579	-0.4427
411	SLV 14	-6.38	1.3	31.83	-0.0128	10.3562	-0.4552
411	SLV 15	-6.78	-1.16	31.59	-0.0097	10.2821	0.4047
411	SLV 16	-6.55	-1.12	31.59	-0.0097	10.2804	0.3922
411	CRTFP Ux+	0	0	0	0	0	0
411	CRTFP Ux-	0	0	0	0	0	0
411	CRTFP Uy+	0	0	0	0	0	0
411	CRTFP Uy-	0	0	0	0	0	0
415	SLU 1	-0.43	-0.46	52.59	-0.0204	-0.2009	-0.012
415	SLU 2	-0.43	-0.37	52.53	-0.0201	-0.2009	-0.0115
415	SLU 3	-0.45	-0.45	53.6	-0.0207	-0.2049	-0.0124
415	SLU 4	-0.44	-0.4	53.57	-0.0205	-0.2049	-0.0121
415	SLU 5	-0.43	-0.37	53.13	-0.0205	-0.2033	-0.0116
415	SLU 6	-0.45	-0.46	54.2	-0.0211	-0.2073	-0.0124
415	SLU 7	-0.45	-0.41	54.17	-0.0209	-0.2073	-0.0121
415	SLU 8	-0.44	-0.47	53.79	-0.0212	-0.2057	-0.0122
415	SLU 9	-0.44	-0.42	53.75	-0.021	-0.2057	-0.0119
415	SLU 10	-0.44	-0.37	59.56	-0.022	-0.2342	-0.0132
415	SLU 11	-0.46	-0.46	60.63	-0.0225	-0.2381	-0.0141
415	SLU 12	-0.45	-0.41	60.59	-0.0224	-0.2381	-0.0138
415	SLU 13	-0.44	-0.38	60.15	-0.0224	-0.2366	-0.0133
415	SLU 14	-0.46	-0.47	61.22	-0.0229	-0.2406	-0.0142
415	SLU 15	-0.46	-0.41	61.19	-0.0228	-0.2406	-0.0139
415	SLU 16	-0.46	-0.48	60.81	-0.023	-0.239	-0.0139
415	SLU 17	-0.45	-0.43	60.78	-0.0229	-0.239	-0.0136
415	SLU 18	-0.45	-0.47	62.62	-0.023	-0.2484	-0.0145
415	SLU 19	-0.45	-0.42	62.59	-0.0229	-0.2484	-0.0142
415	SLU 20	-0.46	-0.48	63.22	-0.0234	-0.2508	-0.0146
415	SLU 21	-0.45	-0.42	63.19	-0.0233	-0.2508	-0.0142
415	SLU 22	-0.5	-0.43	59.01	-0.0215	-0.2255	-0.0143
415	SLU 23	-0.49	-0.34	58.96	-0.0213	-0.2255	-0.0138
415	SLU 24	-0.51	-0.43	60.03	-0.0218	-0.2295	-0.0147
415	SLU 25	-0.5	-0.37	60	-0.0217	-0.2295	-0.0143
415	SLU 26	-0.49	-0.35	59.56	-0.0217	-0.2279	-0.0139
415	SLU 27	-0.51	-0.44	60.63	-0.0222	-0.2319	-0.0147
415	SLU 28	-0.51	-0.38	60.6	-0.0221	-0.2319	-0.0144
415	SLU 29	-0.51	-0.45	60.21	-0.0223	-0.2303	-0.0145
415	SLU 30	-0.5	-0.39	60.18	-0.0222	-0.2303	-0.0141
415	SLU 31	-0.5	-0.35	65.98	-0.0232	-0.2587	-0.0155
415	SLU 32	-0.52	-0.44	67.05	-0.0237	-0.2627	-0.0164
415	SLU 33	-0.52	-0.38	67.02	-0.0236	-0.2627	-0.0161
415	SLU 34	-0.51	-0.36	66.58	-0.0236	-0.2611	-0.0156
415	SLU 35	-0.53	-0.44	67.65	-0.0241	-0.2651	-0.0165
415	SLU 36	-0.52	-0.39	67.62	-0.024	-0.2651	-0.0162
415	SLU 37	-0.52	-0.46	67.23	-0.0242	-0.2636	-0.0162
415	SLU 38	-0.52	-0.4	67.2	-0.024	-0.2636	-0.0159
415	SLU 39	-0.52	-0.45	69.05	-0.0242	-0.273	-0.0168
415	SLU 40	-0.51	-0.39	69.01	-0.0241	-0.273	-0.0165
415	SLU 41	-0.52	-0.45	69.64	-0.0246	-0.2754	-0.0169
415	SLU 42	-0.52	-0.4	69.61	-0.0244	-0.2754	-0.0165
415	SLU 43	-0.54	-0.61	66.16	-0.0261	-0.2527	-0.0148
415	SLU 44	-0.53	-0.51	66.11	-0.0259	-0.2527	-0.0143
415	SLU 45	-0.55	-0.6	67.18	-0.0264	-0.2567	-0.0152
415	SLU 46	-0.55	-0.54	67.14	-0.0262	-0.2567	-0.0149
415	SLU 47	-0.54	-0.52	66.71	-0.0262	-0.2551	-0.0144
415	SLU 48	-0.56	-0.61	67.78	-0.0268	-0.2591	-0.0153
415	SLU 49	-0.55	-0.55	67.74	-0.0266	-0.2591	-0.0149
415	SLU 50	-0.55	-0.62	67.36	-0.0269	-0.2576	-0.015
415	SLU 51	-0.55	-0.56	67.33	-0.0267	-0.2576	-0.0147
415	SLU 52	-0.55	-0.52	73.13	-0.0277	-0.286	-0.016
415	SLU 53	-0.57	-0.61	74.2	-0.0282	-0.29	-0.0169
415	SLU 54	-0.56	-0.55	74.17	-0.0281	-0.29	-0.0166
415	SLU 55	-0.55	-0.53	73.73	-0.0281	-0.2884	-0.0161
415	SLU 56	-0.57	-0.62	74.8	-0.0286	-0.2924	-0.017
415	SLU 57	-0.57	-0.56	74.76	-0.0285	-0.2924	-0.0167

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
415	SLU 58	-0.57	-0.63	74.38	-0.0287	-0.2908	-0.0167
415	SLU 59	-0.56	-0.57	74.35	-0.0286	-0.2908	-0.0164
415	SLU 60	-0.56	-0.62	76.19	-0.0287	-0.3002	-0.0173
415	SLU 61	-0.56	-0.56	76.16	-0.0286	-0.3002	-0.017
415	SLU 62	-0.57	-0.63	76.79	-0.0291	-0.3026	-0.0174
415	SLU 63	-0.56	-0.57	76.76	-0.029	-0.3027	-0.0171
415	SLU 64	-0.61	-0.58	72.59	-0.0272	-0.2773	-0.0171
415	SLU 65	-0.6	-0.49	72.53	-0.027	-0.2773	-0.0166
415	SLU 66	-0.62	-0.57	73.6	-0.0275	-0.2813	-0.0175
415	SLU 67	-0.61	-0.52	73.57	-0.0274	-0.2813	-0.0172
415	SLU 68	-0.6	-0.49	73.13	-0.0274	-0.2797	-0.0167
415	SLU 69	-0.62	-0.58	74.2	-0.0279	-0.2837	-0.0176
415	SLU 70	-0.62	-0.53	74.17	-0.0278	-0.2837	-0.0172
415	SLU 71	-0.62	-0.6	73.78	-0.028	-0.2821	-0.0173
415	SLU 72	-0.61	-0.54	73.75	-0.0279	-0.2821	-0.017
415	SLU 73	-0.61	-0.5	79.55	-0.0289	-0.3106	-0.0183
415	SLU 74	-0.63	-0.58	80.62	-0.0294	-0.3146	-0.0192
415	SLU 75	-0.63	-0.53	80.59	-0.0293	-0.3146	-0.0189
415	SLU 76	-0.62	-0.5	80.15	-0.0293	-0.313	-0.0184
415	SLU 77	-0.64	-0.59	81.22	-0.0298	-0.317	-0.0193
415	SLU 78	-0.63	-0.53	81.19	-0.0297	-0.317	-0.019
415	SLU 79	-0.63	-0.6	80.81	-0.0299	-0.3154	-0.019
415	SLU 80	-0.62	-0.55	80.77	-0.0298	-0.3154	-0.0187
415	SLU 81	-0.63	-0.59	82.62	-0.0299	-0.3248	-0.0196
415	SLU 82	-0.62	-0.54	82.59	-0.0298	-0.3248	-0.0193
415	SLU 83	-0.63	-0.6	83.22	-0.0303	-0.3272	-0.0197
415	SLU 84	-0.63	-0.54	83.18	-0.0302	-0.3272	-0.0194
415	SLE RA 1	-0.45	-0.45	54.42	-0.0207	-0.2079	-0.0127
415	SLE RA 2	-0.45	-0.39	54.39	-0.0205	-0.2079	-0.0123
415	SLE RA 3	-0.46	-0.45	55.1	-0.0209	-0.2106	-0.0129
415	SLE RA 4	-0.46	-0.41	55.08	-0.0208	-0.2106	-0.0127
415	SLE RA 5	-0.45	-0.39	54.79	-0.0208	-0.2095	-0.0124
415	SLE RA 6	-0.46	-0.45	55.5	-0.0212	-0.2122	-0.013
415	SLE RA 7	-0.46	-0.42	55.48	-0.0211	-0.2122	-0.0127
415	SLE RA 8	-0.46	-0.46	55.22	-0.0212	-0.2111	-0.0128
415	SLE RA 9	-0.46	-0.42	55.2	-0.0211	-0.2111	-0.0126
415	SLE RA 10	-0.46	-0.4	59.07	-0.0218	-0.2301	-0.0135
415	SLE RA 11	-0.47	-0.45	59.78	-0.0221	-0.2327	-0.0141
415	SLE RA 12	-0.47	-0.42	59.76	-0.0221	-0.2328	-0.0138
415	SLE RA 13	-0.46	-0.4	59.47	-0.0221	-0.2317	-0.0135
415	SLE RA 14	-0.47	-0.46	60.18	-0.0224	-0.2344	-0.0141
415	SLE RA 15	-0.47	-0.42	60.16	-0.0223	-0.2344	-0.0139
415	SLE RA 16	-0.47	-0.47	59.9	-0.0225	-0.2333	-0.0139
415	SLE RA 17	-0.46	-0.43	59.88	-0.0224	-0.2333	-0.0137
415	SLE RA 18	-0.47	-0.46	61.11	-0.0225	-0.2396	-0.0143
415	SLE RA 19	-0.46	-0.42	61.09	-0.0224	-0.2396	-0.0141
415	SLE RA 20	-0.47	-0.47	61.51	-0.0227	-0.2412	-0.0144
415	SLE RA 21	-0.47	-0.43	61.49	-0.0226	-0.2412	-0.0142
415	SLE FR 1	-0.45	-0.45	54.42	-0.0207	-0.2079	-0.0127
415	SLE FR 2	-0.45	-0.44	54.42	-0.0207	-0.2079	-0.0126
415	SLE FR 3	-0.45	-0.45	54.58	-0.0208	-0.2086	-0.0127
415	SLE FR 4	-0.46	-0.44	56.42	-0.0212	-0.2174	-0.0131
415	SLE FR 5	-0.46	-0.46	56.59	-0.0213	-0.2181	-0.0132
415	SLE FR 6	-0.46	-0.46	57.77	-0.0216	-0.2237	-0.0135
415	SLE QP 1	-0.45	-0.45	54.42	-0.0207	-0.2079	-0.0127
415	SLE QP 2	-0.46	-0.45	56.43	-0.0212	-0.2174	-0.0132
415	SLD 1	4.45	0.32	60.17	-0.0264	-0.1377	0.0007
415	SLD 2	4.63	0.07	60.16	-0.0261	-0.1394	0.005
415	SLD 3	4.57	-1.46	60.07	-0.0234	-0.1521	0.0022
415	SLD 4	4.75	-1.71	60.06	-0.0231	-0.1538	0.0065
415	SLD 5	0.81	2.53	57.71	-0.0275	-0.1714	-0.0121
415	SLD 6	0.92	2.37	57.71	-0.0273	-0.1725	-0.0093
415	SLD 7	1.2	-3.42	57.36	-0.0173	-0.2193	-0.0069
415	SLD 8	1.31	-3.58	57.36	-0.0171	-0.2204	-0.0041
415	SLD 9	-2.23	2.67	55.5	-0.0254	-0.2144	-0.0222
415	SLD 10	-2.11	2.51	55.5	-0.0251	-0.2155	-0.0194
415	SLD 11	-1.83	-3.28	55.15	-0.0152	-0.2623	-0.017
415	SLD 12	-1.72	-3.44	55.15	-0.015	-0.2634	-0.0142
415	SLD 13	-5.66	0.8	52.8	-0.0194	-0.2811	-0.0329
415	SLD 14	-5.48	0.56	52.79	-0.0191	-0.2827	-0.0285
415	SLD 15	-5.54	-0.98	52.69	-0.0164	-0.2954	-0.0313
415	SLD 16	-5.36	-1.23	52.69	-0.016	-0.2971	-0.027
415	SLV 1	11.02	1.31	65.18	-0.0335	-0.0315	0.0192
415	SLV 2	11.43	0.73	65.17	-0.0328	-0.0353	0.0292
415	SLV 3	11.29	-2.77	64.93	-0.0266	-0.0641	0.0228
415	SLV 4	11.71	-3.34	64.92	-0.0259	-0.068	0.0329
415	SLV 5	2.5	6.35	59.43	-0.0355	-0.1115	-0.0107
415	SLV 6	2.76	5.98	59.42	-0.035	-0.1139	-0.0043
415	SLV 7	3.42	-7.23	58.61	-0.0125	-0.2203	0.0015
415	SLV 8	3.68	-7.59	58.6	-0.012	-0.2227	0.0079
415	SLV 9	-4.59	6.68	54.26	-0.0305	-0.2121	-0.0342
415	SLV 10	-4.33	6.32	54.25	-0.03	-0.2145	-0.0278
415	SLV 11	-3.67	-6.89	53.44	-0.0074	-0.3209	-0.0221
415	SLV 12	-3.41	-7.26	53.43	-0.0069	-0.3233	-0.0156
415	SLV 13	-12.62	2.43	47.94	-0.0166	-0.3668	-0.0592
415	SLV 14	-12.21	1.86	47.93	-0.0158	-0.3707	-0.0492
415	SLV 15	-12.34	-1.64	47.69	-0.0097	-0.3995	-0.0555
415	SLV 16	-11.93	-2.22	47.68	-0.0089	-0.4033	-0.0455
415	CRTFP Ux+	0	0	0	0	0	0
415	CRTFP Ux-	0	0	0	0	0	0
419	SLU 1	0.32	-0.41	52.38	-0.023	0.1818	0.0005

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
419	SLU 2	0.31	-0.32	52.34	-0.0227	0.1818	0
419	SLU 3	0.33	-0.41	53.38	-0.0234	0.1851	0.0005
419	SLU 4	0.33	-0.36	53.36	-0.0232	0.1851	0.0002
419	SLU 5	0.32	-0.33	52.94	-0.0231	0.1838	0
419	SLU 6	0.33	-0.42	53.98	-0.0238	0.1871	0.0004
419	SLU 7	0.33	-0.37	53.95	-0.0237	0.1871	0.0002
419	SLU 8	0.33	-0.44	53.58	-0.0238	0.1858	0.0003
419	SLU 9	0.32	-0.38	53.55	-0.0237	0.1857	0
419	SLU 10	0.34	-0.31	59.19	-0.025	0.2106	0.0001
419	SLU 11	0.36	-0.4	60.24	-0.0257	0.2139	0.0005
419	SLU 12	0.36	-0.35	60.21	-0.0255	0.2139	0.0002
419	SLU 13	0.35	-0.32	59.79	-0.0254	0.2125	0
419	SLU 14	0.36	-0.41	60.84	-0.0261	0.2158	0.0004
419	SLU 15	0.36	-0.36	60.81	-0.0259	0.2158	0.0002
419	SLU 16	0.36	-0.43	60.43	-0.0261	0.2145	0.0003
419	SLU 17	0.35	-0.37	60.41	-0.026	0.2145	0
419	SLU 18	0.36	-0.4	62.18	-0.0263	0.2229	0.0005
419	SLU 19	0.36	-0.34	62.15	-0.0261	0.2229	0.0002
419	SLU 20	0.37	-0.41	62.77	-0.0267	0.2249	0.0004
419	SLU 21	0.36	-0.36	62.75	-0.0265	0.2249	0.0001
419	SLU 22	0.38	-0.38	58.72	-0.0246	0.2006	0.0013
419	SLU 23	0.37	-0.29	58.67	-0.0243	0.2006	0.0009
419	SLU 24	0.39	-0.38	59.72	-0.025	0.2039	0.0013
419	SLU 25	0.38	-0.33	59.69	-0.0248	0.2039	0.0011
419	SLU 26	0.37	-0.31	59.27	-0.0247	0.2025	0.0008
419	SLU 27	0.39	-0.4	60.31	-0.0254	0.2059	0.0012
419	SLU 28	0.39	-0.34	60.29	-0.0252	0.2059	0.001
419	SLU 29	0.38	-0.41	59.91	-0.0254	0.2045	0.0011
419	SLU 30	0.38	-0.35	59.88	-0.0252	0.2045	0.0008
419	SLU 31	0.4	-0.28	65.53	-0.0266	0.2293	0.0009
419	SLU 32	0.42	-0.37	66.57	-0.0273	0.2327	0.0013
419	SLU 33	0.41	-0.32	66.55	-0.0271	0.2326	0.0011
419	SLU 34	0.4	-0.29	66.13	-0.027	0.2313	0.0008
419	SLU 35	0.42	-0.38	67.17	-0.0277	0.2346	0.0012
419	SLU 36	0.42	-0.33	67.14	-0.0275	0.2346	0.001
419	SLU 37	0.41	-0.4	66.77	-0.0277	0.2333	0.0011
419	SLU 38	0.41	-0.34	66.74	-0.0275	0.2333	0.0008
419	SLU 39	0.42	-0.37	68.51	-0.0278	0.2417	0.0013
419	SLU 40	0.42	-0.31	68.48	-0.0277	0.2417	0.001
419	SLU 41	0.42	-0.38	69.11	-0.0283	0.2436	0.0012
419	SLU 42	0.42	-0.33	69.08	-0.0281	0.2436	0.0009
419	SLU 43	0.4	-0.55	65.93	-0.0293	0.2299	0.0003
419	SLU 44	0.39	-0.46	65.88	-0.0291	0.2299	-0.0001
419	SLU 45	0.41	-0.55	66.93	-0.0297	0.2332	0.0004
419	SLU 46	0.4	-0.49	66.9	-0.0296	0.2332	0.0001
419	SLU 47	0.39	-0.47	66.48	-0.0295	0.2319	-0.0002
419	SLU 48	0.41	-0.56	67.52	-0.0302	0.2352	0.0003
419	SLU 49	0.41	-0.5	67.5	-0.03	0.2352	0
419	SLU 50	0.4	-0.57	67.12	-0.0302	0.2339	0.0001
419	SLU 51	0.4	-0.52	67.09	-0.03	0.2338	-0.0001
419	SLU 52	0.42	-0.44	72.74	-0.0314	0.2587	-0.0001
419	SLU 53	0.44	-0.54	73.78	-0.032	0.262	0.0004
419	SLU 54	0.43	-0.48	73.76	-0.0319	0.262	0.0001
419	SLU 55	0.42	-0.46	73.33	-0.0318	0.2606	-0.0002
419	SLU 56	0.44	-0.55	74.38	-0.0324	0.2639	0.0003
419	SLU 57	0.44	-0.49	74.35	-0.0323	0.2639	0
419	SLU 58	0.43	-0.56	73.98	-0.0325	0.2626	0.0001
419	SLU 59	0.43	-0.51	73.95	-0.0323	0.2626	-0.0001
419	SLU 60	0.44	-0.53	75.72	-0.0326	0.271	0.0003
419	SLU 61	0.44	-0.48	75.69	-0.0325	0.271	0.0001
419	SLU 62	0.44	-0.54	76.32	-0.033	0.273	0.0002
419	SLU 63	0.44	-0.49	76.29	-0.0329	0.273	0
419	SLU 64	0.46	-0.52	72.26	-0.0309	0.2487	0.0011
419	SLU 65	0.45	-0.43	72.22	-0.0307	0.2487	0.0007
419	SLU 66	0.47	-0.52	73.26	-0.0313	0.252	0.0012
419	SLU 67	0.46	-0.46	73.23	-0.0312	0.252	0.0009
419	SLU 68	0.45	-0.44	72.81	-0.0311	0.2507	0.0006
419	SLU 69	0.47	-0.53	73.86	-0.0317	0.254	0.0011
419	SLU 70	0.46	-0.47	73.83	-0.0316	0.254	0.0008
419	SLU 71	0.46	-0.54	73.45	-0.0317	0.2526	0.0009
419	SLU 72	0.46	-0.49	73.43	-0.0316	0.2526	0.0007
419	SLU 73	0.48	-0.42	79.07	-0.033	0.2774	0.0007
419	SLU 74	0.49	-0.51	80.12	-0.0336	0.2808	0.0012
419	SLU 75	0.49	-0.45	80.09	-0.0335	0.2807	0.0009
419	SLU 76	0.48	-0.43	79.67	-0.0334	0.2794	0.0006
419	SLU 77	0.5	-0.52	80.71	-0.034	0.2827	0.0011
419	SLU 78	0.49	-0.46	80.69	-0.0339	0.2827	0.0008
419	SLU 79	0.49	-0.53	80.31	-0.034	0.2814	0.001
419	SLU 80	0.49	-0.48	80.28	-0.0339	0.2814	0.0007
419	SLU 81	0.5	-0.5	82.05	-0.0342	0.2898	0.0011
419	SLU 82	0.49	-0.45	82.03	-0.034	0.2898	0.0009
419	SLU 83	0.5	-0.51	82.65	-0.0346	0.2918	0.001
419	SLU 84	0.5	-0.46	82.62	-0.0345	0.2917	0.0008
419	SLE RA 1	0.34	-0.4	54.19	-0.0234	0.1872	0.0007
419	SLE RA 2	0.33	-0.34	54.16	-0.0233	0.1872	0.0004
419	SLE RA 3	0.34	-0.4	54.86	-0.0237	0.1894	0.0007
419	SLE RA 4	0.34	-0.37	54.84	-0.0236	0.1894	0.0006
419	SLE RA 5	0.33	-0.35	54.56	-0.0235	0.1885	0.0004
419	SLE RA 6	0.35	-0.41	55.26	-0.024	0.1907	0.0007
419	SLE RA 7	0.34	-0.38	55.24	-0.0239	0.1907	0.0005
419	SLE RA 8	0.34	-0.42	54.99	-0.024	0.1898	0.0006

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
419	SLE RA 9	0.34	-0.38	54.97	-0.0239	0.1898	0.0004
419	SLE RA 10	0.35	-0.34	58.73	-0.0248	0.2063	0.0004
419	SLE RA 11	0.36	-0.4	59.43	-0.0252	0.2086	0.0007
419	SLE RA 12	0.36	-0.36	59.41	-0.0251	0.2085	0.0006
419	SLE RA 13	0.35	-0.34	59.13	-0.0251	0.2077	0.0004
419	SLE RA 14	0.37	-0.41	59.83	-0.0255	0.2099	0.0007
419	SLE RA 15	0.36	-0.37	59.81	-0.0254	0.2099	0.0005
419	SLE RA 16	0.36	-0.41	59.56	-0.0255	0.209	0.0006
419	SLE RA 17	0.36	-0.38	59.54	-0.0254	0.209	0.0004
419	SLE RA 18	0.37	-0.39	60.72	-0.0256	0.2146	0.0007
419	SLE RA 19	0.36	-0.36	60.7	-0.0255	0.2146	0.0005
419	SLE RA 20	0.37	-0.4	61.12	-0.0259	0.2159	0.0006
419	SLE RA 21	0.36	-0.37	61.1	-0.0258	0.2159	0.0005
419	SLE FR 1	0.34	-0.4	54.19	-0.0234	0.1872	0.0007
419	SLE FR 2	0.34	-0.39	54.19	-0.0234	0.1872	0.0006
419	SLE FR 3	0.34	-0.41	54.35	-0.0235	0.1877	0.0007
419	SLE FR 4	0.34	-0.39	56.15	-0.0241	0.1954	0.0006
419	SLE FR 5	0.35	-0.4	56.31	-0.0242	0.1959	0.0007
419	SLE FR 6	0.35	-0.4	57.46	-0.0245	0.2009	0.0007
419	SLE QP 1	0.34	-0.4	54.19	-0.0234	0.1872	0.0007
419	SLE QP 2	0.35	-0.4	56.15	-0.0241	0.1954	0.0007
419	SLD 1	5.44	0.61	52.88	-0.0209	0.2212	0.02
419	SLD 2	5.62	0.85	52.88	-0.0212	0.2198	0.0243
419	SLD 3	5.32	-1.14	52.78	-0.0183	0.2359	0.0188
419	SLD 4	5.5	-0.9	52.78	-0.0186	0.2345	0.023
419	SLD 5	2.04	2.51	55.32	-0.0269	0.1811	0.0077
419	SLD 6	2.16	2.67	55.32	-0.0271	0.1802	0.0105
419	SLD 7	1.61	-3.32	54.99	-0.0185	0.23	0.0034
419	SLD 8	1.73	-3.16	54.99	-0.0186	0.2291	0.0062
419	SLD 9	-1.04	2.36	57.31	-0.0295	0.1617	-0.0048
419	SLD 10	-0.92	2.51	57.31	-0.0297	0.1608	-0.002
419	SLD 11	-1.46	-3.47	56.98	-0.0211	0.2106	-0.0091
419	SLD 12	-1.35	-3.32	56.98	-0.0212	0.2097	-0.0063
419	SLD 13	-4.8	0.1	59.52	-0.0296	0.1563	-0.0217
419	SLD 14	-4.62	0.34	59.52	-0.0298	0.1549	-0.0174
419	SLD 15	-4.93	-1.65	59.42	-0.027	0.171	-0.023
419	SLD 16	-4.75	-1.41	59.42	-0.0273	0.1696	-0.0187
419	SLV 1	12.27	1.91	48.49	-0.0165	0.2562	0.046
419	SLV 2	12.69	2.46	48.49	-0.0171	0.2529	0.056
419	SLV 3	11.97	-2.07	48.26	-0.0107	0.2895	0.043
419	SLV 4	12.39	-1.52	48.26	-0.0114	0.2862	0.053
419	SLV 5	4.3	6.24	54.2	-0.0304	0.1637	0.0171
419	SLV 6	4.57	6.59	54.2	-0.0309	0.1616	0.0235
419	SLV 7	3.31	-7.03	53.43	-0.0112	0.2747	0.0071
419	SLV 8	3.58	-6.68	53.43	-0.0116	0.2726	0.0135
419	SLV 9	-2.89	5.88	58.87	-0.0365	0.1182	-0.0121
419	SLV 10	-2.62	6.23	58.87	-0.0369	0.1161	-0.0057
419	SLV 11	-3.88	-7.39	58.1	-0.0173	0.2292	-0.0222
419	SLV 12	-3.61	-7.04	58.1	-0.0177	0.2271	-0.0158
419	SLV 13	-11.7	0.72	64.04	-0.0368	0.1046	-0.0516
419	SLV 14	-11.28	1.27	64.04	-0.0374	0.1013	-0.0416
419	SLV 15	-12	-3.26	63.81	-0.031	0.1379	-0.0546
419	SLV 16	-11.58	-2.72	63.81	-0.0317	0.1346	-0.0446
419	CRTFP Ux+	0	0	0	0	0	0
419	CRTFP Ux-	0	0	0	0	0	0
420	SLU 1	0.25	0.47	31.44	-0.0257	9.2901	-0.167
420	SLU 2	0.24	0.56	31.41	-0.0255	9.279	-0.1963
420	SLU 3	0.26	0.49	32.05	-0.0263	9.4658	-0.1723
420	SLU 4	0.25	0.54	32.03	-0.0261	9.4591	-0.1899
420	SLU 5	0.24	0.56	31.77	-0.0258	9.3813	-0.1979
420	SLU 6	0.26	0.49	32.41	-0.0266	9.5681	-0.1738
420	SLU 7	0.25	0.54	32.39	-0.0265	9.5615	-0.1914
420	SLU 8	0.25	0.48	32.15	-0.0265	9.4948	-0.1701
420	SLU 9	0.25	0.53	32.13	-0.0263	9.4882	-0.1877
420	SLU 10	0.26	0.66	35.36	-0.0287	10.4271	-0.2317
420	SLU 11	0.27	0.59	36	-0.0295	10.6139	-0.2077
420	SLU 12	0.27	0.64	35.98	-0.0294	10.6072	-0.2253
420	SLU 13	0.26	0.66	35.71	-0.0291	10.5295	-0.2333
420	SLU 14	0.27	0.6	36.35	-0.0299	10.7162	-0.2093
420	SLU 15	0.27	0.65	36.33	-0.0297	10.7096	-0.2269
420	SLU 16	0.27	0.58	36.1	-0.0297	10.6429	-0.2055
420	SLU 17	0.26	0.63	36.08	-0.0296	10.6363	-0.2231
420	SLU 18	0.27	0.62	37.08	-0.0304	10.9303	-0.2176
420	SLU 19	0.26	0.67	37.06	-0.0302	10.9236	-0.2352
420	SLU 20	0.27	0.62	37.44	-0.0308	11.0326	-0.2191
420	SLU 21	0.27	0.67	37.42	-0.0306	11.026	-0.2367
420	SLU 22	0.28	0.56	35.22	-0.0288	10.3882	-0.1973
420	SLU 23	0.28	0.65	35.19	-0.0285	10.377	-0.2267
420	SLU 24	0.29	0.58	35.83	-0.0293	10.5638	-0.2026
420	SLU 25	0.29	0.63	35.81	-0.0292	10.5571	-0.2202
420	SLU 26	0.28	0.65	35.55	-0.0289	10.4794	-0.2282
420	SLU 27	0.29	0.58	36.19	-0.0297	10.6662	-0.2042
420	SLU 28	0.29	0.63	36.17	-0.0295	10.6595	-0.2218
420	SLU 29	0.29	0.57	35.93	-0.0295	10.5929	-0.2004
420	SLU 30	0.29	0.62	35.92	-0.0293	10.5862	-0.218
420	SLU 31	0.29	0.75	39.14	-0.0318	11.5251	-0.2621
420	SLU 32	0.3	0.68	39.78	-0.0326	11.7119	-0.2381
420	SLU 33	0.3	0.73	39.76	-0.0324	11.7052	-0.2557
420	SLU 34	0.29	0.75	39.49	-0.0321	11.6275	-0.2637
420	SLU 35	0.31	0.68	40.13	-0.033	11.8143	-0.2396
420	SLU 36	0.3	0.73	40.11	-0.0328	11.8076	-0.2572

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
420	SLU 37	0.3	0.67	39.88	-0.0328	11.741	-0.2359
420	SLU 38	0.3	0.72	39.86	-0.0326	11.7343	-0.2535
420	SLU 39	0.3	0.71	40.86	-0.0334	12.0283	-0.2479
420	SLU 40	0.3	0.76	40.84	-0.0333	12.0216	-0.2655
420	SLU 41	0.3	0.71	41.22	-0.0338	12.1307	-0.2495
420	SLU 42	0.3	0.76	41.2	-0.0336	12.124	-0.2671
420	SLU 43	0.31	0.59	39.58	-0.0324	11.7007	-0.2066
420	SLU 44	0.3	0.67	39.55	-0.0321	11.6896	-0.236
420	SLU 45	0.32	0.6	40.19	-0.0329	11.8763	-0.212
420	SLU 46	0.31	0.65	40.17	-0.0328	11.8697	-0.2296
420	SLU 47	0.31	0.68	39.9	-0.0325	11.7919	-0.2375
420	SLU 48	0.32	0.61	40.55	-0.0333	11.9787	-0.2135
420	SLU 49	0.32	0.66	40.53	-0.0331	11.972	-0.2311
420	SLU 50	0.31	0.6	40.29	-0.0331	11.9054	-0.2098
420	SLU 51	0.31	0.65	40.27	-0.033	11.8987	-0.2274
420	SLU 52	0.32	0.77	43.5	-0.0354	12.8377	-0.2714
420	SLU 53	0.33	0.7	44.14	-0.0362	13.0244	-0.2474
420	SLU 54	0.33	0.75	44.12	-0.036	13.0178	-0.265
420	SLU 55	0.32	0.78	43.85	-0.0358	12.94	-0.273
420	SLU 56	0.33	0.71	44.49	-0.0366	13.1268	-0.249
420	SLU 57	0.33	0.76	44.47	-0.0364	13.1201	-0.2666
420	SLU 58	0.33	0.7	44.24	-0.0364	13.0535	-0.2452
420	SLU 59	0.32	0.75	44.22	-0.0362	13.0468	-0.2628
420	SLU 60	0.33	0.73	45.22	-0.0371	13.3408	-0.2573
420	SLU 61	0.33	0.78	45.2	-0.0369	13.3342	-0.2749
420	SLU 62	0.33	0.74	45.57	-0.0374	13.4432	-0.2588
420	SLU 63	0.33	0.79	45.55	-0.0373	13.4365	-0.2764
420	SLU 64	0.35	0.67	43.36	-0.0354	12.7987	-0.237
420	SLU 65	0.34	0.76	43.33	-0.0352	12.7876	-0.2663
420	SLU 66	0.35	0.69	43.97	-0.036	12.9744	-0.2423
420	SLU 67	0.35	0.74	43.95	-0.0358	12.9677	-0.2599
420	SLU 68	0.34	0.76	43.68	-0.0355	12.8899	-0.2679
420	SLU 69	0.36	0.69	44.33	-0.0364	13.0767	-0.2439
420	SLU 70	0.35	0.74	44.31	-0.0362	13.0701	-0.2615
420	SLU 71	0.35	0.68	44.07	-0.0362	13.0034	-0.2401
420	SLU 72	0.35	0.73	44.05	-0.036	12.9968	-0.2577
420	SLU 73	0.35	0.86	47.28	-0.0384	13.9357	-0.3018
420	SLU 74	0.37	0.79	47.92	-0.0393	14.1225	-0.2778
420	SLU 75	0.36	0.84	47.9	-0.0391	14.1158	-0.2954
420	SLU 76	0.36	0.86	47.63	-0.0388	14.0381	-0.3033
420	SLU 77	0.37	0.79	48.27	-0.0396	14.2248	-0.2793
420	SLU 78	0.37	0.84	48.25	-0.0395	14.2182	-0.2969
420	SLU 79	0.36	0.78	48.02	-0.0394	14.1515	-0.2756
420	SLU 80	0.36	0.83	48	-0.0393	14.1449	-0.2932
420	SLU 81	0.36	0.82	49	-0.0401	14.4389	-0.2876
420	SLU 82	0.36	0.87	48.98	-0.0399	14.4322	-0.3052
420	SLU 83	0.37	0.82	49.35	-0.0405	14.5412	-0.2892
420	SLU 84	0.36	0.87	49.33	-0.0403	14.5346	-0.3068
420	SLE RA 1	0.26	0.5	32.52	-0.0266	9.6038	-0.1756
420	SLE RA 2	0.25	0.56	32.5	-0.0264	9.5964	-0.1952
420	SLE RA 3	0.26	0.51	32.93	-0.027	9.7209	-0.1792
420	SLE RA 4	0.26	0.54	32.92	-0.0268	9.7165	-0.1909
420	SLE RA 5	0.26	0.56	32.74	-0.0267	9.6647	-0.1962
420	SLE RA 6	0.26	0.51	33.17	-0.0272	9.7892	-0.1802
420	SLE RA 7	0.26	0.55	33.15	-0.0271	9.7847	-0.192
420	SLE RA 8	0.26	0.51	33	-0.0271	9.7403	-0.1777
420	SLE RA 9	0.26	0.54	32.98	-0.027	9.7359	-0.1895
420	SLE RA 10	0.26	0.62	35.13	-0.0286	10.3618	-0.2188
420	SLE RA 11	0.27	0.58	35.56	-0.0291	10.4864	-0.2028
420	SLE RA 12	0.27	0.61	35.55	-0.029	10.4819	-0.2145
420	SLE RA 13	0.26	0.63	35.37	-0.0288	10.4301	-0.2199
420	SLE RA 14	0.27	0.58	35.8	-0.0294	10.5546	-0.2038
420	SLE RA 15	0.27	0.61	35.78	-0.0293	10.5501	-0.2156
420	SLE RA 16	0.27	0.57	35.63	-0.0293	10.5057	-0.2013
420	SLE RA 17	0.27	0.61	35.62	-0.0292	10.5013	-0.2131
420	SLE RA 18	0.27	0.6	36.28	-0.0297	10.6973	-0.2094
420	SLE RA 19	0.27	0.63	36.27	-0.0296	10.6928	-0.2211
420	SLE RA 20	0.27	0.6	36.52	-0.0299	10.7655	-0.2104
420	SLE RA 21	0.27	0.63	36.51	-0.0298	10.7611	-0.2222
420	SLE FR 1	0.26	0.5	32.52	-0.0266	9.6038	-0.1756
420	SLE FR 2	0.26	0.51	32.52	-0.0266	9.6024	-0.1796
420	SLE FR 3	0.26	0.5	32.62	-0.0267	9.6311	-0.1761
420	SLE FR 4	0.26	0.54	33.65	-0.0275	9.9304	-0.1897
420	SLE FR 5	0.26	0.53	33.75	-0.0276	9.9592	-0.1862
420	SLE FR 6	0.26	0.55	34.4	-0.0281	10.1506	-0.1925
420	SLE QP 1	0.26	0.5	32.52	-0.0266	9.6038	-0.1756
420	SLE QP 2	0.26	0.53	33.65	-0.0275	9.9319	-0.1858
420	SLD 1	3.49	0.92	27.38	-0.0213	8.1543	-0.3231
420	SLD 2	3.6	1.31	27.41	-0.0216	8.1631	-0.4565
420	SLD 3	3.4	-0.56	27.19	-0.0198	8.1028	0.1963
420	SLD 4	3.52	-0.18	27.22	-0.0201	8.1116	0.0628
420	SLD 5	1.33	2.83	32.05	-0.0278	9.4752	-0.9913
420	SLD 6	1.41	3.08	32.07	-0.028	9.4809	-1.0779
420	SLD 7	1.06	-2.12	31.42	-0.0229	9.3035	0.7398
420	SLD 8	1.13	-1.87	31.45	-0.0231	9.3092	0.6532
420	SLD 9	-0.61	2.92	35.86	-0.0319	10.5546	-1.0247
420	SLD 10	-0.54	3.17	35.88	-0.0321	10.5603	-1.1113
420	SLD 11	-0.88	-2.02	35.23	-0.027	10.3828	0.7064
420	SLD 12	-0.81	-1.77	35.26	-0.0272	10.3885	0.6198
420	SLD 13	-2.99	1.23	40.08	-0.0349	11.7521	-0.4344
420	SLD 14	-2.88	1.62	40.11	-0.0352	11.761	-0.5678

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
420	SLD 15	-3.08	-0.25	39.89	-0.0334	11.7006	0.085
420	SLD 16	-2.96	0.13	39.93	-0.0337	11.7094	-0.0485
420	SLV 1	7.8	1.41	18.97	-0.0129	5.7719	-0.4908
420	SLV 2	8.06	2.3	19.05	-0.0136	5.7925	-0.8017
420	SLV 3	7.61	-1.97	18.54	-0.0096	5.6526	0.6905
420	SLV 4	7.87	-1.08	18.61	-0.0103	5.6731	0.3796
420	SLV 5	2.77	5.76	29.89	-0.028	8.8614	-2.0162
420	SLV 6	2.94	6.33	29.94	-0.0285	8.8745	-2.2148
420	SLV 7	2.13	-5.49	28.45	-0.017	8.4637	1.9214
420	SLV 8	2.3	-4.92	28.5	-0.0174	8.4768	1.7228
420	SLV 9	-1.78	5.98	38.81	-0.0376	11.387	-2.0943
420	SLV 10	-1.61	6.55	38.86	-0.0381	11.4001	-2.2929
420	SLV 11	-2.41	-5.27	37.37	-0.0265	10.9893	1.8433
420	SLV 12	-2.25	-4.7	37.41	-0.027	11.0024	1.6447
420	SLV 13	-7.35	2.13	48.69	-0.0448	14.1906	-0.7511
420	SLV 14	-7.09	3.03	48.77	-0.0455	14.2111	-1.062
420	SLV 15	-7.54	-1.24	48.26	-0.0414	14.0713	0.4302
420	SLV 16	-7.28	-0.35	48.33	-0.0421	14.0918	0.1192
420	CRTFP Ux+	0	0	0	0	0	0
420	CRTFP Ux-	0	0	0	0	0	0
420	CRTFP Uy+	0	0	0	0	0	0
420	CRTFP Uy-	0	0	0	0	0	0
422	SLU 1	-0.27	-0.05	26.3	-0.031	-5.3831	-0.0142
422	SLU 2	-0.26	0.02	26.26	-0.0308	-5.3749	0.0049
422	SLU 3	-0.27	-0.05	26.81	-0.0317	-5.4855	-0.0127
422	SLU 4	-0.27	0	26.79	-0.0315	-5.4806	-0.0013
422	SLU 5	-0.26	0.03	26.56	-0.0312	-5.4346	0.0059
422	SLU 6	-0.27	-0.04	27.11	-0.0321	-5.5451	-0.0117
422	SLU 7	-0.27	0	27.09	-0.032	-5.5402	-0.0003
422	SLU 8	-0.27	-0.04	26.9	-0.0319	-5.5025	-0.0122
422	SLU 9	-0.27	0	26.88	-0.0317	-5.4976	-0.0008
422	SLU 10	-0.26	0.04	29.6	-0.0347	-6.0467	0.0087
422	SLU 11	-0.28	-0.03	30.14	-0.0356	-6.1572	-0.0089
422	SLU 12	-0.27	0.02	30.12	-0.0355	-6.1523	0.0026
422	SLU 13	-0.27	0.04	29.9	-0.0351	-6.1063	0.0097
422	SLU 14	-0.28	-0.03	30.44	-0.0361	-6.2169	-0.0079
422	SLU 15	-0.28	0.02	30.42	-0.0359	-6.212	0.0036
422	SLU 16	-0.28	-0.03	30.23	-0.0358	-6.1742	-0.0084
422	SLU 17	-0.27	0.02	30.21	-0.0357	-6.1693	0.0031
422	SLU 18	-0.28	-0.03	31.06	-0.0367	-6.3427	-0.0087
422	SLU 19	-0.27	0.02	31.04	-0.0365	-6.3378	0.0027
422	SLU 20	-0.28	-0.03	31.36	-0.0371	-6.4024	-0.0077
422	SLU 21	-0.27	0.02	31.34	-0.0369	-6.3975	0.0037
422	SLU 22	-0.3	-0.03	29.49	-0.0347	-6.0247	-0.0098
422	SLU 23	-0.29	0.04	29.46	-0.0345	-6.0165	0.0092
422	SLU 24	-0.31	-0.03	30	-0.0354	-6.127	-0.0083
422	SLU 25	-0.3	0.02	29.98	-0.0352	-6.1221	0.0031
422	SLU 26	-0.3	0.05	29.76	-0.0349	-6.0762	0.0102
422	SLU 27	-0.31	-0.02	30.3	-0.0358	-6.1867	-0.0073
422	SLU 28	-0.31	0.02	30.28	-0.0357	-6.1818	0.0041
422	SLU 29	-0.31	-0.03	30.09	-0.0356	-6.1441	-0.0078
422	SLU 30	-0.3	0.02	30.07	-0.0354	-6.1391	0.0036
422	SLU 31	-0.3	0.06	32.79	-0.0384	-6.6882	0.0131
422	SLU 32	-0.32	-0.01	33.34	-0.0393	-6.7987	-0.0045
422	SLU 33	-0.31	0.03	33.32	-0.0392	-6.7938	0.0069
422	SLU 34	-0.3	0.06	33.09	-0.0388	-6.7479	0.0141
422	SLU 35	-0.32	-0.01	33.64	-0.0398	-6.8584	-0.0035
422	SLU 36	-0.31	0.04	33.62	-0.0396	-6.8535	0.008
422	SLU 37	-0.31	-0.01	33.42	-0.0395	-6.8158	-0.004
422	SLU 38	-0.31	0.04	33.4	-0.0394	-6.8109	0.0074
422	SLU 39	-0.31	-0.01	34.25	-0.0404	-6.9843	-0.0044
422	SLU 40	-0.31	0.03	34.23	-0.0402	-6.9794	0.0071
422	SLU 41	-0.31	-0.01	34.55	-0.0408	-7.044	-0.0034
422	SLU 42	-0.31	0.04	34.53	-0.0406	-7.0391	0.0081
422	SLU 43	-0.33	-0.08	33.09	-0.0391	-6.7781	-0.02
422	SLU 44	-0.32	0	33.06	-0.0388	-6.7699	-0.0009
422	SLU 45	-0.34	-0.07	33.61	-0.0397	-6.8804	-0.0185
422	SLU 46	-0.33	-0.02	33.59	-0.0396	-6.8755	-0.007
422	SLU 47	-0.33	0.01	33.36	-0.0392	-6.8296	0.0001
422	SLU 48	-0.34	-0.06	33.91	-0.0402	-6.9401	-0.0175
422	SLU 49	-0.34	-0.02	33.89	-0.04	-6.9352	-0.006
422	SLU 50	-0.34	-0.07	33.69	-0.0399	-6.8975	-0.018
422	SLU 51	-0.33	-0.02	33.67	-0.0398	-6.8925	-0.0066
422	SLU 52	-0.33	0.02	36.39	-0.0427	-7.4416	0.0029
422	SLU 53	-0.35	-0.05	36.94	-0.0437	-7.5522	-0.0147
422	SLU 54	-0.34	-0.01	36.92	-0.0435	-7.5472	-0.0032
422	SLU 55	-0.33	0.02	36.69	-0.0432	-7.5013	0.0039
422	SLU 56	-0.35	-0.05	37.24	-0.0441	-7.6118	-0.0137
422	SLU 57	-0.34	0	37.22	-0.044	-7.6069	-0.0022
422	SLU 58	-0.35	-0.05	37.03	-0.0439	-7.5692	-0.0142
422	SLU 59	-0.34	-0.01	37.01	-0.0437	-7.5643	-0.0027
422	SLU 60	-0.34	-0.05	37.86	-0.0447	-7.7377	-0.0145
422	SLU 61	-0.34	-0.01	37.83	-0.0445	-7.7328	-0.0031
422	SLU 62	-0.35	-0.05	38.15	-0.0451	-7.7974	-0.0135
422	SLU 63	-0.34	0	38.13	-0.045	-7.7925	-0.0021
422	SLU 64	-0.37	-0.06	36.29	-0.0428	-7.4197	-0.0156
422	SLU 65	-0.36	0.02	36.25	-0.0425	-7.4115	0.0035
422	SLU 66	-0.38	-0.05	36.8	-0.0434	-7.522	-0.0141
422	SLU 67	-0.37	0	36.78	-0.0433	-7.5171	-0.0027
422	SLU 68	-0.36	0.02	36.55	-0.0429	-7.4712	0.0045
422	SLU 69	-0.38	-0.05	37.1	-0.0439	-7.5817	-0.0131

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
422	SLU 70	-0.37	0	37.08	-0.0437	-7.5768	-0.0017
422	SLU 71	-0.37	-0.05	36.89	-0.0436	-7.539	-0.0136
422	SLU 72	-0.37	0	36.86	-0.0435	-7.5341	-0.0022
422	SLU 73	-0.37	0.04	39.58	-0.0464	-8.0832	0.0073
422	SLU 74	-0.38	-0.03	40.13	-0.0474	-8.1937	-0.0103
422	SLU 75	-0.38	0.01	40.11	-0.0472	-8.1888	0.0012
422	SLU 76	-0.37	0.04	39.88	-0.0469	-8.1429	0.0083
422	SLU 77	-0.39	-0.03	40.43	-0.0478	-8.2534	-0.0093
422	SLU 78	-0.38	0.02	40.41	-0.0477	-8.2485	0.0022
422	SLU 79	-0.38	-0.03	40.22	-0.0476	-8.2107	-0.0098
422	SLU 80	-0.38	0.01	40.2	-0.0474	-8.2058	0.0017
422	SLU 81	-0.38	-0.03	41.05	-0.0484	-8.3793	-0.0101
422	SLU 82	-0.37	0.01	41.03	-0.0482	-8.3743	0.0013
422	SLU 83	-0.38	-0.03	41.35	-0.0488	-8.4389	-0.0091
422	SLU 84	-0.38	0.02	41.33	-0.0487	-8.434	0.0023
422	SLE RA 1	-0.28	-0.05	27.21	-0.0321	-5.5664	-0.013
422	SLE RA 2	-0.27	0	27.19	-0.0319	-5.561	-0.0003
422	SLE RA 3	-0.28	-0.04	27.55	-0.0325	-5.6347	-0.012
422	SLE RA 4	-0.28	-0.01	27.54	-0.0324	-5.6314	-0.0043
422	SLE RA 5	-0.27	0.01	27.39	-0.0322	-5.6008	0.0004
422	SLE RA 6	-0.28	-0.04	27.75	-0.0328	-5.6744	-0.0113
422	SLE RA 7	-0.28	-0.01	27.74	-0.0327	-5.6712	-0.0037
422	SLE RA 8	-0.28	-0.04	27.61	-0.0327	-5.646	-0.0116
422	SLE RA 9	-0.28	-0.01	27.6	-0.0326	-5.6427	-0.004
422	SLE RA 10	-0.27	0.01	29.41	-0.0345	-6.0088	0.0023
422	SLE RA 11	-0.28	-0.03	29.77	-0.0352	-6.0825	-0.0094
422	SLE RA 12	-0.28	0	29.76	-0.0351	-6.0792	-0.0018
422	SLE RA 13	-0.28	0.02	29.61	-0.0348	-6.0486	0.003
422	SLE RA 14	-0.29	-0.03	29.97	-0.0355	-6.1223	-0.0087
422	SLE RA 15	-0.28	0	29.96	-0.0353	-6.119	-0.0011
422	SLE RA 16	-0.28	-0.03	29.83	-0.0353	-6.0938	-0.0091
422	SLE RA 17	-0.28	0	29.82	-0.0352	-6.0905	-0.0015
422	SLE RA 18	-0.28	-0.03	30.38	-0.0359	-6.2062	-0.0093
422	SLE RA 19	-0.28	0	30.37	-0.0357	-6.2029	-0.0017
422	SLE RA 20	-0.28	-0.03	30.58	-0.0361	-6.246	-0.0087
422	SLE RA 21	-0.28	0	30.57	-0.036	-6.2427	-0.001
422	SLE FR 1	-0.28	-0.05	27.21	-0.0321	-5.5664	-0.013
422	SLE FR 2	-0.27	-0.04	27.21	-0.0321	-5.5653	-0.0104
422	SLE FR 3	-0.28	-0.05	27.29	-0.0322	-5.5823	-0.0127
422	SLE FR 4	-0.28	-0.03	28.16	-0.0332	-5.7573	-0.0093
422	SLE FR 5	-0.28	-0.04	28.24	-0.0333	-5.7743	-0.0116
422	SLE FR 6	-0.28	-0.04	28.8	-0.034	-5.8863	-0.0112
422	SLE QP 1	-0.28	-0.05	27.21	-0.0321	-5.5664	-0.013
422	SLE QP 2	-0.28	-0.04	28.16	-0.0332	-5.7584	-0.0119
422	SLD 1	2.23	0.91	33.78	-0.0418	-6.8584	0.2268
422	SLD 2	2.32	0.59	33.75	-0.0414	-6.8536	0.1473
422	SLD 3	2.3	-0.34	33.61	-0.0401	-6.8261	-0.0867
422	SLD 4	2.38	-0.66	33.58	-0.0398	-6.8213	-0.1662
422	SLD 5	0.36	2.2	30.1	-0.0383	-6.1382	0.549
422	SLD 6	0.42	1.99	30.09	-0.0381	-6.1351	0.4974
422	SLD 7	0.58	-1.98	29.55	-0.0329	-6.0305	-0.4959
422	SLD 8	0.63	-2.19	29.53	-0.0326	-6.0274	-0.5475
422	SLD 9	-1.19	2.1	26.79	-0.0338	-5.4893	0.5237
422	SLD 10	-1.13	1.89	26.78	-0.0336	-5.4862	0.4721
422	SLD 11	-0.97	-2.08	26.24	-0.0283	-5.3816	-0.5212
422	SLD 12	-0.92	-2.29	26.22	-0.0281	-5.3785	-0.5728
422	SLD 13	-2.94	0.58	22.74	-0.0267	-4.6954	0.1424
422	SLD 14	-2.85	0.26	22.71	-0.0263	-4.6906	0.0629
422	SLD 15	-2.87	-0.68	22.58	-0.025	-4.6631	-0.171
422	SLD 16	-2.79	-1	22.55	-0.0247	-4.6583	-0.2505
422	SLV 1	5.59	2.15	41.3	-0.0532	-8.3323	0.5373
422	SLV 2	5.79	1.4	41.24	-0.0523	-8.3212	0.3521
422	SLV 3	5.74	-0.71	40.91	-0.0495	-8.2569	-0.1777
422	SLV 4	5.94	-1.46	40.85	-0.0486	-8.2458	-0.3629
422	SLV 5	1.23	5.08	32.7	-0.045	-6.6468	1.2686
422	SLV 6	1.35	4.6	32.66	-0.0445	-6.6397	1.1503
422	SLV 7	1.72	-4.46	31.41	-0.0326	-6.3955	-1.1146
422	SLV 8	1.84	-4.93	31.37	-0.032	-6.3884	-1.2329
422	SLV 9	-2.4	4.85	24.96	-0.0344	-5.1283	1.2091
422	SLV 10	-2.28	4.37	24.91	-0.0338	-5.1212	1.0909
422	SLV 11	-1.91	-4.69	23.66	-0.022	-4.877	-1.1741
422	SLV 12	-1.78	-5.17	23.62	-0.0214	-4.8699	-1.2924
422	SLV 13	-6.49	1.37	15.48	-0.0178	-3.2709	0.3391
422	SLV 14	-6.3	0.63	15.41	-0.017	-3.2598	0.1539
422	SLV 15	-6.34	-1.49	15.09	-0.0141	-3.1955	-0.3759
422	SLV 16	-6.15	-2.24	15.02	-0.0132	-3.1844	-0.5611
422	CRTFP Ux+	0	0	0	0	0	0
422	CRTFP Ux-	0	0	0	0	0	0
422	CRTFP Uy+	0	0	0	0	0	0
422	CRTFP Uy-	0	0	0	0	0	0
424	SLU 1	-0.83	-0.3	102.89	2.5276	-0.3044	-0.0364
424	SLU 2	-0.81	-0.13	102.89	2.5238	-0.3053	-0.0351
424	SLU 3	-0.84	-0.27	104.84	2.5754	-0.3086	-0.0376
424	SLU 4	-0.84	-0.16	104.84	2.5731	-0.3092	-0.0368
424	SLU 5	-0.82	-0.14	104.1	2.5487	-0.3085	-0.0356
424	SLU 6	-0.85	-0.28	106.06	2.6003	-0.3118	-0.0381
424	SLU 7	-0.84	-0.17	106.05	2.598	-0.3124	-0.0373
424	SLU 8	-0.84	-0.33	105.31	2.5774	-0.3108	-0.0373
424	SLU 9	-0.83	-0.23	105.31	2.5751	-0.3113	-0.0366
424	SLU 10	-0.89	-0.07	117.11	2.9096	-0.3552	-0.0368
424	SLU 11	-0.92	-0.21	119.07	2.9612	-0.3585	-0.0394

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
424	SLU 12	-0.91	-0.1	119.07	2.959	-0.3591	-0.0386
424	SLU 13	-0.89	-0.09	118.33	2.9345	-0.3584	-0.0373
424	SLU 14	-0.93	-0.22	120.29	2.9861	-0.3617	-0.0399
424	SLU 15	-0.92	-0.12	120.28	2.9839	-0.3623	-0.0391
424	SLU 16	-0.92	-0.27	119.54	2.9632	-0.3606	-0.0391
424	SLU 17	-0.91	-0.17	119.54	2.961	-0.3612	-0.0383
424	SLU 18	-0.94	-0.22	123.22	3.0788	-0.3756	-0.0389
424	SLU 19	-0.93	-0.12	123.21	3.0765	-0.3762	-0.0381
424	SLU 20	-0.94	-0.23	124.43	3.1037	-0.3788	-0.0394
424	SLU 21	-0.93	-0.13	124.43	3.1014	-0.3794	-0.0386
424	SLU 22	-0.95	-0.11	114.9	2.8452	-0.3325	-0.0419
424	SLU 23	-0.94	0.06	114.89	2.8414	-0.3334	-0.0406
424	SLU 24	-0.97	-0.07	116.85	2.893	-0.3367	-0.0432
424	SLU 25	-0.96	0.03	116.85	2.8907	-0.3373	-0.0424
424	SLU 26	-0.94	0.05	116.1	2.8663	-0.3366	-0.0411
424	SLU 27	-0.98	-0.08	118.06	2.9179	-0.3399	-0.0437
424	SLU 28	-0.97	0.02	118.06	2.9156	-0.3405	-0.0429
424	SLU 29	-0.97	-0.13	117.32	2.895	-0.3389	-0.0429
424	SLU 30	-0.96	-0.03	117.32	2.8927	-0.3394	-0.0421
424	SLU 31	-1.02	0.12	129.12	3.2272	-0.3833	-0.0424
424	SLU 32	-1.05	-0.01	131.08	3.2788	-0.3866	-0.0449
424	SLU 33	-1.04	0.09	131.08	3.2765	-0.3872	-0.0442
424	SLU 34	-1.02	0.11	130.33	3.2521	-0.3865	-0.0429
424	SLU 35	-1.05	-0.02	132.29	3.3037	-0.3898	-0.0454
424	SLU 36	-1.05	0.08	132.29	3.3015	-0.3904	-0.0446
424	SLU 37	-1.04	-0.07	131.55	3.2808	-0.3887	-0.0446
424	SLU 38	-1.03	0.03	131.55	3.2786	-0.3893	-0.0439
424	SLU 39	-1.06	-0.02	135.22	3.3964	-0.4037	-0.0445
424	SLU 40	-1.05	0.08	135.22	3.3941	-0.4043	-0.0437
424	SLU 41	-1.07	-0.04	136.44	3.4213	-0.4069	-0.0449
424	SLU 42	-1.06	0.07	136.43	3.419	-0.4075	-0.0441
424	SLU 43	-1.03	-0.46	129.64	3.177	-0.386	-0.0454
424	SLU 44	-1.01	-0.29	129.64	3.1732	-0.387	-0.0441
424	SLU 45	-1.05	-0.42	131.59	3.2248	-0.3903	-0.0466
424	SLU 46	-1.04	-0.32	131.59	3.2225	-0.3909	-0.0459
424	SLU 47	-1.02	-0.3	130.85	3.1981	-0.3902	-0.0446
424	SLU 48	-1.05	-0.44	132.81	3.2497	-0.3935	-0.0471
424	SLU 49	-1.05	-0.33	132.8	3.2474	-0.3941	-0.0463
424	SLU 50	-1.04	-0.49	132.07	3.2268	-0.3924	-0.0464
424	SLU 51	-1.03	-0.38	132.06	3.2245	-0.393	-0.0456
424	SLU 52	-1.09	-0.23	143.87	3.559	-0.4369	-0.0459
424	SLU 53	-1.13	-0.37	145.82	3.6106	-0.4401	-0.0484
424	SLU 54	-1.12	-0.26	145.82	3.6083	-0.4407	-0.0476
424	SLU 55	-1.1	-0.25	145.08	3.5839	-0.4401	-0.0463
424	SLU 56	-1.13	-0.38	147.04	3.6355	-0.4433	-0.0489
424	SLU 57	-1.12	-0.28	147.03	3.6332	-0.4439	-0.0481
424	SLU 58	-1.12	-0.43	146.29	3.6126	-0.4423	-0.0481
424	SLU 59	-1.11	-0.33	146.29	3.6103	-0.4429	-0.0473
424	SLU 60	-1.14	-0.38	149.97	3.7281	-0.4573	-0.0479
424	SLU 61	-1.13	-0.28	149.96	3.7259	-0.4578	-0.0471
424	SLU 62	-1.15	-0.39	151.18	3.7531	-0.4605	-0.0484
424	SLU 63	-1.14	-0.29	151.18	3.7508	-0.461	-0.0476
424	SLU 64	-1.16	-0.27	141.65	3.4946	-0.4141	-0.0509
424	SLU 65	-1.14	-0.09	141.64	3.4908	-0.4151	-0.0497
424	SLU 66	-1.18	-0.23	143.6	3.5424	-0.4184	-0.0522
424	SLU 67	-1.17	-0.12	143.6	3.5401	-0.419	-0.0514
424	SLU 68	-1.15	-0.11	142.85	3.5157	-0.4183	-0.0501
424	SLU 69	-1.18	-0.24	144.81	3.5673	-0.4216	-0.0527
424	SLU 70	-1.17	-0.14	144.81	3.565	-0.4222	-0.0519
424	SLU 71	-1.17	-0.29	144.07	3.5444	-0.4205	-0.0519
424	SLU 72	-1.16	-0.19	144.07	3.5421	-0.4211	-0.0511
424	SLU 73	-1.22	-0.04	155.87	3.8766	-0.465	-0.0514
424	SLU 74	-1.25	-0.17	157.83	3.9282	-0.4682	-0.0539
424	SLU 75	-1.24	-0.07	157.83	3.9259	-0.4688	-0.0532
424	SLU 76	-1.23	-0.05	157.08	3.9015	-0.4682	-0.0519
424	SLU 77	-1.26	-0.18	159.04	3.9531	-0.4714	-0.0544
424	SLU 78	-1.25	-0.08	159.04	3.9508	-0.472	-0.0536
424	SLU 79	-1.25	-0.23	158.3	3.9302	-0.4704	-0.0537
424	SLU 80	-1.24	-0.13	158.3	3.9279	-0.471	-0.0529
424	SLU 81	-1.27	-0.18	161.97	4.0457	-0.4854	-0.0535
424	SLU 82	-1.26	-0.08	161.97	4.0435	-0.486	-0.0527
424	SLU 83	-1.27	-0.19	163.19	4.0706	-0.4886	-0.0539
424	SLU 84	-1.26	-0.09	163.18	4.0684	-0.4892	-0.0532
424	SLE RA 1	-0.86	-0.25	106.32	2.6183	-0.3124	-0.038
424	SLE RA 2	-0.85	-0.13	106.32	2.6158	-0.313	-0.0371
424	SLE RA 3	-0.87	-0.22	107.62	2.6502	-0.3152	-0.0388
424	SLE RA 4	-0.87	-0.15	107.62	2.6487	-0.3156	-0.0383
424	SLE RA 5	-0.86	-0.14	107.13	2.6324	-0.3152	-0.0374
424	SLE RA 6	-0.88	-0.23	108.43	2.6668	-0.3174	-0.0391
424	SLE RA 7	-0.87	-0.16	108.43	2.6653	-0.3177	-0.0386
424	SLE RA 8	-0.87	-0.26	107.94	2.6515	-0.3167	-0.0386
424	SLE RA 9	-0.86	-0.2	107.94	2.65	-0.317	-0.0381
424	SLE RA 10	-0.9	-0.09	115.8	2.873	-0.3463	-0.0383
424	SLE RA 11	-0.93	-0.18	117.11	2.9074	-0.3485	-0.04
424	SLE RA 12	-0.92	-0.11	117.11	2.9059	-0.3489	-0.0395
424	SLE RA 13	-0.91	-0.1	116.61	2.8896	-0.3484	-0.0386
424	SLE RA 14	-0.93	-0.19	117.92	2.924	-0.3506	-0.0403
424	SLE RA 15	-0.92	-0.12	117.92	2.9225	-0.351	-0.0398
424	SLE RA 16	-0.92	-0.22	117.42	2.9087	-0.3499	-0.0398
424	SLE RA 17	-0.92	-0.16	117.42	2.9072	-0.3503	-0.0393
424	SLE RA 18	-0.94	-0.19	119.87	2.9858	-0.3599	-0.0396

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
424	SLE RA 19	-0.93	-0.12	119.87	2.9843	-0.3603	-0.0391
424	SLE RA 20	-0.94	-0.2	120.68	3.0024	-0.362	-0.04
424	SLE RA 21	-0.93	-0.13	120.68	3.0009	-0.3624	-0.0394
424	SLE FR 1	-0.86	-0.25	106.32	2.6183	-0.3124	-0.038
424	SLE FR 2	-0.86	-0.22	106.32	2.6178	-0.3125	-0.0378
424	SLE FR 3	-0.86	-0.25	106.64	2.625	-0.3132	-0.0381
424	SLE FR 4	-0.88	-0.21	110.38	2.7281	-0.3268	-0.0383
424	SLE FR 5	-0.89	-0.23	110.71	2.7352	-0.3275	-0.0386
424	SLE FR 6	-0.9	-0.22	113.1	2.802	-0.3361	-0.0388
424	SLE QP 1	-0.86	-0.25	106.32	2.6183	-0.3124	-0.038
424	SLE QP 2	-0.89	-0.23	110.38	2.7286	-0.3266	-0.0385
424	SLD 1	8.76	1.38	108.98	2.5856	-0.3067	-0.2263
424	SLD 2	9.08	1.23	109.01	2.5907	-0.3059	-0.2175
424	SLD 3	8.99	-2.39	109.37	2.675	-0.303	-0.2188
424	SLD 4	9.31	-2.54	109.4	2.6801	-0.3021	-0.21
424	SLD 5	1.61	5.99	109.38	2.5493	-0.3265	-0.1078
424	SLD 6	1.81	5.9	109.4	2.5525	-0.326	-0.102
424	SLD 7	2.37	-6.57	110.65	2.8471	-0.314	-0.0827
424	SLD 8	2.58	-6.67	110.67	2.8504	-0.3134	-0.077
424	SLD 9	-4.35	6.2	110.1	2.6067	-0.3398	0
424	SLD 10	-4.14	6.11	110.12	2.61	-0.3393	0.0058
424	SLD 11	-3.58	-6.36	111.37	2.9046	-0.3273	0.0251
424	SLD 12	-3.38	-6.46	111.39	2.9079	-0.3268	0.0308
424	SLD 13	-11.08	2.08	111.37	2.777	-0.3511	0.133
424	SLD 14	-10.76	1.93	111.4	2.7821	-0.3503	0.1419
424	SLD 15	-10.85	-1.69	111.76	2.8664	-0.3474	0.1405
424	SLD 16	-10.53	-1.84	111.78	2.8715	-0.3465	0.1494
424	SLV 1	21.67	3.42	107.12	2.3969	-0.28	-0.4777
424	SLV 2	22.41	3.08	107.19	2.4087	-0.2781	-0.457
424	SLV 3	22.21	-5.17	108	2.6002	-0.2714	-0.4604
424	SLV 4	22.95	-5.51	108.07	2.6119	-0.2694	-0.4397
424	SLV 5	4.95	13.95	108.06	2.3187	-0.3261	-0.2
424	SLV 6	5.42	13.73	108.11	2.3263	-0.3248	-0.1868
424	SLV 7	6.73	-14.68	110.99	2.9964	-0.2973	-0.1423
424	SLV 8	7.2	-14.9	111.03	3.0039	-0.2961	-0.1291
424	SLV 9	-8.97	14.44	109.74	2.4532	-0.3572	0.0521
424	SLV 10	-8.5	14.22	109.78	2.4607	-0.356	0.0653
424	SLV 11	-7.19	-14.19	112.66	3.1308	-0.3284	0.1098
424	SLV 12	-6.72	-14.41	112.71	3.1384	-0.3272	0.123
424	SLV 13	-24.72	5.05	112.7	2.8452	-0.3838	0.3627
424	SLV 14	-23.98	4.71	112.77	2.8569	-0.3819	0.3834
424	SLV 15	-24.18	-3.54	113.58	3.0484	-0.3752	0.3801
424	SLV 16	-23.44	-3.88	113.65	3.0602	-0.3733	0.4007
424	CRTFP Ux+	0	0	0	0	0	0
424	CRTFP Ux-	0	0	0	0	0	0
426	SLU 1	0.11	-0.12	29.63	-0.003	9.6725	0.0421
426	SLU 2	0.11	-0.07	29.63	-0.0031	9.6751	0.0245
426	SLU 3	0.11	-0.11	30.18	-0.0031	9.8503	0.0395
426	SLU 4	0.11	-0.08	30.19	-0.0032	9.8518	0.0289
426	SLU 5	0.11	-0.07	29.97	-0.0033	9.7835	0.0261
426	SLU 6	0.12	-0.12	30.52	-0.0033	9.9587	0.0411
426	SLU 7	0.11	-0.09	30.52	-0.0033	9.9602	0.0306
426	SLU 8	0.11	-0.13	30.3	-0.0034	9.8893	0.0453
426	SLU 9	0.11	-0.1	30.31	-0.0034	9.8908	0.0348
426	SLU 10	0.12	-0.04	33.71	-0.0032	10.9992	0.0152
426	SLU 11	0.13	-0.08	34.25	-0.0032	11.1744	0.0302
426	SLU 12	0.13	-0.05	34.26	-0.0032	11.176	0.0196
426	SLU 13	0.12	-0.05	34.05	-0.0033	11.1076	0.0168
426	SLU 14	0.13	-0.09	34.59	-0.0034	11.2828	0.0318
426	SLU 15	0.13	-0.06	34.6	-0.0034	11.2844	0.0212
426	SLU 16	0.13	-0.1	34.38	-0.0034	11.2134	0.036
426	SLU 17	0.13	-0.07	34.38	-0.0035	11.215	0.0255
426	SLU 18	0.13	-0.08	35.44	-0.0031	11.5641	0.0287
426	SLU 19	0.13	-0.05	35.45	-0.0032	11.5657	0.0182
426	SLU 20	0.14	-0.08	35.78	-0.0033	11.6725	0.0304
426	SLU 21	0.13	-0.05	35.79	-0.0033	11.6741	0.0198
426	SLU 22	0.13	-0.08	33.02	-0.0031	10.7663	0.0281
426	SLU 23	0.13	-0.03	33.03	-0.0032	10.7689	0.0105
426	SLU 24	0.13	-0.07	33.58	-0.0032	10.9441	0.0255
426	SLU 25	0.13	-0.04	33.58	-0.0032	10.9457	0.015
426	SLU 26	0.13	-0.03	33.37	-0.0033	10.8773	0.0122
426	SLU 27	0.13	-0.08	33.92	-0.0034	11.0525	0.0271
426	SLU 28	0.13	-0.04	33.92	-0.0034	11.0541	0.0166
426	SLU 29	0.13	-0.09	33.7	-0.0034	10.9831	0.0314
426	SLU 30	0.13	-0.06	33.7	-0.0035	10.9847	0.0208
426	SLU 31	0.14	0	37.1	-0.0032	12.0931	0.0012
426	SLU 32	0.15	-0.04	37.65	-0.0032	12.2683	0.0162
426	SLU 33	0.15	-0.01	37.66	-0.0033	12.2699	0.0056
426	SLU 34	0.14	-0.01	37.44	-0.0034	12.2015	0.0028
426	SLU 35	0.15	-0.05	37.99	-0.0034	12.3767	0.0178
426	SLU 36	0.15	-0.02	37.99	-0.0035	12.3783	0.0073
426	SLU 37	0.15	-0.06	37.77	-0.0035	12.3073	0.022
426	SLU 38	0.15	-0.03	37.78	-0.0035	12.3088	0.0115
426	SLU 39	0.15	-0.04	38.84	-0.0032	12.658	0.0148
426	SLU 40	0.15	-0.01	38.85	-0.0032	12.6595	0.0042
426	SLU 41	0.15	-0.04	39.18	-0.0033	12.7664	0.0164
426	SLU 42	0.15	-0.01	39.18	-0.0034	12.7679	0.0058
426	SLU 43	0.14	-0.17	37.35	-0.0039	12.1992	0.0595
426	SLU 44	0.13	-0.12	37.36	-0.004	12.2018	0.0419
426	SLU 45	0.14	-0.16	37.9	-0.004	12.377	0.0569
426	SLU 46	0.14	-0.13	37.91	-0.0041	12.3786	0.0464

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
426	SLU 47	0.14	-0.12	37.7	-0.0042	12.3102	0.0436
426	SLU 48	0.14	-0.16	38.24	-0.0042	12.4854	0.0585
426	SLU 49	0.14	-0.13	38.25	-0.0042	12.4869	0.048
426	SLU 50	0.14	-0.18	38.03	-0.0043	12.416	0.0628
426	SLU 51	0.14	-0.15	38.03	-0.0043	12.4175	0.0522
426	SLU 52	0.15	-0.09	41.43	-0.0041	13.526	0.0326
426	SLU 53	0.16	-0.13	41.98	-0.0041	13.7012	0.0476
426	SLU 54	0.16	-0.1	41.98	-0.0041	13.7027	0.037
426	SLU 55	0.15	-0.1	41.77	-0.0042	13.6343	0.0342
426	SLU 56	0.16	-0.14	42.32	-0.0042	13.8095	0.0492
426	SLU 57	0.16	-0.11	42.32	-0.0043	13.8111	0.0387
426	SLU 58	0.16	-0.15	42.1	-0.0043	13.7401	0.0534
426	SLU 59	0.15	-0.12	42.1	-0.0044	13.7417	0.0429
426	SLU 60	0.16	-0.13	43.17	-0.004	14.0908	0.0462
426	SLU 61	0.16	-0.1	43.17	-0.004	14.0924	0.0356
426	SLU 62	0.16	-0.13	43.51	-0.0042	14.1992	0.0478
426	SLU 63	0.16	-0.1	43.51	-0.0042	14.2008	0.0373
426	SLU 64	0.16	-0.13	40.75	-0.004	13.293	0.0455
426	SLU 65	0.15	-0.08	40.75	-0.004	13.2956	0.0279
426	SLU 66	0.16	-0.12	41.3	-0.0041	13.4708	0.0429
426	SLU 67	0.16	-0.09	41.31	-0.0041	13.4724	0.0324
426	SLU 68	0.15	-0.08	41.09	-0.0042	13.404	0.0296
426	SLU 69	0.16	-0.12	41.64	-0.0042	13.5792	0.0446
426	SLU 70	0.16	-0.09	41.64	-0.0043	13.5808	0.034
426	SLU 71	0.16	-0.14	41.42	-0.0043	13.5098	0.0488
426	SLU 72	0.16	-0.11	41.43	-0.0044	13.5114	0.0382
426	SLU 73	0.17	-0.05	44.83	-0.0041	14.6198	0.0186
426	SLU 74	0.18	-0.09	45.37	-0.0041	14.795	0.0336
426	SLU 75	0.17	-0.06	45.38	-0.0042	14.7966	0.023
426	SLU 76	0.17	-0.06	45.17	-0.0043	14.7282	0.0202
426	SLU 77	0.18	-0.1	45.71	-0.0043	14.9034	0.0352
426	SLU 78	0.17	-0.07	45.72	-0.0043	14.905	0.0247
426	SLU 79	0.17	-0.11	45.5	-0.0044	14.834	0.0394
426	SLU 80	0.17	-0.08	45.5	-0.0044	14.8355	0.0289
426	SLU 81	0.18	-0.09	46.56	-0.0041	15.1847	0.0322
426	SLU 82	0.18	-0.06	46.57	-0.0041	15.1863	0.0216
426	SLU 83	0.18	-0.09	46.9	-0.0042	15.2931	0.0338
426	SLU 84	0.18	-0.06	46.91	-0.0043	15.2946	0.0233
426	SLE RA 1	0.12	-0.11	30.6	-0.003	9.985	0.0381
426	SLE RA 2	0.11	-0.07	30.6	-0.0031	9.9867	0.0264
426	SLE RA 3	0.12	-0.1	30.97	-0.0031	10.1035	0.0364
426	SLE RA 4	0.12	-0.08	30.97	-0.0031	10.1046	0.0293
426	SLE RA 5	0.11	-0.08	30.83	-0.0032	10.059	0.0275
426	SLE RA 6	0.12	-0.1	31.19	-0.0032	10.1758	0.0374
426	SLE RA 7	0.12	-0.08	31.2	-0.0033	10.1768	0.0304
426	SLE RA 8	0.12	-0.11	31.05	-0.0033	10.1295	0.0403
426	SLE RA 9	0.12	-0.09	31.05	-0.0033	10.1306	0.0332
426	SLE RA 10	0.12	-0.06	33.32	-0.0031	10.8695	0.0201
426	SLE RA 11	0.13	-0.08	33.68	-0.0031	10.9863	0.0301
426	SLE RA 12	0.13	-0.06	33.69	-0.0032	10.9874	0.0231
426	SLE RA 13	0.13	-0.06	33.54	-0.0032	10.9418	0.0212
426	SLE RA 14	0.13	-0.09	33.91	-0.0033	11.0586	0.0312
426	SLE RA 15	0.13	-0.07	33.91	-0.0033	11.0596	0.0242
426	SLE RA 16	0.13	-0.1	33.76	-0.0033	11.0123	0.034
426	SLE RA 17	0.13	-0.08	33.77	-0.0033	11.0133	0.027
426	SLE RA 18	0.13	-0.08	34.48	-0.0031	11.2461	0.0292
426	SLE RA 19	0.13	-0.06	34.48	-0.0031	11.2472	0.0222
426	SLE RA 20	0.13	-0.08	34.7	-0.0032	11.3184	0.0303
426	SLE RA 21	0.13	-0.06	34.7	-0.0032	11.3194	0.0233
426	SLE FR 1	0.12	-0.11	30.6	-0.003	9.985	0.0381
426	SLE FR 2	0.12	-0.1	30.6	-0.0031	9.9853	0.0357
426	SLE FR 3	0.12	-0.11	30.69	-0.0031	10.0139	0.0385
426	SLE FR 4	0.12	-0.09	31.76	-0.0031	10.3637	0.0331
426	SLE FR 5	0.12	-0.1	31.85	-0.0031	10.3922	0.0358
426	SLE FR 6	0.12	-0.09	32.54	-0.0031	10.6156	0.0336
426	SLE QP 1	0.12	-0.11	30.6	-0.003	9.985	0.0381
426	SLE QP 2	0.12	-0.1	31.76	-0.0031	10.3633	0.0354
426	SLD 1	2.9	0.36	31.92	-0.004	10.4307	-0.1231
426	SLD 2	2.98	0.37	31.92	-0.004	10.4301	-0.1285
426	SLD 3	2.83	-0.71	31.85	-0.0027	10.4087	0.2491
426	SLD 4	2.91	-0.69	31.85	-0.0027	10.408	0.2437
426	SLD 5	1.04	1.65	31.92	-0.0052	10.4172	-0.5757
426	SLD 6	1.1	1.66	31.92	-0.0052	10.4167	-0.5792
426	SLD 7	0.82	-1.9	31.68	-0.0011	10.3436	0.6649
426	SLD 8	0.87	-1.89	31.68	-0.0011	10.3431	0.6614
426	SLD 9	-0.63	1.69	31.84	-0.005	10.3835	-0.5906
426	SLD 10	-0.57	1.7	31.84	-0.005	10.3831	-0.5941
426	SLD 11	-0.86	-1.86	31.6	-0.0009	10.3099	0.65
426	SLD 12	-0.8	-1.85	31.6	-0.0009	10.3095	0.6465
426	SLD 13	-2.67	0.49	31.67	-0.0034	10.3187	-0.1729
426	SLD 14	-2.59	0.51	31.67	-0.0034	10.318	-0.1783
426	SLD 15	-2.74	-0.57	31.6	-0.0021	10.2966	0.1993
426	SLD 16	-2.65	-0.55	31.6	-0.0021	10.2959	0.1939
426	SLV 1	6.61	0.93	32.14	-0.0052	10.5215	-0.3243
426	SLV 2	6.81	0.97	32.13	-0.0052	10.5199	-0.3369
426	SLV 3	6.45	-1.49	31.97	-0.0024	10.4702	0.5234
426	SLV 4	6.66	-1.45	31.97	-0.0024	10.4687	0.5108
426	SLV 5	2.27	3.88	32.13	-0.008	10.4888	-1.3561
426	SLV 6	2.4	3.9	32.12	-0.008	10.4878	-1.3642
426	SLV 7	1.75	-4.2	31.57	0.0014	10.3179	1.4697
426	SLV 8	1.88	-4.17	31.57	0.0014	10.3169	1.4617

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
426	SLV 9	-1.64	3.98	31.95	-0.0076	10.4097	-1.3908
426	SLV 10	-1.51	4	31.95	-0.0076	10.4087	-1.3989
426	SLV 11	-2.16	-4.1	31.4	0.0019	10.2389	1.435
426	SLV 12	-2.03	-4.08	31.4	0.0019	10.2379	1.427
426	SLV 13	-6.41	1.25	31.55	-0.0038	10.258	-0.44
426	SLV 14	-6.21	1.29	31.55	-0.0037	10.2564	-0.4526
426	SLV 15	-6.57	-1.17	31.39	-0.0009	10.2067	0.4077
426	SLV 16	-6.37	-1.13	31.38	-0.0009	10.2052	0.3952
426	CRTFP Ux+	0	0	0	0	0	0
426	CRTFP Ux-	0	0	0	0	0	0
426	CRTFP Uy+	0	0	0	0	0	0
426	CRTFP Uy-	0	0	0	0	0	0
430	SLU 1	-0.38	-0.44	52.06	-0.014	-0.1833	-0.0094
430	SLU 2	-0.37	-0.35	52.01	-0.0138	-0.1832	-0.009
430	SLU 3	-0.39	-0.43	53.07	-0.0141	-0.187	-0.0098
430	SLU 4	-0.38	-0.38	53.04	-0.014	-0.187	-0.0095
430	SLU 5	-0.38	-0.35	52.6	-0.0141	-0.1854	-0.009
430	SLU 6	-0.39	-0.44	53.65	-0.0145	-0.1892	-0.0098
430	SLU 7	-0.39	-0.39	53.63	-0.0143	-0.1891	-0.0095
430	SLU 8	-0.39	-0.45	53.23	-0.0146	-0.1876	-0.0095
430	SLU 9	-0.38	-0.4	53.21	-0.0145	-0.1876	-0.0093
430	SLU 10	-0.38	-0.35	58.99	-0.0146	-0.2142	-0.0105
430	SLU 11	-0.39	-0.44	60.05	-0.015	-0.218	-0.0113
430	SLU 12	-0.39	-0.39	60.02	-0.0149	-0.218	-0.011
430	SLU 13	-0.38	-0.36	59.58	-0.0149	-0.2164	-0.0106
430	SLU 14	-0.4	-0.45	60.64	-0.0153	-0.2202	-0.0113
430	SLU 15	-0.39	-0.39	60.61	-0.0152	-0.2201	-0.0111
430	SLU 16	-0.39	-0.46	60.22	-0.0154	-0.2186	-0.011
430	SLU 17	-0.39	-0.41	60.19	-0.0153	-0.2186	-0.0108
430	SLU 18	-0.39	-0.45	62.03	-0.0151	-0.2276	-0.0116
430	SLU 19	-0.38	-0.39	62	-0.015	-0.2275	-0.0114
430	SLU 20	-0.39	-0.46	62.62	-0.0155	-0.2297	-0.0117
430	SLU 21	-0.39	-0.4	62.59	-0.0153	-0.2297	-0.0114
430	SLU 22	-0.43	-0.41	58.46	-0.0142	-0.2059	-0.0116
430	SLU 23	-0.43	-0.32	58.41	-0.0141	-0.2058	-0.0111
430	SLU 24	-0.44	-0.41	59.47	-0.0144	-0.2096	-0.0119
430	SLU 25	-0.44	-0.35	59.44	-0.0143	-0.2096	-0.0116
430	SLU 26	-0.43	-0.33	59	-0.0144	-0.208	-0.0112
430	SLU 27	-0.44	-0.41	60.06	-0.0147	-0.2118	-0.0119
430	SLU 28	-0.44	-0.36	60.03	-0.0146	-0.2117	-0.0117
430	SLU 29	-0.44	-0.43	59.64	-0.0149	-0.2102	-0.0116
430	SLU 30	-0.44	-0.37	59.61	-0.0148	-0.2102	-0.0114
430	SLU 31	-0.43	-0.33	65.4	-0.0149	-0.2368	-0.0127
430	SLU 32	-0.45	-0.41	66.45	-0.0152	-0.2406	-0.0134
430	SLU 33	-0.44	-0.36	66.42	-0.0151	-0.2406	-0.0132
430	SLU 34	-0.43	-0.33	65.98	-0.0152	-0.239	-0.0127
430	SLU 35	-0.45	-0.42	67.04	-0.0156	-0.2428	-0.0134
430	SLU 36	-0.45	-0.36	67.01	-0.0155	-0.2427	-0.0132
430	SLU 37	-0.44	-0.43	66.62	-0.0157	-0.2412	-0.0132
430	SLU 38	-0.44	-0.38	66.59	-0.0156	-0.2412	-0.0129
430	SLU 39	-0.44	-0.42	68.44	-0.0154	-0.2502	-0.0137
430	SLU 40	-0.44	-0.37	68.41	-0.0153	-0.2501	-0.0135
430	SLU 41	-0.44	-0.43	69.02	-0.0157	-0.2523	-0.0138
430	SLU 42	-0.44	-0.37	69	-0.0156	-0.2523	-0.0135
430	SLU 43	-0.47	-0.58	65.48	-0.0181	-0.2305	-0.0115
430	SLU 44	-0.47	-0.49	65.43	-0.0179	-0.2305	-0.0111
430	SLU 45	-0.48	-0.58	66.49	-0.0182	-0.2342	-0.0119
430	SLU 46	-0.48	-0.52	66.46	-0.0181	-0.2342	-0.0116
430	SLU 47	-0.47	-0.5	66.02	-0.0182	-0.2326	-0.0111
430	SLU 48	-0.49	-0.58	67.08	-0.0186	-0.2364	-0.0119
430	SLU 49	-0.48	-0.53	67.05	-0.0184	-0.2364	-0.0116
430	SLU 50	-0.48	-0.6	66.66	-0.0187	-0.2348	-0.0116
430	SLU 51	-0.48	-0.54	66.63	-0.0186	-0.2348	-0.0114
430	SLU 52	-0.47	-0.5	72.41	-0.0187	-0.2615	-0.0126
430	SLU 53	-0.49	-0.58	73.47	-0.0191	-0.2652	-0.0134
430	SLU 54	-0.49	-0.53	73.44	-0.0189	-0.2652	-0.0131
430	SLU 55	-0.48	-0.5	73	-0.019	-0.2636	-0.0127
430	SLU 56	-0.49	-0.59	74.06	-0.0194	-0.2674	-0.0134
430	SLU 57	-0.49	-0.53	74.03	-0.0193	-0.2674	-0.0132
430	SLU 58	-0.49	-0.6	73.64	-0.0195	-0.2658	-0.0131
430	SLU 59	-0.48	-0.55	73.61	-0.0194	-0.2658	-0.0129
430	SLU 60	-0.48	-0.59	75.45	-0.0192	-0.2748	-0.0137
430	SLU 61	-0.48	-0.54	75.42	-0.0191	-0.2748	-0.0135
430	SLU 62	-0.49	-0.6	76.04	-0.0196	-0.277	-0.0138
430	SLU 63	-0.48	-0.54	76.01	-0.0194	-0.2769	-0.0135
430	SLU 64	-0.53	-0.55	71.88	-0.0183	-0.2531	-0.0137
430	SLU 65	-0.52	-0.46	71.84	-0.0182	-0.2531	-0.0132
430	SLU 66	-0.54	-0.55	72.89	-0.0185	-0.2568	-0.014
430	SLU 67	-0.53	-0.49	72.86	-0.0184	-0.2568	-0.0137
430	SLU 68	-0.52	-0.47	72.42	-0.0185	-0.2552	-0.0133
430	SLU 69	-0.54	-0.56	73.48	-0.0188	-0.259	-0.014
430	SLU 70	-0.54	-0.5	73.45	-0.0187	-0.259	-0.0138
430	SLU 71	-0.53	-0.57	73.06	-0.019	-0.2575	-0.0137
430	SLU 72	-0.53	-0.51	73.03	-0.0189	-0.2574	-0.0135
430	SLU 73	-0.53	-0.47	78.82	-0.019	-0.2841	-0.0148
430	SLU 74	-0.54	-0.56	79.87	-0.0193	-0.2878	-0.0155
430	SLU 75	-0.54	-0.5	79.85	-0.0192	-0.2878	-0.0153
430	SLU 76	-0.53	-0.47	79.41	-0.0193	-0.2862	-0.0148
430	SLU 77	-0.55	-0.56	80.46	-0.0197	-0.29	-0.0155
430	SLU 78	-0.54	-0.51	80.43	-0.0195	-0.29	-0.0153
430	SLU 79	-0.54	-0.58	80.04	-0.0198	-0.2885	-0.0153

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
430	SLU 80	-0.54	-0.52	80.01	-0.0197	-0.2884	-0.015
430	SLU 81	-0.53	-0.56	81.86	-0.0195	-0.2974	-0.0158
430	SLU 82	-0.53	-0.51	81.83	-0.0194	-0.2974	-0.0156
430	SLU 83	-0.54	-0.57	82.45	-0.0198	-0.2996	-0.0159
430	SLU 84	-0.53	-0.52	82.42	-0.0197	-0.2995	-0.0156
430	SLE RA 1	-0.39	-0.43	53.89	-0.014	-0.1898	-0.01
430	SLE RA 2	-0.39	-0.37	53.86	-0.0139	-0.1897	-0.0098
430	SLE RA 3	-0.4	-0.43	54.56	-0.0142	-0.1922	-0.0103
430	SLE RA 4	-0.4	-0.39	54.54	-0.0141	-0.1922	-0.0101
430	SLE RA 5	-0.39	-0.38	54.25	-0.0141	-0.1911	-0.0098
430	SLE RA 6	-0.4	-0.43	54.95	-0.0144	-0.1937	-0.0103
430	SLE RA 7	-0.4	-0.4	54.93	-0.0143	-0.1936	-0.0101
430	SLE RA 8	-0.4	-0.44	54.67	-0.0145	-0.1926	-0.0101
430	SLE RA 9	-0.4	-0.4	54.65	-0.0144	-0.1926	-0.0099
430	SLE RA 10	-0.39	-0.37	58.51	-0.0145	-0.2104	-0.0108
430	SLE RA 11	-0.4	-0.43	59.21	-0.0147	-0.2129	-0.0113
430	SLE RA 12	-0.4	-0.4	59.2	-0.0146	-0.2129	-0.0111
430	SLE RA 13	-0.4	-0.38	58.9	-0.0147	-0.2118	-0.0108
430	SLE RA 14	-0.41	-0.44	59.61	-0.0149	-0.2143	-0.0113
430	SLE RA 15	-0.4	-0.4	59.59	-0.0148	-0.2143	-0.0111
430	SLE RA 16	-0.4	-0.45	59.33	-0.015	-0.2133	-0.0111
430	SLE RA 17	-0.4	-0.41	59.31	-0.0149	-0.2133	-0.0109
430	SLE RA 18	-0.4	-0.44	60.54	-0.0148	-0.2193	-0.0115
430	SLE RA 19	-0.4	-0.4	60.52	-0.0148	-0.2192	-0.0113
430	SLE RA 20	-0.4	-0.44	60.93	-0.015	-0.2207	-0.0115
430	SLE RA 21	-0.4	-0.41	60.91	-0.015	-0.2207	-0.0114
430	SLE FR 1	-0.39	-0.43	53.89	-0.014	-0.1898	-0.01
430	SLE FR 2	-0.39	-0.42	53.88	-0.014	-0.1897	-0.01
430	SLE FR 3	-0.39	-0.43	54.04	-0.0141	-0.1903	-0.0101
430	SLE FR 4	-0.39	-0.42	55.88	-0.0143	-0.1986	-0.0104
430	SLE FR 5	-0.4	-0.44	56.04	-0.0144	-0.1992	-0.0105
430	SLE FR 6	-0.4	-0.44	57.21	-0.0144	-0.2045	-0.0108
430	SLE QP 1	-0.39	-0.43	53.89	-0.014	-0.1898	-0.01
430	SLE QP 2	-0.39	-0.43	55.88	-0.0143	-0.1986	-0.0105
430	SLD 1	4.43	0.35	59.56	-0.0186	-0.1171	0.0044
430	SLD 2	4.58	0.1	59.56	-0.0182	-0.1188	0.0089
430	SLD 3	4.55	-1.44	59.42	-0.0156	-0.1318	0.0059
430	SLD 4	4.7	-1.68	59.43	-0.0153	-0.1335	0.0104
430	SLD 5	0.85	2.55	57.19	-0.0201	-0.1515	-0.0091
430	SLD 6	0.95	2.39	57.19	-0.0199	-0.1526	-0.0062
430	SLD 7	1.23	-3.4	56.74	-0.0102	-0.2006	-0.0041
430	SLD 8	1.33	-3.56	56.74	-0.01	-0.2017	-0.0011
430	SLD 9	-2.12	2.69	55.02	-0.0185	-0.1955	-0.0198
430	SLD 10	-2.02	2.53	55.03	-0.0183	-0.1966	-0.0169
430	SLD 11	-1.74	-3.26	54.58	-0.0087	-0.2446	-0.0148
430	SLD 12	-1.64	-3.42	54.58	-0.0085	-0.2457	-0.0119
430	SLD 13	-5.49	0.81	52.34	-0.0133	-0.2637	-0.0314
430	SLD 14	-5.33	0.57	52.34	-0.013	-0.2654	-0.0269
430	SLD 15	-5.37	-0.97	52.21	-0.0103	-0.2784	-0.0299
430	SLD 16	-5.22	-1.22	52.21	-0.01	-0.2801	-0.0254
430	SLV 1	10.89	1.34	64.47	-0.0244	-0.0083	0.0243
430	SLV 2	11.25	0.77	64.48	-0.0236	-0.0123	0.0349
430	SLV 3	11.16	-2.73	64.16	-0.0177	-0.0418	0.0279
430	SLV 4	11.52	-3.31	64.17	-0.0169	-0.0458	0.0384
430	SLV 5	2.53	6.38	58.93	-0.0276	-0.0901	-0.0072
430	SLV 6	2.75	6.01	58.93	-0.0271	-0.0926	-0.0004
430	SLV 7	3.42	-7.21	57.89	-0.0052	-0.2017	0.0046
430	SLV 8	3.64	-7.57	57.9	-0.0048	-0.2042	0.0113
430	SLV 9	-4.43	6.7	53.86	-0.0238	-0.193	-0.0323
430	SLV 10	-4.21	6.34	53.87	-0.0233	-0.1955	-0.0255
430	SLV 11	-3.54	-6.88	52.83	-0.0014	-0.3046	-0.0205
430	SLV 12	-3.32	-7.25	52.84	-0.0009	-0.3071	-0.0138
430	SLV 13	-12.31	2.44	47.59	-0.0117	-0.3514	-0.0593
430	SLV 14	-11.95	1.86	47.6	-0.0109	-0.3554	-0.0488
430	SLV 15	-12.04	-1.64	47.28	-0.005	-0.3849	-0.0558
430	SLV 16	-11.68	-2.21	47.29	-0.0042	-0.3889	-0.0453
430	CRTFP Ux+	0	0	0	0	0	0
430	CRTFP Ux-	0	0	0	0	0	0
434	SLU 1	0.33	-0.4	51.75	-0.0178	0.159	-0.0027
434	SLU 2	0.32	-0.31	51.72	-0.0176	0.1589	-0.0031
434	SLU 3	0.34	-0.4	52.74	-0.0181	0.1618	-0.0028
434	SLU 4	0.34	-0.34	52.72	-0.0179	0.1618	-0.003
434	SLU 5	0.33	-0.32	52.3	-0.0179	0.1605	-0.0032
434	SLU 6	0.34	-0.41	53.33	-0.0184	0.1635	-0.0029
434	SLU 7	0.34	-0.35	53.31	-0.0183	0.1634	-0.0031
434	SLU 8	0.34	-0.42	52.92	-0.0185	0.1622	-0.003
434	SLU 9	0.33	-0.37	52.9	-0.0183	0.1621	-0.0032
434	SLU 10	0.35	-0.29	58.52	-0.019	0.1846	-0.0033
434	SLU 11	0.37	-0.38	59.54	-0.0195	0.1876	-0.003
434	SLU 12	0.37	-0.33	59.52	-0.0194	0.1875	-0.0032
434	SLU 13	0.36	-0.31	59.1	-0.0194	0.1863	-0.0034
434	SLU 14	0.37	-0.4	60.13	-0.0199	0.1892	-0.0031
434	SLU 15	0.37	-0.34	60.1	-0.0198	0.1892	-0.0033
434	SLU 16	0.37	-0.41	59.72	-0.0199	0.188	-0.0032
434	SLU 17	0.36	-0.35	59.7	-0.0198	0.1879	-0.0034
434	SLU 18	0.37	-0.38	61.47	-0.0198	0.1958	-0.003
434	SLU 19	0.37	-0.33	61.44	-0.0197	0.1957	-0.0032
434	SLU 20	0.38	-0.39	62.05	-0.0202	0.1974	-0.0032
434	SLU 21	0.37	-0.34	62.03	-0.0201	0.1973	-0.0034
434	SLU 22	0.38	-0.37	58.05	-0.0186	0.1749	-0.0021
434	SLU 23	0.38	-0.28	58.01	-0.0184	0.1747	-0.0024

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
434	SLU 24	0.39	-0.37	59.04	-0.019	0.1777	-0.0021
434	SLU 25	0.39	-0.31	59.02	-0.0188	0.1777	-0.0023
434	SLU 26	0.38	-0.29	58.6	-0.0188	0.1764	-0.0026
434	SLU 27	0.4	-0.38	59.63	-0.0193	0.1793	-0.0023
434	SLU 28	0.39	-0.32	59.6	-0.0192	0.1793	-0.0025
434	SLU 29	0.39	-0.39	59.22	-0.0194	0.1781	-0.0024
434	SLU 30	0.39	-0.34	59.2	-0.0192	0.178	-0.0026
434	SLU 31	0.41	-0.26	64.81	-0.0199	0.2005	-0.0027
434	SLU 32	0.42	-0.35	65.84	-0.0204	0.2035	-0.0023
434	SLU 33	0.42	-0.3	65.82	-0.0203	0.2034	-0.0025
434	SLU 34	0.41	-0.28	65.4	-0.0203	0.2021	-0.0028
434	SLU 35	0.43	-0.37	66.42	-0.0208	0.2051	-0.0025
434	SLU 36	0.42	-0.31	66.4	-0.0206	0.205	-0.0027
434	SLU 37	0.42	-0.38	66.02	-0.0208	0.2039	-0.0026
434	SLU 38	0.42	-0.32	66	-0.0207	0.2038	-0.0028
434	SLU 39	0.43	-0.35	67.76	-0.0207	0.2117	-0.0024
434	SLU 40	0.42	-0.3	67.74	-0.0206	0.2116	-0.0026
434	SLU 41	0.43	-0.36	68.35	-0.0211	0.2133	-0.0026
434	SLU 42	0.43	-0.31	68.33	-0.021	0.2132	-0.0028
434	SLU 43	0.41	-0.53	65.12	-0.0228	0.2012	-0.0038
434	SLU 44	0.4	-0.43	65.08	-0.0226	0.2011	-0.0041
434	SLU 45	0.42	-0.52	66.11	-0.0231	0.2041	-0.0038
434	SLU 46	0.42	-0.47	66.09	-0.023	0.204	-0.004
434	SLU 47	0.41	-0.45	65.67	-0.0229	0.2027	-0.0042
434	SLU 48	0.42	-0.54	66.7	-0.0235	0.2057	-0.0039
434	SLU 49	0.42	-0.48	66.67	-0.0233	0.2056	-0.0041
434	SLU 50	0.42	-0.55	66.29	-0.0235	0.2045	-0.0041
434	SLU 51	0.41	-0.49	66.27	-0.0234	0.2044	-0.0043
434	SLU 52	0.43	-0.42	71.88	-0.024	0.2269	-0.0043
434	SLU 53	0.45	-0.51	72.91	-0.0245	0.2299	-0.004
434	SLU 54	0.45	-0.46	72.89	-0.0244	0.2298	-0.0042
434	SLU 55	0.44	-0.43	72.47	-0.0244	0.2285	-0.0045
434	SLU 56	0.45	-0.52	73.49	-0.0249	0.2315	-0.0041
434	SLU 57	0.45	-0.47	73.47	-0.0248	0.2314	-0.0043
434	SLU 58	0.45	-0.54	73.09	-0.0249	0.2302	-0.0043
434	SLU 59	0.44	-0.48	73.07	-0.0248	0.2302	-0.0045
434	SLU 60	0.45	-0.51	74.83	-0.0249	0.238	-0.0041
434	SLU 61	0.45	-0.45	74.81	-0.0247	0.238	-0.0043
434	SLU 62	0.46	-0.52	75.42	-0.0252	0.2397	-0.0042
434	SLU 63	0.45	-0.47	75.4	-0.0251	0.2396	-0.0044
434	SLU 64	0.46	-0.5	71.42	-0.0237	0.2171	-0.0032
434	SLU 65	0.46	-0.4	71.38	-0.0235	0.217	-0.0035
434	SLU 66	0.47	-0.49	72.41	-0.024	0.22	-0.0032
434	SLU 67	0.47	-0.44	72.38	-0.0239	0.2199	-0.0034
434	SLU 68	0.46	-0.42	71.97	-0.0238	0.2186	-0.0036
434	SLU 69	0.48	-0.51	72.99	-0.0243	0.2216	-0.0033
434	SLU 70	0.47	-0.45	72.97	-0.0242	0.2215	-0.0035
434	SLU 71	0.47	-0.52	72.59	-0.0244	0.2203	-0.0035
434	SLU 72	0.47	-0.47	72.57	-0.0243	0.2203	-0.0036
434	SLU 73	0.49	-0.39	78.18	-0.0249	0.2428	-0.0037
434	SLU 74	0.5	-0.48	79.21	-0.0254	0.2457	-0.0034
434	SLU 75	0.5	-0.43	79.18	-0.0253	0.2457	-0.0036
434	SLU 76	0.49	-0.4	78.76	-0.0253	0.2444	-0.0038
434	SLU 77	0.51	-0.49	79.79	-0.0258	0.2474	-0.0035
434	SLU 78	0.5	-0.44	79.77	-0.0257	0.2473	-0.0037
434	SLU 79	0.5	-0.51	79.39	-0.0258	0.2461	-0.0037
434	SLU 80	0.5	-0.45	79.36	-0.0257	0.246	-0.0038
434	SLU 81	0.51	-0.48	81.13	-0.0257	0.2539	-0.0034
434	SLU 82	0.5	-0.42	81.11	-0.0256	0.2538	-0.0036
434	SLU 83	0.51	-0.49	81.72	-0.0261	0.2555	-0.0036
434	SLU 84	0.51	-0.44	81.69	-0.026	0.2555	-0.0038
434	SLE RA 1	0.34	-0.39	53.55	-0.018	0.1635	-0.0026
434	SLE RA 2	0.34	-0.33	53.53	-0.0179	0.1634	-0.0028
434	SLE RA 3	0.35	-0.39	54.21	-0.0182	0.1654	-0.0026
434	SLE RA 4	0.35	-0.35	54.2	-0.0181	0.1654	-0.0027
434	SLE RA 5	0.34	-0.34	53.92	-0.0181	0.1645	-0.0029
434	SLE RA 6	0.35	-0.4	54.6	-0.0185	0.1665	-0.0027
434	SLE RA 7	0.35	-0.36	54.59	-0.0184	0.1665	-0.0028
434	SLE RA 8	0.35	-0.4	54.33	-0.0185	0.1657	-0.0028
434	SLE RA 9	0.35	-0.37	54.32	-0.0184	0.1656	-0.0029
434	SLE RA 10	0.36	-0.32	58.06	-0.0188	0.1806	-0.0029
434	SLE RA 11	0.37	-0.38	58.74	-0.0192	0.1826	-0.0027
434	SLE RA 12	0.37	-0.34	58.73	-0.0191	0.1826	-0.0028
434	SLE RA 13	0.36	-0.33	58.45	-0.0191	0.1817	-0.003
434	SLE RA 14	0.37	-0.39	59.13	-0.0194	0.1837	-0.0028
434	SLE RA 15	0.37	-0.35	59.12	-0.0193	0.1836	-0.0029
434	SLE RA 16	0.37	-0.4	58.87	-0.0195	0.1829	-0.0029
434	SLE RA 17	0.37	-0.36	58.85	-0.0194	0.1828	-0.003
434	SLE RA 18	0.37	-0.38	60.03	-0.0194	0.1881	-0.0028
434	SLE RA 19	0.37	-0.34	60.01	-0.0193	0.188	-0.0029
434	SLE RA 20	0.38	-0.38	60.42	-0.0196	0.1891	-0.0029
434	SLE RA 21	0.37	-0.35	60.4	-0.0196	0.1891	-0.003
434	SLE FR 1	0.34	-0.39	53.55	-0.018	0.1635	-0.0026
434	SLE FR 2	0.34	-0.38	53.55	-0.018	0.1635	-0.0026
434	SLE FR 3	0.35	-0.39	53.71	-0.0181	0.1639	-0.0026
434	SLE FR 4	0.35	-0.37	55.49	-0.0184	0.1709	-0.0027
434	SLE FR 5	0.35	-0.39	55.65	-0.0185	0.1713	-0.0027
434	SLE FR 6	0.36	-0.38	56.79	-0.0187	0.1758	-0.0027
434	SLE QP 1	0.34	-0.39	53.55	-0.018	0.1635	-0.0026
434	SLE QP 2	0.35	-0.38	55.5	-0.0184	0.1709	-0.0026
434	SLD 1	5.34	0.62	52.34	-0.0161	0.1931	0.0188

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
434	SLD 2	5.5	0.85	52.34	-0.0164	0.1917	0.0233
434	SLD 3	5.22	-1.13	52.25	-0.0137	0.2082	0.0174
434	SLD 4	5.37	-0.9	52.24	-0.014	0.2067	0.0219
434	SLD 5	2.01	2.53	54.7	-0.0213	0.155	0.0051
434	SLD 6	2.11	2.68	54.69	-0.0215	0.1541	0.008
434	SLD 7	1.6	-3.3	54.38	-0.0133	0.2051	0.0005
434	SLD 8	1.7	-3.15	54.37	-0.0135	0.2042	0.0034
434	SLD 9	-0.99	2.38	56.62	-0.0234	0.1375	-0.0087
434	SLD 10	-0.89	2.53	56.61	-0.0235	0.1366	-0.0058
434	SLD 11	-1.4	-3.45	56.3	-0.0153	0.1877	-0.0133
434	SLD 12	-1.3	-3.3	56.3	-0.0155	0.1868	-0.0103
434	SLD 13	-4.67	0.13	58.75	-0.0229	0.135	-0.0272
434	SLD 14	-4.51	0.36	58.74	-0.0231	0.1336	-0.0227
434	SLD 15	-4.79	-1.62	58.66	-0.0205	0.15	-0.0285
434	SLD 16	-4.64	-1.39	58.65	-0.0207	0.1486	-0.024
434	SLV 1	12.02	1.91	48.12	-0.0129	0.2234	0.0475
434	SLV 2	12.38	2.46	48.1	-0.0135	0.22	0.0579
434	SLV 3	11.73	-2.08	47.9	-0.0075	0.2576	0.0443
434	SLV 4	12.1	-1.53	47.88	-0.0081	0.2542	0.0548
434	SLV 5	4.23	6.25	53.62	-0.0249	0.1354	0.0155
434	SLV 6	4.46	6.6	53.61	-0.0253	0.1332	0.0222
434	SLV 7	3.27	-7.03	52.88	-0.0068	0.2493	0.0048
434	SLV 8	3.5	-6.68	52.87	-0.0072	0.2471	0.0115
434	SLV 9	-2.8	5.91	58.12	-0.0297	0.0946	-0.0168
434	SLV 10	-2.56	6.26	58.11	-0.0301	0.0925	-0.0101
434	SLV 11	-3.75	-7.37	57.38	-0.0115	0.2085	-0.0274
434	SLV 12	-3.52	-7.02	57.37	-0.0119	0.2064	-0.0207
434	SLV 13	-11.39	0.76	63.11	-0.0288	0.0876	-0.06
434	SLV 14	-11.03	1.31	63.09	-0.0294	0.0842	-0.0495
434	SLV 15	-11.68	-3.23	62.89	-0.0233	0.1217	-0.0632
434	SLV 16	-11.31	-2.68	62.87	-0.0239	0.1184	-0.0527
434	CRTFP Ux+	0	0	0	0	0	0
434	CRTFP Ux-	0	0	0	0	0	0
435	SLU 1	0.28	0.47	30.95	-0.0066	9.0256	-0.167
435	SLU 2	0.27	0.56	30.92	-0.0064	9.0169	-0.1964
435	SLU 3	0.29	0.49	31.55	-0.0068	9.1954	-0.1723
435	SLU 4	0.29	0.54	31.53	-0.0067	9.1902	-0.1899
435	SLU 5	0.28	0.56	31.27	-0.0065	9.1154	-0.1979
435	SLU 6	0.29	0.49	31.89	-0.0069	9.2938	-0.1739
435	SLU 7	0.29	0.54	31.88	-0.0068	9.2887	-0.1915
435	SLU 8	0.29	0.48	31.64	-0.0069	9.2225	-0.1701
435	SLU 9	0.28	0.53	31.63	-0.0068	9.2173	-0.1877
435	SLU 10	0.29	0.66	34.81	-0.007	10.1328	-0.2318
435	SLU 11	0.3	0.59	35.43	-0.0074	10.3112	-0.2078
435	SLU 12	0.3	0.64	35.42	-0.0072	10.306	-0.2254
435	SLU 13	0.29	0.66	35.16	-0.0071	10.2312	-0.2334
435	SLU 14	0.31	0.59	35.78	-0.0075	10.4097	-0.2093
435	SLU 15	0.3	0.64	35.77	-0.0074	10.4045	-0.227
435	SLU 16	0.3	0.58	35.53	-0.0075	10.3383	-0.2056
435	SLU 17	0.3	0.63	35.52	-0.0074	10.3331	-0.2232
435	SLU 18	0.3	0.62	36.5	-0.0075	10.6196	-0.2177
435	SLU 19	0.3	0.67	36.49	-0.0073	10.6144	-0.2353
435	SLU 20	0.31	0.62	36.85	-0.0076	10.718	-0.2192
435	SLU 21	0.3	0.67	36.83	-0.0075	10.7129	-0.2368
435	SLU 22	0.32	0.56	34.67	-0.0071	10.0932	-0.1973
435	SLU 23	0.31	0.64	34.65	-0.0069	10.0845	-0.2267
435	SLU 24	0.32	0.58	35.27	-0.0073	10.263	-0.2027
435	SLU 25	0.32	0.63	35.26	-0.0071	10.2578	-0.2203
435	SLU 26	0.31	0.65	35	-0.007	10.183	-0.2282
435	SLU 27	0.33	0.58	35.62	-0.0074	10.3614	-0.2042
435	SLU 28	0.32	0.63	35.61	-0.0073	10.3563	-0.2218
435	SLU 29	0.32	0.57	35.37	-0.0074	10.2901	-0.2005
435	SLU 30	0.32	0.62	35.35	-0.0073	10.2849	-0.2181
435	SLU 31	0.33	0.75	38.54	-0.0075	11.2004	-0.2622
435	SLU 32	0.34	0.68	39.16	-0.0079	11.3788	-0.2381
435	SLU 33	0.34	0.73	39.14	-0.0077	11.3736	-0.2557
435	SLU 34	0.33	0.75	38.88	-0.0076	11.2988	-0.2637
435	SLU 35	0.34	0.68	39.51	-0.008	11.4773	-0.2397
435	SLU 36	0.34	0.73	39.49	-0.0079	11.4721	-0.2573
435	SLU 37	0.34	0.67	39.26	-0.008	11.4059	-0.2359
435	SLU 38	0.33	0.72	39.24	-0.0078	11.4007	-0.2535
435	SLU 39	0.34	0.7	40.23	-0.008	11.6872	-0.248
435	SLU 40	0.34	0.76	40.21	-0.0078	11.682	-0.2656
435	SLU 41	0.34	0.71	40.57	-0.0081	11.7856	-0.2496
435	SLU 42	0.34	0.76	40.56	-0.008	11.7805	-0.2672
435	SLU 43	0.35	0.59	38.96	-0.0085	11.3672	-0.2067
435	SLU 44	0.35	0.67	38.93	-0.0082	11.3586	-0.2361
435	SLU 45	0.36	0.6	39.55	-0.0086	11.537	-0.212
435	SLU 46	0.36	0.65	39.54	-0.0085	11.5318	-0.2296
435	SLU 47	0.35	0.67	39.28	-0.0084	11.457	-0.2376
435	SLU 48	0.36	0.61	39.9	-0.0087	11.6355	-0.2136
435	SLU 49	0.36	0.66	39.89	-0.0086	11.6303	-0.2312
435	SLU 50	0.36	0.6	39.65	-0.0087	11.5641	-0.2098
435	SLU 51	0.35	0.65	39.64	-0.0086	11.5589	-0.2274
435	SLU 52	0.36	0.77	42.82	-0.0088	12.4744	-0.2715
435	SLU 53	0.38	0.7	43.44	-0.0092	12.6528	-0.2475
435	SLU 54	0.37	0.75	43.43	-0.0091	12.6477	-0.2651
435	SLU 55	0.36	0.78	43.17	-0.009	12.5729	-0.2731
435	SLU 56	0.38	0.71	43.79	-0.0093	12.7513	-0.249
435	SLU 57	0.38	0.76	43.77	-0.0092	12.7461	-0.2667
435	SLU 58	0.37	0.7	43.54	-0.0093	12.6799	-0.2453

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
435	SLU 59	0.37	0.75	43.52	-0.0092	12.6748	-0.2629
435	SLU 60	0.37	0.73	44.51	-0.0093	12.9612	-0.2574
435	SLU 61	0.37	0.78	44.49	-0.0092	12.9561	-0.275
435	SLU 62	0.38	0.74	44.86	-0.0094	13.0597	-0.2589
435	SLU 63	0.37	0.79	44.84	-0.0093	13.0545	-0.2765
435	SLU 64	0.39	0.67	42.68	-0.009	12.4348	-0.237
435	SLU 65	0.38	0.76	42.66	-0.0087	12.4262	-0.2664
435	SLU 66	0.4	0.69	43.28	-0.0091	12.6046	-0.2424
435	SLU 67	0.39	0.74	43.27	-0.009	12.5994	-0.26
435	SLU 68	0.39	0.76	43	-0.0089	12.5246	-0.2679
435	SLU 69	0.4	0.69	43.63	-0.0092	12.7031	-0.2439
435	SLU 70	0.4	0.74	43.61	-0.0091	12.6979	-0.2615
435	SLU 71	0.39	0.68	43.38	-0.0092	12.6317	-0.2402
435	SLU 72	0.39	0.73	43.36	-0.0091	12.6265	-0.2578
435	SLU 73	0.4	0.86	46.54	-0.0093	13.542	-0.3019
435	SLU 74	0.41	0.79	47.17	-0.0097	13.7204	-0.2778
435	SLU 75	0.41	0.84	47.15	-0.0096	13.7153	-0.2954
435	SLU 76	0.4	0.86	46.89	-0.0095	13.6404	-0.3034
435	SLU 77	0.42	0.79	47.51	-0.0098	13.8189	-0.2794
435	SLU 78	0.41	0.84	47.5	-0.0097	13.8137	-0.297
435	SLU 79	0.41	0.78	47.26	-0.0098	13.7475	-0.2756
435	SLU 80	0.41	0.83	47.25	-0.0097	13.7424	-0.2932
435	SLU 81	0.41	0.82	48.23	-0.0098	14.0288	-0.2877
435	SLU 82	0.41	0.87	48.22	-0.0097	14.0236	-0.3053
435	SLU 83	0.41	0.82	48.58	-0.0099	14.1273	-0.2893
435	SLU 84	0.41	0.87	48.57	-0.0098	14.1221	-0.3069
435	SLE RA 1	0.29	0.5	32.01	-0.0068	9.3306	-0.1757
435	SLE RA 2	0.29	0.55	32	-0.0066	9.3248	-0.1952
435	SLE RA 3	0.3	0.51	32.41	-0.0069	9.4438	-0.1792
435	SLE RA 4	0.29	0.54	32.4	-0.0068	9.4404	-0.191
435	SLE RA 5	0.29	0.56	32.23	-0.0067	9.3905	-0.1963
435	SLE RA 6	0.3	0.51	32.64	-0.007	9.5094	-0.1803
435	SLE RA 7	0.3	0.55	32.63	-0.0069	9.506	-0.192
435	SLE RA 8	0.3	0.5	32.48	-0.007	9.4619	-0.1778
435	SLE RA 9	0.29	0.54	32.47	-0.0069	9.4584	-0.1895
435	SLE RA 10	0.3	0.62	34.59	-0.007	10.0687	-0.2189
435	SLE RA 11	0.31	0.58	35	-0.0073	10.1877	-0.2029
435	SLE RA 12	0.3	0.61	34.99	-0.0072	10.1842	-0.2146
435	SLE RA 13	0.3	0.62	34.82	-0.0071	10.1344	-0.2199
435	SLE RA 14	0.31	0.58	35.23	-0.0074	10.2533	-0.2039
435	SLE RA 15	0.31	0.61	35.22	-0.0073	10.2499	-0.2156
435	SLE RA 16	0.31	0.57	35.07	-0.0073	10.2057	-0.2014
435	SLE RA 17	0.3	0.61	35.06	-0.0073	10.2023	-0.2131
435	SLE RA 18	0.31	0.59	35.72	-0.0073	10.3933	-0.2095
435	SLE RA 19	0.3	0.63	35.71	-0.0073	10.3898	-0.2212
435	SLE RA 20	0.31	0.6	35.95	-0.0074	10.4589	-0.2105
435	SLE RA 21	0.31	0.63	35.94	-0.0073	10.4555	-0.2222
435	SLE FR 1	0.29	0.5	32.01	-0.0068	9.3306	-0.1757
435	SLE FR 2	0.29	0.51	32.01	-0.0067	9.3294	-0.1796
435	SLE FR 3	0.29	0.5	32.11	-0.0068	9.3568	-0.1761
435	SLE FR 4	0.29	0.54	33.12	-0.0069	9.6482	-0.1897
435	SLE FR 5	0.3	0.53	33.22	-0.007	9.6756	-0.1862
435	SLE FR 6	0.3	0.55	33.86	-0.0071	9.8619	-0.1926
435	SLE QP 1	0.29	0.5	32.01	-0.0068	9.3306	-0.1757
435	SLE QP 2	0.3	0.53	33.12	-0.0069	9.6494	-0.1858
435	SLD 1	3.45	0.92	26.98	-0.005	7.9406	-0.3231
435	SLD 2	3.55	1.31	27.01	-0.0053	7.9462	-0.4568
435	SLD 3	3.37	-0.56	26.82	-0.0037	7.8975	0.1971
435	SLD 4	3.47	-0.18	26.85	-0.004	7.9031	0.0635
435	SLD 5	1.35	2.83	31.52	-0.0084	9.2012	-0.9927
435	SLD 6	1.41	3.08	31.54	-0.0085	9.2049	-1.0794
435	SLD 7	1.08	-2.12	30.98	-0.0039	9.0574	0.7414
435	SLD 8	1.14	-1.87	31	-0.0041	9.0611	0.6547
435	SLD 9	-0.55	2.93	35.25	-0.0098	10.2377	-1.0263
435	SLD 10	-0.49	3.18	35.26	-0.01	10.2414	-1.113
435	SLD 11	-0.82	-2.03	34.71	-0.0054	10.0939	0.7078
435	SLD 12	-0.76	-1.78	34.73	-0.0055	10.0976	0.6211
435	SLD 13	-2.88	1.24	39.4	-0.0099	11.3957	-0.4351
435	SLD 14	-2.78	1.62	39.43	-0.0102	11.4013	-0.5687
435	SLD 15	-2.96	-0.25	39.24	-0.0086	11.3525	0.0851
435	SLD 16	-2.86	0.13	39.26	-0.0089	11.3582	-0.0485
435	SLV 1	7.67	1.41	18.76	-0.0024	5.6509	-0.4909
435	SLV 2	7.9	2.3	18.81	-0.003	5.664	-0.8022
435	SLV 3	7.49	-1.97	18.38	0.0006	5.5503	0.6925
435	SLV 4	7.71	-1.08	18.44	0	5.5634	0.3811
435	SLV 5	2.76	5.77	29.37	-0.0101	8.6002	-2.0193
435	SLV 6	2.9	6.34	29.41	-0.0105	8.6086	-2.2181
435	SLV 7	2.13	-5.5	28.12	0.0001	8.2649	1.9251
435	SLV 8	2.27	-4.93	28.16	-0.0003	8.2732	1.7262
435	SLV 9	-1.68	5.99	38.09	-0.0136	11.0256	-2.0979
435	SLV 10	-1.54	6.56	38.13	-0.014	11.0339	-2.2967
435	SLV 11	-2.31	-5.28	36.84	-0.0034	10.6902	1.8465
435	SLV 12	-2.17	-4.71	36.87	-0.0038	10.6986	1.6477
435	SLV 13	-7.12	2.14	47.81	-0.0139	13.7354	-0.7527
435	SLV 14	-6.89	3.03	47.87	-0.0145	13.7485	-1.0641
435	SLV 15	-7.31	-1.24	47.44	-0.0109	13.6348	0.4306
435	SLV 16	-7.08	-0.35	47.49	-0.0115	13.6479	0.1192
435	CRTFP Ux+	0	0	0	0	0	0
435	CRTFP Ux-	0	0	0	0	0	0
435	CRTFP Uy+	0	0	0	0	0	0
435	CRTFP Uy-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
437	SLU 1	-0.23	-0.06	25.66	-0.0123	-5.1395	-0.0157
437	SLU 2	-0.23	0.02	25.63	-0.012	-5.1331	0.0034
437	SLU 3	-0.24	-0.05	26.16	-0.0125	-5.2365	-0.0142
437	SLU 4	-0.23	-0.01	26.14	-0.0124	-5.2326	-0.0028
437	SLU 5	-0.23	0.02	25.92	-0.0122	-5.1893	0.0044
437	SLU 6	-0.24	-0.05	26.45	-0.0127	-5.2927	-0.0132
437	SLU 7	-0.24	0	26.43	-0.0126	-5.2889	-0.0018
437	SLU 8	-0.24	-0.05	26.24	-0.0126	-5.252	-0.0137
437	SLU 9	-0.23	0	26.22	-0.0125	-5.2481	-0.0023
437	SLU 10	-0.23	0.03	28.89	-0.0133	-5.7749	0.0071
437	SLU 11	-0.24	-0.04	29.41	-0.0138	-5.8783	-0.0105
437	SLU 12	-0.24	0.01	29.4	-0.0137	-5.8744	0.0009
437	SLU 13	-0.23	0.04	29.18	-0.0135	-5.8311	0.0081
437	SLU 14	-0.25	-0.03	29.7	-0.014	-5.9345	-0.0095
437	SLU 15	-0.24	0.01	29.69	-0.0139	-5.9307	0.0019
437	SLU 16	-0.24	-0.04	29.5	-0.0139	-5.8938	-0.01
437	SLU 17	-0.24	0.01	29.48	-0.0138	-5.8899	0.0014
437	SLU 18	-0.24	-0.04	30.31	-0.0141	-6.0563	-0.0104
437	SLU 19	-0.23	0.01	30.29	-0.014	-6.0525	0.001
437	SLU 20	-0.24	-0.03	30.6	-0.0143	-6.1126	-0.0094
437	SLU 21	-0.24	0.01	30.58	-0.0141	-6.1087	0.002
437	SLU 22	-0.26	-0.04	28.78	-0.0134	-5.7525	-0.0115
437	SLU 23	-0.26	0.04	28.75	-0.0132	-5.7461	0.0076
437	SLU 24	-0.27	-0.03	29.28	-0.0137	-5.8495	-0.01
437	SLU 25	-0.26	0.01	29.26	-0.0135	-5.8457	0.0014
437	SLU 26	-0.26	0.04	29.04	-0.0134	-5.8023	0.0086
437	SLU 27	-0.27	-0.03	29.57	-0.0139	-5.9057	-0.009
437	SLU 28	-0.27	0.01	29.55	-0.0137	-5.9019	0.0024
437	SLU 29	-0.27	-0.03	29.36	-0.0138	-5.865	-0.0095
437	SLU 30	-0.26	0.01	29.34	-0.0137	-5.8611	0.0019
437	SLU 31	-0.26	0.05	32.01	-0.0145	-6.3879	0.0113
437	SLU 32	-0.27	-0.02	32.53	-0.015	-6.4913	-0.0063
437	SLU 33	-0.27	0.03	32.52	-0.0148	-6.4874	0.0051
437	SLU 34	-0.26	0.05	32.3	-0.0147	-6.4441	0.0123
437	SLU 35	-0.28	-0.02	32.83	-0.0152	-6.5475	-0.0053
437	SLU 36	-0.27	0.03	32.81	-0.015	-6.5437	0.0061
437	SLU 37	-0.27	-0.02	32.62	-0.0151	-6.5068	-0.0058
437	SLU 38	-0.27	0.03	32.6	-0.015	-6.5029	0.0056
437	SLU 39	-0.27	-0.02	33.43	-0.0153	-6.6693	-0.0062
437	SLU 40	-0.26	0.03	33.41	-0.0151	-6.6655	0.0052
437	SLU 41	-0.27	-0.02	33.72	-0.0155	-6.7256	-0.0052
437	SLU 42	-0.27	0.03	33.71	-0.0153	-6.7217	0.0062
437	SLU 43	-0.29	-0.08	32.29	-0.0155	-6.4711	-0.0218
437	SLU 44	-0.29	-0.01	32.26	-0.0153	-6.4648	-0.0027
437	SLU 45	-0.3	-0.08	32.79	-0.0158	-6.5681	-0.0204
437	SLU 46	-0.29	-0.03	32.77	-0.0157	-6.5643	-0.0089
437	SLU 47	-0.29	0	32.55	-0.0155	-6.521	-0.0017
437	SLU 48	-0.3	-0.07	33.08	-0.016	-6.6244	-0.0194
437	SLU 49	-0.3	-0.03	33.06	-0.0159	-6.6206	-0.0079
437	SLU 50	-0.3	-0.07	32.87	-0.0159	-6.5836	-0.0199
437	SLU 51	-0.29	-0.03	32.85	-0.0158	-6.5798	-0.0084
437	SLU 52	-0.29	0.01	35.52	-0.0166	-7.1066	0.001
437	SLU 53	-0.3	-0.06	36.04	-0.0171	-7.2099	-0.0167
437	SLU 54	-0.3	-0.02	36.03	-0.0169	-7.2061	-0.0052
437	SLU 55	-0.29	0.01	35.81	-0.0168	-7.1628	0.0019
437	SLU 56	-0.31	-0.06	36.33	-0.0173	-7.2662	-0.0157
437	SLU 57	-0.3	-0.01	36.32	-0.0171	-7.2624	-0.0042
437	SLU 58	-0.3	-0.06	36.12	-0.0172	-7.2254	-0.0162
437	SLU 59	-0.3	-0.01	36.11	-0.0171	-7.2216	-0.0047
437	SLU 60	-0.3	-0.06	36.94	-0.0174	-7.388	-0.0166
437	SLU 61	-0.29	-0.01	36.92	-0.0172	-7.3842	-0.0051
437	SLU 62	-0.3	-0.06	37.23	-0.0176	-7.4442	-0.0156
437	SLU 63	-0.3	-0.01	37.21	-0.0174	-7.4404	-0.0041
437	SLU 64	-0.32	-0.06	35.41	-0.0167	-7.0841	-0.0176
437	SLU 65	-0.32	0.01	35.38	-0.0165	-7.0778	0.0015
437	SLU 66	-0.33	-0.06	35.91	-0.017	-7.1812	-0.0162
437	SLU 67	-0.32	-0.01	35.89	-0.0168	-7.1773	-0.0047
437	SLU 68	-0.32	0.02	35.67	-0.0167	-7.134	0.0025
437	SLU 69	-0.33	-0.05	36.2	-0.0172	-7.2374	-0.0152
437	SLU 70	-0.33	-0.01	36.18	-0.017	-7.2336	-0.0037
437	SLU 71	-0.33	-0.06	35.99	-0.0171	-7.1966	-0.0157
437	SLU 72	-0.32	-0.01	35.97	-0.017	-7.1928	-0.0042
437	SLU 73	-0.32	0.03	38.64	-0.0178	-7.7196	0.0052
437	SLU 74	-0.33	-0.04	39.16	-0.0182	-7.823	-0.0125
437	SLU 75	-0.33	0	39.15	-0.0181	-7.8191	-0.001
437	SLU 76	-0.32	0.03	38.93	-0.0179	-7.7758	0.0061
437	SLU 77	-0.34	-0.04	39.45	-0.0184	-7.8792	-0.0115
437	SLU 78	-0.33	0.01	39.44	-0.0183	-7.8754	0
437	SLU 79	-0.33	-0.04	39.24	-0.0184	-7.8384	-0.012
437	SLU 80	-0.33	0	39.23	-0.0182	-7.8346	-0.0005
437	SLU 81	-0.33	-0.04	40.06	-0.0185	-8.001	-0.0124
437	SLU 82	-0.32	0	40.04	-0.0184	-7.9972	-0.0009
437	SLU 83	-0.33	-0.04	40.35	-0.0187	-8.0572	-0.0114
437	SLU 84	-0.33	0.01	40.33	-0.0186	-8.0534	0.0001
437	SLE RA 1	-0.24	-0.05	26.55	-0.0126	-5.3146	-0.0145
437	SLE RA 2	-0.24	0	26.53	-0.0124	-5.3104	-0.0018
437	SLE RA 3	-0.25	-0.05	26.88	-0.0128	-5.3793	-0.0135
437	SLE RA 4	-0.24	-0.02	26.87	-0.0127	-5.3767	-0.0059
437	SLE RA 5	-0.24	0	26.73	-0.0126	-5.3479	-0.0011
437	SLE RA 6	-0.25	-0.05	27.08	-0.0129	-5.4168	-0.0129
437	SLE RA 7	-0.24	-0.02	27.07	-0.0128	-5.4142	-0.0052

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
437	SLE RA 8	-0.25	-0.05	26.94	-0.0128	-5.3896	-0.0132
437	SLE RA 9	-0.24	-0.02	26.93	-0.0128	-5.3871	-0.0055
437	SLE RA 10	-0.24	0.01	28.7	-0.0133	-5.7382	0.0007
437	SLE RA 11	-0.25	-0.04	29.05	-0.0136	-5.8072	-0.0111
437	SLE RA 12	-0.25	-0.01	29.04	-0.0135	-5.8046	-0.0034
437	SLE RA 13	-0.24	0.01	28.9	-0.0134	-5.7757	0.0014
437	SLE RA 14	-0.25	-0.04	29.25	-0.0138	-5.8447	-0.0104
437	SLE RA 15	-0.25	-0.01	29.24	-0.0137	-5.8421	-0.0028
437	SLE RA 16	-0.25	-0.04	29.11	-0.0137	-5.8175	-0.0107
437	SLE RA 17	-0.25	-0.01	29.1	-0.0136	-5.8149	-0.0031
437	SLE RA 18	-0.25	-0.04	29.65	-0.0138	-5.9259	-0.011
437	SLE RA 19	-0.24	-0.01	29.64	-0.0137	-5.9233	-0.0033
437	SLE RA 20	-0.25	-0.04	29.84	-0.0139	-5.9634	-0.0103
437	SLE RA 21	-0.24	-0.01	29.83	-0.0138	-5.9608	-0.0027
437	SLE FR 1	-0.24	-0.05	26.55	-0.0126	-5.3146	-0.0145
437	SLE FR 2	-0.24	-0.04	26.55	-0.0126	-5.3138	-0.0119
437	SLE FR 3	-0.24	-0.05	26.63	-0.0126	-5.3296	-0.0142
437	SLE FR 4	-0.24	-0.04	27.48	-0.0129	-5.4971	-0.0109
437	SLE FR 5	-0.24	-0.05	27.56	-0.013	-5.513	-0.0132
437	SLE FR 6	-0.24	-0.05	28.1	-0.0132	-5.6202	-0.0127
437	SLE QP 1	-0.24	-0.05	26.55	-0.0126	-5.3146	-0.0145
437	SLE QP 2	-0.24	-0.05	27.48	-0.013	-5.498	-0.0134
437	SLD 1	2.21	0.91	32.93	-0.0168	-6.5374	0.2258
437	SLD 2	2.28	0.59	32.91	-0.0165	-6.5355	0.1462
437	SLD 3	2.27	-0.35	32.78	-0.0153	-6.5056	-0.0883
437	SLD 4	2.34	-0.67	32.76	-0.0149	-6.5037	-0.168
437	SLD 5	0.39	2.2	29.34	-0.0165	-5.8583	0.5487
437	SLD 6	0.43	1.99	29.33	-0.0163	-5.8571	0.497
437	SLD 7	0.59	-1.99	28.85	-0.0114	-5.7525	-0.4985
437	SLD 8	0.64	-2.2	28.83	-0.0111	-5.7512	-0.5502
437	SLD 9	-1.12	2.1	26.13	-0.0148	-5.2448	0.5233
437	SLD 10	-1.08	1.89	26.12	-0.0145	-5.2435	0.4716
437	SLD 11	-0.92	-2.09	25.63	-0.0096	-5.1389	-0.5239
437	SLD 12	-0.87	-2.3	25.62	-0.0094	-5.1377	-0.5756
437	SLD 13	-2.83	0.57	22.2	-0.011	-4.4922	0.1411
437	SLD 14	-2.76	0.25	22.18	-0.0106	-4.4903	0.0615
437	SLD 15	-2.76	-0.68	22.05	-0.0094	-4.4605	-0.1731
437	SLD 16	-2.69	-1	22.03	-0.0091	-4.4586	-0.2527
437	SLV 1	5.49	2.15	40.23	-0.022	-7.9302	0.5372
437	SLV 2	5.65	1.4	40.19	-0.0212	-7.9257	0.3517
437	SLV 3	5.63	-0.72	39.88	-0.0185	-7.856	-0.1794
437	SLV 4	5.79	-1.46	39.84	-0.0177	-7.8515	-0.3649
437	SLV 5	1.23	5.08	31.84	-0.0211	-6.3409	1.2699
437	SLV 6	1.34	4.6	31.82	-0.0206	-6.3381	1.1515
437	SLV 7	1.71	-4.47	30.68	-0.0094	-6.0936	-1.1186
437	SLV 8	1.81	-4.94	30.65	-0.0089	-6.0908	-1.2371
437	SLV 9	-2.3	4.85	24.31	-0.017	-4.9052	1.2102
437	SLV 10	-2.19	4.37	24.29	-0.0165	-4.9024	1.0917
437	SLV 11	-1.82	-4.7	23.14	-0.0053	-4.6579	-1.1783
437	SLV 12	-1.72	-5.18	23.12	-0.0048	-4.6551	-1.2968
437	SLV 13	-6.28	1.36	15.12	-0.0082	-3.1444	0.338
437	SLV 14	-6.12	0.62	15.08	-0.0074	-3.14	0.1525
437	SLV 15	-6.14	-1.5	14.77	-0.0047	-3.0703	-0.3785
437	SLV 16	-5.97	-2.25	14.73	-0.0039	-3.0658	-0.5641
437	CRTFP Ux+	0	0	0	0	0	0
437	CRTFP Ux-	0	0	0	0	0	0
440	SLU 1	0.09	-0.12	29.61	0.002	9.7507	0.0437
440	SLU 2	0.09	-0.07	29.62	0.0019	9.7524	0.0261
440	SLU 3	0.09	-0.12	30.17	0.002	9.9297	0.0411
440	SLU 4	0.09	-0.09	30.17	0.002	9.9307	0.0306
440	SLU 5	0.09	-0.08	29.95	0.0018	9.8602	0.0278
440	SLU 6	0.09	-0.12	30.5	0.0019	10.0375	0.0428
440	SLU 7	0.09	-0.09	30.51	0.0019	10.0385	0.0323
440	SLU 8	0.09	-0.13	30.28	0.0018	9.9664	0.047
440	SLU 9	0.09	-0.1	30.29	0.0018	9.9674	0.0365
440	SLU 10	0.1	-0.05	33.7	0.0026	11.0921	0.0176
440	SLU 11	0.11	-0.09	34.25	0.0027	11.2694	0.0326
440	SLU 12	0.11	-0.06	34.26	0.0026	11.2704	0.0221
440	SLU 13	0.1	-0.05	34.04	0.0025	11.2	0.0192
440	SLU 14	0.11	-0.1	34.59	0.0026	11.3772	0.0342
440	SLU 15	0.11	-0.07	34.59	0.0025	11.3782	0.0237
440	SLU 16	0.11	-0.11	34.37	0.0025	11.3061	0.0385
440	SLU 17	0.11	-0.08	34.37	0.0024	11.3071	0.0279
440	SLU 18	0.11	-0.09	35.45	0.0029	11.6646	0.0315
440	SLU 19	0.11	-0.06	35.45	0.0029	11.6656	0.021
440	SLU 20	0.11	-0.09	35.78	0.0028	11.7725	0.0331
440	SLU 21	0.11	-0.06	35.79	0.0028	11.7735	0.0226
440	SLU 22	0.1	-0.08	33.02	0.0027	10.8577	0.0299
440	SLU 23	0.1	-0.03	33.03	0.0026	10.8594	0.0124
440	SLU 24	0.1	-0.08	33.58	0.0027	11.0366	0.0274
440	SLU 25	0.1	-0.05	33.58	0.0026	11.0376	0.0169
440	SLU 26	0.1	-0.04	33.36	0.0025	10.9672	0.014
440	SLU 27	0.1	-0.08	33.91	0.0026	11.1445	0.029
440	SLU 28	0.1	-0.05	33.91	0.0025	11.1455	0.0185
440	SLU 29	0.1	-0.09	33.69	0.0025	11.0734	0.0333
440	SLU 30	0.1	-0.06	33.69	0.0024	11.0744	0.0227
440	SLU 31	0.11	-0.01	37.11	0.0033	12.1991	0.0039
440	SLU 32	0.12	-0.05	37.66	0.0033	12.3764	0.0189
440	SLU 33	0.12	-0.02	37.66	0.0033	12.3773	0.0083
440	SLU 34	0.12	-0.01	37.45	0.0032	12.3069	0.0055
440	SLU 35	0.12	-0.06	37.99	0.0032	12.4842	0.0205

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
440	SLU 36	0.12	-0.03	38	0.0032	12.4852	0.01
440	SLU 37	0.12	-0.07	37.77	0.0031	12.4131	0.0247
440	SLU 38	0.12	-0.04	37.78	0.0031	12.4141	0.0142
440	SLU 39	0.12	-0.05	38.86	0.0036	12.7716	0.0177
440	SLU 40	0.12	-0.02	38.86	0.0036	12.7726	0.0072
440	SLU 41	0.13	-0.05	39.19	0.0035	12.8794	0.0194
440	SLU 42	0.12	-0.02	39.19	0.0035	12.8804	0.0089
440	SLU 43	0.11	-0.17	37.33	0.0024	12.2964	0.0615
440	SLU 44	0.11	-0.12	37.34	0.0023	12.2981	0.0439
440	SLU 45	0.11	-0.17	37.88	0.0024	12.4753	0.0589
440	SLU 46	0.11	-0.14	37.89	0.0024	12.4763	0.0484
440	SLU 47	0.11	-0.13	37.67	0.0022	12.4059	0.0456
440	SLU 48	0.11	-0.17	38.22	0.0023	12.5832	0.0606
440	SLU 49	0.11	-0.14	38.22	0.0023	12.5842	0.0501
440	SLU 50	0.11	-0.18	38	0.0022	12.5121	0.0648
440	SLU 51	0.11	-0.15	38	0.0021	12.5131	0.0543
440	SLU 52	0.12	-0.1	41.42	0.003	13.6378	0.0354
440	SLU 53	0.13	-0.14	41.97	0.0031	13.8151	0.0504
440	SLU 54	0.13	-0.11	41.97	0.003	13.8161	0.0399
440	SLU 55	0.13	-0.1	41.75	0.0029	13.7456	0.0371
440	SLU 56	0.13	-0.15	42.3	0.003	13.9229	0.0521
440	SLU 57	0.13	-0.12	42.31	0.0029	13.9239	0.0415
440	SLU 58	0.13	-0.16	42.08	0.0028	13.8518	0.0563
440	SLU 59	0.13	-0.13	42.09	0.0028	13.8528	0.0457
440	SLU 60	0.13	-0.14	43.16	0.0033	14.2103	0.0493
440	SLU 61	0.13	-0.11	43.17	0.0033	14.2113	0.0388
440	SLU 62	0.13	-0.14	43.5	0.0032	14.3181	0.051
440	SLU 63	0.13	-0.11	43.5	0.0032	14.3191	0.0404
440	SLU 64	0.12	-0.13	40.74	0.003	13.4034	0.0478
440	SLU 65	0.12	-0.08	40.74	0.003	13.405	0.0302
440	SLU 66	0.13	-0.13	41.29	0.0031	13.5823	0.0452
440	SLU 67	0.12	-0.1	41.29	0.003	13.5833	0.0347
440	SLU 68	0.12	-0.09	41.08	0.0029	13.5129	0.0319
440	SLU 69	0.13	-0.13	41.63	0.003	13.6902	0.0469
440	SLU 70	0.13	-0.1	41.63	0.0029	13.6912	0.0363
440	SLU 71	0.13	-0.14	41.41	0.0028	13.6191	0.0511
440	SLU 72	0.12	-0.11	41.41	0.0028	13.6201	0.0405
440	SLU 73	0.14	-0.06	44.83	0.0036	14.7448	0.0217
440	SLU 74	0.14	-0.1	45.38	0.0037	14.922	0.0367
440	SLU 75	0.14	-0.07	45.38	0.0037	14.923	0.0261
440	SLU 76	0.14	-0.06	45.16	0.0035	14.8526	0.0233
440	SLU 77	0.14	-0.11	45.71	0.0036	15.0299	0.0383
440	SLU 78	0.14	-0.08	45.71	0.0036	15.0309	0.0278
440	SLU 79	0.14	-0.12	45.49	0.0035	14.9588	0.0425
440	SLU 80	0.14	-0.09	45.49	0.0035	14.9598	0.032
440	SLU 81	0.15	-0.1	46.57	0.004	15.3173	0.0356
440	SLU 82	0.14	-0.07	46.58	0.0039	15.3183	0.025
440	SLU 83	0.15	-0.1	46.91	0.0039	15.4251	0.0372
440	SLU 84	0.15	-0.07	46.91	0.0038	15.4261	0.0267
440	SLE RA 1	0.09	-0.11	30.59	0.0022	10.067	0.0398
440	SLE RA 2	0.09	-0.08	30.59	0.0021	10.0681	0.0281
440	SLE RA 3	0.09	-0.11	30.96	0.0022	10.1863	0.0381
440	SLE RA 4	0.09	-0.09	30.96	0.0022	10.187	0.031
440	SLE RA 5	0.09	-0.08	30.81	0.0021	10.14	0.0292
440	SLE RA 6	0.09	-0.11	31.18	0.0021	10.2582	0.0392
440	SLE RA 7	0.09	-0.09	31.18	0.0021	10.2589	0.0321
440	SLE RA 8	0.09	-0.12	31.03	0.0021	10.2108	0.042
440	SLE RA 9	0.09	-0.1	31.04	0.002	10.2115	0.0349
440	SLE RA 10	0.1	-0.06	33.31	0.0026	10.9613	0.0224
440	SLE RA 11	0.1	-0.09	33.68	0.0026	11.0794	0.0324
440	SLE RA 12	0.1	-0.07	33.68	0.0026	11.0801	0.0253
440	SLE RA 13	0.1	-0.07	33.54	0.0025	11.0332	0.0235
440	SLE RA 14	0.11	-0.09	33.9	0.0026	11.1513	0.0335
440	SLE RA 15	0.1	-0.07	33.9	0.0026	11.152	0.0264
440	SLE RA 16	0.1	-0.1	33.76	0.0025	11.104	0.0363
440	SLE RA 17	0.1	-0.08	33.76	0.0025	11.1046	0.0292
440	SLE RA 18	0.11	-0.09	34.48	0.0028	11.3429	0.0316
440	SLE RA 19	0.11	-0.07	34.48	0.0028	11.3436	0.0246
440	SLE RA 20	0.11	-0.09	34.7	0.0028	11.4148	0.0327
440	SLE RA 21	0.11	-0.07	34.7	0.0027	11.4155	0.0257
440	SLE FR 1	0.09	-0.11	30.59	0.0022	10.067	0.0398
440	SLE FR 2	0.09	-0.11	30.59	0.0022	10.0672	0.0374
440	SLE FR 3	0.09	-0.11	30.68	0.0022	10.0958	0.0402
440	SLE FR 4	0.1	-0.1	31.76	0.0024	10.45	0.035
440	SLE FR 5	0.1	-0.11	31.84	0.0024	10.4785	0.0378
440	SLE FR 6	0.1	-0.1	32.53	0.0025	10.705	0.0357
440	SLE QP 1	0.09	-0.11	30.59	0.0022	10.067	0.0398
440	SLE QP 2	0.1	-0.1	31.75	0.0024	10.4498	0.0373
440	SLD 1	2.73	0.35	31.91	0.0014	10.4927	-0.1215
440	SLD 2	2.8	0.37	31.91	0.0014	10.492	-0.127
440	SLD 3	2.79	-0.71	31.85	0.0026	10.5132	0.2507
440	SLD 4	2.87	-0.7	31.85	0.0026	10.5126	0.2452
440	SLD 5	0.78	1.64	31.88	0.0002	10.4316	-0.5739
440	SLD 6	0.83	1.65	31.88	0.0002	10.4312	-0.5775
440	SLD 7	0.99	-1.9	31.7	0.0043	10.5001	0.6669
440	SLD 8	1.04	-1.89	31.7	0.0043	10.4997	0.6633
440	SLD 9	-0.84	1.68	31.81	0.0005	10.3999	-0.5887
440	SLD 10	-0.8	1.69	31.81	0.0005	10.3995	-0.5922
440	SLD 11	-0.63	-1.86	31.63	0.0046	10.4684	0.6521
440	SLD 12	-0.59	-1.85	31.63	0.0046	10.468	0.6486
440	SLD 13	-2.67	0.49	31.66	0.0022	10.387	-0.1706

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
440	SLD 14	-2.6	0.5	31.66	0.0022	10.3864	-0.1761
440	SLD 15	-2.61	-0.58	31.6	0.0034	10.4075	0.2016
440	SLD 16	-2.54	-0.56	31.6	0.0034	10.4069	0.1962
440	SLV 1	6.26	0.93	32.12	0	10.5508	-0.3232
440	SLV 2	6.43	0.97	32.11	0	10.5493	-0.336
440	SLV 3	6.4	-1.5	31.99	0.0028	10.5987	0.5247
440	SLV 4	6.58	-1.46	31.98	0.0028	10.5972	0.5119
440	SLV 5	1.69	3.87	32.06	-0.0026	10.4077	-1.3547
440	SLV 6	1.8	3.9	32.05	-0.0026	10.4068	-1.3628
440	SLV 7	2.18	-4.2	31.63	0.0068	10.5673	1.4717
440	SLV 8	2.29	-4.18	31.63	0.0068	10.5664	1.4635
440	SLV 9	-2.1	3.97	31.88	-0.002	10.3332	-1.3889
440	SLV 10	-1.99	4	31.88	-0.002	10.3323	-1.3971
440	SLV 11	-1.61	-4.11	31.46	0.0073	10.4928	1.4375
440	SLV 12	-1.5	-4.08	31.45	0.0073	10.4919	1.4293
440	SLV 13	-6.38	1.25	31.53	0.0019	10.3024	-0.4373
440	SLV 14	-6.21	1.29	31.52	0.0019	10.3009	-0.4501
440	SLV 15	-6.24	-1.18	31.4	0.0047	10.3502	0.4106
440	SLV 16	-6.07	-1.14	31.39	0.0047	10.3488	0.3978
440	CRTFP Ux+	0	0	0	0	0	0
440	CRTFP Ux-	0	0	0	0	0	0
444	SLU 1	-0.34	-0.42	51.69	-0.0098	-0.1658	-0.007
444	SLU 2	-0.33	-0.33	51.65	-0.0096	-0.1656	-0.0067
444	SLU 3	-0.34	-0.42	52.7	-0.0099	-0.1692	-0.0073
444	SLU 4	-0.34	-0.36	52.67	-0.0098	-0.1691	-0.0071
444	SLU 5	-0.34	-0.33	52.23	-0.0099	-0.1675	-0.0067
444	SLU 6	-0.35	-0.42	53.27	-0.0101	-0.1711	-0.0073
444	SLU 7	-0.35	-0.37	53.25	-0.0101	-0.171	-0.0071
444	SLU 8	-0.34	-0.44	52.85	-0.0103	-0.1696	-0.007
444	SLU 9	-0.34	-0.38	52.82	-0.0102	-0.1695	-0.0068
444	SLU 10	-0.33	-0.33	58.62	-0.0097	-0.1944	-0.008
444	SLU 11	-0.34	-0.42	59.66	-0.01	-0.1979	-0.0086
444	SLU 12	-0.34	-0.36	59.64	-0.0099	-0.1978	-0.0084
444	SLU 13	-0.33	-0.34	59.19	-0.01	-0.1963	-0.008
444	SLU 14	-0.35	-0.43	60.24	-0.0102	-0.1998	-0.0086
444	SLU 15	-0.34	-0.37	60.22	-0.0101	-0.1997	-0.0084
444	SLU 16	-0.34	-0.44	59.82	-0.0104	-0.1983	-0.0083
444	SLU 17	-0.34	-0.38	59.79	-0.0103	-0.1982	-0.0081
444	SLU 18	-0.33	-0.43	61.64	-0.0099	-0.2069	-0.0089
444	SLU 19	-0.33	-0.37	61.62	-0.0098	-0.2068	-0.0087
444	SLU 20	-0.34	-0.44	62.22	-0.0102	-0.2088	-0.0089
444	SLU 21	-0.33	-0.38	62.2	-0.0101	-0.2087	-0.0087
444	SLU 22	-0.38	-0.39	58.1	-0.0095	-0.1864	-0.0089
444	SLU 23	-0.37	-0.3	58.05	-0.0093	-0.1863	-0.0086
444	SLU 24	-0.38	-0.39	59.1	-0.0096	-0.1898	-0.0092
444	SLU 25	-0.38	-0.33	59.08	-0.0095	-0.1897	-0.009
444	SLU 26	-0.38	-0.31	58.63	-0.0096	-0.1882	-0.0086
444	SLU 27	-0.39	-0.39	59.68	-0.0098	-0.1917	-0.0092
444	SLU 28	-0.39	-0.34	59.65	-0.0097	-0.1916	-0.009
444	SLU 29	-0.38	-0.41	59.25	-0.01	-0.1902	-0.0089
444	SLU 30	-0.38	-0.35	59.23	-0.0099	-0.1901	-0.0087
444	SLU 31	-0.37	-0.3	65.02	-0.0094	-0.215	-0.0099
444	SLU 32	-0.38	-0.39	66.07	-0.0097	-0.2186	-0.0105
444	SLU 33	-0.38	-0.33	66.04	-0.0096	-0.2185	-0.0103
444	SLU 34	-0.38	-0.31	65.6	-0.0097	-0.2169	-0.0099
444	SLU 35	-0.39	-0.4	66.65	-0.0099	-0.2205	-0.0105
444	SLU 36	-0.38	-0.34	66.62	-0.0098	-0.2204	-0.0103
444	SLU 37	-0.38	-0.41	66.22	-0.0101	-0.219	-0.0102
444	SLU 38	-0.38	-0.35	66.2	-0.01	-0.2189	-0.01
444	SLU 39	-0.37	-0.4	68.05	-0.0096	-0.2275	-0.0108
444	SLU 40	-0.37	-0.34	68.02	-0.0095	-0.2274	-0.0106
444	SLU 41	-0.38	-0.41	68.63	-0.0099	-0.2294	-0.0108
444	SLU 42	-0.38	-0.35	68.6	-0.0098	-0.2293	-0.0106
444	SLU 43	-0.42	-0.56	65	-0.0128	-0.2084	-0.0085
444	SLU 44	-0.42	-0.46	64.96	-0.0127	-0.2083	-0.0082
444	SLU 45	-0.43	-0.55	66.01	-0.0129	-0.2118	-0.0088
444	SLU 46	-0.43	-0.5	65.98	-0.0128	-0.2117	-0.0086
444	SLU 47	-0.42	-0.47	65.54	-0.0129	-0.2102	-0.0082
444	SLU 48	-0.43	-0.56	66.59	-0.0132	-0.2137	-0.0088
444	SLU 49	-0.43	-0.5	66.56	-0.0131	-0.2136	-0.0086
444	SLU 50	-0.43	-0.57	66.16	-0.0134	-0.2122	-0.0085
444	SLU 51	-0.43	-0.52	66.13	-0.0133	-0.2121	-0.0083
444	SLU 52	-0.42	-0.47	71.93	-0.0128	-0.237	-0.0095
444	SLU 53	-0.43	-0.56	72.97	-0.013	-0.2406	-0.0101
444	SLU 54	-0.43	-0.5	72.95	-0.0129	-0.2405	-0.0099
444	SLU 55	-0.42	-0.48	72.51	-0.013	-0.2389	-0.0095
444	SLU 56	-0.43	-0.56	73.55	-0.0133	-0.2425	-0.0101
444	SLU 57	-0.43	-0.51	73.53	-0.0132	-0.2424	-0.0099
444	SLU 58	-0.43	-0.58	73.13	-0.0135	-0.241	-0.0098
444	SLU 59	-0.43	-0.52	73.1	-0.0134	-0.2409	-0.0096
444	SLU 60	-0.42	-0.57	74.95	-0.013	-0.2495	-0.0104
444	SLU 61	-0.42	-0.51	74.93	-0.0129	-0.2494	-0.0102
444	SLU 62	-0.42	-0.57	75.53	-0.0132	-0.2514	-0.0104
444	SLU 63	-0.42	-0.52	75.51	-0.0131	-0.2513	-0.0102
444	SLU 64	-0.46	-0.53	71.41	-0.0125	-0.2291	-0.0104
444	SLU 65	-0.46	-0.44	71.37	-0.0124	-0.2289	-0.0101
444	SLU 66	-0.47	-0.52	72.41	-0.0126	-0.2325	-0.0107
444	SLU 67	-0.47	-0.47	72.39	-0.0125	-0.2324	-0.0105
444	SLU 68	-0.46	-0.44	71.94	-0.0126	-0.2308	-0.0101
444	SLU 69	-0.48	-0.53	72.99	-0.0129	-0.2344	-0.0107
444	SLU 70	-0.47	-0.47	72.97	-0.0128	-0.2343	-0.0105

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
444	SLU 71	-0.47	-0.54	72.57	-0.013	-0.2329	-0.0104
444	SLU 72	-0.47	-0.49	72.54	-0.0129	-0.2328	-0.0102
444	SLU 73	-0.46	-0.44	78.33	-0.0125	-0.2577	-0.0114
444	SLU 74	-0.47	-0.53	79.38	-0.0127	-0.2612	-0.012
444	SLU 75	-0.47	-0.47	79.35	-0.0126	-0.2611	-0.0118
444	SLU 76	-0.46	-0.45	78.91	-0.0127	-0.2596	-0.0114
444	SLU 77	-0.47	-0.53	79.96	-0.013	-0.2631	-0.012
444	SLU 78	-0.47	-0.48	79.93	-0.0129	-0.263	-0.0118
444	SLU 79	-0.47	-0.55	79.53	-0.0131	-0.2616	-0.0117
444	SLU 80	-0.47	-0.49	79.51	-0.013	-0.2615	-0.0115
444	SLU 81	-0.46	-0.54	81.36	-0.0126	-0.2701	-0.0123
444	SLU 82	-0.46	-0.48	81.34	-0.0126	-0.2701	-0.0121
444	SLU 83	-0.46	-0.54	81.94	-0.0129	-0.272	-0.0123
444	SLU 84	-0.46	-0.49	81.91	-0.0128	-0.272	-0.0121
444	SLE RA 1	-0.35	-0.41	53.52	-0.0097	-0.1717	-0.0076
444	SLE RA 2	-0.35	-0.35	53.49	-0.0096	-0.1716	-0.0074
444	SLE RA 3	-0.35	-0.41	54.19	-0.0098	-0.1739	-0.0078
444	SLE RA 4	-0.35	-0.37	54.17	-0.0097	-0.1739	-0.0076
444	SLE RA 5	-0.35	-0.36	53.88	-0.0098	-0.1728	-0.0074
444	SLE RA 6	-0.36	-0.41	54.58	-0.0099	-0.1752	-0.0078
444	SLE RA 7	-0.35	-0.38	54.56	-0.0099	-0.1751	-0.0076
444	SLE RA 8	-0.35	-0.42	54.29	-0.01	-0.1742	-0.0076
444	SLE RA 9	-0.35	-0.38	54.28	-0.01	-0.1741	-0.0075
444	SLE RA 10	-0.34	-0.35	58.14	-0.0097	-0.1907	-0.0082
444	SLE RA 11	-0.35	-0.41	58.84	-0.0098	-0.1931	-0.0086
444	SLE RA 12	-0.35	-0.37	58.82	-0.0098	-0.193	-0.0085
444	SLE RA 13	-0.35	-0.36	58.52	-0.0098	-0.192	-0.0082
444	SLE RA 14	-0.35	-0.42	59.22	-0.01	-0.1944	-0.0086
444	SLE RA 15	-0.35	-0.38	59.2	-0.0099	-0.1943	-0.0085
444	SLE RA 16	-0.35	-0.43	58.94	-0.0101	-0.1934	-0.0085
444	SLE RA 17	-0.35	-0.39	58.92	-0.01	-0.1933	-0.0083
444	SLE RA 18	-0.35	-0.42	60.16	-0.0098	-0.1991	-0.0088
444	SLE RA 19	-0.34	-0.38	60.14	-0.0097	-0.199	-0.0087
444	SLE RA 20	-0.35	-0.42	60.54	-0.01	-0.2003	-0.0088
444	SLE RA 21	-0.35	-0.38	60.53	-0.0099	-0.2003	-0.0087
444	SLE FR 1	-0.35	-0.41	53.52	-0.0097	-0.1717	-0.0076
444	SLE FR 2	-0.35	-0.4	53.52	-0.0097	-0.1716	-0.0075
444	SLE FR 3	-0.35	-0.42	53.68	-0.0098	-0.1722	-0.0076
444	SLE FR 4	-0.35	-0.4	55.51	-0.0097	-0.1799	-0.0079
444	SLE FR 5	-0.35	-0.42	55.67	-0.0098	-0.1804	-0.008
444	SLE FR 6	-0.35	-0.42	56.84	-0.0097	-0.1854	-0.0082
444	SLE QP 1	-0.35	-0.41	53.52	-0.0097	-0.1717	-0.0076
444	SLE QP 2	-0.35	-0.41	55.51	-0.0097	-0.1799	-0.008
444	SLD 1	4.4	0.38	58.95	-0.0133	-0.0965	0.0062
444	SLD 2	4.53	0.13	58.97	-0.013	-0.0982	0.0109
444	SLD 3	4.51	-1.41	59.16	-0.0104	-0.1116	0.0078
444	SLD 4	4.64	-1.66	59.17	-0.0101	-0.1134	0.0124
444	SLD 5	0.89	2.58	56.23	-0.0152	-0.1316	-0.0069
444	SLD 6	0.97	2.42	56.24	-0.015	-0.1327	-0.0039
444	SLD 7	1.25	-3.38	56.91	-0.0056	-0.1821	-0.0017
444	SLD 8	1.34	-3.54	56.92	-0.0054	-0.1832	0.0013
444	SLD 9	-2.03	2.71	54.1	-0.014	-0.1765	-0.0172
444	SLD 10	-1.95	2.55	54.11	-0.0138	-0.1777	-0.0143
444	SLD 11	-1.66	-3.25	54.78	-0.0044	-0.2271	-0.012
444	SLD 12	-1.58	-3.4	54.79	-0.0042	-0.2282	-0.009
444	SLD 13	-5.33	0.83	51.85	-0.0094	-0.2464	-0.0283
444	SLD 14	-5.2	0.58	51.87	-0.009	-0.2481	-0.0237
444	SLD 15	-5.22	-0.96	52.06	-0.0065	-0.2615	-0.0268
444	SLD 16	-5.09	-1.2	52.07	-0.0062	-0.2633	-0.0222
444	SLV 1	10.75	1.38	63.57	-0.018	0.0148	0.0253
444	SLV 2	11.05	0.81	63.6	-0.0173	0.0107	0.036
444	SLV 3	11.01	-2.7	64.03	-0.0115	-0.0197	0.0289
444	SLV 4	11.31	-3.27	64.06	-0.0108	-0.0238	0.0397
444	SLV 5	2.54	6.4	57.22	-0.0222	-0.0685	-0.0053
444	SLV 6	2.73	6.04	57.24	-0.0217	-0.0711	0.0015
444	SLV 7	3.4	-7.18	58.77	-0.0005	-0.1834	0.0068
444	SLV 8	3.59	-7.55	58.79	0	-0.186	0.0137
444	SLV 9	-4.29	6.72	52.23	-0.0194	-0.1737	-0.0296
444	SLV 10	-4.09	6.36	52.26	-0.0189	-0.1763	-0.0227
444	SLV 11	-3.43	-6.87	53.79	0.0023	-0.2887	-0.0174
444	SLV 12	-3.23	-7.23	53.81	0.0028	-0.2913	-0.0106
444	SLV 13	-12	2.44	46.96	-0.0087	-0.336	-0.0556
444	SLV 14	-11.7	1.87	46.99	-0.0079	-0.3401	-0.0448
444	SLV 15	-11.75	-1.64	47.42	-0.0021	-0.3705	-0.0519
444	SLV 16	-11.44	-2.21	47.46	-0.0014	-0.3745	-0.0412
444	CRTFP Ux+	0	0	0	0	0	0
444	CRTFP Ux-	0	0	0	0	0	0
448	SLU 1	0.35	-0.38	51.25	-0.015	0.1362	-0.0049
448	SLU 2	0.35	-0.29	51.22	-0.0148	0.136	-0.0052
448	SLU 3	0.36	-0.38	52.23	-0.0152	0.1387	-0.005
448	SLU 4	0.36	-0.32	52.21	-0.0152	0.1385	-0.0052
448	SLU 5	0.35	-0.3	51.79	-0.0151	0.1373	-0.0054
448	SLU 6	0.37	-0.39	52.8	-0.0156	0.1399	-0.0052
448	SLU 7	0.36	-0.34	52.78	-0.0155	0.1398	-0.0053
448	SLU 8	0.36	-0.4	52.4	-0.0156	0.1388	-0.0053
448	SLU 9	0.36	-0.35	52.38	-0.0155	0.1387	-0.0055
448	SLU 10	0.38	-0.28	57.98	-0.0158	0.1588	-0.0055
448	SLU 11	0.39	-0.36	58.99	-0.0162	0.1615	-0.0053
448	SLU 12	0.39	-0.31	58.97	-0.0161	0.1613	-0.0055
448	SLU 13	0.38	-0.29	58.55	-0.0161	0.1601	-0.0057
448	SLU 14	0.4	-0.38	59.56	-0.0165	0.1627	-0.0055

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
448	SLU 15	0.4	-0.32	59.54	-0.0164	0.1626	-0.0056
448	SLU 16	0.39	-0.39	59.16	-0.0166	0.1616	-0.0056
448	SLU 17	0.39	-0.34	59.14	-0.0165	0.1615	-0.0058
448	SLU 18	0.4	-0.36	60.91	-0.0163	0.1688	-0.0054
448	SLU 19	0.39	-0.31	60.89	-0.0162	0.1687	-0.0055
448	SLU 20	0.4	-0.37	61.48	-0.0167	0.1701	-0.0056
448	SLU 21	0.4	-0.32	61.46	-0.0166	0.1699	-0.0057
448	SLU 22	0.4	-0.35	57.52	-0.0155	0.1492	-0.0045
448	SLU 23	0.4	-0.26	57.49	-0.0153	0.149	-0.0047
448	SLU 24	0.41	-0.35	58.5	-0.0157	0.1517	-0.0045
448	SLU 25	0.41	-0.29	58.48	-0.0156	0.1515	-0.0047
448	SLU 26	0.4	-0.27	58.07	-0.0156	0.1503	-0.0049
448	SLU 27	0.42	-0.36	59.08	-0.0161	0.1529	-0.0047
448	SLU 28	0.41	-0.3	59.06	-0.016	0.1528	-0.0049
448	SLU 29	0.41	-0.37	58.67	-0.0161	0.1518	-0.0048
448	SLU 30	0.41	-0.32	58.65	-0.016	0.1516	-0.005
448	SLU 31	0.43	-0.24	64.25	-0.0163	0.1718	-0.005
448	SLU 32	0.44	-0.33	65.26	-0.0167	0.1745	-0.0049
448	SLU 33	0.44	-0.28	65.25	-0.0166	0.1743	-0.005
448	SLU 34	0.43	-0.26	64.83	-0.0166	0.1731	-0.0052
448	SLU 35	0.45	-0.35	65.84	-0.017	0.1757	-0.005
448	SLU 36	0.45	-0.29	65.82	-0.0169	0.1756	-0.0052
448	SLU 37	0.44	-0.36	65.43	-0.0171	0.1746	-0.0052
448	SLU 38	0.44	-0.3	65.42	-0.017	0.1744	-0.0053
448	SLU 39	0.45	-0.33	67.18	-0.0168	0.1818	-0.0049
448	SLU 40	0.45	-0.27	67.16	-0.0167	0.1817	-0.0051
448	SLU 41	0.45	-0.34	67.76	-0.0172	0.1831	-0.0051
448	SLU 42	0.45	-0.29	67.74	-0.0171	0.1829	-0.0053
448	SLU 43	0.44	-0.5	64.47	-0.0193	0.1726	-0.0066
448	SLU 44	0.44	-0.41	64.44	-0.0191	0.1724	-0.0068
448	SLU 45	0.45	-0.5	65.45	-0.0196	0.1751	-0.0067
448	SLU 46	0.45	-0.45	65.43	-0.0195	0.175	-0.0068
448	SLU 47	0.44	-0.42	65.01	-0.0195	0.1737	-0.007
448	SLU 48	0.45	-0.51	66.02	-0.0199	0.1764	-0.0068
448	SLU 49	0.45	-0.46	66.01	-0.0198	0.1762	-0.007
448	SLU 50	0.45	-0.53	65.62	-0.02	0.1752	-0.0069
448	SLU 51	0.44	-0.47	65.6	-0.0199	0.1751	-0.0071
448	SLU 52	0.47	-0.4	71.2	-0.0201	0.1952	-0.0072
448	SLU 53	0.48	-0.49	72.21	-0.0205	0.1979	-0.007
448	SLU 54	0.48	-0.44	72.19	-0.0204	0.1978	-0.0071
448	SLU 55	0.47	-0.41	71.77	-0.0204	0.1965	-0.0073
448	SLU 56	0.49	-0.5	72.79	-0.0208	0.1992	-0.0071
448	SLU 57	0.48	-0.45	72.77	-0.0208	0.199	-0.0073
448	SLU 58	0.48	-0.51	72.38	-0.0209	0.198	-0.0073
448	SLU 59	0.48	-0.46	72.36	-0.0208	0.1979	-0.0074
448	SLU 60	0.48	-0.49	74.13	-0.0206	0.2052	-0.007
448	SLU 61	0.48	-0.43	74.11	-0.0206	0.2051	-0.0072
448	SLU 62	0.49	-0.5	74.7	-0.021	0.2065	-0.0072
448	SLU 63	0.49	-0.44	74.68	-0.0209	0.2064	-0.0074
448	SLU 64	0.49	-0.47	70.74	-0.0198	0.1856	-0.0061
448	SLU 65	0.49	-0.38	70.71	-0.0196	0.1854	-0.0064
448	SLU 66	0.5	-0.47	71.73	-0.0201	0.1881	-0.0062
448	SLU 67	0.5	-0.42	71.71	-0.02	0.1879	-0.0063
448	SLU 68	0.49	-0.39	71.29	-0.02	0.1867	-0.0066
448	SLU 69	0.5	-0.48	72.3	-0.0204	0.1893	-0.0064
448	SLU 70	0.5	-0.43	72.28	-0.0203	0.1892	-0.0065
448	SLU 71	0.5	-0.5	71.89	-0.0205	0.1882	-0.0065
448	SLU 72	0.5	-0.44	71.88	-0.0204	0.1881	-0.0066
448	SLU 73	0.52	-0.37	77.48	-0.0206	0.2082	-0.0067
448	SLU 74	0.53	-0.46	78.49	-0.021	0.2109	-0.0065
448	SLU 75	0.53	-0.4	78.47	-0.0209	0.2107	-0.0066
448	SLU 76	0.52	-0.38	78.05	-0.0209	0.2095	-0.0069
448	SLU 77	0.54	-0.47	79.06	-0.0213	0.2121	-0.0067
448	SLU 78	0.53	-0.42	79.04	-0.0212	0.212	-0.0068
448	SLU 79	0.53	-0.48	78.66	-0.0214	0.211	-0.0068
448	SLU 80	0.53	-0.43	78.64	-0.0213	0.2109	-0.0069
448	SLU 81	0.54	-0.45	80.4	-0.0211	0.2182	-0.0066
448	SLU 82	0.53	-0.4	80.39	-0.021	0.2181	-0.0067
448	SLU 83	0.54	-0.47	80.98	-0.0215	0.2195	-0.0068
448	SLU 84	0.54	-0.41	80.96	-0.0214	0.2193	-0.0069
448	SLE RA 1	0.37	-0.37	53.04	-0.0151	0.1399	-0.0048
448	SLE RA 2	0.36	-0.31	53.02	-0.015	0.1398	-0.005
448	SLE RA 3	0.37	-0.37	53.69	-0.0153	0.1416	-0.0049
448	SLE RA 4	0.37	-0.33	53.68	-0.0152	0.1415	-0.005
448	SLE RA 5	0.37	-0.32	53.4	-0.0152	0.1406	-0.0051
448	SLE RA 6	0.38	-0.38	54.08	-0.0155	0.1424	-0.005
448	SLE RA 7	0.37	-0.34	54.06	-0.0155	0.1423	-0.0051
448	SLE RA 8	0.37	-0.39	53.81	-0.0156	0.1416	-0.0051
448	SLE RA 9	0.37	-0.35	53.79	-0.0155	0.1416	-0.0052
448	SLE RA 10	0.38	-0.3	57.53	-0.0156	0.155	-0.0052
448	SLE RA 11	0.39	-0.36	58.2	-0.0159	0.1568	-0.0051
448	SLE RA 12	0.39	-0.32	58.19	-0.0159	0.1567	-0.0052
448	SLE RA 13	0.39	-0.31	57.91	-0.0159	0.1558	-0.0053
448	SLE RA 14	0.4	-0.37	58.58	-0.0161	0.1576	-0.0052
448	SLE RA 15	0.4	-0.33	58.57	-0.0161	0.1575	-0.0053
448	SLE RA 16	0.39	-0.38	58.31	-0.0162	0.1568	-0.0053
448	SLE RA 17	0.39	-0.34	58.3	-0.0161	0.1568	-0.0054
448	SLE RA 18	0.4	-0.36	59.48	-0.016	0.1617	-0.0051
448	SLE RA 19	0.39	-0.32	59.47	-0.016	0.1616	-0.0052
448	SLE RA 20	0.4	-0.37	59.86	-0.0162	0.1625	-0.0052
448	SLE RA 21	0.4	-0.33	59.85	-0.0162	0.1624	-0.0053

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
448	SLE FR 1	0.37	-0.37	53.04	-0.0151	0.1399	-0.0048
448	SLE FR 2	0.37	-0.36	53.04	-0.0151	0.1399	-0.0048
448	SLE FR 3	0.37	-0.37	53.19	-0.0152	0.1403	-0.0049
448	SLE FR 4	0.37	-0.35	54.97	-0.0154	0.1464	-0.0049
448	SLE FR 5	0.38	-0.37	55.13	-0.0155	0.1468	-0.005
448	SLE FR 6	0.38	-0.36	56.26	-0.0156	0.1508	-0.005
448	SLE QP 1	0.37	-0.37	53.04	-0.0151	0.1399	-0.0048
448	SLE QP 2	0.38	-0.37	54.97	-0.0154	0.1465	-0.0049
448	SLD 1	5.25	0.63	51.94	-0.0138	0.1653	0.0166
448	SLD 2	5.38	0.86	51.92	-0.014	0.1638	0.0212
448	SLD 3	5.13	-1.12	51.8	-0.0115	0.1808	0.0151
448	SLD 4	5.26	-0.89	51.78	-0.0117	0.1793	0.0197
448	SLD 5	1.99	2.54	54.28	-0.0183	0.1289	0.003
448	SLD 6	2.08	2.7	54.27	-0.0185	0.1279	0.0059
448	SLD 7	1.6	-3.29	53.81	-0.0107	0.1805	-0.0019
448	SLD 8	1.69	-3.14	53.8	-0.0109	0.1795	0.0011
448	SLD 9	-0.94	2.4	56.14	-0.0199	0.1134	-0.0109
448	SLD 10	-0.85	2.55	56.13	-0.0201	0.1124	-0.0079
448	SLD 11	-1.33	-3.43	55.68	-0.0123	0.165	-0.0158
448	SLD 12	-1.24	-3.28	55.67	-0.0124	0.164	-0.0128
448	SLD 13	-4.51	0.15	58.16	-0.019	0.1136	-0.0295
448	SLD 14	-4.38	0.39	58.15	-0.0193	0.1121	-0.0249
448	SLD 15	-4.63	-1.59	58.02	-0.0167	0.1291	-0.031
448	SLD 16	-4.5	-1.36	58.01	-0.017	0.1276	-0.0264
448	SLV 1	11.77	1.9	47.87	-0.0116	0.1909	0.0453
448	SLV 2	12.08	2.45	47.84	-0.0121	0.1874	0.056
448	SLV 3	11.5	-2.08	47.55	-0.0063	0.226	0.0419
448	SLV 4	11.81	-1.53	47.51	-0.0069	0.2226	0.0526
448	SLV 5	4.16	6.26	53.34	-0.0221	0.107	0.0135
448	SLV 6	4.35	6.61	53.31	-0.0224	0.1048	0.0203
448	SLV 7	3.24	-7.02	52.26	-0.0047	0.2243	0.0022
448	SLV 8	3.44	-6.67	52.24	-0.005	0.2221	0.009
448	SLV 9	-2.69	5.93	57.7	-0.0257	0.0708	-0.0188
448	SLV 10	-2.49	6.28	57.68	-0.0261	0.0686	-0.012
448	SLV 11	-3.6	-7.35	56.63	-0.0084	0.1881	-0.0301
448	SLV 12	-3.41	-7	56.61	-0.0087	0.1859	-0.0233
448	SLV 13	-11.06	0.8	62.43	-0.0239	0.0703	-0.0624
448	SLV 14	-10.75	1.35	62.39	-0.0244	0.0669	-0.0517
448	SLV 15	-11.33	-3.18	62.11	-0.0186	0.1055	-0.0658
448	SLV 16	-11.02	-2.64	62.07	-0.0192	0.102	-0.0551
448	CRTFP Ux+	0	0	0	0	0	0
448	CRTFP Ux-	0	0	0	0	0	0
449	SLU 1	0.32	0.47	31.03	0.0112	9.0835	-0.1671
449	SLU 2	0.32	0.56	31.01	0.0114	9.077	-0.1964
449	SLU 3	0.33	0.49	31.63	0.0114	9.2545	-0.1724
449	SLU 4	0.33	0.54	31.62	0.0115	9.2506	-0.19
449	SLU 5	0.32	0.56	31.36	0.0115	9.1756	-0.198
449	SLU 6	0.33	0.49	31.98	0.0115	9.3531	-0.174
449	SLU 7	0.33	0.54	31.97	0.0116	9.3492	-0.1916
449	SLU 8	0.33	0.48	31.73	0.0114	9.2807	-0.1702
449	SLU 9	0.33	0.53	31.71	0.0115	9.2768	-0.1878
449	SLU 10	0.33	0.66	34.92	0.0133	10.2055	-0.2319
449	SLU 11	0.35	0.59	35.54	0.0133	10.3829	-0.2079
449	SLU 12	0.35	0.64	35.53	0.0134	10.379	-0.2255
449	SLU 13	0.34	0.66	35.27	0.0134	10.3041	-0.2335
449	SLU 14	0.35	0.59	35.89	0.0134	10.4815	-0.2095
449	SLU 15	0.35	0.64	35.88	0.0135	10.4776	-0.2271
449	SLU 16	0.35	0.58	35.63	0.0133	10.4092	-0.2057
449	SLU 17	0.34	0.63	35.62	0.0134	10.4053	-0.2233
449	SLU 18	0.35	0.62	36.62	0.0139	10.6956	-0.2179
449	SLU 19	0.34	0.67	36.61	0.014	10.6917	-0.2354
449	SLU 20	0.35	0.62	36.96	0.014	10.7942	-0.2194
449	SLU 21	0.35	0.67	36.95	0.0141	10.7903	-0.237
449	SLU 22	0.36	0.56	34.78	0.0131	10.1637	-0.1975
449	SLU 23	0.35	0.64	34.76	0.0133	10.1572	-0.2268
449	SLU 24	0.37	0.58	35.38	0.0133	10.3347	-0.2028
449	SLU 25	0.36	0.63	35.37	0.0134	10.3308	-0.2203
449	SLU 26	0.36	0.65	35.11	0.0134	10.2558	-0.2283
449	SLU 27	0.37	0.58	35.73	0.0134	10.4333	-0.2043
449	SLU 28	0.37	0.63	35.72	0.0135	10.4294	-0.2219
449	SLU 29	0.37	0.57	35.48	0.0133	10.3609	-0.2006
449	SLU 30	0.36	0.62	35.46	0.0134	10.357	-0.2182
449	SLU 31	0.37	0.75	38.67	0.0152	11.2857	-0.2623
449	SLU 32	0.39	0.68	39.29	0.0152	11.4631	-0.2383
449	SLU 33	0.38	0.73	39.28	0.0153	11.4592	-0.2559
449	SLU 34	0.37	0.75	39.02	0.0153	11.3843	-0.2638
449	SLU 35	0.39	0.68	39.64	0.0153	11.5617	-0.2398
449	SLU 36	0.39	0.73	39.63	0.0154	11.5578	-0.2574
449	SLU 37	0.38	0.67	39.38	0.0152	11.4894	-0.2361
449	SLU 38	0.38	0.72	39.37	0.0153	11.4855	-0.2537
449	SLU 39	0.38	0.7	40.37	0.0158	11.7758	-0.2482
449	SLU 40	0.38	0.75	40.35	0.0159	11.7719	-0.2658
449	SLU 41	0.39	0.71	40.71	0.0159	11.8744	-0.2497
449	SLU 42	0.39	0.76	40.7	0.016	11.8705	-0.2673
449	SLU 43	0.4	0.59	39.06	0.0139	11.4382	-0.2069
449	SLU 44	0.4	0.67	39.04	0.0141	11.4317	-0.2362
449	SLU 45	0.41	0.6	39.66	0.0141	11.6092	-0.2122
449	SLU 46	0.41	0.65	39.64	0.0142	11.6053	-0.2298
449	SLU 47	0.4	0.67	39.38	0.0142	11.5303	-0.2377
449	SLU 48	0.42	0.61	40	0.0142	11.7078	-0.2137
449	SLU 49	0.41	0.66	39.99	0.0143	11.7039	-0.2313

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
449	SLU 50	0.41	0.59	39.75	0.0141	11.6355	-0.21
449	SLU 51	0.41	0.64	39.74	0.0142	11.6315	-0.2276
449	SLU 52	0.42	0.77	42.95	0.016	12.5602	-0.2717
449	SLU 53	0.43	0.7	43.56	0.016	12.7376	-0.2477
449	SLU 54	0.43	0.75	43.55	0.0161	12.7337	-0.2653
449	SLU 55	0.42	0.78	43.29	0.0161	12.6588	-0.2732
449	SLU 56	0.44	0.71	43.91	0.0161	12.8362	-0.2492
449	SLU 57	0.43	0.76	43.9	0.0162	12.8323	-0.2668
449	SLU 58	0.43	0.7	43.66	0.016	12.7639	-0.2455
449	SLU 59	0.43	0.75	43.65	0.0161	12.76	-0.2631
449	SLU 60	0.43	0.73	44.64	0.0166	13.0503	-0.2576
449	SLU 61	0.43	0.78	44.63	0.0167	13.0464	-0.2752
449	SLU 62	0.44	0.73	44.99	0.0167	13.1489	-0.2591
449	SLU 63	0.43	0.79	44.98	0.0168	13.145	-0.2767
449	SLU 64	0.44	0.67	42.81	0.0158	12.5184	-0.2372
449	SLU 65	0.44	0.76	42.79	0.016	12.5119	-0.2665
449	SLU 66	0.45	0.69	43.41	0.016	12.6894	-0.2425
449	SLU 67	0.45	0.74	43.39	0.0161	12.6855	-0.2601
449	SLU 68	0.44	0.76	43.13	0.0161	12.6105	-0.2681
449	SLU 69	0.45	0.69	43.75	0.0161	12.788	-0.2441
449	SLU 70	0.45	0.74	43.74	0.0162	12.7841	-0.2616
449	SLU 71	0.45	0.68	43.5	0.016	12.7157	-0.2403
449	SLU 72	0.45	0.73	43.49	0.0161	12.7117	-0.2579
449	SLU 73	0.45	0.86	46.7	0.0179	13.6404	-0.302
449	SLU 74	0.47	0.79	47.31	0.0179	13.8178	-0.278
449	SLU 75	0.47	0.84	47.3	0.018	13.8139	-0.2956
449	SLU 76	0.46	0.86	47.04	0.018	13.739	-0.3036
449	SLU 77	0.47	0.79	47.66	0.018	13.9165	-0.2796
449	SLU 78	0.47	0.84	47.65	0.0181	13.9125	-0.2972
449	SLU 79	0.47	0.78	47.41	0.0179	13.8441	-0.2758
449	SLU 80	0.46	0.83	47.4	0.018	13.8402	-0.2934
449	SLU 81	0.47	0.82	48.39	0.0185	14.1305	-0.2879
449	SLU 82	0.46	0.87	48.38	0.0186	14.1266	-0.3055
449	SLU 83	0.47	0.82	48.74	0.0186	14.2291	-0.2895
449	SLU 84	0.47	0.87	48.73	0.0187	14.2252	-0.3071
449	SLE RA 1	0.33	0.5	32.1	0.0117	9.3922	-0.1758
449	SLE RA 2	0.33	0.55	32.09	0.0118	9.3878	-0.1953
449	SLE RA 3	0.34	0.51	32.5	0.0119	9.5061	-0.1793
449	SLE RA 4	0.34	0.54	32.5	0.012	9.5035	-0.1911
449	SLE RA 5	0.33	0.56	32.32	0.0119	9.4536	-0.1964
449	SLE RA 6	0.34	0.51	32.73	0.0119	9.5719	-0.1804
449	SLE RA 7	0.34	0.54	32.73	0.012	9.5692	-0.1921
449	SLE RA 8	0.34	0.5	32.57	0.0119	9.5236	-0.1779
449	SLE RA 9	0.33	0.54	32.56	0.0119	9.521	-0.1896
449	SLE RA 10	0.34	0.62	34.7	0.0131	10.1401	-0.219
449	SLE RA 11	0.35	0.58	35.11	0.0132	10.2584	-0.203
449	SLE RA 12	0.35	0.61	35.1	0.0132	10.2558	-0.2147
449	SLE RA 13	0.34	0.62	34.93	0.0132	10.2059	-0.22
449	SLE RA 14	0.35	0.58	35.34	0.0132	10.3242	-0.204
449	SLE RA 15	0.35	0.61	35.33	0.0133	10.3216	-0.2158
449	SLE RA 16	0.35	0.57	35.17	0.0131	10.276	-0.2015
449	SLE RA 17	0.35	0.61	35.16	0.0132	10.2733	-0.2133
449	SLE RA 18	0.35	0.59	35.83	0.0136	10.4669	-0.2096
449	SLE RA 19	0.35	0.63	35.82	0.0136	10.4643	-0.2213
449	SLE RA 20	0.35	0.6	36.06	0.0136	10.5326	-0.2106
449	SLE RA 21	0.35	0.63	36.05	0.0137	10.53	-0.2224
449	SLE FR 1	0.33	0.5	32.1	0.0117	9.3922	-0.1758
449	SLE FR 2	0.33	0.51	32.1	0.0118	9.3913	-0.1797
449	SLE FR 3	0.33	0.5	32.2	0.0118	9.4185	-0.1762
449	SLE FR 4	0.34	0.54	33.22	0.0123	9.7137	-0.1898
449	SLE FR 5	0.34	0.53	33.31	0.0123	9.7409	-0.1864
449	SLE FR 6	0.34	0.55	33.96	0.0126	9.9295	-0.1927
449	SLE QP 1	0.33	0.5	32.1	0.0117	9.3922	-0.1758
449	SLE QP 2	0.34	0.53	33.22	0.0123	9.7146	-0.1859
449	SLD 1	3.43	0.92	27.09	0.0101	8.0058	-0.3233
449	SLD 2	3.51	1.31	27.1	0.0098	8.0086	-0.457
449	SLD 3	3.35	-0.57	26.94	0.0112	7.9634	0.1976
449	SLD 4	3.43	-0.18	26.95	0.011	7.9663	0.0638
449	SLD 5	1.38	2.83	31.6	0.0098	9.2657	-0.9938
449	SLD 6	1.43	3.08	31.61	0.0097	9.2675	-1.0806
449	SLD 7	1.1	-2.12	31.11	0.0138	9.1245	0.7424
449	SLD 8	1.15	-1.87	31.12	0.0137	9.1263	0.6556
449	SLD 9	-0.48	2.93	35.32	0.0109	10.3028	-1.0275
449	SLD 10	-0.42	3.18	35.33	0.0107	10.3047	-1.1143
449	SLD 11	-0.76	-2.03	34.83	0.0149	10.1616	0.7087
449	SLD 12	-0.7	-1.78	34.84	0.0147	10.1635	0.6219
449	SLD 13	-2.76	1.24	39.49	0.0135	11.4629	-0.4357
449	SLD 14	-2.67	1.62	39.5	0.0133	11.4657	-0.5695
449	SLD 15	-2.84	-0.25	39.34	0.0147	11.4205	0.0852
449	SLD 16	-2.76	0.13	39.35	0.0145	11.4234	-0.0486
449	SLV 1	7.57	1.4	18.87	0.0071	5.7161	-0.491
449	SLV 2	7.77	2.3	18.91	0.0066	5.7227	-0.8026
449	SLV 3	7.38	-1.98	18.52	0.0098	5.6171	0.6938
449	SLV 4	7.57	-1.09	18.56	0.0093	5.6237	0.3821
449	SLV 5	2.77	5.77	29.43	0.0067	8.6641	-2.0215
449	SLV 6	2.89	6.34	29.46	0.0063	8.6684	-2.2206
449	SLV 7	2.12	-5.51	28.28	0.0158	8.334	1.9276
449	SLV 8	2.25	-4.94	28.3	0.0154	8.3382	1.7286
449	SLV 9	-1.57	5.99	38.14	0.0092	11.0909	-2.1004
449	SLV 10	-1.45	6.56	38.16	0.0088	11.0952	-2.2995
449	SLV 11	-2.22	-5.29	36.98	0.0182	10.7608	1.8487

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
449	SLV 12	-2.09	-4.72	37.01	0.0178	10.765	1.6497
449	SLV 13	-6.9	2.14	47.88	0.0153	13.8055	-0.754
449	SLV 14	-6.7	3.03	47.92	0.0147	13.8121	-1.0656
449	SLV 15	-7.09	-1.24	47.53	0.018	13.7064	0.4308
449	SLV 16	-6.89	-0.35	47.57	0.0174	13.713	0.1191
449	CRTFP Ux+	0	0	0	0	0	0
449	CRTFP Ux-	0	0	0	0	0	0
449	CRTFP Uy+	0	0	0	0	0	0
449	CRTFP Uy-	0	0	0	0	0	0
451	SLU 1	-0.21	-0.06	25.55	0.0047	-5.1211	-0.0172
451	SLU 2	-0.2	0.01	25.53	0.0049	-5.1162	0.0019
451	SLU 3	-0.21	-0.06	26.05	0.0048	-5.2177	-0.0157
451	SLU 4	-0.21	-0.01	26.04	0.0049	-5.2147	-0.0043
451	SLU 5	-0.2	0.02	25.82	0.0049	-5.1719	0.0029
451	SLU 6	-0.21	-0.06	26.34	0.0048	-5.2733	-0.0148
451	SLU 7	-0.21	-0.01	26.32	0.005	-5.2703	-0.0033
451	SLU 8	-0.21	-0.06	26.13	0.0048	-5.2324	-0.0152
451	SLU 9	-0.21	-0.01	26.11	0.0049	-5.2295	-0.0038
451	SLU 10	-0.2	0.03	28.79	0.006	-5.7597	0.0055
451	SLU 11	-0.21	-0.04	29.3	0.0059	-5.8611	-0.0122
451	SLU 12	-0.2	0	29.29	0.0061	-5.8581	-0.0007
451	SLU 13	-0.2	0.03	29.07	0.0061	-5.8153	0.0064
451	SLU 14	-0.21	-0.04	29.59	0.006	-5.9167	-0.0112
451	SLU 15	-0.21	0.01	29.58	0.0061	-5.9138	0.0002
451	SLU 16	-0.21	-0.04	29.38	0.0059	-5.8758	-0.0117
451	SLU 17	-0.2	0	29.37	0.006	-5.8729	-0.0002
451	SLU 18	-0.2	-0.04	30.2	0.0063	-6.0403	-0.0121
451	SLU 19	-0.2	0	30.19	0.0064	-6.0374	-0.0007
451	SLU 20	-0.21	-0.04	30.49	0.0063	-6.096	-0.0112
451	SLU 21	-0.2	0.01	30.48	0.0065	-6.093	0.0003
451	SLU 22	-0.23	-0.05	28.67	0.0059	-5.7358	-0.0131
451	SLU 23	-0.22	0.03	28.65	0.006	-5.7309	0.0059
451	SLU 24	-0.23	-0.04	29.17	0.006	-5.8323	-0.0117
451	SLU 25	-0.23	0	29.16	0.0061	-5.8294	-0.0003
451	SLU 26	-0.22	0.03	28.94	0.0061	-5.7865	0.0069
451	SLU 27	-0.24	-0.04	29.46	0.006	-5.888	-0.0107
451	SLU 28	-0.23	0.01	29.44	0.0061	-5.885	0.0007
451	SLU 29	-0.23	-0.04	29.25	0.0059	-5.8471	-0.0112
451	SLU 30	-0.23	0.01	29.24	0.006	-5.8441	0.0002
451	SLU 31	-0.22	0.04	31.91	0.0072	-6.3743	0.0095
451	SLU 32	-0.23	-0.03	32.42	0.0071	-6.4757	-0.0082
451	SLU 33	-0.23	0.02	32.41	0.0072	-6.4728	0.0033
451	SLU 34	-0.22	0.05	32.19	0.0072	-6.43	0.0104
451	SLU 35	-0.23	-0.02	32.71	0.0071	-6.5314	-0.0072
451	SLU 36	-0.23	0.02	32.7	0.0072	-6.5284	0.0042
451	SLU 37	-0.23	-0.03	32.5	0.007	-6.4905	-0.0077
451	SLU 38	-0.23	0.02	32.49	0.0071	-6.4876	0.0038
451	SLU 39	-0.23	-0.03	33.32	0.0075	-6.655	-0.0081
451	SLU 40	-0.22	0.02	33.31	0.0076	-6.652	0.0033
451	SLU 41	-0.23	-0.02	33.61	0.0075	-6.7106	-0.0071
451	SLU 42	-0.22	0.02	33.6	0.0076	-6.7077	0.0043
451	SLU 43	-0.26	-0.09	32.15	0.0058	-6.4467	-0.0237
451	SLU 44	-0.25	-0.01	32.13	0.0059	-6.4418	-0.0046
451	SLU 45	-0.26	-0.08	32.64	0.0059	-6.5432	-0.0222
451	SLU 46	-0.26	-0.04	32.63	0.006	-6.5403	-0.0108
451	SLU 47	-0.25	-0.01	32.41	0.006	-6.4975	-0.0036
451	SLU 48	-0.27	-0.08	32.93	0.0059	-6.5989	-0.0213
451	SLU 49	-0.26	-0.03	32.92	0.006	-6.5959	-0.0098
451	SLU 50	-0.26	-0.08	32.72	0.0058	-6.558	-0.0217
451	SLU 51	-0.26	-0.04	32.71	0.0059	-6.5551	-0.0103
451	SLU 52	-0.25	0	35.38	0.0071	-7.0853	-0.0011
451	SLU 53	-0.26	-0.07	35.9	0.007	-7.1867	-0.0187
451	SLU 54	-0.26	-0.02	35.89	0.0071	-7.1837	-0.0073
451	SLU 55	-0.25	0	35.67	0.0071	-7.1409	-0.0001
451	SLU 56	-0.26	-0.07	36.19	0.007	-7.2423	-0.0178
451	SLU 57	-0.26	-0.02	36.17	0.0071	-7.2394	-0.0063
451	SLU 58	-0.26	-0.07	35.98	0.0069	-7.2014	-0.0182
451	SLU 59	-0.26	-0.02	35.96	0.007	-7.1985	-0.0068
451	SLU 60	-0.26	-0.07	36.8	0.0074	-7.3659	-0.0186
451	SLU 61	-0.25	-0.02	36.78	0.0075	-7.363	-0.0072
451	SLU 62	-0.26	-0.07	37.08	0.0074	-7.4216	-0.0177
451	SLU 63	-0.25	-0.02	37.07	0.0075	-7.4186	-0.0062
451	SLU 64	-0.28	-0.07	35.27	0.0069	-7.0614	-0.0197
451	SLU 65	-0.27	0	35.25	0.0071	-7.0565	-0.0006
451	SLU 66	-0.29	-0.07	35.76	0.007	-7.1579	-0.0182
451	SLU 67	-0.28	-0.02	35.75	0.0071	-7.155	-0.0068
451	SLU 68	-0.28	0.01	35.53	0.0071	-7.1121	0.0004
451	SLU 69	-0.29	-0.06	36.05	0.007	-7.2135	-0.0173
451	SLU 70	-0.28	-0.02	36.04	0.0071	-7.2106	-0.0058
451	SLU 71	-0.29	-0.07	35.84	0.0069	-7.1727	-0.0177
451	SLU 72	-0.28	-0.02	35.83	0.007	-7.1697	-0.0063
451	SLU 73	-0.27	0.02	38.5	0.0082	-7.6999	0.0029
451	SLU 74	-0.29	-0.05	39.02	0.0081	-7.8013	-0.0147
451	SLU 75	-0.28	-0.01	39.01	0.0082	-7.7984	-0.0033
451	SLU 76	-0.28	0.02	38.79	0.0082	-7.7556	0.0039
451	SLU 77	-0.29	-0.05	39.31	0.0081	-7.857	-0.0137
451	SLU 78	-0.28	0	39.29	0.0082	-7.854	-0.0023
451	SLU 79	-0.29	-0.05	39.1	0.008	-7.8161	-0.0142
451	SLU 80	-0.28	-0.01	39.09	0.0082	-7.8132	-0.0028
451	SLU 81	-0.28	-0.05	39.92	0.0085	-7.9806	-0.0146
451	SLU 82	-0.28	-0.01	39.9	0.0086	-7.9776	-0.0032

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
451	SLU 83	-0.28	-0.05	40.2	0.0085	-8.0362	-0.0137
451	SLU 84	-0.28	0	40.19	0.0086	-8.0333	-0.0022
451	SLE RA 1	-0.21	-0.06	26.44	0.005	-5.2967	-0.016
451	SLE RA 2	-0.21	-0.01	26.43	0.0052	-5.2935	-0.0033
451	SLE RA 3	-0.22	-0.06	26.77	0.0051	-5.3611	-0.0151
451	SLE RA 4	-0.21	-0.03	26.77	0.0052	-5.3591	-0.0074
451	SLE RA 5	-0.21	-0.01	26.62	0.0052	-5.3306	-0.0026
451	SLE RA 6	-0.22	-0.05	26.97	0.0051	-5.3982	-0.0144
451	SLE RA 7	-0.21	-0.02	26.96	0.0052	-5.3962	-0.0068
451	SLE RA 8	-0.22	-0.05	26.83	0.0051	-5.3709	-0.0147
451	SLE RA 9	-0.21	-0.02	26.82	0.0051	-5.369	-0.0071
451	SLE RA 10	-0.21	0	28.6	0.0059	-5.7224	-0.0009
451	SLE RA 11	-0.21	-0.05	28.94	0.0059	-5.7901	-0.0127
451	SLE RA 12	-0.21	-0.02	28.94	0.0059	-5.7881	-0.0051
451	SLE RA 13	-0.21	0	28.79	0.0059	-5.7595	-0.0003
451	SLE RA 14	-0.22	-0.04	29.14	0.0059	-5.8271	-0.0121
451	SLE RA 15	-0.21	-0.01	29.13	0.006	-5.8252	-0.0044
451	SLE RA 16	-0.21	-0.05	29	0.0058	-5.7999	-0.0124
451	SLE RA 17	-0.21	-0.01	28.99	0.0059	-5.7979	-0.0047
451	SLE RA 18	-0.21	-0.05	29.54	0.0061	-5.9095	-0.0127
451	SLE RA 19	-0.21	-0.02	29.53	0.0062	-5.9076	-0.005
451	SLE RA 20	-0.21	-0.04	29.73	0.0061	-5.9466	-0.012
451	SLE RA 21	-0.21	-0.01	29.73	0.0062	-5.9447	-0.0044
451	SLE FR 1	-0.21	-0.06	26.44	0.005	-5.2967	-0.016
451	SLE FR 2	-0.21	-0.05	26.44	0.0051	-5.2961	-0.0135
451	SLE FR 3	-0.21	-0.06	26.52	0.0051	-5.3116	-0.0157
451	SLE FR 4	-0.21	-0.05	27.37	0.0054	-5.4799	-0.0125
451	SLE FR 5	-0.21	-0.05	27.45	0.0054	-5.4954	-0.0147
451	SLE FR 6	-0.21	-0.05	27.99	0.0056	-5.6031	-0.0143
451	SLE QP 1	-0.21	-0.06	26.44	0.005	-5.2967	-0.016
451	SLE QP 2	-0.21	-0.06	27.37	0.0054	-5.4806	-0.015
451	SLD 1	2.19	0.9	32.8	0.0061	-6.5174	0.2245
451	SLD 2	2.25	0.58	32.79	0.0064	-6.5182	0.1448
451	SLD 3	2.25	-0.36	32.65	0.0075	-6.4802	-0.09
451	SLD 4	2.31	-0.68	32.64	0.0078	-6.4809	-0.1697
451	SLD 5	0.41	2.19	29.23	0.0034	-5.848	0.5478
451	SLD 6	0.45	1.98	29.22	0.0036	-5.8485	0.4961
451	SLD 7	0.6	-2	28.73	0.0081	-5.7238	-0.5006
451	SLD 8	0.64	-2.2	28.73	0.0083	-5.7243	-0.5524
451	SLD 9	-1.06	2.09	26.02	0.0024	-5.2369	0.5224
451	SLD 10	-1.03	1.88	26.02	0.0026	-5.2373	0.4706
451	SLD 11	-0.87	-2.1	25.52	0.0072	-5.1127	-0.5261
451	SLD 12	-0.84	-2.3	25.52	0.0074	-5.1132	-0.5778
451	SLD 13	-2.73	0.56	22.11	0.0029	-4.4803	0.1397
451	SLD 14	-2.67	0.24	22.1	0.0032	-4.481	0.06
451	SLD 15	-2.67	-0.69	21.96	0.0043	-4.443	-0.1748
451	SLD 16	-2.61	-1.01	21.95	0.0047	-4.4437	-0.2545
451	SLV 1	5.41	2.14	40.06	0.0071	-7.9065	0.5362
451	SLV 2	5.55	1.4	40.04	0.0078	-7.9082	0.3505
451	SLV 3	5.54	-0.72	39.71	0.0103	-7.82	-0.1812
451	SLV 4	5.68	-1.47	39.7	0.0111	-7.8216	-0.3669
451	SLV 5	1.25	5.08	31.71	0.0008	-6.3393	1.2698
451	SLV 6	1.34	4.6	31.7	0.0013	-6.3404	1.1512
451	SLV 7	1.69	-4.48	30.55	0.0117	-6.0509	-1.1215
451	SLV 8	1.78	-4.95	30.54	0.0121	-6.0519	-1.24
451	SLV 9	-2.2	4.84	24.21	-0.0014	-4.9092	1.21
451	SLV 10	-2.11	4.36	24.2	-0.0009	-4.9103	1.0915
451	SLV 11	-1.76	-4.71	23.05	0.0094	-4.6208	-1.1812
451	SLV 12	-1.67	-5.19	23.04	0.0099	-4.6218	-1.2998
451	SLV 13	-6.1	1.36	15.05	-0.0003	-3.1395	0.3369
451	SLV 14	-5.96	0.61	15.03	0.0004	-3.1412	0.1512
451	SLV 15	-5.97	-1.51	14.7	0.0029	-3.053	-0.3805
451	SLV 16	-5.83	-2.26	14.68	0.0036	-3.0547	-0.5662
451	CRTFP Ux+	0	0	0	0	0	0
451	CRTFP Ux-	0	0	0	0	0	0
454	SLU 1	0.06	-0.12	27.64	-0.3397	9.2718	0.0422
454	SLU 2	0.06	-0.07	27.64	-0.3398	9.2724	0.0259
454	SLU 3	0.07	-0.11	28.16	-0.3461	9.4425	0.0399
454	SLU 4	0.07	-0.08	28.16	-0.3461	9.4429	0.0301
454	SLU 5	0.06	-0.08	27.95	-0.3437	9.3745	0.0275
454	SLU 6	0.07	-0.11	28.46	-0.35	9.5446	0.0415
454	SLU 7	0.07	-0.09	28.47	-0.35	9.5449	0.0317
454	SLU 8	0.07	-0.13	28.26	-0.3475	9.4759	0.0454
454	SLU 9	0.07	-0.1	28.26	-0.3475	9.4763	0.0356
454	SLU 10	0.08	-0.05	31.47	-0.3865	10.5524	0.0188
454	SLU 11	0.08	-0.09	31.98	-0.3928	10.7225	0.0328
454	SLU 12	0.08	-0.06	31.98	-0.3928	10.7229	0.023
454	SLU 13	0.08	-0.05	31.78	-0.3904	10.6545	0.0204
454	SLU 14	0.08	-0.09	32.29	-0.3966	10.8246	0.0344
454	SLU 15	0.08	-0.07	32.29	-0.3967	10.8249	0.0246
454	SLU 16	0.08	-0.11	32.08	-0.3942	10.7559	0.0383
454	SLU 17	0.08	-0.08	32.08	-0.3942	10.7563	0.0285
454	SLU 18	0.09	-0.09	33.1	-0.4064	11.1004	0.0321
454	SLU 19	0.08	-0.06	33.1	-0.4065	11.1008	0.0223
454	SLU 20	0.09	-0.09	33.41	-0.4103	11.2024	0.0337
454	SLU 21	0.09	-0.06	33.41	-0.4103	11.2028	0.0239
454	SLU 22	0.07	-0.08	30.84	-0.3785	10.332	0.0297
454	SLU 23	0.07	-0.03	30.84	-0.3786	10.3326	0.0134
454	SLU 24	0.07	-0.07	31.35	-0.3849	10.5027	0.0274
454	SLU 25	0.07	-0.05	31.35	-0.385	10.5031	0.0176
454	SLU 26	0.07	-0.04	31.15	-0.3825	10.4347	0.015

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
454	SLU 27	0.08	-0.08	31.66	-0.3888	10.6048	0.0289
454	SLU 28	0.07	-0.05	31.66	-0.3888	10.6051	0.0191
454	SLU 29	0.08	-0.09	31.45	-0.3863	10.5361	0.0328
454	SLU 30	0.07	-0.06	31.45	-0.3863	10.5365	0.023
454	SLU 31	0.08	-0.01	34.66	-0.4253	11.6126	0.0063
454	SLU 32	0.09	-0.05	35.18	-0.4316	11.7827	0.0203
454	SLU 33	0.09	-0.03	35.18	-0.4316	11.7831	0.0105
454	SLU 34	0.09	-0.02	34.97	-0.4292	11.7147	0.0079
454	SLU 35	0.09	-0.06	35.48	-0.4354	11.8848	0.0219
454	SLU 36	0.09	-0.03	35.49	-0.4355	11.8851	0.0121
454	SLU 37	0.09	-0.07	35.28	-0.433	11.8161	0.0258
454	SLU 38	0.09	-0.04	35.28	-0.433	11.8165	0.016
454	SLU 39	0.09	-0.05	36.3	-0.4452	12.1606	0.0196
454	SLU 40	0.09	-0.02	36.3	-0.4453	12.161	0.0098
454	SLU 41	0.09	-0.06	36.61	-0.4491	12.2626	0.0212
454	SLU 42	0.09	-0.03	36.61	-0.4491	12.263	0.0114
454	SLU 43	0.08	-0.16	34.84	-0.4284	11.6899	0.0592
454	SLU 44	0.08	-0.12	34.84	-0.4284	11.6905	0.0429
454	SLU 45	0.08	-0.16	35.35	-0.4347	11.8606	0.0569
454	SLU 46	0.08	-0.13	35.35	-0.4348	11.861	0.0471
454	SLU 47	0.08	-0.12	35.15	-0.4323	11.7925	0.0445
454	SLU 48	0.08	-0.16	35.66	-0.4386	11.9626	0.0584
454	SLU 49	0.08	-0.13	35.66	-0.4386	11.963	0.0487
454	SLU 50	0.08	-0.17	35.45	-0.4361	11.894	0.0623
454	SLU 51	0.08	-0.15	35.45	-0.4362	11.8943	0.0526
454	SLU 52	0.09	-0.1	38.66	-0.4751	12.9705	0.0358
454	SLU 53	0.1	-0.14	39.18	-0.4814	13.1406	0.0498
454	SLU 54	0.1	-0.11	39.18	-0.4814	13.141	0.04
454	SLU 55	0.1	-0.1	38.97	-0.479	13.0725	0.0374
454	SLU 56	0.1	-0.14	39.49	-0.4852	13.2426	0.0514
454	SLU 57	0.1	-0.11	39.49	-0.4853	13.243	0.0416
454	SLU 58	0.1	-0.15	39.28	-0.4828	13.174	0.0553
454	SLU 59	0.1	-0.12	39.28	-0.4828	13.1743	0.0455
454	SLU 60	0.1	-0.14	40.3	-0.495	13.5185	0.0491
454	SLU 61	0.1	-0.11	40.3	-0.4951	13.5188	0.0393
454	SLU 62	0.1	-0.14	40.61	-0.4989	13.6205	0.0507
454	SLU 63	0.1	-0.11	40.61	-0.499	13.6209	0.0409
454	SLU 64	0.09	-0.13	38.03	-0.4672	12.7501	0.0467
454	SLU 65	0.09	-0.08	38.03	-0.4673	12.7507	0.0304
454	SLU 66	0.09	-0.12	38.55	-0.4735	12.9208	0.0443
454	SLU 67	0.09	-0.09	38.55	-0.4736	12.9211	0.0345
454	SLU 68	0.09	-0.09	38.34	-0.4711	12.8527	0.0319
454	SLU 69	0.09	-0.13	38.86	-0.4774	13.0228	0.0459
454	SLU 70	0.09	-0.1	38.86	-0.4774	13.0232	0.0361
454	SLU 71	0.09	-0.14	38.65	-0.4749	12.9542	0.0498
454	SLU 72	0.09	-0.11	38.65	-0.475	12.9545	0.04
454	SLU 73	0.1	-0.06	41.86	-0.5139	14.0307	0.0233
454	SLU 74	0.11	-0.1	42.37	-0.5202	14.2008	0.0373
454	SLU 75	0.1	-0.07	42.37	-0.5202	14.2011	0.0275
454	SLU 76	0.1	-0.07	42.17	-0.5178	14.1327	0.0248
454	SLU 77	0.11	-0.11	42.68	-0.5241	14.3028	0.0388
454	SLU 78	0.11	-0.08	42.68	-0.5241	14.3032	0.029
454	SLU 79	0.11	-0.12	42.47	-0.5216	14.2342	0.0427
454	SLU 80	0.11	-0.09	42.47	-0.5216	14.2345	0.0329
454	SLU 81	0.11	-0.1	43.5	-0.5338	14.5787	0.0366
454	SLU 82	0.11	-0.07	43.5	-0.5339	14.579	0.0268
454	SLU 83	0.11	-0.1	43.8	-0.5377	14.6807	0.0381
454	SLU 84	0.11	-0.08	43.81	-0.5378	14.6811	0.0283
454	SLE RA 1	0.07	-0.11	28.55	-0.3508	9.5747	0.0387
454	SLE RA 2	0.07	-0.08	28.55	-0.3509	9.5752	0.0278
454	SLE RA 3	0.07	-0.1	28.9	-0.3551	9.6885	0.0371
454	SLE RA 4	0.07	-0.08	28.9	-0.3551	9.6888	0.0306
454	SLE RA 5	0.07	-0.08	28.76	-0.3535	9.6432	0.0288
454	SLE RA 6	0.07	-0.11	29.1	-0.3576	9.7566	0.0381
454	SLE RA 7	0.07	-0.09	29.1	-0.3577	9.7568	0.0316
454	SLE RA 8	0.07	-0.11	28.96	-0.356	9.7108	0.0408
454	SLE RA 9	0.07	-0.09	28.97	-0.356	9.711	0.0342
454	SLE RA 10	0.08	-0.06	31.1	-0.382	10.4285	0.0231
454	SLE RA 11	0.08	-0.09	31.45	-0.3862	10.5419	0.0324
454	SLE RA 12	0.08	-0.07	31.45	-0.3862	10.5421	0.0259
454	SLE RA 13	0.08	-0.06	31.31	-0.3846	10.4965	0.0241
454	SLE RA 14	0.08	-0.09	31.65	-0.3888	10.6099	0.0334
454	SLE RA 15	0.08	-0.07	31.65	-0.3888	10.6102	0.0269
454	SLE RA 16	0.08	-0.1	31.51	-0.3871	10.5641	0.036
454	SLE RA 17	0.08	-0.08	31.51	-0.3871	10.5644	0.0295
454	SLE RA 18	0.08	-0.09	32.2	-0.3953	10.7938	0.0319
454	SLE RA 19	0.08	-0.07	32.2	-0.3953	10.794	0.0254
454	SLE RA 20	0.08	-0.09	32.4	-0.3979	10.8618	0.033
454	SLE RA 21	0.08	-0.07	32.4	-0.3979	10.8621	0.0264
454	SLE FR 1	0.07	-0.11	28.55	-0.3508	9.5747	0.0387
454	SLE FR 2	0.07	-0.1	28.55	-0.3508	9.5748	0.0365
454	SLE FR 3	0.07	-0.11	28.64	-0.3519	9.602	0.0391
454	SLE FR 4	0.07	-0.09	29.65	-0.3642	9.9405	0.0345
454	SLE FR 5	0.07	-0.1	29.73	-0.3652	9.9677	0.0371
454	SLE FR 6	0.07	-0.1	30.37	-0.373	10.1843	0.0353
454	SLE QP 1	0.07	-0.11	28.55	-0.3508	9.5747	0.0387
454	SLE QP 2	0.07	-0.1	29.65	-0.3642	9.9405	0.0366
454	SLD 1	2.47	0.32	29.73	-0.3661	9.9717	-0.0932
454	SLD 2	2.53	0.34	29.73	-0.3661	9.971	-0.0977
454	SLD 3	2.53	-0.67	29.79	-0.3652	9.9998	0.253
454	SLD 4	2.58	-0.65	29.79	-0.3652	9.9992	0.2484

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
454	SLD 5	0.7	1.52	29.58	-0.3661	9.9073	-0.5265
454	SLD 6	0.73	1.53	29.58	-0.3661	9.9068	-0.5295
454	SLD 7	0.88	-1.77	29.78	-0.3631	10.0011	0.6273
454	SLD 8	0.92	-1.76	29.78	-0.3631	10.0006	0.6244
454	SLD 9	-0.78	1.56	29.51	-0.3652	9.8803	-0.5511
454	SLD 10	-0.74	1.57	29.51	-0.3652	9.8798	-0.554
454	SLD 11	-0.59	-1.74	29.71	-0.3622	9.9741	0.6027
454	SLD 12	-0.55	-1.73	29.71	-0.3622	9.9737	0.5998
454	SLD 13	-2.44	0.45	29.5	-0.3631	9.8818	-0.1751
454	SLD 14	-2.39	0.47	29.5	-0.3631	9.8811	-0.1797
454	SLD 15	-2.39	-0.54	29.56	-0.3622	9.9099	0.171
454	SLD 16	-2.33	-0.52	29.56	-0.3622	9.9092	0.1665
454	SLV 1	5.69	0.86	29.85	-0.3688	10.0146	-0.2567
454	SLV 2	5.82	0.9	29.84	-0.3687	10.013	-0.2673
454	SLV 3	5.82	-1.39	29.99	-0.3667	10.0794	0.5317
454	SLV 4	5.95	-1.36	29.98	-0.3667	10.0778	0.5211
454	SLV 5	1.53	3.6	29.49	-0.3687	9.8646	-1.2454
454	SLV 6	1.62	3.62	29.49	-0.3686	9.8636	-1.2522
454	SLV 7	1.97	-3.91	29.96	-0.3618	10.0808	1.3828
454	SLV 8	2.05	-3.89	29.96	-0.3618	10.0798	1.376
454	SLV 9	-1.91	3.69	29.33	-0.3665	9.8011	-1.3027
454	SLV 10	-1.83	3.71	29.33	-0.3665	9.8001	-1.3095
454	SLV 11	-1.48	-3.82	29.8	-0.3597	10.0173	1.3255
454	SLV 12	-1.39	-3.8	29.8	-0.3597	10.0163	1.3187
454	SLV 13	-5.81	1.16	29.31	-0.3616	9.8031	-0.4479
454	SLV 14	-5.67	1.19	29.3	-0.3616	9.8015	-0.4585
454	SLV 15	-5.68	-1.1	29.45	-0.3596	9.8679	0.3406
454	SLV 16	-5.54	-1.06	29.44	-0.3595	9.8663	0.33
454	CRTFP Ux+	0	0	0	0	0	0
454	CRTFP Ux-	0	0	0	0	0	0
458	SLU 1	-0.3	-0.4	51.43	-0.0068	-0.1483	-0.0049
458	SLU 2	-0.3	-0.31	51.4	-0.0067	-0.1481	-0.0046
458	SLU 3	-0.31	-0.4	52.44	-0.0068	-0.1514	-0.0051
458	SLU 4	-0.31	-0.34	52.41	-0.0068	-0.1513	-0.0049
458	SLU 5	-0.31	-0.31	51.97	-0.0069	-0.1497	-0.0046
458	SLU 6	-0.32	-0.4	53.01	-0.0071	-0.1531	-0.0051
458	SLU 7	-0.31	-0.35	52.98	-0.007	-0.1529	-0.0049
458	SLU 8	-0.31	-0.42	52.58	-0.0073	-0.1516	-0.0048
458	SLU 9	-0.31	-0.36	52.55	-0.0072	-0.1515	-0.0047
458	SLU 10	-0.29	-0.31	58.37	-0.0062	-0.1746	-0.0057
458	SLU 11	-0.3	-0.4	59.41	-0.0064	-0.1779	-0.0061
458	SLU 12	-0.3	-0.34	59.39	-0.0063	-0.1778	-0.006
458	SLU 13	-0.3	-0.32	58.94	-0.0064	-0.1762	-0.0056
458	SLU 14	-0.31	-0.41	59.98	-0.0066	-0.1796	-0.0061
458	SLU 15	-0.31	-0.35	59.96	-0.0065	-0.1794	-0.006
458	SLU 16	-0.3	-0.42	59.55	-0.0068	-0.1781	-0.0059
458	SLU 17	-0.3	-0.36	59.53	-0.0067	-0.178	-0.0057
458	SLU 18	-0.29	-0.41	61.4	-0.0062	-0.1862	-0.0064
458	SLU 19	-0.29	-0.35	61.37	-0.0061	-0.186	-0.0062
458	SLU 20	-0.3	-0.41	61.97	-0.0064	-0.1878	-0.0063
458	SLU 21	-0.3	-0.36	61.94	-0.0063	-0.1877	-0.0062
458	SLU 22	-0.34	-0.37	57.86	-0.006	-0.167	-0.0064
458	SLU 23	-0.34	-0.28	57.82	-0.0059	-0.1667	-0.0062
458	SLU 24	-0.34	-0.36	58.86	-0.0061	-0.1701	-0.0067
458	SLU 25	-0.34	-0.31	58.84	-0.006	-0.1699	-0.0065
458	SLU 26	-0.34	-0.28	58.39	-0.0061	-0.1684	-0.0062
458	SLU 27	-0.35	-0.37	59.43	-0.0063	-0.1717	-0.0066
458	SLU 28	-0.35	-0.31	59.41	-0.0062	-0.1716	-0.0065
458	SLU 29	-0.34	-0.38	59	-0.0065	-0.1703	-0.0064
458	SLU 30	-0.34	-0.33	58.98	-0.0064	-0.1701	-0.0062
458	SLU 31	-0.33	-0.28	64.79	-0.0054	-0.1933	-0.0072
458	SLU 32	-0.34	-0.37	65.83	-0.0056	-0.1966	-0.0077
458	SLU 33	-0.33	-0.31	65.81	-0.0055	-0.1965	-0.0076
458	SLU 34	-0.33	-0.29	65.36	-0.0057	-0.1949	-0.0072
458	SLU 35	-0.34	-0.37	66.4	-0.0058	-0.1983	-0.0077
458	SLU 36	-0.34	-0.32	66.38	-0.0058	-0.1981	-0.0075
458	SLU 37	-0.34	-0.39	65.97	-0.006	-0.1968	-0.0075
458	SLU 38	-0.34	-0.33	65.95	-0.0059	-0.1966	-0.0073
458	SLU 39	-0.33	-0.38	67.82	-0.0054	-0.2049	-0.008
458	SLU 40	-0.32	-0.32	67.8	-0.0053	-0.2047	-0.0078
458	SLU 41	-0.33	-0.38	68.39	-0.0056	-0.2065	-0.0079
458	SLU 42	-0.33	-0.33	68.37	-0.0055	-0.2064	-0.0078
458	SLU 43	-0.39	-0.53	64.66	-0.0091	-0.1864	-0.0058
458	SLU 44	-0.38	-0.44	64.62	-0.009	-0.1862	-0.0055
458	SLU 45	-0.39	-0.53	65.66	-0.0092	-0.1895	-0.006
458	SLU 46	-0.39	-0.47	65.64	-0.0091	-0.1894	-0.0058
458	SLU 47	-0.39	-0.45	65.2	-0.0092	-0.1878	-0.0055
458	SLU 48	-0.4	-0.53	66.24	-0.0094	-0.1912	-0.006
458	SLU 49	-0.39	-0.48	66.21	-0.0093	-0.191	-0.0058
458	SLU 50	-0.39	-0.55	65.8	-0.0096	-0.1897	-0.0057
458	SLU 51	-0.39	-0.49	65.78	-0.0095	-0.1895	-0.0056
458	SLU 52	-0.38	-0.44	71.6	-0.0085	-0.2127	-0.0066
458	SLU 53	-0.38	-0.53	72.64	-0.0087	-0.216	-0.007
458	SLU 54	-0.38	-0.47	72.61	-0.0086	-0.2159	-0.0069
458	SLU 55	-0.38	-0.45	72.17	-0.0088	-0.2143	-0.0065
458	SLU 56	-0.39	-0.54	73.21	-0.0089	-0.2177	-0.007
458	SLU 57	-0.39	-0.48	73.19	-0.0088	-0.2175	-0.0069
458	SLU 58	-0.39	-0.55	72.78	-0.0091	-0.2162	-0.0068
458	SLU 59	-0.38	-0.49	72.75	-0.009	-0.2161	-0.0066
458	SLU 60	-0.37	-0.54	74.62	-0.0085	-0.2243	-0.0073
458	SLU 61	-0.37	-0.48	74.6	-0.0084	-0.2241	-0.0071

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
458	SLU 62	-0.38	-0.54	75.19	-0.0087	-0.2259	-0.0072
458	SLU 63	-0.38	-0.49	75.17	-0.0086	-0.2258	-0.0071
458	SLU 64	-0.42	-0.5	71.08	-0.0083	-0.2051	-0.0074
458	SLU 65	-0.42	-0.41	71.05	-0.0082	-0.2048	-0.0071
458	SLU 66	-0.42	-0.5	72.09	-0.0084	-0.2082	-0.0076
458	SLU 67	-0.42	-0.44	72.06	-0.0083	-0.208	-0.0074
458	SLU 68	-0.42	-0.42	71.62	-0.0084	-0.2065	-0.0071
458	SLU 69	-0.43	-0.5	72.66	-0.0086	-0.2098	-0.0076
458	SLU 70	-0.43	-0.45	72.64	-0.0085	-0.2097	-0.0074
458	SLU 71	-0.43	-0.52	72.23	-0.0088	-0.2084	-0.0073
458	SLU 72	-0.42	-0.46	72.21	-0.0087	-0.2082	-0.0072
458	SLU 73	-0.41	-0.41	78.02	-0.0077	-0.2313	-0.0082
458	SLU 74	-0.42	-0.5	79.06	-0.0079	-0.2347	-0.0086
458	SLU 75	-0.41	-0.44	79.04	-0.0078	-0.2346	-0.0085
458	SLU 76	-0.41	-0.42	78.59	-0.008	-0.233	-0.0081
458	SLU 77	-0.42	-0.51	79.63	-0.0081	-0.2363	-0.0086
458	SLU 78	-0.42	-0.45	79.61	-0.0081	-0.2362	-0.0085
458	SLU 79	-0.42	-0.52	79.2	-0.0083	-0.2349	-0.0084
458	SLU 80	-0.42	-0.46	79.18	-0.0083	-0.2347	-0.0082
458	SLU 81	-0.41	-0.51	81.05	-0.0077	-0.243	-0.0089
458	SLU 82	-0.4	-0.45	81.02	-0.0076	-0.2428	-0.0087
458	SLU 83	-0.41	-0.51	81.62	-0.0079	-0.2446	-0.0088
458	SLU 84	-0.41	-0.46	81.59	-0.0078	-0.2445	-0.0087
458	SLE RA 1	-0.31	-0.39	53.27	-0.0066	-0.1536	-0.0053
458	SLE RA 2	-0.31	-0.33	53.24	-0.0065	-0.1535	-0.0051
458	SLE RA 3	-0.32	-0.39	53.94	-0.0066	-0.1557	-0.0055
458	SLE RA 4	-0.32	-0.35	53.92	-0.0066	-0.1556	-0.0054
458	SLE RA 5	-0.32	-0.34	53.62	-0.0066	-0.1546	-0.0051
458	SLE RA 6	-0.32	-0.39	54.32	-0.0068	-0.1568	-0.0054
458	SLE RA 7	-0.32	-0.36	54.3	-0.0067	-0.1567	-0.0053
458	SLE RA 8	-0.32	-0.4	54.03	-0.0069	-0.1558	-0.0053
458	SLE RA 9	-0.32	-0.36	54.02	-0.0068	-0.1557	-0.0052
458	SLE RA 10	-0.31	-0.33	57.89	-0.0062	-0.1712	-0.0058
458	SLE RA 11	-0.31	-0.39	58.59	-0.0063	-0.1734	-0.0062
458	SLE RA 12	-0.31	-0.35	58.57	-0.0063	-0.1733	-0.0061
458	SLE RA 13	-0.31	-0.34	58.27	-0.0063	-0.1723	-0.0058
458	SLE RA 14	-0.32	-0.4	58.97	-0.0065	-0.1745	-0.0061
458	SLE RA 15	-0.31	-0.36	58.95	-0.0064	-0.1744	-0.006
458	SLE RA 16	-0.31	-0.4	58.68	-0.0066	-0.1735	-0.006
458	SLE RA 17	-0.31	-0.37	58.66	-0.0065	-0.1734	-0.0059
458	SLE RA 18	-0.31	-0.4	59.91	-0.0062	-0.1789	-0.0063
458	SLE RA 19	-0.31	-0.36	59.89	-0.0061	-0.1788	-0.0062
458	SLE RA 20	-0.31	-0.4	60.29	-0.0063	-0.18	-0.0063
458	SLE RA 21	-0.31	-0.36	60.28	-0.0063	-0.1799	-0.0062
458	SLE FR 1	-0.31	-0.39	53.27	-0.0066	-0.1536	-0.0053
458	SLE FR 2	-0.31	-0.38	53.26	-0.0066	-0.1536	-0.0053
458	SLE FR 3	-0.32	-0.4	53.42	-0.0066	-0.1541	-0.0053
458	SLE FR 4	-0.31	-0.38	55.26	-0.0064	-0.1612	-0.0056
458	SLE FR 5	-0.31	-0.4	55.41	-0.0065	-0.1617	-0.0056
458	SLE FR 6	-0.31	-0.39	56.59	-0.0064	-0.1663	-0.0058
458	SLE QP 1	-0.31	-0.39	53.27	-0.0066	-0.1536	-0.0053
458	SLE QP 2	-0.31	-0.39	55.26	-0.0065	-0.1612	-0.0056
458	SLD 1	4.36	0.4	58.61	-0.0095	-0.0759	0.0066
458	SLD 2	4.46	0.16	58.63	-0.0092	-0.0777	0.0112
458	SLD 3	4.47	-1.39	58.89	-0.0068	-0.0916	0.0083
458	SLD 4	4.57	-1.63	58.92	-0.0065	-0.0934	0.0128
458	SLD 5	0.91	2.6	55.84	-0.0115	-0.1116	-0.0052
458	SLD 6	0.98	2.44	55.85	-0.0113	-0.1128	-0.0022
458	SLD 7	1.27	-3.36	56.77	-0.0025	-0.1637	0.0002
458	SLD 8	1.33	-3.52	56.79	-0.0023	-0.1649	0.0032
458	SLD 9	-1.96	2.73	53.73	-0.0106	-0.1575	-0.0144
458	SLD 10	-1.89	2.57	53.75	-0.0104	-0.1587	-0.0115
458	SLD 11	-1.6	-3.23	54.67	-0.0016	-0.2097	-0.009
458	SLD 12	-1.53	-3.39	54.69	-0.0014	-0.2108	-0.006
458	SLD 13	-5.2	0.84	51.61	-0.0065	-0.2291	-0.0241
458	SLD 14	-5.09	0.6	51.63	-0.0062	-0.2309	-0.0195
458	SLD 15	-5.09	-0.94	51.89	-0.0038	-0.2447	-0.0224
458	SLD 16	-4.98	-1.19	51.91	-0.0035	-0.2465	-0.0178
458	SLV 1	10.61	1.41	63.11	-0.0134	0.0379	0.023
458	SLV 2	10.86	0.84	63.16	-0.0127	0.0337	0.0337
458	SLV 3	10.86	-2.66	63.75	-0.0073	0.0022	0.0268
458	SLV 4	11.11	-3.23	63.8	-0.0066	-0.0019	0.0375
458	SLV 5	2.54	6.43	56.63	-0.018	-0.0468	-0.0046
458	SLV 6	2.7	6.06	56.67	-0.0175	-0.0495	0.0022
458	SLV 7	3.38	-7.16	58.77	0.0025	-0.1655	0.0081
458	SLV 8	3.54	-7.52	58.81	0.0029	-0.1681	0.0149
458	SLV 9	-4.16	6.74	51.72	-0.0159	-0.1543	-0.0261
458	SLV 10	-4	6.37	51.75	-0.0154	-0.157	-0.0193
458	SLV 11	-3.32	-6.85	53.85	0.0046	-0.273	-0.0135
458	SLV 12	-3.17	-7.22	53.89	0.0051	-0.2756	-0.0066
458	SLV 13	-11.73	2.45	46.72	-0.0063	-0.3205	-0.0488
458	SLV 14	-11.49	1.87	46.78	-0.0057	-0.3247	-0.038
458	SLV 15	-11.48	-1.63	47.36	-0.0002	-0.3561	-0.0449
458	SLV 16	-11.24	-2.2	47.42	0.0005	-0.3603	-0.0342
458	CRTFP Ux+	0	0	0	0	0	0
458	CRTFP Ux-	0	0	0	0	0	0
462	SLU 1	0.38	-0.36	50.81	-0.0135	0.1136	-0.0061
462	SLU 2	0.38	-0.27	50.78	-0.0133	0.1133	-0.0063
462	SLU 3	0.39	-0.36	51.78	-0.0137	0.1156	-0.0062
462	SLU 4	0.39	-0.31	51.76	-0.0136	0.1154	-0.0063
462	SLU 5	0.38	-0.28	51.34	-0.0137	0.1142	-0.0065

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
462	SLU 6	0.4	-0.37	52.34	-0.014	0.1165	-0.0064
462	SLU 7	0.4	-0.32	52.33	-0.014	0.1163	-0.0065
462	SLU 8	0.39	-0.38	51.93	-0.0141	0.1154	-0.0065
462	SLU 9	0.39	-0.33	51.92	-0.014	0.1152	-0.0066
462	SLU 10	0.41	-0.26	57.52	-0.0139	0.1331	-0.0066
462	SLU 11	0.43	-0.35	58.52	-0.0143	0.1354	-0.0065
462	SLU 12	0.43	-0.29	58.5	-0.0142	0.1352	-0.0066
462	SLU 13	0.42	-0.27	58.08	-0.0142	0.134	-0.0068
462	SLU 14	0.43	-0.36	59.08	-0.0146	0.1364	-0.0067
462	SLU 15	0.43	-0.3	59.06	-0.0145	0.1362	-0.0068
462	SLU 16	0.43	-0.37	58.67	-0.0147	0.1353	-0.0068
462	SLU 17	0.42	-0.32	58.66	-0.0146	0.1351	-0.0069
462	SLU 18	0.43	-0.34	60.43	-0.0143	0.1419	-0.0066
462	SLU 19	0.43	-0.29	60.41	-0.0142	0.1417	-0.0067
462	SLU 20	0.44	-0.35	61	-0.0146	0.1428	-0.0068
462	SLU 21	0.43	-0.3	60.98	-0.0145	0.1427	-0.0069
462	SLU 22	0.43	-0.33	57.07	-0.0137	0.1237	-0.0058
462	SLU 23	0.43	-0.24	57.04	-0.0136	0.1234	-0.0059
462	SLU 24	0.44	-0.33	58.04	-0.014	0.1257	-0.0059
462	SLU 25	0.44	-0.27	58.03	-0.0139	0.1255	-0.006
462	SLU 26	0.43	-0.25	57.61	-0.0139	0.1243	-0.0061
462	SLU 27	0.45	-0.34	58.61	-0.0143	0.1266	-0.006
462	SLU 28	0.45	-0.28	58.59	-0.0142	0.1264	-0.0062
462	SLU 29	0.44	-0.35	58.2	-0.0144	0.1255	-0.0061
462	SLU 30	0.44	-0.3	58.18	-0.0143	0.1253	-0.0063
462	SLU 31	0.46	-0.22	63.78	-0.0142	0.1432	-0.0063
462	SLU 32	0.48	-0.31	64.78	-0.0145	0.1455	-0.0062
462	SLU 33	0.47	-0.26	64.76	-0.0145	0.1453	-0.0063
462	SLU 34	0.47	-0.24	64.35	-0.0145	0.1441	-0.0065
462	SLU 35	0.48	-0.32	65.34	-0.0149	0.1465	-0.0064
462	SLU 36	0.48	-0.27	65.33	-0.0148	0.1463	-0.0065
462	SLU 37	0.48	-0.34	64.94	-0.0149	0.1454	-0.0065
462	SLU 38	0.47	-0.28	64.92	-0.0149	0.1452	-0.0066
462	SLU 39	0.48	-0.31	66.7	-0.0145	0.152	-0.0062
462	SLU 40	0.48	-0.25	66.68	-0.0145	0.1518	-0.0063
462	SLU 41	0.48	-0.32	67.26	-0.0149	0.1529	-0.0064
462	SLU 42	0.48	-0.27	67.24	-0.0148	0.1528	-0.0065
462	SLU 43	0.48	-0.48	63.9	-0.0174	0.1442	-0.0081
462	SLU 44	0.48	-0.39	63.87	-0.0173	0.1439	-0.0083
462	SLU 45	0.49	-0.48	64.87	-0.0177	0.1462	-0.0082
462	SLU 46	0.49	-0.43	64.85	-0.0176	0.146	-0.0083
462	SLU 47	0.48	-0.4	64.44	-0.0176	0.1448	-0.0085
462	SLU 48	0.5	-0.49	65.44	-0.018	0.1471	-0.0084
462	SLU 49	0.49	-0.44	65.42	-0.0179	0.1469	-0.0085
462	SLU 50	0.49	-0.5	65.03	-0.0181	0.146	-0.0085
462	SLU 51	0.49	-0.45	65.01	-0.018	0.1458	-0.0086
462	SLU 52	0.51	-0.38	70.61	-0.0179	0.1637	-0.0086
462	SLU 53	0.52	-0.47	71.61	-0.0182	0.166	-0.0085
462	SLU 54	0.52	-0.41	71.59	-0.0182	0.1658	-0.0086
462	SLU 55	0.52	-0.39	71.17	-0.0182	0.1646	-0.0088
462	SLU 56	0.53	-0.48	72.17	-0.0186	0.167	-0.0087
462	SLU 57	0.53	-0.42	72.16	-0.0185	0.1668	-0.0088
462	SLU 58	0.52	-0.49	71.77	-0.0186	0.1659	-0.0088
462	SLU 59	0.52	-0.44	71.75	-0.0186	0.1657	-0.0089
462	SLU 60	0.53	-0.46	73.53	-0.0182	0.1725	-0.0086
462	SLU 61	0.53	-0.41	73.51	-0.0182	0.1723	-0.0087
462	SLU 62	0.53	-0.47	74.09	-0.0186	0.1734	-0.0087
462	SLU 63	0.53	-0.42	74.07	-0.0185	0.1733	-0.0089
462	SLU 64	0.53	-0.45	70.16	-0.0177	0.1543	-0.0077
462	SLU 65	0.53	-0.36	70.14	-0.0175	0.154	-0.0079
462	SLU 66	0.54	-0.45	71.14	-0.0179	0.1563	-0.0078
462	SLU 67	0.54	-0.39	71.12	-0.0178	0.1561	-0.0079
462	SLU 68	0.53	-0.37	70.7	-0.0179	0.1549	-0.0081
462	SLU 69	0.55	-0.46	71.7	-0.0182	0.1572	-0.008
462	SLU 70	0.54	-0.4	71.68	-0.0182	0.157	-0.0081
462	SLU 71	0.54	-0.47	71.29	-0.0183	0.1561	-0.0081
462	SLU 72	0.54	-0.42	71.28	-0.0182	0.1559	-0.0082
462	SLU 73	0.56	-0.34	76.87	-0.0181	0.1738	-0.0082
462	SLU 74	0.57	-0.43	77.87	-0.0185	0.1761	-0.0081
462	SLU 75	0.57	-0.38	77.86	-0.0184	0.1759	-0.0083
462	SLU 76	0.57	-0.36	77.44	-0.0184	0.1747	-0.0084
462	SLU 77	0.58	-0.44	78.44	-0.0188	0.1771	-0.0083
462	SLU 78	0.58	-0.39	78.42	-0.0187	0.1769	-0.0084
462	SLU 79	0.57	-0.46	78.03	-0.0189	0.176	-0.0084
462	SLU 80	0.57	-0.4	78.01	-0.0188	0.1758	-0.0085
462	SLU 81	0.58	-0.43	79.79	-0.0185	0.1826	-0.0082
462	SLU 82	0.58	-0.37	79.77	-0.0184	0.1824	-0.0083
462	SLU 83	0.58	-0.44	80.35	-0.0188	0.1835	-0.0084
462	SLU 84	0.58	-0.39	80.34	-0.0187	0.1834	-0.0085
462	SLE RA 1	0.4	-0.35	52.6	-0.0135	0.1164	-0.006
462	SLE RA 2	0.39	-0.29	52.58	-0.0134	0.1162	-0.0061
462	SLE RA 3	0.4	-0.35	53.24	-0.0137	0.1178	-0.0061
462	SLE RA 4	0.4	-0.32	53.23	-0.0136	0.1177	-0.0062
462	SLE RA 5	0.4	-0.3	52.95	-0.0137	0.1169	-0.0063
462	SLE RA 6	0.41	-0.36	53.62	-0.0139	0.1184	-0.0062
462	SLE RA 7	0.41	-0.32	53.61	-0.0139	0.1183	-0.0063
462	SLE RA 8	0.4	-0.37	53.35	-0.014	0.1177	-0.0063
462	SLE RA 9	0.4	-0.33	53.34	-0.0139	0.1176	-0.0063
462	SLE RA 10	0.42	-0.28	57.07	-0.0138	0.1295	-0.0064
462	SLE RA 11	0.43	-0.34	57.74	-0.0141	0.131	-0.0063
462	SLE RA 12	0.43	-0.31	57.72	-0.014	0.1309	-0.0064

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
462	SLE RA 13	0.42	-0.29	57.45	-0.014	0.1301	-0.0065
462	SLE RA 14	0.43	-0.35	58.11	-0.0143	0.1316	-0.0064
462	SLE RA 15	0.43	-0.31	58.1	-0.0143	0.1315	-0.0065
462	SLE RA 16	0.43	-0.36	57.84	-0.0144	0.1309	-0.0065
462	SLE RA 17	0.42	-0.32	57.83	-0.0143	0.1308	-0.0066
462	SLE RA 18	0.43	-0.34	59.01	-0.0141	0.1353	-0.0063
462	SLE RA 19	0.43	-0.3	59	-0.014	0.1352	-0.0064
462	SLE RA 20	0.43	-0.35	59.39	-0.0143	0.136	-0.0065
462	SLE RA 21	0.43	-0.31	59.38	-0.0143	0.1358	-0.0065
462	SLE FR 1	0.4	-0.35	52.6	-0.0135	0.1164	-0.006
462	SLE FR 2	0.4	-0.34	52.59	-0.0135	0.1164	-0.006
462	SLE FR 3	0.4	-0.36	52.75	-0.0136	0.1167	-0.0061
462	SLE FR 4	0.41	-0.34	54.52	-0.0137	0.1221	-0.0061
462	SLE FR 5	0.41	-0.35	54.67	-0.0138	0.1224	-0.0062
462	SLE FR 6	0.41	-0.35	55.8	-0.0138	0.1259	-0.0062
462	SLE QP 1	0.4	-0.35	52.6	-0.0135	0.1164	-0.006
462	SLE QP 2	0.41	-0.35	54.52	-0.0137	0.1221	-0.0061
462	SLD 1	5.17	0.63	51.39	-0.0128	0.1377	0.0138
462	SLD 2	5.28	0.87	51.37	-0.013	0.1361	0.0184
462	SLD 3	5.06	-1.11	51.59	-0.0106	0.1537	0.0122
462	SLD 4	5.16	-0.88	51.57	-0.0108	0.1521	0.0168
462	SLD 5	1.99	2.56	53.28	-0.0167	0.1028	0.0014
462	SLD 6	2.06	2.71	53.27	-0.0169	0.1018	0.0043
462	SLD 7	1.61	-3.27	53.95	-0.0094	0.1561	-0.0037
462	SLD 8	1.68	-3.12	53.93	-0.0095	0.1551	-0.0007
462	SLD 9	-0.87	2.42	55.11	-0.0179	0.0891	-0.0115
462	SLD 10	-0.8	2.58	55.09	-0.018	0.0881	-0.0085
462	SLD 11	-1.24	-3.41	55.77	-0.0105	0.1424	-0.0166
462	SLD 12	-1.17	-3.25	55.76	-0.0107	0.1415	-0.0136
462	SLD 13	-4.35	0.18	57.47	-0.0166	0.0921	-0.0291
462	SLD 14	-4.24	0.42	57.45	-0.0168	0.0906	-0.0245
462	SLD 15	-4.46	-1.57	57.67	-0.0144	0.1081	-0.0306
462	SLD 16	-4.36	-1.33	57.65	-0.0146	0.1066	-0.026
462	SLV 1	11.55	1.9	47.2	-0.0115	0.1588	0.0404
462	SLV 2	11.8	2.44	47.15	-0.012	0.1552	0.0511
462	SLV 3	11.28	-2.09	47.66	-0.0064	0.1951	0.0369
462	SLV 4	11.54	-1.54	47.6	-0.007	0.1916	0.0476
462	SLV 5	4.1	6.27	51.64	-0.0205	0.0786	0.0113
462	SLV 6	4.26	6.62	51.61	-0.0209	0.0763	0.0182
462	SLV 7	3.23	-7	53.16	-0.0038	0.1998	-0.0003
462	SLV 8	3.39	-6.65	53.13	-0.0042	0.1975	0.0065
462	SLV 9	-2.58	5.96	55.91	-0.0232	0.0467	-0.0187
462	SLV 10	-2.42	6.31	55.88	-0.0236	0.0445	-0.0119
462	SLV 11	-3.45	-7.32	57.43	-0.0065	0.1679	-0.0304
462	SLV 12	-3.29	-6.97	57.4	-0.0068	0.1656	-0.0236
462	SLV 13	-10.72	0.84	61.44	-0.0204	0.0526	-0.0598
462	SLV 14	-10.47	1.39	61.38	-0.021	0.0491	-0.0491
462	SLV 15	-10.98	-3.14	61.89	-0.0154	0.089	-0.0633
462	SLV 16	-10.73	-2.59	61.84	-0.0159	0.0854	-0.0526
462	CRTFP Ux+	0	0	0	0	0	0
462	CRTFP Ux-	0	0	0	0	0	0
463	SLU 1	0.37	0.47	31.63	0.0263	9.4298	-0.1673
463	SLU 2	0.36	0.56	31.62	0.0264	9.425	-0.1966
463	SLU 3	0.38	0.49	32.24	0.0268	9.608	-0.1726
463	SLU 4	0.37	0.54	32.24	0.0269	9.6052	-0.1902
463	SLU 5	0.37	0.56	31.97	0.0267	9.5274	-0.1981
463	SLU 6	0.38	0.49	32.6	0.0271	9.7104	-0.1742
463	SLU 7	0.38	0.54	32.59	0.0272	9.7076	-0.1917
463	SLU 8	0.38	0.48	32.34	0.0268	9.6346	-0.1704
463	SLU 9	0.37	0.53	32.33	0.0269	9.6317	-0.188
463	SLU 10	0.38	0.66	35.62	0.0304	10.6063	-0.2321
463	SLU 11	0.4	0.59	36.25	0.0309	10.7893	-0.2082
463	SLU 12	0.4	0.64	36.24	0.0309	10.7864	-0.2257
463	SLU 13	0.39	0.66	35.98	0.0307	10.7087	-0.2337
463	SLU 14	0.4	0.59	36.6	0.0311	10.8917	-0.2097
463	SLU 15	0.4	0.64	36.59	0.0312	10.8888	-0.2273
463	SLU 16	0.4	0.58	36.34	0.0309	10.8158	-0.206
463	SLU 17	0.4	0.63	36.33	0.0309	10.813	-0.2235
463	SLU 18	0.4	0.62	37.35	0.032	11.1173	-0.2181
463	SLU 19	0.4	0.67	37.34	0.0321	11.1144	-0.2357
463	SLU 20	0.4	0.62	37.71	0.0323	11.2197	-0.2197
463	SLU 21	0.4	0.67	37.7	0.0324	11.2168	-0.2372
463	SLU 22	0.4	0.56	35.47	0.0302	10.561	-0.1977
463	SLU 23	0.4	0.64	35.46	0.0303	10.5563	-0.2269
463	SLU 24	0.41	0.58	36.09	0.0307	10.7393	-0.203
463	SLU 25	0.41	0.63	36.08	0.0308	10.7364	-0.2205
463	SLU 26	0.4	0.65	35.81	0.0306	10.6587	-0.2285
463	SLU 27	0.42	0.58	36.44	0.031	10.8417	-0.2045
463	SLU 28	0.42	0.63	36.43	0.0311	10.8388	-0.2221
463	SLU 29	0.41	0.57	36.18	0.0308	10.7658	-0.2008
463	SLU 30	0.41	0.62	36.17	0.0308	10.763	-0.2183
463	SLU 31	0.42	0.75	39.46	0.0344	11.7375	-0.2624
463	SLU 32	0.44	0.68	40.09	0.0348	11.9205	-0.2385
463	SLU 33	0.43	0.73	40.08	0.0349	11.9177	-0.2561
463	SLU 34	0.43	0.75	39.82	0.0346	11.8399	-0.264
463	SLU 35	0.44	0.68	40.44	0.0351	12.0229	-0.2401
463	SLU 36	0.44	0.73	40.44	0.0351	12.0201	-0.2576
463	SLU 37	0.44	0.67	40.18	0.0348	11.9471	-0.2363
463	SLU 38	0.43	0.72	40.18	0.0349	11.9442	-0.2539
463	SLU 39	0.44	0.71	41.19	0.0359	12.2485	-0.2484
463	SLU 40	0.43	0.76	41.19	0.036	12.2457	-0.266

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
463	SLU 41	0.44	0.71	41.55	0.0362	12.3509	-0.25
463	SLU 42	0.44	0.76	41.54	0.0363	12.3481	-0.2675
463	SLU 43	0.46	0.59	39.8	0.0328	11.8709	-0.2071
463	SLU 44	0.46	0.67	39.79	0.0329	11.8661	-0.2364
463	SLU 45	0.47	0.6	40.42	0.0334	12.0491	-0.2124
463	SLU 46	0.47	0.65	40.41	0.0334	12.0463	-0.23
463	SLU 47	0.46	0.67	40.14	0.0332	11.9685	-0.2379
463	SLU 48	0.48	0.61	40.77	0.0336	12.1515	-0.214
463	SLU 49	0.48	0.66	40.76	0.0337	12.1487	-0.2315
463	SLU 50	0.47	0.6	40.51	0.0334	12.0757	-0.2102
463	SLU 51	0.47	0.65	40.5	0.0335	12.0728	-0.2278
463	SLU 52	0.48	0.77	43.79	0.037	13.0473	-0.2719
463	SLU 53	0.5	0.7	44.42	0.0374	13.2304	-0.248
463	SLU 54	0.49	0.75	44.41	0.0375	13.2275	-0.2655
463	SLU 55	0.49	0.78	44.15	0.0373	13.1497	-0.2735
463	SLU 56	0.5	0.71	44.77	0.0377	13.3328	-0.2495
463	SLU 57	0.5	0.76	44.77	0.0378	13.3299	-0.2671
463	SLU 58	0.5	0.7	44.51	0.0374	13.2569	-0.2458
463	SLU 59	0.49	0.75	44.51	0.0375	13.2541	-0.2633
463	SLU 60	0.5	0.73	45.52	0.0386	13.5584	-0.2579
463	SLU 61	0.49	0.78	45.52	0.0386	13.5555	-0.2754
463	SLU 62	0.5	0.74	45.88	0.0388	13.6608	-0.2595
463	SLU 63	0.5	0.79	45.87	0.0389	13.6579	-0.277
463	SLU 64	0.5	0.67	43.65	0.0367	13.0021	-0.2375
463	SLU 65	0.5	0.76	43.63	0.0369	12.9974	-0.2667
463	SLU 66	0.51	0.69	44.26	0.0373	13.1804	-0.2428
463	SLU 67	0.51	0.74	44.25	0.0374	13.1775	-0.2603
463	SLU 68	0.5	0.76	43.99	0.0372	13.0998	-0.2683
463	SLU 69	0.52	0.69	44.61	0.0376	13.2828	-0.2443
463	SLU 70	0.51	0.74	44.6	0.0377	13.2799	-0.2619
463	SLU 71	0.51	0.68	44.35	0.0373	13.2069	-0.2406
463	SLU 72	0.51	0.73	44.34	0.0374	13.2041	-0.2581
463	SLU 73	0.52	0.86	47.64	0.0409	14.1786	-0.3022
463	SLU 74	0.53	0.79	48.26	0.0413	14.3616	-0.2783
463	SLU 75	0.53	0.84	48.25	0.0414	14.3588	-0.2958
463	SLU 76	0.52	0.86	47.99	0.0412	14.281	-0.3038
463	SLU 77	0.54	0.79	48.62	0.0416	14.464	-0.2799
463	SLU 78	0.54	0.84	48.61	0.0417	14.4612	-0.2974
463	SLU 79	0.53	0.78	48.36	0.0413	14.3882	-0.2761
463	SLU 80	0.53	0.83	48.35	0.0414	14.3853	-0.2937
463	SLU 81	0.53	0.82	49.37	0.0425	14.6896	-0.2882
463	SLU 82	0.53	0.87	49.36	0.0426	14.6868	-0.3058
463	SLU 83	0.54	0.82	49.72	0.0428	14.792	-0.2898
463	SLU 84	0.54	0.87	49.71	0.0428	14.7892	-0.3073
463	SLE RA 1	0.38	0.5	32.73	0.0274	9.753	-0.176
463	SLE RA 2	0.37	0.55	32.72	0.0275	9.7498	-0.1955
463	SLE RA 3	0.38	0.51	33.14	0.0278	9.8718	-0.1795
463	SLE RA 4	0.38	0.54	33.13	0.0278	9.8699	-0.1912
463	SLE RA 5	0.38	0.56	32.96	0.0277	9.8181	-0.1965
463	SLE RA 6	0.39	0.51	33.37	0.0279	9.9401	-0.1806
463	SLE RA 7	0.39	0.54	33.37	0.028	9.9382	-0.1923
463	SLE RA 8	0.38	0.5	33.2	0.0278	9.8895	-0.1781
463	SLE RA 9	0.38	0.54	33.2	0.0278	9.8876	-0.1898
463	SLE RA 10	0.39	0.62	35.39	0.0302	10.5373	-0.2192
463	SLE RA 11	0.4	0.58	35.81	0.0304	10.6593	-0.2032
463	SLE RA 12	0.4	0.61	35.8	0.0305	10.6574	-0.2149
463	SLE RA 13	0.39	0.62	35.63	0.0304	10.6056	-0.2202
463	SLE RA 14	0.4	0.58	36.04	0.0306	10.7276	-0.2043
463	SLE RA 15	0.4	0.61	36.04	0.0307	10.7257	-0.216
463	SLE RA 16	0.4	0.57	35.87	0.0304	10.677	-0.2018
463	SLE RA 17	0.4	0.61	35.86	0.0305	10.6751	-0.2135
463	SLE RA 18	0.4	0.59	36.54	0.0312	10.878	-0.2098
463	SLE RA 19	0.4	0.63	36.54	0.0313	10.8761	-0.2215
463	SLE RA 20	0.4	0.6	36.78	0.0314	10.9463	-0.2109
463	SLE RA 21	0.4	0.63	36.77	0.0315	10.9444	-0.2226
463	SLE FR 1	0.38	0.5	32.73	0.0274	9.753	-0.176
463	SLE FR 2	0.38	0.51	32.73	0.0274	9.7524	-0.1799
463	SLE FR 3	0.38	0.5	32.82	0.0275	9.7803	-0.1764
463	SLE FR 4	0.38	0.54	33.87	0.0286	10.0899	-0.19
463	SLE FR 5	0.39	0.53	33.97	0.0286	10.1178	-0.1866
463	SLE FR 6	0.39	0.55	34.64	0.0293	10.3155	-0.1929
463	SLE QP 1	0.38	0.5	32.73	0.0274	9.753	-0.176
463	SLE QP 2	0.38	0.53	33.87	0.0285	10.0905	-0.1861
463	SLD 1	3.42	0.92	27.63	0.0228	8.3187	-0.3235
463	SLD 2	3.49	1.31	27.64	0.0226	8.3192	-0.4573
463	SLD 3	3.34	-0.57	27.48	0.0238	8.2714	0.1978
463	SLD 4	3.41	-0.18	27.49	0.0236	8.2719	0.0639
463	SLD 5	1.41	2.84	32.22	0.0253	9.6306	-0.9945
463	SLD 6	1.46	3.09	32.23	0.0252	9.631	-1.0814
463	SLD 7	1.13	-2.13	31.73	0.0287	9.4729	0.7429
463	SLD 8	1.17	-1.88	31.74	0.0286	9.4733	0.656
463	SLD 9	-0.4	2.93	36.01	0.0285	10.7077	-1.0283
463	SLD 10	-0.36	3.18	36.02	0.0284	10.7081	-1.1152
463	SLD 11	-0.69	-2.03	35.52	0.0319	10.55	0.7091
463	SLD 12	-0.65	-1.78	35.52	0.0317	10.5504	0.6222
463	SLD 13	-2.64	1.24	40.25	0.0334	11.9091	-0.4362
463	SLD 14	-2.57	1.62	40.26	0.0332	11.9096	-0.57
463	SLD 15	-2.73	-0.25	40.11	0.0345	11.8618	0.085
463	SLD 16	-2.65	0.13	40.12	0.0342	11.8623	-0.0488
463	SLV 1	7.49	1.4	19.27	0.0152	5.9446	-0.4912
463	SLV 2	7.66	2.3	19.29	0.0147	5.9457	-0.803

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
463	SLV 3	7.29	-1.98	18.92	0.0175	5.8343	0.6944
463	SLV 4	7.45	-1.09	18.94	0.017	5.8355	0.3825
463	SLV 5	2.79	5.77	30.01	0.0211	9.0138	-2.0229
463	SLV 6	2.9	6.35	30.02	0.0208	9.0145	-2.2221
463	SLV 7	2.12	-5.51	28.86	0.0288	8.6462	1.9289
463	SLV 8	2.23	-4.94	28.88	0.0285	8.6469	1.7297
463	SLV 9	-1.46	6	38.87	0.0286	11.5341	-2.102
463	SLV 10	-1.36	6.57	38.89	0.0283	11.5348	-2.3012
463	SLV 11	-2.13	-5.29	37.72	0.0362	11.1665	1.8498
463	SLV 12	-2.02	-4.72	37.74	0.0359	11.1672	1.6506
463	SLV 13	-6.69	2.14	48.8	0.0401	14.3456	-0.7548
463	SLV 14	-6.52	3.04	48.83	0.0396	14.3467	-1.0667
463	SLV 15	-6.89	-1.24	48.46	0.0424	14.2353	0.4307
463	SLV 16	-6.72	-0.35	48.48	0.0419	14.2365	0.1189
463	CRTFP Ux+	0	0	0	0	0	0
463	CRTFP Ux-	0	0	0	0	0	0
471	SLU 1	-0.18	-0.07	25.91	0.0188	-5.3007	-0.0186
471	SLU 2	-0.18	0	25.89	0.019	-5.297	0.0004
471	SLU 3	-0.19	-0.07	26.41	0.0192	-5.401	-0.0172
471	SLU 4	-0.18	-0.02	26.4	0.0193	-5.3988	-0.0058
471	SLU 5	-0.18	0.01	26.18	0.0192	-5.3545	0.0013
471	SLU 6	-0.19	-0.06	26.7	0.0194	-5.4585	-0.0163
471	SLU 7	-0.19	-0.02	26.69	0.0195	-5.4563	-0.0049
471	SLU 8	-0.19	-0.06	26.49	0.0192	-5.4157	-0.0167
471	SLU 9	-0.18	-0.02	26.48	0.0193	-5.4135	-0.0053
471	SLU 10	-0.17	0.02	29.21	0.0221	-5.9697	0.0037
471	SLU 11	-0.18	-0.05	29.73	0.0223	-6.0737	-0.0139
471	SLU 12	-0.18	-0.01	29.72	0.0224	-6.0715	-0.0025
471	SLU 13	-0.17	0.02	29.5	0.0223	-6.0273	0.0047
471	SLU 14	-0.18	-0.05	30.02	0.0225	-6.1312	-0.013
471	SLU 15	-0.18	0	30.01	0.0226	-6.129	-0.0015
471	SLU 16	-0.18	-0.05	29.81	0.0223	-6.0885	-0.0134
471	SLU 17	-0.18	-0.01	29.8	0.0224	-6.0863	-0.002
471	SLU 18	-0.17	-0.05	30.65	0.0233	-6.2617	-0.0139
471	SLU 19	-0.17	-0.01	30.64	0.0234	-6.2595	-0.0024
471	SLU 20	-0.18	-0.05	30.94	0.0235	-6.3192	-0.0129
471	SLU 21	-0.17	0	30.93	0.0236	-6.317	-0.0015
471	SLU 22	-0.2	-0.06	29.09	0.0219	-5.9435	-0.0148
471	SLU 23	-0.19	0.02	29.08	0.022	-5.9399	0.0042
471	SLU 24	-0.2	-0.05	29.6	0.0223	-6.0438	-0.0134
471	SLU 25	-0.2	0	29.59	0.0224	-6.0416	-0.002
471	SLU 26	-0.2	0.02	29.37	0.0222	-5.9974	0.0052
471	SLU 27	-0.21	-0.05	29.89	0.0225	-6.1014	-0.0125
471	SLU 28	-0.2	0	29.88	0.0226	-6.0992	-0.0011
471	SLU 29	-0.21	-0.05	29.67	0.0223	-6.0586	-0.0129
471	SLU 30	-0.2	0	29.66	0.0223	-6.0564	-0.0015
471	SLU 31	-0.19	0.03	32.39	0.0251	-6.6126	0.0076
471	SLU 32	-0.2	-0.04	32.92	0.0254	-6.7166	-0.0101
471	SLU 33	-0.19	0.01	32.91	0.0255	-6.7144	0.0013
471	SLU 34	-0.19	0.04	32.69	0.0253	-6.6701	0.0085
471	SLU 35	-0.2	-0.03	33.21	0.0256	-6.7741	-0.0091
471	SLU 36	-0.2	0.01	33.2	0.0257	-6.7719	0.0023
471	SLU 37	-0.2	-0.03	32.99	0.0254	-6.7313	-0.0096
471	SLU 38	-0.2	0.01	32.98	0.0255	-6.7291	0.0018
471	SLU 39	-0.19	-0.04	33.83	0.0263	-6.9046	-0.01
471	SLU 40	-0.19	0.01	33.82	0.0264	-6.9024	0.0014
471	SLU 41	-0.19	-0.03	34.12	0.0265	-6.9621	-0.0091
471	SLU 42	-0.19	0.01	34.11	0.0266	-6.9599	0.0023
471	SLU 43	-0.23	-0.1	32.59	0.0234	-6.6705	-0.0255
471	SLU 44	-0.23	-0.02	32.57	0.0236	-6.6668	-0.0065
471	SLU 45	-0.24	-0.09	33.09	0.0238	-6.7708	-0.0241
471	SLU 46	-0.23	-0.05	33.08	0.0239	-6.7686	-0.0127
471	SLU 47	-0.23	-0.02	32.86	0.0238	-6.7243	-0.0056
471	SLU 48	-0.24	-0.09	33.38	0.024	-6.8283	-0.0232
471	SLU 49	-0.23	-0.04	33.38	0.0241	-6.8261	-0.0118
471	SLU 50	-0.24	-0.09	33.17	0.0238	-6.7855	-0.0237
471	SLU 51	-0.23	-0.05	33.16	0.0239	-6.7833	-0.0122
471	SLU 52	-0.22	-0.01	35.89	0.0267	-7.3395	-0.0032
471	SLU 53	-0.23	-0.08	36.41	0.027	-7.4435	-0.0208
471	SLU 54	-0.23	-0.03	36.4	0.027	-7.4413	-0.0094
471	SLU 55	-0.22	-0.01	36.18	0.0269	-7.3971	-0.0022
471	SLU 56	-0.23	-0.08	36.7	0.0271	-7.501	-0.0199
471	SLU 57	-0.23	-0.03	36.69	0.0272	-7.4988	-0.0084
471	SLU 58	-0.23	-0.08	36.49	0.0269	-7.4583	-0.0203
471	SLU 59	-0.23	-0.03	36.48	0.027	-7.4561	-0.0089
471	SLU 60	-0.22	-0.08	37.33	0.0279	-7.6315	-0.0208
471	SLU 61	-0.22	-0.03	37.32	0.028	-7.6293	-0.0094
471	SLU 62	-0.23	-0.08	37.62	0.0281	-7.689	-0.0198
471	SLU 63	-0.22	-0.03	37.61	0.0282	-7.6868	-0.0084
471	SLU 64	-0.25	-0.08	35.77	0.0265	-7.3133	-0.0217
471	SLU 65	-0.24	-0.01	35.76	0.0266	-7.3097	-0.0027
471	SLU 66	-0.25	-0.08	36.28	0.0269	-7.4136	-0.0203
471	SLU 67	-0.25	-0.03	36.27	0.027	-7.4114	-0.0089
471	SLU 68	-0.25	0	36.05	0.0268	-7.3672	-0.0017
471	SLU 69	-0.26	-0.07	36.57	0.0271	-7.4712	-0.0194
471	SLU 70	-0.25	-0.03	36.56	0.0272	-7.469	-0.008
471	SLU 71	-0.25	-0.08	36.35	0.0269	-7.4284	-0.0198
471	SLU 72	-0.25	-0.03	36.35	0.0269	-7.4262	-0.0084
471	SLU 73	-0.24	0.01	39.08	0.0297	-7.9824	0.0007
471	SLU 74	-0.25	-0.06	39.6	0.03	-8.0864	-0.017
471	SLU 75	-0.24	-0.02	39.59	0.0301	-8.0842	-0.0056

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
471	SLU 76	-0.24	0.01	39.37	0.0299	-8.0399	0.0016
471	SLU 77	-0.25	-0.06	39.89	0.0302	-8.1439	-0.016
471	SLU 78	-0.25	-0.01	39.88	0.0303	-8.1417	-0.0046
471	SLU 79	-0.25	-0.06	39.67	0.03	-8.1011	-0.0165
471	SLU 80	-0.24	-0.02	39.66	0.0301	-8.0989	-0.0051
471	SLU 81	-0.24	-0.06	40.51	0.0309	-8.2744	-0.0169
471	SLU 82	-0.24	-0.02	40.5	0.031	-8.2722	-0.0055
471	SLU 83	-0.24	-0.06	40.8	0.0311	-8.3319	-0.016
471	SLU 84	-0.24	-0.01	40.8	0.0312	-8.3297	-0.0046
471	SLE RA 1	-0.19	-0.07	26.82	0.0197	-5.4843	-0.0175
471	SLE RA 2	-0.18	-0.02	26.81	0.0198	-5.4819	-0.0049
471	SLE RA 3	-0.19	-0.06	27.15	0.02	-5.5512	-0.0166
471	SLE RA 4	-0.19	-0.03	27.15	0.02	-5.5498	-0.009
471	SLE RA 5	-0.19	-0.01	27	0.0199	-5.5203	-0.0042
471	SLE RA 6	-0.19	-0.06	27.35	0.0201	-5.5896	-0.016
471	SLE RA 7	-0.19	-0.03	27.34	0.0202	-5.5881	-0.0084
471	SLE RA 8	-0.19	-0.06	27.21	0.0199	-5.5611	-0.0163
471	SLE RA 9	-0.19	-0.03	27.2	0.02	-5.5596	-0.0087
471	SLE RA 10	-0.18	-0.01	29.02	0.0219	-5.9304	-0.0026
471	SLE RA 11	-0.19	-0.05	29.37	0.022	-5.9997	-0.0144
471	SLE RA 12	-0.18	-0.02	29.36	0.0221	-5.9982	-0.0068
471	SLE RA 13	-0.18	-0.01	29.21	0.022	-5.9687	-0.002
471	SLE RA 14	-0.19	-0.05	29.56	0.0222	-6.0381	-0.0138
471	SLE RA 15	-0.19	-0.02	29.55	0.0222	-6.0366	-0.0062
471	SLE RA 16	-0.19	-0.05	29.42	0.022	-6.0095	-0.0141
471	SLE RA 17	-0.18	-0.02	29.41	0.0221	-6.0081	-0.0064
471	SLE RA 18	-0.18	-0.05	29.98	0.0227	-6.125	-0.0144
471	SLE RA 19	-0.18	-0.02	29.97	0.0227	-6.1236	-0.0068
471	SLE RA 20	-0.18	-0.05	30.17	0.0228	-6.1634	-0.0137
471	SLE RA 21	-0.18	-0.02	30.17	0.0229	-6.1619	-0.0061
471	SLE FR 1	-0.19	-0.07	26.82	0.0197	-5.4843	-0.0175
471	SLE FR 2	-0.19	-0.06	26.82	0.0197	-5.4839	-0.015
471	SLE FR 3	-0.19	-0.07	26.9	0.0197	-5.4997	-0.0173
471	SLE FR 4	-0.19	-0.05	27.76	0.0206	-5.6761	-0.0141
471	SLE FR 5	-0.19	-0.06	27.84	0.0206	-5.6919	-0.0163
471	SLE FR 6	-0.18	-0.06	28.4	0.0212	-5.8047	-0.016
471	SLE QP 1	-0.19	-0.07	26.82	0.0197	-5.4843	-0.0175
471	SLE QP 2	-0.19	-0.06	27.77	0.0206	-5.6766	-0.0166
471	SLD 1	2.19	0.89	33.29	0.0251	-6.7166	0.2228
471	SLD 2	2.23	0.57	33.29	0.0254	-6.7196	0.1431
471	SLD 3	2.24	-0.36	33.13	0.0264	-6.7618	-0.0917
471	SLD 4	2.29	-0.68	33.13	0.0267	-6.7648	-0.1714
471	SLD 5	0.44	2.19	29.67	0.02	-5.9195	0.5462
471	SLD 6	0.47	1.98	29.67	0.0202	-5.9215	0.4945
471	SLD 7	0.61	-2	29.13	0.0242	-6.0701	-0.5023
471	SLD 8	0.65	-2.21	29.13	0.0244	-6.0721	-0.554
471	SLD 9	-1.02	2.08	26.4	0.0168	-5.281	0.5208
471	SLD 10	-0.99	1.88	26.4	0.017	-5.283	0.4691
471	SLD 11	-0.84	-2.1	25.86	0.021	-5.4316	-0.5276
471	SLD 12	-0.81	-2.31	25.86	0.0212	-5.4336	-0.5794
471	SLD 13	-2.66	0.56	22.4	0.0145	-4.5883	0.1382
471	SLD 14	-2.61	0.24	22.4	0.0148	-4.5913	0.0585
471	SLD 15	-2.61	-0.7	22.24	0.0158	-4.6335	-0.1763
471	SLD 16	-2.56	-1.02	22.24	0.0161	-4.6365	-0.256
471	SLV 1	5.36	2.14	40.69	0.0312	-8.1108	0.5344
471	SLV 2	5.48	1.39	40.7	0.0319	-8.1179	0.3487
471	SLV 3	5.49	-0.73	40.32	0.0341	-8.2153	-0.183
471	SLV 4	5.6	-1.47	40.32	0.0348	-8.2224	-0.3687
471	SLV 5	1.27	5.07	32.21	0.0193	-6.2473	1.2682
471	SLV 6	1.34	4.59	32.22	0.0197	-6.2518	1.1496
471	SLV 7	1.68	-4.48	30.96	0.0289	-6.5954	-1.1231
471	SLV 8	1.76	-4.96	30.96	0.0293	-6.5999	-1.2418
471	SLV 9	-2.13	4.83	24.57	0.0118	-4.7532	1.2086
471	SLV 10	-2.06	4.36	24.57	0.0123	-4.7577	1.09
471	SLV 11	-1.71	-4.72	23.32	0.0214	-5.1013	-1.1828
471	SLV 12	-1.64	-5.2	23.32	0.0219	-5.1059	-1.3014
471	SLV 13	-5.97	1.35	15.21	0.0064	-3.1308	0.3356
471	SLV 14	-5.86	0.6	15.21	0.0071	-3.1378	0.1498
471	SLV 15	-5.85	-1.52	14.84	0.0093	-3.2352	-0.3819
471	SLV 16	-5.73	-2.26	14.84	0.0099	-3.2423	-0.5676
471	CRTFP Ux+	0	0	0	0	0	0
471	CRTFP Ux-	0	0	0	0	0	0
474	SLU 1	0.04	-0.11	25.35	-1.3046	8.794	0.0401
474	SLU 2	0.04	-0.06	25.35	-1.3047	8.7935	0.0252
474	SLU 3	0.05	-0.1	25.83	-1.329	8.9577	0.0381
474	SLU 4	0.05	-0.08	25.83	-1.329	8.9574	0.0291
474	SLU 5	0.04	-0.07	25.63	-1.3191	8.8912	0.0267
474	SLU 6	0.05	-0.1	26.11	-1.3435	9.0553	0.0395
474	SLU 7	0.05	-0.08	26.11	-1.3435	9.0551	0.0306
474	SLU 8	0.05	-0.12	25.91	-1.3336	8.9893	0.0431
474	SLU 9	0.05	-0.09	25.91	-1.3336	8.989	0.0342
474	SLU 10	0.05	-0.05	28.87	-1.4855	10.0156	0.0196
474	SLU 11	0.06	-0.08	29.35	-1.5098	10.1798	0.0325
474	SLU 12	0.06	-0.06	29.35	-1.5098	10.1795	0.0235
474	SLU 13	0.06	-0.05	29.15	-1.5	10.1133	0.0211
474	SLU 14	0.06	-0.09	29.63	-1.5243	10.2774	0.0339
474	SLU 15	0.06	-0.06	29.63	-1.5243	10.2771	0.025
474	SLU 16	0.06	-0.1	29.43	-1.5144	10.2114	0.0375
474	SLU 17	0.06	-0.07	29.43	-1.5144	10.2111	0.0286
474	SLU 18	0.06	-0.08	30.38	-1.5629	10.5398	0.0321
474	SLU 19	0.06	-0.06	30.38	-1.5629	10.5395	0.0232

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
474	SLU 20	0.06	-0.09	30.66	-1.5774	10.6375	0.0336
474	SLU 21	0.06	-0.06	30.66	-1.5774	10.6372	0.0247
474	SLU 22	0.05	-0.07	28.3	-1.4559	9.8107	0.0288
474	SLU 23	0.05	-0.03	28.3	-1.4559	9.8102	0.0139
474	SLU 24	0.05	-0.07	28.78	-1.4803	9.9743	0.0268
474	SLU 25	0.05	-0.04	28.78	-1.4803	9.9741	0.0178
474	SLU 26	0.05	-0.04	28.58	-1.4704	9.9078	0.0154
474	SLU 27	0.05	-0.07	29.06	-1.4947	10.072	0.0282
474	SLU 28	0.05	-0.05	29.06	-1.4948	10.0717	0.0193
474	SLU 29	0.05	-0.08	28.86	-1.4848	10.006	0.0318
474	SLU 30	0.05	-0.06	28.86	-1.4849	10.0057	0.0229
474	SLU 31	0.06	-0.01	31.82	-1.6368	11.0323	0.0083
474	SLU 32	0.06	-0.05	32.29	-1.6611	11.1964	0.0212
474	SLU 33	0.06	-0.02	32.29	-1.6611	11.1962	0.0122
474	SLU 34	0.06	-0.02	32.1	-1.6512	11.1299	0.0098
474	SLU 35	0.06	-0.05	32.57	-1.6756	11.2941	0.0227
474	SLU 36	0.06	-0.03	32.58	-1.6756	11.2938	0.0137
474	SLU 37	0.06	-0.06	32.38	-1.6656	11.228	0.0262
474	SLU 38	0.06	-0.04	32.38	-1.6657	11.2278	0.0173
474	SLU 39	0.06	-0.05	33.33	-1.7142	11.5565	0.0208
474	SLU 40	0.06	-0.02	33.33	-1.7142	11.5562	0.0119
474	SLU 41	0.07	-0.05	33.61	-1.7287	11.6541	0.0223
474	SLU 42	0.07	-0.03	33.61	-1.7287	11.6539	0.0134
474	SLU 43	0.06	-0.15	31.95	-1.6441	11.0836	0.0561
474	SLU 44	0.05	-0.11	31.95	-1.6442	11.0832	0.0411
474	SLU 45	0.06	-0.14	32.42	-1.6685	11.2473	0.054
474	SLU 46	0.06	-0.12	32.42	-1.6685	11.247	0.045
474	SLU 47	0.06	-0.11	32.23	-1.6587	11.1808	0.0426
474	SLU 48	0.06	-0.15	32.7	-1.683	11.345	0.0555
474	SLU 49	0.06	-0.12	32.7	-1.683	11.3447	0.0465
474	SLU 50	0.06	-0.16	32.51	-1.6731	11.2789	0.059
474	SLU 51	0.06	-0.13	32.51	-1.6731	11.2786	0.0501
474	SLU 52	0.07	-0.09	35.47	-1.825	12.3052	0.0355
474	SLU 53	0.07	-0.13	35.94	-1.8493	12.4694	0.0484
474	SLU 54	0.07	-0.1	35.94	-1.8494	12.4691	0.0394
474	SLU 55	0.07	-0.09	35.75	-1.8395	12.4029	0.037
474	SLU 56	0.07	-0.13	36.22	-1.8638	12.567	0.0499
474	SLU 57	0.07	-0.11	36.22	-1.8638	12.5668	0.0409
474	SLU 58	0.07	-0.14	36.03	-1.8539	12.501	0.0534
474	SLU 59	0.07	-0.12	36.03	-1.8539	12.5007	0.0445
474	SLU 60	0.07	-0.13	36.97	-1.9024	12.8295	0.0481
474	SLU 61	0.07	-0.1	36.97	-1.9025	12.8292	0.0391
474	SLU 62	0.07	-0.13	37.25	-1.9169	12.9271	0.0495
474	SLU 63	0.07	-0.1	37.26	-1.9169	12.9268	0.0406
474	SLU 64	0.06	-0.12	34.9	-1.7954	12.1003	0.0448
474	SLU 65	0.06	-0.08	34.9	-1.7955	12.0998	0.0298
474	SLU 66	0.06	-0.11	35.37	-1.8198	12.264	0.0427
474	SLU 67	0.06	-0.09	35.37	-1.8198	12.2637	0.0337
474	SLU 68	0.06	-0.08	35.18	-1.8099	12.1975	0.0313
474	SLU 69	0.06	-0.12	35.65	-1.8343	12.3616	0.0442
474	SLU 70	0.06	-0.09	35.65	-1.8343	12.3613	0.0352
474	SLU 71	0.06	-0.13	35.46	-1.8243	12.2956	0.0477
474	SLU 72	0.06	-0.1	35.46	-1.8244	12.2953	0.0388
474	SLU 73	0.07	-0.06	38.42	-1.9763	13.3219	0.0242
474	SLU 74	0.07	-0.09	38.89	-2.0006	13.4861	0.0371
474	SLU 75	0.07	-0.07	38.89	-2.0006	13.4858	0.0281
474	SLU 76	0.07	-0.06	38.7	-1.9907	13.4196	0.0257
474	SLU 77	0.07	-0.1	39.17	-2.0151	13.5837	0.0386
474	SLU 78	0.07	-0.07	39.17	-2.0151	13.5834	0.0296
474	SLU 79	0.07	-0.11	38.98	-2.0052	13.5177	0.0421
474	SLU 80	0.07	-0.08	38.98	-2.0052	13.5174	0.0332
474	SLU 81	0.08	-0.09	39.92	-2.0537	13.8461	0.0368
474	SLU 82	0.08	-0.07	39.92	-2.0537	13.8458	0.0278
474	SLU 83	0.08	-0.1	40.2	-2.0682	13.9438	0.0382
474	SLU 84	0.08	-0.07	40.2	-2.0682	13.9435	0.0293
474	SLE RA 1	0.05	-0.1	26.19	-1.3478	9.0845	0.0369
474	SLE RA 2	0.04	-0.07	26.2	-1.3479	9.0842	0.027
474	SLE RA 3	0.05	-0.09	26.51	-1.3641	9.1936	0.0355
474	SLE RA 4	0.05	-0.08	26.51	-1.3641	9.1934	0.0296
474	SLE RA 5	0.05	-0.07	26.38	-1.3575	9.1493	0.028
474	SLE RA 6	0.05	-0.1	26.7	-1.3737	9.2587	0.0365
474	SLE RA 7	0.05	-0.08	26.7	-1.3738	9.2585	0.0305
474	SLE RA 8	0.05	-0.1	26.57	-1.3671	9.2147	0.0389
474	SLE RA 9	0.05	-0.09	26.57	-1.3671	9.2145	0.0329
474	SLE RA 10	0.05	-0.06	28.54	-1.4684	9.8989	0.0232
474	SLE RA 11	0.05	-0.08	28.86	-1.4846	10.0083	0.0318
474	SLE RA 12	0.05	-0.06	28.86	-1.4846	10.0081	0.0258
474	SLE RA 13	0.05	-0.06	28.73	-1.4781	9.964	0.0242
474	SLE RA 14	0.06	-0.08	29.04	-1.4943	10.0734	0.0328
474	SLE RA 15	0.05	-0.07	29.04	-1.4943	10.0732	0.0268
474	SLE RA 16	0.05	-0.09	28.91	-1.4877	10.0294	0.0352
474	SLE RA 17	0.05	-0.07	28.91	-1.4877	10.0292	0.0292
474	SLE RA 18	0.06	-0.08	29.55	-1.52	10.2484	0.0316
474	SLE RA 19	0.06	-0.06	29.55	-1.52	10.2482	0.0256
474	SLE RA 20	0.06	-0.08	29.73	-1.5297	10.3135	0.0326
474	SLE RA 21	0.06	-0.07	29.73	-1.5297	10.3133	0.0266
474	SLE FR 1	0.05	-0.1	26.19	-1.3478	9.0845	0.0369
474	SLE FR 2	0.05	-0.09	26.19	-1.3478	9.0844	0.0349
474	SLE FR 3	0.05	-0.1	26.27	-1.3517	9.1105	0.0373
474	SLE FR 4	0.05	-0.09	27.2	-1.3995	9.4336	0.0333
474	SLE FR 5	0.05	-0.09	27.27	-1.4033	9.4597	0.0357

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
474	SLE FR 6	0.05	-0.09	27.87	-1.4339	9.6664	0.0342
474	SLE QP 1	0.05	-0.1	26.19	-1.3478	9.0845	0.0369
474	SLE QP 2	0.05	-0.09	27.2	-1.3995	9.4336	0.0353
474	SLD 1	2.22	0.29	27.26	-1.4031	9.4513	-0.0032
474	SLD 2	2.26	0.31	27.26	-1.403	9.4503	-0.0059
474	SLD 3	2.27	-0.61	27.35	-1.4066	9.4934	0.3131
474	SLD 4	2.31	-0.6	27.34	-1.4065	9.4923	0.3104
474	SLD 5	0.62	1.39	27.1	-1.3953	9.3753	-0.4555
474	SLD 6	0.65	1.4	27.09	-1.3952	9.3746	-0.4572
474	SLD 7	0.78	-1.62	27.37	-1.407	9.5156	0.5988
474	SLD 8	0.81	-1.61	27.37	-1.4069	9.5149	0.5971
474	SLD 9	-0.71	1.43	27.03	-1.3921	9.3524	-0.5265
474	SLD 10	-0.69	1.44	27.03	-1.392	9.3517	-0.5282
474	SLD 11	-0.55	-1.59	27.31	-1.4037	9.4926	0.5279
474	SLD 12	-0.52	-1.58	27.31	-1.4037	9.492	0.5261
474	SLD 13	-2.22	0.41	27.06	-1.3924	9.3749	-0.2398
474	SLD 14	-2.17	0.42	27.05	-1.3923	9.3739	-0.2425
474	SLD 15	-2.17	-0.49	27.14	-1.3959	9.417	0.0765
474	SLD 16	-2.12	-0.48	27.14	-1.3958	9.416	0.0738
474	SLV 1	5.13	0.78	27.35	-1.4082	9.4767	-0.0453
474	SLV 2	5.23	0.82	27.35	-1.408	9.4743	-0.0516
474	SLV 3	5.24	-1.27	27.54	-1.4163	9.5729	0.6752
474	SLV 4	5.34	-1.24	27.54	-1.416	9.5705	0.6689
474	SLV 5	1.38	3.29	26.96	-1.3899	9.3009	-1.0805
474	SLV 6	1.44	3.31	26.96	-1.3897	9.2994	-1.0846
474	SLV 7	1.77	-3.57	27.59	-1.4168	9.6218	1.3211
474	SLV 8	1.83	-3.55	27.59	-1.4167	9.6203	1.3171
474	SLV 9	-1.73	3.37	26.81	-1.3823	9.247	-1.2465
474	SLV 10	-1.67	3.39	26.81	-1.3821	9.2454	-1.2505
474	SLV 11	-1.35	-3.49	27.44	-1.4092	9.5679	1.1552
474	SLV 12	-1.28	-3.47	27.44	-1.4091	9.5663	1.1512
474	SLV 13	-5.25	1.05	26.86	-1.3829	9.2967	-0.5983
474	SLV 14	-5.15	1.09	26.86	-1.3827	9.2943	-0.6046
474	SLV 15	-5.13	-1	27.05	-1.391	9.393	0.1222
474	SLV 16	-5.03	-0.97	27.05	-1.3907	9.3906	0.1159
474	CRTFP Ux+	0	0	0	0	0	0
474	CRTFP Ux-	0	0	0	0	0	0
476	SLU 1	-0.2	-0.6	148.85	7.287	35.4268	0.0586
476	SLU 2	-0.2	-0.36	148.81	7.2817	35.4158	0.0009
476	SLU 3	-0.2	-0.55	151.69	7.4325	36.1156	0.0442
476	SLU 4	-0.2	-0.41	151.66	7.4293	36.109	0.0095
476	SLU 5	-0.2	-0.38	150.49	7.3579	35.8222	0.0048
476	SLU 6	-0.2	-0.57	153.37	7.5086	36.522	0.0481
476	SLU 7	-0.2	-0.42	153.34	7.5055	36.5154	0.0134
476	SLU 8	-0.2	-0.64	152.21	7.4393	36.2397	0.0665
476	SLU 9	-0.2	-0.49	152.19	7.4362	36.233	0.0318
476	SLU 10	-0.18	-0.33	169.92	8.3487	40.4233	-0.0298
476	SLU 11	-0.18	-0.53	172.8	8.4995	41.1232	0.0135
476	SLU 12	-0.18	-0.38	172.78	8.4963	41.1165	-0.0212
476	SLU 13	-0.18	-0.35	171.61	8.4249	40.8297	-0.0259
476	SLU 14	-0.18	-0.55	174.48	8.5756	41.5296	0.0174
476	SLU 15	-0.18	-0.4	174.46	8.5725	41.5229	-0.0173
476	SLU 16	-0.18	-0.62	173.33	8.5063	41.2472	0.0358
476	SLU 17	-0.18	-0.47	173.3	8.5032	41.2406	0.0011
476	SLU 18	-0.17	-0.57	179.02	8.8113	42.5805	0.0148
476	SLU 19	-0.17	-0.42	178.99	8.8081	42.5738	-0.0199
476	SLU 20	-0.17	-0.59	180.7	8.8874	42.9869	0.0187
476	SLU 21	-0.17	-0.44	180.67	8.8843	42.9802	-0.016
476	SLU 22	-0.23	-0.36	166.68	8.2381	39.731	-0.0174
476	SLU 23	-0.23	-0.11	166.63	8.2328	39.7199	-0.0752
476	SLU 24	-0.23	-0.3	169.51	8.3836	40.4197	-0.0319
476	SLU 25	-0.23	-0.16	169.49	8.3804	40.4131	-0.0666
476	SLU 26	-0.23	-0.13	168.32	8.309	40.1263	-0.0713
476	SLU 27	-0.23	-0.32	171.2	8.4598	40.8262	-0.028
476	SLU 28	-0.23	-0.18	171.17	8.4566	40.8195	-0.0626
476	SLU 29	-0.23	-0.39	170.04	8.3904	40.5438	-0.0096
476	SLU 30	-0.23	-0.25	170.01	8.3873	40.5372	-0.0443
476	SLU 31	-0.21	-0.09	187.75	9.2998	44.7275	-0.1059
476	SLU 32	-0.21	-0.28	190.63	9.4506	45.4273	-0.0626
476	SLU 33	-0.21	-0.13	190.6	9.4474	45.4207	-0.0973
476	SLU 34	-0.21	-0.1	189.43	9.376	45.1339	-0.102
476	SLU 35	-0.21	-0.3	192.31	9.5268	45.8337	-0.0587
476	SLU 36	-0.21	-0.15	192.28	9.5236	45.8271	-0.0933
476	SLU 37	-0.21	-0.37	191.16	9.4574	45.5513	-0.0403
476	SLU 38	-0.21	-0.22	191.13	9.4543	45.5447	-0.0749
476	SLU 39	-0.2	-0.32	196.85	9.7624	46.8846	-0.0613
476	SLU 40	-0.2	-0.17	196.82	9.7592	46.878	-0.0959
476	SLU 41	-0.2	-0.34	198.53	9.8386	47.291	-0.0574
476	SLU 42	-0.2	-0.19	198.5	9.8354	47.2844	-0.092
476	SLU 43	-0.25	-0.87	187.4	9.147	44.5792	0.1023
476	SLU 44	-0.26	-0.63	187.35	9.1417	44.5681	0.0446
476	SLU 45	-0.26	-0.82	190.23	9.2924	45.268	0.0878
476	SLU 46	-0.26	-0.67	190.21	9.2893	45.2613	0.0532
476	SLU 47	-0.25	-0.64	189.03	9.2179	44.9745	0.0485
476	SLU 48	-0.25	-0.84	191.91	9.3686	45.6744	0.0918
476	SLU 49	-0.25	-0.69	191.89	9.3655	45.6677	0.0571
476	SLU 50	-0.25	-0.91	190.76	9.2993	45.392	0.1101
476	SLU 51	-0.25	-0.76	190.73	9.2962	45.3854	0.0755
476	SLU 52	-0.23	-0.6	208.47	10.2087	49.5757	0.0139
476	SLU 53	-0.23	-0.79	211.35	10.3594	50.2755	0.0571
476	SLU 54	-0.23	-0.65	211.32	10.3563	50.2689	0.0225

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
476	SLU 55	-0.23	-0.62	210.15	10.2849	49.9821	0.0178
476	SLU 56	-0.23	-0.81	213.03	10.4356	50.6819	0.0611
476	SLU 57	-0.23	-0.67	213	10.4325	50.6753	0.0264
476	SLU 58	-0.23	-0.88	211.87	10.3663	50.3996	0.0794
476	SLU 59	-0.23	-0.74	211.85	10.3632	50.3929	0.0448
476	SLU 60	-0.22	-0.83	217.56	10.6712	51.7328	0.0584
476	SLU 61	-0.22	-0.69	217.54	10.6681	51.7262	0.0238
476	SLU 62	-0.22	-0.85	219.24	10.7474	52.1392	0.0624
476	SLU 63	-0.22	-0.71	219.22	10.7443	52.1326	0.0277
476	SLU 64	-0.28	-0.62	205.22	10.0981	48.8833	0.0262
476	SLU 65	-0.28	-0.38	205.18	10.0928	48.8723	-0.0315
476	SLU 66	-0.28	-0.57	208.06	10.2436	49.5721	0.0118
476	SLU 67	-0.28	-0.42	208.03	10.2404	49.5655	-0.0229
476	SLU 68	-0.28	-0.4	206.86	10.169	49.2787	-0.0276
476	SLU 69	-0.28	-0.59	209.74	10.3197	49.9785	0.0157
476	SLU 70	-0.28	-0.44	209.71	10.3166	49.9719	-0.019
476	SLU 71	-0.28	-0.66	208.59	10.2504	49.6961	0.0341
476	SLU 72	-0.28	-0.51	208.56	10.2473	49.6895	-0.0006
476	SLU 73	-0.26	-0.35	226.29	11.1598	53.8798	-0.0622
476	SLU 74	-0.26	-0.55	229.17	11.3106	54.5796	-0.0189
476	SLU 75	-0.26	-0.4	229.15	11.3074	54.573	-0.0536
476	SLU 76	-0.26	-0.37	227.98	11.236	54.2862	-0.0583
476	SLU 77	-0.26	-0.56	230.86	11.3867	54.986	-0.015
476	SLU 78	-0.26	-0.42	230.83	11.3836	54.9794	-0.0497
476	SLU 79	-0.26	-0.63	229.7	11.3174	54.7037	0.0034
476	SLU 80	-0.26	-0.49	229.67	11.3143	54.697	-0.0313
476	SLU 81	-0.25	-0.59	235.39	11.6224	56.037	-0.0176
476	SLU 82	-0.25	-0.44	235.36	11.6192	56.0303	-0.0523
476	SLU 83	-0.25	-0.61	237.07	11.6985	56.4434	-0.0137
476	SLU 84	-0.25	-0.46	237.04	11.6954	56.4367	-0.0484
476	SLE RA 1	-0.21	-0.53	153.95	7.5587	36.6566	0.0369
476	SLE RA 2	-0.21	-0.37	153.92	7.5552	36.6492	-0.0016
476	SLE RA 3	-0.21	-0.5	155.84	7.6557	37.1158	0.0272
476	SLE RA 4	-0.21	-0.4	155.82	7.6536	37.1114	0.0042
476	SLE RA 5	-0.21	-0.38	155.04	7.606	36.9202	0.001
476	SLE RA 6	-0.21	-0.51	156.96	7.7065	37.3867	0.0299
476	SLE RA 7	-0.21	-0.41	156.94	7.7044	37.3823	0.0068
476	SLE RA 8	-0.21	-0.56	156.19	7.6603	37.1985	0.0421
476	SLE RA 9	-0.21	-0.46	156.17	7.6582	37.194	0.019
476	SLE RA 10	-0.2	-0.35	167.99	8.2665	39.9876	-0.0221
476	SLE RA 11	-0.2	-0.48	169.91	8.367	40.4541	0.0068
476	SLE RA 12	-0.2	-0.38	169.9	8.3649	40.4497	-0.0163
476	SLE RA 13	-0.2	-0.37	169.11	8.3173	40.2585	-0.0195
476	SLE RA 14	-0.2	-0.49	171.03	8.4178	40.7251	0.0094
476	SLE RA 15	-0.2	-0.4	171.02	8.4157	40.7207	-0.0137
476	SLE RA 16	-0.2	-0.54	170.26	8.3716	40.5368	0.0217
476	SLE RA 17	-0.2	-0.44	170.25	8.3695	40.5324	-0.0014
476	SLE RA 18	-0.19	-0.51	174.06	8.5749	41.4257	0.0077
476	SLE RA 19	-0.19	-0.41	174.04	8.5728	41.4213	-0.0154
476	SLE RA 20	-0.19	-0.52	175.18	8.6257	41.6966	0.0103
476	SLE RA 21	-0.19	-0.42	175.16	8.6236	41.6922	-0.0128
476	SLE FR 1	-0.21	-0.53	153.95	7.5587	36.6566	0.0369
476	SLE FR 2	-0.21	-0.5	153.94	7.558	36.6551	0.0292
476	SLE FR 3	-0.21	-0.54	154.39	7.579	36.765	0.0379
476	SLE FR 4	-0.21	-0.49	159.97	7.8629	38.0858	0.0204
476	SLE FR 5	-0.21	-0.53	160.43	7.8839	38.1957	0.0292
476	SLE FR 6	-0.2	-0.52	164	8.0668	39.0411	0.0223
476	SLE QP 1	-0.21	-0.53	153.95	7.5587	36.6566	0.0369
476	SLE QP 2	-0.21	-0.53	159.98	7.8636	38.0873	0.0281
476	SLD 1	12.77	1.78	156.71	7.5446	37.2021	-1.2143
476	SLD 2	13	1.58	156.79	7.5505	37.2253	-1.1509
476	SLD 3	13.07	-3.61	158.09	7.6792	37.523	0.0979
476	SLD 4	13.29	-3.81	158.17	7.6851	37.5461	0.1614
476	SLD 5	3.2	8.38	156.89	7.5628	37.3311	-2.346
476	SLD 6	3.35	8.25	156.94	7.5666	37.3461	-2.3048
476	SLD 7	4.19	-9.59	161.49	8.0113	38.4006	2.0283
476	SLD 8	4.33	-9.72	161.54	8.0151	38.4156	2.0694
476	SLD 9	-4.74	8.67	158.42	7.712	37.759	-2.0132
476	SLD 10	-4.6	8.54	158.47	7.7159	37.774	-1.972
476	SLD 11	-3.76	-9.3	163.02	8.1605	38.8285	2.361
476	SLD 12	-3.61	-9.43	163.07	8.1644	38.8435	2.4022
476	SLD 13	-13.7	2.76	161.79	8.0421	38.6285	-0.1051
476	SLD 14	-13.48	2.56	161.87	8.048	38.6517	-0.0417
476	SLD 15	-13.41	-2.63	163.17	8.1766	38.9493	1.2071
476	SLD 16	-13.19	-2.83	163.25	8.1826	38.9725	1.2706
476	SLV 1	30.15	4.71	152.37	7.1213	36.0261	-2.8376
476	SLV 2	30.67	4.25	152.55	7.1351	36.0801	-2.6898
476	SLV 3	30.84	-7.57	155.51	7.4277	36.7576	0.1531
476	SLV 4	31.36	-8.04	155.7	7.4415	36.8116	0.3009
476	SLV 5	7.77	19.75	152.89	7.1738	36.3503	-5.3925
476	SLV 6	8.1	19.46	153.01	7.1826	36.3848	-5.2981
476	SLV 7	10.06	-21.19	163.38	8.1952	38.7887	4.5765
476	SLV 8	10.4	-21.49	163.5	8.204	38.8232	4.6708
476	SLV 9	-10.81	20.44	156.46	7.5231	37.3514	-4.6146
476	SLV 10	-10.48	20.14	156.58	7.5319	37.3859	-4.5202
476	SLV 11	-8.51	-20.51	166.95	8.5445	39.7898	5.3544
476	SLV 12	-8.18	-20.81	167.07	8.5533	39.8243	5.4487
476	SLV 13	-31.77	6.98	164.26	8.2856	39.3631	-0.2446
476	SLV 14	-31.25	6.52	164.44	8.2994	39.417	-0.0969
476	SLV 15	-31.08	-5.3	167.41	8.592	40.0946	2.746
476	SLV 16	-30.56	-5.76	167.59	8.6058	40.1486	2.8938

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
476	CRTFP Ux+	0	0	0	0	0	0
476	CRTFP Ux-	0	0	0	0	0	0
476	CRTFP Uy+	0	0	0	0	0	0
476	CRTFP Uy-	0	0	0	0	0	0
477	SLU 1	-0.01	-0.38	49.2	-0.2599	-0.0036	-0.001
477	SLU 2	-0.01	-0.3	49.19	-0.2615	-0.0037	-0.001
477	SLU 3	-0.01	-0.36	50.09	-0.2623	-0.0029	-0.0011
477	SLU 4	-0.01	-0.31	50.09	-0.2632	-0.0029	-0.0011
477	SLU 5	-0.01	-0.3	49.72	-0.2636	-0.0033	-0.001
477	SLU 6	-0.01	-0.37	50.63	-0.2644	-0.0025	-0.0011
477	SLU 7	-0.01	-0.32	50.62	-0.2654	-0.0025	-0.0011
477	SLU 8	-0.01	-0.39	50.27	-0.2642	-0.0028	-0.0011
477	SLU 9	-0.01	-0.34	50.26	-0.2651	-0.0028	-0.0011
477	SLU 10	0	-0.33	56.19	-0.3286	-0.0025	-0.0011
477	SLU 11	0	-0.4	57.1	-0.3294	-0.0016	-0.0012
477	SLU 12	0	-0.35	57.09	-0.3303	-0.0017	-0.0012
477	SLU 13	0	-0.34	56.73	-0.3307	-0.0021	-0.0011
477	SLU 14	0	-0.4	57.63	-0.3315	-0.0012	-0.0012
477	SLU 15	0	-0.35	57.63	-0.3324	-0.0013	-0.0012
477	SLU 16	0	-0.42	57.27	-0.3312	-0.0016	-0.0012
477	SLU 17	0	-0.38	57.27	-0.3322	-0.0016	-0.0012
477	SLU 18	0	-0.42	59.2	-0.3558	-0.0018	-0.0011
477	SLU 19	0	-0.37	59.2	-0.3567	-0.0019	-0.0011
477	SLU 20	0.01	-0.43	59.74	-0.3579	-0.0014	-0.0012
477	SLU 21	0.01	-0.38	59.73	-0.3588	-0.0015	-0.0012
477	SLU 22	-0.01	-0.33	54.9	-0.2881	0.0002	-0.0014
477	SLU 23	-0.02	-0.25	54.89	-0.2897	0.0001	-0.0014
477	SLU 24	-0.01	-0.31	55.8	-0.2905	0.0009	-0.0015
477	SLU 25	-0.01	-0.27	55.79	-0.2914	0.0008	-0.0015
477	SLU 26	-0.01	-0.25	55.43	-0.2919	0.0005	-0.0014
477	SLU 27	-0.01	-0.32	56.33	-0.2926	0.0013	-0.0016
477	SLU 28	-0.01	-0.27	56.33	-0.2936	0.0012	-0.0015
477	SLU 29	-0.01	-0.34	55.97	-0.2924	0.001	-0.0015
477	SLU 30	-0.01	-0.3	55.97	-0.2933	0.0009	-0.0015
477	SLU 31	0	-0.28	61.89	-0.3568	0.0013	-0.0015
477	SLU 32	0	-0.35	62.8	-0.3576	0.0021	-0.0016
477	SLU 33	0	-0.3	62.79	-0.3585	0.0021	-0.0016
477	SLU 34	0	-0.29	62.43	-0.3589	0.0017	-0.0015
477	SLU 35	0	-0.35	63.34	-0.3597	0.0025	-0.0016
477	SLU 36	0	-0.31	63.33	-0.3606	0.0025	-0.0016
477	SLU 37	0	-0.38	62.98	-0.3594	0.0022	-0.0016
477	SLU 38	0	-0.33	62.97	-0.3604	0.0021	-0.0016
477	SLU 39	0	-0.37	64.91	-0.384	0.0019	-0.0016
477	SLU 40	0	-0.32	64.9	-0.3849	0.0019	-0.0015
477	SLU 41	0	-0.38	65.44	-0.3861	0.0023	-0.0016
477	SLU 42	0	-0.33	65.44	-0.387	0.0023	-0.0016
477	SLU 43	-0.01	-0.5	62	-0.3282	-0.0059	-0.0012
477	SLU 44	-0.01	-0.42	61.99	-0.3298	-0.006	-0.0011
477	SLU 45	-0.01	-0.49	62.9	-0.3306	-0.0052	-0.0012
477	SLU 46	-0.01	-0.44	62.89	-0.3315	-0.0053	-0.0012
477	SLU 47	-0.01	-0.43	62.53	-0.332	-0.0056	-0.0012
477	SLU 48	-0.01	-0.5	63.43	-0.3327	-0.0048	-0.0013
477	SLU 49	-0.01	-0.45	63.43	-0.3337	-0.0049	-0.0013
477	SLU 50	-0.01	-0.52	63.07	-0.3325	-0.0051	-0.0012
477	SLU 51	-0.01	-0.47	63.07	-0.3334	-0.0052	-0.0012
477	SLU 52	0	-0.46	68.99	-0.3969	-0.0048	-0.0012
477	SLU 53	0	-0.52	69.9	-0.3977	-0.004	-0.0013
477	SLU 54	0	-0.48	69.89	-0.3986	-0.0041	-0.0013
477	SLU 55	0	-0.46	69.53	-0.399	-0.0044	-0.0013
477	SLU 56	0	-0.53	70.44	-0.3998	-0.0036	-0.0014
477	SLU 57	0	-0.48	70.43	-0.4007	-0.0037	-0.0014
477	SLU 58	0	-0.55	70.08	-0.3995	-0.0039	-0.0013
477	SLU 59	0	-0.5	70.07	-0.4005	-0.004	-0.0013
477	SLU 60	0	-0.55	72.01	-0.4241	-0.0042	-0.0013
477	SLU 61	0	-0.5	72	-0.425	-0.0043	-0.0013
477	SLU 62	0	-0.56	72.54	-0.4262	-0.0038	-0.0013
477	SLU 63	0	-0.51	72.54	-0.4272	-0.0039	-0.0013
477	SLU 64	-0.02	-0.46	67.71	-0.3564	-0.0022	-0.0016
477	SLU 65	-0.02	-0.38	67.7	-0.358	-0.0023	-0.0016
477	SLU 66	-0.02	-0.44	68.6	-0.3588	-0.0015	-0.0017
477	SLU 67	-0.02	-0.4	68.59	-0.3597	-0.0015	-0.0017
477	SLU 68	-0.02	-0.38	68.23	-0.3602	-0.0019	-0.0016
477	SLU 69	-0.01	-0.45	69.14	-0.3609	-0.0011	-0.0017
477	SLU 70	-0.01	-0.4	69.13	-0.3619	-0.0011	-0.0017
477	SLU 71	-0.01	-0.47	68.78	-0.3607	-0.0014	-0.0017
477	SLU 72	-0.01	-0.42	68.77	-0.3616	-0.0014	-0.0016
477	SLU 73	-0.01	-0.41	74.7	-0.4251	-0.0011	-0.0016
477	SLU 74	0	-0.48	75.61	-0.4259	-0.0003	-0.0018
477	SLU 75	0	-0.43	75.6	-0.4268	-0.0003	-0.0017
477	SLU 76	-0.01	-0.42	75.23	-0.4272	-0.0007	-0.0017
477	SLU 77	0	-0.48	76.14	-0.428	0.0002	-0.0018
477	SLU 78	0	-0.44	76.13	-0.429	0.0001	-0.0018
477	SLU 79	0	-0.5	75.78	-0.4278	-0.0002	-0.0018
477	SLU 80	0	-0.46	75.77	-0.4287	-0.0002	-0.0017
477	SLU 81	0	-0.5	77.71	-0.4523	-0.0004	-0.0017
477	SLU 82	0	-0.45	77.7	-0.4532	-0.0005	-0.0017
477	SLU 83	0	-0.51	78.25	-0.4544	0	-0.0018
477	SLU 84	0	-0.46	78.24	-0.4554	-0.0001	-0.0017
477	SLE RA 1	-0.01	-0.36	50.83	-0.268	-0.0025	-0.0011
477	SLE RA 2	-0.01	-0.31	50.82	-0.2691	-0.0026	-0.0011
477	SLE RA 3	-0.01	-0.35	51.43	-0.2695	-0.002	-0.0012

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
477	SLE RA 4	-0.01	-0.32	51.42	-0.2702	-0.0021	-0.0012
477	SLE RA 5	-0.01	-0.31	51.18	-0.2705	-0.0023	-0.0011
477	SLE RA 6	-0.01	-0.36	51.78	-0.271	-0.0018	-0.0012
477	SLE RA 7	-0.01	-0.33	51.78	-0.2716	-0.0018	-0.0012
477	SLE RA 8	-0.01	-0.37	51.54	-0.2708	-0.002	-0.0012
477	SLE RA 9	-0.01	-0.34	51.54	-0.2714	-0.002	-0.0012
477	SLE RA 10	-0.01	-0.33	55.49	-0.3138	-0.0018	-0.0012
477	SLE RA 11	0	-0.37	56.09	-0.3143	-0.0012	-0.0012
477	SLE RA 12	0	-0.34	56.09	-0.3149	-0.0013	-0.0012
477	SLE RA 13	0	-0.33	55.85	-0.3152	-0.0015	-0.0012
477	SLE RA 14	0	-0.38	56.45	-0.3157	-0.0009	-0.0013
477	SLE RA 15	0	-0.35	56.45	-0.3163	-0.001	-0.0013
477	SLE RA 16	0	-0.39	56.21	-0.3155	-0.0012	-0.0012
477	SLE RA 17	0	-0.36	56.21	-0.3162	-0.0012	-0.0012
477	SLE RA 18	0	-0.39	57.5	-0.3319	-0.0013	-0.0012
477	SLE RA 19	0	-0.36	57.49	-0.3325	-0.0014	-0.0012
477	SLE RA 20	0	-0.4	57.86	-0.3333	-0.0011	-0.0012
477	SLE RA 21	0	-0.37	57.85	-0.3339	-0.0011	-0.0012
477	SLE FR 1	-0.01	-0.36	50.83	-0.268	-0.0025	-0.0011
477	SLE FR 2	-0.01	-0.35	50.83	-0.2682	-0.0025	-0.0011
477	SLE FR 3	-0.01	-0.36	50.97	-0.2685	-0.0024	-0.0011
477	SLE FR 4	-0.01	-0.36	52.83	-0.2874	-0.0022	-0.0012
477	SLE FR 5	-0.01	-0.37	52.97	-0.2877	-0.0021	-0.0012
477	SLE FR 6	-0.01	-0.38	54.16	-0.2999	-0.0019	-0.0012
477	SLE QP 1	-0.01	-0.36	50.83	-0.268	-0.0025	-0.0011
477	SLE QP 2	-0.01	-0.37	52.83	-0.2871	-0.0022	-0.0012
477	SLD 1	4.1	0.38	52.03	-0.3002	-0.0077	0.0012
477	SLD 2	4.18	0.35	52.04	-0.2992	-0.0072	0.0021
477	SLD 3	4.2	-1.35	52.49	-0.2593	-0.0065	0.0008
477	SLD 4	4.27	-1.38	52.5	-0.2583	-0.0059	0.0017
477	SLD 5	1.07	2.48	51.89	-0.3533	-0.0058	-0.0001
477	SLD 6	1.12	2.46	51.9	-0.3526	-0.0055	0.0005
477	SLD 7	1.38	-3.28	53.42	-0.217	-0.0017	-0.0013
477	SLD 8	1.43	-3.3	53.43	-0.2163	-0.0013	-0.0007
477	SLD 9	-1.45	2.56	52.23	-0.358	-0.003	-0.0016
477	SLD 10	-1.4	2.54	52.24	-0.3573	-0.0027	-0.001
477	SLD 11	-1.14	-3.2	53.76	-0.2217	0.0011	-0.0028
477	SLD 12	-1.09	-3.22	53.77	-0.221	0.0015	-0.0023
477	SLD 13	-4.29	0.64	53.16	-0.316	0.0016	-0.004
477	SLD 14	-4.21	0.61	53.17	-0.315	0.0022	-0.0031
477	SLD 15	-4.19	-1.09	53.62	-0.2751	0.0029	-0.0044
477	SLD 16	-4.12	-1.12	53.63	-0.2741	0.0034	-0.0035
477	SLV 1	9.61	1.33	50.97	-0.3163	-0.0151	0.0043
477	SLV 2	9.78	1.26	50.99	-0.3138	-0.0138	0.0064
477	SLV 3	9.83	-2.61	52.01	-0.2233	-0.0122	0.0034
477	SLV 4	10	-2.67	52.04	-0.2208	-0.0109	0.0055
477	SLV 5	2.52	6.12	50.68	-0.4374	-0.0106	0.0014
477	SLV 6	2.63	6.08	50.7	-0.4358	-0.0098	0.0028
477	SLV 7	3.24	-7	54.16	-0.1273	-0.001	-0.0014
477	SLV 8	3.35	-7.04	54.18	-0.1258	-0.0002	-0.0001
477	SLV 9	-3.37	6.3	51.48	-0.4485	-0.0041	-0.0022
477	SLV 10	-3.26	6.26	51.5	-0.4469	-0.0033	-0.0009
477	SLV 11	-2.64	-6.82	54.96	-0.1385	0.0055	-0.0051
477	SLV 12	-2.53	-6.86	54.98	-0.1369	0.0063	-0.0037
477	SLV 13	-10.01	1.93	53.62	-0.3535	0.0066	-0.0078
477	SLV 14	-9.84	1.86	53.65	-0.351	0.0079	-0.0058
477	SLV 15	-9.8	-2.01	54.67	-0.2605	0.0095	-0.0087
477	SLV 16	-9.63	-2.07	54.69	-0.258	0.0108	-0.0066
477	CRTFP Ux+	0	0	0	0	0	0
477	CRTFP Ux-	0	0	0	0	0	0
478	SLU 1	0.04	-0.5	77.17	-0.6198	-7.0619	-0.0325
478	SLU 2	0.03	-0.37	77.16	-0.621	-7.0612	-0.0205
478	SLU 3	0.04	-0.48	78.57	-0.631	-7.1908	-0.0308
478	SLU 4	0.04	-0.41	78.56	-0.6318	-7.1904	-0.0237
478	SLU 5	0.04	-0.39	77.99	-0.6277	-7.1376	-0.0217
478	SLU 6	0.04	-0.5	79.4	-0.6377	-7.2671	-0.032
478	SLU 7	0.04	-0.42	79.39	-0.6384	-7.2667	-0.0248
478	SLU 8	0.04	-0.53	78.84	-0.6331	-7.2146	-0.0348
478	SLU 9	0.04	-0.45	78.83	-0.6338	-7.2142	-0.0276
478	SLU 10	0.06	-0.39	88.02	-0.7317	-8.042	-0.0164
478	SLU 11	0.06	-0.5	89.43	-0.7417	-8.1715	-0.0267
478	SLU 12	0.06	-0.42	89.42	-0.7424	-8.1711	-0.0195
478	SLU 13	0.06	-0.4	88.85	-0.7383	-8.1183	-0.0175
478	SLU 14	0.06	-0.51	90.26	-0.7483	-8.2479	-0.0278
478	SLU 15	0.06	-0.43	90.25	-0.7491	-8.2475	-0.0207
478	SLU 16	0.06	-0.54	89.7	-0.7437	-8.1953	-0.0307
478	SLU 17	0.06	-0.46	89.69	-0.7445	-8.1949	-0.0235
478	SLU 18	0.07	-0.52	92.68	-0.7778	-8.463	-0.0266
478	SLU 19	0.07	-0.44	92.68	-0.7786	-8.4626	-0.0194
478	SLU 20	0.07	-0.53	93.52	-0.7845	-8.5393	-0.0277
478	SLU 21	0.07	-0.46	93.51	-0.7852	-8.5389	-0.0205
478	SLU 22	0.04	-0.42	86.03	-0.696	-7.872	-0.0239
478	SLU 23	0.03	-0.3	86.02	-0.6972	-7.8713	-0.012
478	SLU 24	0.04	-0.41	87.43	-0.7072	-8.0009	-0.0223
478	SLU 25	0.04	-0.33	87.42	-0.7079	-8.0004	-0.0151
478	SLU 26	0.04	-0.31	86.85	-0.7039	-7.9476	-0.0131
478	SLU 27	0.04	-0.42	88.26	-0.7139	-8.0772	-0.0234
478	SLU 28	0.04	-0.34	88.25	-0.7146	-8.0768	-0.0162
478	SLU 29	0.04	-0.45	87.7	-0.7093	-8.0246	-0.0262
478	SLU 30	0.04	-0.37	87.69	-0.71	-8.0242	-0.0191
478	SLU 31	0.06	-0.31	96.87	-0.8078	-8.852	-0.0078

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
478	SLU 32	0.06	-0.42	98.28	-0.8178	-8.9816	-0.0181
478	SLU 33	0.06	-0.34	98.28	-0.8186	-8.9812	-0.0109
478	SLU 34	0.06	-0.32	97.71	-0.8145	-8.9283	-0.009
478	SLU 35	0.06	-0.43	99.12	-0.8245	-9.0579	-0.0193
478	SLU 36	0.06	-0.35	99.11	-0.8252	-9.0575	-0.0121
478	SLU 37	0.06	-0.46	98.55	-0.8199	-9.0054	-0.0221
478	SLU 38	0.06	-0.39	98.54	-0.8207	-9.0049	-0.0149
478	SLU 39	0.07	-0.44	101.54	-0.854	-9.273	-0.018
478	SLU 40	0.07	-0.36	101.53	-0.8548	-9.2726	-0.0108
478	SLU 41	0.07	-0.45	102.37	-0.8607	-9.3493	-0.0191
478	SLU 42	0.07	-0.38	102.37	-0.8614	-9.3489	-0.012
478	SLU 43	0.05	-0.68	97.29	-0.7796	-8.9028	-0.0452
478	SLU 44	0.04	-0.55	97.28	-0.7808	-8.9021	-0.0332
478	SLU 45	0.05	-0.66	98.69	-0.7909	-9.0317	-0.0435
478	SLU 46	0.05	-0.59	98.68	-0.7916	-9.0313	-0.0363
478	SLU 47	0.05	-0.57	98.11	-0.7875	-8.9784	-0.0344
478	SLU 48	0.05	-0.68	99.52	-0.7975	-9.108	-0.0447
478	SLU 49	0.05	-0.6	99.51	-0.7982	-9.1076	-0.0375
478	SLU 50	0.05	-0.71	98.95	-0.7929	-9.0554	-0.0475
478	SLU 51	0.05	-0.63	98.95	-0.7937	-9.055	-0.0403
478	SLU 52	0.07	-0.56	108.13	-0.8915	-9.8828	-0.0291
478	SLU 53	0.07	-0.67	109.54	-0.9015	-10.0124	-0.0394
478	SLU 54	0.07	-0.6	109.53	-0.9022	-10.012	-0.0322
478	SLU 55	0.07	-0.58	108.96	-0.8981	-9.9591	-0.0302
478	SLU 56	0.07	-0.69	110.37	-0.9081	-10.0887	-0.0405
478	SLU 57	0.07	-0.61	110.37	-0.9089	-10.0883	-0.0333
478	SLU 58	0.07	-0.72	109.81	-0.9036	-10.0362	-0.0434
478	SLU 59	0.07	-0.64	109.8	-0.9043	-10.0358	-0.0362
478	SLU 60	0.08	-0.7	112.8	-0.9377	-10.3038	-0.0393
478	SLU 61	0.08	-0.62	112.79	-0.9384	-10.3034	-0.0321
478	SLU 62	0.08	-0.71	113.63	-0.9443	-10.3802	-0.0404
478	SLU 63	0.08	-0.63	113.62	-0.9451	-10.3797	-0.0332
478	SLU 64	0.05	-0.6	106.15	-0.8558	-9.7128	-0.0366
478	SLU 65	0.05	-0.47	106.13	-0.857	-9.7121	-0.0246
478	SLU 66	0.05	-0.58	107.54	-0.867	-9.8417	-0.0349
478	SLU 67	0.05	-0.51	107.54	-0.8678	-9.8413	-0.0278
478	SLU 68	0.05	-0.49	106.97	-0.8637	-9.7885	-0.0258
478	SLU 69	0.05	-0.6	108.38	-0.8737	-9.918	-0.0361
478	SLU 70	0.05	-0.52	108.37	-0.8744	-9.9176	-0.0289
478	SLU 71	0.05	-0.63	107.81	-0.8691	-9.8655	-0.0389
478	SLU 72	0.05	-0.55	107.8	-0.8698	-9.8651	-0.0318
478	SLU 73	0.07	-0.49	116.99	-0.9677	-10.6929	-0.0205
478	SLU 74	0.07	-0.6	118.4	-0.9777	-10.8224	-0.0308
478	SLU 75	0.07	-0.52	118.39	-0.9784	-10.822	-0.0236
478	SLU 76	0.07	-0.5	117.82	-0.9743	-10.7692	-0.0217
478	SLU 77	0.08	-0.61	119.23	-0.9843	-10.8988	-0.032
478	SLU 78	0.07	-0.53	119.22	-0.9851	-10.8984	-0.0248
478	SLU 79	0.08	-0.64	118.67	-0.9797	-10.8462	-0.0348
478	SLU 80	0.07	-0.56	118.66	-0.9805	-10.8458	-0.0276
478	SLU 81	0.08	-0.62	121.66	-1.0138	-11.1139	-0.0307
478	SLU 82	0.08	-0.54	121.65	-1.0146	-11.1134	-0.0235
478	SLU 83	0.08	-0.63	122.49	-1.0205	-11.1902	-0.0318
478	SLU 84	0.08	-0.56	122.48	-1.0212	-11.1898	-0.0247
478	SLE RA 1	0.04	-0.48	79.71	-0.6416	-7.2934	-0.0301
478	SLE RA 2	0.03	-0.39	79.7	-0.6424	-7.2929	-0.0221
478	SLE RA 3	0.04	-0.47	80.64	-0.649	-7.3793	-0.0289
478	SLE RA 4	0.04	-0.42	80.63	-0.6495	-7.379	-0.0242
478	SLE RA 5	0.04	-0.4	80.25	-0.6468	-7.3438	-0.0228
478	SLE RA 6	0.04	-0.48	81.19	-0.6535	-7.4302	-0.0297
478	SLE RA 7	0.04	-0.43	81.19	-0.654	-7.4299	-0.0249
478	SLE RA 8	0.04	-0.5	80.82	-0.6504	-7.3951	-0.0316
478	SLE RA 9	0.04	-0.45	80.81	-0.6509	-7.3949	-0.0268
478	SLE RA 10	0.05	-0.4	86.93	-0.7161	-7.9467	-0.0193
478	SLE RA 11	0.05	-0.48	87.87	-0.7228	-8.0331	-0.0262
478	SLE RA 12	0.05	-0.42	87.87	-0.7233	-8.0328	-0.0214
478	SLE RA 13	0.05	-0.41	87.49	-0.7206	-7.9976	-0.0201
478	SLE RA 14	0.05	-0.48	88.43	-0.7272	-8.084	-0.0269
478	SLE RA 15	0.05	-0.43	88.42	-0.7277	-8.0837	-0.0222
478	SLE RA 16	0.05	-0.51	88.05	-0.7242	-8.049	-0.0288
478	SLE RA 17	0.05	-0.45	88.05	-0.7247	-8.0487	-0.024
478	SLE RA 18	0.06	-0.49	90.04	-0.7469	-8.2274	-0.0261
478	SLE RA 19	0.06	-0.44	90.04	-0.7474	-8.2271	-0.0213
478	SLE RA 20	0.06	-0.5	90.6	-0.7514	-8.2783	-0.0269
478	SLE RA 21	0.06	-0.45	90.59	-0.7519	-8.278	-0.0221
478	SLE FR 1	0.04	-0.48	79.71	-0.6416	-7.2934	-0.0301
478	SLE FR 2	0.04	-0.46	79.7	-0.6417	-7.2933	-0.0285
478	SLE FR 3	0.04	-0.48	79.93	-0.6433	-7.3137	-0.0304
478	SLE FR 4	0.04	-0.47	82.81	-0.6733	-7.5735	-0.0273
478	SLE FR 5	0.04	-0.49	83.03	-0.6749	-7.5939	-0.0292
478	SLE FR 6	0.05	-0.49	84.88	-0.6942	-7.7604	-0.0281
478	SLE QP 1	0.04	-0.48	79.71	-0.6416	-7.2934	-0.0301
478	SLE QP 2	0.04	-0.48	82.81	-0.6732	-7.5736	-0.0289
478	SLD 1	6.56	0.7	81.78	-0.6417	-7.5095	0.0795
478	SLD 2	6.67	0.69	81.78	-0.6415	-7.5085	0.0817
478	SLD 3	6.71	-2.03	82.39	-0.6109	-7.5505	-0.1731
478	SLD 4	6.82	-2.04	82.39	-0.6108	-7.5495	-0.171
478	SLD 5	1.75	4.01	81.58	-0.7103	-7.4924	0.3865
478	SLD 6	1.83	4.01	81.58	-0.7103	-7.4918	0.3879
478	SLD 7	2.25	-5.09	83.6	-0.6079	-7.6289	-0.4558
478	SLD 8	2.32	-5.1	83.6	-0.6078	-7.6283	-0.4544
478	SLD 9	-2.24	4.13	82.01	-0.7385	-7.5189	0.3967

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
478	SLD 10	-2.16	4.12	82.01	-0.7384	-7.5182	0.398
478	SLD 11	-1.74	-4.97	84.03	-0.6361	-7.6554	-0.4457
478	SLD 12	-1.67	-4.98	84.03	-0.636	-7.6547	-0.4443
478	SLD 13	-6.74	1.08	83.22	-0.7355	-7.5977	0.1133
478	SLD 14	-6.62	1.07	83.22	-0.7354	-7.5967	0.1154
478	SLD 15	-6.59	-1.65	83.83	-0.7048	-7.6386	-0.1394
478	SLD 16	-6.47	-1.67	83.83	-0.7047	-7.6376	-0.1373
478	SLV 1	15.28	2.2	80.43	-0.5984	-7.4248	0.2173
478	SLV 2	15.55	2.17	80.43	-0.5981	-7.4225	0.2223
478	SLV 3	15.63	-4.02	81.82	-0.5286	-7.5183	-0.3584
478	SLV 4	15.9	-4.05	81.81	-0.5283	-7.516	-0.3534
478	SLV 5	4.05	9.76	80	-0.7566	-7.3875	0.9171
478	SLV 6	4.22	9.74	80	-0.7564	-7.386	0.9203
478	SLV 7	5.2	-10.98	84.61	-0.524	-7.6993	-1.0016
478	SLV 8	5.37	-10.99	84.61	-0.5238	-7.6978	-0.9984
478	SLV 9	-5.28	10.02	81.01	-0.8225	-7.4493	0.9406
478	SLV 10	-5.11	10.01	81.01	-0.8223	-7.4479	0.9438
478	SLV 11	-4.13	-10.71	85.62	-0.5899	-7.7612	-0.9781
478	SLV 12	-3.96	-10.73	85.62	-0.5897	-7.7597	-0.9749
478	SLV 13	-15.81	3.08	83.8	-0.818	-7.6311	0.2956
478	SLV 14	-15.54	3.05	83.8	-0.8177	-7.6288	0.3006
478	SLV 15	-15.47	-3.14	85.18	-0.7482	-7.7247	-0.28
478	SLV 16	-15.2	-3.17	85.18	-0.748	-7.7224	-0.275
478	CRTFP Ux+	0	0	0	0	0	0
478	CRTFP Ux-	0	0	0	0	0	0
480	SLU 1	0.08	-0.29	64.17	0.9874	34.9777	0.1629
480	SLU 2	0.08	-0.19	64.17	0.9865	34.9746	0.1041
480	SLU 3	0.08	-0.28	65.36	1.0062	35.6237	0.1544
480	SLU 4	0.08	-0.21	65.36	1.0057	35.6218	0.1191
480	SLU 5	0.08	-0.2	64.87	0.9969	35.3562	0.1097
480	SLU 6	0.08	-0.29	66.07	1.0165	36.0053	0.16
480	SLU 7	0.08	-0.22	66.06	1.016	36.0034	0.1247
480	SLU 8	0.08	-0.31	65.58	1.0081	35.7408	0.1741
480	SLU 9	0.08	-0.25	65.57	1.0076	35.739	0.1388
480	SLU 10	0.1	-0.15	73.11	1.1245	39.8492	0.0852
480	SLU 11	0.1	-0.24	74.3	1.1441	40.4983	0.1355
480	SLU 12	0.1	-0.18	74.3	1.1437	40.4964	0.1002
480	SLU 13	0.1	-0.16	73.81	1.1349	40.2308	0.0908
480	SLU 14	0.11	-0.25	75.01	1.1545	40.8799	0.1411
480	SLU 15	0.11	-0.19	75	1.154	40.878	0.1058
480	SLU 16	0.11	-0.28	74.52	1.146	40.6154	0.1552
480	SLU 17	0.11	-0.21	74.51	1.1455	40.6136	0.1199
480	SLU 18	0.11	-0.24	76.94	1.1845	41.9414	0.1359
480	SLU 19	0.11	-0.18	76.94	1.184	41.9395	0.1006
480	SLU 20	0.11	-0.25	77.65	1.1948	42.323	0.1415
480	SLU 21	0.11	-0.19	77.64	1.1943	42.3211	0.1062
480	SLU 22	0.08	-0.21	71.63	1.1083	39.0289	0.1196
480	SLU 23	0.08	-0.11	71.62	1.1075	39.0258	0.0608
480	SLU 24	0.09	-0.2	72.82	1.1271	39.6749	0.1111
480	SLU 25	0.09	-0.13	72.82	1.1266	39.673	0.0758
480	SLU 26	0.09	-0.12	72.33	1.1178	39.4074	0.0664
480	SLU 27	0.09	-0.21	73.52	1.1375	40.0565	0.1167
480	SLU 28	0.09	-0.14	73.52	1.137	40.0546	0.0814
480	SLU 29	0.09	-0.23	73.03	1.129	39.792	0.1308
480	SLU 30	0.09	-0.17	73.03	1.1285	39.7902	0.0955
480	SLU 31	0.1	-0.07	80.56	1.2454	43.9004	0.0419
480	SLU 32	0.11	-0.16	81.76	1.2651	44.5495	0.0922
480	SLU 33	0.11	-0.1	81.76	1.2646	44.5476	0.0569
480	SLU 34	0.11	-0.08	81.27	1.2558	44.282	0.0475
480	SLU 35	0.11	-0.17	82.46	1.2754	44.9311	0.0978
480	SLU 36	0.11	-0.11	82.46	1.2749	44.9292	0.0625
480	SLU 37	0.11	-0.2	81.97	1.267	44.6666	0.1119
480	SLU 38	0.11	-0.13	81.97	1.2665	44.6648	0.0766
480	SLU 39	0.12	-0.16	84.4	1.3054	45.9926	0.0926
480	SLU 40	0.12	-0.1	84.4	1.3049	45.9907	0.0573
480	SLU 41	0.12	-0.17	85.1	1.3157	46.3742	0.0982
480	SLU 42	0.12	-0.11	85.1	1.3152	46.3723	0.0629
480	SLU 43	0.1	-0.41	80.87	1.2421	44.082	0.2266
480	SLU 44	0.1	-0.3	80.86	1.2413	44.0789	0.1678
480	SLU 45	0.1	-0.39	82.06	1.2609	44.728	0.2181
480	SLU 46	0.1	-0.33	82.06	1.2604	44.7262	0.1828
480	SLU 47	0.1	-0.31	81.57	1.2516	44.4605	0.1734
480	SLU 48	0.11	-0.4	82.76	1.2713	45.1096	0.2237
480	SLU 49	0.11	-0.34	82.76	1.2708	45.1077	0.1884
480	SLU 50	0.11	-0.43	82.27	1.2628	44.8452	0.2378
480	SLU 51	0.1	-0.37	82.27	1.2623	44.8433	0.2025
480	SLU 52	0.12	-0.27	89.8	1.3793	48.9535	0.1489
480	SLU 53	0.13	-0.36	91	1.3989	49.6026	0.1992
480	SLU 54	0.12	-0.29	91	1.3984	49.6008	0.1639
480	SLU 55	0.12	-0.28	90.51	1.3896	49.3351	0.1545
480	SLU 56	0.13	-0.37	91.7	1.4092	49.9842	0.2048
480	SLU 57	0.13	-0.3	91.7	1.4088	49.9823	0.1695
480	SLU 58	0.13	-0.39	91.21	1.4008	49.7198	0.2189
480	SLU 59	0.13	-0.33	91.21	1.4003	49.7179	0.1837
480	SLU 60	0.13	-0.36	93.64	1.4392	51.0457	0.1996
480	SLU 61	0.13	-0.29	93.64	1.4387	51.0439	0.1644
480	SLU 62	0.14	-0.37	94.34	1.4496	51.4273	0.2052
480	SLU 63	0.13	-0.3	94.34	1.4491	51.4254	0.17
480	SLU 64	0.11	-0.33	88.32	1.363	48.1332	0.1833
480	SLU 65	0.1	-0.22	88.32	1.3622	48.1301	0.1245
480	SLU 66	0.11	-0.31	89.52	1.3819	48.7792	0.1748

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
480	SLU 67	0.11	-0.25	89.51	1.3814	48.7774	0.1395
480	SLU 68	0.11	-0.23	89.02	1.3726	48.5117	0.1301
480	SLU 69	0.11	-0.32	90.22	1.3922	49.1608	0.1804
480	SLU 70	0.11	-0.26	90.21	1.3917	49.1589	0.1451
480	SLU 71	0.11	-0.35	89.73	1.3838	48.8964	0.1945
480	SLU 72	0.11	-0.29	89.73	1.3833	48.8945	0.1592
480	SLU 73	0.13	-0.18	97.26	1.5002	53.0047	0.1056
480	SLU 74	0.13	-0.28	98.46	1.5198	53.6538	0.1559
480	SLU 75	0.13	-0.21	98.45	1.5193	53.652	0.1206
480	SLU 76	0.13	-0.2	97.96	1.5105	53.3863	0.1112
480	SLU 77	0.13	-0.29	99.16	1.5302	54.0354	0.1615
480	SLU 78	0.13	-0.22	99.15	1.5297	54.0335	0.1262
480	SLU 79	0.13	-0.31	98.67	1.5217	53.7709	0.1756
480	SLU 80	0.13	-0.25	98.67	1.5212	53.7691	0.1403
480	SLU 81	0.14	-0.28	101.1	1.5601	55.0969	0.1563
480	SLU 82	0.14	-0.21	101.09	1.5596	55.0951	0.121
480	SLU 83	0.14	-0.29	101.8	1.5705	55.4785	0.1619
480	SLU 84	0.14	-0.22	101.79	1.57	55.4766	0.1266
480	SLE RA 1	0.08	-0.27	66.3	1.0219	36.1352	0.1505
480	SLE RA 2	0.08	-0.2	66.3	1.0214	36.1331	0.1113
480	SLE RA 3	0.08	-0.26	67.1	1.0345	36.5658	0.1448
480	SLE RA 4	0.08	-0.22	67.1	1.0341	36.5646	0.1213
480	SLE RA 5	0.08	-0.21	66.77	1.0283	36.3875	0.1151
480	SLE RA 6	0.08	-0.27	67.57	1.0414	36.8202	0.1486
480	SLE RA 7	0.08	-0.22	67.56	1.041	36.819	0.1251
480	SLE RA 8	0.08	-0.28	67.24	1.0357	36.6439	0.158
480	SLE RA 9	0.08	-0.24	67.24	1.0354	36.6427	0.1345
480	SLE RA 10	0.09	-0.17	72.26	1.1133	39.3828	0.0987
480	SLE RA 11	0.1	-0.24	73.06	1.1264	39.8156	0.1322
480	SLE RA 12	0.1	-0.19	73.06	1.1261	39.8143	0.1087
480	SLE RA 13	0.1	-0.18	72.73	1.1202	39.6372	0.1025
480	SLE RA 14	0.1	-0.24	73.53	1.1333	40.07	0.136
480	SLE RA 15	0.1	-0.2	73.52	1.133	40.0687	0.1125
480	SLE RA 16	0.1	-0.26	73.2	1.1277	39.8937	0.1454
480	SLE RA 17	0.1	-0.22	73.2	1.1274	39.8924	0.1219
480	SLE RA 18	0.1	-0.24	74.82	1.1533	40.7776	0.1325
480	SLE RA 19	0.1	-0.19	74.82	1.153	40.7764	0.109
480	SLE RA 20	0.1	-0.24	75.29	1.1602	41.032	0.1363
480	SLE RA 21	0.1	-0.2	75.28	1.1599	41.0308	0.1128
480	SLE FR 1	0.08	-0.27	66.3	1.0219	36.1352	0.1505
480	SLE FR 2	0.08	-0.26	66.3	1.0218	36.1348	0.1427
480	SLE FR 3	0.08	-0.27	66.49	1.0247	36.2369	0.152
480	SLE FR 4	0.09	-0.25	68.86	1.0612	37.5275	0.1373
480	SLE FR 5	0.09	-0.26	69.04	1.0641	37.6297	0.1466
480	SLE FR 6	0.09	-0.25	70.56	1.0876	38.4564	0.1415
480	SLE QP 1	0.08	-0.27	66.3	1.0219	36.1352	0.1505
480	SLE QP 2	0.09	-0.26	68.86	1.0613	37.5279	0.1451
480	SLD 1	5.56	0.72	68.45	1.0598	37.2834	-0.586
480	SLD 2	5.66	0.75	68.44	1.0594	37.28	-0.6003
480	SLD 3	5.69	-1.57	68.77	1.0791	37.4726	0.6622
480	SLD 4	5.78	-1.54	68.76	1.0787	37.4692	0.6479
480	SLD 5	1.52	3.5	68.25	1.0317	37.1683	-1.9649
480	SLD 6	1.59	3.51	68.24	1.0314	37.1661	-1.9742
480	SLD 7	1.94	-4.12	69.32	1.096	37.7988	2.1959
480	SLD 8	2	-4.11	69.32	1.0957	37.7966	2.1866
480	SLD 9	-1.83	3.59	68.4	1.0269	37.2592	-1.8964
480	SLD 10	-1.76	3.6	68.39	1.0267	37.257	-1.9057
480	SLD 11	-1.41	-4.04	69.47	1.0912	37.8898	2.2644
480	SLD 12	-1.35	-4.02	69.47	1.091	37.8875	2.2551
480	SLD 13	-5.61	1.02	68.95	1.0439	37.5866	-0.3577
480	SLD 14	-5.51	1.05	68.94	1.0436	37.5832	-0.372
480	SLD 15	-5.48	-1.27	69.27	1.0632	37.7758	0.8906
480	SLD 16	-5.39	-1.24	69.27	1.0628	37.7724	0.8763
480	SLV 1	12.89	1.97	67.91	1.0585	36.96	-1.5262
480	SLV 2	13.11	2.03	67.89	1.0576	36.952	-1.5596
480	SLV 3	13.18	-3.24	68.64	1.1024	37.3921	1.3171
480	SLV 4	13.4	-3.18	68.63	1.1015	37.3841	1.2838
480	SLV 5	3.45	8.3	67.46	0.9941	36.7035	-4.6631
480	SLV 6	3.59	8.34	67.45	0.9935	36.6985	-4.6844
480	SLV 7	4.42	-9.07	69.91	1.1403	38.1438	4.8148
480	SLV 8	4.56	-9.03	69.9	1.1398	38.1388	4.7935
480	SLV 9	-4.39	8.5	67.81	0.9829	36.917	-4.5033
480	SLV 10	-4.24	8.54	67.8	0.9823	36.912	-4.5246
480	SLV 11	-3.42	-8.86	70.27	1.1291	38.3573	4.9746
480	SLV 12	-3.28	-8.82	70.26	1.1286	38.3523	4.9533
480	SLV 13	-13.23	2.66	69.09	1.0212	37.6717	-0.9936
480	SLV 14	-13.01	2.72	69.07	1.0203	37.6637	-1.0269
480	SLV 15	-12.94	-2.55	69.82	1.0651	38.1038	1.8498
480	SLV 16	-12.72	-2.49	69.81	1.0642	38.0958	1.8165
480	CRTFP Ux+	0	0	0	0	0	0
480	CRTFP Ux-	0	0	0	0	0	0
480	CRTFP Uy+	0	0	0	0	0	0
480	CRTFP Uy-	0	0	0	0	0	0
482	SLU 1	-0.29	-0.38	51.26	-0.0046	-0.1309	-0.0029
482	SLU 2	-0.28	-0.29	51.22	-0.0045	-0.1306	-0.0027
482	SLU 3	-0.29	-0.38	52.26	-0.0046	-0.1337	-0.003
482	SLU 4	-0.29	-0.32	52.24	-0.0045	-0.1335	-0.0029
482	SLU 5	-0.29	-0.3	51.79	-0.0047	-0.1319	-0.0027
482	SLU 6	-0.29	-0.38	52.82	-0.0048	-0.1351	-0.003
482	SLU 7	-0.29	-0.33	52.8	-0.0047	-0.1349	-0.0029
482	SLU 8	-0.29	-0.4	52.39	-0.005	-0.1337	-0.0028

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
482	SLU 9	-0.29	-0.34	52.37	-0.0049	-0.1335	-0.0027
482	SLU 10	-0.27	-0.29	58.22	-0.0036	-0.1548	-0.0035
482	SLU 11	-0.28	-0.38	59.25	-0.0037	-0.158	-0.0038
482	SLU 12	-0.28	-0.32	59.23	-0.0037	-0.1578	-0.0037
482	SLU 13	-0.28	-0.3	58.78	-0.0038	-0.1562	-0.0034
482	SLU 14	-0.28	-0.38	59.82	-0.0039	-0.1594	-0.0038
482	SLU 15	-0.28	-0.33	59.8	-0.0039	-0.1592	-0.0037
482	SLU 16	-0.28	-0.4	59.38	-0.0041	-0.158	-0.0036
482	SLU 17	-0.28	-0.34	59.36	-0.0041	-0.1578	-0.0035
482	SLU 18	-0.27	-0.38	61.25	-0.0034	-0.1656	-0.004
482	SLU 19	-0.27	-0.33	61.23	-0.0033	-0.1654	-0.0039
482	SLU 20	-0.27	-0.39	61.81	-0.0036	-0.167	-0.004
482	SLU 21	-0.27	-0.33	61.79	-0.0035	-0.1668	-0.0039
482	SLU 22	-0.31	-0.35	57.71	-0.0035	-0.1476	-0.0041
482	SLU 23	-0.31	-0.26	57.68	-0.0033	-0.1473	-0.0039
482	SLU 24	-0.32	-0.34	58.71	-0.0035	-0.1504	-0.0043
482	SLU 25	-0.31	-0.29	58.69	-0.0034	-0.1502	-0.0042
482	SLU 26	-0.31	-0.26	58.24	-0.0035	-0.1487	-0.0039
482	SLU 27	-0.32	-0.35	59.28	-0.0037	-0.1518	-0.0042
482	SLU 28	-0.32	-0.29	59.26	-0.0036	-0.1516	-0.0041
482	SLU 29	-0.32	-0.36	58.84	-0.0039	-0.1504	-0.004
482	SLU 30	-0.32	-0.31	58.82	-0.0038	-0.1502	-0.0039
482	SLU 31	-0.3	-0.26	64.67	-0.0025	-0.1716	-0.0047
482	SLU 32	-0.3	-0.34	65.71	-0.0026	-0.1747	-0.0051
482	SLU 33	-0.3	-0.29	65.69	-0.0025	-0.1745	-0.0049
482	SLU 34	-0.3	-0.26	65.24	-0.0027	-0.173	-0.0047
482	SLU 35	-0.31	-0.35	66.27	-0.0028	-0.1761	-0.005
482	SLU 36	-0.31	-0.29	66.25	-0.0027	-0.1759	-0.0049
482	SLU 37	-0.3	-0.36	65.83	-0.003	-0.1747	-0.0048
482	SLU 38	-0.3	-0.31	65.81	-0.0029	-0.1745	-0.0047
482	SLU 39	-0.29	-0.35	67.7	-0.0022	-0.1823	-0.0052
482	SLU 40	-0.29	-0.3	67.68	-0.0021	-0.1821	-0.0051
482	SLU 41	-0.3	-0.36	68.27	-0.0024	-0.1837	-0.0052
482	SLU 42	-0.29	-0.3	68.25	-0.0024	-0.1835	-0.0051
482	SLU 43	-0.36	-0.51	64.42	-0.0064	-0.1644	-0.0033
482	SLU 44	-0.36	-0.42	64.39	-0.0063	-0.1641	-0.0031
482	SLU 45	-0.37	-0.5	65.42	-0.0064	-0.1672	-0.0035
482	SLU 46	-0.37	-0.45	65.4	-0.0063	-0.167	-0.0034
482	SLU 47	-0.37	-0.42	64.95	-0.0065	-0.1655	-0.0031
482	SLU 48	-0.37	-0.51	65.99	-0.0066	-0.1686	-0.0034
482	SLU 49	-0.37	-0.45	65.97	-0.0065	-0.1684	-0.0033
482	SLU 50	-0.37	-0.52	65.55	-0.0068	-0.1672	-0.0032
482	SLU 51	-0.37	-0.46	65.53	-0.0067	-0.167	-0.0031
482	SLU 52	-0.35	-0.42	71.38	-0.0054	-0.1884	-0.0039
482	SLU 53	-0.35	-0.5	72.42	-0.0055	-0.1915	-0.0043
482	SLU 54	-0.35	-0.45	72.4	-0.0054	-0.1913	-0.0042
482	SLU 55	-0.35	-0.42	71.95	-0.0056	-0.1898	-0.0039
482	SLU 56	-0.36	-0.51	72.98	-0.0057	-0.1929	-0.0042
482	SLU 57	-0.36	-0.45	72.96	-0.0056	-0.1927	-0.0041
482	SLU 58	-0.36	-0.52	72.55	-0.0059	-0.1915	-0.004
482	SLU 59	-0.36	-0.47	72.52	-0.0058	-0.1913	-0.0039
482	SLU 60	-0.34	-0.51	74.41	-0.0051	-0.1991	-0.0044
482	SLU 61	-0.34	-0.45	74.39	-0.0051	-0.1989	-0.0043
482	SLU 62	-0.35	-0.52	74.98	-0.0053	-0.2005	-0.0044
482	SLU 63	-0.35	-0.46	74.96	-0.0053	-0.2003	-0.0043
482	SLU 64	-0.39	-0.48	70.88	-0.0053	-0.1811	-0.0046
482	SLU 65	-0.39	-0.38	70.84	-0.0051	-0.1808	-0.0044
482	SLU 66	-0.39	-0.47	71.88	-0.0052	-0.1839	-0.0047
482	SLU 67	-0.39	-0.41	71.86	-0.0052	-0.1837	-0.0046
482	SLU 68	-0.39	-0.39	71.41	-0.0053	-0.1822	-0.0043
482	SLU 69	-0.4	-0.48	72.44	-0.0054	-0.1853	-0.0047
482	SLU 70	-0.4	-0.42	72.42	-0.0054	-0.1851	-0.0046
482	SLU 71	-0.4	-0.49	72	-0.0057	-0.1839	-0.0045
482	SLU 72	-0.39	-0.43	71.98	-0.0056	-0.1837	-0.0044
482	SLU 73	-0.37	-0.38	77.84	-0.0042	-0.2051	-0.0052
482	SLU 74	-0.38	-0.47	78.87	-0.0044	-0.2082	-0.0055
482	SLU 75	-0.38	-0.41	78.85	-0.0043	-0.208	-0.0054
482	SLU 76	-0.38	-0.39	78.4	-0.0044	-0.2065	-0.0051
482	SLU 77	-0.38	-0.48	79.44	-0.0046	-0.2096	-0.0055
482	SLU 78	-0.38	-0.42	79.42	-0.0045	-0.2094	-0.0054
482	SLU 79	-0.38	-0.49	79	-0.0048	-0.2082	-0.0053
482	SLU 80	-0.38	-0.43	78.98	-0.0047	-0.208	-0.0052
482	SLU 81	-0.37	-0.48	80.87	-0.004	-0.2158	-0.0057
482	SLU 82	-0.37	-0.42	80.85	-0.0039	-0.2156	-0.0056
482	SLU 83	-0.37	-0.48	81.43	-0.0042	-0.2172	-0.0056
482	SLU 84	-0.37	-0.43	81.41	-0.0041	-0.217	-0.0055
482	SLE RA 1	-0.29	-0.37	53.1	-0.0043	-0.1357	-0.0032
482	SLE RA 2	-0.29	-0.31	53.08	-0.0042	-0.1354	-0.0031
482	SLE RA 3	-0.3	-0.37	53.77	-0.0043	-0.1375	-0.0033
482	SLE RA 4	-0.3	-0.33	53.76	-0.0042	-0.1374	-0.0033
482	SLE RA 5	-0.29	-0.32	53.45	-0.0043	-0.1364	-0.0031
482	SLE RA 6	-0.3	-0.37	54.15	-0.0044	-0.1385	-0.0033
482	SLE RA 7	-0.3	-0.34	54.13	-0.0044	-0.1383	-0.0032
482	SLE RA 8	-0.3	-0.38	53.85	-0.0046	-0.1375	-0.0032
482	SLE RA 9	-0.3	-0.34	53.84	-0.0045	-0.1374	-0.0031
482	SLE RA 10	-0.28	-0.31	57.74	-0.0036	-0.1516	-0.0036
482	SLE RA 11	-0.29	-0.37	58.43	-0.0037	-0.1537	-0.0039
482	SLE RA 12	-0.29	-0.33	58.42	-0.0037	-0.1536	-0.0038
482	SLE RA 13	-0.29	-0.32	58.12	-0.0038	-0.1526	-0.0036
482	SLE RA 14	-0.29	-0.37	58.81	-0.0038	-0.1547	-0.0038
482	SLE RA 15	-0.29	-0.34	58.79	-0.0038	-0.1545	-0.0038

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
482	SLE RA 16	-0.29	-0.38	58.52	-0.004	-0.1537	-0.0037
482	SLE RA 17	-0.29	-0.35	58.5	-0.0039	-0.1536	-0.0036
482	SLE RA 18	-0.28	-0.37	59.76	-0.0035	-0.1588	-0.004
482	SLE RA 19	-0.28	-0.34	59.75	-0.0034	-0.1587	-0.0039
482	SLE RA 20	-0.28	-0.38	60.14	-0.0036	-0.1597	-0.004
482	SLE RA 21	-0.28	-0.34	60.12	-0.0035	-0.1596	-0.0039
482	SLE FR 1	-0.29	-0.37	53.1	-0.0043	-0.1357	-0.0032
482	SLE FR 2	-0.29	-0.36	53.1	-0.0043	-0.1356	-0.0032
482	SLE FR 3	-0.29	-0.38	53.25	-0.0043	-0.136	-0.0032
482	SLE FR 4	-0.29	-0.36	55.09	-0.004	-0.1426	-0.0034
482	SLE FR 5	-0.29	-0.38	55.25	-0.0041	-0.143	-0.0034
482	SLE FR 6	-0.29	-0.37	56.43	-0.0039	-0.1472	-0.0036
482	SLE QP 1	-0.29	-0.37	53.1	-0.0043	-0.1357	-0.0032
482	SLE QP 2	-0.29	-0.37	55.1	-0.004	-0.1426	-0.0035
482	SLD 1	4.32	0.43	58.37	-0.0067	-0.0554	0.0059
482	SLD 2	4.4	0.18	58.4	-0.0064	-0.0573	0.0104
482	SLD 3	4.43	-1.36	58.72	-0.0043	-0.0716	0.0076
482	SLD 4	4.51	-1.6	58.76	-0.0041	-0.0735	0.0121
482	SLD 5	0.92	2.62	55.53	-0.0084	-0.0916	-0.004
482	SLD 6	0.98	2.46	55.56	-0.0083	-0.0928	-0.001
482	SLD 7	1.27	-3.34	56.72	-0.0006	-0.1455	0.0016
482	SLD 8	1.32	-3.49	56.74	-0.0004	-0.1467	0.0045
482	SLD 9	-1.9	2.75	53.46	-0.0076	-0.1385	-0.0114
482	SLD 10	-1.85	2.59	53.48	-0.0075	-0.1397	-0.0085
482	SLD 11	-1.55	-3.21	54.64	0.0002	-0.1924	-0.0059
482	SLD 12	-1.5	-3.37	54.66	0.0004	-0.1936	-0.003
482	SLD 13	-5.08	0.86	51.44	-0.004	-0.2117	-0.019
482	SLD 14	-5	0.61	51.48	-0.0037	-0.2136	-0.0145
482	SLD 15	-4.98	-0.93	51.8	-0.0017	-0.2279	-0.0173
482	SLD 16	-4.9	-1.18	51.83	-0.0014	-0.2298	-0.0128
482	SLV 1	10.49	1.45	62.76	-0.0102	0.0609	0.0185
482	SLV 2	10.68	0.88	62.83	-0.0096	0.0566	0.0289
482	SLV 3	10.74	-2.63	63.57	-0.0048	0.024	0.0223
482	SLV 4	10.93	-3.2	63.64	-0.0042	0.0197	0.0328
482	SLV 5	2.54	6.45	56.16	-0.0141	-0.0249	-0.0045
482	SLV 6	2.67	6.08	56.21	-0.0137	-0.0277	0.0022
482	SLV 7	3.36	-7.13	58.85	0.0037	-0.1478	0.0084
482	SLV 8	3.48	-7.5	58.9	0.0041	-0.1505	0.015
482	SLV 9	-4.05	6.75	51.3	-0.0122	-0.1347	-0.0219
482	SLV 10	-3.93	6.38	51.35	-0.0118	-0.1374	-0.0153
482	SLV 11	-3.24	-6.83	53.99	0.0056	-0.2575	-0.0091
482	SLV 12	-3.12	-7.2	54.04	0.006	-0.2603	-0.0024
482	SLV 13	-11.5	2.45	46.56	-0.0038	-0.3049	-0.0397
482	SLV 14	-11.31	1.88	46.63	-0.0032	-0.3092	-0.0292
482	SLV 15	-11.26	-1.62	47.37	0.0015	-0.3418	-0.0358
482	SLV 16	-11.07	-2.19	47.44	0.0021	-0.3461	-0.0254
482	CRTFP Ux+	0	0	0	0	0	0
482	CRTFP Ux-	0	0	0	0	0	0
486	SLU 1	0.42	-0.34	50.4	-0.0124	0.091	-0.0062
486	SLU 2	0.42	-0.25	50.38	-0.0123	0.0906	-0.0064
486	SLU 3	0.43	-0.34	51.37	-0.0126	0.0925	-0.0063
486	SLU 4	0.43	-0.29	51.35	-0.0125	0.0923	-0.0064
486	SLU 5	0.42	-0.26	50.93	-0.0126	0.0911	-0.0066
486	SLU 6	0.43	-0.35	51.92	-0.0129	0.0931	-0.0065
486	SLU 7	0.43	-0.3	51.91	-0.0129	0.0929	-0.0066
486	SLU 8	0.43	-0.37	51.51	-0.013	0.0921	-0.0066
486	SLU 9	0.43	-0.31	51.5	-0.0129	0.0919	-0.0067
486	SLU 10	0.45	-0.24	57.1	-0.0125	0.1075	-0.0066
486	SLU 11	0.46	-0.33	58.09	-0.0129	0.1094	-0.0066
486	SLU 12	0.46	-0.27	58.08	-0.0128	0.1092	-0.0067
486	SLU 13	0.46	-0.25	57.66	-0.0129	0.108	-0.0068
486	SLU 14	0.47	-0.34	58.65	-0.0132	0.11	-0.0068
486	SLU 15	0.47	-0.28	58.63	-0.0131	0.1098	-0.0068
486	SLU 16	0.46	-0.35	58.24	-0.0133	0.109	-0.0069
486	SLU 17	0.46	-0.3	58.22	-0.0132	0.1088	-0.0069
486	SLU 18	0.47	-0.32	60.01	-0.0128	0.1151	-0.0066
486	SLU 19	0.47	-0.27	60	-0.0127	0.1149	-0.0067
486	SLU 20	0.47	-0.33	60.56	-0.0131	0.1157	-0.0068
486	SLU 21	0.47	-0.28	60.55	-0.013	0.1154	-0.0069
486	SLU 22	0.46	-0.31	56.66	-0.0124	0.0982	-0.0059
486	SLU 23	0.46	-0.22	56.64	-0.0123	0.0978	-0.0061
486	SLU 24	0.48	-0.31	57.63	-0.0127	0.0998	-0.006
486	SLU 25	0.47	-0.25	57.61	-0.0126	0.0995	-0.0061
486	SLU 26	0.47	-0.23	57.19	-0.0126	0.0984	-0.0063
486	SLU 27	0.48	-0.32	58.18	-0.013	0.1004	-0.0062
486	SLU 28	0.48	-0.26	58.17	-0.0129	0.1001	-0.0063
486	SLU 29	0.48	-0.33	57.77	-0.0131	0.0994	-0.0063
486	SLU 30	0.48	-0.28	57.76	-0.013	0.0991	-0.0064
486	SLU 31	0.5	-0.2	63.36	-0.0126	0.1147	-0.0063
486	SLU 32	0.51	-0.29	64.35	-0.0129	0.1167	-0.0063
486	SLU 33	0.51	-0.24	64.34	-0.0129	0.1164	-0.0064
486	SLU 34	0.5	-0.21	63.92	-0.0129	0.1153	-0.0065
486	SLU 35	0.52	-0.3	64.91	-0.0133	0.1173	-0.0065
486	SLU 36	0.52	-0.25	64.89	-0.0132	0.117	-0.0065
486	SLU 37	0.51	-0.32	64.5	-0.0133	0.1163	-0.0066
486	SLU 38	0.51	-0.26	64.48	-0.0133	0.116	-0.0066
486	SLU 39	0.52	-0.29	66.27	-0.0128	0.1223	-0.0063
486	SLU 40	0.51	-0.23	66.26	-0.0127	0.1221	-0.0064
486	SLU 41	0.52	-0.3	66.82	-0.0131	0.1229	-0.0065
486	SLU 42	0.52	-0.24	66.81	-0.0131	0.1227	-0.0066
486	SLU 43	0.53	-0.46	63.38	-0.0161	0.1158	-0.0082

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
486	SLU 44	0.52	-0.37	63.35	-0.0159	0.1154	-0.0083
486	SLU 45	0.54	-0.46	64.34	-0.0163	0.1174	-0.0083
486	SLU 46	0.54	-0.4	64.33	-0.0162	0.1171	-0.0084
486	SLU 47	0.53	-0.38	63.91	-0.0163	0.116	-0.0085
486	SLU 48	0.54	-0.47	64.9	-0.0166	0.1179	-0.0085
486	SLU 49	0.54	-0.41	64.88	-0.0166	0.1177	-0.0086
486	SLU 50	0.54	-0.48	64.49	-0.0167	0.1169	-0.0086
486	SLU 51	0.54	-0.43	64.47	-0.0166	0.1167	-0.0087
486	SLU 52	0.56	-0.35	70.08	-0.0162	0.1323	-0.0086
486	SLU 53	0.57	-0.44	71.07	-0.0166	0.1343	-0.0086
486	SLU 54	0.57	-0.39	71.05	-0.0165	0.134	-0.0086
486	SLU 55	0.57	-0.36	70.63	-0.0165	0.1329	-0.0088
486	SLU 56	0.58	-0.45	71.62	-0.0169	0.1348	-0.0087
486	SLU 57	0.58	-0.4	71.61	-0.0168	0.1346	-0.0088
486	SLU 58	0.57	-0.46	71.21	-0.017	0.1338	-0.0088
486	SLU 59	0.57	-0.41	71.2	-0.0169	0.1336	-0.0089
486	SLU 60	0.58	-0.44	72.98	-0.0164	0.1399	-0.0086
486	SLU 61	0.58	-0.38	72.97	-0.0164	0.1397	-0.0087
486	SLU 62	0.58	-0.45	73.54	-0.0168	0.1405	-0.0088
486	SLU 63	0.58	-0.39	73.52	-0.0167	0.1403	-0.0088
486	SLU 64	0.57	-0.42	69.64	-0.0161	0.123	-0.0079
486	SLU 65	0.57	-0.33	69.61	-0.016	0.1226	-0.008
486	SLU 66	0.58	-0.42	70.6	-0.0164	0.1246	-0.008
486	SLU 67	0.58	-0.37	70.59	-0.0163	0.1243	-0.0081
486	SLU 68	0.58	-0.34	70.17	-0.0163	0.1232	-0.0082
486	SLU 69	0.59	-0.43	71.16	-0.0167	0.1252	-0.0082
486	SLU 70	0.59	-0.38	71.14	-0.0166	0.1249	-0.0083
486	SLU 71	0.59	-0.45	70.75	-0.0168	0.1242	-0.0083
486	SLU 72	0.58	-0.39	70.73	-0.0167	0.1239	-0.0084
486	SLU 73	0.61	-0.32	76.34	-0.0163	0.1395	-0.0083
486	SLU 74	0.62	-0.41	77.33	-0.0166	0.1415	-0.0083
486	SLU 75	0.62	-0.35	77.31	-0.0166	0.1412	-0.0083
486	SLU 76	0.61	-0.33	76.89	-0.0166	0.1401	-0.0085
486	SLU 77	0.63	-0.42	77.88	-0.017	0.1421	-0.0084
486	SLU 78	0.63	-0.36	77.87	-0.0169	0.1418	-0.0085
486	SLU 79	0.62	-0.43	77.47	-0.017	0.1411	-0.0085
486	SLU 80	0.62	-0.38	77.46	-0.017	0.1408	-0.0086
486	SLU 81	0.62	-0.4	79.24	-0.0165	0.1471	-0.0083
486	SLU 82	0.62	-0.35	79.23	-0.0164	0.1469	-0.0084
486	SLU 83	0.63	-0.41	79.8	-0.0168	0.1477	-0.0085
486	SLU 84	0.63	-0.36	79.78	-0.0168	0.1475	-0.0085
486	SLE RA 1	0.43	-0.33	52.19	-0.0124	0.093	-0.0062
486	SLE RA 2	0.43	-0.27	52.18	-0.0123	0.0927	-0.0062
486	SLE RA 3	0.44	-0.33	52.83	-0.0125	0.0941	-0.0062
486	SLE RA 4	0.44	-0.3	52.82	-0.0125	0.0939	-0.0063
486	SLE RA 5	0.43	-0.28	52.55	-0.0125	0.0931	-0.0064
486	SLE RA 6	0.44	-0.34	53.2	-0.0128	0.0945	-0.0063
486	SLE RA 7	0.44	-0.3	53.19	-0.0127	0.0943	-0.0064
486	SLE RA 8	0.44	-0.35	52.93	-0.0128	0.0938	-0.0064
486	SLE RA 9	0.44	-0.31	52.92	-0.0128	0.0936	-0.0065
486	SLE RA 10	0.45	-0.26	56.66	-0.0125	0.104	-0.0064
486	SLE RA 11	0.46	-0.32	57.32	-0.0127	0.1053	-0.0064
486	SLE RA 12	0.46	-0.29	57.31	-0.0127	0.1052	-0.0064
486	SLE RA 13	0.46	-0.27	57.03	-0.0127	0.1044	-0.0065
486	SLE RA 14	0.47	-0.33	57.69	-0.0129	0.1057	-0.0065
486	SLE RA 15	0.47	-0.29	57.68	-0.0129	0.1056	-0.0066
486	SLE RA 16	0.46	-0.34	57.41	-0.013	0.1051	-0.0066
486	SLE RA 17	0.46	-0.3	57.4	-0.013	0.1049	-0.0066
486	SLE RA 18	0.46	-0.32	58.6	-0.0126	0.1091	-0.0064
486	SLE RA 19	0.46	-0.28	58.59	-0.0126	0.109	-0.0064
486	SLE RA 20	0.47	-0.33	58.97	-0.0129	0.1095	-0.0065
486	SLE RA 21	0.47	-0.29	58.96	-0.0128	0.1093	-0.0066
486	SLE FR 1	0.43	-0.33	52.19	-0.0124	0.093	-0.0062
486	SLE FR 2	0.43	-0.32	52.19	-0.0124	0.093	-0.0062
486	SLE FR 3	0.43	-0.34	52.34	-0.0125	0.0932	-0.0062
486	SLE FR 4	0.44	-0.32	54.11	-0.0124	0.0978	-0.0062
486	SLE FR 5	0.44	-0.33	54.26	-0.0125	0.098	-0.0063
486	SLE FR 6	0.45	-0.33	55.39	-0.0125	0.1011	-0.0063
486	SLE QP 1	0.43	-0.33	52.19	-0.0124	0.093	-0.0062
486	SLE QP 2	0.44	-0.33	54.11	-0.0125	0.0978	-0.0062
486	SLD 1	5.11	0.64	51	-0.0123	0.1104	0.0108
486	SLD 2	5.19	0.88	50.97	-0.0125	0.1088	0.0153
486	SLD 3	5	-1.1	51.26	-0.0101	0.1269	0.0093
486	SLD 4	5.08	-0.87	51.23	-0.0103	0.1254	0.0138
486	SLD 5	1.99	2.57	52.79	-0.0156	0.0767	0.0004
486	SLD 6	2.04	2.72	52.77	-0.0157	0.0757	0.0033
486	SLD 7	1.63	-3.25	53.66	-0.0085	0.132	-0.0046
486	SLD 8	1.69	-3.1	53.64	-0.0086	0.131	-0.0017
486	SLD 9	-0.8	2.44	54.59	-0.0163	0.0647	-0.0107
486	SLD 10	-0.75	2.6	54.57	-0.0164	0.0637	-0.0078
486	SLD 11	-1.16	-3.38	55.46	-0.0092	0.12	-0.0157
486	SLD 12	-1.11	-3.23	55.44	-0.0093	0.1189	-0.0128
486	SLD 13	-4.2	0.21	56.99	-0.0146	0.0703	-0.0262
486	SLD 14	-4.12	0.45	56.96	-0.0148	0.0687	-0.0217
486	SLD 15	-4.31	-1.54	57.26	-0.0124	0.0869	-0.0277
486	SLD 16	-4.23	-1.3	57.23	-0.0127	0.0853	-0.0232
486	SLV 1	11.35	1.89	46.84	-0.0119	0.1274	0.0336
486	SLV 2	11.55	2.44	46.77	-0.0124	0.1238	0.044
486	SLV 3	11.1	-2.09	47.44	-0.0071	0.1651	0.0301
486	SLV 4	11.3	-1.54	47.37	-0.0076	0.1614	0.0405
486	SLV 5	4.06	6.28	51.03	-0.0196	0.0502	0.0092

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
486	SLV 6	4.19	6.63	50.99	-0.0199	0.0479	0.0159
486	SLV 7	3.23	-6.99	53.03	-0.0034	0.1757	-0.0024
486	SLV 8	3.35	-6.64	52.98	-0.0037	0.1734	0.0043
486	SLV 9	-2.47	5.98	55.24	-0.0212	0.0223	-0.0168
486	SLV 10	-2.34	6.33	55.2	-0.0215	0.0199	-0.0101
486	SLV 11	-3.3	-7.29	57.24	-0.005	0.1478	-0.0283
486	SLV 12	-3.18	-6.94	57.19	-0.0053	0.1455	-0.0216
486	SLV 13	-10.42	0.88	60.86	-0.0173	0.0343	-0.053
486	SLV 14	-10.22	1.43	60.79	-0.0178	0.0306	-0.0426
486	SLV 15	-10.67	-3.1	61.46	-0.0125	0.0719	-0.0565
486	SLV 16	-10.47	-2.55	61.39	-0.013	0.0683	-0.046
486	CRTFP Ux+	0	0	0	0	0	0
486	CRTFP Ux-	0	0	0	0	0	0
487	SLU 1	0.41	0.47	32.64	0.0369	10.0057	-0.1676
487	SLU 2	0.41	0.56	32.63	0.037	10.0024	-0.1968
487	SLU 3	0.43	0.49	33.27	0.0376	10.1963	-0.1729
487	SLU 4	0.42	0.54	33.27	0.0377	10.1943	-0.1904
487	SLU 5	0.42	0.56	32.99	0.0374	10.1115	-0.1983
487	SLU 6	0.43	0.49	33.64	0.0381	10.3054	-0.1745
487	SLU 7	0.43	0.54	33.63	0.0381	10.3034	-0.192
487	SLU 8	0.43	0.48	33.37	0.0377	10.2239	-0.1707
487	SLU 9	0.42	0.53	33.36	0.0378	10.2219	-0.1882
487	SLU 10	0.44	0.66	36.78	0.0425	11.2682	-0.2324
487	SLU 11	0.45	0.59	37.43	0.0432	11.462	-0.2085
487	SLU 12	0.45	0.64	37.42	0.0432	11.4601	-0.226
487	SLU 13	0.44	0.66	37.15	0.0429	11.3773	-0.2339
487	SLU 14	0.46	0.6	37.79	0.0436	11.5711	-0.2101
487	SLU 15	0.45	0.65	37.79	0.0436	11.5692	-0.2275
487	SLU 16	0.45	0.58	37.52	0.0432	11.4897	-0.2063
487	SLU 17	0.45	0.63	37.52	0.0433	11.4877	-0.2238
487	SLU 18	0.45	0.62	38.57	0.0447	11.814	-0.2184
487	SLU 19	0.45	0.67	38.57	0.0448	11.812	-0.2359
487	SLU 20	0.46	0.62	38.94	0.0451	11.9231	-0.22
487	SLU 21	0.45	0.67	38.93	0.0452	11.9211	-0.2375
487	SLU 22	0.45	0.56	36.63	0.0422	11.2185	-0.198
487	SLU 23	0.45	0.64	36.62	0.0423	11.2152	-0.2271
487	SLU 24	0.46	0.58	37.26	0.043	11.4091	-0.2033
487	SLU 25	0.46	0.63	37.25	0.0431	11.4071	-0.2207
487	SLU 26	0.46	0.65	36.98	0.0427	11.3243	-0.2287
487	SLU 27	0.47	0.58	37.62	0.0434	11.5182	-0.2048
487	SLU 28	0.47	0.63	37.62	0.0435	11.5162	-0.2223
487	SLU 29	0.47	0.57	37.36	0.043	11.4367	-0.2011
487	SLU 30	0.46	0.62	37.35	0.0431	11.4347	-0.2186
487	SLU 31	0.48	0.75	40.77	0.0478	12.481	-0.2627
487	SLU 32	0.49	0.68	41.42	0.0485	12.6749	-0.2388
487	SLU 33	0.49	0.73	41.41	0.0486	12.6729	-0.2563
487	SLU 34	0.48	0.75	41.14	0.0482	12.5901	-0.2643
487	SLU 35	0.5	0.68	41.78	0.0489	12.784	-0.2404
487	SLU 36	0.49	0.73	41.77	0.049	12.782	-0.2579
487	SLU 37	0.49	0.67	41.51	0.0485	12.7025	-0.2367
487	SLU 38	0.49	0.72	41.51	0.0486	12.7005	-0.2542
487	SLU 39	0.49	0.71	42.56	0.0501	13.0268	-0.2488
487	SLU 40	0.49	0.76	42.56	0.0501	13.0248	-0.2663
487	SLU 41	0.5	0.71	42.93	0.0505	13.1359	-0.2504
487	SLU 42	0.49	0.76	42.92	0.0506	13.1339	-0.2678
487	SLU 43	0.52	0.59	41.06	0.0461	12.5916	-0.2075
487	SLU 44	0.52	0.67	41.05	0.0462	12.5883	-0.2367
487	SLU 45	0.54	0.6	41.69	0.0469	12.7821	-0.2128
487	SLU 46	0.53	0.65	41.69	0.0469	12.7801	-0.2303
487	SLU 47	0.53	0.67	41.42	0.0466	12.6974	-0.2382
487	SLU 48	0.54	0.61	42.06	0.0473	12.8912	-0.2144
487	SLU 49	0.54	0.66	42.05	0.0474	12.8893	-0.2318
487	SLU 50	0.54	0.6	41.79	0.0469	12.8098	-0.2106
487	SLU 51	0.53	0.65	41.78	0.047	12.8078	-0.2281
487	SLU 52	0.55	0.77	45.21	0.0517	13.8541	-0.2722
487	SLU 53	0.56	0.7	45.85	0.0524	14.0479	-0.2484
487	SLU 54	0.56	0.75	45.84	0.0525	14.0459	-0.2659
487	SLU 55	0.55	0.78	45.57	0.0521	13.9632	-0.2738
487	SLU 56	0.57	0.71	46.21	0.0528	14.157	-0.2499
487	SLU 57	0.57	0.76	46.21	0.0529	14.155	-0.2674
487	SLU 58	0.56	0.7	45.94	0.0524	14.0756	-0.2462
487	SLU 59	0.56	0.75	45.94	0.0525	14.0736	-0.2637
487	SLU 60	0.56	0.73	47	0.054	14.3999	-0.2583
487	SLU 61	0.56	0.78	46.99	0.054	14.3979	-0.2758
487	SLU 62	0.57	0.74	47.36	0.0544	14.509	-0.2599
487	SLU 63	0.57	0.79	47.36	0.0544	14.507	-0.2774
487	SLU 64	0.56	0.67	45.05	0.0514	13.8044	-0.2378
487	SLU 65	0.56	0.76	45.04	0.0515	13.8011	-0.267
487	SLU 66	0.58	0.69	45.68	0.0522	13.995	-0.2431
487	SLU 67	0.57	0.74	45.68	0.0523	13.993	-0.2606
487	SLU 68	0.57	0.76	45.4	0.052	13.9102	-0.2686
487	SLU 69	0.58	0.69	46.05	0.0526	14.1041	-0.2447
487	SLU 70	0.58	0.74	46.04	0.0527	14.1021	-0.2622
487	SLU 71	0.58	0.68	45.78	0.0523	14.0226	-0.241
487	SLU 72	0.57	0.73	45.77	0.0523	14.0206	-0.2585
487	SLU 73	0.59	0.86	49.2	0.0571	15.0669	-0.3026
487	SLU 74	0.6	0.79	49.84	0.0577	15.2608	-0.2787
487	SLU 75	0.6	0.84	49.83	0.0578	15.2588	-0.2962
487	SLU 76	0.59	0.86	49.56	0.0575	15.176	-0.3041
487	SLU 77	0.61	0.79	50.2	0.0581	15.3699	-0.2803
487	SLU 78	0.6	0.84	50.2	0.0582	15.3679	-0.2978

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
487	SLU 79	0.6	0.78	49.93	0.0578	15.2884	-0.2765
487	SLU 80	0.6	0.83	49.93	0.0578	15.2864	-0.294
487	SLU 81	0.6	0.82	50.99	0.0593	15.6127	-0.2887
487	SLU 82	0.6	0.87	50.98	0.0594	15.6107	-0.3062
487	SLU 83	0.61	0.82	51.35	0.0597	15.7218	-0.2902
487	SLU 84	0.6	0.87	51.35	0.0598	15.7198	-0.3077
487	SLE RA 1	0.43	0.5	33.78	0.0384	10.3522	-0.1763
487	SLE RA 2	0.42	0.55	33.77	0.0385	10.35	-0.1957
487	SLE RA 3	0.43	0.51	34.2	0.0389	10.4793	-0.1798
487	SLE RA 4	0.43	0.54	34.2	0.039	10.4779	-0.1915
487	SLE RA 5	0.43	0.56	34.01	0.0387	10.4227	-0.1968
487	SLE RA 6	0.44	0.51	34.44	0.0392	10.552	-0.1809
487	SLE RA 7	0.44	0.55	34.44	0.0392	10.5507	-0.1925
487	SLE RA 8	0.43	0.51	34.26	0.0389	10.4977	-0.1784
487	SLE RA 9	0.43	0.54	34.26	0.039	10.4964	-0.19
487	SLE RA 10	0.44	0.62	36.54	0.0421	11.1939	-0.2194
487	SLE RA 11	0.45	0.58	36.97	0.0426	11.3231	-0.2035
487	SLE RA 12	0.45	0.61	36.97	0.0426	11.3218	-0.2152
487	SLE RA 13	0.44	0.63	36.78	0.0424	11.2666	-0.2205
487	SLE RA 14	0.45	0.58	37.21	0.0429	11.3959	-0.2046
487	SLE RA 15	0.45	0.61	37.21	0.0429	11.3945	-0.2162
487	SLE RA 16	0.45	0.57	37.03	0.0426	11.3416	-0.2021
487	SLE RA 17	0.45	0.61	37.03	0.0427	11.3402	-0.2137
487	SLE RA 18	0.45	0.6	37.73	0.0436	11.5577	-0.2102
487	SLE RA 19	0.45	0.63	37.73	0.0437	11.5564	-0.2218
487	SLE RA 20	0.45	0.6	37.98	0.0439	11.6305	-0.2112
487	SLE RA 21	0.45	0.63	37.97	0.044	11.6291	-0.2229
487	SLE FR 1	0.43	0.5	33.78	0.0384	10.3522	-0.1763
487	SLE FR 2	0.42	0.51	33.78	0.0384	10.3518	-0.1802
487	SLE FR 3	0.43	0.5	33.87	0.0385	10.3813	-0.1767
487	SLE FR 4	0.43	0.54	34.96	0.04	10.7134	-0.1903
487	SLE FR 5	0.43	0.53	35.06	0.0401	10.743	-0.1869
487	SLE FR 6	0.44	0.55	35.76	0.041	10.955	-0.1932
487	SLE QP 1	0.43	0.5	33.78	0.0384	10.3522	-0.1763
487	SLE QP 2	0.43	0.53	34.96	0.04	10.7139	-0.1865
487	SLD 1	3.43	0.92	28.52	0.0318	8.773	-0.3236
487	SLD 2	3.49	1.31	28.52	0.0316	8.7717	-0.4575
487	SLD 3	3.34	-0.57	28.36	0.0325	8.8271	0.1977
487	SLD 4	3.4	-0.18	28.37	0.0324	8.8258	0.0638
487	SLD 5	1.46	2.84	33.27	0.0364	10.0498	-0.9949
487	SLD 6	1.49	3.09	33.27	0.0363	10.049	-1.0818
487	SLD 7	1.16	-2.13	32.75	0.0389	10.2301	0.7428
487	SLD 8	1.2	-1.88	32.75	0.0388	10.2292	0.6559
487	SLD 9	-0.33	2.93	37.18	0.0411	11.1985	-1.0288
487	SLD 10	-0.29	3.18	37.18	0.041	11.1976	-1.1157
487	SLD 11	-0.63	-2.03	36.66	0.0437	11.3788	0.7089
487	SLD 12	-0.59	-1.78	36.66	0.0435	11.3779	0.622
487	SLD 13	-2.53	1.24	41.56	0.0475	12.602	-0.4367
487	SLD 14	-2.47	1.62	41.56	0.0474	12.6006	-0.5706
487	SLD 15	-2.62	-0.25	41.41	0.0483	12.656	0.0846
487	SLD 16	-2.56	0.13	41.41	0.0481	12.6547	-0.0493
487	SLV 1	7.43	1.4	19.88	0.0208	6.173	-0.4911
487	SLV 2	7.57	2.3	19.89	0.0204	6.1699	-0.8031
487	SLV 3	7.23	-1.98	19.52	0.0226	6.2987	0.6946
487	SLV 4	7.36	-1.09	19.53	0.0222	6.2956	0.3826
487	SLV 5	2.82	5.78	30.99	0.0316	9.1615	-2.0233
487	SLV 6	2.91	6.35	30.99	0.0314	9.1595	-2.2226
487	SLV 7	2.13	-5.51	29.78	0.0375	9.5805	1.929
487	SLV 8	2.22	-4.94	29.79	0.0372	9.5785	1.7298
487	SLV 9	-1.36	6	40.14	0.0427	11.8493	-2.1027
487	SLV 10	-1.27	6.57	40.15	0.0424	11.8473	-2.3019
487	SLV 11	-2.05	-5.29	38.94	0.0485	12.2682	1.8497
487	SLV 12	-1.96	-4.72	38.94	0.0483	12.2662	1.6504
487	SLV 13	-6.5	2.15	50.4	0.0577	15.1322	-0.7555
487	SLV 14	-6.36	3.04	50.41	0.0573	15.1291	-1.0675
487	SLV 15	-6.7	-1.24	50.04	0.0595	15.2578	0.4302
487	SLV 16	-6.57	-0.35	50.04	0.0591	15.2547	0.1182
487	CRTFP Ux+	0	0	0	0	0	0
487	CRTFP Ux-	0	0	0	0	0	0
489	SLU 1	-0.17	-0.08	26.62	0.0286	-5.6382	-0.0201
489	SLU 2	-0.17	0	26.61	0.0288	-5.6356	-0.0012
489	SLU 3	-0.18	-0.07	27.14	0.0293	-5.7458	-0.0188
489	SLU 4	-0.17	-0.03	27.14	0.0293	-5.7442	-0.0074
489	SLU 5	-0.17	0	26.91	0.0291	-5.697	-0.0003
489	SLU 6	-0.18	-0.07	27.44	0.0296	-5.8072	-0.0179
489	SLU 7	-0.18	-0.03	27.44	0.0297	-5.8056	-0.0065
489	SLU 8	-0.18	-0.07	27.22	0.0293	-5.7611	-0.0183
489	SLU 9	-0.18	-0.03	27.21	0.0294	-5.7595	-0.007
489	SLU 10	-0.16	0.01	30.04	0.0333	-6.3595	0.0019
489	SLU 11	-0.17	-0.06	30.58	0.0338	-6.4696	-0.0157
489	SLU 12	-0.16	-0.02	30.57	0.0338	-6.4681	-0.0043
489	SLU 13	-0.16	0.01	30.34	0.0336	-6.4209	0.0028
489	SLU 14	-0.17	-0.06	30.88	0.0341	-6.5311	-0.0147
489	SLU 15	-0.17	-0.01	30.87	0.0341	-6.5295	-0.0034
489	SLU 16	-0.17	-0.06	30.65	0.0338	-6.4849	-0.0152
489	SLU 17	-0.17	-0.01	30.65	0.0338	-6.4834	-0.0038
489	SLU 18	-0.16	-0.06	31.53	0.0351	-6.6723	-0.0156
489	SLU 19	-0.16	-0.02	31.52	0.0351	-6.6708	-0.0043
489	SLU 20	-0.16	-0.06	31.83	0.0354	-6.7338	-0.0147
489	SLU 21	-0.16	-0.01	31.82	0.0355	-6.7322	-0.0034
489	SLU 22	-0.18	-0.07	29.92	0.033	-6.3303	-0.0165

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
489	SLU 23	-0.18	0.01	29.91	0.0331	-6.3277	0.0024
489	SLU 24	-0.19	-0.06	30.44	0.0336	-6.4379	-0.0152
489	SLU 25	-0.19	-0.01	30.43	0.0337	-6.4363	-0.0038
489	SLU 26	-0.18	0.01	30.21	0.0335	-6.3891	0.0033
489	SLU 27	-0.19	-0.06	30.74	0.0339	-6.4993	-0.0142
489	SLU 28	-0.19	-0.01	30.73	0.034	-6.4977	-0.0029
489	SLU 29	-0.19	-0.06	30.52	0.0336	-6.4532	-0.0147
489	SLU 30	-0.19	-0.01	30.51	0.0337	-6.4516	-0.0033
489	SLU 31	-0.17	0.02	33.34	0.0376	-7.0516	0.0056
489	SLU 32	-0.18	-0.05	33.87	0.0381	-7.1617	-0.012
489	SLU 33	-0.18	0	33.86	0.0382	-7.1602	-0.0007
489	SLU 34	-0.18	0.03	33.64	0.0379	-7.113	0.0065
489	SLU 35	-0.18	-0.04	34.17	0.0384	-7.2232	-0.0111
489	SLU 36	-0.18	0	34.16	0.0385	-7.2216	0.0003
489	SLU 37	-0.18	-0.04	33.95	0.0381	-7.1771	-0.0115
489	SLU 38	-0.18	0	33.94	0.0382	-7.1755	-0.0002
489	SLU 39	-0.17	-0.05	34.82	0.0394	-7.3644	-0.012
489	SLU 40	-0.17	0	34.82	0.0395	-7.3629	-0.0007
489	SLU 41	-0.17	-0.04	35.12	0.0397	-7.4259	-0.0111
489	SLU 42	-0.17	0	35.11	0.0398	-7.4243	0.0003
489	SLU 43	-0.22	-0.11	33.48	0.0357	-7.0924	-0.0274
489	SLU 44	-0.22	-0.03	33.47	0.0359	-7.0898	-0.0085
489	SLU 45	-0.22	-0.1	34	0.0364	-7.1999	-0.0261
489	SLU 46	-0.22	-0.06	33.99	0.0364	-7.1983	-0.0147
489	SLU 47	-0.22	-0.03	33.77	0.0362	-7.1512	-0.0076
489	SLU 48	-0.23	-0.1	34.3	0.0367	-7.2613	-0.0252
489	SLU 49	-0.22	-0.06	34.29	0.0368	-7.2598	-0.0138
489	SLU 50	-0.23	-0.1	34.08	0.0364	-7.2152	-0.0256
489	SLU 51	-0.22	-0.06	34.07	0.0365	-7.2137	-0.0142
489	SLU 52	-0.21	-0.02	36.9	0.0404	-7.8136	-0.0054
489	SLU 53	-0.21	-0.09	37.43	0.0408	-7.9238	-0.0229
489	SLU 54	-0.21	-0.05	37.43	0.0409	-7.9222	-0.0116
489	SLU 55	-0.21	-0.02	37.2	0.0407	-7.8751	-0.0044
489	SLU 56	-0.22	-0.09	37.73	0.0412	-7.9852	-0.022
489	SLU 57	-0.22	-0.04	37.73	0.0412	-7.9837	-0.0107
489	SLU 58	-0.22	-0.09	37.51	0.0409	-7.9391	-0.0225
489	SLU 59	-0.21	-0.04	37.5	0.0409	-7.9375	-0.0111
489	SLU 60	-0.21	-0.09	38.38	0.0422	-8.1265	-0.0229
489	SLU 61	-0.2	-0.05	38.38	0.0422	-8.1249	-0.0116
489	SLU 62	-0.21	-0.09	38.68	0.0425	-8.1879	-0.022
489	SLU 63	-0.21	-0.04	38.68	0.0426	-8.1864	-0.0107
489	SLU 64	-0.23	-0.09	36.78	0.0401	-7.7845	-0.0238
489	SLU 65	-0.23	-0.02	36.76	0.0402	-7.7819	-0.0049
489	SLU 66	-0.24	-0.09	37.3	0.0407	-7.892	-0.0225
489	SLU 67	-0.23	-0.04	37.29	0.0408	-7.8905	-0.0111
489	SLU 68	-0.23	-0.02	37.06	0.0406	-7.8433	-0.004
489	SLU 69	-0.24	-0.09	37.59	0.041	-7.9535	-0.0215
489	SLU 70	-0.24	-0.04	37.59	0.0411	-7.9519	-0.0102
489	SLU 71	-0.24	-0.09	37.37	0.0407	-7.9073	-0.022
489	SLU 72	-0.24	-0.04	37.37	0.0408	-7.9058	-0.0106
489	SLU 73	-0.22	-0.01	40.2	0.0447	-8.5058	-0.0017
489	SLU 74	-0.23	-0.08	40.73	0.0452	-8.6159	-0.0193
489	SLU 75	-0.22	-0.03	40.72	0.0453	-8.6143	-0.008
489	SLU 76	-0.22	0	40.5	0.045	-8.5672	-0.0008
489	SLU 77	-0.23	-0.07	41.03	0.0455	-8.6773	-0.0184
489	SLU 78	-0.23	-0.03	41.02	0.0456	-8.6758	-0.007
489	SLU 79	-0.23	-0.07	40.81	0.0452	-8.6312	-0.0188
489	SLU 80	-0.23	-0.03	40.8	0.0453	-8.6297	-0.0075
489	SLU 81	-0.22	-0.08	41.68	0.0465	-8.8186	-0.0193
489	SLU 82	-0.22	-0.03	41.67	0.0466	-8.817	-0.0079
489	SLU 83	-0.22	-0.07	41.98	0.0468	-8.88	-0.0184
489	SLU 84	-0.22	-0.03	41.97	0.0469	-8.8785	-0.007
489	SLE RA 1	-0.18	-0.08	27.56	0.0299	-5.836	-0.0191
489	SLE RA 2	-0.17	-0.03	27.56	0.03	-5.8342	-0.0065
489	SLE RA 3	-0.18	-0.07	27.91	0.0303	-5.9077	-0.0182
489	SLE RA 4	-0.18	-0.04	27.91	0.0304	-5.9066	-0.0106
489	SLE RA 5	-0.18	-0.02	27.76	0.0302	-5.8752	-0.0059
489	SLE RA 6	-0.18	-0.07	28.11	0.0305	-5.9486	-0.0176
489	SLE RA 7	-0.18	-0.04	28.11	0.0306	-5.9476	-0.01
489	SLE RA 8	-0.18	-0.07	27.96	0.0303	-5.9179	-0.0179
489	SLE RA 9	-0.18	-0.04	27.96	0.0304	-5.9168	-0.0103
489	SLE RA 10	-0.17	-0.02	29.85	0.033	-6.3168	-0.0044
489	SLE RA 11	-0.17	-0.06	30.2	0.0333	-6.3902	-0.0161
489	SLE RA 12	-0.17	-0.03	30.2	0.0333	-6.3892	-0.0085
489	SLE RA 13	-0.17	-0.01	30.04	0.0332	-6.3578	-0.0038
489	SLE RA 14	-0.17	-0.06	30.4	0.0335	-6.4312	-0.0155
489	SLE RA 15	-0.17	-0.03	30.39	0.0336	-6.4301	-0.0079
489	SLE RA 16	-0.17	-0.06	30.25	0.0333	-6.4004	-0.0158
489	SLE RA 17	-0.17	-0.03	30.25	0.0334	-6.3994	-0.0082
489	SLE RA 18	-0.17	-0.06	30.83	0.0342	-6.5254	-0.0161
489	SLE RA 19	-0.17	-0.03	30.83	0.0342	-6.5243	-0.0085
489	SLE RA 20	-0.17	-0.06	31.03	0.0344	-6.5663	-0.0155
489	SLE RA 21	-0.17	-0.03	31.03	0.0344	-6.5653	-0.0079
489	SLE FR 1	-0.18	-0.08	27.56	0.0299	-5.836	-0.0191
489	SLE FR 2	-0.18	-0.07	27.56	0.0299	-5.8356	-0.0166
489	SLE FR 3	-0.18	-0.07	27.64	0.03	-5.8523	-0.0189
489	SLE FR 4	-0.17	-0.06	28.54	0.0312	-6.0424	-0.0157
489	SLE FR 5	-0.17	-0.07	28.63	0.0313	-6.0592	-0.018
489	SLE FR 6	-0.17	-0.07	29.2	0.032	-6.1807	-0.0176
489	SLE QP 1	-0.18	-0.08	27.56	0.0299	-5.836	-0.0191
489	SLE QP 2	-0.17	-0.07	28.55	0.0312	-6.0428	-0.0182

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
489	SLD 1	2.18	0.88	34.09	0.0386	-7.164	0.2209
489	SLD 2	2.22	0.56	34.1	0.0388	-7.1689	0.1412
489	SLD 3	2.24	-0.37	34.27	0.0396	-7.2165	-0.0933
489	SLD 4	2.28	-0.69	34.28	0.0398	-7.2214	-0.173
489	SLD 5	0.45	2.17	29.94	0.0318	-6.2986	0.544
489	SLD 6	0.47	1.97	29.94	0.032	-6.3018	0.4923
489	SLD 7	0.62	-2.01	30.53	0.0352	-6.4738	-0.5034
489	SLD 8	0.65	-2.22	30.54	0.0354	-6.4769	-0.5551
489	SLD 9	-1	2.07	26.55	0.027	-5.6086	0.5187
489	SLD 10	-0.97	1.87	26.56	0.0271	-5.6118	0.467
489	SLD 11	-0.82	-2.11	27.15	0.0304	-5.7838	-0.5287
489	SLD 12	-0.79	-2.32	27.16	0.0306	-5.787	-0.5804
489	SLD 13	-2.62	0.55	22.81	0.0225	-4.8641	0.1366
489	SLD 14	-2.58	0.23	22.82	0.0228	-4.869	0.0569
489	SLD 15	-2.57	-0.71	22.99	0.0235	-4.9167	-0.1777
489	SLD 16	-2.53	-1.03	23	0.0238	-4.9216	-0.2573
489	SLV 1	5.34	2.13	41.53	0.0485	-8.6673	0.5321
489	SLV 2	5.43	1.38	41.55	0.0491	-8.6787	0.3465
489	SLV 3	5.47	-0.74	41.94	0.0508	-8.7884	-0.1846
489	SLV 4	5.56	-1.48	41.97	0.0514	-8.7998	-0.3702
489	SLV 5	1.28	5.06	31.8	0.0327	-6.6445	1.2652
489	SLV 6	1.34	4.58	31.82	0.0331	-6.6518	1.1467
489	SLV 7	1.69	-4.49	33.19	0.0405	-7.0483	-1.1236
489	SLV 8	1.75	-4.96	33.21	0.0409	-7.0556	-1.2421
489	SLV 9	-2.1	4.82	23.88	0.0215	-5.03	1.2057
489	SLV 10	-2.04	4.34	23.9	0.0218	-5.0373	1.0872
489	SLV 11	-1.68	-4.73	25.27	0.0292	-5.4338	-1.1831
489	SLV 12	-1.62	-5.2	25.29	0.0296	-5.4411	-1.3016
489	SLV 13	-5.9	1.34	15.12	0.0109	-3.2858	0.3338
489	SLV 14	-5.81	0.59	15.15	0.0115	-3.2972	0.1482
489	SLV 15	-5.78	-1.53	15.54	0.0133	-3.4069	-0.3829
489	SLV 16	-5.69	-2.27	15.56	0.0139	-3.4183	-0.5685
489	CRTFP Ux+	0	0	0	0	0	0
489	CRTFP Ux-	0	0	0	0	0	0
494	SLU 1	0.04	-0.12	28.06	-0.0025	9.5643	0.0414
494	SLU 2	0.04	-0.07	28.05	-0.0025	9.5629	0.0249
494	SLU 3	0.04	-0.11	28.58	-0.0024	9.7417	0.0389
494	SLU 4	0.04	-0.08	28.58	-0.0025	9.7408	0.0291
494	SLU 5	0.04	-0.08	28.36	-0.0026	9.6664	0.0265
494	SLU 6	0.04	-0.12	28.89	-0.0025	9.8451	0.0405
494	SLU 7	0.04	-0.09	28.89	-0.0025	9.8443	0.0306
494	SLU 8	0.04	-0.13	28.67	-0.0026	9.7712	0.0445
494	SLU 9	0.04	-0.1	28.67	-0.0026	9.7704	0.0346
494	SLU 10	0.05	-0.05	31.97	-0.0024	10.8949	0.0185
494	SLU 11	0.05	-0.09	32.5	-0.0023	11.0737	0.0325
494	SLU 12	0.05	-0.07	32.5	-0.0024	11.0728	0.0227
494	SLU 13	0.05	-0.06	32.28	-0.0025	10.9983	0.0201
494	SLU 14	0.05	-0.1	32.81	-0.0024	11.1771	0.0341
494	SLU 15	0.05	-0.07	32.81	-0.0024	11.1763	0.0242
494	SLU 16	0.05	-0.11	32.59	-0.0025	11.1032	0.038
494	SLU 17	0.05	-0.08	32.59	-0.0025	11.1023	0.0282
494	SLU 18	0.05	-0.09	33.65	-0.0023	11.4672	0.0322
494	SLU 19	0.05	-0.06	33.65	-0.0024	11.4663	0.0223
494	SLU 20	0.05	-0.1	33.96	-0.0024	11.5706	0.0337
494	SLU 21	0.05	-0.07	33.96	-0.0024	11.5698	0.0239
494	SLU 22	0.04	-0.08	31.36	-0.0019	10.6805	0.0286
494	SLU 23	0.04	-0.04	31.36	-0.0019	10.6791	0.0122
494	SLU 24	0.04	-0.08	31.89	-0.0019	10.8579	0.0262
494	SLU 25	0.04	-0.05	31.89	-0.0019	10.857	0.0164
494	SLU 26	0.04	-0.04	31.67	-0.002	10.7826	0.0138
494	SLU 27	0.05	-0.08	32.2	-0.0019	10.9613	0.0278
494	SLU 28	0.04	-0.05	32.2	-0.002	10.9605	0.0179
494	SLU 29	0.04	-0.09	31.98	-0.002	10.8874	0.0317
494	SLU 30	0.04	-0.06	31.98	-0.002	10.8866	0.0219
494	SLU 31	0.05	-0.02	35.28	-0.0019	12.0111	0.0058
494	SLU 32	0.05	-0.06	35.81	-0.0018	12.1899	0.0198
494	SLU 33	0.05	-0.03	35.81	-0.0018	12.189	0.0099
494	SLU 34	0.05	-0.02	35.58	-0.0019	12.1145	0.0073
494	SLU 35	0.05	-0.06	36.12	-0.0018	12.2933	0.0214
494	SLU 36	0.05	-0.03	36.11	-0.0019	12.2925	0.0115
494	SLU 37	0.05	-0.07	35.89	-0.0019	12.2194	0.0253
494	SLU 38	0.05	-0.04	35.89	-0.002	12.2185	0.0155
494	SLU 39	0.05	-0.06	36.96	-0.0017	12.5834	0.0194
494	SLU 40	0.05	-0.03	36.96	-0.0018	12.5825	0.0096
494	SLU 41	0.05	-0.06	37.27	-0.0018	12.6868	0.021
494	SLU 42	0.05	-0.03	37.26	-0.0018	12.686	0.0111
494	SLU 43	0.05	-0.17	35.34	-0.0034	12.0509	0.0581
494	SLU 44	0.05	-0.12	35.34	-0.0035	12.0495	0.0417
494	SLU 45	0.05	-0.16	35.87	-0.0034	12.2283	0.0557
494	SLU 46	0.05	-0.13	35.87	-0.0034	12.2274	0.0459
494	SLU 47	0.05	-0.12	35.65	-0.0035	12.153	0.0432
494	SLU 48	0.05	-0.16	36.18	-0.0034	12.3317	0.0573
494	SLU 49	0.05	-0.14	36.17	-0.0035	12.3309	0.0474
494	SLU 50	0.05	-0.18	35.96	-0.0035	12.2578	0.0612
494	SLU 51	0.05	-0.15	35.95	-0.0036	12.257	0.0514
494	SLU 52	0.06	-0.1	39.26	-0.0034	13.3815	0.0353
494	SLU 53	0.06	-0.14	39.79	-0.0033	13.5603	0.0493
494	SLU 54	0.06	-0.11	39.78	-0.0033	13.5594	0.0394
494	SLU 55	0.06	-0.11	39.56	-0.0034	13.4849	0.0368
494	SLU 56	0.06	-0.15	40.09	-0.0033	13.6637	0.0508
494	SLU 57	0.06	-0.12	40.09	-0.0034	13.6629	0.041

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
494	SLU 58	0.06	-0.16	39.87	-0.0034	13.5898	0.0548
494	SLU 59	0.06	-0.13	39.87	-0.0035	13.589	0.0449
494	SLU 60	0.06	-0.14	40.94	-0.0032	13.9538	0.0489
494	SLU 61	0.06	-0.11	40.94	-0.0033	13.9529	0.0391
494	SLU 62	0.06	-0.15	41.25	-0.0033	14.0572	0.0505
494	SLU 63	0.06	-0.12	41.24	-0.0034	14.0564	0.0406
494	SLU 64	0.05	-0.13	38.65	-0.0028	13.1671	0.0454
494	SLU 65	0.05	-0.08	38.64	-0.0029	13.1657	0.029
494	SLU 66	0.05	-0.12	39.17	-0.0028	13.3445	0.043
494	SLU 67	0.05	-0.1	39.17	-0.0028	13.3436	0.0331
494	SLU 68	0.05	-0.09	38.95	-0.0029	13.2692	0.0305
494	SLU 69	0.06	-0.13	39.48	-0.0029	13.4479	0.0445
494	SLU 70	0.06	-0.1	39.48	-0.0029	13.4471	0.0347
494	SLU 71	0.06	-0.14	39.26	-0.0029	13.374	0.0485
494	SLU 72	0.06	-0.11	39.26	-0.003	13.3732	0.0386
494	SLU 73	0.06	-0.07	42.56	-0.0028	14.4977	0.0225
494	SLU 74	0.06	-0.11	43.09	-0.0027	14.6765	0.0366
494	SLU 75	0.06	-0.08	43.09	-0.0027	14.6756	0.0267
494	SLU 76	0.06	-0.07	42.87	-0.0029	14.6011	0.0241
494	SLU 77	0.06	-0.11	43.4	-0.0028	14.7799	0.0381
494	SLU 78	0.06	-0.08	43.4	-0.0028	14.7791	0.0283
494	SLU 79	0.06	-0.12	43.18	-0.0028	14.706	0.0421
494	SLU 80	0.06	-0.09	43.18	-0.0029	14.7051	0.0322
494	SLU 81	0.06	-0.1	44.24	-0.0027	15.07	0.0362
494	SLU 82	0.06	-0.08	44.24	-0.0027	15.0691	0.0264
494	SLU 83	0.07	-0.11	44.55	-0.0027	15.1734	0.0378
494	SLU 84	0.07	-0.08	44.55	-0.0028	15.1726	0.0279
494	SLE RA 1	0.04	-0.11	29	-0.0023	9.8832	0.0377
494	SLE RA 2	0.04	-0.08	29	-0.0023	9.8823	0.0268
494	SLE RA 3	0.04	-0.1	29.35	-0.0023	10.0015	0.0361
494	SLE RA 4	0.04	-0.09	29.35	-0.0023	10.0009	0.0295
494	SLE RA 5	0.04	-0.08	29.2	-0.0024	9.9513	0.0278
494	SLE RA 6	0.04	-0.11	29.56	-0.0023	10.0704	0.0371
494	SLE RA 7	0.04	-0.09	29.56	-0.0023	10.0699	0.0306
494	SLE RA 8	0.04	-0.11	29.41	-0.0024	10.0212	0.0398
494	SLE RA 9	0.04	-0.1	29.41	-0.0024	10.0206	0.0332
494	SLE RA 10	0.05	-0.07	31.61	-0.0023	10.7703	0.0225
494	SLE RA 11	0.05	-0.09	31.97	-0.0022	10.8895	0.0318
494	SLE RA 12	0.05	-0.07	31.96	-0.0022	10.8889	0.0253
494	SLE RA 13	0.05	-0.07	31.82	-0.0023	10.8393	0.0235
494	SLE RA 14	0.05	-0.09	32.17	-0.0023	10.9584	0.0329
494	SLE RA 15	0.05	-0.08	32.17	-0.0023	10.9579	0.0263
494	SLE RA 16	0.05	-0.1	32.02	-0.0023	10.9091	0.0355
494	SLE RA 17	0.05	-0.08	32.02	-0.0023	10.9086	0.0289
494	SLE RA 18	0.05	-0.09	32.73	-0.0022	11.1518	0.0316
494	SLE RA 19	0.05	-0.07	32.73	-0.0022	11.1512	0.025
494	SLE RA 20	0.05	-0.09	32.94	-0.0022	11.2208	0.0326
494	SLE RA 21	0.05	-0.08	32.94	-0.0023	11.2202	0.0261
494	SLE FR 1	0.04	-0.11	29	-0.0023	9.8832	0.0377
494	SLE FR 2	0.04	-0.1	29	-0.0023	9.883	0.0355
494	SLE FR 3	0.04	-0.11	29.08	-0.0023	9.9108	0.0381
494	SLE FR 4	0.04	-0.1	30.12	-0.0023	10.2636	0.0337
494	SLE FR 5	0.04	-0.1	30.2	-0.0023	10.2914	0.0363
494	SLE FR 6	0.04	-0.1	30.87	-0.0022	10.5175	0.0347
494	SLE QP 1	0.04	-0.11	29	-0.0023	9.8832	0.0377
494	SLE QP 2	0.04	-0.1	30.12	-0.0023	10.2638	0.0359
494	SLD 1	2.43	0.45	30.16	-0.0026	10.1925	-0.1588
494	SLD 2	2.47	0.47	30.16	-0.0026	10.1913	-0.1642
494	SLD 3	2.49	-0.55	30.32	-0.0012	10.2533	0.1911
494	SLD 4	2.52	-0.53	30.32	-0.0013	10.2521	0.1857
494	SLD 5	0.67	1.58	29.89	-0.0044	10.1504	-0.5522
494	SLD 6	0.69	1.59	29.89	-0.0044	10.1496	-0.5558
494	SLD 7	0.85	-1.76	30.43	0.0001	10.3531	0.6141
494	SLD 8	0.87	-1.75	30.42	0.0001	10.3523	0.6105
494	SLD 9	-0.79	1.54	29.82	-0.0046	10.1753	-0.5388
494	SLD 10	-0.77	1.55	29.82	-0.0046	10.1745	-0.5423
494	SLD 11	-0.61	-1.79	30.35	-0.0001	10.378	0.6275
494	SLD 12	-0.59	-1.78	30.35	-0.0001	10.3772	0.624
494	SLD 13	-2.43	0.32	29.92	-0.0033	10.2755	-0.1139
494	SLD 14	-2.4	0.34	29.92	-0.0033	10.2743	-0.1194
494	SLD 15	-2.38	-0.68	30.08	-0.0019	10.3363	0.236
494	SLD 16	-2.35	-0.66	30.08	-0.0019	10.3351	0.2305
494	SLV 1	5.63	1.17	30.23	-0.003	10.0982	-0.4084
494	SLV 2	5.71	1.2	30.22	-0.0031	10.0955	-0.4211
494	SLV 3	5.76	-1.11	30.59	0.0001	10.237	0.3886
494	SLV 4	5.84	-1.07	30.58	0	10.2343	0.3759
494	SLV 5	1.52	3.72	29.6	-0.0072	10.0041	-1.304
494	SLV 6	1.57	3.75	29.59	-0.0072	10.0024	-1.3121
494	SLV 7	1.93	-3.87	30.82	0.0032	10.4667	1.3526
494	SLV 8	1.98	-3.84	30.81	0.0031	10.465	1.3445
494	SLV 9	-1.9	3.64	29.43	-0.0076	10.0626	-1.2728
494	SLV 10	-1.85	3.66	29.42	-0.0077	10.0609	-1.2809
494	SLV 11	-1.48	-3.96	30.65	0.0027	10.5253	1.3839
494	SLV 12	-1.43	-3.93	30.64	0.0026	10.5235	1.3758
494	SLV 13	-5.75	0.87	29.66	-0.0046	10.2933	-0.3041
494	SLV 14	-5.67	0.91	29.65	-0.0046	10.2906	-0.3169
494	SLV 15	-5.63	-1.41	30.03	-0.0015	10.4321	0.4928
494	SLV 16	-5.55	-1.37	30.02	-0.0015	10.4294	0.4801
494	CRTFP Ux+	0	0	0	0	0	0
494	CRTFP Ux-	0	0	0	0	0	0
498	SLU 1	-0.27	-0.36	51.14	-0.0033	-0.1135	-0.0011

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
498	SLU 2	-0.28	-0.27	51.11	-0.0032	-0.1131	-0.001
498	SLU 3	-0.28	-0.36	52.14	-0.0033	-0.116	-0.0012
498	SLU 4	-0.28	-0.3	52.12	-0.0032	-0.1158	-0.0012
498	SLU 5	-0.28	-0.28	51.66	-0.0034	-0.1142	-0.001
498	SLU 6	-0.28	-0.36	52.7	-0.0035	-0.1171	-0.0012
498	SLU 7	-0.28	-0.31	52.68	-0.0034	-0.1169	-0.0011
498	SLU 8	-0.28	-0.38	52.25	-0.0037	-0.1158	-0.0011
498	SLU 9	-0.28	-0.32	52.24	-0.0036	-0.1155	-0.001
498	SLU 10	-0.26	-0.27	58.13	-0.0021	-0.1352	-0.0015
498	SLU 11	-0.26	-0.36	59.16	-0.0022	-0.1381	-0.0017
498	SLU 12	-0.26	-0.3	59.15	-0.0021	-0.1378	-0.0017
498	SLU 13	-0.26	-0.28	58.69	-0.0023	-0.1363	-0.0015
498	SLU 14	-0.27	-0.36	59.72	-0.0024	-0.1392	-0.0017
498	SLU 15	-0.27	-0.31	59.7	-0.0023	-0.139	-0.0016
498	SLU 16	-0.27	-0.38	59.28	-0.0026	-0.1378	-0.0015
498	SLU 17	-0.27	-0.32	59.26	-0.0025	-0.1376	-0.0015
498	SLU 18	-0.25	-0.36	61.17	-0.0017	-0.145	-0.0018
498	SLU 19	-0.25	-0.31	61.15	-0.0017	-0.1448	-0.0018
498	SLU 20	-0.26	-0.37	61.73	-0.0019	-0.1462	-0.0018
498	SLU 21	-0.26	-0.31	61.71	-0.0018	-0.1459	-0.0017
498	SLU 22	-0.29	-0.33	57.63	-0.002	-0.1282	-0.0019
498	SLU 23	-0.29	-0.24	57.6	-0.0018	-0.1278	-0.0018
498	SLU 24	-0.3	-0.32	58.63	-0.002	-0.1308	-0.002
498	SLU 25	-0.3	-0.27	58.61	-0.0019	-0.1305	-0.002
498	SLU 26	-0.3	-0.24	58.16	-0.002	-0.129	-0.0018
498	SLU 27	-0.3	-0.33	59.19	-0.0021	-0.1319	-0.002
498	SLU 28	-0.3	-0.27	59.17	-0.002	-0.1317	-0.0019
498	SLU 29	-0.3	-0.34	58.75	-0.0023	-0.1305	-0.0019
498	SLU 30	-0.3	-0.29	58.73	-0.0022	-0.1303	-0.0018
498	SLU 31	-0.28	-0.24	64.62	-0.0007	-0.1499	-0.0023
498	SLU 32	-0.28	-0.32	65.66	-0.0008	-0.1528	-0.0025
498	SLU 33	-0.28	-0.27	65.64	-0.0008	-0.1526	-0.0025
498	SLU 34	-0.28	-0.24	65.18	-0.0009	-0.151	-0.0023
498	SLU 35	-0.29	-0.33	66.21	-0.001	-0.154	-0.0025
498	SLU 36	-0.29	-0.27	66.2	-0.0009	-0.1537	-0.0024
498	SLU 37	-0.29	-0.34	65.77	-0.0012	-0.1526	-0.0023
498	SLU 38	-0.29	-0.29	65.75	-0.0011	-0.1523	-0.0023
498	SLU 39	-0.27	-0.33	67.66	-0.0004	-0.1598	-0.0026
498	SLU 40	-0.27	-0.27	67.65	-0.0003	-0.1595	-0.0026
498	SLU 41	-0.28	-0.34	68.22	-0.0006	-0.1609	-0.0026
498	SLU 42	-0.28	-0.28	68.21	-0.0005	-0.1607	-0.0025
498	SLU 43	-0.35	-0.48	64.25	-0.0048	-0.1425	-0.0012
498	SLU 44	-0.35	-0.39	64.22	-0.0046	-0.1421	-0.0011
498	SLU 45	-0.36	-0.48	65.25	-0.0048	-0.145	-0.0013
498	SLU 46	-0.36	-0.42	65.24	-0.0047	-0.1447	-0.0012
498	SLU 47	-0.36	-0.4	64.78	-0.0048	-0.1432	-0.0011
498	SLU 48	-0.36	-0.48	65.81	-0.0049	-0.1461	-0.0013
498	SLU 49	-0.36	-0.43	65.79	-0.0049	-0.1459	-0.0012
498	SLU 50	-0.36	-0.5	65.37	-0.0051	-0.1447	-0.0011
498	SLU 51	-0.36	-0.44	65.35	-0.0051	-0.1445	-0.0011
498	SLU 52	-0.33	-0.39	71.25	-0.0035	-0.1641	-0.0016
498	SLU 53	-0.34	-0.48	72.28	-0.0037	-0.1671	-0.0018
498	SLU 54	-0.34	-0.42	72.26	-0.0036	-0.1668	-0.0017
498	SLU 55	-0.34	-0.4	71.8	-0.0037	-0.1653	-0.0015
498	SLU 56	-0.34	-0.48	72.84	-0.0038	-0.1682	-0.0017
498	SLU 57	-0.34	-0.43	72.82	-0.0037	-0.168	-0.0017
498	SLU 58	-0.34	-0.5	72.39	-0.004	-0.1668	-0.0016
498	SLU 59	-0.34	-0.44	72.38	-0.0039	-0.1666	-0.0015
498	SLU 60	-0.33	-0.48	74.29	-0.0032	-0.174	-0.0019
498	SLU 61	-0.33	-0.43	74.27	-0.0031	-0.1738	-0.0018
498	SLU 62	-0.33	-0.49	74.85	-0.0034	-0.1751	-0.0019
498	SLU 63	-0.33	-0.43	74.83	-0.0033	-0.1749	-0.0018
498	SLU 64	-0.37	-0.45	70.74	-0.0034	-0.1572	-0.002
498	SLU 65	-0.37	-0.36	70.71	-0.0033	-0.1568	-0.0019
498	SLU 66	-0.37	-0.44	71.75	-0.0034	-0.1597	-0.0021
498	SLU 67	-0.37	-0.39	71.73	-0.0033	-0.1595	-0.002
498	SLU 68	-0.37	-0.36	71.27	-0.0035	-0.158	-0.0019
498	SLU 69	-0.38	-0.45	72.3	-0.0036	-0.1609	-0.0021
498	SLU 70	-0.38	-0.39	72.29	-0.0035	-0.1606	-0.002
498	SLU 71	-0.38	-0.46	71.86	-0.0038	-0.1595	-0.0019
498	SLU 72	-0.38	-0.41	71.84	-0.0037	-0.1592	-0.0019
498	SLU 73	-0.35	-0.36	77.74	-0.0022	-0.1789	-0.0024
498	SLU 74	-0.36	-0.44	78.77	-0.0023	-0.1818	-0.0026
498	SLU 75	-0.36	-0.39	78.75	-0.0022	-0.1816	-0.0025
498	SLU 76	-0.36	-0.36	78.3	-0.0024	-0.18	-0.0023
498	SLU 77	-0.36	-0.45	79.33	-0.0025	-0.183	-0.0025
498	SLU 78	-0.36	-0.39	79.31	-0.0024	-0.1827	-0.0025
498	SLU 79	-0.36	-0.46	78.89	-0.0027	-0.1816	-0.0024
498	SLU 80	-0.36	-0.41	78.87	-0.0026	-0.1813	-0.0023
498	SLU 81	-0.35	-0.45	80.78	-0.0018	-0.1888	-0.0027
498	SLU 82	-0.35	-0.39	80.76	-0.0018	-0.1885	-0.0026
498	SLU 83	-0.35	-0.46	81.34	-0.002	-0.1899	-0.0027
498	SLU 84	-0.35	-0.4	81.32	-0.0019	-0.1897	-0.0026
498	SLE RA 1	-0.28	-0.35	52.99	-0.0029	-0.1177	-0.0014
498	SLE RA 2	-0.28	-0.29	52.97	-0.0028	-0.1174	-0.0013
498	SLE RA 3	-0.28	-0.35	53.66	-0.0029	-0.1194	-0.0014
498	SLE RA 4	-0.28	-0.31	53.65	-0.0029	-0.1192	-0.0014
498	SLE RA 5	-0.28	-0.3	53.34	-0.003	-0.1182	-0.0013
498	SLE RA 6	-0.29	-0.35	54.03	-0.003	-0.1201	-0.0014
498	SLE RA 7	-0.29	-0.32	54.02	-0.003	-0.12	-0.0014
498	SLE RA 8	-0.29	-0.36	53.74	-0.0032	-0.1192	-0.0013

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
498	SLE RA 9	-0.29	-0.32	53.72	-0.0031	-0.119	-0.0013
498	SLE RA 10	-0.27	-0.29	57.65	-0.0021	-0.1321	-0.0016
498	SLE RA 11	-0.27	-0.35	58.34	-0.0022	-0.1341	-0.0018
498	SLE RA 12	-0.27	-0.31	58.33	-0.0021	-0.1339	-0.0017
498	SLE RA 13	-0.27	-0.3	58.03	-0.0022	-0.1329	-0.0016
498	SLE RA 14	-0.28	-0.35	58.72	-0.0023	-0.1349	-0.0017
498	SLE RA 15	-0.28	-0.32	58.7	-0.0022	-0.1347	-0.0017
498	SLE RA 16	-0.28	-0.36	58.42	-0.0024	-0.1339	-0.0016
498	SLE RA 17	-0.28	-0.32	58.41	-0.0024	-0.1338	-0.0016
498	SLE RA 18	-0.26	-0.35	59.68	-0.0019	-0.1387	-0.0018
498	SLE RA 19	-0.26	-0.32	59.67	-0.0018	-0.1386	-0.0018
498	SLE RA 20	-0.27	-0.36	60.05	-0.002	-0.1395	-0.0018
498	SLE RA 21	-0.27	-0.32	60.04	-0.0019	-0.1393	-0.0018
498	SLE FR 1	-0.28	-0.35	52.99	-0.0029	-0.1177	-0.0014
498	SLE FR 2	-0.28	-0.34	52.99	-0.0029	-0.1176	-0.0014
498	SLE FR 3	-0.28	-0.36	53.14	-0.003	-0.118	-0.0014
498	SLE FR 4	-0.28	-0.34	54.99	-0.0026	-0.124	-0.0015
498	SLE FR 5	-0.28	-0.36	55.15	-0.0027	-0.1243	-0.0015
498	SLE FR 6	-0.27	-0.35	56.34	-0.0024	-0.1282	-0.0016
498	SLE QP 1	-0.28	-0.35	52.99	-0.0029	-0.1177	-0.0014
498	SLE QP 2	-0.28	-0.35	55	-0.0026	-0.124	-0.0015
498	SLD 1	4.29	0.45	58.2	-0.005	-0.0349	0.0045
498	SLD 2	4.35	0.21	58.24	-0.0049	-0.0368	0.0088
498	SLD 3	4.39	-1.33	58.61	-0.0034	-0.0517	0.0061
498	SLD 4	4.45	-1.58	58.65	-0.0032	-0.0536	0.0104
498	SLD 5	0.93	2.64	55.32	-0.0059	-0.0715	-0.0029
498	SLD 6	0.97	2.48	55.35	-0.0058	-0.0728	-0.0001
498	SLD 7	1.27	-3.31	56.71	-0.0004	-0.1274	0.0025
498	SLD 8	1.31	-3.47	56.73	-0.0003	-0.1287	0.0053
498	SLD 9	-1.86	2.76	53.27	-0.005	-0.1194	-0.0083
498	SLD 10	-1.82	2.6	53.29	-0.0049	-0.1206	-0.0055
498	SLD 11	-1.52	-3.19	54.65	0.0005	-0.1753	-0.0029
498	SLD 12	-1.48	-3.34	54.67	0.0007	-0.1765	-0.0001
498	SLD 13	-5	0.87	51.34	-0.002	-0.1944	-0.0134
498	SLD 14	-4.95	0.62	51.38	-0.0018	-0.1963	-0.0091
498	SLD 15	-4.9	-0.92	51.76	-0.0004	-0.2112	-0.0118
498	SLD 16	-4.84	-1.16	51.8	-0.0002	-0.2131	-0.0075
498	SLV 1	10.4	1.48	62.5	-0.0084	0.0839	0.0125
498	SLV 2	10.54	0.91	62.59	-0.008	0.0795	0.0225
498	SLV 3	10.64	-2.59	63.45	-0.0046	0.0457	0.0163
498	SLV 4	10.78	-3.16	63.54	-0.0042	0.0412	0.0263
498	SLV 5	2.54	6.47	55.8	-0.0101	-0.0029	-0.0047
498	SLV 6	2.63	6.1	55.86	-0.0099	-0.0057	0.0017
498	SLV 7	3.34	-7.1	58.95	0.0024	-0.1303	0.0078
498	SLV 8	3.43	-7.47	59	0.0027	-0.1332	0.0142
498	SLV 9	-3.98	6.76	50.99	-0.0079	-0.1149	-0.0172
498	SLV 10	-3.89	6.39	51.05	-0.0077	-0.1177	-0.0108
498	SLV 11	-3.18	-6.81	54.13	0.0046	-0.2423	-0.0047
498	SLV 12	-3.09	-7.17	54.19	0.0049	-0.2451	0.0016
498	SLV 13	-11.33	2.45	46.46	-0.001	-0.2893	-0.0293
498	SLV 14	-11.2	1.88	46.55	-0.0006	-0.2937	-0.0193
498	SLV 15	-11.09	-1.62	47.4	0.0028	-0.3275	-0.0256
498	SLV 16	-10.96	-2.19	47.49	0.0032	-0.3319	-0.0156
498	CRTFP Ux+	0	0	0	0	0	0
498	CRTFP Ux-	0	0	0	0	0	0
502	SLU 1	0.45	-0.32	50.04	-0.0111	0.0684	-0.0053
502	SLU 2	0.45	-0.23	50.02	-0.011	0.0679	-0.0054
502	SLU 3	0.46	-0.32	50.99	-0.0113	0.0696	-0.0054
502	SLU 4	0.46	-0.27	50.98	-0.0112	0.0693	-0.0054
502	SLU 5	0.46	-0.24	50.56	-0.0113	0.0681	-0.0055
502	SLU 6	0.47	-0.33	51.54	-0.0116	0.0698	-0.0055
502	SLU 7	0.47	-0.28	51.53	-0.0116	0.0695	-0.0056
502	SLU 8	0.46	-0.35	51.13	-0.0117	0.0689	-0.0056
502	SLU 9	0.46	-0.29	51.11	-0.0117	0.0686	-0.0056
502	SLU 10	0.48	-0.22	56.74	-0.0109	0.0819	-0.0054
502	SLU 11	0.5	-0.3	57.71	-0.0112	0.0835	-0.0054
502	SLU 12	0.5	-0.25	57.7	-0.0112	0.0832	-0.0055
502	SLU 13	0.49	-0.23	57.28	-0.0112	0.0821	-0.0056
502	SLU 14	0.51	-0.32	58.26	-0.0116	0.0838	-0.0056
502	SLU 15	0.5	-0.26	58.25	-0.0115	0.0835	-0.0056
502	SLU 16	0.5	-0.33	57.85	-0.0117	0.0828	-0.0057
502	SLU 17	0.5	-0.27	57.83	-0.0116	0.0826	-0.0057
502	SLU 18	0.5	-0.3	59.64	-0.011	0.0883	-0.0054
502	SLU 19	0.5	-0.25	59.63	-0.0109	0.0881	-0.0054
502	SLU 20	0.51	-0.31	60.18	-0.0113	0.0886	-0.0055
502	SLU 21	0.51	-0.26	60.17	-0.0112	0.0883	-0.0056
502	SLU 22	0.5	-0.29	56.3	-0.0109	0.0727	-0.005
502	SLU 23	0.49	-0.2	56.28	-0.0108	0.0722	-0.0051
502	SLU 24	0.51	-0.29	57.25	-0.0111	0.0739	-0.0051
502	SLU 25	0.51	-0.23	57.24	-0.0111	0.0736	-0.0051
502	SLU 26	0.5	-0.21	56.82	-0.0111	0.0725	-0.0052
502	SLU 27	0.51	-0.3	57.8	-0.0114	0.0742	-0.0052
502	SLU 28	0.51	-0.24	57.79	-0.0114	0.0739	-0.0053
502	SLU 29	0.51	-0.31	57.39	-0.0115	0.0732	-0.0053
502	SLU 30	0.51	-0.26	57.37	-0.0115	0.0729	-0.0053
502	SLU 31	0.53	-0.18	63	-0.0107	0.0862	-0.0051
502	SLU 32	0.54	-0.27	63.98	-0.0111	0.0879	-0.0051
502	SLU 33	0.54	-0.22	63.96	-0.011	0.0876	-0.0052
502	SLU 34	0.54	-0.19	63.54	-0.0111	0.0865	-0.0053
502	SLU 35	0.55	-0.28	64.52	-0.0114	0.0881	-0.0053
502	SLU 36	0.55	-0.23	64.51	-0.0113	0.0878	-0.0053

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
502	SLU 37	0.55	-0.29	64.11	-0.0115	0.0872	-0.0054
502	SLU 38	0.55	-0.24	64.1	-0.0114	0.0869	-0.0054
502	SLU 39	0.55	-0.26	65.9	-0.0108	0.0927	-0.0051
502	SLU 40	0.55	-0.21	65.89	-0.0107	0.0924	-0.0051
502	SLU 41	0.55	-0.28	66.44	-0.0111	0.0929	-0.0052
502	SLU 42	0.55	-0.22	66.43	-0.0111	0.0926	-0.0053
502	SLU 43	0.57	-0.43	62.9	-0.0145	0.0874	-0.007
502	SLU 44	0.57	-0.34	62.88	-0.0144	0.0869	-0.007
502	SLU 45	0.58	-0.43	63.86	-0.0147	0.0886	-0.0071
502	SLU 46	0.58	-0.38	63.85	-0.0146	0.0883	-0.0071
502	SLU 47	0.57	-0.35	63.42	-0.0147	0.0872	-0.0072
502	SLU 48	0.59	-0.44	64.4	-0.015	0.0888	-0.0072
502	SLU 49	0.59	-0.39	64.39	-0.015	0.0885	-0.0073
502	SLU 50	0.58	-0.46	63.99	-0.0151	0.0879	-0.0073
502	SLU 51	0.58	-0.4	63.98	-0.015	0.0876	-0.0073
502	SLU 52	0.6	-0.33	69.6	-0.0143	0.1009	-0.0071
502	SLU 53	0.62	-0.41	70.58	-0.0146	0.1026	-0.0071
502	SLU 54	0.62	-0.36	70.57	-0.0146	0.1023	-0.0072
502	SLU 55	0.61	-0.34	70.15	-0.0146	0.1011	-0.0073
502	SLU 56	0.62	-0.42	71.12	-0.0149	0.1028	-0.0073
502	SLU 57	0.62	-0.37	71.11	-0.0149	0.1025	-0.0073
502	SLU 58	0.62	-0.44	70.71	-0.015	0.1019	-0.0073
502	SLU 59	0.62	-0.38	70.7	-0.015	0.1016	-0.0074
502	SLU 60	0.62	-0.41	72.5	-0.0144	0.1074	-0.0071
502	SLU 61	0.62	-0.35	72.49	-0.0143	0.1071	-0.0071
502	SLU 62	0.63	-0.42	73.05	-0.0147	0.1076	-0.0072
502	SLU 63	0.63	-0.37	73.03	-0.0146	0.1073	-0.0073
502	SLU 64	0.62	-0.4	69.16	-0.0143	0.0918	-0.0067
502	SLU 65	0.61	-0.31	69.14	-0.0142	0.0913	-0.0067
502	SLU 66	0.63	-0.4	70.12	-0.0145	0.0929	-0.0068
502	SLU 67	0.63	-0.34	70.11	-0.0145	0.0926	-0.0068
502	SLU 68	0.62	-0.32	69.69	-0.0145	0.0915	-0.0069
502	SLU 69	0.63	-0.41	70.66	-0.0148	0.0932	-0.0069
502	SLU 70	0.63	-0.35	70.65	-0.0148	0.0929	-0.007
502	SLU 71	0.63	-0.42	70.25	-0.0149	0.0923	-0.007
502	SLU 72	0.63	-0.37	70.24	-0.0149	0.092	-0.007
502	SLU 73	0.65	-0.29	75.86	-0.0141	0.1052	-0.0068
502	SLU 74	0.66	-0.38	76.84	-0.0144	0.1069	-0.0068
502	SLU 75	0.66	-0.32	76.83	-0.0144	0.1066	-0.0069
502	SLU 76	0.66	-0.3	76.41	-0.0144	0.1055	-0.007
502	SLU 77	0.67	-0.39	77.38	-0.0148	0.1072	-0.007
502	SLU 78	0.67	-0.34	77.37	-0.0147	0.1069	-0.007
502	SLU 79	0.67	-0.4	76.97	-0.0149	0.1062	-0.007
502	SLU 80	0.66	-0.35	76.96	-0.0148	0.1059	-0.0071
502	SLU 81	0.67	-0.37	78.76	-0.0142	0.1117	-0.0068
502	SLU 82	0.67	-0.32	78.75	-0.0141	0.1114	-0.0068
502	SLU 83	0.67	-0.38	79.31	-0.0145	0.112	-0.0069
502	SLU 84	0.67	-0.33	79.3	-0.0145	0.1117	-0.007
502	SLE RA 1	0.46	-0.31	51.83	-0.011	0.0696	-0.0052
502	SLE RA 2	0.46	-0.25	51.81	-0.011	0.0693	-0.0052
502	SLE RA 3	0.47	-0.31	52.46	-0.0112	0.0704	-0.0053
502	SLE RA 4	0.47	-0.28	52.46	-0.0111	0.0702	-0.0053
502	SLE RA 5	0.47	-0.26	52.17	-0.0112	0.0695	-0.0053
502	SLE RA 6	0.48	-0.32	52.83	-0.0114	0.0706	-0.0054
502	SLE RA 7	0.47	-0.28	52.82	-0.0114	0.0704	-0.0054
502	SLE RA 8	0.47	-0.33	52.55	-0.0115	0.07	-0.0054
502	SLE RA 9	0.47	-0.29	52.54	-0.0114	0.0698	-0.0054
502	SLE RA 10	0.49	-0.24	56.29	-0.0109	0.0786	-0.0053
502	SLE RA 11	0.5	-0.3	56.94	-0.0111	0.0797	-0.0053
502	SLE RA 12	0.49	-0.26	56.94	-0.0111	0.0795	-0.0053
502	SLE RA 13	0.49	-0.25	56.66	-0.0111	0.0788	-0.0054
502	SLE RA 14	0.5	-0.31	57.31	-0.0113	0.0799	-0.0054
502	SLE RA 15	0.5	-0.27	57.3	-0.0113	0.0797	-0.0054
502	SLE RA 16	0.5	-0.32	57.03	-0.0114	0.0793	-0.0054
502	SLE RA 17	0.5	-0.28	57.02	-0.0114	0.0791	-0.0055
502	SLE RA 18	0.5	-0.3	58.23	-0.011	0.0829	-0.0053
502	SLE RA 19	0.5	-0.26	58.22	-0.0109	0.0827	-0.0053
502	SLE RA 20	0.5	-0.3	58.59	-0.0112	0.0831	-0.0054
502	SLE RA 21	0.5	-0.27	58.58	-0.0111	0.0829	-0.0054
502	SLE FR 1	0.46	-0.31	51.83	-0.011	0.0696	-0.0052
502	SLE FR 2	0.46	-0.3	51.82	-0.011	0.0696	-0.0052
502	SLE FR 3	0.46	-0.32	51.97	-0.0111	0.0697	-0.0052
502	SLE FR 4	0.47	-0.3	53.74	-0.011	0.0736	-0.0052
502	SLE FR 5	0.48	-0.31	53.89	-0.0111	0.0737	-0.0053
502	SLE FR 6	0.48	-0.31	55.03	-0.011	0.0763	-0.0052
502	SLE QP 1	0.46	-0.31	51.83	-0.011	0.0696	-0.0052
502	SLE QP 2	0.47	-0.31	53.75	-0.011	0.0736	-0.0052
502	SLD 1	4.96	0.65	50.62	-0.0125	0.0836	0.008
502	SLD 2	5.02	0.89	50.59	-0.0127	0.082	0.0123
502	SLD 3	5.06	-1.09	50.95	-0.0104	0.1008	0.0066
502	SLD 4	5.12	-0.86	50.91	-0.0106	0.0992	0.0109
502	SLD 5	1.65	2.59	52.32	-0.0146	0.0508	0.0002
502	SLD 6	1.69	2.74	52.3	-0.0147	0.0498	0.0029
502	SLD 7	2	-3.23	53.4	-0.0076	0.1081	-0.0046
502	SLD 8	2.04	-3.08	53.38	-0.0078	0.1071	-0.0018
502	SLD 9	-1.09	2.46	54.11	-0.0142	0.0402	-0.0086
502	SLD 10	-1.05	2.61	54.09	-0.0144	0.0391	-0.0059
502	SLD 11	-0.74	-3.36	55.19	-0.0073	0.0975	-0.0134
502	SLD 12	-0.7	-3.2	55.17	-0.0074	0.0964	-0.0106
502	SLD 13	-4.17	0.24	56.58	-0.0114	0.048	-0.0213
502	SLD 14	-4.11	0.47	56.55	-0.0116	0.0464	-0.017

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
502	SLD 15	-4.07	-1.51	56.91	-0.0093	0.0652	-0.0227
502	SLD 16	-4.01	-1.27	56.87	-0.0095	0.0636	-0.0184
502	SLV 1	10.96	1.89	46.45	-0.0145	0.0972	0.0257
502	SLV 2	11.1	2.43	46.36	-0.015	0.0935	0.0357
502	SLV 3	11.2	-2.09	47.19	-0.0098	0.1363	0.0225
502	SLV 4	11.34	-1.54	47.1	-0.0102	0.1326	0.0325
502	SLV 5	3.23	6.29	50.45	-0.0192	0.022	0.0073
502	SLV 6	3.32	6.64	50.39	-0.0195	0.0197	0.0137
502	SLV 7	4.04	-6.96	52.92	-0.0033	0.1524	-0.0035
502	SLV 8	4.12	-6.62	52.86	-0.0036	0.15	0.0028
502	SLV 9	-3.18	6	54.63	-0.0184	-0.0027	-0.0133
502	SLV 10	-3.09	6.35	54.58	-0.0187	-0.0051	-0.0069
502	SLV 11	-2.37	-7.25	57.1	-0.0025	0.1276	-0.0241
502	SLV 12	-2.28	-6.91	57.04	-0.0028	0.1252	-0.0177
502	SLV 13	-10.4	0.92	60.39	-0.0118	0.0147	-0.0429
502	SLV 14	-10.26	1.47	60.31	-0.0122	0.011	-0.0329
502	SLV 15	-10.15	-3.05	61.13	-0.007	0.0538	-0.0461
502	SLV 16	-10.01	-2.51	61.05	-0.0075	0.05	-0.0361
502	CRTFP Ux+	0	0	0	0	0	0
502	CRTFP Ux-	0	0	0	0	0	0
503	SLU 1	0.46	0.48	33.87	0.0408	10.7225	-0.1681
503	SLU 2	0.46	0.56	33.87	0.0409	10.7204	-0.1971
503	SLU 3	0.47	0.49	34.54	0.0416	10.9284	-0.1734
503	SLU 4	0.47	0.54	34.53	0.0417	10.9272	-0.1908
503	SLU 5	0.46	0.56	34.25	0.0413	10.8381	-0.1987
503	SLU 6	0.48	0.5	34.91	0.0421	11.0461	-0.1749
503	SLU 7	0.48	0.55	34.91	0.0422	11.0448	-0.1924
503	SLU 8	0.47	0.49	34.63	0.0417	10.9578	-0.1712
503	SLU 9	0.47	0.53	34.63	0.0418	10.9565	-0.1886
503	SLU 10	0.49	0.66	38.21	0.0469	12.0898	-0.2327
503	SLU 11	0.5	0.59	38.87	0.0477	12.2979	-0.209
503	SLU 12	0.5	0.64	38.87	0.0477	12.2966	-0.2264
503	SLU 13	0.49	0.67	38.59	0.0474	12.2075	-0.2343
503	SLU 14	0.51	0.6	39.25	0.0481	12.4155	-0.2106
503	SLU 15	0.51	0.65	39.25	0.0482	12.4143	-0.228
503	SLU 16	0.5	0.59	38.97	0.0477	12.3272	-0.2068
503	SLU 17	0.5	0.64	38.97	0.0478	12.326	-0.2242
503	SLU 18	0.5	0.62	40.07	0.0494	12.6788	-0.219
503	SLU 19	0.5	0.67	40.07	0.0494	12.6776	-0.2364
503	SLU 20	0.51	0.63	40.45	0.0499	12.7965	-0.2205
503	SLU 21	0.51	0.68	40.45	0.0499	12.7952	-0.238
503	SLU 22	0.5	0.56	38.04	0.0466	12.0353	-0.1985
503	SLU 23	0.5	0.65	38.04	0.0467	12.0332	-0.2275
503	SLU 24	0.51	0.58	38.7	0.0475	12.2412	-0.2037
503	SLU 25	0.51	0.63	38.7	0.0475	12.24	-0.2212
503	SLU 26	0.51	0.65	38.41	0.0472	12.1509	-0.2291
503	SLU 27	0.52	0.58	39.08	0.048	12.3589	-0.2053
503	SLU 28	0.52	0.63	39.08	0.048	12.3577	-0.2227
503	SLU 29	0.51	0.57	38.8	0.0476	12.2706	-0.2016
503	SLU 30	0.51	0.62	38.8	0.0476	12.2694	-0.219
503	SLU 31	0.53	0.75	42.38	0.0527	13.4027	-0.2631
503	SLU 32	0.54	0.68	43.04	0.0535	13.6107	-0.2394
503	SLU 33	0.54	0.73	43.04	0.0536	13.6094	-0.2568
503	SLU 34	0.53	0.75	42.75	0.0532	13.5203	-0.2647
503	SLU 35	0.55	0.68	43.42	0.054	13.7283	-0.2409
503	SLU 36	0.55	0.73	43.42	0.054	13.7271	-0.2584
503	SLU 37	0.54	0.67	43.14	0.0536	13.6401	-0.2372
503	SLU 38	0.54	0.72	43.13	0.0536	13.6388	-0.2546
503	SLU 39	0.54	0.71	44.24	0.0552	13.9917	-0.2493
503	SLU 40	0.54	0.76	44.24	0.0553	13.9904	-0.2668
503	SLU 41	0.55	0.71	44.62	0.0557	14.1093	-0.2509
503	SLU 42	0.55	0.76	44.62	0.0557	14.1081	-0.2683
503	SLU 43	0.58	0.59	42.61	0.051	13.4891	-0.2081
503	SLU 44	0.58	0.67	42.6	0.0511	13.487	-0.2371
503	SLU 45	0.6	0.6	43.27	0.0519	13.695	-0.2134
503	SLU 46	0.59	0.65	43.27	0.0519	13.6938	-0.2308
503	SLU 47	0.59	0.68	42.98	0.0516	13.6047	-0.2387
503	SLU 48	0.6	0.61	43.65	0.0524	13.8127	-0.2149
503	SLU 49	0.6	0.66	43.64	0.0524	13.8114	-0.2324
503	SLU 50	0.6	0.6	43.37	0.052	13.7244	-0.2112
503	SLU 51	0.6	0.65	43.36	0.052	13.7232	-0.2286
503	SLU 52	0.61	0.77	46.94	0.0571	14.8565	-0.2727
503	SLU 53	0.62	0.71	47.61	0.0579	15.0645	-0.249
503	SLU 54	0.62	0.76	47.6	0.058	15.0632	-0.2664
503	SLU 55	0.62	0.78	47.32	0.0576	14.9741	-0.2743
503	SLU 56	0.63	0.71	47.99	0.0584	15.1821	-0.2506
503	SLU 57	0.63	0.76	47.98	0.0584	15.1809	-0.268
503	SLU 58	0.63	0.7	47.7	0.058	15.0939	-0.2468
503	SLU 59	0.63	0.75	47.7	0.058	15.0926	-0.2643
503	SLU 60	0.63	0.73	48.81	0.0596	15.4455	-0.259
503	SLU 61	0.62	0.78	48.8	0.0597	15.4442	-0.2764
503	SLU 62	0.63	0.74	49.19	0.0601	15.5631	-0.2605
503	SLU 63	0.63	0.79	49.18	0.0601	15.5619	-0.278
503	SLU 64	0.62	0.68	46.78	0.0568	14.8019	-0.2385
503	SLU 65	0.62	0.76	46.77	0.0569	14.7999	-0.2675
503	SLU 66	0.64	0.69	47.44	0.0577	15.0079	-0.2438
503	SLU 67	0.63	0.74	47.43	0.0578	15.0066	-0.2612
503	SLU 68	0.63	0.76	47.15	0.0574	14.9175	-0.2691
503	SLU 69	0.64	0.7	47.81	0.0582	15.1255	-0.2453
503	SLU 70	0.64	0.75	47.81	0.0582	15.1243	-0.2627
503	SLU 71	0.64	0.68	47.53	0.0578	15.0372	-0.2416

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
503	SLU 72	0.64	0.73	47.53	0.0578	15.036	-0.259
503	SLU 73	0.65	0.86	51.11	0.063	16.1693	-0.3031
503	SLU 74	0.67	0.79	51.78	0.0637	16.3773	-0.2794
503	SLU 75	0.66	0.84	51.77	0.0638	16.3761	-0.2968
503	SLU 76	0.66	0.86	51.49	0.0634	16.287	-0.3047
503	SLU 77	0.67	0.8	52.15	0.0642	16.495	-0.2809
503	SLU 78	0.67	0.85	52.15	0.0643	16.4937	-0.2984
503	SLU 79	0.67	0.79	51.87	0.0638	16.4067	-0.2772
503	SLU 80	0.67	0.84	51.87	0.0639	16.4054	-0.2946
503	SLU 81	0.67	0.82	52.97	0.0654	16.7583	-0.2894
503	SLU 82	0.66	0.87	52.97	0.0655	16.757	-0.3068
503	SLU 83	0.67	0.83	53.35	0.0659	16.8759	-0.2909
503	SLU 84	0.67	0.88	53.35	0.066	16.8747	-0.3083
503	SLE RA 1	0.47	0.5	35.07	0.0424	11.0976	-0.1768
503	SLE RA 2	0.47	0.56	35.06	0.0425	11.0962	-0.1961
503	SLE RA 3	0.48	0.51	35.51	0.043	11.2349	-0.1803
503	SLE RA 4	0.48	0.54	35.5	0.0431	11.234	-0.1919
503	SLE RA 5	0.47	0.56	35.31	0.0428	11.1746	-0.1972
503	SLE RA 6	0.48	0.51	35.76	0.0433	11.3133	-0.1813
503	SLE RA 7	0.48	0.55	35.76	0.0434	11.3125	-0.1929
503	SLE RA 8	0.48	0.51	35.57	0.0431	11.2544	-0.1788
503	SLE RA 9	0.48	0.54	35.57	0.0431	11.2536	-0.1905
503	SLE RA 10	0.49	0.62	37.95	0.0465	12.0091	-0.2199
503	SLE RA 11	0.5	0.58	38.4	0.047	12.1478	-0.204
503	SLE RA 12	0.5	0.61	38.4	0.0471	12.147	-0.2157
503	SLE RA 13	0.49	0.63	38.21	0.0468	12.0876	-0.2209
503	SLE RA 14	0.5	0.58	38.65	0.0474	12.2263	-0.2051
503	SLE RA 15	0.5	0.61	38.65	0.0474	12.2254	-0.2167
503	SLE RA 16	0.5	0.57	38.46	0.0471	12.1674	-0.2026
503	SLE RA 17	0.5	0.61	38.46	0.0471	12.1666	-0.2142
503	SLE RA 18	0.5	0.6	39.2	0.0482	12.4018	-0.2107
503	SLE RA 19	0.5	0.63	39.2	0.0482	12.401	-0.2223
503	SLE RA 20	0.5	0.6	39.45	0.0485	12.4802	-0.2117
503	SLE RA 21	0.5	0.63	39.45	0.0485	12.4794	-0.2233
503	SLE FR 1	0.47	0.5	35.07	0.0424	11.0976	-0.1768
503	SLE FR 2	0.47	0.51	35.06	0.0425	11.0973	-0.1806
503	SLE FR 3	0.47	0.5	35.17	0.0426	11.1289	-0.1772
503	SLE FR 4	0.48	0.54	36.3	0.0442	11.4886	-0.1908
503	SLE FR 5	0.48	0.53	36.41	0.0443	11.5202	-0.1874
503	SLE FR 6	0.49	0.55	37.13	0.0453	11.7497	-0.1937
503	SLE QP 1	0.47	0.5	35.07	0.0424	11.0976	-0.1768
503	SLE QP 2	0.48	0.53	36.31	0.0442	11.4888	-0.1869
503	SLD 1	3.44	0.92	29.6	0.0351	9.3942	-0.3238
503	SLD 2	3.48	1.31	29.6	0.0349	9.3916	-0.4577
503	SLD 3	3.35	-0.57	29.44	0.0355	9.4537	0.1973
503	SLD 4	3.39	-0.18	29.44	0.0354	9.4511	0.0634
503	SLD 5	1.5	2.84	34.54	0.0408	10.7705	-0.9949
503	SLD 6	1.52	3.09	34.54	0.0407	10.7689	-1.0818
503	SLD 7	1.2	-2.12	34	0.0423	10.9691	0.742
503	SLD 8	1.23	-1.88	33.99	0.0422	10.9674	0.6551
503	SLD 9	-0.27	2.94	38.62	0.0461	12.0103	-1.0289
503	SLD 10	-0.24	3.18	38.61	0.046	12.0086	-1.1158
503	SLD 11	-0.57	-2.03	38.07	0.0476	12.2088	0.7079
503	SLD 12	-0.54	-1.78	38.07	0.0476	12.2071	0.621
503	SLD 13	-2.43	1.24	43.18	0.0529	13.5265	-0.4373
503	SLD 14	-2.39	1.63	43.17	0.0528	13.524	-0.5711
503	SLD 15	-2.52	-0.25	43.01	0.0534	13.5861	0.0838
503	SLD 16	-2.48	0.14	43.01	0.0532	13.5835	-0.0501
503	SLV 1	7.39	1.4	20.62	0.0229	6.5881	-0.4909
503	SLV 2	7.5	2.3	20.61	0.0226	6.5821	-0.8028
503	SLV 3	7.19	-1.99	20.23	0.024	6.7264	0.6943
503	SLV 4	7.29	-1.09	20.23	0.0237	6.7204	0.3824
503	SLV 5	2.85	5.78	32.18	0.0362	9.81	-2.0229
503	SLV 6	2.92	6.35	32.18	0.036	9.8061	-2.2221
503	SLV 7	2.16	-5.51	30.9	0.0398	10.2708	1.9278
503	SLV 8	2.23	-4.94	30.9	0.0396	10.2669	1.7286
503	SLV 9	-1.27	6	41.71	0.0487	12.7107	-2.1025
503	SLV 10	-1.2	6.57	41.71	0.0486	12.7069	-2.3017
503	SLV 11	-1.96	-5.29	40.43	0.0523	13.1716	1.8482
503	SLV 12	-1.89	-4.72	40.43	0.0521	13.1677	1.649
503	SLV 13	-6.33	2.15	52.38	0.0646	16.2573	-0.7563
503	SLV 14	-6.23	3.05	52.38	0.0644	16.2513	-1.0682
503	SLV 15	-6.54	-1.24	52	0.0657	16.3956	0.4289
503	SLV 16	-6.43	-0.34	51.99	0.0654	16.3895	0.117
503	CRTFP Ux+	0	0	0	0	0	0
503	CRTFP Ux-	0	0	0	0	0	0
505	SLU 1	-0.18	-0.09	27.54	0.0322	-6.0762	-0.0217
505	SLU 2	-0.18	-0.01	27.53	0.0323	-6.0745	-0.0029
505	SLU 3	-0.18	-0.08	28.08	0.0329	-6.1932	-0.0204
505	SLU 4	-0.18	-0.04	28.08	0.033	-6.1922	-0.0091
505	SLU 5	-0.18	-0.01	27.84	0.0327	-6.1412	-0.002
505	SLU 6	-0.19	-0.08	28.39	0.0333	-6.2598	-0.0195
505	SLU 7	-0.19	-0.04	28.39	0.0333	-6.2588	-0.0082
505	SLU 8	-0.19	-0.08	28.16	0.0329	-6.2095	-0.0199
505	SLU 9	-0.18	-0.04	28.15	0.033	-6.2085	-0.0086
505	SLU 10	-0.17	0	31.11	0.0373	-6.8629	0.0001
505	SLU 11	-0.17	-0.07	31.66	0.0378	-6.9816	-0.0174
505	SLU 12	-0.17	-0.03	31.65	0.0379	-6.9806	-0.0061
505	SLU 13	-0.17	0	31.42	0.0376	-6.9296	0.001
505	SLU 14	-0.18	-0.07	31.97	0.0382	-7.0483	-0.0165
505	SLU 15	-0.17	-0.02	31.96	0.0383	-7.0472	-0.0053

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
505	SLU 16	-0.17	-0.07	31.73	0.0379	-6.9979	-0.0169
505	SLU 17	-0.17	-0.03	31.73	0.0379	-6.9969	-0.0057
505	SLU 18	-0.16	-0.07	32.65	0.0393	-7.2025	-0.0174
505	SLU 19	-0.16	-0.03	32.64	0.0393	-7.2015	-0.0062
505	SLU 20	-0.17	-0.07	32.96	0.0396	-7.2692	-0.0166
505	SLU 21	-0.17	-0.02	32.95	0.0397	-7.2682	-0.0053
505	SLU 22	-0.19	-0.07	30.97	0.037	-6.8307	-0.0182
505	SLU 23	-0.19	0	30.97	0.0371	-6.829	0.0006
505	SLU 24	-0.19	-0.07	31.51	0.0377	-6.9477	-0.0169
505	SLU 25	-0.19	-0.02	31.51	0.0378	-6.9467	-0.0056
505	SLU 26	-0.19	0	31.28	0.0375	-6.8956	0.0015
505	SLU 27	-0.2	-0.07	31.82	0.0381	-7.0143	-0.016
505	SLU 28	-0.2	-0.02	31.82	0.0381	-7.0133	-0.0048
505	SLU 29	-0.2	-0.07	31.59	0.0377	-6.964	-0.0164
505	SLU 30	-0.19	-0.02	31.59	0.0378	-6.963	-0.0052
505	SLU 31	-0.18	0.01	34.54	0.0421	-7.6174	0.0035
505	SLU 32	-0.18	-0.06	35.09	0.0426	-7.7361	-0.014
505	SLU 33	-0.18	-0.01	35.08	0.0427	-7.7351	-0.0027
505	SLU 34	-0.18	0.02	34.85	0.0424	-7.6841	0.0044
505	SLU 35	-0.18	-0.05	35.4	0.043	-7.8027	-0.0131
505	SLU 36	-0.18	-0.01	35.39	0.0431	-7.8017	-0.0018
505	SLU 37	-0.18	-0.06	35.17	0.0427	-7.7524	-0.0135
505	SLU 38	-0.18	-0.01	35.16	0.0427	-7.7514	-0.0022
505	SLU 39	-0.17	-0.06	36.08	0.0441	-7.957	-0.014
505	SLU 40	-0.17	-0.01	36.08	0.0441	-7.956	-0.0027
505	SLU 41	-0.18	-0.05	36.39	0.0444	-8.0236	-0.0131
505	SLU 42	-0.18	-0.01	36.39	0.0445	-8.0226	-0.0018
505	SLU 43	-0.23	-0.12	34.63	0.0402	-7.6404	-0.0293
505	SLU 44	-0.23	-0.05	34.62	0.0403	-7.6387	-0.0105
505	SLU 45	-0.23	-0.12	35.17	0.0409	-7.7574	-0.028
505	SLU 46	-0.23	-0.07	35.16	0.041	-7.7564	-0.0168
505	SLU 47	-0.23	-0.04	34.93	0.0407	-7.7053	-0.0097
505	SLU 48	-0.24	-0.11	35.48	0.0413	-7.824	-0.0271
505	SLU 49	-0.24	-0.07	35.47	0.0413	-7.823	-0.0159
505	SLU 50	-0.24	-0.11	35.24	0.0409	-7.7737	-0.0276
505	SLU 51	-0.24	-0.07	35.24	0.041	-7.7727	-0.0163
505	SLU 52	-0.22	-0.03	38.19	0.0453	-8.4271	-0.0076
505	SLU 53	-0.22	-0.1	38.74	0.0458	-8.5458	-0.0251
505	SLU 54	-0.22	-0.06	38.74	0.0459	-8.5448	-0.0138
505	SLU 55	-0.22	-0.03	38.5	0.0456	-8.4938	-0.0067
505	SLU 56	-0.23	-0.1	39.05	0.0462	-8.6124	-0.0242
505	SLU 57	-0.22	-0.05	39.05	0.0463	-8.6114	-0.0129
505	SLU 58	-0.23	-0.1	38.82	0.0459	-8.5621	-0.0246
505	SLU 59	-0.22	-0.06	38.82	0.0459	-8.5611	-0.0133
505	SLU 60	-0.21	-0.1	39.73	0.0473	-8.7667	-0.0251
505	SLU 61	-0.21	-0.06	39.73	0.0473	-8.7657	-0.0138
505	SLU 62	-0.22	-0.1	40.04	0.0476	-8.8334	-0.0242
505	SLU 63	-0.22	-0.05	40.04	0.0477	-8.8323	-0.013
505	SLU 64	-0.24	-0.11	38.06	0.045	-8.3949	-0.0259
505	SLU 65	-0.24	-0.03	38.05	0.0451	-8.3932	-0.0071
505	SLU 66	-0.24	-0.1	38.6	0.0457	-8.5119	-0.0246
505	SLU 67	-0.24	-0.06	38.6	0.0458	-8.5108	-0.0133
505	SLU 68	-0.24	-0.03	38.36	0.0455	-8.4598	-0.0062
505	SLU 69	-0.25	-0.1	38.91	0.0461	-8.5785	-0.0237
505	SLU 70	-0.25	-0.05	38.9	0.0461	-8.5775	-0.0124
505	SLU 71	-0.25	-0.1	38.68	0.0457	-8.5282	-0.0241
505	SLU 72	-0.25	-0.05	38.67	0.0458	-8.5271	-0.0128
505	SLU 73	-0.23	-0.02	41.63	0.0501	-9.1816	-0.0042
505	SLU 74	-0.23	-0.09	42.17	0.0506	-9.3003	-0.0216
505	SLU 75	-0.23	-0.04	42.17	0.0507	-9.2993	-0.0104
505	SLU 76	-0.23	-0.02	41.94	0.0504	-9.2482	-0.0033
505	SLU 77	-0.24	-0.09	42.48	0.051	-9.3669	-0.0208
505	SLU 78	-0.23	-0.04	42.48	0.0511	-9.3659	-0.0095
505	SLU 79	-0.23	-0.09	42.25	0.0507	-9.3166	-0.0212
505	SLU 80	-0.23	-0.04	42.25	0.0508	-9.3156	-0.0099
505	SLU 81	-0.22	-0.09	43.17	0.0521	-9.5212	-0.0217
505	SLU 82	-0.22	-0.04	43.16	0.0521	-9.5202	-0.0104
505	SLU 83	-0.23	-0.09	43.48	0.0524	-9.5878	-0.0208
505	SLU 84	-0.23	-0.04	43.47	0.0525	-9.5868	-0.0095
505	SLE RA 1	-0.18	-0.08	28.52	0.0336	-6.2918	-0.0207
505	SLE RA 2	-0.18	-0.03	28.52	0.0336	-6.2907	-0.0081
505	SLE RA 3	-0.18	-0.08	28.88	0.034	-6.3698	-0.0198
505	SLE RA 4	-0.18	-0.05	28.88	0.0341	-6.3691	-0.0123
505	SLE RA 5	-0.18	-0.03	28.72	0.0339	-6.3351	-0.0076
505	SLE RA 6	-0.19	-0.08	29.09	0.0343	-6.4142	-0.0192
505	SLE RA 7	-0.19	-0.05	29.09	0.0343	-6.4135	-0.0117
505	SLE RA 8	-0.19	-0.08	28.93	0.0341	-6.3806	-0.0195
505	SLE RA 9	-0.19	-0.05	28.93	0.0341	-6.38	-0.012
505	SLE RA 10	-0.17	-0.03	30.9	0.0369	-6.8163	-0.0062
505	SLE RA 11	-0.18	-0.07	31.27	0.0373	-6.8954	-0.0178
505	SLE RA 12	-0.18	-0.04	31.26	0.0374	-6.8947	-0.0103
505	SLE RA 13	-0.18	-0.02	31.11	0.0372	-6.8607	-0.0056
505	SLE RA 14	-0.18	-0.07	31.47	0.0376	-6.9398	-0.0172
505	SLE RA 15	-0.18	-0.04	31.47	0.0376	-6.9391	-0.0097
505	SLE RA 16	-0.18	-0.07	31.32	0.0374	-6.9062	-0.0175
505	SLE RA 17	-0.18	-0.04	31.31	0.0374	-6.9056	-0.01
505	SLE RA 18	-0.17	-0.07	31.93	0.0383	-7.0427	-0.0179
505	SLE RA 19	-0.17	-0.04	31.92	0.0383	-7.042	-0.0103
505	SLE RA 20	-0.17	-0.07	32.13	0.0385	-7.0871	-0.0173
505	SLE RA 21	-0.17	-0.04	32.13	0.0386	-7.0864	-0.0098
505	SLE FR 1	-0.18	-0.08	28.52	0.0336	-6.2918	-0.0207

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
505	SLE FR 2	-0.18	-0.07	28.52	0.0336	-6.2916	-0.0182
505	SLE FR 3	-0.18	-0.08	28.6	0.0337	-6.3095	-0.0204
505	SLE FR 4	-0.18	-0.07	29.54	0.035	-6.5168	-0.0173
505	SLE FR 5	-0.18	-0.08	29.63	0.0351	-6.5348	-0.0196
505	SLE FR 6	-0.18	-0.08	30.22	0.0359	-6.6672	-0.0193
505	SLE QP 1	-0.18	-0.08	28.52	0.0336	-6.2918	-0.0207
505	SLE QP 2	-0.18	-0.08	29.54	0.035	-6.517	-0.0198
505	SLD 1	2.18	0.87	35.33	0.0437	-7.7468	0.2188
505	SLD 2	2.21	0.55	35.35	0.0439	-7.7529	0.1393
505	SLD 3	2.24	-0.38	35.53	0.0443	-7.8038	-0.0947
505	SLD 4	2.26	-0.7	35.55	0.0445	-7.8099	-0.1742
505	SLD 5	0.44	2.16	30.98	0.0366	-6.7984	0.5412
505	SLD 6	0.46	1.96	30.99	0.0367	-6.8023	0.4895
505	SLD 7	0.62	-2.02	31.64	0.0388	-6.9886	-0.5039
505	SLD 8	0.64	-2.22	31.65	0.0389	-6.9925	-0.5555
505	SLD 9	-1	2.06	27.44	0.0311	-6.0416	0.5159
505	SLD 10	-0.98	1.85	27.45	0.0312	-6.0455	0.4643
505	SLD 11	-0.82	-2.12	28.1	0.0333	-6.2318	-0.5292
505	SLD 12	-0.8	-2.33	28.11	0.0334	-6.2357	-0.5808
505	SLD 13	-2.62	0.54	23.54	0.0254	-5.2242	0.1346
505	SLD 14	-2.59	0.22	23.56	0.0256	-5.2302	0.055
505	SLD 15	-2.57	-0.72	23.74	0.0261	-5.2812	-0.1789
505	SLD 16	-2.54	-1.04	23.75	0.0263	-5.2873	-0.2585
505	SLV 1	5.34	2.12	43.09	0.0553	-9.3956	0.5294
505	SLV 2	5.41	1.37	43.13	0.0558	-9.4098	0.3441
505	SLV 3	5.47	-0.74	43.55	0.0569	-9.527	-0.1857
505	SLV 4	5.53	-1.49	43.59	0.0573	-9.5412	-0.371
505	SLV 5	1.27	5.04	32.91	0.0387	-7.1789	1.2609
505	SLV 6	1.31	4.57	32.94	0.039	-7.1879	1.1425
505	SLV 7	1.7	-4.49	34.43	0.0438	-7.617	-1.1228
505	SLV 8	1.74	-4.97	34.45	0.044	-7.626	-1.2411
505	SLV 9	-2.1	4.8	24.63	0.0259	-5.408	1.2015
505	SLV 10	-2.05	4.33	24.66	0.0262	-5.4171	1.0831
505	SLV 11	-1.67	-4.73	26.15	0.0309	-5.8462	-1.1822
505	SLV 12	-1.63	-5.2	26.18	0.0312	-5.8552	-1.3005
505	SLV 13	-5.89	1.32	15.5	0.0127	-3.4929	0.3313
505	SLV 14	-5.82	0.58	15.54	0.0131	-3.507	0.146
505	SLV 15	-5.76	-1.54	15.96	0.0142	-3.6243	-0.3837
505	SLV 16	-5.7	-2.28	15.99	0.0146	-3.6385	-0.5691
505	CRTFP Ux+	0	0	0	0	0	0
505	CRTFP Ux-	0	0	0	0	0	0
508	SLU 1	0.06	-0.12	27.93	-0.0042	9.4539	0.0416
508	SLU 2	0.06	-0.07	27.93	-0.0043	9.4517	0.0252
508	SLU 3	0.06	-0.11	28.46	-0.0042	9.6302	0.0392
508	SLU 4	0.06	-0.09	28.46	-0.0042	9.6289	0.0293
508	SLU 5	0.06	-0.08	28.23	-0.0043	9.5535	0.0267
508	SLU 6	0.06	-0.12	28.77	-0.0043	9.7319	0.0408
508	SLU 7	0.06	-0.09	28.76	-0.0043	9.7306	0.0309
508	SLU 8	0.06	-0.13	28.54	-0.0043	9.6574	0.0447
508	SLU 9	0.06	-0.1	28.54	-0.0044	9.6561	0.0349
508	SLU 10	0.07	-0.06	31.84	-0.0044	10.7725	0.0191
508	SLU 11	0.07	-0.1	32.38	-0.0043	10.951	0.0331
508	SLU 12	0.07	-0.07	32.37	-0.0043	10.9497	0.0232
508	SLU 13	0.07	-0.06	32.15	-0.0044	10.8743	0.0206
508	SLU 14	0.07	-0.1	32.68	-0.0044	11.0528	0.0346
508	SLU 15	0.07	-0.07	32.68	-0.0044	11.0515	0.0248
508	SLU 16	0.07	-0.11	32.46	-0.0044	10.9782	0.0386
508	SLU 17	0.07	-0.08	32.46	-0.0045	10.9769	0.0287
508	SLU 18	0.07	-0.1	33.53	-0.0043	11.3408	0.0329
508	SLU 19	0.07	-0.07	33.53	-0.0044	11.3395	0.023
508	SLU 20	0.07	-0.1	33.83	-0.0044	11.4425	0.0344
508	SLU 21	0.07	-0.07	33.83	-0.0045	11.4412	0.0246
508	SLU 22	0.06	-0.09	31.26	-0.0037	10.5689	0.029
508	SLU 23	0.06	-0.04	31.25	-0.0037	10.5667	0.0126
508	SLU 24	0.06	-0.08	31.79	-0.0037	10.7452	0.0266
508	SLU 25	0.06	-0.05	31.78	-0.0037	10.7439	0.0168
508	SLU 26	0.06	-0.04	31.56	-0.0038	10.6684	0.0141
508	SLU 27	0.07	-0.08	32.09	-0.0037	10.8469	0.0282
508	SLU 28	0.07	-0.05	32.09	-0.0038	10.8456	0.0183
508	SLU 29	0.07	-0.09	31.87	-0.0038	10.7724	0.0321
508	SLU 30	0.07	-0.07	31.86	-0.0039	10.771	0.0223
508	SLU 31	0.07	-0.02	35.17	-0.0038	11.8875	0.0065
508	SLU 32	0.07	-0.06	35.7	-0.0038	12.066	0.0205
508	SLU 33	0.07	-0.03	35.7	-0.0038	12.0647	0.0107
508	SLU 34	0.07	-0.03	35.47	-0.0039	11.9892	0.008
508	SLU 35	0.07	-0.07	36.01	-0.0038	12.1677	0.0221
508	SLU 36	0.07	-0.04	36	-0.0039	12.1664	0.0122
508	SLU 37	0.07	-0.08	35.79	-0.0039	12.0932	0.026
508	SLU 38	0.07	-0.05	35.78	-0.004	12.0919	0.0162
508	SLU 39	0.07	-0.06	36.85	-0.0038	12.4557	0.0203
508	SLU 40	0.07	-0.03	36.85	-0.0039	12.4544	0.0104
508	SLU 41	0.08	-0.06	37.16	-0.0039	12.5575	0.0218
508	SLU 42	0.07	-0.04	37.16	-0.0039	12.5562	0.012
508	SLU 43	0.08	-0.17	35.17	-0.0056	11.9078	0.0584
508	SLU 44	0.08	-0.12	35.17	-0.0057	11.9056	0.042
508	SLU 45	0.08	-0.16	35.7	-0.0056	12.0841	0.056
508	SLU 46	0.08	-0.13	35.7	-0.0057	12.0828	0.0461
508	SLU 47	0.08	-0.13	35.47	-0.0058	12.0073	0.0435
508	SLU 48	0.08	-0.17	36.01	-0.0057	12.1858	0.0575
508	SLU 49	0.08	-0.14	36	-0.0057	12.1845	0.0477
508	SLU 50	0.08	-0.18	35.78	-0.0058	12.1113	0.0615

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
508	SLU 51	0.08	-0.15	35.78	-0.0058	12.11	0.0516
508	SLU 52	0.08	-0.11	39.08	-0.0058	13.2264	0.0359
508	SLU 53	0.09	-0.15	39.62	-0.0057	13.4049	0.0499
508	SLU 54	0.09	-0.12	39.61	-0.0058	13.4036	0.04
508	SLU 55	0.09	-0.11	39.39	-0.0059	13.3282	0.0374
508	SLU 56	0.09	-0.15	39.92	-0.0058	13.5066	0.0514
508	SLU 57	0.09	-0.12	39.92	-0.0058	13.5053	0.0416
508	SLU 58	0.09	-0.16	39.7	-0.0059	13.4321	0.0554
508	SLU 59	0.09	-0.13	39.7	-0.0059	13.4308	0.0455
508	SLU 60	0.09	-0.14	40.77	-0.0058	13.7947	0.0496
508	SLU 61	0.09	-0.12	40.77	-0.0058	13.7933	0.0398
508	SLU 62	0.09	-0.15	41.07	-0.0059	13.8964	0.0512
508	SLU 63	0.09	-0.12	41.07	-0.0059	13.8951	0.0414
508	SLU 64	0.08	-0.13	38.5	-0.0051	13.0227	0.0458
508	SLU 65	0.08	-0.09	38.49	-0.0052	13.0206	0.0294
508	SLU 66	0.08	-0.13	39.03	-0.0051	13.1991	0.0434
508	SLU 67	0.08	-0.1	39.02	-0.0052	13.1978	0.0335
508	SLU 68	0.08	-0.09	38.8	-0.0053	13.1223	0.0309
508	SLU 69	0.08	-0.13	39.33	-0.0052	13.3008	0.045
508	SLU 70	0.08	-0.1	39.33	-0.0052	13.2995	0.0351
508	SLU 71	0.08	-0.14	39.11	-0.0053	13.2262	0.0489
508	SLU 72	0.08	-0.11	39.1	-0.0053	13.2249	0.0391
508	SLU 73	0.09	-0.07	42.41	-0.0053	14.3414	0.0233
508	SLU 74	0.09	-0.11	42.94	-0.0052	14.5199	0.0373
508	SLU 75	0.09	-0.08	42.94	-0.0052	14.5186	0.0274
508	SLU 76	0.09	-0.07	42.71	-0.0054	14.4431	0.0248
508	SLU 77	0.09	-0.11	43.25	-0.0053	14.6216	0.0388
508	SLU 78	0.09	-0.09	43.24	-0.0053	14.6203	0.029
508	SLU 79	0.09	-0.13	43.02	-0.0054	14.5471	0.0428
508	SLU 80	0.09	-0.1	43.02	-0.0054	14.5458	0.0329
508	SLU 81	0.09	-0.11	44.09	-0.0053	14.9096	0.0371
508	SLU 82	0.09	-0.08	44.09	-0.0053	14.9083	0.0272
508	SLU 83	0.09	-0.11	44.4	-0.0053	15.0114	0.0386
508	SLU 84	0.09	-0.09	44.4	-0.0054	15.0101	0.0288
508	SLE RA 1	0.06	-0.11	28.88	-0.0041	9.7724	0.038
508	SLE RA 2	0.06	-0.08	28.88	-0.0041	9.771	0.027
508	SLE RA 3	0.06	-0.11	29.24	-0.004	9.89	0.0364
508	SLE RA 4	0.06	-0.09	29.23	-0.0041	9.8891	0.0298
508	SLE RA 5	0.06	-0.08	29.08	-0.0041	9.8388	0.0281
508	SLE RA 6	0.06	-0.11	29.44	-0.0041	9.9578	0.0374
508	SLE RA 7	0.06	-0.09	29.44	-0.0041	9.957	0.0309
508	SLE RA 8	0.06	-0.12	29.29	-0.0041	9.9081	0.0401
508	SLE RA 9	0.06	-0.1	29.29	-0.0042	9.9072	0.0335
508	SLE RA 10	0.07	-0.07	31.49	-0.0042	10.6515	0.023
508	SLE RA 11	0.07	-0.09	31.85	-0.0041	10.7705	0.0323
508	SLE RA 12	0.07	-0.08	31.84	-0.0041	10.7697	0.0258
508	SLE RA 13	0.07	-0.07	31.69	-0.0042	10.7194	0.024
508	SLE RA 14	0.07	-0.1	32.05	-0.0042	10.8384	0.0334
508	SLE RA 15	0.07	-0.08	32.05	-0.0042	10.8375	0.0268
508	SLE RA 16	0.07	-0.11	31.9	-0.0042	10.7887	0.036
508	SLE RA 17	0.07	-0.09	31.9	-0.0042	10.7878	0.0294
508	SLE RA 18	0.07	-0.09	32.61	-0.0041	11.0304	0.0322
508	SLE RA 19	0.07	-0.08	32.61	-0.0042	11.0295	0.0256
508	SLE RA 20	0.07	-0.1	32.82	-0.0042	11.0982	0.0332
508	SLE RA 21	0.07	-0.08	32.81	-0.0042	11.0973	0.0266
508	SLE FR 1	0.06	-0.11	28.88	-0.0041	9.7724	0.038
508	SLE FR 2	0.06	-0.1	28.88	-0.0041	9.7722	0.0358
508	SLE FR 3	0.06	-0.11	28.96	-0.0041	9.7996	0.0384
508	SLE FR 4	0.06	-0.1	30	-0.0041	10.1495	0.0341
508	SLE FR 5	0.06	-0.11	30.08	-0.0041	10.177	0.0367
508	SLE FR 6	0.06	-0.1	30.75	-0.0041	10.4014	0.0351
508	SLE QP 1	0.06	-0.11	28.88	-0.0041	9.7724	0.038
508	SLE QP 2	0.06	-0.11	30	-0.0041	10.1498	0.0362
508	SLD 1	2.45	0.45	30.03	-0.0043	10.1572	-0.1582
508	SLD 2	2.48	0.47	30.02	-0.0043	10.1557	-0.1637
508	SLD 3	2.51	-0.55	30.24	-0.0029	10.2319	0.1914
508	SLD 4	2.53	-0.53	30.23	-0.003	10.2304	0.186
508	SLD 5	0.69	1.57	29.7	-0.0062	10.039	-0.5515
508	SLD 6	0.71	1.58	29.69	-0.0062	10.038	-0.5551
508	SLD 7	0.87	-1.76	30.39	-0.0017	10.288	0.6141
508	SLD 8	0.89	-1.75	30.39	-0.0017	10.2871	0.6106
508	SLD 9	-0.76	1.54	29.62	-0.0065	10.0126	-0.5381
508	SLD 10	-0.75	1.55	29.62	-0.0065	10.0116	-0.5416
508	SLD 11	-0.59	-1.8	30.31	-0.0019	10.2616	0.6275
508	SLD 12	-0.57	-1.78	30.31	-0.0019	10.2607	0.624
508	SLD 13	-2.41	0.32	29.77	-0.0052	10.0692	-0.1135
508	SLD 14	-2.38	0.34	29.77	-0.0052	10.0677	-0.119
508	SLD 15	-2.35	-0.68	29.98	-0.0038	10.1439	0.2362
508	SLD 16	-2.33	-0.66	29.97	-0.0039	10.1424	0.2307
508	SLV 1	5.65	1.16	30.08	-0.0046	10.1698	-0.4076
508	SLV 2	5.71	1.2	30.06	-0.0046	10.1664	-0.4204
508	SLV 3	5.78	-1.11	30.55	-0.0014	10.3402	0.3889
508	SLV 4	5.83	-1.08	30.54	-0.0015	10.3368	0.3762
508	SLV 5	1.54	3.72	29.31	-0.0089	9.8979	-1.3028
508	SLV 6	1.58	3.74	29.3	-0.009	9.8957	-1.311
508	SLV 7	1.95	-3.87	30.89	0.0015	10.466	1.3523
508	SLV 8	1.99	-3.84	30.88	0.0014	10.4638	1.3441
508	SLV 9	-1.87	3.63	29.13	-0.0096	9.8358	-1.2717
508	SLV 10	-1.83	3.66	29.12	-0.0096	9.8337	-1.2798
508	SLV 11	-1.45	-3.96	30.71	0.0008	10.4039	1.3834
508	SLV 12	-1.42	-3.93	30.7	0.0008	10.4017	1.3753

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
508	SLV 13	-5.71	0.86	29.47	-0.0066	9.9628	-0.3037
508	SLV 14	-5.65	0.9	29.46	-0.0067	9.9594	-0.3164
508	SLV 15	-5.59	-1.41	29.94	-0.0035	10.1332	0.4928
508	SLV 16	-5.53	-1.37	29.93	-0.0036	10.1298	0.4801
508	CRTFP Ux+	0	0	0	0	0	0
508	CRTFP Ux-	0	0	0	0	0	0
514	SLU 1	-0.27	-0.34	51.03	-0.0035	-0.0961	0.0003
514	SLU 2	-0.27	-0.25	51.01	-0.0033	-0.0956	0.0004
514	SLU 3	-0.28	-0.34	52.04	-0.0035	-0.0984	0.0003
514	SLU 4	-0.28	-0.28	52.02	-0.0034	-0.0981	0.0004
514	SLU 5	-0.28	-0.26	51.56	-0.0035	-0.0965	0.0004
514	SLU 6	-0.28	-0.34	52.59	-0.0037	-0.0992	0.0004
514	SLU 7	-0.28	-0.29	52.57	-0.0036	-0.0989	0.0004
514	SLU 8	-0.28	-0.36	52.14	-0.0039	-0.0979	0.0004
514	SLU 9	-0.28	-0.3	52.12	-0.0038	-0.0976	0.0005
514	SLU 10	-0.26	-0.25	58.07	-0.0023	-0.1155	0.0002
514	SLU 11	-0.26	-0.34	59.1	-0.0025	-0.1182	0.0002
514	SLU 12	-0.26	-0.28	59.08	-0.0024	-0.1179	0.0002
514	SLU 13	-0.26	-0.26	58.62	-0.0025	-0.1164	0.0003
514	SLU 14	-0.26	-0.34	59.65	-0.0027	-0.1191	0.0002
514	SLU 15	-0.26	-0.29	59.63	-0.0026	-0.1188	0.0002
514	SLU 16	-0.26	-0.35	59.2	-0.0029	-0.1178	0.0003
514	SLU 17	-0.26	-0.3	59.18	-0.0028	-0.1175	0.0003
514	SLU 18	-0.25	-0.34	61.12	-0.0021	-0.1245	0.0001
514	SLU 19	-0.25	-0.29	61.1	-0.002	-0.1242	0.0001
514	SLU 20	-0.25	-0.35	61.67	-0.0023	-0.1254	0.0002
514	SLU 21	-0.25	-0.29	61.66	-0.0022	-0.1251	0.0002
514	SLU 22	-0.29	-0.31	57.57	-0.0022	-0.1089	0
514	SLU 23	-0.29	-0.22	57.54	-0.002	-0.1084	0.0001
514	SLU 24	-0.29	-0.3	58.57	-0.0022	-0.1112	0
514	SLU 25	-0.29	-0.25	58.56	-0.0021	-0.1109	0
514	SLU 26	-0.29	-0.22	58.1	-0.0022	-0.1093	0.0001
514	SLU 27	-0.3	-0.31	59.12	-0.0024	-0.112	0.0001
514	SLU 28	-0.3	-0.25	59.11	-0.0023	-0.1117	0.0001
514	SLU 29	-0.3	-0.32	58.67	-0.0026	-0.1107	0.0001
514	SLU 30	-0.3	-0.27	58.66	-0.0025	-0.1104	0.0001
514	SLU 31	-0.27	-0.22	64.6	-0.001	-0.1283	-0.0001
514	SLU 32	-0.28	-0.3	65.63	-0.0012	-0.131	-0.0002
514	SLU 33	-0.28	-0.25	65.61	-0.0011	-0.1307	-0.0001
514	SLU 34	-0.28	-0.22	65.16	-0.0012	-0.1292	0
514	SLU 35	-0.28	-0.31	66.18	-0.0014	-0.1319	-0.0001
514	SLU 36	-0.28	-0.25	66.17	-0.0013	-0.1316	-0.0001
514	SLU 37	-0.28	-0.32	65.73	-0.0016	-0.1306	-0.0001
514	SLU 38	-0.28	-0.26	65.72	-0.0015	-0.1303	0
514	SLU 39	-0.26	-0.31	67.65	-0.0008	-0.1373	-0.0002
514	SLU 40	-0.26	-0.25	67.64	-0.0007	-0.137	-0.0002
514	SLU 41	-0.27	-0.31	68.21	-0.001	-0.1382	-0.0002
514	SLU 42	-0.27	-0.26	68.19	-0.0009	-0.1379	-0.0001
514	SLU 43	-0.35	-0.46	64.1	-0.005	-0.1206	0.0006
514	SLU 44	-0.35	-0.37	64.08	-0.0048	-0.1201	0.0006
514	SLU 45	-0.35	-0.45	65.11	-0.005	-0.1228	0.0005
514	SLU 46	-0.35	-0.4	65.09	-0.0049	-0.1225	0.0006
514	SLU 47	-0.35	-0.37	64.63	-0.005	-0.121	0.0006
514	SLU 48	-0.36	-0.46	65.66	-0.0052	-0.1237	0.0006
514	SLU 49	-0.36	-0.4	65.64	-0.0051	-0.1234	0.0006
514	SLU 50	-0.36	-0.47	65.21	-0.0054	-0.1223	0.0006
514	SLU 51	-0.36	-0.42	65.19	-0.0053	-0.122	0.0007
514	SLU 52	-0.33	-0.37	71.14	-0.0038	-0.1399	0.0004
514	SLU 53	-0.34	-0.45	72.16	-0.004	-0.1427	0.0004
514	SLU 54	-0.34	-0.4	72.15	-0.0039	-0.1424	0.0004
514	SLU 55	-0.34	-0.37	71.69	-0.004	-0.1408	0.0005
514	SLU 56	-0.34	-0.46	72.72	-0.0042	-0.1435	0.0004
514	SLU 57	-0.34	-0.4	72.7	-0.0041	-0.1433	0.0004
514	SLU 58	-0.34	-0.47	72.27	-0.0044	-0.1422	0.0005
514	SLU 59	-0.34	-0.41	72.25	-0.0043	-0.1419	0.0005
514	SLU 60	-0.32	-0.46	74.19	-0.0036	-0.149	0.0003
514	SLU 61	-0.32	-0.4	74.17	-0.0035	-0.1487	0.0004
514	SLU 62	-0.33	-0.46	74.74	-0.0038	-0.1498	0.0004
514	SLU 63	-0.33	-0.41	74.73	-0.0037	-0.1495	0.0004
514	SLU 64	-0.37	-0.43	70.64	-0.0037	-0.1334	0.0002
514	SLU 65	-0.37	-0.33	70.61	-0.0035	-0.1329	0.0003
514	SLU 66	-0.37	-0.42	71.64	-0.0037	-0.1356	0.0002
514	SLU 67	-0.37	-0.36	71.63	-0.0036	-0.1353	0.0003
514	SLU 68	-0.37	-0.34	71.17	-0.0037	-0.1338	0.0003
514	SLU 69	-0.38	-0.42	72.19	-0.0039	-0.1365	0.0003
514	SLU 70	-0.38	-0.37	72.18	-0.0038	-0.1362	0.0003
514	SLU 71	-0.38	-0.44	71.74	-0.0041	-0.1351	0.0003
514	SLU 72	-0.38	-0.38	71.73	-0.004	-0.1348	0.0004
514	SLU 73	-0.35	-0.33	77.67	-0.0025	-0.1528	0.0001
514	SLU 74	-0.35	-0.42	78.7	-0.0027	-0.1555	0.0001
514	SLU 75	-0.35	-0.36	78.68	-0.0026	-0.1552	0.0001
514	SLU 76	-0.35	-0.34	78.22	-0.0027	-0.1536	0.0002
514	SLU 77	-0.36	-0.42	79.25	-0.0029	-0.1564	0.0001
514	SLU 78	-0.36	-0.37	79.24	-0.0028	-0.1561	0.0001
514	SLU 79	-0.36	-0.44	78.8	-0.0031	-0.155	0.0002
514	SLU 80	-0.36	-0.38	78.79	-0.003	-0.1547	0.0002
514	SLU 81	-0.34	-0.42	80.72	-0.0023	-0.1618	0
514	SLU 82	-0.34	-0.37	80.71	-0.0022	-0.1615	0
514	SLU 83	-0.34	-0.43	81.27	-0.0025	-0.1626	0
514	SLU 84	-0.34	-0.37	81.26	-0.0024	-0.1623	0.0001
514	SLE RA 1	-0.28	-0.33	52.9	-0.0032	-0.0998	0.0003

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
514	SLE RA 2	-0.28	-0.27	52.88	-0.003	-0.0995	0.0003
514	SLE RA 3	-0.28	-0.33	53.57	-0.0032	-0.1013	0.0002
514	SLE RA 4	-0.28	-0.29	53.56	-0.0031	-0.1011	0.0003
514	SLE RA 5	-0.28	-0.28	53.25	-0.0032	-0.1	0.0003
514	SLE RA 6	-0.28	-0.33	53.94	-0.0033	-0.1019	0.0003
514	SLE RA 7	-0.28	-0.3	53.93	-0.0032	-0.1017	0.0003
514	SLE RA 8	-0.28	-0.34	53.64	-0.0034	-0.101	0.0003
514	SLE RA 9	-0.28	-0.3	53.63	-0.0033	-0.1008	0.0003
514	SLE RA 10	-0.27	-0.27	57.59	-0.0024	-0.1127	0.0002
514	SLE RA 11	-0.27	-0.33	58.27	-0.0025	-0.1145	0.0001
514	SLE RA 12	-0.27	-0.29	58.26	-0.0024	-0.1143	0.0002
514	SLE RA 13	-0.27	-0.28	57.96	-0.0025	-0.1133	0.0002
514	SLE RA 14	-0.27	-0.33	58.64	-0.0026	-0.1151	0.0002
514	SLE RA 15	-0.27	-0.3	58.63	-0.0025	-0.1149	0.0002
514	SLE RA 16	-0.27	-0.34	58.34	-0.0027	-0.1142	0.0002
514	SLE RA 17	-0.27	-0.3	58.33	-0.0027	-0.114	0.0002
514	SLE RA 18	-0.26	-0.33	59.62	-0.0022	-0.1187	0.0001
514	SLE RA 19	-0.26	-0.3	59.61	-0.0021	-0.1185	0.0001
514	SLE RA 20	-0.26	-0.34	59.99	-0.0023	-0.1193	0.0001
514	SLE RA 21	-0.26	-0.3	59.98	-0.0022	-0.1191	0.0001
514	SLE FR 1	-0.28	-0.33	52.9	-0.0032	-0.0998	0.0003
514	SLE FR 2	-0.28	-0.32	52.9	-0.0031	-0.0997	0.0003
514	SLE FR 3	-0.28	-0.34	53.05	-0.0032	-0.1	0.0003
514	SLE FR 4	-0.27	-0.32	54.91	-0.0028	-0.1054	0.0002
514	SLE FR 5	-0.27	-0.34	55.06	-0.0029	-0.1057	0.0002
514	SLE FR 6	-0.27	-0.33	56.26	-0.0027	-0.1092	0.0002
514	SLE QP 1	-0.28	-0.33	52.9	-0.0032	-0.0998	0.0003
514	SLE QP 2	-0.27	-0.33	54.92	-0.0029	-0.1055	0.0002
514	SLD 1	4.27	0.48	58.08	-0.0013	-0.0145	0.0028
514	SLD 2	4.3	0.23	58.12	-0.0013	-0.0164	0.0068
514	SLD 3	4.37	-1.31	58.52	-0.0007	-0.0319	0.0042
514	SLD 4	4.41	-1.55	58.57	-0.0006	-0.0338	0.0082
514	SLD 5	0.93	2.65	55.18	-0.0034	-0.0514	-0.002
514	SLD 6	0.95	2.5	55.21	-0.0033	-0.0527	0.0006
514	SLD 7	1.27	-3.29	56.67	-0.0013	-0.1094	0.003
514	SLD 8	1.29	-3.44	56.69	-0.0012	-0.1107	0.0056
514	SLD 9	-1.84	2.78	53.14	-0.0045	-0.1002	-0.0051
514	SLD 10	-1.81	2.62	53.17	-0.0045	-0.1015	-0.0025
514	SLD 11	-1.5	-3.16	54.62	-0.0024	-0.1582	-0.0002
514	SLD 12	-1.47	-3.32	54.65	-0.0024	-0.1595	0.0024
514	SLD 13	-4.95	0.88	51.27	-0.0051	-0.1771	-0.0078
514	SLD 14	-4.92	0.64	51.31	-0.0051	-0.179	-0.0038
514	SLD 15	-4.85	-0.9	51.71	-0.0045	-0.1945	-0.0063
514	SLD 16	-4.81	-1.14	51.76	-0.0044	-0.1964	-0.0023
514	SLV 1	10.35	1.51	62.33	0.0011	0.1069	0.0062
514	SLV 2	10.43	0.94	62.43	0.0012	0.1024	0.0155
514	SLV 3	10.59	-2.56	63.34	0.0025	0.0672	0.0096
514	SLV 4	10.67	-3.13	63.44	0.0027	0.0627	0.019
514	SLV 5	2.54	6.48	55.59	-0.004	0.0192	-0.0048
514	SLV 6	2.59	6.12	55.65	-0.0039	0.0163	0.0012
514	SLV 7	3.33	-7.07	58.96	0.001	-0.1131	0.0066
514	SLV 8	3.39	-7.43	59.02	0.0011	-0.116	0.0126
514	SLV 9	-3.93	6.76	50.81	-0.0068	-0.0949	-0.0122
514	SLV 10	-3.88	6.4	50.87	-0.0067	-0.0978	-0.0062
514	SLV 11	-3.14	-6.79	54.18	-0.0019	-0.2272	-0.0008
514	SLV 12	-3.08	-7.15	54.24	-0.0018	-0.2302	0.0052
514	SLV 13	-11.22	2.46	46.4	-0.0084	-0.2736	-0.0185
514	SLV 14	-11.13	1.89	46.5	-0.0083	-0.2782	-0.0092
514	SLV 15	-10.98	-1.61	47.41	-0.0069	-0.3133	-0.0151
514	SLV 16	-10.89	-2.18	47.51	-0.0068	-0.3179	-0.0058
514	CRTFP Ux+	0	0	0	0	0	0
514	CRTFP Ux-	0	0	0	0	0	0
518	SLU 1	0.47	-0.3	49.72	-0.009	0.0459	-0.0032
518	SLU 2	0.47	-0.21	49.7	-0.0089	0.0453	-0.0032
518	SLU 3	0.49	-0.3	50.67	-0.0092	0.0466	-0.0033
518	SLU 4	0.49	-0.25	50.66	-0.0092	0.0463	-0.0033
518	SLU 5	0.48	-0.22	50.24	-0.0092	0.0452	-0.0033
518	SLU 6	0.49	-0.31	51.21	-0.0095	0.0465	-0.0034
518	SLU 7	0.49	-0.26	51.2	-0.0095	0.0462	-0.0034
518	SLU 8	0.49	-0.33	50.79	-0.0096	0.0457	-0.0034
518	SLU 9	0.49	-0.27	50.78	-0.0096	0.0453	-0.0034
518	SLU 10	0.51	-0.2	56.43	-0.0084	0.0563	-0.003
518	SLU 11	0.52	-0.28	57.4	-0.0087	0.0577	-0.003
518	SLU 12	0.52	-0.23	57.39	-0.0087	0.0573	-0.0031
518	SLU 13	0.52	-0.21	56.97	-0.0088	0.0562	-0.0031
518	SLU 14	0.53	-0.29	57.94	-0.009	0.0576	-0.0031
518	SLU 15	0.53	-0.24	57.92	-0.009	0.0572	-0.0032
518	SLU 16	0.53	-0.31	57.52	-0.0092	0.0567	-0.0032
518	SLU 17	0.53	-0.25	57.51	-0.0091	0.0564	-0.0032
518	SLU 18	0.53	-0.28	59.33	-0.0083	0.0616	-0.0029
518	SLU 19	0.53	-0.22	59.32	-0.0083	0.0613	-0.0029
518	SLU 20	0.53	-0.29	59.87	-0.0086	0.0615	-0.003
518	SLU 21	0.53	-0.23	59.86	-0.0086	0.0612	-0.003
518	SLU 22	0.52	-0.27	55.99	-0.0085	0.0473	-0.0028
518	SLU 23	0.52	-0.18	55.98	-0.0084	0.0468	-0.0029
518	SLU 24	0.53	-0.27	56.94	-0.0087	0.0481	-0.0029
518	SLU 25	0.53	-0.21	56.93	-0.0087	0.0477	-0.0029
518	SLU 26	0.53	-0.19	56.51	-0.0087	0.0467	-0.003
518	SLU 27	0.54	-0.28	57.48	-0.009	0.048	-0.003
518	SLU 28	0.54	-0.22	57.47	-0.009	0.0476	-0.003
518	SLU 29	0.53	-0.29	57.06	-0.0091	0.0472	-0.003

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
518	SLU 30	0.53	-0.23	57.05	-0.0091	0.0468	-0.0031
518	SLU 31	0.55	-0.16	62.71	-0.0079	0.0578	-0.0027
518	SLU 32	0.57	-0.25	63.67	-0.0082	0.0591	-0.0027
518	SLU 33	0.57	-0.19	63.66	-0.0082	0.0588	-0.0027
518	SLU 34	0.56	-0.17	63.24	-0.0083	0.0577	-0.0028
518	SLU 35	0.57	-0.26	64.21	-0.0085	0.059	-0.0028
518	SLU 36	0.57	-0.2	64.2	-0.0085	0.0587	-0.0028
518	SLU 37	0.57	-0.27	63.79	-0.0086	0.0582	-0.0028
518	SLU 38	0.57	-0.22	63.78	-0.0086	0.0578	-0.0028
518	SLU 39	0.57	-0.24	65.61	-0.0078	0.0631	-0.0025
518	SLU 40	0.57	-0.19	65.6	-0.0078	0.0628	-0.0026
518	SLU 41	0.58	-0.25	66.14	-0.0081	0.063	-0.0026
518	SLU 42	0.58	-0.2	66.13	-0.0081	0.0627	-0.0027
518	SLU 43	0.6	-0.41	62.49	-0.0119	0.0591	-0.0043
518	SLU 44	0.6	-0.32	62.47	-0.0118	0.0585	-0.0043
518	SLU 45	0.61	-0.4	63.44	-0.0121	0.0599	-0.0043
518	SLU 46	0.61	-0.35	63.43	-0.012	0.0595	-0.0044
518	SLU 47	0.61	-0.33	63	-0.0121	0.0584	-0.0044
518	SLU 48	0.62	-0.42	63.97	-0.0124	0.0598	-0.0044
518	SLU 49	0.62	-0.36	63.96	-0.0124	0.0594	-0.0045
518	SLU 50	0.62	-0.43	63.56	-0.0125	0.0589	-0.0045
518	SLU 51	0.62	-0.37	63.55	-0.0125	0.0586	-0.0045
518	SLU 52	0.64	-0.3	69.2	-0.0113	0.0696	-0.0041
518	SLU 53	0.65	-0.39	70.17	-0.0116	0.0709	-0.0041
518	SLU 54	0.65	-0.33	70.16	-0.0116	0.0706	-0.0041
518	SLU 55	0.64	-0.31	69.73	-0.0116	0.0695	-0.0042
518	SLU 56	0.66	-0.4	70.7	-0.0119	0.0708	-0.0042
518	SLU 57	0.66	-0.34	70.69	-0.0119	0.0705	-0.0042
518	SLU 58	0.65	-0.41	70.29	-0.012	0.07	-0.0043
518	SLU 59	0.65	-0.36	70.28	-0.012	0.0696	-0.0043
518	SLU 60	0.65	-0.38	72.1	-0.0112	0.0749	-0.004
518	SLU 61	0.65	-0.33	72.09	-0.0112	0.0745	-0.004
518	SLU 62	0.66	-0.39	72.64	-0.0115	0.0748	-0.0041
518	SLU 63	0.66	-0.34	72.62	-0.0115	0.0744	-0.0041
518	SLU 64	0.65	-0.37	68.76	-0.0114	0.0606	-0.0039
518	SLU 65	0.64	-0.28	68.74	-0.0113	0.06	-0.004
518	SLU 66	0.66	-0.37	69.71	-0.0116	0.0614	-0.004
518	SLU 67	0.66	-0.31	69.7	-0.0115	0.061	-0.004
518	SLU 68	0.65	-0.29	69.28	-0.0116	0.0599	-0.0041
518	SLU 69	0.67	-0.38	70.24	-0.0119	0.0613	-0.0041
518	SLU 70	0.67	-0.33	70.23	-0.0119	0.0609	-0.0041
518	SLU 71	0.66	-0.39	69.83	-0.012	0.0604	-0.0041
518	SLU 72	0.66	-0.34	69.82	-0.012	0.0601	-0.0041
518	SLU 73	0.68	-0.26	75.47	-0.0108	0.0711	-0.0037
518	SLU 74	0.69	-0.35	76.44	-0.0111	0.0724	-0.0038
518	SLU 75	0.69	-0.3	76.43	-0.0111	0.072	-0.0038
518	SLU 76	0.69	-0.27	76.01	-0.0111	0.071	-0.0038
518	SLU 77	0.7	-0.36	76.97	-0.0114	0.0723	-0.0039
518	SLU 78	0.7	-0.31	76.96	-0.0114	0.0719	-0.0039
518	SLU 79	0.7	-0.37	76.56	-0.0115	0.0714	-0.0039
518	SLU 80	0.7	-0.32	76.55	-0.0115	0.0711	-0.0039
518	SLU 81	0.7	-0.34	78.37	-0.0107	0.0764	-0.0036
518	SLU 82	0.7	-0.29	78.36	-0.0106	0.076	-0.0036
518	SLU 83	0.71	-0.36	78.91	-0.011	0.0763	-0.0037
518	SLU 84	0.7	-0.3	78.9	-0.011	0.0759	-0.0037
518	SLE RA 1	0.49	-0.29	51.51	-0.0089	0.0463	-0.0031
518	SLE RA 2	0.49	-0.23	51.5	-0.0088	0.0459	-0.0031
518	SLE RA 3	0.5	-0.29	52.15	-0.009	0.0468	-0.0031
518	SLE RA 4	0.49	-0.26	52.14	-0.009	0.0466	-0.0031
518	SLE RA 5	0.49	-0.24	51.86	-0.009	0.0458	-0.0032
518	SLE RA 6	0.5	-0.3	52.5	-0.0092	0.0467	-0.0032
518	SLE RA 7	0.5	-0.26	52.5	-0.0092	0.0465	-0.0032
518	SLE RA 8	0.5	-0.31	52.23	-0.0093	0.0462	-0.0032
518	SLE RA 9	0.5	-0.27	52.22	-0.0093	0.0459	-0.0032
518	SLE RA 10	0.51	-0.22	55.99	-0.0085	0.0533	-0.003
518	SLE RA 11	0.52	-0.28	56.63	-0.0087	0.0542	-0.003
518	SLE RA 12	0.52	-0.24	56.63	-0.0086	0.0539	-0.003
518	SLE RA 13	0.52	-0.23	56.34	-0.0087	0.0532	-0.003
518	SLE RA 14	0.52	-0.29	56.99	-0.0089	0.0541	-0.0031
518	SLE RA 15	0.52	-0.25	56.98	-0.0089	0.0539	-0.0031
518	SLE RA 16	0.52	-0.3	56.71	-0.009	0.0535	-0.0031
518	SLE RA 17	0.52	-0.26	56.71	-0.0089	0.0533	-0.0031
518	SLE RA 18	0.52	-0.28	57.92	-0.0084	0.0568	-0.0029
518	SLE RA 19	0.52	-0.24	57.92	-0.0084	0.0566	-0.0029
518	SLE RA 20	0.53	-0.28	58.28	-0.0086	0.0567	-0.0029
518	SLE RA 21	0.53	-0.25	58.27	-0.0086	0.0565	-0.003
518	SLE FR 1	0.49	-0.29	51.51	-0.0089	0.0463	-0.0031
518	SLE FR 2	0.49	-0.28	51.51	-0.0089	0.0462	-0.0031
518	SLE FR 3	0.49	-0.3	51.66	-0.009	0.0463	-0.0031
518	SLE FR 4	0.5	-0.28	53.43	-0.0087	0.0494	-0.003
518	SLE FR 5	0.5	-0.29	53.58	-0.0088	0.0494	-0.0031
518	SLE FR 6	0.5	-0.28	54.72	-0.0086	0.0516	-0.003
518	SLE QP 1	0.49	-0.29	51.51	-0.0089	0.0463	-0.0031
518	SLE QP 2	0.5	-0.29	53.44	-0.0087	0.0494	-0.003
518	SLD 1	4.93	0.66	50.27	-0.011	0.0577	0.0059
518	SLD 2	4.97	0.9	50.22	-0.0112	0.0561	0.0099
518	SLD 3	5.03	-1.08	50.65	-0.0089	0.0756	0.0046
518	SLD 4	5.07	-0.85	50.61	-0.0091	0.0739	0.0086
518	SLD 5	1.67	2.6	51.9	-0.0126	0.0251	0.0008
518	SLD 6	1.69	2.75	51.88	-0.0127	0.024	0.0035
518	SLD 7	2	-3.21	53.19	-0.0056	0.0847	-0.0033

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
518	SLD 8	2.03	-3.06	53.17	-0.0057	0.0836	-0.0007
518	SLD 9	-1.03	2.48	53.7	-0.0118	0.0153	-0.0053
518	SLD 10	-1.01	2.63	53.68	-0.0119	0.0142	-0.0027
518	SLD 11	-0.7	-3.33	54.99	-0.0048	0.0748	-0.0095
518	SLD 12	-0.67	-3.18	54.97	-0.0049	0.0738	-0.0069
518	SLD 13	-4.07	0.27	56.26	-0.0084	0.025	-0.0147
518	SLD 14	-4.03	0.5	56.22	-0.0086	0.0233	-0.0107
518	SLD 15	-3.97	-1.47	56.65	-0.0063	0.0428	-0.0159
518	SLD 16	-3.93	-1.24	56.61	-0.0065	0.0412	-0.0119
518	SLV 1	10.86	1.89	46.03	-0.014	0.0688	0.0178
518	SLV 2	10.95	2.43	45.93	-0.0144	0.065	0.0272
518	SLV 3	11.1	-2.08	46.91	-0.0092	0.1095	0.0149
518	SLV 4	11.18	-1.54	46.81	-0.0096	0.1056	0.0243
518	SLV 5	3.23	6.29	49.89	-0.0175	-0.0058	0.006
518	SLV 6	3.29	6.64	49.83	-0.0178	-0.0082	0.012
518	SLV 7	4.02	-6.94	52.84	-0.0015	0.1298	-0.0036
518	SLV 8	4.08	-6.59	52.77	-0.0018	0.1273	0.0024
518	SLV 9	-3.08	6.02	54.1	-0.0157	-0.0284	-0.0084
518	SLV 10	-3.02	6.36	54.04	-0.0159	-0.0309	-0.0024
518	SLV 11	-2.3	-7.22	57.04	0.0003	0.1071	-0.018
518	SLV 12	-2.24	-6.87	56.98	0	0.1047	-0.012
518	SLV 13	-10.19	0.96	60.06	-0.0078	-0.0067	-0.0303
518	SLV 14	-10.1	1.51	59.96	-0.0083	-0.0106	-0.0209
518	SLV 15	-9.95	-3.01	60.94	-0.0031	0.0339	-0.0332
518	SLV 16	-9.86	-2.46	60.84	-0.0035	0.0301	-0.0238
518	CRTFP Ux+	0	0	0	0	0	0
518	CRTFP Ux-	0	0	0	0	0	0
519	SLU 1	0.5	0.48	35.09	0.0352	11.4556	-0.1689
519	SLU 2	0.5	0.56	35.09	0.0353	11.4547	-0.1978
519	SLU 3	0.51	0.49	35.78	0.0359	11.6774	-0.1742
519	SLU 4	0.51	0.54	35.78	0.036	11.6768	-0.1915
519	SLU 5	0.5	0.57	35.48	0.0357	11.5812	-0.1993
519	SLU 6	0.52	0.5	36.17	0.0364	11.8039	-0.1757
519	SLU 7	0.52	0.55	36.17	0.0364	11.8034	-0.1931
519	SLU 8	0.51	0.49	35.88	0.036	11.7087	-0.172
519	SLU 9	0.51	0.54	35.88	0.0361	11.7081	-0.1893
519	SLU 10	0.53	0.66	39.61	0.0405	12.9291	-0.2335
519	SLU 11	0.54	0.6	40.3	0.0411	13.1518	-0.2099
519	SLU 12	0.54	0.65	40.3	0.0412	13.1512	-0.2272
519	SLU 13	0.54	0.67	40	0.0409	13.0556	-0.235
519	SLU 14	0.55	0.6	40.69	0.0415	13.2783	-0.2114
519	SLU 15	0.55	0.65	40.69	0.0416	13.2778	-0.2288
519	SLU 16	0.55	0.59	40.4	0.0412	13.1831	-0.2077
519	SLU 17	0.54	0.64	40.4	0.0412	13.1825	-0.225
519	SLU 18	0.54	0.63	41.55	0.0426	13.5619	-0.2199
519	SLU 19	0.54	0.67	41.55	0.0426	13.5613	-0.2372
519	SLU 20	0.55	0.63	41.94	0.043	13.6885	-0.2214
519	SLU 21	0.55	0.68	41.94	0.0431	13.6879	-0.2388
519	SLU 22	0.54	0.57	39.43	0.0402	12.8699	-0.1993
519	SLU 23	0.54	0.65	39.43	0.0403	12.8689	-0.2282
519	SLU 24	0.55	0.58	40.12	0.041	13.0917	-0.2046
519	SLU 25	0.55	0.63	40.12	0.041	13.0911	-0.222
519	SLU 26	0.55	0.65	39.82	0.0407	12.9955	-0.2298
519	SLU 27	0.56	0.59	40.51	0.0414	13.2182	-0.2062
519	SLU 28	0.56	0.64	40.51	0.0414	13.2176	-0.2235
519	SLU 29	0.56	0.58	40.22	0.041	13.123	-0.2025
519	SLU 30	0.56	0.62	40.22	0.0411	13.1224	-0.2198
519	SLU 31	0.57	0.75	43.95	0.0455	14.3434	-0.2639
519	SLU 32	0.59	0.68	44.64	0.0462	14.5661	-0.2403
519	SLU 33	0.58	0.73	44.64	0.0462	14.5655	-0.2576
519	SLU 34	0.58	0.76	44.34	0.0459	14.4699	-0.2655
519	SLU 35	0.59	0.69	45.03	0.0466	14.6926	-0.2419
519	SLU 36	0.59	0.74	45.03	0.0466	14.6921	-0.2592
519	SLU 37	0.59	0.68	44.74	0.0462	14.5974	-0.2381
519	SLU 38	0.59	0.73	44.74	0.0463	14.5968	-0.2555
519	SLU 39	0.59	0.71	45.89	0.0476	14.9762	-0.2503
519	SLU 40	0.59	0.76	45.89	0.0477	14.9756	-0.2676
519	SLU 41	0.59	0.72	46.28	0.048	15.1027	-0.2519
519	SLU 42	0.59	0.77	46.28	0.0481	15.1022	-0.2692
519	SLU 43	0.63	0.59	44.13	0.044	14.4074	-0.2091
519	SLU 44	0.63	0.68	44.13	0.0441	14.4064	-0.238
519	SLU 45	0.65	0.61	44.82	0.0448	14.6292	-0.2144
519	SLU 46	0.64	0.66	44.82	0.0448	14.6286	-0.2317
519	SLU 47	0.64	0.68	44.52	0.0445	14.533	-0.2396
519	SLU 48	0.65	0.61	45.21	0.0452	14.7557	-0.216
519	SLU 49	0.65	0.66	45.21	0.0452	14.7551	-0.2333
519	SLU 50	0.65	0.6	44.92	0.0448	14.6605	-0.2122
519	SLU 51	0.65	0.65	44.92	0.0449	14.6599	-0.2296
519	SLU 52	0.66	0.78	48.65	0.0493	15.8808	-0.2737
519	SLU 53	0.68	0.71	49.34	0.05	16.1036	-0.2501
519	SLU 54	0.68	0.76	49.34	0.05	16.103	-0.2674
519	SLU 55	0.67	0.78	49.04	0.0497	16.0074	-0.2752
519	SLU 56	0.69	0.72	49.73	0.0504	16.2301	-0.2517
519	SLU 57	0.68	0.76	49.73	0.0504	16.2295	-0.269
519	SLU 58	0.68	0.7	49.44	0.05	16.1349	-0.2479
519	SLU 59	0.68	0.75	49.44	0.0501	16.1343	-0.2653
519	SLU 60	0.68	0.74	50.59	0.0514	16.5137	-0.2601
519	SLU 61	0.68	0.79	50.59	0.0515	16.5131	-0.2774
519	SLU 62	0.69	0.74	50.98	0.0518	16.6402	-0.2617
519	SLU 63	0.69	0.79	50.98	0.0519	16.6397	-0.279
519	SLU 64	0.67	0.68	48.47	0.049	15.8217	-0.2395

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
519	SLU 65	0.67	0.76	48.47	0.0491	15.8207	-0.2684
519	SLU 66	0.69	0.7	49.16	0.0498	16.0435	-0.2448
519	SLU 67	0.69	0.75	49.16	0.0499	16.0429	-0.2622
519	SLU 68	0.68	0.77	48.86	0.0496	15.9473	-0.27
519	SLU 69	0.7	0.7	49.55	0.0502	16.17	-0.2464
519	SLU 70	0.69	0.75	49.55	0.0503	16.1694	-0.2637
519	SLU 71	0.69	0.69	49.26	0.0499	16.0748	-0.2427
519	SLU 72	0.69	0.74	49.26	0.0499	16.0742	-0.26
519	SLU 73	0.71	0.86	52.99	0.0543	17.2951	-0.3041
519	SLU 74	0.72	0.8	53.68	0.055	17.5179	-0.2805
519	SLU 75	0.72	0.85	53.68	0.055	17.5173	-0.2979
519	SLU 76	0.71	0.87	53.38	0.0547	17.4217	-0.3057
519	SLU 77	0.73	0.8	54.07	0.0554	17.6444	-0.2821
519	SLU 78	0.73	0.85	54.07	0.0555	17.6438	-0.2994
519	SLU 79	0.72	0.79	53.78	0.0551	17.5492	-0.2784
519	SLU 80	0.72	0.84	53.78	0.0551	17.5486	-0.2957
519	SLU 81	0.72	0.83	54.93	0.0564	17.928	-0.2905
519	SLU 82	0.72	0.88	54.93	0.0565	17.9274	-0.3079
519	SLU 83	0.73	0.83	55.32	0.0569	18.0545	-0.2921
519	SLU 84	0.73	0.88	55.32	0.0569	18.054	-0.3094
519	SLE RA 1	0.51	0.5	36.33	0.0366	11.8597	-0.1776
519	SLE RA 2	0.51	0.56	36.33	0.0367	11.8591	-0.1968
519	SLE RA 3	0.52	0.51	36.79	0.0371	12.0076	-0.1811
519	SLE RA 4	0.52	0.55	36.79	0.0372	12.0072	-0.1927
519	SLE RA 5	0.51	0.56	36.59	0.037	11.9434	-0.1979
519	SLE RA 6	0.52	0.52	37.05	0.0374	12.0919	-0.1822
519	SLE RA 7	0.52	0.55	37.05	0.0374	12.0915	-0.1937
519	SLE RA 8	0.52	0.51	36.86	0.0372	12.0284	-0.1797
519	SLE RA 9	0.52	0.54	36.86	0.0372	12.028	-0.1912
519	SLE RA 10	0.53	0.63	39.34	0.0401	12.842	-0.2206
519	SLE RA 11	0.54	0.58	39.8	0.0406	12.9905	-0.2049
519	SLE RA 12	0.54	0.62	39.8	0.0406	12.9901	-0.2165
519	SLE RA 13	0.54	0.63	39.61	0.0404	12.9264	-0.2217
519	SLE RA 14	0.55	0.59	40.07	0.0409	13.0749	-0.2059
519	SLE RA 15	0.54	0.62	40.06	0.0409	13.0745	-0.2175
519	SLE RA 16	0.54	0.58	39.87	0.0406	13.0114	-0.2035
519	SLE RA 17	0.54	0.61	39.87	0.0407	13.011	-0.215
519	SLE RA 18	0.54	0.6	40.64	0.0416	13.2639	-0.2116
519	SLE RA 19	0.54	0.63	40.64	0.0416	13.2635	-0.2231
519	SLE RA 20	0.55	0.6	40.9	0.0418	13.3483	-0.2126
519	SLE RA 21	0.55	0.64	40.9	0.0419	13.3479	-0.2242
519	SLE FR 1	0.51	0.5	36.33	0.0366	11.8597	-0.1776
519	SLE FR 2	0.51	0.52	36.33	0.0366	11.8596	-0.1814
519	SLE FR 3	0.51	0.51	36.44	0.0367	11.8934	-0.178
519	SLE FR 4	0.52	0.54	37.62	0.0381	12.2808	-0.1916
519	SLE FR 5	0.52	0.53	37.73	0.0382	12.3147	-0.1882
519	SLE FR 6	0.53	0.55	38.49	0.0391	12.5618	-0.1946
519	SLE QP 1	0.51	0.5	36.33	0.0366	11.8597	-0.1776
519	SLE QP 2	0.52	0.53	37.62	0.0381	12.281	-0.1878
519	SLD 1	3.44	0.92	30.49	0.0303	10.03	-0.324
519	SLD 2	3.47	1.31	30.48	0.0302	10.0269	-0.4579
519	SLD 3	3.36	-0.56	30.66	0.0305	10.0917	0.1965
519	SLD 4	3.39	-0.18	30.65	0.0304	10.0885	0.0627
519	SLD 5	1.52	2.84	35.22	0.0355	11.5127	-0.9948
519	SLD 6	1.54	3.09	35.22	0.0354	11.5107	-1.0817
519	SLD 7	1.24	-2.12	35.8	0.0361	11.7183	0.7404
519	SLD 8	1.26	-1.87	35.79	0.0361	11.7162	0.6535
519	SLD 9	-0.22	2.94	39.46	0.0401	12.8457	-1.0291
519	SLD 10	-0.2	3.19	39.45	0.0401	12.8437	-1.1159
519	SLD 11	-0.5	-2.02	40.03	0.0408	13.0513	0.7061
519	SLD 12	-0.48	-1.77	40.02	0.0407	13.0492	0.6193
519	SLD 13	-2.35	1.25	44.59	0.0458	14.4734	-0.4382
519	SLD 14	-2.32	1.63	44.59	0.0457	14.4702	-0.5721
519	SLD 15	-2.44	-0.24	44.77	0.046	14.535	0.0823
519	SLD 16	-2.4	0.14	44.76	0.0459	14.5319	-0.0515
519	SLV 1	7.36	1.4	20.93	0.0198	7.0146	-0.4904
519	SLV 2	7.43	2.3	20.92	0.0196	7.0073	-0.8021
519	SLV 3	7.16	-1.98	21.33	0.0203	7.1579	0.6937
519	SLV 4	7.23	-1.09	21.32	0.0201	7.1505	0.3819
519	SLV 5	2.85	5.78	32.01	0.0319	10.4851	-2.0216
519	SLV 6	2.9	6.35	32	0.0318	10.4804	-2.2207
519	SLV 7	2.2	-5.51	33.34	0.0335	10.9625	1.9253
519	SLV 8	2.25	-4.94	33.34	0.0334	10.9578	1.7262
519	SLV 9	-1.21	6	41.91	0.0428	13.6041	-2.1017
519	SLV 10	-1.16	6.58	41.91	0.0427	13.5994	-2.3008
519	SLV 11	-1.86	-5.28	43.25	0.0444	14.0815	1.8451
519	SLV 12	-1.82	-4.71	43.24	0.0443	14.0769	1.646
519	SLV 13	-6.19	2.16	53.93	0.0561	17.4114	-0.7574
519	SLV 14	-6.12	3.05	53.92	0.056	17.4041	-1.0692
519	SLV 15	-6.39	-1.23	54.33	0.0566	17.5546	0.4266
519	SLV 16	-6.32	-0.33	54.32	0.0564	17.5473	0.1148
519	CRTFP Ux+	0	0	0	0	0	0
519	CRTFP Ux-	0	0	0	0	0	0
522	SLU 1	0.09	-0.12	27.76	-0.0053	9.4049	0.0423
522	SLU 2	0.09	-0.08	27.75	-0.0054	9.4019	0.0259
522	SLU 3	0.09	-0.12	28.29	-0.0053	9.582	0.0399
522	SLU 4	0.09	-0.09	28.28	-0.0054	9.5802	0.0301
522	SLU 5	0.09	-0.08	28.05	-0.0055	9.5031	0.0275
522	SLU 6	0.09	-0.12	28.59	-0.0054	9.6832	0.0415
522	SLU 7	0.09	-0.09	28.58	-0.0055	9.6814	0.0316
522	SLU 8	0.09	-0.13	28.36	-0.0055	9.6073	0.0454

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
522	SLU 9	0.09	-0.1	28.36	-0.0055	9.6055	0.0356
522	SLU 10	0.1	-0.06	31.66	-0.0056	10.7228	0.0202
522	SLU 11	0.1	-0.1	32.2	-0.0056	10.9028	0.0342
522	SLU 12	0.1	-0.07	32.19	-0.0056	10.9011	0.0244
522	SLU 13	0.1	-0.06	31.96	-0.0057	10.824	0.0217
522	SLU 14	0.1	-0.1	32.5	-0.0056	11.004	0.0358
522	SLU 15	0.1	-0.08	32.5	-0.0057	11.0023	0.0259
522	SLU 16	0.1	-0.12	32.27	-0.0057	10.9281	0.0397
522	SLU 17	0.1	-0.09	32.27	-0.0057	10.9264	0.0299
522	SLU 18	0.1	-0.1	33.35	-0.0056	11.2918	0.0341
522	SLU 19	0.1	-0.07	33.34	-0.0057	11.29	0.0243
522	SLU 20	0.1	-0.1	33.65	-0.0057	11.393	0.0357
522	SLU 21	0.1	-0.08	33.64	-0.0058	11.3912	0.0258
522	SLU 22	0.09	-0.09	31.1	-0.0048	10.5298	0.0299
522	SLU 23	0.09	-0.04	31.09	-0.0049	10.5268	0.0135
522	SLU 24	0.1	-0.08	31.63	-0.0048	10.7069	0.0275
522	SLU 25	0.1	-0.05	31.63	-0.0049	10.7051	0.0177
522	SLU 26	0.09	-0.05	31.4	-0.005	10.628	0.0151
522	SLU 27	0.1	-0.09	31.93	-0.0049	10.8081	0.0291
522	SLU 28	0.1	-0.06	31.93	-0.005	10.8063	0.0193
522	SLU 29	0.1	-0.1	31.71	-0.005	10.7322	0.033
522	SLU 30	0.1	-0.07	31.7	-0.005	10.7304	0.0232
522	SLU 31	0.1	-0.02	35.01	-0.0051	11.8477	0.0078
522	SLU 32	0.11	-0.07	35.54	-0.005	12.0277	0.0218
522	SLU 33	0.11	-0.04	35.54	-0.0051	12.026	0.012
522	SLU 34	0.1	-0.03	35.31	-0.0052	11.9489	0.0094
522	SLU 35	0.11	-0.07	35.84	-0.0051	12.1289	0.0234
522	SLU 36	0.11	-0.04	35.84	-0.0052	12.1272	0.0136
522	SLU 37	0.11	-0.08	35.62	-0.0052	12.053	0.0273
522	SLU 38	0.11	-0.05	35.61	-0.0052	12.0513	0.0175
522	SLU 39	0.11	-0.06	36.69	-0.0051	12.4167	0.0217
522	SLU 40	0.11	-0.04	36.69	-0.0052	12.4149	0.0119
522	SLU 41	0.11	-0.07	36.99	-0.0052	12.5179	0.0233
522	SLU 42	0.11	-0.04	36.99	-0.0052	12.5161	0.0135
522	SLU 43	0.11	-0.17	34.94	-0.0071	11.8406	0.0592
522	SLU 44	0.11	-0.13	34.93	-0.0072	11.8377	0.0428
522	SLU 45	0.12	-0.17	35.47	-0.0071	12.0178	0.0568
522	SLU 46	0.12	-0.14	35.46	-0.0072	12.016	0.047
522	SLU 47	0.11	-0.13	35.23	-0.0073	11.9389	0.0444
522	SLU 48	0.12	-0.17	35.77	-0.0072	12.119	0.0584
522	SLU 49	0.12	-0.14	35.76	-0.0072	12.1172	0.0486
522	SLU 50	0.12	-0.18	35.54	-0.0073	12.0431	0.0623
522	SLU 51	0.12	-0.15	35.54	-0.0073	12.0413	0.0525
522	SLU 52	0.12	-0.11	38.84	-0.0074	13.1585	0.0371
522	SLU 53	0.13	-0.15	39.38	-0.0073	13.3386	0.0511
522	SLU 54	0.12	-0.12	39.37	-0.0074	13.3368	0.0413
522	SLU 55	0.12	-0.11	39.14	-0.0075	13.2597	0.0387
522	SLU 56	0.13	-0.15	39.68	-0.0074	13.4398	0.0527
522	SLU 57	0.13	-0.13	39.68	-0.0075	13.438	0.0429
522	SLU 58	0.13	-0.16	39.46	-0.0075	13.3639	0.0566
522	SLU 59	0.13	-0.14	39.45	-0.0075	13.3621	0.0468
522	SLU 60	0.13	-0.15	40.53	-0.0074	13.7275	0.051
522	SLU 61	0.13	-0.12	40.52	-0.0075	13.7258	0.0412
522	SLU 62	0.13	-0.15	40.83	-0.0075	13.8288	0.0526
522	SLU 63	0.13	-0.13	40.82	-0.0075	13.827	0.0428
522	SLU 64	0.12	-0.14	38.28	-0.0066	12.9655	0.0468
522	SLU 65	0.12	-0.09	38.28	-0.0067	12.9626	0.0304
522	SLU 66	0.12	-0.13	38.81	-0.0066	13.1427	0.0445
522	SLU 67	0.12	-0.1	38.81	-0.0067	13.1409	0.0346
522	SLU 68	0.12	-0.09	38.58	-0.0068	13.0638	0.032
522	SLU 69	0.12	-0.13	39.11	-0.0067	13.2439	0.046
522	SLU 70	0.12	-0.11	39.11	-0.0067	13.2421	0.0362
522	SLU 71	0.12	-0.15	38.89	-0.0068	13.168	0.05
522	SLU 72	0.12	-0.12	38.88	-0.0068	13.1662	0.0401
522	SLU 73	0.13	-0.07	42.19	-0.0069	14.2834	0.0247
522	SLU 74	0.13	-0.11	42.72	-0.0068	14.4635	0.0388
522	SLU 75	0.13	-0.09	42.72	-0.0069	14.4617	0.0289
522	SLU 76	0.13	-0.08	42.49	-0.007	14.3846	0.0263
522	SLU 77	0.13	-0.12	43.03	-0.0069	14.5647	0.0403
522	SLU 78	0.13	-0.09	43.02	-0.0069	14.5629	0.0305
522	SLU 79	0.13	-0.13	42.8	-0.007	14.4888	0.0442
522	SLU 80	0.13	-0.1	42.79	-0.007	14.487	0.0344
522	SLU 81	0.13	-0.11	43.87	-0.0069	14.8524	0.0387
522	SLU 82	0.13	-0.09	43.87	-0.007	14.8507	0.0288
522	SLU 83	0.13	-0.12	44.17	-0.007	14.9537	0.0402
522	SLU 84	0.13	-0.09	44.17	-0.007	14.9519	0.0304
522	SLE RA 1	0.09	-0.11	28.71	-0.0052	9.7263	0.0387
522	SLE RA 2	0.09	-0.08	28.71	-0.0052	9.7243	0.0278
522	SLE RA 3	0.09	-0.11	29.07	-0.0052	9.8443	0.0372
522	SLE RA 4	0.09	-0.09	29.06	-0.0052	9.8432	0.0306
522	SLE RA 5	0.09	-0.08	28.91	-0.0053	9.7918	0.0289
522	SLE RA 6	0.09	-0.11	29.27	-0.0053	9.9118	0.0382
522	SLE RA 7	0.09	-0.09	29.26	-0.0053	9.9106	0.0317
522	SLE RA 8	0.09	-0.12	29.12	-0.0053	9.8612	0.0408
522	SLE RA 9	0.09	-0.1	29.11	-0.0053	9.86	0.0343
522	SLE RA 10	0.1	-0.07	31.32	-0.0054	10.6049	0.024
522	SLE RA 11	0.1	-0.1	31.67	-0.0053	10.7249	0.0334
522	SLE RA 12	0.1	-0.08	31.67	-0.0054	10.7237	0.0268
522	SLE RA 13	0.1	-0.07	31.52	-0.0054	10.6723	0.0251
522	SLE RA 14	0.1	-0.1	31.88	-0.0054	10.7924	0.0344
522	SLE RA 15	0.1	-0.08	31.87	-0.0054	10.7912	0.0278

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
522	SLE RA 16	0.1	-0.11	31.72	-0.0054	10.7418	0.037
522	SLE RA 17	0.1	-0.09	31.72	-0.0055	10.7406	0.0305
522	SLE RA 18	0.1	-0.1	32.44	-0.0054	10.9842	0.0333
522	SLE RA 19	0.1	-0.08	32.44	-0.0054	10.983	0.0267
522	SLE RA 20	0.1	-0.1	32.64	-0.0055	11.0517	0.0343
522	SLE RA 21	0.1	-0.08	32.64	-0.0055	11.0505	0.0278
522	SLE FR 1	0.09	-0.11	28.71	-0.0052	9.7263	0.0387
522	SLE FR 2	0.09	-0.11	28.71	-0.0052	9.7259	0.0366
522	SLE FR 3	0.09	-0.11	28.79	-0.0052	9.7532	0.0392
522	SLE FR 4	0.09	-0.1	29.83	-0.0053	10.1032	0.0349
522	SLE FR 5	0.09	-0.11	29.91	-0.0053	10.1306	0.0375
522	SLE FR 6	0.09	-0.11	30.58	-0.0053	10.3552	0.036
522	SLE QP 1	0.09	-0.11	28.71	-0.0052	9.7263	0.0387
522	SLE QP 2	0.09	-0.11	29.83	-0.0053	10.1036	0.0371
522	SLD 1	2.49	0.45	29.84	-0.0055	10.106	-0.1572
522	SLD 2	2.5	0.46	29.84	-0.0056	10.1043	-0.1627
522	SLD 3	2.54	-0.55	30.1	-0.0042	10.1953	0.1922
522	SLD 4	2.56	-0.54	30.09	-0.0043	10.1935	0.1868
522	SLD 5	0.73	1.57	29.45	-0.0073	9.9693	-0.5502
522	SLD 6	0.74	1.58	29.44	-0.0074	9.9681	-0.5538
522	SLD 7	0.9	-1.76	30.3	-0.0029	10.2669	0.6146
522	SLD 8	0.92	-1.75	30.3	-0.003	10.2657	0.611
522	SLD 9	-0.73	1.53	29.37	-0.0076	9.9416	-0.5368
522	SLD 10	-0.72	1.54	29.36	-0.0076	9.9404	-0.5404
522	SLD 11	-0.55	-1.8	30.22	-0.0032	10.2392	0.628
522	SLD 12	-0.54	-1.79	30.21	-0.0032	10.238	0.6244
522	SLD 13	-2.37	0.32	29.57	-0.0063	10.0137	-0.1125
522	SLD 14	-2.36	0.34	29.56	-0.0063	10.012	-0.118
522	SLD 15	-2.32	-0.68	29.83	-0.005	10.103	0.2369
522	SLD 16	-2.3	-0.66	29.82	-0.005	10.1012	0.2314
522	SLV 1	5.69	1.16	29.87	-0.0059	10.1125	-0.4064
522	SLV 2	5.73	1.2	29.86	-0.0059	10.1084	-0.4191
522	SLV 3	5.82	-1.12	30.45	-0.0029	10.3161	0.3895
522	SLV 4	5.86	-1.08	30.44	-0.0029	10.312	0.3768
522	SLV 5	1.58	3.71	28.96	-0.01	9.7982	-1.301
522	SLV 6	1.6	3.74	28.95	-0.01	9.7956	-1.3091
522	SLV 7	1.99	-3.87	30.91	0	10.4769	1.3522
522	SLV 8	2.02	-3.84	30.9	0	10.4742	1.3441
522	SLV 9	-1.83	3.63	28.77	-0.0105	9.7331	-1.2698
522	SLV 10	-1.81	3.65	28.76	-0.0105	9.7304	-1.278
522	SLV 11	-1.42	-3.95	30.71	-0.0005	10.4117	1.3833
522	SLV 12	-1.39	-3.93	30.7	-0.0005	10.4091	1.3752
522	SLV 13	-5.67	0.86	29.22	-0.0076	9.8953	-0.3026
522	SLV 14	-5.63	0.9	29.21	-0.0076	9.8912	-0.3153
522	SLV 15	-5.55	-1.41	29.81	-0.0046	10.0989	0.4934
522	SLV 16	-5.51	-1.37	29.79	-0.0046	10.0948	0.4806
522	CRTFP Ux+	0	0	0	0	0	0
522	CRTFP Ux-	0	0	0	0	0	0
523	SLU 1	-0.2	-0.1	28.44	0.0267	-6.5347	-0.0231
523	SLU 2	-0.2	-0.02	28.43	0.0268	-6.5338	-0.0045
523	SLU 3	-0.21	-0.09	29	0.0273	-6.6616	-0.0218
523	SLU 4	-0.21	-0.05	28.99	0.0273	-6.6611	-0.0107
523	SLU 5	-0.21	-0.02	28.75	0.0271	-6.6061	-0.0036
523	SLU 6	-0.21	-0.09	29.32	0.0276	-6.7339	-0.021
523	SLU 7	-0.21	-0.04	29.31	0.0276	-6.7334	-0.0098
523	SLU 8	-0.21	-0.09	29.08	0.0273	-6.6791	-0.0214
523	SLU 9	-0.21	-0.05	29.07	0.0274	-6.6786	-0.0102
523	SLU 10	-0.19	-0.01	32.14	0.0309	-7.3884	-0.0017
523	SLU 11	-0.2	-0.08	32.71	0.0313	-7.5162	-0.0191
523	SLU 12	-0.2	-0.04	32.71	0.0314	-7.5157	-0.0079
523	SLU 13	-0.2	-0.01	32.46	0.0312	-7.4606	-0.0009
523	SLU 14	-0.2	-0.08	33.03	0.0316	-7.5884	-0.0182
523	SLU 15	-0.2	-0.03	33.02	0.0317	-7.5879	-0.0071
523	SLU 16	-0.2	-0.08	32.79	0.0314	-7.5337	-0.0186
523	SLU 17	-0.2	-0.03	32.79	0.0314	-7.5331	-0.0075
523	SLU 18	-0.19	-0.08	33.74	0.0325	-7.7554	-0.0191
523	SLU 19	-0.19	-0.04	33.74	0.0325	-7.7549	-0.008
523	SLU 20	-0.19	-0.08	34.06	0.0328	-7.8277	-0.0183
523	SLU 21	-0.19	-0.03	34.06	0.0329	-7.8272	-0.0071
523	SLU 22	-0.21	-0.08	32	0.0307	-7.3535	-0.0198
523	SLU 23	-0.21	-0.01	32	0.0308	-7.3526	-0.0012
523	SLU 24	-0.22	-0.08	32.56	0.0313	-7.4804	-0.0186
523	SLU 25	-0.22	-0.03	32.56	0.0313	-7.4799	-0.0074
523	SLU 26	-0.22	-0.01	32.32	0.0311	-7.4248	-0.0004
523	SLU 27	-0.22	-0.08	32.88	0.0316	-7.5526	-0.0177
523	SLU 28	-0.22	-0.03	32.88	0.0316	-7.5521	-0.0066
523	SLU 29	-0.22	-0.08	32.64	0.0313	-7.4979	-0.0181
523	SLU 30	-0.22	-0.03	32.64	0.0314	-7.4974	-0.0069
523	SLU 31	-0.2	0	35.71	0.0349	-8.2072	0.0015
523	SLU 32	-0.21	-0.07	36.28	0.0353	-8.335	-0.0158
523	SLU 33	-0.21	-0.02	36.27	0.0354	-8.3345	-0.0047
523	SLU 34	-0.21	0	36.03	0.0352	-8.2794	0.0024
523	SLU 35	-0.21	-0.07	36.59	0.0356	-8.4072	-0.015
523	SLU 36	-0.21	-0.02	36.59	0.0357	-8.4067	-0.0038
523	SLU 37	-0.21	-0.07	36.35	0.0354	-8.3524	-0.0154
523	SLU 38	-0.21	-0.02	36.35	0.0354	-8.3519	-0.0042
523	SLU 39	-0.2	-0.07	37.31	0.0365	-8.5742	-0.0159
523	SLU 40	-0.2	-0.02	37.3	0.0365	-8.5737	-0.0047
523	SLU 41	-0.2	-0.07	37.63	0.0368	-8.6464	-0.015
523	SLU 42	-0.2	-0.02	37.62	0.0369	-8.6459	-0.0039
523	SLU 43	-0.26	-0.13	35.74	0.0333	-8.2144	-0.0311

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
523	SLU 44	-0.26	-0.06	35.74	0.0334	-8.2135	-0.0125
523	SLU 45	-0.27	-0.13	36.3	0.0339	-8.3413	-0.0299
523	SLU 46	-0.27	-0.08	36.3	0.034	-8.3408	-0.0187
523	SLU 47	-0.27	-0.05	36.06	0.0337	-8.2857	-0.0117
523	SLU 48	-0.27	-0.12	36.62	0.0342	-8.4135	-0.029
523	SLU 49	-0.27	-0.08	36.62	0.0343	-8.413	-0.0179
523	SLU 50	-0.27	-0.12	36.38	0.0339	-8.3588	-0.0294
523	SLU 51	-0.27	-0.08	36.38	0.034	-8.3583	-0.0183
523	SLU 52	-0.25	-0.05	39.45	0.0375	-9.068	-0.0098
523	SLU 53	-0.26	-0.11	40.02	0.038	-9.1959	-0.0271
523	SLU 54	-0.26	-0.07	40.01	0.038	-9.1953	-0.016
523	SLU 55	-0.26	-0.04	39.77	0.0378	-9.1403	-0.0089
523	SLU 56	-0.26	-0.11	40.34	0.0383	-9.2681	-0.0263
523	SLU 57	-0.26	-0.07	40.33	0.0383	-9.2676	-0.0151
523	SLU 58	-0.26	-0.11	40.1	0.038	-9.2133	-0.0267
523	SLU 59	-0.26	-0.07	40.09	0.0381	-9.2128	-0.0155
523	SLU 60	-0.25	-0.11	41.05	0.0391	-9.4351	-0.0272
523	SLU 61	-0.25	-0.07	41.05	0.0392	-9.4346	-0.016
523	SLU 62	-0.25	-0.11	41.37	0.0394	-9.5073	-0.0263
523	SLU 63	-0.25	-0.07	41.36	0.0395	-9.5068	-0.0152
523	SLU 64	-0.27	-0.12	39.31	0.0373	-9.0331	-0.0279
523	SLU 65	-0.27	-0.04	39.31	0.0374	-9.0323	-0.0093
523	SLU 66	-0.28	-0.11	39.87	0.0379	-9.1601	-0.0266
523	SLU 67	-0.28	-0.07	39.87	0.038	-9.1596	-0.0154
523	SLU 68	-0.28	-0.04	39.63	0.0377	-9.1045	-0.0084
523	SLU 69	-0.28	-0.11	40.19	0.0382	-9.2323	-0.0258
523	SLU 70	-0.28	-0.06	40.19	0.0383	-9.2318	-0.0146
523	SLU 71	-0.28	-0.11	39.95	0.0379	-9.1776	-0.0262
523	SLU 72	-0.28	-0.07	39.95	0.038	-9.1771	-0.015
523	SLU 73	-0.26	-0.03	43.02	0.0415	-9.8868	-0.0065
523	SLU 74	-0.27	-0.1	43.58	0.042	-10.0146	-0.0239
523	SLU 75	-0.27	-0.06	43.58	0.042	-10.0141	-0.0127
523	SLU 76	-0.27	-0.03	43.34	0.0418	-9.9591	-0.0057
523	SLU 77	-0.27	-0.1	43.9	0.0423	-10.0869	-0.023
523	SLU 78	-0.27	-0.05	43.9	0.0423	-10.0864	-0.0118
523	SLU 79	-0.27	-0.1	43.66	0.042	-10.0321	-0.0234
523	SLU 80	-0.27	-0.06	43.66	0.0421	-10.0316	-0.0122
523	SLU 81	-0.26	-0.1	44.61	0.0431	-10.2539	-0.0239
523	SLU 82	-0.26	-0.06	44.61	0.0432	-10.2534	-0.0128
523	SLU 83	-0.26	-0.1	44.93	0.0434	-10.3261	-0.0231
523	SLU 84	-0.26	-0.05	44.93	0.0435	-10.3256	-0.0119
523	SLE RA 1	-0.21	-0.09	29.46	0.0278	-6.7686	-0.0221
523	SLE RA 2	-0.21	-0.04	29.45	0.0279	-6.7681	-0.0097
523	SLE RA 3	-0.21	-0.09	29.83	0.0282	-6.8533	-0.0213
523	SLE RA 4	-0.21	-0.06	29.83	0.0283	-6.8529	-0.0139
523	SLE RA 5	-0.21	-0.04	29.67	0.0281	-6.8162	-0.0092
523	SLE RA 6	-0.21	-0.09	30.04	0.0284	-6.9014	-0.0207
523	SLE RA 7	-0.21	-0.06	30.04	0.0285	-6.9011	-0.0133
523	SLE RA 8	-0.21	-0.09	29.88	0.0282	-6.8649	-0.021
523	SLE RA 9	-0.21	-0.06	29.88	0.0283	-6.8646	-0.0136
523	SLE RA 10	-0.2	-0.04	31.93	0.0306	-7.3377	-0.0079
523	SLE RA 11	-0.2	-0.08	32.3	0.0309	-7.4229	-0.0195
523	SLE RA 12	-0.2	-0.05	32.3	0.031	-7.4226	-0.012
523	SLE RA 13	-0.2	-0.03	32.14	0.0308	-7.3859	-0.0073
523	SLE RA 14	-0.21	-0.08	32.52	0.0311	-7.4711	-0.0189
523	SLE RA 15	-0.21	-0.05	32.51	0.0312	-7.4708	-0.0115
523	SLE RA 16	-0.21	-0.08	32.36	0.0309	-7.4346	-0.0192
523	SLE RA 17	-0.21	-0.05	32.35	0.031	-7.4343	-0.0117
523	SLE RA 18	-0.2	-0.08	32.99	0.0317	-7.5825	-0.0195
523	SLE RA 19	-0.2	-0.05	32.99	0.0317	-7.5821	-0.0121
523	SLE RA 20	-0.2	-0.08	33.2	0.0319	-7.6306	-0.019
523	SLE RA 21	-0.2	-0.05	33.2	0.0319	-7.6303	-0.0115
523	SLE FR 1	-0.21	-0.09	29.46	0.0278	-6.7686	-0.0221
523	SLE FR 2	-0.21	-0.08	29.46	0.0278	-6.7685	-0.0197
523	SLE FR 3	-0.21	-0.09	29.54	0.0279	-6.7879	-0.0219
523	SLE FR 4	-0.2	-0.08	30.52	0.029	-7.0127	-0.0189
523	SLE FR 5	-0.21	-0.09	30.6	0.0291	-7.032	-0.0211
523	SLE FR 6	-0.2	-0.09	31.22	0.0298	-7.1755	-0.0208
523	SLE QP 1	-0.21	-0.09	29.46	0.0278	-6.7686	-0.0221
523	SLE QP 2	-0.2	-0.09	30.52	0.029	-7.0128	-0.0214
523	SLD 1	2.17	0.86	36.55	0.0367	-8.3584	0.2166
523	SLD 2	2.18	0.54	36.57	0.0368	-8.3647	0.1373
523	SLD 3	2.22	-0.39	36.76	0.0369	-8.4151	-0.0959
523	SLD 4	2.24	-0.71	36.78	0.037	-8.4213	-0.1752
523	SLD 5	0.42	2.15	32.01	0.031	-7.3295	0.5378
523	SLD 6	0.43	1.94	32.03	0.031	-7.3336	0.4863
523	SLD 7	0.6	-2.02	32.7	0.0317	-7.5182	-0.5038
523	SLD 8	0.62	-2.23	32.71	0.0317	-7.5223	-0.5553
523	SLD 9	-1.02	2.05	28.32	0.0262	-6.5033	0.5126
523	SLD 10	-1.01	1.84	28.34	0.0263	-6.5073	0.4611
523	SLD 11	-0.84	-2.12	29.01	0.027	-6.692	-0.529
523	SLD 12	-0.83	-2.33	29.02	0.027	-6.696	-0.5805
523	SLD 13	-2.65	0.53	24.25	0.021	-5.6042	0.1325
523	SLD 14	-2.63	0.21	24.27	0.0211	-5.6105	0.0532
523	SLD 15	-2.59	-0.73	24.46	0.0212	-5.6608	-0.18
523	SLD 16	-2.57	-1.04	24.48	0.0213	-5.6671	-0.2593
523	SLV 1	5.34	2.11	44.65	0.047	-10.1625	0.5263
523	SLV 2	5.38	1.36	44.69	0.0472	-10.1771	0.3414
523	SLV 3	5.47	-0.75	45.12	0.0475	-10.2931	-0.1865
523	SLV 4	5.51	-1.49	45.17	0.0477	-10.3077	-0.3713
523	SLV 5	1.26	5.02	34.03	0.0336	-7.7572	1.2553

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
523	SLV 6	1.28	4.55	34.06	0.0337	-7.7665	1.1372
523	SLV 7	1.68	-4.49	35.61	0.0352	-8.1925	-1.1206
523	SLV 8	1.71	-4.97	35.64	0.0354	-8.2018	-1.2387
523	SLV 9	-2.12	4.78	25.39	0.0226	-5.8238	1.196
523	SLV 10	-2.09	4.31	25.42	0.0227	-5.8331	1.0779
523	SLV 11	-1.69	-4.73	26.98	0.0242	-6.2591	-1.1799
523	SLV 12	-1.67	-5.2	27.01	0.0244	-6.2684	-1.298
523	SLV 13	-5.92	1.31	15.86	0.0103	-3.7179	0.3286
523	SLV 14	-5.88	0.57	15.91	0.0105	-3.7324	0.1437
523	SLV 15	-5.79	-1.54	16.34	0.0108	-3.8484	-0.3841
523	SLV 16	-5.75	-2.29	16.39	0.011	-3.863	-0.569
523	CRTFP Ux+	0	0	0	0	0	0
523	CRTFP Ux-	0	0	0	0	0	0
531	SLU 1	-0.24	-0.28	43.63	-1.2216	-0.0689	-0.0054
531	SLU 2	-0.24	-0.2	43.61	-1.221	-0.0684	-0.0054
531	SLU 3	-0.24	-0.27	44.49	-1.2456	-0.0706	-0.0055
531	SLU 4	-0.24	-0.23	44.48	-1.2452	-0.0703	-0.0055
531	SLU 5	-0.24	-0.21	44.08	-1.2342	-0.069	-0.0055
531	SLU 6	-0.25	-0.28	44.96	-1.2588	-0.0712	-0.0056
531	SLU 7	-0.25	-0.23	44.95	-1.2585	-0.0709	-0.0056
531	SLU 8	-0.25	-0.29	44.57	-1.248	-0.07	-0.0056
531	SLU 9	-0.25	-0.24	44.56	-1.2477	-0.0697	-0.0056
531	SLU 10	-0.22	-0.2	49.68	-1.3901	-0.0838	-0.0049
531	SLU 11	-0.23	-0.27	50.55	-1.4148	-0.0859	-0.0049
531	SLU 12	-0.23	-0.22	50.55	-1.4144	-0.0857	-0.0049
531	SLU 13	-0.23	-0.2	50.15	-1.4034	-0.0843	-0.005
531	SLU 14	-0.23	-0.28	51.02	-1.428	-0.0865	-0.005
531	SLU 15	-0.23	-0.23	51.01	-1.4276	-0.0862	-0.005
531	SLU 16	-0.23	-0.29	50.64	-1.4172	-0.0854	-0.005
531	SLU 17	-0.23	-0.24	50.63	-1.4168	-0.0851	-0.0051
531	SLU 18	-0.22	-0.28	52.3	-1.4632	-0.0908	-0.0046
531	SLU 19	-0.22	-0.23	52.29	-1.4629	-0.0905	-0.0046
531	SLU 20	-0.22	-0.28	52.77	-1.4765	-0.0914	-0.0047
531	SLU 21	-0.22	-0.23	52.76	-1.4761	-0.0911	-0.0047
531	SLU 22	-0.25	-0.25	49.26	-1.3782	-0.0784	-0.0056
531	SLU 23	-0.25	-0.17	49.24	-1.3776	-0.0779	-0.0057
531	SLU 24	-0.26	-0.24	50.11	-1.4022	-0.0801	-0.0057
531	SLU 25	-0.26	-0.2	50.1	-1.4018	-0.0798	-0.0057
531	SLU 26	-0.26	-0.17	49.71	-1.3908	-0.0785	-0.0058
531	SLU 27	-0.26	-0.25	50.58	-1.4154	-0.0806	-0.0058
531	SLU 28	-0.26	-0.2	50.57	-1.415	-0.0803	-0.0058
531	SLU 29	-0.26	-0.26	50.19	-1.4046	-0.0795	-0.0058
531	SLU 30	-0.26	-0.21	50.19	-1.4043	-0.0792	-0.0058
531	SLU 31	-0.24	-0.17	55.31	-1.5467	-0.0932	-0.0051
531	SLU 32	-0.24	-0.24	56.18	-1.5713	-0.0954	-0.0051
531	SLU 33	-0.24	-0.19	56.17	-1.571	-0.0951	-0.0052
531	SLU 34	-0.24	-0.17	55.78	-1.5599	-0.0938	-0.0052
531	SLU 35	-0.24	-0.25	56.65	-1.5846	-0.096	-0.0052
531	SLU 36	-0.24	-0.2	56.64	-1.5842	-0.0957	-0.0052
531	SLU 37	-0.24	-0.26	56.26	-1.5738	-0.0948	-0.0053
531	SLU 38	-0.24	-0.21	56.25	-1.5734	-0.0945	-0.0053
531	SLU 39	-0.23	-0.25	57.93	-1.6198	-0.1003	-0.0048
531	SLU 40	-0.23	-0.2	57.92	-1.6195	-0.1	-0.0048
531	SLU 41	-0.23	-0.25	58.39	-1.633	-0.1008	-0.0049
531	SLU 42	-0.23	-0.2	58.39	-1.6327	-0.1006	-0.0049
531	SLU 43	-0.31	-0.37	54.79	-1.5344	-0.0864	-0.007
531	SLU 44	-0.31	-0.3	54.77	-1.5338	-0.0859	-0.007
531	SLU 45	-0.31	-0.37	55.64	-1.5584	-0.0881	-0.007
531	SLU 46	-0.31	-0.32	55.63	-1.558	-0.0878	-0.0071
531	SLU 47	-0.31	-0.3	55.24	-1.547	-0.0864	-0.0071
531	SLU 48	-0.31	-0.37	56.11	-1.5716	-0.0886	-0.0071
531	SLU 49	-0.31	-0.32	56.1	-1.5713	-0.0883	-0.0072
531	SLU 50	-0.31	-0.38	55.72	-1.5608	-0.0875	-0.0072
531	SLU 51	-0.31	-0.34	55.72	-1.5605	-0.0872	-0.0072
531	SLU 52	-0.29	-0.29	60.84	-1.7029	-0.1012	-0.0064
531	SLU 53	-0.29	-0.37	61.71	-1.7275	-0.1034	-0.0065
531	SLU 54	-0.29	-0.32	61.7	-1.7272	-0.1031	-0.0065
531	SLU 55	-0.29	-0.3	61.31	-1.7162	-0.1018	-0.0065
531	SLU 56	-0.3	-0.37	62.18	-1.7408	-0.1039	-0.0066
531	SLU 57	-0.3	-0.32	62.17	-1.7404	-0.1036	-0.0066
531	SLU 58	-0.3	-0.38	61.79	-1.73	-0.1028	-0.0066
531	SLU 59	-0.3	-0.33	61.78	-1.7296	-0.1025	-0.0066
531	SLU 60	-0.28	-0.37	63.46	-1.776	-0.1083	-0.0062
531	SLU 61	-0.28	-0.32	63.45	-1.7757	-0.108	-0.0062
531	SLU 62	-0.29	-0.38	63.93	-1.7893	-0.1088	-0.0063
531	SLU 63	-0.29	-0.33	63.92	-1.7889	-0.1085	-0.0063
531	SLU 64	-0.32	-0.34	60.41	-1.6909	-0.0958	-0.0072
531	SLU 65	-0.32	-0.26	60.4	-1.6903	-0.0953	-0.0072
531	SLU 66	-0.32	-0.34	61.27	-1.715	-0.0975	-0.0073
531	SLU 67	-0.32	-0.29	61.26	-1.7146	-0.0972	-0.0073
531	SLU 68	-0.32	-0.27	60.87	-1.7036	-0.0959	-0.0073
531	SLU 69	-0.33	-0.34	61.74	-1.7282	-0.0981	-0.0074
531	SLU 70	-0.33	-0.29	61.73	-1.7278	-0.0978	-0.0074
531	SLU 71	-0.33	-0.35	61.35	-1.7174	-0.0969	-0.0074
531	SLU 72	-0.33	-0.31	61.34	-1.717	-0.0966	-0.0074
531	SLU 73	-0.3	-0.26	66.47	-1.8595	-0.1107	-0.0067
531	SLU 74	-0.31	-0.34	67.34	-1.8841	-0.1128	-0.0067
531	SLU 75	-0.31	-0.29	67.33	-1.8838	-0.1126	-0.0067
531	SLU 76	-0.31	-0.27	66.94	-1.8727	-0.1112	-0.0067
531	SLU 77	-0.31	-0.34	67.81	-1.8974	-0.1134	-0.0068
531	SLU 78	-0.31	-0.29	67.8	-1.897	-0.1131	-0.0068

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
531	SLU 79	-0.31	-0.35	67.42	-1.8866	-0.1123	-0.0068
531	SLU 80	-0.31	-0.3	67.41	-1.8862	-0.112	-0.0068
531	SLU 81	-0.3	-0.34	69.08	-1.9326	-0.1177	-0.0064
531	SLU 82	-0.3	-0.29	69.07	-1.9322	-0.1174	-0.0064
531	SLU 83	-0.3	-0.35	69.55	-1.9458	-0.1183	-0.0065
531	SLU 84	-0.3	-0.3	69.54	-1.9455	-0.118	-0.0065
531	SLE RA 1	-0.24	-0.27	45.24	-1.2663	-0.0716	-0.0055
531	SLE RA 2	-0.24	-0.22	45.23	-1.2659	-0.0713	-0.0055
531	SLE RA 3	-0.24	-0.27	45.81	-1.2823	-0.0728	-0.0055
531	SLE RA 4	-0.25	-0.24	45.8	-1.2821	-0.0726	-0.0055
531	SLE RA 5	-0.25	-0.22	45.54	-1.2747	-0.0717	-0.0056
531	SLE RA 6	-0.25	-0.27	46.12	-1.2911	-0.0731	-0.0056
531	SLE RA 7	-0.25	-0.24	46.11	-1.2909	-0.0729	-0.0056
531	SLE RA 8	-0.25	-0.28	45.86	-1.284	-0.0724	-0.0056
531	SLE RA 9	-0.25	-0.25	45.86	-1.2837	-0.0722	-0.0056
531	SLE RA 10	-0.23	-0.22	49.27	-1.3787	-0.0815	-0.0051
531	SLE RA 11	-0.23	-0.27	49.85	-1.3951	-0.083	-0.0052
531	SLE RA 12	-0.23	-0.23	49.85	-1.3949	-0.0828	-0.0052
531	SLE RA 13	-0.23	-0.22	49.58	-1.3875	-0.0819	-0.0052
531	SLE RA 14	-0.24	-0.27	50.17	-1.4039	-0.0833	-0.0052
531	SLE RA 15	-0.24	-0.24	50.16	-1.4037	-0.0832	-0.0052
531	SLE RA 16	-0.24	-0.28	49.91	-1.3967	-0.0826	-0.0052
531	SLE RA 17	-0.24	-0.24	49.9	-1.3965	-0.0824	-0.0052
531	SLE RA 18	-0.23	-0.27	51.02	-1.4274	-0.0862	-0.005
531	SLE RA 19	-0.23	-0.24	51.01	-1.4272	-0.086	-0.005
531	SLE RA 20	-0.23	-0.27	51.33	-1.4362	-0.0866	-0.005
531	SLE RA 21	-0.23	-0.24	51.32	-1.436	-0.0864	-0.005
531	SLE FR 1	-0.24	-0.27	45.24	-1.2663	-0.0716	-0.0055
531	SLE FR 2	-0.24	-0.26	45.23	-1.2662	-0.0716	-0.0055
531	SLE FR 3	-0.24	-0.27	45.36	-1.2698	-0.0718	-0.0055
531	SLE FR 4	-0.24	-0.26	46.97	-1.3146	-0.076	-0.0053
531	SLE FR 5	-0.24	-0.27	47.09	-1.3182	-0.0762	-0.0054
531	SLE FR 6	-0.23	-0.27	48.13	-1.3469	-0.0789	-0.0052
531	SLE QP 1	-0.24	-0.27	45.24	-1.2663	-0.0716	-0.0055
531	SLE QP 2	-0.24	-0.27	46.97	-1.3146	-0.076	-0.0053
531	SLD 1	3.65	0.43	49.68	-1.3898	0.0036	0.103
531	SLD 2	3.66	0.22	49.72	-1.3908	0.0018	0.1064
531	SLD 3	3.74	-1.1	50.05	-1.4009	-0.0119	0.1056
531	SLD 4	3.75	-1.31	50.09	-1.402	-0.0136	0.109
531	SLD 5	0.79	2.29	47.22	-1.32	-0.0284	0.0227
531	SLD 6	0.8	2.15	47.24	-1.3207	-0.0295	0.0249
531	SLD 7	1.08	-2.8	48.45	-1.3573	-0.0799	0.0313
531	SLD 8	1.09	-2.93	48.47	-1.358	-0.081	0.0335
531	SLD 9	-1.57	2.39	45.47	-1.2713	-0.071	-0.0441
531	SLD 10	-1.56	2.25	45.49	-1.272	-0.0721	-0.0419
531	SLD 11	-1.28	-2.69	46.7	-1.3086	-0.1225	-0.0355
531	SLD 12	-1.27	-2.83	46.72	-1.3093	-0.1236	-0.0333
531	SLD 13	-4.23	0.77	43.85	-1.2273	-0.1384	-0.1197
531	SLD 14	-4.21	0.56	43.89	-1.2283	-0.1401	-0.1162
531	SLD 15	-4.14	-0.76	44.22	-1.2384	-0.1539	-0.1171
531	SLD 16	-4.12	-0.97	44.26	-1.2395	-0.1556	-0.1137
531	SLV 1	8.85	1.31	53.32	-1.4907	0.1098	0.248
531	SLV 2	8.89	0.83	53.41	-1.4933	0.1058	0.256
531	SLV 3	9.06	-2.17	54.16	-1.5161	0.0745	0.254
531	SLV 4	9.09	-2.65	54.25	-1.5187	0.0705	0.262
531	SLV 5	2.17	5.56	47.59	-1.3285	0.0339	0.0602
531	SLV 6	2.2	5.25	47.64	-1.3301	0.0314	0.0653
531	SLV 7	2.85	-6.03	50.39	-1.4132	-0.0837	0.0802
531	SLV 8	2.88	-6.34	50.44	-1.4148	-0.0863	0.0853
531	SLV 9	-3.35	5.8	43.5	-1.2145	-0.0658	-0.096
531	SLV 10	-3.33	5.49	43.55	-1.2161	-0.0683	-0.0909
531	SLV 11	-2.67	-5.79	46.3	-1.2992	-0.1834	-0.076
531	SLV 12	-2.65	-6.1	46.35	-1.3008	-0.186	-0.0709
531	SLV 13	-9.57	2.11	39.69	-1.1106	-0.2225	-0.2727
531	SLV 14	-9.53	1.62	39.78	-1.1132	-0.2265	-0.2647
531	SLV 15	-9.36	-1.37	40.53	-1.136	-0.2578	-0.2666
531	SLV 16	-9.33	-1.85	40.62	-1.1386	-0.2618	-0.2587
531	CRTFP Ux+	0	0	0	0	0	0
531	CRTFP Ux-	0	0	0	0	0	0
534	SLU 1	0.42	-0.24	42.43	-1.188	0.0219	0.0114
534	SLU 2	0.42	-0.17	42.41	-1.1876	0.0213	0.0114
534	SLU 3	0.43	-0.24	43.24	-1.2107	0.0222	0.0117
534	SLU 4	0.43	-0.19	43.23	-1.2104	0.0219	0.0117
534	SLU 5	0.42	-0.18	42.87	-1.2003	0.0209	0.0116
534	SLU 6	0.43	-0.25	43.69	-1.2234	0.0218	0.0119
534	SLU 7	0.43	-0.2	43.68	-1.2232	0.0215	0.0118
534	SLU 8	0.43	-0.26	43.33	-1.2135	0.0212	0.0118
534	SLU 9	0.43	-0.22	43.32	-1.2132	0.0208	0.0117
534	SLU 10	0.44	-0.15	48.2	-1.3485	0.0285	0.0127
534	SLU 11	0.46	-0.22	49.02	-1.3716	0.0294	0.013
534	SLU 12	0.46	-0.18	49.02	-1.3713	0.0291	0.013
534	SLU 13	0.45	-0.16	48.65	-1.3612	0.0282	0.0128
534	SLU 14	0.46	-0.23	49.47	-1.3843	0.0291	0.0132
534	SLU 15	0.46	-0.19	49.47	-1.3841	0.0287	0.0131
534	SLU 16	0.46	-0.24	49.12	-1.3744	0.0284	0.0131
534	SLU 17	0.46	-0.2	49.11	-1.3741	0.028	0.013
534	SLU 18	0.46	-0.22	50.69	-1.4178	0.0322	0.0133
534	SLU 19	0.46	-0.17	50.69	-1.4176	0.0318	0.0133
534	SLU 20	0.47	-0.23	51.14	-1.4306	0.0318	0.0134
534	SLU 21	0.46	-0.18	51.14	-1.4303	0.0315	0.0134
534	SLU 22	0.45	-0.21	47.82	-1.3379	0.0209	0.0128

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
534	SLU 23	0.45	-0.13	47.81	-1.3375	0.0203	0.0128
534	SLU 24	0.46	-0.21	48.63	-1.3606	0.0212	0.0131
534	SLU 25	0.46	-0.16	48.62	-1.3604	0.0209	0.0131
534	SLU 26	0.46	-0.14	48.26	-1.3503	0.02	0.0129
534	SLU 27	0.47	-0.22	49.08	-1.3734	0.0209	0.0133
534	SLU 28	0.47	-0.17	49.07	-1.3731	0.0205	0.0132
534	SLU 29	0.47	-0.23	48.72	-1.3634	0.0202	0.0132
534	SLU 30	0.47	-0.18	48.71	-1.3632	0.0199	0.0131
534	SLU 31	0.48	-0.12	53.59	-1.4984	0.0276	0.0141
534	SLU 32	0.49	-0.19	54.42	-1.5215	0.0285	0.0144
534	SLU 33	0.49	-0.15	54.41	-1.5213	0.0281	0.0144
534	SLU 34	0.49	-0.13	54.04	-1.5112	0.0272	0.0142
534	SLU 35	0.5	-0.2	54.87	-1.5343	0.0281	0.0146
534	SLU 36	0.5	-0.15	54.86	-1.534	0.0278	0.0145
534	SLU 37	0.5	-0.21	54.51	-1.5243	0.0274	0.0145
534	SLU 38	0.5	-0.17	54.5	-1.5241	0.0271	0.0144
534	SLU 39	0.49	-0.19	56.09	-1.5678	0.0312	0.0147
534	SLU 40	0.49	-0.14	56.08	-1.5675	0.0309	0.0146
534	SLU 41	0.5	-0.2	56.54	-1.5805	0.0309	0.0148
534	SLU 42	0.5	-0.15	56.53	-1.5803	0.0305	0.0148
534	SLU 43	0.53	-0.33	53.31	-1.493	0.0288	0.0144
534	SLU 44	0.53	-0.25	53.29	-1.4926	0.0282	0.0143
534	SLU 45	0.54	-0.33	54.12	-1.5157	0.0291	0.0147
534	SLU 46	0.54	-0.28	54.11	-1.5154	0.0287	0.0146
534	SLU 47	0.53	-0.26	53.74	-1.5053	0.0278	0.0145
534	SLU 48	0.55	-0.33	54.57	-1.5284	0.0287	0.0148
534	SLU 49	0.55	-0.29	54.56	-1.5282	0.0284	0.0148
534	SLU 50	0.54	-0.35	54.21	-1.5185	0.0281	0.0147
534	SLU 51	0.54	-0.3	54.2	-1.5182	0.0277	0.0147
534	SLU 52	0.56	-0.23	59.08	-1.6534	0.0354	0.0156
534	SLU 53	0.57	-0.31	59.9	-1.6765	0.0363	0.016
534	SLU 54	0.57	-0.26	59.9	-1.6763	0.036	0.0159
534	SLU 55	0.56	-0.24	59.53	-1.6662	0.0351	0.0158
534	SLU 56	0.58	-0.32	60.35	-1.6893	0.036	0.0161
534	SLU 57	0.57	-0.27	60.35	-1.6891	0.0356	0.0161
534	SLU 58	0.57	-0.33	59.99	-1.6794	0.0353	0.016
534	SLU 59	0.57	-0.28	59.99	-1.6791	0.0349	0.016
534	SLU 60	0.57	-0.3	61.57	-1.7228	0.0391	0.0162
534	SLU 61	0.57	-0.26	61.56	-1.7226	0.0387	0.0162
534	SLU 62	0.58	-0.31	62.02	-1.7356	0.0387	0.0164
534	SLU 63	0.58	-0.27	62.02	-1.7353	0.0384	0.0164
534	SLU 64	0.56	-0.3	58.7	-1.6429	0.0278	0.0158
534	SLU 65	0.56	-0.22	58.69	-1.6425	0.0272	0.0157
534	SLU 66	0.58	-0.29	59.51	-1.6656	0.0281	0.0161
534	SLU 67	0.57	-0.25	59.5	-1.6654	0.0278	0.016
534	SLU 68	0.57	-0.23	59.14	-1.6553	0.0269	0.0159
534	SLU 69	0.58	-0.3	59.96	-1.6784	0.0278	0.0162
534	SLU 70	0.58	-0.26	59.95	-1.6781	0.0274	0.0162
534	SLU 71	0.58	-0.31	59.6	-1.6684	0.0271	0.0161
534	SLU 72	0.58	-0.27	59.59	-1.6682	0.0268	0.0161
534	SLU 73	0.59	-0.2	64.47	-1.8034	0.0344	0.017
534	SLU 74	0.6	-0.28	65.3	-1.8265	0.0353	0.0174
534	SLU 75	0.6	-0.23	65.29	-1.8262	0.035	0.0173
534	SLU 76	0.6	-0.21	64.92	-1.8161	0.0341	0.0172
534	SLU 77	0.61	-0.29	65.75	-1.8392	0.035	0.0175
534	SLU 78	0.61	-0.24	65.74	-1.839	0.0346	0.0175
534	SLU 79	0.61	-0.3	65.39	-1.8293	0.0343	0.0174
534	SLU 80	0.61	-0.25	65.38	-1.8291	0.034	0.0174
534	SLU 81	0.61	-0.27	66.97	-1.8727	0.0381	0.0176
534	SLU 82	0.61	-0.23	66.96	-1.8725	0.0378	0.0176
534	SLU 83	0.61	-0.28	67.42	-1.8855	0.0378	0.0178
534	SLU 84	0.61	-0.23	67.41	-1.8853	0.0374	0.0178
534	SLE RA 1	0.43	-0.23	43.97	-1.2308	0.0216	0.0118
534	SLE RA 2	0.43	-0.18	43.96	-1.2305	0.0212	0.0118
534	SLE RA 3	0.43	-0.23	44.51	-1.246	0.0218	0.012
534	SLE RA 4	0.43	-0.2	44.5	-1.2458	0.0216	0.012
534	SLE RA 5	0.43	-0.19	44.26	-1.2391	0.021	0.0119
534	SLE RA 6	0.44	-0.24	44.81	-1.2545	0.0216	0.0121
534	SLE RA 7	0.44	-0.21	44.8	-1.2543	0.0214	0.0121
534	SLE RA 8	0.44	-0.25	44.57	-1.2478	0.0211	0.0121
534	SLE RA 9	0.44	-0.22	44.56	-1.2477	0.0209	0.012
534	SLE RA 10	0.45	-0.17	47.82	-1.3378	0.026	0.0127
534	SLE RA 11	0.45	-0.22	48.37	-1.3532	0.0266	0.0129
534	SLE RA 12	0.45	-0.19	48.36	-1.353	0.0264	0.0129
534	SLE RA 13	0.45	-0.18	48.12	-1.3463	0.0258	0.0128
534	SLE RA 14	0.46	-0.23	48.67	-1.3617	0.0264	0.013
534	SLE RA 15	0.46	-0.2	48.66	-1.3616	0.0262	0.013
534	SLE RA 16	0.46	-0.24	48.43	-1.3551	0.0259	0.0129
534	SLE RA 17	0.45	-0.2	48.42	-1.3549	0.0257	0.0129
534	SLE RA 18	0.45	-0.22	49.48	-1.384	0.0285	0.0131
534	SLE RA 19	0.45	-0.19	49.47	-1.3839	0.0282	0.013
534	SLE RA 20	0.46	-0.22	49.78	-1.3925	0.0282	0.0132
534	SLE RA 21	0.46	-0.19	49.77	-1.3924	0.028	0.0132
534	SLE FR 1	0.43	-0.23	43.97	-1.2308	0.0216	0.0118
534	SLE FR 2	0.43	-0.22	43.97	-1.2308	0.0215	0.0118
534	SLE FR 3	0.43	-0.24	44.09	-1.2342	0.0215	0.0119
534	SLE FR 4	0.43	-0.22	45.62	-1.2767	0.0236	0.0122
534	SLE FR 5	0.44	-0.23	45.74	-1.2802	0.0236	0.0122
534	SLE FR 6	0.44	-0.23	46.72	-1.3074	0.025	0.0124
534	SLE QP 1	0.43	-0.23	43.97	-1.2308	0.0216	0.0118
534	SLE QP 2	0.43	-0.23	45.62	-1.2768	0.0237	0.0122

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
534	SLD 1	4.21	0.58	42.84	-1.2012	0.0301	0.1207
534	SLD 2	4.22	0.78	42.8	-1.2001	0.0287	0.1241
534	SLD 3	4.29	-0.91	43.22	-1.2105	0.046	0.1233
534	SLD 4	4.31	-0.71	43.18	-1.2095	0.0446	0.1268
534	SLD 5	1.43	2.24	44.21	-1.2401	0.0018	0.0401
534	SLD 6	1.45	2.37	44.19	-1.2395	0.0008	0.0424
534	SLD 7	1.72	-2.73	45.49	-1.2712	0.0547	0.049
534	SLD 8	1.73	-2.6	45.46	-1.2706	0.0538	0.0512
534	SLD 9	-0.86	2.14	45.78	-1.283	-0.0065	-0.0268
534	SLD 10	-0.85	2.27	45.75	-1.2823	-0.0074	-0.0246
534	SLD 11	-0.58	-2.83	47.06	-1.3141	0.0465	-0.018
534	SLD 12	-0.56	-2.7	47.03	-1.3135	0.0456	-0.0157
534	SLD 13	-3.44	0.25	48.06	-1.3441	0.0027	-0.1024
534	SLD 14	-3.42	0.45	48.02	-1.3431	0.0013	-0.0989
534	SLD 15	-3.35	-1.24	48.45	-1.3534	0.0186	-0.0997
534	SLD 16	-3.34	-1.04	48.4	-1.3524	0.0172	-0.0963
534	SLV 1	9.26	1.61	39.12	-1.1001	0.0388	0.2659
534	SLV 2	9.3	2.08	39.02	-1.0978	0.0354	0.274
534	SLV 3	9.46	-1.78	39.99	-1.1214	0.075	0.2721
534	SLV 4	9.49	-1.32	39.9	-1.1191	0.0716	0.2802
534	SLV 5	2.77	5.4	42.36	-1.1919	-0.0261	0.0775
534	SLV 6	2.8	5.69	42.3	-1.1904	-0.0283	0.0827
534	SLV 7	3.44	-5.93	45.28	-1.2629	0.0945	0.0982
534	SLV 8	3.46	-5.63	45.22	-1.2614	0.0924	0.1034
534	SLV 9	-2.59	5.17	46.03	-1.2922	-0.045	-0.079
534	SLV 10	-2.57	5.47	45.97	-1.2907	-0.0472	-0.0738
534	SLV 11	-1.93	-6.15	48.94	-1.3632	0.0756	-0.0583
534	SLV 12	-1.9	-5.86	48.88	-1.3617	0.0734	-0.0531
534	SLV 13	-8.62	0.86	51.34	-1.4345	-0.0243	-0.2558
534	SLV 14	-8.59	1.32	51.25	-1.4321	-0.0276	-0.2477
534	SLV 15	-8.43	-2.54	52.22	-1.4558	0.0119	-0.2496
534	SLV 16	-8.39	-2.07	52.12	-1.4535	0.0086	-0.2415
534	CRTFP Ux+	0	0	0	0	0	0
534	CRTFP Ux-	0	0	0	0	0	0
535	SLU 1	0.44	0.42	30.78	-0.8476	10.3053	-0.1335
535	SLU 2	0.44	0.49	30.78	-0.8475	10.3052	-0.1581
535	SLU 3	0.46	0.43	31.38	-0.8642	10.506	-0.1377
535	SLU 4	0.45	0.47	31.38	-0.8642	10.506	-0.1525
535	SLU 5	0.45	0.49	31.13	-0.857	10.4197	-0.1593
535	SLU 6	0.46	0.43	31.73	-0.8737	10.6204	-0.1389
535	SLU 7	0.46	0.48	31.73	-0.8737	10.6204	-0.1536
535	SLU 8	0.46	0.42	31.47	-0.8666	10.5341	-0.1358
535	SLU 9	0.46	0.47	31.47	-0.8665	10.5341	-0.1506
535	SLU 10	0.47	0.57	34.76	-0.9568	11.6378	-0.188
535	SLU 11	0.48	0.52	35.36	-0.9735	11.8385	-0.1676
535	SLU 12	0.48	0.56	35.36	-0.9734	11.8385	-0.1824
535	SLU 13	0.48	0.58	35.1	-0.9663	11.7522	-0.1892
535	SLU 14	0.49	0.52	35.71	-0.983	11.953	-0.1688
535	SLU 15	0.49	0.56	35.71	-0.9829	11.953	-0.1835
535	SLU 16	0.49	0.51	35.45	-0.9759	11.8667	-0.1657
535	SLU 17	0.49	0.55	35.45	-0.9758	11.8667	-0.1805
535	SLU 18	0.48	0.54	36.46	-1.0037	12.2089	-0.1762
535	SLU 19	0.48	0.58	36.46	-1.0037	12.2089	-0.191
535	SLU 20	0.49	0.55	36.81	-1.0132	12.3233	-0.1773
535	SLU 21	0.49	0.59	36.81	-1.0132	12.3233	-0.1921
535	SLU 22	0.48	0.49	34.6	-0.9526	11.5843	-0.1586
535	SLU 23	0.48	0.56	34.6	-0.9525	11.5843	-0.1833
535	SLU 24	0.49	0.5	35.21	-0.9692	11.7851	-0.1629
535	SLU 25	0.49	0.55	35.21	-0.9691	11.7851	-0.1777
535	SLU 26	0.49	0.57	34.95	-0.962	11.6988	-0.1845
535	SLU 27	0.5	0.51	35.55	-0.9787	11.8995	-0.164
535	SLU 28	0.5	0.55	35.55	-0.9786	11.8995	-0.1788
535	SLU 29	0.5	0.5	35.29	-0.9716	11.8132	-0.1609
535	SLU 30	0.49	0.54	35.29	-0.9715	11.8132	-0.1757
535	SLU 31	0.51	0.65	38.58	-1.0618	12.9169	-0.2132
535	SLU 32	0.52	0.59	39.18	-1.0785	13.1176	-0.1928
535	SLU 33	0.52	0.63	39.18	-1.0784	13.1176	-0.2076
535	SLU 34	0.52	0.65	38.92	-1.0713	13.0313	-0.2144
535	SLU 35	0.53	0.6	39.53	-1.0879	13.2321	-0.1939
535	SLU 36	0.53	0.64	39.53	-1.0879	13.2321	-0.2087
535	SLU 37	0.52	0.59	39.27	-1.0808	13.1458	-0.1908
535	SLU 38	0.52	0.63	39.27	-1.0808	13.1458	-0.2056
535	SLU 39	0.52	0.62	40.28	-1.1087	13.488	-0.2014
535	SLU 40	0.52	0.66	40.28	-1.1087	13.488	-0.2162
535	SLU 41	0.53	0.62	40.63	-1.1182	13.6024	-0.2025
535	SLU 42	0.53	0.66	40.63	-1.1181	13.6024	-0.2173
535	SLU 43	0.56	0.52	38.71	-1.0659	12.9583	-0.1649
535	SLU 44	0.56	0.59	38.7	-1.0658	12.9583	-0.1895
535	SLU 45	0.58	0.53	39.31	-1.0825	13.159	-0.1691
535	SLU 46	0.58	0.57	39.31	-1.0825	13.159	-0.1839
535	SLU 47	0.57	0.59	39.05	-1.0753	13.0727	-0.1907
535	SLU 48	0.58	0.53	39.65	-1.092	13.2735	-0.1703
535	SLU 49	0.58	0.57	39.65	-1.0919	13.2734	-0.1851
535	SLU 50	0.58	0.52	39.39	-1.0849	13.1872	-0.1672
535	SLU 51	0.58	0.57	39.39	-1.0848	13.1872	-0.182
535	SLU 52	0.59	0.67	42.68	-1.1751	14.2908	-0.2194
535	SLU 53	0.6	0.62	43.29	-1.1918	14.4915	-0.199
535	SLU 54	0.6	0.66	43.28	-1.1917	14.4915	-0.2138
535	SLU 55	0.6	0.68	43.03	-1.1846	14.4053	-0.2206
535	SLU 56	0.61	0.62	43.63	-1.2013	14.606	-0.2002
535	SLU 57	0.61	0.66	43.63	-1.2012	14.606	-0.215

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
535	SLU 58	0.61	0.61	43.37	-1.1942	14.5197	-0.1971
535	SLU 59	0.61	0.65	43.37	-1.1941	14.5197	-0.2119
535	SLU 60	0.61	0.64	44.39	-1.222	14.8619	-0.2076
535	SLU 61	0.6	0.68	44.39	-1.222	14.8619	-0.2224
535	SLU 62	0.61	0.64	44.73	-1.2315	14.9764	-0.2087
535	SLU 63	0.61	0.69	44.73	-1.2315	14.9763	-0.2235
535	SLU 64	0.6	0.59	42.53	-1.1709	14.2374	-0.1901
535	SLU 65	0.6	0.66	42.53	-1.1708	14.2374	-0.2147
535	SLU 66	0.61	0.6	43.13	-1.1875	14.4381	-0.1943
535	SLU 67	0.61	0.65	43.13	-1.1874	14.4381	-0.2091
535	SLU 68	0.61	0.66	42.87	-1.1803	14.3518	-0.2159
535	SLU 69	0.62	0.61	43.48	-1.197	14.5525	-0.1954
535	SLU 70	0.62	0.65	43.47	-1.1969	14.5525	-0.2102
535	SLU 71	0.62	0.6	43.22	-1.1899	14.4663	-0.1924
535	SLU 72	0.62	0.64	43.22	-1.1898	14.4663	-0.2071
535	SLU 73	0.63	0.75	46.5	-1.2801	15.5699	-0.2446
535	SLU 74	0.64	0.69	47.11	-1.2967	15.7706	-0.2242
535	SLU 75	0.64	0.73	47.11	-1.2967	15.7706	-0.239
535	SLU 76	0.64	0.75	46.85	-1.2896	15.6844	-0.2458
535	SLU 77	0.65	0.69	47.45	-1.3062	15.8851	-0.2253
535	SLU 78	0.65	0.74	47.45	-1.3062	15.8851	-0.2401
535	SLU 79	0.64	0.69	47.19	-1.2991	15.7988	-0.2223
535	SLU 80	0.64	0.73	47.19	-1.2991	15.7988	-0.237
535	SLU 81	0.64	0.72	48.21	-1.327	16.141	-0.2328
535	SLU 82	0.64	0.76	48.21	-1.3269	16.141	-0.2476
535	SLU 83	0.65	0.72	48.55	-1.3365	16.2554	-0.2339
535	SLU 84	0.65	0.76	48.55	-1.3364	16.2554	-0.2487
535	SLE RA 1	0.45	0.44	31.87	-0.8776	10.6707	-0.1407
535	SLE RA 2	0.45	0.48	31.87	-0.8776	10.6707	-0.1571
535	SLE RA 3	0.46	0.45	32.28	-0.8887	10.8045	-0.1435
535	SLE RA 4	0.46	0.47	32.28	-0.8886	10.8045	-0.1533
535	SLE RA 5	0.46	0.49	32.1	-0.8839	10.747	-0.1579
535	SLE RA 6	0.47	0.45	32.51	-0.895	10.8808	-0.1443
535	SLE RA 7	0.47	0.48	32.51	-0.895	10.8808	-0.1541
535	SLE RA 8	0.46	0.44	32.33	-0.8903	10.8233	-0.1422
535	SLE RA 9	0.46	0.47	32.33	-0.8902	10.8233	-0.1521
535	SLE RA 10	0.47	0.54	34.52	-0.9504	11.5591	-0.177
535	SLE RA 11	0.48	0.5	34.93	-0.9615	11.6929	-0.1634
535	SLE RA 12	0.48	0.53	34.93	-0.9615	11.6929	-0.1733
535	SLE RA 13	0.48	0.55	34.75	-0.9567	11.6354	-0.1778
535	SLE RA 14	0.49	0.51	35.16	-0.9678	11.7692	-0.1642
535	SLE RA 15	0.49	0.54	35.16	-0.9678	11.7692	-0.174
535	SLE RA 16	0.48	0.5	34.98	-0.9631	11.7117	-0.1621
535	SLE RA 17	0.48	0.53	34.98	-0.9631	11.7117	-0.172
535	SLE RA 18	0.48	0.52	35.66	-0.9817	11.9398	-0.1691
535	SLE RA 19	0.48	0.55	35.66	-0.9816	11.9398	-0.179
535	SLE RA 20	0.49	0.52	35.89	-0.988	12.0161	-0.1699
535	SLE RA 21	0.49	0.55	35.89	-0.988	12.0161	-0.1798
535	SLE FR 1	0.45	0.44	31.87	-0.8776	10.6707	-0.1407
535	SLE FR 2	0.45	0.45	31.87	-0.8776	10.6707	-0.1439
535	SLE FR 3	0.46	0.44	31.96	-0.8801	10.7012	-0.141
535	SLE FR 4	0.46	0.47	33.01	-0.9088	11.0514	-0.1525
535	SLE FR 5	0.46	0.46	33.1	-0.9114	11.082	-0.1495
535	SLE FR 6	0.47	0.48	33.77	-0.9296	11.3053	-0.1549
535	SLE QP 1	0.45	0.44	31.87	-0.8776	10.6707	-0.1407
535	SLE QP 2	0.46	0.46	33.01	-0.9088	11.0514	-0.1492
535	SLD 1	2.94	0.8	26.74	-0.7363	9.0219	-0.2092
535	SLD 2	2.96	1.13	26.73	-0.7361	9.0194	-0.3236
535	SLD 3	2.88	-0.48	26.89	-0.7405	9.073	0.2356
535	SLD 4	2.89	-0.15	26.88	-0.7403	9.0706	0.1213
535	SLD 5	1.3	2.44	30.91	-0.8507	10.3654	-0.822
535	SLD 6	1.31	2.65	30.9	-0.8506	10.3638	-0.8962
535	SLD 7	1.09	-1.81	31.4	-0.8647	10.5359	0.6609
535	SLD 8	1.1	-1.6	31.39	-0.8646	10.5343	0.5867
535	SLD 9	-0.17	2.52	34.62	-0.953	11.5685	-0.8851
535	SLD 10	-0.16	2.74	34.62	-0.953	11.5669	-0.9593
535	SLD 11	-0.38	-1.73	35.12	-0.967	11.7391	0.5977
535	SLD 12	-0.38	-1.51	35.11	-0.9669	11.7374	0.5236
535	SLD 13	-1.97	1.08	39.14	-1.0773	13.0323	-0.4197
535	SLD 14	-1.95	1.4	39.13	-1.0772	13.0298	-0.534
535	SLD 15	-2.03	-0.2	39.28	-1.0815	13.0835	0.0251
535	SLD 16	-2.02	0.13	39.28	-1.0814	13.081	-0.0892
535	SLV 1	6.26	1.2	18.34	-0.5051	6.3028	-0.2759
535	SLV 2	6.29	1.97	18.33	-0.5048	6.297	-0.5423
535	SLV 3	6.11	-1.7	18.68	-0.5149	6.422	0.7359
535	SLV 4	6.15	-0.93	18.67	-0.5146	6.4162	0.4696
535	SLV 5	2.42	4.95	28.09	-0.7729	9.4471	-1.6768
535	SLV 6	2.44	5.44	28.08	-0.7728	9.4434	-1.8469
535	SLV 7	1.93	-4.71	29.23	-0.8055	9.8443	1.6961
535	SLV 8	1.95	-4.22	29.23	-0.8053	9.8406	1.526
535	SLV 9	-1.02	5.15	36.79	-1.0123	12.2623	-1.8244
535	SLV 10	-1	5.64	36.78	-1.0122	12.2586	-1.9945
535	SLV 11	-1.52	-4.52	37.94	-1.0449	12.6595	1.5485
535	SLV 12	-1.5	-4.03	37.93	-1.0447	12.6558	1.3784
535	SLV 13	-5.22	1.86	47.35	-1.3031	15.6867	-0.768
535	SLV 14	-5.19	2.62	47.34	-1.3028	15.6809	-1.0343
535	SLV 15	-5.37	-1.04	47.69	-1.3129	15.8058	0.2439
535	SLV 16	-5.33	-0.28	47.68	-1.3125	15.8	-0.0225
535	CRTFP Ux+	0	0	0	0	0	0
535	CRTFP Ux-	0	0	0	0	0	0
538	SLU 1	0.09	-0.1	22.94	-0.6444	7.8359	0.0384

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
538	SLU 2	0.09	-0.06	22.94	-0.6442	7.8329	0.0248
538	SLU 3	0.09	-0.1	23.38	-0.6567	7.9852	0.0365
538	SLU 4	0.09	-0.07	23.38	-0.6565	7.9834	0.0284
538	SLU 5	0.09	-0.07	23.18	-0.6512	7.9174	0.0261
538	SLU 6	0.1	-0.1	23.63	-0.6637	8.0698	0.0379
538	SLU 7	0.1	-0.08	23.63	-0.6635	8.068	0.0297
538	SLU 8	0.09	-0.11	23.44	-0.6584	8.005	0.0411
538	SLU 9	0.09	-0.09	23.44	-0.6583	8.0032	0.0329
538	SLU 10	0.1	-0.05	26.18	-0.7351	8.9404	0.0206
538	SLU 11	0.1	-0.08	26.63	-0.7476	9.0927	0.0324
538	SLU 12	0.1	-0.06	26.63	-0.7474	9.0909	0.0242
538	SLU 13	0.1	-0.06	26.43	-0.7421	9.0249	0.0219
538	SLU 14	0.1	-0.09	26.88	-0.7546	9.1773	0.0337
538	SLU 15	0.1	-0.07	26.88	-0.7545	9.1754	0.0255
538	SLU 16	0.1	-0.1	26.69	-0.7493	9.1125	0.0369
538	SLU 17	0.1	-0.07	26.69	-0.7492	9.1107	0.0288
538	SLU 18	0.1	-0.09	27.59	-0.7743	9.418	0.0324
538	SLU 19	0.1	-0.06	27.58	-0.7741	9.4162	0.0243
538	SLU 20	0.11	-0.09	27.83	-0.7813	9.5026	0.0338
538	SLU 21	0.11	-0.07	27.83	-0.7811	9.5008	0.0256
538	SLU 22	0.1	-0.07	25.74	-0.7222	8.7875	0.0285
538	SLU 23	0.1	-0.04	25.73	-0.722	8.7844	0.0149
538	SLU 24	0.1	-0.07	26.18	-0.7345	8.9368	0.0266
538	SLU 25	0.1	-0.05	26.18	-0.7344	8.935	0.0184
538	SLU 26	0.1	-0.04	25.98	-0.729	8.869	0.0162
538	SLU 27	0.1	-0.07	26.43	-0.7415	9.0213	0.028
538	SLU 28	0.1	-0.05	26.42	-0.7414	9.0195	0.0198
538	SLU 29	0.1	-0.08	26.24	-0.7362	8.9566	0.0312
538	SLU 30	0.1	-0.06	26.23	-0.7361	8.9548	0.023
538	SLU 31	0.11	-0.02	28.98	-0.8129	9.8919	0.0107
538	SLU 32	0.11	-0.06	29.43	-0.8254	10.0443	0.0224
538	SLU 33	0.11	-0.03	29.42	-0.8253	10.0424	0.0143
538	SLU 34	0.11	-0.03	29.23	-0.8199	9.9765	0.012
538	SLU 35	0.11	-0.06	29.68	-0.8324	10.1288	0.0238
538	SLU 36	0.11	-0.04	29.67	-0.8323	10.127	0.0156
538	SLU 37	0.11	-0.07	29.49	-0.8272	10.0641	0.027
538	SLU 38	0.11	-0.05	29.48	-0.827	10.0623	0.0188
538	SLU 39	0.11	-0.06	30.38	-0.8521	10.3696	0.0225
538	SLU 40	0.11	-0.03	30.38	-0.852	10.3678	0.0143
538	SLU 41	0.11	-0.06	30.63	-0.8591	10.4541	0.0239
538	SLU 42	0.11	-0.04	30.63	-0.859	10.4523	0.0157
538	SLU 43	0.12	-0.14	28.87	-0.811	9.8604	0.0533
538	SLU 44	0.12	-0.11	28.86	-0.8108	9.8574	0.0397
538	SLU 45	0.12	-0.14	29.31	-0.8233	10.0097	0.0515
538	SLU 46	0.12	-0.12	29.3	-0.8232	10.0079	0.0433
538	SLU 47	0.12	-0.11	29.11	-0.8178	9.942	0.0411
538	SLU 48	0.12	-0.14	29.56	-0.8303	10.0943	0.0528
538	SLU 49	0.12	-0.12	29.55	-0.8302	10.0925	0.0446
538	SLU 50	0.12	-0.15	29.37	-0.825	10.0296	0.0561
538	SLU 51	0.12	-0.13	29.36	-0.8249	10.0278	0.0479
538	SLU 52	0.12	-0.09	32.11	-0.9017	10.9649	0.0355
538	SLU 53	0.13	-0.13	32.56	-0.9142	11.1172	0.0473
538	SLU 54	0.13	-0.1	32.55	-0.9141	11.1154	0.0391
538	SLU 55	0.13	-0.1	32.36	-0.9087	11.0494	0.0369
538	SLU 56	0.13	-0.13	32.81	-0.9212	11.2018	0.0486
538	SLU 57	0.13	-0.11	32.8	-0.9211	11.2	0.0405
538	SLU 58	0.13	-0.14	32.62	-0.9159	11.137	0.0519
538	SLU 59	0.13	-0.12	32.61	-0.9158	11.1352	0.0437
538	SLU 60	0.13	-0.13	33.51	-0.9409	11.4425	0.0474
538	SLU 61	0.13	-0.1	33.5	-0.9407	11.4407	0.0392
538	SLU 62	0.13	-0.13	33.76	-0.9479	11.5271	0.0487
538	SLU 63	0.13	-0.11	33.75	-0.9478	11.5253	0.0405
538	SLU 64	0.12	-0.12	31.67	-0.8888	10.812	0.0434
538	SLU 65	0.12	-0.08	31.66	-0.8886	10.809	0.0298
538	SLU 66	0.13	-0.11	32.11	-0.9011	10.9613	0.0416
538	SLU 67	0.12	-0.09	32.1	-0.901	10.9595	0.0334
538	SLU 68	0.12	-0.08	31.91	-0.8956	10.8935	0.0311
538	SLU 69	0.13	-0.11	32.35	-0.9081	11.0459	0.0429
538	SLU 70	0.13	-0.09	32.35	-0.908	11.044	0.0347
538	SLU 71	0.13	-0.12	32.16	-0.9029	10.9811	0.0461
538	SLU 72	0.13	-0.1	32.16	-0.9027	10.9793	0.0379
538	SLU 73	0.13	-0.06	34.91	-0.9795	11.9164	0.0256
538	SLU 74	0.13	-0.1	35.35	-0.992	12.0688	0.0374
538	SLU 75	0.13	-0.07	35.35	-0.9919	12.067	0.0292
538	SLU 76	0.13	-0.07	35.15	-0.9866	12.001	0.027
538	SLU 77	0.14	-0.1	35.6	-0.9991	12.1533	0.0387
538	SLU 78	0.14	-0.08	35.6	-0.9989	12.1515	0.0305
538	SLU 79	0.14	-0.11	35.41	-0.9938	12.0886	0.0419
538	SLU 80	0.14	-0.09	35.41	-0.9937	12.0868	0.0338
538	SLU 81	0.14	-0.1	36.31	-1.0187	12.3941	0.0375
538	SLU 82	0.14	-0.07	36.3	-1.0186	12.3923	0.0293
538	SLU 83	0.14	-0.1	36.56	-1.0257	12.4787	0.0388
538	SLU 84	0.14	-0.08	36.55	-1.0256	12.4768	0.0306
538	SLE RA 1	0.09	-0.09	23.74	-0.6666	8.1078	0.0356
538	SLE RA 2	0.09	-0.07	23.74	-0.6665	8.1058	0.0265
538	SLE RA 3	0.09	-0.09	24.04	-0.6748	8.2073	0.0343
538	SLE RA 4	0.09	-0.08	24.03	-0.6747	8.2061	0.0289
538	SLE RA 5	0.09	-0.07	23.9	-0.6711	8.1621	0.0274
538	SLE RA 6	0.1	-0.09	24.2	-0.6795	8.2637	0.0352
538	SLE RA 7	0.1	-0.08	24.2	-0.6794	8.2625	0.0298
538	SLE RA 8	0.1	-0.1	24.08	-0.676	8.2205	0.0374

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
538	SLE RA 9	0.09	-0.08	24.07	-0.6759	8.2193	0.0319
538	SLE RA 10	0.1	-0.06	25.9	-0.7271	8.8441	0.0237
538	SLE RA 11	0.1	-0.08	26.2	-0.7354	8.9456	0.0315
538	SLE RA 12	0.1	-0.07	26.2	-0.7353	8.9444	0.0261
538	SLE RA 13	0.1	-0.06	26.07	-0.7318	8.9005	0.0246
538	SLE RA 14	0.1	-0.09	26.37	-0.7401	9.002	0.0324
538	SLE RA 15	0.1	-0.07	26.36	-0.74	9.0008	0.027
538	SLE RA 16	0.1	-0.09	26.24	-0.7366	8.9589	0.0346
538	SLE RA 17	0.1	-0.08	26.24	-0.7365	8.9576	0.0291
538	SLE RA 18	0.1	-0.08	26.84	-0.7532	9.1625	0.0316
538	SLE RA 19	0.1	-0.07	26.83	-0.7531	9.1613	0.0261
538	SLE RA 20	0.1	-0.09	27	-0.7579	9.2189	0.0325
538	SLE RA 21	0.1	-0.07	27	-0.7578	9.2177	0.027
538	SLE FR 1	0.09	-0.09	23.74	-0.6666	8.1078	0.0356
538	SLE FR 2	0.09	-0.09	23.74	-0.6666	8.1074	0.0338
538	SLE FR 3	0.09	-0.1	23.81	-0.6685	8.1303	0.0359
538	SLE FR 4	0.1	-0.09	24.67	-0.6926	8.4238	0.0326
538	SLE FR 5	0.1	-0.09	24.74	-0.6945	8.4468	0.0348
538	SLE FR 6	0.1	-0.09	25.29	-0.7099	8.6351	0.0336
538	SLE QP 1	0.09	-0.09	23.74	-0.6666	8.1078	0.0356
538	SLE QP 2	0.1	-0.09	24.67	-0.6926	8.4242	0.0344
538	SLD 1	2.1	0.37	24.67	-0.6928	8.4216	-0.0491
538	SLD 2	2.1	0.38	24.66	-0.6927	8.4199	-0.0535
538	SLD 3	2.14	-0.46	24.92	-0.6991	8.5072	0.2416
538	SLD 4	2.15	-0.45	24.91	-0.6989	8.5055	0.2372
538	SLD 5	0.63	1.3	24.3	-0.6832	8.2939	-0.4307
538	SLD 6	0.63	1.31	24.29	-0.6831	8.2928	-0.4336
538	SLD 7	0.78	-1.46	25.12	-0.704	8.5792	0.5382
538	SLD 8	0.78	-1.45	25.12	-0.7039	8.5781	0.5353
538	SLD 9	-0.59	1.27	24.23	-0.6813	8.2703	-0.4666
538	SLD 10	-0.58	1.28	24.22	-0.6812	8.2692	-0.4694
538	SLD 11	-0.44	-1.5	25.05	-0.702	8.5556	0.5024
538	SLD 12	-0.44	-1.49	25.05	-0.7019	8.5545	0.4995
538	SLD 13	-1.96	0.26	24.43	-0.6863	8.3429	-0.1684
538	SLD 14	-1.95	0.28	24.43	-0.6861	8.3412	-0.1728
538	SLD 15	-1.91	-0.57	24.68	-0.6925	8.4285	0.1222
538	SLD 16	-1.91	-0.55	24.68	-0.6924	8.4268	0.1178
538	SLV 1	4.78	0.96	24.67	-0.6934	8.4212	-0.1521
538	SLV 2	4.79	0.99	24.66	-0.693	8.4173	-0.1623
538	SLV 3	4.88	-0.93	25.24	-0.7076	8.6164	0.51
538	SLV 4	4.9	-0.9	25.22	-0.7072	8.6125	0.4998
538	SLV 5	1.34	3.09	23.82	-0.6714	8.1279	-1.024
538	SLV 6	1.35	3.11	23.81	-0.6711	8.1254	-1.0306
538	SLV 7	1.68	-3.22	25.7	-0.7187	8.7786	1.183
538	SLV 8	1.7	-3.2	25.69	-0.7185	8.7761	1.1765
538	SLV 9	-1.5	3.01	23.65	-0.6667	8.0723	-1.1077
538	SLV 10	-1.49	3.03	23.64	-0.6665	8.0698	-1.1142
538	SLV 11	-1.16	-3.29	25.53	-0.7141	8.723	1.0993
538	SLV 12	-1.15	-3.27	25.53	-0.7138	8.7205	1.0928
538	SLV 13	-4.71	0.72	24.12	-0.678	8.2359	-0.431
538	SLV 14	-4.69	0.75	24.11	-0.6776	8.232	-0.4412
538	SLV 15	-4.6	-1.18	24.69	-0.6922	8.4311	0.2311
538	SLV 16	-4.59	-1.14	24.67	-0.6918	8.4272	0.2209
538	CRTFP Ux+	0	0	0	0	0	0
538	CRTFP Ux-	0	0	0	0	0	0
588	SLU 1	-0.17	-0.07	21.09	-1.173	-5.0129	-0.0276
588	SLU 2	-0.17	-0.02	21.09	-1.1729	-5.0128	-0.0142
588	SLU 3	-0.18	-0.07	21.51	-1.1961	-5.111	-0.027
588	SLU 4	-0.18	-0.04	21.51	-1.1961	-5.111	-0.0189
588	SLU 5	-0.18	-0.02	21.33	-1.1861	-5.0686	-0.0138
588	SLU 6	-0.18	-0.07	21.75	-1.2093	-5.1668	-0.0266
588	SLU 7	-0.18	-0.04	21.75	-1.2092	-5.1667	-0.0185
588	SLU 8	-0.18	-0.07	21.57	-1.1994	-5.1245	-0.0268
588	SLU 9	-0.18	-0.04	21.57	-1.1993	-5.1244	-0.0188
588	SLU 10	-0.17	-0.01	23.85	-1.3264	-5.6706	-0.012
588	SLU 11	-0.17	-0.06	24.27	-1.3496	-5.7688	-0.0248
588	SLU 12	-0.17	-0.03	24.27	-1.3495	-5.7688	-0.0167
588	SLU 13	-0.17	-0.01	24.09	-1.3396	-5.7264	-0.0116
588	SLU 14	-0.17	-0.06	24.51	-1.3628	-5.8246	-0.0244
588	SLU 15	-0.17	-0.03	24.51	-1.3627	-5.8245	-0.0163
588	SLU 16	-0.17	-0.06	24.33	-1.3529	-5.7823	-0.0246
588	SLU 17	-0.17	-0.03	24.33	-1.3528	-5.7822	-0.0166
588	SLU 18	-0.16	-0.06	25.04	-1.3923	-5.9527	-0.0245
588	SLU 19	-0.16	-0.03	25.04	-1.3922	-5.9526	-0.0165
588	SLU 20	-0.17	-0.06	25.28	-1.4055	-6.0084	-0.0241
588	SLU 21	-0.17	-0.03	25.28	-1.4054	-6.0084	-0.0161
588	SLU 22	-0.18	-0.07	23.75	-1.3206	-5.6442	-0.0259
588	SLU 23	-0.18	-0.01	23.75	-1.3205	-5.6441	-0.0125
588	SLU 24	-0.18	-0.06	24.17	-1.3437	-5.7423	-0.0252
588	SLU 25	-0.18	-0.03	24.17	-1.3436	-5.7423	-0.0172
588	SLU 26	-0.18	-0.01	23.99	-1.3336	-5.6999	-0.0121
588	SLU 27	-0.19	-0.06	24.4	-1.3569	-5.7981	-0.0248
588	SLU 28	-0.19	-0.03	24.4	-1.3568	-5.7981	-0.0168
588	SLU 29	-0.19	-0.06	24.22	-1.3469	-5.7558	-0.0251
588	SLU 30	-0.19	-0.03	24.22	-1.3469	-5.7557	-0.017
588	SLU 31	-0.18	0	26.51	-1.474	-6.302	-0.0103
588	SLU 32	-0.18	-0.05	26.93	-1.4972	-6.4002	-0.023
588	SLU 33	-0.18	-0.02	26.93	-1.4971	-6.4001	-0.015
588	SLU 34	-0.18	0	26.75	-1.4871	-6.3577	-0.0099
588	SLU 35	-0.18	-0.05	27.16	-1.5103	-6.4559	-0.0226
588	SLU 36	-0.18	-0.02	27.16	-1.5103	-6.4559	-0.0146

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
588	SLU 37	-0.18	-0.05	26.99	-1.5004	-6.4136	-0.0229
588	SLU 38	-0.18	-0.02	26.99	-1.5003	-6.4136	-0.0148
588	SLU 39	-0.17	-0.06	27.7	-1.5398	-6.584	-0.0228
588	SLU 40	-0.17	-0.02	27.69	-1.5398	-6.5839	-0.0147
588	SLU 41	-0.18	-0.05	27.93	-1.553	-6.6398	-0.0224
588	SLU 42	-0.18	-0.02	27.93	-1.5529	-6.6397	-0.0143
588	SLU 43	-0.22	-0.1	26.51	-1.4743	-6.3003	-0.0365
588	SLU 44	-0.22	-0.05	26.51	-1.4742	-6.3002	-0.0231
588	SLU 45	-0.22	-0.1	26.93	-1.4974	-6.3984	-0.0359
588	SLU 46	-0.22	-0.06	26.93	-1.4974	-6.3984	-0.0278
588	SLU 47	-0.22	-0.04	26.75	-1.4874	-6.356	-0.0227
588	SLU 48	-0.23	-0.09	27.16	-1.5106	-6.4542	-0.0354
588	SLU 49	-0.23	-0.06	27.16	-1.5106	-6.4541	-0.0274
588	SLU 50	-0.23	-0.09	26.99	-1.5007	-6.4119	-0.0357
588	SLU 51	-0.23	-0.06	26.98	-1.5006	-6.4118	-0.0277
588	SLU 52	-0.22	-0.04	29.27	-1.6277	-6.958	-0.0209
588	SLU 53	-0.22	-0.09	29.69	-1.6509	-7.0563	-0.0337
588	SLU 54	-0.22	-0.06	29.69	-1.6509	-7.0562	-0.0256
588	SLU 55	-0.22	-0.04	29.51	-1.6409	-7.0138	-0.0205
588	SLU 56	-0.22	-0.09	29.93	-1.6641	-7.112	-0.0333
588	SLU 57	-0.22	-0.05	29.93	-1.664	-7.112	-0.0252
588	SLU 58	-0.22	-0.09	29.75	-1.6542	-7.0697	-0.0335
588	SLU 59	-0.22	-0.06	29.75	-1.6541	-7.0696	-0.0255
588	SLU 60	-0.21	-0.09	30.46	-1.6936	-7.2401	-0.0334
588	SLU 61	-0.21	-0.06	30.46	-1.6935	-7.24	-0.0254
588	SLU 62	-0.22	-0.09	30.69	-1.7068	-7.2958	-0.033
588	SLU 63	-0.22	-0.05	30.69	-1.7067	-7.2958	-0.025
588	SLU 64	-0.23	-0.09	29.17	-1.6219	-6.9317	-0.0348
588	SLU 65	-0.23	-0.04	29.17	-1.6218	-6.9316	-0.0214
588	SLU 66	-0.23	-0.09	29.58	-1.645	-7.0298	-0.0341
588	SLU 67	-0.23	-0.05	29.58	-1.6449	-7.0297	-0.0261
588	SLU 68	-0.23	-0.03	29.4	-1.635	-6.9873	-0.021
588	SLU 69	-0.24	-0.08	29.82	-1.6582	-7.0855	-0.0337
588	SLU 70	-0.24	-0.05	29.82	-1.6581	-7.0855	-0.0257
588	SLU 71	-0.24	-0.09	29.64	-1.6482	-7.0432	-0.034
588	SLU 72	-0.24	-0.05	29.64	-1.6482	-7.0431	-0.0259
588	SLU 73	-0.22	-0.03	31.93	-1.7753	-7.5894	-0.0192
588	SLU 74	-0.23	-0.08	32.35	-1.7985	-7.6876	-0.0319
588	SLU 75	-0.23	-0.05	32.34	-1.7984	-7.6875	-0.0239
588	SLU 76	-0.23	-0.03	32.17	-1.7884	-7.6452	-0.0188
588	SLU 77	-0.23	-0.08	32.58	-1.8117	-7.7434	-0.0315
588	SLU 78	-0.23	-0.05	32.58	-1.8116	-7.7433	-0.0235
588	SLU 79	-0.23	-0.08	32.4	-1.8017	-7.701	-0.0318
588	SLU 80	-0.23	-0.05	32.4	-1.8017	-7.701	-0.0237
588	SLU 81	-0.22	-0.08	33.11	-1.8412	-7.8714	-0.0317
588	SLU 82	-0.22	-0.05	33.11	-1.8411	-7.8713	-0.0236
588	SLU 83	-0.22	-0.08	33.35	-1.8543	-7.9272	-0.0313
588	SLU 84	-0.22	-0.05	33.35	-1.8543	-7.9271	-0.0232
588	SLE RA 1	-0.17	-0.07	21.85	-1.2152	-5.1933	-0.0271
588	SLE RA 2	-0.17	-0.04	21.85	-1.2151	-5.1932	-0.0182
588	SLE RA 3	-0.18	-0.07	22.13	-1.2306	-5.2587	-0.0267
588	SLE RA 4	-0.18	-0.05	22.13	-1.2305	-5.2586	-0.0213
588	SLE RA 5	-0.18	-0.03	22.01	-1.2239	-5.2304	-0.0179
588	SLE RA 6	-0.18	-0.07	22.29	-1.2394	-5.2959	-0.0264
588	SLE RA 7	-0.18	-0.05	22.29	-1.2393	-5.2958	-0.0211
588	SLE RA 8	-0.18	-0.07	22.17	-1.2328	-5.2677	-0.0266
588	SLE RA 9	-0.18	-0.05	22.17	-1.2327	-5.2676	-0.0212
588	SLE RA 10	-0.17	-0.03	23.69	-1.3174	-5.6318	-0.0167
588	SLE RA 11	-0.17	-0.06	23.97	-1.3329	-5.6972	-0.0252
588	SLE RA 12	-0.17	-0.04	23.97	-1.3329	-5.6972	-0.0199
588	SLE RA 13	-0.17	-0.03	23.85	-1.3262	-5.669	-0.0165
588	SLE RA 14	-0.18	-0.06	24.13	-1.3417	-5.7344	-0.025
588	SLE RA 15	-0.18	-0.04	24.13	-1.3416	-5.7344	-0.0196
588	SLE RA 16	-0.18	-0.06	24.01	-1.3351	-5.7062	-0.0251
588	SLE RA 17	-0.18	-0.04	24.01	-1.335	-5.7062	-0.0198
588	SLE RA 18	-0.17	-0.06	24.48	-1.3614	-5.8198	-0.0251
588	SLE RA 19	-0.17	-0.04	24.48	-1.3613	-5.8197	-0.0197
588	SLE RA 20	-0.17	-0.06	24.64	-1.3701	-5.857	-0.0248
588	SLE RA 21	-0.17	-0.04	24.64	-1.3701	-5.8569	-0.0194
588	SLE FR 1	-0.17	-0.07	21.85	-1.2152	-5.1933	-0.0271
588	SLE FR 2	-0.17	-0.06	21.85	-1.2152	-5.1933	-0.0254
588	SLE FR 3	-0.18	-0.07	21.92	-1.2187	-5.2082	-0.027
588	SLE FR 4	-0.17	-0.06	22.64	-1.259	-5.3812	-0.0247
588	SLE FR 5	-0.17	-0.07	22.71	-1.2625	-5.3961	-0.0264
588	SLE FR 6	-0.17	-0.07	23.17	-1.2883	-5.5065	-0.0261
588	SLE QP 1	-0.17	-0.07	21.85	-1.2152	-5.1933	-0.0271
588	SLE QP 2	-0.17	-0.07	22.64	-1.259	-5.3812	-0.0265
588	SLD 1	1.56	0.62	27.16	-1.5094	-6.4261	0.2272
588	SLD 2	1.57	0.39	27.17	-1.5103	-6.43	0.1696
588	SLD 3	1.6	-0.29	27.3	-1.5178	-6.4633	0.0001
588	SLD 4	1.61	-0.52	27.32	-1.5186	-6.4672	-0.0575
588	SLD 5	0.29	1.56	23.77	-1.3213	-5.6375	0.4041
588	SLD 6	0.29	1.41	23.78	-1.3219	-5.64	0.3667
588	SLD 7	0.42	-1.47	24.26	-1.3492	-5.7617	-0.3529
588	SLD 8	0.42	-1.62	24.27	-1.3498	-5.7642	-0.3903
588	SLD 9	-0.77	1.48	21.01	-1.1683	-4.9983	0.3372
588	SLD 10	-0.76	1.33	21.02	-1.1689	-5.0008	0.2999
588	SLD 11	-0.64	-1.55	21.5	-1.1962	-5.1224	-0.4198
588	SLD 12	-0.63	-1.7	21.51	-1.1968	-5.1249	-0.4571
588	SLD 13	-1.95	0.38	17.97	-0.9994	-4.2953	0.0044
588	SLD 14	-1.95	0.15	17.98	-1.0003	-4.2991	-0.0531

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
588	SLD 15	-1.91	-0.53	18.11	-1.0078	-4.3325	-0.2227
588	SLD 16	-1.91	-0.76	18.13	-1.0087	-4.3364	-0.2802
588	SLV 1	3.88	1.53	33.21	-1.8449	-7.8267	0.5603
588	SLV 2	3.9	0.99	33.24	-1.847	-7.8357	0.4262
588	SLV 3	3.98	-0.55	33.55	-1.8643	-7.9129	0.0423
588	SLV 4	3.99	-1.09	33.58	-1.8664	-7.9219	-0.0918
588	SLV 5	0.9	3.65	25.29	-1.4051	-5.9826	0.9579
588	SLV 6	0.91	3.3	25.31	-1.4064	-5.9883	0.8723
588	SLV 7	1.21	-3.27	26.42	-1.4697	-6.2699	-0.7688
588	SLV 8	1.22	-3.61	26.45	-1.471	-6.2757	-0.8544
588	SLV 9	-1.56	3.47	18.84	-1.0471	-4.4868	0.8014
588	SLV 10	-1.56	3.13	18.86	-1.0484	-4.4925	0.7158
588	SLV 11	-1.26	-3.44	19.97	-1.1117	-4.7741	-0.9253
588	SLV 12	-1.25	-3.79	20	-1.113	-4.7799	-1.0109
588	SLV 13	-4.33	0.95	11.7	-0.6517	-2.8406	0.0387
588	SLV 14	-4.32	0.41	11.74	-0.6537	-2.8496	-0.0953
588	SLV 15	-4.24	-1.13	12.04	-0.6711	-2.9268	-0.4793
588	SLV 16	-4.23	-1.67	12.08	-0.6731	-2.9358	-0.6134
588	CRTFP Ux+	0	0	0	0	0	0
588	CRTFP Ux-	0	0	0	0	0	0
598	SLU 1	-0.38	-0.14	42.3	-0.0476	-1.1758	0.0018
598	SLU 2	-0.38	-0.03	42.3	-0.0465	-1.1758	0.004
598	SLU 3	-0.38	-0.13	43.13	-0.0483	-1.1989	0.002
598	SLU 4	-0.38	-0.07	43.13	-0.0476	-1.1989	0.0034
598	SLU 5	-0.38	-0.03	42.77	-0.0471	-1.189	0.0041
598	SLU 6	-0.39	-0.13	43.61	-0.0488	-1.212	0.0021
598	SLU 7	-0.39	-0.06	43.61	-0.0482	-1.2121	0.0035
598	SLU 8	-0.39	-0.13	43.25	-0.0487	-1.202	0.002
598	SLU 9	-0.39	-0.07	43.25	-0.0481	-1.2021	0.0033
598	SLU 10	-0.37	-0.02	47.85	-0.0534	-1.3309	0.0048
598	SLU 11	-0.38	-0.12	48.69	-0.0552	-1.354	0.0028
598	SLU 12	-0.37	-0.05	48.69	-0.0546	-1.3541	0.0042
598	SLU 13	-0.37	-0.01	48.33	-0.054	-1.3441	0.0049
598	SLU 14	-0.38	-0.11	49.16	-0.0558	-1.3672	0.0029
598	SLU 15	-0.38	-0.05	49.16	-0.0551	-1.3672	0.0043
598	SLU 16	-0.38	-0.11	48.8	-0.0557	-1.3572	0.0027
598	SLU 17	-0.38	-0.05	48.8	-0.055	-1.3572	0.0041
598	SLU 18	-0.36	-0.12	50.23	-0.0575	-1.3974	0.0029
598	SLU 19	-0.36	-0.05	50.23	-0.0568	-1.3974	0.0042
598	SLU 20	-0.37	-0.11	50.71	-0.0581	-1.4105	0.003
598	SLU 21	-0.37	-0.05	50.71	-0.0574	-1.4105	0.0043
598	SLU 22	-0.4	-0.12	47.64	-0.052	-1.3247	0.0028
598	SLU 23	-0.4	-0.01	47.64	-0.0509	-1.3248	0.0051
598	SLU 24	-0.41	-0.11	48.47	-0.0526	-1.3478	0.0031
598	SLU 25	-0.4	-0.05	48.47	-0.052	-1.3479	0.0045
598	SLU 26	-0.4	-0.01	48.12	-0.0515	-1.3379	0.0052
598	SLU 27	-0.41	-0.11	48.95	-0.0532	-1.361	0.0032
598	SLU 28	-0.41	-0.05	48.95	-0.0526	-1.361	0.0046
598	SLU 29	-0.41	-0.11	48.59	-0.0531	-1.351	0.003
598	SLU 30	-0.41	-0.05	48.59	-0.0525	-1.351	0.0044
598	SLU 31	-0.39	0	53.2	-0.0578	-1.4799	0.0059
598	SLU 32	-0.4	-0.1	54.03	-0.0596	-1.503	0.0039
598	SLU 33	-0.4	-0.03	54.03	-0.0589	-1.503	0.0052
598	SLU 34	-0.39	0.01	53.67	-0.0584	-1.493	0.006
598	SLU 35	-0.4	-0.09	54.5	-0.0601	-1.5161	0.004
598	SLU 36	-0.4	-0.03	54.5	-0.0595	-1.5161	0.0053
598	SLU 37	-0.4	-0.1	54.14	-0.06	-1.5061	0.0038
598	SLU 38	-0.4	-0.03	54.14	-0.0594	-1.5061	0.0052
598	SLU 39	-0.38	-0.1	55.58	-0.0619	-1.5463	0.0039
598	SLU 40	-0.38	-0.04	55.58	-0.0612	-1.5463	0.0053
598	SLU 41	-0.39	-0.09	56.05	-0.0624	-1.5594	0.004
598	SLU 42	-0.39	-0.03	56.05	-0.0618	-1.5595	0.0054
598	SLU 43	-0.48	-0.19	53.16	-0.0604	-1.4774	0.0019
598	SLU 44	-0.48	-0.08	53.16	-0.0593	-1.4775	0.0042
598	SLU 45	-0.49	-0.18	53.99	-0.061	-1.5006	0.0022
598	SLU 46	-0.49	-0.12	53.99	-0.0604	-1.5006	0.0036
598	SLU 47	-0.49	-0.08	53.63	-0.0598	-1.4906	0.0043
598	SLU 48	-0.5	-0.17	54.46	-0.0616	-1.5137	0.0023
598	SLU 49	-0.5	-0.11	54.47	-0.061	-1.5137	0.0037
598	SLU 50	-0.5	-0.18	54.11	-0.0615	-1.5037	0.0021
598	SLU 51	-0.5	-0.11	54.11	-0.0608	-1.5037	0.0035
598	SLU 52	-0.47	-0.07	58.71	-0.0662	-1.6326	0.005
598	SLU 53	-0.48	-0.16	59.54	-0.068	-1.6557	0.003
598	SLU 54	-0.48	-0.1	59.55	-0.0673	-1.6557	0.0043
598	SLU 55	-0.48	-0.06	59.19	-0.0668	-1.6457	0.0051
598	SLU 56	-0.49	-0.16	60.02	-0.0685	-1.6688	0.0031
598	SLU 57	-0.49	-0.1	60.02	-0.0679	-1.6689	0.0044
598	SLU 58	-0.49	-0.16	59.66	-0.0684	-1.6588	0.0029
598	SLU 59	-0.49	-0.1	59.66	-0.0678	-1.6589	0.0043
598	SLU 60	-0.47	-0.17	61.09	-0.0703	-1.699	0.003
598	SLU 61	-0.47	-0.1	61.09	-0.0696	-1.6991	0.0044
598	SLU 62	-0.48	-0.16	61.57	-0.0708	-1.7122	0.0031
598	SLU 63	-0.48	-0.1	61.57	-0.0702	-1.7122	0.0045
598	SLU 64	-0.5	-0.17	58.5	-0.0647	-1.6264	0.003
598	SLU 65	-0.5	-0.06	58.5	-0.0637	-1.6264	0.0053
598	SLU 66	-0.51	-0.16	59.33	-0.0654	-1.6495	0.0033
598	SLU 67	-0.51	-0.1	59.33	-0.0648	-1.6495	0.0046
598	SLU 68	-0.51	-0.06	58.97	-0.0642	-1.6396	0.0054
598	SLU 69	-0.52	-0.16	59.81	-0.066	-1.6626	0.0034
598	SLU 70	-0.52	-0.09	59.81	-0.0653	-1.6627	0.0047
598	SLU 71	-0.52	-0.16	59.45	-0.0659	-1.6526	0.0032

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
598	SLU 72	-0.52	-0.1	59.45	-0.0652	-1.6527	0.0046
598	SLU 73	-0.49	-0.05	64.05	-0.0706	-1.7815	0.006
598	SLU 74	-0.5	-0.15	64.89	-0.0724	-1.8046	0.004
598	SLU 75	-0.5	-0.08	64.89	-0.0717	-1.8047	0.0054
598	SLU 76	-0.5	-0.04	64.53	-0.0712	-1.7947	0.0061
598	SLU 77	-0.51	-0.14	65.36	-0.0729	-1.8178	0.0041
598	SLU 78	-0.51	-0.08	65.36	-0.0723	-1.8178	0.0055
598	SLU 79	-0.51	-0.14	65	-0.0728	-1.8078	0.004
598	SLU 80	-0.51	-0.08	65	-0.0722	-1.8078	0.0053
598	SLU 81	-0.49	-0.15	66.43	-0.0746	-1.848	0.0041
598	SLU 82	-0.49	-0.08	66.43	-0.074	-1.848	0.0055
598	SLU 83	-0.5	-0.14	66.91	-0.0752	-1.8611	0.0042
598	SLU 84	-0.5	-0.08	66.91	-0.0746	-1.8611	0.0056
598	SLE RA 1	-0.38	-0.13	43.82	-0.0488	-1.2183	0.0021
598	SLE RA 2	-0.38	-0.06	43.83	-0.0481	-1.2183	0.0036
598	SLE RA 3	-0.39	-0.13	44.38	-0.0493	-1.2337	0.0023
598	SLE RA 4	-0.39	-0.09	44.38	-0.0489	-1.2338	0.0032
598	SLE RA 5	-0.39	-0.06	44.14	-0.0485	-1.2271	0.0037
598	SLE RA 6	-0.39	-0.13	44.7	-0.0497	-1.2425	0.0023
598	SLE RA 7	-0.39	-0.08	44.7	-0.0492	-1.2425	0.0032
598	SLE RA 8	-0.39	-0.13	44.46	-0.0496	-1.2358	0.0022
598	SLE RA 9	-0.39	-0.08	44.46	-0.0492	-1.2358	0.0031
598	SLE RA 10	-0.38	-0.05	47.53	-0.0527	-1.3218	0.0041
598	SLE RA 11	-0.38	-0.12	48.08	-0.0539	-1.3372	0.0028
598	SLE RA 12	-0.38	-0.08	48.08	-0.0535	-1.3372	0.0037
598	SLE RA 13	-0.38	-0.05	47.84	-0.0531	-1.3305	0.0042
598	SLE RA 14	-0.39	-0.12	48.4	-0.0543	-1.3459	0.0028
598	SLE RA 15	-0.39	-0.07	48.4	-0.0539	-1.3459	0.0037
598	SLE RA 16	-0.39	-0.12	48.16	-0.0542	-1.3392	0.0027
598	SLE RA 17	-0.38	-0.07	48.16	-0.0538	-1.3393	0.0036
598	SLE RA 18	-0.37	-0.12	49.11	-0.0554	-1.366	0.0028
598	SLE RA 19	-0.37	-0.08	49.11	-0.055	-1.3661	0.0037
598	SLE RA 20	-0.38	-0.12	49.43	-0.0558	-1.3748	0.0029
598	SLE RA 21	-0.38	-0.07	49.43	-0.0554	-1.3748	0.0038
598	SLE FR 1	-0.38	-0.13	43.82	-0.0488	-1.2183	0.0021
598	SLE FR 2	-0.38	-0.12	43.82	-0.0487	-1.2183	0.0024
598	SLE FR 3	-0.38	-0.13	43.95	-0.049	-1.2218	0.0021
598	SLE FR 4	-0.38	-0.11	45.41	-0.0507	-1.2626	0.0026
598	SLE FR 5	-0.38	-0.13	45.54	-0.051	-1.2661	0.0023
598	SLE FR 6	-0.38	-0.13	46.47	-0.0521	-1.2922	0.0024
598	SLE QP 1	-0.38	-0.13	43.82	-0.0488	-1.2183	0.0021
598	SLE QP 2	-0.38	-0.13	45.41	-0.0508	-1.2626	0.0023
598	SLD 1	3.19	1.24	54.32	-0.0328	-1.5004	0.0321
598	SLD 2	3.18	0.79	54.35	-0.034	-1.501	0.0237
598	SLD 3	3.1	-0.56	54.6	-0.0485	-1.5078	-0.0081
598	SLD 4	3.1	-1.01	54.62	-0.0497	-1.5085	-0.0165
598	SLD 5	0.82	3.09	47.66	-0.0214	-1.3226	0.0737
598	SLD 6	0.81	2.79	47.68	-0.0222	-1.323	0.0683
598	SLD 7	0.54	-2.9	48.58	-0.0737	-1.3473	-0.0604
598	SLD 8	0.54	-3.2	48.6	-0.0745	-1.3478	-0.0658
598	SLD 9	-1.3	2.94	42.23	-0.0271	-1.1775	0.0704
598	SLD 10	-1.3	2.65	42.25	-0.0279	-1.1779	0.065
598	SLD 11	-1.57	-3.05	43.14	-0.0795	-1.2023	-0.0637
598	SLD 12	-1.58	-3.35	43.16	-0.0803	-1.2027	-0.0691
598	SLD 13	-3.86	0.75	36.2	-0.0519	-1.0168	0.0211
598	SLD 14	-3.86	0.3	36.23	-0.0532	-1.0174	0.0127
598	SLD 15	-3.94	-1.04	36.47	-0.0676	-1.0242	-0.0191
598	SLD 16	-3.94	-1.5	36.5	-0.0689	-1.0249	-0.0275
598	SLV 1	7.96	3.02	66.26	-0.0084	-1.8191	0.0709
598	SLV 2	7.95	1.96	66.33	-0.0113	-1.8206	0.0514
598	SLV 3	7.76	-1.08	66.9	-0.0441	-1.8363	-0.0209
598	SLV 4	7.75	-2.14	66.96	-0.047	-1.8378	-0.0404
598	SLV 5	2.42	7.22	50.69	0.0166	-1.4031	0.1654
598	SLV 6	2.41	6.54	50.73	0.0147	-1.4041	0.153
598	SLV 7	1.77	-6.45	52.81	-0.1025	-1.4607	-0.1406
598	SLV 8	1.76	-7.13	52.85	-0.1044	-1.4616	-0.1531
598	SLV 9	-2.52	6.87	37.97	0.0027	-1.0636	0.1577
598	SLV 10	-2.53	6.2	38.01	0.0009	-1.0646	0.1452
598	SLV 11	-3.17	-6.8	40.09	-0.1164	-1.1212	-0.1484
598	SLV 12	-3.18	-7.47	40.13	-0.1182	-1.1222	-0.1609
598	SLV 13	-8.51	1.88	23.86	-0.0546	-0.6874	0.045
598	SLV 14	-8.52	0.82	23.92	-0.0575	-0.6889	0.0255
598	SLV 15	-8.71	-2.22	24.5	-0.0903	-0.7047	-0.0468
598	SLV 16	-8.72	-3.28	24.56	-0.0932	-0.7062	-0.0663
598	CRTFP Ux+	0	0	0	0	0	0
598	CRTFP Ux-	0	0	0	0	0	0
599	SLU 1	-0.45	-0.14	49.99	-0.0559	0.0043	0.0049
599	SLU 2	-0.44	-0.02	49.99	-0.0546	0.0042	0.004
599	SLU 3	-0.45	-0.13	50.97	-0.0567	0.0044	0.0049
599	SLU 4	-0.45	-0.06	50.98	-0.0559	0.0044	0.0044
599	SLU 5	-0.45	-0.01	50.55	-0.0553	0.0043	0.0039
599	SLU 6	-0.46	-0.12	51.53	-0.0574	0.0045	0.0049
599	SLU 7	-0.46	-0.05	51.53	-0.0566	0.0045	0.0043
599	SLU 8	-0.46	-0.13	51.11	-0.0572	0.0045	0.0048
599	SLU 9	-0.46	-0.05	51.11	-0.0565	0.0045	0.0042
599	SLU 10	-0.43	0	56.6	-0.0627	0.0035	0.0041
599	SLU 11	-0.44	-0.11	57.58	-0.0648	0.0037	0.0051
599	SLU 12	-0.44	-0.04	57.58	-0.064	0.0037	0.0045
599	SLU 13	-0.44	0.01	57.16	-0.0634	0.0037	0.004
599	SLU 14	-0.45	-0.11	58.14	-0.0655	0.0038	0.005
599	SLU 15	-0.45	-0.03	58.14	-0.0647	0.0038	0.0045

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
599	SLU 16	-0.45	-0.11	57.71	-0.0653	0.0038	0.0049
599	SLU 17	-0.45	-0.04	57.71	-0.0646	0.0038	0.0043
599	SLU 18	-0.43	-0.11	59.42	-0.0675	0.0033	0.0051
599	SLU 19	-0.43	-0.04	59.43	-0.0667	0.0033	0.0045
599	SLU 20	-0.44	-0.11	59.98	-0.0681	0.0034	0.005
599	SLU 21	-0.44	-0.03	59.98	-0.0674	0.0034	0.0045
599	SLU 22	-0.47	-0.11	56.33	-0.0609	0.004	0.0054
599	SLU 23	-0.47	0.01	56.33	-0.0596	0.004	0.0044
599	SLU 24	-0.48	-0.11	57.31	-0.0616	0.0042	0.0054
599	SLU 25	-0.48	-0.03	57.31	-0.0609	0.0041	0.0048
599	SLU 26	-0.48	0.01	56.89	-0.0602	0.0041	0.0044
599	SLU 27	-0.49	-0.1	57.87	-0.0623	0.0043	0.0053
599	SLU 28	-0.49	-0.03	57.87	-0.0615	0.0042	0.0048
599	SLU 29	-0.49	-0.1	57.44	-0.0622	0.0043	0.0052
599	SLU 30	-0.49	-0.03	57.45	-0.0614	0.0042	0.0047
599	SLU 31	-0.46	0.03	62.93	-0.0677	0.0033	0.0046
599	SLU 32	-0.47	-0.09	63.92	-0.0697	0.0035	0.0055
599	SLU 33	-0.47	-0.01	63.92	-0.069	0.0034	0.005
599	SLU 34	-0.47	0.03	63.49	-0.0683	0.0034	0.0045
599	SLU 35	-0.48	-0.08	64.47	-0.0704	0.0036	0.0055
599	SLU 36	-0.48	-0.01	64.48	-0.0696	0.0036	0.0049
599	SLU 37	-0.48	-0.08	64.05	-0.0703	0.0036	0.0054
599	SLU 38	-0.47	-0.01	64.05	-0.0695	0.0036	0.0048
599	SLU 39	-0.45	-0.09	65.76	-0.0724	0.0031	0.0056
599	SLU 40	-0.45	-0.01	65.76	-0.0716	0.003	0.005
599	SLU 41	-0.46	-0.08	66.32	-0.0731	0.0032	0.0055
599	SLU 42	-0.46	-0.01	66.32	-0.0723	0.0031	0.0049
599	SLU 43	-0.57	-0.19	62.81	-0.071	0.0056	0.0062
599	SLU 44	-0.57	-0.07	62.82	-0.0697	0.0056	0.0053
599	SLU 45	-0.58	-0.18	63.8	-0.0718	0.0058	0.0063
599	SLU 46	-0.58	-0.11	63.8	-0.071	0.0057	0.0057
599	SLU 47	-0.58	-0.06	63.38	-0.0703	0.0057	0.0052
599	SLU 48	-0.59	-0.17	64.36	-0.0724	0.0059	0.0062
599	SLU 49	-0.59	-0.1	64.36	-0.0716	0.0059	0.0056
599	SLU 50	-0.59	-0.18	63.93	-0.0723	0.0059	0.0061
599	SLU 51	-0.59	-0.1	63.93	-0.0715	0.0058	0.0055
599	SLU 52	-0.56	-0.05	69.42	-0.0778	0.0049	0.0054
599	SLU 53	-0.57	-0.16	70.4	-0.0799	0.0051	0.0064
599	SLU 54	-0.57	-0.09	70.4	-0.0791	0.0051	0.0058
599	SLU 55	-0.57	-0.04	69.98	-0.0784	0.005	0.0054
599	SLU 56	-0.58	-0.16	70.96	-0.0805	0.0052	0.0063
599	SLU 57	-0.58	-0.08	70.96	-0.0797	0.0052	0.0058
599	SLU 58	-0.58	-0.16	70.53	-0.0804	0.0052	0.0062
599	SLU 59	-0.57	-0.09	70.54	-0.0796	0.0052	0.0057
599	SLU 60	-0.56	-0.16	72.25	-0.0826	0.0047	0.0064
599	SLU 61	-0.55	-0.09	72.25	-0.0818	0.0046	0.0058
599	SLU 62	-0.56	-0.16	72.81	-0.0832	0.0048	0.0063
599	SLU 63	-0.56	-0.08	72.81	-0.0824	0.0047	0.0058
599	SLU 64	-0.6	-0.16	69.15	-0.0759	0.0054	0.0067
599	SLU 65	-0.59	-0.04	69.16	-0.0746	0.0053	0.0057
599	SLU 66	-0.6	-0.15	70.14	-0.0767	0.0055	0.0067
599	SLU 67	-0.6	-0.08	70.14	-0.0759	0.0055	0.0062
599	SLU 68	-0.6	-0.04	69.71	-0.0753	0.0055	0.0057
599	SLU 69	-0.61	-0.15	70.69	-0.0774	0.0056	0.0067
599	SLU 70	-0.61	-0.08	70.7	-0.0766	0.0056	0.0061
599	SLU 71	-0.61	-0.15	70.27	-0.0773	0.0056	0.0065
599	SLU 72	-0.61	-0.08	70.27	-0.0765	0.0056	0.006
599	SLU 73	-0.58	-0.02	75.76	-0.0827	0.0047	0.0059
599	SLU 74	-0.59	-0.14	76.74	-0.0848	0.0048	0.0069
599	SLU 75	-0.59	-0.06	76.74	-0.084	0.0048	0.0063
599	SLU 76	-0.59	-0.02	76.32	-0.0834	0.0048	0.0058
599	SLU 77	-0.6	-0.13	77.3	-0.0855	0.005	0.0068
599	SLU 78	-0.6	-0.06	77.3	-0.0847	0.0049	0.0062
599	SLU 79	-0.6	-0.13	76.87	-0.0854	0.005	0.0067
599	SLU 80	-0.6	-0.06	76.87	-0.0846	0.0049	0.0061
599	SLU 81	-0.58	-0.14	78.59	-0.0875	0.0044	0.0069
599	SLU 82	-0.58	-0.06	78.59	-0.0867	0.0044	0.0063
599	SLU 83	-0.59	-0.13	79.14	-0.0882	0.0045	0.0068
599	SLU 84	-0.59	-0.06	79.15	-0.0874	0.0045	0.0062
599	SLE RA 1	-0.45	-0.13	51.8	-0.0573	0.0042	0.005
599	SLE RA 2	-0.45	-0.05	51.8	-0.0565	0.0042	0.0044
599	SLE RA 3	-0.46	-0.13	52.46	-0.0578	0.0043	0.0051
599	SLE RA 4	-0.46	-0.08	52.46	-0.0573	0.0043	0.0047
599	SLE RA 5	-0.46	-0.05	52.18	-0.0569	0.0042	0.0044
599	SLE RA 6	-0.46	-0.12	52.83	-0.0583	0.0044	0.005
599	SLE RA 7	-0.46	-0.07	52.83	-0.0578	0.0043	0.0046
599	SLE RA 8	-0.46	-0.12	52.55	-0.0582	0.0044	0.0049
599	SLE RA 9	-0.46	-0.08	52.55	-0.0577	0.0043	0.0046
599	SLE RA 10	-0.44	-0.04	56.21	-0.0619	0.0037	0.0045
599	SLE RA 11	-0.45	-0.11	56.86	-0.0632	0.0038	0.0052
599	SLE RA 12	-0.45	-0.06	56.86	-0.0627	0.0038	0.0048
599	SLE RA 13	-0.45	-0.03	56.58	-0.0623	0.0038	0.0045
599	SLE RA 14	-0.46	-0.11	57.23	-0.0637	0.0039	0.0051
599	SLE RA 15	-0.46	-0.06	57.23	-0.0632	0.0039	0.0047
599	SLE RA 16	-0.46	-0.11	56.95	-0.0636	0.0039	0.005
599	SLE RA 17	-0.46	-0.06	56.95	-0.0631	0.0039	0.0047
599	SLE RA 18	-0.44	-0.11	58.09	-0.065	0.0035	0.0052
599	SLE RA 19	-0.44	-0.06	58.09	-0.0645	0.0035	0.0048
599	SLE RA 20	-0.45	-0.11	58.46	-0.0655	0.0036	0.0051
599	SLE RA 21	-0.45	-0.06	58.46	-0.065	0.0036	0.0047
599	SLE FR 1	-0.45	-0.13	51.8	-0.0573	0.0042	0.005

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
599	SLE FR 2	-0.45	-0.11	51.8	-0.0572	0.0042	0.0049
599	SLE FR 3	-0.45	-0.13	51.95	-0.0575	0.0042	0.005
599	SLE FR 4	-0.45	-0.11	53.69	-0.0595	0.004	0.0049
599	SLE FR 5	-0.45	-0.12	53.84	-0.0598	0.004	0.0051
599	SLE FR 6	-0.45	-0.12	54.95	-0.0612	0.0039	0.0051
599	SLE QP 1	-0.45	-0.13	51.8	-0.0573	0.0042	0.005
599	SLE QP 2	-0.45	-0.13	53.69	-0.0596	0.004	0.0051
599	SLD 1	3.78	1.45	63.7	-0.0378	0.0208	-0.0067
599	SLD 2	3.78	0.93	63.73	-0.0394	0.021	-0.0012
599	SLD 3	3.68	-0.62	64.01	-0.0575	0.022	0.0066
599	SLD 4	3.68	-1.14	64.04	-0.059	0.0222	0.0121
599	SLD 5	0.97	3.58	56.21	-0.023	0.0072	-0.0197
599	SLD 6	0.97	3.25	56.23	-0.024	0.0073	-0.0161
599	SLD 7	0.64	-3.33	57.26	-0.0885	0.0112	0.0248
599	SLD 8	0.64	-3.66	57.28	-0.0896	0.0113	0.0284
599	SLD 9	-1.54	3.41	50.1	-0.0297	-0.0033	-0.0182
599	SLD 10	-1.54	3.08	50.12	-0.0308	-0.0032	-0.0147
599	SLD 11	-1.87	-3.5	51.15	-0.0953	0.0007	0.0262
599	SLD 12	-1.87	-3.83	51.17	-0.0963	0.0008	0.0298
599	SLD 13	-4.58	0.89	43.34	-0.0602	-0.0142	-0.002
599	SLD 14	-4.58	0.37	43.36	-0.0618	-0.014	0.0035
599	SLD 15	-4.68	-1.18	43.65	-0.0799	-0.013	0.0114
599	SLD 16	-4.68	-1.7	43.68	-0.0815	-0.0128	0.0169
599	SLV 1	9.45	3.5	77.12	-0.0082	0.0434	-0.0221
599	SLV 2	9.44	2.3	77.18	-0.0119	0.0438	-0.0093
599	SLV 3	9.22	-1.23	77.85	-0.0529	0.0461	0.0083
599	SLV 4	9.21	-2.43	77.91	-0.0566	0.0466	0.0211
599	SLV 5	2.87	8.34	59.59	0.0243	0.0116	-0.0513
599	SLV 6	2.86	7.57	59.63	0.0219	0.0118	-0.0431
599	SLV 7	2.1	-7.43	62.04	-0.1249	0.0208	0.0499
599	SLV 8	2.1	-8.2	62.08	-0.1272	0.021	0.0581
599	SLV 9	-2.99	7.94	45.3	0.0079	-0.013	-0.0479
599	SLV 10	-3	7.18	45.34	0.0056	-0.0127	-0.0398
599	SLV 11	-3.76	-7.82	47.74	-0.1412	-0.0038	0.0532
599	SLV 12	-3.77	-8.59	47.78	-0.1435	-0.0036	0.0614
599	SLV 13	-10.11	2.18	29.46	-0.0627	-0.0386	-0.011
599	SLV 14	-10.12	0.98	29.53	-0.0663	-0.0381	0.0019
599	SLV 15	-10.34	-2.55	30.2	-0.1074	-0.0358	0.0194
599	SLV 16	-10.35	-3.75	30.26	-0.1111	-0.0354	0.0322
599	CRTFP Ux+	0	0	0	0	0	0
599	CRTFP Ux-	0	0	0	0	0	0
600	SLU 1	-0.44	-0.12	49.86	-0.0554	0.0035	0.0029
600	SLU 2	-0.44	0	49.87	-0.0541	0.0034	0.0019
600	SLU 3	-0.45	-0.11	50.84	-0.0562	0.0036	0.0029
600	SLU 4	-0.45	-0.04	50.85	-0.0554	0.0035	0.0023
600	SLU 5	-0.45	0	50.42	-0.0547	0.0035	0.0018
600	SLU 6	-0.46	-0.11	51.4	-0.0568	0.0037	0.0028
600	SLU 7	-0.46	-0.04	51.4	-0.056	0.0037	0.0022
600	SLU 8	-0.46	-0.11	50.97	-0.0567	0.0037	0.0027
600	SLU 9	-0.46	-0.04	50.98	-0.0559	0.0036	0.0021
600	SLU 10	-0.43	0.02	56.5	-0.062	0.0026	0.0018
600	SLU 11	-0.44	-0.09	57.47	-0.0641	0.0028	0.0028
600	SLU 12	-0.44	-0.02	57.48	-0.0633	0.0028	0.0022
600	SLU 13	-0.44	0.02	57.05	-0.0627	0.0028	0.0017
600	SLU 14	-0.45	-0.09	58.03	-0.0648	0.0029	0.0027
600	SLU 15	-0.45	-0.02	58.03	-0.064	0.0029	0.0021
600	SLU 16	-0.45	-0.09	57.6	-0.0647	0.0029	0.0026
600	SLU 17	-0.45	-0.02	57.6	-0.0639	0.0029	0.002
600	SLU 18	-0.43	-0.09	59.33	-0.0668	0.0024	0.0027
600	SLU 19	-0.43	-0.02	59.34	-0.066	0.0023	0.0021
600	SLU 20	-0.44	-0.09	59.89	-0.0674	0.0025	0.0026
600	SLU 21	-0.44	-0.02	59.89	-0.0666	0.0024	0.002
600	SLU 22	-0.47	-0.09	56.21	-0.0601	0.0031	0.0032
600	SLU 23	-0.47	0.02	56.22	-0.0588	0.0031	0.0022
600	SLU 24	-0.48	-0.08	57.19	-0.0608	0.0032	0.0032
600	SLU 25	-0.48	-0.01	57.19	-0.06	0.0032	0.0026
600	SLU 26	-0.47	0.03	56.77	-0.0594	0.0032	0.0021
600	SLU 27	-0.48	-0.08	57.75	-0.0615	0.0033	0.0031
600	SLU 28	-0.48	-0.01	57.75	-0.0607	0.0033	0.0025
600	SLU 29	-0.48	-0.08	57.32	-0.0614	0.0033	0.003
600	SLU 30	-0.48	-0.01	57.32	-0.0606	0.0033	0.0024
600	SLU 31	-0.46	0.04	62.85	-0.0667	0.0023	0.0021
600	SLU 32	-0.47	-0.07	63.82	-0.0688	0.0025	0.003
600	SLU 33	-0.47	0	63.82	-0.068	0.0024	0.0025
600	SLU 34	-0.46	0.05	63.4	-0.0674	0.0024	0.002
600	SLU 35	-0.47	-0.06	64.38	-0.0695	0.0026	0.0029
600	SLU 36	-0.47	0.01	64.38	-0.0687	0.0026	0.0024
600	SLU 37	-0.47	-0.07	63.95	-0.0694	0.0026	0.0028
600	SLU 38	-0.47	0	63.95	-0.0686	0.0026	0.0022
600	SLU 39	-0.45	-0.07	65.68	-0.0715	0.002	0.003
600	SLU 40	-0.45	0	65.69	-0.0707	0.002	0.0024
600	SLU 41	-0.46	-0.06	66.24	-0.0721	0.0021	0.0029
600	SLU 42	-0.46	0.01	66.24	-0.0713	0.0021	0.0023
600	SLU 43	-0.57	-0.16	62.65	-0.0704	0.0046	0.0037
600	SLU 44	-0.57	-0.05	62.65	-0.0691	0.0046	0.0027
600	SLU 45	-0.58	-0.16	63.63	-0.0712	0.0047	0.0037
600	SLU 46	-0.58	-0.09	63.63	-0.0704	0.0047	0.0031
600	SLU 47	-0.57	-0.04	63.21	-0.0698	0.0047	0.0026
600	SLU 48	-0.58	-0.15	64.18	-0.0718	0.0048	0.0036
600	SLU 49	-0.58	-0.08	64.18	-0.071	0.0048	0.003
600	SLU 50	-0.58	-0.15	63.76	-0.0718	0.0048	0.0035

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
600	SLU 51	-0.58	-0.08	63.76	-0.0709	0.0048	0.0029
600	SLU 52	-0.56	-0.03	69.28	-0.0771	0.0038	0.0026
600	SLU 53	-0.57	-0.14	70.26	-0.0791	0.004	0.0036
600	SLU 54	-0.57	-0.07	70.26	-0.0783	0.0039	0.003
600	SLU 55	-0.56	-0.02	69.83	-0.0777	0.0039	0.0025
600	SLU 56	-0.57	-0.13	70.81	-0.0798	0.0041	0.0035
600	SLU 57	-0.57	-0.06	70.81	-0.079	0.004	0.0029
600	SLU 58	-0.57	-0.14	70.38	-0.0797	0.0041	0.0034
600	SLU 59	-0.57	-0.07	70.39	-0.0789	0.004	0.0028
600	SLU 60	-0.55	-0.14	72.12	-0.0818	0.0035	0.0035
600	SLU 61	-0.55	-0.07	72.12	-0.081	0.0035	0.0029
600	SLU 62	-0.56	-0.13	72.67	-0.0825	0.0036	0.0034
600	SLU 63	-0.56	-0.06	72.67	-0.0817	0.0036	0.0028
600	SLU 64	-0.59	-0.14	68.99	-0.0751	0.0043	0.004
600	SLU 65	-0.59	-0.02	69	-0.0738	0.0042	0.003
600	SLU 66	-0.6	-0.13	69.97	-0.0759	0.0044	0.004
600	SLU 67	-0.6	-0.06	69.98	-0.0751	0.0044	0.0034
600	SLU 68	-0.6	-0.02	69.55	-0.0744	0.0043	0.0029
600	SLU 69	-0.61	-0.12	70.53	-0.0765	0.0045	0.0039
600	SLU 70	-0.61	-0.05	70.53	-0.0757	0.0045	0.0033
600	SLU 71	-0.61	-0.13	70.1	-0.0764	0.0045	0.0037
600	SLU 72	-0.61	-0.06	70.11	-0.0756	0.0045	0.0032
600	SLU 73	-0.58	0	75.63	-0.0817	0.0035	0.0028
600	SLU 74	-0.59	-0.11	76.6	-0.0838	0.0036	0.0038
600	SLU 75	-0.59	-0.04	76.61	-0.083	0.0036	0.0032
600	SLU 76	-0.59	0	76.18	-0.0824	0.0036	0.0027
600	SLU 77	-0.6	-0.11	77.16	-0.0845	0.0037	0.0037
600	SLU 78	-0.6	-0.04	77.16	-0.0837	0.0037	0.0031
600	SLU 79	-0.6	-0.11	76.73	-0.0844	0.0037	0.0036
600	SLU 80	-0.6	-0.04	76.74	-0.0836	0.0037	0.003
600	SLU 81	-0.58	-0.11	78.47	-0.0865	0.0032	0.0038
600	SLU 82	-0.58	-0.04	78.47	-0.0857	0.0032	0.0032
600	SLU 83	-0.58	-0.11	79.02	-0.0871	0.0033	0.0037
600	SLU 84	-0.58	-0.04	79.02	-0.0863	0.0033	0.0031
600	SLE RA 1	-0.45	-0.11	51.68	-0.0568	0.0034	0.003
600	SLE RA 2	-0.45	-0.03	51.68	-0.0559	0.0033	0.0023
600	SLE RA 3	-0.46	-0.11	52.33	-0.0573	0.0034	0.003
600	SLE RA 4	-0.46	-0.06	52.33	-0.0567	0.0034	0.0026
600	SLE RA 5	-0.45	-0.03	52.05	-0.0563	0.0034	0.0023
600	SLE RA 6	-0.46	-0.1	52.7	-0.0577	0.0035	0.0029
600	SLE RA 7	-0.46	-0.06	52.7	-0.0572	0.0035	0.0025
600	SLE RA 8	-0.46	-0.11	52.42	-0.0576	0.0035	0.0029
600	SLE RA 9	-0.46	-0.06	52.42	-0.0571	0.0035	0.0025
600	SLE RA 10	-0.44	-0.02	56.1	-0.0612	0.0028	0.0022
600	SLE RA 11	-0.45	-0.09	56.75	-0.0626	0.0029	0.0029
600	SLE RA 12	-0.45	-0.05	56.75	-0.062	0.0029	0.0025
600	SLE RA 13	-0.45	-0.02	56.47	-0.0616	0.0029	0.0022
600	SLE RA 14	-0.45	-0.09	57.12	-0.063	0.003	0.0028
600	SLE RA 15	-0.45	-0.04	57.12	-0.0625	0.003	0.0024
600	SLE RA 16	-0.45	-0.09	56.84	-0.0629	0.003	0.0028
600	SLE RA 17	-0.45	-0.05	56.84	-0.0624	0.003	0.0024
600	SLE RA 18	-0.44	-0.09	57.99	-0.0643	0.0026	0.0029
600	SLE RA 19	-0.44	-0.05	57.99	-0.0638	0.0026	0.0025
600	SLE RA 20	-0.45	-0.09	58.36	-0.0648	0.0027	0.0028
600	SLE RA 21	-0.44	-0.04	58.36	-0.0642	0.0027	0.0024
600	SLE FR 1	-0.45	-0.11	51.68	-0.0568	0.0034	0.003
600	SLE FR 2	-0.45	-0.1	51.68	-0.0566	0.0034	0.0029
600	SLE FR 3	-0.45	-0.11	51.83	-0.0569	0.0034	0.003
600	SLE FR 4	-0.45	-0.09	53.57	-0.0588	0.0031	0.0028
600	SLE FR 5	-0.45	-0.11	53.72	-0.0592	0.0032	0.0029
600	SLE FR 6	-0.45	-0.1	54.83	-0.0605	0.003	0.0029
600	SLE QP 1	-0.45	-0.11	51.68	-0.0568	0.0034	0.003
600	SLE QP 2	-0.45	-0.11	53.57	-0.059	0.0031	0.003
600	SLD 1	3.79	1.41	63	-0.0365	0.0196	-0.0092
600	SLD 2	3.78	0.92	63.02	-0.0382	0.0198	-0.0036
600	SLD 3	3.69	-0.6	63.31	-0.0573	0.0207	0.0045
600	SLD 4	3.69	-1.08	63.33	-0.059	0.0208	0.01
600	SLD 5	0.97	3.48	55.92	-0.0204	0.0064	-0.0223
600	SLD 6	0.97	3.16	55.94	-0.0215	0.0065	-0.0187
600	SLD 7	0.64	-3.21	56.96	-0.0898	0.01	0.0231
600	SLD 8	0.64	-3.53	56.98	-0.0909	0.0101	0.0267
600	SLD 9	-1.54	3.32	50.17	-0.0272	-0.0038	-0.0208
600	SLD 10	-1.54	3	50.18	-0.0283	-0.0037	-0.0172
600	SLD 11	-1.87	-3.37	51.21	-0.0965	-0.0003	0.0247
600	SLD 12	-1.87	-3.69	51.22	-0.0976	-0.0002	0.0282
600	SLD 13	-4.58	0.87	43.81	-0.059	-0.0145	-0.0041
600	SLD 14	-4.58	0.38	43.83	-0.0607	-0.0144	0.0014
600	SLD 15	-4.68	-1.13	44.12	-0.0798	-0.0135	0.0095
600	SLD 16	-4.68	-1.62	44.15	-0.0815	-0.0133	0.0151
600	SLV 1	9.46	3.38	75.63	-0.0059	0.0417	-0.0249
600	SLV 2	9.45	2.25	75.68	-0.0098	0.042	-0.0121
600	SLV 3	9.23	-1.19	76.36	-0.0532	0.0442	0.0061
600	SLV 4	9.22	-2.33	76.4	-0.0572	0.0445	0.019
600	SLV 5	2.88	8.08	59.08	0.0294	0.0109	-0.0547
600	SLV 6	2.87	7.35	59.11	0.0269	0.0111	-0.0465
600	SLV 7	2.11	-7.18	61.5	-0.1284	0.0191	0.0488
600	SLV 8	2.1	-7.91	61.53	-0.131	0.0194	0.057
600	SLV 9	-3	7.7	45.61	0.0129	-0.0131	-0.0511
600	SLV 10	-3	6.97	45.65	0.0104	-0.0129	-0.0429
600	SLV 11	-3.76	-7.56	48.03	-0.145	-0.0048	0.0524
600	SLV 12	-3.77	-8.29	48.06	-0.1475	-0.0046	0.0606

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
600	SLV 13	-10.11	2.12	30.74	-0.0609	-0.0382	-0.013
600	SLV 14	-10.12	0.98	30.79	-0.0648	-0.0379	-0.0002
600	SLV 15	-10.34	-2.46	31.46	-0.1082	-0.0357	0.018
600	SLV 16	-10.35	-3.6	31.51	-0.1122	-0.0354	0.0309
600	CRTFP Ux+	0	0	0	0	0	0
600	CRTFP Ux-	0	0	0	0	0	0
601	SLU 1	-0.44	-0.11	49.73	-0.055	0.0044	0.0012
601	SLU 2	-0.44	0	49.74	-0.0536	0.0043	0.0002
601	SLU 3	-0.45	-0.1	50.71	-0.0557	0.0045	0.0012
601	SLU 4	-0.45	-0.03	50.71	-0.0549	0.0045	0.0006
601	SLU 5	-0.45	0.01	50.29	-0.0543	0.0044	0.0001
601	SLU 6	-0.46	-0.1	51.26	-0.0564	0.0046	0.0011
601	SLU 7	-0.46	-0.03	51.26	-0.0555	0.0046	0.0005
601	SLU 8	-0.46	-0.1	50.83	-0.0563	0.0046	0.001
601	SLU 9	-0.45	-0.03	50.84	-0.0555	0.0046	0.0004
601	SLU 10	-0.43	0.02	56.39	-0.0614	0.0037	-0.0001
601	SLU 11	-0.44	-0.08	57.36	-0.0635	0.0039	0.0009
601	SLU 12	-0.44	-0.02	57.36	-0.0627	0.0039	0.0003
601	SLU 13	-0.44	0.02	56.94	-0.0621	0.0038	-0.0002
601	SLU 14	-0.45	-0.08	57.91	-0.0642	0.004	0.0007
601	SLU 15	-0.45	-0.01	57.91	-0.0634	0.004	0.0001
601	SLU 16	-0.44	-0.08	57.49	-0.0641	0.004	0.0006
601	SLU 17	-0.44	-0.02	57.49	-0.0633	0.004	0
601	SLU 18	-0.42	-0.08	59.24	-0.0662	0.0035	0.0007
601	SLU 19	-0.42	-0.02	59.24	-0.0653	0.0035	0.0001
601	SLU 20	-0.43	-0.08	59.79	-0.0668	0.0036	0.0006
601	SLU 21	-0.43	-0.01	59.79	-0.066	0.0036	0
601	SLU 22	-0.46	-0.08	56.09	-0.0594	0.0042	0.0013
601	SLU 23	-0.46	0.03	56.1	-0.058	0.0041	0.0003
601	SLU 24	-0.47	-0.07	57.07	-0.0601	0.0043	0.0013
601	SLU 25	-0.47	-0.01	57.07	-0.0593	0.0043	0.0007
601	SLU 26	-0.47	0.03	56.65	-0.0587	0.0043	0.0002
601	SLU 27	-0.48	-0.07	57.62	-0.0608	0.0044	0.0012
601	SLU 28	-0.48	0	57.62	-0.06	0.0044	0.0006
601	SLU 29	-0.48	-0.07	57.19	-0.0607	0.0044	0.001
601	SLU 30	-0.48	-0.01	57.19	-0.0599	0.0044	0.0005
601	SLU 31	-0.45	0.05	62.75	-0.0659	0.0035	0
601	SLU 32	-0.46	-0.06	63.72	-0.068	0.0037	0.001
601	SLU 33	-0.46	0.01	63.72	-0.0671	0.0037	0.0004
601	SLU 34	-0.46	0.05	63.3	-0.0665	0.0037	-0.0001
601	SLU 35	-0.47	-0.05	64.27	-0.0686	0.0038	0.0008
601	SLU 36	-0.47	0.01	64.27	-0.0678	0.0038	0.0002
601	SLU 37	-0.47	-0.06	63.84	-0.0685	0.0038	0.0007
601	SLU 38	-0.47	0.01	63.85	-0.0677	0.0038	0.0001
601	SLU 39	-0.45	-0.06	65.59	-0.0706	0.0033	0.0008
601	SLU 40	-0.45	0.01	65.6	-0.0698	0.0033	0.0002
601	SLU 41	-0.46	-0.05	66.14	-0.0712	0.0035	0.0007
601	SLU 42	-0.46	0.01	66.15	-0.0704	0.0034	0.0001
601	SLU 43	-0.56	-0.15	62.47	-0.07	0.0057	0.0016
601	SLU 44	-0.56	-0.04	62.48	-0.0686	0.0057	0.0006
601	SLU 45	-0.57	-0.14	63.45	-0.0707	0.0059	0.0015
601	SLU 46	-0.57	-0.08	63.45	-0.0699	0.0058	0.0009
601	SLU 47	-0.57	-0.04	63.03	-0.0692	0.0058	0.0004
601	SLU 48	-0.58	-0.14	64	-0.0713	0.006	0.0014
601	SLU 49	-0.58	-0.07	64	-0.0705	0.006	0.0008
601	SLU 50	-0.58	-0.14	63.57	-0.0713	0.006	0.0013
601	SLU 51	-0.58	-0.08	63.58	-0.0704	0.0059	0.0007
601	SLU 52	-0.55	-0.02	69.13	-0.0764	0.0051	0.0002
601	SLU 53	-0.56	-0.13	70.1	-0.0785	0.0053	0.0012
601	SLU 54	-0.56	-0.06	70.1	-0.0777	0.0052	0.0006
601	SLU 55	-0.56	-0.02	69.68	-0.0771	0.0052	0.0001
601	SLU 56	-0.57	-0.12	70.65	-0.0792	0.0054	0.0011
601	SLU 57	-0.57	-0.05	70.65	-0.0783	0.0054	0.0005
601	SLU 58	-0.57	-0.13	70.23	-0.0791	0.0054	0.0009
601	SLU 59	-0.57	-0.06	70.23	-0.0783	0.0053	0.0004
601	SLU 60	-0.55	-0.13	71.98	-0.0811	0.0049	0.0011
601	SLU 61	-0.55	-0.06	71.98	-0.0803	0.0049	0.0005
601	SLU 62	-0.56	-0.12	72.53	-0.0818	0.005	0.0009
601	SLU 63	-0.56	-0.06	72.53	-0.081	0.005	0.0003
601	SLU 64	-0.59	-0.13	68.83	-0.0744	0.0055	0.0016
601	SLU 65	-0.59	-0.01	68.84	-0.073	0.0055	0.0007
601	SLU 66	-0.6	-0.12	69.81	-0.0751	0.0057	0.0016
601	SLU 67	-0.6	-0.05	69.81	-0.0743	0.0057	0.001
601	SLU 68	-0.59	-0.01	69.39	-0.0737	0.0056	0.0005
601	SLU 69	-0.6	-0.11	70.36	-0.0758	0.0058	0.0015
601	SLU 70	-0.6	-0.05	70.36	-0.0749	0.0058	0.0009
601	SLU 71	-0.6	-0.12	69.93	-0.0757	0.0058	0.0014
601	SLU 72	-0.6	-0.05	69.93	-0.0749	0.0058	0.0008
601	SLU 73	-0.58	0	75.49	-0.0808	0.0049	0.0003
601	SLU 74	-0.59	-0.1	76.46	-0.0829	0.0051	0.0013
601	SLU 75	-0.59	-0.03	76.46	-0.0821	0.0051	0.0007
601	SLU 76	-0.58	0.01	76.04	-0.0815	0.005	0.0002
601	SLU 77	-0.59	-0.09	77.01	-0.0836	0.0052	0.0012
601	SLU 78	-0.59	-0.03	77.01	-0.0828	0.0052	0.0006
601	SLU 79	-0.59	-0.1	76.58	-0.0835	0.0052	0.001
601	SLU 80	-0.59	-0.03	76.59	-0.0827	0.0052	0.0004
601	SLU 81	-0.57	-0.1	78.33	-0.0856	0.0047	0.0012
601	SLU 82	-0.57	-0.03	78.34	-0.0847	0.0047	0.0006
601	SLU 83	-0.58	-0.1	78.88	-0.0862	0.0048	0.001
601	SLU 84	-0.58	-0.03	78.89	-0.0854	0.0048	0.0004
601	SLE RA 1	-0.45	-0.1	51.55	-0.0562	0.0043	0.0012

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
601	SLE RA 2	-0.45	-0.03	51.55	-0.0553	0.0043	0.0006
601	SLE RA 3	-0.45	-0.1	52.2	-0.0567	0.0044	0.0012
601	SLE RA 4	-0.45	-0.05	52.2	-0.0562	0.0044	0.0008
601	SLE RA 5	-0.45	-0.02	51.92	-0.0558	0.0044	0.0005
601	SLE RA 6	-0.46	-0.09	52.57	-0.0572	0.0045	0.0011
601	SLE RA 7	-0.46	-0.05	52.57	-0.0566	0.0045	0.0007
601	SLE RA 8	-0.46	-0.1	52.28	-0.0571	0.0045	0.0011
601	SLE RA 9	-0.46	-0.05	52.28	-0.0566	0.0045	0.0007
601	SLE RA 10	-0.44	-0.02	55.99	-0.0605	0.0039	0.0004
601	SLE RA 11	-0.45	-0.08	56.63	-0.0619	0.004	0.001
601	SLE RA 12	-0.45	-0.04	56.64	-0.0614	0.004	0.0006
601	SLE RA 13	-0.44	-0.01	56.35	-0.061	0.004	0.0003
601	SLE RA 14	-0.45	-0.08	57	-0.0624	0.0041	0.0009
601	SLE RA 15	-0.45	-0.04	57	-0.0618	0.0041	0.0005
601	SLE RA 16	-0.45	-0.08	56.72	-0.0623	0.0041	0.0008
601	SLE RA 17	-0.45	-0.04	56.72	-0.0618	0.0041	0.0004
601	SLE RA 18	-0.44	-0.09	57.88	-0.0637	0.0037	0.0009
601	SLE RA 19	-0.44	-0.04	57.89	-0.0632	0.0037	0.0005
601	SLE RA 20	-0.44	-0.08	58.25	-0.0641	0.0038	0.0008
601	SLE RA 21	-0.44	-0.04	58.25	-0.0636	0.0038	0.0004
601	SLE FR 1	-0.45	-0.1	51.55	-0.0562	0.0043	0.0012
601	SLE FR 2	-0.45	-0.09	51.55	-0.0561	0.0043	0.0011
601	SLE FR 3	-0.45	-0.1	51.7	-0.0564	0.0043	0.0012
601	SLE FR 4	-0.44	-0.08	53.45	-0.0583	0.0041	0.001
601	SLE FR 5	-0.45	-0.1	53.6	-0.0587	0.0042	0.0011
601	SLE FR 6	-0.44	-0.09	54.72	-0.06	0.004	0.0011
601	SLE QP 1	-0.45	-0.1	51.55	-0.0562	0.0043	0.0012
601	SLE QP 2	-0.44	-0.1	53.45	-0.0585	0.0041	0.0011
601	SLD 1	3.79	1.36	62.3	-0.0351	0.0206	-0.011
601	SLD 2	3.79	0.9	62.31	-0.0369	0.0207	-0.0055
601	SLD 3	3.7	-0.58	62.61	-0.057	0.0215	0.0024
601	SLD 4	3.69	-1.04	62.62	-0.0589	0.0217	0.0078
601	SLD 5	0.98	3.36	55.63	-0.0178	0.0076	-0.0236
601	SLD 6	0.97	3.06	55.64	-0.019	0.0077	-0.0201
601	SLD 7	0.65	-3.1	56.67	-0.091	0.0108	0.0208
601	SLD 8	0.65	-3.4	56.68	-0.0922	0.0108	0.0243
601	SLD 9	-1.53	3.21	50.22	-0.0247	-0.0026	-0.022
601	SLD 10	-1.54	2.91	50.23	-0.0259	-0.0025	-0.0185
601	SLD 11	-1.86	-3.26	51.26	-0.0979	0.0006	0.0224
601	SLD 12	-1.87	-3.56	51.27	-0.0991	0.0007	0.0259
601	SLD 13	-4.58	0.85	44.27	-0.0581	-0.0134	-0.0055
601	SLD 14	-4.58	0.39	44.29	-0.0599	-0.0133	-0.0001
601	SLD 15	-4.68	-1.09	44.59	-0.0801	-0.0124	0.0078
601	SLD 16	-4.68	-1.55	44.6	-0.0819	-0.0123	0.0132
601	SLV 1	9.47	3.26	74.15	-0.0031	0.0426	-0.0268
601	SLV 2	9.46	2.18	74.19	-0.0074	0.0429	-0.0141
601	SLV 3	9.24	-1.17	74.88	-0.0531	0.0448	0.0036
601	SLV 4	9.23	-2.24	74.92	-0.0573	0.0451	0.0162
601	SLV 5	2.88	7.8	58.55	0.0346	0.0123	-0.0554
601	SLV 6	2.87	7.12	58.57	0.0319	0.0125	-0.0473
601	SLV 7	2.11	-6.95	60.98	-0.1319	0.0196	0.0457
601	SLV 8	2.11	-7.63	61	-0.1346	0.0198	0.0538
601	SLV 9	-3	7.44	45.9	0.0177	-0.0115	-0.0515
601	SLV 10	-3	6.75	45.92	0.015	-0.0114	-0.0434
601	SLV 11	-3.76	-7.31	48.33	-0.1489	-0.0042	0.0496
601	SLV 12	-3.77	-8	48.35	-0.1516	-0.004	0.0577
601	SLV 13	-10.12	2.05	31.98	-0.0596	-0.0369	-0.0139
601	SLV 14	-10.13	0.98	32.02	-0.0639	-0.0366	-0.0013
601	SLV 15	-10.35	-2.38	32.71	-0.1096	-0.0347	0.0164
601	SLV 16	-10.36	-3.45	32.75	-0.1138	-0.0344	0.029
601	CRTFP Ux+	0	0	0	0	0	0
601	CRTFP Ux-	0	0	0	0	0	0
602	SLU 1	-0.44	-0.11	49.56	-0.0546	0.0058	-0.0002
602	SLU 2	-0.43	0	49.57	-0.0532	0.0058	-0.0012
602	SLU 3	-0.44	-0.1	50.53	-0.0553	0.006	-0.0002
602	SLU 4	-0.44	-0.04	50.53	-0.0545	0.006	-0.0008
602	SLU 5	-0.44	0	50.11	-0.0539	0.0059	-0.0013
602	SLU 6	-0.45	-0.1	51.07	-0.056	0.0061	-0.0004
602	SLU 7	-0.45	-0.03	51.08	-0.0551	0.0061	-0.001
602	SLU 8	-0.45	-0.1	50.65	-0.0559	0.0061	-0.0005
602	SLU 9	-0.45	-0.04	50.65	-0.0551	0.0061	-0.0011
602	SLU 10	-0.42	0.01	56.23	-0.0609	0.0055	-0.0016
602	SLU 11	-0.43	-0.08	57.2	-0.063	0.0057	-0.0007
602	SLU 12	-0.43	-0.02	57.2	-0.0622	0.0057	-0.0013
602	SLU 13	-0.43	0.02	56.78	-0.0616	0.0056	-0.0018
602	SLU 14	-0.44	-0.08	57.74	-0.0637	0.0058	-0.0009
602	SLU 15	-0.44	-0.02	57.75	-0.0628	0.0058	-0.0015
602	SLU 16	-0.44	-0.09	57.32	-0.0636	0.0058	-0.001
602	SLU 17	-0.44	-0.02	57.32	-0.0628	0.0058	-0.0016
602	SLU 18	-0.42	-0.09	59.08	-0.0656	0.0054	-0.0009
602	SLU 19	-0.42	-0.02	59.09	-0.0648	0.0054	-0.0015
602	SLU 20	-0.43	-0.08	59.63	-0.0663	0.0055	-0.0011
602	SLU 21	-0.43	-0.02	59.63	-0.0654	0.0055	-0.0016
602	SLU 22	-0.46	-0.08	55.92	-0.0588	0.0059	-0.0002
602	SLU 23	-0.46	0.03	55.92	-0.0574	0.0059	-0.0012
602	SLU 24	-0.47	-0.07	56.89	-0.0595	0.0061	-0.0003
602	SLU 25	-0.47	-0.01	56.89	-0.0587	0.006	-0.0008
602	SLU 26	-0.47	0.03	56.47	-0.058	0.006	-0.0013
602	SLU 27	-0.48	-0.07	57.43	-0.0601	0.0062	-0.0004
602	SLU 28	-0.48	0	57.44	-0.0593	0.0062	-0.001
602	SLU 29	-0.48	-0.07	57.01	-0.0601	0.0062	-0.0005

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
602	SLU 30	-0.47	-0.01	57.01	-0.0593	0.0062	-0.0011
602	SLU 31	-0.45	0.04	62.59	-0.0651	0.0056	-0.0017
602	SLU 32	-0.46	-0.06	63.56	-0.0672	0.0057	-0.0007
602	SLU 33	-0.46	0.01	63.56	-0.0664	0.0057	-0.0013
602	SLU 34	-0.46	0.04	63.14	-0.0658	0.0057	-0.0018
602	SLU 35	-0.47	-0.05	64.1	-0.0679	0.0059	-0.0009
602	SLU 36	-0.47	0.01	64.11	-0.067	0.0059	-0.0015
602	SLU 37	-0.47	-0.06	63.68	-0.0678	0.0059	-0.001
602	SLU 38	-0.46	0.01	63.68	-0.067	0.0058	-0.0016
602	SLU 39	-0.45	-0.06	65.44	-0.0698	0.0054	-0.0009
602	SLU 40	-0.45	0.01	65.45	-0.069	0.0054	-0.0015
602	SLU 41	-0.45	-0.06	65.99	-0.0705	0.0056	-0.0011
602	SLU 42	-0.45	0.01	65.99	-0.0696	0.0056	-0.0016
602	SLU 43	-0.56	-0.15	62.24	-0.0696	0.0076	-0.0003
602	SLU 44	-0.56	-0.04	62.25	-0.0682	0.0075	-0.0012
602	SLU 45	-0.57	-0.14	63.22	-0.0703	0.0077	-0.0003
602	SLU 46	-0.57	-0.08	63.22	-0.0694	0.0077	-0.0009
602	SLU 47	-0.56	-0.04	62.8	-0.0688	0.0077	-0.0014
602	SLU 48	-0.57	-0.14	63.76	-0.0709	0.0079	-0.0005
602	SLU 49	-0.57	-0.07	63.77	-0.0701	0.0078	-0.001
602	SLU 50	-0.57	-0.14	63.34	-0.0709	0.0078	-0.0006
602	SLU 51	-0.57	-0.08	63.34	-0.07	0.0078	-0.0011
602	SLU 52	-0.55	-0.03	68.92	-0.0759	0.0072	-0.0017
602	SLU 53	-0.56	-0.13	69.88	-0.078	0.0074	-0.0008
602	SLU 54	-0.56	-0.06	69.89	-0.0771	0.0074	-0.0014
602	SLU 55	-0.55	-0.02	69.47	-0.0765	0.0074	-0.0019
602	SLU 56	-0.56	-0.12	70.43	-0.0786	0.0075	-0.0009
602	SLU 57	-0.56	-0.06	70.43	-0.0778	0.0075	-0.0015
602	SLU 58	-0.56	-0.13	70.01	-0.0786	0.0075	-0.0011
602	SLU 59	-0.56	-0.06	70.01	-0.0777	0.0075	-0.0016
602	SLU 60	-0.54	-0.13	71.77	-0.0806	0.0071	-0.001
602	SLU 61	-0.54	-0.06	71.78	-0.0798	0.0071	-0.0015
602	SLU 62	-0.55	-0.12	72.32	-0.0812	0.0072	-0.0011
602	SLU 63	-0.55	-0.06	72.32	-0.0804	0.0072	-0.0017
602	SLU 64	-0.58	-0.12	68.6	-0.0738	0.0076	-0.0003
602	SLU 65	-0.58	-0.02	68.61	-0.0724	0.0076	-0.0012
602	SLU 66	-0.59	-0.11	69.57	-0.0745	0.0078	-0.0003
602	SLU 67	-0.59	-0.05	69.58	-0.0736	0.0078	-0.0009
602	SLU 68	-0.59	-0.01	69.16	-0.073	0.0077	-0.0014
602	SLU 69	-0.6	-0.11	70.12	-0.0751	0.0079	-0.0005
602	SLU 70	-0.6	-0.05	70.13	-0.0743	0.0079	-0.001
602	SLU 71	-0.6	-0.12	69.7	-0.0751	0.0079	-0.0006
602	SLU 72	-0.6	-0.05	69.7	-0.0742	0.0079	-0.0012
602	SLU 73	-0.57	0	75.28	-0.0801	0.0073	-0.0017
602	SLU 74	-0.58	-0.1	76.24	-0.0822	0.0075	-0.0008
602	SLU 75	-0.58	-0.03	76.25	-0.0813	0.0075	-0.0014
602	SLU 76	-0.58	0	75.83	-0.0807	0.0074	-0.0019
602	SLU 77	-0.59	-0.1	76.79	-0.0828	0.0076	-0.001
602	SLU 78	-0.59	-0.03	76.79	-0.082	0.0076	-0.0015
602	SLU 79	-0.59	-0.1	76.36	-0.0828	0.0076	-0.0011
602	SLU 80	-0.59	-0.04	76.37	-0.0819	0.0076	-0.0016
602	SLU 81	-0.57	-0.1	78.13	-0.0848	0.0072	-0.001
602	SLU 82	-0.57	-0.04	78.14	-0.0839	0.0072	-0.0015
602	SLU 83	-0.58	-0.1	78.68	-0.0854	0.0073	-0.0011
602	SLU 84	-0.57	-0.03	78.68	-0.0846	0.0073	-0.0017
602	SLE RA 1	-0.44	-0.1	51.37	-0.0558	0.0059	-0.0002
602	SLE RA 2	-0.44	-0.03	51.38	-0.0549	0.0058	-0.0008
602	SLE RA 3	-0.45	-0.09	52.02	-0.0563	0.006	-0.0002
602	SLE RA 4	-0.45	-0.05	52.02	-0.0557	0.006	-0.0006
602	SLE RA 5	-0.45	-0.03	51.74	-0.0553	0.0059	-0.001
602	SLE RA 6	-0.45	-0.09	52.39	-0.0567	0.0061	-0.0003
602	SLE RA 7	-0.45	-0.05	52.39	-0.0562	0.006	-0.0007
602	SLE RA 8	-0.45	-0.1	52.1	-0.0567	0.006	-0.0004
602	SLE RA 9	-0.45	-0.05	52.11	-0.0561	0.006	-0.0008
602	SLE RA 10	-0.44	-0.02	55.83	-0.06	0.0056	-0.0012
602	SLE RA 11	-0.44	-0.08	56.47	-0.0614	0.0057	-0.0006
602	SLE RA 12	-0.44	-0.04	56.47	-0.0609	0.0057	-0.0009
602	SLE RA 13	-0.44	-0.02	56.19	-0.0605	0.0057	-0.0013
602	SLE RA 14	-0.45	-0.08	56.83	-0.0619	0.0058	-0.0007
602	SLE RA 15	-0.45	-0.04	56.83	-0.0613	0.0058	-0.001
602	SLE RA 16	-0.45	-0.09	56.55	-0.0618	0.0058	-0.0007
602	SLE RA 17	-0.45	-0.04	56.55	-0.0613	0.0058	-0.0011
602	SLE RA 18	-0.43	-0.09	57.73	-0.0632	0.0056	-0.0007
602	SLE RA 19	-0.43	-0.04	57.73	-0.0626	0.0055	-0.0011
602	SLE RA 20	-0.44	-0.08	58.09	-0.0636	0.0056	-0.0008
602	SLE RA 21	-0.44	-0.04	58.09	-0.063	0.0056	-0.0012
602	SLE FR 1	-0.44	-0.1	51.37	-0.0558	0.0059	-0.0002
602	SLE FR 2	-0.44	-0.09	51.38	-0.0556	0.0059	-0.0003
602	SLE FR 3	-0.44	-0.1	51.52	-0.056	0.0059	-0.0002
602	SLE FR 4	-0.44	-0.08	53.28	-0.0578	0.0058	-0.0005
602	SLE FR 5	-0.44	-0.09	53.43	-0.0582	0.0058	-0.0004
602	SLE FR 6	-0.44	-0.09	54.55	-0.0595	0.0057	-0.0004
602	SLE QP 1	-0.44	-0.1	51.37	-0.0558	0.0059	-0.0002
602	SLE QP 2	-0.44	-0.1	53.28	-0.058	0.0058	-0.0003
602	SLD 1	3.8	1.3	61.55	-0.0336	0.0223	-0.0121
602	SLD 2	3.8	0.87	61.56	-0.0355	0.0224	-0.0069
602	SLD 3	3.7	-0.57	61.86	-0.0566	0.0231	0.0004
602	SLD 4	3.7	-1.01	61.87	-0.0586	0.0232	0.0056
602	SLD 5	0.98	3.24	55.28	-0.0154	0.0095	-0.0238
602	SLD 6	0.98	2.96	55.29	-0.0166	0.0095	-0.0204
602	SLD 7	0.66	-3.01	56.33	-0.0923	0.0122	0.0179

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
602	SLD 8	0.65	-3.29	56.34	-0.0935	0.0123	0.0213
602	SLD 9	-1.53	3.1	50.22	-0.0225	-0.0007	-0.022
602	SLD 10	-1.53	2.82	50.23	-0.0238	-0.0007	-0.0186
602	SLD 11	-1.86	-3.15	51.27	-0.0994	0.002	0.0197
602	SLD 12	-1.86	-3.44	51.28	-0.1007	0.0021	0.0231
602	SLD 13	-4.58	0.82	44.69	-0.0575	-0.0117	-0.0063
602	SLD 14	-4.58	0.38	44.7	-0.0594	-0.0116	-0.0011
602	SLD 15	-4.68	-1.06	45	-0.0805	-0.0109	0.0062
602	SLD 16	-4.68	-1.49	45.01	-0.0825	-0.0108	0.0114
602	SLV 1	9.48	3.12	72.62	-0.0001	0.0445	-0.0275
602	SLV 2	9.47	2.11	72.65	-0.0046	0.0448	-0.0154
602	SLV 3	9.25	-1.16	73.36	-0.0526	0.0464	0.001
602	SLV 4	9.24	-2.17	73.39	-0.0571	0.0467	0.0131
602	SLV 5	2.88	7.53	57.96	0.0397	0.0145	-0.0538
602	SLV 6	2.88	6.89	57.98	0.0368	0.0146	-0.046
602	SLV 7	2.12	-6.73	60.42	-0.1352	0.0208	0.0412
602	SLV 8	2.12	-7.38	60.43	-0.1381	0.021	0.0489
602	SLV 9	-2.99	7.19	46.13	0.0221	-0.0094	-0.0496
602	SLV 10	-3	6.54	46.15	0.0192	-0.0093	-0.0419
602	SLV 11	-3.76	-7.08	48.58	-0.1529	-0.0031	0.0453
602	SLV 12	-3.76	-7.72	48.6	-0.1558	-0.0029	0.0531
602	SLV 13	-10.12	1.98	33.17	-0.0589	-0.0351	-0.0138
602	SLV 14	-10.13	0.96	33.2	-0.0635	-0.0349	-0.0016
602	SLV 15	-10.35	-2.3	33.91	-0.1114	-0.0332	0.0147
602	SLV 16	-10.36	-3.32	33.94	-0.116	-0.033	0.0268
602	CRTFP Ux+	0	0	0	0	0	0
602	CRTFP Ux-	0	0	0	0	0	0
603	SLU 1	-0.43	-0.11	49.33	-0.0544	0.0074	-0.0014
603	SLU 2	-0.43	-0.01	49.34	-0.0529	0.0074	-0.0023
603	SLU 3	-0.44	-0.1	50.3	-0.055	0.0076	-0.0014
603	SLU 4	-0.44	-0.04	50.3	-0.0542	0.0076	-0.0019
603	SLU 5	-0.44	-0.01	49.88	-0.0536	0.0075	-0.0024
603	SLU 6	-0.45	-0.1	50.84	-0.0557	0.0077	-0.0016
603	SLU 7	-0.45	-0.04	50.84	-0.0548	0.0077	-0.0021
603	SLU 8	-0.44	-0.11	50.41	-0.0557	0.0077	-0.0017
603	SLU 9	-0.44	-0.05	50.42	-0.0548	0.0077	-0.0022
603	SLU 10	-0.42	0	56.01	-0.0605	0.0073	-0.0028
603	SLU 11	-0.43	-0.09	56.97	-0.0626	0.0075	-0.002
603	SLU 12	-0.43	-0.03	56.98	-0.0618	0.0075	-0.0025
603	SLU 13	-0.43	0.01	56.56	-0.0612	0.0075	-0.003
603	SLU 14	-0.44	-0.09	57.51	-0.0633	0.0077	-0.0022
603	SLU 15	-0.44	-0.03	57.52	-0.0624	0.0077	-0.0027
603	SLU 16	-0.43	-0.09	57.09	-0.0633	0.0077	-0.0023
603	SLU 17	-0.43	-0.03	57.09	-0.0624	0.0076	-0.0028
603	SLU 18	-0.42	-0.09	58.87	-0.0652	0.0073	-0.0022
603	SLU 19	-0.41	-0.03	58.87	-0.0644	0.0073	-0.0027
603	SLU 20	-0.42	-0.09	59.41	-0.0659	0.0075	-0.0023
603	SLU 21	-0.42	-0.03	59.41	-0.065	0.0075	-0.0029
603	SLU 22	-0.45	-0.09	55.68	-0.0583	0.0077	-0.0014
603	SLU 23	-0.45	0.02	55.69	-0.0569	0.0077	-0.0023
603	SLU 24	-0.46	-0.08	56.65	-0.059	0.0079	-0.0015
603	SLU 25	-0.46	-0.02	56.65	-0.0581	0.0079	-0.002
603	SLU 26	-0.46	0.02	56.23	-0.0575	0.0079	-0.0025
603	SLU 27	-0.47	-0.07	57.19	-0.0596	0.0081	-0.0017
603	SLU 28	-0.47	-0.01	57.19	-0.0588	0.008	-0.0022
603	SLU 29	-0.47	-0.08	56.77	-0.0596	0.008	-0.0018
603	SLU 30	-0.47	-0.02	56.77	-0.0587	0.008	-0.0023
603	SLU 31	-0.44	0.03	62.37	-0.0645	0.0077	-0.0029
603	SLU 32	-0.45	-0.06	63.32	-0.0666	0.0079	-0.0021
603	SLU 33	-0.45	0	63.33	-0.0657	0.0079	-0.0026
603	SLU 34	-0.45	0.03	62.91	-0.0651	0.0078	-0.0031
603	SLU 35	-0.46	-0.06	63.86	-0.0672	0.008	-0.0022
603	SLU 36	-0.46	0	63.87	-0.0664	0.008	-0.0028
603	SLU 37	-0.46	-0.07	63.44	-0.0672	0.008	-0.0024
603	SLU 38	-0.46	-0.01	63.45	-0.0663	0.008	-0.0029
603	SLU 39	-0.44	-0.07	65.22	-0.0692	0.0077	-0.0023
603	SLU 40	-0.44	-0.01	65.22	-0.0683	0.0077	-0.0028
603	SLU 41	-0.45	-0.06	65.76	-0.0698	0.0078	-0.0024
603	SLU 42	-0.45	0	65.77	-0.069	0.0078	-0.003
603	SLU 43	-0.55	-0.15	61.95	-0.0693	0.0095	-0.0017
603	SLU 44	-0.55	-0.05	61.96	-0.0679	0.0095	-0.0026
603	SLU 45	-0.56	-0.15	62.92	-0.07	0.0097	-0.0018
603	SLU 46	-0.56	-0.09	62.92	-0.0691	0.0097	-0.0023
603	SLU 47	-0.56	-0.05	62.5	-0.0685	0.0096	-0.0028
603	SLU 48	-0.57	-0.14	63.46	-0.0706	0.0098	-0.002
603	SLU 49	-0.57	-0.08	63.46	-0.0698	0.0098	-0.0025
603	SLU 50	-0.56	-0.15	63.03	-0.0706	0.0098	-0.0021
603	SLU 51	-0.56	-0.09	63.04	-0.0697	0.0098	-0.0026
603	SLU 52	-0.54	-0.04	68.64	-0.0755	0.0095	-0.0032
603	SLU 53	-0.55	-0.13	69.59	-0.0776	0.0097	-0.0024
603	SLU 54	-0.55	-0.07	69.6	-0.0767	0.0096	-0.0029
603	SLU 55	-0.55	-0.04	69.18	-0.0761	0.0096	-0.0034
603	SLU 56	-0.56	-0.13	70.13	-0.0782	0.0098	-0.0025
603	SLU 57	-0.56	-0.07	70.14	-0.0774	0.0098	-0.0031
603	SLU 58	-0.55	-0.14	69.71	-0.0782	0.0098	-0.0026
603	SLU 59	-0.55	-0.08	69.71	-0.0774	0.0098	-0.0032
603	SLU 60	-0.54	-0.14	71.49	-0.0802	0.0095	-0.0026
603	SLU 61	-0.54	-0.08	71.49	-0.0793	0.0094	-0.0031
603	SLU 62	-0.54	-0.13	72.03	-0.0808	0.0096	-0.0027
603	SLU 63	-0.54	-0.07	72.03	-0.08	0.0096	-0.0033
603	SLU 64	-0.57	-0.13	68.3	-0.0733	0.0098	-0.0018

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
603	SLU 65	-0.57	-0.03	68.31	-0.0718	0.0098	-0.0027
603	SLU 66	-0.58	-0.12	69.27	-0.0739	0.01	-0.0019
603	SLU 67	-0.58	-0.06	69.27	-0.0731	0.01	-0.0024
603	SLU 68	-0.58	-0.02	68.85	-0.0725	0.01	-0.0029
603	SLU 69	-0.59	-0.12	69.81	-0.0746	0.0102	-0.002
603	SLU 70	-0.59	-0.06	69.82	-0.0737	0.0102	-0.0026
603	SLU 71	-0.59	-0.12	69.39	-0.0746	0.0101	-0.0022
603	SLU 72	-0.59	-0.06	69.39	-0.0737	0.0101	-0.0027
603	SLU 73	-0.56	-0.01	74.99	-0.0794	0.0098	-0.0033
603	SLU 74	-0.57	-0.11	75.94	-0.0816	0.01	-0.0024
603	SLU 75	-0.57	-0.05	75.95	-0.0807	0.01	-0.003
603	SLU 76	-0.57	-0.01	75.53	-0.0801	0.0099	-0.0035
603	SLU 77	-0.58	-0.1	76.49	-0.0822	0.0101	-0.0026
603	SLU 78	-0.58	-0.04	76.49	-0.0813	0.0101	-0.0032
603	SLU 79	-0.58	-0.11	76.06	-0.0822	0.0101	-0.0027
603	SLU 80	-0.58	-0.05	76.07	-0.0813	0.0101	-0.0033
603	SLU 81	-0.56	-0.11	77.84	-0.0841	0.0098	-0.0026
603	SLU 82	-0.56	-0.05	77.85	-0.0833	0.0098	-0.0032
603	SLU 83	-0.57	-0.11	78.38	-0.0848	0.0099	-0.0028
603	SLU 84	-0.57	-0.05	78.39	-0.0839	0.0099	-0.0033
603	SLE RA 1	-0.44	-0.1	51.15	-0.0555	0.0075	-0.0014
603	SLE RA 2	-0.44	-0.04	51.15	-0.0545	0.0075	-0.002
603	SLE RA 3	-0.44	-0.1	51.79	-0.0559	0.0076	-0.0014
603	SLE RA 4	-0.44	-0.06	51.79	-0.0554	0.0076	-0.0018
603	SLE RA 5	-0.44	-0.03	51.51	-0.055	0.0076	-0.0021
603	SLE RA 6	-0.45	-0.1	52.15	-0.0564	0.0077	-0.0015
603	SLE RA 7	-0.45	-0.06	52.15	-0.0558	0.0077	-0.0019
603	SLE RA 8	-0.45	-0.1	51.87	-0.0564	0.0077	-0.0016
603	SLE RA 9	-0.45	-0.06	51.87	-0.0558	0.0077	-0.002
603	SLE RA 10	-0.43	-0.03	55.6	-0.0596	0.0075	-0.0024
603	SLE RA 11	-0.44	-0.09	56.24	-0.061	0.0076	-0.0018
603	SLE RA 12	-0.44	-0.05	56.24	-0.0604	0.0076	-0.0022
603	SLE RA 13	-0.43	-0.03	55.96	-0.06	0.0076	-0.0025
603	SLE RA 14	-0.44	-0.09	56.6	-0.0614	0.0077	-0.0019
603	SLE RA 15	-0.44	-0.05	56.6	-0.0609	0.0077	-0.0023
603	SLE RA 16	-0.44	-0.09	56.32	-0.0614	0.0077	-0.002
603	SLE RA 17	-0.44	-0.05	56.32	-0.0608	0.0077	-0.0023
603	SLE RA 18	-0.43	-0.09	57.5	-0.0627	0.0075	-0.0019
603	SLE RA 19	-0.43	-0.05	57.51	-0.0622	0.0075	-0.0023
603	SLE RA 20	-0.43	-0.09	57.86	-0.0632	0.0076	-0.002
603	SLE RA 21	-0.43	-0.05	57.87	-0.0626	0.0075	-0.0024
603	SLE FR 1	-0.44	-0.1	51.15	-0.0555	0.0075	-0.0014
603	SLE FR 2	-0.44	-0.09	51.15	-0.0553	0.0075	-0.0015
603	SLE FR 3	-0.44	-0.1	51.29	-0.0557	0.0075	-0.0014
603	SLE FR 4	-0.43	-0.09	53.05	-0.0575	0.0075	-0.0017
603	SLE FR 5	-0.44	-0.1	53.2	-0.0578	0.0075	-0.0016
603	SLE FR 6	-0.43	-0.1	54.32	-0.0591	0.0075	-0.0017
603	SLE QP 1	-0.44	-0.1	51.15	-0.0555	0.0075	-0.0014
603	SLE QP 2	-0.43	-0.1	53.05	-0.0577	0.0075	-0.0015
603	SLD 1	3.81	1.24	60.74	-0.032	0.0242	-0.0127
603	SLD 2	3.8	0.83	60.75	-0.0341	0.0242	-0.0078
603	SLD 3	3.71	-0.57	61.05	-0.0562	0.0248	-0.0014
603	SLD 4	3.71	-0.98	61.06	-0.0582	0.0249	0.0035
603	SLD 5	0.99	3.13	54.87	-0.013	0.0114	-0.0229
603	SLD 6	0.99	2.86	54.88	-0.0143	0.0115	-0.0197
603	SLD 7	0.66	-2.93	55.93	-0.0935	0.0137	0.0148
603	SLD 8	0.66	-3.19	55.94	-0.0948	0.0138	0.018
603	SLD 9	-1.53	2.99	50.17	-0.0205	0.0012	-0.0211
603	SLD 10	-1.53	2.73	50.17	-0.0219	0.0013	-0.0179
603	SLD 11	-1.85	-3.07	51.23	-0.101	0.0035	0.0166
603	SLD 12	-1.86	-3.33	51.23	-0.1023	0.0035	0.0198
603	SLD 13	-4.57	0.78	45.04	-0.0571	-0.01	-0.0066
603	SLD 14	-4.58	0.37	45.05	-0.0592	-0.0099	-0.0017
603	SLD 15	-4.67	-1.04	45.36	-0.0812	-0.0093	0.0047
603	SLD 16	-4.68	-1.45	45.37	-0.0833	-0.0092	0.0097
603	SLV 1	9.49	2.99	71.03	0.0032	0.0465	-0.0274
603	SLV 2	9.48	2.04	71.05	-0.0017	0.0467	-0.0159
603	SLV 3	9.26	-1.15	71.78	-0.0518	0.0481	-0.0016
603	SLV 4	9.25	-2.11	71.8	-0.0566	0.0483	0.0099
603	SLV 5	2.89	7.28	57.32	0.0447	0.0167	-0.0503
603	SLV 6	2.88	6.67	57.33	0.0416	0.0169	-0.043
603	SLV 7	2.13	-6.54	59.79	-0.1384	0.0221	0.0355
603	SLV 8	2.12	-7.15	59.81	-0.1415	0.0222	0.0429
603	SLV 9	-2.99	6.95	46.3	0.0261	-0.0072	-0.046
603	SLV 10	-3	6.34	46.31	0.0231	-0.0071	-0.0386
603	SLV 11	-3.75	-6.87	48.78	-0.157	-0.0019	0.0399
603	SLV 12	-3.76	-7.48	48.79	-0.16	-0.0018	0.0472
603	SLV 13	-10.12	1.91	34.31	-0.0588	-0.0333	-0.0129
603	SLV 14	-10.13	0.95	34.33	-0.0636	-0.0331	-0.0014
603	SLV 15	-10.35	-2.24	35.05	-0.1137	-0.0317	0.0128
603	SLV 16	-10.36	-3.19	35.07	-0.1185	-0.0315	0.0243
603	CRTFP Ux+	0	0	0	0	0	0
603	CRTFP Ux-	0	0	0	0	0	0
604	SLU 1	-0.42	-0.12	49.05	-0.0542	0.0089	-0.0022
604	SLU 2	-0.42	-0.02	49.06	-0.0527	0.0089	-0.003
604	SLU 3	-0.43	-0.11	50.01	-0.0549	0.0091	-0.0023
604	SLU 4	-0.43	-0.05	50.01	-0.054	0.0091	-0.0028
604	SLU 5	-0.43	-0.02	49.6	-0.0534	0.009	-0.0032
604	SLU 6	-0.44	-0.11	50.55	-0.0555	0.0093	-0.0025
604	SLU 7	-0.44	-0.05	50.55	-0.0546	0.0092	-0.003
604	SLU 8	-0.44	-0.12	50.12	-0.0555	0.0092	-0.0026

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
604	SLU 9	-0.44	-0.06	50.13	-0.0546	0.0092	-0.0031
604	SLU 10	-0.41	-0.01	55.73	-0.0603	0.0091	-0.0037
604	SLU 11	-0.42	-0.1	56.68	-0.0624	0.0093	-0.0029
604	SLU 12	-0.42	-0.05	56.69	-0.0615	0.0093	-0.0034
604	SLU 13	-0.42	-0.01	56.27	-0.0609	0.0093	-0.0038
604	SLU 14	-0.43	-0.1	57.22	-0.063	0.0095	-0.0031
604	SLU 15	-0.43	-0.04	57.22	-0.0621	0.0095	-0.0036
604	SLU 16	-0.43	-0.11	56.79	-0.063	0.0095	-0.0032
604	SLU 17	-0.43	-0.05	56.8	-0.0621	0.0094	-0.0037
604	SLU 18	-0.41	-0.11	58.58	-0.065	0.0092	-0.0031
604	SLU 19	-0.41	-0.05	58.59	-0.0641	0.0092	-0.0036
604	SLU 20	-0.42	-0.11	59.12	-0.0656	0.0094	-0.0033
604	SLU 21	-0.42	-0.05	59.12	-0.0647	0.0094	-0.0038
604	SLU 22	-0.45	-0.1	55.39	-0.0579	0.0095	-0.0024
604	SLU 23	-0.45	0	55.4	-0.0565	0.0095	-0.0032
604	SLU 24	-0.46	-0.09	56.35	-0.0586	0.0097	-0.0024
604	SLU 25	-0.46	-0.03	56.35	-0.0577	0.0097	-0.0029
604	SLU 26	-0.45	0	55.93	-0.0571	0.0096	-0.0033
604	SLU 27	-0.46	-0.09	56.88	-0.0592	0.0098	-0.0026
604	SLU 28	-0.46	-0.03	56.89	-0.0583	0.0098	-0.0031
604	SLU 29	-0.46	-0.09	56.46	-0.0592	0.0098	-0.0027
604	SLU 30	-0.46	-0.03	56.47	-0.0583	0.0098	-0.0032
604	SLU 31	-0.44	0.01	62.07	-0.064	0.0097	-0.0038
604	SLU 32	-0.45	-0.08	63.02	-0.0661	0.0099	-0.003
604	SLU 33	-0.45	-0.02	63.02	-0.0652	0.0099	-0.0035
604	SLU 34	-0.44	0.01	62.6	-0.0646	0.0099	-0.004
604	SLU 35	-0.45	-0.08	63.55	-0.0668	0.0101	-0.0032
604	SLU 36	-0.45	-0.02	63.56	-0.0659	0.0101	-0.0037
604	SLU 37	-0.45	-0.08	63.13	-0.0667	0.01	-0.0033
604	SLU 38	-0.45	-0.02	63.14	-0.0659	0.01	-0.0038
604	SLU 39	-0.43	-0.08	64.92	-0.0687	0.0098	-0.0032
604	SLU 40	-0.43	-0.02	64.92	-0.0678	0.0098	-0.0037
604	SLU 41	-0.44	-0.08	65.45	-0.0693	0.01	-0.0034
604	SLU 42	-0.44	-0.02	65.46	-0.0684	0.01	-0.0039
604	SLU 43	-0.54	-0.17	61.59	-0.0692	0.0114	-0.0029
604	SLU 44	-0.54	-0.07	61.6	-0.0677	0.0113	-0.0037
604	SLU 45	-0.55	-0.16	62.55	-0.0698	0.0116	-0.0029
604	SLU 46	-0.55	-0.1	62.56	-0.069	0.0115	-0.0034
604	SLU 47	-0.55	-0.07	62.14	-0.0684	0.0115	-0.0039
604	SLU 48	-0.56	-0.16	63.09	-0.0705	0.0117	-0.0031
604	SLU 49	-0.56	-0.1	63.09	-0.0696	0.0117	-0.0036
604	SLU 50	-0.55	-0.16	62.67	-0.0705	0.0117	-0.0032
604	SLU 51	-0.55	-0.1	62.67	-0.0696	0.0117	-0.0037
604	SLU 52	-0.53	-0.06	68.27	-0.0752	0.0116	-0.0043
604	SLU 53	-0.54	-0.15	69.22	-0.0774	0.0118	-0.0035
604	SLU 54	-0.54	-0.09	69.23	-0.0765	0.0118	-0.004
604	SLU 55	-0.54	-0.06	68.81	-0.0759	0.0117	-0.0045
604	SLU 56	-0.55	-0.15	69.76	-0.078	0.012	-0.0037
604	SLU 57	-0.55	-0.09	69.76	-0.0771	0.012	-0.0042
604	SLU 58	-0.55	-0.15	69.34	-0.078	0.0119	-0.0038
604	SLU 59	-0.54	-0.09	69.34	-0.0771	0.0119	-0.0043
604	SLU 60	-0.53	-0.15	71.12	-0.0799	0.0117	-0.0037
604	SLU 61	-0.53	-0.09	71.13	-0.0791	0.0117	-0.0042
604	SLU 62	-0.53	-0.15	71.66	-0.0806	0.0119	-0.0039
604	SLU 63	-0.53	-0.09	71.67	-0.0797	0.0119	-0.0044
604	SLU 64	-0.57	-0.14	67.93	-0.0729	0.0119	-0.003
604	SLU 65	-0.56	-0.04	67.94	-0.0714	0.0119	-0.0038
604	SLU 66	-0.57	-0.13	68.89	-0.0736	0.0121	-0.003
604	SLU 67	-0.57	-0.07	68.89	-0.0727	0.0121	-0.0035
604	SLU 68	-0.57	-0.04	68.48	-0.0721	0.0121	-0.004
604	SLU 69	-0.58	-0.13	69.43	-0.0742	0.0123	-0.0032
604	SLU 70	-0.58	-0.07	69.43	-0.0733	0.0123	-0.0037
604	SLU 71	-0.58	-0.14	69	-0.0742	0.0123	-0.0033
604	SLU 72	-0.58	-0.08	69.01	-0.0733	0.0123	-0.0038
604	SLU 73	-0.55	-0.03	74.61	-0.079	0.0122	-0.0044
604	SLU 74	-0.56	-0.12	75.56	-0.0811	0.0124	-0.0037
604	SLU 75	-0.56	-0.06	75.57	-0.0802	0.0124	-0.0041
604	SLU 76	-0.56	-0.03	75.15	-0.0796	0.0123	-0.0046
604	SLU 77	-0.57	-0.12	76.1	-0.0817	0.0126	-0.0038
604	SLU 78	-0.57	-0.06	76.1	-0.0809	0.0125	-0.0043
604	SLU 79	-0.57	-0.13	75.67	-0.0817	0.0125	-0.0039
604	SLU 80	-0.57	-0.07	75.68	-0.0808	0.0125	-0.0044
604	SLU 81	-0.55	-0.13	77.46	-0.0837	0.0123	-0.0039
604	SLU 82	-0.55	-0.07	77.47	-0.0828	0.0123	-0.0044
604	SLU 83	-0.56	-0.13	78	-0.0843	0.0125	-0.004
604	SLU 84	-0.56	-0.07	78	-0.0834	0.0125	-0.0045
604	SLE RA 1	-0.43	-0.11	50.86	-0.0553	0.0091	-0.0023
604	SLE RA 2	-0.43	-0.05	50.87	-0.0543	0.009	-0.0028
604	SLE RA 3	-0.43	-0.11	51.5	-0.0557	0.0092	-0.0023
604	SLE RA 4	-0.43	-0.07	51.5	-0.0551	0.0092	-0.0026
604	SLE RA 5	-0.43	-0.05	51.23	-0.0547	0.0092	-0.0029
604	SLE RA 6	-0.44	-0.11	51.86	-0.0561	0.0093	-0.0024
604	SLE RA 7	-0.44	-0.07	51.86	-0.0555	0.0093	-0.0028
604	SLE RA 8	-0.44	-0.11	51.58	-0.0561	0.0093	-0.0025
604	SLE RA 9	-0.44	-0.07	51.58	-0.0555	0.0093	-0.0028
604	SLE RA 10	-0.42	-0.04	55.32	-0.0593	0.0092	-0.0032
604	SLE RA 11	-0.43	-0.1	55.95	-0.0607	0.0094	-0.0027
604	SLE RA 12	-0.43	-0.06	55.95	-0.0601	0.0094	-0.003
604	SLE RA 13	-0.43	-0.04	55.67	-0.0597	0.0093	-0.0033
604	SLE RA 14	-0.43	-0.1	56.31	-0.0612	0.0095	-0.0028
604	SLE RA 15	-0.43	-0.06	56.31	-0.0606	0.0095	-0.0032

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
604	SLE RA 16	-0.43	-0.11	56.02	-0.0611	0.0094	-0.0029
604	SLE RA 17	-0.43	-0.07	56.03	-0.0606	0.0094	-0.0032
604	SLE RA 18	-0.42	-0.1	57.22	-0.0624	0.0093	-0.0029
604	SLE RA 19	-0.42	-0.07	57.22	-0.0619	0.0093	-0.0032
604	SLE RA 20	-0.42	-0.1	57.57	-0.0629	0.0094	-0.003
604	SLE RA 21	-0.42	-0.06	57.58	-0.0623	0.0094	-0.0033
604	SLE FR 1	-0.43	-0.11	50.86	-0.0553	0.0091	-0.0023
604	SLE FR 2	-0.43	-0.1	50.86	-0.0551	0.0091	-0.0024
604	SLE FR 3	-0.43	-0.11	51	-0.0554	0.0091	-0.0023
604	SLE FR 4	-0.43	-0.1	52.77	-0.0572	0.0091	-0.0026
604	SLE FR 5	-0.43	-0.11	52.91	-0.0576	0.0092	-0.0025
604	SLE FR 6	-0.42	-0.11	54.04	-0.0589	0.0092	-0.0026
604	SLE QP 1	-0.43	-0.11	50.86	-0.0553	0.0091	-0.0023
604	SLE QP 2	-0.43	-0.11	52.77	-0.0574	0.0091	-0.0024
604	SLD 1	3.82	1.18	59.87	-0.0305	0.0259	-0.0128
604	SLD 2	3.81	0.8	59.88	-0.0327	0.026	-0.0082
604	SLD 3	3.72	-0.58	60.19	-0.0556	0.0264	-0.003
604	SLD 4	3.72	-0.97	60.19	-0.0578	0.0265	0.0016
604	SLD 5	0.99	3.02	54.41	-0.0108	0.0133	-0.0213
604	SLD 6	0.99	2.77	54.42	-0.0122	0.0133	-0.0183
604	SLD 7	0.67	-2.86	55.48	-0.0947	0.0152	0.0115
604	SLD 8	0.67	-3.11	55.48	-0.0961	0.0152	0.0145
604	SLD 9	-1.52	2.89	50.06	-0.0188	0.003	-0.0194
604	SLD 10	-1.52	2.64	50.06	-0.0202	0.0031	-0.0164
604	SLD 11	-1.85	-2.99	51.12	-0.1026	0.0049	0.0134
604	SLD 12	-1.85	-3.24	51.12	-0.1041	0.005	0.0164
604	SLD 13	-4.57	0.75	45.34	-0.057	-0.0083	-0.0065
604	SLD 14	-4.57	0.36	45.35	-0.0592	-0.0082	-0.0019
604	SLD 15	-4.67	-1.02	45.66	-0.0822	-0.0077	0.0033
604	SLD 16	-4.67	-1.41	45.67	-0.0844	-0.0076	0.008
604	SLV 1	9.5	2.87	69.38	0.0066	0.0483	-0.0265
604	SLV 2	9.49	1.97	69.4	0.0015	0.0485	-0.0157
604	SLV 3	9.27	-1.16	70.13	-0.0507	0.0496	-0.0041
604	SLV 4	9.26	-2.06	70.14	-0.0558	0.0498	0.0067
604	SLV 5	2.9	7.04	56.62	0.0495	0.0189	-0.0454
604	SLV 6	2.89	6.47	56.63	0.0462	0.019	-0.0386
604	SLV 7	2.14	-6.38	59.1	-0.1414	0.0232	0.0292
604	SLV 8	2.13	-6.96	59.11	-0.1446	0.0234	0.0361
604	SLV 9	-2.99	6.74	46.42	0.0298	-0.0051	-0.041
604	SLV 10	-2.99	6.16	46.43	0.0265	-0.005	-0.0341
604	SLV 11	-3.74	-6.69	48.91	-0.1611	-0.0007	0.0337
604	SLV 12	-3.75	-7.27	48.92	-0.1643	-0.0006	0.0406
604	SLV 13	-10.11	1.84	35.39	-0.0591	-0.0315	-0.0115
604	SLV 14	-10.12	0.94	35.41	-0.0642	-0.0314	-0.0008
604	SLV 15	-10.34	-2.19	36.14	-0.1163	-0.0302	0.0109
604	SLV 16	-10.35	-3.09	36.15	-0.1214	-0.0301	0.0216
604	CRTFP Ux+	0	0	0	0	0	0
604	CRTFP Ux-	0	0	0	0	0	0
605	SLU 1	-0.41	-0.13	48.72	-0.0542	0.0103	-0.0029
605	SLU 2	-0.41	-0.04	48.73	-0.0527	0.0103	-0.0036
605	SLU 3	-0.42	-0.13	49.67	-0.0548	0.0106	-0.0029
605	SLU 4	-0.42	-0.07	49.68	-0.0539	0.0106	-0.0033
605	SLU 5	-0.42	-0.04	49.26	-0.0533	0.0105	-0.0037
605	SLU 6	-0.43	-0.13	50.2	-0.0554	0.0107	-0.0031
605	SLU 7	-0.43	-0.07	50.21	-0.0545	0.0107	-0.0035
605	SLU 8	-0.43	-0.13	49.78	-0.0555	0.0107	-0.0032
605	SLU 9	-0.43	-0.08	49.79	-0.0545	0.0107	-0.0036
605	SLU 10	-0.4	-0.03	55.39	-0.0601	0.0109	-0.0042
605	SLU 11	-0.41	-0.12	56.33	-0.0623	0.0111	-0.0035
605	SLU 12	-0.41	-0.06	56.34	-0.0613	0.0111	-0.004
605	SLU 13	-0.41	-0.03	55.92	-0.0608	0.0111	-0.0044
605	SLU 14	-0.42	-0.12	56.86	-0.0629	0.0113	-0.0037
605	SLU 15	-0.42	-0.06	56.87	-0.062	0.0113	-0.0041
605	SLU 16	-0.42	-0.13	56.44	-0.0629	0.0112	-0.0038
605	SLU 17	-0.42	-0.07	56.45	-0.062	0.0112	-0.0042
605	SLU 18	-0.4	-0.12	58.23	-0.0648	0.0111	-0.0037
605	SLU 19	-0.4	-0.07	58.24	-0.0639	0.0111	-0.0042
605	SLU 20	-0.41	-0.12	58.76	-0.0655	0.0113	-0.0039
605	SLU 21	-0.41	-0.07	58.77	-0.0645	0.0113	-0.0043
605	SLU 22	-0.44	-0.11	55.03	-0.0577	0.0112	-0.003
605	SLU 23	-0.44	-0.01	55.04	-0.0562	0.0112	-0.0037
605	SLU 24	-0.45	-0.1	55.98	-0.0583	0.0114	-0.003
605	SLU 25	-0.45	-0.04	55.99	-0.0574	0.0114	-0.0035
605	SLU 26	-0.44	-0.01	55.57	-0.0568	0.0114	-0.0039
605	SLU 27	-0.45	-0.1	56.52	-0.059	0.0116	-0.0032
605	SLU 28	-0.45	-0.04	56.52	-0.0581	0.0116	-0.0036
605	SLU 29	-0.45	-0.11	56.09	-0.059	0.0115	-0.0033
605	SLU 30	-0.45	-0.05	56.1	-0.0581	0.0115	-0.0038
605	SLU 31	-0.43	-0.01	61.7	-0.0636	0.0117	-0.0043
605	SLU 32	-0.44	-0.09	62.64	-0.0658	0.012	-0.0036
605	SLU 33	-0.44	-0.04	62.65	-0.0649	0.012	-0.0041
605	SLU 34	-0.44	-0.01	62.23	-0.0643	0.0119	-0.0045
605	SLU 35	-0.44	-0.09	63.17	-0.0664	0.0121	-0.0038
605	SLU 36	-0.44	-0.04	63.18	-0.0655	0.0121	-0.0042
605	SLU 37	-0.44	-0.1	62.75	-0.0664	0.0121	-0.0039
605	SLU 38	-0.44	-0.04	62.76	-0.0655	0.0121	-0.0044
605	SLU 39	-0.42	-0.1	64.54	-0.0683	0.012	-0.0038
605	SLU 40	-0.42	-0.04	64.55	-0.0674	0.012	-0.0043
605	SLU 41	-0.43	-0.1	65.07	-0.069	0.0122	-0.004
605	SLU 42	-0.43	-0.04	65.08	-0.0681	0.0122	-0.0044
605	SLU 43	-0.53	-0.18	61.17	-0.0692	0.0132	-0.0037

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
605	SLU 44	-0.53	-0.09	61.18	-0.0677	0.0131	-0.0044
605	SLU 45	-0.54	-0.18	62.12	-0.0698	0.0134	-0.0037
605	SLU 46	-0.54	-0.12	62.13	-0.0689	0.0134	-0.0042
605	SLU 47	-0.54	-0.09	61.71	-0.0683	0.0133	-0.0046
605	SLU 48	-0.54	-0.17	62.65	-0.0705	0.0135	-0.0039
605	SLU 49	-0.54	-0.12	62.66	-0.0696	0.0135	-0.0043
605	SLU 50	-0.54	-0.18	62.23	-0.0705	0.0135	-0.004
605	SLU 51	-0.54	-0.12	62.24	-0.0696	0.0135	-0.0045
605	SLU 52	-0.52	-0.08	67.84	-0.0752	0.0137	-0.005
605	SLU 53	-0.53	-0.17	68.78	-0.0773	0.0139	-0.0043
605	SLU 54	-0.53	-0.11	68.79	-0.0764	0.0139	-0.0048
605	SLU 55	-0.53	-0.08	68.37	-0.0758	0.0139	-0.0052
605	SLU 56	-0.53	-0.17	69.31	-0.0779	0.0141	-0.0045
605	SLU 57	-0.53	-0.11	69.32	-0.077	0.0141	-0.0049
605	SLU 58	-0.53	-0.17	68.89	-0.0779	0.014	-0.0046
605	SLU 59	-0.53	-0.12	68.9	-0.077	0.014	-0.0051
605	SLU 60	-0.52	-0.17	70.68	-0.0799	0.0139	-0.0045
605	SLU 61	-0.52	-0.12	70.69	-0.0789	0.0139	-0.005
605	SLU 62	-0.52	-0.17	71.21	-0.0805	0.0141	-0.0047
605	SLU 63	-0.52	-0.12	71.22	-0.0796	0.0141	-0.0051
605	SLU 64	-0.55	-0.16	67.49	-0.0727	0.014	-0.0038
605	SLU 65	-0.55	-0.06	67.5	-0.0712	0.014	-0.0045
605	SLU 66	-0.56	-0.15	68.44	-0.0734	0.0142	-0.0039
605	SLU 67	-0.56	-0.09	68.44	-0.0725	0.0142	-0.0043
605	SLU 68	-0.56	-0.06	68.03	-0.0719	0.0142	-0.0047
605	SLU 69	-0.57	-0.15	68.97	-0.074	0.0144	-0.004
605	SLU 70	-0.57	-0.09	68.97	-0.0731	0.0144	-0.0045
605	SLU 71	-0.57	-0.16	68.55	-0.074	0.0144	-0.0042
605	SLU 72	-0.57	-0.1	68.55	-0.0731	0.0143	-0.0046
605	SLU 73	-0.54	-0.06	74.15	-0.0787	0.0146	-0.0051
605	SLU 74	-0.55	-0.14	75.09	-0.0808	0.0148	-0.0045
605	SLU 75	-0.55	-0.09	75.1	-0.0799	0.0148	-0.0049
605	SLU 76	-0.55	-0.06	74.68	-0.0793	0.0147	-0.0053
605	SLU 77	-0.56	-0.14	75.62	-0.0815	0.015	-0.0046
605	SLU 78	-0.56	-0.09	75.63	-0.0806	0.015	-0.0051
605	SLU 79	-0.56	-0.15	75.2	-0.0815	0.0149	-0.0048
605	SLU 80	-0.56	-0.09	75.21	-0.0806	0.0149	-0.0052
605	SLU 81	-0.54	-0.15	77	-0.0834	0.0148	-0.0047
605	SLU 82	-0.54	-0.09	77	-0.0825	0.0148	-0.0051
605	SLU 83	-0.55	-0.15	77.53	-0.084	0.015	-0.0048
605	SLU 84	-0.55	-0.09	77.53	-0.0831	0.015	-0.0053
605	SLE RA 1	-0.42	-0.13	50.52	-0.0552	0.0106	-0.0029
605	SLE RA 2	-0.42	-0.06	50.53	-0.0542	0.0106	-0.0034
605	SLE RA 3	-0.43	-0.12	51.16	-0.0556	0.0107	-0.0029
605	SLE RA 4	-0.43	-0.08	51.16	-0.055	0.0107	-0.0032
605	SLE RA 5	-0.42	-0.06	50.88	-0.0546	0.0107	-0.0035
605	SLE RA 6	-0.43	-0.12	51.51	-0.056	0.0109	-0.0031
605	SLE RA 7	-0.43	-0.08	51.52	-0.0554	0.0108	-0.0033
605	SLE RA 8	-0.43	-0.13	51.23	-0.056	0.0108	-0.0031
605	SLE RA 9	-0.43	-0.09	51.24	-0.0554	0.0108	-0.0034
605	SLE RA 10	-0.41	-0.06	54.97	-0.0591	0.011	-0.0038
605	SLE RA 11	-0.42	-0.12	55.6	-0.0606	0.0111	-0.0033
605	SLE RA 12	-0.42	-0.08	55.6	-0.06	0.0111	-0.0036
605	SLE RA 13	-0.42	-0.06	55.32	-0.0596	0.0111	-0.0039
605	SLE RA 14	-0.42	-0.12	55.95	-0.061	0.0112	-0.0035
605	SLE RA 15	-0.42	-0.08	55.95	-0.0604	0.0112	-0.0037
605	SLE RA 16	-0.42	-0.12	55.67	-0.061	0.0112	-0.0035
605	SLE RA 17	-0.42	-0.08	55.67	-0.0604	0.0112	-0.0038
605	SLE RA 18	-0.41	-0.12	56.87	-0.0623	0.0111	-0.0035
605	SLE RA 19	-0.41	-0.08	56.87	-0.0617	0.0111	-0.0038
605	SLE RA 20	-0.42	-0.12	57.22	-0.0627	0.0112	-0.0036
605	SLE RA 21	-0.42	-0.08	57.22	-0.0621	0.0112	-0.0039
605	SLE FR 1	-0.42	-0.13	50.52	-0.0552	0.0106	-0.0029
605	SLE FR 2	-0.42	-0.11	50.53	-0.055	0.0106	-0.003
605	SLE FR 3	-0.42	-0.13	50.67	-0.0553	0.0106	-0.0029
605	SLE FR 4	-0.42	-0.11	52.43	-0.0571	0.0107	-0.0032
605	SLE FR 5	-0.42	-0.12	52.57	-0.0575	0.0108	-0.0031
605	SLE FR 6	-0.42	-0.12	53.7	-0.0587	0.0109	-0.0032
605	SLE QP 1	-0.42	-0.13	50.52	-0.0552	0.0106	-0.0029
605	SLE QP 2	-0.42	-0.13	52.43	-0.0573	0.0108	-0.0031
605	SLD 1	3.83	1.12	58.95	-0.0289	0.0275	-0.0125
605	SLD 2	3.82	0.76	58.95	-0.0313	0.0275	-0.0083
605	SLD 3	3.73	-0.6	59.26	-0.0551	0.0279	-0.0043
605	SLD 4	3.73	-0.96	59.27	-0.0574	0.028	-0.0001
605	SLD 5	1	2.92	53.9	-0.0087	0.015	-0.0191
605	SLD 6	1	2.69	53.91	-0.0103	0.0151	-0.0163
605	SLD 7	0.68	-2.81	54.96	-0.0959	0.0166	0.0082
605	SLD 8	0.68	-3.05	54.96	-0.0974	0.0167	0.011
605	SLD 9	-1.51	2.8	49.9	-0.0172	0.0048	-0.0171
605	SLD 10	-1.52	2.56	49.9	-0.0187	0.0049	-0.0144
605	SLD 11	-1.84	-2.94	50.95	-0.1044	0.0064	0.0102
605	SLD 12	-1.84	-3.17	50.95	-0.1059	0.0065	0.0129
605	SLD 13	-4.56	0.71	45.59	-0.0572	-0.0065	-0.0061
605	SLD 14	-4.56	0.35	45.59	-0.0595	-0.0064	-0.0018
605	SLD 15	-4.66	-1.01	45.9	-0.0834	-0.006	0.0021
605	SLD 16	-4.66	-1.38	45.91	-0.0857	-0.006	0.0064
605	SLV 1	9.51	2.75	67.69	0.01	0.0499	-0.025
605	SLV 2	9.5	1.9	67.7	0.0046	0.05	-0.015
605	SLV 3	9.28	-1.18	68.42	-0.0494	0.051	-0.0063
605	SLV 4	9.27	-2.03	68.43	-0.0548	0.0511	0.0036
605	SLV 5	2.9	6.84	55.88	0.054	0.0208	-0.0396

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
605	SLV 6	2.9	6.3	55.89	0.0506	0.0209	-0.0333
605	SLV 7	2.15	-6.25	58.34	-0.1442	0.0245	0.0226
605	SLV 8	2.14	-6.8	58.35	-0.1477	0.0246	0.0289
605	SLV 9	-2.98	6.54	46.51	0.033	-0.0031	-0.0351
605	SLV 10	-2.99	6	46.51	0.0296	-0.003	-0.0287
605	SLV 11	-3.73	-6.55	48.96	-0.1652	0.0006	0.0271
605	SLV 12	-3.74	-7.09	48.97	-0.1686	0.0007	0.0335
605	SLV 13	-10.11	1.78	36.42	-0.0598	-0.0296	-0.0098
605	SLV 14	-10.12	0.93	36.43	-0.0652	-0.0295	0.0002
605	SLV 15	-10.33	-2.15	37.16	-0.1193	-0.0285	0.0089
605	SLV 16	-10.34	-3	37.17	-0.1246	-0.0284	0.0188
605	CRTFP Ux+	0	0	0	0	0	0
605	CRTFP Ux-	0	0	0	0	0	0
606	SLU 1	-0.4	-0.15	48.34	-0.0542	0.0119	-0.0032
606	SLU 2	-0.4	-0.06	48.35	-0.0527	0.0118	-0.0038
606	SLU 3	-0.41	-0.14	49.28	-0.0549	0.0121	-0.0033
606	SLU 4	-0.41	-0.09	49.29	-0.0539	0.0121	-0.0037
606	SLU 5	-0.41	-0.06	48.88	-0.0533	0.012	-0.004
606	SLU 6	-0.42	-0.14	49.81	-0.0555	0.0123	-0.0035
606	SLU 7	-0.42	-0.09	49.81	-0.0546	0.0123	-0.0038
606	SLU 8	-0.42	-0.15	49.39	-0.0555	0.0122	-0.0036
606	SLU 9	-0.42	-0.1	49.4	-0.0546	0.0122	-0.0039
606	SLU 10	-0.39	-0.06	54.98	-0.0601	0.0127	-0.0044
606	SLU 11	-0.4	-0.14	55.92	-0.0622	0.013	-0.0038
606	SLU 12	-0.4	-0.08	55.92	-0.0613	0.013	-0.0042
606	SLU 13	-0.4	-0.06	55.51	-0.0607	0.0129	-0.0046
606	SLU 14	-0.41	-0.14	56.44	-0.0629	0.0132	-0.004
606	SLU 15	-0.41	-0.08	56.45	-0.062	0.0132	-0.0044
606	SLU 16	-0.41	-0.15	56.02	-0.0629	0.0131	-0.0041
606	SLU 17	-0.41	-0.09	56.03	-0.062	0.0131	-0.0045
606	SLU 18	-0.39	-0.14	57.82	-0.0648	0.0131	-0.004
606	SLU 19	-0.39	-0.09	57.82	-0.0639	0.0131	-0.0044
606	SLU 20	-0.4	-0.14	58.34	-0.0654	0.0133	-0.0042
606	SLU 21	-0.4	-0.09	58.35	-0.0645	0.0133	-0.0046
606	SLU 22	-0.43	-0.13	54.62	-0.0576	0.013	-0.0033
606	SLU 23	-0.43	-0.03	54.63	-0.056	0.013	-0.0039
606	SLU 24	-0.44	-0.12	55.56	-0.0582	0.0132	-0.0034
606	SLU 25	-0.44	-0.06	55.57	-0.0573	0.0132	-0.0037
606	SLU 26	-0.43	-0.03	55.15	-0.0567	0.0132	-0.0041
606	SLU 27	-0.44	-0.12	56.09	-0.0588	0.0134	-0.0036
606	SLU 28	-0.44	-0.06	56.09	-0.0579	0.0134	-0.0039
606	SLU 29	-0.44	-0.12	55.67	-0.0589	0.0134	-0.0037
606	SLU 30	-0.44	-0.07	55.67	-0.0579	0.0134	-0.004
606	SLU 31	-0.42	-0.03	61.26	-0.0634	0.0139	-0.0045
606	SLU 32	-0.43	-0.11	62.2	-0.0656	0.0141	-0.0039
606	SLU 33	-0.43	-0.06	62.2	-0.0646	0.0141	-0.0043
606	SLU 34	-0.43	-0.03	61.79	-0.0641	0.0141	-0.0046
606	SLU 35	-0.43	-0.11	62.72	-0.0662	0.0143	-0.0041
606	SLU 36	-0.43	-0.06	62.73	-0.0653	0.0143	-0.0045
606	SLU 37	-0.43	-0.12	62.3	-0.0663	0.0142	-0.0042
606	SLU 38	-0.43	-0.07	62.31	-0.0653	0.0142	-0.0046
606	SLU 39	-0.41	-0.12	64.1	-0.0681	0.0143	-0.0041
606	SLU 40	-0.41	-0.07	64.1	-0.0672	0.0143	-0.0045
606	SLU 41	-0.42	-0.12	64.62	-0.0688	0.0144	-0.0043
606	SLU 42	-0.42	-0.07	64.63	-0.0678	0.0144	-0.0046
606	SLU 43	-0.52	-0.2	60.69	-0.0694	0.015	-0.0042
606	SLU 44	-0.52	-0.11	60.7	-0.0678	0.015	-0.0048
606	SLU 45	-0.52	-0.2	61.63	-0.07	0.0153	-0.0042
606	SLU 46	-0.52	-0.14	61.64	-0.0691	0.0153	-0.0046
606	SLU 47	-0.52	-0.11	61.23	-0.0685	0.0152	-0.005
606	SLU 48	-0.53	-0.2	62.16	-0.0706	0.0154	-0.0044
606	SLU 49	-0.53	-0.14	62.16	-0.0697	0.0154	-0.0048
606	SLU 50	-0.53	-0.2	61.74	-0.0707	0.0154	-0.0045
606	SLU 51	-0.53	-0.15	61.75	-0.0697	0.0154	-0.0049
606	SLU 52	-0.51	-0.11	67.33	-0.0752	0.0159	-0.0053
606	SLU 53	-0.51	-0.19	68.27	-0.0774	0.0161	-0.0048
606	SLU 54	-0.51	-0.14	68.27	-0.0764	0.0161	-0.0051
606	SLU 55	-0.51	-0.11	67.86	-0.0759	0.0161	-0.0055
606	SLU 56	-0.52	-0.19	68.79	-0.078	0.0163	-0.005
606	SLU 57	-0.52	-0.14	68.8	-0.0771	0.0163	-0.0053
606	SLU 58	-0.52	-0.2	68.37	-0.078	0.0163	-0.0051
606	SLU 59	-0.52	-0.14	68.38	-0.0771	0.0163	-0.0054
606	SLU 60	-0.5	-0.2	70.17	-0.0799	0.0163	-0.005
606	SLU 61	-0.5	-0.14	70.17	-0.079	0.0163	-0.0053
606	SLU 62	-0.51	-0.2	70.69	-0.0806	0.0165	-0.0051
606	SLU 63	-0.51	-0.14	70.7	-0.0796	0.0165	-0.0055
606	SLU 64	-0.54	-0.18	66.97	-0.0727	0.0162	-0.0043
606	SLU 65	-0.54	-0.09	66.98	-0.0711	0.0162	-0.0049
606	SLU 66	-0.55	-0.17	67.91	-0.0733	0.0164	-0.0043
606	SLU 67	-0.55	-0.12	67.92	-0.0724	0.0164	-0.0047
606	SLU 68	-0.55	-0.09	67.5	-0.0718	0.0163	-0.005
606	SLU 69	-0.55	-0.17	68.44	-0.074	0.0166	-0.0045
606	SLU 70	-0.55	-0.12	68.44	-0.073	0.0166	-0.0049
606	SLU 71	-0.55	-0.18	68.02	-0.074	0.0165	-0.0046
606	SLU 72	-0.55	-0.12	68.02	-0.0731	0.0165	-0.005
606	SLU 73	-0.53	-0.08	73.61	-0.0785	0.017	-0.0054
606	SLU 74	-0.54	-0.17	74.55	-0.0807	0.0173	-0.0049
606	SLU 75	-0.54	-0.11	74.55	-0.0798	0.0173	-0.0052
606	SLU 76	-0.54	-0.08	74.14	-0.0792	0.0172	-0.0056
606	SLU 77	-0.55	-0.17	75.07	-0.0814	0.0175	-0.005
606	SLU 78	-0.55	-0.11	75.08	-0.0804	0.0175	-0.0054

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
606	SLU 79	-0.54	-0.17	74.65	-0.0814	0.0174	-0.0052
606	SLU 80	-0.54	-0.12	74.66	-0.0804	0.0174	-0.0055
606	SLU 81	-0.53	-0.17	76.44	-0.0833	0.0174	-0.0051
606	SLU 82	-0.53	-0.12	76.45	-0.0823	0.0174	-0.0054
606	SLU 83	-0.53	-0.17	76.97	-0.0839	0.0176	-0.0052
606	SLU 84	-0.53	-0.12	76.98	-0.083	0.0176	-0.0056
606	SLE RA 1	-0.41	-0.14	50.13	-0.0552	0.0122	-0.0033
606	SLE RA 2	-0.41	-0.08	50.14	-0.0542	0.0122	-0.0037
606	SLE RA 3	-0.42	-0.14	50.76	-0.0556	0.0123	-0.0033
606	SLE RA 4	-0.42	-0.1	50.77	-0.055	0.0123	-0.0035
606	SLE RA 5	-0.41	-0.08	50.49	-0.0546	0.0123	-0.0038
606	SLE RA 6	-0.42	-0.14	51.11	-0.056	0.0125	-0.0034
606	SLE RA 7	-0.42	-0.1	51.12	-0.0554	0.0125	-0.0037
606	SLE RA 8	-0.42	-0.14	50.83	-0.056	0.0124	-0.0035
606	SLE RA 9	-0.42	-0.11	50.84	-0.0554	0.0124	-0.0037
606	SLE RA 10	-0.4	-0.08	54.56	-0.0591	0.0128	-0.004
606	SLE RA 11	-0.41	-0.14	55.19	-0.0605	0.0129	-0.0037
606	SLE RA 12	-0.41	-0.1	55.19	-0.0599	0.0129	-0.0039
606	SLE RA 13	-0.41	-0.08	54.91	-0.0595	0.0129	-0.0041
606	SLE RA 14	-0.41	-0.14	55.54	-0.061	0.0131	-0.0038
606	SLE RA 15	-0.41	-0.1	55.54	-0.0603	0.013	-0.004
606	SLE RA 16	-0.41	-0.14	55.26	-0.061	0.013	-0.0039
606	SLE RA 17	-0.41	-0.1	55.26	-0.0604	0.013	-0.0041
606	SLE RA 18	-0.4	-0.14	56.45	-0.0622	0.013	-0.0038
606	SLE RA 19	-0.4	-0.1	56.46	-0.0616	0.013	-0.004
606	SLE RA 20	-0.41	-0.14	56.8	-0.0627	0.0131	-0.0039
606	SLE RA 21	-0.41	-0.1	56.81	-0.062	0.0131	-0.0041
606	SLE FR 1	-0.41	-0.14	50.13	-0.0552	0.0122	-0.0033
606	SLE FR 2	-0.41	-0.13	50.14	-0.055	0.0122	-0.0033
606	SLE FR 3	-0.41	-0.14	50.27	-0.0554	0.0122	-0.0033
606	SLE FR 4	-0.41	-0.13	52.03	-0.0571	0.0124	-0.0035
606	SLE FR 5	-0.41	-0.14	52.17	-0.0575	0.0125	-0.0035
606	SLE FR 6	-0.41	-0.14	53.29	-0.0587	0.0126	-0.0035
606	SLE QP 1	-0.41	-0.14	50.13	-0.0552	0.0122	-0.0033
606	SLE QP 2	-0.41	-0.14	52.03	-0.0573	0.0124	-0.0034
606	SLD 1	3.84	1.07	57.98	-0.0275	0.0289	-0.0119
606	SLD 2	3.83	0.73	57.98	-0.0299	0.029	-0.0079
606	SLD 3	3.74	-0.62	58.29	-0.0545	0.0294	-0.0054
606	SLD 4	3.74	-0.96	58.29	-0.057	0.0294	-0.0015
606	SLD 5	1.01	2.84	53.35	-0.0069	0.0167	-0.0165
606	SLD 6	1.01	2.61	53.35	-0.0085	0.0167	-0.0139
606	SLD 7	0.69	-2.78	54.37	-0.0971	0.0182	0.0051
606	SLD 8	0.69	-3	54.37	-0.0987	0.0182	0.0077
606	SLD 9	-1.5	2.72	49.69	-0.0159	0.0066	-0.0145
606	SLD 10	-1.51	2.5	49.69	-0.0175	0.0067	-0.012
606	SLD 11	-1.83	-2.9	50.71	-0.1061	0.0082	0.0071
606	SLD 12	-1.83	-3.12	50.71	-0.1077	0.0082	0.0096
606	SLD 13	-4.55	0.68	45.77	-0.0576	-0.0046	-0.0054
606	SLD 14	-4.55	0.33	45.77	-0.0601	-0.0045	-0.0015
606	SLD 15	-4.65	-1.01	46.08	-0.0847	-0.0041	0.0011
606	SLD 16	-4.65	-1.35	46.08	-0.0871	-0.0041	0.005
606	SLV 1	9.52	2.64	65.95	0.0135	0.051	-0.023
606	SLV 2	9.51	1.84	65.95	0.0079	0.0511	-0.0139
606	SLV 3	9.29	-1.2	66.67	-0.048	0.0521	-0.0082
606	SLV 4	9.28	-2	66.67	-0.0537	0.0522	0.001
606	SLV 5	2.91	6.66	55.11	0.0583	0.0224	-0.0333
606	SLV 6	2.91	6.15	55.12	0.0547	0.0224	-0.0275
606	SLV 7	2.16	-6.16	57.51	-0.1469	0.0259	0.016
606	SLV 8	2.16	-6.67	57.51	-0.1506	0.026	0.0219
606	SLV 9	-2.97	6.38	46.55	0.036	-0.0011	-0.0288
606	SLV 10	-2.98	5.87	46.55	0.0323	-0.0011	-0.0229
606	SLV 11	-3.72	-6.43	48.94	-0.1693	0.0024	0.0206
606	SLV 12	-3.73	-6.94	48.94	-0.1729	0.0025	0.0265
606	SLV 13	-10.1	1.72	37.39	-0.0609	-0.0273	-0.0078
606	SLV 14	-10.11	0.92	37.39	-0.0666	-0.0272	0.0014
606	SLV 15	-10.32	-2.13	38.11	-0.1225	-0.0263	0.007
606	SLV 16	-10.33	-2.93	38.11	-0.1281	-0.0262	0.0162
606	CRTFP Ux+	0	0	0	0	0	0
606	CRTFP Ux-	0	0	0	0	0	0
607	SLU 1	-0.39	-0.17	47.91	-0.0544	0.0134	-0.0034
607	SLU 2	-0.39	-0.08	47.92	-0.0528	0.0134	-0.0039
607	SLU 3	-0.4	-0.16	48.84	-0.055	0.0137	-0.0034
607	SLU 4	-0.4	-0.11	48.85	-0.0541	0.0137	-0.0037
607	SLU 5	-0.4	-0.08	48.44	-0.0535	0.0136	-0.004
607	SLU 6	-0.41	-0.16	49.36	-0.0557	0.0139	-0.0036
607	SLU 7	-0.41	-0.11	49.37	-0.0547	0.0139	-0.0039
607	SLU 8	-0.4	-0.17	48.94	-0.0557	0.0138	-0.0037
607	SLU 9	-0.4	-0.11	48.95	-0.0547	0.0138	-0.004
607	SLU 10	-0.38	-0.08	54.52	-0.0602	0.0146	-0.0043
607	SLU 11	-0.39	-0.16	55.44	-0.0624	0.0149	-0.0039
607	SLU 12	-0.39	-0.11	55.45	-0.0614	0.0149	-0.0042
607	SLU 13	-0.39	-0.08	55.03	-0.0608	0.0148	-0.0045
607	SLU 14	-0.4	-0.16	55.96	-0.063	0.0151	-0.004
607	SLU 15	-0.4	-0.11	55.96	-0.0621	0.0151	-0.0043
607	SLU 16	-0.4	-0.17	55.54	-0.0631	0.015	-0.0042
607	SLU 17	-0.39	-0.11	55.55	-0.0621	0.015	-0.0044
607	SLU 18	-0.38	-0.16	57.33	-0.0649	0.0152	-0.004
607	SLU 19	-0.38	-0.11	57.34	-0.064	0.0152	-0.0043
607	SLU 20	-0.38	-0.17	57.85	-0.0656	0.0153	-0.0042
607	SLU 21	-0.38	-0.11	57.86	-0.0646	0.0153	-0.0045
607	SLU 22	-0.42	-0.14	54.14	-0.0576	0.0149	-0.0034

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
607	SLU 23	-0.42	-0.05	54.15	-0.056	0.0149	-0.0039
607	SLU 24	-0.42	-0.13	55.08	-0.0582	0.0151	-0.0035
607	SLU 25	-0.42	-0.08	55.08	-0.0572	0.0151	-0.0037
607	SLU 26	-0.42	-0.05	54.67	-0.0566	0.0151	-0.004
607	SLU 27	-0.43	-0.14	55.59	-0.0588	0.0153	-0.0036
607	SLU 28	-0.43	-0.08	55.6	-0.0579	0.0153	-0.0039
607	SLU 29	-0.43	-0.14	55.18	-0.0589	0.0152	-0.0037
607	SLU 30	-0.43	-0.09	55.18	-0.0579	0.0152	-0.004
607	SLU 31	-0.41	-0.05	60.75	-0.0633	0.0161	-0.0043
607	SLU 32	-0.41	-0.13	61.67	-0.0655	0.0164	-0.0039
607	SLU 33	-0.41	-0.08	61.68	-0.0646	0.0164	-0.0042
607	SLU 34	-0.41	-0.05	61.27	-0.064	0.0163	-0.0045
607	SLU 35	-0.42	-0.13	62.19	-0.0662	0.0165	-0.0041
607	SLU 36	-0.42	-0.08	62.2	-0.0652	0.0166	-0.0043
607	SLU 37	-0.42	-0.14	61.77	-0.0662	0.0165	-0.0042
607	SLU 38	-0.42	-0.09	61.78	-0.0653	0.0165	-0.0045
607	SLU 39	-0.4	-0.14	63.57	-0.0681	0.0166	-0.0041
607	SLU 40	-0.4	-0.09	63.57	-0.0671	0.0166	-0.0043
607	SLU 41	-0.41	-0.14	64.08	-0.0687	0.0168	-0.0042
607	SLU 42	-0.41	-0.09	64.09	-0.0678	0.0168	-0.0045
607	SLU 43	-0.5	-0.22	60.14	-0.0696	0.0169	-0.0044
607	SLU 44	-0.5	-0.14	60.15	-0.0681	0.0169	-0.0049
607	SLU 45	-0.51	-0.22	61.08	-0.0703	0.0172	-0.0044
607	SLU 46	-0.51	-0.16	61.08	-0.0693	0.0172	-0.0047
607	SLU 47	-0.51	-0.14	60.67	-0.0687	0.0171	-0.005
607	SLU 48	-0.51	-0.22	61.6	-0.0709	0.0174	-0.0046
607	SLU 49	-0.51	-0.17	61.6	-0.0699	0.0174	-0.0049
607	SLU 50	-0.51	-0.23	61.18	-0.0709	0.0173	-0.0047
607	SLU 51	-0.51	-0.17	61.19	-0.07	0.0173	-0.005
607	SLU 52	-0.49	-0.14	66.75	-0.0754	0.0182	-0.0053
607	SLU 53	-0.5	-0.22	67.68	-0.0776	0.0184	-0.0049
607	SLU 54	-0.5	-0.16	67.68	-0.0766	0.0184	-0.0052
607	SLU 55	-0.5	-0.14	67.27	-0.0761	0.0183	-0.0055
607	SLU 56	-0.5	-0.22	68.19	-0.0782	0.0186	-0.005
607	SLU 57	-0.5	-0.16	68.2	-0.0773	0.0186	-0.0053
607	SLU 58	-0.5	-0.23	67.78	-0.0783	0.0185	-0.0052
607	SLU 59	-0.5	-0.17	67.78	-0.0773	0.0185	-0.0054
607	SLU 60	-0.49	-0.22	69.57	-0.0801	0.0187	-0.005
607	SLU 61	-0.49	-0.17	69.57	-0.0792	0.0187	-0.0053
607	SLU 62	-0.49	-0.22	70.09	-0.0808	0.0189	-0.0052
607	SLU 63	-0.49	-0.17	70.09	-0.0798	0.0189	-0.0055
607	SLU 64	-0.52	-0.2	66.38	-0.0728	0.0184	-0.0044
607	SLU 65	-0.52	-0.11	66.39	-0.0712	0.0184	-0.0049
607	SLU 66	-0.53	-0.19	67.31	-0.0734	0.0186	-0.0045
607	SLU 67	-0.53	-0.14	67.32	-0.0725	0.0186	-0.0047
607	SLU 68	-0.53	-0.11	66.9	-0.0719	0.0186	-0.0051
607	SLU 69	-0.54	-0.19	67.83	-0.0741	0.0188	-0.0046
607	SLU 70	-0.54	-0.14	67.84	-0.0731	0.0188	-0.0049
607	SLU 71	-0.54	-0.2	67.41	-0.0741	0.0188	-0.0047
607	SLU 72	-0.54	-0.15	67.42	-0.0731	0.0188	-0.005
607	SLU 73	-0.51	-0.11	72.98	-0.0786	0.0196	-0.0053
607	SLU 74	-0.52	-0.19	73.91	-0.0808	0.0199	-0.0049
607	SLU 75	-0.52	-0.14	73.91	-0.0798	0.0199	-0.0052
607	SLU 76	-0.52	-0.11	73.5	-0.0792	0.0198	-0.0055
607	SLU 77	-0.53	-0.19	74.43	-0.0814	0.0201	-0.0051
607	SLU 78	-0.53	-0.14	74.43	-0.0805	0.0201	-0.0053
607	SLU 79	-0.53	-0.2	74.01	-0.0814	0.02	-0.0052
607	SLU 80	-0.53	-0.15	74.02	-0.0805	0.02	-0.0055
607	SLU 81	-0.51	-0.2	75.8	-0.0833	0.0201	-0.0051
607	SLU 82	-0.51	-0.15	75.81	-0.0824	0.0201	-0.0053
607	SLU 83	-0.52	-0.2	76.32	-0.0839	0.0203	-0.0052
607	SLU 84	-0.52	-0.15	76.33	-0.083	0.0203	-0.0055
607	SLE RA 1	-0.4	-0.16	49.69	-0.0553	0.0138	-0.0034
607	SLE RA 2	-0.4	-0.1	49.7	-0.0542	0.0138	-0.0037
607	SLE RA 3	-0.4	-0.15	50.31	-0.0557	0.014	-0.0034
607	SLE RA 4	-0.4	-0.12	50.32	-0.0551	0.014	-0.0036
607	SLE RA 5	-0.4	-0.1	50.04	-0.0547	0.0139	-0.0038
607	SLE RA 6	-0.41	-0.16	50.66	-0.0561	0.0141	-0.0035
607	SLE RA 7	-0.41	-0.12	50.66	-0.0555	0.0141	-0.0037
607	SLE RA 8	-0.41	-0.16	50.38	-0.0562	0.0141	-0.0036
607	SLE RA 9	-0.41	-0.13	50.38	-0.0555	0.0141	-0.0038
607	SLE RA 10	-0.39	-0.1	54.09	-0.0592	0.0146	-0.004
607	SLE RA 11	-0.4	-0.15	54.71	-0.0606	0.0148	-0.0037
607	SLE RA 12	-0.4	-0.12	54.71	-0.06	0.0148	-0.0039
607	SLE RA 13	-0.4	-0.1	54.44	-0.0596	0.0148	-0.0041
607	SLE RA 14	-0.4	-0.15	55.06	-0.061	0.0149	-0.0038
607	SLE RA 15	-0.4	-0.12	55.06	-0.0604	0.0149	-0.004
607	SLE RA 16	-0.4	-0.16	54.78	-0.0611	0.0149	-0.0039
607	SLE RA 17	-0.4	-0.12	54.78	-0.0604	0.0149	-0.0041
607	SLE RA 18	-0.39	-0.16	55.97	-0.0623	0.015	-0.0038
607	SLE RA 19	-0.39	-0.12	55.98	-0.0617	0.015	-0.004
607	SLE RA 20	-0.39	-0.16	56.32	-0.0627	0.0151	-0.0039
607	SLE RA 21	-0.39	-0.12	56.32	-0.0621	0.0151	-0.0041
607	SLE FR 1	-0.4	-0.16	49.69	-0.0553	0.0138	-0.0034
607	SLE FR 2	-0.4	-0.15	49.69	-0.0551	0.0138	-0.0035
607	SLE FR 3	-0.4	-0.16	49.83	-0.0555	0.0139	-0.0034
607	SLE FR 4	-0.4	-0.15	51.58	-0.0572	0.0142	-0.0036
607	SLE FR 5	-0.4	-0.16	51.71	-0.0576	0.0142	-0.0036
607	SLE FR 6	-0.39	-0.16	52.83	-0.0588	0.0144	-0.0036
607	SLE QP 1	-0.4	-0.16	49.69	-0.0553	0.0138	-0.0034
607	SLE QP 2	-0.4	-0.16	51.57	-0.0574	0.0142	-0.0035

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
607	SLD 1	3.85	1.02	56.97	-0.026	0.0301	-0.0109
607	SLD 2	3.84	0.69	56.97	-0.0286	0.0301	-0.0073
607	SLD 3	3.75	-0.64	57.26	-0.054	0.0306	-0.0061
607	SLD 4	3.75	-0.96	57.26	-0.0566	0.0306	-0.0025
607	SLD 5	1.02	2.77	52.75	-0.0051	0.0181	-0.0137
607	SLD 6	1.02	2.55	52.75	-0.0068	0.0182	-0.0114
607	SLD 7	0.7	-2.76	53.73	-0.0983	0.0199	0.0024
607	SLD 8	0.7	-2.97	53.73	-0.1	0.0199	0.0048
607	SLD 9	-1.49	2.65	49.42	-0.0148	0.0084	-0.0118
607	SLD 10	-1.49	2.44	49.42	-0.0165	0.0085	-0.0095
607	SLD 11	-1.81	-2.87	50.4	-0.108	0.0102	0.0043
607	SLD 12	-1.81	-3.08	50.4	-0.1097	0.0102	0.0067
607	SLD 13	-4.54	0.64	45.89	-0.0583	-0.0023	-0.0046
607	SLD 14	-4.54	0.32	45.89	-0.0608	-0.0023	-0.0009
607	SLD 15	-4.63	-1.01	46.18	-0.0862	-0.0018	0.0003
607	SLD 16	-4.64	-1.34	46.18	-0.0888	-0.0017	0.0039
607	SLV 1	9.52	2.55	64.19	0.0171	0.0514	-0.0208
607	SLV 2	9.52	1.79	64.19	0.0111	0.0514	-0.0123
607	SLV 3	9.3	-1.23	64.88	-0.0465	0.0526	-0.0097
607	SLV 4	9.29	-1.99	64.88	-0.0525	0.0527	-0.0013
607	SLV 5	2.92	6.52	54.32	0.0624	0.0235	-0.0269
607	SLV 6	2.92	6.03	54.32	0.0586	0.0235	-0.0215
607	SLV 7	2.18	-6.09	56.61	-0.1496	0.0275	0.01
607	SLV 8	2.17	-6.57	56.61	-0.1534	0.0276	0.0154
607	SLV 9	-2.96	6.25	46.54	0.0386	0.0008	-0.0224
607	SLV 10	-2.97	5.77	46.54	0.0348	0.0008	-0.017
607	SLV 11	-3.71	-6.35	48.83	-0.1734	0.0048	0.0145
607	SLV 12	-3.71	-6.84	48.83	-0.1772	0.0049	0.0199
607	SLV 13	-10.08	1.67	38.27	-0.0623	-0.0243	-0.0058
607	SLV 14	-10.09	0.91	38.27	-0.0683	-0.0243	0.0026
607	SLV 15	-10.31	-2.11	38.95	-0.1259	-0.0231	0.0053
607	SLV 16	-10.32	-2.87	38.96	-0.1319	-0.023	0.0137
607	CRTFP Ux+	0	0	0	0	0	0
607	CRTFP Ux-	0	0	0	0	0	0
608	SLU 1	-0.38	-0.18	47.43	-0.0547	0.0147	-0.0033
608	SLU 2	-0.38	-0.1	47.43	-0.053	0.0147	-0.0036
608	SLU 3	-0.38	-0.18	48.35	-0.0553	0.015	-0.0033
608	SLU 4	-0.38	-0.12	48.36	-0.0543	0.015	-0.0035
608	SLU 5	-0.38	-0.1	47.95	-0.0537	0.0149	-0.0038
608	SLU 6	-0.39	-0.18	48.86	-0.0559	0.0152	-0.0035
608	SLU 7	-0.39	-0.13	48.87	-0.0549	0.0152	-0.0037
608	SLU 8	-0.39	-0.19	48.45	-0.056	0.0151	-0.0036
608	SLU 9	-0.39	-0.13	48.45	-0.055	0.0151	-0.0038
608	SLU 10	-0.37	-0.1	53.98	-0.0604	0.0163	-0.0039
608	SLU 11	-0.37	-0.18	54.9	-0.0626	0.0166	-0.0036
608	SLU 12	-0.37	-0.13	54.9	-0.0616	0.0166	-0.0038
608	SLU 13	-0.37	-0.1	54.5	-0.061	0.0165	-0.0041
608	SLU 14	-0.38	-0.18	55.41	-0.0632	0.0168	-0.0038
608	SLU 15	-0.38	-0.13	55.42	-0.0623	0.0168	-0.004
608	SLU 16	-0.38	-0.19	55	-0.0633	0.0167	-0.0039
608	SLU 17	-0.38	-0.14	55	-0.0623	0.0167	-0.0041
608	SLU 18	-0.36	-0.18	56.78	-0.0651	0.0169	-0.0037
608	SLU 19	-0.36	-0.13	56.79	-0.0642	0.017	-0.0039
608	SLU 20	-0.37	-0.19	57.29	-0.0658	0.0171	-0.0039
608	SLU 21	-0.37	-0.13	57.3	-0.0648	0.0172	-0.0041
608	SLU 22	-0.4	-0.16	53.6	-0.0577	0.0165	-0.0032
608	SLU 23	-0.4	-0.07	53.61	-0.056	0.0165	-0.0036
608	SLU 24	-0.41	-0.15	54.53	-0.0583	0.0168	-0.0033
608	SLU 25	-0.41	-0.1	54.53	-0.0573	0.0168	-0.0035
608	SLU 26	-0.41	-0.07	54.12	-0.0567	0.0167	-0.0037
608	SLU 27	-0.41	-0.15	55.04	-0.0589	0.017	-0.0034
608	SLU 28	-0.41	-0.1	55.05	-0.0579	0.017	-0.0036
608	SLU 29	-0.41	-0.16	54.63	-0.059	0.0169	-0.0035
608	SLU 30	-0.41	-0.11	54.63	-0.058	0.0169	-0.0037
608	SLU 31	-0.39	-0.07	60.16	-0.0634	0.0181	-0.0039
608	SLU 32	-0.4	-0.15	61.08	-0.0656	0.0183	-0.0036
608	SLU 33	-0.4	-0.1	61.08	-0.0646	0.0183	-0.0038
608	SLU 34	-0.4	-0.07	60.67	-0.064	0.0183	-0.004
608	SLU 35	-0.41	-0.15	61.59	-0.0662	0.0185	-0.0037
608	SLU 36	-0.41	-0.1	61.59	-0.0653	0.0185	-0.0039
608	SLU 37	-0.4	-0.16	61.17	-0.0663	0.0184	-0.0038
608	SLU 38	-0.4	-0.11	61.18	-0.0653	0.0185	-0.004
608	SLU 39	-0.39	-0.16	62.96	-0.0681	0.0187	-0.0037
608	SLU 40	-0.39	-0.11	62.96	-0.0671	0.0187	-0.0039
608	SLU 41	-0.39	-0.16	63.47	-0.0688	0.0189	-0.0038
608	SLU 42	-0.39	-0.11	63.48	-0.0678	0.0189	-0.004
608	SLU 43	-0.48	-0.25	59.54	-0.07	0.0185	-0.0043
608	SLU 44	-0.48	-0.16	59.54	-0.0684	0.0186	-0.0047
608	SLU 45	-0.49	-0.24	60.46	-0.0706	0.0188	-0.0043
608	SLU 46	-0.49	-0.19	60.47	-0.0697	0.0188	-0.0045
608	SLU 47	-0.49	-0.16	60.06	-0.0691	0.0188	-0.0048
608	SLU 48	-0.5	-0.24	60.97	-0.0713	0.019	-0.0045
608	SLU 49	-0.5	-0.19	60.98	-0.0703	0.019	-0.0047
608	SLU 50	-0.49	-0.25	60.56	-0.0713	0.0189	-0.0046
608	SLU 51	-0.49	-0.2	60.56	-0.0704	0.0189	-0.0048
608	SLU 52	-0.47	-0.16	66.09	-0.0757	0.0201	-0.005
608	SLU 53	-0.48	-0.24	67.01	-0.078	0.0204	-0.0046
608	SLU 54	-0.48	-0.19	67.01	-0.077	0.0204	-0.0048
608	SLU 55	-0.48	-0.16	66.6	-0.0764	0.0203	-0.0051
608	SLU 56	-0.49	-0.24	67.52	-0.0786	0.0206	-0.0048
608	SLU 57	-0.49	-0.19	67.53	-0.0776	0.0206	-0.005

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
608	SLU 58	-0.49	-0.25	67.11	-0.0787	0.0205	-0.0049
608	SLU 59	-0.49	-0.2	67.11	-0.0777	0.0205	-0.0051
608	SLU 60	-0.47	-0.25	68.89	-0.0805	0.0207	-0.0047
608	SLU 61	-0.47	-0.2	68.9	-0.0795	0.0208	-0.0049
608	SLU 62	-0.48	-0.25	69.4	-0.0812	0.0209	-0.0049
608	SLU 63	-0.47	-0.2	69.41	-0.0802	0.021	-0.0051
608	SLU 64	-0.51	-0.22	65.71	-0.073	0.0203	-0.0043
608	SLU 65	-0.51	-0.14	65.72	-0.0714	0.0203	-0.0046
608	SLU 66	-0.51	-0.22	66.64	-0.0736	0.0206	-0.0043
608	SLU 67	-0.51	-0.16	66.64	-0.0727	0.0206	-0.0045
608	SLU 68	-0.51	-0.14	66.23	-0.0721	0.0205	-0.0047
608	SLU 69	-0.52	-0.22	67.15	-0.0743	0.0208	-0.0044
608	SLU 70	-0.52	-0.16	67.15	-0.0733	0.0208	-0.0046
608	SLU 71	-0.52	-0.23	66.74	-0.0743	0.0207	-0.0045
608	SLU 72	-0.52	-0.17	66.74	-0.0734	0.0207	-0.0047
608	SLU 73	-0.5	-0.14	72.27	-0.0787	0.0219	-0.0049
608	SLU 74	-0.5	-0.22	73.19	-0.0809	0.0221	-0.0046
608	SLU 75	-0.5	-0.16	73.19	-0.08	0.0221	-0.0048
608	SLU 76	-0.5	-0.14	72.78	-0.0794	0.0221	-0.005
608	SLU 77	-0.51	-0.22	73.7	-0.0816	0.0223	-0.0047
608	SLU 78	-0.51	-0.17	73.7	-0.0806	0.0223	-0.0049
608	SLU 79	-0.51	-0.23	73.28	-0.0817	0.0222	-0.0048
608	SLU 80	-0.51	-0.17	73.29	-0.0807	0.0223	-0.005
608	SLU 81	-0.49	-0.22	75.07	-0.0835	0.0225	-0.0047
608	SLU 82	-0.49	-0.17	75.07	-0.0825	0.0225	-0.0049
608	SLU 83	-0.5	-0.22	75.58	-0.0841	0.0227	-0.0048
608	SLU 84	-0.5	-0.17	75.59	-0.0832	0.0227	-0.005
608	SLE RA 1	-0.38	-0.18	49.19	-0.0555	0.0152	-0.0033
608	SLE RA 2	-0.38	-0.12	49.2	-0.0544	0.0152	-0.0035
608	SLE RA 3	-0.39	-0.17	49.81	-0.0559	0.0154	-0.0033
608	SLE RA 4	-0.39	-0.14	49.81	-0.0553	0.0154	-0.0034
608	SLE RA 5	-0.39	-0.12	49.54	-0.0549	0.0154	-0.0036
608	SLE RA 6	-0.39	-0.17	50.15	-0.0564	0.0155	-0.0034
608	SLE RA 7	-0.39	-0.14	50.15	-0.0557	0.0156	-0.0035
608	SLE RA 8	-0.39	-0.18	49.87	-0.0564	0.0155	-0.0035
608	SLE RA 9	-0.39	-0.14	49.88	-0.0557	0.0155	-0.0036
608	SLE RA 10	-0.38	-0.12	53.56	-0.0593	0.0163	-0.0037
608	SLE RA 11	-0.38	-0.17	54.17	-0.0608	0.0164	-0.0035
608	SLE RA 12	-0.38	-0.14	54.18	-0.0601	0.0165	-0.0036
608	SLE RA 13	-0.38	-0.12	53.9	-0.0598	0.0164	-0.0038
608	SLE RA 14	-0.39	-0.17	54.51	-0.0612	0.0166	-0.0036
608	SLE RA 15	-0.39	-0.14	54.52	-0.0606	0.0166	-0.0037
608	SLE RA 16	-0.39	-0.18	54.24	-0.0613	0.0165	-0.0037
608	SLE RA 17	-0.39	-0.14	54.24	-0.0606	0.0165	-0.0038
608	SLE RA 18	-0.37	-0.18	55.43	-0.0625	0.0167	-0.0036
608	SLE RA 19	-0.37	-0.14	55.43	-0.0618	0.0167	-0.0037
608	SLE RA 20	-0.38	-0.18	55.77	-0.0629	0.0168	-0.0037
608	SLE RA 21	-0.38	-0.14	55.77	-0.0623	0.0168	-0.0038
608	SLE FR 1	-0.38	-0.18	49.19	-0.0555	0.0152	-0.0033
608	SLE FR 2	-0.38	-0.16	49.19	-0.0553	0.0152	-0.0033
608	SLE FR 3	-0.39	-0.18	49.33	-0.0557	0.0153	-0.0033
608	SLE FR 4	-0.38	-0.17	51.06	-0.0574	0.0157	-0.0034
608	SLE FR 5	-0.38	-0.18	51.2	-0.0578	0.0157	-0.0034
608	SLE FR 6	-0.38	-0.18	52.31	-0.059	0.016	-0.0034
608	SLE QP 1	-0.38	-0.18	49.19	-0.0555	0.0152	-0.0033
608	SLE QP 2	-0.38	-0.18	51.06	-0.0576	0.0157	-0.0034
608	SLD 1	3.86	0.98	55.93	-0.0247	0.031	-0.0098
608	SLD 2	3.86	0.67	55.93	-0.0273	0.031	-0.0065
608	SLD 3	3.76	-0.66	56.2	-0.0535	0.0304	-0.0065
608	SLD 4	3.76	-0.97	56.2	-0.0562	0.0304	-0.0031
608	SLD 5	1.04	2.71	52.1	-0.0035	0.0213	-0.011
608	SLD 6	1.03	2.51	52.1	-0.0053	0.0213	-0.0088
608	SLD 7	0.72	-2.75	53.02	-0.0996	0.019	0.0002
608	SLD 8	0.72	-2.95	53.02	-0.1014	0.019	0.0024
608	SLD 9	-1.48	2.6	49.1	-0.0138	0.0123	-0.0091
608	SLD 10	-1.48	2.4	49.1	-0.0156	0.0123	-0.0069
608	SLD 11	-1.8	-2.86	50.02	-0.11	0.01	0.002
608	SLD 12	-1.8	-3.06	50.02	-0.1117	0.01	0.0042
608	SLD 13	-4.52	0.62	45.92	-0.059	0.001	-0.0036
608	SLD 14	-4.53	0.31	45.92	-0.0617	0.001	-0.0003
608	SLD 15	-4.62	-1.02	46.19	-0.0879	0.0003	-0.0003
608	SLD 16	-4.62	-1.33	46.19	-0.0906	0.0003	0.0031
608	SLV 1	9.53	2.48	62.45	0.0206	0.0516	-0.0184
608	SLV 2	9.53	1.76	62.45	0.0143	0.0516	-0.0106
608	SLV 3	9.31	-1.26	63.09	-0.045	0.0501	-0.0107
608	SLV 4	9.3	-1.98	63.09	-0.0513	0.0501	-0.0029
608	SLV 5	2.93	6.41	53.5	0.0664	0.0289	-0.0208
608	SLV 6	2.93	5.95	53.5	0.0624	0.0289	-0.0159
608	SLV 7	2.19	-6.05	55.65	-0.1523	0.0236	0.0048
608	SLV 8	2.18	-6.51	55.65	-0.1563	0.0236	0.0097
608	SLV 9	-2.95	6.15	46.48	0.041	0.0078	-0.0165
608	SLV 10	-2.95	5.7	46.48	0.037	0.0078	-0.0115
608	SLV 11	-3.69	-6.3	48.62	-0.1776	0.0025	0.0091
608	SLV 12	-3.69	-6.76	48.62	-0.1816	0.0025	0.0141
608	SLV 13	-10.07	1.63	39.03	-0.064	-0.0187	-0.0038
608	SLV 14	-10.07	0.91	39.03	-0.0702	-0.0187	0.004
608	SLV 15	-10.29	-2.11	39.67	-0.1296	-0.0203	0.0038
608	SLV 16	-10.3	-2.83	39.67	-0.1358	-0.0203	0.0116
608	CRTFP Ux+	0	0	0	0	0	0
608	CRTFP Ux-	0	0	0	0	0	0
609	SLU 1	-0.36	-0.2	46.91	-0.055	0.0151	-0.003

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
609	SLU 2	-0.36	-0.11	46.92	-0.0533	0.0152	-0.0032
609	SLU 3	-0.37	-0.19	47.83	-0.0556	0.0154	-0.003
609	SLU 4	-0.37	-0.14	47.83	-0.0546	0.0154	-0.0031
609	SLU 5	-0.37	-0.12	47.42	-0.054	0.0154	-0.0033
609	SLU 6	-0.37	-0.19	48.33	-0.0562	0.0156	-0.0031
609	SLU 7	-0.37	-0.14	48.34	-0.0552	0.0156	-0.0032
609	SLU 8	-0.37	-0.2	47.92	-0.0563	0.0155	-0.0032
609	SLU 9	-0.37	-0.15	47.92	-0.0553	0.0155	-0.0034
609	SLU 10	-0.35	-0.12	53.41	-0.0606	0.0169	-0.0033
609	SLU 11	-0.36	-0.19	54.32	-0.0629	0.0171	-0.0031
609	SLU 12	-0.36	-0.14	54.32	-0.0619	0.0172	-0.0032
609	SLU 13	-0.36	-0.12	53.92	-0.0613	0.0171	-0.0034
609	SLU 14	-0.36	-0.2	54.82	-0.0635	0.0173	-0.0032
609	SLU 15	-0.36	-0.15	54.83	-0.0626	0.0174	-0.0034
609	SLU 16	-0.36	-0.21	54.41	-0.0636	0.0173	-0.0033
609	SLU 17	-0.36	-0.15	54.42	-0.0626	0.0173	-0.0035
609	SLU 18	-0.35	-0.2	56.19	-0.0654	0.0176	-0.0031
609	SLU 19	-0.35	-0.15	56.19	-0.0644	0.0176	-0.0033
609	SLU 20	-0.35	-0.2	56.69	-0.0661	0.0178	-0.0033
609	SLU 21	-0.35	-0.15	56.69	-0.0651	0.0178	-0.0034
609	SLU 22	-0.38	-0.17	53.02	-0.0578	0.0171	-0.0028
609	SLU 23	-0.38	-0.09	53.03	-0.0562	0.0171	-0.003
609	SLU 24	-0.39	-0.17	53.94	-0.0584	0.0173	-0.0028
609	SLU 25	-0.39	-0.12	53.94	-0.0574	0.0174	-0.003
609	SLU 26	-0.39	-0.09	53.54	-0.0568	0.0173	-0.0032
609	SLU 27	-0.4	-0.17	54.44	-0.0591	0.0175	-0.0029
609	SLU 28	-0.4	-0.12	54.45	-0.0581	0.0176	-0.0031
609	SLU 29	-0.4	-0.18	54.03	-0.0592	0.0175	-0.0031
609	SLU 30	-0.4	-0.13	54.04	-0.0582	0.0175	-0.0032
609	SLU 31	-0.37	-0.09	59.52	-0.0635	0.0189	-0.0032
609	SLU 32	-0.38	-0.17	60.43	-0.0657	0.0191	-0.0029
609	SLU 33	-0.38	-0.12	60.44	-0.0647	0.0191	-0.0031
609	SLU 34	-0.38	-0.09	60.03	-0.0641	0.0191	-0.0033
609	SLU 35	-0.39	-0.17	60.94	-0.0664	0.0193	-0.0031
609	SLU 36	-0.39	-0.12	60.94	-0.0654	0.0193	-0.0032
609	SLU 37	-0.39	-0.18	60.53	-0.0665	0.0192	-0.0032
609	SLU 38	-0.39	-0.13	60.53	-0.0655	0.0192	-0.0033
609	SLU 39	-0.37	-0.18	62.3	-0.0683	0.0196	-0.003
609	SLU 40	-0.37	-0.13	62.3	-0.0673	0.0196	-0.0031
609	SLU 41	-0.38	-0.18	62.8	-0.0689	0.0198	-0.0031
609	SLU 42	-0.38	-0.13	62.81	-0.0679	0.0198	-0.0033
609	SLU 43	-0.46	-0.27	58.89	-0.0705	0.019	-0.0039
609	SLU 44	-0.46	-0.18	58.9	-0.0689	0.019	-0.0041
609	SLU 45	-0.47	-0.26	59.8	-0.0711	0.0193	-0.0039
609	SLU 46	-0.47	-0.21	59.81	-0.0701	0.0193	-0.0041
609	SLU 47	-0.47	-0.18	59.4	-0.0695	0.0192	-0.0043
609	SLU 48	-0.47	-0.26	60.31	-0.0718	0.0195	-0.004
609	SLU 49	-0.47	-0.21	60.31	-0.0708	0.0195	-0.0042
609	SLU 50	-0.47	-0.27	59.9	-0.0718	0.0194	-0.0042
609	SLU 51	-0.47	-0.22	59.9	-0.0708	0.0194	-0.0043
609	SLU 52	-0.45	-0.18	65.39	-0.0762	0.0208	-0.0043
609	SLU 53	-0.46	-0.26	66.3	-0.0784	0.021	-0.004
609	SLU 54	-0.46	-0.21	66.3	-0.0774	0.021	-0.0042
609	SLU 55	-0.46	-0.19	65.89	-0.0768	0.021	-0.0044
609	SLU 56	-0.46	-0.26	66.8	-0.0791	0.0212	-0.0042
609	SLU 57	-0.46	-0.21	66.8	-0.0781	0.0212	-0.0043
609	SLU 58	-0.46	-0.27	66.39	-0.0791	0.0211	-0.0043
609	SLU 59	-0.46	-0.22	66.39	-0.0781	0.0211	-0.0044
609	SLU 60	-0.45	-0.27	68.16	-0.081	0.0215	-0.0041
609	SLU 61	-0.45	-0.22	68.17	-0.08	0.0215	-0.0042
609	SLU 62	-0.45	-0.27	68.67	-0.0816	0.0217	-0.0042
609	SLU 63	-0.45	-0.22	68.67	-0.0806	0.0217	-0.0043
609	SLU 64	-0.48	-0.24	65	-0.0734	0.0209	-0.0038
609	SLU 65	-0.48	-0.16	65.01	-0.0717	0.021	-0.004
609	SLU 66	-0.49	-0.24	65.92	-0.074	0.0212	-0.0038
609	SLU 67	-0.49	-0.18	65.92	-0.073	0.0212	-0.0039
609	SLU 68	-0.49	-0.16	65.51	-0.0724	0.0212	-0.0041
609	SLU 69	-0.5	-0.24	66.42	-0.0746	0.0214	-0.0039
609	SLU 70	-0.5	-0.19	66.43	-0.0736	0.0214	-0.004
609	SLU 71	-0.5	-0.25	66.01	-0.0747	0.0213	-0.004
609	SLU 72	-0.5	-0.2	66.02	-0.0737	0.0214	-0.0041
609	SLU 73	-0.47	-0.16	71.5	-0.079	0.0227	-0.0041
609	SLU 74	-0.48	-0.24	72.41	-0.0813	0.023	-0.0039
609	SLU 75	-0.48	-0.19	72.41	-0.0803	0.023	-0.004
609	SLU 76	-0.48	-0.16	72.01	-0.0797	0.0229	-0.0042
609	SLU 77	-0.49	-0.24	72.91	-0.0819	0.0231	-0.004
609	SLU 78	-0.49	-0.19	72.92	-0.0809	0.0232	-0.0041
609	SLU 79	-0.49	-0.25	72.5	-0.082	0.0231	-0.0041
609	SLU 80	-0.49	-0.2	72.51	-0.081	0.0231	-0.0043
609	SLU 81	-0.47	-0.25	74.28	-0.0838	0.0234	-0.0039
609	SLU 82	-0.47	-0.19	74.28	-0.0828	0.0235	-0.0041
609	SLU 83	-0.48	-0.25	74.78	-0.0845	0.0236	-0.0041
609	SLU 84	-0.48	-0.2	74.79	-0.0835	0.0237	-0.0042
609	SLE RA 1	-0.37	-0.19	48.66	-0.0558	0.0157	-0.0029
609	SLE RA 2	-0.37	-0.14	48.66	-0.0547	0.0157	-0.0031
609	SLE RA 3	-0.37	-0.19	49.27	-0.0562	0.0159	-0.0029
609	SLE RA 4	-0.37	-0.15	49.27	-0.0555	0.0159	-0.003
609	SLE RA 5	-0.37	-0.14	49	-0.0551	0.0158	-0.0032
609	SLE RA 6	-0.38	-0.19	49.6	-0.0566	0.016	-0.003
609	SLE RA 7	-0.38	-0.15	49.61	-0.056	0.016	-0.0031
609	SLE RA 8	-0.38	-0.19	49.33	-0.0567	0.0159	-0.0031

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
609	SLE RA 9	-0.38	-0.16	49.33	-0.056	0.016	-0.0032
609	SLE RA 10	-0.36	-0.14	52.99	-0.0596	0.0169	-0.0032
609	SLE RA 11	-0.37	-0.19	53.6	-0.0611	0.017	-0.003
609	SLE RA 12	-0.37	-0.15	53.6	-0.0604	0.017	-0.0031
609	SLE RA 13	-0.37	-0.14	53.33	-0.06	0.017	-0.0032
609	SLE RA 14	-0.37	-0.19	53.93	-0.0615	0.0172	-0.0031
609	SLE RA 15	-0.37	-0.16	53.94	-0.0608	0.0172	-0.0032
609	SLE RA 16	-0.37	-0.2	53.66	-0.0616	0.0171	-0.0032
609	SLE RA 17	-0.37	-0.16	53.66	-0.0609	0.0171	-0.0033
609	SLE RA 18	-0.36	-0.19	54.84	-0.0628	0.0173	-0.003
609	SLE RA 19	-0.36	-0.16	54.84	-0.0621	0.0174	-0.0031
609	SLE RA 20	-0.36	-0.2	55.18	-0.0632	0.0175	-0.0031
609	SLE RA 21	-0.36	-0.16	55.18	-0.0625	0.0175	-0.0032
609	SLE FR 1	-0.37	-0.19	48.66	-0.0558	0.0157	-0.0029
609	SLE FR 2	-0.37	-0.18	48.66	-0.0556	0.0157	-0.003
609	SLE FR 3	-0.37	-0.19	48.79	-0.056	0.0157	-0.003
609	SLE FR 4	-0.36	-0.18	50.51	-0.0577	0.0162	-0.003
609	SLE FR 5	-0.37	-0.19	50.65	-0.0581	0.0162	-0.003
609	SLE FR 6	-0.36	-0.19	51.75	-0.0593	0.0165	-0.003
609	SLE QP 1	-0.37	-0.19	48.66	-0.0558	0.0157	-0.0029
609	SLE QP 2	-0.36	-0.19	50.51	-0.0579	0.0162	-0.003
609	SLD 1	3.87	0.94	54.91	-0.0233	0.0297	-0.0085
609	SLD 2	3.87	0.65	54.91	-0.0261	0.0297	-0.0054
609	SLD 3	3.78	-0.68	55.16	-0.053	0.0287	-0.0064
609	SLD 4	3.77	-0.98	55.16	-0.0558	0.0287	-0.0033
609	SLD 5	1.05	2.66	51.45	-0.002	0.0217	-0.0084
609	SLD 6	1.05	2.47	51.45	-0.0038	0.0217	-0.0064
609	SLD 7	0.73	-2.75	52.29	-0.101	0.0185	-0.0013
609	SLD 8	0.73	-2.94	52.29	-0.1028	0.0184	0.0007
609	SLD 9	-1.46	2.56	48.74	-0.013	0.0139	-0.0066
609	SLD 10	-1.46	2.37	48.74	-0.0148	0.0139	-0.0046
609	SLD 11	-1.78	-2.86	49.57	-0.112	0.0106	0.0004
609	SLD 12	-1.78	-3.05	49.58	-0.1138	0.0106	0.0025
609	SLD 13	-4.5	0.59	45.86	-0.0599	0.0036	-0.0026
609	SLD 14	-4.51	0.3	45.86	-0.0628	0.0036	0.0005
609	SLD 15	-4.6	-1.03	46.11	-0.0897	0.0027	-0.0005
609	SLD 16	-4.6	-1.33	46.12	-0.0925	0.0026	0.0026
609	SLV 1	9.54	2.41	60.8	0.0242	0.0479	-0.016
609	SLV 2	9.53	1.73	60.8	0.0176	0.0478	-0.0087
609	SLV 3	9.32	-1.29	61.39	-0.0434	0.0456	-0.0111
609	SLV 4	9.31	-1.98	61.39	-0.05	0.0455	-0.0038
609	SLV 5	2.94	6.33	52.71	0.0704	0.0292	-0.0156
609	SLV 6	2.94	5.89	52.71	0.0662	0.0291	-0.0109
609	SLV 7	2.21	-6.03	54.67	-0.155	0.0216	0.0008
609	SLV 8	2.2	-6.47	54.67	-0.1592	0.0215	0.0055
609	SLV 9	-2.93	6.08	46.36	0.0434	0.0108	-0.0114
609	SLV 10	-2.94	5.65	46.36	0.0392	0.0108	-0.0067
609	SLV 11	-3.67	-6.28	48.32	-0.182	0.0032	0.005
609	SLV 12	-3.67	-6.72	48.32	-0.1862	0.0032	0.0096
609	SLV 13	-10.04	1.59	39.64	-0.0658	-0.0132	-0.0021
609	SLV 14	-10.05	0.91	39.64	-0.0724	-0.0133	0.0052
609	SLV 15	-10.26	-2.12	40.22	-0.1334	-0.0154	0.0028
609	SLV 16	-10.27	-2.8	40.23	-0.14	-0.0156	0.0101
609	CRTFP Ux+	0	0	0	0	0	0
609	CRTFP Ux-	0	0	0	0	0	0
610	SLU 1	-0.32	-0.2	42.87	-0.0511	0.5955	0.0005
610	SLU 2	-0.32	-0.12	42.88	-0.0496	0.5957	-0.0007
610	SLU 3	-0.32	-0.19	43.71	-0.0517	0.6071	0.0004
610	SLU 4	-0.32	-0.14	43.71	-0.0507	0.6072	-0.0003
610	SLU 5	-0.32	-0.12	43.34	-0.0502	0.6021	-0.0008
610	SLU 6	-0.33	-0.19	44.17	-0.0523	0.6136	0.0003
610	SLU 7	-0.33	-0.15	44.17	-0.0513	0.6136	-0.0004
610	SLU 8	-0.33	-0.2	43.79	-0.0524	0.6084	0.0004
610	SLU 9	-0.33	-0.15	43.79	-0.0514	0.6085	-0.0003
610	SLU 10	-0.31	-0.12	48.82	-0.0563	0.678	-0.0006
610	SLU 11	-0.31	-0.19	49.65	-0.0584	0.6895	0.0005
610	SLU 12	-0.31	-0.14	49.65	-0.0575	0.6896	-0.0002
610	SLU 13	-0.31	-0.12	49.28	-0.0569	0.6844	-0.0006
610	SLU 14	-0.32	-0.19	50.11	-0.059	0.6959	0.0005
610	SLU 15	-0.32	-0.15	50.11	-0.0581	0.696	-0.0002
610	SLU 16	-0.32	-0.2	49.73	-0.0591	0.6907	0.0005
610	SLU 17	-0.32	-0.16	49.73	-0.0582	0.6908	-0.0002
610	SLU 18	-0.3	-0.2	51.36	-0.0608	0.7132	0.0006
610	SLU 19	-0.3	-0.15	51.36	-0.0598	0.7132	-0.0001
610	SLU 20	-0.31	-0.2	51.82	-0.0614	0.7196	0.0006
610	SLU 21	-0.31	-0.15	51.82	-0.0604	0.7197	-0.0001
610	SLU 22	-0.34	-0.17	48.46	-0.0536	0.6732	0.0004
610	SLU 23	-0.34	-0.09	48.46	-0.0521	0.6733	-0.0008
610	SLU 24	-0.34	-0.17	49.29	-0.0542	0.6848	0.0003
610	SLU 25	-0.34	-0.12	49.3	-0.0532	0.6849	-0.0004
610	SLU 26	-0.34	-0.1	48.92	-0.0527	0.6798	-0.0008
610	SLU 27	-0.35	-0.17	49.75	-0.0548	0.6912	0.0003
610	SLU 28	-0.35	-0.12	49.76	-0.0538	0.6913	-0.0004
610	SLU 29	-0.35	-0.18	49.38	-0.0549	0.686	0.0003
610	SLU 30	-0.35	-0.13	49.38	-0.0539	0.6861	-0.0004
610	SLU 31	-0.33	-0.1	54.4	-0.0588	0.7557	-0.0007
610	SLU 32	-0.33	-0.17	55.23	-0.0609	0.7671	0.0004
610	SLU 33	-0.33	-0.12	55.24	-0.06	0.7672	-0.0003
610	SLU 34	-0.33	-0.1	54.86	-0.0594	0.7621	-0.0007
610	SLU 35	-0.34	-0.17	55.69	-0.0615	0.7736	0.0004
610	SLU 36	-0.34	-0.12	55.7	-0.0606	0.7736	-0.0003

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
610	SLU 37	-0.34	-0.18	55.32	-0.0616	0.7684	0.0004
610	SLU 38	-0.34	-0.13	55.32	-0.0607	0.7685	-0.0003
610	SLU 39	-0.32	-0.17	56.94	-0.0633	0.7908	0.0005
610	SLU 40	-0.32	-0.13	56.95	-0.0623	0.7909	-0.0002
610	SLU 41	-0.33	-0.18	57.4	-0.0639	0.7972	0.0005
610	SLU 42	-0.33	-0.13	57.41	-0.0629	0.7973	-0.0002
610	SLU 43	-0.41	-0.26	53.82	-0.0656	0.7476	0.0006
610	SLU 44	-0.41	-0.19	53.82	-0.0641	0.7477	-0.0005
610	SLU 45	-0.41	-0.26	54.65	-0.0662	0.7592	0.0006
610	SLU 46	-0.41	-0.21	54.66	-0.0652	0.7593	-0.0001
610	SLU 47	-0.41	-0.19	54.28	-0.0647	0.7541	-0.0006
610	SLU 48	-0.42	-0.26	55.11	-0.0668	0.7656	0.0005
610	SLU 49	-0.42	-0.21	55.12	-0.0658	0.7657	-0.0002
610	SLU 50	-0.42	-0.27	54.74	-0.0669	0.7604	0.0005
610	SLU 51	-0.42	-0.22	54.74	-0.0659	0.7605	-0.0002
610	SLU 52	-0.4	-0.19	59.76	-0.0708	0.83	-0.0004
610	SLU 53	-0.4	-0.26	60.59	-0.0729	0.8415	0.0007
610	SLU 54	-0.4	-0.21	60.6	-0.072	0.8416	0
610	SLU 55	-0.4	-0.19	60.22	-0.0714	0.8365	-0.0005
610	SLU 56	-0.41	-0.26	61.05	-0.0735	0.8479	0.0006
610	SLU 57	-0.41	-0.21	61.06	-0.0726	0.848	-0.0001
610	SLU 58	-0.41	-0.27	60.68	-0.0736	0.8427	0.0006
610	SLU 59	-0.41	-0.22	60.68	-0.0727	0.8428	-0.0001
610	SLU 60	-0.39	-0.27	62.3	-0.0753	0.8652	0.0008
610	SLU 61	-0.39	-0.22	62.31	-0.0743	0.8653	0.0001
610	SLU 62	-0.4	-0.27	62.76	-0.0759	0.8716	0.0007
610	SLU 63	-0.4	-0.22	62.77	-0.0749	0.8717	0
610	SLU 64	-0.43	-0.24	59.4	-0.0681	0.8252	0.0005
610	SLU 65	-0.43	-0.16	59.41	-0.0665	0.8254	-0.0006
610	SLU 66	-0.43	-0.23	60.24	-0.0687	0.8368	0.0005
610	SLU 67	-0.43	-0.19	60.24	-0.0677	0.8369	-0.0002
610	SLU 68	-0.43	-0.16	59.87	-0.0672	0.8318	-0.0007
610	SLU 69	-0.44	-0.24	60.7	-0.0693	0.8433	0.0004
610	SLU 70	-0.44	-0.19	60.7	-0.0683	0.8433	-0.0003
610	SLU 71	-0.44	-0.24	60.32	-0.0693	0.8381	0.0004
610	SLU 72	-0.44	-0.2	60.32	-0.0684	0.8382	-0.0003
610	SLU 73	-0.42	-0.16	65.35	-0.0733	0.9077	-0.0005
610	SLU 74	-0.42	-0.23	66.18	-0.0754	0.9192	0.0006
610	SLU 75	-0.42	-0.19	66.18	-0.0745	0.9193	-0.0001
610	SLU 76	-0.42	-0.17	65.81	-0.0739	0.9141	-0.0006
610	SLU 77	-0.43	-0.24	66.64	-0.076	0.9256	0.0005
610	SLU 78	-0.43	-0.19	66.64	-0.0751	0.9257	-0.0002
610	SLU 79	-0.43	-0.25	66.26	-0.0761	0.9204	0.0006
610	SLU 80	-0.43	-0.2	66.27	-0.0751	0.9205	-0.0001
610	SLU 81	-0.41	-0.24	67.89	-0.0777	0.9429	0.0007
610	SLU 82	-0.41	-0.2	67.89	-0.0768	0.9429	0
610	SLU 83	-0.42	-0.24	68.35	-0.0784	0.9493	0.0007
610	SLU 84	-0.42	-0.2	68.35	-0.0774	0.9494	0
610	SLE RA 1	-0.32	-0.19	44.47	-0.0519	0.6177	0.0004
610	SLE RA 2	-0.32	-0.14	44.47	-0.0508	0.6178	-0.0003
610	SLE RA 3	-0.33	-0.18	45.02	-0.0522	0.6255	0.0004
610	SLE RA 4	-0.33	-0.15	45.03	-0.0516	0.6255	-0.0001
610	SLE RA 5	-0.33	-0.14	44.78	-0.0512	0.6221	-0.0004
610	SLE RA 6	-0.33	-0.19	45.33	-0.0526	0.6297	0.0004
610	SLE RA 7	-0.33	-0.16	45.33	-0.052	0.6298	-0.0001
610	SLE RA 8	-0.33	-0.19	45.08	-0.0527	0.6263	0.0004
610	SLE RA 9	-0.33	-0.16	45.08	-0.052	0.6263	-0.0001
610	SLE RA 10	-0.32	-0.14	48.43	-0.0553	0.6727	-0.0003
610	SLE RA 11	-0.32	-0.19	48.99	-0.0567	0.6804	0.0005
610	SLE RA 12	-0.32	-0.16	48.99	-0.0561	0.6804	0
610	SLE RA 13	-0.32	-0.14	48.74	-0.0557	0.677	-0.0003
610	SLE RA 14	-0.32	-0.19	49.29	-0.0571	0.6846	0.0004
610	SLE RA 15	-0.32	-0.16	49.29	-0.0565	0.6847	0
610	SLE RA 16	-0.32	-0.19	49.04	-0.0572	0.6812	0.0004
610	SLE RA 17	-0.32	-0.16	49.04	-0.0565	0.6812	0
610	SLE RA 18	-0.31	-0.19	50.12	-0.0583	0.6961	0.0005
610	SLE RA 19	-0.31	-0.16	50.13	-0.0576	0.6962	0.0001
610	SLE RA 20	-0.32	-0.19	50.43	-0.0587	0.7004	0.0005
610	SLE RA 21	-0.32	-0.16	50.43	-0.058	0.7005	0
610	SLE FR 1	-0.32	-0.19	44.47	-0.0519	0.6177	0.0004
610	SLE FR 2	-0.32	-0.18	44.47	-0.0516	0.6177	0.0003
610	SLE FR 3	-0.32	-0.19	44.59	-0.052	0.6194	0.0004
610	SLE FR 4	-0.32	-0.18	46.16	-0.0536	0.6413	0.0003
610	SLE FR 5	-0.32	-0.19	46.29	-0.0539	0.643	0.0005
610	SLE FR 6	-0.32	-0.19	47.3	-0.0551	0.6569	0.0005
610	SLE QP 1	-0.32	-0.19	44.47	-0.0519	0.6177	0.0004
610	SLE QP 2	-0.32	-0.19	46.16	-0.0538	0.6413	0.0005
610	SLD 1	3.59	0.85	49.88	-0.0204	0.7032	-0.0169
610	SLD 2	3.58	0.59	49.88	-0.0231	0.7031	-0.0107
610	SLD 3	3.5	-0.65	50.09	-0.0486	0.6997	0.0044
610	SLD 4	3.5	-0.91	50.09	-0.0513	0.6996	0.0106
610	SLD 5	0.99	2.43	46.96	-0.0005	0.6652	-0.0381
610	SLD 6	0.98	2.27	46.96	-0.0022	0.6652	-0.0341
610	SLD 7	0.69	-2.55	47.66	-0.0945	0.6534	0.0329
610	SLD 8	0.69	-2.72	47.66	-0.0963	0.6534	0.0369
610	SLD 9	-1.33	2.34	44.67	-0.0112	0.6291	-0.0359
610	SLD 10	-1.33	2.17	44.67	-0.013	0.6291	-0.0319
610	SLD 11	-1.62	-2.65	45.37	-0.1053	0.6174	0.035
610	SLD 12	-1.63	-2.81	45.37	-0.1071	0.6173	0.0391
610	SLD 13	-4.14	0.53	42.24	-0.0563	0.5829	-0.0096
610	SLD 14	-4.14	0.27	42.24	-0.059	0.5829	-0.0034

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
610	SLD 15	-4.22	-0.97	42.45	-0.0845	0.5794	0.0117
610	SLD 16	-4.23	-1.22	42.45	-0.0872	0.5793	0.0179
610	SLV 1	8.82	2.19	54.85	0.0255	0.7861	-0.0397
610	SLV 2	8.81	1.59	54.86	0.0192	0.786	-0.0252
610	SLV 3	8.61	-1.22	55.34	-0.0387	0.7779	0.009
610	SLV 4	8.61	-1.82	55.35	-0.045	0.7778	0.0234
610	SLV 5	2.73	5.8	48.02	0.0685	0.6972	-0.0878
610	SLV 6	2.73	5.42	48.03	0.0644	0.6972	-0.0786
610	SLV 7	2.05	-5.57	49.66	-0.1456	0.6698	0.0743
610	SLV 8	2.05	-5.95	49.67	-0.1496	0.6697	0.0836
610	SLV 9	-2.69	5.57	42.66	0.042	0.6128	-0.0826
610	SLV 10	-2.69	5.19	42.67	0.038	0.6128	-0.0734
610	SLV 11	-3.37	-5.79	44.3	-0.172	0.5853	0.0795
610	SLV 12	-3.37	-6.18	44.3	-0.176	0.5853	0.0887
610	SLV 13	-9.25	1.44	36.98	-0.0625	0.5047	-0.0225
610	SLV 14	-9.25	0.84	36.98	-0.0689	0.5046	-0.008
610	SLV 15	-9.45	-1.97	37.47	-0.1267	0.4965	0.0262
610	SLV 16	-9.46	-2.57	37.47	-0.1331	0.4964	0.0406
610	CRTFP Ux+	0	0	0	0	0	0
610	CRTFP Ux-	0	0	0	0	0	0
615	SLU 1	-0.73	-0.77	124.72	-7.4138	-8.5188	-0.0894
615	SLU 2	-0.73	-0.54	124.69	-7.4078	-8.5145	-0.0743
615	SLU 3	-0.74	-0.75	127.17	-7.56	-8.6872	-0.0885
615	SLU 4	-0.74	-0.61	127.16	-7.5564	-8.6846	-0.0794
615	SLU 5	-0.74	-0.55	126.03	-7.4887	-8.6057	-0.0759
615	SLU 6	-0.75	-0.76	128.5	-7.6409	-8.7785	-0.09
615	SLU 7	-0.75	-0.62	128.49	-7.6373	-8.7759	-0.081
615	SLU 8	-0.75	-0.79	127.38	-7.5757	-8.7013	-0.0926
615	SLU 9	-0.75	-0.65	127.37	-7.572	-8.6987	-0.0835
615	SLU 10	-0.69	-0.53	142.09	-8.4352	-9.7111	-0.0701
615	SLU 11	-0.7	-0.74	144.56	-8.5874	-9.8838	-0.0842
615	SLU 12	-0.7	-0.61	144.55	-8.5838	-9.8812	-0.0752
615	SLU 13	-0.7	-0.55	143.42	-8.5161	-9.8023	-0.0717
615	SLU 14	-0.71	-0.75	145.9	-8.6684	-9.9751	-0.0858
615	SLU 15	-0.71	-0.62	145.88	-8.6648	-9.9725	-0.0767
615	SLU 16	-0.71	-0.79	144.78	-8.6031	-9.8979	-0.0883
615	SLU 17	-0.71	-0.65	144.76	-8.5995	-9.8953	-0.0793
615	SLU 18	-0.67	-0.76	149.57	-8.8815	-10.2282	-0.0834
615	SLU 19	-0.67	-0.62	149.55	-8.8779	-10.2256	-0.0743
615	SLU 20	-0.68	-0.77	150.9	-8.9625	-10.3195	-0.0849
615	SLU 21	-0.68	-0.64	150.88	-8.9589	-10.3169	-0.0759
615	SLU 22	-0.77	-0.68	140.91	-8.3574	-9.6192	-0.0838
615	SLU 23	-0.77	-0.45	140.89	-8.3514	-9.6149	-0.0687
615	SLU 24	-0.78	-0.66	143.37	-8.5036	-9.7876	-0.0829
615	SLU 25	-0.78	-0.52	143.35	-8.5	-9.785	-0.0738
615	SLU 26	-0.78	-0.46	142.22	-8.4323	-9.7061	-0.0703
615	SLU 27	-0.8	-0.67	144.7	-8.5845	-9.8789	-0.0844
615	SLU 28	-0.8	-0.54	144.68	-8.5809	-9.8763	-0.0754
615	SLU 29	-0.8	-0.7	143.58	-8.5193	-9.8017	-0.087
615	SLU 30	-0.8	-0.57	143.57	-8.5156	-9.7991	-0.0779
615	SLU 31	-0.73	-0.45	158.28	-9.3788	-10.8115	-0.0645
615	SLU 32	-0.74	-0.66	160.76	-9.531	-10.9842	-0.0786
615	SLU 33	-0.74	-0.52	160.75	-9.5274	-10.9816	-0.0696
615	SLU 34	-0.74	-0.46	159.62	-9.4597	-10.9027	-0.0661
615	SLU 35	-0.76	-0.67	162.09	-9.612	-11.0754	-0.0802
615	SLU 36	-0.76	-0.53	162.08	-9.6084	-11.0729	-0.0711
615	SLU 37	-0.76	-0.7	160.97	-9.5467	-10.9983	-0.0827
615	SLU 38	-0.76	-0.56	160.96	-9.5431	-10.9957	-0.0737
615	SLU 39	-0.71	-0.67	165.76	-9.8251	-11.3286	-0.0778
615	SLU 40	-0.71	-0.54	165.75	-9.8215	-11.326	-0.0687
615	SLU 41	-0.73	-0.69	167.09	-9.9061	-11.4199	-0.0793
615	SLU 42	-0.73	-0.55	167.08	-9.9025	-11.4173	-0.0703
615	SLU 43	-0.93	-1.03	156.58	-9.3144	-10.6972	-0.1182
615	SLU 44	-0.93	-0.8	156.56	-9.3084	-10.6929	-0.1031
615	SLU 45	-0.94	-1.01	159.03	-9.4606	-10.8656	-0.1172
615	SLU 46	-0.94	-0.87	159.02	-9.457	-10.863	-0.1081
615	SLU 47	-0.94	-0.81	157.89	-9.3893	-10.7841	-0.1047
615	SLU 48	-0.95	-1.02	160.37	-9.5416	-10.9569	-0.1188
615	SLU 49	-0.95	-0.88	160.35	-9.5379	-10.9543	-0.1097
615	SLU 50	-0.95	-1.05	159.25	-9.4763	-10.8797	-0.1213
615	SLU 51	-0.95	-0.91	159.23	-9.4727	-10.8771	-0.1123
615	SLU 52	-0.89	-0.79	173.95	-10.3358	-11.8895	-0.0988
615	SLU 53	-0.9	-1	176.43	-10.488	-12.0622	-0.113
615	SLU 54	-0.9	-0.87	176.41	-10.4844	-12.0596	-0.1039
615	SLU 55	-0.9	-0.81	175.28	-10.4167	-11.9807	-0.1004
615	SLU 56	-0.91	-1.01	177.76	-10.569	-12.1535	-0.1145
615	SLU 57	-0.91	-0.88	177.75	-10.5654	-12.1509	-0.1055
615	SLU 58	-0.91	-1.05	176.64	-10.5037	-12.0763	-0.1171
615	SLU 59	-0.91	-0.91	176.63	-10.5001	-12.0737	-0.108
615	SLU 60	-0.87	-1.02	181.43	-10.7822	-12.4066	-0.1121
615	SLU 61	-0.87	-0.88	181.41	-10.7785	-12.404	-0.103
615	SLU 62	-0.88	-1.03	182.76	-10.8631	-12.4979	-0.1137
615	SLU 63	-0.88	-0.9	182.75	-10.8595	-12.4953	-0.1046
615	SLU 64	-0.97	-0.94	172.78	-10.258	-11.7976	-0.1126
615	SLU 65	-0.97	-0.71	172.75	-10.252	-11.7933	-0.0975
615	SLU 66	-0.99	-0.92	175.23	-10.4042	-11.966	-0.1116
615	SLU 67	-0.99	-0.78	175.21	-10.4006	-11.9634	-0.1026
615	SLU 68	-0.99	-0.72	174.09	-10.3329	-11.8845	-0.0991
615	SLU 69	-1	-0.93	176.56	-10.4851	-12.0572	-0.1132
615	SLU 70	-1	-0.8	176.55	-10.4815	-12.0546	-0.1041
615	SLU 71	-1	-0.96	175.44	-10.4199	-11.9801	-0.1157

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
615	SLU 72	-1	-0.83	175.43	-10.4163	-11.9775	-0.1067
615	SLU 73	-0.93	-0.71	190.15	-11.2794	-12.9898	-0.0932
615	SLU 74	-0.95	-0.92	192.62	-11.4316	-13.1626	-0.1074
615	SLU 75	-0.95	-0.78	192.61	-11.428	-13.16	-0.0983
615	SLU 76	-0.95	-0.72	191.48	-11.3603	-13.0811	-0.0948
615	SLU 77	-0.96	-0.93	193.96	-11.5126	-13.2538	-0.1089
615	SLU 78	-0.96	-0.79	193.94	-11.509	-13.2512	-0.0999
615	SLU 79	-0.96	-0.96	192.84	-11.4473	-13.1767	-0.1115
615	SLU 80	-0.96	-0.82	192.82	-11.4437	-13.1741	-0.1024
615	SLU 81	-0.92	-0.93	197.62	-11.7258	-13.507	-0.1065
615	SLU 82	-0.92	-0.8	197.61	-11.7221	-13.5044	-0.0975
615	SLU 83	-0.93	-0.95	198.96	-11.8067	-13.5982	-0.1081
615	SLU 84	-0.93	-0.81	198.94	-11.8031	-13.5956	-0.099
615	SLE RA 1	-0.74	-0.74	129.35	-7.6834	-8.8332	-0.0878
615	SLE RA 2	-0.74	-0.59	129.33	-7.6794	-8.8303	-0.0778
615	SLE RA 3	-0.75	-0.73	130.98	-7.7809	-8.9455	-0.0872
615	SLE RA 4	-0.75	-0.64	130.97	-7.7784	-8.9438	-0.0811
615	SLE RA 5	-0.75	-0.6	130.22	-7.7333	-8.8912	-0.0788
615	SLE RA 6	-0.76	-0.74	131.87	-7.8348	-9.0063	-0.0882
615	SLE RA 7	-0.76	-0.65	131.86	-7.8324	-9.0046	-0.0822
615	SLE RA 8	-0.76	-0.76	131.12	-7.7913	-8.9549	-0.0899
615	SLE RA 9	-0.76	-0.67	131.11	-7.7889	-8.9532	-0.0839
615	SLE RA 10	-0.71	-0.59	140.93	-8.3643	-9.6281	-0.0749
615	SLE RA 11	-0.72	-0.73	142.58	-8.4658	-9.7432	-0.0843
615	SLE RA 12	-0.72	-0.63	142.57	-8.4634	-9.7415	-0.0783
615	SLE RA 13	-0.72	-0.59	141.81	-8.4183	-9.6889	-0.076
615	SLE RA 14	-0.73	-0.73	143.46	-8.5198	-9.8041	-0.0854
615	SLE RA 15	-0.73	-0.64	143.46	-8.5174	-9.8023	-0.0794
615	SLE RA 16	-0.73	-0.76	142.72	-8.4763	-9.7526	-0.0871
615	SLE RA 17	-0.73	-0.66	142.71	-8.4738	-9.7509	-0.0811
615	SLE RA 18	-0.7	-0.74	145.91	-8.6619	-9.9728	-0.0838
615	SLE RA 19	-0.7	-0.65	145.9	-8.6595	-9.9711	-0.0777
615	SLE RA 20	-0.71	-0.75	146.8	-8.7159	-10.0337	-0.0848
615	SLE RA 21	-0.71	-0.65	146.79	-8.7134	-10.0319	-0.0788
615	SLE FR 1	-0.74	-0.74	129.35	-7.6834	-8.8332	-0.0878
615	SLE FR 2	-0.74	-0.71	129.34	-7.6826	-8.8326	-0.0858
615	SLE FR 3	-0.74	-0.75	129.7	-7.705	-8.8576	-0.0882
615	SLE FR 4	-0.73	-0.71	134.31	-7.9761	-9.1745	-0.0846
615	SLE FR 5	-0.73	-0.74	134.67	-7.9985	-9.1994	-0.087
615	SLE FR 6	-0.72	-0.74	137.63	-8.1726	-9.403	-0.0858
615	SLE QP 1	-0.74	-0.74	129.35	-7.6834	-8.8332	-0.0878
615	SLE QP 2	-0.73	-0.74	134.32	-7.9769	-9.1751	-0.0866
615	SLD 1	10.48	1.28	142.62	-8.3647	-9.547	0.7092
615	SLD 2	10.48	0.66	142.71	-8.3748	-9.5578	0.6807
615	SLD 3	10.73	-3.1	143.46	-8.4714	-9.6495	0.4148
615	SLD 4	10.73	-3.72	143.54	-8.4815	-9.6602	0.3863
615	SLD 5	2.25	6.63	135.53	-7.9296	-9.1294	0.6037
615	SLD 6	2.25	6.22	135.58	-7.9363	-9.1364	0.5852
615	SLD 7	3.1	-7.99	138.31	-8.2853	-9.4709	-0.3778
615	SLD 8	3.1	-8.39	138.37	-8.2919	-9.4779	-0.3963
615	SLD 9	-4.55	6.91	130.27	-7.6619	-8.8723	0.2231
615	SLD 10	-4.55	6.51	130.32	-7.6685	-8.8793	0.2046
615	SLD 11	-3.7	-7.7	133.05	-8.0176	-9.2138	-0.7584
615	SLD 12	-3.7	-8.11	133.11	-8.0242	-9.2208	-0.7769
615	SLD 13	-12.19	2.24	125.09	-7.4723	-8.69	-0.5595
615	SLD 14	-12.19	1.62	125.17	-7.4825	-8.7007	-0.588
615	SLD 15	-11.93	-2.14	125.93	-7.579	-8.7924	-0.8539
615	SLD 16	-11.93	-2.76	126.01	-7.5892	-8.8032	-0.8825
615	SLV 1	25.48	3.86	153.78	-8.8879	-10.0487	1.7659
615	SLV 2	25.48	2.42	153.97	-8.9116	-10.0739	1.6995
615	SLV 3	26.07	-6.14	155.68	-9.1302	-10.2815	1.0943
615	SLV 4	26.07	-7.58	155.87	-9.1539	-10.3066	1.0278
615	SLV 5	6.23	16.06	137.23	-7.8787	-9.0799	1.499
615	SLV 6	6.24	15.14	137.36	-7.8939	-9.0959	1.4566
615	SLV 7	8.21	-17.29	143.58	-8.6864	-9.8558	-0.7397
615	SLV 8	8.21	-18.21	143.7	-8.7015	-9.8719	-0.7822
615	SLV 9	-9.67	16.73	124.93	-7.2524	-8.4783	0.6089
615	SLV 10	-9.66	15.81	125.05	-7.2675	-8.4944	0.5665
615	SLV 11	-7.69	-16.62	131.28	-8.06	-9.2543	-1.6298
615	SLV 12	-7.69	-17.54	131.4	-8.0751	-9.2703	-1.6722
615	SLV 13	-27.53	6.1	112.76	-6.8	-8.0436	-1.2011
615	SLV 14	-27.52	4.66	112.95	-6.8237	-8.0687	-1.2675
615	SLV 15	-26.93	-3.9	114.66	-7.0422	-8.2763	-1.8727
615	SLV 16	-26.93	-5.34	114.86	-7.066	-8.3015	-1.9391
615	CRTFP Ux+	0	0	0	0	0	0
615	CRTFP Ux-	0	0	0	0	0	0
617	SLU 1	-0.12	-0.12	19.52	4.8107	-0.8	0.0243
617	SLU 2	-0.12	-0.08	19.52	4.8108	-0.7999	0.0257
617	SLU 3	-0.12	-0.11	19.91	4.905	-0.8157	0.0249
617	SLU 4	-0.12	-0.09	19.9	4.9051	-0.8156	0.0258
617	SLU 5	-0.12	-0.08	19.73	4.8616	-0.8084	0.0261
617	SLU 6	-0.12	-0.12	20.11	4.9558	-0.8241	0.0253
617	SLU 7	-0.12	-0.09	20.11	4.9559	-0.8241	0.0262
617	SLU 8	-0.12	-0.12	19.94	4.9123	-0.8169	0.0251
617	SLU 9	-0.12	-0.1	19.93	4.9124	-0.8169	0.0259
617	SLU 10	-0.11	-0.08	22.26	5.4845	-0.9122	0.0244
617	SLU 11	-0.11	-0.11	22.64	5.5788	-0.928	0.0236
617	SLU 12	-0.11	-0.09	22.64	5.5788	-0.9279	0.0245
617	SLU 13	-0.11	-0.08	22.46	5.5353	-0.9206	0.0248
617	SLU 14	-0.11	-0.11	22.85	5.6296	-0.9364	0.024
617	SLU 15	-0.11	-0.09	22.85	5.6296	-0.9364	0.0249

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
617	SLU 16	-0.11	-0.12	22.67	5.586	-0.9292	0.0237
617	SLU 17	-0.11	-0.1	22.67	5.5861	-0.9291	0.0246
617	SLU 18	-0.11	-0.12	23.43	5.7732	-0.9604	0.0224
617	SLU 19	-0.11	-0.09	23.43	5.7732	-0.9603	0.0232
617	SLU 20	-0.11	-0.12	23.64	5.824	-0.9688	0.0227
617	SLU 21	-0.11	-0.1	23.64	5.824	-0.9688	0.0236
617	SLU 22	-0.12	-0.1	22.07	5.4396	-0.9044	0.0269
617	SLU 23	-0.12	-0.07	22.07	5.4397	-0.9044	0.0284
617	SLU 24	-0.13	-0.1	22.45	5.534	-0.9202	0.0276
617	SLU 25	-0.13	-0.08	22.45	5.534	-0.9201	0.0285
617	SLU 26	-0.13	-0.07	22.28	5.4905	-0.9128	0.0288
617	SLU 27	-0.13	-0.1	22.66	5.5848	-0.9286	0.028
617	SLU 28	-0.13	-0.08	22.66	5.5848	-0.9286	0.0289
617	SLU 29	-0.13	-0.11	22.48	5.5412	-0.9214	0.0277
617	SLU 30	-0.13	-0.09	22.48	5.5413	-0.9213	0.0286
617	SLU 31	-0.12	-0.07	24.8	6.1135	-1.0167	0.0271
617	SLU 32	-0.12	-0.1	25.19	6.2077	-1.0324	0.0263
617	SLU 33	-0.12	-0.08	25.19	6.2078	-1.0324	0.0271
617	SLU 34	-0.12	-0.07	25.01	6.1643	-1.0251	0.0275
617	SLU 35	-0.12	-0.1	25.4	6.2585	-1.0409	0.0267
617	SLU 36	-0.12	-0.08	25.4	6.2586	-1.0409	0.0275
617	SLU 37	-0.12	-0.11	25.22	6.215	-1.0337	0.0264
617	SLU 38	-0.12	-0.08	25.22	6.215	-1.0336	0.0273
617	SLU 39	-0.12	-0.1	25.98	6.4021	-1.0648	0.025
617	SLU 40	-0.12	-0.08	25.98	6.4022	-1.0648	0.0259
617	SLU 41	-0.12	-0.1	26.19	6.4529	-1.0733	0.0254
617	SLU 42	-0.12	-0.08	26.18	6.453	-1.0733	0.0263
617	SLU 43	-0.15	-0.16	24.5	6.0383	-1.0041	0.0306
617	SLU 44	-0.15	-0.12	24.5	6.0384	-1.0041	0.0321
617	SLU 45	-0.15	-0.15	24.89	6.1326	-1.0198	0.0313
617	SLU 46	-0.15	-0.13	24.89	6.1327	-1.0198	0.0322
617	SLU 47	-0.15	-0.12	24.71	6.0892	-1.0125	0.0325
617	SLU 48	-0.15	-0.16	25.09	6.1834	-1.0283	0.0317
617	SLU 49	-0.15	-0.14	25.09	6.1835	-1.0283	0.0326
617	SLU 50	-0.15	-0.16	24.92	6.1399	-1.0211	0.0314
617	SLU 51	-0.15	-0.14	24.92	6.1399	-1.021	0.0323
617	SLU 52	-0.14	-0.12	27.24	6.7121	-1.1163	0.0307
617	SLU 53	-0.14	-0.15	27.62	6.8064	-1.1321	0.03
617	SLU 54	-0.14	-0.13	27.62	6.8064	-1.1321	0.0308
617	SLU 55	-0.14	-0.12	27.45	6.7629	-1.1248	0.0311
617	SLU 56	-0.15	-0.16	27.83	6.8571	-1.1406	0.0304
617	SLU 57	-0.15	-0.13	27.83	6.8572	-1.1406	0.0312
617	SLU 58	-0.15	-0.16	27.65	6.8136	-1.1333	0.0301
617	SLU 59	-0.15	-0.14	27.65	6.8137	-1.1333	0.031
617	SLU 60	-0.14	-0.16	28.41	7.0008	-1.1645	0.0287
617	SLU 61	-0.14	-0.13	28.41	7.0008	-1.1645	0.0296
617	SLU 62	-0.14	-0.16	28.62	7.0516	-1.173	0.0291
617	SLU 63	-0.14	-0.14	28.62	7.0516	-1.173	0.03
617	SLU 64	-0.16	-0.14	27.05	6.6672	-1.1086	0.0333
617	SLU 65	-0.16	-0.11	27.05	6.6673	-1.1085	0.0347
617	SLU 66	-0.16	-0.14	27.44	6.7616	-1.1243	0.034
617	SLU 67	-0.16	-0.12	27.44	6.7616	-1.1243	0.0348
617	SLU 68	-0.16	-0.11	27.26	6.7181	-1.117	0.0351
617	SLU 69	-0.16	-0.14	27.64	6.8124	-1.1328	0.0344
617	SLU 70	-0.16	-0.12	27.64	6.8124	-1.1328	0.0352
617	SLU 71	-0.16	-0.15	27.47	6.7688	-1.1255	0.0341
617	SLU 72	-0.16	-0.13	27.47	6.7689	-1.1255	0.035
617	SLU 73	-0.15	-0.11	29.79	7.341	-1.2208	0.0334
617	SLU 74	-0.15	-0.14	30.17	7.4353	-1.2366	0.0326
617	SLU 75	-0.15	-0.12	30.17	7.4354	-1.2366	0.0335
617	SLU 76	-0.15	-0.11	29.99	7.3918	-1.2293	0.0338
617	SLU 77	-0.15	-0.14	30.38	7.4861	-1.2451	0.033
617	SLU 78	-0.15	-0.12	30.38	7.4861	-1.245	0.0339
617	SLU 79	-0.15	-0.15	30.2	7.4425	-1.2378	0.0327
617	SLU 80	-0.15	-0.12	30.2	7.4426	-1.2378	0.0336
617	SLU 81	-0.15	-0.14	30.96	7.6297	-1.269	0.0314
617	SLU 82	-0.15	-0.12	30.96	7.6298	-1.269	0.0323
617	SLU 83	-0.15	-0.14	31.17	7.6805	-1.2775	0.0318
617	SLU 84	-0.15	-0.12	31.17	7.6806	-1.2774	0.0327
617	SLE RA 1	-0.12	-0.11	20.25	4.9904	-0.8298	0.025
617	SLE RA 2	-0.12	-0.09	20.25	4.9905	-0.8298	0.026
617	SLE RA 3	-0.12	-0.11	20.51	5.0533	-0.8403	0.0255
617	SLE RA 4	-0.12	-0.1	20.51	5.0533	-0.8403	0.0261
617	SLE RA 5	-0.12	-0.09	20.39	5.0243	-0.8354	0.0263
617	SLE RA 6	-0.12	-0.11	20.64	5.0872	-0.8459	0.0257
617	SLE RA 7	-0.12	-0.1	20.64	5.0872	-0.8459	0.0263
617	SLE RA 8	-0.12	-0.12	20.53	5.0581	-0.8411	0.0255
617	SLE RA 9	-0.12	-0.1	20.53	5.0582	-0.8411	0.0261
617	SLE RA 10	-0.11	-0.09	22.07	5.4396	-0.9046	0.0251
617	SLE RA 11	-0.12	-0.11	22.33	5.5025	-0.9151	0.0246
617	SLE RA 12	-0.12	-0.1	22.33	5.5025	-0.9151	0.0252
617	SLE RA 13	-0.12	-0.09	22.21	5.4735	-0.9103	0.0254
617	SLE RA 14	-0.12	-0.11	22.47	5.5363	-0.9208	0.0248
617	SLE RA 15	-0.12	-0.1	22.47	5.5364	-0.9208	0.0254
617	SLE RA 16	-0.12	-0.11	22.35	5.5073	-0.916	0.0247
617	SLE RA 17	-0.12	-0.1	22.35	5.5073	-0.9159	0.0252
617	SLE RA 18	-0.11	-0.11	22.86	5.6321	-0.9367	0.0237
617	SLE RA 19	-0.11	-0.1	22.85	5.6321	-0.9367	0.0243
617	SLE RA 20	-0.11	-0.11	22.99	5.6659	-0.9424	0.024
617	SLE RA 21	-0.11	-0.1	22.99	5.666	-0.9424	0.0246
617	SLE FR 1	-0.12	-0.11	20.25	4.9904	-0.8298	0.025

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
617	SLE FR 2	-0.12	-0.11	20.25	4.9904	-0.8298	0.0252
617	SLE FR 3	-0.12	-0.11	20.31	5.0039	-0.8321	0.0251
617	SLE FR 4	-0.12	-0.11	21.03	5.1829	-0.8619	0.0248
617	SLE FR 5	-0.12	-0.11	21.09	5.1964	-0.8642	0.0247
617	SLE FR 6	-0.12	-0.11	21.55	5.3112	-0.8833	0.0244
617	SLE QP 1	-0.12	-0.11	20.25	4.9904	-0.8298	0.025
617	SLE QP 2	-0.12	-0.11	21.03	5.1829	-0.8619	0.0246
617	SLD 1	1.69	0.2	22.27	5.48	-0.91	-0.407
617	SLD 2	1.68	0.11	22.28	5.4824	-0.9105	-0.4094
617	SLD 3	1.65	-0.49	22.38	5.5017	-0.9146	-0.4343
617	SLD 4	1.64	-0.58	22.39	5.504	-0.9151	-0.4367
617	SLD 5	0.49	1.04	21.23	5.2388	-0.8692	-0.0631
617	SLD 6	0.48	0.98	21.24	5.2403	-0.8695	-0.0647
617	SLD 7	0.35	-1.25	21.6	5.3109	-0.8847	-0.154
617	SLD 8	0.35	-1.31	21.61	5.3125	-0.885	-0.1555
617	SLD 9	-0.58	1.09	20.45	5.0533	-0.8388	0.2048
617	SLD 10	-0.58	1.03	20.46	5.0548	-0.8391	0.2032
617	SLD 11	-0.72	-1.21	20.82	5.1255	-0.8543	0.1139
617	SLD 12	-0.72	-1.27	20.83	5.127	-0.8546	0.1124
617	SLD 13	-1.87	0.35	19.67	4.8618	-0.8087	0.486
617	SLD 14	-1.88	0.26	19.68	4.8641	-0.8092	0.4836
617	SLD 15	-1.91	-0.34	19.78	4.8834	-0.8133	0.4587
617	SLD 16	-1.92	-0.43	19.79	4.8858	-0.8138	0.4563
617	SLV 1	4.1	0.6	23.93	5.8787	-0.9745	-0.9857
617	SLV 2	4.09	0.39	23.96	5.8842	-0.9757	-0.9913
617	SLV 3	4.01	-0.96	24.19	5.9281	-0.9851	-1.0479
617	SLV 4	3.99	-1.18	24.22	5.9337	-0.9863	-1.0535
617	SLV 5	1.29	2.52	21.51	5.3157	-0.8794	-0.1831
617	SLV 6	1.29	2.38	21.53	5.3192	-0.8802	-0.1866
617	SLV 7	0.98	-2.71	22.36	5.4805	-0.9147	-0.3906
617	SLV 8	0.97	-2.85	22.38	5.484	-0.9155	-0.3942
617	SLV 9	-1.2	2.62	19.69	4.8818	-0.8083	0.4435
617	SLV 10	-1.21	2.48	19.7	4.8853	-0.8091	0.4399
617	SLV 11	-1.52	-2.61	20.53	5.0465	-0.8436	0.2359
617	SLV 12	-1.53	-2.74	20.55	5.0501	-0.8444	0.2323
617	SLV 13	-4.23	0.95	17.85	4.4321	-0.7375	1.1028
617	SLV 14	-4.24	0.74	17.87	4.4377	-0.7387	1.0972
617	SLV 15	-4.32	-0.61	18.1	4.4816	-0.7481	1.0405
617	SLV 16	-4.33	-0.83	18.13	4.4871	-0.7493	1.0349
617	CRTFP Ux+	0	0	0	0	0	0
617	CRTFP Ux-	0	0	0	0	0	0
619	SLU 1	-0.26	-0.26	49.13	0.0813	-0.1712	0.0098
619	SLU 2	-0.26	-0.17	49.13	0.0839	-0.1712	0.0099
619	SLU 3	-0.26	-0.25	50.1	0.0822	-0.1746	0.0101
619	SLU 4	-0.26	-0.2	50.1	0.0838	-0.1746	0.0102
619	SLU 5	-0.26	-0.18	49.65	0.0834	-0.173	0.01
619	SLU 6	-0.27	-0.26	50.62	0.0817	-0.1764	0.0102
619	SLU 7	-0.27	-0.2	50.62	0.0833	-0.1764	0.0103
619	SLU 8	-0.27	-0.27	50.18	0.0803	-0.1748	0.01
619	SLU 9	-0.27	-0.22	50.17	0.0819	-0.1748	0.0101
619	SLU 10	-0.24	-0.16	56.02	0.0999	-0.1961	0.0108
619	SLU 11	-0.25	-0.24	57	0.0983	-0.1995	0.011
619	SLU 12	-0.25	-0.19	56.99	0.0998	-0.1995	0.0111
619	SLU 13	-0.25	-0.17	56.54	0.0994	-0.1979	0.0109
619	SLU 14	-0.25	-0.25	57.52	0.0978	-0.2013	0.0111
619	SLU 15	-0.25	-0.19	57.52	0.0994	-0.2013	0.0112
619	SLU 16	-0.25	-0.26	57.08	0.0964	-0.1997	0.0109
619	SLU 17	-0.25	-0.21	57.07	0.0979	-0.1997	0.011
619	SLU 18	-0.24	-0.25	58.99	0.1042	-0.2068	0.0111
619	SLU 19	-0.24	-0.2	58.98	0.1057	-0.2068	0.0111
619	SLU 20	-0.24	-0.25	59.51	0.1037	-0.2086	0.0112
619	SLU 21	-0.24	-0.2	59.5	0.1053	-0.2086	0.0112
619	SLU 22	-0.28	-0.22	55.53	0.1026	-0.1937	0.0113
619	SLU 23	-0.28	-0.13	55.52	0.1052	-0.1937	0.0115
619	SLU 24	-0.28	-0.21	56.5	0.1036	-0.1971	0.0117
619	SLU 25	-0.28	-0.16	56.49	0.1052	-0.1971	0.0117
619	SLU 26	-0.28	-0.13	56.04	0.1048	-0.1955	0.0116
619	SLU 27	-0.29	-0.21	57.02	0.1031	-0.1989	0.0118
619	SLU 28	-0.29	-0.16	57.01	0.1047	-0.1989	0.0119
619	SLU 29	-0.29	-0.23	56.58	0.1017	-0.1973	0.0116
619	SLU 30	-0.29	-0.17	56.57	0.1033	-0.1973	0.0116
619	SLU 31	-0.26	-0.12	62.42	0.1213	-0.2186	0.0124
619	SLU 32	-0.26	-0.2	63.39	0.1196	-0.222	0.0126
619	SLU 33	-0.26	-0.15	63.39	0.1212	-0.222	0.0126
619	SLU 34	-0.26	-0.13	62.94	0.1208	-0.2204	0.0125
619	SLU 35	-0.27	-0.21	63.92	0.1192	-0.2238	0.0127
619	SLU 36	-0.27	-0.15	63.91	0.1207	-0.2238	0.0127
619	SLU 37	-0.27	-0.22	63.47	0.1178	-0.2222	0.0125
619	SLU 38	-0.27	-0.17	63.47	0.1193	-0.2222	0.0125
619	SLU 39	-0.25	-0.21	65.38	0.1256	-0.2293	0.0126
619	SLU 40	-0.25	-0.15	65.38	0.1271	-0.2293	0.0127
619	SLU 41	-0.26	-0.21	65.91	0.1251	-0.2311	0.0127
619	SLU 42	-0.26	-0.16	65.9	0.1267	-0.2311	0.0128
619	SLU 43	-0.33	-0.35	61.68	0.0983	-0.2149	0.0122
619	SLU 44	-0.33	-0.26	61.67	0.1009	-0.2148	0.0123
619	SLU 45	-0.34	-0.34	62.65	0.0992	-0.2183	0.0125
619	SLU 46	-0.34	-0.29	62.64	0.1008	-0.2182	0.0126
619	SLU 47	-0.34	-0.27	62.2	0.1004	-0.2166	0.0124
619	SLU 48	-0.34	-0.35	63.17	0.0988	-0.2201	0.0126
619	SLU 49	-0.34	-0.29	63.17	0.1003	-0.22	0.0127
619	SLU 50	-0.34	-0.36	62.73	0.0974	-0.2184	0.0124

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
619	SLU 51	-0.34	-0.31	62.72	0.0989	-0.2184	0.0124
619	SLU 52	-0.32	-0.26	68.57	0.1169	-0.2397	0.0132
619	SLU 53	-0.32	-0.34	69.55	0.1153	-0.2432	0.0134
619	SLU 54	-0.32	-0.28	69.54	0.1169	-0.2432	0.0135
619	SLU 55	-0.32	-0.26	69.09	0.1165	-0.2415	0.0133
619	SLU 56	-0.32	-0.34	70.07	0.1148	-0.245	0.0135
619	SLU 57	-0.32	-0.29	70.06	0.1164	-0.245	0.0136
619	SLU 58	-0.32	-0.35	69.62	0.1134	-0.2434	0.0133
619	SLU 59	-0.32	-0.3	69.62	0.115	-0.2433	0.0133
619	SLU 60	-0.31	-0.34	71.54	0.1212	-0.2505	0.0135
619	SLU 61	-0.31	-0.29	71.53	0.1228	-0.2504	0.0135
619	SLU 62	-0.31	-0.35	72.06	0.1208	-0.2523	0.0136
619	SLU 63	-0.31	-0.29	72.05	0.1223	-0.2522	0.0136
619	SLU 64	-0.35	-0.31	68.08	0.1197	-0.2374	0.0137
619	SLU 65	-0.35	-0.22	68.07	0.1223	-0.2373	0.0139
619	SLU 66	-0.35	-0.3	69.05	0.1206	-0.2408	0.0141
619	SLU 67	-0.35	-0.25	69.04	0.1222	-0.2408	0.0141
619	SLU 68	-0.35	-0.23	68.59	0.1218	-0.2391	0.014
619	SLU 69	-0.36	-0.31	69.57	0.1202	-0.2426	0.0142
619	SLU 70	-0.36	-0.25	69.56	0.1217	-0.2425	0.0142
619	SLU 71	-0.36	-0.32	69.12	0.1188	-0.2409	0.014
619	SLU 72	-0.36	-0.27	69.12	0.1203	-0.2409	0.014
619	SLU 73	-0.33	-0.21	74.97	0.1383	-0.2623	0.0148
619	SLU 74	-0.34	-0.29	75.94	0.1367	-0.2657	0.015
619	SLU 75	-0.34	-0.24	75.94	0.1383	-0.2657	0.015
619	SLU 76	-0.34	-0.22	75.49	0.1379	-0.264	0.0149
619	SLU 77	-0.34	-0.3	76.46	0.1362	-0.2675	0.0151
619	SLU 78	-0.34	-0.25	76.46	0.1378	-0.2675	0.0151
619	SLU 79	-0.34	-0.31	76.02	0.1348	-0.2659	0.0148
619	SLU 80	-0.34	-0.26	76.01	0.1364	-0.2658	0.0149
619	SLU 81	-0.32	-0.3	77.93	0.1426	-0.273	0.015
619	SLU 82	-0.33	-0.25	77.93	0.1442	-0.273	0.0151
619	SLU 83	-0.33	-0.3	78.45	0.1421	-0.2748	0.0151
619	SLU 84	-0.33	-0.25	78.45	0.1437	-0.2747	0.0152
619	SLE RA 1	-0.26	-0.25	50.96	0.0874	-0.1776	0.0102
619	SLE RA 2	-0.26	-0.19	50.96	0.0891	-0.1776	0.0103
619	SLE RA 3	-0.27	-0.24	51.61	0.088	-0.1799	0.0104
619	SLE RA 4	-0.27	-0.21	51.6	0.089	-0.1799	0.0105
619	SLE RA 5	-0.27	-0.19	51.3	0.0888	-0.1788	0.0104
619	SLE RA 6	-0.27	-0.24	51.96	0.0877	-0.1811	0.0105
619	SLE RA 7	-0.27	-0.21	51.95	0.0887	-0.1811	0.0106
619	SLE RA 8	-0.27	-0.25	51.66	0.0867	-0.18	0.0104
619	SLE RA 9	-0.27	-0.22	51.65	0.0878	-0.18	0.0104
619	SLE RA 10	-0.25	-0.18	55.55	0.0998	-0.1942	0.0109
619	SLE RA 11	-0.26	-0.24	56.21	0.0987	-0.1965	0.011
619	SLE RA 12	-0.26	-0.2	56.2	0.0997	-0.1965	0.0111
619	SLE RA 13	-0.26	-0.19	55.9	0.0995	-0.1954	0.011
619	SLE RA 14	-0.26	-0.24	56.55	0.0984	-0.1977	0.0111
619	SLE RA 15	-0.26	-0.2	56.55	0.0994	-0.1977	0.0112
619	SLE RA 16	-0.26	-0.25	56.26	0.0974	-0.1966	0.011
619	SLE RA 17	-0.26	-0.21	56.25	0.0985	-0.1966	0.011
619	SLE RA 18	-0.25	-0.24	57.53	0.1027	-0.2014	0.0111
619	SLE RA 19	-0.25	-0.21	57.53	0.1037	-0.2014	0.0111
619	SLE RA 20	-0.25	-0.24	57.88	0.1023	-0.2026	0.0111
619	SLE RA 21	-0.25	-0.21	57.88	0.1034	-0.2026	0.0112
619	SLE FR 1	-0.26	-0.25	50.96	0.0874	-0.1776	0.0102
619	SLE FR 2	-0.26	-0.24	50.96	0.0877	-0.1776	0.0102
619	SLE FR 3	-0.27	-0.25	51.1	0.0872	-0.1781	0.0103
619	SLE FR 4	-0.26	-0.23	52.93	0.0923	-0.1848	0.0105
619	SLE FR 5	-0.26	-0.25	53.07	0.0918	-0.1852	0.0105
619	SLE FR 6	-0.26	-0.24	54.25	0.095	-0.1895	0.0107
619	SLE QP 1	-0.26	-0.25	50.96	0.0874	-0.1776	0.0102
619	SLE QP 2	-0.26	-0.25	52.93	0.092	-0.1848	0.0105
619	SLD 1	4.13	0.53	55.62	0.1401	-0.1798	-0.008
619	SLD 2	4.13	0.32	55.66	0.1375	-0.18	-0.0056
619	SLD 3	4.23	-1.17	55.98	0.1068	-0.1818	-0.0121
619	SLD 4	4.23	-1.39	56.02	0.1041	-0.182	-0.0098
619	SLD 5	0.91	2.62	53.19	0.1575	-0.1803	0.0109
619	SLD 6	0.91	2.48	53.21	0.1558	-0.1804	0.0124
619	SLD 7	1.24	-3.08	54.39	0.0462	-0.1868	-0.0031
619	SLD 8	1.24	-3.22	54.41	0.0445	-0.1869	-0.0015
619	SLD 9	-1.76	2.73	51.45	0.1394	-0.1826	0.0225
619	SLD 10	-1.76	2.59	51.48	0.1377	-0.1827	0.024
619	SLD 11	-1.43	-2.97	52.66	0.0281	-0.1891	0.0085
619	SLD 12	-1.43	-3.11	52.68	0.0264	-0.1893	0.0101
619	SLD 13	-4.75	0.9	49.85	0.0798	-0.1876	0.0307
619	SLD 14	-4.75	0.68	49.88	0.0771	-0.1877	0.0331
619	SLD 15	-4.65	-0.81	50.21	0.0464	-0.1895	0.0265
619	SLD 16	-4.65	-1.03	50.24	0.0438	-0.1897	0.0289
619	SLV 1	10.01	1.53	59.24	0.2071	-0.1732	-0.0328
619	SLV 2	10.01	1.03	59.32	0.201	-0.1737	-0.0273
619	SLV 3	10.24	-2.37	60.06	0.1314	-0.1777	-0.0424
619	SLV 4	10.24	-2.87	60.14	0.1253	-0.1782	-0.0368
619	SLV 5	2.47	6.29	53.56	0.2424	-0.1744	0.011
619	SLV 6	2.47	5.96	53.62	0.2385	-0.1747	0.0146
619	SLV 7	3.24	-6.71	56.3	-0.0101	-0.1894	-0.0208
619	SLV 8	3.24	-7.03	56.36	-0.014	-0.1897	-0.0173
619	SLV 9	-3.76	6.54	49.51	0.1979	-0.1799	0.0382
619	SLV 10	-3.76	6.22	49.57	0.194	-0.1801	0.0417
619	SLV 11	-2.99	-6.46	52.24	-0.0546	-0.1948	0.0064
619	SLV 12	-2.99	-6.78	52.3	-0.0585	-0.1951	0.0099

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
619	SLV 13	-10.76	2.38	45.72	0.0586	-0.1914	0.0578
619	SLV 14	-10.76	1.88	45.81	0.0525	-0.1918	0.0633
619	SLV 15	-10.53	-1.52	46.54	-0.0171	-0.1959	0.0483
619	SLV 16	-10.53	-2.02	46.63	-0.0232	-0.1963	0.0538
619	CRTFP Ux+	0	0	0	0	0	0
619	CRTFP Ux-	0	0	0	0	0	0
620	SLU 1	-0.24	-0.2	50.17	-0.1536	-0.0029	0.0149
620	SLU 2	-0.24	-0.11	50.16	-0.1509	-0.0029	0.0146
620	SLU 3	-0.25	-0.19	51.16	-0.1575	-0.0029	0.0153
620	SLU 4	-0.25	-0.13	51.15	-0.1558	-0.003	0.0151
620	SLU 5	-0.25	-0.11	50.69	-0.154	-0.0029	0.0148
620	SLU 6	-0.25	-0.19	51.69	-0.1606	-0.0029	0.0154
620	SLU 7	-0.25	-0.14	51.69	-0.1589	-0.0029	0.0153
620	SLU 8	-0.25	-0.2	51.23	-0.1598	-0.0028	0.0152
620	SLU 9	-0.25	-0.15	51.23	-0.1582	-0.0028	0.015
620	SLU 10	-0.22	-0.09	57.23	-0.1683	-0.0043	0.0159
620	SLU 11	-0.23	-0.17	58.23	-0.1749	-0.0043	0.0166
620	SLU 12	-0.23	-0.12	58.23	-0.1733	-0.0043	0.0164
620	SLU 13	-0.23	-0.1	57.77	-0.1714	-0.0043	0.0161
620	SLU 14	-0.23	-0.18	58.76	-0.178	-0.0043	0.0167
620	SLU 15	-0.23	-0.12	58.76	-0.1764	-0.0043	0.0166
620	SLU 16	-0.23	-0.19	58.31	-0.1773	-0.0042	0.0165
620	SLU 17	-0.23	-0.14	58.3	-0.1756	-0.0042	0.0163
620	SLU 18	-0.22	-0.18	60.27	-0.1785	-0.0048	0.0167
620	SLU 19	-0.22	-0.12	60.27	-0.1769	-0.0049	0.0166
620	SLU 20	-0.22	-0.18	60.81	-0.1816	-0.0048	0.0169
620	SLU 21	-0.22	-0.13	60.8	-0.18	-0.0048	0.0167
620	SLU 22	-0.26	-0.15	56.71	-0.1627	-0.0036	0.0168
620	SLU 23	-0.26	-0.06	56.7	-0.1599	-0.0036	0.0165
620	SLU 24	-0.26	-0.13	57.7	-0.1666	-0.0036	0.0172
620	SLU 25	-0.26	-0.08	57.69	-0.1649	-0.0037	0.017
620	SLU 26	-0.26	-0.06	57.23	-0.163	-0.0036	0.0167
620	SLU 27	-0.27	-0.14	58.23	-0.1696	-0.0036	0.0173
620	SLU 28	-0.27	-0.08	58.23	-0.168	-0.0036	0.0172
620	SLU 29	-0.27	-0.15	57.77	-0.1689	-0.0035	0.0171
620	SLU 30	-0.27	-0.1	57.77	-0.1672	-0.0036	0.0169
620	SLU 31	-0.24	-0.04	63.78	-0.1774	-0.005	0.0178
620	SLU 32	-0.24	-0.12	64.77	-0.184	-0.005	0.0185
620	SLU 33	-0.24	-0.07	64.77	-0.1823	-0.005	0.0183
620	SLU 34	-0.24	-0.05	64.31	-0.1805	-0.005	0.018
620	SLU 35	-0.25	-0.12	65.3	-0.1871	-0.005	0.0186
620	SLU 36	-0.25	-0.07	65.3	-0.1854	-0.005	0.0185
620	SLU 37	-0.25	-0.14	64.85	-0.1863	-0.0049	0.0184
620	SLU 38	-0.25	-0.09	64.84	-0.1847	-0.0049	0.0182
620	SLU 39	-0.23	-0.13	66.82	-0.1876	-0.0055	0.0186
620	SLU 40	-0.23	-0.07	66.81	-0.186	-0.0056	0.0185
620	SLU 41	-0.24	-0.13	67.35	-0.1907	-0.0055	0.0188
620	SLU 42	-0.24	-0.08	67.34	-0.1891	-0.0055	0.0186
620	SLU 43	-0.31	-0.27	62.98	-0.1966	-0.0035	0.0187
620	SLU 44	-0.31	-0.18	62.97	-0.1938	-0.0035	0.0184
620	SLU 45	-0.31	-0.26	63.97	-0.2005	-0.0035	0.0191
620	SLU 46	-0.31	-0.21	63.96	-0.1988	-0.0036	0.0189
620	SLU 47	-0.31	-0.19	63.5	-0.1969	-0.0035	0.0186
620	SLU 48	-0.32	-0.27	64.5	-0.2036	-0.0035	0.0192
620	SLU 49	-0.32	-0.21	64.49	-0.2019	-0.0035	0.0191
620	SLU 50	-0.32	-0.28	64.04	-0.2028	-0.0034	0.019
620	SLU 51	-0.32	-0.23	64.04	-0.2011	-0.0035	0.0188
620	SLU 52	-0.29	-0.17	70.04	-0.2113	-0.0049	0.0197
620	SLU 53	-0.3	-0.25	71.04	-0.2179	-0.0049	0.0204
620	SLU 54	-0.3	-0.2	71.03	-0.2162	-0.0049	0.0202
620	SLU 55	-0.3	-0.17	70.57	-0.2144	-0.0049	0.0199
620	SLU 56	-0.3	-0.25	71.57	-0.221	-0.0049	0.0206
620	SLU 57	-0.3	-0.2	71.57	-0.2193	-0.0049	0.0204
620	SLU 58	-0.3	-0.27	71.12	-0.2202	-0.0048	0.0203
620	SLU 59	-0.3	-0.21	71.11	-0.2186	-0.0048	0.0202
620	SLU 60	-0.28	-0.25	73.08	-0.2215	-0.0054	0.0205
620	SLU 61	-0.28	-0.2	73.08	-0.2199	-0.0055	0.0204
620	SLU 62	-0.29	-0.26	73.61	-0.2246	-0.0054	0.0207
620	SLU 63	-0.29	-0.2	73.61	-0.223	-0.0054	0.0205
620	SLU 64	-0.32	-0.22	69.52	-0.2057	-0.0042	0.0206
620	SLU 65	-0.33	-0.13	69.51	-0.2029	-0.0042	0.0203
620	SLU 66	-0.33	-0.21	70.51	-0.2095	-0.0042	0.021
620	SLU 67	-0.33	-0.16	70.5	-0.2079	-0.0043	0.0208
620	SLU 68	-0.33	-0.14	70.04	-0.206	-0.0042	0.0205
620	SLU 69	-0.33	-0.21	71.04	-0.2126	-0.0042	0.0211
620	SLU 70	-0.33	-0.16	71.03	-0.211	-0.0043	0.021
620	SLU 71	-0.33	-0.23	70.58	-0.2119	-0.0041	0.0209
620	SLU 72	-0.33	-0.18	70.58	-0.2102	-0.0042	0.0207
620	SLU 73	-0.31	-0.12	76.58	-0.2204	-0.0056	0.0216
620	SLU 74	-0.31	-0.2	77.58	-0.227	-0.0056	0.0223
620	SLU 75	-0.31	-0.14	77.58	-0.2253	-0.0057	0.0221
620	SLU 76	-0.31	-0.12	77.12	-0.2234	-0.0056	0.0218
620	SLU 77	-0.32	-0.2	78.11	-0.2301	-0.0056	0.0224
620	SLU 78	-0.32	-0.15	78.11	-0.2284	-0.0056	0.0223
620	SLU 79	-0.32	-0.22	77.66	-0.2293	-0.0055	0.0222
620	SLU 80	-0.32	-0.16	77.65	-0.2276	-0.0055	0.022
620	SLU 81	-0.3	-0.2	79.62	-0.2306	-0.0061	0.0224
620	SLU 82	-0.3	-0.15	79.62	-0.2289	-0.0062	0.0223
620	SLU 83	-0.3	-0.21	80.16	-0.2337	-0.0061	0.0226
620	SLU 84	-0.3	-0.15	80.15	-0.232	-0.0062	0.0224
620	SLE RA 1	-0.25	-0.18	52.04	-0.1562	-0.0031	0.0154

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
620	SLE RA 2	-0.25	-0.12	52.03	-0.1544	-0.0031	0.0152
620	SLE RA 3	-0.25	-0.17	52.7	-0.1588	-0.0031	0.0157
620	SLE RA 4	-0.25	-0.14	52.69	-0.1577	-0.0031	0.0156
620	SLE RA 5	-0.25	-0.13	52.39	-0.1564	-0.0031	0.0153
620	SLE RA 6	-0.25	-0.18	53.05	-0.1609	-0.0031	0.0158
620	SLE RA 7	-0.25	-0.14	53.05	-0.1597	-0.0031	0.0157
620	SLE RA 8	-0.25	-0.19	52.75	-0.1603	-0.003	0.0156
620	SLE RA 9	-0.25	-0.15	52.74	-0.1592	-0.003	0.0155
620	SLE RA 10	-0.23	-0.11	56.75	-0.166	-0.004	0.0161
620	SLE RA 11	-0.24	-0.17	57.41	-0.1704	-0.004	0.0165
620	SLE RA 12	-0.24	-0.13	57.41	-0.1693	-0.004	0.0164
620	SLE RA 13	-0.24	-0.12	57.1	-0.1681	-0.004	0.0162
620	SLE RA 14	-0.24	-0.17	57.77	-0.1725	-0.004	0.0167
620	SLE RA 15	-0.24	-0.13	57.76	-0.1714	-0.004	0.0166
620	SLE RA 16	-0.24	-0.18	57.46	-0.172	-0.004	0.0165
620	SLE RA 17	-0.24	-0.14	57.46	-0.1709	-0.004	0.0164
620	SLE RA 18	-0.23	-0.17	58.78	-0.1728	-0.0044	0.0166
620	SLE RA 19	-0.23	-0.13	58.77	-0.1717	-0.0044	0.0165
620	SLE RA 20	-0.23	-0.17	59.13	-0.1749	-0.0044	0.0168
620	SLE RA 21	-0.23	-0.14	59.13	-0.1738	-0.0044	0.0167
620	SLE FR 1	-0.25	-0.18	52.04	-0.1562	-0.0031	0.0154
620	SLE FR 2	-0.25	-0.17	52.04	-0.1559	-0.0031	0.0154
620	SLE FR 3	-0.25	-0.18	52.18	-0.157	-0.003	0.0154
620	SLE FR 4	-0.24	-0.17	54.06	-0.1608	-0.0035	0.0157
620	SLE FR 5	-0.24	-0.18	54.2	-0.162	-0.0034	0.0158
620	SLE FR 6	-0.24	-0.18	55.41	-0.1645	-0.0037	0.016
620	SLE QP 1	-0.25	-0.18	52.04	-0.1562	-0.0031	0.0154
620	SLE QP 2	-0.24	-0.18	54.06	-0.1612	-0.0034	0.0158
620	SLD 1	4.23	0.61	56.31	-0.1125	0.0131	0.0171
620	SLD 2	4.23	0.41	56.35	-0.1154	0.0132	0.0202
620	SLD 3	4.33	-1.12	56.68	-0.1506	0.0142	0.0188
620	SLD 4	4.33	-1.32	56.72	-0.1535	0.0142	0.0218
620	SLD 5	0.95	2.72	54.17	-0.0883	-0.0001	0.0131
620	SLD 6	0.95	2.59	54.19	-0.0902	-0.0001	0.0151
620	SLD 7	1.28	-3.05	55.4	-0.2153	0.0034	0.0186
620	SLD 8	1.28	-3.18	55.42	-0.2172	0.0035	0.0206
620	SLD 9	-1.77	2.83	52.7	-0.1052	-0.0104	0.0109
620	SLD 10	-1.77	2.69	52.72	-0.1071	-0.0103	0.0129
620	SLD 11	-1.43	-2.94	53.93	-0.2322	-0.0068	0.0164
620	SLD 12	-1.43	-3.08	53.95	-0.2341	-0.0068	0.0184
620	SLD 13	-4.81	0.97	51.4	-0.1689	-0.0211	0.0097
620	SLD 14	-4.81	0.76	51.44	-0.1718	-0.0211	0.0128
620	SLD 15	-4.71	-0.77	51.77	-0.207	-0.0201	0.0114
620	SLD 16	-4.71	-0.97	51.81	-0.2099	-0.02	0.0144
620	SLV 1	10.21	1.62	59.33	-0.0444	0.0353	0.0192
620	SLV 2	10.21	1.15	59.42	-0.0512	0.0354	0.0263
620	SLV 3	10.45	-2.33	60.17	-0.1308	0.0377	0.023
620	SLV 4	10.45	-2.8	60.26	-0.1376	0.0379	0.0301
620	SLV 5	2.54	6.43	54.36	0.006	0.0044	0.0098
620	SLV 6	2.54	6.13	54.41	0.0017	0.0045	0.0144
620	SLV 7	3.32	-6.73	57.15	-0.282	0.0126	0.0225
620	SLV 8	3.32	-7.04	57.21	-0.2863	0.0127	0.027
620	SLV 9	-3.8	6.68	50.91	-0.0361	-0.0196	0.0045
620	SLV 10	-3.81	6.38	50.97	-0.0404	-0.0195	0.0091
620	SLV 11	-3.02	-6.48	53.71	-0.3241	-0.0114	0.0172
620	SLV 12	-3.02	-6.79	53.76	-0.3285	-0.0113	0.0217
620	SLV 13	-10.93	2.45	47.86	-0.1848	-0.0448	0.0015
620	SLV 14	-10.93	1.97	47.95	-0.1916	-0.0446	0.0086
620	SLV 15	-10.69	-1.5	48.7	-0.2713	-0.0423	0.0052
620	SLV 16	-10.7	-1.98	48.79	-0.2781	-0.0422	0.0124
620	CRTFP Ux+	0	0	0	0	0	0
620	CRTFP Ux-	0	0	0	0	0	0
621	SLU 1	-0.22	-0.11	50.19	-0.1749	0.0017	0.0175
621	SLU 2	-0.22	-0.02	50.18	-0.172	0.0016	0.0172
621	SLU 3	-0.22	-0.09	51.18	-0.1793	0.0017	0.018
621	SLU 4	-0.22	-0.04	51.17	-0.1776	0.0017	0.0178
621	SLU 5	-0.23	-0.02	50.71	-0.1754	0.0017	0.0174
621	SLU 6	-0.23	-0.1	51.71	-0.1828	0.0018	0.0182
621	SLU 7	-0.23	-0.04	51.71	-0.1811	0.0018	0.018
621	SLU 8	-0.23	-0.11	51.25	-0.1817	0.0018	0.0179
621	SLU 9	-0.23	-0.06	51.25	-0.18	0.0018	0.0178
621	SLU 10	-0.2	0	57.29	-0.1934	0.001	0.0187
621	SLU 11	-0.21	-0.07	58.28	-0.2007	0.0011	0.0195
621	SLU 12	-0.21	-0.02	58.28	-0.199	0.0011	0.0193
621	SLU 13	-0.21	0	57.82	-0.1968	0.0011	0.0189
621	SLU 14	-0.21	-0.08	58.81	-0.2041	0.0012	0.0197
621	SLU 15	-0.21	-0.02	58.81	-0.2024	0.0012	0.0195
621	SLU 16	-0.21	-0.09	58.36	-0.2031	0.0012	0.0194
621	SLU 17	-0.21	-0.04	58.35	-0.2014	0.0012	0.0192
621	SLU 18	-0.19	-0.08	60.34	-0.2054	0.0008	0.0197
621	SLU 19	-0.2	-0.03	60.34	-0.2037	0.0008	0.0195
621	SLU 20	-0.2	-0.08	60.87	-0.2088	0.0009	0.0199
621	SLU 21	-0.2	-0.03	60.87	-0.2071	0.0009	0.0197
621	SLU 22	-0.24	-0.05	56.74	-0.187	0.0017	0.0197
621	SLU 23	-0.24	0.04	56.74	-0.1842	0.0016	0.0194
621	SLU 24	-0.24	-0.03	57.73	-0.1915	0.0017	0.0202
621	SLU 25	-0.24	0.02	57.73	-0.1898	0.0017	0.02
621	SLU 26	-0.24	0.04	57.27	-0.1876	0.0017	0.0196
621	SLU 27	-0.24	-0.03	58.26	-0.1949	0.0018	0.0204
621	SLU 28	-0.24	0.02	58.26	-0.1932	0.0018	0.0202
621	SLU 29	-0.24	-0.05	57.8	-0.1939	0.0018	0.0201

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
621	SLU 30	-0.24	0	57.8	-0.1922	0.0018	0.0199
621	SLU 31	-0.22	0.06	63.84	-0.2056	0.001	0.0209
621	SLU 32	-0.22	-0.01	64.84	-0.2129	0.0011	0.0217
621	SLU 33	-0.22	0.04	64.83	-0.2112	0.0011	0.0215
621	SLU 34	-0.22	0.06	64.37	-0.209	0.0011	0.0211
621	SLU 35	-0.22	-0.01	65.37	-0.2163	0.0012	0.0219
621	SLU 36	-0.22	0.04	65.36	-0.2146	0.0012	0.0217
621	SLU 37	-0.22	-0.03	64.91	-0.2152	0.0012	0.0216
621	SLU 38	-0.22	0.02	64.9	-0.2135	0.0012	0.0214
621	SLU 39	-0.21	-0.02	66.89	-0.2176	0.0008	0.0218
621	SLU 40	-0.21	0.04	66.89	-0.2159	0.0008	0.0217
621	SLU 41	-0.21	-0.02	67.42	-0.221	0.0009	0.022
621	SLU 42	-0.21	0.03	67.42	-0.2193	0.0009	0.0219
621	SLU 43	-0.28	-0.16	63	-0.2232	0.0022	0.0221
621	SLU 44	-0.28	-0.07	62.99	-0.2203	0.0022	0.0217
621	SLU 45	-0.29	-0.15	63.99	-0.2276	0.0023	0.0225
621	SLU 46	-0.29	-0.1	63.99	-0.2259	0.0022	0.0223
621	SLU 47	-0.29	-0.08	63.52	-0.2237	0.0022	0.0219
621	SLU 48	-0.29	-0.15	64.52	-0.2311	0.0023	0.0227
621	SLU 49	-0.29	-0.1	64.52	-0.2293	0.0023	0.0225
621	SLU 50	-0.29	-0.17	64.06	-0.23	0.0023	0.0225
621	SLU 51	-0.29	-0.11	64.06	-0.2283	0.0023	0.0223
621	SLU 52	-0.26	-0.05	70.1	-0.2417	0.0016	0.0232
621	SLU 53	-0.27	-0.13	71.09	-0.249	0.0017	0.024
621	SLU 54	-0.27	-0.07	71.09	-0.2473	0.0016	0.0238
621	SLU 55	-0.27	-0.06	70.63	-0.2451	0.0016	0.0234
621	SLU 56	-0.27	-0.13	71.63	-0.2524	0.0017	0.0242
621	SLU 57	-0.27	-0.08	71.62	-0.2507	0.0017	0.024
621	SLU 58	-0.27	-0.15	71.17	-0.2514	0.0017	0.0239
621	SLU 59	-0.27	-0.09	71.16	-0.2497	0.0017	0.0238
621	SLU 60	-0.26	-0.13	73.15	-0.2537	0.0014	0.0242
621	SLU 61	-0.26	-0.08	73.15	-0.252	0.0013	0.024
621	SLU 62	-0.26	-0.13	73.68	-0.2571	0.0014	0.0244
621	SLU 63	-0.26	-0.08	73.68	-0.2554	0.0014	0.0242
621	SLU 64	-0.3	-0.1	69.55	-0.2353	0.0022	0.0242
621	SLU 65	-0.3	-0.01	69.55	-0.2325	0.0022	0.0239
621	SLU 66	-0.3	-0.09	70.54	-0.2398	0.0023	0.0247
621	SLU 67	-0.3	-0.03	70.54	-0.2381	0.0022	0.0245
621	SLU 68	-0.3	-0.01	70.08	-0.2359	0.0022	0.0241
621	SLU 69	-0.3	-0.09	71.07	-0.2432	0.0023	0.0249
621	SLU 70	-0.3	-0.04	71.07	-0.2415	0.0023	0.0247
621	SLU 71	-0.3	-0.1	70.61	-0.2422	0.0023	0.0246
621	SLU 72	-0.3	-0.05	70.61	-0.2405	0.0023	0.0245
621	SLU 73	-0.28	0.01	76.65	-0.2539	0.0016	0.0254
621	SLU 74	-0.28	-0.06	77.65	-0.2612	0.0017	0.0262
621	SLU 75	-0.28	-0.01	77.64	-0.2595	0.0016	0.026
621	SLU 76	-0.28	0.01	77.18	-0.2573	0.0016	0.0256
621	SLU 77	-0.29	-0.07	78.18	-0.2646	0.0017	0.0264
621	SLU 78	-0.29	-0.01	78.17	-0.2629	0.0017	0.0262
621	SLU 79	-0.29	-0.08	77.72	-0.2635	0.0017	0.0261
621	SLU 80	-0.29	-0.03	77.71	-0.2618	0.0017	0.0259
621	SLU 81	-0.27	-0.07	79.7	-0.2659	0.0014	0.0264
621	SLU 82	-0.27	-0.02	79.7	-0.2642	0.0013	0.0262
621	SLU 83	-0.27	-0.07	80.23	-0.2693	0.0014	0.0266
621	SLU 84	-0.27	-0.02	80.23	-0.2676	0.0014	0.0264
621	SLE RA 1	-0.22	-0.09	52.06	-0.1784	0.0017	0.0182
621	SLE RA 2	-0.23	-0.03	52.06	-0.1765	0.0017	0.018
621	SLE RA 3	-0.23	-0.08	52.72	-0.1813	0.0017	0.0185
621	SLE RA 4	-0.23	-0.05	52.72	-0.1802	0.0017	0.0184
621	SLE RA 5	-0.23	-0.03	52.41	-0.1787	0.0017	0.0181
621	SLE RA 6	-0.23	-0.08	53.08	-0.1836	0.0018	0.0186
621	SLE RA 7	-0.23	-0.05	53.07	-0.1825	0.0017	0.0185
621	SLE RA 8	-0.23	-0.09	52.77	-0.1829	0.0018	0.0184
621	SLE RA 9	-0.23	-0.06	52.77	-0.1818	0.0018	0.0183
621	SLE RA 10	-0.21	-0.02	56.79	-0.1907	0.0013	0.0189
621	SLE RA 11	-0.22	-0.07	57.46	-0.1956	0.0013	0.0195
621	SLE RA 12	-0.22	-0.03	57.46	-0.1944	0.0013	0.0193
621	SLE RA 13	-0.22	-0.02	57.15	-0.193	0.0013	0.0191
621	SLE RA 14	-0.22	-0.07	57.81	-0.1979	0.0014	0.0196
621	SLE RA 15	-0.22	-0.03	57.81	-0.1967	0.0013	0.0195
621	SLE RA 16	-0.22	-0.08	57.51	-0.1972	0.0014	0.0194
621	SLE RA 17	-0.22	-0.04	57.5	-0.196	0.0014	0.0193
621	SLE RA 18	-0.21	-0.07	58.83	-0.1987	0.0011	0.0196
621	SLE RA 19	-0.21	-0.03	58.83	-0.1976	0.0011	0.0195
621	SLE RA 20	-0.21	-0.07	59.18	-0.201	0.0012	0.0197
621	SLE RA 21	-0.21	-0.04	59.18	-0.1999	0.0012	0.0196
621	SLE FR 1	-0.22	-0.09	52.06	-0.1784	0.0017	0.0182
621	SLE FR 2	-0.23	-0.08	52.06	-0.178	0.0017	0.0181
621	SLE FR 3	-0.23	-0.09	52.2	-0.1793	0.0017	0.0182
621	SLE FR 4	-0.22	-0.07	54.09	-0.1841	0.0015	0.0185
621	SLE FR 5	-0.22	-0.08	54.23	-0.1854	0.0016	0.0186
621	SLE FR 6	-0.22	-0.08	55.45	-0.1885	0.0014	0.0189
621	SLE QP 1	-0.22	-0.09	52.06	-0.1784	0.0017	0.0182
621	SLE QP 2	-0.22	-0.08	54.09	-0.1845	0.0015	0.0186
621	SLD 1	4.25	0.71	55.78	-0.1321	0.0198	0.0208
621	SLD 2	4.25	0.52	55.82	-0.1351	0.0199	0.0238
621	SLD 3	4.35	-1.02	56.14	-0.1728	0.021	0.0222
621	SLD 4	4.35	-1.21	56.17	-0.1758	0.0211	0.0251
621	SLD 5	0.97	2.8	54.06	-0.1065	0.0052	0.0167
621	SLD 6	0.97	2.68	54.08	-0.1084	0.0052	0.0186
621	SLD 7	1.3	-2.95	55.24	-0.2422	0.0092	0.0212

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
621	SLD 8	1.3	-3.07	55.26	-0.2441	0.0093	0.0231
621	SLD 9	-1.74	2.9	52.92	-0.1248	-0.0062	0.0141
621	SLD 10	-1.74	2.78	52.95	-0.1267	-0.0061	0.016
621	SLD 11	-1.41	-2.85	54.11	-0.2605	-0.0022	0.0186
621	SLD 12	-1.41	-2.97	54.13	-0.2625	-0.0021	0.0205
621	SLD 13	-4.79	1.04	52.01	-0.1931	-0.0181	0.012
621	SLD 14	-4.79	0.85	52.05	-0.1961	-0.018	0.015
621	SLD 15	-4.69	-0.68	52.37	-0.2338	-0.0169	0.0134
621	SLD 16	-4.69	-0.87	52.4	-0.2369	-0.0168	0.0163
621	SLV 1	10.23	1.71	58.06	-0.059	0.0444	0.024
621	SLV 2	10.23	1.27	58.14	-0.066	0.0446	0.0309
621	SLV 3	10.46	-2.22	58.87	-0.1514	0.0471	0.0272
621	SLV 4	10.46	-2.66	58.95	-0.1584	0.0474	0.034
621	SLV 5	2.56	6.49	54.04	-0.0055	0.0101	0.0143
621	SLV 6	2.56	6.21	54.1	-0.01	0.0103	0.0187
621	SLV 7	3.34	-6.61	56.73	-0.3135	0.0194	0.0248
621	SLV 8	3.34	-6.89	56.79	-0.3179	0.0195	0.0291
621	SLV 9	-3.78	6.72	51.4	-0.051	-0.0165	0.008
621	SLV 10	-3.78	6.44	51.45	-0.0555	-0.0163	0.0124
621	SLV 11	-3	-6.38	54.09	-0.3589	-0.0072	0.0185
621	SLV 12	-3	-6.66	54.14	-0.3634	-0.007	0.0229
621	SLV 13	-10.9	2.49	49.23	-0.2105	-0.0443	0.0032
621	SLV 14	-10.9	2.05	49.32	-0.2176	-0.0441	0.01
621	SLV 15	-10.66	-1.44	50.04	-0.3029	-0.0415	0.0063
621	SLV 16	-10.67	-1.88	50.13	-0.31	-0.0413	0.0131
621	CRTFP Ux+	0	0	0	0	0	0
621	CRTFP Ux-	0	0	0	0	0	0
622	SLU 1	-0.2	-0.01	50.06	-0.1963	0.0068	0.0177
622	SLU 2	-0.2	0.07	50.05	-0.1934	0.0067	0.0174
622	SLU 3	-0.2	0	51.04	-0.2014	0.007	0.0182
622	SLU 4	-0.2	0.06	51.04	-0.1997	0.0069	0.018
622	SLU 5	-0.2	0.07	50.58	-0.1972	0.0068	0.0176
622	SLU 6	-0.21	0	51.57	-0.2052	0.0071	0.0184
622	SLU 7	-0.21	0.05	51.57	-0.2034	0.007	0.0182
622	SLU 8	-0.21	-0.01	51.11	-0.2038	0.007	0.0181
622	SLU 9	-0.21	0.04	51.11	-0.2021	0.007	0.0179
622	SLU 10	-0.18	0.1	57.16	-0.2188	0.0071	0.0188
622	SLU 11	-0.18	0.03	58.15	-0.2268	0.0073	0.0196
622	SLU 12	-0.19	0.09	58.15	-0.225	0.0072	0.0194
622	SLU 13	-0.19	0.1	57.69	-0.2225	0.0072	0.019
622	SLU 14	-0.19	0.03	58.68	-0.2305	0.0074	0.0198
622	SLU 15	-0.19	0.08	58.68	-0.2288	0.0074	0.0196
622	SLU 16	-0.19	0.01	58.22	-0.2292	0.0073	0.0195
622	SLU 17	-0.19	0.07	58.22	-0.2274	0.0073	0.0193
622	SLU 18	-0.17	0.03	60.21	-0.2325	0.0073	0.0198
622	SLU 19	-0.17	0.08	60.21	-0.2308	0.0072	0.0196
622	SLU 20	-0.18	0.03	60.74	-0.2363	0.0074	0.02
622	SLU 21	-0.18	0.08	60.74	-0.2345	0.0073	0.0198
622	SLU 22	-0.21	0.06	56.59	-0.2116	0.0077	0.0199
622	SLU 23	-0.21	0.15	56.59	-0.2087	0.0076	0.0196
622	SLU 24	-0.22	0.08	57.58	-0.2167	0.0078	0.0204
622	SLU 25	-0.22	0.13	57.58	-0.215	0.0078	0.0202
622	SLU 26	-0.22	0.15	57.12	-0.2124	0.0077	0.0198
622	SLU 27	-0.22	0.08	58.11	-0.2205	0.0079	0.0206
622	SLU 28	-0.22	0.13	58.11	-0.2187	0.0079	0.0204
622	SLU 29	-0.22	0.06	57.65	-0.2191	0.0079	0.0203
622	SLU 30	-0.22	0.11	57.65	-0.2174	0.0078	0.0201
622	SLU 31	-0.2	0.18	63.7	-0.2341	0.0079	0.0211
622	SLU 32	-0.2	0.11	64.69	-0.2421	0.0081	0.0219
622	SLU 33	-0.2	0.16	64.69	-0.2403	0.0081	0.0217
622	SLU 34	-0.2	0.18	64.23	-0.2378	0.008	0.0213
622	SLU 35	-0.2	0.11	65.22	-0.2458	0.0082	0.0221
622	SLU 36	-0.2	0.16	65.22	-0.2441	0.0082	0.0219
622	SLU 37	-0.2	0.09	64.76	-0.2445	0.0082	0.0218
622	SLU 38	-0.2	0.14	64.76	-0.2427	0.0082	0.0216
622	SLU 39	-0.19	0.1	66.75	-0.2478	0.0081	0.022
622	SLU 40	-0.19	0.16	66.75	-0.2461	0.0081	0.0218
622	SLU 41	-0.19	0.1	67.28	-0.2516	0.0082	0.0222
622	SLU 42	-0.19	0.15	67.28	-0.2498	0.0082	0.022
622	SLU 43	-0.26	-0.04	62.83	-0.25	0.0085	0.0222
622	SLU 44	-0.26	0.04	62.83	-0.2471	0.0085	0.0219
622	SLU 45	-0.26	-0.02	63.82	-0.2551	0.0087	0.0227
622	SLU 46	-0.26	0.03	63.81	-0.2533	0.0087	0.0225
622	SLU 47	-0.26	0.04	63.35	-0.2508	0.0086	0.0221
622	SLU 48	-0.26	-0.03	64.34	-0.2588	0.0088	0.0229
622	SLU 49	-0.26	0.03	64.34	-0.2571	0.0088	0.0227
622	SLU 50	-0.26	-0.04	63.89	-0.2575	0.0088	0.0226
622	SLU 51	-0.26	0.01	63.88	-0.2557	0.0087	0.0224
622	SLU 52	-0.24	0.07	69.94	-0.2724	0.0088	0.0234
622	SLU 53	-0.24	0	70.93	-0.2804	0.009	0.0242
622	SLU 54	-0.24	0.06	70.92	-0.2787	0.009	0.024
622	SLU 55	-0.24	0.07	70.46	-0.2762	0.0089	0.0236
622	SLU 56	-0.24	0	71.45	-0.2842	0.0091	0.0244
622	SLU 57	-0.24	0.05	71.45	-0.2824	0.0091	0.0242
622	SLU 58	-0.24	-0.01	71	-0.2828	0.0091	0.0241
622	SLU 59	-0.24	0.04	70.99	-0.2811	0.009	0.0239
622	SLU 60	-0.23	0	72.99	-0.2862	0.009	0.0243
622	SLU 61	-0.23	0.05	72.98	-0.2845	0.009	0.0241
622	SLU 62	-0.23	0	73.52	-0.2899	0.0091	0.0245
622	SLU 63	-0.23	0.05	73.51	-0.2882	0.0091	0.0243
622	SLU 64	-0.27	0.03	69.37	-0.2653	0.0094	0.0244

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
622	SLU 65	-0.27	0.12	69.36	-0.2624	0.0093	0.0241
622	SLU 66	-0.27	0.05	70.36	-0.2704	0.0096	0.0249
622	SLU 67	-0.27	0.1	70.35	-0.2686	0.0095	0.0248
622	SLU 68	-0.27	0.12	69.89	-0.2661	0.0095	0.0243
622	SLU 69	-0.28	0.05	70.88	-0.2741	0.0097	0.0251
622	SLU 70	-0.28	0.1	70.88	-0.2724	0.0096	0.025
622	SLU 71	-0.28	0.03	70.43	-0.2728	0.0096	0.0248
622	SLU 72	-0.28	0.08	70.42	-0.271	0.0096	0.0247
622	SLU 73	-0.25	0.15	76.47	-0.2877	0.0097	0.0256
622	SLU 74	-0.25	0.08	77.47	-0.2957	0.0099	0.0264
622	SLU 75	-0.25	0.13	77.46	-0.294	0.0098	0.0262
622	SLU 76	-0.25	0.15	77	-0.2915	0.0098	0.0258
622	SLU 77	-0.26	0.08	77.99	-0.2995	0.01	0.0266
622	SLU 78	-0.26	0.13	77.99	-0.2977	0.01	0.0264
622	SLU 79	-0.26	0.06	77.53	-0.2981	0.0099	0.0263
622	SLU 80	-0.26	0.11	77.53	-0.2964	0.0099	0.0261
622	SLU 81	-0.24	0.08	79.53	-0.3015	0.0099	0.0265
622	SLU 82	-0.24	0.13	79.52	-0.2997	0.0098	0.0264
622	SLU 83	-0.25	0.07	80.05	-0.3052	0.01	0.0267
622	SLU 84	-0.25	0.13	80.05	-0.3035	0.0099	0.0265
622	SLE RA 1	-0.2	0.01	51.92	-0.2007	0.007	0.0183
622	SLE RA 2	-0.2	0.07	51.92	-0.1988	0.007	0.0181
622	SLE RA 3	-0.21	0.02	52.58	-0.2041	0.0072	0.0186
622	SLE RA 4	-0.21	0.05	52.58	-0.2029	0.0071	0.0185
622	SLE RA 5	-0.21	0.07	52.27	-0.2013	0.0071	0.0182
622	SLE RA 6	-0.21	0.02	52.93	-0.2066	0.0072	0.0188
622	SLE RA 7	-0.21	0.05	52.93	-0.2054	0.0072	0.0186
622	SLE RA 8	-0.21	0.01	52.63	-0.2057	0.0072	0.0186
622	SLE RA 9	-0.21	0.04	52.63	-0.2045	0.0072	0.0185
622	SLE RA 10	-0.19	0.09	56.66	-0.2157	0.0072	0.0191
622	SLE RA 11	-0.19	0.04	57.32	-0.221	0.0074	0.0196
622	SLE RA 12	-0.19	0.07	57.32	-0.2198	0.0073	0.0195
622	SLE RA 13	-0.19	0.09	57.01	-0.2181	0.0073	0.0192
622	SLE RA 14	-0.2	0.04	57.67	-0.2235	0.0074	0.0197
622	SLE RA 15	-0.2	0.07	57.67	-0.2223	0.0074	0.0196
622	SLE RA 16	-0.2	0.03	57.37	-0.2226	0.0074	0.0196
622	SLE RA 17	-0.2	0.06	57.37	-0.2214	0.0074	0.0194
622	SLE RA 18	-0.19	0.04	58.7	-0.2248	0.0073	0.0197
622	SLE RA 19	-0.19	0.07	58.69	-0.2237	0.0073	0.0196
622	SLE RA 20	-0.19	0.04	59.05	-0.2273	0.0074	0.0198
622	SLE RA 21	-0.19	0.07	59.05	-0.2262	0.0074	0.0197
622	SLE FR 1	-0.2	0.01	51.92	-0.2007	0.007	0.0183
622	SLE FR 2	-0.2	0.02	51.92	-0.2003	0.007	0.0183
622	SLE FR 3	-0.2	0.01	52.06	-0.2017	0.0071	0.0184
622	SLE FR 4	-0.2	0.03	53.95	-0.2076	0.0071	0.0187
622	SLE FR 5	-0.2	0.02	54.1	-0.209	0.0072	0.0188
622	SLE FR 6	-0.2	0.02	55.31	-0.2128	0.0072	0.019
622	SLE QP 1	-0.2	0.01	51.92	-0.2007	0.007	0.0183
622	SLE QP 2	-0.2	0.02	53.96	-0.208	0.0071	0.0187
622	SLD 1	4.26	0.8	55.06	-0.1515	0.026	0.0214
622	SLD 2	4.26	0.63	55.09	-0.1546	0.0261	0.0243
622	SLD 3	4.37	-0.91	55.39	-0.1949	0.0272	0.0223
622	SLD 4	4.36	-1.09	55.43	-0.198	0.0274	0.0252
622	SLD 5	0.99	2.89	53.78	-0.1247	0.0109	0.0177
622	SLD 6	0.99	2.78	53.8	-0.1267	0.0109	0.0195
622	SLD 7	1.32	-2.84	54.89	-0.2693	0.0151	0.0207
622	SLD 8	1.32	-2.95	54.91	-0.2713	0.0151	0.0225
622	SLD 9	-1.72	2.99	53	-0.1446	-0.0009	0.0149
622	SLD 10	-1.72	2.87	53.02	-0.1467	-0.0008	0.0168
622	SLD 11	-1.38	-2.74	54.11	-0.2892	0.0033	0.0179
622	SLD 12	-1.39	-2.85	54.14	-0.2912	0.0034	0.0198
622	SLD 13	-4.76	1.12	52.48	-0.2179	-0.0131	0.0123
622	SLD 14	-4.76	0.95	52.52	-0.221	-0.013	0.0151
622	SLD 15	-4.66	-0.6	52.82	-0.2613	-0.0118	0.0132
622	SLD 16	-4.66	-0.77	52.85	-0.2644	-0.0117	0.016
622	SLV 1	10.24	1.81	56.55	-0.073	0.0512	0.0252
622	SLV 2	10.24	1.4	56.63	-0.0803	0.0515	0.0318
622	SLV 3	10.48	-2.11	57.31	-0.1714	0.0541	0.0273
622	SLV 4	10.47	-2.52	57.39	-0.1787	0.0544	0.0339
622	SLV 5	2.58	6.57	53.57	-0.017	0.0159	0.0163
622	SLV 6	2.58	6.31	53.62	-0.0217	0.0161	0.0206
622	SLV 7	3.36	-6.5	56.1	-0.345	0.0256	0.0234
622	SLV 8	3.36	-6.75	56.15	-0.3497	0.0257	0.0276
622	SLV 9	-3.76	6.79	51.76	-0.0663	-0.0115	0.0099
622	SLV 10	-3.76	6.53	51.81	-0.0709	-0.0113	0.0141
622	SLV 11	-2.97	-6.27	54.3	-0.3943	-0.0018	0.0169
622	SLV 12	-2.97	-6.53	54.34	-0.3989	-0.0017	0.0211
622	SLV 13	-10.87	2.55	50.52	-0.2372	-0.0401	0.0036
622	SLV 14	-10.87	2.15	50.6	-0.2445	-0.0399	0.0102
622	SLV 15	-10.63	-1.37	51.28	-0.3356	-0.0372	0.0057
622	SLV 16	-10.64	-1.77	51.36	-0.3429	-0.037	0.0123
622	CRTFP Ux+	0	0	0	0	0	0
622	CRTFP Ux-	0	0	0	0	0	0
623	SLU 1	-0.18	0.08	49.76	-0.2181	0.012	0.0152
623	SLU 2	-0.18	0.16	49.75	-0.2151	0.0119	0.0149
623	SLU 3	-0.18	0.1	50.74	-0.2238	0.0122	0.0157
623	SLU 4	-0.18	0.15	50.74	-0.222	0.0122	0.0155
623	SLU 5	-0.18	0.16	50.28	-0.2191	0.0121	0.0151
623	SLU 6	-0.18	0.1	51.26	-0.2279	0.0124	0.0158
623	SLU 7	-0.19	0.15	51.26	-0.2261	0.0124	0.0157
623	SLU 8	-0.19	0.08	50.8	-0.2262	0.0123	0.0155

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
623	SLU 9	-0.19	0.13	50.8	-0.2244	0.0122	0.0154
623	SLU 10	-0.16	0.2	56.84	-0.2444	0.0132	0.0162
623	SLU 11	-0.16	0.13	57.82	-0.2531	0.0135	0.0169
623	SLU 12	-0.16	0.18	57.82	-0.2513	0.0135	0.0168
623	SLU 13	-0.16	0.2	57.36	-0.2485	0.0133	0.0164
623	SLU 14	-0.17	0.13	58.35	-0.2572	0.0137	0.0171
623	SLU 15	-0.17	0.18	58.34	-0.2554	0.0136	0.0169
623	SLU 16	-0.17	0.11	57.89	-0.2556	0.0135	0.0168
623	SLU 17	-0.17	0.16	57.89	-0.2538	0.0135	0.0166
623	SLU 18	-0.15	0.13	59.88	-0.26	0.0138	0.017
623	SLU 19	-0.15	0.18	59.88	-0.2582	0.0137	0.0168
623	SLU 20	-0.16	0.13	60.4	-0.2641	0.0139	0.0172
623	SLU 21	-0.16	0.18	60.4	-0.2623	0.0139	0.017
623	SLU 22	-0.19	0.16	56.26	-0.2365	0.0137	0.0173
623	SLU 23	-0.19	0.25	56.25	-0.2335	0.0137	0.017
623	SLU 24	-0.19	0.18	57.23	-0.2422	0.014	0.0177
623	SLU 25	-0.19	0.23	57.23	-0.2404	0.014	0.0176
623	SLU 26	-0.19	0.25	56.78	-0.2376	0.0138	0.0172
623	SLU 27	-0.2	0.18	57.76	-0.2463	0.0142	0.0179
623	SLU 28	-0.2	0.23	57.76	-0.2445	0.0142	0.0177
623	SLU 29	-0.2	0.16	57.3	-0.2447	0.0141	0.0176
623	SLU 30	-0.2	0.21	57.3	-0.2428	0.014	0.0174
623	SLU 31	-0.17	0.29	63.34	-0.2629	0.015	0.0183
623	SLU 32	-0.17	0.22	64.32	-0.2716	0.0153	0.019
623	SLU 33	-0.18	0.27	64.32	-0.2698	0.0153	0.0188
623	SLU 34	-0.18	0.28	63.86	-0.2669	0.0151	0.0184
623	SLU 35	-0.18	0.22	64.84	-0.2757	0.0155	0.0191
623	SLU 36	-0.18	0.27	64.84	-0.2739	0.0154	0.019
623	SLU 37	-0.18	0.2	64.39	-0.274	0.0153	0.0189
623	SLU 38	-0.18	0.25	64.39	-0.2722	0.0153	0.0187
623	SLU 39	-0.16	0.22	66.38	-0.2785	0.0156	0.0191
623	SLU 40	-0.16	0.27	66.37	-0.2766	0.0155	0.0189
623	SLU 41	-0.17	0.22	66.9	-0.2825	0.0157	0.0192
623	SLU 42	-0.17	0.27	66.9	-0.2807	0.0157	0.0191
623	SLU 43	-0.23	0.07	62.46	-0.2772	0.0149	0.0191
623	SLU 44	-0.23	0.16	62.45	-0.2742	0.0149	0.0188
623	SLU 45	-0.23	0.09	63.44	-0.2829	0.0152	0.0195
623	SLU 46	-0.23	0.14	63.43	-0.2811	0.0152	0.0194
623	SLU 47	-0.23	0.16	62.98	-0.2782	0.015	0.019
623	SLU 48	-0.23	0.09	63.96	-0.287	0.0154	0.0197
623	SLU 49	-0.24	0.14	63.96	-0.2851	0.0153	0.0195
623	SLU 50	-0.23	0.07	63.5	-0.2853	0.0152	0.0194
623	SLU 51	-0.24	0.12	63.5	-0.2835	0.0152	0.0192
623	SLU 52	-0.21	0.19	69.54	-0.3035	0.0161	0.0201
623	SLU 53	-0.21	0.13	70.52	-0.3122	0.0165	0.0208
623	SLU 54	-0.21	0.18	70.52	-0.3104	0.0165	0.0206
623	SLU 55	-0.21	0.19	70.06	-0.3076	0.0163	0.0202
623	SLU 56	-0.22	0.13	71.05	-0.3163	0.0166	0.0209
623	SLU 57	-0.22	0.18	71.04	-0.3145	0.0166	0.0208
623	SLU 58	-0.22	0.11	70.59	-0.3147	0.0165	0.0207
623	SLU 59	-0.22	0.16	70.59	-0.3128	0.0165	0.0205
623	SLU 60	-0.2	0.12	72.58	-0.3191	0.0167	0.0209
623	SLU 61	-0.2	0.18	72.58	-0.3173	0.0167	0.0207
623	SLU 62	-0.2	0.12	73.1	-0.3232	0.0169	0.021
623	SLU 63	-0.21	0.17	73.1	-0.3214	0.0169	0.0209
623	SLU 64	-0.24	0.16	68.95	-0.2956	0.0167	0.0211
623	SLU 65	-0.24	0.24	68.95	-0.2926	0.0167	0.0209
623	SLU 66	-0.24	0.18	69.93	-0.3013	0.017	0.0216
623	SLU 67	-0.24	0.23	69.93	-0.2995	0.017	0.0214
623	SLU 68	-0.24	0.24	69.48	-0.2967	0.0168	0.021
623	SLU 69	-0.25	0.18	70.46	-0.3054	0.0172	0.0217
623	SLU 70	-0.25	0.23	70.46	-0.3036	0.0171	0.0216
623	SLU 71	-0.25	0.16	70	-0.3037	0.017	0.0215
623	SLU 72	-0.25	0.21	70	-0.3019	0.017	0.0213
623	SLU 73	-0.22	0.28	76.04	-0.322	0.0179	0.0221
623	SLU 74	-0.22	0.21	77.02	-0.3307	0.0183	0.0228
623	SLU 75	-0.23	0.26	77.02	-0.3289	0.0182	0.0227
623	SLU 76	-0.23	0.28	76.56	-0.326	0.0181	0.0223
623	SLU 77	-0.23	0.21	77.54	-0.3348	0.0184	0.023
623	SLU 78	-0.23	0.26	77.54	-0.3329	0.0184	0.0228
623	SLU 79	-0.23	0.19	77.09	-0.3331	0.0183	0.0227
623	SLU 80	-0.23	0.24	77.08	-0.3313	0.0183	0.0226
623	SLU 81	-0.21	0.21	79.08	-0.3375	0.0185	0.0229
623	SLU 82	-0.21	0.26	79.07	-0.3357	0.0185	0.0228
623	SLU 83	-0.22	0.21	79.6	-0.3416	0.0187	0.0231
623	SLU 84	-0.22	0.26	79.6	-0.3398	0.0187	0.0229
623	SLE RA 1	-0.18	0.1	51.61	-0.2233	0.0125	0.0158
623	SLE RA 2	-0.18	0.16	51.61	-0.2213	0.0124	0.0156
623	SLE RA 3	-0.18	0.12	52.27	-0.2272	0.0127	0.0161
623	SLE RA 4	-0.18	0.15	52.27	-0.226	0.0126	0.016
623	SLE RA 5	-0.19	0.16	51.96	-0.224	0.0125	0.0157
623	SLE RA 6	-0.19	0.12	52.62	-0.2299	0.0128	0.0162
623	SLE RA 7	-0.19	0.15	52.61	-0.2287	0.0127	0.0161
623	SLE RA 8	-0.19	0.1	52.31	-0.2288	0.0127	0.016
623	SLE RA 9	-0.19	0.14	52.31	-0.2276	0.0127	0.0159
623	SLE RA 10	-0.17	0.18	56.34	-0.2409	0.0133	0.0165
623	SLE RA 11	-0.17	0.14	56.99	-0.2467	0.0135	0.0169
623	SLE RA 12	-0.17	0.17	56.99	-0.2455	0.0135	0.0168
623	SLE RA 13	-0.17	0.18	56.68	-0.2436	0.0134	0.0166
623	SLE RA 14	-0.17	0.14	57.34	-0.2494	0.0136	0.0171
623	SLE RA 15	-0.17	0.17	57.34	-0.2482	0.0136	0.0169

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
623	SLE RA 16	-0.17	0.13	57.04	-0.2483	0.0135	0.0169
623	SLE RA 17	-0.17	0.16	57.03	-0.2471	0.0135	0.0168
623	SLE RA 18	-0.16	0.14	58.36	-0.2513	0.0137	0.017
623	SLE RA 19	-0.17	0.17	58.36	-0.2501	0.0137	0.0169
623	SLE RA 20	-0.17	0.14	58.71	-0.254	0.0138	0.0171
623	SLE RA 21	-0.17	0.17	58.71	-0.2528	0.0138	0.017
623	SLE FR 1	-0.18	0.1	51.61	-0.2233	0.0125	0.0158
623	SLE FR 2	-0.18	0.11	51.61	-0.2229	0.0125	0.0158
623	SLE FR 3	-0.18	0.1	51.75	-0.2244	0.0125	0.0159
623	SLE FR 4	-0.18	0.12	53.64	-0.2313	0.0128	0.0161
623	SLE FR 5	-0.18	0.11	53.78	-0.2328	0.0129	0.0162
623	SLE FR 6	-0.17	0.12	54.99	-0.2373	0.0131	0.0164
623	SLE QP 1	-0.18	0.1	51.61	-0.2233	0.0125	0.0158
623	SLE QP 2	-0.18	0.11	53.64	-0.2317	0.0128	0.0162
623	SLD 1	4.28	0.9	54.18	-0.171	0.0311	0.0186
623	SLD 2	4.28	0.74	54.21	-0.1742	0.0312	0.0213
623	SLD 3	4.38	-0.82	54.49	-0.217	0.0323	0.0194
623	SLD 4	4.38	-0.98	54.52	-0.2202	0.0324	0.0222
623	SLD 5	1.01	2.98	53.33	-0.1432	0.0165	0.0151
623	SLD 6	1.01	2.88	53.35	-0.1453	0.0166	0.0169
623	SLD 7	1.34	-2.74	54.36	-0.2965	0.0204	0.0179
623	SLD 8	1.34	-2.85	54.38	-0.2986	0.0205	0.0197
623	SLD 9	-1.7	3.07	52.9	-0.1648	0.0051	0.0126
623	SLD 10	-1.7	2.97	52.92	-0.1669	0.0052	0.0144
623	SLD 11	-1.36	-2.65	53.93	-0.3182	0.0091	0.0154
623	SLD 12	-1.36	-2.75	53.95	-0.3203	0.0092	0.0172
623	SLD 13	-4.73	1.21	52.75	-0.2432	-0.0067	0.0102
623	SLD 14	-4.74	1.05	52.78	-0.2464	-0.0066	0.0129
623	SLD 15	-4.63	-0.51	53.06	-0.2892	-0.0055	0.011
623	SLD 16	-4.64	-0.67	53.09	-0.2925	-0.0054	0.0138
623	SLV 1	10.25	1.89	54.93	-0.0868	0.0555	0.0219
623	SLV 2	10.25	1.52	54.99	-0.0943	0.0558	0.0283
623	SLV 3	10.48	-2.02	55.63	-0.1912	0.0582	0.0239
623	SLV 4	10.48	-2.39	55.7	-0.1987	0.0585	0.0303
623	SLV 5	2.6	6.65	52.94	-0.0286	0.0215	0.0138
623	SLV 6	2.59	6.41	52.98	-0.0334	0.0217	0.0179
623	SLV 7	3.38	-6.4	55.3	-0.3767	0.0305	0.0204
623	SLV 8	3.37	-6.64	55.34	-0.3815	0.0307	0.0245
623	SLV 9	-3.73	6.87	51.94	-0.082	-0.005	0.0079
623	SLV 10	-3.73	6.63	51.98	-0.0868	-0.0049	0.012
623	SLV 11	-2.95	-6.18	54.29	-0.4301	0.004	0.0144
623	SLV 12	-2.95	-6.42	54.34	-0.4349	0.0042	0.0185
623	SLV 13	-10.83	2.62	51.57	-0.2647	-0.0328	0.0021
623	SLV 14	-10.84	2.25	51.64	-0.2722	-0.0326	0.0085
623	SLV 15	-10.6	-1.3	52.28	-0.3691	-0.0301	0.004
623	SLV 16	-10.6	-1.67	52.35	-0.3767	-0.0298	0.0105
623	CRTFP Ux+	0	0	0	0	0	0
623	CRTFP Ux-	0	0	0	0	0	0
624	SLU 1	-0.16	0.15	49.31	-0.2401	0.0163	0.0102
624	SLU 2	-0.16	0.23	49.31	-0.237	0.0162	0.0099
624	SLU 3	-0.16	0.17	50.28	-0.2465	0.0167	0.0105
624	SLU 4	-0.16	0.22	50.27	-0.2446	0.0166	0.0104
624	SLU 5	-0.16	0.23	49.82	-0.2414	0.0164	0.01
624	SLU 6	-0.16	0.17	50.79	-0.2509	0.0169	0.0106
624	SLU 7	-0.16	0.22	50.79	-0.249	0.0168	0.0105
624	SLU 8	-0.16	0.15	50.34	-0.2489	0.0166	0.0103
624	SLU 9	-0.16	0.2	50.34	-0.247	0.0166	0.0102
624	SLU 10	-0.14	0.27	56.34	-0.2704	0.0183	0.0108
624	SLU 11	-0.14	0.21	57.31	-0.2799	0.0188	0.0114
624	SLU 12	-0.14	0.26	57.31	-0.278	0.0187	0.0112
624	SLU 13	-0.14	0.27	56.86	-0.2748	0.0185	0.0109
624	SLU 14	-0.14	0.21	57.82	-0.2843	0.0189	0.0115
624	SLU 15	-0.14	0.26	57.82	-0.2824	0.0189	0.0113
624	SLU 16	-0.14	0.19	57.37	-0.2823	0.0187	0.0112
624	SLU 17	-0.14	0.24	57.37	-0.2805	0.0187	0.0111
624	SLU 18	-0.13	0.21	59.35	-0.2878	0.0192	0.0114
624	SLU 19	-0.13	0.26	59.35	-0.286	0.0192	0.0112
624	SLU 20	-0.13	0.21	59.87	-0.2922	0.0194	0.0115
624	SLU 21	-0.13	0.26	59.87	-0.2904	0.0194	0.0113
624	SLU 22	-0.17	0.25	55.73	-0.2617	0.0189	0.0118
624	SLU 23	-0.17	0.33	55.73	-0.2587	0.0189	0.0116
624	SLU 24	-0.17	0.27	56.7	-0.2681	0.0193	0.0121
624	SLU 25	-0.17	0.32	56.7	-0.2662	0.0193	0.012
624	SLU 26	-0.17	0.33	56.25	-0.2631	0.0191	0.0117
624	SLU 27	-0.17	0.27	57.22	-0.2725	0.0195	0.0122
624	SLU 28	-0.17	0.32	57.22	-0.2706	0.0195	0.0121
624	SLU 29	-0.17	0.25	56.77	-0.2705	0.0193	0.012
624	SLU 30	-0.17	0.3	56.77	-0.2687	0.0193	0.0118
624	SLU 31	-0.15	0.37	62.76	-0.2921	0.021	0.0124
624	SLU 32	-0.15	0.31	63.73	-0.3015	0.0214	0.013
624	SLU 33	-0.15	0.36	63.73	-0.2997	0.0214	0.0128
624	SLU 34	-0.15	0.37	63.28	-0.2965	0.0212	0.0125
624	SLU 35	-0.15	0.31	64.25	-0.3059	0.0216	0.0131
624	SLU 36	-0.15	0.36	64.25	-0.3041	0.0216	0.0129
624	SLU 37	-0.15	0.29	63.8	-0.304	0.0214	0.0128
624	SLU 38	-0.15	0.34	63.8	-0.3021	0.0214	0.0127
624	SLU 39	-0.14	0.31	65.78	-0.3095	0.0219	0.013
624	SLU 40	-0.14	0.36	65.78	-0.3076	0.0219	0.0129
624	SLU 41	-0.14	0.31	66.3	-0.3139	0.0221	0.0131
624	SLU 42	-0.14	0.36	66.3	-0.312	0.0221	0.013
624	SLU 43	-0.2	0.16	61.9	-0.3047	0.0202	0.0127

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
624	SLU 44	-0.2	0.24	61.89	-0.3016	0.0202	0.0124
624	SLU 45	-0.2	0.18	62.86	-0.3111	0.0206	0.013
624	SLU 46	-0.2	0.23	62.86	-0.3092	0.0206	0.0129
624	SLU 47	-0.2	0.24	62.41	-0.306	0.0204	0.0125
624	SLU 48	-0.21	0.18	63.38	-0.3155	0.0208	0.0131
624	SLU 49	-0.21	0.23	63.38	-0.3136	0.0208	0.013
624	SLU 50	-0.21	0.16	62.93	-0.3135	0.0206	0.0128
624	SLU 51	-0.21	0.21	62.93	-0.3117	0.0206	0.0127
624	SLU 52	-0.18	0.29	68.93	-0.335	0.0223	0.0133
624	SLU 53	-0.18	0.22	69.9	-0.3445	0.0227	0.0139
624	SLU 54	-0.18	0.27	69.89	-0.3426	0.0227	0.0137
624	SLU 55	-0.19	0.29	69.44	-0.3394	0.0225	0.0134
624	SLU 56	-0.19	0.22	70.41	-0.3489	0.0229	0.0139
624	SLU 57	-0.19	0.27	70.41	-0.347	0.0229	0.0138
624	SLU 58	-0.19	0.2	69.96	-0.3469	0.0227	0.0137
624	SLU 59	-0.19	0.25	69.96	-0.3451	0.0227	0.0136
624	SLU 60	-0.17	0.22	71.94	-0.3524	0.0232	0.0139
624	SLU 61	-0.17	0.27	71.94	-0.3506	0.0232	0.0137
624	SLU 62	-0.18	0.22	72.46	-0.3568	0.0234	0.014
624	SLU 63	-0.18	0.27	72.46	-0.355	0.0234	0.0138
624	SLU 64	-0.21	0.26	68.32	-0.3264	0.0229	0.0143
624	SLU 65	-0.21	0.34	68.32	-0.3233	0.0229	0.0141
624	SLU 66	-0.21	0.28	69.29	-0.3327	0.0233	0.0146
624	SLU 67	-0.21	0.33	69.29	-0.3309	0.0233	0.0145
624	SLU 68	-0.21	0.34	68.84	-0.3277	0.023	0.0141
624	SLU 69	-0.22	0.28	69.81	-0.3371	0.0235	0.0147
624	SLU 70	-0.22	0.33	69.81	-0.3353	0.0235	0.0146
624	SLU 71	-0.22	0.26	69.36	-0.3352	0.0233	0.0145
624	SLU 72	-0.22	0.31	69.36	-0.3333	0.0232	0.0143
624	SLU 73	-0.19	0.38	75.35	-0.3567	0.0249	0.0149
624	SLU 74	-0.19	0.32	76.32	-0.3661	0.0254	0.0155
624	SLU 75	-0.19	0.37	76.32	-0.3643	0.0254	0.0153
624	SLU 76	-0.2	0.38	75.87	-0.3611	0.0251	0.015
624	SLU 77	-0.2	0.32	76.84	-0.3705	0.0256	0.0156
624	SLU 78	-0.2	0.37	76.84	-0.3687	0.0255	0.0154
624	SLU 79	-0.2	0.3	76.39	-0.3686	0.0254	0.0153
624	SLU 80	-0.2	0.35	76.39	-0.3667	0.0253	0.0152
624	SLU 81	-0.18	0.32	78.37	-0.3741	0.0259	0.0155
624	SLU 82	-0.18	0.37	78.37	-0.3722	0.0259	0.0154
624	SLU 83	-0.19	0.32	78.89	-0.3785	0.0261	0.0156
624	SLU 84	-0.19	0.37	78.88	-0.3766	0.026	0.0155
624	SLE RA 1	-0.16	0.18	51.14	-0.2463	0.017	0.0106
624	SLE RA 2	-0.16	0.23	51.14	-0.2442	0.017	0.0105
624	SLE RA 3	-0.16	0.19	51.79	-0.2505	0.0173	0.0109
624	SLE RA 4	-0.16	0.22	51.79	-0.2493	0.0173	0.0108
624	SLE RA 5	-0.16	0.23	51.49	-0.2472	0.0171	0.0105
624	SLE RA 6	-0.16	0.19	52.13	-0.2535	0.0174	0.0109
624	SLE RA 7	-0.16	0.22	52.13	-0.2522	0.0174	0.0108
624	SLE RA 8	-0.16	0.18	51.83	-0.2522	0.0173	0.0108
624	SLE RA 9	-0.16	0.21	51.83	-0.2509	0.0173	0.0107
624	SLE RA 10	-0.15	0.26	55.83	-0.2665	0.0184	0.0111
624	SLE RA 11	-0.15	0.22	56.48	-0.2728	0.0187	0.0114
624	SLE RA 12	-0.15	0.25	56.48	-0.2716	0.0187	0.0113
624	SLE RA 13	-0.15	0.26	56.18	-0.2694	0.0185	0.0111
624	SLE RA 14	-0.15	0.22	56.82	-0.2757	0.0188	0.0115
624	SLE RA 15	-0.15	0.25	56.82	-0.2745	0.0188	0.0114
624	SLE RA 16	-0.15	0.21	56.52	-0.2744	0.0187	0.0113
624	SLE RA 17	-0.15	0.24	56.52	-0.2732	0.0186	0.0112
624	SLE RA 18	-0.14	0.22	57.84	-0.2781	0.019	0.0114
624	SLE RA 19	-0.14	0.25	57.84	-0.2769	0.019	0.0114
624	SLE RA 20	-0.14	0.22	58.19	-0.281	0.0191	0.0115
624	SLE RA 21	-0.14	0.25	58.18	-0.2798	0.0191	0.0114
624	SLE FR 1	-0.16	0.18	51.14	-0.2463	0.017	0.0106
624	SLE FR 2	-0.16	0.19	51.14	-0.2459	0.017	0.0106
624	SLE FR 3	-0.16	0.18	51.28	-0.2475	0.0171	0.0107
624	SLE FR 4	-0.16	0.2	53.15	-0.2554	0.0176	0.0108
624	SLE FR 5	-0.16	0.19	53.29	-0.257	0.0177	0.0109
624	SLE FR 6	-0.15	0.2	54.49	-0.2622	0.018	0.011
624	SLE QP 1	-0.16	0.18	51.14	-0.2463	0.017	0.0106
624	SLE QP 2	-0.15	0.19	53.15	-0.2558	0.0176	0.0109
624	SLD 1	4.3	0.97	53.34	-0.1906	0.034	0.0135
624	SLD 2	4.29	0.82	53.36	-0.1939	0.0341	0.0163
624	SLD 3	4.4	-0.75	53.62	-0.2393	0.0349	0.0121
624	SLD 4	4.39	-0.9	53.65	-0.2426	0.035	0.0148
624	SLD 5	1.03	3.06	52.77	-0.1619	0.0211	0.0134
624	SLD 6	1.03	2.96	52.79	-0.164	0.0211	0.0152
624	SLD 7	1.36	-2.68	53.72	-0.3241	0.0243	0.0086
624	SLD 8	1.36	-2.77	53.74	-0.3263	0.0243	0.0103
624	SLD 9	-1.67	3.15	52.57	-0.1854	0.0109	0.0114
624	SLD 10	-1.67	3.05	52.58	-0.1876	0.011	0.0132
624	SLD 11	-1.34	-2.58	53.52	-0.3476	0.0141	0.0066
624	SLD 12	-1.34	-2.68	53.53	-0.3498	0.0142	0.0084
624	SLD 13	-4.7	1.28	52.66	-0.2691	0.0002	0.007
624	SLD 14	-4.71	1.13	52.68	-0.2724	0.0003	0.0097
624	SLD 15	-4.6	-0.44	52.94	-0.3177	0.0012	0.0055
624	SLD 16	-4.61	-0.59	52.97	-0.3211	0.0013	0.0082
624	SLV 1	10.25	1.96	53.59	-0.1004	0.0559	0.0171
624	SLV 2	10.25	1.62	53.65	-0.1082	0.0561	0.0235
624	SLV 3	10.49	-1.96	54.25	-0.2109	0.0581	0.0138
624	SLV 4	10.48	-2.3	54.31	-0.2186	0.0583	0.0202
624	SLV 5	2.61	6.72	52.28	-0.0404	0.0257	0.0167

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
624	SLV 6	2.61	6.51	52.32	-0.0453	0.0259	0.0207
624	SLV 7	3.39	-6.35	54.46	-0.4085	0.033	0.0057
624	SLV 8	3.39	-6.56	54.5	-0.4135	0.0332	0.0098
624	SLV 9	-3.7	6.94	51.81	-0.0982	0.002	0.012
624	SLV 10	-3.7	6.73	51.84	-0.1031	0.0022	0.0161
624	SLV 11	-2.92	-6.13	53.98	-0.4663	0.0093	0.001
624	SLV 12	-2.92	-6.35	54.02	-0.4713	0.0095	0.0051
624	SLV 13	-10.79	2.68	52	-0.293	-0.0231	0.0016
624	SLV 14	-10.8	2.34	52.06	-0.3008	-0.0228	0.0079
624	SLV 15	-10.56	-1.24	52.65	-0.4035	-0.0209	-0.0017
624	SLV 16	-10.56	-1.58	52.71	-0.4112	-0.0206	0.0046
624	CRTFP Ux+	0	0	0	0	0	0
624	CRTFP Ux-	0	0	0	0	0	0
625	SLU 1	-0.14	0.19	50.08	0.0781	-0.2486	0.0043
625	SLU 2	-0.14	0.28	50.08	0.0814	-0.2487	0.0046
625	SLU 3	-0.14	0.22	51.06	0.0778	-0.2534	0.0046
625	SLU 4	-0.14	0.27	51.06	0.0797	-0.2534	0.0048
625	SLU 5	-0.14	0.28	50.6	0.0801	-0.2513	0.0046
625	SLU 6	-0.14	0.22	51.58	0.0765	-0.256	0.0046
625	SLU 7	-0.14	0.27	51.58	0.0785	-0.256	0.0048
625	SLU 8	-0.14	0.19	51.13	0.0757	-0.2538	0.0043
625	SLU 9	-0.14	0.24	51.13	0.0776	-0.2538	0.0045
625	SLU 10	-0.12	0.32	57.22	0.0926	-0.2842	0.005
625	SLU 11	-0.12	0.26	58.2	0.089	-0.2889	0.005
625	SLU 12	-0.12	0.31	58.2	0.0909	-0.289	0.0052
625	SLU 13	-0.12	0.32	57.75	0.0914	-0.2868	0.005
625	SLU 14	-0.12	0.26	58.73	0.0878	-0.2915	0.005
625	SLU 15	-0.12	0.31	58.73	0.0897	-0.2916	0.0051
625	SLU 16	-0.12	0.24	58.27	0.0869	-0.2894	0.0046
625	SLU 17	-0.12	0.29	58.27	0.0889	-0.2894	0.0048
625	SLU 18	-0.11	0.26	60.28	0.0942	-0.2994	0.0048
625	SLU 19	-0.11	0.31	60.28	0.0961	-0.2995	0.005
625	SLU 20	-0.11	0.26	60.81	0.0929	-0.302	0.0048
625	SLU 21	-0.11	0.31	60.81	0.0949	-0.3021	0.005
625	SLU 22	-0.15	0.3	56.58	0.098	-0.28	0.0059
625	SLU 23	-0.15	0.38	56.58	0.1012	-0.2801	0.0062
625	SLU 24	-0.15	0.32	57.56	0.0976	-0.2848	0.0062
625	SLU 25	-0.15	0.37	57.56	0.0996	-0.2848	0.0064
625	SLU 26	-0.15	0.38	57.1	0.1	-0.2827	0.0062
625	SLU 27	-0.15	0.32	58.09	0.0964	-0.2874	0.0062
625	SLU 28	-0.15	0.37	58.09	0.0983	-0.2874	0.0064
625	SLU 29	-0.15	0.3	57.63	0.0955	-0.2852	0.0059
625	SLU 30	-0.15	0.35	57.63	0.0975	-0.2853	0.006
625	SLU 31	-0.13	0.43	63.72	0.1124	-0.3157	0.0065
625	SLU 32	-0.13	0.37	64.71	0.1088	-0.3204	0.0065
625	SLU 33	-0.13	0.42	64.71	0.1108	-0.3204	0.0067
625	SLU 34	-0.13	0.43	64.25	0.1112	-0.3183	0.0065
625	SLU 35	-0.13	0.37	65.23	0.1076	-0.323	0.0065
625	SLU 36	-0.13	0.42	65.23	0.1096	-0.323	0.0067
625	SLU 37	-0.13	0.35	64.78	0.1068	-0.3208	0.0062
625	SLU 38	-0.13	0.4	64.78	0.1087	-0.3208	0.0064
625	SLU 39	-0.12	0.37	66.79	0.114	-0.3308	0.0064
625	SLU 40	-0.12	0.42	66.79	0.116	-0.3309	0.0066
625	SLU 41	-0.12	0.37	67.31	0.1128	-0.3335	0.0064
625	SLU 42	-0.12	0.42	67.31	0.1147	-0.3335	0.0065
625	SLU 43	-0.18	0.21	62.87	0.0947	-0.3124	0.0051
625	SLU 44	-0.18	0.3	62.87	0.098	-0.3125	0.0054
625	SLU 45	-0.18	0.24	63.85	0.0944	-0.3172	0.0054
625	SLU 46	-0.18	0.29	63.85	0.0963	-0.3172	0.0056
625	SLU 47	-0.18	0.3	63.39	0.0968	-0.3151	0.0054
625	SLU 48	-0.18	0.24	64.38	0.0932	-0.3198	0.0054
625	SLU 49	-0.18	0.29	64.37	0.0951	-0.3198	0.0056
625	SLU 50	-0.18	0.21	63.92	0.0923	-0.3176	0.0051
625	SLU 51	-0.18	0.27	63.92	0.0943	-0.3177	0.0052
625	SLU 52	-0.16	0.35	70.01	0.1092	-0.348	0.0057
625	SLU 53	-0.16	0.28	70.99	0.1056	-0.3527	0.0057
625	SLU 54	-0.16	0.33	70.99	0.1076	-0.3528	0.0059
625	SLU 55	-0.16	0.35	70.54	0.108	-0.3506	0.0057
625	SLU 56	-0.16	0.28	71.52	0.1044	-0.3553	0.0057
625	SLU 57	-0.16	0.33	71.52	0.1063	-0.3554	0.0059
625	SLU 58	-0.16	0.26	71.07	0.1035	-0.3532	0.0054
625	SLU 59	-0.16	0.31	71.07	0.1055	-0.3532	0.0056
625	SLU 60	-0.15	0.28	73.08	0.1108	-0.3632	0.0056
625	SLU 61	-0.15	0.33	73.08	0.1127	-0.3633	0.0058
625	SLU 62	-0.15	0.28	73.6	0.1096	-0.3658	0.0056
625	SLU 63	-0.15	0.33	73.6	0.1115	-0.3659	0.0057
625	SLU 64	-0.18	0.32	69.37	0.1146	-0.3438	0.0066
625	SLU 65	-0.19	0.4	69.37	0.1178	-0.3439	0.0069
625	SLU 66	-0.19	0.34	70.35	0.1142	-0.3486	0.007
625	SLU 67	-0.19	0.39	70.35	0.1162	-0.3486	0.0071
625	SLU 68	-0.19	0.4	69.9	0.1166	-0.3465	0.0069
625	SLU 69	-0.19	0.34	70.88	0.113	-0.3512	0.0069
625	SLU 70	-0.19	0.39	70.88	0.115	-0.3512	0.0071
625	SLU 71	-0.19	0.32	70.42	0.1122	-0.3491	0.0066
625	SLU 72	-0.19	0.37	70.42	0.1141	-0.3491	0.0068
625	SLU 73	-0.16	0.45	76.52	0.1291	-0.3795	0.0073
625	SLU 74	-0.17	0.39	77.5	0.1255	-0.3842	0.0073
625	SLU 75	-0.17	0.44	77.5	0.1274	-0.3842	0.0075
625	SLU 76	-0.17	0.45	77.04	0.1279	-0.3821	0.0073
625	SLU 77	-0.17	0.39	78.02	0.1243	-0.3868	0.0073
625	SLU 78	-0.17	0.44	78.02	0.1262	-0.3868	0.0075

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
625	SLU 79	-0.17	0.37	77.57	0.1234	-0.3846	0.007
625	SLU 80	-0.17	0.42	77.57	0.1253	-0.3847	0.0071
625	SLU 81	-0.16	0.39	79.58	0.1306	-0.3947	0.0071
625	SLU 82	-0.16	0.44	79.58	0.1326	-0.3947	0.0073
625	SLU 83	-0.16	0.39	80.11	0.1294	-0.3973	0.0071
625	SLU 84	-0.16	0.44	80.11	0.1314	-0.3973	0.0073
625	SLE RA 1	-0.14	0.22	51.93	0.0838	-0.2576	0.0048
625	SLE RA 2	-0.14	0.28	51.93	0.0859	-0.2576	0.005
625	SLE RA 3	-0.14	0.24	52.59	0.0835	-0.2608	0.005
625	SLE RA 4	-0.14	0.27	52.59	0.0848	-0.2608	0.0051
625	SLE RA 5	-0.14	0.28	52.28	0.0851	-0.2594	0.005
625	SLE RA 6	-0.14	0.24	52.94	0.0827	-0.2625	0.005
625	SLE RA 7	-0.14	0.27	52.94	0.084	-0.2625	0.0051
625	SLE RA 8	-0.14	0.22	52.64	0.0822	-0.2611	0.0047
625	SLE RA 9	-0.14	0.26	52.64	0.0835	-0.2611	0.0049
625	SLE RA 10	-0.13	0.31	56.7	0.0934	-0.2813	0.0052
625	SLE RA 11	-0.13	0.27	57.35	0.091	-0.2845	0.0052
625	SLE RA 12	-0.13	0.3	57.35	0.0923	-0.2845	0.0053
625	SLE RA 13	-0.13	0.31	57.05	0.0926	-0.2831	0.0052
625	SLE RA 14	-0.13	0.27	57.7	0.0902	-0.2862	0.0052
625	SLE RA 15	-0.13	0.3	57.7	0.0915	-0.2862	0.0053
625	SLE RA 16	-0.13	0.25	57.4	0.0897	-0.2848	0.005
625	SLE RA 17	-0.13	0.29	57.4	0.091	-0.2848	0.0051
625	SLE RA 18	-0.12	0.27	58.74	0.0945	-0.2915	0.0051
625	SLE RA 19	-0.12	0.3	58.74	0.0958	-0.2915	0.0052
625	SLE RA 20	-0.12	0.27	59.09	0.0937	-0.2932	0.0051
625	SLE RA 21	-0.12	0.3	59.09	0.095	-0.2932	0.0052
625	SLE FR 1	-0.14	0.22	51.93	0.0838	-0.2576	0.0048
625	SLE FR 2	-0.14	0.23	51.93	0.0842	-0.2576	0.0048
625	SLE FR 3	-0.14	0.22	52.07	0.0835	-0.2583	0.0048
625	SLE FR 4	-0.13	0.25	53.98	0.0874	-0.2678	0.0049
625	SLE FR 5	-0.13	0.24	54.12	0.0867	-0.2684	0.0049
625	SLE FR 6	-0.13	0.25	55.34	0.0891	-0.2745	0.0049
625	SLE QP 1	-0.14	0.22	51.93	0.0838	-0.2576	0.0048
625	SLE QP 2	-0.13	0.24	53.98	0.087	-0.2677	0.0049
625	SLD 1	4.43	1.03	53.28	0.1551	-0.2509	-0.0195
625	SLD 2	4.43	0.9	53.3	0.1517	-0.2508	-0.0174
625	SLD 3	4.53	-0.74	53.55	0.1041	-0.2516	-0.0309
625	SLD 4	4.53	-0.88	53.57	0.1007	-0.2516	-0.0288
625	SLD 5	1.08	3.19	53.35	0.1854	-0.2616	0.0144
625	SLD 6	1.08	3.1	53.37	0.1832	-0.2615	0.0158
625	SLD 7	1.42	-2.73	54.25	0.0153	-0.264	-0.0235
625	SLD 8	1.42	-2.81	54.27	0.0131	-0.264	-0.0221
625	SLD 9	-1.69	3.29	53.68	0.1608	-0.2715	0.0318
625	SLD 10	-1.69	3.2	53.7	0.1587	-0.2715	0.0332
625	SLD 11	-1.35	-2.63	54.58	-0.0092	-0.274	-0.0061
625	SLD 12	-1.35	-2.72	54.6	-0.0114	-0.2739	-0.0047
625	SLD 13	-4.8	1.35	54.38	0.0733	-0.2839	0.0385
625	SLD 14	-4.8	1.21	54.4	0.0699	-0.2839	0.0406
625	SLD 15	-4.7	-0.43	54.65	0.0223	-0.2847	0.0271
625	SLD 16	-4.7	-0.56	54.67	0.0189	-0.2846	0.0293
625	SLV 1	10.54	2.04	52.35	0.2495	-0.2282	-0.0526
625	SLV 2	10.53	1.73	52.4	0.2416	-0.2282	-0.0476
625	SLV 3	10.78	-2	52.97	0.1337	-0.23	-0.0784
625	SLV 4	10.77	-2.32	53.02	0.1258	-0.2299	-0.0735
625	SLV 5	2.71	6.97	52.54	0.3127	-0.2533	0.026
625	SLV 6	2.7	6.77	52.57	0.3077	-0.2532	0.0291
625	SLV 7	3.5	-6.52	54.61	-0.0733	-0.2591	-0.0601
625	SLV 8	3.5	-6.72	54.64	-0.0783	-0.259	-0.057
625	SLV 9	-3.77	7.19	53.31	0.2523	-0.2765	0.0667
625	SLV 10	-3.77	6.99	53.34	0.2473	-0.2764	0.0699
625	SLV 11	-2.97	-6.3	55.38	-0.1337	-0.2823	-0.0194
625	SLV 12	-2.97	-6.5	55.41	-0.1387	-0.2822	-0.0162
625	SLV 13	-11.04	2.79	54.93	0.0482	-0.3056	0.0832
625	SLV 14	-11.04	2.48	54.98	0.0403	-0.3055	0.0882
625	SLV 15	-10.8	-1.26	55.55	-0.0676	-0.3073	0.0574
625	SLV 16	-10.81	-1.57	55.6	-0.0755	-0.3073	0.0623
625	CRTFP Ux+	0	0	0	0	0	0
625	CRTFP Ux-	0	0	0	0	0	0
626	SLU 1	-0.07	0.09	24.51	-6.0814	0.0042	-0.0177
626	SLU 2	-0.07	0.13	24.51	-6.0797	0.0043	-0.0178
626	SLU 3	-0.07	0.1	24.99	-6.201	0.0043	-0.0178
626	SLU 4	-0.07	0.12	24.99	-6.2	0.0043	-0.0179
626	SLU 5	-0.07	0.13	24.77	-6.1448	0.0043	-0.0181
626	SLU 6	-0.07	0.1	25.25	-6.2661	0.0043	-0.0181
626	SLU 7	-0.07	0.12	25.25	-6.2651	0.0044	-0.0182
626	SLU 8	-0.07	0.09	25.03	-6.2117	0.0043	-0.0183
626	SLU 9	-0.07	0.11	25.03	-6.2106	0.0043	-0.0184
626	SLU 10	-0.06	0.15	28.01	-6.9472	0.0047	-0.0156
626	SLU 11	-0.06	0.12	28.49	-7.0684	0.0048	-0.0156
626	SLU 12	-0.06	0.15	28.49	-7.0674	0.0048	-0.0157
626	SLU 13	-0.06	0.15	28.27	-7.0123	0.0047	-0.0159
626	SLU 14	-0.06	0.12	28.76	-7.1336	0.0048	-0.0159
626	SLU 15	-0.06	0.15	28.75	-7.1325	0.0048	-0.016
626	SLU 16	-0.06	0.11	28.53	-7.0791	0.0047	-0.016
626	SLU 17	-0.06	0.14	28.53	-7.0781	0.0047	-0.0161
626	SLU 18	-0.06	0.12	29.51	-7.3206	0.0049	-0.0144
626	SLU 19	-0.06	0.14	29.51	-7.3196	0.0049	-0.0145
626	SLU 20	-0.06	0.12	29.78	-7.3858	0.0049	-0.0147
626	SLU 21	-0.06	0.14	29.77	-7.3847	0.0049	-0.0148
626	SLU 22	-0.07	0.14	27.67	-6.8602	0.0053	-0.0186

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
626	SLU 23	-0.07	0.18	27.66	-6.8585	0.0053	-0.0188
626	SLU 24	-0.07	0.15	28.15	-6.9798	0.0054	-0.0188
626	SLU 25	-0.07	0.18	28.15	-6.9788	0.0054	-0.0189
626	SLU 26	-0.07	0.18	27.92	-6.9236	0.0053	-0.019
626	SLU 27	-0.07	0.15	28.41	-7.0449	0.0054	-0.019
626	SLU 28	-0.07	0.18	28.41	-7.0439	0.0054	-0.0191
626	SLU 29	-0.07	0.14	28.19	-6.9905	0.0053	-0.0192
626	SLU 30	-0.08	0.17	28.19	-6.9894	0.0053	-0.0193
626	SLU 31	-0.06	0.2	31.17	-7.726	0.0058	-0.0165
626	SLU 32	-0.06	0.18	31.65	-7.8472	0.0058	-0.0165
626	SLU 33	-0.06	0.2	31.65	-7.8462	0.0059	-0.0166
626	SLU 34	-0.06	0.2	31.43	-7.7911	0.0058	-0.0168
626	SLU 35	-0.06	0.18	31.91	-7.9124	0.0058	-0.0168
626	SLU 36	-0.07	0.2	31.91	-7.9113	0.0059	-0.0169
626	SLU 37	-0.07	0.16	31.69	-7.8579	0.0058	-0.0169
626	SLU 38	-0.07	0.19	31.69	-7.8569	0.0058	-0.017
626	SLU 39	-0.06	0.17	32.67	-8.0994	0.0059	-0.0153
626	SLU 40	-0.06	0.2	32.67	-8.0984	0.006	-0.0154
626	SLU 41	-0.06	0.17	32.93	-8.1646	0.0059	-0.0156
626	SLU 42	-0.06	0.2	32.93	-8.1635	0.006	-0.0157
626	SLU 43	-0.09	0.1	30.78	-7.6388	0.0052	-0.0227
626	SLU 44	-0.09	0.14	30.78	-7.6371	0.0052	-0.0228
626	SLU 45	-0.09	0.11	31.26	-7.7584	0.0052	-0.0228
626	SLU 46	-0.09	0.13	31.26	-7.7574	0.0053	-0.0229
626	SLU 47	-0.09	0.14	31.04	-7.7022	0.0052	-0.0231
626	SLU 48	-0.09	0.11	31.52	-7.8235	0.0052	-0.0231
626	SLU 49	-0.09	0.13	31.52	-7.8225	0.0053	-0.0232
626	SLU 50	-0.09	0.1	31.3	-7.7691	0.0052	-0.0233
626	SLU 51	-0.09	0.12	31.3	-7.768	0.0052	-0.0234
626	SLU 52	-0.08	0.16	34.28	-8.5046	0.0056	-0.0206
626	SLU 53	-0.08	0.13	34.77	-8.6258	0.0057	-0.0206
626	SLU 54	-0.08	0.16	34.76	-8.6248	0.0057	-0.0207
626	SLU 55	-0.08	0.16	34.54	-8.5697	0.0056	-0.0209
626	SLU 56	-0.08	0.13	35.03	-8.691	0.0057	-0.0208
626	SLU 57	-0.08	0.16	35.02	-8.69	0.0057	-0.0209
626	SLU 58	-0.08	0.12	34.81	-8.6365	0.0056	-0.021
626	SLU 59	-0.08	0.14	34.8	-8.6355	0.0056	-0.0211
626	SLU 60	-0.07	0.13	35.78	-8.878	0.0058	-0.0194
626	SLU 61	-0.08	0.15	35.78	-8.877	0.0058	-0.0195
626	SLU 62	-0.08	0.13	36.05	-8.9432	0.0058	-0.0197
626	SLU 63	-0.08	0.15	36.04	-8.9421	0.0058	-0.0198
626	SLU 64	-0.09	0.15	33.94	-8.4176	0.0062	-0.0236
626	SLU 65	-0.09	0.19	33.93	-8.4159	0.0062	-0.0237
626	SLU 66	-0.09	0.16	34.42	-8.5372	0.0063	-0.0237
626	SLU 67	-0.09	0.19	34.42	-8.5362	0.0063	-0.0238
626	SLU 68	-0.09	0.19	34.2	-8.481	0.0062	-0.024
626	SLU 69	-0.09	0.16	34.68	-8.6023	0.0063	-0.024
626	SLU 70	-0.09	0.19	34.68	-8.6013	0.0063	-0.0241
626	SLU 71	-0.09	0.15	34.46	-8.5479	0.0062	-0.0242
626	SLU 72	-0.09	0.17	34.46	-8.5468	0.0062	-0.0243
626	SLU 73	-0.08	0.21	37.44	-9.2834	0.0067	-0.0215
626	SLU 74	-0.08	0.18	37.92	-9.4046	0.0067	-0.0215
626	SLU 75	-0.08	0.21	37.92	-9.4036	0.0068	-0.0216
626	SLU 76	-0.08	0.21	37.7	-9.3485	0.0067	-0.0218
626	SLU 77	-0.08	0.18	38.18	-9.4698	0.0067	-0.0218
626	SLU 78	-0.08	0.21	38.18	-9.4688	0.0068	-0.0219
626	SLU 79	-0.08	0.17	37.96	-9.4153	0.0067	-0.0219
626	SLU 80	-0.09	0.2	37.96	-9.4143	0.0067	-0.022
626	SLU 81	-0.08	0.18	38.94	-9.6568	0.0068	-0.0203
626	SLU 82	-0.08	0.21	38.94	-9.6558	0.0069	-0.0204
626	SLU 83	-0.08	0.18	39.2	-9.722	0.0069	-0.0206
626	SLU 84	-0.08	0.21	39.2	-9.7209	0.0069	-0.0207
626	SLE RA 1	-0.07	0.1	25.41	-6.3039	0.0046	-0.0179
626	SLE RA 2	-0.07	0.13	25.41	-6.3028	0.0046	-0.0181
626	SLE RA 3	-0.07	0.11	25.73	-6.3836	0.0046	-0.018
626	SLE RA 4	-0.07	0.13	25.73	-6.383	0.0046	-0.0181
626	SLE RA 5	-0.07	0.13	25.58	-6.3462	0.0046	-0.0182
626	SLE RA 6	-0.07	0.11	25.91	-6.4271	0.0046	-0.0182
626	SLE RA 7	-0.07	0.13	25.91	-6.4264	0.0046	-0.0183
626	SLE RA 8	-0.07	0.1	25.76	-6.3908	0.0046	-0.0183
626	SLE RA 9	-0.07	0.12	25.76	-6.3901	0.0046	-0.0184
626	SLE RA 10	-0.06	0.15	27.74	-6.8811	0.0049	-0.0165
626	SLE RA 11	-0.06	0.13	28.07	-6.9619	0.0049	-0.0165
626	SLE RA 12	-0.06	0.14	28.07	-6.9613	0.0049	-0.0166
626	SLE RA 13	-0.06	0.15	27.92	-6.9245	0.0049	-0.0167
626	SLE RA 14	-0.06	0.13	28.24	-7.0054	0.0049	-0.0167
626	SLE RA 15	-0.07	0.14	28.24	-7.0047	0.0049	-0.0168
626	SLE RA 16	-0.07	0.12	28.1	-6.9691	0.0048	-0.0168
626	SLE RA 17	-0.07	0.13	28.09	-6.9684	0.0049	-0.0169
626	SLE RA 18	-0.06	0.13	28.75	-7.1301	0.005	-0.0158
626	SLE RA 19	-0.06	0.14	28.75	-7.1294	0.005	-0.0158
626	SLE RA 20	-0.06	0.12	28.92	-7.1735	0.005	-0.016
626	SLE RA 21	-0.06	0.14	28.92	-7.1728	0.005	-0.016
626	SLE FR 1	-0.07	0.1	25.41	-6.3039	0.0046	-0.0179
626	SLE FR 2	-0.07	0.11	25.41	-6.3037	0.0046	-0.018
626	SLE FR 3	-0.07	0.1	25.48	-6.3213	0.0046	-0.018
626	SLE FR 4	-0.07	0.12	26.41	-6.5515	0.0047	-0.0173
626	SLE FR 5	-0.07	0.11	26.48	-6.5691	0.0047	-0.0174
626	SLE FR 6	-0.07	0.11	27.08	-6.717	0.0048	-0.0169
626	SLE QP 1	-0.07	0.1	25.41	-6.3039	0.0046	-0.0179
626	SLE QP 2	-0.07	0.11	26.41	-6.5518	0.0047	-0.0173

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
626	SLD 1	2.15	0.5	25.85	-6.4206	0.0107	0.5485
626	SLD 2	2.15	0.44	25.86	-6.4246	0.0108	0.5498
626	SLD 3	2.2	-0.37	26.04	-6.4771	0.0099	0.5359
626	SLD 4	2.2	-0.43	26.05	-6.4811	0.01	0.5372
626	SLD 5	0.52	1.55	25.95	-6.426	0.0077	0.1714
626	SLD 6	0.52	1.52	25.96	-6.4286	0.0077	0.1722
626	SLD 7	0.69	-1.34	26.59	-6.6144	0.005	0.1293
626	SLD 8	0.69	-1.38	26.6	-6.617	0.005	0.1301
626	SLD 9	-0.82	1.6	26.23	-6.4866	0.0043	-0.1647
626	SLD 10	-0.82	1.56	26.23	-6.4892	0.0043	-0.1639
626	SLD 11	-0.66	-1.3	26.87	-6.6749	0.0016	-0.2068
626	SLD 12	-0.65	-1.33	26.88	-6.6775	0.0016	-0.206
626	SLD 13	-2.34	0.65	26.77	-6.6224	-0.0006	-0.5718
626	SLD 14	-2.33	0.59	26.79	-6.6264	-0.0006	-0.5705
626	SLD 15	-2.29	-0.22	26.97	-6.6789	-0.0014	-0.5844
626	SLD 16	-2.28	-0.28	26.98	-6.6829	-0.0014	-0.5831
626	SLV 1	5.11	0.99	25.09	-6.2462	0.0189	1.306
626	SLV 2	5.12	0.85	25.12	-6.2554	0.0189	1.309
626	SLV 3	5.23	-0.99	25.53	-6.3749	0.017	1.2765
626	SLV 4	5.24	-1.13	25.56	-6.3842	0.017	1.2795
626	SLV 5	1.31	3.4	25.34	-6.2633	0.0118	0.4238
626	SLV 6	1.31	3.31	25.36	-6.2692	0.0118	0.4258
626	SLV 7	1.7	-3.2	26.81	-6.6923	0.0055	0.3257
626	SLV 8	1.7	-3.29	26.83	-6.6983	0.0056	0.3276
626	SLV 9	-1.84	3.51	25.99	-6.4053	0.0038	-0.3622
626	SLV 10	-1.83	3.42	26.01	-6.4112	0.0038	-0.3602
626	SLV 11	-1.45	-3.09	27.47	-6.8343	-0.0024	-0.4603
626	SLV 12	-1.44	-3.18	27.49	-6.8402	-0.0024	-0.4584
626	SLV 13	-5.37	1.35	27.26	-6.7194	-0.0077	-1.3141
626	SLV 14	-5.36	1.21	27.3	-6.7287	-0.0076	-1.3111
626	SLV 15	-5.25	-0.63	27.7	-6.8481	-0.0096	-1.3435
626	SLV 16	-5.24	-0.77	27.74	-6.8574	-0.0095	-1.3405
626	CRTFP Ux+	0	0	0	0	0	0
626	CRTFP Ux-	0	0	0	0	0	0
628	SLU 1	-0.31	0.46	160.59	22.722	-0.6727	-0.0384
628	SLU 2	-0.31	0.73	160.6	22.7341	-0.6672	-0.0373
628	SLU 3	-0.31	0.53	163.71	23.1545	-0.6867	-0.0387
628	SLU 4	-0.31	0.7	163.71	23.1618	-0.6834	-0.0381
628	SLU 5	-0.32	0.73	162.29	22.9647	-0.6789	-0.0383
628	SLU 6	-0.32	0.53	165.4	23.3851	-0.6984	-0.0397
628	SLU 7	-0.32	0.69	165.4	23.3924	-0.6951	-0.039
628	SLU 8	-0.32	0.45	163.97	23.1832	-0.6961	-0.0404
628	SLU 9	-0.32	0.62	163.97	23.1905	-0.6928	-0.0397
628	SLU 10	-0.24	0.87	183.51	25.9607	-0.7675	-0.0548
628	SLU 11	-0.24	0.67	186.62	26.3811	-0.787	-0.0562
628	SLU 12	-0.24	0.84	186.62	26.3884	-0.7837	-0.0555
628	SLU 13	-0.25	0.87	185.2	26.1913	-0.7792	-0.0558
628	SLU 14	-0.25	0.67	188.31	26.6117	-0.7987	-0.0572
628	SLU 15	-0.25	0.83	188.31	26.619	-0.7954	-0.0565
628	SLU 16	-0.25	0.59	186.88	26.4097	-0.7964	-0.0579
628	SLU 17	-0.25	0.75	186.88	26.417	-0.7931	-0.0572
628	SLU 18	-0.21	0.66	193.32	27.3314	-0.816	-0.0634
628	SLU 19	-0.21	0.82	193.32	27.3386	-0.8127	-0.0627
628	SLU 20	-0.21	0.65	195.01	27.562	-0.8277	-0.0644
628	SLU 21	-0.21	0.82	195.01	27.5692	-0.8244	-0.0637
628	SLU 22	-0.33	0.81	181.23	25.6764	-0.7141	-0.0372
628	SLU 23	-0.34	1.09	181.23	25.6885	-0.7085	-0.036
628	SLU 24	-0.34	0.89	184.35	26.1089	-0.7281	-0.0374
628	SLU 25	-0.34	1.05	184.35	26.1162	-0.7247	-0.0368
628	SLU 26	-0.34	1.08	182.92	25.9191	-0.7202	-0.037
628	SLU 27	-0.34	0.89	186.04	26.3395	-0.7397	-0.0384
628	SLU 28	-0.34	1.05	186.04	26.3468	-0.7364	-0.0377
628	SLU 29	-0.34	0.81	184.61	26.1376	-0.7374	-0.0391
628	SLU 30	-0.34	0.97	184.61	26.1449	-0.7341	-0.0384
628	SLU 31	-0.26	1.22	204.14	28.9151	-0.8088	-0.0535
628	SLU 32	-0.26	1.03	207.26	29.3355	-0.8284	-0.0549
628	SLU 33	-0.27	1.19	207.26	29.3428	-0.825	-0.0543
628	SLU 34	-0.27	1.22	205.83	29.1457	-0.8205	-0.0545
628	SLU 35	-0.27	1.02	208.95	29.5661	-0.84	-0.0559
628	SLU 36	-0.27	1.19	208.95	29.5734	-0.8367	-0.0552
628	SLU 37	-0.27	0.94	207.52	29.3641	-0.8377	-0.0566
628	SLU 38	-0.27	1.11	207.52	29.3714	-0.8344	-0.0559
628	SLU 39	-0.23	1.01	213.96	30.2858	-0.8573	-0.0621
628	SLU 40	-0.23	1.17	213.96	30.2931	-0.854	-0.0615
628	SLU 41	-0.23	1.01	215.65	30.5164	-0.869	-0.0631
628	SLU 42	-0.24	1.17	215.65	30.5236	-0.8657	-0.0624
628	SLU 43	-0.39	0.47	201.69	28.5256	-0.8604	-0.0504
628	SLU 44	-0.4	0.75	201.7	28.5378	-0.8548	-0.0493
628	SLU 45	-0.4	0.55	204.81	28.9582	-0.8744	-0.0507
628	SLU 46	-0.4	0.71	204.81	28.9655	-0.8711	-0.05
628	SLU 47	-0.4	0.74	203.39	28.7684	-0.8665	-0.0503
628	SLU 48	-0.4	0.55	206.5	29.1888	-0.8861	-0.0517
628	SLU 49	-0.4	0.71	206.5	29.1961	-0.8827	-0.051
628	SLU 50	-0.4	0.47	205.07	28.9868	-0.8837	-0.0524
628	SLU 51	-0.41	0.63	205.08	28.9941	-0.8804	-0.0517
628	SLU 52	-0.33	0.88	224.61	31.7643	-0.9551	-0.0668
628	SLU 53	-0.33	0.69	227.72	32.1848	-0.9747	-0.0682
628	SLU 54	-0.33	0.85	227.72	32.192	-0.9714	-0.0675
628	SLU 55	-0.33	0.88	226.3	31.9949	-0.9668	-0.0677
628	SLU 56	-0.33	0.68	229.41	32.4153	-0.9864	-0.0691
628	SLU 57	-0.33	0.85	229.41	32.4226	-0.983	-0.0685

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
628	SLU 58	-0.33	0.6	227.98	32.2134	-0.984	-0.0698
628	SLU 59	-0.33	0.77	227.99	32.2207	-0.9807	-0.0692
628	SLU 60	-0.29	0.67	234.42	33.135	-1.0037	-0.0754
628	SLU 61	-0.29	0.83	234.43	33.1423	-1.0003	-0.0747
628	SLU 62	-0.3	0.67	236.11	33.3656	-1.0153	-0.0763
628	SLU 63	-0.3	0.83	236.12	33.3729	-1.012	-0.0757
628	SLU 64	-0.42	0.83	222.33	31.4801	-0.9017	-0.0491
628	SLU 65	-0.42	1.1	222.34	31.4922	-0.8962	-0.048
628	SLU 66	-0.42	0.9	225.45	31.9126	-0.9157	-0.0494
628	SLU 67	-0.42	1.07	225.45	31.9199	-0.9124	-0.0487
628	SLU 68	-0.42	1.1	224.03	31.7228	-0.9079	-0.049
628	SLU 69	-0.42	0.9	227.14	32.1432	-0.9274	-0.0504
628	SLU 70	-0.43	1.06	227.14	32.1505	-0.9241	-0.0497
628	SLU 71	-0.43	0.82	225.71	31.9412	-0.9251	-0.0511
628	SLU 72	-0.43	0.99	225.71	31.9485	-0.9217	-0.0504
628	SLU 73	-0.35	1.24	245.25	34.7188	-0.9965	-0.0655
628	SLU 74	-0.35	1.04	248.36	35.1392	-1.016	-0.0669
628	SLU 75	-0.35	1.21	248.36	35.1464	-1.0127	-0.0662
628	SLU 76	-0.35	1.24	246.94	34.9493	-1.0082	-0.0665
628	SLU 77	-0.35	1.04	250.05	35.3697	-1.0277	-0.0679
628	SLU 78	-0.35	1.2	250.05	35.377	-1.0244	-0.0672
628	SLU 79	-0.35	0.96	248.62	35.1678	-1.0254	-0.0685
628	SLU 80	-0.36	1.12	248.62	35.1751	-1.0221	-0.0679
628	SLU 81	-0.32	1.03	255.06	36.0894	-1.045	-0.0741
628	SLU 82	-0.32	1.19	255.06	36.0967	-1.0417	-0.0734
628	SLU 83	-0.32	1.02	256.75	36.32	-1.0567	-0.0751
628	SLU 84	-0.32	1.19	256.75	36.3273	-1.0534	-0.0744
628	SLE RA 1	-0.32	0.56	166.49	23.5661	-0.6845	-0.0381
628	SLE RA 2	-0.32	0.74	166.49	23.5742	-0.6808	-0.0373
628	SLE RA 3	-0.32	0.61	168.57	23.8545	-0.6939	-0.0383
628	SLE RA 4	-0.32	0.72	168.57	23.8593	-0.6917	-0.0378
628	SLE RA 5	-0.32	0.74	167.62	23.7279	-0.6886	-0.038
628	SLE RA 6	-0.32	0.61	169.69	24.0082	-0.7017	-0.0389
628	SLE RA 7	-0.32	0.72	169.7	24.0131	-0.6994	-0.0385
628	SLE RA 8	-0.32	0.55	168.74	23.8736	-0.7001	-0.0394
628	SLE RA 9	-0.32	0.66	168.74	23.8784	-0.6979	-0.0389
628	SLE RA 10	-0.27	0.83	181.76	25.7252	-0.7477	-0.049
628	SLE RA 11	-0.27	0.7	183.84	26.0055	-0.7607	-0.0499
628	SLE RA 12	-0.27	0.81	183.84	26.0104	-0.7585	-0.0495
628	SLE RA 13	-0.27	0.83	182.89	25.879	-0.7555	-0.0496
628	SLE RA 14	-0.27	0.7	184.97	26.1592	-0.7685	-0.0506
628	SLE RA 15	-0.27	0.81	184.97	26.1641	-0.7663	-0.0501
628	SLE RA 16	-0.27	0.65	184.01	26.0246	-0.767	-0.051
628	SLE RA 17	-0.28	0.76	184.02	26.0295	-0.7648	-0.0506
628	SLE RA 18	-0.25	0.69	188.31	26.639	-0.7801	-0.0547
628	SLE RA 19	-0.25	0.8	188.31	26.6439	-0.7778	-0.0543
628	SLE RA 20	-0.25	0.69	189.43	26.7927	-0.7878	-0.0554
628	SLE RA 21	-0.25	0.8	189.44	26.7976	-0.7856	-0.0549
628	SLE FR 1	-0.32	0.56	166.49	23.5661	-0.6845	-0.0381
628	SLE FR 2	-0.32	0.6	166.49	23.5677	-0.6838	-0.0379
628	SLE FR 3	-0.32	0.56	166.94	23.6276	-0.6877	-0.0383
628	SLE FR 4	-0.3	0.63	173.03	24.4896	-0.7125	-0.0429
628	SLE FR 5	-0.3	0.6	173.48	24.5495	-0.7163	-0.0433
628	SLE FR 6	-0.28	0.62	177.4	25.1026	-0.7323	-0.0464
628	SLE QP 1	-0.32	0.56	166.49	23.5661	-0.6845	-0.0381
628	SLE QP 2	-0.3	0.6	173.03	24.488	-0.7132	-0.0431
628	SLD 1	14.66	3.22	169.48	24.2225	-0.4218	-2.275
628	SLD 2	14.63	2.88	169.52	24.2165	-0.4242	-2.25
628	SLD 3	14.99	-2.69	170.18	24.0955	-0.5228	-2.3362
628	SLD 4	14.97	-3.04	170.22	24.0894	-0.5252	-2.3113
628	SLD 5	3.69	10.42	170.9	24.6021	-0.4721	-0.6241
628	SLD 6	3.67	10.2	170.92	24.5982	-0.4737	-0.608
628	SLD 7	4.8	-9.3	173.23	24.1785	-0.8089	-0.8282
628	SLD 8	4.78	-9.53	173.26	24.1746	-0.8104	-0.812
628	SLD 9	-5.38	10.72	172.81	24.8013	-0.6159	0.7259
628	SLD 10	-5.39	10.5	172.84	24.7974	-0.6175	0.7421
628	SLD 11	-4.27	-9	175.15	24.3777	-0.9527	0.5218
628	SLD 12	-4.28	-9.22	175.17	24.3738	-0.9543	0.538
628	SLD 13	-15.56	4.23	175.85	24.8865	-0.9012	2.2251
628	SLD 14	-15.58	3.89	175.89	24.8805	-0.9036	2.2501
628	SLD 15	-15.22	-1.68	176.55	24.7594	-1.0022	2.1639
628	SLD 16	-15.25	-2.03	176.59	24.7534	-1.0046	2.1889
628	SLV 1	34.67	6.55	164.72	23.8442	-0.0335	-5.2636
628	SLV 2	34.62	5.75	164.81	23.8301	-0.039	-5.2055
628	SLV 3	35.45	-6.93	166.32	23.5544	-0.2643	-5.4049
628	SLV 4	35.4	-7.73	166.42	23.5403	-0.2698	-5.3468
628	SLV 5	9.02	22.98	168.08	24.7367	-0.1583	-1.4047
628	SLV 6	8.99	22.46	168.14	24.7278	-0.1618	-1.3676
628	SLV 7	11.62	-21.98	173.44	23.7707	-0.9277	-1.8758
628	SLV 8	11.58	-22.49	173.51	23.7618	-0.9312	-1.8387
628	SLV 9	-12.17	23.69	172.56	25.2142	-0.4952	1.7526
628	SLV 10	-12.21	23.18	172.62	25.2052	-0.4987	1.7897
628	SLV 11	-9.58	-21.27	177.92	24.2482	-1.2646	1.2815
628	SLV 12	-9.61	-21.78	177.98	24.2392	-1.2681	1.3186
628	SLV 13	-35.99	8.93	179.65	25.4356	-1.1566	5.2607
628	SLV 14	-36.04	8.13	179.74	25.4216	-1.1621	5.3188
628	SLV 15	-35.21	-4.56	181.26	25.1458	-1.3874	5.1193
628	SLV 16	-35.26	-5.36	181.35	25.1318	-1.3929	5.1774
628	CRTFP Ux+	0	0	0	0	0	0
628	CRTFP Ux-	0	0	0	0	0	0
631	SLU 1	-0.23	-0.34	145.7	-34.2461	2.2475	-0.0864

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
631	SLU 2	-0.24	-0.09	145.66	-34.2311	2.2495	-0.0915
631	SLU 3	-0.23	-0.28	148.54	-34.9124	2.2911	-0.0883
631	SLU 4	-0.24	-0.14	148.51	-34.9034	2.2923	-0.0914
631	SLU 5	-0.24	-0.11	147.24	-34.6111	2.2719	-0.0926
631	SLU 6	-0.24	-0.3	150.12	-35.2923	2.3135	-0.0894
631	SLU 7	-0.24	-0.15	150.09	-35.2833	2.3147	-0.0925
631	SLU 8	-0.24	-0.37	148.87	-35.006	2.2923	-0.0886
631	SLU 9	-0.24	-0.22	148.84	-34.9971	2.2935	-0.0916
631	SLU 10	-0.17	-0.04	166.49	-39.126	2.5662	-0.0814
631	SLU 11	-0.17	-0.23	169.36	-39.8072	2.6079	-0.0783
631	SLU 12	-0.17	-0.08	169.34	-39.7982	2.6091	-0.0813
631	SLU 13	-0.18	-0.06	168.07	-39.506	2.5886	-0.0825
631	SLU 14	-0.17	-0.24	170.95	-40.1872	2.6303	-0.0794
631	SLU 15	-0.18	-0.1	170.92	-40.1782	2.6314	-0.0824
631	SLU 16	-0.18	-0.32	169.69	-39.9009	2.6091	-0.0785
631	SLU 17	-0.18	-0.17	169.67	-39.8919	2.6102	-0.0816
631	SLU 18	-0.14	-0.26	175.45	-41.2388	2.7001	-0.072
631	SLU 19	-0.14	-0.12	175.43	-41.2298	2.7012	-0.0751
631	SLU 20	-0.15	-0.28	177.04	-41.6187	2.7225	-0.0731
631	SLU 21	-0.15	-0.13	177.01	-41.6097	2.7236	-0.0762
631	SLU 22	-0.24	-0.07	163.98	-38.4751	2.5506	-0.0958
631	SLU 23	-0.25	0.17	163.94	-38.4601	2.5525	-0.1009
631	SLU 24	-0.24	-0.01	166.82	-39.1413	2.5942	-0.0978
631	SLU 25	-0.25	0.13	166.79	-39.1323	2.5953	-0.1008
631	SLU 26	-0.25	0.16	165.52	-38.8401	2.5749	-0.102
631	SLU 27	-0.25	-0.03	168.4	-39.5213	2.6166	-0.0989
631	SLU 28	-0.25	0.12	168.37	-39.5123	2.6177	-0.1019
631	SLU 29	-0.25	-0.1	167.15	-39.235	2.5954	-0.098
631	SLU 30	-0.25	0.05	167.12	-39.226	2.5965	-0.1011
631	SLU 31	-0.18	0.23	184.76	-43.355	2.8693	-0.0909
631	SLU 32	-0.18	0.04	187.64	-44.0362	2.911	-0.0877
631	SLU 33	-0.18	0.19	187.62	-44.0272	2.9121	-0.0908
631	SLU 34	-0.19	0.21	186.35	-43.7349	2.8917	-0.092
631	SLU 35	-0.18	0.02	189.22	-44.4161	2.9334	-0.0888
631	SLU 36	-0.19	0.17	189.2	-44.4072	2.9345	-0.0919
631	SLU 37	-0.19	-0.05	187.97	-44.1299	2.9122	-0.088
631	SLU 38	-0.19	0.1	187.95	-44.1209	2.9133	-0.091
631	SLU 39	-0.15	0.01	193.73	-45.4677	3.0031	-0.0815
631	SLU 40	-0.16	0.15	193.71	-45.4587	3.0043	-0.0846
631	SLU 41	-0.16	-0.01	195.32	-45.8477	3.0255	-0.0826
631	SLU 42	-0.16	0.14	195.29	-45.8387	3.0267	-0.0856
631	SLU 43	-0.3	-0.53	183.14	-43.07	2.8179	-0.1091
631	SLU 44	-0.3	-0.29	183.1	-43.055	2.8198	-0.1142
631	SLU 45	-0.3	-0.48	185.98	-43.7363	2.8615	-0.111
631	SLU 46	-0.3	-0.33	185.96	-43.7273	2.8626	-0.114
631	SLU 47	-0.3	-0.3	184.69	-43.435	2.8422	-0.1152
631	SLU 48	-0.3	-0.49	187.56	-44.1162	2.8839	-0.1121
631	SLU 49	-0.3	-0.34	187.54	-44.1072	2.885	-0.1151
631	SLU 50	-0.3	-0.56	186.31	-43.8299	2.8627	-0.1112
631	SLU 51	-0.31	-0.42	186.29	-43.821	2.8638	-0.1143
631	SLU 52	-0.24	-0.23	203.93	-47.9499	3.1366	-0.1041
631	SLU 53	-0.24	-0.42	206.81	-48.6311	3.1783	-0.1009
631	SLU 54	-0.24	-0.28	206.78	-48.6221	3.1794	-0.104
631	SLU 55	-0.24	-0.25	205.51	-48.3299	3.159	-0.1052
631	SLU 56	-0.24	-0.44	208.39	-49.0111	3.2006	-0.102
631	SLU 57	-0.24	-0.29	208.36	-49.0021	3.2018	-0.1051
631	SLU 58	-0.24	-0.51	207.14	-48.7248	3.1795	-0.1012
631	SLU 59	-0.24	-0.36	207.11	-48.7158	3.1806	-0.1042
631	SLU 60	-0.21	-0.45	212.9	-50.0627	3.2704	-0.0947
631	SLU 61	-0.21	-0.31	212.87	-50.0537	3.2716	-0.0978
631	SLU 62	-0.21	-0.47	214.48	-50.4426	3.2928	-0.0958
631	SLU 63	-0.21	-0.32	214.45	-50.4336	3.294	-0.0989
631	SLU 64	-0.31	-0.26	201.42	-47.299	3.121	-0.1185
631	SLU 65	-0.31	-0.02	201.38	-47.284	3.1229	-0.1236
631	SLU 66	-0.31	-0.21	204.26	-47.9652	3.1646	-0.1204
631	SLU 67	-0.31	-0.06	204.23	-47.9562	3.1657	-0.1235
631	SLU 68	-0.32	-0.03	202.96	-47.664	3.1453	-0.1247
631	SLU 69	-0.31	-0.22	205.84	-48.3452	3.1869	-0.1215
631	SLU 70	-0.32	-0.08	205.82	-48.3362	3.1881	-0.1246
631	SLU 71	-0.32	-0.29	204.59	-48.0589	3.1658	-0.1207
631	SLU 72	-0.32	-0.15	204.56	-48.0499	3.1669	-0.1237
631	SLU 73	-0.25	0.03	222.21	-52.1789	3.4397	-0.1136
631	SLU 74	-0.25	-0.15	225.09	-52.8601	3.4813	-0.1104
631	SLU 75	-0.25	-0.01	225.06	-52.8511	3.4825	-0.1135
631	SLU 76	-0.25	0.02	223.79	-52.5588	3.462	-0.1147
631	SLU 77	-0.25	-0.17	226.67	-53.24	3.5037	-0.1115
631	SLU 78	-0.25	-0.02	226.64	-53.2311	3.5049	-0.1145
631	SLU 79	-0.25	-0.24	225.42	-52.9538	3.4825	-0.1106
631	SLU 80	-0.25	-0.09	225.39	-52.9448	3.4837	-0.1137
631	SLU 81	-0.22	-0.19	231.18	-54.2916	3.5735	-0.1042
631	SLU 82	-0.22	-0.04	231.15	-54.2826	3.5746	-0.1072
631	SLU 83	-0.22	-0.2	232.76	-54.6716	3.5959	-0.1052
631	SLU 84	-0.22	-0.06	232.73	-54.6626	3.597	-0.1083
631	SLE RA 1	-0.24	-0.26	150.92	-35.4544	2.3341	-0.0891
631	SLE RA 2	-0.24	-0.1	150.9	-35.4444	2.3354	-0.0925
631	SLE RA 3	-0.24	-0.22	152.81	-35.8985	2.3632	-0.0904
631	SLE RA 4	-0.24	-0.13	152.8	-35.8926	2.364	-0.0924
631	SLE RA 5	-0.24	-0.11	151.95	-35.6977	2.3503	-0.0932
631	SLE RA 6	-0.24	-0.23	153.87	-36.1519	2.3781	-0.0911
631	SLE RA 7	-0.24	-0.14	153.85	-36.1459	2.3789	-0.0931
631	SLE RA 8	-0.24	-0.28	153.03	-35.961	2.364	-0.0905

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
631	SLE RA 9	-0.24	-0.18	153.02	-35.955	2.3648	-0.0926
631	SLE RA 10	-0.2	-0.06	164.78	-38.7076	2.5466	-0.0858
631	SLE RA 11	-0.19	-0.19	166.7	-39.1618	2.5744	-0.0837
631	SLE RA 12	-0.2	-0.09	166.68	-39.1558	2.5751	-0.0857
631	SLE RA 13	-0.2	-0.07	165.84	-38.9609	2.5615	-0.0865
631	SLE RA 14	-0.2	-0.2	167.75	-39.4151	2.5893	-0.0844
631	SLE RA 15	-0.2	-0.1	167.74	-39.4091	2.5901	-0.0864
631	SLE RA 16	-0.2	-0.25	166.92	-39.2242	2.5752	-0.0838
631	SLE RA 17	-0.2	-0.15	166.9	-39.2183	2.5759	-0.0859
631	SLE RA 18	-0.18	-0.21	170.76	-40.1161	2.6358	-0.0795
631	SLE RA 19	-0.18	-0.11	170.74	-40.1102	2.6366	-0.0816
631	SLE RA 20	-0.18	-0.22	171.81	-40.3695	2.6508	-0.0802
631	SLE RA 21	-0.18	-0.12	171.8	-40.3635	2.6515	-0.0823
631	SLE FR 1	-0.24	-0.26	150.92	-35.4544	2.3341	-0.0891
631	SLE FR 2	-0.24	-0.23	150.92	-35.4524	2.3344	-0.0898
631	SLE FR 3	-0.24	-0.27	151.35	-35.5557	2.3401	-0.0894
631	SLE FR 4	-0.22	-0.21	156.87	-36.8509	2.4249	-0.0869
631	SLE FR 5	-0.22	-0.25	157.3	-36.9542	2.4306	-0.0865
631	SLE FR 6	-0.21	-0.24	160.84	-37.7853	2.485	-0.0843
631	SLE QP 1	-0.24	-0.26	150.92	-35.4544	2.3341	-0.0891
631	SLE QP 2	-0.22	-0.25	156.87	-36.8529	2.4246	-0.0862
631	SLD 1	12.98	2.08	152.68	-35.8198	2.3735	2.9063
631	SLD 2	13.01	1.87	152.74	-35.8407	2.3737	2.9325
631	SLD 3	13.28	-3.29	154.06	-36.2266	2.3442	3.0082
631	SLD 4	13.31	-3.5	154.11	-36.2476	2.3444	3.0344
631	SLD 5	3.29	8.63	153.52	-35.9222	2.4538	0.6523
631	SLD 6	3.31	8.49	153.56	-35.9358	2.4539	0.6693
631	SLD 7	4.27	-9.27	158.1	-37.2784	2.356	0.9922
631	SLD 8	4.29	-9.4	158.14	-37.292	2.3561	1.0092
631	SLD 9	-4.73	8.91	155.61	-36.4138	2.4932	-1.1816
631	SLD 10	-4.71	8.77	155.65	-36.4274	2.4933	-1.1646
631	SLD 11	-3.74	-8.99	160.19	-37.77	2.3954	-0.8418
631	SLD 12	-3.72	-9.12	160.23	-37.7836	2.3955	-0.8248
631	SLD 13	-13.74	3.01	159.63	-37.4582	2.5049	-3.2069
631	SLD 14	-13.71	2.8	159.69	-37.4792	2.5051	-3.1806
631	SLD 15	-13.45	-2.36	161.01	-37.8651	2.4756	-3.1049
631	SLD 16	-13.42	-2.57	161.07	-37.8861	2.4758	-3.0787
631	SLV 1	30.65	5.03	147.1	-34.4478	2.3038	6.9142
631	SLV 2	30.72	4.53	147.24	-34.4967	2.3042	6.9753
631	SLV 3	31.34	-7.21	150.24	-35.3748	2.2365	7.1491
631	SLV 4	31.41	-7.7	150.38	-35.4237	2.2369	7.2102
631	SLV 5	7.99	19.98	149.16	-34.7172	2.4903	1.6473
631	SLV 6	8.03	19.66	149.25	-34.7484	2.4906	1.6863
631	SLV 7	10.28	-20.81	159.62	-37.8072	2.2661	2.4303
631	SLV 8	10.33	-21.12	159.7	-37.8383	2.2664	2.4693
631	SLV 9	-10.76	20.63	154.04	-35.8675	2.5829	-2.6417
631	SLV 10	-10.72	20.32	154.13	-35.8987	2.5831	-2.6027
631	SLV 11	-8.47	-20.15	164.5	-38.9575	2.3587	-1.8587
631	SLV 12	-8.42	-20.47	164.58	-38.9887	2.359	-1.8197
631	SLV 13	-31.85	7.21	163.37	-38.2822	2.6124	-7.3826
631	SLV 14	-31.78	6.71	163.51	-38.331	2.6128	-7.3216
631	SLV 15	-31.16	-5.03	166.51	-39.2092	2.5451	-7.1477
631	SLV 16	-31.09	-5.52	166.64	-39.258	2.5455	-7.0867
631	CRTFP Ux+	0	0	0	0	0	0
631	CRTFP Ux-	0	0	0	0	0	0
632	SLU 1	0	-0.05	14.06	3.3567	-0.4373	-0.0026
632	SLU 2	0	-0.03	14.06	3.356	-0.4372	-0.0017
632	SLU 3	0	-0.05	14.34	3.4217	-0.4459	-0.0025
632	SLU 4	0	-0.03	14.34	3.4213	-0.4458	-0.002
632	SLU 5	0	-0.03	14.21	3.3918	-0.4419	-0.0018
632	SLU 6	0	-0.05	14.49	3.4575	-0.4506	-0.0026
632	SLU 7	0	-0.03	14.49	3.457	-0.4505	-0.0021
632	SLU 8	0	-0.05	14.37	3.4283	-0.4468	-0.0027
632	SLU 9	0	-0.04	14.36	3.4278	-0.4467	-0.0022
632	SLU 10	0.01	-0.02	16.07	3.8335	-0.4998	-0.0036
632	SLU 11	0.01	-0.04	16.35	3.8992	-0.5085	-0.0044
632	SLU 12	0.01	-0.03	16.35	3.8988	-0.5084	-0.0039
632	SLU 13	0.01	-0.03	16.22	3.8693	-0.5045	-0.0037
632	SLU 14	0.01	-0.04	16.5	3.935	-0.5132	-0.0045
632	SLU 15	0.01	-0.03	16.5	3.9346	-0.5131	-0.004
632	SLU 16	0.01	-0.05	16.38	3.9058	-0.5094	-0.0046
632	SLU 17	0.01	-0.04	16.38	3.9054	-0.5093	-0.0041
632	SLU 18	0.01	-0.05	16.94	4.0389	-0.5268	-0.0052
632	SLU 19	0.01	-0.03	16.94	4.0385	-0.5267	-0.0047
632	SLU 20	0.01	-0.05	17.09	4.0747	-0.5315	-0.0053
632	SLU 21	0.01	-0.03	17.09	4.0743	-0.5314	-0.0048
632	SLU 22	0	-0.03	15.84	3.7802	-0.4926	-0.002
632	SLU 23	0	0	15.84	3.7795	-0.4925	-0.0012
632	SLU 24	0	-0.02	16.12	3.8452	-0.5012	-0.002
632	SLU 25	0	-0.01	16.12	3.8448	-0.5011	-0.0015
632	SLU 26	0	0	15.99	3.8153	-0.4972	-0.0013
632	SLU 27	0	-0.02	16.27	3.881	-0.5059	-0.0021
632	SLU 28	0	-0.01	16.27	3.8806	-0.5058	-0.0016
632	SLU 29	0	-0.03	16.15	3.8518	-0.502	-0.0022
632	SLU 30	0	-0.02	16.14	3.8514	-0.502	-0.0017
632	SLU 31	0.01	0	17.85	4.2571	-0.5551	-0.0031
632	SLU 32	0.01	-0.02	18.13	4.3228	-0.5638	-0.0038
632	SLU 33	0.01	0	18.13	4.3224	-0.5637	-0.0033
632	SLU 34	0.01	0	18	4.2929	-0.5598	-0.0032
632	SLU 35	0.01	-0.02	18.28	4.3586	-0.5685	-0.0039
632	SLU 36	0.01	-0.01	18.28	4.3581	-0.5684	-0.0034

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
632	SLU 37	0.01	-0.03	18.16	4.3294	-0.5647	-0.0041
632	SLU 38	0.01	-0.01	18.16	4.3289	-0.5646	-0.0036
632	SLU 39	0.01	-0.02	18.72	4.4625	-0.5821	-0.0047
632	SLU 40	0.01	-0.01	18.72	4.462	-0.582	-0.0042
632	SLU 41	0.01	-0.02	18.87	4.4982	-0.5868	-0.0048
632	SLU 42	0.01	-0.01	18.87	4.4978	-0.5867	-0.0043
632	SLU 43	0	-0.07	17.67	4.2185	-0.5496	-0.0035
632	SLU 44	0	-0.05	17.67	4.2178	-0.5494	-0.0027
632	SLU 45	0	-0.07	17.95	4.2835	-0.5581	-0.0035
632	SLU 46	0	-0.06	17.94	4.2831	-0.558	-0.003
632	SLU 47	0	-0.05	17.82	4.2536	-0.5541	-0.0028
632	SLU 48	0	-0.07	18.1	4.3193	-0.5628	-0.0035
632	SLU 49	0	-0.06	18.09	4.3188	-0.5627	-0.0031
632	SLU 50	0	-0.08	17.97	4.2901	-0.559	-0.0037
632	SLU 51	0	-0.06	17.97	4.2896	-0.5589	-0.0032
632	SLU 52	0.01	-0.05	19.68	4.6953	-0.6121	-0.0046
632	SLU 53	0.01	-0.07	19.96	4.761	-0.6207	-0.0053
632	SLU 54	0.01	-0.05	19.96	4.7606	-0.6207	-0.0048
632	SLU 55	0.01	-0.05	19.83	4.7311	-0.6168	-0.0047
632	SLU 56	0.01	-0.07	20.11	4.7968	-0.6255	-0.0054
632	SLU 57	0.01	-0.05	20.11	4.7964	-0.6254	-0.0049
632	SLU 58	0.01	-0.08	19.99	4.7676	-0.6216	-0.0056
632	SLU 59	0.01	-0.06	19.98	4.7672	-0.6215	-0.0051
632	SLU 60	0.01	-0.07	20.55	4.9007	-0.639	-0.0062
632	SLU 61	0.01	-0.06	20.54	4.9003	-0.639	-0.0057
632	SLU 62	0.01	-0.07	20.7	4.9365	-0.6438	-0.0063
632	SLU 63	0.01	-0.06	20.7	4.9361	-0.6437	-0.0058
632	SLU 64	0	-0.05	19.45	4.642	-0.6049	-0.003
632	SLU 65	0	-0.03	19.45	4.6413	-0.6047	-0.0022
632	SLU 66	0	-0.05	19.73	4.707	-0.6134	-0.0029
632	SLU 67	0	-0.03	19.72	4.7066	-0.6133	-0.0024
632	SLU 68	0	-0.03	19.6	4.6771	-0.6094	-0.0022
632	SLU 69	0	-0.05	19.88	4.7428	-0.6181	-0.003
632	SLU 70	0	-0.03	19.88	4.7424	-0.618	-0.0025
632	SLU 71	0	-0.05	19.75	4.7136	-0.6143	-0.0031
632	SLU 72	0	-0.04	19.75	4.7132	-0.6142	-0.0026
632	SLU 73	0.01	-0.02	21.46	5.1189	-0.6674	-0.004
632	SLU 74	0.01	-0.04	21.74	5.1846	-0.676	-0.0048
632	SLU 75	0.01	-0.03	21.74	5.1841	-0.676	-0.0043
632	SLU 76	0.01	-0.03	21.61	5.1546	-0.6721	-0.0041
632	SLU 77	0.01	-0.04	21.89	5.2204	-0.6808	-0.0049
632	SLU 78	0.01	-0.03	21.89	5.2199	-0.6807	-0.0044
632	SLU 79	0.01	-0.05	21.77	5.1912	-0.6769	-0.005
632	SLU 80	0.01	-0.04	21.76	5.1907	-0.6768	-0.0045
632	SLU 81	0.02	-0.05	22.33	5.3243	-0.6943	-0.0056
632	SLU 82	0.01	-0.03	22.33	5.3238	-0.6943	-0.0052
632	SLU 83	0.02	-0.05	22.48	5.36	-0.6991	-0.0057
632	SLU 84	0.01	-0.03	22.48	5.3596	-0.699	-0.0052
632	SLE RA 1	0	-0.04	14.57	3.4777	-0.4531	-0.0024
632	SLE RA 2	0	-0.03	14.57	3.4772	-0.453	-0.0019
632	SLE RA 3	0	-0.04	14.75	3.521	-0.4588	-0.0024
632	SLE RA 4	0	-0.03	14.75	3.5208	-0.4588	-0.002
632	SLE RA 5	0	-0.03	14.67	3.5011	-0.4562	-0.0019
632	SLE RA 6	0	-0.04	14.86	3.5449	-0.462	-0.0024
632	SLE RA 7	0	-0.03	14.85	3.5446	-0.4619	-0.0021
632	SLE RA 8	0	-0.05	14.77	3.5254	-0.4594	-0.0025
632	SLE RA 9	0	-0.04	14.77	3.5251	-0.4593	-0.0022
632	SLE RA 10	0.01	-0.03	15.91	3.7956	-0.4948	-0.0031
632	SLE RA 11	0.01	-0.04	16.1	3.8394	-0.5006	-0.0036
632	SLE RA 12	0.01	-0.03	16.09	3.8391	-0.5005	-0.0033
632	SLE RA 13	0.01	-0.03	16.01	3.8195	-0.4979	-0.0032
632	SLE RA 14	0.01	-0.04	16.2	3.8633	-0.5037	-0.0037
632	SLE RA 15	0.01	-0.03	16.2	3.863	-0.5037	-0.0033
632	SLE RA 16	0.01	-0.04	16.12	3.8438	-0.5012	-0.0038
632	SLE RA 17	0.01	-0.03	16.11	3.8435	-0.5011	-0.0034
632	SLE RA 18	0.01	-0.04	16.49	3.9325	-0.5128	-0.0042
632	SLE RA 19	0.01	-0.03	16.49	3.9322	-0.5127	-0.0039
632	SLE RA 20	0.01	-0.04	16.59	3.9564	-0.5159	-0.0042
632	SLE RA 21	0.01	-0.03	16.59	3.9561	-0.5159	-0.0039
632	SLE FR 1	0	-0.04	14.57	3.4777	-0.4531	-0.0024
632	SLE FR 2	0	-0.04	14.57	3.4776	-0.4531	-0.0023
632	SLE FR 3	0	-0.04	14.61	3.4873	-0.4544	-0.0024
632	SLE FR 4	0.01	-0.04	15.15	3.6141	-0.471	-0.0028
632	SLE FR 5	0.01	-0.04	15.19	3.6237	-0.4723	-0.003
632	SLE FR 6	0.01	-0.04	15.53	3.7051	-0.4829	-0.0033
632	SLE QP 1	0	-0.04	14.57	3.4777	-0.4531	-0.0024
632	SLE QP 2	0.01	-0.04	15.15	3.6142	-0.471	-0.0029
632	SLD 1	1.3	0.18	14.75	3.5403	-0.4586	-0.3226
632	SLD 2	1.3	0.16	14.75	3.5406	-0.4587	-0.3224
632	SLD 3	1.33	-0.34	14.88	3.5684	-0.463	-0.3398
632	SLD 4	1.33	-0.36	14.88	3.5687	-0.4631	-0.3396
632	SLD 5	0.35	0.82	14.83	3.5494	-0.4606	-0.0728
632	SLD 6	0.35	0.81	14.83	3.5495	-0.4606	-0.0727
632	SLD 7	0.45	-0.93	15.26	3.643	-0.4753	-0.1301
632	SLD 8	0.45	-0.94	15.27	3.6432	-0.4754	-0.13
632	SLD 9	-0.43	0.85	15.03	3.5851	-0.4667	0.1241
632	SLD 10	-0.44	0.84	15.03	3.5853	-0.4667	0.1242
632	SLD 11	-0.34	-0.9	15.46	3.6788	-0.4814	0.0668
632	SLD 12	-0.34	-0.91	15.46	3.679	-0.4814	0.0669
632	SLD 13	-1.32	0.27	15.41	3.6596	-0.4789	0.3337
632	SLD 14	-1.32	0.26	15.41	3.6599	-0.479	0.334

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
632	SLD 15	-1.29	-0.25	15.54	3.6877	-0.4833	0.3165
632	SLD 16	-1.29	-0.27	15.54	3.688	-0.4834	0.3168
632	SLV 1	3.04	0.47	14.22	3.442	-0.4421	-0.7511
632	SLV 2	3.03	0.43	14.23	3.4427	-0.4423	-0.7505
632	SLV 3	3.11	-0.73	14.52	3.5062	-0.4522	-0.7904
632	SLV 4	3.1	-0.77	14.52	3.5069	-0.4524	-0.7898
632	SLV 5	0.81	1.93	14.42	3.465	-0.447	-0.1679
632	SLV 6	0.81	1.91	14.42	3.4655	-0.4472	-0.1675
632	SLV 7	1.04	-2.06	15.41	3.679	-0.4806	-0.2988
632	SLV 8	1.03	-2.08	15.41	3.6795	-0.4808	-0.2985
632	SLV 9	-1.02	2	14.88	3.5489	-0.4613	0.2926
632	SLV 10	-1.03	1.97	14.89	3.5493	-0.4614	0.293
632	SLV 11	-0.8	-1.99	15.87	3.7629	-0.4949	0.1617
632	SLV 12	-0.8	-2.02	15.88	3.7633	-0.495	0.162
632	SLV 13	-3.09	0.68	15.77	3.7215	-0.4896	0.7839
632	SLV 14	-3.1	0.64	15.78	3.7221	-0.4898	0.7845
632	SLV 15	-3.02	-0.51	16.07	3.7857	-0.4997	0.7447
632	SLV 16	-3.03	-0.55	16.07	3.7863	-0.4999	0.7452
632	CRTFP Ux+	0	0	0	0	0	0
632	CRTFP Ux-	0	0	0	0	0	0
634	SLU 1	0.03	-0.21	36.81	8.6811	-5.5354	-0.0431
634	SLU 2	0.03	-0.15	36.8	8.6778	-5.533	-0.0336
634	SLU 3	0.03	-0.2	37.54	8.8496	-5.644	-0.042
634	SLU 4	0.03	-0.16	37.53	8.8476	-5.6426	-0.0363
634	SLU 5	0.03	-0.15	37.2	8.7713	-5.5931	-0.0347
634	SLU 6	0.03	-0.2	37.93	8.943	-5.7042	-0.0431
634	SLU 7	0.03	-0.17	37.93	8.941	-5.7027	-0.0374
634	SLU 8	0.03	-0.22	37.61	8.8681	-5.6556	-0.0454
634	SLU 9	0.03	-0.18	37.6	8.8661	-5.6542	-0.0396
634	SLU 10	0.05	-0.15	42.08	9.912	-6.3274	-0.0393
634	SLU 11	0.05	-0.2	42.82	10.0838	-6.4385	-0.0478
634	SLU 12	0.05	-0.16	42.81	10.0818	-6.4371	-0.042
634	SLU 13	0.05	-0.15	42.48	10.0055	-6.3876	-0.0404
634	SLU 14	0.05	-0.2	43.21	10.1772	-6.4986	-0.0489
634	SLU 15	0.05	-0.17	43.21	10.1752	-6.4972	-0.0431
634	SLU 16	0.05	-0.22	42.89	10.1023	-6.4501	-0.0511
634	SLU 17	0.05	-0.18	42.88	10.1003	-6.4486	-0.0454
634	SLU 18	0.06	-0.21	44.36	10.4443	-6.6703	-0.0514
634	SLU 19	0.05	-0.17	44.35	10.4423	-6.6689	-0.0456
634	SLU 20	0.06	-0.22	44.75	10.5378	-6.7304	-0.0525
634	SLU 21	0.06	-0.18	44.75	10.5358	-6.729	-0.0467
634	SLU 22	0.03	-0.16	41.46	9.7678	-6.233	-0.037
634	SLU 23	0.03	-0.09	41.45	9.7645	-6.2306	-0.0274
634	SLU 24	0.03	-0.14	42.18	9.9362	-6.3416	-0.0359
634	SLU 25	0.03	-0.11	42.17	9.9342	-6.3402	-0.0301
634	SLU 26	0.03	-0.1	41.84	9.8579	-6.2907	-0.0285
634	SLU 27	0.03	-0.15	42.58	10.0297	-6.4018	-0.037
634	SLU 28	0.03	-0.11	42.57	10.0277	-6.4003	-0.0313
634	SLU 29	0.03	-0.17	42.26	9.9547	-6.3532	-0.0392
634	SLU 30	0.03	-0.13	42.25	9.9527	-6.3518	-0.0335
634	SLU 31	0.05	-0.1	46.72	10.9987	-7.025	-0.0332
634	SLU 32	0.05	-0.15	47.46	11.1704	-7.1361	-0.0417
634	SLU 33	0.05	-0.11	47.45	11.1684	-7.1347	-0.0359
634	SLU 34	0.05	-0.1	47.12	11.0921	-7.0851	-0.0343
634	SLU 35	0.05	-0.15	47.86	11.2639	-7.1962	-0.0428
634	SLU 36	0.05	-0.11	47.85	11.2619	-7.1948	-0.037
634	SLU 37	0.05	-0.17	47.54	11.1889	-7.1477	-0.045
634	SLU 38	0.05	-0.13	47.53	11.1869	-7.1462	-0.0392
634	SLU 39	0.06	-0.16	49	11.5309	-7.3679	-0.0452
634	SLU 40	0.06	-0.12	48.99	11.529	-7.3665	-0.0395
634	SLU 41	0.06	-0.16	49.4	11.6244	-7.428	-0.0463
634	SLU 42	0.06	-0.13	49.39	11.6224	-7.4266	-0.0406
634	SLU 43	0.03	-0.29	46.27	10.9129	-6.9568	-0.0582
634	SLU 44	0.03	-0.23	46.25	10.9096	-6.9544	-0.0486
634	SLU 45	0.04	-0.28	46.99	11.0813	-7.0655	-0.0571
634	SLU 46	0.04	-0.24	46.98	11.0794	-7.064	-0.0513
634	SLU 47	0.03	-0.23	46.65	11.0031	-7.0145	-0.0497
634	SLU 48	0.04	-0.28	47.39	11.1748	-7.1256	-0.0582
634	SLU 49	0.04	-0.25	47.38	11.1728	-7.1242	-0.0524
634	SLU 50	0.04	-0.3	47.06	11.0998	-7.077	-0.0604
634	SLU 51	0.04	-0.26	47.05	11.0979	-7.0756	-0.0547
634	SLU 52	0.05	-0.23	51.53	12.1438	-7.7489	-0.0543
634	SLU 53	0.06	-0.28	52.27	12.3155	-7.8599	-0.0628
634	SLU 54	0.06	-0.24	52.26	12.3136	-7.8585	-0.0571
634	SLU 55	0.05	-0.23	51.93	12.2373	-7.809	-0.0555
634	SLU 56	0.06	-0.29	52.67	12.409	-7.92	-0.0639
634	SLU 57	0.06	-0.25	52.66	12.407	-7.9186	-0.0582
634	SLU 58	0.06	-0.3	52.34	12.334	-7.8715	-0.0662
634	SLU 59	0.05	-0.26	52.33	12.3321	-7.8701	-0.0604
634	SLU 60	0.06	-0.29	53.81	12.6761	-8.0917	-0.0664
634	SLU 61	0.06	-0.25	53.8	12.6741	-8.0903	-0.0607
634	SLU 62	0.06	-0.3	54.21	12.7695	-8.1518	-0.0675
634	SLU 63	0.06	-0.26	54.2	12.7675	-8.1504	-0.0618
634	SLU 64	0.04	-0.24	50.91	11.9996	-7.6544	-0.0521
634	SLU 65	0.04	-0.17	50.9	11.9963	-7.652	-0.0425
634	SLU 66	0.04	-0.23	51.63	12.168	-7.7631	-0.0509
634	SLU 67	0.04	-0.19	51.62	12.166	-7.7616	-0.0452
634	SLU 68	0.04	-0.18	51.3	12.0897	-7.7121	-0.0436
634	SLU 69	0.04	-0.23	52.03	12.2614	-7.8232	-0.0521
634	SLU 70	0.04	-0.19	52.02	12.2595	-7.8218	-0.0463
634	SLU 71	0.04	-0.25	51.71	12.1865	-7.7746	-0.0543

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
634	SLU 72	0.04	-0.21	51.7	12.1845	-7.7732	-0.0485
634	SLU 73	0.06	-0.18	56.18	13.2305	-8.4465	-0.0482
634	SLU 74	0.06	-0.23	56.91	13.4022	-8.5575	-0.0567
634	SLU 75	0.06	-0.19	56.9	13.4002	-8.5561	-0.0509
634	SLU 76	0.06	-0.18	56.58	13.3239	-8.5066	-0.0493
634	SLU 77	0.06	-0.23	57.31	13.4956	-8.6176	-0.0578
634	SLU 78	0.06	-0.2	57.3	13.4937	-8.6162	-0.0521
634	SLU 79	0.06	-0.25	56.99	13.4207	-8.5691	-0.06
634	SLU 80	0.06	-0.21	56.98	13.4187	-8.5677	-0.0543
634	SLU 81	0.07	-0.24	58.45	13.7627	-8.7893	-0.0603
634	SLU 82	0.07	-0.2	58.44	13.7607	-8.7879	-0.0545
634	SLU 83	0.07	-0.24	58.85	13.8562	-8.8494	-0.0614
634	SLU 84	0.07	-0.21	58.84	13.8542	-8.848	-0.0556
634	SLE RA 1	0.03	-0.19	38.14	8.9916	-5.7347	-0.0414
634	SLE RA 2	0.03	-0.15	38.13	8.9894	-5.7331	-0.035
634	SLE RA 3	0.03	-0.19	38.62	9.1039	-5.8071	-0.0407
634	SLE RA 4	0.03	-0.16	38.62	9.1026	-5.8062	-0.0368
634	SLE RA 5	0.03	-0.16	38.4	9.0517	-5.7732	-0.0357
634	SLE RA 6	0.03	-0.19	38.89	9.1662	-5.8472	-0.0414
634	SLE RA 7	0.03	-0.17	38.88	9.1649	-5.8462	-0.0376
634	SLE RA 8	0.03	-0.2	38.67	9.1162	-5.8148	-0.0429
634	SLE RA 9	0.03	-0.18	38.67	9.1149	-5.8139	-0.039
634	SLE RA 10	0.04	-0.15	41.65	9.8122	-6.2627	-0.0388
634	SLE RA 11	0.04	-0.19	42.14	9.9267	-6.3368	-0.0445
634	SLE RA 12	0.04	-0.16	42.14	9.9254	-6.3358	-0.0407
634	SLE RA 13	0.04	-0.16	41.92	9.8745	-6.3028	-0.0396
634	SLE RA 14	0.04	-0.19	42.41	9.989	-6.3768	-0.0452
634	SLE RA 15	0.04	-0.17	42.4	9.9877	-6.3759	-0.0414
634	SLE RA 16	0.04	-0.2	42.19	9.939	-6.3445	-0.0467
634	SLE RA 17	0.04	-0.18	42.19	9.9377	-6.3435	-0.0429
634	SLE RA 18	0.05	-0.19	43.17	10.167	-6.4913	-0.0469
634	SLE RA 19	0.05	-0.17	43.16	10.1657	-6.4903	-0.043
634	SLE RA 20	0.05	-0.2	43.44	10.2293	-6.5314	-0.0476
634	SLE RA 21	0.05	-0.17	43.43	10.228	-6.5304	-0.0438
634	SLE FR 1	0.03	-0.19	38.14	8.9916	-5.7347	-0.0414
634	SLE FR 2	0.03	-0.19	38.14	8.9912	-5.7344	-0.0401
634	SLE FR 3	0.03	-0.19	38.25	9.0165	-5.7507	-0.0417
634	SLE FR 4	0.03	-0.19	39.65	9.3438	-5.9613	-0.0418
634	SLE FR 5	0.03	-0.2	39.76	9.3692	-5.9777	-0.0433
634	SLE FR 6	0.04	-0.19	40.66	9.5793	-6.113	-0.0441
634	SLE QP 1	0.03	-0.19	38.14	8.9916	-5.7347	-0.0414
634	SLE QP 2	0.03	-0.19	39.65	9.3442	-5.9617	-0.043
634	SLD 1	3.4	0.39	38.66	9.1972	-5.8179	-0.7973
634	SLD 2	3.4	0.36	38.66	9.1977	-5.8188	-0.7998
634	SLD 3	3.48	-0.98	39.07	9.295	-5.8855	-1.002
634	SLD 4	3.47	-1.01	39.08	9.2954	-5.8864	-1.0044
634	SLD 5	0.93	2.07	38.72	9.1518	-5.8158	0.0415
634	SLD 6	0.93	2.04	38.72	9.1521	-5.8163	0.0399
634	SLD 7	1.18	-2.5	40.11	9.4777	-6.0413	-0.6407
634	SLD 8	1.18	-2.52	40.12	9.4779	-6.0418	-0.6422
634	SLD 9	-1.11	2.14	39.18	9.2105	-5.8815	0.5562
634	SLD 10	-1.11	2.11	39.19	9.2108	-5.882	0.5546
634	SLD 11	-0.86	-2.43	40.58	9.5364	-6.107	-0.126
634	SLD 12	-0.86	-2.45	40.58	9.5367	-6.1075	-0.1275
634	SLD 13	-3.4	0.62	40.22	9.393	-6.0369	0.9183
634	SLD 14	-3.41	0.59	40.22	9.3935	-6.0378	0.9159
634	SLD 15	-3.33	-0.75	40.64	9.4908	-6.1046	0.7137
634	SLD 16	-3.34	-0.78	40.64	9.4912	-6.1054	0.7113
634	SLV 1	7.92	1.14	37.34	9.0022	-5.6273	-1.8134
634	SLV 2	7.9	1.06	37.35	9.0032	-5.6293	-1.819
634	SLV 3	8.09	-1.99	38.29	9.2254	-5.7818	-2.2796
634	SLV 4	8.07	-2.06	38.31	9.2264	-5.7838	-2.2852
634	SLV 5	2.14	4.95	37.5	8.903	-5.6267	0.1339
634	SLV 6	2.13	4.9	37.51	8.9036	-5.6279	0.1303
634	SLV 7	2.72	-5.45	40.69	9.6469	-6.1417	-1.4201
634	SLV 8	2.71	-5.5	40.7	9.6475	-6.143	-1.4237
634	SLV 9	-2.64	5.12	38.6	9.0409	-5.7803	1.3376
634	SLV 10	-2.65	5.07	38.61	9.0416	-5.7816	1.334
634	SLV 11	-2.06	-5.29	41.79	9.7849	-6.2954	-0.2164
634	SLV 12	-2.07	-5.34	41.8	9.7855	-6.2967	-0.2199
634	SLV 13	-8.01	1.68	40.99	9.4621	-6.1395	2.1991
634	SLV 14	-8.02	1.6	41.01	9.4631	-6.1415	2.1935
634	SLV 15	-7.83	-1.45	41.95	9.6853	-6.294	1.7329
634	SLV 16	-7.85	-1.52	41.96	9.6863	-6.296	1.7273
634	CRTFP Ux+	0	0	0	0	0	0
634	CRTFP Ux-	0	0	0	0	0	0
635	SLU 1	0.08	-0.35	46.65	10.9338	6.8859	0.0308
635	SLU 2	0.08	-0.28	46.63	10.9274	6.8827	0.0193
635	SLU 3	0.08	-0.34	47.57	11.1464	7.0213	0.0283
635	SLU 4	0.08	-0.3	47.55	11.1425	7.0194	0.0215
635	SLU 5	0.08	-0.28	47.14	11.0462	6.9576	0.0202
635	SLU 6	0.08	-0.35	48.08	11.2652	7.0962	0.0292
635	SLU 7	0.08	-0.31	48.06	11.2614	7.0943	0.0224
635	SLU 8	0.08	-0.37	47.67	11.1715	7.0358	0.0326
635	SLU 9	0.08	-0.32	47.65	11.1676	7.0339	0.0257
635	SLU 10	0.1	-0.29	53.33	12.4789	7.8717	0.0156
635	SLU 11	0.1	-0.36	54.27	12.6979	8.0103	0.0246
635	SLU 12	0.1	-0.31	54.26	12.6941	8.0084	0.0177
635	SLU 13	0.1	-0.3	53.84	12.5977	7.9467	0.0165
635	SLU 14	0.11	-0.37	54.78	12.8168	8.0853	0.0255
635	SLU 15	0.11	-0.32	54.77	12.8129	8.0834	0.0186

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
635	SLU 16	0.1	-0.39	54.37	12.723	8.0248	0.0289
635	SLU 17	0.1	-0.34	54.36	12.7191	8.0229	0.022
635	SLU 18	0.11	-0.37	56.23	13.1503	8.2988	0.0254
635	SLU 19	0.11	-0.33	56.21	13.1464	8.2969	0.0186
635	SLU 20	0.11	-0.38	56.73	13.2691	8.3738	0.0263
635	SLU 21	0.11	-0.34	56.72	13.2652	8.3718	0.0195
635	SLU 22	0.09	-0.31	52.52	12.2929	7.753	0.0211
635	SLU 23	0.09	-0.23	52.49	12.2865	7.7498	0.0096
635	SLU 24	0.09	-0.3	53.43	12.5055	7.8884	0.0186
635	SLU 25	0.09	-0.25	53.42	12.5016	7.8864	0.0117
635	SLU 26	0.09	-0.24	53	12.4053	7.8247	0.0105
635	SLU 27	0.09	-0.31	53.94	12.6243	7.9633	0.0195
635	SLU 28	0.09	-0.26	53.93	12.6204	7.9614	0.0126
635	SLU 29	0.09	-0.33	53.53	12.5306	7.9029	0.0229
635	SLU 30	0.09	-0.28	53.52	12.5267	7.901	0.016
635	SLU 31	0.11	-0.24	59.2	13.838	8.7388	0.0058
635	SLU 32	0.11	-0.31	60.14	14.057	8.8774	0.0148
635	SLU 33	0.11	-0.26	60.12	14.0531	8.8755	0.0079
635	SLU 34	0.11	-0.25	59.7	13.9568	8.8138	0.0067
635	SLU 35	0.11	-0.32	60.65	14.1758	8.9524	0.0157
635	SLU 36	0.11	-0.27	60.63	14.172	8.9504	0.0089
635	SLU 37	0.11	-0.34	60.24	14.0821	8.8919	0.0191
635	SLU 38	0.11	-0.29	60.22	14.0782	8.89	0.0122
635	SLU 39	0.12	-0.33	62.09	14.5094	9.1659	0.0157
635	SLU 40	0.12	-0.28	62.08	14.5055	9.164	0.0088
635	SLU 41	0.12	-0.34	62.6	14.6282	9.2408	0.0166
635	SLU 42	0.12	-0.29	62.59	14.6243	9.2389	0.0097
635	SLU 43	0.1	-0.48	58.63	13.748	8.6544	0.0434
635	SLU 44	0.1	-0.4	58.61	13.7416	8.6512	0.0319
635	SLU 45	0.1	-0.47	59.55	13.9606	8.7898	0.0409
635	SLU 46	0.1	-0.42	59.54	13.9567	8.7879	0.034
635	SLU 47	0.1	-0.41	59.12	13.8604	8.7261	0.0328
635	SLU 48	0.1	-0.48	60.06	14.0794	8.8647	0.0418
635	SLU 49	0.1	-0.43	60.05	14.0755	8.8628	0.035
635	SLU 50	0.1	-0.5	59.65	13.9856	8.8043	0.0452
635	SLU 51	0.1	-0.45	59.64	13.9818	8.8024	0.0383
635	SLU 52	0.12	-0.41	65.31	15.2931	9.6402	0.0282
635	SLU 53	0.12	-0.48	66.25	15.5121	9.7788	0.0372
635	SLU 54	0.12	-0.43	66.24	15.5082	9.7769	0.0303
635	SLU 55	0.12	-0.42	65.82	15.4119	9.7152	0.0291
635	SLU 56	0.13	-0.49	66.76	15.6309	9.8538	0.0381
635	SLU 57	0.13	-0.44	66.75	15.6271	9.8518	0.0312
635	SLU 58	0.12	-0.51	66.35	15.5372	9.7933	0.0414
635	SLU 59	0.12	-0.46	66.34	15.5333	9.7914	0.0346
635	SLU 60	0.13	-0.5	68.21	15.9645	10.0673	0.038
635	SLU 61	0.13	-0.45	68.2	15.9606	10.0654	0.0311
635	SLU 62	0.13	-0.51	68.72	16.0833	10.1423	0.0389
635	SLU 63	0.13	-0.46	68.7	16.0794	10.1403	0.032
635	SLU 64	0.11	-0.43	64.5	15.1071	9.5215	0.0336
635	SLU 65	0.11	-0.35	64.48	15.1006	9.5183	0.0222
635	SLU 66	0.11	-0.42	65.42	15.3197	9.6569	0.0312
635	SLU 67	0.11	-0.37	65.4	15.3158	9.6549	0.0243
635	SLU 68	0.11	-0.36	64.99	15.2195	9.5932	0.0231
635	SLU 69	0.11	-0.43	65.93	15.4385	9.7318	0.0321
635	SLU 70	0.11	-0.38	65.91	15.4346	9.7299	0.0252
635	SLU 71	0.11	-0.45	65.52	15.3447	9.6714	0.0355
635	SLU 72	0.11	-0.4	65.5	15.3409	9.6695	0.0286
635	SLU 73	0.13	-0.36	71.18	16.6522	10.5073	0.0184
635	SLU 74	0.13	-0.43	72.12	16.8712	10.6459	0.0274
635	SLU 75	0.13	-0.39	72.11	16.8673	10.644	0.0205
635	SLU 76	0.13	-0.37	71.69	16.771	10.5822	0.0193
635	SLU 77	0.13	-0.44	72.63	16.99	10.7208	0.0283
635	SLU 78	0.13	-0.39	72.62	16.9861	10.7189	0.0214
635	SLU 79	0.13	-0.46	72.22	16.8962	10.6604	0.0317
635	SLU 80	0.13	-0.41	72.21	16.8924	10.6585	0.0248
635	SLU 81	0.14	-0.45	74.08	17.3235	10.9344	0.0283
635	SLU 82	0.14	-0.4	74.06	17.3197	10.9325	0.0214
635	SLU 83	0.14	-0.46	74.58	17.4424	11.0093	0.0292
635	SLU 84	0.14	-0.41	74.57	17.4385	11.0074	0.0223
635	SLE RA 1	0.08	-0.34	48.33	11.3221	7.1336	0.028
635	SLE RA 2	0.08	-0.29	48.31	11.3178	7.1315	0.0204
635	SLE RA 3	0.08	-0.33	48.94	11.4639	7.2239	0.0264
635	SLE RA 4	0.08	-0.3	48.93	11.4613	7.2226	0.0218
635	SLE RA 5	0.08	-0.29	48.65	11.397	7.1815	0.021
635	SLE RA 6	0.08	-0.34	49.28	11.5431	7.2739	0.027
635	SLE RA 7	0.08	-0.31	49.27	11.5405	7.2726	0.0224
635	SLE RA 8	0.08	-0.35	49	11.4806	7.2336	0.0292
635	SLE RA 9	0.08	-0.32	48.99	11.478	7.2323	0.0246
635	SLE RA 10	0.1	-0.3	52.78	12.3522	7.7909	0.0179
635	SLE RA 11	0.1	-0.34	53.41	12.4982	7.8833	0.0239
635	SLE RA 12	0.1	-0.31	53.4	12.4956	7.882	0.0193
635	SLE RA 13	0.1	-0.3	53.12	12.4314	7.8408	0.0185
635	SLE RA 14	0.1	-0.35	53.75	12.5774	7.9332	0.0245
635	SLE RA 15	0.1	-0.32	53.74	12.5748	7.9319	0.0199
635	SLE RA 16	0.1	-0.36	53.47	12.5149	7.8929	0.0267
635	SLE RA 17	0.1	-0.33	53.46	12.5123	7.8917	0.0221
635	SLE RA 18	0.1	-0.35	54.71	12.7998	8.0756	0.0244
635	SLE RA 19	0.1	-0.32	54.7	12.7972	8.0743	0.0199
635	SLE RA 20	0.1	-0.36	55.05	12.879	8.1255	0.025
635	SLE RA 21	0.1	-0.33	55.04	12.8764	8.1243	0.0205
635	SLE FR 1	0.08	-0.34	48.33	11.3221	7.1336	0.028

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
635	SLE FR 2	0.08	-0.33	48.32	11.3213	7.1332	0.0265
635	SLE FR 3	0.08	-0.34	48.46	11.3538	7.1536	0.0283
635	SLE FR 4	0.09	-0.33	50.24	11.7646	7.4158	0.0254
635	SLE FR 5	0.09	-0.35	50.38	11.7971	7.4362	0.0272
635	SLE FR 6	0.09	-0.35	51.52	12.061	7.6046	0.0262
635	SLE QP 1	0.08	-0.34	48.33	11.3221	7.1336	0.028
635	SLE QP 2	0.09	-0.35	50.24	11.7654	7.4162	0.027
635	SLD 1	4.33	0.4	49.21	11.5861	7.2476	-1.1703
635	SLD 2	4.32	0.38	49.21	11.5861	7.2484	-1.1634
635	SLD 3	4.42	-1.33	49.84	11.7503	7.3362	-0.9104
635	SLD 4	4.41	-1.35	49.85	11.7503	7.337	-0.9035
635	SLD 5	1.22	2.51	48.97	11.4626	7.231	-0.7276
635	SLD 6	1.21	2.5	48.98	11.4626	7.2316	-0.7232
635	SLD 7	1.53	-3.26	51.08	12.01	7.5265	0.1388
635	SLD 8	1.53	-3.28	51.08	12.01	7.5271	0.1432
635	SLD 9	-1.35	2.58	49.4	11.5209	7.3054	-0.0893
635	SLD 10	-1.36	2.57	49.4	11.5209	7.3059	-0.0849
635	SLD 11	-1.04	-3.19	51.51	12.0683	7.6009	0.7771
635	SLD 12	-1.04	-3.2	51.51	12.0683	7.6014	0.7815
635	SLD 13	-4.24	0.66	50.64	11.7805	7.4954	0.9574
635	SLD 14	-4.25	0.64	50.64	11.7805	7.4962	0.9643
635	SLD 15	-4.14	-1.07	51.27	11.9448	7.5841	1.2173
635	SLD 16	-4.15	-1.1	51.27	11.9447	7.5849	1.2242
635	SLV 1	10	1.36	47.85	11.3505	7.0242	-2.7653
635	SLV 2	9.98	1.31	47.86	11.3504	7.0262	-2.7493
635	SLV 3	10.22	-2.59	49.29	11.7248	7.2267	-2.1728
635	SLV 4	10.2	-2.63	49.3	11.7247	7.2286	-2.1568
635	SLV 5	2.73	6.16	47.34	11.0733	6.9912	-1.7121
635	SLV 6	2.72	6.13	47.34	11.0733	6.9924	-1.7019
635	SLV 7	3.47	-6.99	52.14	12.3209	7.6662	0.263
635	SLV 8	3.45	-7.02	52.15	12.3209	7.6674	0.2732
635	SLV 9	-3.28	6.33	48.34	11.21	7.1651	-0.2193
635	SLV 10	-3.29	6.3	48.34	11.21	7.1663	-0.2091
635	SLV 11	-2.54	-6.82	53.14	12.4576	7.84	1.7558
635	SLV 12	-2.56	-6.85	53.15	12.4576	7.8413	1.766
635	SLV 13	-10.02	1.94	51.18	11.8061	7.6038	2.2107
635	SLV 14	-10.05	1.9	51.19	11.8061	7.6057	2.2267
635	SLV 15	-9.8	-2	52.63	12.1804	7.8063	2.8032
635	SLV 16	-9.83	-2.05	52.63	12.1804	7.8082	2.8192
635	CRTFP Ux+	0	0	0	0	0	0
635	CRTFP Ux-	0	0	0	0	0	0
637	SLU 1	0.1	-0.26	38.3	9.0536	-5.9399	-0.0613
637	SLU 2	0.1	-0.2	38.28	9.0477	-5.9366	-0.0508
637	SLU 3	0.1	-0.26	39.05	9.2295	-6.0563	-0.0608
637	SLU 4	0.1	-0.22	39.04	9.2259	-6.0543	-0.0545
637	SLU 5	0.1	-0.21	38.7	9.1461	-6.0013	-0.0524
637	SLU 6	0.1	-0.26	39.47	9.3279	-6.121	-0.0624
637	SLU 7	0.1	-0.22	39.46	9.3244	-6.119	-0.0561
637	SLU 8	0.1	-0.28	39.14	9.2506	-6.0693	-0.0644
637	SLU 9	0.1	-0.24	39.12	9.247	-6.0673	-0.0581
637	SLU 10	0.11	-0.2	43.78	10.334	-6.7888	-0.0543
637	SLU 11	0.12	-0.26	44.55	10.5157	-6.9084	-0.0643
637	SLU 12	0.12	-0.22	44.54	10.5122	-6.9064	-0.058
637	SLU 13	0.11	-0.21	44.2	10.4324	-6.8535	-0.0559
637	SLU 14	0.12	-0.26	44.97	10.6142	-6.9731	-0.0659
637	SLU 15	0.12	-0.22	44.96	10.6106	-6.9711	-0.0596
637	SLU 16	0.12	-0.28	44.64	10.5369	-6.9215	-0.0679
637	SLU 17	0.12	-0.24	44.62	10.5333	-6.9195	-0.0616
637	SLU 18	0.12	-0.26	46.16	10.8912	-7.1573	-0.0663
637	SLU 19	0.12	-0.22	46.14	10.8876	-7.1553	-0.06
637	SLU 20	0.12	-0.27	46.57	10.9897	-7.222	-0.0678
637	SLU 21	0.12	-0.23	46.56	10.9861	-7.22	-0.0615
637	SLU 22	0.11	-0.23	43.1	10.1774	-6.6837	-0.0573
637	SLU 23	0.1	-0.16	43.08	10.1715	-6.6803	-0.0468
637	SLU 24	0.11	-0.22	43.85	10.3533	-6.8	-0.0568
637	SLU 25	0.11	-0.18	43.84	10.3497	-6.798	-0.0505
637	SLU 26	0.11	-0.17	43.5	10.27	-6.745	-0.0483
637	SLU 27	0.11	-0.23	44.27	10.4517	-6.8647	-0.0584
637	SLU 28	0.11	-0.19	44.26	10.4482	-6.8627	-0.0521
637	SLU 29	0.11	-0.24	43.94	10.3744	-6.8131	-0.0604
637	SLU 30	0.11	-0.2	43.92	10.3708	-6.8111	-0.0541
637	SLU 31	0.12	-0.16	48.58	11.4578	-7.5325	-0.0503
637	SLU 32	0.13	-0.22	49.35	11.6396	-7.6522	-0.0603
637	SLU 33	0.13	-0.18	49.34	11.636	-7.6502	-0.054
637	SLU 34	0.12	-0.17	49	11.5563	-7.5972	-0.0518
637	SLU 35	0.13	-0.23	49.77	11.738	-7.7169	-0.0618
637	SLU 36	0.13	-0.19	49.76	11.7345	-7.7149	-0.0556
637	SLU 37	0.13	-0.24	49.44	11.6607	-7.6653	-0.0639
637	SLU 38	0.13	-0.2	49.42	11.6571	-7.6633	-0.0576
637	SLU 39	0.13	-0.23	50.96	12.015	-7.9011	-0.0623
637	SLU 40	0.13	-0.19	50.95	12.0114	-7.8991	-0.056
637	SLU 41	0.13	-0.23	51.38	12.1135	-7.9658	-0.0638
637	SLU 42	0.13	-0.19	51.36	12.1099	-7.9638	-0.0575
637	SLU 43	0.12	-0.36	48.15	11.3844	-7.4669	-0.0811
637	SLU 44	0.12	-0.29	48.12	11.3785	-7.4636	-0.0706
637	SLU 45	0.13	-0.35	48.9	11.5602	-7.5832	-0.0806
637	SLU 46	0.12	-0.31	48.88	11.5567	-7.5812	-0.0743
637	SLU 47	0.12	-0.3	48.54	11.4769	-7.5283	-0.0721
637	SLU 48	0.13	-0.36	49.31	11.6587	-7.6479	-0.0822
637	SLU 49	0.13	-0.32	49.3	11.6551	-7.6459	-0.0759
637	SLU 50	0.13	-0.37	48.98	11.5813	-7.5963	-0.0842

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
637	SLU 51	0.12	-0.33	48.97	11.5778	-7.5943	-0.0779
637	SLU 52	0.14	-0.29	53.62	12.6647	-8.3157	-0.0741
637	SLU 53	0.14	-0.35	54.4	12.8465	-8.4354	-0.0841
637	SLU 54	0.14	-0.31	54.38	12.843	-8.4334	-0.0778
637	SLU 55	0.14	-0.3	54.04	12.7632	-8.3804	-0.0756
637	SLU 56	0.14	-0.36	54.81	12.945	-8.5001	-0.0856
637	SLU 57	0.14	-0.32	54.8	12.9414	-8.4981	-0.0794
637	SLU 58	0.14	-0.37	54.48	12.8676	-8.4485	-0.0877
637	SLU 59	0.14	-0.33	54.47	12.8641	-8.4465	-0.0814
637	SLU 60	0.15	-0.36	56	13.222	-8.6843	-0.0861
637	SLU 61	0.15	-0.32	55.99	13.2184	-8.6823	-0.0798
637	SLU 62	0.15	-0.36	56.42	13.3204	-8.749	-0.0876
637	SLU 63	0.15	-0.32	56.41	13.3169	-8.747	-0.0813
637	SLU 64	0.13	-0.32	52.95	12.5082	-8.2107	-0.0771
637	SLU 65	0.13	-0.25	52.93	12.5023	-8.2073	-0.0666
637	SLU 66	0.13	-0.31	53.7	12.684	-8.327	-0.0766
637	SLU 67	0.13	-0.27	53.69	12.6805	-8.325	-0.0703
637	SLU 68	0.13	-0.26	53.34	12.6007	-8.272	-0.0681
637	SLU 69	0.14	-0.32	54.12	12.7825	-8.3917	-0.0781
637	SLU 70	0.14	-0.28	54.1	12.779	-8.3897	-0.0718
637	SLU 71	0.13	-0.33	53.78	12.7052	-8.3401	-0.0801
637	SLU 72	0.13	-0.29	53.77	12.7016	-8.3381	-0.0739
637	SLU 73	0.15	-0.25	58.42	13.7886	-9.0595	-0.0701
637	SLU 74	0.15	-0.31	59.2	13.9703	-9.1792	-0.0801
637	SLU 75	0.15	-0.27	59.18	13.9668	-9.1772	-0.0738
637	SLU 76	0.15	-0.26	58.84	13.887	-9.1242	-0.0716
637	SLU 77	0.15	-0.32	59.61	14.0688	-9.2439	-0.0816
637	SLU 78	0.15	-0.28	59.6	14.0652	-9.2419	-0.0753
637	SLU 79	0.15	-0.33	59.28	13.9915	-9.1922	-0.0836
637	SLU 80	0.15	-0.29	59.27	13.9879	-9.1902	-0.0773
637	SLU 81	0.16	-0.32	60.8	14.3458	-9.4281	-0.082
637	SLU 82	0.16	-0.28	60.79	14.3422	-9.426	-0.0757
637	SLU 83	0.16	-0.33	61.22	14.4443	-9.4928	-0.0836
637	SLU 84	0.16	-0.29	61.21	14.4407	-9.4908	-0.0773
637	SLE RA 1	0.1	-0.25	39.67	9.3747	-6.1524	-0.0602
637	SLE RA 2	0.1	-0.21	39.66	9.3708	-6.1502	-0.0532
637	SLE RA 3	0.1	-0.25	40.17	9.4919	-6.23	-0.0598
637	SLE RA 4	0.1	-0.22	40.17	9.4896	-6.2286	-0.0557
637	SLE RA 5	0.1	-0.21	39.94	9.4364	-6.1933	-0.0542
637	SLE RA 6	0.1	-0.25	40.45	9.5576	-6.2731	-0.0609
637	SLE RA 7	0.1	-0.23	40.44	9.5552	-6.2718	-0.0567
637	SLE RA 8	0.1	-0.26	40.23	9.506	-6.2387	-0.0622
637	SLE RA 9	0.1	-0.24	40.22	9.5036	-6.2374	-0.058
637	SLE RA 10	0.11	-0.21	43.32	10.2283	-6.7183	-0.0555
637	SLE RA 11	0.11	-0.25	43.84	10.3495	-6.7981	-0.0622
637	SLE RA 12	0.11	-0.22	43.83	10.3471	-6.7968	-0.058
637	SLE RA 13	0.11	-0.21	43.6	10.2939	-6.7615	-0.0565
637	SLE RA 14	0.11	-0.25	44.12	10.4151	-6.8412	-0.0632
637	SLE RA 15	0.11	-0.23	44.11	10.4127	-6.8399	-0.059
637	SLE RA 16	0.11	-0.26	43.9	10.3635	-6.8068	-0.0645
637	SLE RA 17	0.11	-0.24	43.89	10.3612	-6.8055	-0.0603
637	SLE RA 18	0.12	-0.25	44.91	10.5998	-6.964	-0.0635
637	SLE RA 19	0.12	-0.23	44.9	10.5974	-6.9627	-0.0593
637	SLE RA 20	0.12	-0.26	45.19	10.6654	-7.0072	-0.0645
637	SLE RA 21	0.12	-0.23	45.18	10.663	-7.0058	-0.0603
637	SLE FR 1	0.1	-0.25	39.67	9.3747	-6.1524	-0.0602
637	SLE FR 2	0.1	-0.24	39.67	9.3739	-6.152	-0.0588
637	SLE FR 3	0.1	-0.26	39.78	9.401	-6.1697	-0.0606
637	SLE FR 4	0.1	-0.24	41.24	9.7414	-6.3955	-0.0598
637	SLE FR 5	0.1	-0.26	41.36	9.7685	-6.4132	-0.0616
637	SLE FR 6	0.11	-0.25	42.29	9.9872	-6.5582	-0.0618
637	SLE QP 1	0.1	-0.25	39.67	9.3747	-6.1524	-0.0602
637	SLE QP 2	0.1	-0.25	41.24	9.7422	-6.3959	-0.0612
637	SLD 1	3.56	0.55	40.63	9.7166	-6.3114	-0.8258
637	SLD 2	3.56	0.55	40.62	9.7149	-6.3103	-0.8228
637	SLD 3	3.64	-0.87	41.18	9.8631	-6.3977	-1.0439
637	SLD 4	3.63	-0.87	41.18	9.8614	-6.3966	-1.0408
637	SLD 5	1.03	2.14	40.22	9.5126	-6.2399	0.0396
637	SLD 6	1.02	2.14	40.22	9.5115	-6.2392	0.0416
637	SLD 7	1.28	-2.59	42.07	10.001	-6.5275	-0.6872
637	SLD 8	1.28	-2.59	42.06	9.9999	-6.5268	-0.6852
637	SLD 9	-1.07	2.08	40.43	9.4846	-6.265	0.5629
637	SLD 10	-1.08	2.08	40.42	9.4835	-6.2643	0.5649
637	SLD 11	-0.81	-2.65	42.27	9.9729	-6.5527	-0.1639
637	SLD 12	-0.82	-2.65	42.27	9.9718	-6.5519	-0.1619
637	SLD 13	-3.43	0.36	41.31	9.6231	-6.3952	0.9185
637	SLD 14	-3.43	0.36	41.31	9.6214	-6.3941	0.9216
637	SLD 15	-3.35	-1.06	41.86	9.7696	-6.4815	0.7005
637	SLD 16	-3.36	-1.06	41.86	9.7679	-6.4804	0.7035
637	SLV 1	8.2	1.58	39.82	9.6877	-6.2007	-1.8561
637	SLV 2	8.18	1.59	39.81	9.6838	-6.1981	-1.849
637	SLV 3	8.38	-1.65	41.08	10.0215	-6.3975	-2.3527
637	SLV 4	8.36	-1.65	41.07	10.0175	-6.395	-2.3456
637	SLV 5	2.26	5.2	38.9	9.2203	-6.0392	0.1523
637	SLV 6	2.25	5.2	38.9	9.2178	-6.0375	0.1569
637	SLV 7	2.86	-5.58	43.11	10.3329	-6.6954	-1.503
637	SLV 8	2.85	-5.57	43.11	10.3304	-6.6938	-1.4984
637	SLV 9	-2.64	5.07	39.38	9.1541	-6.098	1.3761
637	SLV 10	-2.66	5.07	39.37	9.1516	-6.0964	1.3807
637	SLV 11	-2.04	-5.71	43.59	10.2666	-6.7543	-0.2792
637	SLV 12	-2.05	-5.71	43.59	10.2641	-6.7527	-0.2746

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
637	SLV 13	-8.15	1.14	41.42	9.4669	-6.3969	2.2232
637	SLV 14	-8.17	1.14	41.41	9.463	-6.3943	2.2304
637	SLV 15	-7.97	-2.09	42.68	9.8007	-6.5937	1.7267
637	SLV 16	-7.99	-2.09	42.67	9.7968	-6.5912	1.7338
637	CRTFP Ux+	0	0	0	0	0	0
637	CRTFP Ux-	0	0	0	0	0	0
639	SLU 1	0.25	-0.31	67.46	10.085	9.3063	0.0142
639	SLU 2	0.25	-0.2	67.43	10.079	9.3011	-0.0017
639	SLU 3	0.26	-0.3	68.77	10.2813	9.4878	0.0108
639	SLU 4	0.25	-0.23	68.75	10.2778	9.4847	0.0013
639	SLU 5	0.25	-0.21	68.16	10.1876	9.4025	-0.0007
639	SLU 6	0.26	-0.31	69.5	10.3898	9.5893	0.0119
639	SLU 7	0.26	-0.24	69.48	10.3863	9.5862	0.0023
639	SLU 8	0.26	-0.34	68.92	10.302	9.5091	0.0162
639	SLU 9	0.26	-0.27	68.9	10.2985	9.506	0.0067
639	SLU 10	0.28	-0.16	77.07	11.5248	10.6331	-0.0103
639	SLU 11	0.29	-0.26	78.41	11.727	10.8198	0.0023
639	SLU 12	0.29	-0.19	78.39	11.7235	10.8167	-0.0073
639	SLU 13	0.28	-0.17	77.8	11.6333	10.7345	-0.0093
639	SLU 14	0.29	-0.27	79.14	11.8356	10.9212	0.0033
639	SLU 15	0.29	-0.2	79.12	11.832	10.9181	-0.0062
639	SLU 16	0.29	-0.3	78.56	11.7478	10.8411	0.0076
639	SLU 17	0.29	-0.23	78.54	11.7442	10.838	-0.0019
639	SLU 18	0.29	-0.27	81.23	12.1503	11.2091	0.0019
639	SLU 19	0.29	-0.2	81.21	12.1467	11.206	-0.0076
639	SLU 20	0.3	-0.28	81.96	12.2588	11.3105	0.0029
639	SLU 21	0.29	-0.21	81.94	12.2553	11.3074	-0.0066
639	SLU 22	0.27	-0.23	75.87	11.357	10.4653	-0.0006
639	SLU 23	0.27	-0.11	75.84	11.351	10.4601	-0.0165
639	SLU 24	0.28	-0.21	77.18	11.5533	10.6469	-0.0039
639	SLU 25	0.28	-0.14	77.16	11.5497	10.6438	-0.0135
639	SLU 26	0.27	-0.12	76.56	11.4596	10.5615	-0.0155
639	SLU 27	0.28	-0.22	77.91	11.6618	10.7483	-0.0029
639	SLU 28	0.28	-0.15	77.89	11.6583	10.7452	-0.0124
639	SLU 29	0.28	-0.25	77.33	11.574	10.6681	0.0015
639	SLU 30	0.28	-0.18	77.31	11.5705	10.665	-0.0081
639	SLU 31	0.3	-0.08	85.47	12.7967	11.7921	-0.0251
639	SLU 32	0.31	-0.18	86.81	12.999	11.9788	-0.0125
639	SLU 33	0.31	-0.11	86.79	12.9955	11.9757	-0.022
639	SLU 34	0.3	-0.09	86.2	12.9053	11.8935	-0.024
639	SLU 35	0.31	-0.19	87.54	13.1076	12.0803	-0.0115
639	SLU 36	0.31	-0.12	87.52	13.104	12.0771	-0.021
639	SLU 37	0.31	-0.22	86.96	13.0198	12.0001	-0.0071
639	SLU 38	0.31	-0.15	86.94	13.0162	11.997	-0.0167
639	SLU 39	0.31	-0.18	89.63	13.4223	12.3681	-0.0129
639	SLU 40	0.31	-0.11	89.61	13.4187	12.365	-0.0224
639	SLU 41	0.32	-0.19	90.36	13.5308	12.4695	-0.0118
639	SLU 42	0.32	-0.12	90.34	13.5272	12.4664	-0.0214
639	SLU 43	0.31	-0.44	84.82	12.6744	11.7008	0.0235
639	SLU 44	0.31	-0.32	84.79	12.6684	11.6956	0.0076
639	SLU 45	0.32	-0.42	86.13	12.8707	11.8824	0.0202
639	SLU 46	0.32	-0.35	86.11	12.8671	11.8792	0.0106
639	SLU 47	0.32	-0.33	85.52	12.777	11.797	0.0086
639	SLU 48	0.33	-0.43	86.86	12.9792	11.9838	0.0212
639	SLU 49	0.33	-0.36	86.84	12.9757	11.9807	0.0116
639	SLU 50	0.32	-0.46	86.28	12.8914	11.9036	0.0255
639	SLU 51	0.32	-0.39	86.26	12.8879	11.9005	0.016
639	SLU 52	0.34	-0.29	94.42	14.1141	13.0276	-0.001
639	SLU 53	0.35	-0.39	95.76	14.3164	13.2143	0.0116
639	SLU 54	0.35	-0.32	95.74	14.3128	13.2112	0.002
639	SLU 55	0.35	-0.3	95.15	14.2227	13.129	0
639	SLU 56	0.36	-0.4	96.49	14.4249	13.3157	0.0126
639	SLU 57	0.36	-0.33	96.47	14.4214	13.3126	0.0031
639	SLU 58	0.35	-0.42	95.92	14.3371	13.2356	0.017
639	SLU 59	0.35	-0.35	95.9	14.3336	13.2325	0.0074
639	SLU 60	0.36	-0.39	98.59	14.7397	13.6036	0.0112
639	SLU 61	0.36	-0.32	98.57	14.7361	13.6005	0.0017
639	SLU 62	0.36	-0.4	99.32	14.8482	13.705	0.0122
639	SLU 63	0.36	-0.33	99.3	14.8446	13.7019	0.0027
639	SLU 64	0.34	-0.35	93.23	13.9463	12.8598	0.0087
639	SLU 65	0.34	-0.24	93.19	13.9404	12.8546	-0.0072
639	SLU 66	0.34	-0.34	94.53	14.1427	13.0414	0.0054
639	SLU 67	0.34	-0.27	94.51	14.1391	13.0383	-0.0041
639	SLU 68	0.34	-0.25	93.92	14.0489	12.956	-0.0061
639	SLU 69	0.35	-0.35	95.26	14.2512	13.1428	0.0064
639	SLU 70	0.35	-0.28	95.24	14.2477	13.1397	-0.0031
639	SLU 71	0.35	-0.37	94.69	14.1634	13.0626	0.0108
639	SLU 72	0.35	-0.3	94.67	14.1599	13.0595	0.0012
639	SLU 73	0.37	-0.2	102.83	15.3861	14.1866	-0.0158
639	SLU 74	0.38	-0.3	104.17	15.5884	14.3733	-0.0032
639	SLU 75	0.37	-0.23	104.15	15.5848	14.3702	-0.0127
639	SLU 76	0.37	-0.21	103.56	15.4947	14.288	-0.0147
639	SLU 77	0.38	-0.31	104.9	15.6969	14.4748	-0.0022
639	SLU 78	0.38	-0.24	104.88	15.6934	14.4716	-0.0117
639	SLU 79	0.38	-0.34	104.32	15.6091	14.3946	0.0022
639	SLU 80	0.38	-0.27	104.3	15.6056	14.3915	-0.0073
639	SLU 81	0.38	-0.3	106.99	16.0117	14.7626	-0.0036
639	SLU 82	0.38	-0.23	106.97	16.0081	14.7595	-0.0131
639	SLU 83	0.38	-0.32	107.72	16.1202	14.864	-0.0025
639	SLU 84	0.38	-0.25	107.7	16.1166	14.8609	-0.0121
639	SLE RA 1	0.25	-0.29	69.87	10.4484	9.6374	0.0099

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
639	SLE RA 2	0.25	-0.21	69.84	10.4444	9.634	-0.0006
639	SLE RA 3	0.26	-0.28	70.74	10.5793	9.7585	0.0077
639	SLE RA 4	0.26	-0.23	70.72	10.5769	9.7564	0.0014
639	SLE RA 5	0.26	-0.22	70.33	10.5168	9.7016	0
639	SLE RA 6	0.26	-0.29	71.22	10.6516	9.8261	0.0084
639	SLE RA 7	0.26	-0.24	71.21	10.6493	9.824	0.0021
639	SLE RA 8	0.26	-0.3	70.84	10.5931	9.7726	0.0113
639	SLE RA 9	0.26	-0.26	70.82	10.5907	9.7706	0.005
639	SLE RA 10	0.27	-0.19	76.27	11.4083	10.5219	-0.0064
639	SLE RA 11	0.28	-0.26	77.16	11.5431	10.6465	0.002
639	SLE RA 12	0.28	-0.21	77.15	11.5407	10.6444	-0.0043
639	SLE RA 13	0.28	-0.2	76.75	11.4806	10.5896	-0.0057
639	SLE RA 14	0.28	-0.26	77.65	11.6155	10.7141	0.0027
639	SLE RA 15	0.28	-0.22	77.63	11.6131	10.712	-0.0037
639	SLE RA 16	0.28	-0.28	77.26	11.5569	10.6606	0.0056
639	SLE RA 17	0.28	-0.24	77.25	11.5546	10.6585	-0.0008
639	SLE RA 18	0.28	-0.26	79.04	11.8253	10.906	0.0018
639	SLE RA 19	0.28	-0.21	79.03	11.8229	10.9039	-0.0046
639	SLE RA 20	0.29	-0.26	79.53	11.8976	10.9736	0.0025
639	SLE RA 21	0.29	-0.22	79.52	11.8953	10.9715	-0.0039
639	SLE FR 1	0.25	-0.29	69.87	10.4484	9.6374	0.0099
639	SLE FR 2	0.25	-0.27	69.86	10.4476	9.6367	0.0078
639	SLE FR 3	0.26	-0.29	70.06	10.4773	9.6645	0.0102
639	SLE FR 4	0.26	-0.26	72.61	10.8607	10.0173	0.0054
639	SLE FR 5	0.26	-0.28	72.81	10.8904	10.045	0.0078
639	SLE FR 6	0.27	-0.27	74.45	11.1368	10.2717	0.0059
639	SLE QP 1	0.25	-0.29	69.87	10.4484	9.6374	0.0099
639	SLE QP 2	0.26	-0.28	72.62	10.8615	10.018	0.0075
639	SLD 1	6.31	1.1	71.85	10.7344	9.9014	-1.1056
639	SLD 2	6.3	1.14	71.83	10.7314	9.8993	-1.1063
639	SLD 3	6.44	-1.38	72.74	10.8856	10.0347	-0.7573
639	SLD 4	6.43	-1.34	72.72	10.8826	10.0326	-0.758
639	SLD 5	1.87	3.89	71.04	10.5945	9.7812	-0.8546
639	SLD 6	1.87	3.92	71.03	10.5925	9.7798	-0.8551
639	SLD 7	2.32	-4.38	74.01	11.0986	10.2256	0.3065
639	SLD 8	2.32	-4.35	74	11.0966	10.2242	0.306
639	SLD 9	-1.79	3.79	71.24	10.6263	9.8118	-0.291
639	SLD 10	-1.8	3.82	71.23	10.6243	9.8104	-0.2915
639	SLD 11	-1.34	-4.47	74.21	11.1304	10.2561	0.8701
639	SLD 12	-1.35	-4.45	74.2	11.1284	10.2548	0.8696
639	SLD 13	-5.91	0.78	72.52	10.8403	10.0033	0.773
639	SLD 14	-5.92	0.82	72.5	10.8373	10.0012	0.7723
639	SLD 15	-5.77	-1.7	73.41	10.9916	10.1366	1.1213
639	SLD 16	-5.78	-1.66	73.39	10.9885	10.1345	1.1206
639	SLV 1	14.4	2.87	70.83	10.5671	9.7489	-2.5853
639	SLV 2	14.38	2.96	70.78	10.56	9.744	-2.587
639	SLV 3	14.71	-2.78	72.86	10.9118	10.053	-1.7916
639	SLV 4	14.69	-2.69	72.81	10.9047	10.0481	-1.7933
639	SLV 5	4.03	9.22	69.01	10.2515	9.4769	-1.9739
639	SLV 6	4.02	9.28	68.98	10.247	9.4737	-1.975
639	SLV 7	5.08	-9.62	75.78	11.4006	10.4905	0.6719
639	SLV 8	5.07	-9.56	75.75	11.3961	10.4874	0.6708
639	SLV 9	-4.54	9	69.49	10.3268	9.5486	-0.6558
639	SLV 10	-4.55	9.06	69.46	10.3223	9.5455	-0.6569
639	SLV 11	-3.49	-9.84	76.26	11.476	10.5622	1.9899
639	SLV 12	-3.5	-9.78	76.23	11.4714	10.5591	1.9889
639	SLV 13	-14.17	2.13	72.42	10.8182	9.9879	1.8083
639	SLV 14	-14.19	2.22	72.38	10.8111	9.983	1.8066
639	SLV 15	-13.85	-3.52	74.45	11.1629	10.292	2.602
639	SLV 16	-13.87	-3.43	74.41	11.1558	10.2871	2.6003
639	CRTFP Ux+	0	0	0	0	0	0
639	CRTFP Ux-	0	0	0	0	0	0
639	CRTFP Uy+	0	0	0	0	0	0
639	CRTFP Uy-	0	0	0	0	0	0
641	SLU 1	0.11	-0.05	24.32	6.0107	0.7063	-0.0222
641	SLU 2	0.1	-0.01	24.31	6.0085	0.7059	-0.0233
641	SLU 3	0.11	-0.04	24.79	6.1257	0.72	-0.0231
641	SLU 4	0.11	-0.02	24.78	6.1244	0.7198	-0.0238
641	SLU 5	0.11	-0.01	24.57	6.0715	0.7136	-0.0236
641	SLU 6	0.11	-0.05	25.05	6.1887	0.7276	-0.0235
641	SLU 7	0.11	-0.02	25.04	6.1873	0.7274	-0.0241
641	SLU 8	0.11	-0.06	24.84	6.1366	0.7216	-0.0228
641	SLU 9	0.11	-0.03	24.83	6.1353	0.7214	-0.0235
641	SLU 10	0.12	0.01	27.78	6.8686	0.8069	-0.0264
641	SLU 11	0.12	-0.03	28.26	6.9858	0.821	-0.0262
641	SLU 12	0.12	0	28.25	6.9845	0.8207	-0.0269
641	SLU 13	0.12	0	28.04	6.9316	0.8145	-0.0267
641	SLU 14	0.12	-0.03	28.51	7.0487	0.8286	-0.0266
641	SLU 15	0.12	-0.01	28.51	7.0474	0.8284	-0.0272
641	SLU 16	0.12	-0.04	28.31	6.9967	0.8225	-0.0259
641	SLU 17	0.12	-0.02	28.3	6.9954	0.8223	-0.0266
641	SLU 18	0.12	-0.03	29.28	7.2394	0.8506	-0.0266
641	SLU 19	0.12	0	29.27	7.2381	0.8503	-0.0273
641	SLU 20	0.12	-0.03	29.53	7.3024	0.8582	-0.0269
641	SLU 21	0.12	-0.01	29.53	7.301	0.858	-0.0276
641	SLU 22	0.12	-0.02	27.37	6.7699	0.7946	-0.0255
641	SLU 23	0.11	0.03	27.36	6.7677	0.7942	-0.0266
641	SLU 24	0.12	-0.01	27.84	6.8849	0.8082	-0.0265
641	SLU 25	0.12	0.02	27.83	6.8836	0.808	-0.0271
641	SLU 26	0.12	0.02	27.62	6.8307	0.8018	-0.0269
641	SLU 27	0.12	-0.01	28.1	6.9479	0.8159	-0.0268

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
641	SLU 28	0.12	0.01	28.09	6.9466	0.8157	-0.0274
641	SLU 29	0.12	-0.02	27.89	6.8959	0.8098	-0.0261
641	SLU 30	0.12	0	27.88	6.8945	0.8096	-0.0268
641	SLU 31	0.13	0.04	30.83	7.6278	0.8951	-0.0297
641	SLU 32	0.13	0	31.31	7.745	0.9092	-0.0296
641	SLU 33	0.13	0.03	31.3	7.7437	0.909	-0.0302
641	SLU 34	0.13	0.04	31.09	7.6908	0.9028	-0.03
641	SLU 35	0.13	0	31.56	7.808	0.9169	-0.0299
641	SLU 36	0.13	0.03	31.56	7.8067	0.9166	-0.0305
641	SLU 37	0.13	-0.01	31.36	7.756	0.9108	-0.0292
641	SLU 38	0.13	0.02	31.35	7.7546	0.9106	-0.0299
641	SLU 39	0.13	0	32.33	7.9986	0.9388	-0.0299
641	SLU 40	0.13	0.03	32.32	7.9973	0.9386	-0.0306
641	SLU 41	0.13	0	32.58	8.0616	0.9464	-0.0302
641	SLU 42	0.13	0.03	32.58	8.0603	0.9462	-0.0309
641	SLU 43	0.13	-0.08	30.57	7.5536	0.8879	-0.0277
641	SLU 44	0.13	-0.03	30.56	7.5514	0.8876	-0.0288
641	SLU 45	0.14	-0.07	31.04	7.6686	0.9016	-0.0287
641	SLU 46	0.14	-0.04	31.03	7.6673	0.9014	-0.0293
641	SLU 47	0.13	-0.04	30.82	7.6143	0.8952	-0.0291
641	SLU 48	0.14	-0.07	31.3	7.7315	0.9093	-0.029
641	SLU 49	0.14	-0.05	31.29	7.7302	0.909	-0.0296
641	SLU 50	0.14	-0.08	31.09	7.6795	0.9032	-0.0284
641	SLU 51	0.14	-0.06	31.08	7.6782	0.903	-0.029
641	SLU 52	0.14	-0.02	34.03	8.4115	0.9885	-0.0319
641	SLU 53	0.15	-0.05	34.51	8.5287	1.0026	-0.0318
641	SLU 54	0.15	-0.03	34.5	8.5274	1.0024	-0.0324
641	SLU 55	0.15	-0.02	34.29	8.4744	0.9962	-0.0322
641	SLU 56	0.15	-0.06	34.77	8.5916	1.0102	-0.0321
641	SLU 57	0.15	-0.03	34.76	8.5903	1.01	-0.0327
641	SLU 58	0.15	-0.07	34.56	8.5396	1.0042	-0.0315
641	SLU 59	0.15	-0.04	34.55	8.5383	1.004	-0.0321
641	SLU 60	0.15	-0.05	35.53	8.7823	1.0322	-0.0321
641	SLU 61	0.15	-0.03	35.52	8.781	1.032	-0.0328
641	SLU 62	0.15	-0.06	35.79	8.8453	1.0398	-0.0325
641	SLU 63	0.15	-0.03	35.78	8.8439	1.0396	-0.0331
641	SLU 64	0.14	-0.04	33.62	8.3128	0.9762	-0.031
641	SLU 65	0.14	0	33.61	8.3106	0.9758	-0.0321
641	SLU 66	0.15	-0.04	34.09	8.4278	0.9899	-0.032
641	SLU 67	0.15	-0.01	34.08	8.4265	0.9897	-0.0326
641	SLU 68	0.14	0	33.87	8.3736	0.9834	-0.0324
641	SLU 69	0.15	-0.04	34.35	8.4908	0.9975	-0.0323
641	SLU 70	0.15	-0.01	34.34	8.4895	0.9973	-0.033
641	SLU 71	0.15	-0.05	34.14	8.4388	0.9915	-0.0317
641	SLU 72	0.15	-0.02	34.13	8.4374	0.9912	-0.0323
641	SLU 73	0.15	0.01	37.08	9.1707	1.0768	-0.0352
641	SLU 74	0.16	-0.02	37.56	9.2879	1.0909	-0.0351
641	SLU 75	0.16	0	37.55	9.2866	1.0906	-0.0357
641	SLU 76	0.16	0.01	37.34	9.2337	1.0844	-0.0355
641	SLU 77	0.16	-0.02	37.81	9.3509	1.0985	-0.0354
641	SLU 78	0.16	0	37.81	9.3496	1.0983	-0.0361
641	SLU 79	0.16	-0.03	37.61	9.2989	1.0924	-0.0348
641	SLU 80	0.16	-0.01	37.6	9.2975	1.0922	-0.0354
641	SLU 81	0.16	-0.02	38.58	9.5415	1.1204	-0.0354
641	SLU 82	0.16	0	38.57	9.5402	1.1202	-0.0361
641	SLU 83	0.16	-0.03	38.83	9.6045	1.1281	-0.0358
641	SLU 84	0.16	0	38.83	9.6032	1.1278	-0.0364
641	SLE RA 1	0.11	-0.04	25.19	6.2276	0.7315	-0.0231
641	SLE RA 2	0.11	-0.01	25.19	6.2261	0.7313	-0.0239
641	SLE RA 3	0.11	-0.04	25.5	6.3043	0.7406	-0.0238
641	SLE RA 4	0.11	-0.02	25.5	6.3034	0.7405	-0.0242
641	SLE RA 5	0.11	-0.01	25.36	6.2681	0.7364	-0.0241
641	SLE RA 6	0.11	-0.04	25.68	6.3463	0.7457	-0.024
641	SLE RA 7	0.11	-0.02	25.67	6.3454	0.7456	-0.0244
641	SLE RA 8	0.11	-0.04	25.54	6.3116	0.7417	-0.0236
641	SLE RA 9	0.11	-0.03	25.53	6.3107	0.7416	-0.024
641	SLE RA 10	0.12	0	27.5	6.7995	0.7986	-0.0259
641	SLE RA 11	0.12	-0.03	27.82	6.8777	0.808	-0.0258
641	SLE RA 12	0.12	-0.01	27.81	6.8768	0.8078	-0.0263
641	SLE RA 13	0.12	0	27.67	6.8415	0.8037	-0.0261
641	SLE RA 14	0.12	-0.03	27.99	6.9197	0.8131	-0.0261
641	SLE RA 15	0.12	-0.01	27.98	6.9188	0.8129	-0.0265
641	SLE RA 16	0.12	-0.03	27.85	6.885	0.809	-0.0256
641	SLE RA 17	0.12	-0.02	27.85	6.8841	0.8089	-0.0261
641	SLE RA 18	0.12	-0.03	28.5	7.0468	0.8277	-0.0261
641	SLE RA 19	0.12	-0.01	28.49	7.0459	0.8275	-0.0265
641	SLE RA 20	0.12	-0.03	28.67	7.0887	0.8328	-0.0263
641	SLE RA 21	0.12	-0.01	28.66	7.0879	0.8326	-0.0267
641	SLE FR 1	0.11	-0.04	25.19	6.2276	0.7315	-0.0231
641	SLE FR 2	0.11	-0.03	25.19	6.2273	0.7315	-0.0233
641	SLE FR 3	0.11	-0.04	25.26	6.2444	0.7336	-0.0232
641	SLE FR 4	0.11	-0.03	26.18	6.4731	0.7603	-0.0242
641	SLE FR 5	0.11	-0.04	26.25	6.4901	0.7624	-0.0241
641	SLE FR 6	0.11	-0.03	26.84	6.6372	0.7796	-0.0246
641	SLE QP 1	0.11	-0.04	25.19	6.2276	0.7315	-0.0231
641	SLE QP 2	0.11	-0.04	26.18	6.4734	0.7604	-0.024
641	SLD 1	2.31	0.34	25.93	6.4112	0.7598	-0.5961
641	SLD 2	2.31	0.36	25.92	6.4095	0.7595	-0.5954
641	SLD 3	2.36	-0.56	26.21	6.4749	0.7695	-0.5654
641	SLD 4	2.36	-0.53	26.2	6.4732	0.7693	-0.5646
641	SLD 5	0.7	1.42	25.69	6.3583	0.7454	-0.2424

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
641	SLD 6	0.69	1.44	25.68	6.3572	0.7453	-0.2419
641	SLD 7	0.86	-1.55	26.61	6.5708	0.778	-0.14
641	SLD 8	0.86	-1.53	26.61	6.5696	0.7778	-0.1395
641	SLD 9	-0.64	1.46	25.76	6.3771	0.7429	0.0914
641	SLD 10	-0.64	1.48	25.75	6.376	0.7428	0.0919
641	SLD 11	-0.47	-1.51	26.68	6.5895	0.7755	0.1939
641	SLD 12	-0.48	-1.5	26.68	6.5884	0.7753	0.1943
641	SLD 13	-2.14	0.46	26.17	6.4735	0.7514	0.5166
641	SLD 14	-2.14	0.48	26.16	6.4718	0.7512	0.5173
641	SLD 15	-2.09	-0.43	26.45	6.5373	0.7612	0.5473
641	SLD 16	-2.09	-0.41	26.44	6.5356	0.761	0.548
641	SLV 1	5.26	0.81	25.59	6.3275	0.7594	-1.3611
641	SLV 2	5.25	0.87	25.57	6.3235	0.7588	-1.3595
641	SLV 3	5.38	-1.23	26.22	6.4729	0.7816	-1.2908
641	SLV 4	5.37	-1.16	26.2	6.4689	0.7811	-1.2891
641	SLV 5	1.48	3.29	25.05	6.2098	0.7264	-0.5321
641	SLV 6	1.48	3.33	25.04	6.2072	0.726	-0.5311
641	SLV 7	1.87	-3.49	27.16	6.6944	0.8006	-0.2976
641	SLV 8	1.86	-3.45	27.15	6.6918	0.8003	-0.2966
641	SLV 9	-1.64	3.38	25.22	6.2549	0.7205	0.2485
641	SLV 10	-1.65	3.41	25.21	6.2523	0.7201	0.2496
641	SLV 11	-1.25	-3.4	27.33	6.7395	0.7947	0.483
641	SLV 12	-1.26	-3.36	27.32	6.7369	0.7943	0.4841
641	SLV 13	-5.14	1.09	26.16	6.4778	0.7397	1.2411
641	SLV 14	-5.16	1.15	26.14	6.4738	0.7391	1.2428
641	SLV 15	-5.03	-0.94	26.8	6.6232	0.7619	1.3114
641	SLV 16	-5.04	-0.88	26.78	6.6192	0.7614	1.3131
641	CRTFP Ux+	0	0	0	0	0	0
641	CRTFP Ux-	0	0	0	0	0	0
642	SLU 1	0.11	0.03	22.48	5.5492	-1.472	-0.0244
642	SLU 2	0.11	0.07	22.48	5.5481	-1.4717	-0.0217
642	SLU 3	0.12	0.04	22.91	5.6541	-1.4998	-0.0247
642	SLU 4	0.12	0.06	22.9	5.6534	-1.4996	-0.023
642	SLU 5	0.12	0.07	22.71	5.6051	-1.4869	-0.0223
642	SLU 6	0.12	0.04	23.14	5.7111	-1.515	-0.0252
642	SLU 7	0.12	0.06	23.14	5.7105	-1.5148	-0.0236
642	SLU 8	0.12	0.03	22.95	5.6633	-1.5024	-0.0255
642	SLU 9	0.12	0.05	22.95	5.6627	-1.5022	-0.0239
642	SLU 10	0.12	0.09	25.67	6.3403	-1.6809	-0.0233
642	SLU 11	0.13	0.06	26.11	6.4463	-1.709	-0.0263
642	SLU 12	0.13	0.08	26.1	6.4457	-1.7088	-0.0247
642	SLU 13	0.13	0.08	25.91	6.3974	-1.696	-0.0239
642	SLU 14	0.13	0.05	26.34	6.5034	-1.7241	-0.0269
642	SLU 15	0.13	0.08	26.34	6.5027	-1.724	-0.0252
642	SLU 16	0.13	0.04	26.15	6.4556	-1.7115	-0.0272
642	SLU 17	0.13	0.07	26.14	6.4549	-1.7114	-0.0255
642	SLU 18	0.13	0.05	27.05	6.681	-1.7708	-0.0267
642	SLU 19	0.13	0.08	27.05	6.6803	-1.7706	-0.0251
642	SLU 20	0.13	0.05	27.28	6.7381	-1.786	-0.0273
642	SLU 21	0.13	0.08	27.28	6.7374	-1.7858	-0.0257
642	SLU 22	0.13	0.07	25.31	6.2524	-1.6576	-0.0248
642	SLU 23	0.12	0.1	25.3	6.2513	-1.6573	-0.0221
642	SLU 24	0.13	0.07	25.74	6.3573	-1.6854	-0.025
642	SLU 25	0.13	0.1	25.73	6.3566	-1.6852	-0.0234
642	SLU 26	0.13	0.1	25.54	6.3083	-1.6724	-0.0227
642	SLU 27	0.13	0.07	25.97	6.4143	-1.7005	-0.0256
642	SLU 28	0.13	0.1	25.97	6.4137	-1.7004	-0.024
642	SLU 29	0.13	0.06	25.78	6.3665	-1.6879	-0.0259
642	SLU 30	0.13	0.09	25.78	6.3659	-1.6878	-0.0243
642	SLU 31	0.14	0.12	28.5	7.0435	-1.8664	-0.0237
642	SLU 32	0.14	0.09	28.94	7.1495	-1.8945	-0.0267
642	SLU 33	0.14	0.11	28.93	7.1489	-1.8944	-0.025
642	SLU 34	0.14	0.12	28.74	7.1006	-1.8816	-0.0243
642	SLU 35	0.14	0.09	29.17	7.2066	-1.9097	-0.0272
642	SLU 36	0.14	0.11	29.17	7.2059	-1.9096	-0.0256
642	SLU 37	0.14	0.08	28.98	7.1588	-1.8971	-0.0275
642	SLU 38	0.14	0.1	28.97	7.1581	-1.897	-0.0259
642	SLU 39	0.14	0.09	29.88	7.3842	-1.9564	-0.0271
642	SLU 40	0.14	0.11	29.88	7.3835	-1.9562	-0.0255
642	SLU 41	0.14	0.09	30.11	7.4413	-1.9716	-0.0276
642	SLU 42	0.14	0.11	30.11	7.4406	-1.9714	-0.026
642	SLU 43	0.15	0.03	28.26	6.9729	-1.8499	-0.0316
642	SLU 44	0.15	0.07	28.25	6.9717	-1.8496	-0.0289
642	SLU 45	0.15	0.04	28.68	7.0777	-1.8777	-0.0318
642	SLU 46	0.15	0.06	28.68	7.0771	-1.8775	-0.0302
642	SLU 47	0.15	0.07	28.48	7.0288	-1.8648	-0.0295
642	SLU 48	0.15	0.04	28.92	7.1348	-1.8929	-0.0324
642	SLU 49	0.15	0.06	28.91	7.1341	-1.8927	-0.0308
642	SLU 50	0.15	0.03	28.72	7.087	-1.8803	-0.0327
642	SLU 51	0.15	0.05	28.72	7.0863	-1.8801	-0.0311
642	SLU 52	0.16	0.08	31.45	7.764	-2.0588	-0.0305
642	SLU 53	0.16	0.05	31.88	7.87	-2.0869	-0.0335
642	SLU 54	0.16	0.08	31.88	7.8693	-2.0867	-0.0319
642	SLU 55	0.16	0.08	31.68	7.8211	-2.074	-0.0311
642	SLU 56	0.16	0.05	32.12	7.9271	-2.1021	-0.034
642	SLU 57	0.16	0.08	32.11	7.9264	-2.1019	-0.0324
642	SLU 58	0.16	0.04	31.92	7.8793	-2.0895	-0.0343
642	SLU 59	0.16	0.07	31.92	7.8786	-2.0893	-0.0327
642	SLU 60	0.16	0.05	32.83	8.1047	-2.1488	-0.0339
642	SLU 61	0.16	0.08	32.82	8.104	-2.1486	-0.0323
642	SLU 62	0.16	0.05	33.06	8.1617	-2.164	-0.0345

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
642	SLU 63	0.16	0.07	33.06	8.1611	-2.1638	-0.0328
642	SLU 64	0.16	0.06	31.09	7.6761	-2.0355	-0.0319
642	SLU 65	0.16	0.1	31.08	7.6749	-2.0352	-0.0293
642	SLU 66	0.16	0.07	31.51	7.7809	-2.0633	-0.0322
642	SLU 67	0.16	0.1	31.51	7.7803	-2.0631	-0.0306
642	SLU 68	0.16	0.1	31.31	7.732	-2.0504	-0.0298
642	SLU 69	0.16	0.07	31.75	7.838	-2.0785	-0.0328
642	SLU 70	0.16	0.09	31.74	7.8373	-2.0783	-0.0312
642	SLU 71	0.16	0.06	31.55	7.7902	-2.0659	-0.0331
642	SLU 72	0.16	0.08	31.55	7.7895	-2.0657	-0.0315
642	SLU 73	0.17	0.12	34.28	8.4672	-2.2444	-0.0309
642	SLU 74	0.17	0.09	34.71	8.5732	-2.2725	-0.0338
642	SLU 75	0.17	0.11	34.71	8.5725	-2.2723	-0.0322
642	SLU 76	0.17	0.12	34.51	8.5243	-2.2596	-0.0315
642	SLU 77	0.17	0.09	34.94	8.6303	-2.2877	-0.0344
642	SLU 78	0.17	0.11	34.94	8.6296	-2.2875	-0.0328
642	SLU 79	0.17	0.08	34.75	8.5825	-2.2751	-0.0347
642	SLU 80	0.17	0.1	34.75	8.5818	-2.2749	-0.0331
642	SLU 81	0.17	0.09	35.65	8.8079	-2.3344	-0.0343
642	SLU 82	0.17	0.11	35.65	8.8072	-2.3342	-0.0326
642	SLU 83	0.17	0.08	35.89	8.8649	-2.3496	-0.0348
642	SLU 84	0.17	0.11	35.88	8.8643	-2.3494	-0.0332
642	SLE RA 1	0.12	0.04	23.29	5.7501	-1.525	-0.0245
642	SLE RA 2	0.12	0.07	23.29	5.7494	-1.5248	-0.0227
642	SLE RA 3	0.12	0.05	23.57	5.82	-1.5435	-0.0247
642	SLE RA 4	0.12	0.06	23.57	5.8196	-1.5434	-0.0236
642	SLE RA 5	0.12	0.07	23.44	5.7874	-1.5349	-0.0231
642	SLE RA 6	0.12	0.05	23.73	5.8581	-1.5537	-0.0251
642	SLE RA 7	0.12	0.06	23.73	5.8576	-1.5535	-0.024
642	SLE RA 8	0.12	0.04	23.6	5.8262	-1.5453	-0.0253
642	SLE RA 9	0.12	0.06	23.6	5.8258	-1.5451	-0.0242
642	SLE RA 10	0.12	0.08	25.42	6.2775	-1.6643	-0.0238
642	SLE RA 11	0.13	0.06	25.71	6.3482	-1.683	-0.0258
642	SLE RA 12	0.13	0.07	25.7	6.3478	-1.6829	-0.0247
642	SLE RA 13	0.13	0.08	25.57	6.3156	-1.6744	-0.0242
642	SLE RA 14	0.13	0.06	25.86	6.3863	-1.6931	-0.0261
642	SLE RA 15	0.13	0.07	25.86	6.3858	-1.693	-0.0251
642	SLE RA 16	0.13	0.05	25.73	6.3544	-1.6847	-0.0263
642	SLE RA 17	0.13	0.06	25.73	6.3539	-1.6846	-0.0253
642	SLE RA 18	0.13	0.06	26.34	6.5047	-1.7242	-0.026
642	SLE RA 19	0.13	0.07	26.33	6.5042	-1.7241	-0.025
642	SLE RA 20	0.13	0.05	26.49	6.5427	-1.7344	-0.0264
642	SLE RA 21	0.13	0.07	26.49	6.5423	-1.7342	-0.0253
642	SLE FR 1	0.12	0.04	23.29	5.7501	-1.525	-0.0245
642	SLE FR 2	0.12	0.05	23.29	5.75	-1.525	-0.0241
642	SLE FR 3	0.12	0.04	23.35	5.7653	-1.529	-0.0246
642	SLE FR 4	0.12	0.05	24.2	5.9763	-1.5847	-0.0246
642	SLE FR 5	0.12	0.05	24.27	5.9917	-1.5888	-0.0251
642	SLE FR 6	0.12	0.05	24.81	6.1274	-1.6246	-0.0253
642	SLE QP 1	0.12	0.04	23.29	5.7501	-1.525	-0.0245
642	SLE QP 2	0.12	0.05	24.2	5.9765	-1.5848	-0.0249
642	SLD 1	2.18	0.38	23.95	5.9153	-1.5665	-0.5235
642	SLD 2	2.18	0.41	23.95	5.9141	-1.566	-0.5201
642	SLD 3	2.23	-0.45	24.16	5.9577	-1.5782	-0.5768
642	SLD 4	2.22	-0.42	24.15	5.9564	-1.5778	-0.5734
642	SLD 5	0.67	1.39	23.82	5.8941	-1.5615	-0.0944
642	SLD 6	0.67	1.41	23.82	5.8933	-1.5612	-0.0922
642	SLD 7	0.82	-1.36	24.5	6.0353	-1.6007	-0.2718
642	SLD 8	0.82	-1.34	24.5	6.0345	-1.6004	-0.2696
642	SLD 9	-0.58	1.43	23.91	5.9184	-1.5691	0.2197
642	SLD 10	-0.58	1.45	23.91	5.9176	-1.5688	0.2219
642	SLD 11	-0.42	-1.32	24.59	6.0597	-1.6083	0.0423
642	SLD 12	-0.43	-1.3	24.59	6.0589	-1.608	0.0445
642	SLD 13	-1.98	0.51	24.26	5.9965	-1.5918	0.5235
642	SLD 14	-1.99	0.54	24.25	5.9952	-1.5913	0.5269
642	SLD 15	-1.93	-0.32	24.46	6.0389	-1.6035	0.4702
642	SLD 16	-1.94	-0.28	24.45	6.0376	-1.6031	0.4736
642	SLV 1	4.94	0.79	23.62	5.8325	-1.5419	-1.1926
642	SLV 2	4.93	0.87	23.6	5.8295	-1.5409	-1.1846
642	SLV 3	5.05	-1.09	24.08	5.9294	-1.5688	-1.3139
642	SLV 4	5.04	-1.01	24.07	5.9264	-1.5678	-1.3059
642	SLV 5	1.4	3.11	23.32	5.7868	-1.5313	-0.1926
642	SLV 6	1.4	3.16	23.31	5.7849	-1.5306	-0.1875
642	SLV 7	1.77	-3.16	24.88	6.1098	-1.621	-0.597
642	SLV 8	1.76	-3.11	24.87	6.1079	-1.6203	-0.5919
642	SLV 9	-1.52	3.2	23.54	5.8451	-1.5492	0.542
642	SLV 10	-1.52	3.25	23.53	5.8432	-1.5485	0.5471
642	SLV 11	-1.16	-3.06	25.1	6.168	-1.6389	0.1376
642	SLV 12	-1.16	-3.02	25.08	6.1661	-1.6382	0.1427
642	SLV 13	-4.8	1.11	24.34	6.0266	-1.6018	1.2561
642	SLV 14	-4.81	1.18	24.32	6.0236	-1.6007	1.264
642	SLV 15	-4.69	-0.77	24.81	6.1234	-1.6287	1.1347
642	SLV 16	-4.7	-0.7	24.79	6.1205	-1.6276	1.1427
642	CRTFP Ux+	0	0	0	0	0	0
642	CRTFP Ux-	0	0	0	0	0	0
644	SLU 1	0.56	0.41	88.81	32.0795	31.3348	-0.3349
644	SLU 2	0.56	0.57	88.81	32.083	31.334	-0.3892
644	SLU 3	0.57	0.45	90.46	32.6753	31.9208	-0.3536
644	SLU 4	0.57	0.54	90.46	32.6773	31.9203	-0.3862
644	SLU 5	0.57	0.56	89.7	32.4045	31.6524	-0.3911
644	SLU 6	0.58	0.44	91.35	32.9968	32.2393	-0.3555

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
644	SLU 7	0.58	0.54	91.36	32.9988	32.2387	-0.388
644	SLU 8	0.58	0.4	90.59	32.7225	31.9717	-0.3387
644	SLU 9	0.58	0.5	90.59	32.7246	31.9712	-0.3712
644	SLU 10	0.6	0.62	101.44	36.6547	35.7961	-0.4275
644	SLU 11	0.62	0.5	103.09	37.2469	36.3829	-0.3919
644	SLU 12	0.62	0.6	103.09	37.249	36.3824	-0.4244
644	SLU 13	0.61	0.62	102.33	36.9762	36.1145	-0.4293
644	SLU 14	0.63	0.5	103.98	37.5684	36.7014	-0.3937
644	SLU 15	0.63	0.59	103.98	37.5705	36.7008	-0.4263
644	SLU 16	0.62	0.46	103.22	37.2942	36.4338	-0.3769
644	SLU 17	0.62	0.55	103.22	37.2963	36.4333	-0.4095
644	SLU 18	0.62	0.49	106.85	38.6105	37.7093	-0.3896
644	SLU 19	0.62	0.59	106.85	38.6126	37.7088	-0.4221
644	SLU 20	0.63	0.49	107.74	38.932	38.0277	-0.3915
644	SLU 21	0.63	0.58	107.74	38.9341	38.0272	-0.424
644	SLU 22	0.61	0.55	100.13	36.1821	35.3166	-0.4032
644	SLU 23	0.61	0.71	100.13	36.1856	35.3157	-0.4575
644	SLU 24	0.63	0.59	101.78	36.7778	35.9026	-0.4219
644	SLU 25	0.62	0.68	101.78	36.7799	35.9021	-0.4545
644	SLU 26	0.62	0.7	101.02	36.5071	35.6342	-0.4594
644	SLU 27	0.64	0.58	102.67	37.0993	36.221	-0.4238
644	SLU 28	0.63	0.68	102.68	37.1014	36.2205	-0.4563
644	SLU 29	0.63	0.54	101.91	36.8251	35.9534	-0.407
644	SLU 30	0.63	0.63	101.91	36.8272	35.9529	-0.4395
644	SLU 31	0.65	0.76	112.76	40.7572	39.7778	-0.4957
644	SLU 32	0.67	0.64	114.41	41.3495	40.3647	-0.4602
644	SLU 33	0.67	0.74	114.41	41.3516	40.3641	-0.4927
644	SLU 34	0.66	0.76	113.65	41.0787	40.0963	-0.4976
644	SLU 35	0.68	0.64	115.3	41.671	40.6831	-0.462
644	SLU 36	0.68	0.73	115.3	41.6731	40.6826	-0.4946
644	SLU 37	0.68	0.6	114.54	41.3968	40.4155	-0.4452
644	SLU 38	0.67	0.69	114.54	41.3988	40.415	-0.4778
644	SLU 39	0.68	0.63	118.17	42.7131	41.691	-0.4579
644	SLU 40	0.67	0.72	118.17	42.7151	41.6905	-0.4904
644	SLU 41	0.69	0.62	119.06	43.0346	42.0094	-0.4598
644	SLU 42	0.68	0.72	119.06	43.0366	42.0089	-0.4923
644	SLU 43	0.71	0.49	111.57	40.2968	39.3701	-0.412
644	SLU 44	0.71	0.65	111.57	40.3003	39.3693	-0.4662
644	SLU 45	0.72	0.53	113.22	40.8925	39.9561	-0.4307
644	SLU 46	0.72	0.62	113.22	40.8946	39.9556	-0.4632
644	SLU 47	0.72	0.64	112.46	40.6217	39.6877	-0.4681
644	SLU 48	0.73	0.52	114.12	41.214	40.2745	-0.4325
644	SLU 49	0.73	0.62	114.12	41.2161	40.274	-0.4651
644	SLU 50	0.73	0.48	113.35	40.9398	40.007	-0.4157
644	SLU 51	0.73	0.57	113.36	40.9419	40.0065	-0.4483
644	SLU 52	0.75	0.7	124.2	44.8719	43.8314	-0.5045
644	SLU 53	0.77	0.58	125.85	45.4642	44.4182	-0.4689
644	SLU 54	0.77	0.68	125.85	45.4663	44.4177	-0.5015
644	SLU 55	0.76	0.7	125.09	45.1934	44.1498	-0.5064
644	SLU 56	0.78	0.58	126.74	45.7857	44.7366	-0.4708
644	SLU 57	0.78	0.67	126.74	45.7878	44.7361	-0.5034
644	SLU 58	0.77	0.54	125.98	45.5115	44.4691	-0.454
644	SLU 59	0.77	0.63	125.98	45.5135	44.4686	-0.4866
644	SLU 60	0.77	0.57	129.61	46.8277	45.7445	-0.4666
644	SLU 61	0.77	0.66	129.61	46.8298	45.744	-0.4992
644	SLU 62	0.78	0.56	130.5	47.1492	46.063	-0.4685
644	SLU 63	0.78	0.66	130.5	47.1513	46.0625	-0.5011
644	SLU 64	0.76	0.63	122.89	44.3994	43.3519	-0.4803
644	SLU 65	0.76	0.78	122.89	44.4028	43.351	-0.5345
644	SLU 66	0.78	0.66	124.54	44.9951	43.9378	-0.499
644	SLU 67	0.77	0.76	124.54	44.9972	43.9373	-0.5315
644	SLU 68	0.77	0.78	123.78	44.7243	43.6694	-0.5364
644	SLU 69	0.79	0.66	125.44	45.3166	44.2563	-0.5008
644	SLU 70	0.78	0.75	125.44	45.3187	44.2558	-0.5334
644	SLU 71	0.78	0.62	124.67	45.0424	43.9887	-0.484
644	SLU 72	0.78	0.71	124.68	45.0444	43.9882	-0.5166
644	SLU 73	0.8	0.84	135.52	48.9745	47.8131	-0.5728
644	SLU 74	0.82	0.72	137.17	49.5668	48.3999	-0.5372
644	SLU 75	0.82	0.81	137.17	49.5689	48.3994	-0.5698
644	SLU 76	0.81	0.83	136.41	49.296	48.1315	-0.5747
644	SLU 77	0.83	0.71	138.06	49.8883	48.7184	-0.5391
644	SLU 78	0.83	0.81	138.06	49.8903	48.7179	-0.5717
644	SLU 79	0.83	0.67	137.3	49.614	48.4508	-0.5223
644	SLU 80	0.82	0.77	137.3	49.6161	48.4503	-0.5548
644	SLU 81	0.83	0.71	140.93	50.9303	49.7263	-0.5349
644	SLU 82	0.82	0.8	140.93	50.9324	49.7258	-0.5675
644	SLU 83	0.84	0.7	141.82	51.2518	50.0447	-0.5368
644	SLU 84	0.83	0.8	141.82	51.2539	50.0442	-0.5694
644	SLE RA 1	0.57	0.45	92.04	33.2517	32.4725	-0.3544
644	SLE RA 2	0.57	0.56	92.04	33.254	32.4719	-0.3906
644	SLE RA 3	0.58	0.48	93.14	33.6489	32.8631	-0.3669
644	SLE RA 4	0.58	0.54	93.15	33.6502	32.8628	-0.3886
644	SLE RA 5	0.58	0.55	92.64	33.4683	32.6842	-0.3919
644	SLE RA 6	0.59	0.47	93.74	33.8632	33.0754	-0.3681
644	SLE RA 7	0.59	0.54	93.74	33.8646	33.0751	-0.3898
644	SLE RA 8	0.59	0.45	93.23	33.6804	32.8971	-0.3569
644	SLE RA 9	0.58	0.51	93.23	33.6817	32.8967	-0.3786
644	SLE RA 10	0.6	0.59	100.46	36.3018	35.4466	-0.4161
644	SLE RA 11	0.61	0.51	101.56	36.6966	35.8379	-0.3924
644	SLE RA 12	0.61	0.58	101.56	36.698	35.8375	-0.4141
644	SLE RA 13	0.61	0.59	101.06	36.5161	35.6589	-0.4174

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
644	SLE RA 14	0.62	0.51	102.16	36.911	36.0502	-0.3936
644	SLE RA 15	0.62	0.57	102.16	36.9123	36.0498	-0.4154
644	SLE RA 16	0.62	0.48	101.65	36.7281	35.8718	-0.3824
644	SLE RA 17	0.62	0.55	101.65	36.7295	35.8714	-0.4041
644	SLE RA 18	0.62	0.51	104.07	37.6057	36.7221	-0.3909
644	SLE RA 19	0.62	0.57	104.07	37.607	36.7218	-0.4126
644	SLE RA 20	0.62	0.5	104.66	37.82	36.9344	-0.3921
644	SLE RA 21	0.62	0.56	104.66	37.8214	36.934	-0.4138
644	SLE FR 1	0.57	0.45	92.04	33.2517	32.4725	-0.3544
644	SLE FR 2	0.57	0.47	92.04	33.2522	32.4724	-0.3617
644	SLE FR 3	0.58	0.45	92.28	33.3374	32.5574	-0.3549
644	SLE FR 4	0.59	0.49	95.65	34.5583	33.7472	-0.3726
644	SLE FR 5	0.59	0.47	95.89	34.6436	33.8323	-0.3659
644	SLE FR 6	0.59	0.48	98.05	35.4287	34.5973	-0.3727
644	SLE QP 1	0.57	0.45	92.04	33.2517	32.4725	-0.3544
644	SLE QP 2	0.59	0.47	95.65	34.5579	33.7474	-0.3654
644	SLD 1	9.12	1.7	93.82	33.8932	33.2592	-3.9268
644	SLD 2	9.09	1.88	93.81	33.8918	33.2549	-3.9695
644	SLD 3	8.93	-1.59	94.2	33.9941	33.4069	-2.7439
644	SLD 4	8.9	-1.41	94.19	33.9927	33.4027	-2.7866
644	SLD 5	3.44	5.8	94.53	34.2056	33.3776	-3.2204
644	SLD 6	3.42	5.91	94.52	34.2047	33.3749	-3.2481
644	SLD 7	2.81	-5.17	95.79	34.5421	33.87	0.7225
644	SLD 8	2.79	-5.06	95.78	34.5412	33.8672	0.6948
644	SLD 9	-1.62	5.99	95.52	34.5746	33.6275	-1.4256
644	SLD 10	-1.63	6.11	95.51	34.5737	33.6247	-1.4533
644	SLD 11	-2.25	-4.98	96.78	34.9111	34.1199	2.5173
644	SLD 12	-2.27	-4.86	96.77	34.9101	34.1171	2.4896
644	SLD 13	-7.73	2.35	97.11	35.123	34.0921	2.0559
644	SLD 14	-7.76	2.53	97.1	35.1216	34.0878	2.0132
644	SLD 15	-7.92	-0.94	97.49	35.224	34.2398	3.2388
644	SLD 16	-7.95	-0.77	97.48	35.2226	34.2355	3.1961
644	SLV 1	20.54	3.25	91.36	32.9966	32.6002	-8.6587
644	SLV 2	20.47	3.66	91.33	32.9933	32.5903	-8.7581
644	SLV 3	20.1	-4.24	92.24	33.2323	32.9403	-5.9634
644	SLV 4	20.03	-3.84	92.21	33.229	32.9305	-6.0628
644	SLV 5	7.25	12.6	93.04	33.7327	32.889	-6.9244
644	SLV 6	7.21	12.86	93.02	33.7306	32.8827	-6.9879
644	SLV 7	5.78	-12.38	95.96	34.5181	34.0228	2.0599
644	SLV 8	5.74	-12.12	95.94	34.516	34.0165	1.9965
644	SLV 9	-4.57	13.06	95.36	34.5997	33.4782	-2.7272
644	SLV 10	-4.61	13.32	95.33	34.5976	33.4719	-2.7907
644	SLV 11	-6.04	-11.93	98.28	35.3852	34.612	6.2572
644	SLV 12	-6.08	-11.67	98.26	35.3831	34.6057	6.1937
644	SLV 13	-18.86	4.77	99.09	35.8868	34.5643	5.3321
644	SLV 14	-18.92	5.18	99.06	35.8835	34.5544	5.2327
644	SLV 15	-19.3	-2.72	99.97	36.1224	34.9044	8.0274
644	SLV 16	-19.37	-2.32	99.93	36.1191	34.8946	7.928
644	CRTFP Ux+	0	0	0	0	0	0
644	CRTFP Ux-	0	0	0	0	0	0
644	CRTFP Uy+	0	0	0	0	0	0
644	CRTFP Uy-	0	0	0	0	0	0
645	SLU 1	0.23	0.15	33.85	1.9685	-1.914	-0.0102
645	SLU 2	0.22	0.21	33.84	1.9706	-1.9137	-0.0069
645	SLU 3	0.23	0.17	34.48	2.0037	-1.9498	-0.0101
645	SLU 4	0.23	0.2	34.48	2.005	-1.9497	-0.0081
645	SLU 5	0.23	0.21	34.18	1.9896	-1.9328	-0.0073
645	SLU 6	0.24	0.16	34.81	2.0227	-1.9689	-0.0106
645	SLU 7	0.23	0.2	34.81	2.024	-1.9688	-0.0086
645	SLU 8	0.23	0.15	34.52	2.0064	-1.9521	-0.0111
645	SLU 9	0.23	0.18	34.52	2.0077	-1.952	-0.0091
645	SLU 10	0.24	0.23	38.62	2.2586	-2.1832	-0.0075
645	SLU 11	0.25	0.18	39.26	2.2917	-2.2193	-0.0107
645	SLU 12	0.25	0.22	39.26	2.293	-2.2191	-0.0087
645	SLU 13	0.24	0.23	38.96	2.2776	-2.2022	-0.0079
645	SLU 14	0.25	0.18	39.59	2.3107	-2.2384	-0.0112
645	SLU 15	0.25	0.22	39.59	2.312	-2.2382	-0.0091
645	SLU 16	0.25	0.17	39.3	2.2944	-2.2216	-0.0117
645	SLU 17	0.25	0.2	39.3	2.2957	-2.2214	-0.0097
645	SLU 18	0.25	0.18	40.67	2.3799	-2.2989	-0.0111
645	SLU 19	0.25	0.21	40.67	2.3812	-2.2987	-0.0091
645	SLU 20	0.25	0.18	41.01	2.3989	-2.318	-0.0115
645	SLU 21	0.25	0.21	41.01	2.4002	-2.3178	-0.0095
645	SLU 22	0.24	0.2	38.16	2.2319	-2.1571	-0.0094
645	SLU 23	0.24	0.26	38.15	2.234	-2.1568	-0.006
645	SLU 24	0.25	0.21	38.79	2.2671	-2.1929	-0.0093
645	SLU 25	0.25	0.25	38.79	2.2684	-2.1927	-0.0072
645	SLU 26	0.25	0.26	38.49	2.253	-2.1759	-0.0065
645	SLU 27	0.25	0.21	39.12	2.2861	-2.212	-0.0097
645	SLU 28	0.25	0.25	39.12	2.2873	-2.2118	-0.0077
645	SLU 29	0.25	0.2	38.83	2.2698	-2.1952	-0.0103
645	SLU 30	0.25	0.23	38.83	2.2711	-2.195	-0.0083
645	SLU 31	0.26	0.28	42.93	2.522	-2.4262	-0.0066
645	SLU 32	0.27	0.23	43.57	2.5551	-2.4623	-0.0099
645	SLU 33	0.27	0.27	43.57	2.5564	-2.4622	-0.0078
645	SLU 34	0.26	0.27	43.27	2.541	-2.4453	-0.0071
645	SLU 35	0.27	0.23	43.9	2.5741	-2.4814	-0.0103
645	SLU 36	0.27	0.26	43.9	2.5754	-2.4813	-0.0083
645	SLU 37	0.27	0.21	43.61	2.5578	-2.4646	-0.0109
645	SLU 38	0.27	0.25	43.61	2.5591	-2.4645	-0.0089
645	SLU 39	0.27	0.23	44.98	2.6433	-2.542	-0.0102

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
645	SLU 40	0.27	0.26	44.98	2.6446	-2.5418	-0.0082
645	SLU 41	0.27	0.22	45.32	2.6623	-2.561	-0.0107
645	SLU 42	0.27	0.26	45.32	2.6636	-2.5609	-0.0087
645	SLU 43	0.29	0.18	42.52	2.4687	-2.4049	-0.0136
645	SLU 44	0.29	0.24	42.52	2.4708	-2.4046	-0.0103
645	SLU 45	0.29	0.2	43.15	2.5039	-2.4407	-0.0135
645	SLU 46	0.29	0.23	43.15	2.5052	-2.4405	-0.0115
645	SLU 47	0.29	0.24	42.86	2.4898	-2.4237	-0.0107
645	SLU 48	0.3	0.19	43.49	2.5229	-2.4598	-0.0139
645	SLU 49	0.3	0.23	43.49	2.5242	-2.4596	-0.0119
645	SLU 50	0.29	0.18	43.2	2.5066	-2.443	-0.0145
645	SLU 51	0.29	0.21	43.2	2.5079	-2.4428	-0.0125
645	SLU 52	0.3	0.26	47.3	2.7589	-2.674	-0.0108
645	SLU 53	0.31	0.21	47.93	2.792	-2.7101	-0.0141
645	SLU 54	0.31	0.25	47.93	2.7933	-2.71	-0.0121
645	SLU 55	0.31	0.26	47.64	2.7778	-2.6931	-0.0113
645	SLU 56	0.31	0.21	48.27	2.8109	-2.7292	-0.0145
645	SLU 57	0.31	0.25	48.27	2.8122	-2.7291	-0.0125
645	SLU 58	0.31	0.2	47.98	2.7947	-2.7124	-0.0151
645	SLU 59	0.31	0.23	47.97	2.7959	-2.7123	-0.0131
645	SLU 60	0.31	0.21	49.35	2.8802	-2.7898	-0.0145
645	SLU 61	0.31	0.24	49.35	2.8815	-2.7896	-0.0124
645	SLU 62	0.31	0.21	49.69	2.8991	-2.8088	-0.0149
645	SLU 63	0.31	0.24	49.69	2.9004	-2.8087	-0.0129
645	SLU 64	0.31	0.23	46.83	2.7321	-2.6479	-0.0128
645	SLU 65	0.3	0.29	46.83	2.7342	-2.6476	-0.0094
645	SLU 66	0.31	0.24	47.46	2.7673	-2.6838	-0.0126
645	SLU 67	0.31	0.28	47.46	2.7686	-2.6836	-0.0106
645	SLU 68	0.31	0.29	47.17	2.7532	-2.6667	-0.0098
645	SLU 69	0.32	0.24	47.8	2.7863	-2.7028	-0.0131
645	SLU 70	0.32	0.28	47.8	2.7876	-2.7027	-0.0111
645	SLU 71	0.31	0.23	47.51	2.77	-2.6861	-0.0137
645	SLU 72	0.31	0.26	47.5	2.7713	-2.6859	-0.0116
645	SLU 73	0.32	0.31	51.61	3.0223	-2.9171	-0.01
645	SLU 74	0.33	0.26	52.24	3.0554	-2.9532	-0.0132
645	SLU 75	0.33	0.3	52.24	3.0566	-2.953	-0.0112
645	SLU 76	0.32	0.3	51.95	3.0412	-2.9362	-0.0104
645	SLU 77	0.33	0.26	52.58	3.0743	-2.9723	-0.0137
645	SLU 78	0.33	0.29	52.58	3.0756	-2.9721	-0.0117
645	SLU 79	0.33	0.24	52.29	3.0581	-2.9555	-0.0142
645	SLU 80	0.33	0.28	52.28	3.0593	-2.9553	-0.0122
645	SLU 81	0.33	0.25	53.66	3.1436	-3.0328	-0.0136
645	SLU 82	0.33	0.29	53.66	3.1449	-3.0327	-0.0116
645	SLU 83	0.33	0.25	54	3.1625	-3.0519	-0.014
645	SLU 84	0.33	0.29	54	3.1638	-3.0517	-0.012
645	SLE RA 1	0.23	0.17	35.08	2.0437	-1.9834	-0.01
645	SLE RA 2	0.23	0.21	35.08	2.0452	-1.9833	-0.0078
645	SLE RA 3	0.24	0.18	35.5	2.0672	-2.0073	-0.0099
645	SLE RA 4	0.23	0.2	35.5	2.0681	-2.0072	-0.0086
645	SLE RA 5	0.23	0.21	35.3	2.0578	-1.996	-0.0081
645	SLE RA 6	0.24	0.17	35.72	2.0799	-2.0201	-0.0102
645	SLE RA 7	0.24	0.2	35.72	2.0807	-2.0199	-0.0089
645	SLE RA 8	0.24	0.16	35.53	2.069	-2.0089	-0.0106
645	SLE RA 9	0.24	0.19	35.53	2.0699	-2.0088	-0.0093
645	SLE RA 10	0.24	0.22	38.26	2.2372	-2.1629	-0.0082
645	SLE RA 11	0.25	0.19	38.68	2.2592	-2.187	-0.0103
645	SLE RA 12	0.25	0.21	38.68	2.2601	-2.1869	-0.009
645	SLE RA 13	0.24	0.22	38.49	2.2498	-2.1756	-0.0085
645	SLE RA 14	0.25	0.19	38.91	2.2719	-2.1997	-0.0106
645	SLE RA 15	0.25	0.21	38.91	2.2727	-2.1996	-0.0093
645	SLE RA 16	0.25	0.18	38.71	2.261	-2.1885	-0.011
645	SLE RA 17	0.25	0.2	38.71	2.2619	-2.1884	-0.0096
645	SLE RA 18	0.25	0.18	39.63	2.318	-2.2401	-0.0106
645	SLE RA 19	0.25	0.21	39.63	2.3189	-2.2399	-0.0092
645	SLE RA 20	0.25	0.18	39.85	2.3307	-2.2528	-0.0109
645	SLE RA 21	0.25	0.21	39.85	2.3315	-2.2527	-0.0095
645	SLE FR 1	0.23	0.17	35.08	2.0437	-1.9834	-0.01
645	SLE FR 2	0.23	0.18	35.08	2.044	-1.9834	-0.0096
645	SLE FR 3	0.23	0.17	35.17	2.0488	-1.9885	-0.0101
645	SLE FR 4	0.24	0.18	36.44	2.1263	-2.0604	-0.0097
645	SLE FR 5	0.24	0.17	36.53	2.1311	-2.0655	-0.0103
645	SLE FR 6	0.24	0.18	37.35	2.1809	-2.1117	-0.0103
645	SLE QP 1	0.23	0.17	35.08	2.0437	-1.9834	-0.01
645	SLE QP 2	0.24	0.17	36.44	2.126	-2.0604	-0.0102
645	SLD 1	3.37	0.62	35.41	2.0593	-1.9966	-0.1905
645	SLD 2	3.36	0.71	35.4	2.062	-1.9953	-0.184
645	SLD 3	3.44	-0.59	35.65	2.022	-2.0131	-0.2569
645	SLD 4	3.43	-0.51	35.63	2.0248	-2.0118	-0.2504
645	SLD 5	1.07	2.14	35.78	2.1619	-2.0165	0.0353
645	SLD 6	1.07	2.19	35.77	2.1638	-2.0156	0.0395
645	SLD 7	1.3	-1.92	36.56	2.0379	-2.0715	-0.186
645	SLD 8	1.3	-1.87	36.55	2.0397	-2.0706	-0.1818
645	SLD 9	-0.83	2.21	36.34	2.2123	-2.0502	0.1615
645	SLD 10	-0.83	2.26	36.33	2.2141	-2.0494	0.1657
645	SLD 11	-0.6	-1.85	37.11	2.0883	-2.1052	-0.0598
645	SLD 12	-0.6	-1.8	37.1	2.0901	-2.1043	-0.0556
645	SLD 13	-2.96	0.86	37.26	2.2272	-2.1091	0.23
645	SLD 14	-2.96	0.94	37.24	2.23	-2.1078	0.2365
645	SLD 15	-2.89	-0.36	37.49	2.19	-2.1256	0.1636
645	SLD 16	-2.89	-0.28	37.47	2.1928	-2.1242	0.1701
645	SLV 1	7.56	1.19	34.04	1.9673	-1.9115	-0.4339

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
645	SLV 2	7.55	1.38	34	1.9738	-1.9084	-0.4188
645	SLV 3	7.72	-1.58	34.58	1.8831	-1.9494	-0.5851
645	SLV 4	7.71	-1.39	34.54	1.8896	-1.9463	-0.57
645	SLV 5	2.18	4.66	34.92	2.2051	-1.9587	0.0895
645	SLV 6	2.18	4.78	34.89	2.2093	-1.9568	0.0992
645	SLV 7	2.73	-4.6	36.7	1.9242	-2.0852	-0.4146
645	SLV 8	2.73	-4.47	36.68	1.9284	-2.0832	-0.4049
645	SLV 9	-2.26	4.82	36.21	2.3237	-2.0377	0.3846
645	SLV 10	-2.26	4.94	36.18	2.3278	-2.0357	0.3942
645	SLV 11	-1.71	-4.43	38	2.0428	-2.1641	-0.1195
645	SLV 12	-1.71	-4.31	37.97	2.0469	-2.1621	-0.1099
645	SLV 13	-7.24	1.74	38.35	2.3625	-2.1745	0.5496
645	SLV 14	-7.25	1.93	38.31	2.369	-2.1715	0.5647
645	SLV 15	-7.08	-1.04	38.88	2.2782	-2.2125	0.3984
645	SLV 16	-7.09	-0.85	38.84	2.2847	-2.2094	0.4135
645	CRTFP Ux+	0	0	0	0	0	0
645	CRTFP Ux-	0	0	0	0	0	0
646	SLU 1	0.28	0.15	40.99	-0.3364	-0.5112	-0.0071
646	SLU 2	0.28	0.22	40.99	-0.3335	-0.5112	-0.0061
646	SLU 3	0.29	0.17	41.76	-0.3445	-0.5208	-0.0072
646	SLU 4	0.29	0.21	41.75	-0.3428	-0.5208	-0.0066
646	SLU 5	0.29	0.22	41.4	-0.3377	-0.5163	-0.0063
646	SLU 6	0.3	0.16	42.17	-0.3487	-0.5259	-0.0074
646	SLU 7	0.3	0.21	42.16	-0.347	-0.5259	-0.0068
646	SLU 8	0.29	0.15	41.81	-0.3447	-0.5214	-0.0075
646	SLU 9	0.29	0.19	41.8	-0.343	-0.5214	-0.0069
646	SLU 10	0.3	0.24	46.77	-0.3683	-0.5833	-0.0064
646	SLU 11	0.31	0.18	47.54	-0.3794	-0.5929	-0.0075
646	SLU 12	0.31	0.23	47.54	-0.3776	-0.5929	-0.007
646	SLU 13	0.31	0.24	47.18	-0.3725	-0.5884	-0.0066
646	SLU 14	0.32	0.18	47.95	-0.3836	-0.598	-0.0077
646	SLU 15	0.31	0.22	47.94	-0.3818	-0.598	-0.0071
646	SLU 16	0.31	0.16	47.59	-0.3796	-0.5935	-0.0078
646	SLU 17	0.31	0.21	47.59	-0.3778	-0.5935	-0.0072
646	SLU 18	0.31	0.18	49.25	-0.3861	-0.6142	-0.0075
646	SLU 19	0.31	0.22	49.25	-0.3844	-0.6142	-0.007
646	SLU 20	0.32	0.17	49.66	-0.3903	-0.6193	-0.0077
646	SLU 21	0.32	0.22	49.66	-0.3886	-0.6193	-0.0072
646	SLU 22	0.31	0.21	46.22	-0.3626	-0.5769	-0.0073
646	SLU 23	0.31	0.28	46.22	-0.3597	-0.5769	-0.0063
646	SLU 24	0.31	0.22	46.99	-0.3708	-0.5865	-0.0074
646	SLU 25	0.31	0.26	46.98	-0.369	-0.5865	-0.0068
646	SLU 26	0.31	0.27	46.62	-0.3639	-0.582	-0.0065
646	SLU 27	0.32	0.22	47.39	-0.375	-0.5916	-0.0076
646	SLU 28	0.32	0.26	47.39	-0.3732	-0.5916	-0.007
646	SLU 29	0.32	0.2	47.03	-0.371	-0.5871	-0.0076
646	SLU 30	0.32	0.24	47.03	-0.3692	-0.5871	-0.0071
646	SLU 31	0.33	0.29	52	-0.3945	-0.649	-0.0066
646	SLU 32	0.33	0.24	52.77	-0.4056	-0.6586	-0.0077
646	SLU 33	0.33	0.28	52.76	-0.4039	-0.6586	-0.0071
646	SLU 34	0.33	0.29	52.4	-0.3987	-0.6541	-0.0068
646	SLU 35	0.34	0.23	53.17	-0.4098	-0.6637	-0.0079
646	SLU 36	0.34	0.28	53.17	-0.4081	-0.6637	-0.0073
646	SLU 37	0.34	0.22	52.82	-0.4058	-0.6592	-0.008
646	SLU 38	0.34	0.26	52.81	-0.4041	-0.6592	-0.0074
646	SLU 39	0.33	0.23	54.48	-0.4123	-0.6799	-0.0077
646	SLU 40	0.33	0.27	54.48	-0.4106	-0.6799	-0.0071
646	SLU 41	0.34	0.23	54.89	-0.4165	-0.685	-0.0079
646	SLU 42	0.34	0.27	54.88	-0.4148	-0.685	-0.0073
646	SLU 43	0.36	0.18	51.49	-0.4283	-0.642	-0.0091
646	SLU 44	0.36	0.25	51.49	-0.4254	-0.642	-0.0082
646	SLU 45	0.37	0.19	52.26	-0.4365	-0.6516	-0.0093
646	SLU 46	0.37	0.24	52.26	-0.4347	-0.6516	-0.0087
646	SLU 47	0.36	0.25	51.9	-0.4296	-0.6471	-0.0084
646	SLU 48	0.37	0.19	52.67	-0.4406	-0.6567	-0.0095
646	SLU 49	0.37	0.23	52.67	-0.4389	-0.6567	-0.0089
646	SLU 50	0.37	0.17	52.31	-0.4367	-0.6522	-0.0095
646	SLU 51	0.37	0.22	52.31	-0.4349	-0.6522	-0.0089
646	SLU 52	0.38	0.27	57.27	-0.4602	-0.7141	-0.0085
646	SLU 53	0.39	0.21	58.04	-0.4713	-0.7237	-0.0096
646	SLU 54	0.39	0.25	58.04	-0.4696	-0.7237	-0.009
646	SLU 55	0.38	0.26	57.68	-0.4644	-0.7192	-0.0087
646	SLU 56	0.39	0.21	58.45	-0.4755	-0.7288	-0.0098
646	SLU 57	0.39	0.25	58.45	-0.4737	-0.7288	-0.0092
646	SLU 58	0.39	0.19	58.09	-0.4715	-0.7243	-0.0098
646	SLU 59	0.39	0.23	58.09	-0.4698	-0.7243	-0.0093
646	SLU 60	0.39	0.2	59.75	-0.478	-0.745	-0.0096
646	SLU 61	0.39	0.25	59.75	-0.4763	-0.745	-0.009
646	SLU 62	0.39	0.2	60.16	-0.4822	-0.7501	-0.0098
646	SLU 63	0.39	0.24	60.16	-0.4805	-0.7501	-0.0092
646	SLU 64	0.38	0.23	56.72	-0.4545	-0.7077	-0.0093
646	SLU 65	0.38	0.3	56.72	-0.4516	-0.7077	-0.0084
646	SLU 66	0.39	0.25	57.49	-0.4627	-0.7173	-0.0095
646	SLU 67	0.39	0.29	57.49	-0.461	-0.7173	-0.0089
646	SLU 68	0.39	0.3	57.13	-0.4558	-0.7128	-0.0085
646	SLU 69	0.4	0.24	57.9	-0.4669	-0.7224	-0.0096
646	SLU 70	0.4	0.29	57.9	-0.4652	-0.7224	-0.0091
646	SLU 71	0.39	0.23	57.54	-0.4629	-0.7179	-0.0097
646	SLU 72	0.39	0.27	57.54	-0.4612	-0.7179	-0.0091
646	SLU 73	0.4	0.32	62.5	-0.4864	-0.7798	-0.0087
646	SLU 74	0.41	0.26	63.27	-0.4975	-0.7894	-0.0098

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
646	SLU 75	0.41	0.31	63.27	-0.4958	-0.7894	-0.0092
646	SLU 76	0.41	0.32	62.91	-0.4906	-0.7849	-0.0089
646	SLU 77	0.42	0.26	63.68	-0.5017	-0.7945	-0.01
646	SLU 78	0.42	0.3	63.68	-0.5	-0.7945	-0.0094
646	SLU 79	0.41	0.24	63.32	-0.4977	-0.7901	-0.01
646	SLU 80	0.41	0.29	63.32	-0.496	-0.79	-0.0094
646	SLU 81	0.41	0.26	64.98	-0.5043	-0.8107	-0.0098
646	SLU 82	0.41	0.3	64.98	-0.5025	-0.8107	-0.0092
646	SLU 83	0.42	0.25	65.39	-0.5084	-0.8159	-0.01
646	SLU 84	0.42	0.3	65.39	-0.5067	-0.8158	-0.0094
646	SLE RA 1	0.29	0.17	42.48	-0.3439	-0.53	-0.0071
646	SLE RA 2	0.29	0.21	42.48	-0.3419	-0.5299	-0.0065
646	SLE RA 3	0.3	0.18	43	-0.3493	-0.5364	-0.0072
646	SLE RA 4	0.3	0.21	42.99	-0.3482	-0.5363	-0.0068
646	SLE RA 5	0.29	0.21	42.75	-0.3447	-0.5334	-0.0066
646	SLE RA 6	0.3	0.17	43.27	-0.3521	-0.5398	-0.0073
646	SLE RA 7	0.3	0.2	43.27	-0.351	-0.5398	-0.007
646	SLE RA 8	0.3	0.16	43.03	-0.3494	-0.5368	-0.0074
646	SLE RA 9	0.3	0.19	43.03	-0.3483	-0.5368	-0.007
646	SLE RA 10	0.3	0.23	46.34	-0.3651	-0.578	-0.0067
646	SLE RA 11	0.31	0.19	46.85	-0.3725	-0.5844	-0.0074
646	SLE RA 12	0.31	0.22	46.85	-0.3714	-0.5844	-0.007
646	SLE RA 13	0.31	0.22	46.61	-0.3679	-0.5814	-0.0068
646	SLE RA 14	0.31	0.19	47.12	-0.3753	-0.5878	-0.0076
646	SLE RA 15	0.31	0.21	47.12	-0.3742	-0.5878	-0.0072
646	SLE RA 16	0.31	0.17	46.88	-0.3727	-0.5848	-0.0076
646	SLE RA 17	0.31	0.2	46.88	-0.3715	-0.5848	-0.0072
646	SLE RA 18	0.31	0.18	47.99	-0.377	-0.5986	-0.0074
646	SLE RA 19	0.31	0.21	47.99	-0.3759	-0.5986	-0.0071
646	SLE RA 20	0.31	0.18	48.26	-0.3798	-0.602	-0.0076
646	SLE RA 21	0.31	0.21	48.26	-0.3787	-0.602	-0.0072
646	SLE FR 1	0.29	0.17	42.48	-0.3439	-0.53	-0.0071
646	SLE FR 2	0.29	0.18	42.48	-0.3435	-0.53	-0.007
646	SLE FR 3	0.29	0.17	42.59	-0.345	-0.5313	-0.0072
646	SLE FR 4	0.3	0.18	44.14	-0.3534	-0.5506	-0.0071
646	SLE FR 5	0.3	0.17	44.24	-0.3549	-0.5519	-0.0073
646	SLE FR 6	0.3	0.18	45.24	-0.3604	-0.5643	-0.0073
646	SLE QP 1	0.29	0.17	42.48	-0.3439	-0.53	-0.0071
646	SLE QP 2	0.3	0.17	44.14	-0.3538	-0.5506	-0.0072
646	SLD 1	4.07	0.72	42.58	-0.368	-0.5213	0.0039
646	SLD 2	4.07	0.83	42.56	-0.3631	-0.5209	0.0075
646	SLD 3	4.15	-0.74	42.9	-0.4302	-0.5254	-0.0129
646	SLD 4	4.15	-0.63	42.87	-0.4252	-0.5251	-0.0093
646	SLD 5	1.3	2.53	43.2	-0.2647	-0.5356	0.0211
646	SLD 6	1.3	2.6	43.18	-0.2614	-0.5354	0.0234
646	SLD 7	1.58	-2.33	44.24	-0.4719	-0.5493	-0.0351
646	SLD 8	1.58	-2.26	44.23	-0.4687	-0.5491	-0.0328
646	SLD 9	-0.99	2.61	44.04	-0.2389	-0.552	0.0183
646	SLD 10	-0.99	2.68	44.03	-0.2357	-0.5518	0.0207
646	SLD 11	-0.71	-2.26	45.09	-0.4462	-0.5658	-0.0378
646	SLD 12	-0.71	-2.19	45.07	-0.443	-0.5656	-0.0355
646	SLD 13	-3.56	0.97	45.4	-0.2824	-0.5761	-0.0051
646	SLD 14	-3.56	1.08	45.38	-0.2774	-0.5757	-0.0015
646	SLD 15	-3.47	-0.49	45.71	-0.3445	-0.5802	-0.022
646	SLD 16	-3.47	-0.38	45.69	-0.3396	-0.5799	-0.0184
646	SLV 1	9.11	1.42	40.51	-0.3915	-0.4821	0.0184
646	SLV 2	9.11	1.67	40.45	-0.3799	-0.4813	0.0268
646	SLV 3	9.31	-1.91	41.23	-0.5326	-0.4916	-0.02
646	SLV 4	9.31	-1.66	41.17	-0.521	-0.4908	-0.0116
646	SLV 5	2.64	5.54	41.96	-0.1531	-0.5157	0.0573
646	SLV 6	2.64	5.71	41.92	-0.1457	-0.5152	0.0626
646	SLV 7	3.3	-5.54	44.37	-0.6234	-0.5475	-0.0707
646	SLV 8	3.3	-5.38	44.34	-0.616	-0.547	-0.0654
646	SLV 9	-2.71	5.72	43.93	-0.0916	-0.5541	0.0509
646	SLV 10	-2.71	5.88	43.9	-0.0842	-0.5536	0.0563
646	SLV 11	-2.05	-5.36	46.35	-0.5619	-0.586	-0.0771
646	SLV 12	-2.05	-5.2	46.31	-0.5545	-0.5855	-0.0717
646	SLV 13	-8.72	2	47.1	-0.1866	-0.6103	-0.0028
646	SLV 14	-8.72	2.25	47.04	-0.175	-0.6095	0.0056
646	SLV 15	-8.52	-1.32	47.82	-0.3277	-0.6199	-0.0412
646	SLV 16	-8.52	-1.07	47.76	-0.3161	-0.6191	-0.0328
646	CRTFP Ux+	0	0	0	0	0	0
646	CRTFP Ux-	0	0	0	0	0	0
647	SLU 1	0.33	0.11	44.16	-0.3647	-0.0039	-0.0132
647	SLU 2	0.32	0.18	44.16	-0.3616	-0.0038	-0.013
647	SLU 3	0.33	0.12	44.99	-0.3736	-0.004	-0.0136
647	SLU 4	0.33	0.16	44.99	-0.3717	-0.004	-0.0135
647	SLU 5	0.33	0.18	44.6	-0.3662	-0.004	-0.0132
647	SLU 6	0.34	0.11	45.43	-0.3781	-0.0041	-0.0138
647	SLU 7	0.34	0.16	45.43	-0.3763	-0.0041	-0.0137
647	SLU 8	0.34	0.1	45.05	-0.3738	-0.0041	-0.0136
647	SLU 9	0.34	0.14	45.04	-0.372	-0.0041	-0.0135
647	SLU 10	0.35	0.2	50.39	-0.3994	-0.0042	-0.0135
647	SLU 11	0.36	0.13	51.22	-0.4114	-0.0044	-0.014
647	SLU 12	0.35	0.18	51.22	-0.4095	-0.0044	-0.014
647	SLU 13	0.35	0.19	50.83	-0.404	-0.0043	-0.0137
647	SLU 14	0.36	0.13	51.66	-0.416	-0.0045	-0.0142
647	SLU 15	0.36	0.18	51.66	-0.4141	-0.0045	-0.0142
647	SLU 16	0.36	0.11	51.27	-0.4117	-0.0045	-0.014
647	SLU 17	0.36	0.16	51.27	-0.4098	-0.0044	-0.014
647	SLU 18	0.36	0.13	53.06	-0.4188	-0.0044	-0.0139

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
647	SLU 19	0.36	0.17	53.06	-0.4169	-0.0044	-0.0138
647	SLU 20	0.36	0.12	53.5	-0.4233	-0.0045	-0.0141
647	SLU 21	0.36	0.17	53.5	-0.4215	-0.0045	-0.014
647	SLU 22	0.35	0.16	49.81	-0.3934	-0.0047	-0.0142
647	SLU 23	0.35	0.23	49.81	-0.3903	-0.0047	-0.014
647	SLU 24	0.36	0.17	50.64	-0.4022	-0.0049	-0.0146
647	SLU 25	0.36	0.22	50.64	-0.4004	-0.0049	-0.0145
647	SLU 26	0.36	0.23	50.25	-0.3948	-0.0048	-0.0142
647	SLU 27	0.37	0.17	51.08	-0.4068	-0.005	-0.0148
647	SLU 28	0.37	0.21	51.08	-0.4049	-0.005	-0.0147
647	SLU 29	0.36	0.15	50.7	-0.4025	-0.005	-0.0146
647	SLU 30	0.36	0.2	50.69	-0.4006	-0.005	-0.0145
647	SLU 31	0.37	0.25	56.04	-0.4281	-0.0051	-0.0145
647	SLU 32	0.38	0.19	56.87	-0.4401	-0.0053	-0.0151
647	SLU 33	0.38	0.23	56.87	-0.4382	-0.0052	-0.015
647	SLU 34	0.38	0.25	56.48	-0.4327	-0.0052	-0.0147
647	SLU 35	0.39	0.18	57.31	-0.4446	-0.0054	-0.0153
647	SLU 36	0.39	0.23	57.31	-0.4428	-0.0054	-0.0152
647	SLU 37	0.38	0.17	56.92	-0.4403	-0.0053	-0.0151
647	SLU 38	0.38	0.21	56.92	-0.4385	-0.0053	-0.015
647	SLU 39	0.38	0.18	58.71	-0.4474	-0.0053	-0.0149
647	SLU 40	0.38	0.23	58.71	-0.4456	-0.0053	-0.0148
647	SLU 41	0.39	0.18	59.15	-0.452	-0.0054	-0.0151
647	SLU 42	0.39	0.22	59.15	-0.4501	-0.0054	-0.015
647	SLU 43	0.41	0.12	55.48	-0.4643	-0.0047	-0.0168
647	SLU 44	0.41	0.2	55.47	-0.4612	-0.0047	-0.0166
647	SLU 45	0.42	0.13	56.3	-0.4732	-0.0048	-0.0172
647	SLU 46	0.42	0.18	56.3	-0.4713	-0.0048	-0.0171
647	SLU 47	0.42	0.19	55.91	-0.4658	-0.0048	-0.0168
647	SLU 48	0.43	0.13	56.74	-0.4777	-0.005	-0.0174
647	SLU 49	0.43	0.17	56.74	-0.4759	-0.005	-0.0173
647	SLU 50	0.42	0.11	56.36	-0.4734	-0.0049	-0.0171
647	SLU 51	0.42	0.16	56.36	-0.4716	-0.0049	-0.0171
647	SLU 52	0.43	0.21	61.7	-0.499	-0.0051	-0.0171
647	SLU 53	0.44	0.15	62.53	-0.511	-0.0052	-0.0176
647	SLU 54	0.44	0.19	62.53	-0.5091	-0.0052	-0.0176
647	SLU 55	0.44	0.21	62.14	-0.5036	-0.0052	-0.0173
647	SLU 56	0.45	0.14	62.97	-0.5155	-0.0053	-0.0178
647	SLU 57	0.45	0.19	62.97	-0.5137	-0.0053	-0.0178
647	SLU 58	0.45	0.13	62.58	-0.5113	-0.0053	-0.0176
647	SLU 59	0.45	0.17	62.58	-0.5094	-0.0053	-0.0175
647	SLU 60	0.44	0.14	64.37	-0.5183	-0.0052	-0.0174
647	SLU 61	0.44	0.19	64.37	-0.5165	-0.0052	-0.0174
647	SLU 62	0.45	0.14	64.81	-0.5229	-0.0054	-0.0176
647	SLU 63	0.45	0.18	64.81	-0.521	-0.0053	-0.0176
647	SLU 64	0.44	0.17	61.13	-0.493	-0.0056	-0.0178
647	SLU 65	0.44	0.25	61.12	-0.4899	-0.0056	-0.0176
647	SLU 66	0.45	0.19	61.95	-0.5018	-0.0057	-0.0182
647	SLU 67	0.45	0.23	61.95	-0.5	-0.0057	-0.0181
647	SLU 68	0.45	0.24	61.56	-0.4944	-0.0057	-0.0178
647	SLU 69	0.46	0.18	62.39	-0.5064	-0.0058	-0.0184
647	SLU 70	0.45	0.23	62.39	-0.5045	-0.0058	-0.0183
647	SLU 71	0.45	0.16	62.01	-0.5021	-0.0058	-0.0182
647	SLU 72	0.45	0.21	62.01	-0.5002	-0.0058	-0.0181
647	SLU 73	0.46	0.26	67.35	-0.5277	-0.006	-0.0181
647	SLU 74	0.47	0.2	68.18	-0.5396	-0.0061	-0.0187
647	SLU 75	0.47	0.25	68.18	-0.5378	-0.0061	-0.0186
647	SLU 76	0.47	0.26	67.79	-0.5323	-0.0061	-0.0183
647	SLU 77	0.48	0.2	68.62	-0.5442	-0.0062	-0.0189
647	SLU 78	0.48	0.24	68.62	-0.5423	-0.0062	-0.0188
647	SLU 79	0.47	0.18	68.23	-0.5399	-0.0062	-0.0187
647	SLU 80	0.47	0.23	68.23	-0.5381	-0.0062	-0.0186
647	SLU 81	0.47	0.19	70.02	-0.547	-0.0061	-0.0185
647	SLU 82	0.47	0.24	70.02	-0.5452	-0.0061	-0.0184
647	SLU 83	0.48	0.19	70.46	-0.5516	-0.0062	-0.0187
647	SLU 84	0.48	0.24	70.46	-0.5497	-0.0062	-0.0186
647	SLE RA 1	0.33	0.12	45.78	-0.3729	-0.0041	-0.0134
647	SLE RA 2	0.33	0.17	45.78	-0.3708	-0.0041	-0.0134
647	SLE RA 3	0.34	0.13	46.33	-0.3788	-0.0042	-0.0137
647	SLE RA 4	0.34	0.16	46.33	-0.3776	-0.0042	-0.0137
647	SLE RA 5	0.34	0.17	46.07	-0.3739	-0.0042	-0.0135
647	SLE RA 6	0.34	0.13	46.62	-0.3819	-0.0043	-0.0139
647	SLE RA 7	0.34	0.16	46.62	-0.3806	-0.0043	-0.0138
647	SLE RA 8	0.34	0.11	46.37	-0.379	-0.0043	-0.0137
647	SLE RA 9	0.34	0.15	46.36	-0.3778	-0.0043	-0.0137
647	SLE RA 10	0.35	0.18	49.93	-0.3961	-0.0043	-0.0137
647	SLE RA 11	0.35	0.14	50.48	-0.404	-0.0044	-0.014
647	SLE RA 12	0.35	0.17	50.48	-0.4028	-0.0044	-0.014
647	SLE RA 13	0.35	0.18	50.22	-0.3991	-0.0044	-0.0138
647	SLE RA 14	0.36	0.14	50.78	-0.4071	-0.0045	-0.0142
647	SLE RA 15	0.36	0.17	50.77	-0.4058	-0.0045	-0.0141
647	SLE RA 16	0.35	0.13	50.52	-0.4042	-0.0045	-0.014
647	SLE RA 17	0.35	0.16	50.52	-0.403	-0.0045	-0.014
647	SLE RA 18	0.35	0.14	51.71	-0.4089	-0.0045	-0.0139
647	SLE RA 19	0.35	0.17	51.71	-0.4077	-0.0045	-0.0139
647	SLE RA 20	0.36	0.13	52	-0.412	-0.0045	-0.014
647	SLE RA 21	0.36	0.16	52	-0.4107	-0.0045	-0.014
647	SLE FR 1	0.33	0.12	45.78	-0.3729	-0.0041	-0.0134
647	SLE FR 2	0.33	0.13	45.78	-0.3725	-0.0041	-0.0134
647	SLE FR 3	0.33	0.12	45.9	-0.3741	-0.0041	-0.0135
647	SLE FR 4	0.34	0.14	47.56	-0.3833	-0.0042	-0.0136

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
647	SLE FR 5	0.34	0.12	47.67	-0.3849	-0.0042	-0.0136
647	SLE FR 6	0.34	0.13	48.74	-0.3909	-0.0043	-0.0137
647	SLE QP 1	0.33	0.12	45.78	-0.3729	-0.0041	-0.0134
647	SLE QP 2	0.34	0.13	47.56	-0.3837	-0.0042	-0.0136
647	SLD 1	4.39	0.73	45.47	-0.3986	0.0088	-0.0085
647	SLD 2	4.39	0.85	45.44	-0.3933	0.0088	-0.0061
647	SLD 3	4.48	-0.84	45.82	-0.4657	0.0083	-0.0075
647	SLD 4	4.48	-0.71	45.79	-0.4603	0.0083	-0.0051
647	SLD 5	1.42	2.65	46.41	-0.2875	0.0005	-0.014
647	SLD 6	1.42	2.74	46.39	-0.284	0.0005	-0.0124
647	SLD 7	1.72	-2.56	47.57	-0.5109	-0.0013	-0.0107
647	SLD 8	1.72	-2.47	47.55	-0.5074	-0.0012	-0.0091
647	SLD 9	-1.04	2.72	47.56	-0.26	-0.0072	-0.0181
647	SLD 10	-1.04	2.81	47.54	-0.2565	-0.0071	-0.0165
647	SLD 11	-0.74	-2.49	48.73	-0.4835	-0.009	-0.0148
647	SLD 12	-0.74	-2.4	48.71	-0.48	-0.0089	-0.0132
647	SLD 13	-3.8	0.96	49.32	-0.3071	-0.0168	-0.0221
647	SLD 14	-3.8	1.09	49.3	-0.3018	-0.0167	-0.0196
647	SLD 15	-3.71	-0.6	49.67	-0.3742	-0.0173	-0.0211
647	SLD 16	-3.71	-0.48	49.65	-0.3688	-0.0172	-0.0186
647	SLV 1	9.81	1.48	42.68	-0.4233	0.0262	-0.0017
647	SLV 2	9.81	1.78	42.61	-0.4108	0.0264	0.0041
647	SLV 3	10.02	-2.08	43.48	-0.5755	0.025	0.0006
647	SLV 4	10.02	-1.78	43.42	-0.563	0.0251	0.0064
647	SLV 5	2.86	5.88	44.88	-0.167	0.0067	-0.0145
647	SLV 6	2.86	6.07	44.84	-0.159	0.0068	-0.0108
647	SLV 7	3.57	-5.98	47.57	-0.6741	0.0027	-0.0068
647	SLV 8	3.56	-5.79	47.53	-0.6661	0.0028	-0.0032
647	SLV 9	-2.89	6.04	47.59	-0.1013	-0.0112	-0.024
647	SLV 10	-2.89	6.23	47.54	-0.0933	-0.0111	-0.0203
647	SLV 11	-2.18	-5.82	50.28	-0.6085	-0.0153	-0.0164
647	SLV 12	-2.18	-5.63	50.23	-0.6005	-0.0152	-0.0127
647	SLV 13	-9.34	2.03	51.7	-0.2045	-0.0336	-0.0336
647	SLV 14	-9.35	2.33	51.63	-0.192	-0.0334	-0.0278
647	SLV 15	-9.13	-1.53	52.5	-0.3566	-0.0348	-0.0313
647	SLV 16	-9.13	-1.23	52.44	-0.3441	-0.0346	-0.0255
647	CRTFP Ux+	0	0	0	0	0	0
647	CRTFP Ux-	0	0	0	0	0	0
648	SLU 1	0.35	0.03	44.27	-0.3686	-0.0025	-0.0149
648	SLU 2	0.35	0.11	44.27	-0.3655	-0.0024	-0.0147
648	SLU 3	0.36	0.04	45.11	-0.3776	-0.0026	-0.0153
648	SLU 4	0.36	0.09	45.1	-0.3757	-0.0025	-0.0152
648	SLU 5	0.35	0.11	44.71	-0.3702	-0.0025	-0.0149
648	SLU 6	0.36	0.04	45.55	-0.3822	-0.0027	-0.0155
648	SLU 7	0.36	0.09	45.55	-0.3803	-0.0027	-0.0154
648	SLU 8	0.36	0.02	45.16	-0.3779	-0.0027	-0.0153
648	SLU 9	0.36	0.07	45.16	-0.376	-0.0027	-0.0152
648	SLU 10	0.37	0.12	50.5	-0.4038	-0.0023	-0.015
648	SLU 11	0.38	0.06	51.34	-0.4159	-0.0024	-0.0157
648	SLU 12	0.38	0.1	51.33	-0.414	-0.0024	-0.0155
648	SLU 13	0.37	0.12	50.95	-0.4084	-0.0024	-0.0153
648	SLU 14	0.38	0.05	51.78	-0.4205	-0.0026	-0.0159
648	SLU 15	0.38	0.1	51.78	-0.4186	-0.0025	-0.0158
648	SLU 16	0.38	0.04	51.4	-0.4162	-0.0026	-0.0157
648	SLU 17	0.38	0.08	51.39	-0.4143	-0.0026	-0.0155
648	SLU 18	0.38	0.05	53.18	-0.4234	-0.0023	-0.0154
648	SLU 19	0.38	0.1	53.17	-0.4215	-0.0022	-0.0153
648	SLU 20	0.38	0.05	53.62	-0.428	-0.0024	-0.0156
648	SLU 21	0.38	0.09	53.62	-0.4261	-0.0024	-0.0155
648	SLU 22	0.38	0.08	49.95	-0.3978	-0.0029	-0.0159
648	SLU 23	0.37	0.16	49.94	-0.3947	-0.0029	-0.0157
648	SLU 24	0.39	0.09	50.78	-0.4068	-0.003	-0.0163
648	SLU 25	0.38	0.14	50.78	-0.4049	-0.003	-0.0162
648	SLU 26	0.38	0.15	50.39	-0.3994	-0.003	-0.0159
648	SLU 27	0.39	0.09	51.22	-0.4114	-0.0032	-0.0165
648	SLU 28	0.39	0.13	51.22	-0.4095	-0.0031	-0.0164
648	SLU 29	0.39	0.07	50.84	-0.4071	-0.0032	-0.0163
648	SLU 30	0.39	0.12	50.84	-0.4052	-0.0031	-0.0162
648	SLU 31	0.4	0.17	56.17	-0.433	-0.0027	-0.0161
648	SLU 32	0.41	0.11	57.01	-0.4451	-0.0029	-0.0167
648	SLU 33	0.41	0.15	57.01	-0.4432	-0.0029	-0.0166
648	SLU 34	0.4	0.17	56.62	-0.4377	-0.0029	-0.0163
648	SLU 35	0.41	0.1	57.46	-0.4497	-0.003	-0.0169
648	SLU 36	0.41	0.15	57.45	-0.4478	-0.003	-0.0168
648	SLU 37	0.41	0.08	57.07	-0.4454	-0.003	-0.0167
648	SLU 38	0.41	0.13	57.07	-0.4435	-0.003	-0.0166
648	SLU 39	0.41	0.1	58.85	-0.4526	-0.0027	-0.0164
648	SLU 40	0.41	0.15	58.85	-0.4507	-0.0027	-0.0163
648	SLU 41	0.41	0.09	59.29	-0.4572	-0.0029	-0.0166
648	SLU 42	0.41	0.14	59.29	-0.4553	-0.0028	-0.0165
648	SLU 43	0.44	0.03	55.61	-0.4692	-0.003	-0.019
648	SLU 44	0.44	0.1	55.61	-0.4661	-0.003	-0.0188
648	SLU 45	0.45	0.04	56.44	-0.4781	-0.0031	-0.0194
648	SLU 46	0.45	0.08	56.44	-0.4763	-0.0031	-0.0193
648	SLU 47	0.45	0.1	56.05	-0.4707	-0.0031	-0.019
648	SLU 48	0.46	0.03	56.89	-0.4828	-0.0033	-0.0196
648	SLU 49	0.46	0.08	56.89	-0.4809	-0.0033	-0.0195
648	SLU 50	0.45	0.02	56.5	-0.4785	-0.0033	-0.0194
648	SLU 51	0.45	0.06	56.5	-0.4766	-0.0033	-0.0193
648	SLU 52	0.46	0.12	61.84	-0.5044	-0.0029	-0.0192
648	SLU 53	0.47	0.05	62.67	-0.5164	-0.003	-0.0198

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
648	SLU 54	0.47	0.1	62.67	-0.5146	-0.003	-0.0197
648	SLU 55	0.47	0.11	62.28	-0.509	-0.003	-0.0194
648	SLU 56	0.48	0.05	63.12	-0.5211	-0.0031	-0.02
648	SLU 57	0.48	0.09	63.12	-0.5192	-0.0031	-0.0199
648	SLU 58	0.48	0.03	62.73	-0.5168	-0.0032	-0.0198
648	SLU 59	0.47	0.08	62.73	-0.5149	-0.0031	-0.0197
648	SLU 60	0.47	0.05	64.51	-0.5239	-0.0028	-0.0195
648	SLU 61	0.47	0.09	64.51	-0.5221	-0.0028	-0.0194
648	SLU 62	0.48	0.04	64.96	-0.5286	-0.003	-0.0197
648	SLU 63	0.48	0.09	64.96	-0.5267	-0.003	-0.0196
648	SLU 64	0.47	0.07	61.28	-0.4984	-0.0035	-0.02
648	SLU 65	0.47	0.15	61.28	-0.4953	-0.0035	-0.0198
648	SLU 66	0.48	0.09	62.12	-0.5073	-0.0036	-0.0204
648	SLU 67	0.48	0.13	62.11	-0.5055	-0.0036	-0.0203
648	SLU 68	0.47	0.15	61.72	-0.4999	-0.0036	-0.02
648	SLU 69	0.49	0.08	62.56	-0.512	-0.0037	-0.0207
648	SLU 70	0.48	0.13	62.56	-0.5101	-0.0037	-0.0205
648	SLU 71	0.48	0.06	62.17	-0.5077	-0.0037	-0.0204
648	SLU 72	0.48	0.11	62.17	-0.5058	-0.0037	-0.0203
648	SLU 73	0.49	0.17	67.51	-0.5336	-0.0033	-0.0202
648	SLU 74	0.5	0.1	68.35	-0.5456	-0.0035	-0.0208
648	SLU 75	0.5	0.15	68.34	-0.5438	-0.0035	-0.0207
648	SLU 76	0.5	0.16	67.96	-0.5382	-0.0035	-0.0204
648	SLU 77	0.51	0.09	68.79	-0.5503	-0.0036	-0.021
648	SLU 78	0.51	0.14	68.79	-0.5484	-0.0036	-0.0209
648	SLU 79	0.5	0.08	68.41	-0.546	-0.0036	-0.0208
648	SLU 80	0.5	0.12	68.4	-0.5441	-0.0036	-0.0207
648	SLU 81	0.5	0.09	70.19	-0.5531	-0.0033	-0.0205
648	SLU 82	0.5	0.14	70.18	-0.5513	-0.0033	-0.0204
648	SLU 83	0.51	0.09	70.63	-0.5578	-0.0034	-0.0207
648	SLU 84	0.51	0.13	70.63	-0.5559	-0.0034	-0.0206
648	SLE RA 1	0.36	0.05	45.89	-0.377	-0.0026	-0.0152
648	SLE RA 2	0.35	0.1	45.89	-0.3749	-0.0026	-0.015
648	SLE RA 3	0.36	0.05	46.45	-0.3829	-0.0027	-0.0155
648	SLE RA 4	0.36	0.08	46.45	-0.3817	-0.0026	-0.0154
648	SLE RA 5	0.36	0.09	46.19	-0.378	-0.0026	-0.0152
648	SLE RA 6	0.37	0.05	46.75	-0.386	-0.0027	-0.0156
648	SLE RA 7	0.37	0.08	46.74	-0.3848	-0.0027	-0.0155
648	SLE RA 8	0.36	0.04	46.49	-0.3832	-0.0028	-0.0155
648	SLE RA 9	0.36	0.07	46.49	-0.3819	-0.0027	-0.0154
648	SLE RA 10	0.37	0.11	50.05	-0.4004	-0.0025	-0.0153
648	SLE RA 11	0.38	0.06	50.6	-0.4085	-0.0026	-0.0157
648	SLE RA 12	0.38	0.09	50.6	-0.4072	-0.0026	-0.0156
648	SLE RA 13	0.37	0.1	50.34	-0.4035	-0.0026	-0.0154
648	SLE RA 14	0.38	0.06	50.9	-0.4115	-0.0027	-0.0158
648	SLE RA 15	0.38	0.09	50.9	-0.4103	-0.0026	-0.0158
648	SLE RA 16	0.38	0.05	50.64	-0.4087	-0.0027	-0.0157
648	SLE RA 17	0.38	0.08	50.64	-0.4074	-0.0027	-0.0156
648	SLE RA 18	0.38	0.06	51.83	-0.4135	-0.0025	-0.0155
648	SLE RA 19	0.38	0.09	51.83	-0.4122	-0.0024	-0.0154
648	SLE RA 20	0.38	0.06	52.13	-0.4165	-0.0025	-0.0156
648	SLE RA 21	0.38	0.09	52.12	-0.4153	-0.0025	-0.0156
648	SLE FR 1	0.36	0.05	45.89	-0.377	-0.0026	-0.0152
648	SLE FR 2	0.36	0.06	45.89	-0.3766	-0.0026	-0.0151
648	SLE FR 3	0.36	0.05	46.01	-0.3782	-0.0026	-0.0152
648	SLE FR 4	0.36	0.06	47.67	-0.3875	-0.0025	-0.0152
648	SLE FR 5	0.36	0.05	47.79	-0.3892	-0.0026	-0.0153
648	SLE FR 6	0.37	0.05	48.86	-0.3952	-0.0025	-0.0153
648	SLE QP 1	0.36	0.05	45.89	-0.377	-0.0026	-0.0152
648	SLE QP 2	0.36	0.05	47.67	-0.3879	-0.0025	-0.0153
648	SLD 1	4.41	0.66	45.17	-0.4025	0.009	-0.0098
648	SLD 2	4.41	0.8	45.14	-0.397	0.0091	-0.0072
648	SLD 3	4.5	-0.9	45.53	-0.4698	0.0083	-0.0091
648	SLD 4	4.5	-0.76	45.5	-0.4644	0.0083	-0.0066
648	SLD 5	1.44	2.57	46.38	-0.2911	0.002	-0.0151
648	SLD 6	1.44	2.67	46.36	-0.2876	0.0021	-0.0135
648	SLD 7	1.74	-2.63	47.59	-0.5156	-0.0004	-0.0128
648	SLD 8	1.74	-2.54	47.57	-0.5121	-0.0004	-0.0112
648	SLD 9	-1.02	2.64	47.78	-0.2638	-0.0047	-0.0194
648	SLD 10	-1.02	2.73	47.76	-0.2603	-0.0046	-0.0177
648	SLD 11	-0.72	-2.56	48.99	-0.4883	-0.0072	-0.0171
648	SLD 12	-0.72	-2.47	48.97	-0.4848	-0.0071	-0.0154
648	SLD 13	-3.78	0.86	49.85	-0.3115	-0.0134	-0.024
648	SLD 14	-3.78	1	49.82	-0.3061	-0.0133	-0.0215
648	SLD 15	-3.69	-0.7	50.21	-0.3788	-0.0142	-0.0233
648	SLD 16	-3.69	-0.56	50.18	-0.3734	-0.0141	-0.0208
648	SLV 1	9.83	1.42	41.82	-0.4266	0.0245	-0.0023
648	SLV 2	9.83	1.75	41.75	-0.414	0.0247	0.0036
648	SLV 3	10.04	-2.13	42.66	-0.5795	0.0228	-0.0007
648	SLV 4	10.04	-1.81	42.59	-0.5668	0.023	0.0052
648	SLV 5	2.88	5.8	44.66	-0.1699	0.0081	-0.0148
648	SLV 6	2.88	6.01	44.61	-0.1618	0.0082	-0.011
648	SLV 7	3.59	-6.05	47.46	-0.6793	0.0024	-0.0095
648	SLV 8	3.59	-5.84	47.41	-0.6712	0.0025	-0.0057
648	SLV 9	-2.86	5.94	47.94	-0.1046	-0.0076	-0.0248
648	SLV 10	-2.86	6.15	47.89	-0.0965	-0.0075	-0.0211
648	SLV 11	-2.16	-5.9	50.74	-0.6141	-0.0133	-0.0195
648	SLV 12	-2.16	-5.7	50.69	-0.606	-0.0132	-0.0157
648	SLV 13	-9.32	1.91	52.76	-0.209	-0.028	-0.0357
648	SLV 14	-9.32	2.23	52.69	-0.1964	-0.0279	-0.0298
648	SLV 15	-9.11	-1.65	53.6	-0.3619	-0.0298	-0.0341

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
648	SLV 16	-9.11	-1.32	53.53	-0.3492	-0.0296	-0.0282
648	CRTFP Ux+	0	0	0	0	0	0
648	CRTFP Ux-	0	0	0	0	0	0
649	SLU 1	0.37	-0.04	44.32	-0.3728	-0.0005	-0.0148
649	SLU 2	0.37	0.03	44.32	-0.3697	-0.0005	-0.0146
649	SLU 3	0.38	-0.03	45.16	-0.3818	-0.0006	-0.0153
649	SLU 4	0.38	0.01	45.16	-0.3799	-0.0006	-0.0151
649	SLU 5	0.38	0.03	44.77	-0.3744	-0.0006	-0.0148
649	SLU 6	0.39	-0.04	45.61	-0.3865	-0.0008	-0.0155
649	SLU 7	0.39	0.01	45.61	-0.3846	-0.0007	-0.0153
649	SLU 8	0.38	-0.06	45.22	-0.3822	-0.0008	-0.0152
649	SLU 9	0.38	-0.01	45.22	-0.3803	-0.0008	-0.0151
649	SLU 10	0.39	0.05	50.53	-0.4085	0.0002	-0.0148
649	SLU 11	0.4	-0.02	51.38	-0.4206	0.0001	-0.0154
649	SLU 12	0.4	0.02	51.37	-0.4187	0.0001	-0.0153
649	SLU 13	0.4	0.04	50.98	-0.4132	0.0001	-0.015
649	SLU 14	0.41	-0.03	51.83	-0.4253	0	-0.0157
649	SLU 15	0.41	0.02	51.82	-0.4234	0	-0.0155
649	SLU 16	0.41	-0.04	51.44	-0.421	-0.0001	-0.0154
649	SLU 17	0.41	0	51.44	-0.4191	-0.0001	-0.0153
649	SLU 18	0.4	-0.03	53.2	-0.4282	0.0005	-0.0151
649	SLU 19	0.4	0.02	53.2	-0.4264	0.0005	-0.015
649	SLU 20	0.41	-0.03	53.65	-0.4329	0.0004	-0.0153
649	SLU 21	0.41	0.01	53.65	-0.431	0.0004	-0.0152
649	SLU 22	0.4	0	50.01	-0.4026	-0.0006	-0.0158
649	SLU 23	0.4	0.08	50	-0.3994	-0.0005	-0.0156
649	SLU 24	0.41	0.01	50.84	-0.4116	-0.0007	-0.0162
649	SLU 25	0.41	0.05	50.84	-0.4097	-0.0006	-0.0161
649	SLU 26	0.41	0.07	50.45	-0.4041	-0.0007	-0.0158
649	SLU 27	0.42	0	51.29	-0.4162	-0.0008	-0.0164
649	SLU 28	0.42	0.05	51.29	-0.4144	-0.0008	-0.0163
649	SLU 29	0.41	-0.01	50.91	-0.412	-0.0008	-0.0162
649	SLU 30	0.41	0.03	50.9	-0.4101	-0.0008	-0.016
649	SLU 31	0.42	0.09	56.22	-0.4382	0.0002	-0.0157
649	SLU 32	0.43	0.02	57.06	-0.4504	0.0001	-0.0164
649	SLU 33	0.43	0.07	57.05	-0.4485	0.0001	-0.0162
649	SLU 34	0.43	0.08	56.67	-0.4429	0.0001	-0.016
649	SLU 35	0.44	0.01	57.51	-0.455	0	-0.0166
649	SLU 36	0.44	0.06	57.5	-0.4532	0	-0.0165
649	SLU 37	0.44	0	57.12	-0.4508	-0.0001	-0.0164
649	SLU 38	0.44	0.05	57.12	-0.4489	-0.0001	-0.0162
649	SLU 39	0.43	0.02	58.89	-0.458	0.0005	-0.016
649	SLU 40	0.43	0.06	58.88	-0.4561	0.0005	-0.0159
649	SLU 41	0.44	0.01	59.34	-0.4627	0.0004	-0.0162
649	SLU 42	0.44	0.06	59.33	-0.4608	0.0004	-0.0161
649	SLU 43	0.47	-0.07	55.67	-0.4744	-0.0007	-0.019
649	SLU 44	0.47	0.01	55.67	-0.4713	-0.0007	-0.0188
649	SLU 45	0.48	-0.06	56.51	-0.4834	-0.0008	-0.0194
649	SLU 46	0.48	-0.02	56.51	-0.4815	-0.0008	-0.0193
649	SLU 47	0.48	0	56.12	-0.476	-0.0008	-0.019
649	SLU 48	0.49	-0.07	56.96	-0.4881	-0.0009	-0.0196
649	SLU 49	0.49	-0.02	56.96	-0.4862	-0.0009	-0.0195
649	SLU 50	0.48	-0.08	56.57	-0.4838	-0.001	-0.0194
649	SLU 51	0.48	-0.04	56.57	-0.4819	-0.0009	-0.0192
649	SLU 52	0.49	0.02	61.88	-0.5101	0.0001	-0.0189
649	SLU 53	0.5	-0.05	62.73	-0.5222	0	-0.0196
649	SLU 54	0.5	0	62.72	-0.5203	0	-0.0194
649	SLU 55	0.5	0.01	62.33	-0.5148	-0.0001	-0.0192
649	SLU 56	0.51	-0.06	63.18	-0.5269	-0.0002	-0.0198
649	SLU 57	0.51	-0.01	63.17	-0.525	-0.0002	-0.0197
649	SLU 58	0.51	-0.07	62.79	-0.5226	-0.0002	-0.0196
649	SLU 59	0.51	-0.02	62.79	-0.5207	-0.0002	-0.0194
649	SLU 60	0.5	-0.05	64.55	-0.5299	0.0004	-0.0192
649	SLU 61	0.5	-0.01	64.55	-0.528	0.0004	-0.0191
649	SLU 62	0.51	-0.06	65	-0.5346	0.0002	-0.0194
649	SLU 63	0.51	-0.01	65	-0.5327	0.0002	-0.0193
649	SLU 64	0.5	-0.03	61.35	-0.5042	-0.0007	-0.0199
649	SLU 65	0.5	0.05	61.35	-0.5011	-0.0007	-0.0197
649	SLU 66	0.51	-0.02	62.19	-0.5132	-0.0008	-0.0203
649	SLU 67	0.51	0.03	62.19	-0.5113	-0.0008	-0.0202
649	SLU 68	0.51	0.04	61.8	-0.5058	-0.0008	-0.0199
649	SLU 69	0.52	-0.03	62.64	-0.5179	-0.0009	-0.0205
649	SLU 70	0.52	0.02	62.64	-0.516	-0.0009	-0.0204
649	SLU 71	0.51	-0.04	62.25	-0.5136	-0.001	-0.0203
649	SLU 72	0.51	0.01	62.25	-0.5117	-0.001	-0.0202
649	SLU 73	0.52	0.06	67.57	-0.5399	0.0001	-0.0199
649	SLU 74	0.53	-0.01	68.41	-0.552	-0.0001	-0.0205
649	SLU 75	0.53	0.04	68.4	-0.5501	0	-0.0204
649	SLU 76	0.53	0.06	68.02	-0.5446	-0.0001	-0.0201
649	SLU 77	0.54	-0.01	68.86	-0.5567	-0.0002	-0.0207
649	SLU 78	0.54	0.03	68.85	-0.5548	-0.0002	-0.0206
649	SLU 79	0.54	-0.03	68.47	-0.5524	-0.0003	-0.0205
649	SLU 80	0.54	0.02	68.47	-0.5505	-0.0002	-0.0204
649	SLU 81	0.53	-0.01	70.24	-0.5596	0.0003	-0.0202
649	SLU 82	0.53	0.04	70.23	-0.5578	0.0004	-0.02
649	SLU 83	0.54	-0.02	70.69	-0.5643	0.0002	-0.0204
649	SLU 84	0.54	0.03	70.68	-0.5625	0.0002	-0.0202
649	SLE RA 1	0.38	-0.03	45.95	-0.3813	-0.0006	-0.0151
649	SLE RA 2	0.38	0.02	45.94	-0.3792	-0.0005	-0.015
649	SLE RA 3	0.39	-0.03	46.5	-0.3873	-0.0006	-0.0154
649	SLE RA 4	0.39	0.01	46.5	-0.386	-0.0006	-0.0153

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
649	SLE RA 5	0.38	0.02	46.24	-0.3823	-0.0006	-0.0151
649	SLE RA 6	0.39	-0.03	46.8	-0.3904	-0.0007	-0.0155
649	SLE RA 7	0.39	0	46.8	-0.3892	-0.0007	-0.0154
649	SLE RA 8	0.39	-0.04	46.55	-0.3876	-0.0007	-0.0154
649	SLE RA 9	0.39	-0.01	46.54	-0.3863	-0.0007	-0.0153
649	SLE RA 10	0.39	0.03	50.09	-0.4051	0	-0.0151
649	SLE RA 11	0.4	-0.02	50.65	-0.4132	-0.0001	-0.0155
649	SLE RA 12	0.4	0.01	50.65	-0.4119	-0.0001	-0.0154
649	SLE RA 13	0.4	0.02	50.39	-0.4082	-0.0001	-0.0152
649	SLE RA 14	0.41	-0.02	50.95	-0.4163	-0.0002	-0.0156
649	SLE RA 15	0.4	0.01	50.95	-0.415	-0.0002	-0.0156
649	SLE RA 16	0.4	-0.03	50.69	-0.4134	-0.0002	-0.0155
649	SLE RA 17	0.4	0	50.69	-0.4122	-0.0002	-0.0154
649	SLE RA 18	0.4	-0.02	51.87	-0.4183	0.0001	-0.0153
649	SLE RA 19	0.4	0.01	51.87	-0.417	0.0002	-0.0152
649	SLE RA 20	0.41	-0.02	52.17	-0.4214	0.0001	-0.0154
649	SLE RA 21	0.4	0.01	52.17	-0.4201	0.0001	-0.0153
649	SLE FR 1	0.38	-0.03	45.95	-0.3813	-0.0006	-0.0151
649	SLE FR 2	0.38	-0.02	45.95	-0.3809	-0.0005	-0.0151
649	SLE FR 3	0.38	-0.03	46.07	-0.3826	-0.0006	-0.0152
649	SLE FR 4	0.39	-0.02	47.72	-0.392	-0.0003	-0.0151
649	SLE FR 5	0.39	-0.03	47.84	-0.3936	-0.0004	-0.0152
649	SLE FR 6	0.39	-0.03	48.91	-0.3998	-0.0002	-0.0152
649	SLE QP 1	0.38	-0.03	45.95	-0.3813	-0.0006	-0.0151
649	SLE QP 2	0.39	-0.03	47.72	-0.3924	-0.0003	-0.0152
649	SLD 1	4.43	0.78	44.89	-0.4066	0.0077	-0.0093
649	SLD 2	4.43	0.93	44.86	-0.4011	0.0078	-0.0067
649	SLD 3	4.52	-0.78	45.27	-0.4742	0.0068	-0.0101
649	SLD 4	4.52	-0.63	45.23	-0.4687	0.0069	-0.0075
649	SLD 5	1.46	2.56	46.31	-0.295	0.0034	-0.0125
649	SLD 6	1.46	2.66	46.29	-0.2914	0.0035	-0.0109
649	SLD 7	1.76	-2.65	47.56	-0.5205	0.0004	-0.0154
649	SLD 8	1.76	-2.55	47.54	-0.5169	0.0004	-0.0137
649	SLD 9	-0.99	2.49	47.91	-0.2679	-0.0011	-0.0166
649	SLD 10	-0.99	2.59	47.88	-0.2643	-0.0011	-0.0149
649	SLD 11	-0.69	-2.71	49.16	-0.4933	-0.0042	-0.0195
649	SLD 12	-0.69	-2.61	49.14	-0.4898	-0.0041	-0.0178
649	SLD 13	-3.75	0.57	50.21	-0.3161	-0.0075	-0.0228
649	SLD 14	-3.75	0.73	50.18	-0.3106	-0.0075	-0.0202
649	SLD 15	-3.66	-0.99	50.59	-0.3837	-0.0085	-0.0237
649	SLD 16	-3.66	-0.84	50.56	-0.3782	-0.0084	-0.0211
649	SLV 1	9.85	1.81	41.1	-0.4303	0.0184	-0.0012
649	SLV 2	9.85	2.17	41.02	-0.4175	0.0186	0.0048
649	SLV 3	10.06	-1.74	41.97	-0.5838	0.0163	-0.0032
649	SLV 4	10.06	-1.39	41.89	-0.571	0.0165	0.0028
649	SLV 5	2.91	5.86	44.44	-0.1731	0.0084	-0.009
649	SLV 6	2.9	6.09	44.39	-0.1649	0.0086	-0.0051
649	SLV 7	3.61	-6	47.32	-0.6848	0.0014	-0.0156
649	SLV 8	3.61	-5.77	47.27	-0.6766	0.0016	-0.0117
649	SLV 9	-2.84	5.71	48.17	-0.1082	-0.0023	-0.0186
649	SLV 10	-2.84	5.94	48.12	-0.1	-0.0021	-0.0147
649	SLV 11	-2.13	-6.14	51.06	-0.6199	-0.0093	-0.0252
649	SLV 12	-2.13	-5.91	51.01	-0.6117	-0.0091	-0.0213
649	SLV 13	-9.29	1.33	53.56	-0.2138	-0.0172	-0.0331
649	SLV 14	-9.29	1.69	53.48	-0.201	-0.017	-0.0271
649	SLV 15	-9.08	-2.22	54.42	-0.3673	-0.0193	-0.0351
649	SLV 16	-9.08	-1.87	54.34	-0.3545	-0.0191	-0.0291
649	CRTFP Ux+	0	0	0	0	0	0
649	CRTFP Ux-	0	0	0	0	0	0
650	SLU 1	0.69	-0.23	75.38	-0.1913	-9.4751	-0.0602
650	SLU 2	0.69	-0.1	75.36	-0.1862	-9.4734	-0.0426
650	SLU 3	0.71	-0.22	76.8	-0.1982	-9.6547	-0.0597
650	SLU 4	0.71	-0.14	76.79	-0.1951	-9.6537	-0.0492
650	SLU 5	0.7	-0.11	76.14	-0.1898	-9.5716	-0.0447
650	SLU 6	0.72	-0.24	77.58	-0.2017	-9.7529	-0.0618
650	SLU 7	0.72	-0.15	77.57	-0.1987	-9.7519	-0.0513
650	SLU 8	0.71	-0.26	76.93	-0.1985	-9.6715	-0.0643
650	SLU 9	0.71	-0.18	76.92	-0.1954	-9.6705	-0.0538
650	SLU 10	0.73	-0.08	85.86	-0.1921	-10.7876	-0.0402
650	SLU 11	0.75	-0.2	87.3	-0.204	-10.9688	-0.0573
650	SLU 12	0.75	-0.12	87.29	-0.2009	-10.9679	-0.0467
650	SLU 13	0.74	-0.09	86.63	-0.1957	-10.8858	-0.0423
650	SLU 14	0.76	-0.22	88.07	-0.2076	-11.067	-0.0593
650	SLU 15	0.76	-0.13	88.06	-0.2045	-11.066	-0.0488
650	SLU 16	0.76	-0.24	87.42	-0.2043	-10.9856	-0.0619
650	SLU 17	0.76	-0.16	87.41	-0.2013	-10.9846	-0.0514
650	SLU 18	0.75	-0.2	90.37	-0.1997	-11.3524	-0.0567
650	SLU 19	0.75	-0.12	90.36	-0.1966	-11.3514	-0.0462
650	SLU 20	0.76	-0.22	91.14	-0.2033	-11.4506	-0.0588
650	SLU 21	0.76	-0.14	91.14	-0.2002	-11.4496	-0.0482
650	SLU 22	0.75	-0.17	85.03	-0.1881	-10.6886	-0.054
650	SLU 23	0.75	-0.03	85.02	-0.183	-10.6869	-0.0365
650	SLU 24	0.77	-0.16	86.46	-0.195	-10.8682	-0.0536
650	SLU 25	0.76	-0.08	86.45	-0.1919	-10.8672	-0.0431
650	SLU 26	0.76	-0.05	85.79	-0.1866	-10.7851	-0.0386
650	SLU 27	0.78	-0.17	87.23	-0.1985	-10.9664	-0.0557
650	SLU 28	0.78	-0.09	87.22	-0.1955	-10.9654	-0.0451
650	SLU 29	0.77	-0.2	86.58	-0.1953	-10.885	-0.0582
650	SLU 30	0.77	-0.12	86.57	-0.1922	-10.884	-0.0477
650	SLU 31	0.79	-0.01	95.51	-0.1889	-12.0011	-0.0341
650	SLU 32	0.81	-0.14	96.95	-0.2008	-12.1823	-0.0511

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
650	SLU 33	0.81	-0.06	96.94	-0.1977	-12.1813	-0.0406
650	SLU 34	0.8	-0.03	96.29	-0.1925	-12.0992	-0.0361
650	SLU 35	0.82	-0.15	97.73	-0.2044	-12.2805	-0.0532
650	SLU 36	0.82	-0.07	97.72	-0.2013	-12.2795	-0.0427
650	SLU 37	0.81	-0.18	97.08	-0.2011	-12.1991	-0.0558
650	SLU 38	0.81	-0.09	97.07	-0.1981	-12.1981	-0.0452
650	SLU 39	0.81	-0.14	100.02	-0.1965	-12.5659	-0.0506
650	SLU 40	0.81	-0.06	100.01	-0.1934	-12.5649	-0.04
650	SLU 41	0.82	-0.15	100.8	-0.2001	-12.6641	-0.0526
650	SLU 42	0.82	-0.07	100.79	-0.197	-12.6631	-0.0421
650	SLU 43	0.88	-0.33	94.68	-0.2498	-11.9016	-0.0803
650	SLU 44	0.88	-0.19	94.67	-0.2447	-11.8999	-0.0628
650	SLU 45	0.9	-0.31	96.1	-0.2566	-12.0812	-0.0798
650	SLU 46	0.89	-0.23	96.1	-0.2536	-12.0802	-0.0693
650	SLU 47	0.89	-0.2	95.44	-0.2483	-11.9981	-0.0648
650	SLU 48	0.91	-0.33	96.88	-0.2602	-12.1794	-0.0819
650	SLU 49	0.91	-0.25	96.87	-0.2572	-12.1784	-0.0714
650	SLU 50	0.9	-0.35	96.23	-0.257	-12.098	-0.0845
650	SLU 51	0.9	-0.27	96.22	-0.2539	-12.097	-0.0739
650	SLU 52	0.92	-0.17	105.16	-0.2506	-13.2141	-0.0603
650	SLU 53	0.94	-0.29	106.6	-0.2625	-13.3953	-0.0774
650	SLU 54	0.94	-0.21	106.59	-0.2594	-13.3943	-0.0669
650	SLU 55	0.93	-0.18	105.94	-0.2542	-13.3122	-0.0624
650	SLU 56	0.95	-0.31	107.38	-0.2661	-13.4935	-0.0795
650	SLU 57	0.95	-0.23	107.37	-0.263	-13.4925	-0.069
650	SLU 58	0.94	-0.33	106.72	-0.2628	-13.4121	-0.082
650	SLU 59	0.94	-0.25	106.72	-0.2598	-13.4111	-0.0715
650	SLU 60	0.94	-0.3	109.67	-0.2582	-13.7789	-0.0768
650	SLU 61	0.94	-0.21	109.66	-0.2551	-13.7779	-0.0663
650	SLU 62	0.95	-0.31	110.45	-0.2618	-13.8771	-0.0789
650	SLU 63	0.95	-0.23	110.44	-0.2587	-13.8761	-0.0684
650	SLU 64	0.94	-0.26	104.33	-0.2466	-13.1151	-0.0742
650	SLU 65	0.93	-0.13	104.32	-0.2415	-13.1134	-0.0566
650	SLU 66	0.95	-0.25	105.76	-0.2534	-13.2947	-0.0737
650	SLU 67	0.95	-0.17	105.75	-0.2504	-13.2937	-0.0632
650	SLU 68	0.94	-0.14	105.1	-0.2451	-13.2116	-0.0587
650	SLU 69	0.96	-0.26	106.53	-0.257	-13.3929	-0.0758
650	SLU 70	0.96	-0.18	106.53	-0.254	-13.3919	-0.0653
650	SLU 71	0.96	-0.29	105.88	-0.2538	-13.3115	-0.0784
650	SLU 72	0.96	-0.21	105.88	-0.2507	-13.3105	-0.0678
650	SLU 73	0.98	-0.11	114.81	-0.2474	-14.4275	-0.0542
650	SLU 74	1	-0.23	116.25	-0.2593	-14.6088	-0.0713
650	SLU 75	1	-0.15	116.25	-0.2562	-14.6078	-0.0608
650	SLU 76	0.99	-0.12	115.59	-0.2509	-14.5257	-0.0563
650	SLU 77	1.01	-0.24	117.03	-0.2629	-14.707	-0.0734
650	SLU 78	1.01	-0.16	117.02	-0.2598	-14.706	-0.0628
650	SLU 79	1	-0.27	116.38	-0.2596	-14.6256	-0.0759
650	SLU 80	1	-0.19	116.37	-0.2566	-14.6246	-0.0654
650	SLU 81	1	-0.23	119.32	-0.255	-14.9924	-0.0707
650	SLU 82	1	-0.15	119.32	-0.2519	-14.9914	-0.0602
650	SLU 83	1.01	-0.25	120.1	-0.2586	-15.0906	-0.0728
650	SLU 84	1.01	-0.16	120.09	-0.2555	-15.0896	-0.0623
650	SLE RA 1	0.71	-0.22	78.13	-0.1904	-9.8218	-0.0584
650	SLE RA 2	0.71	-0.13	78.13	-0.187	-9.8207	-0.0467
650	SLE RA 3	0.72	-0.21	79.08	-0.195	-9.9416	-0.0581
650	SLE RA 4	0.72	-0.15	79.08	-0.1929	-9.9409	-0.0511
650	SLE RA 5	0.71	-0.13	78.64	-0.1894	-9.8862	-0.0481
650	SLE RA 6	0.73	-0.22	79.6	-0.1974	-10.007	-0.0595
650	SLE RA 7	0.73	-0.16	79.6	-0.1953	-10.0064	-0.0525
650	SLE RA 8	0.72	-0.23	79.17	-0.1952	-9.9527	-0.0612
650	SLE RA 9	0.72	-0.18	79.16	-0.1931	-9.9521	-0.0542
650	SLE RA 10	0.73	-0.11	85.12	-0.1909	-10.6968	-0.0451
650	SLE RA 11	0.75	-0.19	86.08	-0.1989	-10.8176	-0.0565
650	SLE RA 12	0.75	-0.14	86.08	-0.1968	-10.817	-0.0495
650	SLE RA 13	0.74	-0.12	85.64	-0.1933	-10.7623	-0.0465
650	SLE RA 14	0.76	-0.2	86.6	-0.2013	-10.8831	-0.0579
650	SLE RA 15	0.75	-0.15	86.59	-0.1992	-10.8824	-0.0509
650	SLE RA 16	0.75	-0.22	86.16	-0.1991	-10.8288	-0.0596
650	SLE RA 17	0.75	-0.17	86.16	-0.197	-10.8282	-0.0525
650	SLE RA 18	0.75	-0.2	88.13	-0.196	-11.0734	-0.0561
650	SLE RA 19	0.75	-0.14	88.12	-0.1939	-11.0727	-0.0491
650	SLE RA 20	0.76	-0.2	88.65	-0.1984	-11.1388	-0.0575
650	SLE RA 21	0.75	-0.15	88.64	-0.1963	-11.1382	-0.0505
650	SLE FR 1	0.71	-0.22	78.13	-0.1904	-9.8218	-0.0584
650	SLE FR 2	0.71	-0.2	78.13	-0.1897	-9.8216	-0.0561
650	SLE FR 3	0.71	-0.22	78.34	-0.1914	-9.848	-0.059
650	SLE FR 4	0.72	-0.19	81.13	-0.1914	-10.1971	-0.0554
650	SLE FR 5	0.72	-0.21	81.34	-0.193	-10.2235	-0.0583
650	SLE FR 6	0.73	-0.21	83.13	-0.1932	-10.4476	-0.0573
650	SLE QP 1	0.71	-0.22	78.13	-0.1904	-9.8218	-0.0584
650	SLE QP 2	0.72	-0.21	81.13	-0.1921	-10.1973	-0.0577
650	SLD 1	7.6	1.18	75.98	-0.2593	-9.5402	0.0574
650	SLD 2	7.59	1.47	75.91	-0.2504	-9.5321	0.0998
650	SLD 3	7.75	-1.49	76.62	-0.3672	-9.6185	-0.2803
650	SLD 4	7.75	-1.2	76.55	-0.3583	-9.6104	-0.2379
650	SLD 5	2.55	4.2	78.63	-0.0501	-9.8829	0.4816
650	SLD 6	2.55	4.39	78.58	-0.0443	-9.8776	0.5091
650	SLD 7	3.06	-4.69	80.76	-0.4099	-10.1438	-0.6441
650	SLD 8	3.06	-4.5	80.72	-0.4041	-10.1385	-0.6165
650	SLD 9	-1.62	4.08	81.55	0.0199	-10.256	0.5011
650	SLD 10	-1.62	4.27	81.5	0.0257	-10.2508	0.5286

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
650	SLD 11	-1.11	-4.81	83.68	-0.3399	-10.517	-0.6246
650	SLD 12	-1.11	-4.62	83.64	-0.3341	-10.5117	-0.597
650	SLD 13	-6.31	0.78	85.71	-0.0259	-10.7842	0.1224
650	SLD 14	-6.31	1.07	85.65	-0.0169	-10.7761	0.1649
650	SLD 15	-6.16	-1.89	86.35	-0.1338	-10.8624	-0.2153
650	SLD 16	-6.16	-1.6	86.29	-0.1249	-10.8543	-0.1728
650	SLV 1	16.8	2.96	69.08	-0.3552	-8.6619	0.2016
650	SLV 2	16.8	3.63	68.94	-0.3345	-8.643	0.3004
650	SLV 3	17.16	-3.12	70.55	-0.6001	-8.8414	-0.5676
650	SLV 4	17.16	-2.44	70.41	-0.5793	-8.8225	-0.4687
650	SLV 5	5	9.84	75.31	0.1268	-9.4677	1.1699
650	SLV 6	5	10.27	75.22	0.14	-9.4556	1.233
650	SLV 7	6.2	-10.41	80.21	-0.6893	-10.0659	-1.394
650	SLV 8	6.19	-9.98	80.12	-0.676	-10.0538	-1.3308
650	SLV 9	-4.76	9.56	82.15	0.2919	-10.3407	1.2154
650	SLV 10	-4.76	9.99	82.05	0.3052	-10.3287	1.2785
650	SLV 11	-3.56	-10.69	87.05	-0.5242	-10.9389	-1.3485
650	SLV 12	-3.56	-10.26	86.95	-0.5109	-10.9269	-1.2853
650	SLV 13	-15.72	2.02	91.86	0.1951	-11.5721	0.3533
650	SLV 14	-15.72	2.7	91.71	0.2159	-11.5532	0.4521
650	SLV 15	-15.36	-4.05	93.33	-0.0497	-11.7515	-0.4159
650	SLV 16	-15.36	-3.38	93.18	-0.0289	-11.7327	-0.317
650	CRTFP Ux+	0	0	0	0	0	0
650	CRTFP Ux-	0	0	0	0	0	0
651	SLU 1	0.64	-0.22	58.83	14.0353	-2.2019	-0.1655
651	SLU 2	0.64	-0.11	58.83	14.037	-2.202	-0.1609
651	SLU 3	0.66	-0.22	59.95	14.2999	-2.2447	-0.1695
651	SLU 4	0.66	-0.15	59.94	14.3009	-2.2448	-0.1667
651	SLU 5	0.65	-0.12	59.44	14.1827	-2.2263	-0.1638
651	SLU 6	0.67	-0.23	60.56	14.4456	-2.2689	-0.1725
651	SLU 7	0.67	-0.16	60.56	14.4467	-2.269	-0.1697
651	SLU 8	0.66	-0.24	60.06	14.3268	-2.2504	-0.1714
651	SLU 9	0.66	-0.18	60.06	14.3278	-2.2505	-0.1686
651	SLU 10	0.68	-0.09	66.94	15.9716	-2.495	-0.168
651	SLU 11	0.7	-0.19	68.06	16.2345	-2.5377	-0.1767
651	SLU 12	0.7	-0.12	68.06	16.2355	-2.5377	-0.1739
651	SLU 13	0.69	-0.1	67.55	16.1174	-2.5193	-0.171
651	SLU 14	0.71	-0.2	68.67	16.3803	-2.5619	-0.1797
651	SLU 15	0.71	-0.13	68.67	16.3813	-2.562	-0.1769
651	SLU 16	0.7	-0.22	68.17	16.2614	-2.5434	-0.1786
651	SLU 17	0.7	-0.15	68.17	16.2624	-2.5435	-0.1758
651	SLU 18	0.7	-0.18	70.42	16.799	-2.6205	-0.1758
651	SLU 19	0.7	-0.12	70.41	16.8001	-2.6205	-0.173
651	SLU 20	0.71	-0.19	71.03	16.9448	-2.6447	-0.1787
651	SLU 21	0.71	-0.13	71.03	16.9458	-2.6448	-0.1759
651	SLU 22	0.7	-0.17	66.4	15.8371	-2.4833	-0.1763
651	SLU 23	0.69	-0.06	66.4	15.8388	-2.4834	-0.1716
651	SLU 24	0.71	-0.16	67.51	16.1017	-2.526	-0.1803
651	SLU 25	0.71	-0.1	67.51	16.1027	-2.5261	-0.1775
651	SLU 26	0.7	-0.07	67.01	15.9845	-2.5076	-0.1745
651	SLU 27	0.72	-0.17	68.13	16.2474	-2.5503	-0.1832
651	SLU 28	0.72	-0.11	68.13	16.2484	-2.5503	-0.1804
651	SLU 29	0.72	-0.19	67.63	16.1286	-2.5318	-0.1822
651	SLU 30	0.72	-0.13	67.63	16.1296	-2.5318	-0.1794
651	SLU 31	0.73	-0.03	74.51	17.7734	-2.7763	-0.1788
651	SLU 32	0.75	-0.14	75.62	18.0363	-2.819	-0.1875
651	SLU 33	0.75	-0.07	75.62	18.0373	-2.8191	-0.1847
651	SLU 34	0.74	-0.05	75.12	17.9192	-2.8006	-0.1817
651	SLU 35	0.76	-0.15	76.24	18.182	-2.8432	-0.1904
651	SLU 36	0.76	-0.08	76.24	18.1831	-2.8433	-0.1876
651	SLU 37	0.76	-0.16	75.74	18.0632	-2.8247	-0.1893
651	SLU 38	0.75	-0.1	75.74	18.0642	-2.8248	-0.1865
651	SLU 39	0.75	-0.13	77.98	18.6008	-2.9018	-0.1865
651	SLU 40	0.75	-0.07	77.98	18.6019	-2.9019	-0.1837
651	SLU 41	0.76	-0.14	78.6	18.7466	-2.926	-0.1894
651	SLU 42	0.76	-0.08	78.6	18.7476	-2.9261	-0.1866
651	SLU 43	0.82	-0.31	73.88	17.6281	-2.7661	-0.2115
651	SLU 44	0.81	-0.2	73.88	17.6298	-2.7662	-0.2068
651	SLU 45	0.83	-0.3	75	17.8927	-2.8088	-0.2155
651	SLU 46	0.83	-0.24	75	17.8937	-2.8089	-0.2127
651	SLU 47	0.82	-0.21	74.5	17.7756	-2.7904	-0.2098
651	SLU 48	0.84	-0.31	75.62	18.0384	-2.8331	-0.2185
651	SLU 49	0.84	-0.25	75.61	18.0395	-2.8331	-0.2157
651	SLU 50	0.84	-0.33	75.11	17.9196	-2.8146	-0.2174
651	SLU 51	0.84	-0.26	75.11	17.9206	-2.8146	-0.2146
651	SLU 52	0.85	-0.17	81.99	19.5645	-3.0591	-0.214
651	SLU 53	0.87	-0.27	83.11	19.8273	-3.1018	-0.2227
651	SLU 54	0.87	-0.21	83.11	19.8284	-3.1019	-0.2199
651	SLU 55	0.86	-0.18	82.61	19.7102	-3.0834	-0.2169
651	SLU 56	0.88	-0.28	83.73	19.9731	-3.126	-0.2256
651	SLU 57	0.88	-0.22	83.73	19.9741	-3.1261	-0.2228
651	SLU 58	0.88	-0.3	83.23	19.8542	-3.1075	-0.2245
651	SLU 59	0.87	-0.24	83.22	19.8553	-3.1076	-0.2217
651	SLU 60	0.87	-0.27	85.47	20.3919	-3.1846	-0.2217
651	SLU 61	0.87	-0.2	85.47	20.3929	-3.1846	-0.2189
651	SLU 62	0.88	-0.28	86.09	20.5376	-3.2088	-0.2247
651	SLU 63	0.88	-0.21	86.08	20.5386	-3.2089	-0.2219
651	SLU 64	0.87	-0.25	81.45	19.4299	-3.0474	-0.2222
651	SLU 65	0.87	-0.15	81.45	19.4316	-3.0475	-0.2176
651	SLU 66	0.89	-0.25	82.57	19.6945	-3.0901	-0.2263
651	SLU 67	0.89	-0.18	82.57	19.6955	-3.0902	-0.2235

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
651	SLU 68	0.88	-0.16	82.07	19.5774	-3.0717	-0.2205
651	SLU 69	0.9	-0.26	83.18	19.8402	-3.1144	-0.2292
651	SLU 70	0.9	-0.19	83.18	19.8413	-3.1145	-0.2264
651	SLU 71	0.89	-0.28	82.68	19.7214	-3.0959	-0.2281
651	SLU 72	0.89	-0.21	82.68	19.7224	-3.0959	-0.2253
651	SLU 73	0.91	-0.12	89.56	21.3662	-3.3405	-0.2247
651	SLU 74	0.93	-0.22	90.68	21.6291	-3.3831	-0.2334
651	SLU 75	0.92	-0.16	90.68	21.6302	-3.3832	-0.2306
651	SLU 76	0.92	-0.13	90.18	21.512	-3.3647	-0.2277
651	SLU 77	0.94	-0.23	91.29	21.7749	-3.4074	-0.2364
651	SLU 78	0.93	-0.17	91.29	21.7759	-3.4074	-0.2336
651	SLU 79	0.93	-0.25	90.79	21.656	-3.3889	-0.2353
651	SLU 80	0.93	-0.18	90.79	21.6571	-3.3889	-0.2325
651	SLU 81	0.93	-0.22	93.04	22.1936	-3.4659	-0.2325
651	SLU 82	0.92	-0.15	93.04	22.1947	-3.466	-0.2297
651	SLU 83	0.94	-0.23	93.65	22.3394	-3.4902	-0.2354
651	SLU 84	0.93	-0.16	93.65	22.3404	-3.4902	-0.2326
651	SLE RA 1	0.66	-0.21	60.99	14.5501	-2.2823	-0.1686
651	SLE RA 2	0.66	-0.14	60.99	14.5512	-2.2824	-0.1655
651	SLE RA 3	0.67	-0.2	61.74	14.7265	-2.3108	-0.1713
651	SLE RA 4	0.67	-0.16	61.73	14.7272	-2.3109	-0.1694
651	SLE RA 5	0.66	-0.14	61.4	14.6484	-2.2985	-0.1674
651	SLE RA 6	0.68	-0.21	62.15	14.8236	-2.327	-0.1732
651	SLE RA 7	0.67	-0.17	62.15	14.8243	-2.327	-0.1714
651	SLE RA 8	0.67	-0.22	61.81	14.7444	-2.3146	-0.1725
651	SLE RA 9	0.67	-0.18	61.81	14.7451	-2.3147	-0.1707
651	SLE RA 10	0.68	-0.12	66.4	15.841	-2.4777	-0.1703
651	SLE RA 11	0.69	-0.18	67.14	16.0162	-2.5061	-0.176
651	SLE RA 12	0.69	-0.14	67.14	16.0169	-2.5062	-0.1742
651	SLE RA 13	0.69	-0.12	66.81	15.9381	-2.4939	-0.1722
651	SLE RA 14	0.7	-0.19	67.55	16.1134	-2.5223	-0.178
651	SLE RA 15	0.7	-0.15	67.55	16.1141	-2.5223	-0.1761
651	SLE RA 16	0.7	-0.2	67.22	16.0342	-2.51	-0.1773
651	SLE RA 17	0.7	-0.16	67.22	16.0349	-2.51	-0.1754
651	SLE RA 18	0.69	-0.18	68.72	16.3926	-2.5613	-0.1754
651	SLE RA 19	0.69	-0.14	68.71	16.3933	-2.5614	-0.1735
651	SLE RA 20	0.7	-0.19	69.13	16.4897	-2.5775	-0.1774
651	SLE RA 21	0.7	-0.15	69.13	16.4904	-2.5775	-0.1755
651	SLE FR 1	0.66	-0.21	60.99	14.5501	-2.2823	-0.1686
651	SLE FR 2	0.66	-0.19	60.99	14.5503	-2.2823	-0.168
651	SLE FR 3	0.66	-0.21	61.15	14.5889	-2.2888	-0.1694
651	SLE FR 4	0.67	-0.19	63.31	15.103	-2.366	-0.17
651	SLE FR 5	0.67	-0.2	63.47	15.1417	-2.3725	-0.1714
651	SLE FR 6	0.68	-0.19	64.85	15.4713	-2.4218	-0.172
651	SLE QP 1	0.66	-0.21	60.99	14.5501	-2.2823	-0.1686
651	SLE QP 2	0.67	-0.2	63.31	15.1028	-2.366	-0.1706
651	SLD 1	6.11	0.91	59.38	13.9827	-2.2501	-1.5053
651	SLD 2	6.09	1.18	59.35	13.9799	-2.2496	-1.4879
651	SLD 3	6.23	-1.2	59.65	14.0294	-2.2543	-1.5863
651	SLD 4	6.21	-0.93	59.62	14.0266	-2.2538	-1.5689
651	SLD 5	2.12	3.3	61.72	14.6964	-2.325	-0.4513
651	SLD 6	2.11	3.47	61.7	14.6946	-2.3246	-0.44
651	SLD 7	2.52	-3.76	62.63	14.8522	-2.339	-0.7212
651	SLD 8	2.51	-3.58	62.61	14.8504	-2.3386	-0.7099
651	SLD 9	-1.18	3.18	64	15.3553	-2.3934	0.3686
651	SLD 10	-1.19	3.36	63.98	15.3535	-2.3931	0.3799
651	SLD 11	-0.77	-3.87	64.92	15.5111	-2.4074	0.0987
651	SLD 12	-0.78	-3.7	64.9	15.5093	-2.4071	0.11
651	SLD 13	-4.88	0.53	67	16.179	-2.4783	1.2276
651	SLD 14	-4.89	0.8	66.96	16.1762	-2.4777	1.245
651	SLD 15	-4.76	-1.58	67.27	16.2257	-2.4825	1.1467
651	SLD 16	-4.77	-1.31	67.24	16.223	-2.4819	1.1641
651	SLV 1	13.39	2.34	54.12	12.482	-2.0949	-3.2942
651	SLV 2	13.36	2.97	54.04	12.4756	-2.0936	-3.2537
651	SLV 3	13.67	-2.48	54.75	12.5913	-2.1045	-3.4789
651	SLV 4	13.64	-1.85	54.68	12.5849	-2.1032	-3.4384
651	SLV 5	4.06	7.77	59.6	14.1519	-2.2702	-0.8344
651	SLV 6	4.04	8.17	59.56	14.1478	-2.2694	-0.8085
651	SLV 7	5	-8.3	61.71	14.5162	-2.3025	-1.4502
651	SLV 8	4.98	-7.9	61.66	14.5121	-2.3016	-1.4243
651	SLV 9	-3.65	7.5	64.95	15.6935	-2.4304	1.083
651	SLV 10	-3.67	7.9	64.9	15.6894	-2.4296	1.1089
651	SLV 11	-2.7	-8.57	67.06	16.0579	-2.4626	0.4672
651	SLV 12	-2.72	-8.17	67.01	16.0537	-2.4618	0.4931
651	SLV 13	-12.3	1.45	71.94	17.6208	-2.6288	3.0971
651	SLV 14	-12.34	2.08	71.87	17.6143	-2.6275	3.1377
651	SLV 15	-12.02	-3.37	72.57	17.7301	-2.6385	2.9124
651	SLV 16	-12.05	-2.74	72.5	17.7236	-2.6371	2.9529
651	CRTFP Ux+	0	0	0	0	0	0
651	CRTFP Ux-	0	0	0	0	0	0
655	SLU 1	0.88	-0.47	89.68	-18.5166	25.1843	0.3234
655	SLU 2	0.88	-0.3	89.65	-18.511	25.1749	0.2775
655	SLU 3	0.9	-0.46	91.39	-18.8701	25.6647	0.3262
655	SLU 4	0.9	-0.36	91.37	-18.8668	25.659	0.2987
655	SLU 5	0.89	-0.32	90.6	-18.707	25.4378	0.2857
655	SLU 6	0.92	-0.48	92.33	-19.0661	25.9276	0.3344
655	SLU 7	0.91	-0.38	92.32	-19.0628	25.9219	0.3069
655	SLU 8	0.91	-0.5	91.57	-18.9086	25.7102	0.3398
655	SLU 9	0.91	-0.4	91.55	-18.9052	25.7045	0.3123
655	SLU 10	0.94	-0.27	101.94	-21.0422	28.6446	0.2836
655	SLU 11	0.96	-0.42	103.68	-21.4014	29.1344	0.3323

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
655	SLU 12	0.96	-0.32	103.66	-21.398	29.1287	0.3048
655	SLU 13	0.95	-0.28	102.89	-21.2382	28.9076	0.2918
655	SLU 14	0.97	-0.44	104.63	-21.5974	29.3974	0.3405
655	SLU 15	0.97	-0.34	104.61	-21.594	29.3917	0.313
655	SLU 16	0.97	-0.46	103.86	-21.4398	29.18	0.3459
655	SLU 17	0.97	-0.37	103.84	-21.4365	29.1743	0.3184
655	SLU 18	0.96	-0.41	107.24	-22.1326	30.1412	0.3321
655	SLU 19	0.96	-0.31	107.22	-22.1292	30.1355	0.3045
655	SLU 20	0.98	-0.43	108.18	-22.3286	30.4041	0.3403
655	SLU 21	0.98	-0.33	108.17	-22.3253	30.3984	0.3128
655	SLU 22	0.95	-0.4	101.13	-20.8737	28.3853	0.3216
655	SLU 23	0.95	-0.23	101.1	-20.8681	28.3758	0.2756
655	SLU 24	0.98	-0.39	102.84	-21.2273	28.8656	0.3244
655	SLU 25	0.97	-0.29	102.82	-21.2239	28.8599	0.2968
655	SLU 26	0.97	-0.25	102.05	-21.0641	28.6387	0.2839
655	SLU 27	0.99	-0.41	103.78	-21.4233	29.1285	0.3326
655	SLU 28	0.99	-0.31	103.77	-21.4199	29.1229	0.3051
655	SLU 29	0.98	-0.43	103.02	-21.2657	28.9112	0.338
655	SLU 30	0.98	-0.33	103	-21.2624	28.9055	0.3104
655	SLU 31	1.01	-0.2	113.39	-23.3993	31.8456	0.2817
655	SLU 32	1.03	-0.35	115.13	-23.7585	32.3354	0.3305
655	SLU 33	1.03	-0.25	115.12	-23.7551	32.3297	0.3029
655	SLU 34	1.02	-0.21	114.34	-23.5953	32.1085	0.2899
655	SLU 35	1.05	-0.37	116.08	-23.9545	32.5983	0.3387
655	SLU 36	1.05	-0.27	116.06	-23.9511	32.5926	0.3111
655	SLU 37	1.04	-0.39	115.31	-23.7969	32.3809	0.3441
655	SLU 38	1.04	-0.3	115.29	-23.7936	32.3752	0.3165
655	SLU 39	1.04	-0.34	118.69	-24.4897	33.3421	0.3303
655	SLU 40	1.04	-0.24	118.67	-24.4864	33.3364	0.3027
655	SLU 41	1.05	-0.36	119.63	-24.6857	33.605	0.3385
655	SLU 42	1.05	-0.26	119.62	-24.6824	33.5993	0.3109
655	SLU 43	1.12	-0.63	112.65	-23.2634	31.6422	0.421
655	SLU 44	1.11	-0.47	112.63	-23.2578	31.6327	0.3751
655	SLU 45	1.14	-0.62	114.36	-23.617	32.1225	0.4239
655	SLU 46	1.14	-0.53	114.35	-23.6136	32.1168	0.3963
655	SLU 47	1.13	-0.48	113.57	-23.4538	31.8957	0.3833
655	SLU 48	1.15	-0.64	115.31	-23.813	32.3854	0.4321
655	SLU 49	1.15	-0.54	115.3	-23.8096	32.3798	0.4045
655	SLU 50	1.15	-0.67	114.54	-23.6554	32.1681	0.4375
655	SLU 51	1.14	-0.57	114.53	-23.6521	32.1624	0.4099
655	SLU 52	1.17	-0.43	124.92	-25.789	35.1025	0.3812
655	SLU 53	1.2	-0.59	126.66	-26.1482	35.5923	0.4299
655	SLU 54	1.2	-0.49	126.64	-26.1448	35.5866	0.4024
655	SLU 55	1.19	-0.45	125.87	-25.985	35.3654	0.3894
655	SLU 56	1.21	-0.6	127.6	-26.3442	35.8552	0.4382
655	SLU 57	1.21	-0.51	127.59	-26.3408	35.8495	0.4106
655	SLU 58	1.2	-0.63	126.84	-26.1866	35.6378	0.4435
655	SLU 59	1.2	-0.53	126.82	-26.1833	35.6321	0.416
655	SLU 60	1.2	-0.58	130.21	-26.8794	36.599	0.4297
655	SLU 61	1.2	-0.48	130.2	-26.8761	36.5933	0.4022
655	SLU 62	1.22	-0.59	131.16	-27.0754	36.8619	0.4379
655	SLU 63	1.21	-0.5	131.14	-27.0721	36.8562	0.4104
655	SLU 64	1.19	-0.56	124.1	-25.6205	34.8431	0.4192
655	SLU 65	1.19	-0.4	124.08	-25.6149	34.8336	0.3733
655	SLU 66	1.21	-0.55	125.82	-25.9741	35.3234	0.422
655	SLU 67	1.21	-0.46	125.8	-25.9707	35.3178	0.3945
655	SLU 68	1.2	-0.41	125.02	-25.8109	35.0966	0.3815
655	SLU 69	1.23	-0.57	126.76	-26.1701	35.5864	0.4302
655	SLU 70	1.23	-0.47	126.75	-26.1667	35.5807	0.4027
655	SLU 71	1.22	-0.6	125.99	-26.0125	35.369	0.4356
655	SLU 72	1.22	-0.5	125.98	-26.0092	35.3633	0.4081
655	SLU 73	1.25	-0.36	136.37	-28.1462	38.3034	0.3794
655	SLU 74	1.27	-0.52	138.11	-28.5053	38.7932	0.4281
655	SLU 75	1.27	-0.42	138.09	-28.502	38.7875	0.4006
655	SLU 76	1.26	-0.38	137.32	-28.3422	38.5664	0.3876
655	SLU 77	1.29	-0.53	139.05	-28.7013	39.0561	0.4363
655	SLU 78	1.29	-0.44	139.04	-28.698	39.0505	0.4088
655	SLU 79	1.28	-0.56	138.29	-28.5437	38.8388	0.4417
655	SLU 80	1.28	-0.46	138.27	-28.5404	38.8331	0.4142
655	SLU 81	1.28	-0.51	141.66	-29.2365	39.7999	0.4279
655	SLU 82	1.27	-0.41	141.65	-29.2332	39.7942	0.4003
655	SLU 83	1.29	-0.52	142.61	-29.4325	40.0629	0.4361
655	SLU 84	1.29	-0.43	142.59	-29.4292	40.0572	0.4086
655	SLE RA 1	0.9	-0.45	92.95	-19.19	26.0989	0.3229
655	SLE RA 2	0.9	-0.34	92.93	-19.1863	26.0926	0.2923
655	SLE RA 3	0.91	-0.44	94.09	-19.4257	26.4191	0.3247
655	SLE RA 4	0.91	-0.38	94.08	-19.4235	26.4153	0.3064
655	SLE RA 5	0.91	-0.35	93.56	-19.317	26.2679	0.2977
655	SLE RA 6	0.92	-0.45	94.72	-19.5564	26.5944	0.3302
655	SLE RA 7	0.92	-0.39	94.71	-19.5542	26.5906	0.3119
655	SLE RA 8	0.92	-0.47	94.21	-19.4514	26.4495	0.3338
655	SLE RA 9	0.92	-0.4	94.2	-19.4491	26.4457	0.3155
655	SLE RA 10	0.94	-0.31	101.13	-20.8738	28.4058	0.2963
655	SLE RA 11	0.95	-0.42	102.28	-21.1132	28.7323	0.3288
655	SLE RA 12	0.95	-0.35	102.27	-21.111	28.7285	0.3104
655	SLE RA 13	0.95	-0.32	101.76	-21.0045	28.5811	0.3018
655	SLE RA 14	0.96	-0.43	102.91	-21.2439	28.9076	0.3343
655	SLE RA 15	0.96	-0.36	102.9	-21.2417	28.9038	0.3159
655	SLE RA 16	0.96	-0.44	102.4	-21.1389	28.7627	0.3379
655	SLE RA 17	0.96	-0.38	102.39	-21.1366	28.7589	0.3195
655	SLE RA 18	0.96	-0.41	104.65	-21.6007	29.4034	0.3287

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
655	SLE RA 19	0.96	-0.35	104.64	-21.5985	29.3996	0.3103
655	SLE RA 20	0.97	-0.42	105.28	-21.7314	29.5787	0.3341
655	SLE RA 21	0.96	-0.36	105.27	-21.7292	29.5749	0.3158
655	SLE FR 1	0.9	-0.45	92.95	-19.19	26.0989	0.3229
655	SLE FR 2	0.9	-0.42	92.94	-19.1893	26.0976	0.3167
655	SLE FR 3	0.9	-0.45	93.2	-19.2423	26.169	0.3251
655	SLE FR 4	0.92	-0.41	96.46	-19.9125	27.089	0.3185
655	SLE FR 5	0.92	-0.44	96.71	-19.9655	27.1604	0.3268
655	SLE FR 6	0.93	-0.43	98.8	-20.3954	27.7512	0.3258
655	SLE QP 1	0.9	-0.45	92.95	-19.19	26.0989	0.3229
655	SLE QP 2	0.92	-0.43	96.46	-19.9132	27.0903	0.3246
655	SLD 1	8.89	1.25	90.45	-18.6896	25.3862	1.5429
655	SLD 2	8.9	1.67	90.36	-18.6712	25.3548	1.4437
655	SLD 3	9.07	-1.9	91.34	-18.8673	25.6951	2.4201
655	SLD 4	9.08	-1.48	91.24	-18.8488	25.6637	2.3209
655	SLD 5	3.03	4.77	93.33	-19.28	26.1161	-0.6231
655	SLD 6	3.04	5.05	93.27	-19.268	26.0957	-0.6874
655	SLD 7	3.63	-5.72	96.28	-19.8721	27.1456	2.301
655	SLD 8	3.64	-5.45	96.22	-19.86	27.1252	2.2366
655	SLD 9	-1.81	4.58	96.7	-19.9664	27.0553	-1.5874
655	SLD 10	-1.8	4.85	96.64	-19.9544	27.0349	-1.6518
655	SLD 11	-1.21	-5.92	99.64	-20.5585	28.0848	1.3366
655	SLD 12	-1.2	-5.64	99.58	-20.5465	28.0644	1.2723
655	SLD 13	-7.25	0.61	101.68	-20.9777	28.5168	-1.6717
655	SLD 14	-7.24	1.03	101.58	-20.9592	28.4854	-1.7709
655	SLD 15	-7.07	-2.54	102.56	-21.1553	28.8257	-0.7945
655	SLD 16	-7.06	-2.12	102.47	-21.1368	28.7943	-0.8936
655	SLV 1	19.56	3.41	82.43	-17.0555	23.112	3.1997
655	SLV 2	19.6	4.39	82.22	-17.0124	23.0388	2.9686
655	SLV 3	19.98	-3.76	84.45	-17.4609	23.8167	5.1975
655	SLV 4	20.02	-2.78	84.23	-17.4178	23.7435	4.9664
655	SLV 5	5.87	11.43	89.23	-18.4483	24.8404	-1.8038
655	SLV 6	5.89	12.06	89.09	-18.4208	24.7937	-1.9513
655	SLV 7	7.27	-12.47	95.95	-19.7997	27.1893	4.8556
655	SLV 8	7.29	-11.85	95.81	-19.7722	27.1426	4.708
655	SLV 9	-5.45	10.98	97.11	-20.0543	27.0379	-4.0588
655	SLV 10	-5.43	11.61	96.97	-20.0268	26.9912	-4.2064
655	SLV 11	-4.06	-12.93	103.83	-21.4057	29.3868	2.6005
655	SLV 12	-4.04	-12.3	103.69	-21.3781	29.3401	2.453
655	SLV 13	-18.18	1.91	108.69	-22.4086	30.437	-4.3172
655	SLV 14	-18.15	2.89	108.47	-22.3656	30.3638	-4.5483
655	SLV 15	-17.76	-5.26	110.7	-22.8141	31.1417	-2.3194
655	SLV 16	-17.73	-4.28	110.49	-22.771	31.0685	-2.5505
655	CRTFP Ux+	0	0	0	0	0	0
655	CRTFP Ux-	0	0	0	0	0	0
655	CRTFP Uy+	0	0	0	0	0	0
655	CRTFP Uy-	0	0	0	0	0	0
656	SLU 1	1.32	-0.26	114.64	-1.2762	23.7622	0.0891
656	SLU 2	1.32	-0.06	114.64	-1.2727	23.7613	0.0461
656	SLU 3	1.36	-0.25	116.83	-1.3003	24.2162	0.0867
656	SLU 4	1.35	-0.13	116.83	-1.2982	24.2157	0.0608
656	SLU 5	1.34	-0.07	115.86	-1.2868	24.0137	0.0503
656	SLU 6	1.38	-0.27	118.05	-1.3145	24.4686	0.0909
656	SLU 7	1.38	-0.14	118.05	-1.3124	24.4681	0.0651
656	SLU 8	1.37	-0.3	117.08	-1.3045	24.2671	0.0976
656	SLU 9	1.36	-0.17	117.09	-1.3024	24.2665	0.0717
656	SLU 10	1.41	0.03	130.26	-1.444	27.0071	0.0319
656	SLU 11	1.44	-0.16	132.45	-1.4716	27.462	0.0725
656	SLU 12	1.44	-0.04	132.45	-1.4695	27.4615	0.0467
656	SLU 13	1.43	0.01	131.48	-1.4582	27.2595	0.0361
656	SLU 14	1.47	-0.18	133.68	-1.4858	27.7145	0.0767
656	SLU 15	1.46	-0.05	133.68	-1.4837	27.7139	0.0509
656	SLU 16	1.45	-0.21	132.71	-1.4758	27.5129	0.0834
656	SLU 17	1.45	-0.09	132.71	-1.4737	27.5124	0.0576
656	SLU 18	1.45	-0.14	136.96	-1.5209	28.3991	0.0688
656	SLU 19	1.44	-0.01	136.96	-1.5188	28.3986	0.043
656	SLU 20	1.47	-0.15	138.18	-1.535	28.6515	0.0731
656	SLU 21	1.47	-0.03	138.18	-1.533	28.651	0.0473
656	SLU 22	1.44	-0.15	129.36	-1.437	26.8129	0.0669
656	SLU 23	1.43	0.06	129.36	-1.4335	26.8119	0.0238
656	SLU 24	1.47	-0.13	131.56	-1.4611	27.2669	0.0644
656	SLU 25	1.47	-0.01	131.56	-1.4591	27.2663	0.0386
656	SLU 26	1.45	0.04	130.59	-1.4477	27.0644	0.0281
656	SLU 27	1.49	-0.15	132.78	-1.4753	27.5193	0.0687
656	SLU 28	1.49	-0.03	132.78	-1.4732	27.5187	0.0429
656	SLU 29	1.48	-0.18	131.81	-1.4653	27.3177	0.0753
656	SLU 30	1.48	-0.06	131.81	-1.4632	27.3172	0.0495
656	SLU 31	1.52	0.15	144.99	-1.6048	30.0578	0.0097
656	SLU 32	1.56	-0.05	147.18	-1.6324	30.5127	0.0503
656	SLU 33	1.55	0.08	147.18	-1.6304	30.5121	0.0244
656	SLU 34	1.54	0.13	146.21	-1.619	30.3102	0.0139
656	SLU 35	1.58	-0.06	148.4	-1.6466	30.7651	0.0545
656	SLU 36	1.58	0.06	148.4	-1.6445	30.7645	0.0287
656	SLU 37	1.57	-0.09	147.44	-1.6366	30.5636	0.0612
656	SLU 38	1.56	0.03	147.44	-1.6345	30.563	0.0354
656	SLU 39	1.56	-0.02	151.68	-1.6817	31.4498	0.0466
656	SLU 40	1.56	0.1	151.68	-1.6796	31.4492	0.0208
656	SLU 41	1.58	-0.04	152.91	-1.6959	31.7022	0.0509
656	SLU 42	1.58	0.09	152.91	-1.6938	31.7016	0.0251
656	SLU 43	1.68	-0.38	143.98	-1.6039	29.845	0.1234
656	SLU 44	1.68	-0.17	143.98	-1.6004	29.844	0.0804

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
656	SLU 45	1.72	-0.37	146.17	-1.628	30.299	0.121
656	SLU 46	1.71	-0.24	146.17	-1.6259	30.2984	0.0952
656	SLU 47	1.7	-0.19	145.2	-1.6146	30.0965	0.0846
656	SLU 48	1.74	-0.38	147.39	-1.6422	30.5514	0.1252
656	SLU 49	1.74	-0.26	147.39	-1.6401	30.5508	0.0994
656	SLU 50	1.73	-0.42	146.43	-1.6322	30.3498	0.1319
656	SLU 51	1.72	-0.29	146.43	-1.6301	30.3493	0.1061
656	SLU 52	1.76	-0.09	159.6	-1.7717	33.0899	0.0662
656	SLU 53	1.8	-0.28	161.79	-1.7993	33.5448	0.1068
656	SLU 54	1.8	-0.16	161.79	-1.7972	33.5442	0.081
656	SLU 55	1.79	-0.1	160.83	-1.7859	33.3423	0.0705
656	SLU 56	1.82	-0.3	163.02	-1.8135	33.7972	0.1111
656	SLU 57	1.82	-0.17	163.02	-1.8114	33.7966	0.0853
656	SLU 58	1.81	-0.33	162.05	-1.8035	33.5956	0.1177
656	SLU 59	1.81	-0.2	162.05	-1.8014	33.5951	0.0919
656	SLU 60	1.81	-0.26	166.3	-1.8486	34.4818	0.1032
656	SLU 61	1.8	-0.13	166.3	-1.8465	34.4813	0.0774
656	SLU 62	1.83	-0.27	167.52	-1.8627	34.7343	0.1074
656	SLU 63	1.83	-0.15	167.52	-1.8607	34.7337	0.0816
656	SLU 64	1.79	-0.26	158.71	-1.7647	32.8956	0.1012
656	SLU 65	1.79	-0.06	158.71	-1.7612	32.8947	0.0582
656	SLU 66	1.83	-0.25	160.9	-1.7888	33.3496	0.0988
656	SLU 67	1.83	-0.13	160.9	-1.7868	33.349	0.073
656	SLU 68	1.81	-0.08	159.93	-1.7754	33.1471	0.0624
656	SLU 69	1.85	-0.27	162.12	-1.803	33.602	0.103
656	SLU 70	1.85	-0.14	162.12	-1.8009	33.6015	0.0772
656	SLU 71	1.84	-0.3	161.15	-1.793	33.4005	0.1097
656	SLU 72	1.83	-0.18	161.15	-1.7909	33.3999	0.0839
656	SLU 73	1.88	0.03	174.33	-1.9325	36.1405	0.044
656	SLU 74	1.92	-0.16	176.52	-1.9602	36.5954	0.0846
656	SLU 75	1.91	-0.04	176.52	-1.9581	36.5949	0.0588
656	SLU 76	1.9	0.01	175.55	-1.9467	36.3929	0.0483
656	SLU 77	1.94	-0.18	177.74	-1.9743	36.8478	0.0889
656	SLU 78	1.93	-0.06	177.75	-1.9722	36.8473	0.063
656	SLU 79	1.92	-0.21	176.78	-1.9643	36.6463	0.0955
656	SLU 80	1.92	-0.09	176.78	-1.9622	36.6457	0.0697
656	SLU 81	1.92	-0.14	181.02	-2.0094	37.5325	0.081
656	SLU 82	1.92	-0.02	181.02	-2.0074	37.5319	0.0552
656	SLU 83	1.94	-0.16	182.25	-2.0236	37.7849	0.0852
656	SLU 84	1.94	-0.03	182.25	-2.0215	37.7844	0.0594
656	SLE RA 1	1.36	-0.23	118.84	-1.3221	24.6338	0.0827
656	SLE RA 2	1.35	-0.09	118.84	-1.3198	24.6332	0.054
656	SLE RA 3	1.38	-0.22	120.31	-1.3382	24.9365	0.0811
656	SLE RA 4	1.38	-0.14	120.31	-1.3368	24.9361	0.0639
656	SLE RA 5	1.37	-0.1	119.66	-1.3292	24.8015	0.0569
656	SLE RA 6	1.39	-0.23	121.12	-1.3476	25.1048	0.0839
656	SLE RA 7	1.39	-0.15	121.12	-1.3463	25.1044	0.0667
656	SLE RA 8	1.38	-0.25	120.48	-1.341	24.9704	0.0884
656	SLE RA 9	1.38	-0.17	120.48	-1.3396	24.97	0.0712
656	SLE RA 10	1.41	-0.03	129.26	-1.434	26.7971	0.0446
656	SLE RA 11	1.44	-0.16	130.72	-1.4524	27.1004	0.0717
656	SLE RA 12	1.43	-0.08	130.72	-1.451	27.1	0.0545
656	SLE RA 13	1.42	-0.04	130.08	-1.4434	26.9654	0.0474
656	SLE RA 14	1.45	-0.17	131.54	-1.4618	27.2687	0.0745
656	SLE RA 15	1.45	-0.09	131.54	-1.4605	27.2683	0.0573
656	SLE RA 16	1.44	-0.19	130.89	-1.4552	27.1343	0.0789
656	SLE RA 17	1.44	-0.11	130.89	-1.4538	27.1339	0.0617
656	SLE RA 18	1.44	-0.15	133.72	-1.4853	27.7251	0.0692
656	SLE RA 19	1.44	-0.06	133.72	-1.4839	27.7247	0.052
656	SLE RA 20	1.45	-0.16	134.54	-1.4947	27.8934	0.0721
656	SLE RA 21	1.45	-0.07	134.54	-1.4933	27.893	0.0549
656	SLE FR 1	1.36	-0.23	118.84	-1.3221	24.6338	0.0827
656	SLE FR 2	1.35	-0.2	118.84	-1.3216	24.6337	0.077
656	SLE FR 3	1.36	-0.23	119.17	-1.3259	24.7012	0.0839
656	SLE FR 4	1.38	-0.18	123.31	-1.3706	25.5611	0.073
656	SLE FR 5	1.39	-0.21	123.63	-1.3748	25.6285	0.0798
656	SLE FR 6	1.4	-0.19	126.28	-1.4037	26.1795	0.076
656	SLE QP 1	1.36	-0.23	118.84	-1.3221	24.6338	0.0827
656	SLE QP 2	1.38	-0.2	123.31	-1.3711	25.5612	0.0787
656	SLD 1	11.56	1.83	115.76	-1.2663	24.0704	-0.2219
656	SLD 2	11.55	2.46	115.71	-1.2596	24.058	-0.3371
656	SLD 3	11.78	-2.17	116.25	-1.3421	24.177	0.6206
656	SLD 4	11.78	-1.55	116.2	-1.3354	24.1646	0.5054
656	SLD 5	4.09	6.38	120.3	-1.2258	24.9545	-1.2692
656	SLD 6	4.09	6.78	120.26	-1.2215	24.9464	-1.344
656	SLD 7	4.85	-6.98	121.96	-1.4785	25.3098	1.5392
656	SLD 8	4.85	-6.58	121.92	-1.4742	25.3018	1.4645
656	SLD 9	-2.09	6.17	124.69	-1.2679	25.8207	-1.3071
656	SLD 10	-2.09	6.57	124.66	-1.2636	25.8126	-1.3819
656	SLD 11	-1.33	-7.19	126.35	-1.5206	26.176	1.5014
656	SLD 12	-1.33	-6.78	126.32	-1.5163	26.168	1.4266
656	SLD 13	-9.02	1.14	130.41	-1.4067	26.9578	-0.348
656	SLD 14	-9.02	1.77	130.36	-1.4	26.9454	-0.4633
656	SLD 15	-8.79	-2.86	130.91	-1.4825	27.0644	0.4945
656	SLD 16	-8.8	-2.24	130.86	-1.4758	27.052	0.3793
656	SLV 1	25.18	4.44	105.65	-1.128	22.0755	-0.5992
656	SLV 2	25.17	5.89	105.53	-1.1124	22.0466	-0.8676
656	SLV 3	25.71	-4.68	106.8	-1.3005	22.3205	1.3196
656	SLV 4	25.71	-3.23	106.68	-1.2849	22.2917	1.0512
656	SLV 5	7.71	14.78	116.29	-1.0392	24.1488	-2.9895
656	SLV 6	7.71	15.71	116.21	-1.0292	24.1303	-3.1609

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
656	SLV 7	9.49	-15.63	120.12	-1.6141	24.9655	3.4067
656	SLV 8	9.48	-14.71	120.04	-1.6041	24.9471	3.2352
656	SLV 9	-6.72	14.3	126.57	-1.138	26.1754	-3.0779
656	SLV 10	-6.73	15.22	126.5	-1.128	26.1569	-3.2493
656	SLV 11	-4.95	-16.12	130.4	-1.7129	26.9921	3.3183
656	SLV 12	-4.95	-15.19	130.33	-1.7029	26.9737	3.1469
656	SLV 13	-22.95	2.82	139.93	-1.4572	28.8308	-0.8938
656	SLV 14	-22.95	4.27	139.82	-1.4416	28.8019	-1.1622
656	SLV 15	-22.41	-6.3	141.08	-1.6297	29.0758	1.025
656	SLV 16	-22.42	-4.85	140.96	-1.6141	29.0469	0.7566
656	CRTFP Ux+	0	0	0	0	0	0
656	CRTFP Ux-	0	0	0	0	0	0
656	CRTFP Uy+	0	0	0	0	0	0
656	CRTFP Uy-	0	0	0	0	0	0
659	SLU 1	0.49	-0.05	40.8	-2.0711	-1.0756	0.0286
659	SLU 2	0.49	0.02	40.8	-2.0697	-1.076	0.0306
659	SLU 3	0.5	-0.04	41.58	-2.1104	-1.0963	0.0294
659	SLU 4	0.5	0	41.58	-2.1095	-1.0965	0.0306
659	SLU 5	0.49	0.02	41.24	-2.0918	-1.0876	0.0309
659	SLU 6	0.51	-0.05	42.02	-2.1326	-1.1079	0.0298
659	SLU 7	0.51	-0.01	42.02	-2.1317	-1.1081	0.031
659	SLU 8	0.5	-0.06	41.68	-2.1154	-1.0988	0.0293
659	SLU 9	0.5	-0.02	41.68	-2.1146	-1.099	0.0305
659	SLU 10	0.52	0.06	46.35	-2.3515	-1.222	0.0339
659	SLU 11	0.53	-0.01	47.13	-2.3922	-1.2423	0.0328
659	SLU 12	0.53	0.04	47.13	-2.3914	-1.2425	0.0339
659	SLU 13	0.53	0.05	46.79	-2.3736	-1.2336	0.0343
659	SLU 14	0.54	-0.01	47.57	-2.4144	-1.2539	0.0331
659	SLU 15	0.54	0.03	47.57	-2.4135	-1.2541	0.0343
659	SLU 16	0.54	-0.02	47.22	-2.3973	-1.2449	0.0327
659	SLU 17	0.54	0.02	47.23	-2.3964	-1.2451	0.0338
659	SLU 18	0.53	0	48.72	-2.4737	-1.2843	0.0334
659	SLU 19	0.53	0.05	48.73	-2.4728	-1.2845	0.0345
659	SLU 20	0.54	0	49.16	-2.4959	-1.2959	0.0337
659	SLU 21	0.54	0.04	49.17	-2.495	-1.2961	0.0349
659	SLU 22	0.53	-0.01	46.05	-2.3358	-1.2143	0.0322
659	SLU 23	0.53	0.07	46.05	-2.3344	-1.2146	0.0341
659	SLU 24	0.54	0	46.83	-2.3751	-1.2349	0.033
659	SLU 25	0.54	0.04	46.83	-2.3742	-1.2351	0.0342
659	SLU 26	0.54	0.06	46.49	-2.3565	-1.2262	0.0345
659	SLU 27	0.55	-0.01	47.27	-2.3973	-1.2465	0.0334
659	SLU 28	0.55	0.04	47.27	-2.3964	-1.2467	0.0345
659	SLU 29	0.55	-0.02	46.93	-2.3801	-1.2375	0.0329
659	SLU 30	0.54	0.03	46.93	-2.3793	-1.2377	0.0341
659	SLU 31	0.56	0.1	51.6	-2.6162	-1.3607	0.0375
659	SLU 32	0.57	0.03	52.38	-2.6569	-1.381	0.0363
659	SLU 33	0.57	0.08	52.38	-2.656	-1.3812	0.0375
659	SLU 34	0.57	0.1	52.04	-2.6383	-1.3723	0.0378
659	SLU 35	0.58	0.03	52.82	-2.6791	-1.3926	0.0367
659	SLU 36	0.58	0.07	52.82	-2.6782	-1.3928	0.0379
659	SLU 37	0.58	0.02	52.47	-2.6619	-1.3835	0.0362
659	SLU 38	0.58	0.06	52.48	-2.6611	-1.3837	0.0374
659	SLU 39	0.58	0.05	53.97	-2.7384	-1.4229	0.0369
659	SLU 40	0.57	0.09	53.98	-2.7375	-1.4231	0.0381
659	SLU 41	0.58	0.04	54.41	-2.7606	-1.4345	0.0373
659	SLU 42	0.58	0.08	54.41	-2.7597	-1.4347	0.0385
659	SLU 43	0.62	-0.08	51.24	-2.6017	-1.3508	0.036
659	SLU 44	0.62	-0.01	51.24	-2.6002	-1.3511	0.038
659	SLU 45	0.63	-0.07	52.02	-2.641	-1.3714	0.0368
659	SLU 46	0.63	-0.03	52.02	-2.6401	-1.3716	0.038
659	SLU 47	0.63	-0.01	51.68	-2.6224	-1.3627	0.0383
659	SLU 48	0.64	-0.08	52.46	-2.6632	-1.383	0.0372
659	SLU 49	0.64	-0.04	52.46	-2.6623	-1.3832	0.0384
659	SLU 50	0.64	-0.09	52.12	-2.646	-1.374	0.0367
659	SLU 51	0.64	-0.05	52.12	-2.6452	-1.3742	0.0379
659	SLU 52	0.65	0.03	56.79	-2.8821	-1.4972	0.0413
659	SLU 53	0.67	-0.04	57.57	-2.9228	-1.5175	0.0401
659	SLU 54	0.66	0.01	57.57	-2.9219	-1.5177	0.0413
659	SLU 55	0.66	0.02	57.23	-2.9042	-1.5088	0.0416
659	SLU 56	0.67	-0.04	58.01	-2.945	-1.5291	0.0405
659	SLU 57	0.67	0	58.01	-2.9441	-1.5293	0.0417
659	SLU 58	0.67	-0.05	57.66	-2.9278	-1.5201	0.04
659	SLU 59	0.67	-0.01	57.67	-2.927	-1.5203	0.0412
659	SLU 60	0.67	-0.03	59.16	-3.0043	-1.5595	0.0407
659	SLU 61	0.67	0.02	59.17	-3.0034	-1.5597	0.0419
659	SLU 62	0.67	-0.03	59.6	-3.0264	-1.5711	0.0411
659	SLU 63	0.67	0.01	59.61	-3.0256	-1.5713	0.0423
659	SLU 64	0.66	-0.04	56.49	-2.8664	-1.4894	0.0395
659	SLU 65	0.66	0.04	56.49	-2.8649	-1.4897	0.0415
659	SLU 66	0.67	-0.03	57.27	-2.9057	-1.5101	0.0404
659	SLU 67	0.67	0.01	57.27	-2.9048	-1.5102	0.0415
659	SLU 68	0.67	0.03	56.93	-2.8871	-1.5013	0.0419
659	SLU 69	0.68	-0.04	57.71	-2.9278	-1.5217	0.0407
659	SLU 70	0.68	0.01	57.71	-2.927	-1.5218	0.0419
659	SLU 71	0.68	-0.05	57.37	-2.9107	-1.5126	0.0403
659	SLU 72	0.68	0	57.37	-2.9098	-1.5128	0.0414
659	SLU 73	0.69	0.07	62.04	-3.1467	-1.6358	0.0448
659	SLU 74	0.71	0.01	62.82	-3.1875	-1.6561	0.0437
659	SLU 75	0.71	0.05	62.82	-3.1866	-1.6563	0.0449
659	SLU 76	0.7	0.07	62.48	-3.1689	-1.6474	0.0452
659	SLU 77	0.71	0	63.26	-3.2097	-1.6677	0.044

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
659	SLU 78	0.71	0.04	63.26	-3.2088	-1.6679	0.0452
659	SLU 79	0.71	-0.01	62.91	-3.1925	-1.6587	0.0436
659	SLU 80	0.71	0.03	62.92	-3.1917	-1.6589	0.0448
659	SLU 81	0.71	0.02	64.41	-3.269	-1.6981	0.0443
659	SLU 82	0.71	0.06	64.42	-3.2681	-1.6983	0.0455
659	SLU 83	0.72	0.01	64.85	-3.2911	-1.7097	0.0446
659	SLU 84	0.72	0.05	64.85	-3.2903	-1.7099	0.0458
659	SLE RA 1	0.5	-0.04	42.3	-2.1467	-1.1153	0.0296
659	SLE RA 2	0.5	0.01	42.3	-2.1458	-1.1155	0.0309
659	SLE RA 3	0.51	-0.03	42.82	-2.1729	-1.129	0.0302
659	SLE RA 4	0.51	0	42.82	-2.1724	-1.1291	0.031
659	SLE RA 5	0.5	0.01	42.59	-2.1605	-1.1232	0.0312
659	SLE RA 6	0.51	-0.04	43.11	-2.1877	-1.1367	0.0304
659	SLE RA 7	0.51	-0.01	43.11	-2.1871	-1.1369	0.0312
659	SLE RA 8	0.51	-0.04	42.88	-2.1763	-1.1307	0.0301
659	SLE RA 9	0.51	-0.02	42.89	-2.1757	-1.1308	0.0309
659	SLE RA 10	0.52	0.04	46	-2.3336	-1.2128	0.0332
659	SLE RA 11	0.53	-0.01	46.52	-2.3608	-1.2264	0.0324
659	SLE RA 12	0.53	0.02	46.52	-2.3602	-1.2265	0.0332
659	SLE RA 13	0.53	0.03	46.29	-2.3484	-1.2206	0.0334
659	SLE RA 14	0.54	-0.01	46.81	-2.3756	-1.2341	0.0326
659	SLE RA 15	0.53	0.02	46.81	-2.375	-1.2342	0.0334
659	SLE RA 16	0.53	-0.02	46.58	-2.3642	-1.2281	0.0323
659	SLE RA 17	0.53	0.01	46.58	-2.3636	-1.2282	0.0331
659	SLE RA 18	0.53	0	47.58	-2.4151	-1.2544	0.0328
659	SLE RA 19	0.53	0.03	47.58	-2.4145	-1.2545	0.0336
659	SLE RA 20	0.54	-0.01	47.87	-2.4299	-1.2621	0.033
659	SLE RA 21	0.54	0.02	47.88	-2.4293	-1.2622	0.0338
659	SLE FR 1	0.5	-0.04	42.3	-2.1467	-1.1153	0.0296
659	SLE FR 2	0.5	-0.03	42.3	-2.1465	-1.1153	0.0299
659	SLE FR 3	0.5	-0.04	42.42	-2.1526	-1.1183	0.0297
659	SLE FR 4	0.51	-0.02	43.88	-2.2271	-1.157	0.0308
659	SLE FR 5	0.51	-0.03	44	-2.2332	-1.1601	0.0307
659	SLE FR 6	0.52	-0.02	44.94	-2.2809	-1.1848	0.0312
659	SLE QP 1	0.5	-0.04	42.3	-2.1467	-1.1153	0.0296
659	SLE QP 2	0.51	-0.03	43.88	-2.2272	-1.157	0.0306
659	SLD 1	4.04	0.67	40.96	-2.0638	-1.0785	0.2175
659	SLD 2	4.04	0.91	40.95	-2.0604	-1.0785	0.2266
659	SLD 3	4.12	-0.73	41.12	-2.1017	-1.0744	0.1791
659	SLD 4	4.12	-0.49	41.11	-2.0983	-1.0744	0.1882
659	SLD 5	1.45	2.26	42.77	-2.1213	-1.1397	0.1433
659	SLD 6	1.45	2.42	42.76	-2.1191	-1.1397	0.1492
659	SLD 7	1.71	-2.4	43.3	-2.2476	-1.126	0.0153
659	SLD 8	1.71	-2.25	43.29	-2.2454	-1.126	0.0212
659	SLD 9	-0.7	2.19	44.47	-2.209	-1.188	0.04
659	SLD 10	-0.7	2.35	44.47	-2.2068	-1.188	0.0459
659	SLD 11	-0.43	-2.47	45.01	-2.3354	-1.1743	-0.0881
659	SLD 12	-0.43	-2.31	45	-2.3332	-1.1743	-0.0822
659	SLD 13	-3.11	0.44	46.66	-2.3562	-1.2395	-0.127
659	SLD 14	-3.11	0.68	46.64	-2.3528	-1.2396	-0.1179
659	SLD 15	-3.03	-0.96	46.82	-2.3941	-1.2354	-0.1654
659	SLD 16	-3.03	-0.72	46.81	-2.3907	-1.2355	-0.1564
659	SLV 1	8.78	1.55	37.05	-1.846	-0.9734	0.4667
659	SLV 2	8.78	2.11	37.03	-1.8381	-0.9735	0.4878
659	SLV 3	8.96	-1.64	37.42	-1.9324	-0.9638	0.3792
659	SLV 4	8.96	-1.07	37.4	-1.9245	-0.9639	0.4003
659	SLV 5	2.71	5.19	41.27	-1.9831	-1.1164	0.2906
659	SLV 6	2.71	5.55	41.26	-1.9781	-1.1164	0.3041
659	SLV 7	3.33	-5.44	42.52	-2.2712	-1.0845	-0.0012
659	SLV 8	3.33	-5.08	42.5	-2.2662	-1.0846	0.0123
659	SLV 9	-2.31	5.03	45.27	-2.1883	-1.2294	0.0488
659	SLV 10	-2.31	5.39	45.25	-2.1833	-1.2294	0.0623
659	SLV 11	-1.69	-5.6	46.51	-2.4764	-1.1975	-0.2429
659	SLV 12	-1.69	-5.24	46.5	-2.4714	-1.1976	-0.2294
659	SLV 13	-7.95	1.02	50.37	-2.53	-1.3501	-0.3391
659	SLV 14	-7.94	1.58	50.34	-2.5221	-1.3502	-0.318
659	SLV 15	-7.76	-2.17	50.74	-2.6164	-1.3405	-0.4267
659	SLV 16	-7.76	-1.6	50.72	-2.6085	-1.3406	-0.4055
659	CRTFP Ux+	0	0	0	0	0	0
659	CRTFP Ux-	0	0	0	0	0	0
660	SLU 1	0.61	-0.02	49.75	-0.0854	-0.0206	0.0103
660	SLU 2	0.61	0.07	49.76	-0.0835	-0.0207	0.0106
660	SLU 3	0.62	-0.01	50.7	-0.0867	-0.0211	0.0105
660	SLU 4	0.62	0.04	50.7	-0.0855	-0.0211	0.0107
660	SLU 5	0.62	0.07	50.29	-0.0843	-0.0209	0.0108
660	SLU 6	0.63	-0.01	51.24	-0.0875	-0.0213	0.0107
660	SLU 7	0.63	0.04	51.24	-0.0864	-0.0213	0.0109
660	SLU 8	0.63	-0.03	50.82	-0.0871	-0.0212	0.0107
660	SLU 9	0.63	0.03	50.82	-0.086	-0.0212	0.0109
660	SLU 10	0.65	0.12	56.51	-0.0952	-0.0232	0.012
660	SLU 11	0.66	0.04	57.46	-0.0984	-0.0235	0.0118
660	SLU 12	0.66	0.09	57.46	-0.0972	-0.0236	0.012
660	SLU 13	0.66	0.12	57.05	-0.0961	-0.0234	0.0121
660	SLU 14	0.67	0.04	57.99	-0.0993	-0.0238	0.012
660	SLU 15	0.67	0.09	58	-0.0981	-0.0238	0.0122
660	SLU 16	0.67	0.02	57.57	-0.0988	-0.0236	0.012
660	SLU 17	0.67	0.08	57.58	-0.0977	-0.0237	0.0122
660	SLU 18	0.66	0.06	59.4	-0.1022	-0.0242	0.0122
660	SLU 19	0.66	0.11	59.4	-0.101	-0.0242	0.0124
660	SLU 20	0.67	0.05	59.93	-0.103	-0.0244	0.0124
660	SLU 21	0.67	0.1	59.94	-0.1019	-0.0245	0.0126

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
660	SLU 22	0.66	0.04	56.15	-0.0944	-0.0232	0.0111
660	SLU 23	0.66	0.13	56.16	-0.0924	-0.0233	0.0114
660	SLU 24	0.67	0.05	57.1	-0.0956	-0.0237	0.0113
660	SLU 25	0.67	0.1	57.11	-0.0945	-0.0237	0.0115
660	SLU 26	0.67	0.12	56.69	-0.0933	-0.0236	0.0116
660	SLU 27	0.68	0.04	57.64	-0.0965	-0.0239	0.0115
660	SLU 28	0.68	0.09	57.64	-0.0953	-0.024	0.0117
660	SLU 29	0.68	0.03	57.22	-0.0961	-0.0238	0.0115
660	SLU 30	0.68	0.08	57.23	-0.0949	-0.0238	0.0117
660	SLU 31	0.7	0.18	62.91	-0.1042	-0.0258	0.0128
660	SLU 32	0.71	0.1	63.86	-0.1073	-0.0261	0.0126
660	SLU 33	0.71	0.15	63.86	-0.1062	-0.0262	0.0128
660	SLU 34	0.71	0.17	63.45	-0.105	-0.026	0.0129
660	SLU 35	0.72	0.09	64.39	-0.1082	-0.0264	0.0128
660	SLU 36	0.72	0.14	64.4	-0.107	-0.0264	0.013
660	SLU 37	0.72	0.08	63.98	-0.1078	-0.0262	0.0128
660	SLU 38	0.72	0.13	63.98	-0.1066	-0.0263	0.013
660	SLU 39	0.72	0.11	65.8	-0.1111	-0.0268	0.013
660	SLU 40	0.71	0.16	65.81	-0.11	-0.0268	0.0132
660	SLU 41	0.73	0.1	66.34	-0.112	-0.027	0.0132
660	SLU 42	0.72	0.16	66.34	-0.1108	-0.0271	0.0134
660	SLU 43	0.77	-0.04	62.48	-0.108	-0.0259	0.0132
660	SLU 44	0.77	0.05	62.48	-0.1061	-0.026	0.0134
660	SLU 45	0.79	-0.03	63.43	-0.1093	-0.0263	0.0133
660	SLU 46	0.79	0.02	63.43	-0.1081	-0.0264	0.0135
660	SLU 47	0.78	0.04	63.02	-0.1069	-0.0262	0.0136
660	SLU 48	0.8	-0.04	63.96	-0.1101	-0.0266	0.0135
660	SLU 49	0.8	0.02	63.97	-0.1089	-0.0266	0.0137
660	SLU 50	0.79	-0.05	63.55	-0.1097	-0.0264	0.0135
660	SLU 51	0.79	0	63.55	-0.1085	-0.0265	0.0137
660	SLU 52	0.81	0.1	69.24	-0.1178	-0.0285	0.0148
660	SLU 53	0.83	0.02	70.18	-0.121	-0.0288	0.0147
660	SLU 54	0.83	0.07	70.19	-0.1198	-0.0289	0.0148
660	SLU 55	0.82	0.09	69.78	-0.1186	-0.0287	0.015
660	SLU 56	0.84	0.01	70.72	-0.1218	-0.0291	0.0148
660	SLU 57	0.84	0.07	70.73	-0.1207	-0.0291	0.015
660	SLU 58	0.83	0	70.3	-0.1214	-0.0289	0.0149
660	SLU 59	0.83	0.05	70.31	-0.1203	-0.029	0.015
660	SLU 60	0.83	0.03	72.13	-0.1247	-0.0295	0.0151
660	SLU 61	0.83	0.09	72.13	-0.1236	-0.0295	0.0152
660	SLU 62	0.84	0.03	72.66	-0.1256	-0.0297	0.0153
660	SLU 63	0.84	0.08	72.67	-0.1244	-0.0298	0.0154
660	SLU 64	0.82	0.02	68.88	-0.1169	-0.0285	0.014
660	SLU 65	0.82	0.1	68.89	-0.115	-0.0286	0.0142
660	SLU 66	0.84	0.02	69.83	-0.1182	-0.029	0.0141
660	SLU 67	0.84	0.08	69.84	-0.117	-0.029	0.0143
660	SLU 68	0.83	0.1	69.42	-0.1159	-0.0289	0.0144
660	SLU 69	0.85	0.02	70.37	-0.119	-0.0292	0.0143
660	SLU 70	0.85	0.07	70.37	-0.1179	-0.0293	0.0145
660	SLU 71	0.84	0	69.95	-0.1186	-0.0291	0.0143
660	SLU 72	0.84	0.06	69.96	-0.1175	-0.0291	0.0145
660	SLU 73	0.86	0.15	75.64	-0.1267	-0.0311	0.0156
660	SLU 74	0.88	0.07	76.59	-0.1299	-0.0314	0.0155
660	SLU 75	0.88	0.13	76.59	-0.1288	-0.0315	0.0156
660	SLU 76	0.87	0.15	76.18	-0.1276	-0.0313	0.0158
660	SLU 77	0.89	0.07	77.12	-0.1308	-0.0317	0.0156
660	SLU 78	0.89	0.12	77.13	-0.1296	-0.0317	0.0158
660	SLU 79	0.88	0.05	76.71	-0.1304	-0.0315	0.0157
660	SLU 80	0.88	0.11	76.71	-0.1292	-0.0316	0.0158
660	SLU 81	0.88	0.09	78.53	-0.1337	-0.0321	0.0159
660	SLU 82	0.88	0.14	78.53	-0.1325	-0.0321	0.016
660	SLU 83	0.89	0.08	79.06	-0.1345	-0.0323	0.0161
660	SLU 84	0.89	0.13	79.07	-0.1334	-0.0324	0.0162
660	SLE RA 1	0.62	0	51.58	-0.088	-0.0214	0.0106
660	SLE RA 2	0.62	0.06	51.58	-0.0867	-0.0214	0.0108
660	SLE RA 3	0.63	0	52.21	-0.0888	-0.0217	0.0107
660	SLE RA 4	0.63	0.04	52.21	-0.088	-0.0217	0.0108
660	SLE RA 5	0.63	0.06	51.94	-0.0873	-0.0216	0.0109
660	SLE RA 6	0.64	0	52.57	-0.0894	-0.0218	0.0108
660	SLE RA 7	0.64	0.04	52.57	-0.0886	-0.0219	0.0109
660	SLE RA 8	0.64	-0.01	52.29	-0.0891	-0.0217	0.0108
660	SLE RA 9	0.63	0.03	52.29	-0.0883	-0.0217	0.0109
660	SLE RA 10	0.65	0.09	56.09	-0.0945	-0.0231	0.0116
660	SLE RA 11	0.66	0.04	56.72	-0.0966	-0.0233	0.0116
660	SLE RA 12	0.66	0.07	56.72	-0.0959	-0.0233	0.0117
660	SLE RA 13	0.65	0.09	56.44	-0.0951	-0.0232	0.0118
660	SLE RA 14	0.67	0.03	57.07	-0.0972	-0.0235	0.0117
660	SLE RA 15	0.67	0.07	57.08	-0.0964	-0.0235	0.0118
660	SLE RA 16	0.66	0.03	56.79	-0.0969	-0.0234	0.0117
660	SLE RA 17	0.66	0.06	56.8	-0.0962	-0.0234	0.0118
660	SLE RA 18	0.66	0.05	58.01	-0.0991	-0.0237	0.0118
660	SLE RA 19	0.66	0.08	58.01	-0.0984	-0.0238	0.0119
660	SLE RA 20	0.67	0.04	58.37	-0.0997	-0.0239	0.012
660	SLE RA 21	0.67	0.08	58.37	-0.0989	-0.0239	0.0121
660	SLE FR 1	0.62	0	51.58	-0.088	-0.0214	0.0106
660	SLE FR 2	0.62	0.01	51.58	-0.0877	-0.0214	0.0106
660	SLE FR 3	0.63	0	51.72	-0.0882	-0.0214	0.0106
660	SLE FR 4	0.63	0.03	53.51	-0.0911	-0.0221	0.011
660	SLE FR 5	0.64	0.01	53.65	-0.0916	-0.0222	0.011
660	SLE FR 6	0.64	0.02	54.79	-0.0936	-0.0226	0.0112
660	SLE QP 1	0.62	0	51.58	-0.088	-0.0214	0.0106

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
660	SLE QP 2	0.63	0.01	53.51	-0.0913	-0.0221	0.0109
660	SLD 1	4.9	0.85	49.6	-0.0577	-0.0069	0.0039
660	SLD 2	4.9	1.16	49.59	-0.0545	-0.007	0.0076
660	SLD 3	5	-0.85	49.8	-0.0955	-0.006	0.001
660	SLD 4	4.99	-0.54	49.79	-0.0923	-0.0061	0.0047
660	SLD 5	1.77	2.78	52.04	-0.0245	-0.0189	0.0126
660	SLD 6	1.77	2.98	52.03	-0.0224	-0.0189	0.015
660	SLD 7	2.09	-2.87	52.69	-0.1504	-0.0159	0.0029
660	SLD 8	2.09	-2.67	52.69	-0.1484	-0.0159	0.0053
660	SLD 9	-0.82	2.7	54.33	-0.0343	-0.0282	0.0166
660	SLD 10	-0.82	2.9	54.32	-0.0322	-0.0283	0.019
660	SLD 11	-0.5	-2.95	54.98	-0.1602	-0.0252	0.0069
660	SLD 12	-0.5	-2.75	54.97	-0.1582	-0.0253	0.0093
660	SLD 13	-3.73	0.57	57.22	-0.0904	-0.0381	0.0172
660	SLD 14	-3.73	0.88	57.21	-0.0872	-0.0381	0.0209
660	SLD 15	-3.63	-1.13	57.42	-0.1282	-0.0372	0.0143
660	SLD 16	-3.63	-0.82	57.41	-0.125	-0.0372	0.018
660	SLV 1	10.61	1.91	44.37	-0.0131	0.0134	-0.0056
660	SLV 2	10.61	2.63	44.36	-0.0056	0.0132	0.003
660	SLV 3	10.83	-1.95	44.83	-0.099	0.0155	-0.0122
660	SLV 4	10.83	-1.23	44.81	-0.0915	0.0153	-0.0036
660	SLV 5	3.29	6.32	50.07	0.0611	-0.0146	0.0145
660	SLV 6	3.29	6.78	50.06	0.0659	-0.0147	0.02
660	SLV 7	4.03	-6.56	51.6	-0.2251	-0.0076	-0.0074
660	SLV 8	4.03	-6.1	51.59	-0.2204	-0.0077	-0.002
660	SLV 9	-2.76	6.13	55.42	0.0377	-0.0364	0.0238
660	SLV 10	-2.77	6.59	55.41	0.0425	-0.0366	0.0293
660	SLV 11	-2.02	-6.75	56.95	-0.2486	-0.0295	0.0019
660	SLV 12	-2.02	-6.29	56.94	-0.2438	-0.0296	0.0074
660	SLV 13	-9.56	1.26	62.2	-0.0912	-0.0595	0.0255
660	SLV 14	-9.57	1.98	62.18	-0.0837	-0.0596	0.0341
660	SLV 15	-9.34	-2.6	62.66	-0.177	-0.0574	0.0189
660	SLV 16	-9.34	-1.88	62.64	-0.1695	-0.0576	0.0275
660	CRTFP Ux+	0	0	0	0	0	0
660	CRTFP Ux-	0	0	0	0	0	0
661	SLU 1	0.63	0.04	50.38	-0.0837	-0.0189	0.0125
661	SLU 2	0.63	0.13	50.39	-0.0818	-0.0189	0.0129
661	SLU 3	0.65	0.05	51.35	-0.0849	-0.0193	0.0127
661	SLU 4	0.65	0.11	51.36	-0.0838	-0.0193	0.013
661	SLU 5	0.64	0.13	50.94	-0.0827	-0.0192	0.0131
661	SLU 6	0.66	0.05	51.89	-0.0858	-0.0195	0.0129
661	SLU 7	0.66	0.1	51.9	-0.0847	-0.0195	0.0132
661	SLU 8	0.65	0.03	51.47	-0.0854	-0.0194	0.0129
661	SLU 9	0.65	0.09	51.48	-0.0843	-0.0194	0.0132
661	SLU 10	0.67	0.19	57.22	-0.0933	-0.021	0.0145
661	SLU 11	0.69	0.11	58.18	-0.0964	-0.0214	0.0144
661	SLU 12	0.69	0.16	58.19	-0.0953	-0.0214	0.0146
661	SLU 13	0.68	0.19	57.77	-0.0942	-0.0212	0.0147
661	SLU 14	0.7	0.1	58.72	-0.0972	-0.0216	0.0146
661	SLU 15	0.7	0.16	58.73	-0.0961	-0.0216	0.0148
661	SLU 16	0.69	0.09	58.3	-0.0968	-0.0215	0.0146
661	SLU 17	0.69	0.15	58.31	-0.0957	-0.0215	0.0148
661	SLU 18	0.69	0.13	60.14	-0.1001	-0.0219	0.0148
661	SLU 19	0.69	0.18	60.15	-0.099	-0.0219	0.0151
661	SLU 20	0.7	0.12	60.68	-0.1009	-0.0221	0.015
661	SLU 21	0.7	0.18	60.69	-0.0998	-0.0221	0.0153
661	SLU 22	0.68	0.1	56.86	-0.0925	-0.0211	0.0135
661	SLU 23	0.68	0.19	56.88	-0.0906	-0.0211	0.0139
661	SLU 24	0.7	0.11	57.83	-0.0937	-0.0215	0.0138
661	SLU 25	0.7	0.17	57.84	-0.0926	-0.0215	0.014
661	SLU 26	0.69	0.19	57.42	-0.0915	-0.0214	0.0142
661	SLU 27	0.71	0.11	58.37	-0.0946	-0.0217	0.014
661	SLU 28	0.71	0.16	58.38	-0.0935	-0.0217	0.0142
661	SLU 29	0.71	0.09	57.95	-0.0942	-0.0216	0.014
661	SLU 30	0.7	0.15	57.96	-0.0931	-0.0216	0.0142
661	SLU 31	0.72	0.25	63.7	-0.1021	-0.0232	0.0156
661	SLU 32	0.74	0.17	64.66	-0.1052	-0.0236	0.0154
661	SLU 33	0.74	0.22	64.67	-0.1041	-0.0236	0.0157
661	SLU 34	0.73	0.25	64.25	-0.1029	-0.0234	0.0158
661	SLU 35	0.75	0.16	65.2	-0.106	-0.0238	0.0156
661	SLU 36	0.75	0.22	65.21	-0.1049	-0.0238	0.0159
661	SLU 37	0.75	0.15	64.78	-0.1056	-0.0236	0.0156
661	SLU 38	0.74	0.21	64.79	-0.1045	-0.0237	0.0159
661	SLU 39	0.74	0.19	66.62	-0.1089	-0.0241	0.0159
661	SLU 40	0.74	0.24	66.63	-0.1078	-0.0241	0.0161
661	SLU 41	0.75	0.18	67.16	-0.1097	-0.0243	0.0161
661	SLU 42	0.75	0.23	67.17	-0.1086	-0.0243	0.0163
661	SLU 43	0.8	0.04	63.28	-0.1058	-0.0238	0.0159
661	SLU 44	0.8	0.13	63.29	-0.1039	-0.0238	0.0163
661	SLU 45	0.82	0.04	64.24	-0.107	-0.0242	0.0161
661	SLU 46	0.82	0.1	64.25	-0.1059	-0.0242	0.0163
661	SLU 47	0.81	0.12	63.83	-0.1048	-0.0241	0.0165
661	SLU 48	0.83	0.04	64.79	-0.1079	-0.0244	0.0163
661	SLU 49	0.83	0.09	64.79	-0.1068	-0.0245	0.0166
661	SLU 50	0.82	0.03	64.37	-0.1075	-0.0243	0.0163
661	SLU 51	0.82	0.08	64.37	-0.1064	-0.0243	0.0165
661	SLU 52	0.84	0.18	70.12	-0.1154	-0.0259	0.0179
661	SLU 53	0.86	0.1	71.07	-0.1185	-0.0263	0.0177
661	SLU 54	0.86	0.16	71.08	-0.1174	-0.0263	0.018
661	SLU 55	0.85	0.18	70.66	-0.1162	-0.0261	0.0181
661	SLU 56	0.87	0.1	71.62	-0.1193	-0.0265	0.018

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
661	SLU 57	0.87	0.15	71.62	-0.1182	-0.0265	0.0182
661	SLU 58	0.86	0.09	71.19	-0.1189	-0.0264	0.0179
661	SLU 59	0.86	0.14	71.2	-0.1178	-0.0264	0.0182
661	SLU 60	0.86	0.12	73.03	-0.1222	-0.0268	0.0182
661	SLU 61	0.86	0.17	73.04	-0.121	-0.0268	0.0185
661	SLU 62	0.87	0.11	73.58	-0.123	-0.027	0.0184
661	SLU 63	0.87	0.17	73.58	-0.1219	-0.027	0.0187
661	SLU 64	0.86	0.1	69.76	-0.1146	-0.026	0.0169
661	SLU 65	0.85	0.19	69.77	-0.1127	-0.026	0.0173
661	SLU 66	0.87	0.1	70.72	-0.1158	-0.0264	0.0172
661	SLU 67	0.87	0.16	70.73	-0.1147	-0.0264	0.0174
661	SLU 68	0.86	0.18	70.31	-0.1136	-0.0263	0.0175
661	SLU 69	0.88	0.1	71.27	-0.1167	-0.0266	0.0174
661	SLU 70	0.88	0.15	71.27	-0.1156	-0.0266	0.0176
661	SLU 71	0.88	0.09	70.85	-0.1163	-0.0265	0.0174
661	SLU 72	0.88	0.14	70.85	-0.1152	-0.0265	0.0176
661	SLU 73	0.89	0.24	76.6	-0.1242	-0.0281	0.019
661	SLU 74	0.91	0.16	77.55	-0.1273	-0.0285	0.0188
661	SLU 75	0.91	0.22	77.56	-0.1262	-0.0285	0.019
661	SLU 76	0.9	0.24	77.14	-0.125	-0.0283	0.0192
661	SLU 77	0.92	0.16	78.1	-0.1281	-0.0287	0.019
661	SLU 78	0.92	0.21	78.1	-0.127	-0.0287	0.0193
661	SLU 79	0.92	0.14	77.68	-0.1277	-0.0286	0.019
661	SLU 80	0.92	0.2	77.68	-0.1266	-0.0286	0.0192
661	SLU 81	0.91	0.18	79.51	-0.131	-0.029	0.0193
661	SLU 82	0.91	0.23	79.52	-0.1298	-0.029	0.0195
661	SLU 83	0.92	0.17	80.06	-0.1318	-0.0292	0.0195
661	SLU 84	0.92	0.23	80.06	-0.1307	-0.0292	0.0197
661	SLE RA 1	0.65	0.06	52.24	-0.0862	-0.0195	0.0128
661	SLE RA 2	0.65	0.12	52.24	-0.085	-0.0195	0.0131
661	SLE RA 3	0.66	0.07	52.88	-0.087	-0.0198	0.0129
661	SLE RA 4	0.66	0.1	52.88	-0.0863	-0.0198	0.0131
661	SLE RA 5	0.65	0.12	52.61	-0.0855	-0.0197	0.0132
661	SLE RA 6	0.66	0.06	53.24	-0.0876	-0.0199	0.0131
661	SLE RA 7	0.66	0.1	53.25	-0.0869	-0.02	0.0132
661	SLE RA 8	0.66	0.05	52.96	-0.0873	-0.0198	0.0131
661	SLE RA 9	0.66	0.09	52.97	-0.0866	-0.0198	0.0132
661	SLE RA 10	0.67	0.16	56.8	-0.0926	-0.0209	0.0141
661	SLE RA 11	0.68	0.1	57.43	-0.0947	-0.0212	0.014
661	SLE RA 12	0.68	0.14	57.44	-0.0939	-0.0212	0.0142
661	SLE RA 13	0.68	0.16	57.16	-0.0932	-0.0211	0.0143
661	SLE RA 14	0.69	0.1	57.8	-0.0952	-0.0213	0.0142
661	SLE RA 15	0.69	0.14	57.8	-0.0945	-0.0213	0.0143
661	SLE RA 16	0.69	0.09	57.51	-0.095	-0.0212	0.0142
661	SLE RA 17	0.69	0.13	57.52	-0.0942	-0.0212	0.0143
661	SLE RA 18	0.69	0.12	58.74	-0.0971	-0.0215	0.0144
661	SLE RA 19	0.68	0.15	58.74	-0.0964	-0.0215	0.0145
661	SLE RA 20	0.69	0.11	59.1	-0.0977	-0.0217	0.0145
661	SLE RA 21	0.69	0.15	59.11	-0.0969	-0.0217	0.0147
661	SLE FR 1	0.65	0.06	52.24	-0.0862	-0.0195	0.0128
661	SLE FR 2	0.65	0.07	52.24	-0.086	-0.0195	0.0128
661	SLE FR 3	0.65	0.06	52.38	-0.0864	-0.0196	0.0128
661	SLE FR 4	0.66	0.09	54.19	-0.0892	-0.0201	0.0133
661	SLE FR 5	0.66	0.08	54.33	-0.0897	-0.0202	0.0133
661	SLE FR 6	0.67	0.09	55.49	-0.0917	-0.0205	0.0136
661	SLE QP 1	0.65	0.06	52.24	-0.0862	-0.0195	0.0128
661	SLE QP 2	0.66	0.08	54.19	-0.0895	-0.0201	0.0133
661	SLD 1	4.92	0.62	49.92	-0.0566	-0.001	0.0066
661	SLD 2	4.92	0.95	49.92	-0.0537	-0.001	0.0105
661	SLD 3	5.02	-1.09	49.71	-0.0923	-0.0004	0.002
661	SLD 4	5.02	-0.77	49.7	-0.0894	-0.0005	0.006
661	SLD 5	1.79	2.78	53.23	-0.026	-0.0153	0.0175
661	SLD 6	1.79	3	53.23	-0.0241	-0.0153	0.0201
661	SLD 7	2.11	-2.93	52.52	-0.145	-0.0133	0.0022
661	SLD 8	2.11	-2.72	52.52	-0.1431	-0.0133	0.0048
661	SLD 9	-0.79	2.87	55.86	-0.0359	-0.0269	0.0217
661	SLD 10	-0.8	3.09	55.85	-0.0339	-0.0269	0.0243
661	SLD 11	-0.48	-2.84	55.15	-0.1549	-0.0249	0.0064
661	SLD 12	-0.48	-2.63	55.14	-0.153	-0.0249	0.009
661	SLD 13	-3.7	0.92	58.67	-0.0896	-0.0398	0.0205
661	SLD 14	-3.7	1.25	58.66	-0.0866	-0.0398	0.0245
661	SLD 15	-3.61	-0.79	58.46	-0.1253	-0.0392	0.016
661	SLD 16	-3.61	-0.47	58.45	-0.1223	-0.0392	0.02
661	SLV 1	10.63	1.29	44.21	-0.0132	0.0246	-0.0026
661	SLV 2	10.63	2.06	44.2	-0.0063	0.0245	0.0067
661	SLV 3	10.86	-2.61	43.71	-0.0943	0.026	-0.0129
661	SLV 4	10.85	-1.84	43.7	-0.0875	0.0259	-0.0037
661	SLV 5	3.31	6.23	51.95	0.0553	-0.0088	0.0227
661	SLV 6	3.31	6.72	51.94	0.0597	-0.0088	0.0286
661	SLV 7	4.06	-6.78	50.29	-0.2152	-0.0042	-0.0119
661	SLV 8	4.06	-6.29	50.28	-0.2108	-0.0042	-0.006
661	SLV 9	-2.74	6.45	58.09	0.0318	-0.036	0.0325
661	SLV 10	-2.74	6.93	58.08	0.0362	-0.0361	0.0385
661	SLV 11	-1.99	-6.57	56.43	-0.2387	-0.0314	-0.0021
661	SLV 12	-2	-6.08	56.42	-0.2343	-0.0314	0.0038
661	SLV 13	-9.54	2	64.68	-0.0915	-0.0661	0.0302
661	SLV 14	-9.54	2.76	64.66	-0.0846	-0.0662	0.0395
661	SLV 15	-9.31	-1.9	64.18	-0.1727	-0.0647	0.0198
661	SLV 16	-9.32	-1.14	64.16	-0.1658	-0.0648	0.0291
661	CRTFP Ux+	0	0	0	0	0	0
661	CRTFP Ux-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
662	SLU 1	0.65	0.11	50.96	-0.0821	-0.0166	0.0142
662	SLU 2	0.65	0.21	50.97	-0.0803	-0.0166	0.0147
662	SLU 3	0.67	0.12	51.93	-0.0833	-0.017	0.0145
662	SLU 4	0.67	0.18	51.94	-0.0822	-0.017	0.0148
662	SLU 5	0.66	0.2	51.52	-0.0811	-0.0168	0.015
662	SLU 6	0.68	0.12	52.48	-0.0841	-0.0172	0.0148
662	SLU 7	0.68	0.17	52.49	-0.0831	-0.0172	0.0151
662	SLU 8	0.67	0.11	52.06	-0.0838	-0.0171	0.0147
662	SLU 9	0.67	0.16	52.06	-0.0827	-0.0171	0.015
662	SLU 10	0.69	0.27	57.85	-0.0915	-0.0182	0.0167
662	SLU 11	0.71	0.19	58.82	-0.0945	-0.0185	0.0164
662	SLU 12	0.71	0.24	58.83	-0.0935	-0.0186	0.0167
662	SLU 13	0.7	0.27	58.41	-0.0924	-0.0184	0.0169
662	SLU 14	0.72	0.19	59.37	-0.0954	-0.0188	0.0167
662	SLU 15	0.72	0.24	59.38	-0.0943	-0.0188	0.017
662	SLU 16	0.72	0.17	58.95	-0.095	-0.0186	0.0166
662	SLU 17	0.71	0.23	58.95	-0.0939	-0.0186	0.0169
662	SLU 18	0.71	0.21	60.79	-0.0981	-0.0189	0.0169
662	SLU 19	0.71	0.26	60.8	-0.097	-0.0189	0.0173
662	SLU 20	0.72	0.21	61.35	-0.0989	-0.0191	0.0172
662	SLU 21	0.72	0.26	61.35	-0.0979	-0.0191	0.0175
662	SLU 22	0.71	0.18	57.5	-0.0907	-0.0183	0.0155
662	SLU 23	0.7	0.27	57.51	-0.089	-0.0183	0.016
662	SLU 24	0.72	0.19	58.48	-0.092	-0.0187	0.0158
662	SLU 25	0.72	0.24	58.48	-0.0909	-0.0187	0.0161
662	SLU 26	0.72	0.27	58.06	-0.0898	-0.0186	0.0163
662	SLU 27	0.73	0.18	59.03	-0.0928	-0.0189	0.016
662	SLU 28	0.73	0.24	59.03	-0.0918	-0.0189	0.0163
662	SLU 29	0.73	0.17	58.6	-0.0924	-0.0188	0.016
662	SLU 30	0.73	0.23	58.61	-0.0914	-0.0188	0.0163
662	SLU 31	0.75	0.34	64.4	-0.1002	-0.0199	0.0179
662	SLU 32	0.77	0.25	65.36	-0.1032	-0.0203	0.0177
662	SLU 33	0.76	0.31	65.37	-0.1021	-0.0203	0.018
662	SLU 34	0.76	0.33	64.95	-0.101	-0.0201	0.0182
662	SLU 35	0.78	0.25	65.92	-0.104	-0.0205	0.0179
662	SLU 36	0.78	0.31	65.92	-0.103	-0.0205	0.0183
662	SLU 37	0.77	0.24	65.49	-0.1036	-0.0204	0.0179
662	SLU 38	0.77	0.29	65.5	-0.1026	-0.0204	0.0182
662	SLU 39	0.77	0.27	67.34	-0.1068	-0.0206	0.0182
662	SLU 40	0.77	0.33	67.34	-0.1057	-0.0206	0.0185
662	SLU 41	0.78	0.27	67.89	-0.1076	-0.0208	0.0185
662	SLU 42	0.78	0.33	67.9	-0.1066	-0.0208	0.0188
662	SLU 43	0.83	0.13	64	-0.1037	-0.021	0.0181
662	SLU 44	0.83	0.22	64.01	-0.102	-0.021	0.0186
662	SLU 45	0.85	0.13	64.98	-0.105	-0.0214	0.0183
662	SLU 46	0.85	0.19	64.98	-0.1039	-0.0214	0.0186
662	SLU 47	0.84	0.21	64.56	-0.1028	-0.0212	0.0188
662	SLU 48	0.86	0.13	65.53	-0.1058	-0.0216	0.0186
662	SLU 49	0.86	0.19	65.53	-0.1047	-0.0216	0.0189
662	SLU 50	0.85	0.12	65.1	-0.1054	-0.0214	0.0186
662	SLU 51	0.85	0.17	65.11	-0.1043	-0.0214	0.0189
662	SLU 52	0.87	0.28	70.9	-0.1132	-0.0226	0.0205
662	SLU 53	0.89	0.2	71.86	-0.1162	-0.0229	0.0202
662	SLU 54	0.89	0.26	71.87	-0.1151	-0.0229	0.0205
662	SLU 55	0.88	0.28	71.45	-0.114	-0.0228	0.0207
662	SLU 56	0.9	0.2	72.42	-0.117	-0.0232	0.0205
662	SLU 57	0.9	0.25	72.42	-0.116	-0.0232	0.0208
662	SLU 58	0.89	0.18	71.99	-0.1166	-0.023	0.0205
662	SLU 59	0.89	0.24	72	-0.1156	-0.023	0.0208
662	SLU 60	0.89	0.22	73.84	-0.1197	-0.0233	0.0208
662	SLU 61	0.89	0.28	73.84	-0.1187	-0.0233	0.0211
662	SLU 62	0.9	0.22	74.39	-0.1206	-0.0235	0.021
662	SLU 63	0.9	0.27	74.4	-0.1195	-0.0235	0.0213
662	SLU 64	0.88	0.19	70.54	-0.1124	-0.0227	0.0193
662	SLU 65	0.88	0.28	70.55	-0.1106	-0.0227	0.0199
662	SLU 66	0.9	0.2	71.52	-0.1136	-0.0231	0.0196
662	SLU 67	0.9	0.26	71.53	-0.1126	-0.0231	0.0199
662	SLU 68	0.89	0.28	71.1	-0.1115	-0.0229	0.0201
662	SLU 69	0.91	0.2	72.07	-0.1145	-0.0233	0.0199
662	SLU 70	0.91	0.25	72.08	-0.1134	-0.0233	0.0202
662	SLU 71	0.91	0.18	71.64	-0.1141	-0.0232	0.0198
662	SLU 72	0.9	0.24	71.65	-0.113	-0.0232	0.0201
662	SLU 73	0.92	0.35	77.44	-0.1218	-0.0243	0.0218
662	SLU 74	0.94	0.27	78.41	-0.1248	-0.0247	0.0215
662	SLU 75	0.94	0.32	78.41	-0.1238	-0.0247	0.0218
662	SLU 76	0.93	0.35	77.99	-0.1227	-0.0245	0.022
662	SLU 77	0.95	0.26	78.96	-0.1257	-0.0249	0.0218
662	SLU 78	0.95	0.32	78.97	-0.1246	-0.0249	0.0221
662	SLU 79	0.95	0.25	78.53	-0.1253	-0.0247	0.0217
662	SLU 80	0.95	0.31	78.54	-0.1242	-0.0247	0.0221
662	SLU 81	0.94	0.29	80.38	-0.1284	-0.025	0.0221
662	SLU 82	0.94	0.34	80.39	-0.1274	-0.025	0.0224
662	SLU 83	0.95	0.28	80.93	-0.1293	-0.0252	0.0223
662	SLU 84	0.95	0.34	80.94	-0.1282	-0.0252	0.0226
662	SLE RA 1	0.67	0.13	52.82	-0.0845	-0.0171	0.0146
662	SLE RA 2	0.67	0.19	52.83	-0.0834	-0.0171	0.0149
662	SLE RA 3	0.68	0.14	53.48	-0.0854	-0.0173	0.0148
662	SLE RA 4	0.68	0.18	53.48	-0.0847	-0.0173	0.015
662	SLE RA 5	0.67	0.19	53.2	-0.0839	-0.0173	0.0151
662	SLE RA 6	0.69	0.14	53.84	-0.0859	-0.0175	0.0149
662	SLE RA 7	0.69	0.17	53.85	-0.0852	-0.0175	0.0152

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
662	SLE RA 8	0.68	0.13	53.56	-0.0857	-0.0174	0.0149
662	SLE RA 9	0.68	0.16	53.56	-0.085	-0.0174	0.0151
662	SLE RA 10	0.69	0.24	57.42	-0.0908	-0.0182	0.0162
662	SLE RA 11	0.71	0.18	58.07	-0.0929	-0.0184	0.016
662	SLE RA 12	0.71	0.22	58.07	-0.0921	-0.0184	0.0163
662	SLE RA 13	0.7	0.24	57.79	-0.0914	-0.0183	0.0164
662	SLE RA 14	0.71	0.18	58.44	-0.0934	-0.0185	0.0162
662	SLE RA 15	0.71	0.22	58.44	-0.0927	-0.0185	0.0164
662	SLE RA 16	0.71	0.17	58.15	-0.0932	-0.0184	0.0162
662	SLE RA 17	0.71	0.21	58.16	-0.0924	-0.0185	0.0164
662	SLE RA 18	0.71	0.2	59.38	-0.0952	-0.0186	0.0164
662	SLE RA 19	0.71	0.23	59.39	-0.0945	-0.0186	0.0166
662	SLE RA 20	0.72	0.19	59.75	-0.0958	-0.0188	0.0166
662	SLE RA 21	0.71	0.23	59.76	-0.0951	-0.0188	0.0168
662	SLE FR 1	0.67	0.13	52.82	-0.0845	-0.0171	0.0146
662	SLE FR 2	0.67	0.14	52.83	-0.0843	-0.0171	0.0147
662	SLE FR 3	0.67	0.13	52.97	-0.0848	-0.0172	0.0147
662	SLE FR 4	0.68	0.16	54.79	-0.0875	-0.0176	0.0152
662	SLE FR 5	0.68	0.15	54.94	-0.088	-0.0176	0.0152
662	SLE FR 6	0.69	0.16	56.1	-0.0899	-0.0179	0.0155
662	SLE QP 1	0.67	0.13	52.82	-0.0845	-0.0171	0.0146
662	SLE QP 2	0.68	0.15	54.79	-0.0877	-0.0176	0.0151
662	SLD 1	4.94	0.68	49.88	-0.0557	0.004	0.0092
662	SLD 2	4.94	1.03	49.88	-0.053	0.004	0.0136
662	SLD 3	5.04	-1.06	49.65	-0.0893	0.0035	0.0028
662	SLD 4	5.04	-0.71	49.65	-0.0866	0.0035	0.0071
662	SLD 5	1.81	2.89	53.66	-0.0276	-0.0103	0.0224
662	SLD 6	1.81	3.12	53.66	-0.0259	-0.0103	0.0252
662	SLD 7	2.13	-2.92	52.91	-0.1397	-0.012	0.0009
662	SLD 8	2.13	-2.69	52.9	-0.1379	-0.012	0.0037
662	SLD 9	-0.77	2.99	56.68	-0.0376	-0.0231	0.0266
662	SLD 10	-0.77	3.22	56.68	-0.0358	-0.0231	0.0294
662	SLD 11	-0.45	-2.81	55.93	-0.1496	-0.0248	0.005
662	SLD 12	-0.45	-2.59	55.92	-0.1479	-0.0248	0.0079
662	SLD 13	-3.68	1.02	59.94	-0.0889	-0.0386	0.0232
662	SLD 14	-3.68	1.37	59.93	-0.0862	-0.0386	0.0275
662	SLD 15	-3.58	-0.73	59.71	-0.1225	-0.0391	0.0167
662	SLD 16	-3.58	-0.38	59.7	-0.1198	-0.0391	0.021
662	SLV 1	10.65	1.33	43.3	-0.0133	0.033	0.0011
662	SLV 2	10.65	2.15	43.29	-0.007	0.033	0.0112
662	SLV 3	10.88	-2.64	42.77	-0.0897	0.0317	-0.0136
662	SLV 4	10.87	-1.82	42.76	-0.0834	0.0317	-0.0034
662	SLV 5	3.33	6.38	52.15	0.0494	-0.0005	0.0315
662	SLV 6	3.33	6.9	52.14	0.0535	-0.0005	0.038
662	SLV 7	4.08	-6.84	50.38	-0.2053	-0.0046	-0.0175
662	SLV 8	4.08	-6.32	50.38	-0.2013	-0.0047	-0.011
662	SLV 9	-2.72	6.62	59.21	0.0258	-0.0305	0.0413
662	SLV 10	-2.72	7.14	59.2	0.0298	-0.0305	0.0477
662	SLV 11	-1.97	-6.6	57.44	-0.229	-0.0346	-0.0077
662	SLV 12	-1.97	-6.08	57.43	-0.2249	-0.0346	-0.0012
662	SLV 13	-9.51	2.12	66.83	-0.0921	-0.0668	0.0337
662	SLV 14	-9.52	2.94	66.82	-0.0858	-0.0668	0.0438
662	SLV 15	-9.29	-1.84	66.3	-0.1685	-0.0681	0.019
662	SLV 16	-9.29	-1.03	66.29	-0.1622	-0.0681	0.0292
662	CRTFP Ux+	0	0	0	0	0	0
662	CRTFP Ux-	0	0	0	0	0	0
663	SLU 1	0.67	0.19	51.45	-0.0806	-0.0144	0.0155
663	SLU 2	0.67	0.29	51.46	-0.0789	-0.0144	0.0162
663	SLU 3	0.69	0.2	52.44	-0.0818	-0.0148	0.0159
663	SLU 4	0.69	0.26	52.45	-0.0808	-0.0148	0.0162
663	SLU 5	0.68	0.28	52.02	-0.0797	-0.0146	0.0164
663	SLU 6	0.7	0.2	53	-0.0827	-0.015	0.0161
663	SLU 7	0.7	0.26	53.01	-0.0816	-0.015	0.0165
663	SLU 8	0.69	0.19	52.57	-0.0823	-0.0149	0.0161
663	SLU 9	0.69	0.24	52.58	-0.0813	-0.0149	0.0165
663	SLU 10	0.71	0.36	58.4	-0.0899	-0.0155	0.0183
663	SLU 11	0.73	0.28	59.37	-0.0928	-0.0159	0.018
663	SLU 12	0.73	0.34	59.38	-0.0918	-0.0159	0.0184
663	SLU 13	0.72	0.36	58.95	-0.0907	-0.0157	0.0186
663	SLU 14	0.74	0.28	59.93	-0.0937	-0.0161	0.0182
663	SLU 15	0.74	0.33	59.94	-0.0927	-0.0161	0.0186
663	SLU 16	0.74	0.26	59.5	-0.0933	-0.016	0.0182
663	SLU 17	0.74	0.32	59.51	-0.0923	-0.016	0.0186
663	SLU 18	0.73	0.3	61.36	-0.0963	-0.016	0.0186
663	SLU 19	0.73	0.36	61.36	-0.0953	-0.016	0.0189
663	SLU 20	0.74	0.3	61.91	-0.0971	-0.0162	0.0188
663	SLU 21	0.74	0.36	61.92	-0.0961	-0.0162	0.0192
663	SLU 22	0.73	0.26	58.05	-0.0891	-0.0157	0.017
663	SLU 23	0.73	0.36	58.06	-0.0875	-0.0157	0.0177
663	SLU 24	0.74	0.27	59.03	-0.0904	-0.0161	0.0173
663	SLU 25	0.74	0.33	59.04	-0.0894	-0.0161	0.0177
663	SLU 26	0.74	0.36	58.61	-0.0883	-0.0159	0.0179
663	SLU 27	0.76	0.27	59.59	-0.0912	-0.0163	0.0176
663	SLU 28	0.75	0.33	59.6	-0.0902	-0.0163	0.018
663	SLU 29	0.75	0.26	59.16	-0.0908	-0.0161	0.0176
663	SLU 30	0.75	0.32	59.17	-0.0898	-0.0161	0.0179
663	SLU 31	0.77	0.44	64.99	-0.0985	-0.0168	0.0198
663	SLU 32	0.79	0.35	65.97	-0.1014	-0.0172	0.0195
663	SLU 33	0.79	0.41	65.97	-0.1004	-0.0172	0.0198
663	SLU 34	0.78	0.43	65.55	-0.0993	-0.017	0.02
663	SLU 35	0.8	0.35	66.52	-0.1022	-0.0174	0.0197

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
663	SLU 36	0.8	0.41	66.53	-0.1012	-0.0174	0.0201
663	SLU 37	0.79	0.34	66.09	-0.1018	-0.0172	0.0197
663	SLU 38	0.79	0.39	66.1	-0.1008	-0.0172	0.02
663	SLU 39	0.79	0.37	67.95	-0.1049	-0.0173	0.02
663	SLU 40	0.79	0.43	67.95	-0.1038	-0.0173	0.0204
663	SLU 41	0.8	0.37	68.5	-0.1057	-0.0175	0.0203
663	SLU 42	0.8	0.43	68.51	-0.1047	-0.0175	0.0207
663	SLU 43	0.85	0.22	64.63	-0.1018	-0.0183	0.0197
663	SLU 44	0.85	0.32	64.64	-0.1001	-0.0183	0.0203
663	SLU 45	0.87	0.23	65.62	-0.1031	-0.0187	0.02
663	SLU 46	0.87	0.29	65.63	-0.102	-0.0187	0.0204
663	SLU 47	0.86	0.32	65.2	-0.101	-0.0185	0.0206
663	SLU 48	0.88	0.23	66.18	-0.1039	-0.0189	0.0203
663	SLU 49	0.88	0.29	66.18	-0.1029	-0.0189	0.0207
663	SLU 50	0.88	0.22	65.75	-0.1035	-0.0188	0.0202
663	SLU 51	0.88	0.28	65.75	-0.1025	-0.0188	0.0206
663	SLU 52	0.89	0.4	71.57	-0.1111	-0.0194	0.0224
663	SLU 53	0.91	0.31	72.55	-0.1141	-0.0198	0.0221
663	SLU 54	0.91	0.37	72.56	-0.113	-0.0198	0.0225
663	SLU 55	0.91	0.39	72.13	-0.112	-0.0196	0.0227
663	SLU 56	0.93	0.31	73.11	-0.1149	-0.02	0.0224
663	SLU 57	0.92	0.37	73.11	-0.1139	-0.02	0.0228
663	SLU 58	0.92	0.3	72.68	-0.1145	-0.0199	0.0223
663	SLU 59	0.92	0.35	72.68	-0.1135	-0.0199	0.0227
663	SLU 60	0.92	0.33	74.53	-0.1175	-0.0199	0.0227
663	SLU 61	0.91	0.39	74.54	-0.1165	-0.0199	0.0231
663	SLU 62	0.93	0.33	75.09	-0.1184	-0.0201	0.023
663	SLU 63	0.93	0.39	75.1	-0.1174	-0.0201	0.0234
663	SLU 64	0.91	0.3	71.22	-0.1104	-0.0196	0.0212
663	SLU 65	0.91	0.39	71.23	-0.1087	-0.0196	0.0218
663	SLU 66	0.93	0.31	72.21	-0.1116	-0.02	0.0215
663	SLU 67	0.93	0.36	72.22	-0.1106	-0.02	0.0219
663	SLU 68	0.92	0.39	71.79	-0.1095	-0.0198	0.0221
663	SLU 69	0.94	0.3	72.77	-0.1125	-0.0202	0.0218
663	SLU 70	0.94	0.36	72.78	-0.1114	-0.0202	0.0221
663	SLU 71	0.93	0.29	72.34	-0.1121	-0.02	0.0217
663	SLU 72	0.93	0.35	72.34	-0.1111	-0.02	0.0221
663	SLU 73	0.95	0.47	78.16	-0.1197	-0.0207	0.0239
663	SLU 74	0.97	0.38	79.14	-0.1226	-0.0211	0.0236
663	SLU 75	0.97	0.44	79.15	-0.1216	-0.0211	0.024
663	SLU 76	0.96	0.47	78.72	-0.1205	-0.0209	0.0242
663	SLU 77	0.98	0.38	79.7	-0.1235	-0.0213	0.0239
663	SLU 78	0.98	0.44	79.71	-0.1224	-0.0213	0.0243
663	SLU 79	0.97	0.37	79.27	-0.1231	-0.0211	0.0238
663	SLU 80	0.97	0.43	79.28	-0.1221	-0.0211	0.0242
663	SLU 81	0.97	0.41	81.12	-0.1261	-0.0212	0.0242
663	SLU 82	0.97	0.46	81.13	-0.1251	-0.0212	0.0246
663	SLU 83	0.98	0.4	81.68	-0.1269	-0.0214	0.0245
663	SLU 84	0.98	0.46	81.69	-0.1259	-0.0214	0.0248
663	SLE RA 1	0.69	0.21	53.34	-0.083	-0.0148	0.016
663	SLE RA 2	0.69	0.28	53.34	-0.0819	-0.0148	0.0164
663	SLE RA 3	0.7	0.22	54	-0.0838	-0.015	0.0162
663	SLE RA 4	0.7	0.26	54	-0.0832	-0.015	0.0164
663	SLE RA 5	0.69	0.27	53.72	-0.0825	-0.0149	0.0166
663	SLE RA 6	0.71	0.22	54.37	-0.0844	-0.0152	0.0164
663	SLE RA 7	0.71	0.26	54.37	-0.0837	-0.0152	0.0166
663	SLE RA 8	0.7	0.21	54.08	-0.0841	-0.0151	0.0163
663	SLE RA 9	0.7	0.25	54.09	-0.0835	-0.0151	0.0166
663	SLE RA 10	0.71	0.33	57.96	-0.0892	-0.0155	0.0178
663	SLE RA 11	0.73	0.27	58.62	-0.0912	-0.0158	0.0176
663	SLE RA 12	0.73	0.31	58.62	-0.0905	-0.0158	0.0178
663	SLE RA 13	0.72	0.33	58.34	-0.0898	-0.0157	0.018
663	SLE RA 14	0.74	0.27	58.99	-0.0917	-0.0159	0.0178
663	SLE RA 15	0.73	0.31	58.99	-0.0911	-0.0159	0.018
663	SLE RA 16	0.73	0.26	58.7	-0.0915	-0.0158	0.0177
663	SLE RA 17	0.73	0.3	58.71	-0.0908	-0.0158	0.018
663	SLE RA 18	0.73	0.28	59.94	-0.0935	-0.0159	0.018
663	SLE RA 19	0.73	0.32	59.94	-0.0928	-0.0159	0.0182
663	SLE RA 20	0.74	0.28	60.31	-0.0941	-0.016	0.0182
663	SLE RA 21	0.73	0.32	60.31	-0.0934	-0.016	0.0184
663	SLE FR 1	0.69	0.21	53.34	-0.083	-0.0148	0.016
663	SLE FR 2	0.69	0.22	53.34	-0.0828	-0.0148	0.0161
663	SLE FR 3	0.69	0.21	53.49	-0.0832	-0.0149	0.016
663	SLE FR 4	0.7	0.25	55.32	-0.0859	-0.0151	0.0167
663	SLE FR 5	0.7	0.23	55.47	-0.0864	-0.0152	0.0166
663	SLE FR 6	0.71	0.25	56.64	-0.0883	-0.0153	0.017
663	SLE QP 1	0.69	0.21	53.34	-0.083	-0.0148	0.016
663	SLE QP 2	0.7	0.23	55.32	-0.0862	-0.0151	0.0166
663	SLD 1	4.96	0.74	49.48	-0.0549	0.0072	0.0119
663	SLD 2	4.96	1.12	49.47	-0.0524	0.0073	0.0166
663	SLD 3	5.06	-1.03	49.71	-0.0864	0.0067	0.0034
663	SLD 4	5.06	-0.66	49.71	-0.0839	0.0067	0.0082
663	SLD 5	1.83	3.02	53.21	-0.0294	-0.0076	0.0271
663	SLD 6	1.83	3.26	53.21	-0.0278	-0.0076	0.0302
663	SLD 7	2.15	-2.91	53.99	-0.1345	-0.0094	-0.001
663	SLD 8	2.15	-2.67	53.99	-0.1329	-0.0094	0.0021
663	SLD 9	-0.75	3.14	56.64	-0.0394	-0.0208	0.0311
663	SLD 10	-0.75	3.38	56.64	-0.0379	-0.0208	0.0341
663	SLD 11	-0.43	-2.8	57.43	-0.1445	-0.0227	0.0029
663	SLD 12	-0.43	-2.55	57.43	-0.1429	-0.0227	0.006
663	SLD 13	-3.66	1.13	60.93	-0.0884	-0.037	0.025

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
663	SLD 14	-3.66	1.5	60.92	-0.0859	-0.0369	0.0297
663	SLD 15	-3.56	-0.65	61.16	-0.1199	-0.0375	0.0166
663	SLD 16	-3.56	-0.28	61.16	-0.1175	-0.0375	0.0213
663	SLV 1	10.67	1.37	41.65	-0.0135	0.0372	0.0053
663	SLV 2	10.66	2.24	41.64	-0.0078	0.0373	0.0163
663	SLV 3	10.89	-2.68	42.2	-0.0852	0.0359	-0.0138
663	SLV 4	10.89	-1.81	42.19	-0.0795	0.0359	-0.0028
663	SLV 5	3.35	6.57	50.39	0.0433	0.0026	0.0404
663	SLV 6	3.35	7.13	50.38	0.047	0.0026	0.0474
663	SLV 7	4.1	-6.93	52.22	-0.1955	-0.0018	-0.0234
663	SLV 8	4.09	-6.38	52.21	-0.1919	-0.0018	-0.0164
663	SLV 9	-2.69	6.84	58.42	0.0195	-0.0284	0.0496
663	SLV 10	-2.7	7.4	58.41	0.0232	-0.0284	0.0566
663	SLV 11	-1.95	-6.66	60.26	-0.2193	-0.0329	-0.0142
663	SLV 12	-1.95	-6.11	60.25	-0.2157	-0.0328	-0.0072
663	SLV 13	-9.49	2.27	68.44	-0.0929	-0.0662	0.036
663	SLV 14	-9.49	3.14	68.43	-0.0872	-0.0662	0.047
663	SLV 15	-9.26	-1.78	68.99	-0.1645	-0.0675	0.0168
663	SLV 16	-9.27	-0.91	68.98	-0.1588	-0.0675	0.0278
663	CRTFP Ux+	0	0	0	0	0	0
663	CRTFP Ux-	0	0	0	0	0	0
664	SLU 1	0.69	0.27	51.89	-0.0792	-0.0126	0.0164
664	SLU 2	0.69	0.37	51.9	-0.0776	-0.0126	0.0171
664	SLU 3	0.71	0.29	52.89	-0.0805	-0.0129	0.0168
664	SLU 4	0.71	0.35	52.89	-0.0795	-0.0129	0.0172
664	SLU 5	0.7	0.37	52.46	-0.0785	-0.0128	0.0174
664	SLU 6	0.72	0.29	53.45	-0.0813	-0.0131	0.017
664	SLU 7	0.72	0.34	53.46	-0.0804	-0.0131	0.0175
664	SLU 8	0.71	0.27	53.02	-0.0809	-0.013	0.017
664	SLU 9	0.71	0.33	53.02	-0.08	-0.013	0.0174
664	SLU 10	0.73	0.46	58.86	-0.0884	-0.0132	0.0194
664	SLU 11	0.75	0.37	59.85	-0.0913	-0.0136	0.019
664	SLU 12	0.75	0.43	59.85	-0.0903	-0.0136	0.0195
664	SLU 13	0.74	0.46	59.42	-0.0893	-0.0134	0.0197
664	SLU 14	0.76	0.37	60.41	-0.0921	-0.0138	0.0193
664	SLU 15	0.76	0.43	60.42	-0.0912	-0.0137	0.0197
664	SLU 16	0.76	0.36	59.98	-0.0917	-0.0136	0.0192
664	SLU 17	0.75	0.42	59.98	-0.0908	-0.0136	0.0197
664	SLU 18	0.75	0.4	61.83	-0.0947	-0.0135	0.0196
664	SLU 19	0.75	0.46	61.84	-0.0937	-0.0135	0.0201
664	SLU 20	0.76	0.4	62.39	-0.0955	-0.0137	0.0199
664	SLU 21	0.76	0.46	62.4	-0.0946	-0.0137	0.0204
664	SLU 22	0.75	0.35	58.51	-0.0877	-0.0135	0.018
664	SLU 23	0.74	0.45	58.52	-0.0861	-0.0135	0.0188
664	SLU 24	0.76	0.37	59.51	-0.0889	-0.0138	0.0184
664	SLU 25	0.76	0.43	59.52	-0.088	-0.0138	0.0188
664	SLU 26	0.75	0.45	59.09	-0.087	-0.0137	0.019
664	SLU 27	0.78	0.37	60.08	-0.0898	-0.014	0.0187
664	SLU 28	0.77	0.43	60.08	-0.0888	-0.014	0.0191
664	SLU 29	0.77	0.35	59.64	-0.0894	-0.0139	0.0186
664	SLU 30	0.77	0.41	59.65	-0.0884	-0.0139	0.019
664	SLU 31	0.79	0.54	65.48	-0.0969	-0.0141	0.021
664	SLU 32	0.81	0.46	66.47	-0.0997	-0.0145	0.0207
664	SLU 33	0.81	0.51	66.48	-0.0988	-0.0145	0.0211
664	SLU 34	0.8	0.54	66.05	-0.0978	-0.0143	0.0213
664	SLU 35	0.82	0.45	67.04	-0.1006	-0.0147	0.0209
664	SLU 36	0.82	0.51	67.04	-0.0996	-0.0147	0.0214
664	SLU 37	0.81	0.44	66.6	-0.1002	-0.0146	0.0209
664	SLU 38	0.81	0.5	66.61	-0.0992	-0.0145	0.0213
664	SLU 39	0.81	0.48	68.46	-0.1031	-0.0145	0.0213
664	SLU 40	0.81	0.54	68.46	-0.1022	-0.0144	0.0217
664	SLU 41	0.82	0.48	69.02	-0.104	-0.0147	0.0216
664	SLU 42	0.82	0.54	69.03	-0.103	-0.0146	0.022
664	SLU 43	0.88	0.33	65.18	-0.1001	-0.016	0.0208
664	SLU 44	0.87	0.43	65.19	-0.0985	-0.016	0.0215
664	SLU 45	0.89	0.34	66.18	-0.1013	-0.0163	0.0211
664	SLU 46	0.89	0.4	66.19	-0.1004	-0.0163	0.0215
664	SLU 47	0.89	0.43	65.76	-0.0994	-0.0162	0.0218
664	SLU 48	0.91	0.34	66.75	-0.1022	-0.0165	0.0214
664	SLU 49	0.9	0.4	66.75	-0.1012	-0.0165	0.0218
664	SLU 50	0.9	0.33	66.31	-0.1018	-0.0164	0.0213
664	SLU 51	0.9	0.39	66.32	-0.1008	-0.0164	0.0218
664	SLU 52	0.92	0.52	72.15	-0.1093	-0.0167	0.0238
664	SLU 53	0.94	0.43	73.14	-0.1121	-0.017	0.0234
664	SLU 54	0.94	0.49	73.15	-0.1112	-0.017	0.0238
664	SLU 55	0.93	0.51	72.72	-0.1102	-0.0169	0.024
664	SLU 56	0.95	0.43	73.71	-0.113	-0.0172	0.0237
664	SLU 57	0.95	0.49	73.71	-0.112	-0.0172	0.0241
664	SLU 58	0.94	0.42	73.27	-0.1126	-0.0171	0.0236
664	SLU 59	0.94	0.47	73.28	-0.1116	-0.0171	0.024
664	SLU 60	0.94	0.45	75.12	-0.1155	-0.017	0.024
664	SLU 61	0.94	0.51	75.13	-0.1146	-0.017	0.0244
664	SLU 62	0.95	0.45	75.69	-0.1164	-0.0172	0.0243
664	SLU 63	0.95	0.51	75.69	-0.1154	-0.0172	0.0247
664	SLU 64	0.93	0.41	71.81	-0.1086	-0.0169	0.0224
664	SLU 65	0.93	0.51	71.82	-0.107	-0.0169	0.0231
664	SLU 66	0.95	0.42	72.81	-0.1098	-0.0173	0.0228
664	SLU 67	0.95	0.48	72.81	-0.1088	-0.0172	0.0232
664	SLU 68	0.94	0.51	72.38	-0.1078	-0.0171	0.0234
664	SLU 69	0.96	0.42	73.37	-0.1107	-0.0175	0.023
664	SLU 70	0.96	0.48	73.38	-0.1097	-0.0174	0.0235

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
664	SLU 71	0.96	0.41	72.94	-0.1103	-0.0173	0.023
664	SLU 72	0.95	0.47	72.94	-0.1093	-0.0173	0.0234
664	SLU 73	0.97	0.6	78.78	-0.1178	-0.0176	0.0254
664	SLU 74	0.99	0.51	79.77	-0.1206	-0.0179	0.025
664	SLU 75	0.99	0.57	79.77	-0.1197	-0.0179	0.0254
664	SLU 76	0.99	0.6	79.34	-0.1186	-0.0178	0.0257
664	SLU 77	1.01	0.51	80.33	-0.1215	-0.0181	0.0253
664	SLU 78	1	0.57	80.34	-0.1205	-0.0181	0.0257
664	SLU 79	1	0.5	79.9	-0.1211	-0.018	0.0252
664	SLU 80	1	0.56	79.9	-0.1201	-0.018	0.0257
664	SLU 81	1	0.53	81.75	-0.124	-0.0179	0.0256
664	SLU 82	0.99	0.59	81.76	-0.123	-0.0179	0.0261
664	SLU 83	1.01	0.53	82.32	-0.1249	-0.0181	0.0259
664	SLU 84	1.01	0.59	82.32	-0.1239	-0.0181	0.0263
664	SLE RA 1	0.71	0.3	53.78	-0.0817	-0.0128	0.0169
664	SLE RA 2	0.7	0.36	53.79	-0.0806	-0.0128	0.0174
664	SLE RA 3	0.72	0.3	54.45	-0.0825	-0.013	0.0171
664	SLE RA 4	0.72	0.34	54.45	-0.0818	-0.013	0.0174
664	SLE RA 5	0.71	0.36	54.16	-0.0812	-0.013	0.0175
664	SLE RA 6	0.73	0.3	54.82	-0.083	-0.0132	0.0173
664	SLE RA 7	0.72	0.34	54.83	-0.0824	-0.0132	0.0176
664	SLE RA 8	0.72	0.3	54.53	-0.0828	-0.0131	0.0172
664	SLE RA 9	0.72	0.34	54.54	-0.0821	-0.0131	0.0175
664	SLE RA 10	0.73	0.42	58.43	-0.0878	-0.0133	0.0189
664	SLE RA 11	0.75	0.36	59.09	-0.0897	-0.0135	0.0186
664	SLE RA 12	0.75	0.4	59.09	-0.089	-0.0135	0.0189
664	SLE RA 13	0.74	0.42	58.8	-0.0884	-0.0134	0.019
664	SLE RA 14	0.75	0.36	59.46	-0.0902	-0.0136	0.0188
664	SLE RA 15	0.75	0.4	59.47	-0.0896	-0.0136	0.0191
664	SLE RA 16	0.75	0.35	59.17	-0.09	-0.0136	0.0188
664	SLE RA 17	0.75	0.39	59.18	-0.0893	-0.0135	0.019
664	SLE RA 18	0.75	0.38	60.41	-0.0919	-0.0135	0.019
664	SLE RA 19	0.75	0.42	60.41	-0.0913	-0.0135	0.0193
664	SLE RA 20	0.75	0.38	60.79	-0.0925	-0.0136	0.0192
664	SLE RA 21	0.75	0.42	60.79	-0.0919	-0.0136	0.0195
664	SLE FR 1	0.71	0.3	53.78	-0.0817	-0.0128	0.0169
664	SLE FR 2	0.71	0.31	53.78	-0.0814	-0.0128	0.017
664	SLE FR 3	0.71	0.3	53.93	-0.0819	-0.0129	0.0169
664	SLE FR 4	0.72	0.34	55.77	-0.0845	-0.013	0.0176
664	SLE FR 5	0.72	0.32	55.92	-0.085	-0.0131	0.0176
664	SLE FR 6	0.73	0.34	57.09	-0.0868	-0.0132	0.018
664	SLE QP 1	0.71	0.3	53.78	-0.0817	-0.0128	0.0169
664	SLE QP 2	0.72	0.32	55.77	-0.0847	-0.013	0.0175
664	SLD 1	4.98	0.82	49.22	-0.0542	0.0096	0.0144
664	SLD 2	4.97	1.22	49.21	-0.052	0.0096	0.0195
664	SLD 3	5.07	-1.01	49.46	-0.0836	0.0089	0.004
664	SLD 4	5.07	-0.61	49.45	-0.0814	0.0089	0.0091
664	SLD 5	1.85	3.17	53.44	-0.0314	-0.0052	0.0314
664	SLD 6	1.85	3.43	53.44	-0.03	-0.0052	0.0347
664	SLD 7	2.17	-2.92	54.24	-0.1293	-0.0075	-0.0031
664	SLD 8	2.17	-2.66	54.24	-0.1279	-0.0075	0.0002
664	SLD 9	-0.73	3.3	57.3	-0.0416	-0.0186	0.0348
664	SLD 10	-0.73	3.56	57.3	-0.0402	-0.0186	0.0381
664	SLD 11	-0.41	-2.79	58.1	-0.1395	-0.0208	0.0004
664	SLD 12	-0.41	-2.53	58.1	-0.1381	-0.0208	0.0037
664	SLD 13	-3.63	1.25	62.09	-0.0881	-0.035	0.0259
664	SLD 14	-3.64	1.65	62.08	-0.0859	-0.035	0.031
664	SLD 15	-3.54	-0.57	62.33	-0.1175	-0.0357	0.0156
664	SLD 16	-3.54	-0.18	62.32	-0.1153	-0.0356	0.0207
664	SLV 1	10.68	1.43	40.44	-0.0138	0.0399	0.0098
664	SLV 2	10.67	2.36	40.42	-0.0087	0.0399	0.0217
664	SLV 3	10.9	-2.73	41	-0.0806	0.0383	-0.0136
664	SLV 4	10.9	-1.8	40.98	-0.0755	0.0384	-0.0018
664	SLV 5	3.37	6.8	50.32	0.037	0.0052	0.0488
664	SLV 6	3.36	7.4	50.32	0.0402	0.0052	0.0564
664	SLV 7	4.11	-7.06	52.19	-0.1857	0	-0.0294
664	SLV 8	4.11	-6.46	52.18	-0.1824	0	-0.0218
664	SLV 9	-2.67	7.11	59.36	0.0129	-0.0261	0.0569
664	SLV 10	-2.68	7.7	59.35	0.0162	-0.0261	0.0645
664	SLV 11	-1.93	-6.75	61.22	-0.2097	-0.0313	-0.0213
664	SLV 12	-1.93	-6.16	61.21	-0.2064	-0.0313	-0.0138
664	SLV 13	-9.46	2.44	70.56	-0.094	-0.0644	0.0368
664	SLV 14	-9.47	3.37	70.54	-0.0889	-0.0644	0.0487
664	SLV 15	-9.24	-1.71	71.11	-0.1608	-0.066	0.0133
664	SLV 16	-9.24	-0.79	71.1	-0.1557	-0.0659	0.0252
664	CRTFP Ux+	0	0	0	0	0	0
664	CRTFP Ux-	0	0	0	0	0	0
665	SLU 1	0.71	0.36	52.27	-0.078	-0.011	0.0168
665	SLU 2	0.7	0.46	52.28	-0.0765	-0.011	0.0176
665	SLU 3	0.72	0.37	53.28	-0.0793	-0.0113	0.0171
665	SLU 4	0.72	0.44	53.28	-0.0784	-0.0113	0.0176
665	SLU 5	0.71	0.46	52.85	-0.0774	-0.0112	0.0178
665	SLU 6	0.74	0.37	53.85	-0.0801	-0.0115	0.0174
665	SLU 7	0.73	0.44	53.85	-0.0792	-0.0115	0.0179
665	SLU 8	0.73	0.36	53.41	-0.0798	-0.0114	0.0173
665	SLU 9	0.73	0.42	53.41	-0.0788	-0.0114	0.0178
665	SLU 10	0.75	0.56	59.25	-0.0872	-0.0113	0.0199
665	SLU 11	0.77	0.47	60.25	-0.0899	-0.0116	0.0195
665	SLU 12	0.77	0.54	60.26	-0.089	-0.0116	0.02
665	SLU 13	0.76	0.56	59.82	-0.088	-0.0115	0.0202
665	SLU 14	0.78	0.48	60.82	-0.0908	-0.0118	0.0198

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
665	SLU 15	0.78	0.54	60.83	-0.0899	-0.0118	0.0202
665	SLU 16	0.77	0.46	60.38	-0.0904	-0.0117	0.0197
665	SLU 17	0.77	0.52	60.39	-0.0895	-0.0117	0.0202
665	SLU 18	0.77	0.5	62.23	-0.0932	-0.0115	0.0201
665	SLU 19	0.77	0.56	62.24	-0.0923	-0.0115	0.0206
665	SLU 20	0.78	0.5	62.8	-0.0941	-0.0117	0.0204
665	SLU 21	0.78	0.57	62.81	-0.0932	-0.0116	0.0209
665	SLU 22	0.76	0.45	58.92	-0.0864	-0.0116	0.0185
665	SLU 23	0.76	0.55	58.93	-0.0849	-0.0116	0.0193
665	SLU 24	0.78	0.46	59.93	-0.0877	-0.0119	0.0189
665	SLU 25	0.78	0.53	59.93	-0.0868	-0.0119	0.0194
665	SLU 26	0.77	0.55	59.5	-0.0858	-0.0118	0.0196
665	SLU 27	0.79	0.46	60.5	-0.0885	-0.0121	0.0192
665	SLU 28	0.79	0.53	60.5	-0.0876	-0.0121	0.0196
665	SLU 29	0.79	0.45	60.06	-0.0882	-0.012	0.0191
665	SLU 30	0.78	0.51	60.06	-0.0872	-0.012	0.0195
665	SLU 31	0.8	0.65	65.9	-0.0956	-0.0119	0.0217
665	SLU 32	0.83	0.56	66.9	-0.0983	-0.0122	0.0212
665	SLU 33	0.82	0.63	66.91	-0.0974	-0.0122	0.0217
665	SLU 34	0.82	0.65	66.47	-0.0964	-0.0121	0.0219
665	SLU 35	0.84	0.56	67.47	-0.0992	-0.0124	0.0215
665	SLU 36	0.84	0.63	67.48	-0.0983	-0.0124	0.022
665	SLU 37	0.83	0.55	67.03	-0.0988	-0.0123	0.0214
665	SLU 38	0.83	0.61	67.04	-0.0979	-0.0123	0.0219
665	SLU 39	0.83	0.59	68.88	-0.1016	-0.0121	0.0219
665	SLU 40	0.82	0.65	68.89	-0.1007	-0.0121	0.0223
665	SLU 41	0.84	0.59	69.45	-0.1025	-0.0123	0.0221
665	SLU 42	0.84	0.66	69.46	-0.1016	-0.0122	0.0226
665	SLU 43	0.9	0.44	65.67	-0.0986	-0.0141	0.0212
665	SLU 44	0.9	0.54	65.68	-0.0971	-0.0141	0.022
665	SLU 45	0.92	0.45	66.67	-0.0998	-0.0144	0.0216
665	SLU 46	0.91	0.51	66.68	-0.0989	-0.0144	0.022
665	SLU 47	0.91	0.54	66.25	-0.0979	-0.0143	0.0223
665	SLU 48	0.93	0.45	67.25	-0.1007	-0.0146	0.0219
665	SLU 49	0.93	0.51	67.25	-0.0998	-0.0146	0.0223
665	SLU 50	0.92	0.44	66.81	-0.1003	-0.0145	0.0218
665	SLU 51	0.92	0.5	66.81	-0.0994	-0.0145	0.0222
665	SLU 52	0.94	0.64	72.65	-0.1077	-0.0144	0.0243
665	SLU 53	0.96	0.55	73.65	-0.1104	-0.0147	0.0239
665	SLU 54	0.96	0.61	73.66	-0.1095	-0.0147	0.0244
665	SLU 55	0.95	0.64	73.22	-0.1085	-0.0146	0.0246
665	SLU 56	0.97	0.55	74.22	-0.1113	-0.0149	0.0242
665	SLU 57	0.97	0.61	74.23	-0.1104	-0.0149	0.0247
665	SLU 58	0.96	0.54	73.78	-0.1109	-0.0148	0.0241
665	SLU 59	0.96	0.6	73.79	-0.11	-0.0148	0.0246
665	SLU 60	0.96	0.58	75.63	-0.1138	-0.0146	0.0246
665	SLU 61	0.96	0.64	75.64	-0.1128	-0.0146	0.025
665	SLU 62	0.97	0.58	76.2	-0.1146	-0.0148	0.0248
665	SLU 63	0.97	0.64	76.21	-0.1137	-0.0147	0.0253
665	SLU 64	0.96	0.53	72.32	-0.107	-0.0147	0.0229
665	SLU 65	0.95	0.63	72.33	-0.1055	-0.0147	0.0237
665	SLU 66	0.97	0.54	73.33	-0.1082	-0.015	0.0233
665	SLU 67	0.97	0.6	73.33	-0.1073	-0.015	0.0238
665	SLU 68	0.96	0.63	72.9	-0.1063	-0.0149	0.024
665	SLU 69	0.99	0.54	73.9	-0.1091	-0.0152	0.0236
665	SLU 70	0.98	0.6	73.9	-0.1082	-0.0152	0.0241
665	SLU 71	0.98	0.53	73.46	-0.1087	-0.0151	0.0235
665	SLU 72	0.98	0.59	73.46	-0.1078	-0.0151	0.024
665	SLU 73	1	0.73	79.3	-0.1161	-0.015	0.0261
665	SLU 74	1.02	0.64	80.3	-0.1188	-0.0153	0.0257
665	SLU 75	1.02	0.7	80.31	-0.1179	-0.0153	0.0261
665	SLU 76	1.01	0.73	79.87	-0.1169	-0.0152	0.0264
665	SLU 77	1.03	0.64	80.87	-0.1197	-0.0155	0.0259
665	SLU 78	1.03	0.7	80.88	-0.1188	-0.0155	0.0264
665	SLU 79	1.02	0.63	80.43	-0.1193	-0.0154	0.0259
665	SLU 80	1.02	0.69	80.44	-0.1184	-0.0154	0.0263
665	SLU 81	1.02	0.67	82.28	-0.1222	-0.0152	0.0263
665	SLU 82	1.02	0.73	82.29	-0.1212	-0.0152	0.0268
665	SLU 83	1.03	0.67	82.85	-0.123	-0.0154	0.0266
665	SLU 84	1.03	0.73	82.86	-0.1221	-0.0153	0.0271
665	SLE RA 1	0.72	0.39	54.17	-0.0804	-0.0112	0.0173
665	SLE RA 2	0.72	0.45	54.17	-0.0794	-0.0112	0.0178
665	SLE RA 3	0.73	0.39	54.84	-0.0813	-0.0114	0.0175
665	SLE RA 4	0.73	0.44	54.84	-0.0807	-0.0114	0.0178
665	SLE RA 5	0.73	0.45	54.55	-0.08	-0.0113	0.018
665	SLE RA 6	0.74	0.4	55.22	-0.0818	-0.0115	0.0177
665	SLE RA 7	0.74	0.44	55.22	-0.0812	-0.0115	0.018
665	SLE RA 8	0.74	0.39	54.93	-0.0816	-0.0114	0.0176
665	SLE RA 9	0.74	0.43	54.93	-0.081	-0.0114	0.018
665	SLE RA 10	0.75	0.52	58.82	-0.0865	-0.0114	0.0194
665	SLE RA 11	0.76	0.46	59.49	-0.0884	-0.0116	0.0191
665	SLE RA 12	0.76	0.5	59.49	-0.0877	-0.0116	0.0194
665	SLE RA 13	0.76	0.52	59.2	-0.0871	-0.0115	0.0195
665	SLE RA 14	0.77	0.46	59.87	-0.0889	-0.0117	0.0193
665	SLE RA 15	0.77	0.5	59.87	-0.0883	-0.0117	0.0196
665	SLE RA 16	0.77	0.45	59.58	-0.0887	-0.0116	0.0192
665	SLE RA 17	0.77	0.49	59.58	-0.0881	-0.0116	0.0195
665	SLE RA 18	0.76	0.48	60.81	-0.0906	-0.0115	0.0195
665	SLE RA 19	0.76	0.52	60.81	-0.09	-0.0115	0.0198
665	SLE RA 20	0.77	0.48	61.19	-0.0911	-0.0116	0.0197
665	SLE RA 21	0.77	0.52	61.19	-0.0905	-0.0116	0.02

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
665	SLE FR 1	0.72	0.39	54.17	-0.0804	-0.0112	0.0173
665	SLE FR 2	0.72	0.4	54.17	-0.0802	-0.0112	0.0174
665	SLE FR 3	0.73	0.39	54.32	-0.0807	-0.0112	0.0173
665	SLE FR 4	0.73	0.43	56.16	-0.0833	-0.0113	0.018
665	SLE FR 5	0.74	0.41	56.31	-0.0837	-0.0113	0.018
665	SLE FR 6	0.74	0.43	57.49	-0.0855	-0.0113	0.0184
665	SLE QP 1	0.72	0.39	54.17	-0.0804	-0.0112	0.0173
665	SLE QP 2	0.73	0.41	56.16	-0.0835	-0.0113	0.0179
665	SLD 1	4.99	0.9	48.89	-0.0537	0.0114	0.0167
665	SLD 2	4.99	1.33	48.89	-0.0517	0.0114	0.0221
665	SLD 3	5.08	-0.98	49.13	-0.0808	0.0106	0.0046
665	SLD 4	5.08	-0.55	49.13	-0.0789	0.0106	0.0101
665	SLD 5	1.87	3.34	53.62	-0.0336	-0.0032	0.0349
665	SLD 6	1.86	3.62	53.62	-0.0324	-0.0032	0.0384
665	SLD 7	2.19	-2.93	54.41	-0.1243	-0.006	-0.0053
665	SLD 8	2.18	-2.66	54.41	-0.123	-0.006	-0.0017
665	SLD 9	-0.71	3.49	57.91	-0.044	-0.0166	0.0376
665	SLD 10	-0.72	3.76	57.91	-0.0427	-0.0166	0.0412
665	SLD 11	-0.4	-2.79	58.7	-0.1346	-0.0193	-0.0025
665	SLD 12	-0.4	-2.51	58.7	-0.1333	-0.0193	0.001
665	SLD 13	-3.61	1.38	63.19	-0.0881	-0.0331	0.0258
665	SLD 14	-3.62	1.81	63.19	-0.0861	-0.0331	0.0313
665	SLD 15	-3.52	-0.5	63.43	-0.1152	-0.0339	0.0138
665	SLD 16	-3.52	-0.08	63.43	-0.1133	-0.0339	0.0192
665	SLV 1	10.68	1.5	39.16	-0.0143	0.0417	0.0146
665	SLV 2	10.68	2.49	39.15	-0.0098	0.0417	0.0272
665	SLV 3	10.91	-2.78	39.72	-0.0761	0.0398	-0.0128
665	SLV 4	10.9	-1.79	39.7	-0.0715	0.0398	-0.0001
665	SLV 5	3.38	7.07	50.22	0.0302	0.0075	0.0562
665	SLV 6	3.38	7.71	50.21	0.0331	0.0075	0.0643
665	SLV 7	4.13	-7.21	52.07	-0.1757	0.0011	-0.0349
665	SLV 8	4.12	-6.58	52.06	-0.1729	0.0012	-0.0268
665	SLV 9	-2.65	7.41	60.25	0.0059	-0.0237	0.0627
665	SLV 10	-2.66	8.04	60.25	0.0088	-0.0237	0.0708
665	SLV 11	-1.91	-6.88	62.11	-0.2001	-0.0301	-0.0284
665	SLV 12	-1.91	-6.25	62.1	-0.1972	-0.0301	-0.0204
665	SLV 13	-9.43	2.62	72.62	-0.0954	-0.0624	0.036
665	SLV 14	-9.44	3.61	72.6	-0.0909	-0.0624	0.0486
665	SLV 15	-9.21	-1.66	73.17	-0.1572	-0.0643	0.0086
665	SLV 16	-9.21	-0.67	73.16	-0.1527	-0.0643	0.0213
665	CRTFP Ux+	0	0	0	0	0	0
665	CRTFP Ux-	0	0	0	0	0	0
666	SLU 1	0.72	0.45	52.6	-0.077	-0.0099	0.0166
666	SLU 2	0.72	0.55	52.61	-0.0756	-0.0099	0.0174
666	SLU 3	0.74	0.46	53.62	-0.0782	-0.0102	0.017
666	SLU 4	0.74	0.53	53.62	-0.0774	-0.0102	0.0175
666	SLU 5	0.73	0.56	53.19	-0.0764	-0.01	0.0177
666	SLU 6	0.75	0.46	54.2	-0.0791	-0.0104	0.0172
666	SLU 7	0.75	0.53	54.2	-0.0782	-0.0103	0.0177
666	SLU 8	0.74	0.45	53.75	-0.0787	-0.0103	0.0171
666	SLU 9	0.74	0.52	53.76	-0.0779	-0.0102	0.0176
666	SLU 10	0.76	0.67	59.59	-0.086	-0.0099	0.0198
666	SLU 11	0.78	0.58	60.6	-0.0887	-0.0102	0.0193
666	SLU 12	0.78	0.64	60.6	-0.0879	-0.0102	0.0198
666	SLU 13	0.77	0.67	60.17	-0.0869	-0.0101	0.0201
666	SLU 14	0.8	0.58	61.18	-0.0896	-0.0104	0.0196
666	SLU 15	0.79	0.64	61.18	-0.0887	-0.0104	0.0201
666	SLU 16	0.79	0.56	60.74	-0.0892	-0.0103	0.0195
666	SLU 17	0.79	0.63	60.74	-0.0883	-0.0103	0.02
666	SLU 18	0.78	0.61	62.57	-0.092	-0.0099	0.02
666	SLU 19	0.78	0.67	62.58	-0.0911	-0.0099	0.0205
666	SLU 20	0.8	0.61	63.15	-0.0928	-0.0101	0.0202
666	SLU 21	0.79	0.67	63.16	-0.092	-0.0101	0.0207
666	SLU 22	0.78	0.55	59.27	-0.0854	-0.0102	0.0184
666	SLU 23	0.78	0.65	59.28	-0.0839	-0.0102	0.0192
666	SLU 24	0.8	0.56	60.28	-0.0866	-0.0105	0.0188
666	SLU 25	0.8	0.63	60.29	-0.0857	-0.0105	0.0193
666	SLU 26	0.79	0.65	59.85	-0.0848	-0.0104	0.0195
666	SLU 27	0.81	0.56	60.86	-0.0875	-0.0107	0.019
666	SLU 28	0.81	0.63	60.87	-0.0866	-0.0107	0.0195
666	SLU 29	0.8	0.55	60.42	-0.0871	-0.0106	0.0189
666	SLU 30	0.8	0.61	60.43	-0.0862	-0.0106	0.0194
666	SLU 31	0.82	0.76	66.26	-0.0944	-0.0103	0.0216
666	SLU 32	0.84	0.67	67.27	-0.0971	-0.0106	0.0211
666	SLU 33	0.84	0.74	67.27	-0.0962	-0.0105	0.0216
666	SLU 34	0.83	0.77	66.83	-0.0953	-0.0104	0.0219
666	SLU 35	0.85	0.68	67.84	-0.0979	-0.0107	0.0214
666	SLU 36	0.85	0.74	67.85	-0.0971	-0.0107	0.0219
666	SLU 37	0.85	0.66	67.4	-0.0976	-0.0106	0.0213
666	SLU 38	0.85	0.73	67.41	-0.0967	-0.0106	0.0218
666	SLU 39	0.84	0.71	69.24	-0.1003	-0.0103	0.0218
666	SLU 40	0.84	0.77	69.24	-0.0995	-0.0103	0.0223
666	SLU 41	0.85	0.71	69.82	-0.1012	-0.0105	0.022
666	SLU 42	0.85	0.77	69.82	-0.1003	-0.0105	0.0225
666	SLU 43	0.92	0.55	66.1	-0.0972	-0.0127	0.021
666	SLU 44	0.91	0.65	66.1	-0.0958	-0.0127	0.0218
666	SLU 45	0.94	0.56	67.11	-0.0985	-0.013	0.0213
666	SLU 46	0.93	0.63	67.12	-0.0976	-0.013	0.0218
666	SLU 47	0.93	0.66	66.68	-0.0967	-0.0129	0.0221
666	SLU 48	0.95	0.57	67.69	-0.0993	-0.0132	0.0216
666	SLU 49	0.95	0.63	67.7	-0.0985	-0.0132	0.0221

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
666	SLU 50	0.94	0.55	67.25	-0.099	-0.0131	0.0215
666	SLU 51	0.94	0.62	67.25	-0.0981	-0.0131	0.022
666	SLU 52	0.96	0.77	73.09	-0.1063	-0.0127	0.0242
666	SLU 53	0.98	0.68	74.09	-0.109	-0.013	0.0237
666	SLU 54	0.98	0.74	74.1	-0.1081	-0.013	0.0242
666	SLU 55	0.97	0.77	73.66	-0.1071	-0.0129	0.0244
666	SLU 56	0.99	0.68	74.67	-0.1098	-0.0132	0.024
666	SLU 57	0.99	0.74	74.68	-0.109	-0.0132	0.0245
666	SLU 58	0.98	0.66	74.23	-0.1094	-0.0131	0.0239
666	SLU 59	0.98	0.73	74.24	-0.1086	-0.0131	0.0244
666	SLU 60	0.98	0.71	76.07	-0.1122	-0.0128	0.0243
666	SLU 61	0.98	0.77	76.07	-0.1113	-0.0128	0.0248
666	SLU 62	0.99	0.71	76.65	-0.1131	-0.013	0.0246
666	SLU 63	0.99	0.77	76.65	-0.1122	-0.013	0.0251
666	SLU 64	0.97	0.65	72.76	-0.1056	-0.0131	0.0228
666	SLU 65	0.97	0.75	72.77	-0.1042	-0.0131	0.0236
666	SLU 66	0.99	0.66	73.78	-0.1068	-0.0134	0.0231
666	SLU 67	0.99	0.73	73.78	-0.106	-0.0134	0.0236
666	SLU 68	0.98	0.75	73.35	-0.105	-0.0132	0.0239
666	SLU 69	1.01	0.66	74.36	-0.1077	-0.0136	0.0234
666	SLU 70	1	0.73	74.36	-0.1068	-0.0135	0.0239
666	SLU 71	1	0.65	73.92	-0.1073	-0.0135	0.0233
666	SLU 72	1	0.71	73.92	-0.1065	-0.0134	0.0238
666	SLU 73	1.02	0.87	79.75	-0.1146	-0.0131	0.0259
666	SLU 74	1.04	0.77	80.76	-0.1173	-0.0134	0.0255
666	SLU 75	1.04	0.84	80.77	-0.1164	-0.0134	0.026
666	SLU 76	1.03	0.87	80.33	-0.1155	-0.0133	0.0262
666	SLU 77	1.05	0.78	81.34	-0.1182	-0.0136	0.0258
666	SLU 78	1.05	0.84	81.34	-0.1173	-0.0136	0.0263
666	SLU 79	1.04	0.76	80.9	-0.1178	-0.0135	0.0257
666	SLU 80	1.04	0.83	80.9	-0.1169	-0.0135	0.0262
666	SLU 81	1.04	0.81	82.73	-0.1206	-0.0131	0.0261
666	SLU 82	1.04	0.87	82.74	-0.1197	-0.0131	0.0266
666	SLU 83	1.05	0.81	83.31	-0.1214	-0.0133	0.0264
666	SLU 84	1.05	0.87	83.32	-0.1206	-0.0133	0.0269
666	SLE RA 1	0.74	0.47	54.51	-0.0794	-0.01	0.0171
666	SLE RA 2	0.74	0.55	54.51	-0.0784	-0.01	0.0177
666	SLE RA 3	0.75	0.49	55.18	-0.0802	-0.0102	0.0174
666	SLE RA 4	0.75	0.53	55.19	-0.0796	-0.0102	0.0177
666	SLE RA 5	0.74	0.55	54.9	-0.079	-0.0101	0.0178
666	SLE RA 6	0.76	0.49	55.57	-0.0808	-0.0103	0.0175
666	SLE RA 7	0.76	0.53	55.57	-0.0802	-0.0103	0.0179
666	SLE RA 8	0.75	0.48	55.27	-0.0805	-0.0102	0.0175
666	SLE RA 9	0.75	0.52	55.28	-0.08	-0.0102	0.0178
666	SLE RA 10	0.76	0.62	59.17	-0.0854	-0.01	0.0192
666	SLE RA 11	0.78	0.56	59.84	-0.0872	-0.0102	0.0189
666	SLE RA 12	0.78	0.6	59.84	-0.0866	-0.0102	0.0193
666	SLE RA 13	0.77	0.62	59.55	-0.086	-0.0101	0.0194
666	SLE RA 14	0.79	0.56	60.22	-0.0878	-0.0103	0.0191
666	SLE RA 15	0.79	0.6	60.23	-0.0872	-0.0103	0.0194
666	SLE RA 16	0.78	0.55	59.93	-0.0875	-0.0103	0.019
666	SLE RA 17	0.78	0.6	59.93	-0.0869	-0.0102	0.0194
666	SLE RA 18	0.78	0.58	61.15	-0.0894	-0.01	0.0194
666	SLE RA 19	0.78	0.62	61.16	-0.0888	-0.01	0.0197
666	SLE RA 20	0.79	0.58	61.54	-0.0899	-0.0101	0.0195
666	SLE RA 21	0.79	0.63	61.54	-0.0894	-0.0101	0.0199
666	SLE FR 1	0.74	0.47	54.51	-0.0794	-0.01	0.0171
666	SLE FR 2	0.74	0.49	54.51	-0.0792	-0.01	0.0172
666	SLE FR 3	0.74	0.48	54.66	-0.0796	-0.01	0.0172
666	SLE FR 4	0.75	0.52	56.5	-0.0822	-0.01	0.0179
666	SLE FR 5	0.75	0.51	56.65	-0.0826	-0.01	0.0179
666	SLE FR 6	0.76	0.53	57.83	-0.0844	-0.01	0.0182
666	SLE QP 1	0.74	0.47	54.51	-0.0794	-0.01	0.0171
666	SLE QP 2	0.75	0.51	56.5	-0.0824	-0.01	0.0178
666	SLD 1	5	1	48.52	-0.0533	0.0127	0.0186
666	SLD 2	5	1.45	48.52	-0.0516	0.0127	0.0243
666	SLD 3	5.09	-0.95	48.76	-0.0782	0.0117	0.0052
666	SLD 4	5.09	-0.5	48.75	-0.0765	0.0117	0.0109
666	SLD 5	1.88	3.53	53.75	-0.0361	-0.0017	0.0374
666	SLD 6	1.88	3.82	53.75	-0.035	-0.0017	0.0411
666	SLD 7	2.2	-2.96	54.53	-0.1192	-0.005	-0.0073
666	SLD 8	2.2	-2.67	54.53	-0.1181	-0.005	-0.0036
666	SLD 9	-0.7	3.68	58.47	-0.0466	-0.015	0.0392
666	SLD 10	-0.7	3.98	58.47	-0.0455	-0.015	0.0429
666	SLD 11	-0.38	-2.81	59.25	-0.1297	-0.0183	-0.0055
666	SLD 12	-0.38	-2.51	59.25	-0.1286	-0.0183	-0.0018
666	SLD 13	-3.59	1.51	64.25	-0.0883	-0.0317	0.0247
666	SLD 14	-3.59	1.97	64.24	-0.0866	-0.0317	0.0304
666	SLD 15	-3.5	-0.44	64.48	-0.1132	-0.0327	0.0113
666	SLD 16	-3.5	0.02	64.48	-0.1115	-0.0327	0.017
666	SLV 1	10.69	1.59	37.84	-0.0148	0.0431	0.0192
666	SLV 2	10.68	2.65	37.82	-0.0109	0.0432	0.0326
666	SLV 3	10.91	-2.84	38.39	-0.0715	0.0408	-0.0112
666	SLV 4	10.9	-1.78	38.37	-0.0676	0.0409	0.0021
666	SLV 5	3.39	7.38	50.07	0.0232	0.0094	0.0621
666	SLV 6	3.39	8.05	50.06	0.0257	0.0095	0.0706
666	SLV 7	4.14	-7.4	51.9	-0.1657	0.0017	-0.0393
666	SLV 8	4.13	-6.72	51.89	-0.1632	0.0018	-0.0308
666	SLV 9	-2.64	7.74	61.11	-0.0015	-0.0218	0.0664
666	SLV 10	-2.64	8.41	61.1	0.001	-0.0217	0.0749
666	SLV 11	-1.89	-7.04	62.94	-0.1904	-0.0295	-0.035

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
666	SLV 12	-1.89	-6.36	62.93	-0.1879	-0.0294	-0.0265
666	SLV 13	-9.41	2.8	74.63	-0.0972	-0.0609	0.0334
666	SLV 14	-9.41	3.85	74.61	-0.0932	-0.0608	0.0468
666	SLV 15	-9.18	-1.64	75.18	-0.1539	-0.0632	0.003
666	SLV 16	-9.19	-0.58	75.16	-0.1499	-0.0631	0.0164
666	CRTFP Ux+	0	0	0	0	0	0
666	CRTFP Ux-	0	0	0	0	0	0
667	SLU 1	0.73	0.53	52.91	-0.0761	-0.0097	0.0158
667	SLU 2	0.73	0.64	52.92	-0.0747	-0.0097	0.0167
667	SLU 3	0.75	0.55	53.94	-0.0774	-0.01	0.0162
667	SLU 4	0.75	0.62	53.95	-0.0765	-0.01	0.0167
667	SLU 5	0.74	0.65	53.5	-0.0756	-0.0099	0.0169
667	SLU 6	0.77	0.55	54.52	-0.0782	-0.0102	0.0165
667	SLU 7	0.76	0.62	54.53	-0.0774	-0.0102	0.017
667	SLU 8	0.76	0.54	54.08	-0.0778	-0.0101	0.0164
667	SLU 9	0.76	0.61	54.08	-0.077	-0.0101	0.0169
667	SLU 10	0.78	0.77	59.9	-0.0851	-0.0096	0.019
667	SLU 11	0.8	0.67	60.92	-0.0877	-0.0099	0.0185
667	SLU 12	0.8	0.74	60.92	-0.0869	-0.0099	0.019
667	SLU 13	0.79	0.77	60.48	-0.0859	-0.0098	0.0192
667	SLU 14	0.81	0.68	61.5	-0.0886	-0.0101	0.0187
667	SLU 15	0.81	0.74	61.51	-0.0877	-0.0101	0.0192
667	SLU 16	0.8	0.66	61.06	-0.0882	-0.01	0.0186
667	SLU 17	0.8	0.73	61.06	-0.0874	-0.01	0.0191
667	SLU 18	0.8	0.71	62.88	-0.0909	-0.0096	0.0191
667	SLU 19	0.8	0.78	62.89	-0.09	-0.0096	0.0196
667	SLU 20	0.81	0.71	63.47	-0.0917	-0.0098	0.0194
667	SLU 21	0.81	0.78	63.47	-0.0909	-0.0098	0.0199
667	SLU 22	0.79	0.64	59.59	-0.0844	-0.01	0.0176
667	SLU 23	0.79	0.75	59.6	-0.0831	-0.01	0.0184
667	SLU 24	0.81	0.66	60.62	-0.0857	-0.0103	0.018
667	SLU 25	0.81	0.72	60.62	-0.0849	-0.0103	0.0185
667	SLU 26	0.8	0.75	60.18	-0.0839	-0.0102	0.0187
667	SLU 27	0.82	0.66	61.2	-0.0866	-0.0105	0.0182
667	SLU 28	0.82	0.73	61.2	-0.0857	-0.0105	0.0187
667	SLU 29	0.82	0.65	60.75	-0.0862	-0.0104	0.0181
667	SLU 30	0.82	0.71	60.76	-0.0854	-0.0104	0.0186
667	SLU 31	0.84	0.88	66.58	-0.0934	-0.0099	0.0207
667	SLU 32	0.86	0.78	67.59	-0.096	-0.0102	0.0203
667	SLU 33	0.86	0.85	67.6	-0.0952	-0.0102	0.0208
667	SLU 34	0.85	0.88	67.16	-0.0943	-0.0101	0.021
667	SLU 35	0.87	0.79	68.18	-0.0969	-0.0104	0.0205
667	SLU 36	0.87	0.85	68.18	-0.0961	-0.0104	0.021
667	SLU 37	0.86	0.77	67.73	-0.0965	-0.0103	0.0204
667	SLU 38	0.86	0.84	67.74	-0.0957	-0.0103	0.0209
667	SLU 39	0.86	0.82	69.56	-0.0992	-0.0099	0.0209
667	SLU 40	0.86	0.88	69.56	-0.0984	-0.0098	0.0214
667	SLU 41	0.87	0.82	70.14	-0.1001	-0.0101	0.0211
667	SLU 42	0.87	0.89	70.15	-0.0992	-0.01	0.0216
667	SLU 43	0.93	0.65	66.5	-0.0961	-0.0126	0.02
667	SLU 44	0.93	0.76	66.51	-0.0947	-0.0125	0.0208
667	SLU 45	0.95	0.67	67.53	-0.0973	-0.0129	0.0204
667	SLU 46	0.95	0.74	67.53	-0.0965	-0.0128	0.0209
667	SLU 47	0.94	0.77	67.09	-0.0956	-0.0127	0.0211
667	SLU 48	0.96	0.67	68.11	-0.0982	-0.013	0.0206
667	SLU 49	0.96	0.74	68.11	-0.0974	-0.013	0.0211
667	SLU 50	0.96	0.66	67.66	-0.0978	-0.0129	0.0205
667	SLU 51	0.96	0.73	67.67	-0.097	-0.0129	0.021
667	SLU 52	0.98	0.89	73.49	-0.105	-0.0124	0.0231
667	SLU 53	1	0.8	74.5	-0.1077	-0.0128	0.0226
667	SLU 54	1	0.86	74.51	-0.1069	-0.0127	0.0231
667	SLU 55	0.99	0.89	74.07	-0.1059	-0.0126	0.0234
667	SLU 56	1.01	0.8	75.09	-0.1085	-0.013	0.0229
667	SLU 57	1.01	0.87	75.09	-0.1077	-0.0129	0.0234
667	SLU 58	1	0.79	74.64	-0.1082	-0.0129	0.0228
667	SLU 59	1	0.85	74.65	-0.1073	-0.0128	0.0233
667	SLU 60	1	0.83	76.47	-0.1108	-0.0124	0.0232
667	SLU 61	1	0.9	76.47	-0.11	-0.0124	0.0237
667	SLU 62	1.01	0.83	77.05	-0.1117	-0.0126	0.0235
667	SLU 63	1.01	0.9	77.06	-0.1109	-0.0126	0.024
667	SLU 64	0.99	0.76	73.17	-0.1044	-0.0128	0.0218
667	SLU 65	0.99	0.87	73.18	-0.103	-0.0128	0.0226
667	SLU 66	1.01	0.78	74.2	-0.1057	-0.0131	0.0221
667	SLU 67	1.01	0.85	74.21	-0.1048	-0.0131	0.0226
667	SLU 68	1	0.88	73.76	-0.1039	-0.013	0.0229
667	SLU 69	1.02	0.78	74.78	-0.1065	-0.0133	0.0224
667	SLU 70	1.02	0.85	74.79	-0.1057	-0.0133	0.0229
667	SLU 71	1.02	0.77	74.34	-0.1061	-0.0132	0.0223
667	SLU 72	1.02	0.84	74.34	-0.1053	-0.0132	0.0228
667	SLU 73	1.04	1	80.16	-0.1134	-0.0127	0.0249
667	SLU 74	1.06	0.9	81.18	-0.116	-0.013	0.0244
667	SLU 75	1.06	0.97	81.19	-0.1152	-0.013	0.0249
667	SLU 76	1.05	1	80.74	-0.1142	-0.0129	0.0251
667	SLU 77	1.07	0.91	81.76	-0.1169	-0.0132	0.0247
667	SLU 78	1.07	0.97	81.77	-0.1161	-0.0132	0.0252
667	SLU 79	1.06	0.89	81.32	-0.1165	-0.0131	0.0245
667	SLU 80	1.06	0.96	81.32	-0.1157	-0.0131	0.025
667	SLU 81	1.06	0.94	83.14	-0.1192	-0.0127	0.025
667	SLU 82	1.06	1.01	83.15	-0.1184	-0.0127	0.0255
667	SLU 83	1.07	0.94	83.73	-0.12	-0.0129	0.0253
667	SLU 84	1.07	1.01	83.73	-0.1192	-0.0129	0.0258

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
667	SLE RA 1	0.75	0.56	54.82	-0.0785	-0.0098	0.0164
667	SLE RA 2	0.75	0.64	54.83	-0.0776	-0.0098	0.0169
667	SLE RA 3	0.76	0.57	55.51	-0.0793	-0.01	0.0166
667	SLE RA 4	0.76	0.62	55.51	-0.0788	-0.01	0.0169
667	SLE RA 5	0.76	0.64	55.21	-0.0782	-0.0099	0.0171
667	SLE RA 6	0.77	0.58	55.89	-0.0799	-0.0101	0.0168
667	SLE RA 7	0.77	0.62	55.9	-0.0794	-0.0101	0.0171
667	SLE RA 8	0.77	0.57	55.6	-0.0796	-0.0101	0.0167
667	SLE RA 9	0.77	0.61	55.6	-0.0791	-0.01	0.017
667	SLE RA 10	0.78	0.72	59.48	-0.0845	-0.0097	0.0184
667	SLE RA 11	0.79	0.66	60.16	-0.0862	-0.0099	0.0181
667	SLE RA 12	0.79	0.7	60.16	-0.0857	-0.0099	0.0184
667	SLE RA 13	0.79	0.72	59.87	-0.085	-0.0099	0.0186
667	SLE RA 14	0.8	0.66	60.55	-0.0868	-0.0101	0.0183
667	SLE RA 15	0.8	0.7	60.55	-0.0862	-0.0101	0.0186
667	SLE RA 16	0.8	0.65	60.25	-0.0865	-0.01	0.0182
667	SLE RA 17	0.8	0.69	60.25	-0.086	-0.01	0.0185
667	SLE RA 18	0.79	0.68	61.47	-0.0883	-0.0097	0.0185
667	SLE RA 19	0.79	0.73	61.47	-0.0878	-0.0097	0.0189
667	SLE RA 20	0.8	0.68	61.86	-0.0889	-0.0098	0.0187
667	SLE RA 21	0.8	0.73	61.86	-0.0884	-0.0098	0.019
667	SLE FR 1	0.75	0.56	54.82	-0.0785	-0.0098	0.0164
667	SLE FR 2	0.75	0.58	54.82	-0.0783	-0.0098	0.0165
667	SLE FR 3	0.75	0.56	54.98	-0.0787	-0.0099	0.0164
667	SLE FR 4	0.76	0.61	56.82	-0.0813	-0.0098	0.0171
667	SLE FR 5	0.77	0.6	56.97	-0.0817	-0.0098	0.0171
667	SLE FR 6	0.77	0.62	58.14	-0.0834	-0.0098	0.0174
667	SLE QP 1	0.75	0.56	54.82	-0.0785	-0.0098	0.0164
667	SLE QP 2	0.76	0.6	56.81	-0.0814	-0.0098	0.017
667	SLD 1	5.01	1.1	48.13	-0.053	0.0121	0.0197
667	SLD 2	5	1.58	48.12	-0.0516	0.0121	0.0256
667	SLD 3	5.1	-0.92	48.36	-0.0756	0.0132	0.0054
667	SLD 4	5.1	-0.44	48.35	-0.0742	0.0132	0.0113
667	SLD 5	1.89	3.72	53.86	-0.0389	-0.005	0.0384
667	SLD 6	1.89	4.04	53.86	-0.0379	-0.005	0.0423
667	SLD 7	2.21	-3	54.63	-0.1143	-0.0011	-0.0092
667	SLD 8	2.21	-2.69	54.62	-0.1133	-0.0011	-0.0053
667	SLD 9	-0.68	3.89	59.01	-0.0496	-0.0184	0.0393
667	SLD 10	-0.68	4.2	59	-0.0486	-0.0184	0.0432
667	SLD 11	-0.36	-2.84	59.77	-0.1249	-0.0146	-0.0083
667	SLD 12	-0.36	-2.53	59.77	-0.124	-0.0146	-0.0044
667	SLD 13	-3.57	1.63	65.28	-0.0887	-0.0328	0.0227
667	SLD 14	-3.57	2.12	65.27	-0.0872	-0.0328	0.0286
667	SLD 15	-3.48	-0.39	65.51	-0.1113	-0.0316	0.0084
667	SLD 16	-3.48	0.1	65.5	-0.1098	-0.0316	0.0143
667	SLV 1	10.69	1.7	36.48	-0.0155	0.0414	0.0228
667	SLV 2	10.68	2.83	36.47	-0.0122	0.0414	0.0365
667	SLV 3	10.91	-2.89	37.02	-0.067	0.0441	-0.0096
667	SLV 4	10.9	-1.76	37.01	-0.0636	0.0441	0.0041
667	SLV 5	3.4	7.7	49.9	0.0158	0.0015	0.0655
667	SLV 6	3.4	8.42	49.89	0.0179	0.0015	0.0743
667	SLV 7	4.15	-7.61	51.7	-0.1556	0.0105	-0.0425
667	SLV 8	4.14	-6.89	51.69	-0.1535	0.0105	-0.0337
667	SLV 9	-2.62	8.08	61.94	-0.0094	-0.03	0.0677
667	SLV 10	-2.62	8.8	61.93	-0.0072	-0.03	0.0765
667	SLV 11	-1.87	-7.23	63.74	-0.1808	-0.021	-0.0403
667	SLV 12	-1.87	-6.51	63.73	-0.1786	-0.021	-0.0315
667	SLV 13	-9.38	2.96	76.62	-0.0993	-0.0636	0.0299
667	SLV 14	-9.38	4.09	76.61	-0.0959	-0.0636	0.0436
667	SLV 15	-9.15	-1.63	77.16	-0.1507	-0.0609	-0.0025
667	SLV 16	-9.16	-0.51	77.15	-0.1473	-0.0609	0.0113
667	CRTFP Ux+	0	0	0	0	0	0
667	CRTFP Ux-	0	0	0	0	0	0
668	SLU 1	0.75	0.61	53.25	-0.0753	-0.0118	0.0145
668	SLU 2	0.74	0.73	53.26	-0.074	-0.0118	0.0152
668	SLU 3	0.77	0.63	54.29	-0.0766	-0.0122	0.0148
668	SLU 4	0.76	0.7	54.29	-0.0758	-0.0122	0.0153
668	SLU 5	0.76	0.73	53.85	-0.0749	-0.012	0.0155
668	SLU 6	0.78	0.63	54.88	-0.0775	-0.0124	0.015
668	SLU 7	0.78	0.7	54.88	-0.0767	-0.0124	0.0155
668	SLU 8	0.77	0.62	54.43	-0.0771	-0.0123	0.0149
668	SLU 9	0.77	0.69	54.44	-0.0763	-0.0123	0.0154
668	SLU 10	0.79	0.86	60.24	-0.0843	-0.0119	0.0173
668	SLU 11	0.81	0.77	61.27	-0.0868	-0.0123	0.0169
668	SLU 12	0.81	0.84	61.27	-0.086	-0.0123	0.0174
668	SLU 13	0.8	0.87	60.83	-0.0851	-0.0121	0.0176
668	SLU 14	0.82	0.77	61.86	-0.0877	-0.0125	0.0171
668	SLU 15	0.82	0.84	61.86	-0.0869	-0.0125	0.0176
668	SLU 16	0.82	0.76	61.41	-0.0873	-0.0124	0.017
668	SLU 17	0.81	0.83	61.42	-0.0865	-0.0124	0.0175
668	SLU 18	0.81	0.8	63.22	-0.0899	-0.012	0.0175
668	SLU 19	0.81	0.87	63.23	-0.0891	-0.012	0.0179
668	SLU 20	0.82	0.81	63.81	-0.0908	-0.0122	0.0177
668	SLU 21	0.82	0.88	63.82	-0.09	-0.0122	0.0182
668	SLU 22	0.81	0.73	59.94	-0.0836	-0.0123	0.0161
668	SLU 23	0.8	0.84	59.95	-0.0824	-0.0123	0.0169
668	SLU 24	0.83	0.75	60.98	-0.0849	-0.0127	0.0165
668	SLU 25	0.82	0.82	60.98	-0.0841	-0.0126	0.0169
668	SLU 26	0.82	0.85	60.54	-0.0832	-0.0125	0.0171
668	SLU 27	0.84	0.75	61.57	-0.0858	-0.0129	0.0167
668	SLU 28	0.84	0.82	61.57	-0.085	-0.0129	0.0172

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
668	SLU 29	0.83	0.74	61.12	-0.0854	-0.0128	0.0166
668	SLU 30	0.83	0.81	61.12	-0.0846	-0.0127	0.0171
668	SLU 31	0.85	0.98	66.93	-0.0926	-0.0124	0.019
668	SLU 32	0.87	0.88	67.96	-0.0951	-0.0128	0.0186
668	SLU 33	0.87	0.95	67.96	-0.0944	-0.0128	0.019
668	SLU 34	0.86	0.98	67.51	-0.0935	-0.0126	0.0192
668	SLU 35	0.88	0.89	68.54	-0.096	-0.013	0.0188
668	SLU 36	0.88	0.96	68.55	-0.0952	-0.013	0.0193
668	SLU 37	0.88	0.87	68.1	-0.0956	-0.0129	0.0187
668	SLU 38	0.87	0.94	68.1	-0.0949	-0.0129	0.0191
668	SLU 39	0.87	0.92	69.91	-0.0982	-0.0125	0.0191
668	SLU 40	0.87	0.99	69.91	-0.0975	-0.0125	0.0196
668	SLU 41	0.88	0.93	70.5	-0.0991	-0.0127	0.0193
668	SLU 42	0.88	1	70.5	-0.0983	-0.0127	0.0198
668	SLU 43	0.95	0.75	66.94	-0.0951	-0.0152	0.0182
668	SLU 44	0.95	0.87	66.94	-0.0938	-0.0152	0.019
668	SLU 45	0.97	0.77	67.97	-0.0963	-0.0156	0.0186
668	SLU 46	0.97	0.84	67.98	-0.0956	-0.0155	0.019
668	SLU 47	0.96	0.87	67.53	-0.0947	-0.0154	0.0192
668	SLU 48	0.98	0.78	68.56	-0.0972	-0.0158	0.0188
668	SLU 49	0.98	0.85	68.57	-0.0964	-0.0158	0.0193
668	SLU 50	0.97	0.76	68.12	-0.0968	-0.0157	0.0187
668	SLU 51	0.97	0.83	68.12	-0.0961	-0.0156	0.0192
668	SLU 52	0.99	1	73.92	-0.104	-0.0153	0.0211
668	SLU 53	1.01	0.91	74.95	-0.1066	-0.0157	0.0207
668	SLU 54	1.01	0.98	74.96	-0.1058	-0.0157	0.0211
668	SLU 55	1	1.01	74.51	-0.1049	-0.0155	0.0213
668	SLU 56	1.03	0.91	75.54	-0.1074	-0.0159	0.0209
668	SLU 57	1.02	0.98	75.55	-0.1067	-0.0159	0.0214
668	SLU 58	1.02	0.9	75.09	-0.107	-0.0158	0.0208
668	SLU 59	1.02	0.97	75.1	-0.1063	-0.0158	0.0212
668	SLU 60	1.01	0.95	76.91	-0.1097	-0.0154	0.0212
668	SLU 61	1.01	1.02	76.91	-0.1089	-0.0154	0.0217
668	SLU 62	1.03	0.95	77.5	-0.1105	-0.0156	0.0214
668	SLU 63	1.02	1.02	77.5	-0.1098	-0.0156	0.0219
668	SLU 64	1.01	0.87	73.62	-0.1034	-0.0157	0.0199
668	SLU 65	1.01	0.99	73.63	-0.1021	-0.0157	0.0207
668	SLU 66	1.03	0.89	74.66	-0.1047	-0.016	0.0202
668	SLU 67	1.03	0.96	74.66	-0.1039	-0.016	0.0207
668	SLU 68	1.02	0.99	74.22	-0.103	-0.0159	0.0209
668	SLU 69	1.04	0.89	75.25	-0.1055	-0.0163	0.0205
668	SLU 70	1.04	0.96	75.25	-0.1048	-0.0163	0.0209
668	SLU 71	1.03	0.88	74.8	-0.1051	-0.0162	0.0203
668	SLU 72	1.03	0.95	74.81	-0.1044	-0.0161	0.0208
668	SLU 73	1.05	1.12	80.61	-0.1123	-0.0158	0.0228
668	SLU 74	1.07	1.03	81.64	-0.1149	-0.0162	0.0223
668	SLU 75	1.07	1.1	81.64	-0.1141	-0.0161	0.0228
668	SLU 76	1.06	1.13	81.2	-0.1132	-0.016	0.023
668	SLU 77	1.09	1.03	82.23	-0.1158	-0.0164	0.0226
668	SLU 78	1.08	1.1	82.23	-0.115	-0.0164	0.023
668	SLU 79	1.08	1.02	81.78	-0.1154	-0.0163	0.0224
668	SLU 80	1.08	1.09	81.79	-0.1146	-0.0163	0.0229
668	SLU 81	1.07	1.06	83.59	-0.118	-0.0159	0.0229
668	SLU 82	1.07	1.13	83.6	-0.1172	-0.0159	0.0234
668	SLU 83	1.09	1.07	84.18	-0.1189	-0.0161	0.0231
668	SLU 84	1.09	1.14	84.19	-0.1181	-0.0161	0.0236
668	SLE RA 1	0.76	0.64	55.16	-0.0777	-0.012	0.0149
668	SLE RA 2	0.76	0.72	55.17	-0.0768	-0.0119	0.0155
668	SLE RA 3	0.78	0.66	55.86	-0.0785	-0.0122	0.0152
668	SLE RA 4	0.77	0.7	55.86	-0.078	-0.0122	0.0155
668	SLE RA 5	0.77	0.72	55.56	-0.0774	-0.0121	0.0156
668	SLE RA 6	0.78	0.66	56.25	-0.0791	-0.0124	0.0153
668	SLE RA 7	0.78	0.71	56.25	-0.0786	-0.0123	0.0156
668	SLE RA 8	0.78	0.65	55.95	-0.0789	-0.0123	0.0152
668	SLE RA 9	0.78	0.7	55.95	-0.0784	-0.0123	0.0156
668	SLE RA 10	0.79	0.81	59.82	-0.0837	-0.012	0.0169
668	SLE RA 11	0.81	0.75	60.51	-0.0854	-0.0123	0.0166
668	SLE RA 12	0.81	0.79	60.51	-0.0848	-0.0123	0.0169
668	SLE RA 13	0.8	0.81	60.21	-0.0842	-0.0122	0.017
668	SLE RA 14	0.81	0.75	60.9	-0.0859	-0.0124	0.0167
668	SLE RA 15	0.81	0.8	60.9	-0.0854	-0.0124	0.017
668	SLE RA 16	0.81	0.74	60.6	-0.0857	-0.0124	0.0166
668	SLE RA 17	0.81	0.79	60.6	-0.0852	-0.0123	0.017
668	SLE RA 18	0.81	0.77	61.81	-0.0874	-0.0121	0.0169
668	SLE RA 19	0.81	0.82	61.81	-0.0869	-0.0121	0.0172
668	SLE RA 20	0.81	0.78	62.2	-0.088	-0.0122	0.0171
668	SLE RA 21	0.81	0.82	62.21	-0.0875	-0.0122	0.0174
668	SLE FR 1	0.76	0.64	55.16	-0.0777	-0.012	0.0149
668	SLE FR 2	0.76	0.66	55.16	-0.0775	-0.012	0.015
668	SLE FR 3	0.77	0.64	55.32	-0.0779	-0.012	0.015
668	SLE FR 4	0.78	0.7	57.16	-0.0804	-0.012	0.0156
668	SLE FR 5	0.78	0.68	57.31	-0.0809	-0.0121	0.0156
668	SLE FR 6	0.78	0.71	58.49	-0.0826	-0.012	0.0159
668	SLE QP 1	0.76	0.64	55.16	-0.0777	-0.012	0.0149
668	SLE QP 2	0.78	0.68	57.16	-0.0806	-0.012	0.0155
668	SLD 1	5.01	1.2	47.74	-0.0529	0.0105	0.0222
668	SLD 2	5.01	1.71	47.73	-0.0517	0.0105	0.0282
668	SLD 3	5.11	-0.89	47.97	-0.0732	0.0118	0.0077
668	SLD 4	5.1	-0.38	47.96	-0.072	0.0118	0.0137
668	SLD 5	1.9	3.92	53.98	-0.0418	-0.0072	0.0385
668	SLD 6	1.9	4.26	53.98	-0.041	-0.0072	0.0424

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
668	SLD 7	2.22	-3.05	54.75	-0.1093	-0.0029	-0.0099
668	SLD 8	2.22	-2.72	54.75	-0.1086	-0.0029	-0.006
668	SLD 9	-0.67	4.08	59.57	-0.0527	-0.0211	0.0371
668	SLD 10	-0.67	4.42	59.56	-0.0519	-0.0211	0.0409
668	SLD 11	-0.35	-2.89	60.33	-0.1202	-0.0168	-0.0113
668	SLD 12	-0.35	-2.56	60.33	-0.1195	-0.0168	-0.0074
668	SLD 13	-3.55	1.74	66.35	-0.0893	-0.0358	0.0174
668	SLD 14	-3.56	2.26	66.35	-0.0881	-0.0358	0.0234
668	SLD 15	-3.46	-0.35	66.58	-0.1095	-0.0346	0.0029
668	SLD 16	-3.46	0.16	66.58	-0.1083	-0.0345	0.0089
668	SLV 1	10.68	1.83	35.12	-0.0163	0.0407	0.0306
668	SLV 2	10.68	3.03	35.1	-0.0135	0.0408	0.0446
668	SLV 3	10.91	-2.93	35.66	-0.0624	0.0438	-0.0023
668	SLV 4	10.9	-1.73	35.64	-0.0596	0.0438	0.0116
668	SLV 5	3.41	8.04	49.73	0.0081	-0.0008	0.0677
668	SLV 6	3.41	8.81	49.72	0.0099	-0.0007	0.0765
668	SLV 7	4.16	-7.83	51.52	-0.1455	0.0093	-0.0421
668	SLV 8	4.15	-7.06	51.51	-0.1437	0.0093	-0.0332
668	SLV 9	-2.6	8.42	62.8	-0.0175	-0.0333	0.0643
668	SLV 10	-2.6	9.19	62.79	-0.0157	-0.0333	0.0732
668	SLV 11	-1.85	-7.44	64.59	-0.1711	-0.0233	-0.0455
668	SLV 12	-1.86	-6.68	64.58	-0.1693	-0.0233	-0.0366
668	SLV 13	-9.35	3.1	78.67	-0.1017	-0.0678	0.0194
668	SLV 14	-9.35	4.3	78.66	-0.0989	-0.0678	0.0334
668	SLV 15	-9.12	-1.66	79.21	-0.1477	-0.0648	-0.0135
668	SLV 16	-9.13	-0.46	79.19	-0.145	-0.0648	0.0004
668	CRTFP Ux+	0	0	0	0	0	0
668	CRTFP Ux-	0	0	0	0	0	0
669	SLU 1	0.76	0.68	53.73	-0.0746	-0.0187	0.0124
669	SLU 2	0.75	0.8	53.74	-0.0734	-0.0187	0.0131
669	SLU 3	0.78	0.7	54.78	-0.0759	-0.0192	0.0127
669	SLU 4	0.77	0.77	54.78	-0.0752	-0.0192	0.0131
669	SLU 5	0.77	0.81	54.33	-0.0743	-0.019	0.0133
669	SLU 6	0.79	0.71	55.38	-0.0768	-0.0195	0.0129
669	SLU 7	0.79	0.78	55.38	-0.0761	-0.0195	0.0133
669	SLU 8	0.78	0.69	54.93	-0.0764	-0.0193	0.0128
669	SLU 9	0.78	0.76	54.93	-0.0757	-0.0193	0.0132
669	SLU 10	0.8	0.95	60.73	-0.0835	-0.0197	0.0149
669	SLU 11	0.82	0.85	61.78	-0.086	-0.0202	0.0145
669	SLU 12	0.82	0.92	61.78	-0.0853	-0.0202	0.0149
669	SLU 13	0.81	0.95	61.33	-0.0844	-0.02	0.0151
669	SLU 14	0.83	0.85	62.37	-0.0869	-0.0205	0.0147
669	SLU 15	0.83	0.93	62.38	-0.0862	-0.0205	0.0151
669	SLU 16	0.83	0.84	61.92	-0.0865	-0.0204	0.0146
669	SLU 17	0.83	0.91	61.93	-0.0858	-0.0203	0.015
669	SLU 18	0.82	0.89	63.72	-0.0891	-0.0202	0.015
669	SLU 19	0.82	0.96	63.73	-0.0884	-0.0202	0.0154
669	SLU 20	0.84	0.9	64.32	-0.09	-0.0205	0.0151
669	SLU 21	0.83	0.97	64.33	-0.0893	-0.0205	0.0156
669	SLU 22	0.82	0.81	60.44	-0.083	-0.0201	0.0139
669	SLU 23	0.81	0.93	60.45	-0.0818	-0.02	0.0145
669	SLU 24	0.84	0.83	61.5	-0.0843	-0.0206	0.0142
669	SLU 25	0.83	0.9	61.5	-0.0835	-0.0205	0.0146
669	SLU 26	0.83	0.93	61.05	-0.0827	-0.0203	0.0147
669	SLU 27	0.85	0.83	62.09	-0.0852	-0.0209	0.0143
669	SLU 28	0.85	0.9	62.1	-0.0844	-0.0209	0.0148
669	SLU 29	0.84	0.82	61.64	-0.0848	-0.0207	0.0142
669	SLU 30	0.84	0.89	61.64	-0.084	-0.0207	0.0146
669	SLU 31	0.86	1.07	67.45	-0.0919	-0.0211	0.0164
669	SLU 32	0.88	0.97	68.49	-0.0944	-0.0216	0.016
669	SLU 33	0.88	1.05	68.49	-0.0936	-0.0216	0.0164
669	SLU 34	0.87	1.08	68.04	-0.0928	-0.0214	0.0165
669	SLU 35	0.9	0.98	69.09	-0.0953	-0.0219	0.0162
669	SLU 36	0.89	1.05	69.09	-0.0945	-0.0219	0.0166
669	SLU 37	0.89	0.96	68.64	-0.0949	-0.0217	0.016
669	SLU 38	0.89	1.04	68.64	-0.0941	-0.0217	0.0165
669	SLU 39	0.88	1.01	70.44	-0.0974	-0.0216	0.0164
669	SLU 40	0.88	1.09	70.44	-0.0967	-0.0215	0.0169
669	SLU 41	0.9	1.02	71.04	-0.0983	-0.0219	0.0166
669	SLU 42	0.89	1.09	71.04	-0.0976	-0.0218	0.017
669	SLU 43	0.96	0.84	67.55	-0.0942	-0.0238	0.0156
669	SLU 44	0.96	0.96	67.55	-0.093	-0.0238	0.0163
669	SLU 45	0.98	0.86	68.6	-0.0955	-0.0243	0.0159
669	SLU 46	0.98	0.93	68.6	-0.0947	-0.0243	0.0163
669	SLU 47	0.97	0.97	68.15	-0.0939	-0.0241	0.0165
669	SLU 48	0.99	0.87	69.2	-0.0964	-0.0246	0.0161
669	SLU 49	0.99	0.94	69.2	-0.0956	-0.0246	0.0165
669	SLU 50	0.99	0.85	68.74	-0.096	-0.0245	0.016
669	SLU 51	0.98	0.93	68.75	-0.0952	-0.0244	0.0164
669	SLU 52	1.01	1.11	74.55	-0.1031	-0.0248	0.0181
669	SLU 53	1.03	1.01	75.59	-0.1056	-0.0254	0.0177
669	SLU 54	1.03	1.08	75.6	-0.1049	-0.0253	0.0181
669	SLU 55	1.02	1.11	75.15	-0.104	-0.0251	0.0183
669	SLU 56	1.04	1.02	76.19	-0.1065	-0.0257	0.0179
669	SLU 57	1.04	1.09	76.19	-0.1058	-0.0257	0.0183
669	SLU 58	1.03	1	75.74	-0.1061	-0.0255	0.0178
669	SLU 59	1.03	1.07	75.74	-0.1054	-0.0255	0.0182
669	SLU 60	1.03	1.05	77.54	-0.1086	-0.0253	0.0182
669	SLU 61	1.03	1.12	77.54	-0.1079	-0.0253	0.0186
669	SLU 62	1.04	1.06	78.14	-0.1095	-0.0256	0.0184
669	SLU 63	1.04	1.13	78.14	-0.1088	-0.0256	0.0188

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
669	SLU 64	1.02	0.97	74.26	-0.1025	-0.0252	0.0171
669	SLU 65	1.02	1.09	74.27	-0.1013	-0.0252	0.0178
669	SLU 66	1.04	0.99	75.31	-0.1038	-0.0257	0.0174
669	SLU 67	1.04	1.06	75.32	-0.1031	-0.0257	0.0178
669	SLU 68	1.03	1.09	74.87	-0.1022	-0.0255	0.0179
669	SLU 69	1.06	0.99	75.91	-0.1047	-0.026	0.0176
669	SLU 70	1.05	1.07	75.91	-0.104	-0.026	0.018
669	SLU 71	1.05	0.98	75.46	-0.1043	-0.0258	0.0174
669	SLU 72	1.05	1.05	75.46	-0.1036	-0.0258	0.0179
669	SLU 73	1.07	1.23	81.26	-0.1114	-0.0262	0.0196
669	SLU 74	1.09	1.13	82.31	-0.1139	-0.0267	0.0192
669	SLU 75	1.09	1.21	82.31	-0.1132	-0.0267	0.0196
669	SLU 76	1.08	1.24	81.86	-0.1123	-0.0265	0.0197
669	SLU 77	1.1	1.14	82.91	-0.1148	-0.0271	0.0194
669	SLU 78	1.1	1.21	82.91	-0.1141	-0.027	0.0198
669	SLU 79	1.09	1.12	82.45	-0.1144	-0.0269	0.0192
669	SLU 80	1.09	1.2	82.46	-0.1137	-0.0269	0.0197
669	SLU 81	1.09	1.18	84.26	-0.117	-0.0267	0.0196
669	SLU 82	1.09	1.25	84.26	-0.1162	-0.0267	0.0201
669	SLU 83	1.1	1.18	84.85	-0.1178	-0.027	0.0198
669	SLU 84	1.1	1.25	84.86	-0.1171	-0.027	0.0202
669	SLE RA 1	0.77	0.72	55.65	-0.077	-0.0191	0.0128
669	SLE RA 2	0.77	0.8	55.65	-0.0762	-0.0191	0.0133
669	SLE RA 3	0.79	0.73	56.35	-0.0779	-0.0194	0.013
669	SLE RA 4	0.79	0.78	56.35	-0.0774	-0.0194	0.0133
669	SLE RA 5	0.78	0.8	56.05	-0.0768	-0.0193	0.0134
669	SLE RA 6	0.79	0.73	56.75	-0.0785	-0.0196	0.0131
669	SLE RA 7	0.79	0.78	56.75	-0.078	-0.0196	0.0134
669	SLE RA 8	0.79	0.72	56.45	-0.0782	-0.0195	0.0131
669	SLE RA 9	0.79	0.77	56.45	-0.0777	-0.0195	0.0133
669	SLE RA 10	0.8	0.89	60.32	-0.083	-0.0198	0.0145
669	SLE RA 11	0.82	0.83	61.01	-0.0846	-0.0201	0.0142
669	SLE RA 12	0.82	0.88	61.01	-0.0841	-0.0201	0.0145
669	SLE RA 13	0.81	0.9	60.71	-0.0836	-0.02	0.0146
669	SLE RA 14	0.83	0.83	61.41	-0.0852	-0.0203	0.0143
669	SLE RA 15	0.82	0.88	61.41	-0.0847	-0.0203	0.0146
669	SLE RA 16	0.82	0.82	61.11	-0.085	-0.0202	0.0143
669	SLE RA 17	0.82	0.87	61.11	-0.0845	-0.0202	0.0145
669	SLE RA 18	0.82	0.86	62.31	-0.0867	-0.0201	0.0145
669	SLE RA 19	0.82	0.9	62.31	-0.0862	-0.0201	0.0148
669	SLE RA 20	0.83	0.86	62.71	-0.0872	-0.0203	0.0146
669	SLE RA 21	0.82	0.91	62.71	-0.0868	-0.0203	0.0149
669	SLE FR 1	0.77	0.72	55.65	-0.077	-0.0191	0.0128
669	SLE FR 2	0.77	0.73	55.65	-0.0769	-0.0191	0.0129
669	SLE FR 3	0.78	0.72	55.81	-0.0773	-0.0192	0.0129
669	SLE FR 4	0.79	0.77	57.65	-0.0798	-0.0194	0.0134
669	SLE FR 5	0.79	0.76	57.81	-0.0802	-0.0195	0.0134
669	SLE FR 6	0.8	0.79	58.98	-0.0818	-0.0196	0.0137
669	SLE QP 1	0.77	0.72	55.65	-0.077	-0.0191	0.0128
669	SLE QP 2	0.79	0.76	57.65	-0.0799	-0.0194	0.0133
669	SLD 1	5.01	1.3	47.46	-0.0528	0.0049	0.0225
669	SLD 2	5.01	1.85	47.45	-0.0519	0.0049	0.0284
669	SLD 3	5.11	-0.86	47.69	-0.0707	0.0063	0.0086
669	SLD 4	5.11	-0.32	47.69	-0.0698	0.0063	0.0144
669	SLD 5	1.91	4.11	54.23	-0.0448	-0.0142	0.0362
669	SLD 6	1.91	4.47	54.23	-0.0442	-0.0142	0.04
669	SLD 7	2.23	-3.11	55.02	-0.1045	-0.0096	-0.0103
669	SLD 8	2.23	-2.75	55.01	-0.1038	-0.0096	-0.0065
669	SLD 9	-0.65	4.27	60.28	-0.056	-0.0292	0.0331
669	SLD 10	-0.66	4.62	60.28	-0.0554	-0.0292	0.0369
669	SLD 11	-0.34	-2.95	61.07	-0.1156	-0.0246	-0.0134
669	SLD 12	-0.34	-2.6	61.06	-0.115	-0.0246	-0.0096
669	SLD 13	-3.53	1.83	67.61	-0.09	-0.0451	0.0122
669	SLD 14	-3.54	2.38	67.6	-0.0891	-0.0451	0.0181
669	SLD 15	-3.44	-0.33	67.85	-0.1079	-0.0437	-0.0018
669	SLD 16	-3.44	0.21	67.84	-0.107	-0.0437	0.0041
669	SLV 1	10.67	1.97	33.8	-0.0171	0.0375	0.0344
669	SLV 2	10.67	3.24	33.79	-0.0149	0.0375	0.0481
669	SLV 3	10.9	-2.96	34.35	-0.0577	0.0407	0.0027
669	SLV 4	10.89	-1.69	34.34	-0.0555	0.0407	0.0164
669	SLV 5	3.41	8.38	49.66	0.0003	-0.0072	0.0654
669	SLV 6	3.41	9.19	49.65	0.0017	-0.0072	0.0741
669	SLV 7	4.16	-8.05	51.5	-0.1353	0.0035	-0.0402
669	SLV 8	4.16	-7.23	51.49	-0.1339	0.0035	-0.0315
669	SLV 9	-2.58	8.75	63.81	-0.0259	-0.0423	0.0581
669	SLV 10	-2.59	9.56	63.8	-0.0245	-0.0423	0.0669
669	SLV 11	-1.84	-7.68	65.64	-0.1615	-0.0316	-0.0475
669	SLV 12	-1.84	-6.86	65.63	-0.1601	-0.0315	-0.0387
669	SLV 13	-9.32	3.2	80.96	-0.1043	-0.0795	0.0102
669	SLV 14	-9.32	4.47	80.94	-0.1021	-0.0795	0.0239
669	SLV 15	-9.09	-1.72	81.51	-0.145	-0.0763	-0.0214
669	SLV 16	-9.1	-0.45	81.49	-0.1428	-0.0762	-0.0078
669	CRTFP Ux+	0	0	0	0	0	0
669	CRTFP Ux-	0	0	0	0	0	0
670	SLU 1	0.65	0.63	46.45	-0.0632	1.2762	-0.0095
670	SLU 2	0.65	0.73	46.45	-0.0623	1.2764	-0.012
670	SLU 3	0.67	0.65	47.36	-0.0644	1.3012	-0.0098
670	SLU 4	0.67	0.71	47.36	-0.0638	1.3013	-0.0113
670	SLU 5	0.66	0.74	46.97	-0.063	1.2906	-0.012
670	SLU 6	0.68	0.65	47.88	-0.0651	1.3154	-0.0099
670	SLU 7	0.68	0.71	47.88	-0.0645	1.3155	-0.0114

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
670	SLU 8	0.67	0.64	47.49	-0.0648	1.3047	-0.0096
670	SLU 9	0.67	0.7	47.49	-0.0642	1.3047	-0.0111
670	SLU 10	0.69	0.86	52.47	-0.0708	1.4424	-0.0145
670	SLU 11	0.71	0.78	53.38	-0.0729	1.4672	-0.0123
670	SLU 12	0.71	0.84	53.38	-0.0723	1.4673	-0.0138
670	SLU 13	0.7	0.87	52.99	-0.0716	1.4566	-0.0145
670	SLU 14	0.72	0.78	53.9	-0.0737	1.4814	-0.0124
670	SLU 15	0.72	0.85	53.9	-0.0731	1.4815	-0.0139
670	SLU 16	0.71	0.77	53.5	-0.0733	1.4706	-0.0121
670	SLU 17	0.71	0.83	53.51	-0.0728	1.4707	-0.0136
670	SLU 18	0.71	0.81	55.04	-0.0755	1.5134	-0.0131
670	SLU 19	0.71	0.88	55.04	-0.0749	1.5134	-0.0146
670	SLU 20	0.72	0.82	55.56	-0.0762	1.5276	-0.0131
670	SLU 21	0.72	0.88	55.56	-0.0757	1.5276	-0.0146
670	SLU 22	0.7	0.74	52.23	-0.0704	1.4356	-0.0116
670	SLU 23	0.7	0.84	52.24	-0.0694	1.4357	-0.0141
670	SLU 24	0.72	0.76	53.14	-0.0715	1.4605	-0.012
670	SLU 25	0.72	0.82	53.15	-0.0709	1.4606	-0.0135
670	SLU 26	0.71	0.85	52.76	-0.0702	1.4499	-0.0142
670	SLU 27	0.73	0.76	53.66	-0.0722	1.4748	-0.012
670	SLU 28	0.73	0.83	53.67	-0.0717	1.4748	-0.0135
670	SLU 29	0.72	0.75	53.27	-0.0719	1.464	-0.0117
670	SLU 30	0.72	0.81	53.27	-0.0713	1.4641	-0.0132
670	SLU 31	0.74	0.97	58.25	-0.0779	1.6017	-0.0166
670	SLU 32	0.76	0.89	59.16	-0.08	1.6265	-0.0145
670	SLU 33	0.76	0.95	59.16	-0.0794	1.6266	-0.016
670	SLU 34	0.75	0.98	58.77	-0.0787	1.6159	-0.0167
670	SLU 35	0.77	0.9	59.68	-0.0808	1.6407	-0.0145
670	SLU 36	0.77	0.96	59.68	-0.0802	1.6408	-0.016
670	SLU 37	0.76	0.88	59.29	-0.0805	1.63	-0.0142
670	SLU 38	0.76	0.94	59.29	-0.0799	1.6301	-0.0157
670	SLU 39	0.76	0.93	60.82	-0.0826	1.6727	-0.0152
670	SLU 40	0.76	0.99	60.83	-0.082	1.6728	-0.0167
670	SLU 41	0.77	0.93	61.34	-0.0834	1.6869	-0.0153
670	SLU 42	0.77	1	61.35	-0.0828	1.687	-0.0168
670	SLU 43	0.83	0.78	58.4	-0.0798	1.6045	-0.0116
670	SLU 44	0.82	0.88	58.41	-0.0788	1.6046	-0.0141
670	SLU 45	0.84	0.8	59.31	-0.0809	1.6294	-0.012
670	SLU 46	0.84	0.86	59.32	-0.0803	1.6295	-0.0134
670	SLU 47	0.84	0.89	58.93	-0.0796	1.6188	-0.0141
670	SLU 48	0.86	0.8	59.83	-0.0817	1.6436	-0.012
670	SLU 49	0.85	0.86	59.84	-0.0811	1.6437	-0.0135
670	SLU 50	0.85	0.79	59.44	-0.0813	1.6329	-0.0117
670	SLU 51	0.85	0.85	59.45	-0.0807	1.633	-0.0132
670	SLU 52	0.86	1.01	64.42	-0.0874	1.7706	-0.0166
670	SLU 53	0.88	0.93	65.33	-0.0894	1.7954	-0.0145
670	SLU 54	0.88	0.99	65.33	-0.0889	1.7955	-0.0159
670	SLU 55	0.88	1.02	64.94	-0.0881	1.7848	-0.0166
670	SLU 56	0.9	0.93	65.85	-0.0902	1.8096	-0.0145
670	SLU 57	0.89	1	65.85	-0.0896	1.8097	-0.016
670	SLU 58	0.89	0.92	65.46	-0.0899	1.7989	-0.0142
670	SLU 59	0.89	0.98	65.46	-0.0893	1.799	-0.0157
670	SLU 60	0.88	0.96	66.99	-0.092	1.8416	-0.0152
670	SLU 61	0.88	1.03	67	-0.0914	1.8417	-0.0167
670	SLU 62	0.9	0.97	67.51	-0.0928	1.8558	-0.0152
670	SLU 63	0.89	1.03	67.52	-0.0922	1.8559	-0.0167
670	SLU 64	0.88	0.89	64.19	-0.0869	1.7638	-0.0138
670	SLU 65	0.88	0.99	64.19	-0.0859	1.764	-0.0162
670	SLU 66	0.9	0.91	65.1	-0.088	1.7888	-0.0141
670	SLU 67	0.9	0.97	65.1	-0.0874	1.7889	-0.0156
670	SLU 68	0.89	1	64.71	-0.0867	1.7782	-0.0163
670	SLU 69	0.91	0.91	65.62	-0.0888	1.803	-0.0142
670	SLU 70	0.91	0.98	65.62	-0.0882	1.8031	-0.0156
670	SLU 71	0.9	0.9	65.22	-0.0884	1.7922	-0.0138
670	SLU 72	0.9	0.96	65.23	-0.0879	1.7923	-0.0153
670	SLU 73	0.92	1.12	70.2	-0.0945	1.9299	-0.0187
670	SLU 74	0.94	1.04	71.11	-0.0966	1.9548	-0.0166
670	SLU 75	0.94	1.1	71.11	-0.096	1.9548	-0.0181
670	SLU 76	0.93	1.13	70.72	-0.0953	1.9442	-0.0188
670	SLU 77	0.95	1.05	71.63	-0.0973	1.969	-0.0167
670	SLU 78	0.95	1.11	71.63	-0.0968	1.9691	-0.0181
670	SLU 79	0.94	1.03	71.24	-0.097	1.9582	-0.0163
670	SLU 80	0.94	1.09	71.24	-0.0964	1.9583	-0.0178
670	SLU 81	0.94	1.08	72.78	-0.0991	2.001	-0.0173
670	SLU 82	0.94	1.14	72.78	-0.0985	2.001	-0.0188
670	SLU 83	0.95	1.08	73.3	-0.0999	2.0152	-0.0174
670	SLU 84	0.95	1.14	73.3	-0.0993	2.0152	-0.0189
670	SLE RA 1	0.67	0.66	48.1	-0.0653	1.3218	-0.0101
670	SLE RA 2	0.66	0.73	48.1	-0.0646	1.3219	-0.0118
670	SLE RA 3	0.68	0.67	48.71	-0.066	1.3384	-0.0103
670	SLE RA 4	0.68	0.71	48.71	-0.0656	1.3385	-0.0113
670	SLE RA 5	0.67	0.73	48.45	-0.0651	1.3313	-0.0118
670	SLE RA 6	0.68	0.68	49.06	-0.0665	1.3479	-0.0104
670	SLE RA 7	0.68	0.72	49.06	-0.0661	1.3479	-0.0114
670	SLE RA 8	0.68	0.67	48.8	-0.0663	1.3407	-0.0102
670	SLE RA 9	0.68	0.71	48.8	-0.0659	1.3408	-0.0112
670	SLE RA 10	0.69	0.82	52.11	-0.0703	1.4325	-0.0134
670	SLE RA 11	0.7	0.76	52.72	-0.0717	1.4491	-0.012
670	SLE RA 12	0.7	0.8	52.72	-0.0713	1.4491	-0.013
670	SLE RA 13	0.7	0.82	52.46	-0.0709	1.442	-0.0135
670	SLE RA 14	0.71	0.76	53.07	-0.0722	1.4585	-0.012

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
670	SLE RA 15	0.71	0.8	53.07	-0.0719	1.4586	-0.013
670	SLE RA 16	0.71	0.75	52.8	-0.072	1.4514	-0.0118
670	SLE RA 17	0.71	0.8	52.81	-0.0716	1.4514	-0.0128
670	SLE RA 18	0.7	0.78	53.83	-0.0734	1.4799	-0.0125
670	SLE RA 19	0.7	0.83	53.83	-0.073	1.4799	-0.0135
670	SLE RA 20	0.71	0.79	54.18	-0.0739	1.4893	-0.0125
670	SLE RA 21	0.71	0.83	54.18	-0.0736	1.4894	-0.0135
670	SLE FR 1	0.67	0.66	48.1	-0.0653	1.3218	-0.0101
670	SLE FR 2	0.67	0.67	48.1	-0.0651	1.3218	-0.0104
670	SLE FR 3	0.67	0.66	48.24	-0.0655	1.3256	-0.0101
670	SLE FR 4	0.68	0.71	49.82	-0.0676	1.3692	-0.0112
670	SLE FR 5	0.68	0.7	49.96	-0.0679	1.373	-0.0108
670	SLE FR 6	0.68	0.72	50.97	-0.0694	1.4008	-0.0113
670	SLE QP 1	0.67	0.66	48.1	-0.0653	1.3218	-0.0101
670	SLE QP 2	0.68	0.7	49.82	-0.0677	1.3692	-0.0108
670	SLD 1	4.28	1.19	40.45	-0.0451	1.1254	-0.0168
670	SLD 2	4.27	1.68	40.45	-0.0445	1.1252	-0.0259
670	SLD 3	4.36	-0.71	40.67	-0.0585	1.131	0.0262
670	SLD 4	4.36	-0.22	40.66	-0.0579	1.1309	0.0171
670	SLD 5	1.63	3.64	46.69	-0.0407	1.2876	-0.0762
670	SLD 6	1.63	3.96	46.69	-0.0403	1.2875	-0.0821
670	SLD 7	1.91	-2.7	47.4	-0.0854	1.3063	0.067
670	SLD 8	1.9	-2.38	47.39	-0.085	1.3062	0.0611
670	SLD 9	-0.55	3.77	52.25	-0.0504	1.4322	-0.0828
670	SLD 10	-0.55	4.09	52.24	-0.05	1.4321	-0.0887
670	SLD 11	-0.28	-2.57	52.96	-0.0952	1.4509	0.0604
670	SLD 12	-0.28	-2.25	52.95	-0.0948	1.4508	0.0545
670	SLD 13	-3	1.61	58.98	-0.0775	1.6075	-0.0387
670	SLD 14	-3	2.1	58.98	-0.0769	1.6074	-0.0478
670	SLD 15	-2.92	-0.29	59.19	-0.091	1.6131	0.0042
670	SLD 16	-2.92	0.2	59.19	-0.0903	1.613	-0.0049
670	SLV 1	9.09	1.79	27.9	-0.0152	0.7988	-0.0235
670	SLV 2	9.09	2.93	27.89	-0.0137	0.7984	-0.0447
670	SLV 3	9.28	-2.53	28.4	-0.0457	0.8119	0.0743
670	SLV 4	9.28	-1.39	28.38	-0.0442	0.8115	0.0531
670	SLV 5	2.91	7.39	42.5	-0.0059	1.1782	-0.1594
670	SLV 6	2.91	8.12	42.49	-0.005	1.178	-0.1729
670	SLV 7	3.55	-7.03	44.15	-0.1077	1.222	0.1666
670	SLV 8	3.55	-6.3	44.14	-0.1067	1.2217	0.1531
670	SLV 9	-2.19	7.69	55.5	-0.0287	1.5167	-0.1748
670	SLV 10	-2.19	8.42	55.49	-0.0278	1.5164	-0.1883
670	SLV 11	-1.56	-6.73	57.16	-0.1305	1.5604	0.1513
670	SLV 12	-1.56	-6	57.15	-0.1295	1.5602	0.1377
670	SLV 13	-7.92	2.79	71.26	-0.0912	1.9269	-0.0748
670	SLV 14	-7.93	3.92	71.24	-0.0898	1.9265	-0.0959
670	SLV 15	-7.73	-1.54	71.75	-0.1217	1.94	0.023
670	SLV 16	-7.74	-0.4	71.74	-0.1203	1.9396	0.0019
670	CRTFP Ux+	0	0	0	0	0	0
670	CRTFP Ux-	0	0	0	0	0	0
672	SLU 1	1.15	1.14	82.89	0.0977	20.5224	-0.2832
672	SLU 2	1.15	1.33	82.89	0.0986	20.5241	-0.3301
672	SLU 3	1.18	1.18	84.52	0.0997	20.9245	-0.292
672	SLU 4	1.18	1.29	84.52	0.1002	20.9255	-0.3202
672	SLU 5	1.17	1.34	83.82	0.0996	20.7534	-0.3328
672	SLU 6	1.2	1.19	85.45	0.1007	21.1537	-0.2947
672	SLU 7	1.2	1.3	85.45	0.1013	21.1548	-0.3228
672	SLU 8	1.19	1.16	84.75	0.0997	20.9809	-0.2885
672	SLU 9	1.19	1.28	84.75	0.1003	20.9819	-0.3166
672	SLU 10	1.22	1.57	93.6	0.1108	23.1806	-0.3892
672	SLU 11	1.26	1.42	95.22	0.1119	23.581	-0.3511
672	SLU 12	1.25	1.53	95.22	0.1125	23.582	-0.3793
672	SLU 13	1.24	1.58	94.53	0.1119	23.4098	-0.3919
672	SLU 14	1.28	1.43	96.15	0.113	23.8102	-0.3538
672	SLU 15	1.27	1.54	96.15	0.1135	23.8112	-0.3819
672	SLU 16	1.26	1.4	95.45	0.112	23.6374	-0.3476
672	SLU 17	1.26	1.51	95.45	0.1125	23.6384	-0.3757
672	SLU 18	1.26	1.48	98.18	0.1152	24.3174	-0.3676
672	SLU 19	1.25	1.59	98.18	0.1157	24.3184	-0.3958
672	SLU 20	1.28	1.49	99.11	0.1162	24.5466	-0.3703
672	SLU 21	1.27	1.61	99.11	0.1167	24.5477	-0.3984
672	SLU 22	1.25	1.35	93.19	0.1105	23.0758	-0.3338
672	SLU 23	1.24	1.53	93.19	0.1114	23.0775	-0.3807
672	SLU 24	1.28	1.38	94.82	0.1125	23.4779	-0.3426
672	SLU 25	1.28	1.49	94.82	0.1131	23.4789	-0.3707
672	SLU 26	1.26	1.54	94.12	0.1124	23.3068	-0.3833
672	SLU 27	1.3	1.39	95.75	0.1135	23.7072	-0.3452
672	SLU 28	1.29	1.5	95.75	0.1141	23.7082	-0.3734
672	SLU 29	1.29	1.37	95.05	0.1125	23.5343	-0.3391
672	SLU 30	1.28	1.48	95.05	0.1131	23.5353	-0.3672
672	SLU 31	1.31	1.77	103.9	0.1237	25.734	-0.4398
672	SLU 32	1.35	1.62	105.52	0.1248	26.1344	-0.4017
672	SLU 33	1.35	1.73	105.52	0.1253	26.1354	-0.4298
672	SLU 34	1.33	1.78	104.83	0.1247	25.9633	-0.4424
672	SLU 35	1.37	1.63	106.45	0.1258	26.3637	-0.4043
672	SLU 36	1.37	1.74	106.45	0.1264	26.3647	-0.4325
672	SLU 37	1.36	1.6	105.75	0.1248	26.1908	-0.3982
672	SLU 38	1.35	1.72	105.75	0.1253	26.1918	-0.4263
672	SLU 39	1.35	1.69	108.48	0.128	26.8708	-0.4182
672	SLU 40	1.35	1.8	108.48	0.1286	26.8718	-0.4464
672	SLU 41	1.37	1.7	109.41	0.129	27.1001	-0.4208
672	SLU 42	1.37	1.81	109.41	0.1296	27.1011	-0.449

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
672	SLU 43	1.47	1.42	104.22	0.1226	25.8037	-0.3508
672	SLU 44	1.46	1.6	104.23	0.1235	25.8054	-0.3978
672	SLU 45	1.5	1.45	105.85	0.1246	26.2058	-0.3597
672	SLU 46	1.5	1.56	105.85	0.1251	26.2068	-0.3878
672	SLU 47	1.48	1.61	105.16	0.1245	26.0346	-0.4004
672	SLU 48	1.52	1.46	106.78	0.1256	26.435	-0.3623
672	SLU 49	1.51	1.57	106.78	0.1262	26.436	-0.3904
672	SLU 50	1.51	1.44	106.08	0.1246	26.2622	-0.3561
672	SLU 51	1.5	1.55	106.08	0.1252	26.2632	-0.3843
672	SLU 52	1.53	1.84	114.93	0.1357	28.4619	-0.4568
672	SLU 53	1.57	1.69	116.55	0.1368	28.8622	-0.4187
672	SLU 54	1.57	1.8	116.56	0.1374	28.8633	-0.4469
672	SLU 55	1.55	1.85	115.86	0.1368	28.6911	-0.4595
672	SLU 56	1.59	1.7	117.48	0.1379	29.0915	-0.4214
672	SLU 57	1.59	1.81	117.49	0.1384	29.0925	-0.4495
672	SLU 58	1.58	1.67	116.78	0.1369	28.9186	-0.4152
672	SLU 59	1.58	1.79	116.79	0.1374	28.9197	-0.4434
672	SLU 60	1.57	1.76	119.51	0.1401	29.5986	-0.4353
672	SLU 61	1.57	1.87	119.52	0.1406	29.5997	-0.4634
672	SLU 62	1.59	1.77	120.44	0.1411	29.8279	-0.4379
672	SLU 63	1.59	1.88	120.45	0.1416	29.8289	-0.466
672	SLU 64	1.56	1.62	114.52	0.1354	28.3571	-0.4014
672	SLU 65	1.56	1.81	114.53	0.1363	28.3588	-0.4483
672	SLU 66	1.59	1.65	116.15	0.1374	28.7592	-0.4102
672	SLU 67	1.59	1.77	116.15	0.138	28.7602	-0.4384
672	SLU 68	1.58	1.82	115.46	0.1373	28.588	-0.451
672	SLU 69	1.61	1.66	117.08	0.1384	28.9884	-0.4129
672	SLU 70	1.61	1.78	117.08	0.139	28.9895	-0.441
672	SLU 71	1.6	1.64	116.38	0.1374	28.8156	-0.4067
672	SLU 72	1.6	1.75	116.38	0.138	28.8166	-0.4348
672	SLU 73	1.63	2.04	125.23	0.1486	31.0153	-0.5074
672	SLU 74	1.66	1.89	126.85	0.1497	31.4157	-0.4693
672	SLU 75	1.66	2	126.86	0.1502	31.4167	-0.4975
672	SLU 76	1.65	2.05	126.16	0.1496	31.2445	-0.5101
672	SLU 77	1.68	1.9	127.78	0.1507	31.6449	-0.472
672	SLU 78	1.68	2.01	127.79	0.1513	31.6459	-0.5001
672	SLU 79	1.67	1.88	127.09	0.1497	31.4721	-0.4658
672	SLU 80	1.67	1.99	127.09	0.1502	31.4731	-0.4939
672	SLU 81	1.66	1.96	129.81	0.1529	32.1521	-0.4858
672	SLU 82	1.66	2.07	129.82	0.1535	32.1531	-0.514
672	SLU 83	1.68	1.97	130.74	0.1539	32.3813	-0.4885
672	SLU 84	1.68	2.08	130.75	0.1545	32.3823	-0.5166
672	SLE RA 1	1.18	1.2	85.83	0.1013	21.252	-0.2977
672	SLE RA 2	1.18	1.33	85.83	0.1019	21.2531	-0.3289
672	SLE RA 3	1.2	1.22	86.92	0.1027	21.52	-0.3035
672	SLE RA 4	1.2	1.3	86.92	0.103	21.5207	-0.3223
672	SLE RA 5	1.19	1.33	86.45	0.1026	21.4059	-0.3307
672	SLE RA 6	1.21	1.23	87.54	0.1034	21.6728	-0.3053
672	SLE RA 7	1.21	1.31	87.54	0.1037	21.6735	-0.3241
672	SLE RA 8	1.21	1.21	87.07	0.1027	21.5576	-0.3012
672	SLE RA 9	1.2	1.29	87.07	0.1031	21.5583	-0.3199
672	SLE RA 10	1.23	1.48	92.97	0.1101	23.0241	-0.3683
672	SLE RA 11	1.25	1.38	94.05	0.1108	23.291	-0.3429
672	SLE RA 12	1.25	1.46	94.05	0.1112	23.2917	-0.3617
672	SLE RA 13	1.24	1.49	93.59	0.1108	23.1769	-0.3701
672	SLE RA 14	1.26	1.39	94.67	0.1115	23.4438	-0.3447
672	SLE RA 15	1.26	1.46	94.67	0.1119	23.4445	-0.3635
672	SLE RA 16	1.25	1.37	94.21	0.1109	23.3286	-0.3406
672	SLE RA 17	1.25	1.45	94.21	0.1112	23.3293	-0.3593
672	SLE RA 18	1.25	1.43	96.02	0.113	23.7819	-0.3539
672	SLE RA 19	1.25	1.5	96.03	0.1134	23.7826	-0.3727
672	SLE RA 20	1.26	1.43	96.64	0.1137	23.9348	-0.3557
672	SLE RA 21	1.26	1.51	96.65	0.1141	23.9355	-0.3745
672	SLE FR 1	1.18	1.2	85.83	0.1013	21.252	-0.2977
672	SLE FR 2	1.18	1.23	85.83	0.1014	21.2522	-0.3039
672	SLE FR 3	1.19	1.2	86.08	0.1016	21.3131	-0.2984
672	SLE FR 4	1.2	1.29	88.89	0.105	22.0112	-0.3208
672	SLE FR 5	1.21	1.27	89.13	0.1051	22.0721	-0.3153
672	SLE FR 6	1.22	1.31	90.93	0.1072	22.517	-0.3258
672	SLE QP 1	1.18	1.2	85.83	0.1013	21.252	-0.2977
672	SLE QP 2	1.2	1.27	88.89	0.1048	22.011	-0.3146
672	SLD 1	7.57	2.17	71.74	0.0934	17.9146	-0.5399
672	SLD 2	7.56	3.05	71.72	0.0939	17.9118	-0.7578
672	SLD 3	7.71	-1.24	72.12	0.0812	18.0075	0.3107
672	SLD 4	7.71	-0.36	72.11	0.0817	18.0047	0.0928
672	SLD 5	2.89	6.56	83.15	0.1197	20.6415	-1.6343
672	SLD 6	2.89	7.13	83.15	0.12	20.6397	-1.7757
672	SLD 7	3.37	-4.81	84.45	0.0793	20.9514	1.2012
672	SLD 8	3.37	-4.24	84.44	0.0796	20.9496	1.0598
672	SLD 9	-0.97	6.77	93.33	0.1301	23.0723	-1.6889
672	SLD 10	-0.97	7.35	93.32	0.1304	23.0705	-1.8303
672	SLD 11	-0.49	-4.59	94.63	0.0896	23.3822	1.1466
672	SLD 12	-0.49	-4.02	94.62	0.09	23.3804	1.0052
672	SLD 13	-5.3	2.9	105.66	0.1279	26.0172	-0.7219
672	SLD 14	-5.31	3.78	105.65	0.1284	26.0144	-0.9398
672	SLD 15	-5.16	-0.52	106.05	0.1158	26.1101	0.1287
672	SLD 16	-5.17	0.37	106.04	0.1163	26.1073	-0.0892
672	SLV 1	16.09	3.27	48.75	0.0774	12.4259	-0.8153
672	SLV 2	16.08	5.33	48.73	0.0786	12.4194	-1.323
672	SLV 3	16.43	-4.49	49.66	0.0499	12.6432	1.1196
672	SLV 4	16.42	-2.43	49.64	0.051	12.6367	0.612

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
672	SLV 5	5.16	13.28	75.47	0.1383	18.8069	-3.3135
672	SLV 6	5.15	14.6	75.46	0.139	18.8027	-3.6377
672	SLV 7	6.28	-12.57	78.5	0.0463	19.5314	3.1363
672	SLV 8	6.28	-11.26	78.48	0.047	19.5273	2.8121
672	SLV 9	-3.87	13.79	99.29	0.1626	24.4947	-3.4412
672	SLV 10	-3.88	15.11	99.27	0.1633	24.4905	-3.7654
672	SLV 11	-2.75	-12.06	102.32	0.0707	25.2192	3.0085
672	SLV 12	-2.76	-10.75	102.3	0.0714	25.215	2.6844
672	SLV 13	-14.01	4.97	128.14	0.1586	31.3852	-1.2411
672	SLV 14	-14.02	7.03	128.11	0.1598	31.3787	-1.7487
672	SLV 15	-13.68	-2.79	129.05	0.1311	31.6025	0.6939
672	SLV 16	-13.69	-0.73	129.02	0.1322	31.596	0.1862
672	CRTFP Ux+	0	0	0	0	0	0
672	CRTFP Ux-	0	0	0	0	0	0
674	SLU 1	0.36	-0.05	31.15	-0.6034	0.9917	0.0093
674	SLU 2	0.36	0	31.15	-0.6034	0.9911	0.0074
674	SLU 3	0.37	-0.05	31.74	-0.615	1.0106	0.0093
674	SLU 4	0.37	-0.02	31.75	-0.6149	1.0103	0.0082
674	SLU 5	0.36	0	31.48	-0.6098	1.0015	0.0077
674	SLU 6	0.37	-0.05	32.08	-0.6214	1.0209	0.0096
674	SLU 7	0.37	-0.02	32.08	-0.6214	1.0206	0.0085
674	SLU 8	0.37	-0.06	31.81	-0.6163	1.0123	0.0099
674	SLU 9	0.37	-0.03	31.82	-0.6163	1.012	0.0087
674	SLU 10	0.38	0.03	35.39	-0.6857	1.1276	0.0071
674	SLU 11	0.39	-0.02	35.98	-0.6972	1.1471	0.0091
674	SLU 12	0.39	0.01	35.99	-0.6972	1.1468	0.0079
674	SLU 13	0.39	0.02	35.73	-0.6921	1.1379	0.0074
674	SLU 14	0.4	-0.03	36.32	-0.7036	1.1574	0.0093
674	SLU 15	0.4	0.01	36.32	-0.7036	1.1571	0.0082
674	SLU 16	0.39	-0.04	36.06	-0.6986	1.1488	0.0096
674	SLU 17	0.39	0	36.06	-0.6985	1.1485	0.0084
674	SLU 18	0.39	-0.02	37.21	-0.7209	1.1867	0.0089
674	SLU 19	0.39	0.02	37.21	-0.7209	1.1863	0.0078
674	SLU 20	0.4	-0.02	37.54	-0.7274	1.197	0.0092
674	SLU 21	0.4	0.01	37.54	-0.7274	1.1967	0.008
674	SLU 22	0.39	-0.02	35.15	-0.6809	1.1183	0.0087
674	SLU 23	0.39	0.04	35.16	-0.6809	1.1177	0.0068
674	SLU 24	0.4	-0.02	35.75	-0.6925	1.1372	0.0088
674	SLU 25	0.4	0.02	35.75	-0.6924	1.1369	0.0076
674	SLU 26	0.39	0.03	35.49	-0.6874	1.1281	0.0071
674	SLU 27	0.41	-0.02	36.08	-0.6989	1.1475	0.009
674	SLU 28	0.4	0.01	36.09	-0.6989	1.1472	0.0079
674	SLU 29	0.4	-0.03	35.82	-0.6938	1.1389	0.0093
674	SLU 30	0.4	0	35.82	-0.6938	1.1386	0.0081
674	SLU 31	0.41	0.06	39.4	-0.7632	1.2542	0.0065
674	SLU 32	0.42	0.01	39.99	-0.7747	1.2737	0.0085
674	SLU 33	0.42	0.04	39.99	-0.7747	1.2734	0.0073
674	SLU 34	0.42	0.06	39.73	-0.7696	1.2646	0.0068
674	SLU 35	0.43	0	40.32	-0.7812	1.284	0.0087
674	SLU 36	0.43	0.04	40.33	-0.7811	1.2837	0.0076
674	SLU 37	0.43	0	40.06	-0.7761	1.2754	0.009
674	SLU 38	0.42	0.03	40.06	-0.7761	1.2751	0.0078
674	SLU 39	0.42	0.02	41.21	-0.7984	1.3133	0.0083
674	SLU 40	0.42	0.05	41.21	-0.7984	1.313	0.0072
674	SLU 41	0.43	0.01	41.55	-0.8049	1.3236	0.0086
674	SLU 42	0.43	0.05	41.55	-0.8049	1.3233	0.0074
674	SLU 43	0.46	-0.08	39.12	-0.7579	1.2458	0.0123
674	SLU 44	0.46	-0.02	39.12	-0.7579	1.2452	0.0104
674	SLU 45	0.47	-0.08	39.71	-0.7694	1.2647	0.0123
674	SLU 46	0.47	-0.04	39.72	-0.7694	1.2644	0.0112
674	SLU 47	0.46	-0.03	39.46	-0.7643	1.2555	0.0107
674	SLU 48	0.47	-0.08	40.05	-0.7759	1.275	0.0126
674	SLU 49	0.47	-0.05	40.05	-0.7758	1.2747	0.0115
674	SLU 50	0.47	-0.09	39.78	-0.7708	1.2664	0.0129
674	SLU 51	0.47	-0.06	39.79	-0.7707	1.2661	0.0117
674	SLU 52	0.48	0	43.36	-0.8401	1.3817	0.0101
674	SLU 53	0.49	-0.05	43.96	-0.8517	1.4012	0.0121
674	SLU 54	0.49	-0.02	43.96	-0.8516	1.4009	0.0109
674	SLU 55	0.48	0	43.7	-0.8465	1.392	0.0104
674	SLU 56	0.49	-0.06	44.29	-0.8581	1.4115	0.0123
674	SLU 57	0.49	-0.02	44.29	-0.8581	1.4112	0.0112
674	SLU 58	0.49	-0.06	44.03	-0.853	1.4029	0.0126
674	SLU 59	0.49	-0.03	44.03	-0.853	1.4026	0.0114
674	SLU 60	0.49	-0.04	45.18	-0.8754	1.4407	0.0119
674	SLU 61	0.49	-0.01	45.18	-0.8754	1.4404	0.0108
674	SLU 62	0.5	-0.05	45.51	-0.8818	1.4511	0.0122
674	SLU 63	0.49	-0.01	45.51	-0.8818	1.4507	0.011
674	SLU 64	0.49	-0.05	43.12	-0.8354	1.3724	0.0117
674	SLU 65	0.49	0.01	43.13	-0.8354	1.3718	0.0098
674	SLU 66	0.5	-0.04	43.72	-0.8469	1.3913	0.0118
674	SLU 67	0.5	-0.01	43.72	-0.8469	1.391	0.0106
674	SLU 68	0.49	0	43.46	-0.8418	1.3822	0.0101
674	SLU 69	0.5	-0.05	44.05	-0.8534	1.4016	0.012
674	SLU 70	0.5	-0.01	44.06	-0.8533	1.4013	0.0109
674	SLU 71	0.5	-0.06	43.79	-0.8483	1.393	0.0123
674	SLU 72	0.5	-0.02	43.79	-0.8483	1.3927	0.0111
674	SLU 73	0.51	0.03	47.37	-0.9176	1.5083	0.0095
674	SLU 74	0.52	-0.02	47.96	-0.9292	1.5278	0.0115
674	SLU 75	0.52	0.02	47.96	-0.9292	1.5275	0.0103
674	SLU 76	0.52	0.03	47.7	-0.9241	1.5186	0.0098
674	SLU 77	0.53	-0.02	48.29	-0.9356	1.5381	0.0117

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
674	SLU 78	0.52	0.01	48.3	-0.9356	1.5378	0.0106
674	SLU 79	0.52	-0.03	48.03	-0.9305	1.5295	0.012
674	SLU 80	0.52	0	48.03	-0.9305	1.5292	0.0108
674	SLU 81	0.52	-0.01	49.18	-0.9529	1.5674	0.0113
674	SLU 82	0.52	0.02	49.18	-0.9529	1.567	0.0102
674	SLU 83	0.53	-0.02	49.52	-0.9593	1.5777	0.0116
674	SLU 84	0.53	0.02	49.52	-0.9593	1.5774	0.0104
674	SLE RA 1	0.37	-0.04	32.29	-0.6256	1.0278	0.0092
674	SLE RA 2	0.37	-0.01	32.29	-0.6256	1.0275	0.0079
674	SLE RA 3	0.37	-0.04	32.69	-0.6333	1.0405	0.0092
674	SLE RA 4	0.37	-0.02	32.69	-0.6332	1.0402	0.0084
674	SLE RA 5	0.37	-0.01	32.52	-0.6298	1.0344	0.0081
674	SLE RA 6	0.38	-0.04	32.91	-0.6376	1.0473	0.0094
674	SLE RA 7	0.38	-0.02	32.91	-0.6375	1.0471	0.0086
674	SLE RA 8	0.38	-0.05	32.74	-0.6342	1.0416	0.0095
674	SLE RA 9	0.38	-0.03	32.74	-0.6341	1.0414	0.0088
674	SLE RA 10	0.38	0.01	35.12	-0.6804	1.1185	0.0077
674	SLE RA 11	0.39	-0.02	35.52	-0.6881	1.1315	0.009
674	SLE RA 12	0.39	0	35.52	-0.6881	1.1312	0.0082
674	SLE RA 13	0.39	0.01	35.34	-0.6847	1.1254	0.0079
674	SLE RA 14	0.39	-0.03	35.74	-0.6924	1.1383	0.0092
674	SLE RA 15	0.39	0	35.74	-0.6924	1.1381	0.0084
674	SLE RA 16	0.39	-0.03	35.56	-0.689	1.1326	0.0093
674	SLE RA 17	0.39	-0.01	35.57	-0.689	1.1324	0.0086
674	SLE RA 18	0.39	-0.02	36.33	-0.7039	1.1578	0.0089
674	SLE RA 19	0.39	0	36.33	-0.7039	1.1576	0.0081
674	SLE RA 20	0.39	-0.02	36.55	-0.7082	1.1647	0.0091
674	SLE RA 21	0.39	0	36.55	-0.7082	1.1645	0.0083
674	SLE FR 1	0.37	-0.04	32.29	-0.6256	1.0278	0.0092
674	SLE FR 2	0.37	-0.04	32.29	-0.6256	1.0278	0.0089
674	SLE FR 3	0.37	-0.05	32.38	-0.6273	1.0306	0.0092
674	SLE FR 4	0.37	-0.03	33.5	-0.6491	1.0668	0.0088
674	SLE FR 5	0.38	-0.04	33.59	-0.6508	1.0696	0.0092
674	SLE FR 6	0.38	-0.03	34.31	-0.6647	1.0928	0.009
674	SLE QP 1	0.37	-0.04	32.29	-0.6256	1.0278	0.0092
674	SLE QP 2	0.37	-0.04	33.5	-0.6491	1.0668	0.0091
674	SLD 1	3.14	0.51	31.44	-0.6096	1.0193	0.0432
674	SLD 2	3.13	0.68	31.43	-0.6093	1.0181	0.0391
674	SLD 3	3.2	-0.58	31.53	-0.6126	1.0309	0.0806
674	SLD 4	3.2	-0.4	31.52	-0.6123	1.0296	0.0764
674	SLD 5	1.11	1.74	32.75	-0.6327	1.0353	-0.0366
674	SLD 6	1.11	1.86	32.75	-0.6325	1.0345	-0.0393
674	SLD 7	1.32	-1.88	33.05	-0.6428	1.0738	0.0879
674	SLD 8	1.31	-1.76	33.04	-0.6426	1.073	0.0852
674	SLD 9	-0.56	1.69	33.97	-0.6556	1.0607	-0.067
674	SLD 10	-0.57	1.8	33.96	-0.6554	1.0599	-0.0697
674	SLD 11	-0.36	-1.93	34.26	-0.6656	1.0992	0.0574
674	SLD 12	-0.36	-1.82	34.26	-0.6654	1.0984	0.0547
674	SLD 13	-2.45	0.33	35.49	-0.6859	1.104	-0.0583
674	SLD 14	-2.45	0.5	35.48	-0.6855	1.1028	-0.0624
674	SLD 15	-2.39	-0.76	35.58	-0.6889	1.1156	-0.0209
674	SLD 16	-2.39	-0.58	35.57	-0.6886	1.1143	-0.0251
674	SLV 1	6.84	1.21	28.67	-0.5567	0.956	0.0901
674	SLV 2	6.83	1.61	28.65	-0.556	0.953	0.0804
674	SLV 3	6.99	-1.27	28.88	-0.5637	0.9824	0.1751
674	SLV 4	6.97	-0.86	28.86	-0.563	0.9794	0.1654
674	SLV 5	2.1	4.02	31.74	-0.6109	0.994	-0.094
674	SLV 6	2.09	4.28	31.73	-0.6105	0.9922	-0.1001
674	SLV 7	2.58	-4.23	32.43	-0.6341	1.082	0.1895
674	SLV 8	2.57	-3.97	32.42	-0.6337	1.0801	0.1833
674	SLV 9	-1.82	3.89	34.59	-0.6645	1.0535	-0.1652
674	SLV 10	-1.83	4.15	34.58	-0.664	1.0517	-0.1713
674	SLV 11	-1.34	-4.35	35.27	-0.6877	1.1415	0.1183
674	SLV 12	-1.35	-4.09	35.26	-0.6872	1.1396	0.1121
674	SLV 13	-6.22	0.79	38.15	-0.7352	1.1542	-0.1473
674	SLV 14	-6.24	1.19	38.13	-0.7344	1.1513	-0.1569
674	SLV 15	-6.08	-1.69	38.35	-0.7421	1.1806	-0.0622
674	SLV 16	-6.09	-1.28	38.34	-0.7414	1.1777	-0.0719
674	CRTFP Ux+	0	0	0	0	0	0
674	CRTFP Ux-	0	0	0	0	0	0
676	SLU 1	-0.81	-0.31	86.19	-4.3896	-16.6881	-0.0824
676	SLU 2	-0.8	-0.09	86.2	-4.3879	-16.689	-0.0397
676	SLU 3	-0.83	-0.29	87.9	-4.4761	-17.0162	-0.0802
676	SLU 4	-0.82	-0.16	87.9	-4.4751	-17.0167	-0.0545
676	SLU 5	-0.82	-0.08	87.17	-4.4375	-16.8753	-0.0383
676	SLU 6	-0.84	-0.28	88.87	-4.5257	-17.2025	-0.0788
676	SLU 7	-0.84	-0.15	88.87	-4.5247	-17.203	-0.0532
676	SLU 8	-0.84	-0.29	88.13	-4.4888	-17.0608	-0.0798
676	SLU 9	-0.83	-0.16	88.13	-4.4878	-17.0613	-0.0541
676	SLU 10	-0.79	-0.06	97.47	-4.9639	-18.8769	-0.0313
676	SLU 11	-0.81	-0.26	99.17	-5.0521	-19.2041	-0.0718
676	SLU 12	-0.81	-0.13	99.17	-5.0511	-19.2046	-0.0461
676	SLU 13	-0.8	-0.05	98.44	-5.0135	-19.0632	-0.0299
676	SLU 14	-0.83	-0.25	100.14	-5.1017	-19.3904	-0.0704
676	SLU 15	-0.82	-0.12	100.14	-5.1007	-19.3909	-0.0448
676	SLU 16	-0.82	-0.26	99.41	-5.0648	-19.2488	-0.0714
676	SLU 17	-0.82	-0.13	99.41	-5.0638	-19.2493	-0.0457
676	SLU 18	-0.79	-0.26	102.3	-5.2125	-19.8137	-0.0705
676	SLU 19	-0.79	-0.13	102.3	-5.2115	-19.8142	-0.0448
676	SLU 20	-0.8	-0.25	103.27	-5.2621	-20.0001	-0.0691
676	SLU 21	-0.8	-0.12	103.27	-5.2611	-20.0006	-0.0435

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
676	SLU 22	-0.86	-0.27	97.06	-4.9414	-18.7937	-0.0757
676	SLU 23	-0.85	-0.05	97.06	-4.9397	-18.7946	-0.0329
676	SLU 24	-0.87	-0.26	98.76	-5.0279	-19.1218	-0.0734
676	SLU 25	-0.87	-0.13	98.76	-5.0269	-19.1223	-0.0477
676	SLU 26	-0.87	-0.04	98.03	-4.9893	-18.9809	-0.0316
676	SLU 27	-0.89	-0.25	99.73	-5.0775	-19.3081	-0.0721
676	SLU 28	-0.88	-0.12	99.73	-5.0765	-19.3086	-0.0464
676	SLU 29	-0.88	-0.25	98.99	-5.0405	-19.1664	-0.073
676	SLU 30	-0.88	-0.12	99	-5.0395	-19.1669	-0.0474
676	SLU 31	-0.84	-0.02	108.33	-5.5157	-20.9825	-0.0245
676	SLU 32	-0.86	-0.23	110.03	-5.6039	-21.3097	-0.065
676	SLU 33	-0.86	-0.1	110.03	-5.6029	-21.3102	-0.0393
676	SLU 34	-0.85	-0.01	109.3	-5.5653	-21.1688	-0.0232
676	SLU 35	-0.87	-0.22	111	-5.6535	-21.496	-0.0637
676	SLU 36	-0.87	-0.09	111	-5.6525	-21.4965	-0.038
676	SLU 37	-0.87	-0.22	110.27	-5.6166	-21.3544	-0.0646
676	SLU 38	-0.87	-0.09	110.27	-5.6155	-21.3549	-0.039
676	SLU 39	-0.84	-0.23	113.16	-5.7642	-21.9193	-0.0637
676	SLU 40	-0.83	-0.1	113.16	-5.7632	-21.9198	-0.038
676	SLU 41	-0.85	-0.22	114.13	-5.8138	-22.1057	-0.0624
676	SLU 42	-0.85	-0.09	114.13	-5.8128	-22.1062	-0.0367
676	SLU 43	-1.04	-0.41	108.33	-5.5173	-20.9727	-0.1095
676	SLU 44	-1.03	-0.19	108.33	-5.5156	-20.9735	-0.0667
676	SLU 45	-1.05	-0.4	110.03	-5.6038	-21.3007	-0.1072
676	SLU 46	-1.05	-0.26	110.03	-5.6028	-21.3012	-0.0815
676	SLU 47	-1.05	-0.18	109.3	-5.5652	-21.1598	-0.0654
676	SLU 48	-1.07	-0.39	111	-5.6534	-21.487	-0.1059
676	SLU 49	-1.06	-0.26	111	-5.6524	-21.4875	-0.0802
676	SLU 50	-1.06	-0.39	110.27	-5.6165	-21.3454	-0.1068
676	SLU 51	-1.06	-0.26	110.27	-5.6155	-21.3459	-0.0812
676	SLU 52	-1.02	-0.16	119.6	-6.0916	-23.1614	-0.0583
676	SLU 53	-1.04	-0.37	121.3	-6.1799	-23.4886	-0.0988
676	SLU 54	-1.04	-0.24	121.31	-6.1788	-23.4891	-0.0731
676	SLU 55	-1.03	-0.15	120.57	-6.1412	-23.3478	-0.057
676	SLU 56	-1.05	-0.36	122.27	-6.2294	-23.675	-0.0975
676	SLU 57	-1.05	-0.23	122.27	-6.2284	-23.6755	-0.0718
676	SLU 58	-1.05	-0.36	121.54	-6.1925	-23.5333	-0.0985
676	SLU 59	-1.05	-0.23	121.54	-6.1915	-23.5338	-0.0728
676	SLU 60	-1.02	-0.37	124.43	-6.3402	-24.0983	-0.0975
676	SLU 61	-1.01	-0.24	124.43	-6.3392	-24.0988	-0.0718
676	SLU 62	-1.03	-0.36	125.4	-6.3898	-24.2846	-0.0962
676	SLU 63	-1.03	-0.23	125.4	-6.3888	-24.2851	-0.0705
676	SLU 64	-1.08	-0.37	119.19	-6.0691	-23.0783	-0.1027
676	SLU 65	-1.08	-0.16	119.19	-6.0674	-23.0791	-0.06
676	SLU 66	-1.1	-0.36	120.89	-6.1556	-23.4063	-0.1005
676	SLU 67	-1.1	-0.23	120.89	-6.1546	-23.4068	-0.0748
676	SLU 68	-1.09	-0.15	120.16	-6.117	-23.2654	-0.0586
676	SLU 69	-1.11	-0.35	121.86	-6.2052	-23.5926	-0.0991
676	SLU 70	-1.11	-0.22	121.86	-6.2042	-23.5931	-0.0735
676	SLU 71	-1.11	-0.36	121.13	-6.1683	-23.451	-0.1001
676	SLU 72	-1.11	-0.22	121.13	-6.1672	-23.4515	-0.0744
676	SLU 73	-1.06	-0.13	130.47	-6.6434	-25.267	-0.0516
676	SLU 74	-1.09	-0.33	132.16	-6.7316	-25.5942	-0.0921
676	SLU 75	-1.08	-0.2	132.17	-6.7306	-25.5947	-0.0664
676	SLU 76	-1.08	-0.12	131.44	-6.693	-25.4534	-0.0502
676	SLU 77	-1.1	-0.32	133.13	-6.7812	-25.7806	-0.0907
676	SLU 78	-1.1	-0.19	133.14	-6.7802	-25.7811	-0.0651
676	SLU 79	-1.1	-0.33	132.4	-6.7443	-25.6389	-0.0917
676	SLU 80	-1.09	-0.19	132.4	-6.7433	-25.6394	-0.066
676	SLU 81	-1.06	-0.33	135.29	-6.8919	-26.2039	-0.0908
676	SLU 82	-1.06	-0.2	135.3	-6.8909	-26.2044	-0.0651
676	SLU 83	-1.08	-0.32	136.26	-6.9415	-26.3902	-0.0894
676	SLU 84	-1.07	-0.19	136.27	-6.9405	-26.3907	-0.0638
676	SLE RA 1	-0.82	-0.3	89.3	-4.5472	-17.2897	-0.0805
676	SLE RA 2	-0.82	-0.15	89.3	-4.5461	-17.2903	-0.052
676	SLE RA 3	-0.83	-0.29	90.43	-4.6049	-17.5084	-0.079
676	SLE RA 4	-0.83	-0.2	90.43	-4.6043	-17.5088	-0.0619
676	SLE RA 5	-0.83	-0.14	89.95	-4.5792	-17.4145	-0.0511
676	SLE RA 6	-0.84	-0.28	91.08	-4.638	-17.6327	-0.0781
676	SLE RA 7	-0.84	-0.19	91.08	-4.6373	-17.633	-0.061
676	SLE RA 8	-0.84	-0.28	90.59	-4.6134	-17.5382	-0.0787
676	SLE RA 9	-0.84	-0.2	90.59	-4.6127	-17.5385	-0.0616
676	SLE RA 10	-0.81	-0.13	96.82	-4.9301	-18.7489	-0.0464
676	SLE RA 11	-0.82	-0.27	97.95	-4.9889	-18.967	-0.0734
676	SLE RA 12	-0.82	-0.18	97.95	-4.9883	-18.9674	-0.0563
676	SLE RA 13	-0.82	-0.12	97.46	-4.9632	-18.8731	-0.0455
676	SLE RA 14	-0.83	-0.26	98.59	-5.022	-19.0913	-0.0725
676	SLE RA 15	-0.83	-0.17	98.59	-5.0213	-19.0916	-0.0554
676	SLE RA 16	-0.83	-0.26	98.1	-4.9974	-18.9968	-0.0732
676	SLE RA 17	-0.83	-0.18	98.11	-4.9967	-18.9972	-0.056
676	SLE RA 18	-0.81	-0.27	100.03	-5.0958	-19.3735	-0.0725
676	SLE RA 19	-0.81	-0.18	100.04	-5.0952	-19.3738	-0.0554
676	SLE RA 20	-0.82	-0.26	100.68	-5.1289	-19.4977	-0.0716
676	SLE RA 21	-0.82	-0.17	100.68	-5.1282	-19.498	-0.0545
676	SLE FR 1	-0.82	-0.3	89.3	-4.5472	-17.2897	-0.0805
676	SLE FR 2	-0.82	-0.27	89.3	-4.547	-17.2898	-0.0748
676	SLE FR 3	-0.83	-0.29	89.56	-4.5605	-17.3394	-0.0802
676	SLE FR 4	-0.82	-0.26	92.52	-4.7116	-17.915	-0.0724
676	SLE FR 5	-0.82	-0.29	92.78	-4.725	-17.9645	-0.0778
676	SLE FR 6	-0.82	-0.28	94.67	-4.8215	-18.3316	-0.0765
676	SLE QP 1	-0.82	-0.3	89.3	-4.5472	-17.2897	-0.0805

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
676	SLE QP 2	-0.82	-0.29	92.52	-4.7118	-17.9149	-0.0781
676	SLD 1	6.46	2.56	111.21	-5.6685	-21.4535	0.7737
676	SLD 2	6.44	1.61	111.27	-5.6742	-21.4671	0.5909
676	SLD 3	6.28	-1.17	111.75	-5.7166	-21.564	0.0429
676	SLD 4	6.25	-2.12	111.81	-5.7223	-21.5776	-0.1399
676	SLD 5	1.65	6.39	97.29	-4.9248	-18.8065	1.3177
676	SLD 6	1.63	5.77	97.33	-4.9285	-18.8153	1.199
676	SLD 7	1.03	-6.04	99.1	-5.0853	-19.1748	-1.1183
676	SLD 8	1.02	-6.66	99.14	-5.089	-19.1836	-1.2369
676	SLD 9	-2.65	6.08	85.9	-4.3347	-16.6461	1.0807
676	SLD 10	-2.67	5.47	85.94	-4.3384	-16.6549	0.962
676	SLD 11	-3.27	-6.34	87.71	-4.4951	-17.0144	-1.3553
676	SLD 12	-3.29	-6.96	87.75	-4.4988	-17.0232	-1.4739
676	SLD 13	-7.89	1.55	73.23	-3.7013	-14.2521	-0.0163
676	SLD 14	-7.92	0.59	73.29	-3.707	-14.2657	-0.1991
676	SLD 15	-8.07	-2.18	73.77	-3.7495	-14.3626	-0.7471
676	SLD 16	-8.1	-3.13	73.83	-3.7552	-14.3762	-0.9299
676	SLV 1	16.21	6.26	136.26	-6.9514	-26.1968	1.8932
676	SLV 2	16.15	4.04	136.39	-6.9647	-26.2284	1.4673
676	SLV 3	15.78	-2.24	137.52	-7.0618	-26.4532	0.2262
676	SLV 4	15.72	-4.46	137.65	-7.075	-26.4848	-0.1997
676	SLV 5	4.96	14.95	103.7	-5.2141	-20.0053	3.1137
676	SLV 6	4.91	13.53	103.79	-5.2226	-20.0254	2.8417
676	SLV 7	3.52	-13.4	107.91	-5.5819	-20.8598	-2.443
676	SLV 8	3.48	-14.82	107.99	-5.5904	-20.88	-2.715
676	SLV 9	-5.12	14.24	77.04	-3.8333	-14.9497	2.5588
676	SLV 10	-5.16	12.82	77.13	-3.8417	-14.9699	2.2868
676	SLV 11	-6.55	-14.11	81.25	-4.2011	-15.8043	-2.9979
676	SLV 12	-6.59	-15.53	81.33	-4.2095	-15.8244	-3.2699
676	SLV 13	-17.35	3.89	47.38	-2.3486	-9.3449	0.0435
676	SLV 14	-17.42	1.66	47.52	-2.3619	-9.3765	-0.3824
676	SLV 15	-17.79	-4.62	48.64	-2.459	-9.6013	-1.6235
676	SLV 16	-17.85	-6.84	48.78	-2.4722	-9.6329	-2.0494
676	CRTFP Ux+	0	0	0	0	0	0
676	CRTFP Ux-	0	0	0	0	0	0
691	SLU 1	-1.19	-0.84	170.42	-12.4712	-10.6226	-0.1454
691	SLU 2	-1.19	-0.53	170.44	-12.4641	-10.6197	-0.126
691	SLU 3	-1.21	-0.81	173.76	-12.7135	-10.8318	-0.1449
691	SLU 4	-1.21	-0.63	173.77	-12.7093	-10.8301	-0.1332
691	SLU 5	-1.21	-0.54	172.26	-12.598	-10.7328	-0.1285
691	SLU 6	-1.23	-0.83	175.58	-12.8473	-10.945	-0.1474
691	SLU 7	-1.23	-0.64	175.59	-12.8431	-10.9432	-0.1358
691	SLU 8	-1.23	-0.86	174.07	-12.7389	-10.8489	-0.1505
691	SLU 9	-1.23	-0.68	174.08	-12.7347	-10.8471	-0.1389
691	SLU 10	-1.15	-0.53	194.1	-14.1946	-12.1024	-0.1201
691	SLU 11	-1.17	-0.82	197.42	-14.444	-12.3146	-0.139
691	SLU 12	-1.17	-0.63	197.43	-14.4397	-12.3128	-0.1273
691	SLU 13	-1.17	-0.54	195.92	-14.3285	-12.2155	-0.1226
691	SLU 14	-1.19	-0.83	199.24	-14.5778	-12.4277	-0.1415
691	SLU 15	-1.19	-0.64	199.25	-14.5736	-12.4259	-0.1299
691	SLU 16	-1.19	-0.87	197.73	-14.4694	-12.3316	-0.1446
691	SLU 17	-1.19	-0.68	197.74	-14.4652	-12.3298	-0.1329
691	SLU 18	-1.13	-0.84	204.22	-14.9433	-12.7408	-0.137
691	SLU 19	-1.13	-0.66	204.23	-14.9391	-12.739	-0.1253
691	SLU 20	-1.15	-0.86	206.05	-15.0771	-12.8539	-0.1395
691	SLU 21	-1.15	-0.67	206.06	-15.0729	-12.8522	-0.1279
691	SLU 22	-1.27	-0.74	192.63	-14.0753	-12.0029	-0.1411
691	SLU 23	-1.27	-0.43	192.65	-14.0682	-11.9999	-0.1217
691	SLU 24	-1.29	-0.71	195.97	-14.3176	-12.2121	-0.1406
691	SLU 25	-1.29	-0.52	195.98	-14.3134	-12.2103	-0.1289
691	SLU 26	-1.29	-0.44	194.47	-14.2021	-12.1131	-0.1242
691	SLU 27	-1.31	-0.72	197.8	-14.4514	-12.3252	-0.1431
691	SLU 28	-1.31	-0.54	197.8	-14.4472	-12.3234	-0.1315
691	SLU 29	-1.31	-0.76	196.28	-14.343	-12.2291	-0.1462
691	SLU 30	-1.31	-0.57	196.29	-14.3388	-12.2274	-0.1346
691	SLU 31	-1.23	-0.43	216.31	-15.7987	-13.4827	-0.1158
691	SLU 32	-1.25	-0.71	219.63	-16.0481	-13.6948	-0.1347
691	SLU 33	-1.25	-0.53	219.64	-16.0438	-13.6931	-0.123
691	SLU 34	-1.25	-0.44	218.13	-15.9326	-13.5958	-0.1183
691	SLU 35	-1.27	-0.73	221.46	-16.1819	-13.8079	-0.1372
691	SLU 36	-1.27	-0.54	221.46	-16.1777	-13.8062	-0.1255
691	SLU 37	-1.27	-0.76	219.94	-16.0735	-13.7119	-0.1403
691	SLU 38	-1.27	-0.58	219.95	-16.0693	-13.7101	-0.1286
691	SLU 39	-1.21	-0.74	226.43	-16.5474	-14.1211	-0.1327
691	SLU 40	-1.21	-0.55	226.44	-16.5432	-14.1193	-0.121
691	SLU 41	-1.23	-0.75	228.26	-16.6812	-14.2342	-0.1352
691	SLU 42	-1.23	-0.57	228.27	-16.677	-14.2324	-0.1236
691	SLU 43	-1.51	-1.13	213.93	-15.6625	-13.3361	-0.1905
691	SLU 44	-1.51	-0.82	213.95	-15.6555	-13.3332	-0.1711
691	SLU 45	-1.54	-1.1	217.27	-15.9048	-13.5454	-0.19
691	SLU 46	-1.54	-0.92	217.28	-15.9006	-13.5436	-0.1783
691	SLU 47	-1.53	-0.83	215.77	-15.7894	-13.4464	-0.1737
691	SLU 48	-1.56	-1.11	219.09	-16.0387	-13.6585	-0.1925
691	SLU 49	-1.56	-0.93	219.1	-16.0345	-13.6567	-0.1809
691	SLU 50	-1.55	-1.15	217.58	-15.9303	-13.5624	-0.1956
691	SLU 51	-1.55	-0.97	217.59	-15.926	-13.5607	-0.184
691	SLU 52	-1.48	-0.82	237.61	-17.386	-14.816	-0.1652
691	SLU 53	-1.5	-1.1	240.93	-17.6353	-15.0281	-0.1841
691	SLU 54	-1.5	-0.92	240.94	-17.6311	-15.0263	-0.1724
691	SLU 55	-1.5	-0.83	239.43	-17.5199	-14.9291	-0.1677
691	SLU 56	-1.52	-1.12	242.75	-17.7692	-15.1412	-0.1866

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
691	SLU 57	-1.52	-0.93	242.76	-17.765	-15.1395	-0.175
691	SLU 58	-1.51	-1.15	241.24	-17.6607	-15.0452	-0.1897
691	SLU 59	-1.51	-0.97	241.25	-17.6565	-15.0434	-0.178
691	SLU 60	-1.46	-1.13	247.73	-18.1346	-15.4543	-0.1821
691	SLU 61	-1.46	-0.95	247.74	-18.1304	-15.4526	-0.1704
691	SLU 62	-1.48	-1.14	249.56	-18.2685	-15.5675	-0.1846
691	SLU 63	-1.48	-0.96	249.57	-18.2643	-15.5657	-0.173
691	SLU 64	-1.59	-1.03	236.14	-17.2666	-14.7164	-0.1862
691	SLU 65	-1.59	-0.71	236.16	-17.2596	-14.7135	-0.1668
691	SLU 66	-1.62	-1	239.48	-17.5089	-14.9256	-0.1857
691	SLU 67	-1.62	-0.81	239.49	-17.5047	-14.9239	-0.174
691	SLU 68	-1.61	-0.73	237.98	-17.3935	-14.8266	-0.1693
691	SLU 69	-1.64	-1.01	241.31	-17.6428	-15.0388	-0.1882
691	SLU 70	-1.64	-0.82	241.32	-17.6386	-15.037	-0.1766
691	SLU 71	-1.63	-1.05	239.79	-17.5344	-14.9427	-0.1913
691	SLU 72	-1.63	-0.86	239.8	-17.5301	-14.9409	-0.1797
691	SLU 73	-1.56	-0.72	259.82	-18.9901	-16.1962	-0.1609
691	SLU 74	-1.58	-1	263.14	-19.2394	-16.4084	-0.1798
691	SLU 75	-1.58	-0.81	263.15	-19.2352	-16.4066	-0.1681
691	SLU 76	-1.58	-0.73	261.64	-19.124	-16.3093	-0.1634
691	SLU 77	-1.6	-1.01	264.97	-19.3733	-16.5215	-0.1823
691	SLU 78	-1.6	-0.83	264.98	-19.3691	-16.5197	-0.1707
691	SLU 79	-1.59	-1.05	263.45	-19.2648	-16.4254	-0.1854
691	SLU 80	-1.6	-0.86	263.46	-19.2606	-16.4236	-0.1737
691	SLU 81	-1.54	-1.03	269.94	-19.7387	-16.8346	-0.1778
691	SLU 82	-1.54	-0.84	269.95	-19.7345	-16.8328	-0.1661
691	SLU 83	-1.56	-1.04	271.77	-19.8726	-16.9477	-0.1803
691	SLU 84	-1.56	-0.85	271.78	-19.8684	-16.946	-0.1687
691	SLE RA 1	-1.21	-0.81	176.77	-12.9295	-11.017	-0.1442
691	SLE RA 2	-1.21	-0.6	176.78	-12.9248	-11.015	-0.1313
691	SLE RA 3	-1.22	-0.79	178.99	-13.091	-11.1564	-0.1438
691	SLE RA 4	-1.22	-0.67	179	-13.0882	-11.1553	-0.1361
691	SLE RA 5	-1.22	-0.61	177.99	-13.014	-11.0904	-0.1329
691	SLE RA 6	-1.24	-0.8	180.21	-13.1803	-11.2319	-0.1455
691	SLE RA 7	-1.24	-0.68	180.21	-13.1774	-11.2307	-0.1378
691	SLE RA 8	-1.23	-0.83	179.2	-13.108	-11.1678	-0.1476
691	SLE RA 9	-1.24	-0.7	179.21	-13.1051	-11.1666	-0.1398
691	SLE RA 10	-1.18	-0.61	192.55	-14.0784	-12.0035	-0.1273
691	SLE RA 11	-1.2	-0.8	194.77	-14.2447	-12.1449	-0.1399
691	SLE RA 12	-1.2	-0.67	194.77	-14.2419	-12.1438	-0.1321
691	SLE RA 13	-1.2	-0.61	193.77	-14.1677	-12.0789	-0.129
691	SLE RA 14	-1.21	-0.8	195.98	-14.3339	-12.2204	-0.1416
691	SLE RA 15	-1.21	-0.68	195.99	-14.3311	-12.2192	-0.1338
691	SLE RA 16	-1.21	-0.83	194.97	-14.2616	-12.1563	-0.1436
691	SLE RA 17	-1.21	-0.7	194.98	-14.2588	-12.1551	-0.1359
691	SLE RA 18	-1.17	-0.81	199.3	-14.5776	-12.4291	-0.1386
691	SLE RA 19	-1.17	-0.69	199.31	-14.5747	-12.4279	-0.1308
691	SLE RA 20	-1.18	-0.82	200.52	-14.6668	-12.5045	-0.1403
691	SLE RA 21	-1.19	-0.7	200.52	-14.664	-12.5033	-0.1325
691	SLE FR 1	-1.21	-0.81	176.77	-12.9295	-11.017	-0.1442
691	SLE FR 2	-1.21	-0.77	176.77	-12.9285	-11.0166	-0.1416
691	SLE FR 3	-1.21	-0.81	177.25	-12.9652	-11.0471	-0.1449
691	SLE FR 4	-1.2	-0.77	183.53	-13.423	-11.4402	-0.1399
691	SLE FR 5	-1.2	-0.82	184.01	-13.4596	-11.4708	-0.1432
691	SLE FR 6	-1.19	-0.81	188.03	-13.7535	-11.723	-0.1414
691	SLE QP 1	-1.21	-0.81	176.77	-12.9295	-11.017	-0.1442
691	SLE QP 2	-1.2	-0.81	183.53	-13.4239	-11.4406	-0.1425
691	SLD 1	14.53	2.04	197.32	-14.2677	-12.1031	1.1568
691	SLD 2	14.5	1.08	197.34	-14.2834	-12.1114	1.1172
691	SLD 3	14.18	-3.96	197.97	-14.4423	-12.1814	0.7745
691	SLD 4	14.14	-4.93	197.99	-14.458	-12.1897	0.7348
691	SLD 5	4.06	9.32	186.67	-13.4095	-11.5191	0.8341
691	SLD 6	4.04	8.69	186.69	-13.4197	-11.5245	0.8084
691	SLD 7	2.89	-10.69	188.85	-13.9915	-11.7801	-0.4404
691	SLD 8	2.86	-11.32	188.86	-14.0017	-11.7855	-0.4661
691	SLD 9	-5.26	9.7	178.2	-12.8461	-11.0956	0.1811
691	SLD 10	-5.28	9.07	178.21	-12.8563	-11.101	0.1553
691	SLD 11	-6.43	-10.32	180.37	-13.4281	-11.3567	-1.0934
691	SLD 12	-6.46	-10.94	180.38	-13.4383	-11.3621	-1.1191
691	SLD 13	-16.54	3.3	169.06	-12.3898	-10.6915	-1.0199
691	SLD 14	-16.57	2.34	169.08	-12.4055	-10.6998	-1.0595
691	SLD 15	-16.89	-2.7	169.72	-12.5644	-10.7698	-1.4022
691	SLD 16	-16.93	-3.67	169.74	-12.5801	-10.7781	-1.4419
691	SLV 1	35.59	5.69	215.8	-15.4026	-12.993	2.8851
691	SLV 2	35.5	3.43	215.85	-15.4392	-13.0124	2.7927
691	SLV 3	34.76	-8.01	217.31	-15.8007	-13.1711	2.0129
691	SLV 4	34.68	-10.26	217.36	-15.8373	-13.1905	1.9205
691	SLV 5	11.1	22.29	190.9	-13.4075	-11.633	2.1042
691	SLV 6	11.04	20.85	190.93	-13.4309	-11.6454	2.0452
691	SLV 7	8.36	-23.36	195.95	-14.7346	-12.2265	-0.8031
691	SLV 8	8.31	-24.8	195.98	-14.7579	-12.2388	-0.8621
691	SLV 9	-10.7	23.18	171.07	-12.0899	-10.6424	0.577
691	SLV 10	-10.76	21.74	171.1	-12.1132	-10.6547	0.518
691	SLV 11	-13.44	-22.48	176.12	-13.4169	-11.2358	-2.3303
691	SLV 12	-13.49	-23.92	176.15	-13.4403	-11.2481	-2.3893
691	SLV 13	-37.08	8.64	149.7	-11.0105	-9.6907	-2.2056
691	SLV 14	-37.16	6.38	149.74	-11.0471	-9.7101	-2.2979
691	SLV 15	-37.9	-5.06	151.21	-11.4086	-9.8688	-3.0778
691	SLV 16	-37.98	-7.31	151.26	-11.4452	-9.8881	-3.1701
691	CRTFP Ux+	0	0	0	0	0	0
691	CRTFP Ux-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
737	SLU 1	0.42	0.45	31.63	0.8598	10.4905	-0.1691
737	SLU 2	0.42	0.52	31.63	0.86	10.4924	-0.1945
737	SLU 3	0.43	0.47	32.25	0.8766	10.6949	-0.1743
737	SLU 4	0.43	0.51	32.25	0.8767	10.696	-0.1895
737	SLU 5	0.43	0.53	31.99	0.8696	10.6088	-0.1962
737	SLU 6	0.44	0.47	32.6	0.8862	10.8113	-0.1759
737	SLU 7	0.44	0.51	32.6	0.8863	10.8124	-0.1912
737	SLU 8	0.44	0.46	32.33	0.879	10.7233	-0.1725
737	SLU 9	0.43	0.5	32.34	0.8791	10.7244	-0.1877
737	SLU 10	0.44	0.62	35.71	0.9707	11.8469	-0.2278
737	SLU 11	0.46	0.56	36.33	0.9873	12.0493	-0.2076
737	SLU 12	0.46	0.6	36.33	0.9874	12.0505	-0.2228
737	SLU 13	0.45	0.62	36.07	0.9802	11.9633	-0.2294
737	SLU 14	0.46	0.56	36.68	0.9969	12.1657	-0.2092
737	SLU 15	0.46	0.61	36.69	0.997	12.1669	-0.2244
737	SLU 16	0.46	0.55	36.42	0.9897	12.0777	-0.2057
737	SLU 17	0.46	0.6	36.42	0.9898	12.0789	-0.221
737	SLU 18	0.46	0.59	37.46	1.0179	12.4255	-0.2167
737	SLU 19	0.45	0.63	37.46	1.018	12.4266	-0.2319
737	SLU 20	0.46	0.59	37.81	1.0275	12.5418	-0.2183
737	SLU 21	0.46	0.63	37.82	1.0276	12.543	-0.2336
737	SLU 22	0.46	0.53	35.56	0.9664	11.7926	-0.1979
737	SLU 23	0.45	0.6	35.56	0.9666	11.7945	-0.2233
737	SLU 24	0.47	0.55	36.18	0.9832	11.9969	-0.2031
737	SLU 25	0.46	0.59	36.18	0.9833	11.9981	-0.2183
737	SLU 26	0.46	0.61	35.92	0.9762	11.9109	-0.225
737	SLU 27	0.47	0.55	36.53	0.9928	12.1133	-0.2048
737	SLU 28	0.47	0.59	36.53	0.9929	12.1145	-0.22
737	SLU 29	0.47	0.54	36.26	0.9856	12.0253	-0.2013
737	SLU 30	0.47	0.58	36.27	0.9857	12.0265	-0.2165
737	SLU 31	0.48	0.7	39.64	1.0773	13.1489	-0.2566
737	SLU 32	0.49	0.64	40.26	1.0939	13.3514	-0.2364
737	SLU 33	0.49	0.68	40.26	1.094	13.3525	-0.2516
737	SLU 34	0.48	0.7	40	1.0868	13.2653	-0.2583
737	SLU 35	0.5	0.64	40.61	1.1035	13.4678	-0.2381
737	SLU 36	0.5	0.69	40.62	1.1036	13.4689	-0.2533
737	SLU 37	0.49	0.63	40.35	1.0963	13.3798	-0.2346
737	SLU 38	0.49	0.68	40.35	1.0964	13.3809	-0.2498
737	SLU 39	0.49	0.67	41.39	1.1245	13.7275	-0.2455
737	SLU 40	0.49	0.71	41.39	1.1246	13.7286	-0.2607
737	SLU 41	0.5	0.67	41.74	1.1341	13.8439	-0.2472
737	SLU 42	0.49	0.71	41.75	1.1342	13.845	-0.2624
737	SLU 43	0.54	0.56	39.77	1.0812	13.1913	-0.21
737	SLU 44	0.53	0.63	39.77	1.0814	13.1932	-0.2353
737	SLU 45	0.55	0.57	40.39	1.098	13.3957	-0.2151
737	SLU 46	0.55	0.62	40.39	1.0981	13.3968	-0.2303
737	SLU 47	0.54	0.64	40.13	1.091	13.3096	-0.237
737	SLU 48	0.56	0.58	40.74	1.1076	13.512	-0.2168
737	SLU 49	0.55	0.62	40.74	1.1077	13.5132	-0.232
737	SLU 50	0.55	0.57	40.48	1.1004	13.424	-0.2133
737	SLU 51	0.55	0.61	40.48	1.1005	13.4252	-0.2285
737	SLU 52	0.56	0.73	43.86	1.192	14.5476	-0.2686
737	SLU 53	0.57	0.67	44.47	1.2087	14.7501	-0.2484
737	SLU 54	0.57	0.71	44.47	1.2088	14.7512	-0.2636
737	SLU 55	0.57	0.73	44.21	1.2016	14.664	-0.2703
737	SLU 56	0.58	0.67	44.83	1.2183	14.8665	-0.2501
737	SLU 57	0.58	0.72	44.83	1.2184	14.8676	-0.2653
737	SLU 58	0.58	0.66	44.56	1.2111	14.7785	-0.2466
737	SLU 59	0.57	0.71	44.56	1.2112	14.7796	-0.2618
737	SLU 60	0.57	0.69	45.6	1.2393	15.1262	-0.2575
737	SLU 61	0.57	0.74	45.6	1.2394	15.1273	-0.2727
737	SLU 62	0.58	0.7	45.95	1.2489	15.2426	-0.2592
737	SLU 63	0.58	0.74	45.96	1.249	15.2437	-0.2744
737	SLU 64	0.57	0.64	43.7	1.1878	14.4933	-0.2388
737	SLU 65	0.57	0.71	43.7	1.188	14.4952	-0.2642
737	SLU 66	0.58	0.65	44.32	1.2046	14.6977	-0.244
737	SLU 67	0.58	0.7	44.32	1.2047	14.6988	-0.2592
737	SLU 68	0.57	0.72	44.06	1.1976	14.6116	-0.2658
737	SLU 69	0.59	0.66	44.67	1.2142	14.8141	-0.2456
737	SLU 70	0.59	0.7	44.67	1.2143	14.8152	-0.2608
737	SLU 71	0.58	0.65	44.4	1.207	14.7261	-0.2421
737	SLU 72	0.58	0.69	44.41	1.2071	14.7272	-0.2574
737	SLU 73	0.59	0.81	47.79	1.2986	15.8497	-0.2974
737	SLU 74	0.61	0.75	48.4	1.3153	16.0521	-0.2772
737	SLU 75	0.6	0.79	48.4	1.3154	16.0533	-0.2925
737	SLU 76	0.6	0.81	48.14	1.3082	15.9661	-0.2991
737	SLU 77	0.61	0.75	48.75	1.3249	16.1685	-0.2789
737	SLU 78	0.61	0.8	48.76	1.325	16.1696	-0.2941
737	SLU 79	0.61	0.74	48.49	1.3176	16.0805	-0.2754
737	SLU 80	0.61	0.79	48.49	1.3178	16.0817	-0.2906
737	SLU 81	0.6	0.77	49.53	1.3459	16.4282	-0.2863
737	SLU 82	0.6	0.82	49.53	1.346	16.4294	-0.3016
737	SLU 83	0.61	0.78	49.88	1.3555	16.5446	-0.288
737	SLU 84	0.61	0.82	49.89	1.3556	16.5458	-0.3032
737	SLE RA 1	0.43	0.47	32.75	0.8903	10.8626	-0.1774
737	SLE RA 2	0.43	0.52	32.75	0.8904	10.8638	-0.1943
737	SLE RA 3	0.44	0.48	33.16	0.9015	10.9988	-0.1808
737	SLE RA 4	0.44	0.51	33.17	0.9016	10.9996	-0.1909
737	SLE RA 5	0.43	0.53	32.99	0.8968	10.9414	-0.1954
737	SLE RA 6	0.44	0.49	33.4	0.9079	11.0764	-0.1819
737	SLE RA 7	0.44	0.52	33.4	0.9079	11.0771	-0.1921

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
737	SLE RA 8	0.44	0.48	33.22	0.903	11.0177	-0.1796
737	SLE RA 9	0.44	0.51	33.22	0.9031	11.0185	-0.1897
737	SLE RA 10	0.45	0.59	35.47	0.9642	11.7668	-0.2165
737	SLE RA 11	0.45	0.55	35.89	0.9753	11.9018	-0.203
737	SLE RA 12	0.45	0.58	35.89	0.9753	11.9025	-0.2131
737	SLE RA 13	0.45	0.59	35.71	0.9706	11.8444	-0.2176
737	SLE RA 14	0.46	0.55	36.12	0.9817	11.9793	-0.2041
737	SLE RA 15	0.46	0.58	36.12	0.9817	11.9801	-0.2142
737	SLE RA 16	0.46	0.54	35.94	0.9768	11.9207	-0.2018
737	SLE RA 17	0.46	0.57	35.95	0.9769	11.9214	-0.2119
737	SLE RA 18	0.45	0.56	36.64	0.9957	12.1525	-0.2091
737	SLE RA 19	0.45	0.59	36.64	0.9957	12.1533	-0.2192
737	SLE RA 20	0.46	0.57	36.87	1.0021	12.2301	-0.2102
737	SLE RA 21	0.46	0.6	36.88	1.0021	12.2308	-0.2203
737	SLE FR 1	0.43	0.47	32.75	0.8903	10.8626	-0.1774
737	SLE FR 2	0.43	0.48	32.75	0.8903	10.8628	-0.1807
737	SLE FR 3	0.43	0.48	32.84	0.8928	10.8936	-0.1778
737	SLE FR 4	0.44	0.51	33.92	0.9219	11.2498	-0.1902
737	SLE FR 5	0.44	0.5	34.01	0.9244	11.2806	-0.1873
737	SLE FR 6	0.44	0.52	34.69	0.943	11.5075	-0.1932
737	SLE QP 1	0.43	0.47	32.75	0.8903	10.8626	-0.1774
737	SLE QP 2	0.44	0.5	33.92	0.9219	11.2495	-0.1869
737	SLD 1	2.88	0.84	27.64	0.7523	9.2426	-0.4133
737	SLD 2	2.86	1.19	27.64	0.7522	9.2423	-0.5321
737	SLD 3	2.95	-0.48	27.5	0.7482	9.1953	0.0493
737	SLD 4	2.93	-0.14	27.49	0.7481	9.195	-0.0695
737	SLD 5	1.08	2.56	32.26	0.8772	10.7193	-0.9357
737	SLD 6	1.06	2.78	32.25	0.8771	10.7191	-1.0128
737	SLD 7	1.29	-1.87	31.77	0.8637	10.5616	0.6064
737	SLD 8	1.28	-1.64	31.77	0.8636	10.5614	0.5293
737	SLD 9	-0.4	2.65	36.06	0.9802	11.9377	-0.903
737	SLD 10	-0.42	2.87	36.06	0.9801	11.9375	-0.9801
737	SLD 11	-0.19	-1.78	35.58	0.9667	11.78	0.6391
737	SLD 12	-0.2	-1.55	35.58	0.9666	11.7798	0.562
737	SLD 13	-2.05	1.14	40.34	1.0956	13.304	-0.3042
737	SLD 14	-2.07	1.49	40.33	1.0955	13.3038	-0.4231
737	SLD 15	-1.99	-0.18	40.19	1.0916	13.2567	0.1584
737	SLD 16	-2	0.16	40.19	1.0915	13.2565	0.0396
737	SLV 1	6.15	1.26	19.24	0.525	6.5533	-0.7023
737	SLV 2	6.11	2.06	19.23	0.5248	6.5527	-0.9792
737	SLV 3	6.3	-1.76	18.9	0.5156	6.4429	0.35
737	SLV 4	6.26	-0.96	18.89	0.5153	6.4422	0.0731
737	SLV 5	1.93	5.17	30.03	0.8172	10.0082	-1.8907
737	SLV 6	1.9	5.68	30.03	0.817	10.0078	-2.0675
737	SLV 7	2.43	-4.89	28.9	0.7857	9.6402	1.6171
737	SLV 8	2.41	-4.38	28.89	0.7855	9.6398	1.4403
737	SLV 9	-1.53	5.38	38.94	1.0582	12.8593	-1.814
737	SLV 10	-1.56	5.89	38.94	1.0581	12.8589	-1.9908
737	SLV 11	-1.03	-4.68	37.81	1.0267	12.4912	1.6937
737	SLV 12	-1.05	-4.17	37.8	1.0266	12.4908	1.5169
737	SLV 13	-5.38	1.96	48.94	1.3284	16.0568	-0.4469
737	SLV 14	-5.43	2.76	48.93	1.3282	16.0562	-0.7237
737	SLV 15	-5.23	-1.06	48.6	1.319	15.9464	0.6055
737	SLV 16	-5.28	-0.26	48.59	1.3188	15.9458	0.3286
737	CRTFP Ux+	0	0	0	0	0	0
737	CRTFP Ux-	0	0	0	0	0	0
740	SLU 1	0.75	-0.09	63.73	9.2831	-0.1326	-0.1146
740	SLU 2	0.75	0.02	63.75	9.2862	-0.1338	-0.1141
740	SLU 3	0.77	-0.08	64.95	9.4616	-0.1351	-0.1177
740	SLU 4	0.77	-0.01	64.96	9.4635	-0.1358	-0.1174
740	SLU 5	0.76	0.02	64.43	9.3859	-0.1358	-0.116
740	SLU 6	0.78	-0.09	65.64	9.5613	-0.1371	-0.1196
740	SLU 7	0.78	-0.02	65.65	9.5632	-0.1378	-0.1193
740	SLU 8	0.77	-0.11	65.1	9.4825	-0.1366	-0.1184
740	SLU 9	0.77	-0.04	65.11	9.4843	-0.1374	-0.1181
740	SLU 10	0.79	0.08	72.42	10.5486	-0.1481	-0.1216
740	SLU 11	0.82	-0.03	73.62	10.7241	-0.1494	-0.1252
740	SLU 12	0.82	0.04	73.63	10.7259	-0.1501	-0.1249
740	SLU 13	0.81	0.07	73.1	10.6483	-0.1501	-0.1235
740	SLU 14	0.83	-0.04	74.31	10.8237	-0.1514	-0.1271
740	SLU 15	0.83	0.03	74.32	10.8256	-0.1521	-0.1268
740	SLU 16	0.82	-0.05	73.77	10.7449	-0.151	-0.1259
740	SLU 17	0.82	0.02	73.78	10.7468	-0.1517	-0.1256
740	SLU 18	0.82	-0.01	76.12	11.0866	-0.1531	-0.1253
740	SLU 19	0.82	0.06	76.13	11.0884	-0.1538	-0.125
740	SLU 20	0.83	-0.02	76.8	11.1862	-0.1551	-0.1272
740	SLU 21	0.83	0.05	76.81	11.1881	-0.1558	-0.1269
740	SLU 22	0.82	-0.02	71.94	10.4788	-0.1503	-0.1248
740	SLU 23	0.81	0.09	71.95	10.4819	-0.1515	-0.1243
740	SLU 24	0.84	-0.01	73.16	10.6573	-0.1528	-0.1279
740	SLU 25	0.83	0.06	73.17	10.6592	-0.1535	-0.1276
740	SLU 26	0.82	0.08	72.64	10.5815	-0.1535	-0.1263
740	SLU 27	0.85	-0.02	73.84	10.757	-0.1548	-0.1299
740	SLU 28	0.85	0.05	73.85	10.7588	-0.1555	-0.1296
740	SLU 29	0.84	-0.04	73.3	10.6781	-0.1543	-0.1287
740	SLU 30	0.84	0.03	73.31	10.68	-0.155	-0.1284
740	SLU 31	0.86	0.15	80.62	11.7443	-0.1658	-0.1318
740	SLU 32	0.88	0.04	81.83	11.9197	-0.1671	-0.1354
740	SLU 33	0.88	0.11	81.84	11.9216	-0.1678	-0.1351
740	SLU 34	0.87	0.14	81.31	11.844	-0.1678	-0.1337
740	SLU 35	0.9	0.03	82.51	12.0194	-0.1691	-0.1374

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
740	SLU 36	0.89	0.1	82.52	12.0213	-0.1698	-0.1371
740	SLU 37	0.89	0.01	81.97	11.9405	-0.1686	-0.1362
740	SLU 38	0.89	0.08	81.98	11.9424	-0.1693	-0.1359
740	SLU 39	0.88	0.06	84.32	12.2822	-0.1707	-0.1355
740	SLU 40	0.88	0.12	84.33	12.2841	-0.1714	-0.1352
740	SLU 41	0.9	0.05	85.01	12.3819	-0.1727	-0.1374
740	SLU 42	0.89	0.12	85.02	12.3838	-0.1734	-0.1371
740	SLU 43	0.95	-0.14	80.04	11.6581	-0.1664	-0.1455
740	SLU 44	0.95	-0.03	80.05	11.6612	-0.1676	-0.145
740	SLU 45	0.97	-0.13	81.26	11.8366	-0.1688	-0.1486
740	SLU 46	0.97	-0.06	81.27	11.8385	-0.1696	-0.1483
740	SLU 47	0.96	-0.03	80.74	11.7609	-0.1696	-0.1469
740	SLU 48	0.98	-0.14	81.94	11.9363	-0.1708	-0.1505
740	SLU 49	0.98	-0.07	81.95	11.9382	-0.1716	-0.1502
740	SLU 50	0.98	-0.16	81.4	11.8574	-0.1704	-0.1493
740	SLU 51	0.98	-0.09	81.41	11.8593	-0.1711	-0.149
740	SLU 52	1	0.03	88.72	12.9236	-0.1819	-0.1524
740	SLU 53	1.02	-0.08	89.93	13.0991	-0.1832	-0.1561
740	SLU 54	1.02	-0.01	89.94	13.1009	-0.1839	-0.1558
740	SLU 55	1.01	0.02	89.41	13.0233	-0.1839	-0.1544
740	SLU 56	1.03	-0.09	90.61	13.1987	-0.1852	-0.158
740	SLU 57	1.03	-0.02	90.62	13.2006	-0.1859	-0.1577
740	SLU 58	1.03	-0.1	90.07	13.1199	-0.1847	-0.1568
740	SLU 59	1.02	-0.03	90.08	13.1217	-0.1854	-0.1565
740	SLU 60	1.02	-0.06	92.42	13.4616	-0.1868	-0.1561
740	SLU 61	1.02	0.01	92.43	13.4634	-0.1875	-0.1558
740	SLU 62	1.03	-0.07	93.11	13.5612	-0.1888	-0.1581
740	SLU 63	1.03	0	93.12	13.5631	-0.1895	-0.1578
740	SLU 64	1.02	-0.07	88.24	12.8537	-0.184	-0.1557
740	SLU 65	1.01	0.04	88.26	12.8569	-0.1852	-0.1552
740	SLU 66	1.04	-0.06	89.47	13.0323	-0.1865	-0.1588
740	SLU 67	1.04	0.01	89.48	13.0342	-0.1872	-0.1585
740	SLU 68	1.03	0.03	88.94	12.9565	-0.1872	-0.1571
740	SLU 69	1.05	-0.07	90.15	13.132	-0.1885	-0.1607
740	SLU 70	1.05	0	90.16	13.1338	-0.1892	-0.1604
740	SLU 71	1.04	-0.09	89.61	13.0531	-0.188	-0.1596
740	SLU 72	1.04	-0.02	89.62	13.055	-0.1887	-0.1593
740	SLU 73	1.06	0.1	96.93	14.1193	-0.1995	-0.1627
740	SLU 74	1.09	-0.01	98.14	14.2947	-0.2008	-0.1663
740	SLU 75	1.08	0.06	98.15	14.2966	-0.2015	-0.166
740	SLU 76	1.08	0.09	97.61	14.219	-0.2015	-0.1646
740	SLU 77	1.1	-0.02	98.82	14.3944	-0.2028	-0.1682
740	SLU 78	1.1	0.05	98.83	14.3963	-0.2035	-0.1679
740	SLU 79	1.09	-0.04	98.28	14.3155	-0.2023	-0.167
740	SLU 80	1.09	0.03	98.29	14.3174	-0.2031	-0.1667
740	SLU 81	1.09	0.01	100.63	14.6572	-0.2045	-0.1664
740	SLU 82	1.08	0.07	100.64	14.6591	-0.2052	-0.1661
740	SLU 83	1.1	0	101.31	14.7569	-0.2065	-0.1683
740	SLU 84	1.1	0.07	101.32	14.7588	-0.2072	-0.168
740	SLE RA 1	0.77	-0.07	66.07	9.6247	-0.1377	-0.1175
740	SLE RA 2	0.77	0.01	66.09	9.6268	-0.1385	-0.1172
740	SLE RA 3	0.78	-0.06	66.89	9.7437	-0.1393	-0.1196
740	SLE RA 4	0.78	-0.02	66.9	9.745	-0.1398	-0.1194
740	SLE RA 5	0.77	0	66.54	9.6932	-0.1398	-0.1185
740	SLE RA 6	0.79	-0.07	67.35	9.8102	-0.1407	-0.1209
740	SLE RA 7	0.79	-0.02	67.35	9.8114	-0.1411	-0.1207
740	SLE RA 8	0.79	-0.08	66.99	9.7576	-0.1403	-0.1201
740	SLE RA 9	0.78	-0.04	66.99	9.7589	-0.1408	-0.1199
740	SLE RA 10	0.8	0.04	71.87	10.4684	-0.148	-0.1222
740	SLE RA 11	0.81	-0.03	72.67	10.5854	-0.1489	-0.1246
740	SLE RA 12	0.81	0.02	72.68	10.5866	-0.1493	-0.1244
740	SLE RA 13	0.81	0.04	72.32	10.5349	-0.1493	-0.1235
740	SLE RA 14	0.82	-0.03	73.13	10.6518	-0.1502	-0.1259
740	SLE RA 15	0.82	0.01	73.13	10.6531	-0.1507	-0.1257
740	SLE RA 16	0.82	-0.05	72.77	10.5992	-0.1499	-0.1251
740	SLE RA 17	0.82	0	72.77	10.6005	-0.1504	-0.1249
740	SLE RA 18	0.81	-0.02	74.33	10.827	-0.1513	-0.1246
740	SLE RA 19	0.81	0.03	74.34	10.8283	-0.1518	-0.1244
740	SLE RA 20	0.82	-0.02	74.79	10.8935	-0.1526	-0.1259
740	SLE RA 21	0.82	0.02	74.79	10.8947	-0.1531	-0.1257
740	SLE FR 1	0.77	-0.07	66.07	9.6247	-0.1377	-0.1175
740	SLE FR 2	0.77	-0.05	66.08	9.6251	-0.1378	-0.1175
740	SLE FR 3	0.77	-0.07	66.26	9.6513	-0.1382	-0.118
740	SLE FR 4	0.78	-0.04	68.55	9.9858	-0.1419	-0.1196
740	SLE FR 5	0.79	-0.06	68.73	10.012	-0.1423	-0.1202
740	SLE FR 6	0.79	-0.04	70.2	10.2259	-0.1445	-0.1211
740	SLE QP 1	0.77	-0.07	66.07	9.6247	-0.1377	-0.1175
740	SLE QP 2	0.78	-0.05	68.55	9.9854	-0.1418	-0.1197
740	SLD 1	6.49	1.06	64.45	9.3896	-0.1003	-0.9599
740	SLD 2	6.45	1.42	64.46	9.3913	-0.1019	-0.9489
740	SLD 3	6.62	-1.17	64.26	9.3534	-0.0795	-0.9787
740	SLD 4	6.58	-0.81	64.26	9.3552	-0.0811	-0.9677
740	SLD 5	2.31	3.6	67.61	9.8611	-0.1607	-0.3451
740	SLD 6	2.28	3.83	67.62	9.8622	-0.1617	-0.338
740	SLD 7	2.73	-3.83	66.97	9.7408	-0.0912	-0.4078
740	SLD 8	2.71	-3.6	66.97	9.7419	-0.0922	-0.4007
740	SLD 9	-1.14	3.49	70.13	10.2289	-0.1913	0.1614
740	SLD 10	-1.17	3.72	70.13	10.2301	-0.1923	0.1685
740	SLD 11	-0.72	-3.94	69.49	10.1086	-0.1218	0.0987
740	SLD 12	-0.74	-3.71	69.49	10.1097	-0.1229	0.1058
740	SLD 13	-5.01	0.7	72.84	10.6156	-0.2024	0.7284

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
740	SLD 14	-5.05	1.06	72.84	10.6174	-0.204	0.7393
740	SLD 15	-4.89	-1.53	72.65	10.5795	-0.1816	0.7096
740	SLD 16	-4.92	-1.17	72.65	10.5813	-0.1832	0.7206
740	SLV 1	14.13	2.49	58.96	8.59	-0.0446	-2.0846
740	SLV 2	14.04	3.32	58.97	8.594	-0.0484	-2.0591
740	SLV 3	14.43	-2.59	58.51	8.5076	0.0033	-2.1285
740	SLV 4	14.34	-1.75	58.52	8.5116	-0.0004	-2.103
740	SLV 5	4.35	8.27	66.34	9.691	-0.1847	-0.6469
740	SLV 6	4.29	8.8	66.35	9.6936	-0.1871	-0.6307
740	SLV 7	5.34	-8.65	64.86	9.4164	-0.0249	-0.7931
740	SLV 8	5.28	-8.12	64.87	9.419	-0.0273	-0.7769
740	SLV 9	-3.72	8.01	72.23	10.5518	-0.2562	0.5376
740	SLV 10	-3.78	8.54	72.24	10.5544	-0.2586	0.5538
740	SLV 11	-2.73	-8.91	70.75	10.2772	-0.0964	0.3913
740	SLV 12	-2.79	-8.38	70.76	10.2798	-0.0988	0.4076
740	SLV 13	-12.77	1.64	78.58	11.4592	-0.2831	1.8637
740	SLV 14	-12.86	2.48	78.59	11.4632	-0.2868	1.8892
740	SLV 15	-12.48	-3.43	78.14	11.3768	-0.2351	1.8198
740	SLV 16	-12.56	-2.6	78.15	11.3809	-0.2389	1.8453
740	CRTFP Ux+	0	0	0	0	0	0
740	CRTFP Ux-	0	0	0	0	0	0
743	SLU 1	0.45	0.53	35.35	-0.0574	11.2997	-0.1855
743	SLU 2	0.45	0.62	35.36	-0.0573	11.3025	-0.2149
743	SLU 3	0.47	0.55	36.04	-0.0586	11.5182	-0.1911
743	SLU 4	0.46	0.6	36.05	-0.0585	11.5198	-0.2088
743	SLU 5	0.46	0.62	35.75	-0.058	11.4268	-0.2167
743	SLU 6	0.47	0.55	36.44	-0.0593	11.6425	-0.1929
743	SLU 7	0.47	0.61	36.44	-0.0593	11.6441	-0.2106
743	SLU 8	0.47	0.54	36.14	-0.0588	11.5483	-0.1889
743	SLU 9	0.47	0.59	36.14	-0.0587	11.55	-0.2066
743	SLU 10	0.47	0.73	39.9	-0.0656	12.7514	-0.2531
743	SLU 11	0.49	0.66	40.59	-0.0668	12.9672	-0.2294
743	SLU 12	0.49	0.71	40.59	-0.0668	12.9688	-0.247
743	SLU 13	0.48	0.73	40.3	-0.0663	12.8758	-0.2549
743	SLU 14	0.5	0.66	40.98	-0.0675	13.0915	-0.2311
743	SLU 15	0.5	0.71	40.99	-0.0675	13.0931	-0.2488
743	SLU 16	0.49	0.65	40.68	-0.067	12.9973	-0.2272
743	SLU 17	0.49	0.7	40.69	-0.067	12.999	-0.2449
743	SLU 18	0.49	0.69	41.84	-0.0691	13.3697	-0.2401
743	SLU 19	0.49	0.74	41.85	-0.0691	13.3713	-0.2577
743	SLU 20	0.5	0.69	42.24	-0.0698	13.494	-0.2418
743	SLU 21	0.49	0.75	42.24	-0.0698	13.4957	-0.2595
743	SLU 22	0.49	0.63	39.73	-0.0652	12.6931	-0.2182
743	SLU 23	0.48	0.71	39.73	-0.0651	12.6958	-0.2476
743	SLU 24	0.5	0.64	40.42	-0.0664	12.9115	-0.2238
743	SLU 25	0.5	0.69	40.42	-0.0664	12.9132	-0.2415
743	SLU 26	0.49	0.72	40.13	-0.0658	12.8202	-0.2494
743	SLU 27	0.51	0.65	40.81	-0.0671	13.0359	-0.2256
743	SLU 28	0.51	0.7	40.82	-0.0671	13.0375	-0.2433
743	SLU 29	0.5	0.64	40.52	-0.0666	12.9417	-0.2217
743	SLU 30	0.5	0.69	40.52	-0.0666	12.9434	-0.2393
743	SLU 31	0.51	0.82	44.28	-0.0734	14.1448	-0.2859
743	SLU 32	0.53	0.75	44.96	-0.0746	14.3605	-0.2621
743	SLU 33	0.52	0.8	44.97	-0.0746	14.3622	-0.2797
743	SLU 34	0.52	0.83	44.67	-0.0741	14.2692	-0.2876
743	SLU 35	0.53	0.76	45.36	-0.0753	14.4849	-0.2638
743	SLU 36	0.53	0.81	45.36	-0.0753	14.4865	-0.2815
743	SLU 37	0.53	0.75	45.06	-0.0748	14.3907	-0.2599
743	SLU 38	0.53	0.8	45.06	-0.0748	14.3924	-0.2776
743	SLU 39	0.52	0.78	46.22	-0.0769	14.7631	-0.2728
743	SLU 40	0.52	0.83	46.22	-0.0769	14.7647	-0.2904
743	SLU 41	0.53	0.79	46.61	-0.0776	14.8874	-0.2745
743	SLU 42	0.53	0.84	46.62	-0.0776	14.8891	-0.2922
743	SLU 43	0.58	0.66	44.46	-0.0719	14.2119	-0.2299
743	SLU 44	0.57	0.75	44.46	-0.0718	14.2146	-0.2594
743	SLU 45	0.59	0.68	45.15	-0.0731	14.4303	-0.2356
743	SLU 46	0.59	0.73	45.15	-0.0731	14.432	-0.2532
743	SLU 47	0.58	0.75	44.86	-0.0725	14.3389	-0.2611
743	SLU 48	0.6	0.68	45.54	-0.0738	14.5547	-0.2373
743	SLU 49	0.6	0.73	45.55	-0.0738	14.5563	-0.255
743	SLU 50	0.59	0.67	45.24	-0.0733	14.4605	-0.2334
743	SLU 51	0.59	0.72	45.25	-0.0733	14.4622	-0.2511
743	SLU 52	0.6	0.85	49.01	-0.0801	15.6636	-0.2976
743	SLU 53	0.62	0.79	49.69	-0.0813	15.8793	-0.2738
743	SLU 54	0.61	0.84	49.7	-0.0813	15.881	-0.2915
743	SLU 55	0.61	0.86	49.4	-0.0808	15.7879	-0.2993
743	SLU 56	0.62	0.79	50.09	-0.082	16.0036	-0.2755
743	SLU 57	0.62	0.84	50.09	-0.082	16.0053	-0.2932
743	SLU 58	0.62	0.78	49.79	-0.0815	15.9095	-0.2716
743	SLU 59	0.62	0.83	49.79	-0.0815	15.9112	-0.2893
743	SLU 60	0.61	0.82	50.95	-0.0836	16.2819	-0.2845
743	SLU 61	0.61	0.87	50.95	-0.0836	16.2835	-0.3022
743	SLU 62	0.62	0.82	51.34	-0.0843	16.4062	-0.2862
743	SLU 63	0.62	0.87	51.35	-0.0843	16.4078	-0.3039
743	SLU 64	0.61	0.75	48.83	-0.0797	15.6053	-0.2626
743	SLU 65	0.61	0.84	48.84	-0.0797	15.608	-0.2921
743	SLU 66	0.63	0.77	49.52	-0.0809	15.8237	-0.2683
743	SLU 67	0.62	0.82	49.53	-0.0809	15.8254	-0.286
743	SLU 68	0.62	0.84	49.23	-0.0804	15.7323	-0.2938
743	SLU 69	0.63	0.78	49.92	-0.0816	15.948	-0.27
743	SLU 70	0.63	0.83	49.92	-0.0816	15.9497	-0.2877

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
743	SLU 71	0.63	0.76	49.62	-0.0811	15.8539	-0.2661
743	SLU 72	0.63	0.82	49.62	-0.0811	15.8556	-0.2838
743	SLU 73	0.63	0.95	53.38	-0.0879	17.057	-0.3303
743	SLU 74	0.65	0.88	54.07	-0.0892	17.2727	-0.3065
743	SLU 75	0.65	0.93	54.07	-0.0891	17.2744	-0.3242
743	SLU 76	0.64	0.95	53.78	-0.0886	17.1813	-0.332
743	SLU 77	0.66	0.89	54.46	-0.0899	17.397	-0.3082
743	SLU 78	0.66	0.94	54.47	-0.0898	17.3987	-0.3259
743	SLU 79	0.65	0.87	54.16	-0.0893	17.3029	-0.3043
743	SLU 80	0.65	0.92	54.17	-0.0893	17.3046	-0.322
743	SLU 81	0.65	0.91	55.32	-0.0915	17.6753	-0.3172
743	SLU 82	0.65	0.96	55.33	-0.0914	17.6769	-0.3349
743	SLU 83	0.66	0.92	55.72	-0.0922	17.7996	-0.3189
743	SLU 84	0.65	0.97	55.72	-0.0921	17.8012	-0.3366
743	SLE RA 1	0.46	0.56	36.6	-0.0596	11.6978	-0.1948
743	SLE RA 2	0.46	0.62	36.61	-0.0596	11.6997	-0.2144
743	SLE RA 3	0.47	0.57	37.06	-0.0604	11.8435	-0.1986
743	SLE RA 4	0.47	0.6	37.07	-0.0604	11.8446	-0.2104
743	SLE RA 5	0.47	0.62	36.87	-0.06	11.7825	-0.2156
743	SLE RA 6	0.48	0.57	37.33	-0.0609	11.9263	-0.1998
743	SLE RA 7	0.48	0.61	37.33	-0.0609	11.9274	-0.2115
743	SLE RA 8	0.47	0.57	37.13	-0.0605	11.8636	-0.1971
743	SLE RA 9	0.47	0.6	37.13	-0.0605	11.8647	-0.2089
743	SLE RA 10	0.48	0.69	39.64	-0.0651	12.6656	-0.2399
743	SLE RA 11	0.49	0.64	40.09	-0.0659	12.8095	-0.2241
743	SLE RA 12	0.49	0.68	40.1	-0.0659	12.8105	-0.2359
743	SLE RA 13	0.48	0.69	39.9	-0.0655	12.7485	-0.2411
743	SLE RA 14	0.49	0.65	40.35	-0.0664	12.8923	-0.2252
743	SLE RA 15	0.49	0.68	40.36	-0.0663	12.8934	-0.237
743	SLE RA 16	0.49	0.64	40.16	-0.066	12.8296	-0.2226
743	SLE RA 17	0.49	0.67	40.16	-0.066	12.8307	-0.2344
743	SLE RA 18	0.49	0.66	40.93	-0.0674	13.0778	-0.2312
743	SLE RA 19	0.49	0.7	40.93	-0.0674	13.0789	-0.243
743	SLE RA 20	0.49	0.67	41.19	-0.0679	13.1607	-0.2324
743	SLE RA 21	0.49	0.7	41.19	-0.0679	13.1618	-0.2442
743	SLE FR 1	0.46	0.56	36.6	-0.0596	11.6978	-0.1948
743	SLE FR 2	0.46	0.57	36.6	-0.0596	11.6982	-0.1987
743	SLE FR 3	0.47	0.56	36.71	-0.0598	11.731	-0.1953
743	SLE FR 4	0.47	0.6	37.9	-0.0619	12.1122	-0.2096
743	SLE FR 5	0.47	0.59	38	-0.0621	12.145	-0.2062
743	SLE FR 6	0.48	0.61	38.77	-0.0635	12.3878	-0.213
743	SLE QP 1	0.46	0.56	36.6	-0.0596	11.6978	-0.1948
743	SLE QP 2	0.47	0.59	37.9	-0.0619	12.1118	-0.2057
743	SLD 1	3.22	0.99	30.94	-0.0484	9.9762	-0.3417
743	SLD 2	3.18	1.38	30.94	-0.0485	9.9765	-0.4802
743	SLD 3	3.32	-0.55	30.78	-0.0478	9.9223	0.1965
743	SLD 4	3.28	-0.16	30.77	-0.0479	9.9226	0.0579
743	SLD 5	1.15	2.98	36.06	-0.0588	11.5528	-1.0385
743	SLD 6	1.13	3.24	36.06	-0.0588	11.553	-1.1284
743	SLD 7	1.48	-2.16	35.51	-0.0568	11.3732	0.7553
743	SLD 8	1.46	-1.9	35.51	-0.0568	11.3734	0.6654
743	SLD 9	-0.51	3.08	40.29	-0.0671	12.8503	-1.0768
743	SLD 10	-0.54	3.34	40.29	-0.0671	12.8505	-1.1667
743	SLD 11	-0.18	-2.05	39.74	-0.0651	12.6706	0.717
743	SLD 12	-0.21	-1.8	39.74	-0.0651	12.6708	0.627
743	SLD 13	-2.33	1.34	45.03	-0.076	14.301	-0.4694
743	SLD 14	-2.37	1.74	45.02	-0.0761	14.3013	-0.6079
743	SLD 15	-2.24	-0.2	44.86	-0.0754	14.2471	0.0688
743	SLD 16	-2.27	0.2	44.86	-0.0755	14.2474	-0.0698
743	SLV 1	6.9	1.47	21.62	-0.0303	7.1141	-0.507
743	SLV 2	6.8	2.39	21.61	-0.0304	7.1148	-0.8298
743	SLV 3	7.12	-2.04	21.23	-0.0289	6.9888	0.717
743	SLV 4	7.03	-1.11	21.22	-0.029	6.9895	0.3943
743	SLV 5	2.07	6.01	33.6	-0.0546	10.8024	-2.0979
743	SLV 6	2.01	6.61	33.6	-0.0546	10.8029	-2.304
743	SLV 7	2.83	-5.67	32.32	-0.0499	10.3848	1.9822
743	SLV 8	2.77	-5.08	32.31	-0.05	10.3852	1.7761
743	SLV 9	-1.82	6.26	43.49	-0.0739	13.8384	-2.1875
743	SLV 10	-1.88	6.85	43.48	-0.074	13.8389	-2.3936
743	SLV 11	-1.07	-5.42	42.2	-0.0693	13.4208	1.8926
743	SLV 12	-1.13	-4.83	42.2	-0.0693	13.4212	1.6865
743	SLV 13	-6.09	2.29	54.58	-0.0949	17.2341	-0.8057
743	SLV 14	-6.18	3.22	54.57	-0.095	17.2348	-1.1284
743	SLV 15	-5.86	-1.21	54.19	-0.0935	17.1088	0.4183
743	SLV 16	-5.95	-0.29	54.18	-0.0936	17.1095	0.0956
743	CRTFP Ux+	0	0	0	0	0	0
743	CRTFP Ux-	0	0	0	0	0	0
745	SLU 1	0.45	0.44	74.99	-10.036	-1.7776	0.0746
745	SLU 2	0.45	0.57	75.03	-10.0397	-1.7798	0.0776
745	SLU 3	0.46	0.47	76.35	-10.2201	-1.8088	0.0773
745	SLU 4	0.46	0.55	76.38	-10.2223	-1.8101	0.0791
745	SLU 5	0.46	0.57	75.76	-10.1387	-1.7953	0.0786
745	SLU 6	0.47	0.47	77.08	-10.3191	-1.8243	0.0783
745	SLU 7	0.47	0.55	77.11	-10.3213	-1.8256	0.0801
745	SLU 8	0.47	0.43	76.45	-10.234	-1.8087	0.0766
745	SLU 9	0.47	0.51	76.48	-10.2362	-1.81	0.0784
745	SLU 10	0.5	0.62	85.8	-11.4762	-2.0308	0.0841
745	SLU 11	0.51	0.52	87.12	-11.6567	-2.0598	0.0838
745	SLU 12	0.51	0.6	87.15	-11.6589	-2.0611	0.0856
745	SLU 13	0.51	0.62	86.53	-11.5752	-2.0463	0.0851
745	SLU 14	0.52	0.52	87.86	-11.7557	-2.0753	0.0849

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
745	SLU 15	0.52	0.6	87.88	-11.7579	-2.0766	0.0866
745	SLU 16	0.52	0.48	87.22	-11.6705	-2.0597	0.0832
745	SLU 17	0.52	0.56	87.25	-11.6728	-2.061	0.085
745	SLU 18	0.52	0.51	90.38	-12.0882	-2.1362	0.0839
745	SLU 19	0.52	0.59	90.4	-12.0904	-2.1375	0.0857
745	SLU 20	0.53	0.51	91.11	-12.1872	-2.1518	0.085
745	SLU 21	0.53	0.59	91.13	-12.1894	-2.1531	0.0868
745	SLU 22	0.5	0.56	84.75	-11.3326	-2.0156	0.0836
745	SLU 23	0.5	0.7	84.79	-11.3363	-2.0178	0.0866
745	SLU 24	0.51	0.59	86.11	-11.5168	-2.0467	0.0863
745	SLU 25	0.51	0.68	86.14	-11.519	-2.048	0.0881
745	SLU 26	0.51	0.7	85.52	-11.4353	-2.0333	0.0876
745	SLU 27	0.52	0.59	86.84	-11.6158	-2.0623	0.0873
745	SLU 28	0.52	0.67	86.87	-11.618	-2.0636	0.0891
745	SLU 29	0.52	0.55	86.21	-11.5307	-2.0467	0.0856
745	SLU 30	0.52	0.64	86.24	-11.5329	-2.048	0.0874
745	SLU 31	0.55	0.75	95.56	-12.7729	-2.2688	0.0931
745	SLU 32	0.56	0.65	96.88	-12.9533	-2.2978	0.0928
745	SLU 33	0.56	0.73	96.91	-12.9555	-2.299	0.0946
745	SLU 34	0.56	0.75	96.29	-12.8719	-2.2843	0.0941
745	SLU 35	0.57	0.64	97.61	-13.0523	-2.3133	0.0939
745	SLU 36	0.57	0.72	97.64	-13.0545	-2.3146	0.0956
745	SLU 37	0.57	0.61	96.98	-12.9672	-2.2977	0.0922
745	SLU 38	0.57	0.69	97.01	-12.9694	-2.299	0.094
745	SLU 39	0.57	0.63	100.14	-13.3848	-2.3742	0.0929
745	SLU 40	0.57	0.72	100.16	-13.3871	-2.3755	0.0947
745	SLU 41	0.58	0.63	100.87	-13.4838	-2.3897	0.094
745	SLU 42	0.58	0.71	100.89	-13.4861	-2.391	0.0958
745	SLU 43	0.56	0.52	94.14	-12.6022	-2.2293	0.0939
745	SLU 44	0.56	0.66	94.18	-12.6059	-2.2315	0.0968
745	SLU 45	0.58	0.56	95.5	-12.7864	-2.2605	0.0965
745	SLU 46	0.58	0.64	95.53	-12.7886	-2.2617	0.0983
745	SLU 47	0.57	0.66	94.91	-12.7049	-2.247	0.0979
745	SLU 48	0.59	0.55	96.24	-12.8854	-2.276	0.0976
745	SLU 49	0.59	0.64	96.26	-12.8876	-2.2773	0.0994
745	SLU 50	0.58	0.52	95.6	-12.8002	-2.2604	0.0959
745	SLU 51	0.58	0.6	95.63	-12.8025	-2.2617	0.0977
745	SLU 52	0.61	0.71	104.95	-14.0425	-2.4825	0.1034
745	SLU 53	0.63	0.61	106.28	-14.2229	-2.5115	0.1031
745	SLU 54	0.63	0.69	106.3	-14.2251	-2.5128	0.1049
745	SLU 55	0.62	0.71	105.69	-14.1415	-2.498	0.1044
745	SLU 56	0.64	0.6	107.01	-14.3219	-2.527	0.1041
745	SLU 57	0.64	0.69	107.03	-14.3241	-2.5283	0.1059
745	SLU 58	0.63	0.57	106.38	-14.2368	-2.5114	0.1025
745	SLU 59	0.63	0.65	106.4	-14.239	-2.5127	0.1043
745	SLU 60	0.64	0.6	109.53	-14.6544	-2.5879	0.1032
745	SLU 61	0.64	0.68	109.55	-14.6566	-2.5892	0.105
745	SLU 62	0.65	0.59	110.26	-14.7534	-2.6035	0.1043
745	SLU 63	0.64	0.68	110.29	-14.7556	-2.6047	0.106
745	SLU 64	0.62	0.65	103.9	-13.8989	-2.4673	0.1029
745	SLU 65	0.62	0.79	103.94	-13.9026	-2.4695	0.1058
745	SLU 66	0.63	0.68	105.26	-14.083	-2.4984	0.1055
745	SLU 67	0.63	0.76	105.29	-14.0852	-2.4997	0.1073
745	SLU 68	0.62	0.78	104.67	-14.0016	-2.485	0.1069
745	SLU 69	0.64	0.68	105.99	-14.182	-2.514	0.1066
745	SLU 70	0.64	0.76	106.02	-14.1842	-2.5153	0.1084
745	SLU 71	0.63	0.64	105.36	-14.0969	-2.4984	0.1049
745	SLU 72	0.63	0.73	105.39	-14.0991	-2.4997	0.1067
745	SLU 73	0.67	0.84	114.71	-15.3391	-2.7205	0.1124
745	SLU 74	0.68	0.73	116.03	-15.5195	-2.7495	0.1121
745	SLU 75	0.68	0.82	116.06	-15.5218	-2.7507	0.1139
745	SLU 76	0.67	0.83	115.44	-15.4381	-2.736	0.1134
745	SLU 77	0.69	0.73	116.77	-15.6185	-2.765	0.1131
745	SLU 78	0.69	0.81	116.79	-15.6208	-2.7663	0.1149
745	SLU 79	0.68	0.69	116.13	-15.5334	-2.7494	0.1115
745	SLU 80	0.68	0.78	116.16	-15.5356	-2.7507	0.1133
745	SLU 81	0.69	0.72	119.29	-15.9511	-2.8259	0.1122
745	SLU 82	0.69	0.8	119.31	-15.9533	-2.8272	0.114
745	SLU 83	0.7	0.72	120.02	-16.0501	-2.8414	0.1133
745	SLU 84	0.7	0.8	120.04	-16.0523	-2.8427	0.115
745	SLE RA 1	0.46	0.47	77.78	-10.4065	-1.8456	0.0771
745	SLE RA 2	0.46	0.56	77.8	-10.4089	-1.8471	0.0791
745	SLE RA 3	0.47	0.49	78.69	-10.5292	-1.8664	0.0789
745	SLE RA 4	0.47	0.55	78.7	-10.5307	-1.8672	0.0801
745	SLE RA 5	0.47	0.56	78.29	-10.4749	-1.8574	0.0798
745	SLE RA 6	0.48	0.49	79.17	-10.5952	-1.8767	0.0796
745	SLE RA 7	0.48	0.55	79.19	-10.5967	-1.8776	0.0808
745	SLE RA 8	0.47	0.47	78.75	-10.5385	-1.8663	0.0785
745	SLE RA 9	0.47	0.52	78.77	-10.54	-1.8672	0.0797
745	SLE RA 10	0.5	0.6	84.99	-11.3666	-2.0144	0.0835
745	SLE RA 11	0.51	0.53	85.87	-11.4869	-2.0337	0.0833
745	SLE RA 12	0.51	0.58	85.88	-11.4884	-2.0346	0.0845
745	SLE RA 13	0.5	0.6	85.47	-11.4326	-2.0248	0.0842
745	SLE RA 14	0.51	0.53	86.36	-11.5529	-2.0441	0.084
745	SLE RA 15	0.51	0.58	86.37	-11.5544	-2.0449	0.0852
745	SLE RA 16	0.51	0.5	85.93	-11.4962	-2.0337	0.0829
745	SLE RA 17	0.51	0.56	85.95	-11.4976	-2.0345	0.0841
745	SLE RA 18	0.51	0.52	88.04	-11.7746	-2.0847	0.0834
745	SLE RA 19	0.51	0.57	88.05	-11.7761	-2.0855	0.0846
745	SLE RA 20	0.52	0.52	88.52	-11.8406	-2.095	0.0841
745	SLE RA 21	0.52	0.57	88.54	-11.8421	-2.0959	0.0853

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
745	SLE FR 1	0.46	0.47	77.78	-10.4065	-1.8456	0.0771
745	SLE FR 2	0.46	0.49	77.78	-10.407	-1.8459	0.0775
745	SLE FR 3	0.47	0.47	77.97	-10.4329	-1.8498	0.0774
745	SLE FR 4	0.48	0.5	80.86	-10.8174	-1.9176	0.0794
745	SLE FR 5	0.48	0.48	81.05	-10.8433	-1.9215	0.0793
745	SLE FR 6	0.49	0.5	82.91	-11.0905	-1.9652	0.0803
745	SLE QP 1	0.46	0.47	77.78	-10.4065	-1.8456	0.0771
745	SLE QP 2	0.48	0.49	80.86	-10.8169	-1.9173	0.079
745	SLD 1	8.06	1.56	79.03	-10.5854	-1.7522	1.0828
745	SLD 2	7.99	1.72	79.07	-10.5882	-1.7525	1.0846
745	SLD 3	7.89	-1.35	78.44	-10.5386	-1.7153	1.0059
745	SLD 4	7.81	-1.19	78.48	-10.5414	-1.7156	1.0077
745	SLD 5	3.04	5.19	81.19	-10.818	-1.9236	0.4965
745	SLD 6	2.99	5.29	81.21	-10.8198	-1.9238	0.4977
745	SLD 7	2.44	-4.5	79.24	-10.6619	-1.8008	0.24
745	SLD 8	2.39	-4.4	79.26	-10.6637	-1.801	0.2412
745	SLD 9	-1.44	5.37	82.45	-10.9701	-2.0336	-0.0832
745	SLD 10	-1.49	5.47	82.47	-10.9719	-2.0338	-0.082
745	SLD 11	-2.03	-4.32	80.5	-10.814	-1.9109	-0.3397
745	SLD 12	-2.08	-4.22	80.52	-10.8158	-1.9111	-0.3385
745	SLD 13	-6.86	2.16	83.23	-11.0925	-2.119	-0.8497
745	SLD 14	-6.93	2.32	83.27	-11.0952	-2.1193	-0.8478
745	SLD 15	-7.04	-0.75	82.64	-11.0456	-2.0822	-0.9266
745	SLD 16	-7.11	-0.59	82.68	-11.0484	-2.0825	-0.9248
745	SLV 1	18.22	2.91	76.53	-10.2709	-1.5297	2.4245
745	SLV 2	18.05	3.27	76.62	-10.2773	-1.5304	2.4287
745	SLV 3	17.8	-3.72	75.2	-10.1643	-1.4459	2.2487
745	SLV 4	17.63	-3.35	75.3	-10.1707	-1.4466	2.253
745	SLV 5	6.46	11.2	81.55	-10.8137	-1.9281	1.0485
745	SLV 6	6.35	11.43	81.61	-10.8178	-1.9285	1.0513
745	SLV 7	5.07	-10.88	77.13	-10.4583	-1.6486	0.4626
745	SLV 8	4.96	-10.65	77.19	-10.4624	-1.6491	0.4653
745	SLV 9	-4.01	11.62	84.52	-11.1714	-2.1856	-0.3073
745	SLV 10	-4.12	11.86	84.58	-11.1755	-2.1861	-0.3046
745	SLV 11	-5.4	-10.46	80.1	-10.816	-1.9062	-0.8932
745	SLV 12	-5.51	-10.22	80.16	-10.8201	-1.9066	-0.8905
745	SLV 13	-16.67	4.32	86.41	-11.4631	-2.3881	-2.0949
745	SLV 14	-16.85	4.69	86.51	-11.4696	-2.3888	-2.0907
745	SLV 15	-17.09	-2.3	85.09	-11.3565	-2.3043	-2.2707
745	SLV 16	-17.27	-1.93	85.18	-11.3629	-2.305	-2.2664
745	CRTFP Ux+	0	0	0	0	0	0
745	CRTFP Ux-	0	0	0	0	0	0
748	SLU 1	0.43	0.54	33.44	-0.068	10.1776	-0.188
748	SLU 2	0.42	0.62	33.45	-0.068	10.1806	-0.2174
748	SLU 3	0.44	0.56	34.09	-0.0695	10.3721	-0.1937
748	SLU 4	0.43	0.61	34.09	-0.0694	10.3738	-0.2114
748	SLU 5	0.43	0.63	33.82	-0.0688	10.2912	-0.2192
748	SLU 6	0.44	0.56	34.46	-0.0703	10.4826	-0.1955
748	SLU 7	0.44	0.61	34.46	-0.0703	10.4844	-0.2132
748	SLU 8	0.44	0.55	34.18	-0.0697	10.3987	-0.1916
748	SLU 9	0.44	0.6	34.18	-0.0697	10.4005	-0.2092
748	SLU 10	0.44	0.73	37.72	-0.0778	11.4707	-0.256
748	SLU 11	0.46	0.67	38.36	-0.0792	11.6621	-0.2323
748	SLU 12	0.46	0.72	38.36	-0.0792	11.6639	-0.2499
748	SLU 13	0.45	0.74	38.09	-0.0786	11.5812	-0.2578
748	SLU 14	0.47	0.67	38.73	-0.0801	11.7727	-0.2341
748	SLU 15	0.46	0.72	38.73	-0.0801	11.7745	-0.2517
748	SLU 16	0.46	0.66	38.45	-0.0795	11.6888	-0.2301
748	SLU 17	0.46	0.71	38.45	-0.0794	11.6906	-0.2478
748	SLU 18	0.46	0.7	39.54	-0.082	12.0206	-0.2431
748	SLU 19	0.46	0.75	39.54	-0.082	12.0224	-0.2608
748	SLU 20	0.47	0.7	39.91	-0.0828	12.1311	-0.2449
748	SLU 21	0.46	0.75	39.91	-0.0828	12.1329	-0.2625
748	SLU 22	0.46	0.63	37.55	-0.0773	11.4187	-0.221
748	SLU 23	0.45	0.72	37.56	-0.0773	11.4216	-0.2504
748	SLU 24	0.47	0.65	38.2	-0.0788	11.6131	-0.2267
748	SLU 25	0.47	0.7	38.21	-0.0788	11.6149	-0.2444
748	SLU 26	0.46	0.72	37.93	-0.0781	11.5322	-0.2522
748	SLU 27	0.48	0.66	38.58	-0.0796	11.7236	-0.2285
748	SLU 28	0.47	0.71	38.58	-0.0796	11.7254	-0.2462
748	SLU 29	0.47	0.64	38.29	-0.079	11.6398	-0.2246
748	SLU 30	0.47	0.69	38.3	-0.079	11.6415	-0.2422
748	SLU 31	0.48	0.83	41.83	-0.0871	12.7117	-0.289
748	SLU 32	0.49	0.76	42.47	-0.0886	12.9031	-0.2653
748	SLU 33	0.49	0.81	42.48	-0.0885	12.9049	-0.2829
748	SLU 34	0.48	0.83	42.2	-0.0879	12.8223	-0.2908
748	SLU 35	0.5	0.77	42.85	-0.0894	13.0137	-0.2671
748	SLU 36	0.5	0.82	42.85	-0.0894	13.0155	-0.2847
748	SLU 37	0.5	0.75	42.56	-0.0888	12.9298	-0.2631
748	SLU 38	0.49	0.8	42.57	-0.0888	12.9316	-0.2808
748	SLU 39	0.49	0.79	43.65	-0.0913	13.2616	-0.2761
748	SLU 40	0.49	0.84	43.66	-0.0913	13.2634	-0.2937
748	SLU 41	0.5	0.8	44.02	-0.0921	13.3722	-0.2779
748	SLU 42	0.5	0.85	44.03	-0.0921	13.3739	-0.2955
748	SLU 43	0.54	0.67	42.06	-0.0852	12.8054	-0.2331
748	SLU 44	0.54	0.75	42.07	-0.0852	12.8084	-0.2625
748	SLU 45	0.55	0.69	42.71	-0.0867	12.9999	-0.2388
748	SLU 46	0.55	0.74	42.71	-0.0867	13.0016	-0.2565
748	SLU 47	0.54	0.76	42.44	-0.086	12.919	-0.2643
748	SLU 48	0.56	0.69	43.08	-0.0875	13.1104	-0.2406
748	SLU 49	0.56	0.74	43.08	-0.0875	13.1122	-0.2582

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
748	SLU 50	0.56	0.68	42.8	-0.0869	13.0265	-0.2366
748	SLU 51	0.55	0.73	42.8	-0.0869	13.0283	-0.2543
748	SLU 52	0.56	0.86	46.34	-0.095	14.0985	-0.3011
748	SLU 53	0.58	0.8	46.98	-0.0964	14.2899	-0.2774
748	SLU 54	0.57	0.85	46.98	-0.0964	14.2917	-0.295
748	SLU 55	0.57	0.87	46.71	-0.0958	14.209	-0.3029
748	SLU 56	0.58	0.8	47.35	-0.0973	14.4005	-0.2792
748	SLU 57	0.58	0.85	47.35	-0.0973	14.4023	-0.2968
748	SLU 58	0.58	0.79	47.07	-0.0967	14.3166	-0.2752
748	SLU 59	0.58	0.84	47.07	-0.0967	14.3184	-0.2929
748	SLU 60	0.57	0.83	48.16	-0.0992	14.6484	-0.2882
748	SLU 61	0.57	0.88	48.16	-0.0992	14.6502	-0.3058
748	SLU 62	0.58	0.83	48.53	-0.1	14.7589	-0.29
748	SLU 63	0.58	0.88	48.53	-0.1	14.7607	-0.3076
748	SLU 64	0.58	0.76	46.17	-0.0945	14.0465	-0.2661
748	SLU 65	0.57	0.85	46.18	-0.0945	14.0494	-0.2955
748	SLU 66	0.59	0.78	46.83	-0.096	14.2409	-0.2718
748	SLU 67	0.58	0.83	46.83	-0.096	14.2427	-0.2895
748	SLU 68	0.58	0.85	46.55	-0.0954	14.16	-0.2973
748	SLU 69	0.59	0.78	47.2	-0.0968	14.3514	-0.2736
748	SLU 70	0.59	0.83	47.2	-0.0968	14.3532	-0.2912
748	SLU 71	0.59	0.77	46.91	-0.0962	14.2676	-0.2696
748	SLU 72	0.59	0.82	46.92	-0.0962	14.2693	-0.2873
748	SLU 73	0.59	0.96	50.45	-0.1043	15.3395	-0.3341
748	SLU 74	0.61	0.89	51.1	-0.1058	15.5309	-0.3104
748	SLU 75	0.61	0.94	51.1	-0.1057	15.5327	-0.328
748	SLU 76	0.6	0.96	50.82	-0.1051	15.4501	-0.3359
748	SLU 77	0.62	0.89	51.47	-0.1066	15.6415	-0.3122
748	SLU 78	0.61	0.95	51.47	-0.1066	15.6433	-0.3298
748	SLU 79	0.61	0.88	51.18	-0.106	15.5576	-0.3082
748	SLU 80	0.61	0.93	51.19	-0.106	15.5594	-0.3259
748	SLU 81	0.61	0.92	52.27	-0.1085	15.8894	-0.3212
748	SLU 82	0.61	0.97	52.28	-0.1085	15.8912	-0.3388
748	SLU 83	0.62	0.93	52.64	-0.1093	16	-0.323
748	SLU 84	0.61	0.98	52.65	-0.1093	16.0017	-0.3406
748	SLE RA 1	0.44	0.57	34.61	-0.0707	10.5322	-0.1974
748	SLE RA 2	0.43	0.62	34.62	-0.0707	10.5342	-0.2171
748	SLE RA 3	0.44	0.58	35.05	-0.0716	10.6618	-0.2013
748	SLE RA 4	0.44	0.61	35.05	-0.0716	10.663	-0.213
748	SLE RA 5	0.44	0.63	34.87	-0.0712	10.6079	-0.2182
748	SLE RA 6	0.45	0.58	35.3	-0.0722	10.7355	-0.2024
748	SLE RA 7	0.44	0.61	35.3	-0.0722	10.7367	-0.2142
748	SLE RA 8	0.44	0.57	35.11	-0.0718	10.6796	-0.1998
748	SLE RA 9	0.44	0.61	35.11	-0.0718	10.6808	-0.2116
748	SLE RA 10	0.45	0.7	37.47	-0.0772	11.3942	-0.2428
748	SLE RA 11	0.46	0.65	37.89	-0.0782	11.5219	-0.227
748	SLE RA 12	0.46	0.68	37.9	-0.0781	11.5231	-0.2387
748	SLE RA 13	0.45	0.7	37.71	-0.0777	11.4679	-0.2439
748	SLE RA 14	0.46	0.65	38.14	-0.0787	11.5956	-0.2281
748	SLE RA 15	0.46	0.69	38.14	-0.0787	11.5968	-0.2399
748	SLE RA 16	0.46	0.65	37.95	-0.0783	11.5397	-0.2255
748	SLE RA 17	0.46	0.68	37.96	-0.0783	11.5409	-0.2373
748	SLE RA 18	0.46	0.67	38.68	-0.08	11.7608	-0.2342
748	SLE RA 19	0.46	0.7	38.68	-0.08	11.762	-0.2459
748	SLE RA 20	0.46	0.67	38.93	-0.0805	11.8345	-0.2353
748	SLE RA 21	0.46	0.71	38.93	-0.0805	11.8357	-0.2471
748	SLE FR 1	0.44	0.57	34.61	-0.0707	10.5322	-0.1974
748	SLE FR 2	0.43	0.58	34.62	-0.0707	10.5326	-0.2014
748	SLE FR 3	0.44	0.57	34.71	-0.0709	10.5617	-0.1979
748	SLE FR 4	0.44	0.61	35.84	-0.0735	10.9012	-0.2124
748	SLE FR 5	0.44	0.6	35.93	-0.0737	10.9303	-0.2089
748	SLE FR 6	0.45	0.62	36.65	-0.0753	11.1465	-0.2158
748	SLE QP 1	0.44	0.57	34.61	-0.0707	10.5322	-0.1974
748	SLE QP 2	0.44	0.6	35.83	-0.0735	10.9008	-0.2085
748	SLD 1	3.07	0.99	29.33	-0.0572	9.0199	-0.3431
748	SLD 2	3.01	1.39	29.33	-0.0573	9.0202	-0.4818
748	SLD 3	3.19	-0.55	29.17	-0.0567	8.9682	0.1955
748	SLD 4	3.14	-0.15	29.17	-0.0568	8.9685	0.0568
748	SLD 5	1.04	2.99	34.12	-0.0693	10.4149	-1.0415
748	SLD 6	1.01	3.24	34.12	-0.0693	10.4151	-1.1315
748	SLD 7	1.47	-2.16	33.6	-0.0677	10.2426	0.7538
748	SLD 8	1.44	-1.9	33.59	-0.0678	10.2427	0.6638
748	SLD 9	-0.55	3.09	38.08	-0.0791	11.5589	-1.0807
748	SLD 10	-0.59	3.35	38.07	-0.0792	11.5591	-1.1707
748	SLD 11	-0.12	-2.05	37.55	-0.0776	11.3865	0.7146
748	SLD 12	-0.16	-1.79	37.54	-0.0777	11.3867	0.6246
748	SLD 13	-2.25	1.35	42.5	-0.0901	12.8331	-0.4738
748	SLD 14	-2.31	1.75	42.49	-0.0902	12.8334	-0.6124
748	SLD 15	-2.13	-0.19	42.34	-0.0896	12.7814	0.0649
748	SLD 16	-2.18	0.2	42.34	-0.0897	12.7817	-0.0738
748	SLV 1	6.58	1.47	20.62	-0.0354	6.4987	-0.5066
748	SLV 2	6.45	2.4	20.61	-0.0356	6.4994	-0.8297
748	SLV 3	6.87	-2.04	20.25	-0.0343	6.379	0.7185
748	SLV 4	6.74	-1.11	20.24	-0.0345	6.3796	0.3954
748	SLV 5	1.86	6.02	31.83	-0.0636	9.7617	-2.1013
748	SLV 6	1.78	6.62	31.82	-0.0638	9.7621	-2.3076
748	SLV 7	2.84	-5.67	30.6	-0.0601	9.3625	1.9824
748	SLV 8	2.76	-5.08	30.59	-0.0602	9.3629	1.7761
748	SLV 9	-1.87	6.27	41.08	-0.0867	12.4387	-2.193
748	SLV 10	-1.96	6.87	41.07	-0.0869	12.4391	-2.3993
748	SLV 11	-0.89	-5.42	39.84	-0.0832	12.0395	1.8907

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
748	SLV 12	-0.98	-4.83	39.84	-0.0833	12.0399	1.6844
748	SLV 13	-5.86	2.31	51.43	-0.1124	15.422	-0.8123
748	SLV 14	-5.99	3.23	51.42	-0.1126	15.4226	-1.1354
748	SLV 15	-5.57	-1.2	51.06	-0.1113	15.3022	0.4128
748	SLV 16	-5.7	-0.27	51.05	-0.1115	15.3029	0.0897
748	CRTFP Ux+	0	0	0	0	0	0
748	CRTFP Ux-	0	0	0	0	0	0
749	SLU 1	-0.63	-0.15	49.32	-8.9683	-10.3379	-0.1406
749	SLU 2	-0.63	-0.01	49.33	-8.9699	-10.3391	-0.1062
749	SLU 3	-0.65	-0.14	50.29	-9.1451	-10.5357	-0.1403
749	SLU 4	-0.64	-0.06	50.29	-9.1461	-10.5364	-0.1197
749	SLU 5	-0.64	-0.01	49.88	-9.0704	-10.4505	-0.1062
749	SLU 6	-0.66	-0.13	50.84	-9.2457	-10.6471	-0.1403
749	SLU 7	-0.65	-0.05	50.85	-9.2466	-10.6478	-0.1197
749	SLU 8	-0.65	-0.13	50.42	-9.1694	-10.5607	-0.1406
749	SLU 9	-0.65	-0.05	50.43	-9.1703	-10.5614	-0.12
749	SLU 10	-0.64	0.01	55.71	-10.137	-11.6818	-0.1012
749	SLU 11	-0.66	-0.11	56.67	-10.3123	-11.8784	-0.1353
749	SLU 12	-0.66	-0.03	56.68	-10.3132	-11.8791	-0.1147
749	SLU 13	-0.65	0.02	56.27	-10.2376	-11.7931	-0.1012
749	SLU 14	-0.67	-0.11	57.23	-10.4128	-11.9897	-0.1353
749	SLU 15	-0.67	-0.03	57.23	-10.4138	-11.9904	-0.1147
749	SLU 16	-0.67	-0.11	56.81	-10.3366	-11.9033	-0.1356
749	SLU 17	-0.66	-0.03	56.81	-10.3375	-11.904	-0.115
749	SLU 18	-0.65	-0.11	58.44	-10.6357	-12.256	-0.1334
749	SLU 19	-0.65	-0.03	58.45	-10.6366	-12.2567	-0.1128
749	SLU 20	-0.66	-0.11	58.99	-10.7362	-12.3674	-0.1334
749	SLU 21	-0.66	-0.03	59	-10.7372	-12.3681	-0.1128
749	SLU 22	-0.68	-0.12	55.49	-10.0953	-11.6306	-0.1412
749	SLU 23	-0.68	0.01	55.5	-10.0968	-11.6318	-0.1068
749	SLU 24	-0.69	-0.11	56.46	-10.2721	-11.8284	-0.1409
749	SLU 25	-0.69	-0.03	56.47	-10.273	-11.8291	-0.1203
749	SLU 26	-0.68	0.02	56.05	-10.1974	-11.7432	-0.1068
749	SLU 27	-0.7	-0.1	57.01	-10.3726	-11.9398	-0.1409
749	SLU 28	-0.7	-0.02	57.02	-10.3736	-11.9405	-0.1203
749	SLU 29	-0.7	-0.11	56.59	-10.2963	-11.8534	-0.1412
749	SLU 30	-0.7	-0.03	56.6	-10.2973	-11.8541	-0.1205
749	SLU 31	-0.69	0.04	61.89	-11.264	-12.9744	-0.1018
749	SLU 32	-0.71	-0.09	62.85	-11.4393	-13.171	-0.1359
749	SLU 33	-0.7	-0.01	62.86	-11.4402	-13.1717	-0.1153
749	SLU 34	-0.7	0.04	62.44	-11.3645	-13.0858	-0.1018
749	SLU 35	-0.72	-0.08	63.4	-11.5398	-13.2824	-0.1359
749	SLU 36	-0.71	0	63.41	-11.5407	-13.2831	-0.1153
749	SLU 37	-0.71	-0.08	62.98	-11.4635	-13.196	-0.1362
749	SLU 38	-0.71	0	62.99	-11.4644	-13.1967	-0.1155
749	SLU 39	-0.7	-0.09	64.62	-11.7627	-13.5486	-0.134
749	SLU 40	-0.7	-0.01	64.62	-11.7636	-13.5493	-0.1134
749	SLU 41	-0.71	-0.08	65.17	-11.8632	-13.66	-0.134
749	SLU 42	-0.71	0	65.17	-11.8641	-13.6607	-0.1134
749	SLU 43	-0.81	-0.2	61.99	-11.2724	-12.9961	-0.1826
749	SLU 44	-0.8	-0.07	62	-11.274	-12.9973	-0.1482
749	SLU 45	-0.82	-0.19	62.97	-11.4492	-13.1939	-0.1823
749	SLU 46	-0.82	-0.11	62.97	-11.4502	-13.1946	-0.1617
749	SLU 47	-0.81	-0.06	62.56	-11.3745	-13.1087	-0.1482
749	SLU 48	-0.83	-0.18	63.52	-11.5498	-13.3053	-0.1823
749	SLU 49	-0.83	-0.1	63.52	-11.5507	-13.306	-0.1617
749	SLU 50	-0.83	-0.19	63.1	-11.4735	-13.2189	-0.1826
749	SLU 51	-0.82	-0.11	63.1	-11.4744	-13.2196	-0.162
749	SLU 52	-0.81	-0.04	68.39	-12.4411	-14.3399	-0.1432
749	SLU 53	-0.83	-0.17	69.35	-12.6164	-14.5365	-0.1773
749	SLU 54	-0.83	-0.09	69.36	-12.6173	-14.5373	-0.1567
749	SLU 55	-0.82	-0.04	68.94	-12.5417	-14.4513	-0.1432
749	SLU 56	-0.84	-0.16	69.9	-12.7169	-14.6479	-0.1773
749	SLU 57	-0.84	-0.08	69.91	-12.7179	-14.6486	-0.1567
749	SLU 58	-0.84	-0.16	69.49	-12.6407	-14.5615	-0.1776
749	SLU 59	-0.84	-0.08	69.49	-12.6416	-14.5622	-0.157
749	SLU 60	-0.83	-0.17	71.12	-12.9398	-14.9142	-0.1754
749	SLU 61	-0.82	-0.09	71.13	-12.9407	-14.9149	-0.1548
749	SLU 62	-0.84	-0.16	71.67	-13.0403	-15.0256	-0.1754
749	SLU 63	-0.83	-0.08	71.68	-13.0413	-15.0263	-0.1548
749	SLU 64	-0.86	-0.17	68.17	-12.3994	-14.2888	-0.1831
749	SLU 65	-0.85	-0.04	68.18	-12.4009	-14.29	-0.1488
749	SLU 66	-0.87	-0.16	69.14	-12.5762	-14.4866	-0.1829
749	SLU 67	-0.86	-0.08	69.15	-12.5771	-14.4873	-0.1623
749	SLU 68	-0.86	-0.03	68.73	-12.5015	-14.4013	-0.1488
749	SLU 69	-0.88	-0.16	69.69	-12.6767	-14.5979	-0.1829
749	SLU 70	-0.87	-0.08	69.7	-12.6777	-14.5987	-0.1623
749	SLU 71	-0.87	-0.16	69.27	-12.6004	-14.5115	-0.1832
749	SLU 72	-0.87	-0.08	69.28	-12.6014	-14.5123	-0.1625
749	SLU 73	-0.86	-0.02	74.57	-13.5681	-15.6326	-0.1438
749	SLU 74	-0.88	-0.14	75.53	-13.7434	-15.8292	-0.1779
749	SLU 75	-0.88	-0.06	75.53	-13.7443	-15.8299	-0.1573
749	SLU 76	-0.87	-0.01	75.12	-13.6686	-15.744	-0.1438
749	SLU 77	-0.89	-0.13	76.08	-13.8439	-15.9406	-0.1779
749	SLU 78	-0.89	-0.05	76.09	-13.8448	-15.9413	-0.1573
749	SLU 79	-0.89	-0.14	75.66	-13.7676	-15.8542	-0.1781
749	SLU 80	-0.88	-0.06	75.67	-13.7685	-15.8549	-0.1575
749	SLU 81	-0.87	-0.14	77.29	-14.0668	-16.2068	-0.176
749	SLU 82	-0.87	-0.06	77.3	-14.0677	-16.2075	-0.1554
749	SLU 83	-0.88	-0.13	77.85	-14.1673	-16.3182	-0.176
749	SLU 84	-0.88	-0.05	77.85	-14.1682	-16.3189	-0.1554

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
749	SLE RA 1	-0.65	-0.14	51.08	-9.2903	-10.7073	-0.1408
749	SLE RA 2	-0.64	-0.05	51.09	-9.2913	-10.7081	-0.1178
749	SLE RA 3	-0.66	-0.13	51.73	-9.4082	-10.8391	-0.1406
749	SLE RA 4	-0.65	-0.08	51.73	-9.4088	-10.8396	-0.1268
749	SLE RA 5	-0.65	-0.05	51.46	-9.3584	-10.7823	-0.1178
749	SLE RA 6	-0.66	-0.13	52.1	-9.4752	-10.9134	-0.1406
749	SLE RA 7	-0.66	-0.07	52.1	-9.4758	-10.9139	-0.1268
749	SLE RA 8	-0.66	-0.13	51.82	-9.4243	-10.8558	-0.1408
749	SLE RA 9	-0.66	-0.08	51.82	-9.425	-10.8563	-0.127
749	SLE RA 10	-0.65	-0.03	55.35	-10.0694	-11.6031	-0.1145
749	SLE RA 11	-0.66	-0.12	55.99	-10.1863	-11.7342	-0.1372
749	SLE RA 12	-0.66	-0.06	55.99	-10.1869	-11.7347	-0.1235
749	SLE RA 13	-0.66	-0.03	55.71	-10.1365	-11.6774	-0.1145
749	SLE RA 14	-0.67	-0.11	56.35	-10.2533	-11.8085	-0.1372
749	SLE RA 15	-0.67	-0.06	56.36	-10.2539	-11.8089	-0.1235
749	SLE RA 16	-0.67	-0.11	56.07	-10.2025	-11.7509	-0.1374
749	SLE RA 17	-0.67	-0.06	56.08	-10.2031	-11.7513	-0.1237
749	SLE RA 18	-0.66	-0.12	57.16	-10.4019	-11.986	-0.136
749	SLE RA 19	-0.66	-0.06	57.17	-10.4025	-11.9864	-0.1222
749	SLE RA 20	-0.67	-0.11	57.53	-10.4689	-12.0602	-0.136
749	SLE RA 21	-0.66	-0.06	57.54	-10.4695	-12.0607	-0.1222
749	SLE FR 1	-0.65	-0.14	51.08	-9.2903	-10.7073	-0.1408
749	SLE FR 2	-0.65	-0.12	51.08	-9.2905	-10.7074	-0.1362
749	SLE FR 3	-0.65	-0.14	51.23	-9.3171	-10.737	-0.1408
749	SLE FR 4	-0.65	-0.11	52.91	-9.624	-11.091	-0.1347
749	SLE FR 5	-0.65	-0.13	53.05	-9.6506	-11.1206	-0.1393
749	SLE FR 6	-0.65	-0.13	54.12	-9.8461	-11.3466	-0.1384
749	SLE QP 1	-0.65	-0.14	51.08	-9.2903	-10.7073	-0.1408
749	SLE QP 2	-0.65	-0.13	52.91	-9.6238	-11.0909	-0.1393
749	SLD 1	3.79	1.61	63.46	-11.5523	-13.2336	1.0341
749	SLD 2	3.72	1.03	63.47	-11.556	-13.2528	0.8793
749	SLD 3	3.65	-0.67	63.72	-11.6009	-13.3273	0.4447
749	SLD 4	3.58	-1.25	63.73	-11.6045	-13.3464	0.2898
749	SLD 5	0.91	3.95	55.67	-10.1281	-11.5883	1.1337
749	SLD 6	0.86	3.57	55.68	-10.1304	-11.6007	1.0332
749	SLD 7	0.43	-3.65	56.54	-10.2899	-11.9005	-0.8311
749	SLD 8	0.39	-4.03	56.55	-10.2923	-11.913	-0.9316
749	SLD 9	-1.7	3.76	49.26	-8.9553	-10.2688	0.653
749	SLD 10	-1.74	3.39	49.27	-8.9576	-10.2812	0.5524
749	SLD 11	-2.17	-3.84	50.13	-9.1171	-10.581	-1.3119
749	SLD 12	-2.21	-4.22	50.14	-9.1195	-10.5935	-1.4124
749	SLD 13	-4.89	0.99	42.08	-7.643	-8.8353	-0.5685
749	SLD 14	-4.95	0.4	42.09	-7.6467	-8.8545	-0.7234
749	SLD 15	-5.03	-1.29	42.34	-7.6916	-8.929	-1.1579
749	SLD 16	-5.09	-1.88	42.35	-7.6952	-8.9482	-1.3128
749	SLV 1	9.73	3.88	77.6	-14.137	-16.1073	2.5881
749	SLV 2	9.58	2.53	77.63	-14.1455	-16.1519	2.2272
749	SLV 3	9.4	-1.32	78.21	-14.2505	-16.323	1.2435
749	SLV 4	9.25	-2.67	78.24	-14.2589	-16.3677	0.8827
749	SLV 5	2.98	9.19	59.38	-10.8042	-12.2611	2.7793
749	SLV 6	2.89	8.33	59.41	-10.8096	-12.2896	2.5489
749	SLV 7	1.89	-8.15	61.42	-11.1825	-12.9801	-1.7027
749	SLV 8	1.8	-9.01	61.44	-11.1879	-13.0086	-1.9331
749	SLV 9	-3.1	8.75	44.37	-8.0597	-9.1731	1.6545
749	SLV 10	-3.2	7.88	44.4	-8.0651	-9.2016	1.424
749	SLV 11	-4.19	-8.59	46.41	-8.438	-9.8922	-2.8275
749	SLV 12	-4.29	-9.46	46.43	-8.4433	-9.9207	-3.058
749	SLV 13	-10.56	2.41	27.57	-4.9886	-5.8141	-1.1613
749	SLV 14	-10.71	1.05	27.6	-4.997	-5.8587	-1.5222
749	SLV 15	-10.88	-2.79	28.18	-5.1021	-6.0298	-2.5059
749	SLV 16	-11.03	-4.15	28.21	-5.1105	-6.0745	-2.8668
749	CRTFP Ux+	0	0	0	0	0	0
749	CRTFP Ux-	0	0	0	0	0	0
752	SLU 1	-0.71	-0.4	89.95	-12.6909	1.7749	-0.0746
752	SLU 2	-0.71	-0.24	89.99	-12.6953	1.7775	-0.0782
752	SLU 3	-0.72	-0.39	91.73	-12.9403	1.8085	-0.0765
752	SLU 4	-0.72	-0.29	91.75	-12.9429	1.8101	-0.0787
752	SLU 5	-0.72	-0.24	90.95	-12.8314	1.797	-0.0794
752	SLU 6	-0.74	-0.39	92.69	-13.0763	1.828	-0.0778
752	SLU 7	-0.74	-0.29	92.71	-13.079	1.8296	-0.0799
752	SLU 8	-0.73	-0.41	91.88	-12.9631	1.8139	-0.077
752	SLU 9	-0.73	-0.31	91.91	-12.9657	1.8154	-0.0792
752	SLU 10	-0.71	-0.24	102.46	-14.4548	2.0122	-0.0749
752	SLU 11	-0.72	-0.39	104.19	-14.6998	2.0432	-0.0732
752	SLU 12	-0.72	-0.29	104.21	-14.7024	2.0448	-0.0754
752	SLU 13	-0.72	-0.24	103.42	-14.5909	2.0316	-0.0761
752	SLU 14	-0.73	-0.39	105.16	-14.8358	2.0627	-0.0744
752	SLU 15	-0.74	-0.29	105.18	-14.8385	2.0643	-0.0766
752	SLU 16	-0.73	-0.41	104.35	-14.7226	2.0486	-0.0737
752	SLU 17	-0.73	-0.31	104.37	-14.7252	2.0501	-0.0759
752	SLU 18	-0.71	-0.4	107.76	-15.2045	2.1102	-0.0698
752	SLU 19	-0.71	-0.3	107.78	-15.2071	2.1117	-0.072
752	SLU 20	-0.72	-0.41	108.73	-15.3406	2.1297	-0.0711
752	SLU 21	-0.72	-0.31	108.75	-15.3432	2.1312	-0.0732
752	SLU 22	-0.77	-0.35	101.74	-14.3508	2.0005	-0.0818
752	SLU 23	-0.77	-0.18	101.77	-14.3552	2.0031	-0.0854
752	SLU 24	-0.78	-0.33	103.51	-14.6002	2.0342	-0.0838
752	SLU 25	-0.78	-0.23	103.53	-14.6028	2.0357	-0.0859
752	SLU 26	-0.78	-0.19	102.74	-14.4913	2.0226	-0.0867
752	SLU 27	-0.79	-0.34	104.47	-14.7362	2.0537	-0.085
752	SLU 28	-0.79	-0.24	104.5	-14.7389	2.0552	-0.0872

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
752	SLU 29	-0.79	-0.36	103.67	-14.623	2.0395	-0.0843
752	SLU 30	-0.79	-0.26	103.69	-14.6256	2.0411	-0.0865
752	SLU 31	-0.77	-0.18	114.24	-16.1147	2.2378	-0.0821
752	SLU 32	-0.78	-0.33	115.97	-16.3596	2.2689	-0.0804
752	SLU 33	-0.78	-0.23	116	-16.3623	2.2704	-0.0826
752	SLU 34	-0.78	-0.19	115.2	-16.2508	2.2573	-0.0834
752	SLU 35	-0.79	-0.34	116.94	-16.4957	2.2884	-0.0817
752	SLU 36	-0.79	-0.24	116.96	-16.4983	2.2899	-0.0839
752	SLU 37	-0.79	-0.36	116.13	-16.3824	2.2742	-0.0809
752	SLU 38	-0.79	-0.26	116.16	-16.3851	2.2758	-0.0831
752	SLU 39	-0.77	-0.35	119.55	-16.8644	2.3358	-0.0771
752	SLU 40	-0.77	-0.25	119.57	-16.867	2.3374	-0.0792
752	SLU 41	-0.78	-0.35	120.51	-17.0004	2.3553	-0.0783
752	SLU 42	-0.78	-0.25	120.53	-17.0031	2.3568	-0.0805
752	SLU 43	-0.9	-0.54	112.9	-15.9291	2.23	-0.0945
752	SLU 44	-0.9	-0.38	112.94	-15.9335	2.2326	-0.0981
752	SLU 45	-0.92	-0.53	114.67	-16.1785	2.2636	-0.0964
752	SLU 46	-0.92	-0.43	114.69	-16.1811	2.2652	-0.0986
752	SLU 47	-0.91	-0.38	113.9	-16.0696	2.2521	-0.0993
752	SLU 48	-0.93	-0.53	115.64	-16.3145	2.2831	-0.0977
752	SLU 49	-0.93	-0.43	115.66	-16.3172	2.2847	-0.0998
752	SLU 50	-0.93	-0.55	114.83	-16.2013	2.269	-0.0969
752	SLU 51	-0.93	-0.45	114.85	-16.2039	2.2705	-0.0991
752	SLU 52	-0.9	-0.38	125.4	-17.693	2.4673	-0.0948
752	SLU 53	-0.92	-0.53	127.14	-17.938	2.4983	-0.0931
752	SLU 54	-0.92	-0.43	127.16	-17.9406	2.4999	-0.0953
752	SLU 55	-0.91	-0.38	126.37	-17.8291	2.4868	-0.096
752	SLU 56	-0.93	-0.53	128.1	-18.074	2.5178	-0.0943
752	SLU 57	-0.93	-0.43	128.12	-18.0767	2.5194	-0.0965
752	SLU 58	-0.92	-0.55	127.3	-17.9607	2.5037	-0.0936
752	SLU 59	-0.92	-0.45	127.32	-17.9634	2.5052	-0.0958
752	SLU 60	-0.9	-0.54	130.71	-18.4427	2.5653	-0.0897
752	SLU 61	-0.9	-0.44	130.73	-18.4453	2.5668	-0.0919
752	SLU 62	-0.91	-0.55	131.67	-18.5787	2.5848	-0.091
752	SLU 63	-0.91	-0.45	131.7	-18.5814	2.5863	-0.0931
752	SLU 64	-0.96	-0.49	124.68	-17.589	2.4557	-0.1017
752	SLU 65	-0.96	-0.32	124.72	-17.5934	2.4582	-0.1053
752	SLU 66	-0.98	-0.47	126.45	-17.8383	2.4893	-0.1037
752	SLU 67	-0.98	-0.37	126.48	-17.841	2.4908	-0.1058
752	SLU 68	-0.97	-0.33	125.68	-17.7295	2.4777	-0.1066
752	SLU 69	-0.99	-0.48	127.42	-17.9744	2.5088	-0.1049
752	SLU 70	-0.99	-0.38	127.44	-17.977	2.5103	-0.1071
752	SLU 71	-0.98	-0.5	126.61	-17.8611	2.4946	-0.1042
752	SLU 72	-0.98	-0.4	126.63	-17.8638	2.4962	-0.1063
752	SLU 73	-0.96	-0.32	137.18	-19.3529	2.6929	-0.102
752	SLU 74	-0.97	-0.47	138.92	-19.5978	2.724	-0.1003
752	SLU 75	-0.98	-0.37	138.94	-19.6005	2.7255	-0.1025
752	SLU 76	-0.97	-0.33	138.15	-19.4889	2.7124	-0.1033
752	SLU 77	-0.99	-0.48	139.89	-19.7339	2.7435	-0.1016
752	SLU 78	-0.99	-0.38	139.91	-19.7365	2.745	-0.1038
752	SLU 79	-0.98	-0.5	139.08	-19.6206	2.7293	-0.1008
752	SLU 80	-0.98	-0.4	139.1	-19.6233	2.7309	-0.103
752	SLU 81	-0.96	-0.49	142.49	-20.1026	2.7909	-0.097
752	SLU 82	-0.96	-0.39	142.51	-20.1052	2.7925	-0.0991
752	SLU 83	-0.97	-0.49	143.46	-20.2386	2.8104	-0.0982
752	SLU 84	-0.97	-0.39	143.48	-20.2413	2.812	-0.1004
752	SLE RA 1	-0.73	-0.39	93.32	-13.1652	1.8394	-0.0766
752	SLE RA 2	-0.73	-0.28	93.34	-13.1681	1.8411	-0.0791
752	SLE RA 3	-0.74	-0.38	94.5	-13.3314	1.8618	-0.0779
752	SLE RA 4	-0.74	-0.31	94.52	-13.3332	1.8628	-0.0794
752	SLE RA 5	-0.73	-0.28	93.99	-13.2588	1.8541	-0.0799
752	SLE RA 6	-0.74	-0.38	95.14	-13.4221	1.8748	-0.0788
752	SLE RA 7	-0.74	-0.31	95.16	-13.4239	1.8758	-0.0802
752	SLE RA 8	-0.74	-0.39	94.61	-13.3466	1.8654	-0.0783
752	SLE RA 9	-0.74	-0.33	94.62	-13.3484	1.8664	-0.0797
752	SLE RA 10	-0.73	-0.28	101.65	-14.3411	1.9975	-0.0769
752	SLE RA 11	-0.74	-0.38	102.81	-14.5044	2.0183	-0.0757
752	SLE RA 12	-0.74	-0.31	102.83	-14.5062	2.0193	-0.0772
752	SLE RA 13	-0.73	-0.28	102.3	-14.4318	2.0105	-0.0777
752	SLE RA 14	-0.74	-0.38	103.46	-14.5951	2.0312	-0.0766
752	SLE RA 15	-0.74	-0.31	103.47	-14.5969	2.0323	-0.078
752	SLE RA 16	-0.74	-0.39	102.92	-14.5196	2.0218	-0.0761
752	SLE RA 17	-0.74	-0.33	102.93	-14.5214	2.0228	-0.0775
752	SLE RA 18	-0.73	-0.39	105.19	-14.8409	2.0629	-0.0735
752	SLE RA 19	-0.73	-0.32	105.21	-14.8427	2.0639	-0.0749
752	SLE RA 20	-0.73	-0.39	105.84	-14.9316	2.0759	-0.0743
752	SLE RA 21	-0.73	-0.32	105.85	-14.9334	2.0769	-0.0758
752	SLE FR 1	-0.73	-0.39	93.32	-13.1652	1.8394	-0.0766
752	SLE FR 2	-0.73	-0.36	93.32	-13.1658	1.8397	-0.0771
752	SLE FR 3	-0.73	-0.39	93.58	-13.2015	1.8446	-0.077
752	SLE FR 4	-0.73	-0.36	96.89	-13.6685	1.9068	-0.0762
752	SLE FR 5	-0.73	-0.39	97.14	-13.7042	1.9116	-0.076
752	SLE FR 6	-0.73	-0.39	99.26	-14.003	1.9511	-0.0751
752	SLE QP 1	-0.73	-0.39	93.32	-13.1652	1.8394	-0.0766
752	SLE QP 2	-0.73	-0.39	96.88	-13.6679	1.9064	-0.0757
752	SLD 1	7.72	1.81	104.95	-14.7973	2.195	1.0473
752	SLD 2	7.62	1.29	104.9	-14.7923	2.1897	1.0547
752	SLD 3	7.53	-1.39	104.5	-14.745	2.1481	1.116
752	SLD 4	7.43	-1.92	104.46	-14.74	2.1428	1.1234
752	SLD 5	2.12	5.22	99.98	-14.087	2.0651	0.1558
752	SLD 6	2.06	4.88	99.95	-14.0837	2.0616	0.1606

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
752	SLD 7	1.47	-5.45	98.5	-13.9126	1.9087	0.3846
752	SLD 8	1.41	-5.79	98.47	-13.9093	1.9053	0.3895
752	SLD 9	-2.86	5.02	95.29	-13.4265	1.9076	-0.5408
752	SLD 10	-2.92	4.68	95.26	-13.4233	1.9041	-0.536
752	SLD 11	-3.51	-5.65	93.81	-13.2521	1.7512	-0.312
752	SLD 12	-3.57	-5.99	93.78	-13.2489	1.7478	-0.3072
752	SLD 13	-8.88	1.14	89.31	-12.5958	1.6701	-1.2748
752	SLD 14	-8.98	0.62	89.26	-12.5908	1.6647	-1.2673
752	SLD 15	-9.07	-2.06	88.86	-12.5435	1.6231	-1.2061
752	SLD 16	-9.17	-2.58	88.82	-12.5385	1.6178	-1.1987
752	SLV 1	19.03	4.65	115.74	-16.31	2.5808	2.5524
752	SLV 2	18.8	3.44	115.64	-16.2983	2.5683	2.5697
752	SLV 3	18.57	-2.65	114.73	-16.1893	2.4731	2.7094
752	SLV 4	18.35	-3.87	114.62	-16.1776	2.4607	2.7267
752	SLV 5	5.93	12.41	104.1	-14.6456	2.2742	0.4718
752	SLV 6	5.78	11.64	104.04	-14.6381	2.2662	0.4829
752	SLV 7	4.42	-11.94	100.71	-14.2432	1.9152	0.9949
752	SLV 8	4.27	-12.72	100.64	-14.2358	1.9073	1.0059
752	SLV 9	-5.72	11.95	93.12	-13.1	1.9056	-1.1573
752	SLV 10	-5.87	11.17	93.06	-13.0926	1.8977	-1.1463
752	SLV 11	-7.23	-12.41	89.73	-12.6977	1.5466	-0.6343
752	SLV 12	-7.38	-13.18	89.66	-12.6902	1.5387	-0.6232
752	SLV 13	-19.8	3.1	79.14	-11.1582	1.3522	-2.878
752	SLV 14	-20.03	1.88	79.04	-11.1465	1.3398	-2.8607
752	SLV 15	-20.25	-4.21	78.13	-11.0375	1.2445	-2.7211
752	SLV 16	-20.48	-5.43	78.02	-11.0258	1.2321	-2.7038
752	CRTFP Ux+	0	0	0	0	0	0
752	CRTFP Ux-	0	0	0	0	0	0
755	SLU 1	-0.03	0.44	86.08	-15.7038	0.1395	-0.0166
755	SLU 2	-0.03	0.6	86.14	-15.7123	0.1403	-0.0169
755	SLU 3	-0.03	0.49	87.69	-16.001	0.1431	-0.0168
755	SLU 4	-0.03	0.58	87.72	-16.0061	0.1436	-0.0169
755	SLU 5	-0.03	0.6	87	-15.8718	0.1416	-0.017
755	SLU 6	-0.03	0.49	88.55	-16.1605	0.1444	-0.0169
755	SLU 7	-0.03	0.58	88.58	-16.1656	0.1449	-0.0171
755	SLU 8	-0.03	0.44	87.8	-16.0227	0.142	-0.0169
755	SLU 9	-0.03	0.53	87.84	-16.0278	0.1425	-0.0171
755	SLU 10	0.01	0.69	98.28	-17.937	0.159	-0.0082
755	SLU 11	0.01	0.58	99.83	-18.2256	0.1618	-0.0081
755	SLU 12	0.01	0.68	99.87	-18.2308	0.1623	-0.0083
755	SLU 13	0.01	0.69	99.14	-18.0964	0.1603	-0.0084
755	SLU 14	0.01	0.58	100.69	-18.3851	0.1631	-0.0083
755	SLU 15	0.01	0.68	100.73	-18.3902	0.1636	-0.0084
755	SLU 16	0.02	0.54	99.94	-18.2474	0.1607	-0.0083
755	SLU 17	0.02	0.63	99.98	-18.2525	0.1612	-0.0084
755	SLU 18	0.04	0.58	103.42	-18.8818	0.1663	-0.0043
755	SLU 19	0.03	0.67	103.46	-18.887	0.1667	-0.0044
755	SLU 20	0.04	0.58	104.29	-19.0413	0.1675	-0.0044
755	SLU 21	0.03	0.67	104.32	-19.0464	0.168	-0.0046
755	SLU 22	-0.04	0.66	97.22	-17.7345	0.168	-0.0184
755	SLU 23	-0.04	0.81	97.28	-17.7431	0.1688	-0.0186
755	SLU 24	-0.04	0.7	98.82	-18.0318	0.1716	-0.0186
755	SLU 25	-0.04	0.8	98.86	-18.0369	0.1721	-0.0187
755	SLU 26	-0.04	0.81	98.14	-17.9026	0.1701	-0.0188
755	SLU 27	-0.04	0.7	99.68	-18.1912	0.1729	-0.0187
755	SLU 28	-0.04	0.8	99.72	-18.1964	0.1734	-0.0189
755	SLU 29	-0.04	0.66	98.94	-18.0535	0.1705	-0.0187
755	SLU 30	-0.04	0.75	98.97	-18.0586	0.171	-0.0189
755	SLU 31	0	0.91	109.42	-19.9677	0.1876	-0.01
755	SLU 32	0	0.8	110.97	-20.2564	0.1904	-0.0099
755	SLU 33	0	0.89	111.01	-20.2615	0.1908	-0.01
755	SLU 34	0	0.91	110.28	-20.1272	0.1888	-0.0101
755	SLU 35	0	0.8	111.83	-20.4159	0.1916	-0.0101
755	SLU 36	0	0.9	111.87	-20.421	0.1921	-0.0102
755	SLU 37	0	0.76	111.08	-20.2781	0.1893	-0.0101
755	SLU 38	0	0.85	111.12	-20.2833	0.1897	-0.0102
755	SLU 39	0.02	0.8	114.56	-20.9126	0.1948	-0.0061
755	SLU 40	0.02	0.89	114.6	-20.9177	0.1953	-0.0062
755	SLU 41	0.02	0.8	115.42	-21.0721	0.196	-0.0062
755	SLU 42	0.02	0.89	115.46	-21.0772	0.1965	-0.0063
755	SLU 43	-0.04	0.5	108.08	-19.7186	0.1716	-0.021
755	SLU 44	-0.04	0.65	108.14	-19.7272	0.1724	-0.0212
755	SLU 45	-0.04	0.54	109.69	-20.0159	0.1752	-0.0212
755	SLU 46	-0.04	0.64	109.73	-20.021	0.1757	-0.0213
755	SLU 47	-0.04	0.65	109.01	-19.8867	0.1736	-0.0214
755	SLU 48	-0.04	0.54	110.55	-20.1753	0.1765	-0.0213
755	SLU 49	-0.04	0.64	110.59	-20.1805	0.1769	-0.0214
755	SLU 50	-0.04	0.5	109.8	-20.0376	0.1741	-0.0213
755	SLU 51	-0.04	0.59	109.84	-20.0427	0.1746	-0.0215
755	SLU 52	0.01	0.75	120.29	-21.9518	0.1911	-0.0126
755	SLU 53	0.01	0.64	121.83	-22.2405	0.1939	-0.0125
755	SLU 54	0.01	0.73	121.87	-22.2456	0.1944	-0.0126
755	SLU 55	0.01	0.75	121.15	-22.1113	0.1924	-0.0127
755	SLU 56	0.01	0.64	122.69	-22.4	0.1952	-0.0127
755	SLU 57	0.01	0.73	122.73	-22.4051	0.1957	-0.0128
755	SLU 58	0.01	0.59	121.95	-22.2622	0.1928	-0.0127
755	SLU 59	0.01	0.69	121.98	-22.2674	0.1933	-0.0128
755	SLU 60	0.03	0.63	125.43	-22.8967	0.1983	-0.0086
755	SLU 61	0.03	0.73	125.47	-22.9018	0.1988	-0.0088
755	SLU 62	0.03	0.63	126.29	-23.0562	0.1996	-0.0088
755	SLU 63	0.03	0.73	126.33	-23.0613	0.2001	-0.0089

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
755	SLU 64	-0.05	0.71	119.22	-21.7494	0.2001	-0.0228
755	SLU 65	-0.05	0.87	119.28	-21.758	0.2009	-0.023
755	SLU 66	-0.05	0.76	120.83	-22.0466	0.2037	-0.0229
755	SLU 67	-0.05	0.85	120.87	-22.0518	0.2042	-0.0231
755	SLU 68	-0.05	0.87	120.14	-21.9174	0.2022	-0.0232
755	SLU 69	-0.05	0.76	121.69	-22.2061	0.205	-0.0231
755	SLU 70	-0.05	0.86	121.73	-22.2112	0.2054	-0.0232
755	SLU 71	-0.05	0.72	120.94	-22.0684	0.2026	-0.0231
755	SLU 72	-0.05	0.81	120.98	-22.0735	0.2031	-0.0232
755	SLU 73	0	0.97	131.43	-23.9826	0.2196	-0.0144
755	SLU 74	0	0.86	132.97	-24.2713	0.2224	-0.0143
755	SLU 75	0	0.95	133.01	-24.2764	0.2229	-0.0144
755	SLU 76	0	0.97	132.29	-24.1421	0.2209	-0.0145
755	SLU 77	0	0.86	133.83	-24.4307	0.2237	-0.0144
755	SLU 78	0	0.95	133.87	-24.4359	0.2242	-0.0146
755	SLU 79	0	0.81	133.08	-24.293	0.2213	-0.0145
755	SLU 80	0	0.91	133.12	-24.2981	0.2218	-0.0146
755	SLU 81	0.02	0.85	136.57	-24.9275	0.2269	-0.0104
755	SLU 82	0.02	0.95	136.61	-24.9326	0.2273	-0.0106
755	SLU 83	0.02	0.85	137.43	-25.0869	0.2281	-0.0106
755	SLU 84	0.02	0.95	137.47	-25.0921	0.2286	-0.0107
755	SLE RA 1	-0.03	0.5	89.26	-16.284	0.1477	-0.0171
755	SLE RA 2	-0.04	0.61	89.3	-16.2897	0.1482	-0.0173
755	SLE RA 3	-0.04	0.53	90.33	-16.4821	0.1501	-0.0172
755	SLE RA 4	-0.04	0.6	90.36	-16.4856	0.1504	-0.0173
755	SLE RA 5	-0.04	0.61	89.88	-16.396	0.149	-0.0174
755	SLE RA 6	-0.03	0.53	90.91	-16.5884	0.1509	-0.0173
755	SLE RA 7	-0.04	0.6	90.93	-16.5919	0.1512	-0.0174
755	SLE RA 8	-0.03	0.5	90.41	-16.4966	0.1493	-0.0174
755	SLE RA 9	-0.03	0.57	90.43	-16.5	0.1497	-0.0174
755	SLE RA 10	0	0.67	97.4	-17.7728	0.1607	-0.0115
755	SLE RA 11	0	0.6	98.43	-17.9652	0.1625	-0.0115
755	SLE RA 12	0	0.66	98.45	-17.9686	0.1629	-0.0116
755	SLE RA 13	0	0.67	97.97	-17.8791	0.1615	-0.0116
755	SLE RA 14	0	0.6	99	-18.0715	0.1634	-0.0116
755	SLE RA 15	0	0.66	99.03	-18.075	0.1637	-0.0117
755	SLE RA 16	0	0.57	98.5	-17.9797	0.1618	-0.0116
755	SLE RA 17	0	0.63	98.53	-17.9831	0.1621	-0.0117
755	SLE RA 18	0.01	0.59	100.82	-18.4027	0.1655	-0.0089
755	SLE RA 19	0.01	0.66	100.85	-18.4061	0.1658	-0.009
755	SLE RA 20	0.01	0.59	101.4	-18.509	0.1663	-0.009
755	SLE RA 21	0.01	0.66	101.42	-18.5124	0.1667	-0.0091
755	SLE FR 1	-0.03	0.5	89.26	-16.284	0.1477	-0.0171
755	SLE FR 2	-0.04	0.52	89.27	-16.2851	0.1478	-0.0172
755	SLE FR 3	-0.03	0.5	89.49	-16.3265	0.148	-0.0172
755	SLE FR 4	-0.02	0.55	92.74	-16.9207	0.1531	-0.0147
755	SLE FR 5	-0.02	0.53	92.96	-16.9621	0.1533	-0.0147
755	SLE FR 6	-0.01	0.55	95.04	-17.3433	0.1566	-0.013
755	SLE QP 1	-0.03	0.5	89.26	-16.284	0.1477	-0.0171
755	SLE QP 2	-0.02	0.53	92.73	-16.9196	0.153	-0.0147
755	SLD 1	8.61	2.03	94.48	-16.7391	0.2671	1.512
755	SLD 2	8.53	1.82	94.44	-16.7346	0.2678	1.5061
755	SLD 3	8.81	-1.36	93.67	-16.6453	0.2504	1.546
755	SLD 4	8.72	-1.57	93.63	-16.6407	0.251	1.54
755	SLD 5	2.29	6.16	94.49	-17.0086	0.2125	0.3929
755	SLD 6	2.23	6.02	94.46	-17.0056	0.2129	0.389
755	SLD 7	2.94	-5.15	91.79	-16.6958	0.1567	0.506
755	SLD 8	2.88	-5.28	91.76	-16.6928	0.1571	0.5022
755	SLD 9	-2.92	6.34	93.69	-17.1464	0.1489	-0.5315
755	SLD 10	-2.98	6.2	93.67	-17.1434	0.1493	-0.5354
755	SLD 11	-2.27	-4.97	91	-16.8336	0.0931	-0.4184
755	SLD 12	-2.33	-5.1	90.97	-16.8307	0.0935	-0.4222
755	SLD 13	-8.76	2.63	91.83	-17.1985	0.055	-1.5694
755	SLD 14	-8.85	2.42	91.79	-17.1939	0.0556	-1.5753
755	SLD 15	-8.57	-0.76	91.02	-17.1046	0.0383	-1.5354
755	SLD 16	-8.66	-0.97	90.98	-17.1001	0.0389	-1.5413
755	SLV 1	20.18	3.93	96.93	-16.4792	0.4196	3.5558
755	SLV 2	19.97	3.45	96.83	-16.4687	0.421	3.542
755	SLV 3	20.63	-3.8	95.09	-16.2654	0.3809	3.635
755	SLV 4	20.42	-4.28	94.99	-16.2549	0.3824	3.6213
755	SLV 5	5.38	13.35	96.8	-17.1136	0.2913	0.9386
755	SLV 6	5.25	13.05	96.73	-17.1068	0.2923	0.9298
755	SLV 7	6.9	-12.41	90.66	-16.4009	0.1625	1.2028
755	SLV 8	6.77	-12.72	90.6	-16.3941	0.1635	1.194
755	SLV 9	-6.81	13.77	94.86	-17.4451	0.1426	-1.2233
755	SLV 10	-6.94	13.47	94.79	-17.4383	0.1435	-1.2321
755	SLV 11	-5.29	-11.99	88.72	-16.7324	0.0137	-0.9591
755	SLV 12	-5.43	-12.29	88.66	-16.7257	0.0147	-0.9679
755	SLV 13	-20.47	5.33	90.46	-17.5843	-0.0764	-3.6506
755	SLV 14	-20.67	4.86	90.37	-17.5738	-0.0749	-3.6644
755	SLV 15	-20.01	-2.39	88.62	-17.3705	-0.115	-3.5713
755	SLV 16	-20.22	-2.87	88.53	-17.36	-0.1135	-3.5851
755	CRTFP Ux+	0	0	0	0	0	0
755	CRTFP Ux-	0	0	0	0	0	0
758	SLU 1	0.98	-0.07	76.07	-7.3997	0.1203	0.0784
758	SLU 2	0.98	0.06	76.11	-7.4025	0.1191	0.078
758	SLU 3	1.01	-0.06	77.54	-7.5421	0.1233	0.0804
758	SLU 4	1	0.02	77.56	-7.5438	0.1226	0.0802
758	SLU 5	0.99	0.05	76.92	-7.482	0.1198	0.0792
758	SLU 6	1.02	-0.07	78.36	-7.6216	0.124	0.0817
758	SLU 7	1.02	0.01	78.38	-7.6234	0.1233	0.0815

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
758	SLU 8	1.01	-0.09	77.71	-7.5587	0.1217	0.0809
758	SLU 9	1.01	-0.01	77.73	-7.5604	0.121	0.0806
758	SLU 10	1.04	0.13	86.44	-8.4085	0.1436	0.0825
758	SLU 11	1.07	0	87.87	-8.5481	0.1478	0.085
758	SLU 12	1.07	0.09	87.89	-8.5498	0.1471	0.0848
758	SLU 13	1.06	0.12	87.26	-8.488	0.1443	0.0838
758	SLU 14	1.09	-0.01	88.69	-8.6276	0.1485	0.0863
758	SLU 15	1.09	0.08	88.71	-8.6293	0.1478	0.086
758	SLU 16	1.08	-0.03	88.04	-8.5646	0.1462	0.0854
758	SLU 17	1.08	0.05	88.06	-8.5663	0.1454	0.0852
758	SLU 18	1.07	0.02	90.83	-8.8367	0.1553	0.0849
758	SLU 19	1.07	0.1	90.85	-8.8384	0.1545	0.0846
758	SLU 20	1.09	0.01	91.65	-8.9162	0.156	0.0861
758	SLU 21	1.09	0.09	91.67	-8.9179	0.1552	0.0859
758	SLU 22	1.07	0.01	85.88	-8.3529	0.1407	0.085
758	SLU 23	1.06	0.15	85.91	-8.3558	0.1395	0.0846
758	SLU 24	1.09	0.02	87.35	-8.4954	0.1438	0.0871
758	SLU 25	1.09	0.1	87.37	-8.4971	0.143	0.0869
758	SLU 26	1.08	0.14	86.73	-8.4353	0.1402	0.0859
758	SLU 27	1.11	0.01	88.17	-8.5749	0.1445	0.0884
758	SLU 28	1.11	0.09	88.19	-8.5766	0.1437	0.0881
758	SLU 29	1.1	-0.01	87.52	-8.512	0.1421	0.0875
758	SLU 30	1.1	0.07	87.54	-8.5137	0.1414	0.0873
758	SLU 31	1.13	0.21	96.25	-9.3617	0.164	0.0891
758	SLU 32	1.16	0.09	97.68	-9.5014	0.1682	0.0916
758	SLU 33	1.16	0.17	97.7	-9.5031	0.1675	0.0914
758	SLU 34	1.15	0.2	97.06	-9.4413	0.1647	0.0904
758	SLU 35	1.18	0.08	98.5	-9.5809	0.169	0.0929
758	SLU 36	1.17	0.16	98.52	-9.5826	0.1682	0.0927
758	SLU 37	1.17	0.06	97.85	-9.5179	0.1666	0.0921
758	SLU 38	1.16	0.14	97.87	-9.5196	0.1659	0.0918
758	SLU 39	1.16	0.1	100.64	-9.79	0.1757	0.0915
758	SLU 40	1.16	0.19	100.66	-9.7917	0.1749	0.0913
758	SLU 41	1.18	0.09	101.46	-9.8695	0.1764	0.0928
758	SLU 42	1.18	0.18	101.48	-9.8712	0.1757	0.0925
758	SLU 43	1.24	-0.12	95.53	-9.2927	0.1493	0.0996
758	SLU 44	1.24	0.01	95.56	-9.2956	0.1481	0.0992
758	SLU 45	1.27	-0.11	97	-9.4352	0.1524	0.1017
758	SLU 46	1.27	-0.03	97.02	-9.4369	0.1517	0.1014
758	SLU 47	1.26	0	96.38	-9.3751	0.1488	0.1004
758	SLU 48	1.29	-0.12	97.82	-9.5147	0.1531	0.1029
758	SLU 49	1.28	-0.04	97.84	-9.5164	0.1524	0.1027
758	SLU 50	1.28	-0.14	97.17	-9.4518	0.1508	0.1021
758	SLU 51	1.27	-0.06	97.19	-9.4535	0.15	0.1019
758	SLU 52	1.31	0.08	105.9	-10.3015	0.1726	0.1037
758	SLU 53	1.34	-0.05	107.33	-10.4411	0.1769	0.1062
758	SLU 54	1.33	0.03	107.35	-10.4428	0.1762	0.106
758	SLU 55	1.32	0.07	106.72	-10.381	0.1733	0.105
758	SLU 56	1.35	-0.06	108.15	-10.5207	0.1776	0.1075
758	SLU 57	1.35	0.02	108.17	-10.5224	0.1769	0.1073
758	SLU 58	1.34	-0.08	107.5	-10.4577	0.1752	0.1067
758	SLU 59	1.34	0	107.52	-10.4594	0.1745	0.1064
758	SLU 60	1.34	-0.03	110.29	-10.7298	0.1843	0.1061
758	SLU 61	1.34	0.05	110.31	-10.7315	0.1836	0.1058
758	SLU 62	1.35	-0.04	111.11	-10.8093	0.185	0.1074
758	SLU 63	1.35	0.04	111.13	-10.811	0.1843	0.1071
758	SLU 64	1.33	-0.04	105.34	-10.246	0.1698	0.1062
758	SLU 65	1.33	0.09	105.37	-10.2489	0.1686	0.1058
758	SLU 66	1.36	-0.03	106.81	-10.3885	0.1728	0.1083
758	SLU 67	1.35	0.05	106.83	-10.3902	0.1721	0.1081
758	SLU 68	1.34	0.08	106.19	-10.3284	0.1693	0.1071
758	SLU 69	1.37	-0.04	107.63	-10.468	0.1735	0.1096
758	SLU 70	1.37	0.04	107.65	-10.4697	0.1728	0.1093
758	SLU 71	1.36	-0.06	106.98	-10.405	0.1712	0.1088
758	SLU 72	1.36	0.02	107	-10.4067	0.1704	0.1085
758	SLU 73	1.39	0.16	115.7	-11.2548	0.1931	0.1104
758	SLU 74	1.42	0.04	117.14	-11.3944	0.1973	0.1129
758	SLU 75	1.42	0.12	117.16	-11.3961	0.1966	0.1126
758	SLU 76	1.41	0.15	116.52	-11.3343	0.1938	0.1116
758	SLU 77	1.44	0.03	117.96	-11.4739	0.198	0.1141
758	SLU 78	1.44	0.11	117.98	-11.4756	0.1973	0.1139
758	SLU 79	1.43	0.01	117.31	-11.411	0.1957	0.1133
758	SLU 80	1.43	0.09	117.33	-11.4127	0.1949	0.1131
758	SLU 81	1.42	0.05	120.1	-11.6831	0.2047	0.1127
758	SLU 82	1.42	0.14	120.12	-11.6848	0.204	0.1125
758	SLU 83	1.44	0.04	120.92	-11.7626	0.2055	0.114
758	SLU 84	1.44	0.13	120.94	-11.7643	0.2047	0.1138
758	SLE RA 1	1	-0.05	78.87	-7.672	0.1261	0.0802
758	SLE RA 2	1	0.04	78.9	-7.6739	0.1253	0.08
758	SLE RA 3	1.02	-0.04	79.85	-7.767	0.1281	0.0816
758	SLE RA 4	1.02	0.01	79.87	-7.7681	0.1277	0.0815
758	SLE RA 5	1.01	0.03	79.44	-7.7269	0.1258	0.0808
758	SLE RA 6	1.03	-0.05	80.4	-7.82	0.1286	0.0825
758	SLE RA 7	1.03	0	80.41	-7.8212	0.1281	0.0823
758	SLE RA 8	1.03	-0.06	79.97	-7.778	0.127	0.0819
758	SLE RA 9	1.02	-0.01	79.98	-7.7792	0.1266	0.0818
758	SLE RA 10	1.05	0.09	85.78	-8.3446	0.1416	0.083
758	SLE RA 11	1.07	0	86.74	-8.4376	0.1445	0.0847
758	SLE RA 12	1.06	0.06	86.75	-8.4388	0.144	0.0845
758	SLE RA 13	1.06	0.08	86.33	-8.3976	0.1421	0.0839
758	SLE RA 14	1.08	-0.01	87.29	-8.4906	0.1449	0.0855

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
758	SLE RA 15	1.08	0.05	87.3	-8.4918	0.1445	0.0854
758	SLE RA 16	1.07	-0.02	86.85	-8.4487	0.1434	0.085
758	SLE RA 17	1.07	0.04	86.87	-8.4498	0.1429	0.0848
758	SLE RA 18	1.07	0.01	88.71	-8.6301	0.1494	0.0846
758	SLE RA 19	1.07	0.07	88.73	-8.6312	0.1489	0.0844
758	SLE RA 20	1.08	0.01	89.26	-8.6831	0.1499	0.0854
758	SLE RA 21	1.08	0.06	89.27	-8.6842	0.1494	0.0853
758	SLE FR 1	1	-0.05	78.87	-7.672	0.1261	0.0802
758	SLE FR 2	1	-0.03	78.88	-7.6724	0.1259	0.0802
758	SLE FR 3	1.01	-0.05	79.09	-7.6932	0.1263	0.0806
758	SLE FR 4	1.02	-0.01	81.83	-7.9598	0.1329	0.0815
758	SLE FR 5	1.03	-0.03	82.04	-7.9806	0.1333	0.0819
758	SLE FR 6	1.04	-0.02	83.79	-8.151	0.1378	0.0824
758	SLE QP 1	1	-0.05	78.87	-7.672	0.1261	0.0802
758	SLE QP 2	1.02	-0.03	81.83	-7.9594	0.1331	0.0815
758	SLD 1	7.89	1.3	76.96	-7.4859	0.1466	0.7358
758	SLD 2	7.8	1.72	76.99	-7.4881	0.1456	0.7347
758	SLD 3	8.04	-1.36	76.48	-7.45	0.1749	0.7504
758	SLD 4	7.95	-0.94	76.51	-7.4522	0.1739	0.7492
758	SLD 5	2.86	4.33	81.09	-7.8714	0.0944	0.2559
758	SLD 6	2.81	4.6	81.11	-7.8728	0.0938	0.2552
758	SLD 7	3.38	-4.54	79.49	-7.7518	0.1887	0.3045
758	SLD 8	3.32	-4.26	79.51	-7.7532	0.1881	0.3037
758	SLD 9	-1.27	4.2	84.14	-8.1657	0.0781	-0.1406
758	SLD 10	-1.33	4.48	84.16	-8.1671	0.0775	-0.1414
758	SLD 11	-0.76	-4.66	82.54	-8.046	0.1724	-0.0921
758	SLD 12	-0.82	-4.39	82.57	-8.0475	0.1718	-0.0928
758	SLD 13	-5.9	0.87	87.14	-8.4667	0.0922	-0.5861
758	SLD 14	-5.99	1.3	87.17	-8.4689	0.0913	-0.5873
758	SLD 15	-5.75	-1.78	86.66	-8.4308	0.1205	-0.5716
758	SLD 16	-5.84	-1.36	86.69	-8.433	0.1196	-0.5727
758	SLV 1	17.07	2.99	70.42	-6.85	0.1649	1.6116
758	SLV 2	16.86	3.99	70.5	-6.8551	0.1627	1.609
758	SLV 3	17.43	-3.06	69.34	-6.7683	0.2306	1.6456
758	SLV 4	17.22	-2.07	69.41	-6.7734	0.2285	1.643
758	SLV 5	5.33	9.89	80.04	-7.7496	0.0433	0.4895
758	SLV 6	5.2	10.53	80.09	-7.7529	0.0419	0.4878
758	SLV 7	6.53	-10.29	76.42	-7.4774	0.2624	0.6028
758	SLV 8	6.39	-9.66	76.46	-7.4806	0.2611	0.6011
758	SLV 9	-4.35	9.6	87.19	-8.4382	0.0051	-0.438
758	SLV 10	-4.48	10.23	87.23	-8.4415	0.0038	-0.4397
758	SLV 11	-3.15	-10.59	83.56	-8.166	0.2243	-0.3247
758	SLV 12	-3.28	-9.96	83.61	-8.1693	0.2229	-0.3264
758	SLV 13	-15.18	2.01	94.24	-9.1455	0.0377	-1.4799
758	SLV 14	-15.39	3	94.32	-9.1505	0.0356	-1.4825
758	SLV 15	-14.82	-4.05	93.16	-9.0638	0.1034	-1.4459
758	SLV 16	-15.03	-3.06	93.23	-9.0689	0.1013	-1.4485
758	CRTFP Ux+	0	0	0	0	0	0
758	CRTFP Ux-	0	0	0	0	0	0
761	SLU 1	0.26	0.29	44.36	-0.0166	0.0083	0.0004
761	SLU 2	0.26	0.38	44.4	-0.0164	0.0074	0.0004
761	SLU 3	0.27	0.31	45.15	-0.0172	0.0092	0.0004
761	SLU 4	0.27	0.36	45.17	-0.0171	0.0087	0.0004
761	SLU 5	0.27	0.38	44.82	-0.0168	0.0086	0.0003
761	SLU 6	0.27	0.31	45.58	-0.0175	0.0104	0.0004
761	SLU 7	0.27	0.36	45.6	-0.0174	0.0099	0.0003
761	SLU 8	0.27	0.29	45.21	-0.0174	0.0106	0.0004
761	SLU 9	0.27	0.34	45.23	-0.0173	0.0101	0.0003
761	SLU 10	0.29	0.41	50.8	-0.0185	0.0105	-0.0002
761	SLU 11	0.3	0.35	51.55	-0.0193	0.0123	-0.0001
761	SLU 12	0.3	0.4	51.57	-0.0192	0.0118	-0.0002
761	SLU 13	0.3	0.41	51.22	-0.0189	0.0117	-0.0002
761	SLU 14	0.31	0.35	51.98	-0.0197	0.0135	-0.0002
761	SLU 15	0.31	0.4	52	-0.0196	0.013	-0.0002
761	SLU 16	0.31	0.32	51.61	-0.0195	0.0137	-0.0002
761	SLU 17	0.31	0.37	51.63	-0.0194	0.0132	-0.0002
761	SLU 18	0.31	0.34	53.5	-0.0196	0.0127	-0.0003
761	SLU 19	0.31	0.39	53.52	-0.0195	0.0122	-0.0004
761	SLU 20	0.31	0.34	53.93	-0.02	0.0138	-0.0004
761	SLU 21	0.31	0.39	53.95	-0.0199	0.0133	-0.0004
761	SLU 22	0.29	0.37	50.2	-0.0174	0.0048	0.0001
761	SLU 23	0.29	0.45	50.24	-0.0172	0.0039	0
761	SLU 24	0.3	0.39	51	-0.0179	0.0057	0.0001
761	SLU 25	0.3	0.44	51.02	-0.0178	0.0052	0
761	SLU 26	0.3	0.45	50.66	-0.0176	0.0051	0
761	SLU 27	0.31	0.39	51.42	-0.0183	0.0069	0
761	SLU 28	0.31	0.44	51.44	-0.0182	0.0064	0
761	SLU 29	0.3	0.37	51.05	-0.0181	0.0071	0
761	SLU 30	0.3	0.42	51.07	-0.018	0.0066	0
761	SLU 31	0.33	0.49	56.64	-0.0193	0.007	-0.0005
761	SLU 32	0.34	0.42	57.4	-0.02	0.0088	-0.0005
761	SLU 33	0.34	0.47	57.42	-0.0199	0.0083	-0.0005
761	SLU 34	0.33	0.49	57.06	-0.0197	0.0082	-0.0005
761	SLU 35	0.34	0.42	57.82	-0.0204	0.01	-0.0005
761	SLU 36	0.34	0.47	57.84	-0.0203	0.0095	-0.0005
761	SLU 37	0.34	0.4	57.45	-0.0203	0.0102	-0.0005
761	SLU 38	0.34	0.45	57.47	-0.0201	0.0097	-0.0005
761	SLU 39	0.34	0.42	59.35	-0.0204	0.0092	-0.0007
761	SLU 40	0.34	0.47	59.37	-0.0203	0.0087	-0.0007
761	SLU 41	0.35	0.42	59.77	-0.0208	0.0104	-0.0007
761	SLU 42	0.35	0.47	59.79	-0.0207	0.0098	-0.0007

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
761	SLU 43	0.33	0.35	55.66	-0.0213	0.012	0.0007
761	SLU 44	0.33	0.44	55.7	-0.0212	0.0111	0.0006
761	SLU 45	0.34	0.38	56.46	-0.0219	0.0129	0.0006
761	SLU 46	0.34	0.43	56.48	-0.0218	0.0124	0.0006
761	SLU 47	0.33	0.44	56.12	-0.0215	0.0123	0.0006
761	SLU 48	0.34	0.37	56.88	-0.0223	0.0141	0.0006
761	SLU 49	0.34	0.42	56.9	-0.0222	0.0136	0.0006
761	SLU 50	0.34	0.35	56.51	-0.0221	0.0143	0.0006
761	SLU 51	0.34	0.4	56.53	-0.022	0.0138	0.0006
761	SLU 52	0.36	0.47	62.1	-0.0233	0.0142	0.0001
761	SLU 53	0.37	0.41	62.86	-0.024	0.016	0.0001
761	SLU 54	0.37	0.46	62.88	-0.0239	0.0155	0.0001
761	SLU 55	0.37	0.47	62.52	-0.0237	0.0154	0
761	SLU 56	0.38	0.41	63.28	-0.0244	0.0172	0.0001
761	SLU 57	0.38	0.46	63.3	-0.0243	0.0166	0
761	SLU 58	0.37	0.38	62.91	-0.0242	0.0174	0.0001
761	SLU 59	0.37	0.43	62.93	-0.0241	0.0168	0
761	SLU 60	0.38	0.4	64.81	-0.0243	0.0164	-0.0001
761	SLU 61	0.38	0.45	64.83	-0.0242	0.0159	-0.0001
761	SLU 62	0.38	0.4	65.23	-0.0247	0.0175	-0.0001
761	SLU 63	0.38	0.45	65.25	-0.0246	0.017	-0.0002
761	SLU 64	0.36	0.43	61.51	-0.0221	0.0085	0.0003
761	SLU 65	0.36	0.52	61.54	-0.0219	0.0076	0.0003
761	SLU 66	0.37	0.45	62.3	-0.0226	0.0094	0.0003
761	SLU 67	0.37	0.5	62.32	-0.0225	0.0089	0.0003
761	SLU 68	0.37	0.51	61.97	-0.0223	0.0088	0.0002
761	SLU 69	0.37	0.45	62.72	-0.023	0.0106	0.0003
761	SLU 70	0.37	0.5	62.75	-0.0229	0.0101	0.0002
761	SLU 71	0.37	0.43	62.35	-0.0229	0.0108	0.0003
761	SLU 72	0.37	0.48	62.38	-0.0228	0.0103	0.0002
761	SLU 73	0.39	0.55	67.95	-0.024	0.0107	-0.0003
761	SLU 74	0.4	0.49	68.7	-0.0248	0.0125	-0.0002
761	SLU 75	0.4	0.54	68.72	-0.0246	0.012	-0.0003
761	SLU 76	0.4	0.55	68.37	-0.0244	0.0119	-0.0003
761	SLU 77	0.41	0.48	69.12	-0.0251	0.0137	-0.0003
761	SLU 78	0.41	0.53	69.15	-0.025	0.0132	-0.0003
761	SLU 79	0.41	0.46	68.75	-0.025	0.0139	-0.0003
761	SLU 80	0.41	0.51	68.78	-0.0249	0.0133	-0.0003
761	SLU 81	0.41	0.48	70.65	-0.0251	0.0129	-0.0004
761	SLU 82	0.41	0.53	70.67	-0.025	0.0124	-0.0005
761	SLU 83	0.41	0.48	71.07	-0.0255	0.014	-0.0005
761	SLU 84	0.41	0.53	71.1	-0.0254	0.0135	-0.0005
761	SLE RA 1	0.27	0.32	46.03	-0.0168	0.0073	0.0003
761	SLE RA 2	0.27	0.37	46.05	-0.0167	0.0067	0.0003
761	SLE RA 3	0.28	0.33	46.56	-0.0172	0.0079	0.0003
761	SLE RA 4	0.28	0.36	46.57	-0.0171	0.0076	0.0003
761	SLE RA 5	0.27	0.37	46.34	-0.017	0.0075	0.0003
761	SLE RA 6	0.28	0.33	46.84	-0.0174	0.0087	0.0003
761	SLE RA 7	0.28	0.36	46.85	-0.0174	0.0084	0.0003
761	SLE RA 8	0.28	0.31	46.59	-0.0173	0.0088	0.0003
761	SLE RA 9	0.28	0.35	46.61	-0.0173	0.0085	0.0003
761	SLE RA 10	0.29	0.39	50.32	-0.0181	0.0088	-0.0001
761	SLE RA 11	0.3	0.35	50.83	-0.0186	0.01	0
761	SLE RA 12	0.3	0.38	50.84	-0.0185	0.0096	-0.0001
761	SLE RA 13	0.3	0.39	50.6	-0.0184	0.0095	-0.0001
761	SLE RA 14	0.3	0.35	51.11	-0.0189	0.0107	-0.0001
761	SLE RA 15	0.3	0.38	51.12	-0.0188	0.0104	-0.0001
761	SLE RA 16	0.3	0.34	50.86	-0.0187	0.0109	-0.0001
761	SLE RA 17	0.3	0.37	50.87	-0.0187	0.0105	-0.0001
761	SLE RA 18	0.3	0.35	52.13	-0.0188	0.0102	-0.0002
761	SLE RA 19	0.3	0.38	52.14	-0.0188	0.0099	-0.0002
761	SLE RA 20	0.31	0.35	52.41	-0.0191	0.011	-0.0002
761	SLE RA 21	0.31	0.38	52.42	-0.019	0.0107	-0.0002
761	SLE FR 1	0.27	0.32	46.03	-0.0168	0.0073	0.0003
761	SLE FR 2	0.27	0.33	46.03	-0.0168	0.0072	0.0003
761	SLE FR 3	0.27	0.32	46.14	-0.0169	0.0076	0.0003
761	SLE FR 4	0.28	0.34	47.86	-0.0174	0.0081	0.0002
761	SLE FR 5	0.28	0.32	47.97	-0.0175	0.0085	0.0002
761	SLE FR 6	0.29	0.33	49.08	-0.0178	0.0088	0.0001
761	SLE QP 1	0.27	0.32	46.03	-0.0168	0.0073	0.0003
761	SLE QP 2	0.28	0.32	47.86	-0.0174	0.0082	0.0002
761	SLD 1	4.94	0.97	46.6	-0.0219	0.0846	-0.0139
761	SLD 2	4.87	1.07	46.64	-0.0216	0.0847	-0.0099
761	SLD 3	4.82	-0.79	46.01	-0.0255	0.1013	-0.0123
761	SLD 4	4.75	-0.7	46.06	-0.0253	0.1014	-0.0083
761	SLD 5	1.86	3.17	48.37	-0.0132	0.0059	-0.0071
761	SLD 6	1.82	3.24	48.39	-0.0131	0.0059	-0.0045
761	SLD 7	1.48	-2.7	46.41	-0.0255	0.0613	-0.0019
761	SLD 8	1.43	-2.64	46.43	-0.0253	0.0614	0.0007
761	SLD 9	-0.88	3.29	49.28	-0.0095	-0.045	-0.0004
761	SLD 10	-0.92	3.35	49.31	-0.0094	-0.045	0.0022
761	SLD 11	-1.26	-2.59	47.32	-0.0218	0.0104	0.0049
761	SLD 12	-1.31	-2.53	47.35	-0.0216	0.0105	0.0075
761	SLD 13	-4.19	1.34	49.66	-0.0096	-0.085	0.0087
761	SLD 14	-4.27	1.44	49.7	-0.0093	-0.0849	0.0127
761	SLD 15	-4.31	-0.42	49.07	-0.0132	-0.0684	0.0103
761	SLD 16	-4.38	-0.32	49.11	-0.013	-0.0683	0.0143
761	SLV 1	11.18	1.78	44.87	-0.028	0.1876	-0.0327
761	SLV 2	11.01	2	44.97	-0.0274	0.1878	-0.0234
761	SLV 3	10.91	-2.23	43.54	-0.0364	0.2255	-0.0291
761	SLV 4	10.74	-2.01	43.64	-0.0358	0.2257	-0.0198

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
761	SLV 5	3.98	6.81	48.97	-0.008	0.0045	-0.0168
761	SLV 6	3.88	6.95	49.03	-0.0076	0.0046	-0.0108
761	SLV 7	3.09	-6.57	44.52	-0.0359	0.1308	-0.0047
761	SLV 8	2.98	-6.43	44.58	-0.0355	0.131	0.0013
761	SLV 9	-2.42	7.08	51.13	0.0007	-0.1146	-0.0009
761	SLV 10	-2.53	7.22	51.19	0.001	-0.1145	0.005
761	SLV 11	-3.32	-6.3	46.69	-0.0272	0.0117	0.0112
761	SLV 12	-3.42	-6.16	46.75	-0.0268	0.0119	0.0171
761	SLV 13	-10.18	2.66	52.08	0.0009	-0.2093	0.0201
761	SLV 14	-10.35	2.88	52.18	0.0015	-0.2091	0.0295
761	SLV 15	-10.45	-1.36	50.75	-0.0074	-0.1714	0.0237
761	SLV 16	-10.62	-1.13	50.84	-0.0068	-0.1712	0.0331
761	CRTFP Ux+	0	0	0	0	0	0
761	CRTFP Ux-	0	0	0	0	0	0
764	SLU 1	0	0.28	43.14	-0.0276	0.0726	-0.0007
764	SLU 2	0	0.36	43.19	-0.0274	0.0729	-0.0007
764	SLU 3	0	0.3	43.92	-0.0285	0.0745	-0.0006
764	SLU 4	0	0.35	43.95	-0.0283	0.0747	-0.0006
764	SLU 5	0	0.36	43.6	-0.0279	0.0737	-0.0007
764	SLU 6	0	0.3	44.34	-0.029	0.0752	-0.0007
764	SLU 7	0	0.35	44.37	-0.0289	0.0754	-0.0007
764	SLU 8	0	0.28	43.97	-0.0286	0.0741	-0.0007
764	SLU 9	0	0.33	44	-0.0285	0.0743	-0.0007
764	SLU 10	0.02	0.41	49.22	-0.0324	0.0825	-0.0001
764	SLU 11	0.02	0.36	49.95	-0.0335	0.084	-0.0001
764	SLU 12	0.02	0.41	49.98	-0.0334	0.0842	-0.0001
764	SLU 13	0.02	0.41	49.63	-0.0329	0.0833	-0.0001
764	SLU 14	0.02	0.36	50.37	-0.034	0.0848	-0.0001
764	SLU 15	0.02	0.41	50.4	-0.0339	0.085	-0.0001
764	SLU 16	0.02	0.33	50	-0.0337	0.0837	-0.0001
764	SLU 17	0.02	0.38	50.03	-0.0336	0.0839	-0.0002
764	SLU 18	0.03	0.36	51.75	-0.0347	0.0862	0.0001
764	SLU 19	0.03	0.4	51.78	-0.0346	0.0864	0.0001
764	SLU 20	0.03	0.36	52.17	-0.0353	0.087	0.0001
764	SLU 21	0.03	0.41	52.2	-0.0352	0.0872	0.0001
764	SLU 22	-0.01	0.39	48.73	-0.031	0.0863	-0.0004
764	SLU 23	-0.01	0.48	48.78	-0.0308	0.0867	-0.0004
764	SLU 24	-0.01	0.42	49.51	-0.0319	0.0882	-0.0004
764	SLU 25	-0.01	0.47	49.54	-0.0318	0.0884	-0.0004
764	SLU 26	-0.01	0.48	49.19	-0.0313	0.0875	-0.0004
764	SLU 27	-0.01	0.42	49.93	-0.0324	0.089	-0.0004
764	SLU 28	-0.01	0.47	49.96	-0.0323	0.0892	-0.0004
764	SLU 29	0	0.4	49.56	-0.0321	0.0879	-0.0004
764	SLU 30	-0.01	0.45	49.59	-0.032	0.0881	-0.0004
764	SLU 31	0.02	0.53	54.81	-0.0358	0.0962	0.0001
764	SLU 32	0.02	0.48	55.54	-0.0369	0.0977	0.0002
764	SLU 33	0.02	0.52	55.57	-0.0368	0.098	0.0002
764	SLU 34	0.02	0.53	55.22	-0.0364	0.097	0.0001
764	SLU 35	0.02	0.48	55.96	-0.0374	0.0985	0.0002
764	SLU 36	0.02	0.53	55.99	-0.0373	0.0987	0.0001
764	SLU 37	0.02	0.45	55.59	-0.0371	0.0974	0.0001
764	SLU 38	0.02	0.5	55.62	-0.037	0.0976	0.0001
764	SLU 39	0.03	0.47	57.34	-0.0382	0.1	0.0004
764	SLU 40	0.02	0.52	57.37	-0.038	0.1002	0.0004
764	SLU 41	0.03	0.47	57.76	-0.0387	0.1007	0.0004
764	SLU 42	0.03	0.52	57.79	-0.0386	0.1009	0.0004
764	SLU 43	0	0.32	54.17	-0.0347	0.0896	-0.0009
764	SLU 44	0	0.4	54.21	-0.0345	0.09	-0.001
764	SLU 45	0	0.34	54.95	-0.0356	0.0915	-0.0009
764	SLU 46	0	0.39	54.98	-0.0354	0.0917	-0.0009
764	SLU 47	0	0.4	54.63	-0.035	0.0908	-0.001
764	SLU 48	0	0.35	55.37	-0.0361	0.0923	-0.0009
764	SLU 49	0	0.39	55.4	-0.036	0.0925	-0.001
764	SLU 50	0	0.32	55	-0.0357	0.0912	-0.001
764	SLU 51	0	0.37	55.03	-0.0356	0.0914	-0.001
764	SLU 52	0.03	0.46	60.24	-0.0395	0.0995	-0.0004
764	SLU 53	0.03	0.4	60.98	-0.0406	0.1011	-0.0004
764	SLU 54	0.03	0.45	61.01	-0.0405	0.1013	-0.0004
764	SLU 55	0.03	0.46	60.66	-0.04	0.1003	-0.0004
764	SLU 56	0.03	0.4	61.4	-0.0411	0.1018	-0.0004
764	SLU 57	0.03	0.45	61.43	-0.041	0.1021	-0.0004
764	SLU 58	0.03	0.38	61.03	-0.0408	0.1007	-0.0004
764	SLU 59	0.03	0.43	61.06	-0.0407	0.1009	-0.0004
764	SLU 60	0.03	0.4	62.78	-0.0418	0.1033	-0.0002
764	SLU 61	0.03	0.45	62.81	-0.0417	0.1035	-0.0002
764	SLU 62	0.04	0.4	63.2	-0.0424	0.104	-0.0002
764	SLU 63	0.04	0.45	63.23	-0.0423	0.1043	-0.0002
764	SLU 64	0	0.44	59.76	-0.0381	0.1034	-0.0007
764	SLU 65	0	0.52	59.8	-0.0379	0.1037	-0.0007
764	SLU 66	0	0.46	60.54	-0.039	0.1053	-0.0007
764	SLU 67	0	0.51	60.57	-0.0389	0.1055	-0.0007
764	SLU 68	0	0.52	60.22	-0.0384	0.1045	-0.0007
764	SLU 69	0	0.46	60.96	-0.0395	0.106	-0.0007
764	SLU 70	0	0.51	60.99	-0.0394	0.1062	-0.0007
764	SLU 71	0	0.44	60.59	-0.0392	0.1049	-0.0007
764	SLU 72	0	0.49	60.62	-0.0391	0.1051	-0.0007
764	SLU 73	0.02	0.57	65.83	-0.0429	0.1133	-0.0001
764	SLU 74	0.02	0.52	66.57	-0.044	0.1148	-0.0001
764	SLU 75	0.02	0.57	66.6	-0.0439	0.115	-0.0001
764	SLU 76	0.02	0.57	66.25	-0.0435	0.1141	-0.0002
764	SLU 77	0.02	0.52	66.99	-0.0445	0.1156	-0.0001

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
764	SLU 78	0.02	0.57	67.02	-0.0444	0.1158	-0.0001
764	SLU 79	0.02	0.49	66.62	-0.0442	0.1145	-0.0002
764	SLU 80	0.02	0.54	66.65	-0.0441	0.1147	-0.0002
764	SLU 81	0.03	0.52	68.37	-0.0453	0.117	0.0001
764	SLU 82	0.03	0.56	68.4	-0.0451	0.1172	0.0001
764	SLU 83	0.03	0.52	68.79	-0.0458	0.1178	0.0001
764	SLU 84	0.03	0.57	68.82	-0.0457	0.118	0.0001
764	SLE RA 1	0	0.31	44.74	-0.0285	0.0765	-0.0006
764	SLE RA 2	0	0.36	44.77	-0.0284	0.0767	-0.0006
764	SLE RA 3	0	0.33	45.26	-0.0291	0.0778	-0.0006
764	SLE RA 4	0	0.36	45.28	-0.0291	0.0779	-0.0006
764	SLE RA 5	0	0.37	45.05	-0.0288	0.0773	-0.0006
764	SLE RA 6	0	0.33	45.54	-0.0295	0.0783	-0.0006
764	SLE RA 7	0	0.36	45.56	-0.0294	0.0784	-0.0006
764	SLE RA 8	0	0.31	45.29	-0.0293	0.0775	-0.0006
764	SLE RA 9	0	0.34	45.31	-0.0292	0.0777	-0.0006
764	SLE RA 10	0.01	0.4	48.79	-0.0318	0.0831	-0.0002
764	SLE RA 11	0.01	0.36	49.28	-0.0325	0.0841	-0.0002
764	SLE RA 12	0.01	0.4	49.3	-0.0324	0.0843	-0.0002
764	SLE RA 13	0.01	0.4	49.07	-0.0321	0.0836	-0.0002
764	SLE RA 14	0.01	0.36	49.56	-0.0328	0.0846	-0.0002
764	SLE RA 15	0.01	0.4	49.58	-0.0328	0.0848	-0.0002
764	SLE RA 16	0.01	0.35	49.31	-0.0326	0.0839	-0.0002
764	SLE RA 17	0.01	0.38	49.33	-0.0325	0.084	-0.0002
764	SLE RA 18	0.02	0.36	50.48	-0.0333	0.0856	-0.0001
764	SLE RA 19	0.02	0.4	50.5	-0.0332	0.0857	-0.0001
764	SLE RA 20	0.02	0.36	50.76	-0.0337	0.0861	-0.0001
764	SLE RA 21	0.02	0.4	50.78	-0.0336	0.0863	-0.0001
764	SLE FR 1	0	0.31	44.74	-0.0285	0.0765	-0.0006
764	SLE FR 2	0	0.32	44.74	-0.0285	0.0765	-0.0006
764	SLE FR 3	0	0.31	44.85	-0.0287	0.0767	-0.0006
764	SLE FR 4	0.01	0.34	46.47	-0.0299	0.0793	-0.0004
764	SLE FR 5	0.01	0.33	46.57	-0.0301	0.0794	-0.0004
764	SLE FR 6	0.01	0.34	47.61	-0.0309	0.081	-0.0003
764	SLE QP 1	0	0.31	44.74	-0.0285	0.0765	-0.0006
764	SLE QP 2	0.01	0.33	46.46	-0.03	0.0792	-0.0004
764	SLD 1	4.57	1.42	47.77	-0.0187	0.1409	-0.0137
764	SLD 2	4.49	1.31	47.74	-0.0189	0.1412	-0.0098
764	SLD 3	4.67	-0.34	47.08	-0.0223	0.1332	-0.0128
764	SLD 4	4.59	-0.45	47.05	-0.0225	0.1335	-0.0088
764	SLD 5	1.23	3.35	47.9	-0.021	0.1093	-0.0065
764	SLD 6	1.18	3.28	47.88	-0.0212	0.1095	-0.0039
764	SLD 7	1.58	-2.53	45.61	-0.0332	0.0837	-0.0034
764	SLD 8	1.53	-2.6	45.59	-0.0333	0.084	-0.0008
764	SLD 9	-1.52	3.25	47.33	-0.0267	0.0745	0
764	SLD 10	-1.57	3.18	47.31	-0.0268	0.0747	0.0026
764	SLD 11	-1.17	-2.63	45.04	-0.0388	0.049	0.0031
764	SLD 12	-1.22	-2.7	45.02	-0.0389	0.0492	0.0057
764	SLD 13	-4.58	1.1	45.87	-0.0374	0.0249	0.008
764	SLD 14	-4.66	1	45.84	-0.0376	0.0253	0.012
764	SLD 15	-4.48	-0.66	45.19	-0.0411	0.0173	0.0089
764	SLD 16	-4.55	-0.77	45.15	-0.0412	0.0176	0.0129
764	SLV 1	10.67	2.83	49.61	-0.0034	0.2232	-0.0316
764	SLV 2	10.49	2.59	49.53	-0.0038	0.2239	-0.0223
764	SLV 3	10.91	-1.19	48.05	-0.0117	0.2055	-0.0294
764	SLV 4	10.74	-1.44	47.96	-0.0121	0.2063	-0.0201
764	SLV 5	2.86	7.22	49.79	-0.0094	0.1491	-0.0146
764	SLV 6	2.75	7.06	49.74	-0.0096	0.1495	-0.0087
764	SLV 7	3.68	-6.19	44.58	-0.037	0.0902	-0.0074
764	SLV 8	3.57	-6.34	44.52	-0.0373	0.0907	-0.0014
764	SLV 9	-3.56	7	48.4	-0.0227	0.0678	0.0006
764	SLV 10	-3.67	6.84	48.34	-0.0229	0.0682	0.0065
764	SLV 11	-2.74	-6.41	43.18	-0.0503	0.0089	0.0079
764	SLV 12	-2.85	-6.57	43.13	-0.0506	0.0094	0.0138
764	SLV 13	-10.73	2.09	44.96	-0.0478	-0.0478	0.0193
764	SLV 14	-10.9	1.84	44.87	-0.0482	-0.0471	0.0285
764	SLV 15	-10.48	-1.94	43.39	-0.0561	-0.0655	0.0214
764	SLV 16	-10.66	-2.18	43.31	-0.0565	-0.0647	0.0307
764	CRTFP Ux+	0	0	0	0	0	0
764	CRTFP Ux-	0	0	0	0	0	0
766	SLU 1	-0.39	-0.06	24.45	-0.0348	-4.6554	-0.0151
766	SLU 2	-0.38	0.01	24.46	-0.0348	-4.6561	0.0025
766	SLU 3	-0.39	-0.06	24.93	-0.0356	-4.7425	-0.0138
766	SLU 4	-0.39	-0.02	24.93	-0.0355	-4.743	-0.0032
766	SLU 5	-0.39	0.01	24.73	-0.0352	-4.7051	0.0034
766	SLU 6	-0.4	-0.06	25.2	-0.036	-4.7914	-0.0129
766	SLU 7	-0.4	-0.01	25.2	-0.036	-4.7919	-0.0023
766	SLU 8	-0.4	-0.06	24.99	-0.0357	-4.7532	-0.0133
766	SLU 9	-0.4	-0.02	25	-0.0357	-4.7537	-0.0028
766	SLU 10	-0.4	0.02	27.59	-0.0401	-5.2491	0.0061
766	SLU 11	-0.41	-0.05	28.06	-0.0408	-5.3354	-0.0101
766	SLU 12	-0.41	0	28.06	-0.0408	-5.3359	0.0004
766	SLU 13	-0.41	0.02	27.86	-0.0405	-5.298	0.007
766	SLU 14	-0.42	-0.04	28.33	-0.0413	-5.3843	-0.0092
766	SLU 15	-0.42	0	28.33	-0.0412	-5.3848	0.0013
766	SLU 16	-0.41	-0.04	28.12	-0.0409	-5.3461	-0.0096
766	SLU 17	-0.41	0	28.13	-0.0409	-5.3466	0.0009
766	SLU 18	-0.41	-0.04	28.92	-0.0424	-5.5024	-0.0098
766	SLU 19	-0.41	0	28.93	-0.0423	-5.5028	0.0007
766	SLU 20	-0.42	-0.04	29.19	-0.0428	-5.5513	-0.0089
766	SLU 21	-0.42	0	29.2	-0.0428	-5.5518	0.0016

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
766	SLU 22	-0.42	-0.05	27.48	-0.0398	-5.227	-0.011
766	SLU 23	-0.42	0.02	27.49	-0.0398	-5.2278	0.0065
766	SLU 24	-0.43	-0.04	27.96	-0.0405	-5.3142	-0.0097
766	SLU 25	-0.42	0	27.97	-0.0405	-5.3147	0.0008
766	SLU 26	-0.42	0.02	27.76	-0.0402	-5.2768	0.0074
766	SLU 27	-0.43	-0.04	28.23	-0.0409	-5.3631	-0.0088
766	SLU 28	-0.43	0	28.24	-0.0409	-5.3636	0.0017
766	SLU 29	-0.43	-0.04	28.03	-0.0406	-5.3249	-0.0092
766	SLU 30	-0.43	0	28.03	-0.0406	-5.3254	0.0013
766	SLU 31	-0.43	0.03	30.62	-0.045	-5.8208	0.0102
766	SLU 32	-0.44	-0.03	31.09	-0.0458	-5.9071	-0.006
766	SLU 33	-0.44	0.01	31.1	-0.0458	-5.9076	0.0045
766	SLU 34	-0.44	0.04	30.89	-0.0454	-5.8697	0.0111
766	SLU 35	-0.45	-0.03	31.36	-0.0462	-5.956	-0.0051
766	SLU 36	-0.45	0.02	31.37	-0.0462	-5.9565	0.0054
766	SLU 37	-0.45	-0.03	31.16	-0.0459	-5.9178	-0.0055
766	SLU 38	-0.45	0.01	31.16	-0.0459	-5.9183	0.005
766	SLU 39	-0.44	-0.03	31.95	-0.0473	-6.0741	-0.0057
766	SLU 40	-0.44	0.01	31.96	-0.0473	-6.0745	0.0048
766	SLU 41	-0.45	-0.03	32.23	-0.0477	-6.123	-0.0048
766	SLU 42	-0.45	0.02	32.23	-0.0477	-6.1235	0.0057
766	SLU 43	-0.49	-0.09	30.74	-0.0436	-5.8559	-0.021
766	SLU 44	-0.49	-0.02	30.75	-0.0436	-5.8567	-0.0035
766	SLU 45	-0.5	-0.08	31.22	-0.0443	-5.9431	-0.0197
766	SLU 46	-0.5	-0.04	31.23	-0.0443	-5.9436	-0.0092
766	SLU 47	-0.49	-0.02	31.02	-0.044	-5.9057	-0.0026
766	SLU 48	-0.5	-0.08	31.49	-0.0447	-5.992	-0.0188
766	SLU 49	-0.5	-0.04	31.5	-0.0447	-5.9925	-0.0083
766	SLU 50	-0.5	-0.08	31.29	-0.0444	-5.9538	-0.0192
766	SLU 51	-0.5	-0.04	31.29	-0.0444	-5.9543	-0.0087
766	SLU 52	-0.5	-0.01	33.88	-0.0488	-6.4496	0.0002
766	SLU 53	-0.52	-0.07	34.35	-0.0496	-6.536	-0.016
766	SLU 54	-0.51	-0.03	34.36	-0.0496	-6.5365	-0.0055
766	SLU 55	-0.51	0	34.15	-0.0493	-6.4986	0.0011
766	SLU 56	-0.52	-0.07	34.63	-0.05	-6.5849	-0.0151
766	SLU 57	-0.52	-0.02	34.63	-0.05	-6.5854	-0.0046
766	SLU 58	-0.52	-0.07	34.42	-0.0497	-6.5467	-0.0155
766	SLU 59	-0.52	-0.03	34.42	-0.0497	-6.5472	-0.005
766	SLU 60	-0.52	-0.07	35.22	-0.0511	-6.703	-0.0157
766	SLU 61	-0.51	-0.03	35.22	-0.0511	-6.7034	-0.0052
766	SLU 62	-0.52	-0.07	35.49	-0.0515	-6.7519	-0.0148
766	SLU 63	-0.52	-0.02	35.49	-0.0515	-6.7524	-0.0043
766	SLU 64	-0.52	-0.07	33.78	-0.0485	-6.4276	-0.0169
766	SLU 65	-0.52	0	33.78	-0.0485	-6.4284	0.0006
766	SLU 66	-0.53	-0.07	34.26	-0.0493	-6.5148	-0.0156
766	SLU 67	-0.53	-0.03	34.26	-0.0492	-6.5153	-0.0051
766	SLU 68	-0.53	0	34.06	-0.0489	-6.4774	0.0015
766	SLU 69	-0.54	-0.06	34.53	-0.0497	-6.5637	-0.0147
766	SLU 70	-0.53	-0.02	34.53	-0.0497	-6.5642	-0.0042
766	SLU 71	-0.53	-0.07	34.32	-0.0494	-6.5255	-0.0151
766	SLU 72	-0.53	-0.02	34.33	-0.0493	-6.526	-0.0046
766	SLU 73	-0.54	0.01	36.91	-0.0538	-7.0213	0.0043
766	SLU 74	-0.55	-0.05	37.39	-0.0545	-7.1077	-0.0119
766	SLU 75	-0.55	-0.01	37.39	-0.0545	-7.1082	-0.0014
766	SLU 76	-0.54	0.01	37.19	-0.0542	-7.0703	0.0052
766	SLU 77	-0.55	-0.05	37.66	-0.0549	-7.1566	-0.011
766	SLU 78	-0.55	-0.01	37.66	-0.0549	-7.1571	-0.0005
766	SLU 79	-0.55	-0.05	37.45	-0.0546	-7.1184	-0.0114
766	SLU 80	-0.55	-0.01	37.46	-0.0546	-7.1189	-0.0009
766	SLU 81	-0.55	-0.05	38.25	-0.0561	-7.2747	-0.0116
766	SLU 82	-0.55	-0.01	38.25	-0.056	-7.2751	-0.0011
766	SLU 83	-0.55	-0.05	38.52	-0.0565	-7.3236	-0.0108
766	SLU 84	-0.55	-0.01	38.53	-0.0565	-7.3241	-0.0002
766	SLE RA 1	-0.39	-0.06	25.32	-0.0362	-4.8187	-0.0139
766	SLE RA 2	-0.39	-0.01	25.32	-0.0362	-4.8192	-0.0022
766	SLE RA 3	-0.4	-0.06	25.63	-0.0367	-4.8768	-0.013
766	SLE RA 4	-0.4	-0.03	25.64	-0.0367	-4.8771	-0.006
766	SLE RA 5	-0.4	-0.01	25.5	-0.0365	-4.8518	-0.0016
766	SLE RA 6	-0.4	-0.05	25.82	-0.037	-4.9094	-0.0124
766	SLE RA 7	-0.4	-0.03	25.82	-0.037	-4.9097	-0.0054
766	SLE RA 8	-0.4	-0.06	25.68	-0.0368	-4.8839	-0.0127
766	SLE RA 9	-0.4	-0.03	25.68	-0.0368	-4.8843	-0.0057
766	SLE RA 10	-0.4	0	27.41	-0.0397	-5.2145	0.0002
766	SLE RA 11	-0.41	-0.05	27.72	-0.0402	-5.2721	-0.0106
766	SLE RA 12	-0.41	-0.02	27.72	-0.0402	-5.2724	-0.0036
766	SLE RA 13	-0.41	0	27.59	-0.04	-5.2471	0.0008
766	SLE RA 14	-0.42	-0.04	27.9	-0.0405	-5.3047	-0.01
766	SLE RA 15	-0.41	-0.02	27.91	-0.0405	-5.305	-0.003
766	SLE RA 16	-0.41	-0.05	27.77	-0.0403	-5.2792	-0.0102
766	SLE RA 17	-0.41	-0.02	27.77	-0.0403	-5.2795	-0.0032
766	SLE RA 18	-0.41	-0.05	28.3	-0.0413	-5.3834	-0.0104
766	SLE RA 19	-0.41	-0.02	28.3	-0.0413	-5.3837	-0.0034
766	SLE RA 20	-0.42	-0.04	28.48	-0.0415	-5.416	-0.0098
766	SLE RA 21	-0.41	-0.02	28.48	-0.0415	-5.4163	-0.0028
766	SLE FR 1	-0.39	-0.06	25.32	-0.0362	-4.8187	-0.0139
766	SLE FR 2	-0.39	-0.05	25.32	-0.0362	-4.8188	-0.0116
766	SLE FR 3	-0.4	-0.06	25.39	-0.0363	-4.8317	-0.0137
766	SLE FR 4	-0.4	-0.05	26.21	-0.0377	-4.9882	-0.0105
766	SLE FR 5	-0.4	-0.06	26.28	-0.0379	-5.0011	-0.0126
766	SLE FR 6	-0.4	-0.05	26.81	-0.0387	-5.101	-0.0121
766	SLE QP 1	-0.39	-0.06	25.32	-0.0362	-4.8187	-0.0139

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
766	SLE QP 2	-0.4	-0.06	26.21	-0.0377	-4.9881	-0.0129
766	SLD 1	1.95	0.87	31.37	-0.0472	-5.9297	0.2188
766	SLD 2	1.9	0.56	31.38	-0.0472	-5.9387	0.1419
766	SLD 3	1.88	-0.34	31.51	-0.0466	-5.9693	-0.0838
766	SLD 4	1.83	-0.65	31.51	-0.0466	-5.9783	-0.1607
766	SLD 5	0.41	2.11	27.56	-0.0416	-5.209	0.529
766	SLD 6	0.38	1.91	27.56	-0.0416	-5.2148	0.4792
766	SLD 7	0.19	-1.92	28	-0.0394	-5.3409	-0.4797
766	SLD 8	0.16	-2.12	28	-0.0394	-5.3467	-0.5296
766	SLD 9	-0.96	2.01	24.42	-0.0361	-4.6295	0.5039
766	SLD 10	-0.99	1.81	24.42	-0.0361	-4.6353	0.454
766	SLD 11	-1.18	-2.02	24.86	-0.0339	-4.7613	-0.5049
766	SLD 12	-1.21	-2.22	24.86	-0.0339	-4.7672	-0.5547
766	SLD 13	-2.63	0.53	20.91	-0.0289	-3.9979	0.135
766	SLD 14	-2.68	0.23	20.91	-0.0289	-4.0069	0.0581
766	SLD 15	-2.7	-0.67	21.04	-0.0282	-4.0375	-0.1676
766	SLD 16	-2.75	-0.98	21.05	-0.0283	-4.0465	-0.2445
766	SLV 1	5.09	2.08	38.3	-0.0599	-7.1927	0.5203
766	SLV 2	4.98	1.36	38.3	-0.06	-7.2136	0.3413
766	SLV 3	4.93	-0.68	38.6	-0.0584	-7.2839	-0.17
766	SLV 4	4.82	-1.4	38.61	-0.0584	-7.3048	-0.349
766	SLV 5	1.5	4.89	29.37	-0.0467	-5.5076	1.2243
766	SLV 6	1.43	4.43	29.37	-0.0467	-5.521	1.11
766	SLV 7	0.98	-4.3	30.39	-0.0416	-5.8116	-1.0766
766	SLV 8	0.91	-4.76	30.4	-0.0416	-5.825	-1.1909
766	SLV 9	-1.71	4.65	22.02	-0.0338	-4.1512	1.1652
766	SLV 10	-1.78	4.19	22.03	-0.0339	-4.1646	1.0509
766	SLV 11	-2.23	-4.54	23.05	-0.0287	-4.4552	-1.1357
766	SLV 12	-2.3	-5	23.05	-0.0288	-4.4686	-1.25
766	SLV 13	-5.62	1.29	13.81	-0.017	-2.6714	0.3233
766	SLV 14	-5.73	0.57	13.82	-0.0171	-2.6923	0.1443
766	SLV 15	-5.78	-1.47	14.12	-0.0155	-2.7626	-0.367
766	SLV 16	-5.89	-2.19	14.12	-0.0156	-2.7835	-0.546
766	CRTFP Ux+	0	0	0	0	0	0
766	CRTFP Ux-	0	0	0	0	0	0
769	SLU 1	0.41	0.54	31.34	-0.0701	8.9854	-0.1899
769	SLU 2	0.41	0.63	31.35	-0.0701	8.9884	-0.2193
769	SLU 3	0.42	0.56	31.95	-0.0716	9.1542	-0.1957
769	SLU 4	0.42	0.61	31.95	-0.0716	9.156	-0.2133
769	SLU 5	0.41	0.63	31.69	-0.0709	9.0843	-0.2211
769	SLU 6	0.43	0.56	32.29	-0.0724	9.2502	-0.1975
769	SLU 7	0.43	0.61	32.3	-0.0724	9.2519	-0.2151
769	SLU 8	0.43	0.55	32.03	-0.0718	9.1772	-0.1935
769	SLU 9	0.42	0.6	32.04	-0.0718	9.179	-0.2112
769	SLU 10	0.43	0.74	35.32	-0.0802	10.1088	-0.2582
769	SLU 11	0.45	0.67	35.92	-0.0817	10.2747	-0.2345
769	SLU 12	0.44	0.72	35.92	-0.0817	10.2765	-0.2522
769	SLU 13	0.44	0.74	35.66	-0.081	10.2047	-0.26
769	SLU 14	0.46	0.68	36.26	-0.0825	10.3706	-0.2363
769	SLU 15	0.45	0.73	36.27	-0.0825	10.3724	-0.254
769	SLU 16	0.45	0.66	36	-0.0819	10.2977	-0.2324
769	SLU 17	0.45	0.71	36	-0.0819	10.2995	-0.25
769	SLU 18	0.45	0.7	37.01	-0.0845	10.5861	-0.2454
769	SLU 19	0.44	0.75	37.02	-0.0845	10.5878	-0.263
769	SLU 20	0.46	0.71	37.36	-0.0853	10.682	-0.2472
769	SLU 21	0.45	0.76	37.36	-0.0853	10.6838	-0.2648
769	SLU 22	0.45	0.64	35.17	-0.0797	10.0637	-0.2232
769	SLU 23	0.44	0.72	35.18	-0.0797	10.0667	-0.2525
769	SLU 24	0.46	0.65	35.78	-0.0812	10.2326	-0.2289
769	SLU 25	0.45	0.7	35.78	-0.0812	10.2344	-0.2465
769	SLU 26	0.45	0.73	35.52	-0.0806	10.1626	-0.2543
769	SLU 27	0.47	0.66	36.12	-0.0821	10.3285	-0.2307
769	SLU 28	0.46	0.71	36.13	-0.0821	10.3303	-0.2483
769	SLU 29	0.46	0.65	35.86	-0.0814	10.2556	-0.2268
769	SLU 30	0.46	0.7	35.86	-0.0814	10.2574	-0.2444
769	SLU 31	0.47	0.83	39.15	-0.0898	11.1872	-0.2914
769	SLU 32	0.48	0.76	39.74	-0.0913	11.353	-0.2678
769	SLU 33	0.48	0.82	39.75	-0.0913	11.3548	-0.2854
769	SLU 34	0.47	0.84	39.49	-0.0906	11.2831	-0.2932
769	SLU 35	0.49	0.77	40.09	-0.0921	11.449	-0.2696
769	SLU 36	0.49	0.82	40.09	-0.0921	11.4507	-0.2872
769	SLU 37	0.49	0.76	39.83	-0.0915	11.376	-0.2656
769	SLU 38	0.48	0.81	39.83	-0.0915	11.3778	-0.2832
769	SLU 39	0.48	0.8	40.84	-0.0941	11.6644	-0.2786
769	SLU 40	0.48	0.85	40.84	-0.0941	11.6662	-0.2963
769	SLU 41	0.49	0.8	41.18	-0.095	11.7603	-0.2804
769	SLU 42	0.49	0.85	41.19	-0.095	11.7621	-0.2981
769	SLU 43	0.52	0.67	39.43	-0.0878	11.3113	-0.2355
769	SLU 44	0.52	0.76	39.44	-0.0878	11.3143	-0.2649
769	SLU 45	0.54	0.69	40.04	-0.0893	11.4801	-0.2413
769	SLU 46	0.53	0.74	40.04	-0.0893	11.4819	-0.2589
769	SLU 47	0.53	0.76	39.78	-0.0887	11.4102	-0.2667
769	SLU 48	0.54	0.7	40.38	-0.0902	11.5761	-0.2431
769	SLU 49	0.54	0.75	40.39	-0.0902	11.5778	-0.2607
769	SLU 50	0.54	0.68	40.12	-0.0895	11.5031	-0.2391
769	SLU 51	0.54	0.73	40.13	-0.0895	11.5049	-0.2567
769	SLU 52	0.54	0.87	43.41	-0.0979	12.4347	-0.3037
769	SLU 53	0.56	0.8	44.01	-0.0994	12.6006	-0.2801
769	SLU 54	0.56	0.85	44.01	-0.0994	12.6024	-0.2977
769	SLU 55	0.55	0.87	43.75	-0.0987	12.5306	-0.3055
769	SLU 56	0.57	0.81	44.35	-0.1002	12.6965	-0.2819

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
769	SLU 57	0.56	0.86	44.36	-0.1002	12.6983	-0.2995
769	SLU 58	0.56	0.79	44.09	-0.0996	12.6236	-0.278
769	SLU 59	0.56	0.84	44.09	-0.0996	12.6254	-0.2956
769	SLU 60	0.56	0.83	45.1	-0.1022	12.9119	-0.291
769	SLU 61	0.56	0.88	45.11	-0.1022	12.9137	-0.3086
769	SLU 62	0.57	0.84	45.45	-0.1031	13.0079	-0.2928
769	SLU 63	0.56	0.89	45.45	-0.1031	13.0097	-0.3104
769	SLU 64	0.56	0.77	43.26	-0.0974	12.3896	-0.2688
769	SLU 65	0.55	0.85	43.27	-0.0974	12.3926	-0.2981
769	SLU 66	0.57	0.78	43.87	-0.0989	12.5585	-0.2745
769	SLU 67	0.57	0.83	43.87	-0.0989	12.5602	-0.2921
769	SLU 68	0.56	0.86	43.61	-0.0983	12.4885	-0.2999
769	SLU 69	0.58	0.79	44.21	-0.0998	12.6544	-0.2763
769	SLU 70	0.57	0.84	44.22	-0.0998	12.6562	-0.2939
769	SLU 71	0.57	0.78	43.95	-0.0991	12.5815	-0.2723
769	SLU 72	0.57	0.83	43.95	-0.0991	12.5833	-0.29
769	SLU 73	0.58	0.96	47.24	-0.1075	13.5131	-0.337
769	SLU 74	0.6	0.9	47.83	-0.109	13.6789	-0.3133
769	SLU 75	0.59	0.95	47.84	-0.109	13.6807	-0.331
769	SLU 76	0.59	0.97	47.58	-0.1084	13.609	-0.3388
769	SLU 77	0.6	0.9	48.18	-0.1099	13.7749	-0.3151
769	SLU 78	0.6	0.95	48.18	-0.1099	13.7766	-0.3328
769	SLU 79	0.6	0.89	47.92	-0.1092	13.7019	-0.3112
769	SLU 80	0.59	0.94	47.92	-0.1092	13.7037	-0.3288
769	SLU 81	0.6	0.93	48.93	-0.1118	13.9903	-0.3242
769	SLU 82	0.59	0.98	48.93	-0.1118	13.9921	-0.3419
769	SLU 83	0.6	0.93	49.27	-0.1127	14.0862	-0.326
769	SLU 84	0.6	0.98	49.28	-0.1127	14.088	-0.3437
769	SLE RA 1	0.42	0.57	32.44	-0.0728	9.2935	-0.1994
769	SLE RA 2	0.42	0.63	32.44	-0.0728	9.2955	-0.219
769	SLE RA 3	0.43	0.58	32.84	-0.0738	9.406	-0.2033
769	SLE RA 4	0.43	0.61	32.84	-0.0738	9.4072	-0.215
769	SLE RA 5	0.42	0.63	32.67	-0.0734	9.3594	-0.2202
769	SLE RA 6	0.43	0.58	33.07	-0.0744	9.47	-0.2045
769	SLE RA 7	0.43	0.62	33.07	-0.0744	9.4712	-0.2162
769	SLE RA 8	0.43	0.58	32.89	-0.074	9.4214	-0.2018
769	SLE RA 9	0.43	0.61	32.9	-0.074	9.4226	-0.2136
769	SLE RA 10	0.44	0.7	35.09	-0.0796	10.0424	-0.2449
769	SLE RA 11	0.45	0.65	35.49	-0.0805	10.153	-0.2292
769	SLE RA 12	0.44	0.69	35.49	-0.0805	10.1542	-0.2409
769	SLE RA 13	0.44	0.7	35.32	-0.0801	10.1064	-0.2461
769	SLE RA 14	0.45	0.66	35.72	-0.0811	10.217	-0.2304
769	SLE RA 15	0.45	0.69	35.72	-0.0811	10.2182	-0.2421
769	SLE RA 16	0.45	0.65	35.54	-0.0807	10.1684	-0.2277
769	SLE RA 17	0.45	0.68	35.54	-0.0807	10.1695	-0.2395
769	SLE RA 18	0.45	0.68	36.21	-0.0824	10.3606	-0.2364
769	SLE RA 19	0.44	0.71	36.22	-0.0824	10.3618	-0.2482
769	SLE RA 20	0.45	0.68	36.44	-0.083	10.4245	-0.2376
769	SLE RA 21	0.45	0.71	36.45	-0.083	10.4257	-0.2494
769	SLE FR 1	0.42	0.57	32.44	-0.0728	9.2935	-0.1994
769	SLE FR 2	0.42	0.58	32.44	-0.0728	9.2939	-0.2033
769	SLE FR 3	0.42	0.57	32.53	-0.0731	9.3191	-0.1999
769	SLE FR 4	0.43	0.61	33.57	-0.0757	9.614	-0.2144
769	SLE FR 5	0.43	0.6	33.66	-0.0759	9.6392	-0.211
769	SLE FR 6	0.43	0.62	34.32	-0.0776	9.827	-0.2179
769	SLE QP 1	0.42	0.57	32.44	-0.0728	9.2935	-0.1994
769	SLE QP 2	0.43	0.6	33.57	-0.0757	9.6136	-0.2105
769	SLD 1	2.91	0.99	27.42	-0.0588	8.007	-0.3442
769	SLD 2	2.84	1.39	27.41	-0.0589	8.0067	-0.483
769	SLD 3	3.07	-0.55	27.57	-0.0584	7.9588	0.1948
769	SLD 4	3	-0.15	27.56	-0.0585	7.9585	0.056
769	SLD 5	0.94	2.99	31.5	-0.0713	9.2047	-1.0438
769	SLD 6	0.9	3.25	31.49	-0.0714	9.2045	-1.1339
769	SLD 7	1.48	-2.15	32	-0.0698	9.0442	0.7527
769	SLD 8	1.43	-1.9	31.99	-0.0699	9.044	0.6626
769	SLD 9	-0.57	3.1	35.15	-0.0816	10.1832	-1.0836
769	SLD 10	-0.62	3.36	35.14	-0.0816	10.183	-1.1737
769	SLD 11	-0.04	-2.05	35.64	-0.08	10.0227	0.7128
769	SLD 12	-0.08	-1.79	35.64	-0.0801	10.0225	0.6227
769	SLD 13	-2.14	1.36	39.58	-0.0929	11.2687	-0.477
769	SLD 14	-2.21	1.75	39.57	-0.0931	11.2684	-0.6158
769	SLD 15	-1.98	-0.19	39.73	-0.0925	11.2205	0.0619
769	SLD 16	-2.05	0.21	39.72	-0.0926	11.2202	-0.0769
769	SLV 1	6.24	1.47	19.18	-0.0362	5.8532	-0.5065
769	SLV 2	6.07	2.4	19.16	-0.0365	5.8525	-0.8298
769	SLV 3	6.61	-2.04	19.53	-0.0351	5.742	0.7194
769	SLV 4	6.44	-1.11	19.51	-0.0354	5.7413	0.396
769	SLV 5	1.64	6.03	28.73	-0.0654	8.6543	-2.1038
769	SLV 6	1.54	6.62	28.72	-0.0656	8.6539	-2.3103
769	SLV 7	2.87	-5.67	29.89	-0.0618	8.2835	1.9824
769	SLV 8	2.76	-5.08	29.87	-0.062	8.2831	1.7759
769	SLV 9	-1.9	6.28	37.26	-0.0894	10.9441	-2.197
769	SLV 10	-2.01	6.88	37.25	-0.0896	10.9437	-2.4035
769	SLV 11	-0.68	-5.42	38.42	-0.0858	10.5734	1.8893
769	SLV 12	-0.78	-4.83	38.41	-0.086	10.5729	1.6827
769	SLV 13	-5.58	2.32	47.63	-0.116	13.486	-0.8171
769	SLV 14	-5.75	3.24	47.61	-0.1163	13.4853	-1.1405
769	SLV 15	-5.21	-1.19	47.98	-0.1149	13.3747	0.4088
769	SLV 16	-5.38	-0.27	47.95	-0.1152	13.374	0.0854
769	CRTFP Ux+	0	0	0	0	0	0
769	CRTFP Ux-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
771	SLU 1	0.74	-0.03	51.59	0.009	0.1506	-0.013
771	SLU 2	0.74	0.06	51.62	0.009	0.1498	-0.0131
771	SLU 3	0.76	-0.03	52.59	0.0093	0.1542	-0.0134
771	SLU 4	0.76	0.03	52.61	0.0093	0.1537	-0.0134
771	SLU 5	0.75	0.05	52.17	0.0091	0.1511	-0.0134
771	SLU 6	0.77	-0.03	53.15	0.0094	0.1554	-0.0136
771	SLU 7	0.77	0.02	53.16	0.0094	0.155	-0.0137
771	SLU 8	0.76	-0.05	52.7	0.0092	0.1531	-0.0136
771	SLU 9	0.76	0.01	52.72	0.0092	0.1526	-0.0136
771	SLU 10	0.79	0.1	58.62	0.0099	0.1768	-0.0147
771	SLU 11	0.81	0.02	59.59	0.0102	0.1811	-0.0149
771	SLU 12	0.81	0.08	59.61	0.0102	0.1807	-0.015
771	SLU 13	0.8	0.1	59.17	0.0101	0.178	-0.0149
771	SLU 14	0.82	0.01	60.15	0.0103	0.1824	-0.0152
771	SLU 15	0.82	0.07	60.16	0.0103	0.1819	-0.0152
771	SLU 16	0.82	0	59.7	0.0102	0.18	-0.0151
771	SLU 17	0.82	0.06	59.72	0.0102	0.1796	-0.0152
771	SLU 18	0.81	0.03	61.59	0.0104	0.1891	-0.0153
771	SLU 19	0.81	0.09	61.6	0.0104	0.1886	-0.0153
771	SLU 20	0.83	0.03	62.14	0.0105	0.1903	-0.0155
771	SLU 21	0.83	0.08	62.16	0.0105	0.1899	-0.0156
771	SLU 22	0.8	0.02	58.25	0.0104	0.1747	-0.0144
771	SLU 23	0.8	0.12	58.28	0.0104	0.174	-0.0145
771	SLU 24	0.82	0.03	59.25	0.0106	0.1783	-0.0148
771	SLU 25	0.82	0.09	59.27	0.0106	0.1779	-0.0148
771	SLU 26	0.81	0.11	58.83	0.0105	0.1752	-0.0148
771	SLU 27	0.84	0.02	59.81	0.0107	0.1796	-0.015
771	SLU 28	0.84	0.08	59.82	0.0108	0.1791	-0.0151
771	SLU 29	0.83	0.01	59.36	0.0106	0.1772	-0.0149
771	SLU 30	0.83	0.07	59.38	0.0106	0.1768	-0.015
771	SLU 31	0.86	0.16	65.28	0.0113	0.2009	-0.0161
771	SLU 32	0.88	0.08	66.25	0.0116	0.2053	-0.0163
771	SLU 33	0.88	0.13	66.27	0.0116	0.2048	-0.0164
771	SLU 34	0.87	0.15	65.83	0.0114	0.2022	-0.0163
771	SLU 35	0.89	0.07	66.81	0.0117	0.2065	-0.0166
771	SLU 36	0.89	0.13	66.82	0.0117	0.2061	-0.0166
771	SLU 37	0.88	0.06	66.36	0.0115	0.2042	-0.0165
771	SLU 38	0.88	0.11	66.38	0.0115	0.2037	-0.0166
771	SLU 39	0.88	0.09	68.25	0.0117	0.2132	-0.0167
771	SLU 40	0.88	0.14	68.26	0.0117	0.2128	-0.0167
771	SLU 41	0.89	0.08	68.8	0.0118	0.2145	-0.0169
771	SLU 42	0.89	0.14	68.82	0.0119	0.214	-0.017
771	SLU 43	0.94	-0.06	64.79	0.0112	0.1875	-0.0165
771	SLU 44	0.93	0.03	64.81	0.0112	0.1868	-0.0165
771	SLU 45	0.96	-0.05	65.79	0.0115	0.1911	-0.0168
771	SLU 46	0.95	0	65.8	0.0115	0.1906	-0.0168
771	SLU 47	0.95	0.02	65.37	0.0113	0.188	-0.0168
771	SLU 48	0.97	-0.06	66.34	0.0116	0.1923	-0.0171
771	SLU 49	0.97	-0.01	66.36	0.0116	0.1919	-0.0171
771	SLU 50	0.96	-0.07	65.9	0.0114	0.19	-0.017
771	SLU 51	0.96	-0.02	65.91	0.0114	0.1895	-0.017
771	SLU 52	0.99	0.08	71.81	0.0122	0.2137	-0.0181
771	SLU 53	1.01	-0.01	72.78	0.0124	0.218	-0.0184
771	SLU 54	1.01	0.05	72.8	0.0124	0.2176	-0.0184
771	SLU 55	1	0.07	72.37	0.0123	0.2149	-0.0184
771	SLU 56	1.02	-0.02	73.34	0.0125	0.2193	-0.0186
771	SLU 57	1.02	0.04	73.36	0.0125	0.2188	-0.0187
771	SLU 58	1.01	-0.03	72.9	0.0124	0.2169	-0.0186
771	SLU 59	1.01	0.03	72.91	0.0124	0.2165	-0.0186
771	SLU 60	1.01	0	74.78	0.0126	0.226	-0.0187
771	SLU 61	1.01	0.06	74.8	0.0126	0.2255	-0.0187
771	SLU 62	1.02	0	75.34	0.0127	0.2272	-0.019
771	SLU 63	1.02	0.05	75.35	0.0127	0.2268	-0.019
771	SLU 64	1	-0.01	71.45	0.0126	0.2116	-0.0179
771	SLU 65	1	0.09	71.47	0.0126	0.2109	-0.0179
771	SLU 66	1.02	0	72.45	0.0129	0.2152	-0.0182
771	SLU 67	1.02	0.06	72.46	0.0129	0.2148	-0.0182
771	SLU 68	1.01	0.08	72.03	0.0127	0.2121	-0.0182
771	SLU 69	1.04	0	73	0.013	0.2165	-0.0185
771	SLU 70	1.03	0.05	73.02	0.013	0.216	-0.0185
771	SLU 71	1.03	-0.02	72.56	0.0128	0.2141	-0.0184
771	SLU 72	1.03	0.04	72.57	0.0128	0.2137	-0.0184
771	SLU 73	1.05	0.13	78.47	0.0136	0.2378	-0.0195
771	SLU 74	1.08	0.05	79.44	0.0138	0.2422	-0.0198
771	SLU 75	1.07	0.1	79.46	0.0138	0.2417	-0.0198
771	SLU 76	1.07	0.13	79.03	0.0137	0.2391	-0.0198
771	SLU 77	1.09	0.04	80	0.0139	0.2434	-0.02
771	SLU 78	1.09	0.1	80.02	0.0139	0.243	-0.0201
771	SLU 79	1.08	0.03	79.56	0.0138	0.2411	-0.02
771	SLU 80	1.08	0.08	79.57	0.0138	0.2406	-0.02
771	SLU 81	1.08	0.06	81.44	0.014	0.2501	-0.0201
771	SLU 82	1.08	0.11	81.46	0.014	0.2497	-0.0201
771	SLU 83	1.09	0.05	82	0.0141	0.2514	-0.0204
771	SLU 84	1.09	0.11	82.01	0.0141	0.2509	-0.0204
771	SLE RA 1	0.76	-0.02	53.49	0.0094	0.1575	-0.0134
771	SLE RA 2	0.75	0.04	53.51	0.0094	0.157	-0.0135
771	SLE RA 3	0.77	-0.01	54.16	0.0096	0.1599	-0.0137
771	SLE RA 4	0.77	0.03	54.17	0.0096	0.1596	-0.0137
771	SLE RA 5	0.76	0.04	53.88	0.0095	0.1578	-0.0137
771	SLE RA 6	0.78	-0.02	54.53	0.0096	0.1607	-0.0138
771	SLE RA 7	0.78	0.02	54.54	0.0096	0.1604	-0.0139

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
771	SLE RA 8	0.77	-0.03	54.24	0.0095	0.1592	-0.0138
771	SLE RA 9	0.77	0.01	54.25	0.0095	0.1589	-0.0138
771	SLE RA 10	0.79	0.07	58.18	0.01	0.175	-0.0145
771	SLE RA 11	0.81	0.02	58.83	0.0102	0.1779	-0.0147
771	SLE RA 12	0.8	0.06	58.84	0.0102	0.1775	-0.0147
771	SLE RA 13	0.8	0.07	58.55	0.0101	0.1758	-0.0147
771	SLE RA 14	0.81	0.01	59.2	0.0103	0.1787	-0.0149
771	SLE RA 15	0.81	0.05	59.21	0.0103	0.1784	-0.0149
771	SLE RA 16	0.81	0.01	58.9	0.0102	0.1771	-0.0148
771	SLE RA 17	0.81	0.04	58.91	0.0102	0.1768	-0.0149
771	SLE RA 18	0.81	0.03	60.16	0.0103	0.1832	-0.0149
771	SLE RA 19	0.81	0.06	60.17	0.0103	0.1829	-0.015
771	SLE RA 20	0.82	0.02	60.53	0.0104	0.184	-0.0151
771	SLE RA 21	0.82	0.06	60.54	0.0104	0.1837	-0.0151
771	SLE FR 1	0.76	-0.02	53.49	0.0094	0.1575	-0.0134
771	SLE FR 2	0.76	0	53.5	0.0094	0.1574	-0.0134
771	SLE FR 3	0.76	-0.02	53.64	0.0094	0.1578	-0.0135
771	SLE FR 4	0.77	0.01	55.5	0.0097	0.1651	-0.0139
771	SLE FR 5	0.78	-0.01	55.64	0.0097	0.1655	-0.014
771	SLE FR 6	0.78	0	56.83	0.0098	0.1703	-0.0142
771	SLE QP 1	0.76	-0.02	53.49	0.0094	0.1575	-0.0134
771	SLE QP 2	0.77	0	55.49	0.0097	0.1652	-0.0139
771	SLD 1	5.47	0.89	52.18	0.0073	0.1698	-0.0273
771	SLD 2	5.38	1.18	52.21	0.0071	0.1694	-0.0228
771	SLD 3	5.57	-0.9	51.79	0.0083	0.1904	-0.0264
771	SLD 4	5.48	-0.62	51.81	0.0081	0.19	-0.0219
771	SLD 5	2.03	2.94	55.1	0.0075	0.1355	-0.0201
771	SLD 6	1.98	3.12	55.12	0.0074	0.1352	-0.0172
771	SLD 7	2.39	-3.04	53.77	0.0108	0.204	-0.017
771	SLD 8	2.33	-2.86	53.79	0.0107	0.2037	-0.0141
771	SLD 9	-0.79	2.85	57.2	0.0086	0.1266	-0.0136
771	SLD 10	-0.84	3.04	57.22	0.0085	0.1264	-0.0108
771	SLD 11	-0.43	-3.13	55.87	0.0119	0.1952	-0.0106
771	SLD 12	-0.49	-2.94	55.89	0.0118	0.1949	-0.0077
771	SLD 13	-3.94	0.61	59.18	0.0112	0.1404	-0.0058
771	SLD 14	-4.03	0.9	59.2	0.011	0.14	-0.0014
771	SLD 15	-3.83	-1.18	58.78	0.0122	0.161	-0.0049
771	SLD 16	-3.92	-0.9	58.8	0.012	0.1606	-0.0005
771	SLV 1	11.75	2.03	47.73	0.004	0.1764	-0.0453
771	SLV 2	11.54	2.7	47.79	0.0036	0.1756	-0.0349
771	SLV 3	12	-2.05	46.82	0.0063	0.2243	-0.0431
771	SLV 4	11.79	-1.38	46.88	0.0059	0.2234	-0.0327
771	SLV 5	3.72	6.69	54.53	0.0045	0.0961	-0.0283
771	SLV 6	3.59	7.12	54.57	0.0043	0.0956	-0.0217
771	SLV 7	4.55	-6.93	51.51	0.0122	0.2557	-0.0211
771	SLV 8	4.42	-6.5	51.54	0.012	0.2551	-0.0145
771	SLV 9	-2.87	6.49	59.45	0.0073	0.0753	-0.0133
771	SLV 10	-3.01	6.92	59.48	0.0071	0.0747	-0.0066
771	SLV 11	-2.05	-7.13	56.42	0.015	0.2348	-0.0061
771	SLV 12	-2.18	-6.7	56.46	0.0148	0.2343	0.0006
771	SLV 13	-10.24	1.38	64.11	0.0134	0.107	0.005
771	SLV 14	-10.45	2.04	64.16	0.013	0.1061	0.0153
771	SLV 15	-10	-2.71	63.2	0.0157	0.1548	0.0071
771	SLV 16	-10.2	-2.04	63.26	0.0153	0.1539	0.0175
771	CRTFP Ux+	0	0	0	0	0	0
771	CRTFP Ux-	0	0	0	0	0	0
774	SLU 1	-0.5	-0.23	54.59	0.0002	-0.1865	0.012
774	SLU 2	-0.51	-0.13	54.61	0.0002	-0.1854	0.012
774	SLU 3	-0.52	-0.22	55.67	0.0003	-0.1911	0.0122
774	SLU 4	-0.52	-0.16	55.68	0.0003	-0.1904	0.0123
774	SLU 5	-0.51	-0.13	55.2	0.0002	-0.1871	0.0122
774	SLU 6	-0.52	-0.22	56.25	0.0003	-0.1928	0.0124
774	SLU 7	-0.52	-0.16	56.27	0.0003	-0.1921	0.0125
774	SLU 8	-0.52	-0.23	55.76	0.0002	-0.19	0.0124
774	SLU 9	-0.52	-0.17	55.78	0.0002	-0.1893	0.0124
774	SLU 10	-0.52	-0.13	62.17	-0.0001	-0.2192	0.0139
774	SLU 11	-0.53	-0.22	63.22	0	-0.2249	0.0141
774	SLU 12	-0.53	-0.16	63.24	0	-0.2242	0.0142
774	SLU 13	-0.52	-0.13	62.75	-0.0001	-0.221	0.0141
774	SLU 14	-0.54	-0.22	63.81	0	-0.2266	0.0143
774	SLU 15	-0.54	-0.16	63.82	0	-0.2259	0.0144
774	SLU 16	-0.53	-0.23	63.32	-0.0001	-0.2239	0.0142
774	SLU 17	-0.53	-0.17	63.33	-0.0001	-0.2232	0.0143
774	SLU 18	-0.52	-0.23	65.38	-0.0002	-0.2349	0.0146
774	SLU 19	-0.52	-0.17	65.4	-0.0002	-0.2342	0.0147
774	SLU 20	-0.53	-0.23	65.97	-0.0002	-0.2366	0.0149
774	SLU 21	-0.53	-0.17	65.98	-0.0002	-0.2359	0.0149
774	SLU 22	-0.55	-0.19	61.76	0.0007	-0.2162	0.0133
774	SLU 23	-0.55	-0.09	61.78	0.0007	-0.215	0.0133
774	SLU 24	-0.56	-0.18	62.84	0.0008	-0.2207	0.0136
774	SLU 25	-0.56	-0.12	62.85	0.0008	-0.22	0.0136
774	SLU 26	-0.56	-0.09	62.37	0.0007	-0.2168	0.0135
774	SLU 27	-0.57	-0.19	63.42	0.0008	-0.2224	0.0138
774	SLU 28	-0.57	-0.13	63.44	0.0008	-0.2217	0.0138
774	SLU 29	-0.57	-0.2	62.93	0.0007	-0.2197	0.0137
774	SLU 30	-0.57	-0.14	62.94	0.0007	-0.219	0.0137
774	SLU 31	-0.56	-0.09	69.34	0.0004	-0.2489	0.0152
774	SLU 32	-0.57	-0.18	70.39	0.0005	-0.2545	0.0154
774	SLU 33	-0.57	-0.12	70.41	0.0005	-0.2538	0.0155
774	SLU 34	-0.57	-0.1	69.92	0.0004	-0.2506	0.0154
774	SLU 35	-0.58	-0.19	70.98	0.0005	-0.2563	0.0157

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
774	SLU 36	-0.58	-0.13	70.99	0.0005	-0.2556	0.0157
774	SLU 37	-0.58	-0.2	70.48	0.0004	-0.2535	0.0156
774	SLU 38	-0.58	-0.14	70.5	0.0004	-0.2528	0.0156
774	SLU 39	-0.57	-0.19	72.55	0.0002	-0.2645	0.016
774	SLU 40	-0.57	-0.13	72.56	0.0002	-0.2638	0.016
774	SLU 41	-0.57	-0.2	73.13	0.0002	-0.2663	0.0162
774	SLU 42	-0.57	-0.14	73.15	0.0002	-0.2656	0.0162
774	SLU 43	-0.64	-0.31	68.51	0.0002	-0.2324	0.0151
774	SLU 44	-0.64	-0.21	68.53	0.0002	-0.2312	0.0151
774	SLU 45	-0.65	-0.3	69.59	0.0003	-0.2369	0.0154
774	SLU 46	-0.65	-0.24	69.6	0.0003	-0.2362	0.0154
774	SLU 47	-0.65	-0.21	69.12	0.0002	-0.2329	0.0153
774	SLU 48	-0.66	-0.3	70.17	0.0003	-0.2386	0.0156
774	SLU 49	-0.66	-0.24	70.19	0.0003	-0.2379	0.0156
774	SLU 50	-0.66	-0.31	69.68	0.0002	-0.2358	0.0155
774	SLU 51	-0.66	-0.25	69.69	0.0002	-0.2351	0.0155
774	SLU 52	-0.65	-0.21	76.09	-0.0001	-0.265	0.017
774	SLU 53	-0.66	-0.3	77.14	0	-0.2707	0.0173
774	SLU 54	-0.66	-0.24	77.16	0	-0.27	0.0173
774	SLU 55	-0.66	-0.21	76.67	-0.0001	-0.2668	0.0172
774	SLU 56	-0.67	-0.3	77.73	0	-0.2724	0.0175
774	SLU 57	-0.67	-0.24	77.74	0	-0.2718	0.0175
774	SLU 58	-0.67	-0.31	77.23	-0.0001	-0.2697	0.0174
774	SLU 59	-0.67	-0.25	77.25	-0.0001	-0.269	0.0174
774	SLU 60	-0.66	-0.31	79.3	-0.0003	-0.2807	0.0178
774	SLU 61	-0.66	-0.25	79.31	-0.0003	-0.28	0.0178
774	SLU 62	-0.67	-0.31	79.89	-0.0003	-0.2824	0.018
774	SLU 63	-0.67	-0.25	79.9	-0.0003	-0.2817	0.018
774	SLU 64	-0.69	-0.27	75.67	0.0006	-0.262	0.0164
774	SLU 65	-0.69	-0.17	75.7	0.0006	-0.2608	0.0165
774	SLU 66	-0.7	-0.26	76.75	0.0007	-0.2665	0.0167
774	SLU 67	-0.7	-0.2	76.77	0.0007	-0.2658	0.0167
774	SLU 68	-0.69	-0.17	76.29	0.0006	-0.2626	0.0167
774	SLU 69	-0.7	-0.27	77.34	0.0007	-0.2682	0.0169
774	SLU 70	-0.7	-0.21	77.36	0.0007	-0.2675	0.0169
774	SLU 71	-0.7	-0.28	76.85	0.0006	-0.2655	0.0168
774	SLU 72	-0.7	-0.22	76.86	0.0006	-0.2648	0.0168
774	SLU 73	-0.7	-0.17	83.25	0.0003	-0.2947	0.0184
774	SLU 74	-0.71	-0.26	84.31	0.0004	-0.3003	0.0186
774	SLU 75	-0.71	-0.2	84.32	0.0004	-0.2996	0.0186
774	SLU 76	-0.71	-0.17	83.84	0.0003	-0.2964	0.0186
774	SLU 77	-0.72	-0.27	84.9	0.0004	-0.3021	0.0188
774	SLU 78	-0.72	-0.21	84.91	0.0004	-0.3014	0.0188
774	SLU 79	-0.71	-0.28	84.4	0.0003	-0.2993	0.0187
774	SLU 80	-0.71	-0.22	84.42	0.0003	-0.2986	0.0187
774	SLU 81	-0.7	-0.27	86.47	0.0002	-0.3103	0.0191
774	SLU 82	-0.7	-0.21	86.48	0.0002	-0.3096	0.0191
774	SLU 83	-0.71	-0.28	87.05	0.0002	-0.3121	0.0193
774	SLU 84	-0.71	-0.22	87.07	0.0002	-0.3114	0.0193
774	SLE RA 1	-0.52	-0.22	56.64	0.0004	-0.195	0.0123
774	SLE RA 2	-0.52	-0.15	56.65	0.0004	-0.1942	0.0124
774	SLE RA 3	-0.52	-0.21	57.36	0.0004	-0.198	0.0125
774	SLE RA 4	-0.52	-0.17	57.37	0.0004	-0.1976	0.0125
774	SLE RA 5	-0.52	-0.15	57.04	0.0004	-0.1954	0.0125
774	SLE RA 6	-0.53	-0.21	57.75	0.0004	-0.1992	0.0127
774	SLE RA 7	-0.53	-0.17	57.76	0.0004	-0.1987	0.0127
774	SLE RA 8	-0.53	-0.22	57.42	0.0004	-0.1973	0.0126
774	SLE RA 9	-0.53	-0.18	57.43	0.0004	-0.1969	0.0126
774	SLE RA 10	-0.53	-0.15	61.69	0.0002	-0.2168	0.0136
774	SLE RA 11	-0.53	-0.21	62.39	0.0002	-0.2206	0.0138
774	SLE RA 12	-0.53	-0.17	62.4	0.0002	-0.2201	0.0138
774	SLE RA 13	-0.53	-0.15	62.08	0.0002	-0.218	0.0138
774	SLE RA 14	-0.54	-0.21	62.78	0.0002	-0.2217	0.0139
774	SLE RA 15	-0.54	-0.17	62.79	0.0002	-0.2213	0.0139
774	SLE RA 16	-0.54	-0.22	62.45	0.0002	-0.2199	0.0139
774	SLE RA 17	-0.54	-0.18	62.46	0.0002	-0.2194	0.0139
774	SLE RA 18	-0.53	-0.22	63.83	0.0001	-0.2272	0.0141
774	SLE RA 19	-0.53	-0.18	63.84	0.0001	-0.2268	0.0142
774	SLE RA 20	-0.53	-0.22	64.22	0.0001	-0.2284	0.0143
774	SLE RA 21	-0.53	-0.18	64.23	0.0001	-0.2279	0.0143
774	SLE FR 1	-0.52	-0.22	56.64	0.0004	-0.195	0.0123
774	SLE FR 2	-0.52	-0.2	56.64	0.0004	-0.1949	0.0123
774	SLE FR 3	-0.52	-0.22	56.79	0.0004	-0.1955	0.0124
774	SLE FR 4	-0.52	-0.2	58.8	0.0003	-0.2045	0.0129
774	SLE FR 5	-0.52	-0.22	58.95	0.0003	-0.2051	0.0129
774	SLE FR 6	-0.52	-0.22	60.23	0.0002	-0.2111	0.0132
774	SLE QP 1	-0.52	-0.22	56.64	0.0004	-0.195	0.0123
774	SLE QP 2	-0.52	-0.22	58.79	0.0003	-0.2047	0.0129
774	SLD 1	4.67	1.11	63.78	0.002	-0.1383	0.0002
774	SLD 2	4.58	0.8	63.75	0.0022	-0.1412	0.0049
774	SLD 3	4.55	-0.83	63.45	0.0028	-0.1636	0.0014
774	SLD 4	4.45	-1.15	63.42	0.003	-0.1666	0.0061
774	SLD 5	1.24	3.19	60.8	-0.0005	-0.1458	0.0064
774	SLD 6	1.18	2.98	60.78	-0.0004	-0.1477	0.0094
774	SLD 7	0.83	-3.29	59.69	0.0023	-0.2303	0.0105
774	SLD 8	0.77	-3.5	59.67	0.0024	-0.2322	0.0135
774	SLD 9	-1.81	3.07	57.92	-0.0019	-0.1772	0.0122
774	SLD 10	-1.87	2.86	57.9	-0.0018	-0.1791	0.0153
774	SLD 11	-2.22	-3.41	56.81	0.001	-0.2616	0.0163
774	SLD 12	-2.28	-3.62	56.79	0.0011	-0.2636	0.0194
774	SLD 13	-5.5	0.71	54.17	-0.0024	-0.2428	0.0196

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
774	SLD 14	-5.59	0.4	54.14	-0.0023	-0.2458	0.0243
774	SLD 15	-5.62	-1.23	53.84	-0.0016	-0.2681	0.0209
774	SLD 16	-5.71	-1.55	53.8	-0.0014	-0.2711	0.0256
774	SLV 1	11.62	2.84	70.47	0.0045	-0.0499	-0.0168
774	SLV 2	11.4	2.11	70.39	0.0049	-0.0567	-0.0058
774	SLV 3	11.33	-1.6	69.7	0.0065	-0.108	-0.014
774	SLV 4	11.12	-2.33	69.63	0.0069	-0.1149	-0.003
774	SLV 5	3.59	7.55	63.47	-0.0015	-0.0689	-0.0022
774	SLV 6	3.45	7.08	63.42	-0.0013	-0.0733	0.0048
774	SLV 7	2.64	-7.23	60.92	0.0051	-0.2627	0.0073
774	SLV 8	2.5	-7.7	60.88	0.0053	-0.2671	0.0143
774	SLV 9	-3.54	7.27	56.71	-0.0048	-0.1423	0.0114
774	SLV 10	-3.68	6.8	56.66	-0.0045	-0.1467	0.0184
774	SLV 11	-4.49	-7.52	54.17	0.0019	-0.3361	0.021
774	SLV 12	-4.63	-7.99	54.12	0.0021	-0.3405	0.028
774	SLV 13	-12.16	1.9	47.96	-0.0063	-0.2945	0.0287
774	SLV 14	-12.37	1.16	47.88	-0.0059	-0.3014	0.0397
774	SLV 15	-12.44	-2.54	47.2	-0.0043	-0.3526	0.0316
774	SLV 16	-12.66	-3.27	47.12	-0.0039	-0.3595	0.0426
774	CRTFP Ux+	0	0	0	0	0	0
774	CRTFP Ux-	0	0	0	0	0	0
777	SLU 1	0.26	0.32	43.98	-0.0083	0.0028	-0.0012
777	SLU 2	0.26	0.4	44.02	-0.0083	0.002	-0.0012
777	SLU 3	0.27	0.34	44.76	-0.0086	0.0035	-0.0012
777	SLU 4	0.27	0.39	44.78	-0.0086	0.0031	-0.0013
777	SLU 5	0.27	0.4	44.43	-0.0086	0.003	-0.0013
777	SLU 6	0.28	0.34	45.17	-0.0089	0.0045	-0.0013
777	SLU 7	0.28	0.39	45.2	-0.0089	0.0041	-0.0013
777	SLU 8	0.27	0.31	44.81	-0.0088	0.0048	-0.0013
777	SLU 9	0.27	0.36	44.83	-0.0088	0.0043	-0.0013
777	SLU 10	0.3	0.43	50.37	-0.0098	0.0042	-0.0018
777	SLU 11	0.31	0.37	51.11	-0.0101	0.0057	-0.0017
777	SLU 12	0.31	0.42	51.13	-0.0101	0.0053	-0.0018
777	SLU 13	0.31	0.43	50.78	-0.0101	0.0052	-0.0018
777	SLU 14	0.31	0.37	51.52	-0.0104	0.0067	-0.0018
777	SLU 15	0.31	0.42	51.54	-0.0104	0.0063	-0.0018
777	SLU 16	0.31	0.35	51.15	-0.0103	0.007	-0.0018
777	SLU 17	0.31	0.4	51.18	-0.0103	0.0065	-0.0018
777	SLU 18	0.32	0.36	53.05	-0.0105	0.0059	-0.0019
777	SLU 19	0.32	0.41	53.07	-0.0105	0.0054	-0.002
777	SLU 20	0.32	0.36	53.46	-0.0107	0.0069	-0.002
777	SLU 21	0.32	0.41	53.48	-0.0107	0.0064	-0.002
777	SLU 22	0.3	0.39	49.81	-0.0086	-0.0011	-0.0015
777	SLU 23	0.3	0.48	49.85	-0.0086	-0.0019	-0.0016
777	SLU 24	0.31	0.42	50.59	-0.0089	-0.0004	-0.0015
777	SLU 25	0.31	0.47	50.61	-0.0089	-0.0009	-0.0016
777	SLU 26	0.3	0.48	50.26	-0.0088	-0.0009	-0.0016
777	SLU 27	0.31	0.42	51	-0.0091	0.0006	-0.0016
777	SLU 28	0.31	0.47	51.03	-0.0091	0.0001	-0.0016
777	SLU 29	0.31	0.39	50.64	-0.0091	0.0009	-0.0016
777	SLU 30	0.31	0.44	50.66	-0.0091	0.0004	-0.0016
777	SLU 31	0.33	0.51	56.2	-0.0101	0.0003	-0.0021
777	SLU 32	0.34	0.45	56.94	-0.0104	0.0018	-0.0021
777	SLU 33	0.34	0.5	56.96	-0.0104	0.0014	-0.0021
777	SLU 34	0.34	0.51	56.61	-0.0103	0.0013	-0.0022
777	SLU 35	0.35	0.45	57.35	-0.0106	0.0028	-0.0021
777	SLU 36	0.35	0.5	57.37	-0.0106	0.0023	-0.0022
777	SLU 37	0.35	0.43	56.98	-0.0106	0.0031	-0.0021
777	SLU 38	0.35	0.48	57.01	-0.0106	0.0026	-0.0022
777	SLU 39	0.35	0.44	58.88	-0.0107	0.002	-0.0023
777	SLU 40	0.35	0.49	58.9	-0.0107	0.0015	-0.0023
777	SLU 41	0.36	0.44	59.29	-0.011	0.003	-0.0023
777	SLU 42	0.36	0.49	59.31	-0.011	0.0025	-0.0024
777	SLU 43	0.33	0.38	55.18	-0.0107	0.005	-0.0014
777	SLU 44	0.33	0.47	55.22	-0.0107	0.0042	-0.0015
777	SLU 45	0.34	0.4	55.96	-0.011	0.0057	-0.0015
777	SLU 46	0.34	0.45	55.98	-0.011	0.0052	-0.0015
777	SLU 47	0.33	0.47	55.63	-0.011	0.0052	-0.0015
777	SLU 48	0.34	0.4	56.37	-0.0113	0.0067	-0.0015
777	SLU 49	0.34	0.45	56.39	-0.0113	0.0062	-0.0015
777	SLU 50	0.34	0.38	56	-0.0112	0.0069	-0.0015
777	SLU 51	0.34	0.43	56.03	-0.0112	0.0065	-0.0016
777	SLU 52	0.37	0.5	61.56	-0.0122	0.0064	-0.002
777	SLU 53	0.38	0.44	62.3	-0.0125	0.0079	-0.002
777	SLU 54	0.38	0.49	62.32	-0.0125	0.0074	-0.002
777	SLU 55	0.37	0.5	61.97	-0.0125	0.0074	-0.0021
777	SLU 56	0.38	0.44	62.71	-0.0128	0.0089	-0.002
777	SLU 57	0.38	0.49	62.74	-0.0128	0.0084	-0.0021
777	SLU 58	0.38	0.41	62.35	-0.0127	0.0092	-0.002
777	SLU 59	0.38	0.46	62.37	-0.0127	0.0087	-0.0021
777	SLU 60	0.38	0.43	64.24	-0.0129	0.0081	-0.0022
777	SLU 61	0.38	0.48	64.26	-0.0129	0.0076	-0.0022
777	SLU 62	0.39	0.43	64.65	-0.0131	0.0091	-0.0022
777	SLU 63	0.39	0.48	64.68	-0.0131	0.0086	-0.0023
777	SLU 64	0.36	0.46	61.01	-0.011	0.001	-0.0017
777	SLU 65	0.36	0.55	61.05	-0.011	0.0002	-0.0018
777	SLU 66	0.37	0.48	61.79	-0.0113	0.0018	-0.0018
777	SLU 67	0.37	0.53	61.81	-0.0113	0.0013	-0.0018
777	SLU 68	0.37	0.54	61.46	-0.0112	0.0012	-0.0019
777	SLU 69	0.38	0.48	62.2	-0.0115	0.0028	-0.0018
777	SLU 70	0.38	0.53	62.22	-0.0115	0.0023	-0.0019

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
777	SLU 71	0.38	0.46	61.83	-0.0115	0.003	-0.0018
777	SLU 72	0.38	0.51	61.86	-0.0115	0.0026	-0.0019
777	SLU 73	0.4	0.58	67.39	-0.0125	0.0024	-0.0023
777	SLU 74	0.41	0.52	68.13	-0.0128	0.004	-0.0023
777	SLU 75	0.41	0.57	68.16	-0.0128	0.0035	-0.0024
777	SLU 76	0.41	0.58	67.8	-0.0127	0.0034	-0.0024
777	SLU 77	0.42	0.52	68.54	-0.013	0.005	-0.0024
777	SLU 78	0.42	0.57	68.57	-0.013	0.0045	-0.0024
777	SLU 79	0.41	0.49	68.18	-0.013	0.0052	-0.0024
777	SLU 80	0.41	0.54	68.2	-0.013	0.0048	-0.0024
777	SLU 81	0.42	0.51	70.07	-0.0131	0.0042	-0.0025
777	SLU 82	0.42	0.56	70.09	-0.0131	0.0037	-0.0025
777	SLU 83	0.42	0.51	70.48	-0.0134	0.0052	-0.0026
777	SLU 84	0.42	0.56	70.51	-0.0134	0.0047	-0.0026
777	SLE RA 1	0.27	0.34	45.65	-0.0084	0.0017	-0.0013
777	SLE RA 2	0.27	0.39	45.67	-0.0084	0.0011	-0.0013
777	SLE RA 3	0.28	0.35	46.17	-0.0086	0.0022	-0.0013
777	SLE RA 4	0.28	0.39	46.18	-0.0086	0.0018	-0.0013
777	SLE RA 5	0.28	0.39	45.95	-0.0086	0.0018	-0.0013
777	SLE RA 6	0.28	0.35	46.44	-0.0088	0.0028	-0.0013
777	SLE RA 7	0.28	0.39	46.46	-0.0088	0.0025	-0.0014
777	SLE RA 8	0.28	0.34	46.2	-0.0087	0.003	-0.0013
777	SLE RA 9	0.28	0.37	46.21	-0.0087	0.0027	-0.0014
777	SLE RA 10	0.3	0.42	49.9	-0.0094	0.0026	-0.0017
777	SLE RA 11	0.3	0.37	50.4	-0.0096	0.0036	-0.0016
777	SLE RA 12	0.3	0.41	50.41	-0.0096	0.0033	-0.0017
777	SLE RA 13	0.3	0.42	50.18	-0.0096	0.0033	-0.0017
777	SLE RA 14	0.31	0.37	50.67	-0.0098	0.0043	-0.0017
777	SLE RA 15	0.31	0.41	50.69	-0.0098	0.004	-0.0017
777	SLE RA 16	0.3	0.36	50.43	-0.0097	0.0045	-0.0017
777	SLE RA 17	0.3	0.39	50.44	-0.0097	0.0041	-0.0017
777	SLE RA 18	0.31	0.37	51.69	-0.0098	0.0038	-0.0018
777	SLE RA 19	0.31	0.4	51.71	-0.0098	0.0034	-0.0018
777	SLE RA 20	0.31	0.37	51.96	-0.01	0.0044	-0.0018
777	SLE RA 21	0.31	0.4	51.98	-0.01	0.0041	-0.0018
777	SLE FR 1	0.27	0.34	45.65	-0.0084	0.0017	-0.0013
777	SLE FR 2	0.27	0.35	45.65	-0.0084	0.0016	-0.0013
777	SLE FR 3	0.27	0.34	45.76	-0.0085	0.0019	-0.0013
777	SLE FR 4	0.28	0.36	47.46	-0.0088	0.0022	-0.0014
777	SLE FR 5	0.28	0.35	47.57	-0.0089	0.0026	-0.0014
777	SLE FR 6	0.29	0.35	48.67	-0.0091	0.0027	-0.0015
777	SLE QP 1	0.27	0.34	45.65	-0.0084	0.0017	-0.0013
777	SLE QP 2	0.28	0.35	47.46	-0.0088	0.0023	-0.0014
777	SLD 1	5.03	0.99	46.06	-0.0135	0.0779	-0.02
777	SLD 2	4.93	1.09	46.11	-0.0134	0.078	-0.0157
777	SLD 3	4.91	-0.77	45.42	-0.0141	0.0935	-0.0187
777	SLD 4	4.81	-0.68	45.46	-0.0141	0.0936	-0.0144
777	SLD 5	1.9	3.2	48.01	-0.0092	0.0013	-0.0098
777	SLD 6	1.84	3.26	48.04	-0.0092	0.0014	-0.007
777	SLD 7	1.5	-2.68	45.86	-0.0114	0.0533	-0.0053
777	SLD 8	1.44	-2.62	45.89	-0.0114	0.0534	-0.0025
777	SLD 9	-0.88	3.31	49.03	-0.0062	-0.0488	-0.0003
777	SLD 10	-0.94	3.37	49.06	-0.0062	-0.0487	0.0025
777	SLD 11	-1.28	-2.57	46.88	-0.0085	0.0032	0.0042
777	SLD 12	-1.34	-2.5	46.9	-0.0084	0.0033	0.0069
777	SLD 13	-4.25	1.37	49.46	-0.0036	-0.0891	0.0116
777	SLD 14	-4.34	1.47	49.5	-0.0035	-0.0889	0.0158
777	SLD 15	-4.37	-0.39	48.81	-0.0043	-0.0735	0.0129
777	SLD 16	-4.46	-0.3	48.86	-0.0042	-0.0734	0.0172
777	SLV 1	11.38	1.8	44.14	-0.0197	0.1798	-0.0449
777	SLV 2	11.16	2.02	44.25	-0.0195	0.18	-0.035
777	SLV 3	11.1	-2.22	42.68	-0.0212	0.2153	-0.0418
777	SLV 4	10.88	-2	42.78	-0.0211	0.2155	-0.0319
777	SLV 5	4.07	6.84	48.67	-0.0097	0.0017	-0.0208
777	SLV 6	3.93	6.98	48.74	-0.0097	0.0018	-0.0145
777	SLV 7	3.14	-6.55	43.78	-0.0149	0.12	-0.0105
777	SLV 8	3	-6.41	43.85	-0.0148	0.1201	-0.0042
777	SLV 9	-2.43	7.11	51.07	-0.0028	-0.1155	0.0013
777	SLV 10	-2.57	7.25	51.14	-0.0027	-0.1154	0.0077
777	SLV 11	-3.37	-6.28	46.18	-0.008	0.0028	0.0117
777	SLV 12	-3.51	-6.14	46.25	-0.0079	0.0029	0.018
777	SLV 13	-10.31	2.69	52.14	0.0034	-0.2109	0.029
777	SLV 14	-10.53	2.91	52.24	0.0036	-0.2107	0.0389
777	SLV 15	-10.59	-1.33	50.67	0.0019	-0.1754	0.0321
777	SLV 16	-10.81	-1.1	50.78	0.002	-0.1752	0.042
777	CRTFP Ux+	0	0	0	0	0	0
777	CRTFP Ux-	0	0	0	0	0	0
780	SLU 1	0	0.31	42.45	-0.0168	0.0723	0.0013
780	SLU 2	0	0.39	42.5	-0.0168	0.0726	0.0013
780	SLU 3	0	0.33	43.21	-0.0174	0.0742	0.0014
780	SLU 4	0	0.38	43.24	-0.0174	0.0744	0.0014
780	SLU 5	0	0.39	42.9	-0.0172	0.0734	0.0013
780	SLU 6	0	0.34	43.61	-0.0178	0.075	0.0014
780	SLU 7	0	0.39	43.64	-0.0178	0.0752	0.0014
780	SLU 8	0	0.31	43.25	-0.0176	0.0739	0.0014
780	SLU 9	0	0.36	43.28	-0.0176	0.0741	0.0014
780	SLU 10	0.02	0.45	48.4	-0.0202	0.0821	0.0021
780	SLU 11	0.02	0.39	49.11	-0.0207	0.0836	0.0022
780	SLU 12	0.02	0.44	49.14	-0.0207	0.0838	0.0022
780	SLU 13	0.02	0.45	48.8	-0.0205	0.0829	0.0021
780	SLU 14	0.02	0.4	49.51	-0.0211	0.0844	0.0022

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
780	SLU 15	0.02	0.44	49.54	-0.0211	0.0846	0.0022
780	SLU 16	0.02	0.37	49.15	-0.0209	0.0833	0.0022
780	SLU 17	0.02	0.42	49.18	-0.0209	0.0836	0.0022
780	SLU 18	0.02	0.39	50.87	-0.0216	0.0858	0.0025
780	SLU 19	0.02	0.44	50.9	-0.0216	0.086	0.0025
780	SLU 20	0.03	0.39	51.28	-0.022	0.0866	0.0025
780	SLU 21	0.02	0.44	51.31	-0.022	0.0868	0.0025
780	SLU 22	-0.01	0.43	47.95	-0.0189	0.0857	0.0017
780	SLU 23	-0.01	0.51	48	-0.0188	0.0861	0.0017
780	SLU 24	-0.01	0.46	48.71	-0.0194	0.0876	0.0018
780	SLU 25	-0.01	0.5	48.74	-0.0194	0.0878	0.0018
780	SLU 26	-0.01	0.51	48.41	-0.0192	0.0869	0.0017
780	SLU 27	-0.01	0.46	49.12	-0.0198	0.0884	0.0018
780	SLU 28	-0.01	0.51	49.15	-0.0198	0.0886	0.0018
780	SLU 29	-0.01	0.43	48.76	-0.0196	0.0873	0.0018
780	SLU 30	-0.01	0.48	48.79	-0.0196	0.0875	0.0018
780	SLU 31	0.01	0.57	53.9	-0.0222	0.0955	0.0025
780	SLU 32	0.01	0.51	54.61	-0.0228	0.0971	0.0026
780	SLU 33	0.01	0.56	54.64	-0.0228	0.0973	0.0026
780	SLU 34	0.01	0.57	54.3	-0.0226	0.0963	0.0025
780	SLU 35	0.01	0.52	55.02	-0.0232	0.0978	0.0026
780	SLU 36	0.01	0.56	55.05	-0.0231	0.0981	0.0026
780	SLU 37	0.01	0.49	54.66	-0.023	0.0968	0.0026
780	SLU 38	0.01	0.54	54.69	-0.023	0.097	0.0026
780	SLU 39	0.02	0.51	56.38	-0.0237	0.0992	0.0029
780	SLU 40	0.02	0.56	56.41	-0.0237	0.0994	0.0029
780	SLU 41	0.02	0.51	56.78	-0.024	0.1	0.0029
780	SLU 42	0.02	0.56	56.81	-0.024	0.1002	0.0029
780	SLU 43	0	0.36	53.29	-0.0212	0.0894	0.0016
780	SLU 44	0	0.44	53.34	-0.0212	0.0897	0.0016
780	SLU 45	0	0.39	54.06	-0.0217	0.0912	0.0017
780	SLU 46	0	0.43	54.09	-0.0217	0.0915	0.0017
780	SLU 47	0	0.44	53.75	-0.0215	0.0905	0.0016
780	SLU 48	0	0.39	54.46	-0.0221	0.092	0.0017
780	SLU 49	0	0.44	54.49	-0.0221	0.0922	0.0017
780	SLU 50	0	0.36	54.1	-0.0219	0.091	0.0016
780	SLU 51	0	0.41	54.13	-0.0219	0.0912	0.0016
780	SLU 52	0.02	0.5	59.24	-0.0245	0.0992	0.0024
780	SLU 53	0.02	0.44	59.95	-0.0251	0.1007	0.0025
780	SLU 54	0.02	0.49	59.98	-0.0251	0.1009	0.0025
780	SLU 55	0.02	0.5	59.65	-0.0249	0.1	0.0024
780	SLU 56	0.02	0.45	60.36	-0.0255	0.1015	0.0025
780	SLU 57	0.02	0.5	60.39	-0.0255	0.1017	0.0025
780	SLU 58	0.02	0.42	60	-0.0253	0.1004	0.0024
780	SLU 59	0.02	0.47	60.03	-0.0253	0.1006	0.0024
780	SLU 60	0.03	0.44	61.72	-0.026	0.1029	0.0028
780	SLU 61	0.03	0.49	61.75	-0.026	0.1031	0.0027
780	SLU 62	0.03	0.45	62.12	-0.0264	0.1037	0.0028
780	SLU 63	0.03	0.49	62.15	-0.0263	0.1039	0.0028
780	SLU 64	-0.01	0.48	58.8	-0.0232	0.1028	0.002
780	SLU 65	-0.01	0.56	58.85	-0.0232	0.1031	0.002
780	SLU 66	-0.01	0.51	59.56	-0.0238	0.1047	0.0021
780	SLU 67	-0.01	0.56	59.59	-0.0238	0.1049	0.002
780	SLU 68	-0.01	0.56	59.25	-0.0236	0.1039	0.002
780	SLU 69	-0.01	0.51	59.96	-0.0242	0.1055	0.0021
780	SLU 70	-0.01	0.56	59.99	-0.0241	0.1057	0.0021
780	SLU 71	-0.01	0.48	59.6	-0.024	0.1044	0.002
780	SLU 72	-0.01	0.53	59.63	-0.024	0.1046	0.002
780	SLU 73	0.01	0.62	64.75	-0.0266	0.1126	0.0028
780	SLU 74	0.01	0.57	65.46	-0.0271	0.1141	0.0029
780	SLU 75	0.01	0.61	65.49	-0.0271	0.1143	0.0028
780	SLU 76	0.01	0.62	65.15	-0.0269	0.1134	0.0028
780	SLU 77	0.01	0.57	65.86	-0.0275	0.1149	0.0029
780	SLU 78	0.01	0.62	65.89	-0.0275	0.1151	0.0029
780	SLU 79	0.01	0.54	65.5	-0.0273	0.1138	0.0028
780	SLU 80	0.01	0.59	65.53	-0.0273	0.1141	0.0028
780	SLU 81	0.02	0.56	67.23	-0.028	0.1163	0.0031
780	SLU 82	0.02	0.61	67.26	-0.028	0.1165	0.0031
780	SLU 83	0.02	0.57	67.63	-0.0284	0.1171	0.0032
780	SLU 84	0.02	0.61	67.66	-0.0284	0.1173	0.0032
780	SLE RA 1	0	0.34	44.02	-0.0174	0.0761	0.0015
780	SLE RA 2	0	0.4	44.05	-0.0174	0.0764	0.0014
780	SLE RA 3	0	0.36	44.53	-0.0178	0.0774	0.0015
780	SLE RA 4	0	0.39	44.55	-0.0178	0.0775	0.0015
780	SLE RA 5	0	0.4	44.32	-0.0177	0.0769	0.0015
780	SLE RA 6	0	0.36	44.8	-0.018	0.0779	0.0015
780	SLE RA 7	0	0.39	44.82	-0.018	0.078	0.0015
780	SLE RA 8	0	0.35	44.56	-0.0179	0.0772	0.0015
780	SLE RA 9	0	0.38	44.58	-0.0179	0.0773	0.0015
780	SLE RA 10	0.01	0.44	47.99	-0.0196	0.0827	0.002
780	SLE RA 11	0.01	0.4	48.46	-0.02	0.0837	0.002
780	SLE RA 12	0.01	0.43	48.48	-0.02	0.0838	0.002
780	SLE RA 13	0.01	0.44	48.25	-0.0199	0.0832	0.002
780	SLE RA 14	0.01	0.4	48.73	-0.0203	0.0842	0.002
780	SLE RA 15	0.01	0.43	48.75	-0.0203	0.0844	0.002
780	SLE RA 16	0.01	0.38	48.49	-0.0202	0.0835	0.002
780	SLE RA 17	0.01	0.42	48.51	-0.0201	0.0836	0.002
780	SLE RA 18	0.01	0.4	49.64	-0.0206	0.0851	0.0022
780	SLE RA 19	0.01	0.43	49.66	-0.0206	0.0853	0.0022
780	SLE RA 20	0.01	0.4	49.91	-0.0209	0.0857	0.0022
780	SLE RA 21	0.01	0.43	49.93	-0.0209	0.0858	0.0022

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
780	SLE FR 1	0	0.34	44.02	-0.0174	0.0761	0.0015
780	SLE FR 2	0	0.35	44.03	-0.0174	0.0762	0.0015
780	SLE FR 3	0	0.34	44.13	-0.0175	0.0763	0.0015
780	SLE FR 4	0	0.37	45.71	-0.0184	0.0789	0.0017
780	SLE FR 5	0	0.36	45.81	-0.0185	0.079	0.0017
780	SLE FR 6	0	0.37	46.83	-0.019	0.0806	0.0018
780	SLE QP 1	0	0.34	44.02	-0.0174	0.0761	0.0015
780	SLE QP 2	0	0.36	45.71	-0.0184	0.0788	0.0017
780	SLD 1	4.64	1.46	47.23	-0.0112	0.1406	-0.016
780	SLD 2	4.54	1.35	47.19	-0.0111	0.1409	-0.0118
780	SLD 3	4.74	-0.31	46.47	-0.0118	0.1332	-0.0149
780	SLD 4	4.65	-0.41	46.44	-0.0118	0.1335	-0.0107
780	SLD 5	1.25	3.38	47.31	-0.0152	0.1085	-0.0059
780	SLD 6	1.18	3.31	47.28	-0.0151	0.1087	-0.0032
780	SLD 7	1.6	-2.5	44.8	-0.0175	0.0839	-0.0024
780	SLD 8	1.54	-2.57	44.78	-0.0175	0.0841	0.0003
780	SLD 9	-1.54	3.29	46.63	-0.0193	0.0735	0.0031
780	SLD 10	-1.6	3.22	46.61	-0.0193	0.0738	0.0058
780	SLD 11	-1.18	-2.59	44.13	-0.0216	0.049	0.0066
780	SLD 12	-1.24	-2.66	44.1	-0.0216	0.0492	0.0093
780	SLD 13	-4.64	1.13	44.98	-0.0249	0.0241	0.0141
780	SLD 14	-4.74	1.03	44.94	-0.0249	0.0244	0.0183
780	SLD 15	-4.54	-0.63	44.22	-0.0256	0.0168	0.0151
780	SLD 16	-4.63	-0.74	44.19	-0.0256	0.0171	0.0194
780	SLV 1	10.84	2.87	49.35	-0.0014	0.2231	-0.0396
780	SLV 2	10.62	2.63	49.26	-0.0014	0.2238	-0.0298
780	SLV 3	11.09	-1.15	47.64	-0.003	0.2061	-0.0372
780	SLV 4	10.87	-1.39	47.55	-0.003	0.2068	-0.0274
780	SLV 5	2.91	7.25	49.41	-0.0109	0.1478	-0.0161
780	SLV 6	2.77	7.1	49.35	-0.0108	0.1482	-0.0098
780	SLV 7	3.75	-6.15	43.71	-0.0162	0.0911	-0.0079
780	SLV 8	3.6	-6.31	43.65	-0.0162	0.0916	-0.0016
780	SLV 9	-3.6	7.03	47.76	-0.0206	0.0661	0.005
780	SLV 10	-3.74	6.87	47.7	-0.0206	0.0665	0.0113
780	SLV 11	-2.77	-6.38	42.06	-0.0259	0.0094	0.0132
780	SLV 12	-2.91	-6.53	42	-0.0259	0.0099	0.0195
780	SLV 13	-10.87	2.11	43.86	-0.0338	-0.0492	0.0307
780	SLV 14	-11.09	1.87	43.77	-0.0338	-0.0484	0.0405
780	SLV 15	-10.61	-1.91	42.15	-0.0354	-0.0662	0.0332
780	SLV 16	-10.84	-2.15	42.06	-0.0354	-0.0654	0.043
780	CRTFP Ux+	0	0	0	0	0	0
780	CRTFP Ux-	0	0	0	0	0	0
782	SLU 1	-0.41	-0.06	23.51	-0.0259	-4.3084	-0.0133
782	SLU 2	-0.41	0.01	23.52	-0.0259	-4.3094	0.0042
782	SLU 3	-0.42	-0.05	23.97	-0.0264	-4.3883	-0.0119
782	SLU 4	-0.42	-0.01	23.97	-0.0264	-4.3888	-0.0015
782	SLU 5	-0.42	0.02	23.78	-0.0262	-4.3543	0.0051
782	SLU 6	-0.43	-0.05	24.23	-0.0268	-4.4332	-0.011
782	SLU 7	-0.43	-0.01	24.23	-0.0267	-4.4338	-0.0005
782	SLU 8	-0.43	-0.05	24.03	-0.0265	-4.3982	-0.0114
782	SLU 9	-0.43	-0.01	24.04	-0.0265	-4.3988	-0.001
782	SLU 10	-0.44	0.03	26.5	-0.0298	-4.8486	0.0081
782	SLU 11	-0.45	-0.04	26.96	-0.0304	-4.9275	-0.008
782	SLU 12	-0.45	0.01	26.96	-0.0304	-4.9281	0.0025
782	SLU 13	-0.44	0.03	26.77	-0.0302	-4.8935	0.009
782	SLU 14	-0.45	-0.03	27.22	-0.0307	-4.9724	-0.0071
782	SLU 15	-0.45	0.01	27.22	-0.0307	-4.973	0.0034
782	SLU 16	-0.45	-0.03	27.02	-0.0305	-4.9375	-0.0075
782	SLU 17	-0.45	0.01	27.02	-0.0305	-4.9381	0.003
782	SLU 18	-0.45	-0.04	27.78	-0.0316	-5.0787	-0.0077
782	SLU 19	-0.45	0.01	27.78	-0.0316	-5.0793	0.0028
782	SLU 20	-0.46	-0.03	28.04	-0.0319	-5.1237	-0.0068
782	SLU 21	-0.46	0.01	28.04	-0.0319	-5.1242	0.0037
782	SLU 22	-0.45	-0.04	26.41	-0.0296	-4.8294	-0.009
782	SLU 23	-0.45	0.03	26.42	-0.0296	-4.8304	0.0085
782	SLU 24	-0.46	-0.03	26.87	-0.0301	-4.9093	-0.0077
782	SLU 25	-0.46	0.01	26.87	-0.0301	-4.9099	0.0028
782	SLU 26	-0.46	0.03	26.68	-0.0299	-4.8754	0.0094
782	SLU 27	-0.47	-0.03	27.13	-0.0304	-4.9543	-0.0067
782	SLU 28	-0.47	0.01	27.13	-0.0304	-4.9548	0.0037
782	SLU 29	-0.46	-0.03	26.93	-0.0302	-4.9193	-0.0072
782	SLU 30	-0.46	0.01	26.94	-0.0302	-4.9199	0.0033
782	SLU 31	-0.48	0.04	29.4	-0.0335	-5.3697	0.0124
782	SLU 32	-0.49	-0.02	29.86	-0.0341	-5.4486	-0.0037
782	SLU 33	-0.48	0.02	29.86	-0.0341	-5.4492	0.0067
782	SLU 34	-0.48	0.05	29.67	-0.0338	-5.4146	0.0133
782	SLU 35	-0.49	-0.02	30.12	-0.0344	-5.4935	-0.0028
782	SLU 36	-0.49	0.03	30.12	-0.0344	-5.4941	0.0077
782	SLU 37	-0.49	-0.02	29.92	-0.0342	-5.4585	-0.0032
782	SLU 38	-0.49	0.02	29.92	-0.0342	-5.4591	0.0072
782	SLU 39	-0.49	-0.02	30.68	-0.0352	-5.5998	-0.0034
782	SLU 40	-0.49	0.02	30.68	-0.0352	-5.6004	0.0071
782	SLU 41	-0.49	-0.02	30.94	-0.0356	-5.6447	-0.0025
782	SLU 42	-0.49	0.03	30.94	-0.0356	-5.6453	0.008
782	SLU 43	-0.53	-0.08	29.57	-0.0324	-5.4222	-0.0187
782	SLU 44	-0.52	-0.01	29.58	-0.0324	-5.4232	-0.0013
782	SLU 45	-0.53	-0.07	30.03	-0.0329	-5.5021	-0.0174
782	SLU 46	-0.53	-0.03	30.03	-0.0329	-5.5027	-0.0069
782	SLU 47	-0.53	-0.01	29.84	-0.0327	-5.4681	-0.0003
782	SLU 48	-0.54	-0.07	30.29	-0.0333	-5.547	-0.0165
782	SLU 49	-0.54	-0.03	30.29	-0.0332	-5.5476	-0.006

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
782	SLU 50	-0.54	-0.07	30.09	-0.033	-5.512	-0.0169
782	SLU 51	-0.54	-0.03	30.09	-0.033	-5.5126	-0.0064
782	SLU 52	-0.55	0.01	32.56	-0.0364	-5.9625	0.0027
782	SLU 53	-0.56	-0.06	33.02	-0.0369	-6.0414	-0.0135
782	SLU 54	-0.56	-0.02	33.02	-0.0369	-6.042	-0.003
782	SLU 55	-0.56	0.01	32.82	-0.0367	-6.0074	0.0036
782	SLU 56	-0.57	-0.06	33.28	-0.0372	-6.0863	-0.0125
782	SLU 57	-0.56	-0.01	33.28	-0.0372	-6.0869	-0.0021
782	SLU 58	-0.56	-0.06	33.08	-0.037	-6.0513	-0.013
782	SLU 59	-0.56	-0.02	33.08	-0.037	-6.0519	-0.0025
782	SLU 60	-0.56	-0.06	33.84	-0.0381	-6.1926	-0.0131
782	SLU 61	-0.56	-0.02	33.84	-0.0381	-6.1932	-0.0026
782	SLU 62	-0.57	-0.05	34.1	-0.0384	-6.2375	-0.0122
782	SLU 63	-0.57	-0.01	34.1	-0.0384	-6.2381	-0.0017
782	SLU 64	-0.56	-0.06	32.47	-0.0361	-5.9433	-0.0145
782	SLU 65	-0.56	0.01	32.48	-0.0361	-5.9443	0.003
782	SLU 66	-0.57	-0.06	32.93	-0.0366	-6.0232	-0.0131
782	SLU 67	-0.57	-0.02	32.93	-0.0366	-6.0238	-0.0026
782	SLU 68	-0.57	0.01	32.74	-0.0364	-5.9892	0.0039
782	SLU 69	-0.58	-0.05	33.19	-0.0369	-6.0681	-0.0122
782	SLU 70	-0.58	-0.01	33.19	-0.0369	-6.0687	-0.0017
782	SLU 71	-0.58	-0.06	32.99	-0.0367	-6.0331	-0.0126
782	SLU 72	-0.57	-0.01	32.99	-0.0367	-6.0337	-0.0021
782	SLU 73	-0.59	0.02	35.46	-0.04	-6.4836	0.0069
782	SLU 74	-0.6	-0.04	35.92	-0.0406	-6.5625	-0.0092
782	SLU 75	-0.6	0	35.92	-0.0406	-6.563	0.0013
782	SLU 76	-0.59	0.03	35.72	-0.0404	-6.5285	0.0079
782	SLU 77	-0.6	-0.04	36.18	-0.0409	-6.6074	-0.0083
782	SLU 78	-0.6	0	36.18	-0.0409	-6.608	0.0022
782	SLU 79	-0.6	-0.04	35.98	-0.0407	-6.5724	-0.0087
782	SLU 80	-0.6	0	35.98	-0.0407	-6.573	0.0018
782	SLU 81	-0.6	-0.04	36.74	-0.0417	-6.7137	-0.0089
782	SLU 82	-0.6	0	36.74	-0.0417	-6.7143	0.0016
782	SLU 83	-0.61	-0.04	37	-0.0421	-6.7586	-0.0079
782	SLU 84	-0.6	0	37	-0.0421	-6.7592	0.0026
782	SLE RA 1	-0.42	-0.05	24.34	-0.0269	-4.4572	-0.0121
782	SLE RA 2	-0.42	-0.01	24.34	-0.0269	-4.4579	-0.0004
782	SLE RA 3	-0.43	-0.05	24.64	-0.0273	-4.5105	-0.0112
782	SLE RA 4	-0.43	-0.02	24.65	-0.0273	-4.5109	-0.0042
782	SLE RA 5	-0.43	0	24.52	-0.0271	-4.4879	0.0002
782	SLE RA 6	-0.43	-0.05	24.82	-0.0275	-4.5404	-0.0106
782	SLE RA 7	-0.43	-0.02	24.82	-0.0275	-4.5408	-0.0036
782	SLE RA 8	-0.43	-0.05	24.69	-0.0274	-4.5171	-0.0108
782	SLE RA 9	-0.43	-0.02	24.69	-0.0274	-4.5175	-0.0038
782	SLE RA 10	-0.44	0	26.33	-0.0296	-4.8174	0.0022
782	SLE RA 11	-0.45	-0.04	26.64	-0.03	-4.87	-0.0086
782	SLE RA 12	-0.45	-0.01	26.64	-0.0299	-4.8704	-0.0016
782	SLE RA 13	-0.44	0.01	26.51	-0.0298	-4.8474	0.0028
782	SLE RA 14	-0.45	-0.04	26.81	-0.0302	-4.9	-0.0079
782	SLE RA 15	-0.45	-0.01	26.81	-0.0302	-4.9004	-0.0009
782	SLE RA 16	-0.45	-0.04	26.68	-0.03	-4.8766	-0.0082
782	SLE RA 17	-0.45	-0.01	26.68	-0.03	-4.877	-0.0012
782	SLE RA 18	-0.45	-0.04	27.18	-0.0307	-4.9708	-0.0083
782	SLE RA 19	-0.45	-0.01	27.19	-0.0307	-4.9712	-0.0013
782	SLE RA 20	-0.45	-0.04	27.36	-0.0309	-5.0008	-0.0077
782	SLE RA 21	-0.45	-0.01	27.36	-0.0309	-5.0012	-0.0007
782	SLE FR 1	-0.42	-0.05	24.34	-0.0269	-4.4572	-0.0121
782	SLE FR 2	-0.42	-0.04	24.34	-0.0269	-4.4574	-0.0097
782	SLE FR 3	-0.43	-0.05	24.41	-0.027	-4.4692	-0.0118
782	SLE FR 4	-0.43	-0.04	25.19	-0.0281	-4.6115	-0.0086
782	SLE FR 5	-0.43	-0.05	25.26	-0.0282	-4.6233	-0.0107
782	SLE FR 6	-0.44	-0.04	25.76	-0.0288	-4.714	-0.0102
782	SLE QP 1	-0.42	-0.05	24.34	-0.0269	-4.4572	-0.0121
782	SLE QP 2	-0.43	-0.05	25.19	-0.0281	-4.6113	-0.0109
782	SLD 1	1.94	0.88	30.12	-0.0349	-5.4697	0.2208
782	SLD 2	1.88	0.57	30.12	-0.0348	-5.4762	0.1439
782	SLD 3	1.87	-0.33	30.25	-0.0344	-5.4974	-0.082
782	SLD 4	1.82	-0.64	30.25	-0.0344	-5.5039	-0.1589
782	SLD 5	0.38	2.12	26.47	-0.0308	-4.8258	0.5313
782	SLD 6	0.35	1.92	26.48	-0.0308	-4.83	0.4814
782	SLD 7	0.18	-1.91	26.9	-0.0293	-4.918	-0.4781
782	SLD 8	0.14	-2.11	26.91	-0.0293	-4.9222	-0.528
782	SLD 9	-1	2.02	23.48	-0.0269	-4.3005	0.5061
782	SLD 10	-1.04	1.82	23.48	-0.0268	-4.3047	0.4562
782	SLD 11	-1.21	-2.01	23.91	-0.0254	-4.3927	-0.5033
782	SLD 12	-1.25	-2.21	23.91	-0.0254	-4.3969	-0.5532
782	SLD 13	-2.68	0.54	20.13	-0.0218	-3.7188	0.137
782	SLD 14	-2.74	0.23	20.13	-0.0217	-3.7252	0.0601
782	SLD 15	-2.74	-0.67	20.26	-0.0213	-3.7464	-0.1658
782	SLD 16	-2.8	-0.98	20.26	-0.0213	-3.7529	-0.2427
782	SLV 1	5.1	2.09	36.73	-0.044	-6.6208	0.5225
782	SLV 2	4.98	1.37	36.74	-0.0439	-6.6358	0.3434
782	SLV 3	4.96	-0.67	37.03	-0.043	-6.6849	-0.1682
782	SLV 4	4.83	-1.39	37.04	-0.0429	-6.6999	-0.3473
782	SLV 5	1.47	4.9	28.2	-0.0344	-5.1144	1.2271
782	SLV 6	1.39	4.44	28.2	-0.0344	-5.124	1.1127
782	SLV 7	0.99	-4.3	29.2	-0.031	-5.3281	-1.0754
782	SLV 8	0.91	-4.76	29.2	-0.0309	-5.3377	-1.1898
782	SLV 9	-1.77	4.66	21.18	-0.0252	-3.885	1.1679
782	SLV 10	-1.85	4.2	21.19	-0.0251	-3.8946	1.0536
782	SLV 11	-2.25	-4.54	22.18	-0.0218	-4.0986	-1.1346

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
782	SLV 12	-2.33	-5	22.19	-0.0217	-4.1083	-1.249
782	SLV 13	-5.7	1.29	13.35	-0.0133	-2.5227	0.3255
782	SLV 14	-5.83	0.58	13.36	-0.0132	-2.5378	0.1463
782	SLV 15	-5.84	-1.47	13.65	-0.0122	-2.5868	-0.3653
782	SLV 16	-5.97	-2.18	13.66	-0.0122	-2.6019	-0.5444
782	CRTFP Ux+	0	0	0	0	0	0
782	CRTFP Ux-	0	0	0	0	0	0
785	SLU 1	0.42	0.55	29.27	-0.0671	7.8213	-0.1914
785	SLU 2	0.41	0.63	29.27	-0.0671	7.8241	-0.2208
785	SLU 3	0.43	0.56	29.83	-0.0685	7.9652	-0.1972
785	SLU 4	0.43	0.61	29.83	-0.0685	7.9669	-0.2148
785	SLU 5	0.42	0.63	29.59	-0.0679	7.9058	-0.2226
785	SLU 6	0.44	0.57	30.15	-0.0693	8.0469	-0.199
785	SLU 7	0.43	0.62	30.15	-0.0693	8.0486	-0.2166
785	SLU 8	0.43	0.56	29.9	-0.0687	7.9846	-0.1951
785	SLU 9	0.43	0.61	29.91	-0.0687	7.9863	-0.2127
785	SLU 10	0.44	0.74	32.94	-0.0767	8.7786	-0.2598
785	SLU 11	0.46	0.67	33.5	-0.0781	8.9197	-0.2363
785	SLU 12	0.46	0.72	33.5	-0.0781	8.9214	-0.2539
785	SLU 13	0.45	0.75	33.26	-0.0775	8.8602	-0.2617
785	SLU 14	0.47	0.68	33.82	-0.079	9.0013	-0.2381
785	SLU 15	0.46	0.73	33.82	-0.079	9.003	-0.2557
785	SLU 16	0.46	0.67	33.57	-0.0784	8.9391	-0.2341
785	SLU 17	0.46	0.72	33.58	-0.0784	8.9408	-0.2517
785	SLU 18	0.46	0.7	34.51	-0.0808	9.1848	-0.2473
785	SLU 19	0.46	0.75	34.51	-0.0808	9.1865	-0.2649
785	SLU 20	0.47	0.71	34.83	-0.0817	9.2665	-0.2491
785	SLU 21	0.46	0.76	34.83	-0.0817	9.2682	-0.2667
785	SLU 22	0.46	0.64	32.81	-0.0763	8.7404	-0.2249
785	SLU 23	0.45	0.72	32.82	-0.0763	8.7432	-0.2542
785	SLU 24	0.47	0.66	33.37	-0.0777	8.8843	-0.2306
785	SLU 25	0.47	0.71	33.38	-0.0777	8.886	-0.2482
785	SLU 26	0.46	0.73	33.13	-0.0771	8.8249	-0.256
785	SLU 27	0.48	0.66	33.69	-0.0785	8.966	-0.2324
785	SLU 28	0.47	0.71	33.69	-0.0785	8.9676	-0.25
785	SLU 29	0.47	0.65	33.45	-0.0779	8.9037	-0.2285
785	SLU 30	0.47	0.7	33.45	-0.0779	8.9054	-0.2461
785	SLU 31	0.48	0.84	36.49	-0.0859	9.6977	-0.2933
785	SLU 32	0.5	0.77	37.04	-0.0873	9.8388	-0.2697
785	SLU 33	0.49	0.82	37.04	-0.0874	9.8404	-0.2873
785	SLU 34	0.49	0.84	36.8	-0.0868	9.7793	-0.2951
785	SLU 35	0.5	0.77	37.36	-0.0882	9.9204	-0.2715
785	SLU 36	0.5	0.82	37.36	-0.0882	9.9221	-0.2891
785	SLU 37	0.5	0.76	37.12	-0.0876	9.8582	-0.2675
785	SLU 38	0.5	0.81	37.12	-0.0876	9.8599	-0.2851
785	SLU 39	0.5	0.8	38.05	-0.09	10.1039	-0.2807
785	SLU 40	0.5	0.85	38.06	-0.0901	10.1056	-0.2983
785	SLU 41	0.51	0.8	38.37	-0.0909	10.1856	-0.2825
785	SLU 42	0.5	0.85	38.37	-0.0909	10.1873	-0.3001
785	SLU 43	0.53	0.68	36.83	-0.084	9.8526	-0.2374
785	SLU 44	0.53	0.76	36.84	-0.084	9.8554	-0.2668
785	SLU 45	0.54	0.69	37.39	-0.0854	9.9965	-0.2432
785	SLU 46	0.54	0.74	37.4	-0.0855	9.9982	-0.2608
785	SLU 47	0.53	0.77	37.16	-0.0849	9.9371	-0.2686
785	SLU 48	0.55	0.7	37.71	-0.0863	10.0782	-0.245
785	SLU 49	0.55	0.75	37.72	-0.0863	10.0798	-0.2626
785	SLU 50	0.55	0.69	37.47	-0.0857	10.0159	-0.2411
785	SLU 51	0.54	0.74	37.47	-0.0857	10.0176	-0.2587
785	SLU 52	0.55	0.87	40.51	-0.0937	10.8099	-0.3058
785	SLU 53	0.57	0.8	41.06	-0.0951	10.951	-0.2823
785	SLU 54	0.57	0.85	41.07	-0.0951	10.9526	-0.2999
785	SLU 55	0.56	0.88	40.83	-0.0945	10.8915	-0.3076
785	SLU 56	0.58	0.81	41.38	-0.0959	11.0326	-0.2841
785	SLU 57	0.57	0.86	41.39	-0.0959	11.0343	-0.3017
785	SLU 58	0.57	0.8	41.14	-0.0953	10.9704	-0.2801
785	SLU 59	0.57	0.85	41.14	-0.0953	10.9721	-0.2977
785	SLU 60	0.57	0.84	42.07	-0.0978	11.2161	-0.2932
785	SLU 61	0.57	0.89	42.08	-0.0978	11.2178	-0.3108
785	SLU 62	0.58	0.84	42.39	-0.0986	11.2978	-0.295
785	SLU 63	0.58	0.89	42.4	-0.0986	11.2995	-0.3127
785	SLU 64	0.57	0.77	40.37	-0.0932	10.7717	-0.2708
785	SLU 65	0.56	0.86	40.38	-0.0932	10.7745	-0.3002
785	SLU 66	0.58	0.79	40.94	-0.0947	10.9156	-0.2766
785	SLU 67	0.58	0.84	40.94	-0.0947	10.9173	-0.2942
785	SLU 68	0.57	0.86	40.7	-0.0941	10.8562	-0.302
785	SLU 69	0.59	0.79	41.25	-0.0955	10.9973	-0.2784
785	SLU 70	0.58	0.84	41.26	-0.0955	10.9989	-0.296
785	SLU 71	0.58	0.78	41.01	-0.0949	10.935	-0.2745
785	SLU 72	0.58	0.83	41.02	-0.0949	10.9367	-0.2921
785	SLU 73	0.59	0.97	44.05	-0.1029	11.729	-0.3392
785	SLU 74	0.61	0.9	44.61	-0.1043	11.8701	-0.3157
785	SLU 75	0.61	0.95	44.61	-0.1043	11.8717	-0.3333
785	SLU 76	0.6	0.97	44.37	-0.1037	11.8106	-0.341
785	SLU 77	0.62	0.9	44.92	-0.1051	11.9517	-0.3175
785	SLU 78	0.61	0.95	44.93	-0.1051	11.9534	-0.3351
785	SLU 79	0.61	0.89	44.68	-0.1045	11.8895	-0.3135
785	SLU 80	0.61	0.94	44.69	-0.1045	11.8911	-0.3311
785	SLU 81	0.61	0.93	45.62	-0.107	12.1352	-0.3266
785	SLU 82	0.61	0.98	45.62	-0.107	12.1369	-0.3442
785	SLU 83	0.62	0.94	45.93	-0.1078	12.2169	-0.3285
785	SLU 84	0.62	0.99	45.94	-0.1078	12.2185	-0.3461

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
785	SLE RA 1	0.43	0.57	30.28	-0.0697	8.0839	-0.201
785	SLE RA 2	0.43	0.63	30.28	-0.0697	8.0858	-0.2205
785	SLE RA 3	0.44	0.58	30.65	-0.0706	8.1799	-0.2048
785	SLE RA 4	0.44	0.62	30.66	-0.0706	8.181	-0.2166
785	SLE RA 5	0.43	0.63	30.5	-0.0702	8.1402	-0.2218
785	SLE RA 6	0.44	0.59	30.87	-0.0712	8.2343	-0.2061
785	SLE RA 7	0.44	0.62	30.87	-0.0712	8.2354	-0.2178
785	SLE RA 8	0.44	0.58	30.7	-0.0708	8.1928	-0.2034
785	SLE RA 9	0.44	0.61	30.71	-0.0708	8.1939	-0.2151
785	SLE RA 10	0.45	0.7	32.73	-0.0761	8.7221	-0.2466
785	SLE RA 11	0.46	0.66	33.1	-0.0771	8.8162	-0.2309
785	SLE RA 12	0.45	0.69	33.1	-0.0771	8.8173	-0.2426
785	SLE RA 13	0.45	0.71	32.94	-0.0767	8.7765	-0.2478
785	SLE RA 14	0.46	0.66	33.31	-0.0776	8.8706	-0.2321
785	SLE RA 15	0.46	0.69	33.31	-0.0776	8.8717	-0.2438
785	SLE RA 16	0.46	0.65	33.15	-0.0772	8.8291	-0.2295
785	SLE RA 17	0.46	0.69	33.15	-0.0772	8.8302	-0.2412
785	SLE RA 18	0.46	0.68	33.77	-0.0789	8.9929	-0.2382
785	SLE RA 19	0.46	0.71	33.78	-0.0789	8.9941	-0.2499
785	SLE RA 20	0.46	0.68	33.99	-0.0794	9.0474	-0.2394
785	SLE RA 21	0.46	0.72	33.99	-0.0794	9.0485	-0.2511
785	SLE FR 1	0.43	0.57	30.28	-0.0697	8.0839	-0.201
785	SLE FR 2	0.43	0.58	30.28	-0.0697	8.0843	-0.2049
785	SLE FR 3	0.43	0.57	30.36	-0.0699	8.1057	-0.2015
785	SLE FR 4	0.44	0.62	31.33	-0.0724	8.357	-0.2161
785	SLE FR 5	0.44	0.61	31.41	-0.0727	8.3784	-0.2126
785	SLE FR 6	0.44	0.63	32.03	-0.0743	8.5384	-0.2196
785	SLE QP 1	0.43	0.57	30.28	-0.0697	8.0839	-0.201
785	SLE QP 2	0.44	0.6	31.33	-0.0724	8.3566	-0.2122
785	SLD 1	2.77	0.99	25.69	-0.0562	7.0201	-0.3452
785	SLD 2	2.68	1.39	25.68	-0.0564	7.0188	-0.484
785	SLD 3	2.97	-0.55	25.83	-0.0557	6.9765	0.194
785	SLD 4	2.88	-0.15	25.81	-0.0559	6.9751	0.0551
785	SLD 5	0.86	2.99	29.43	-0.0684	8.0222	-1.0455
785	SLD 6	0.8	3.25	29.42	-0.0685	8.0213	-1.1357
785	SLD 7	1.51	-2.15	29.89	-0.0666	7.8766	0.7516
785	SLD 8	1.45	-1.89	29.88	-0.0667	7.8757	0.6615
785	SLD 9	-0.57	3.1	32.77	-0.0782	8.8376	-1.0858
785	SLD 10	-0.63	3.36	32.76	-0.0783	8.8367	-1.1759
785	SLD 11	0.08	-2.04	33.23	-0.0764	8.692	0.7114
785	SLD 12	0.02	-1.78	33.22	-0.0765	8.6911	0.6212
785	SLD 13	-2	1.36	36.84	-0.089	9.7381	-0.4794
785	SLD 14	-2.09	1.76	36.82	-0.0892	9.7368	-0.6183
785	SLD 15	-1.81	-0.18	36.98	-0.0885	9.6945	0.0597
785	SLD 16	-1.9	0.21	36.96	-0.0887	9.6931	-0.0791
785	SLV 1	5.9	1.47	18.14	-0.0345	5.2283	-0.5066
785	SLV 2	5.7	2.4	18.1	-0.0349	5.2252	-0.8301
785	SLV 3	6.35	-2.04	18.46	-0.0333	5.1275	0.7197
785	SLV 4	6.14	-1.11	18.43	-0.0336	5.1244	0.3962
785	SLV 5	1.44	6.03	26.88	-0.0629	7.5715	-2.1057
785	SLV 6	1.31	6.62	26.86	-0.0631	7.5695	-2.3123
785	SLV 7	2.92	-5.67	27.96	-0.0588	7.2356	1.9822
785	SLV 8	2.78	-5.08	27.94	-0.059	7.2336	1.7755
785	SLV 9	-1.91	6.29	34.71	-0.0859	9.4797	-2.1998
785	SLV 10	-2.04	6.88	34.69	-0.0861	9.4777	-2.4065
785	SLV 11	-0.43	-5.42	35.79	-0.0818	9.1438	1.888
785	SLV 12	-0.57	-4.82	35.77	-0.082	9.1418	1.6814
785	SLV 13	-5.26	2.32	44.22	-0.1113	11.5889	-0.8205
785	SLV 14	-5.47	3.25	44.19	-0.1116	11.5858	-1.1441
785	SLV 15	-4.82	-1.19	44.55	-0.11	11.4881	0.4058
785	SLV 16	-5.03	-0.26	44.52	-0.1104	11.485	0.0823
785	CRTFP Ux+	0	0	0	0	0	0
785	CRTFP Ux-	0	0	0	0	0	0
787	SLU 1	0.81	-0.02	51.84	0.0075	0.1859	-0.0148
787	SLU 2	0.81	0.07	51.87	0.0074	0.1852	-0.0149
787	SLU 3	0.84	-0.01	52.85	0.0078	0.1903	-0.0151
787	SLU 4	0.83	0.04	52.87	0.0077	0.1899	-0.0152
787	SLU 5	0.83	0.06	52.43	0.0075	0.1869	-0.0152
787	SLU 6	0.85	-0.02	53.41	0.0078	0.1919	-0.0154
787	SLU 7	0.85	0.03	53.43	0.0078	0.1915	-0.0155
787	SLU 8	0.84	-0.03	52.96	0.0077	0.1892	-0.0154
787	SLU 9	0.84	0.02	52.98	0.0076	0.1888	-0.0154
787	SLU 10	0.88	0.12	58.89	0.0082	0.2174	-0.0167
787	SLU 11	0.9	0.03	59.88	0.0085	0.2225	-0.017
787	SLU 12	0.9	0.09	59.89	0.0084	0.2221	-0.017
787	SLU 13	0.89	0.11	59.45	0.0083	0.2191	-0.017
787	SLU 14	0.91	0.02	60.43	0.0086	0.2242	-0.0173
787	SLU 15	0.91	0.08	60.45	0.0085	0.2237	-0.0173
787	SLU 16	0.91	0.01	59.99	0.0084	0.2214	-0.0172
787	SLU 17	0.9	0.07	60	0.0084	0.221	-0.0173
787	SLU 18	0.9	0.04	61.88	0.0086	0.232	-0.0174
787	SLU 19	0.9	0.1	61.89	0.0085	0.2315	-0.0175
787	SLU 20	0.92	0.04	62.44	0.0087	0.2336	-0.0177
787	SLU 21	0.92	0.09	62.45	0.0086	0.2332	-0.0178
787	SLU 22	0.89	0.03	58.54	0.0087	0.2153	-0.0163
787	SLU 23	0.89	0.13	58.57	0.0086	0.2146	-0.0164
787	SLU 24	0.91	0.04	59.55	0.0089	0.2197	-0.0167
787	SLU 25	0.91	0.1	59.57	0.0089	0.2193	-0.0168
787	SLU 26	0.9	0.12	59.13	0.0087	0.2163	-0.0167
787	SLU 27	0.92	0.04	60.11	0.009	0.2213	-0.017
787	SLU 28	0.92	0.09	60.12	0.0089	0.2209	-0.0171

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
787	SLU 29	0.92	0.02	59.66	0.0088	0.2186	-0.0169
787	SLU 30	0.92	0.08	59.68	0.0088	0.2182	-0.017
787	SLU 31	0.95	0.17	65.59	0.0093	0.2468	-0.0183
787	SLU 32	0.97	0.09	66.57	0.0097	0.2519	-0.0186
787	SLU 33	0.97	0.14	66.59	0.0096	0.2515	-0.0186
787	SLU 34	0.96	0.17	66.15	0.0094	0.2485	-0.0186
787	SLU 35	0.99	0.08	67.13	0.0097	0.2536	-0.0188
787	SLU 36	0.99	0.14	67.15	0.0097	0.2531	-0.0189
787	SLU 37	0.98	0.07	66.68	0.0096	0.2508	-0.0188
787	SLU 38	0.98	0.12	66.7	0.0095	0.2504	-0.0188
787	SLU 39	0.98	0.1	68.58	0.0098	0.2614	-0.019
787	SLU 40	0.98	0.15	68.59	0.0097	0.2609	-0.019
787	SLU 41	0.99	0.09	69.14	0.0098	0.263	-0.0193
787	SLU 42	0.99	0.15	69.15	0.0098	0.2626	-0.0193
787	SLU 43	1.03	-0.05	65.1	0.0094	0.2317	-0.0187
787	SLU 44	1.03	0.04	65.13	0.0093	0.2309	-0.0187
787	SLU 45	1.05	-0.04	66.11	0.0096	0.236	-0.019
787	SLU 46	1.05	0.01	66.12	0.0096	0.2356	-0.0191
787	SLU 47	1.04	0.04	65.68	0.0094	0.2326	-0.019
787	SLU 48	1.07	-0.05	66.67	0.0097	0.2376	-0.0193
787	SLU 49	1.07	0.01	66.68	0.0096	0.2372	-0.0194
787	SLU 50	1.06	-0.06	66.22	0.0095	0.2349	-0.0192
787	SLU 51	1.06	-0.01	66.23	0.0095	0.2345	-0.0193
787	SLU 52	1.09	0.09	72.15	0.0101	0.2631	-0.0206
787	SLU 53	1.12	0	73.13	0.0104	0.2682	-0.0209
787	SLU 54	1.12	0.06	73.15	0.0103	0.2678	-0.0209
787	SLU 55	1.11	0.08	72.71	0.0101	0.2648	-0.0209
787	SLU 56	1.13	0	73.69	0.0104	0.2699	-0.0212
787	SLU 57	1.13	0.05	73.71	0.0104	0.2694	-0.0212
787	SLU 58	1.12	-0.02	73.24	0.0103	0.2672	-0.0211
787	SLU 59	1.12	0.04	73.26	0.0102	0.2667	-0.0211
787	SLU 60	1.12	0.02	75.13	0.0105	0.2777	-0.0213
787	SLU 61	1.12	0.07	75.15	0.0104	0.2772	-0.0213
787	SLU 62	1.14	0.01	75.69	0.0105	0.2793	-0.0216
787	SLU 63	1.14	0.07	75.71	0.0105	0.2789	-0.0216
787	SLU 64	1.11	0.01	71.8	0.0106	0.2611	-0.0202
787	SLU 65	1.11	0.1	71.82	0.0105	0.2603	-0.0203
787	SLU 66	1.13	0.02	72.81	0.0108	0.2654	-0.0206
787	SLU 67	1.13	0.07	72.82	0.0107	0.265	-0.0207
787	SLU 68	1.12	0.09	72.38	0.0105	0.262	-0.0206
787	SLU 69	1.14	0.01	73.37	0.0108	0.267	-0.0209
787	SLU 70	1.14	0.06	73.38	0.0108	0.2666	-0.0209
787	SLU 71	1.14	0	72.92	0.0107	0.2643	-0.0208
787	SLU 72	1.13	0.05	72.93	0.0106	0.2639	-0.0209
787	SLU 73	1.17	0.15	78.85	0.0112	0.2925	-0.0222
787	SLU 74	1.19	0.06	79.83	0.0115	0.2976	-0.0224
787	SLU 75	1.19	0.12	79.85	0.0115	0.2972	-0.0225
787	SLU 76	1.18	0.14	79.41	0.0113	0.2942	-0.0225
787	SLU 77	1.21	0.06	80.39	0.0116	0.2993	-0.0227
787	SLU 78	1.21	0.11	80.4	0.0115	0.2988	-0.0228
787	SLU 79	1.2	0.04	79.94	0.0114	0.2966	-0.0227
787	SLU 80	1.2	0.1	79.96	0.0114	0.2961	-0.0227
787	SLU 81	1.2	0.07	81.83	0.0116	0.3071	-0.0229
787	SLU 82	1.2	0.13	81.85	0.0116	0.3066	-0.0229
787	SLU 83	1.21	0.07	82.39	0.0117	0.3087	-0.0232
787	SLU 84	1.21	0.12	82.41	0.0116	0.3083	-0.0232
787	SLE RA 1	0.84	-0.01	53.76	0.0079	0.1943	-0.0152
787	SLE RA 2	0.83	0.05	53.77	0.0078	0.1939	-0.0153
787	SLE RA 3	0.85	0	54.43	0.008	0.1973	-0.0155
787	SLE RA 4	0.85	0.04	54.44	0.008	0.197	-0.0155
787	SLE RA 5	0.84	0.05	54.15	0.0078	0.195	-0.0155
787	SLE RA 6	0.86	-0.01	54.8	0.0081	0.1983	-0.0157
787	SLE RA 7	0.86	0.03	54.81	0.008	0.198	-0.0157
787	SLE RA 8	0.85	-0.01	54.5	0.008	0.1965	-0.0156
787	SLE RA 9	0.85	0.02	54.51	0.0079	0.1962	-0.0156
787	SLE RA 10	0.88	0.09	58.46	0.0083	0.2153	-0.0165
787	SLE RA 11	0.89	0.03	59.11	0.0085	0.2187	-0.0167
787	SLE RA 12	0.89	0.07	59.12	0.0085	0.2184	-0.0167
787	SLE RA 13	0.89	0.08	58.83	0.0083	0.2164	-0.0167
787	SLE RA 14	0.9	0.03	59.48	0.0086	0.2198	-0.0169
787	SLE RA 15	0.9	0.06	59.49	0.0085	0.2195	-0.0169
787	SLE RA 16	0.9	0.02	59.19	0.0085	0.218	-0.0168
787	SLE RA 17	0.9	0.05	59.2	0.0084	0.2177	-0.0169
787	SLE RA 18	0.9	0.04	60.45	0.0086	0.225	-0.017
787	SLE RA 19	0.89	0.07	60.46	0.0085	0.2247	-0.017
787	SLE RA 20	0.9	0.03	60.82	0.0086	0.2261	-0.0172
787	SLE RA 21	0.9	0.07	60.83	0.0086	0.2258	-0.0172
787	SLE FR 1	0.84	-0.01	53.76	0.0079	0.1943	-0.0152
787	SLE FR 2	0.83	0.01	53.76	0.0079	0.1943	-0.0152
787	SLE FR 3	0.84	-0.01	53.91	0.0079	0.1948	-0.0153
787	SLE FR 4	0.85	0.02	55.77	0.0081	0.2035	-0.0158
787	SLE FR 5	0.86	0.01	55.91	0.0081	0.204	-0.0158
787	SLE FR 6	0.87	0.02	57.1	0.0082	0.2097	-0.0161
787	SLE QP 1	0.84	-0.01	53.76	0.0079	0.1943	-0.0152
787	SLE QP 2	0.85	0.01	55.76	0.0081	0.2036	-0.0157
787	SLD 1	5.62	0.9	52.4	0.0057	0.178	-0.0333
787	SLD 2	5.51	1.19	52.42	0.0053	0.1777	-0.0287
787	SLD 3	5.73	-0.89	52.03	0.008	0.1993	-0.0322
787	SLD 4	5.62	-0.61	52.04	0.0076	0.199	-0.0276
787	SLD 5	2.14	2.95	55.32	0.004	0.1636	-0.0235
787	SLD 6	2.07	3.13	55.33	0.0037	0.1634	-0.0205

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
787	SLD 7	2.5	-3.04	54.08	0.0116	0.2347	-0.0198
787	SLD 8	2.43	-2.85	54.09	0.0113	0.2345	-0.0169
787	SLD 9	-0.72	2.86	57.44	0.0048	0.1726	-0.0146
787	SLD 10	-0.8	3.05	57.45	0.0045	0.1725	-0.0117
787	SLD 11	-0.36	-3.12	56.2	0.0125	0.2437	-0.011
787	SLD 12	-0.43	-2.93	56.21	0.0122	0.2435	-0.008
787	SLD 13	-3.91	0.62	59.48	0.0086	0.2081	-0.0039
787	SLD 14	-4.03	0.91	59.5	0.0081	0.2078	0.0007
787	SLD 15	-3.8	-1.17	59.11	0.0109	0.2294	-0.0028
787	SLD 16	-3.92	-0.89	59.13	0.0104	0.2291	0.0018
787	SLV 1	12.01	2.04	47.88	0.0026	0.1433	-0.0568
787	SLV 2	11.74	2.71	47.91	0.0016	0.1427	-0.0461
787	SLV 3	12.26	-2.04	47.03	0.0078	0.193	-0.0543
787	SLV 4	12	-1.37	47.06	0.0068	0.1924	-0.0436
787	SLV 5	3.86	6.7	54.68	-0.0013	0.1102	-0.0337
787	SLV 6	3.69	7.13	54.7	-0.0019	0.1098	-0.0269
787	SLV 7	4.71	-6.92	51.86	0.0161	0.2758	-0.0253
787	SLV 8	4.54	-6.49	51.88	0.0154	0.2755	-0.0184
787	SLV 9	-2.83	6.51	59.65	0.0008	0.1316	-0.0131
787	SLV 10	-3	6.93	59.67	0.0001	0.1313	-0.0062
787	SLV 11	-1.98	-7.12	56.83	0.0181	0.2973	-0.0046
787	SLV 12	-2.15	-6.69	56.85	0.0174	0.2969	0.0022
787	SLV 13	-10.29	1.39	64.46	0.0094	0.2147	0.0121
787	SLV 14	-10.56	2.06	64.5	0.0083	0.2141	0.0228
787	SLV 15	-10.04	-2.7	63.62	0.0146	0.2644	0.0146
787	SLV 16	-10.3	-2.03	63.65	0.0135	0.2638	0.0253
787	CRTFP Ux+	0	0	0	0	0	0
787	CRTFP Ux-	0	0	0	0	0	0
790	SLU 1	-0.58	-0.22	54.54	-0.0041	-0.2079	0.0141
790	SLU 2	-0.58	-0.12	54.56	-0.0042	-0.2067	0.0142
790	SLU 3	-0.59	-0.21	55.62	-0.0041	-0.2128	0.0144
790	SLU 4	-0.59	-0.15	55.63	-0.0042	-0.2121	0.0144
790	SLU 5	-0.59	-0.12	55.15	-0.0043	-0.2087	0.0144
790	SLU 6	-0.6	-0.21	56.2	-0.0042	-0.2148	0.0147
790	SLU 7	-0.6	-0.15	56.22	-0.0043	-0.2141	0.0147
790	SLU 8	-0.6	-0.22	55.71	-0.0043	-0.2118	0.0146
790	SLU 9	-0.6	-0.16	55.72	-0.0044	-0.2112	0.0146
790	SLU 10	-0.6	-0.12	62.1	-0.0053	-0.2438	0.0163
790	SLU 11	-0.62	-0.21	63.15	-0.0052	-0.2499	0.0166
790	SLU 12	-0.62	-0.15	63.17	-0.0053	-0.2492	0.0166
790	SLU 13	-0.61	-0.12	62.68	-0.0054	-0.2458	0.0165
790	SLU 14	-0.62	-0.21	63.74	-0.0053	-0.2519	0.0168
790	SLU 15	-0.63	-0.15	63.75	-0.0054	-0.2512	0.0168
790	SLU 16	-0.62	-0.22	63.24	-0.0053	-0.2489	0.0167
790	SLU 17	-0.62	-0.16	63.26	-0.0054	-0.2482	0.0167
790	SLU 18	-0.61	-0.22	65.3	-0.0056	-0.2608	0.0171
790	SLU 19	-0.61	-0.16	65.32	-0.0057	-0.2601	0.0172
790	SLU 20	-0.62	-0.22	65.89	-0.0057	-0.2628	0.0174
790	SLU 21	-0.62	-0.16	65.9	-0.0058	-0.2621	0.0174
790	SLU 22	-0.63	-0.18	61.71	-0.0044	-0.2407	0.0156
790	SLU 23	-0.63	-0.08	61.73	-0.0045	-0.2395	0.0156
790	SLU 24	-0.64	-0.18	62.79	-0.0044	-0.2457	0.0159
790	SLU 25	-0.64	-0.12	62.8	-0.0045	-0.245	0.0159
790	SLU 26	-0.64	-0.09	62.32	-0.0046	-0.2415	0.0159
790	SLU 27	-0.65	-0.18	63.37	-0.0045	-0.2476	0.0161
790	SLU 28	-0.65	-0.12	63.39	-0.0046	-0.247	0.0162
790	SLU 29	-0.65	-0.19	62.88	-0.0046	-0.2447	0.0161
790	SLU 30	-0.65	-0.13	62.89	-0.0047	-0.244	0.0161
790	SLU 31	-0.66	-0.09	69.27	-0.0056	-0.2766	0.0178
790	SLU 32	-0.67	-0.18	70.32	-0.0055	-0.2827	0.018
790	SLU 33	-0.67	-0.12	70.34	-0.0056	-0.282	0.0181
790	SLU 34	-0.66	-0.09	69.85	-0.0057	-0.2786	0.018
790	SLU 35	-0.68	-0.18	70.91	-0.0056	-0.2847	0.0183
790	SLU 36	-0.68	-0.12	70.92	-0.0057	-0.284	0.0183
790	SLU 37	-0.67	-0.19	70.41	-0.0056	-0.2817	0.0182
790	SLU 38	-0.67	-0.13	70.43	-0.0057	-0.2811	0.0182
790	SLU 39	-0.66	-0.19	72.47	-0.0059	-0.2936	0.0186
790	SLU 40	-0.66	-0.13	72.49	-0.006	-0.293	0.0187
790	SLU 41	-0.67	-0.19	73.06	-0.006	-0.2956	0.0189
790	SLU 42	-0.67	-0.13	73.07	-0.0061	-0.2949	0.0189
790	SLU 43	-0.74	-0.3	68.44	-0.0052	-0.259	0.0178
790	SLU 44	-0.74	-0.2	68.46	-0.0053	-0.2578	0.0179
790	SLU 45	-0.75	-0.29	69.52	-0.0053	-0.2639	0.0181
790	SLU 46	-0.75	-0.23	69.53	-0.0053	-0.2632	0.0182
790	SLU 47	-0.75	-0.2	69.05	-0.0054	-0.2598	0.0181
790	SLU 48	-0.76	-0.29	70.1	-0.0053	-0.2659	0.0184
790	SLU 49	-0.76	-0.23	70.12	-0.0054	-0.2652	0.0184
790	SLU 50	-0.75	-0.3	69.61	-0.0054	-0.2629	0.0183
790	SLU 51	-0.75	-0.24	69.62	-0.0055	-0.2623	0.0183
790	SLU 52	-0.76	-0.2	76	-0.0064	-0.2949	0.02
790	SLU 53	-0.77	-0.29	77.06	-0.0063	-0.301	0.0203
790	SLU 54	-0.77	-0.23	77.07	-0.0064	-0.3003	0.0203
790	SLU 55	-0.77	-0.2	76.58	-0.0065	-0.2969	0.0203
790	SLU 56	-0.78	-0.29	77.64	-0.0064	-0.303	0.0205
790	SLU 57	-0.78	-0.23	77.66	-0.0065	-0.3023	0.0205
790	SLU 58	-0.78	-0.3	77.15	-0.0065	-0.3	0.0204
790	SLU 59	-0.78	-0.24	77.16	-0.0065	-0.2993	0.0205
790	SLU 60	-0.77	-0.3	79.2	-0.0067	-0.3119	0.0209
790	SLU 61	-0.77	-0.24	79.22	-0.0068	-0.3112	0.0209
790	SLU 62	-0.78	-0.3	79.79	-0.0068	-0.3139	0.0211
790	SLU 63	-0.78	-0.24	79.8	-0.0069	-0.3132	0.0211

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
790	SLU 64	-0.79	-0.26	75.61	-0.0055	-0.2918	0.0193
790	SLU 65	-0.79	-0.16	75.63	-0.0057	-0.2906	0.0194
790	SLU 66	-0.8	-0.25	76.69	-0.0056	-0.2968	0.0196
790	SLU 67	-0.8	-0.19	76.7	-0.0056	-0.2961	0.0196
790	SLU 68	-0.8	-0.16	76.22	-0.0057	-0.2926	0.0196
790	SLU 69	-0.81	-0.26	77.28	-0.0057	-0.2987	0.0199
790	SLU 70	-0.81	-0.2	77.29	-0.0057	-0.2981	0.0199
790	SLU 71	-0.81	-0.27	76.78	-0.0057	-0.2958	0.0198
790	SLU 72	-0.81	-0.21	76.79	-0.0058	-0.2951	0.0198
790	SLU 73	-0.81	-0.16	83.17	-0.0067	-0.3277	0.0215
790	SLU 74	-0.82	-0.25	84.23	-0.0066	-0.3338	0.0218
790	SLU 75	-0.82	-0.19	84.24	-0.0067	-0.3331	0.0218
790	SLU 76	-0.82	-0.17	83.75	-0.0068	-0.3297	0.0217
790	SLU 77	-0.83	-0.26	84.81	-0.0067	-0.3358	0.022
790	SLU 78	-0.83	-0.2	84.83	-0.0068	-0.3351	0.022
790	SLU 79	-0.83	-0.27	84.32	-0.0068	-0.3328	0.0219
790	SLU 80	-0.83	-0.21	84.33	-0.0068	-0.3322	0.0219
790	SLU 81	-0.82	-0.26	86.38	-0.007	-0.3447	0.0223
790	SLU 82	-0.82	-0.2	86.39	-0.0071	-0.3441	0.0224
790	SLU 83	-0.83	-0.27	86.96	-0.0071	-0.3467	0.0226
790	SLU 84	-0.83	-0.21	86.97	-0.0072	-0.3461	0.0226
790	SLE RA 1	-0.59	-0.21	56.58	-0.0042	-0.2172	0.0145
790	SLE RA 2	-0.59	-0.14	56.6	-0.0043	-0.2165	0.0146
790	SLE RA 3	-0.6	-0.2	57.31	-0.0042	-0.2206	0.0147
790	SLE RA 4	-0.6	-0.16	57.31	-0.0043	-0.2201	0.0148
790	SLE RA 5	-0.6	-0.14	56.99	-0.0043	-0.2178	0.0147
790	SLE RA 6	-0.61	-0.2	57.7	-0.0043	-0.2219	0.0149
790	SLE RA 7	-0.61	-0.16	57.71	-0.0043	-0.2214	0.0149
790	SLE RA 8	-0.61	-0.21	57.37	-0.0043	-0.2199	0.0148
790	SLE RA 9	-0.61	-0.17	57.37	-0.0044	-0.2194	0.0149
790	SLE RA 10	-0.61	-0.14	61.62	-0.005	-0.2412	0.016
790	SLE RA 11	-0.62	-0.2	62.33	-0.0049	-0.2453	0.0162
790	SLE RA 12	-0.62	-0.16	62.34	-0.005	-0.2448	0.0162
790	SLE RA 13	-0.62	-0.14	62.01	-0.005	-0.2425	0.0161
790	SLE RA 14	-0.62	-0.2	62.72	-0.005	-0.2466	0.0163
790	SLE RA 15	-0.62	-0.16	62.73	-0.005	-0.2461	0.0163
790	SLE RA 16	-0.62	-0.21	62.39	-0.005	-0.2446	0.0163
790	SLE RA 17	-0.62	-0.17	62.4	-0.0051	-0.2441	0.0163
790	SLE RA 18	-0.62	-0.21	63.76	-0.0052	-0.2525	0.0166
790	SLE RA 19	-0.62	-0.17	63.77	-0.0052	-0.2521	0.0166
790	SLE RA 20	-0.62	-0.21	64.15	-0.0052	-0.2539	0.0167
790	SLE RA 21	-0.62	-0.17	64.16	-0.0053	-0.2534	0.0167
790	SLE FR 1	-0.59	-0.21	56.58	-0.0042	-0.2172	0.0145
790	SLE FR 2	-0.59	-0.2	56.59	-0.0042	-0.2171	0.0145
790	SLE FR 3	-0.6	-0.21	56.74	-0.0042	-0.2178	0.0146
790	SLE FR 4	-0.6	-0.2	58.74	-0.0045	-0.2277	0.0151
790	SLE FR 5	-0.6	-0.21	58.89	-0.0045	-0.2284	0.0152
790	SLE FR 6	-0.61	-0.21	60.17	-0.0047	-0.2349	0.0155
790	SLE QP 1	-0.59	-0.21	56.58	-0.0042	-0.2172	0.0145
790	SLE QP 2	-0.6	-0.21	58.74	-0.0045	-0.2278	0.0151
790	SLD 1	4.67	1.12	63.74	-0.0049	-0.1638	-0.0022
790	SLD 2	4.55	0.81	63.72	-0.0044	-0.1667	0.0027
790	SLD 3	4.54	-0.82	63.45	-0.002	-0.189	-0.0009
790	SLD 4	4.42	-1.14	63.43	-0.0014	-0.192	0.004
790	SLD 5	1.19	3.19	60.68	-0.0092	-0.1698	0.0071
790	SLD 6	1.12	2.99	60.67	-0.0089	-0.1717	0.0103
790	SLD 7	0.77	-3.29	59.71	0.0007	-0.254	0.0114
790	SLD 8	0.69	-3.49	59.7	0.001	-0.2559	0.0146
790	SLD 9	-1.9	3.07	57.78	-0.01	-0.1998	0.0157
790	SLD 10	-1.97	2.87	57.76	-0.0097	-0.2017	0.0189
790	SLD 11	-2.32	-3.41	56.81	-0.0001	-0.2839	0.0199
790	SLD 12	-2.39	-3.61	56.79	0.0003	-0.2858	0.0231
790	SLD 13	-5.63	0.72	54.05	-0.0075	-0.2637	0.0262
790	SLD 14	-5.74	0.4	54.03	-0.007	-0.2666	0.0312
790	SLD 15	-5.75	-1.22	53.76	-0.0046	-0.2889	0.0275
790	SLD 16	-5.87	-1.54	53.74	-0.004	-0.2919	0.0324
790	SLV 1	11.72	2.85	70.44	-0.0054	-0.0786	-0.0254
790	SLV 2	11.45	2.11	70.39	-0.0041	-0.0854	-0.0139
790	SLV 3	11.43	-1.59	69.77	0.0014	-0.1365	-0.0224
790	SLV 4	11.15	-2.32	69.72	0.0026	-0.1433	-0.0109
790	SLV 5	3.59	7.56	63.27	-0.0152	-0.0941	-0.0035
790	SLV 6	3.41	7.09	63.23	-0.0144	-0.0984	0.0039
790	SLV 7	2.61	-7.23	61.05	0.0073	-0.2871	0.0064
790	SLV 8	2.43	-7.7	61.01	0.0081	-0.2915	0.0138
790	SLV 9	-3.63	7.28	56.46	-0.0171	-0.1642	0.0165
790	SLV 10	-3.81	6.81	56.43	-0.0163	-0.1685	0.0238
790	SLV 11	-4.62	-7.51	54.24	0.0054	-0.3572	0.0264
790	SLV 12	-4.79	-7.98	54.21	0.0062	-0.3616	0.0337
790	SLV 13	-12.35	1.91	47.76	-0.0116	-0.3123	0.0411
790	SLV 14	-12.63	1.17	47.7	-0.0104	-0.3192	0.0526
790	SLV 15	-12.65	-2.53	47.09	-0.0048	-0.3702	0.0441
790	SLV 16	-12.93	-3.27	47.04	-0.0036	-0.3771	0.0556
790	CRTFP Ux+	0	0	0	0	0	0
790	CRTFP Ux-	0	0	0	0	0	0
793	SLU 1	0.27	0.34	43.82	-0.0027	-0.0028	-0.0026
793	SLU 2	0.27	0.42	43.85	-0.0028	-0.0035	-0.0027
793	SLU 3	0.28	0.36	44.59	-0.0028	-0.0022	-0.0027
793	SLU 4	0.28	0.41	44.61	-0.0028	-0.0026	-0.0027
793	SLU 5	0.28	0.42	44.26	-0.0029	-0.0026	-0.0028
793	SLU 6	0.29	0.36	45	-0.0029	-0.0013	-0.0028
793	SLU 7	0.29	0.41	45.02	-0.003	-0.0018	-0.0028

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
793	SLU 8	0.28	0.34	44.63	-0.003	-0.001	-0.0028
793	SLU 9	0.28	0.39	44.65	-0.0031	-0.0015	-0.0028
793	SLU 10	0.31	0.45	50.16	-0.004	-0.0022	-0.0032
793	SLU 11	0.32	0.39	50.89	-0.004	-0.0008	-0.0032
793	SLU 12	0.32	0.44	50.92	-0.0041	-0.0013	-0.0033
793	SLU 13	0.32	0.45	50.56	-0.0042	-0.0013	-0.0033
793	SLU 14	0.33	0.39	51.3	-0.0042	0	-0.0033
793	SLU 15	0.33	0.44	51.32	-0.0042	-0.0004	-0.0033
793	SLU 16	0.32	0.37	50.93	-0.0042	0.0003	-0.0033
793	SLU 17	0.32	0.42	50.96	-0.0043	-0.0002	-0.0033
793	SLU 18	0.33	0.39	52.82	-0.0044	-0.0009	-0.0034
793	SLU 19	0.33	0.44	52.84	-0.0045	-0.0013	-0.0034
793	SLU 20	0.34	0.39	53.23	-0.0046	0	-0.0035
793	SLU 21	0.34	0.44	53.25	-0.0046	-0.0005	-0.0035
793	SLU 22	0.31	0.42	49.64	-0.0027	-0.0071	-0.003
793	SLU 23	0.31	0.5	49.68	-0.0028	-0.0078	-0.0031
793	SLU 24	0.32	0.44	50.42	-0.0028	-0.0065	-0.003
793	SLU 25	0.32	0.49	50.44	-0.0029	-0.007	-0.0031
793	SLU 26	0.32	0.5	50.09	-0.003	-0.007	-0.0031
793	SLU 27	0.33	0.44	50.82	-0.003	-0.0057	-0.0031
793	SLU 28	0.33	0.49	50.85	-0.003	-0.0061	-0.0031
793	SLU 29	0.32	0.42	50.45	-0.0031	-0.0054	-0.0031
793	SLU 30	0.32	0.47	50.48	-0.0031	-0.0058	-0.0032
793	SLU 31	0.35	0.54	55.98	-0.0041	-0.0065	-0.0036
793	SLU 32	0.36	0.47	56.72	-0.004	-0.0052	-0.0036
793	SLU 33	0.36	0.52	56.74	-0.0041	-0.0056	-0.0036
793	SLU 34	0.36	0.53	56.39	-0.0042	-0.0057	-0.0037
793	SLU 35	0.36	0.47	57.13	-0.0042	-0.0043	-0.0036
793	SLU 36	0.37	0.52	57.15	-0.0043	-0.0048	-0.0037
793	SLU 37	0.36	0.45	56.76	-0.0043	-0.0041	-0.0036
793	SLU 38	0.36	0.5	56.78	-0.0043	-0.0045	-0.0037
793	SLU 39	0.37	0.47	58.65	-0.0045	-0.0052	-0.0037
793	SLU 40	0.37	0.52	58.67	-0.0045	-0.0057	-0.0038
793	SLU 41	0.37	0.47	59.05	-0.0046	-0.0043	-0.0038
793	SLU 42	0.37	0.52	59.08	-0.0047	-0.0048	-0.0039
793	SLU 43	0.34	0.41	54.96	-0.0035	-0.0021	-0.0033
793	SLU 44	0.34	0.49	55	-0.0036	-0.0028	-0.0034
793	SLU 45	0.35	0.43	55.74	-0.0036	-0.0015	-0.0034
793	SLU 46	0.35	0.48	55.76	-0.0036	-0.002	-0.0034
793	SLU 47	0.35	0.49	55.41	-0.0037	-0.002	-0.0034
793	SLU 48	0.36	0.43	56.14	-0.0037	-0.0007	-0.0034
793	SLU 49	0.36	0.48	56.17	-0.0038	-0.0011	-0.0035
793	SLU 50	0.35	0.41	55.78	-0.0038	-0.0004	-0.0034
793	SLU 51	0.35	0.46	55.8	-0.0039	-0.0008	-0.0035
793	SLU 52	0.38	0.53	61.3	-0.0048	-0.0015	-0.0039
793	SLU 53	0.39	0.47	62.04	-0.0048	-0.0002	-0.0039
793	SLU 54	0.39	0.52	62.06	-0.0048	-0.0006	-0.0039
793	SLU 55	0.39	0.53	61.71	-0.005	-0.0007	-0.004
793	SLU 56	0.4	0.47	62.45	-0.0049	0.0007	-0.004
793	SLU 57	0.4	0.52	62.47	-0.005	0.0002	-0.004
793	SLU 58	0.39	0.44	62.08	-0.005	0.0009	-0.004
793	SLU 59	0.39	0.49	62.1	-0.0051	0.0005	-0.004
793	SLU 60	0.4	0.46	63.97	-0.0052	-0.0002	-0.0041
793	SLU 61	0.4	0.51	63.99	-0.0053	-0.0006	-0.0041
793	SLU 62	0.4	0.46	64.37	-0.0054	0.0007	-0.0041
793	SLU 63	0.41	0.51	64.4	-0.0054	0.0002	-0.0042
793	SLU 64	0.38	0.49	60.79	-0.0035	-0.0064	-0.0037
793	SLU 65	0.38	0.57	60.83	-0.0036	-0.0072	-0.0037
793	SLU 66	0.39	0.51	61.56	-0.0036	-0.0058	-0.0037
793	SLU 67	0.39	0.56	61.59	-0.0037	-0.0063	-0.0038
793	SLU 68	0.39	0.57	61.23	-0.0038	-0.0063	-0.0038
793	SLU 69	0.39	0.51	61.97	-0.0038	-0.005	-0.0038
793	SLU 70	0.39	0.56	61.99	-0.0038	-0.0054	-0.0038
793	SLU 71	0.39	0.49	61.6	-0.0039	-0.0047	-0.0038
793	SLU 72	0.39	0.54	61.62	-0.0039	-0.0052	-0.0038
793	SLU 73	0.42	0.61	67.13	-0.0048	-0.0059	-0.0043
793	SLU 74	0.43	0.55	67.87	-0.0048	-0.0045	-0.0042
793	SLU 75	0.43	0.6	67.89	-0.0049	-0.005	-0.0043
793	SLU 76	0.43	0.61	67.54	-0.005	-0.005	-0.0043
793	SLU 77	0.43	0.55	68.27	-0.005	-0.0037	-0.0043
793	SLU 78	0.43	0.6	68.3	-0.005	-0.0041	-0.0043
793	SLU 79	0.43	0.52	67.91	-0.0051	-0.0034	-0.0043
793	SLU 80	0.43	0.57	67.93	-0.0051	-0.0039	-0.0044
793	SLU 81	0.44	0.54	69.79	-0.0053	-0.0045	-0.0044
793	SLU 82	0.44	0.59	69.82	-0.0053	-0.005	-0.0045
793	SLU 83	0.44	0.54	70.2	-0.0054	-0.0037	-0.0045
793	SLU 84	0.44	0.59	70.22	-0.0055	-0.0041	-0.0045
793	SLE RA 1	0.28	0.36	45.48	-0.0027	-0.004	-0.0027
793	SLE RA 2	0.28	0.42	45.51	-0.0028	-0.0045	-0.0028
793	SLE RA 3	0.29	0.37	46	-0.0028	-0.0036	-0.0028
793	SLE RA 4	0.29	0.41	46.01	-0.0028	-0.0039	-0.0028
793	SLE RA 5	0.29	0.42	45.78	-0.0029	-0.0039	-0.0028
793	SLE RA 6	0.29	0.37	46.27	-0.0029	-0.003	-0.0028
793	SLE RA 7	0.29	0.41	46.28	-0.0029	-0.0033	-0.0028
793	SLE RA 8	0.29	0.36	46.02	-0.0029	-0.0029	-0.0028
793	SLE RA 9	0.29	0.39	46.04	-0.003	-0.0032	-0.0028
793	SLE RA 10	0.31	0.44	49.71	-0.0036	-0.0036	-0.0031
793	SLE RA 11	0.32	0.4	50.2	-0.0036	-0.0027	-0.0031
793	SLE RA 12	0.32	0.43	50.21	-0.0036	-0.003	-0.0032
793	SLE RA 13	0.31	0.44	49.98	-0.0037	-0.003	-0.0032
793	SLE RA 14	0.32	0.4	50.47	-0.0037	-0.0022	-0.0032

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
793	SLE RA 15	0.32	0.43	50.49	-0.0037	-0.0025	-0.0032
793	SLE RA 16	0.32	0.38	50.22	-0.0037	-0.002	-0.0032
793	SLE RA 17	0.32	0.42	50.24	-0.0038	-0.0023	-0.0032
793	SLE RA 18	0.32	0.39	51.48	-0.0039	-0.0027	-0.0032
793	SLE RA 19	0.32	0.43	51.5	-0.0039	-0.003	-0.0033
793	SLE RA 20	0.33	0.39	51.75	-0.004	-0.0022	-0.0033
793	SLE RA 21	0.33	0.43	51.77	-0.004	-0.0025	-0.0033
793	SLE FR 1	0.28	0.36	45.48	-0.0027	-0.004	-0.0027
793	SLE FR 2	0.28	0.37	45.49	-0.0027	-0.0041	-0.0027
793	SLE FR 3	0.28	0.36	45.59	-0.0028	-0.0038	-0.0028
793	SLE FR 4	0.29	0.38	47.29	-0.0031	-0.0037	-0.0029
793	SLE FR 5	0.3	0.37	47.39	-0.0031	-0.0034	-0.0029
793	SLE FR 6	0.3	0.38	48.48	-0.0033	-0.0034	-0.003
793	SLE QP 1	0.28	0.36	45.48	-0.0027	-0.004	-0.0027
793	SLE QP 2	0.29	0.37	47.28	-0.0031	-0.0036	-0.0029
793	SLD 1	5.15	1.01	45.74	-0.0082	0.0711	-0.0262
793	SLD 2	5.03	1.11	45.78	-0.0082	0.0713	-0.0217
793	SLD 3	5.02	-0.75	45.12	-0.0062	0.0857	-0.025
793	SLD 4	4.91	-0.66	45.16	-0.0063	0.0858	-0.0205
793	SLD 5	1.96	3.22	47.75	-0.0076	-0.0033	-0.0125
793	SLD 6	1.89	3.28	47.78	-0.0076	-0.0032	-0.0096
793	SLD 7	1.54	-2.66	45.68	-0.001	0.0452	-0.0085
793	SLD 8	1.47	-2.6	45.71	-0.001	0.0453	-0.0056
793	SLD 9	-0.88	3.34	48.85	-0.0051	-0.0525	-0.0002
793	SLD 10	-0.95	3.4	48.88	-0.0051	-0.0524	0.0027
793	SLD 11	-1.3	-2.54	46.78	0.0015	-0.004	0.0038
793	SLD 12	-1.37	-2.48	46.81	0.0015	-0.004	0.0067
793	SLD 13	-4.32	1.4	49.4	0.0001	-0.093	0.0147
793	SLD 14	-4.43	1.49	49.44	0.0001	-0.0929	0.0192
793	SLD 15	-4.44	-0.37	48.78	0.0021	-0.0785	0.0159
793	SLD 16	-4.56	-0.27	48.82	0.0021	-0.0784	0.0204
793	SLV 1	11.64	1.81	43.63	-0.015	0.1718	-0.0573
793	SLV 2	11.37	2.04	43.73	-0.0151	0.172	-0.0469
793	SLV 3	11.35	-2.2	42.22	-0.0105	0.2049	-0.0545
793	SLV 4	11.08	-1.98	42.32	-0.0106	0.2052	-0.0441
793	SLV 5	4.19	6.86	48.3	-0.0135	-0.0013	-0.0252
793	SLV 6	4.01	7	48.37	-0.0136	-0.0011	-0.0185
793	SLV 7	3.22	-6.53	43.61	0.0016	0.1091	-0.0159
793	SLV 8	3.04	-6.39	43.67	0.0015	0.1093	-0.0093
793	SLV 9	-2.45	7.13	50.89	-0.0076	-0.1165	0.0035
793	SLV 10	-2.63	7.27	50.96	-0.0077	-0.1163	0.0101
793	SLV 11	-3.42	-6.26	46.19	0.0074	-0.0061	0.0128
793	SLV 12	-3.6	-6.12	46.26	0.0073	-0.006	0.0194
793	SLV 13	-10.49	2.72	52.24	0.0045	-0.2124	0.0383
793	SLV 14	-10.76	2.94	52.34	0.0044	-0.2121	0.0487
793	SLV 15	-10.78	-1.3	50.83	0.009	-0.1793	0.0411
793	SLV 16	-11.05	-1.08	50.94	0.0089	-0.179	0.0515
793	CRTFP Ux+	0	0	0	0	0	0
793	CRTFP Ux-	0	0	0	0	0	0
796	SLU 1	-0.01	0.34	42.06	-0.008	0.072	0.0031
796	SLU 2	-0.01	0.42	42.11	-0.0082	0.0724	0.0031
796	SLU 3	-0.01	0.37	42.81	-0.0083	0.0739	0.0032
796	SLU 4	-0.01	0.42	42.84	-0.0084	0.0741	0.0032
796	SLU 5	-0.01	0.42	42.5	-0.0084	0.0732	0.0031
796	SLU 6	-0.01	0.37	43.2	-0.0085	0.0747	0.0032
796	SLU 7	-0.01	0.42	43.23	-0.0086	0.0749	0.0032
796	SLU 8	-0.01	0.34	42.85	-0.0085	0.0737	0.0032
796	SLU 9	-0.01	0.39	42.88	-0.0086	0.0739	0.0032
796	SLU 10	0	0.48	47.93	-0.0102	0.0818	0.0041
796	SLU 11	0	0.43	48.63	-0.0103	0.0833	0.0042
796	SLU 12	0	0.48	48.66	-0.0104	0.0835	0.0041
796	SLU 13	0	0.48	48.32	-0.0104	0.0826	0.0041
796	SLU 14	0	0.43	49.02	-0.0106	0.0841	0.0042
796	SLU 15	0	0.48	49.05	-0.0106	0.0843	0.0042
796	SLU 16	0	0.41	48.66	-0.0105	0.0831	0.0042
796	SLU 17	0	0.45	48.69	-0.0106	0.0833	0.0042
796	SLU 18	0.01	0.43	50.37	-0.0109	0.0854	0.0045
796	SLU 19	0.01	0.48	50.4	-0.011	0.0856	0.0045
796	SLU 20	0.01	0.43	50.76	-0.0112	0.0863	0.0046
796	SLU 21	0.01	0.48	50.79	-0.0112	0.0865	0.0045
796	SLU 22	-0.02	0.46	47.52	-0.009	0.0851	0.0036
796	SLU 23	-0.02	0.54	47.57	-0.0091	0.0855	0.0036
796	SLU 24	-0.03	0.49	48.27	-0.0092	0.087	0.0037
796	SLU 25	-0.03	0.54	48.3	-0.0093	0.0872	0.0036
796	SLU 26	-0.02	0.55	47.96	-0.0093	0.0863	0.0036
796	SLU 27	-0.02	0.49	48.66	-0.0095	0.0878	0.0037
796	SLU 28	-0.02	0.54	48.69	-0.0095	0.088	0.0037
796	SLU 29	-0.02	0.47	48.31	-0.0094	0.0868	0.0037
796	SLU 30	-0.02	0.52	48.34	-0.0095	0.087	0.0037
796	SLU 31	-0.01	0.61	53.39	-0.0111	0.0949	0.0046
796	SLU 32	-0.01	0.55	54.08	-0.0112	0.0964	0.0046
796	SLU 33	-0.01	0.6	54.11	-0.0113	0.0966	0.0046
796	SLU 34	-0.01	0.61	53.78	-0.0113	0.0957	0.0046
796	SLU 35	-0.01	0.55	54.48	-0.0115	0.0972	0.0047
796	SLU 36	-0.01	0.6	54.51	-0.0115	0.0974	0.0047
796	SLU 37	-0.01	0.53	54.12	-0.0114	0.0962	0.0047
796	SLU 38	-0.01	0.58	54.15	-0.0115	0.0964	0.0047
796	SLU 39	-0.01	0.55	55.83	-0.0118	0.0986	0.005
796	SLU 40	-0.01	0.6	55.86	-0.0119	0.0988	0.005
796	SLU 41	-0.01	0.55	56.22	-0.0121	0.0994	0.005
796	SLU 42	-0.01	0.6	56.25	-0.0121	0.0996	0.005

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
796	SLU 43	-0.01	0.4	52.81	-0.0101	0.0891	0.0038
796	SLU 44	-0.01	0.48	52.86	-0.0102	0.0895	0.0038
796	SLU 45	-0.01	0.43	53.56	-0.0104	0.091	0.0039
796	SLU 46	-0.01	0.47	53.59	-0.0105	0.0912	0.0039
796	SLU 47	-0.01	0.48	53.25	-0.0105	0.0903	0.0039
796	SLU 48	-0.01	0.43	53.95	-0.0106	0.0918	0.004
796	SLU 49	-0.01	0.48	53.98	-0.0107	0.092	0.004
796	SLU 50	-0.01	0.4	53.6	-0.0106	0.0908	0.0039
796	SLU 51	-0.01	0.45	53.62	-0.0107	0.091	0.0039
796	SLU 52	0	0.54	58.67	-0.0123	0.0989	0.0048
796	SLU 53	0	0.49	59.37	-0.0124	0.1004	0.0049
796	SLU 54	0	0.54	59.4	-0.0125	0.1006	0.0049
796	SLU 55	0	0.54	59.07	-0.0125	0.0997	0.0049
796	SLU 56	0	0.49	59.77	-0.0127	0.1012	0.005
796	SLU 57	0	0.54	59.8	-0.0127	0.1014	0.0049
796	SLU 58	0	0.47	59.41	-0.0126	0.1002	0.0049
796	SLU 59	0	0.51	59.44	-0.0127	0.1004	0.0049
796	SLU 60	0.01	0.49	61.12	-0.013	0.1026	0.0053
796	SLU 61	0.01	0.54	61.15	-0.0131	0.1028	0.0053
796	SLU 62	0.01	0.49	61.51	-0.0132	0.1034	0.0053
796	SLU 63	0.01	0.54	61.54	-0.0133	0.1036	0.0053
796	SLU 64	-0.02	0.52	58.27	-0.0111	0.1023	0.0043
796	SLU 65	-0.02	0.6	58.32	-0.0112	0.1026	0.0043
796	SLU 66	-0.03	0.55	59.02	-0.0113	0.1041	0.0044
796	SLU 67	-0.03	0.6	59.05	-0.0114	0.1043	0.0044
796	SLU 68	-0.02	0.61	58.71	-0.0114	0.1034	0.0044
796	SLU 69	-0.03	0.55	59.41	-0.0116	0.1049	0.0045
796	SLU 70	-0.03	0.6	59.44	-0.0116	0.1052	0.0045
796	SLU 71	-0.02	0.53	59.05	-0.0115	0.1039	0.0044
796	SLU 72	-0.02	0.58	59.08	-0.0116	0.1041	0.0044
796	SLU 73	-0.01	0.67	64.13	-0.0132	0.112	0.0053
796	SLU 74	-0.01	0.61	64.83	-0.0133	0.1135	0.0054
796	SLU 75	-0.01	0.66	64.86	-0.0134	0.1137	0.0054
796	SLU 76	-0.01	0.67	64.53	-0.0134	0.1128	0.0054
796	SLU 77	-0.01	0.61	65.23	-0.0136	0.1143	0.0055
796	SLU 78	-0.01	0.66	65.25	-0.0136	0.1145	0.0054
796	SLU 79	-0.01	0.59	64.87	-0.0135	0.1133	0.0054
796	SLU 80	-0.01	0.64	64.9	-0.0136	0.1135	0.0054
796	SLU 81	-0.01	0.61	66.58	-0.0139	0.1157	0.0058
796	SLU 82	-0.01	0.66	66.6	-0.014	0.1159	0.0058
796	SLU 83	-0.01	0.61	66.97	-0.0142	0.1165	0.0058
796	SLU 84	-0.01	0.66	67	-0.0142	0.1167	0.0058
796	SLE RA 1	-0.02	0.37	43.62	-0.0083	0.0758	0.0032
796	SLE RA 2	-0.02	0.43	43.65	-0.0084	0.076	0.0032
796	SLE RA 3	-0.02	0.39	44.12	-0.0085	0.077	0.0033
796	SLE RA 4	-0.02	0.43	44.14	-0.0085	0.0772	0.0033
796	SLE RA 5	-0.02	0.43	43.92	-0.0085	0.0765	0.0033
796	SLE RA 6	-0.02	0.39	44.38	-0.0086	0.0776	0.0033
796	SLE RA 7	-0.02	0.43	44.4	-0.0087	0.0777	0.0033
796	SLE RA 8	-0.02	0.38	44.15	-0.0086	0.0769	0.0033
796	SLE RA 9	-0.02	0.41	44.17	-0.0087	0.077	0.0033
796	SLE RA 10	-0.01	0.47	47.53	-0.0097	0.0823	0.0039
796	SLE RA 11	-0.01	0.43	48	-0.0098	0.0833	0.0039
796	SLE RA 12	-0.01	0.47	48.02	-0.0099	0.0834	0.0039
796	SLE RA 13	-0.01	0.47	47.79	-0.0099	0.0828	0.0039
796	SLE RA 14	-0.01	0.44	48.26	-0.01	0.0838	0.004
796	SLE RA 15	-0.01	0.47	48.28	-0.01	0.084	0.004
796	SLE RA 16	-0.01	0.42	48.02	-0.01	0.0831	0.004
796	SLE RA 17	-0.01	0.45	48.04	-0.01	0.0833	0.0039
796	SLE RA 18	0	0.43	49.16	-0.0102	0.0847	0.0042
796	SLE RA 19	0	0.47	49.18	-0.0103	0.0849	0.0042
796	SLE RA 20	0	0.44	49.42	-0.0104	0.0853	0.0042
796	SLE RA 21	0	0.47	49.44	-0.0104	0.0854	0.0042
796	SLE FR 1	-0.02	0.37	43.62	-0.0083	0.0758	0.0032
796	SLE FR 2	-0.02	0.39	43.63	-0.0083	0.0758	0.0032
796	SLE FR 3	-0.02	0.38	43.73	-0.0084	0.076	0.0032
796	SLE FR 4	-0.01	0.4	45.29	-0.0089	0.0785	0.0035
796	SLE FR 5	-0.01	0.39	45.39	-0.0089	0.0787	0.0035
796	SLE FR 6	-0.01	0.4	46.39	-0.0093	0.0802	0.0037
796	SLE QP 1	-0.02	0.37	43.62	-0.0083	0.0758	0.0032
796	SLE QP 2	-0.01	0.39	45.28	-0.0089	0.0785	0.0035
796	SLD 1	4.72	1.49	46.91	-0.0047	0.1402	-0.0187
796	SLD 2	4.6	1.38	46.88	-0.0046	0.1406	-0.0143
796	SLD 3	4.83	-0.27	46.18	-0.0029	0.1331	-0.0174
796	SLD 4	4.71	-0.38	46.15	-0.0028	0.1335	-0.013
796	SLD 5	1.26	3.41	46.89	-0.0104	0.1077	-0.0059
796	SLD 6	1.18	3.35	46.87	-0.0103	0.1079	-0.0031
796	SLD 7	1.63	-2.46	44.45	-0.0044	0.0841	-0.0016
796	SLD 8	1.55	-2.53	44.43	-0.0043	0.0843	0.0013
796	SLD 9	-1.58	3.32	46.14	-0.0134	0.0727	0.0057
796	SLD 10	-1.65	3.25	46.12	-0.0134	0.0729	0.0086
796	SLD 11	-1.21	-2.56	43.7	-0.0075	0.049	0.0101
796	SLD 12	-1.29	-2.63	43.68	-0.0074	0.0492	0.0129
796	SLD 13	-4.74	1.16	44.42	-0.015	0.0235	0.0201
796	SLD 14	-4.86	1.06	44.38	-0.0148	0.0238	0.0245
796	SLD 15	-4.63	-0.6	43.69	-0.0132	0.0164	0.0214
796	SLD 16	-4.75	-0.71	43.65	-0.013	0.0167	0.0258
796	SLV 1	11.06	2.91	49.18	0.0009	0.2228	-0.0485
796	SLV 2	10.78	2.66	49.1	0.0013	0.2235	-0.0383
796	SLV 3	11.32	-1.11	47.52	0.005	0.2065	-0.0455
796	SLV 4	11.04	-1.35	47.43	0.0053	0.2072	-0.0352

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
796	SLV 5	2.96	7.29	48.99	-0.0122	0.1464	-0.0185
796	SLV 6	2.79	7.13	48.94	-0.0119	0.1469	-0.0119
796	SLV 7	3.82	-6.11	43.44	0.0014	0.092	-0.0083
796	SLV 8	3.65	-6.27	43.39	0.0016	0.0924	-0.0018
796	SLV 9	-3.67	7.05	47.18	-0.0193	0.0645	0.0088
796	SLV 10	-3.85	6.9	47.12	-0.0191	0.065	0.0153
796	SLV 11	-2.81	-6.34	41.63	-0.0058	0.01	0.0189
796	SLV 12	-2.99	-6.5	41.57	-0.0056	0.0105	0.0255
796	SLV 13	-11.07	2.14	43.13	-0.0231	-0.0503	0.0422
796	SLV 14	-11.34	1.89	43.05	-0.0227	-0.0495	0.0525
796	SLV 15	-10.81	-1.88	41.47	-0.019	-0.0666	0.0453
796	SLV 16	-11.09	-2.13	41.38	-0.0187	-0.0659	0.0556
796	CRTFP Ux+	0	0	0	0	0	0
796	CRTFP Ux-	0	0	0	0	0	0
798	SLU 1	-0.44	-0.05	22.9	-0.0137	-4.0888	-0.0118
798	SLU 2	-0.44	0.02	22.9	-0.0137	-4.0899	0.0056
798	SLU 3	-0.44	-0.04	23.34	-0.014	-4.1641	-0.0105
798	SLU 4	-0.44	0	23.35	-0.014	-4.1648	0
798	SLU 5	-0.44	0.02	23.16	-0.0139	-4.1323	0.0065
798	SLU 6	-0.45	-0.04	23.6	-0.0142	-4.2065	-0.0095
798	SLU 7	-0.45	0	23.6	-0.0142	-4.2072	0.0009
798	SLU 8	-0.45	-0.04	23.4	-0.014	-4.1735	-0.0099
798	SLU 9	-0.45	0	23.41	-0.014	-4.1742	0.0005
798	SLU 10	-0.47	0.04	25.8	-0.0159	-4.594	0.0097
798	SLU 11	-0.48	-0.03	26.24	-0.0162	-4.6682	-0.0063
798	SLU 12	-0.48	0.01	26.24	-0.0162	-4.6689	0.0041
798	SLU 13	-0.47	0.04	26.05	-0.0161	-4.6364	0.0106
798	SLU 14	-0.48	-0.02	26.49	-0.0163	-4.7106	-0.0054
798	SLU 15	-0.48	0.02	26.49	-0.0163	-4.7113	0.005
798	SLU 16	-0.48	-0.03	26.3	-0.0162	-4.6777	-0.0058
798	SLU 17	-0.48	0.02	26.3	-0.0162	-4.6783	0.0046
798	SLU 18	-0.48	-0.03	27.03	-0.0168	-4.8089	-0.0059
798	SLU 19	-0.48	0.01	27.03	-0.0168	-4.8096	0.0045
798	SLU 20	-0.49	-0.02	27.28	-0.017	-4.8513	-0.005
798	SLU 21	-0.49	0.02	27.29	-0.017	-4.852	0.0054
798	SLU 22	-0.48	-0.03	25.71	-0.0157	-4.5771	-0.0074
798	SLU 23	-0.48	0.04	25.72	-0.0157	-4.5782	0.0101
798	SLU 24	-0.49	-0.03	26.16	-0.016	-4.6525	-0.006
798	SLU 25	-0.49	0.01	26.16	-0.016	-4.6531	0.0045
798	SLU 26	-0.48	0.04	25.97	-0.0158	-4.6206	0.011
798	SLU 27	-0.49	-0.02	26.41	-0.0161	-4.6948	-0.0051
798	SLU 28	-0.49	0.02	26.41	-0.0161	-4.6955	0.0054
798	SLU 29	-0.49	-0.02	26.22	-0.016	-4.6619	-0.0055
798	SLU 30	-0.49	0.02	26.22	-0.016	-4.6626	0.005
798	SLU 31	-0.51	0.05	28.61	-0.0179	-5.0823	0.0142
798	SLU 32	-0.52	-0.01	29.05	-0.0181	-5.1566	-0.0019
798	SLU 33	-0.52	0.03	29.05	-0.0181	-5.1572	0.0086
798	SLU 34	-0.51	0.06	28.86	-0.018	-5.1247	0.0151
798	SLU 35	-0.52	-0.01	29.3	-0.0183	-5.199	-0.0009
798	SLU 36	-0.52	0.03	29.31	-0.0183	-5.1996	0.0095
798	SLU 37	-0.52	-0.01	29.11	-0.0182	-5.166	-0.0014
798	SLU 38	-0.52	0.03	29.11	-0.0182	-5.1667	0.0091
798	SLU 39	-0.52	-0.01	29.84	-0.0188	-5.2973	-0.0015
798	SLU 40	-0.52	0.03	29.85	-0.0188	-5.298	0.009
798	SLU 41	-0.53	-0.01	30.1	-0.019	-5.3397	-0.0005
798	SLU 42	-0.53	0.04	30.1	-0.019	-5.3403	0.0099
798	SLU 43	-0.55	-0.07	28.8	-0.0171	-5.148	-0.0169
798	SLU 44	-0.55	0	28.81	-0.0171	-5.1491	0.0005
798	SLU 45	-0.56	-0.06	29.25	-0.0174	-5.2233	-0.0155
798	SLU 46	-0.56	-0.02	29.25	-0.0174	-5.224	-0.0051
798	SLU 47	-0.56	0	29.06	-0.0173	-5.1915	0.0015
798	SLU 48	-0.57	-0.06	29.5	-0.0176	-5.2657	-0.0146
798	SLU 49	-0.57	-0.02	29.51	-0.0176	-5.2664	-0.0041
798	SLU 50	-0.57	-0.06	29.31	-0.0175	-5.2327	-0.015
798	SLU 51	-0.57	-0.02	29.31	-0.0175	-5.2334	-0.0046
798	SLU 52	-0.58	0.01	31.7	-0.0193	-5.6532	0.0046
798	SLU 53	-0.59	-0.05	32.14	-0.0196	-5.7274	-0.0114
798	SLU 54	-0.59	-0.01	32.15	-0.0196	-5.7281	-0.001
798	SLU 55	-0.59	0.02	31.96	-0.0195	-5.6956	0.0056
798	SLU 56	-0.6	-0.05	32.39	-0.0198	-5.7698	-0.0105
798	SLU 57	-0.6	0	32.4	-0.0198	-5.7705	0
798	SLU 58	-0.6	-0.05	32.2	-0.0197	-5.7369	-0.0109
798	SLU 59	-0.6	-0.01	32.21	-0.0197	-5.7375	-0.0005
798	SLU 60	-0.6	-0.05	32.93	-0.0203	-5.8681	-0.011
798	SLU 61	-0.6	-0.01	32.94	-0.0203	-5.8688	-0.0006
798	SLU 62	-0.6	-0.04	33.19	-0.0204	-5.9105	-0.0101
798	SLU 63	-0.6	0	33.19	-0.0204	-5.9112	0.0004
798	SLU 64	-0.59	-0.05	31.61	-0.0191	-5.6363	-0.0124
798	SLU 65	-0.59	0.02	31.62	-0.0191	-5.6374	0.005
798	SLU 66	-0.6	-0.05	32.06	-0.0194	-5.7116	-0.0111
798	SLU 67	-0.6	-0.01	32.06	-0.0194	-5.7123	-0.0006
798	SLU 68	-0.6	0.02	31.87	-0.0193	-5.6798	0.0059
798	SLU 69	-0.61	-0.04	32.31	-0.0196	-5.754	-0.0101
798	SLU 70	-0.61	0	32.32	-0.0196	-5.7547	0.0003
798	SLU 71	-0.61	-0.05	32.12	-0.0194	-5.7211	-0.0106
798	SLU 72	-0.61	0	32.13	-0.0194	-5.7218	-0.0001
798	SLU 73	-0.62	0.03	34.51	-0.0213	-6.1415	0.0091
798	SLU 74	-0.63	-0.03	34.95	-0.0216	-6.2158	-0.007
798	SLU 75	-0.63	0.01	34.96	-0.0216	-6.2164	0.0035
798	SLU 76	-0.63	0.04	34.77	-0.0215	-6.1839	0.01
798	SLU 77	-0.64	-0.03	35.21	-0.0217	-6.2582	-0.006

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
798	SLU 78	-0.64	0.01	35.21	-0.0217	-6.2588	0.0044
798	SLU 79	-0.64	-0.03	35.01	-0.0216	-6.2252	-0.0064
798	SLU 80	-0.64	0.01	35.02	-0.0216	-6.2259	0.004
798	SLU 81	-0.64	-0.03	35.75	-0.0222	-6.3565	-0.0066
798	SLU 82	-0.64	0.01	35.75	-0.0222	-6.3571	0.0039
798	SLU 83	-0.64	-0.03	36	-0.0224	-6.3989	-0.0056
798	SLU 84	-0.64	0.01	36	-0.0224	-6.3995	0.0048
798	SLE RA 1	-0.45	-0.04	23.7	-0.0143	-4.2283	-0.0105
798	SLE RA 2	-0.45	0	23.71	-0.0143	-4.229	0.0011
798	SLE RA 3	-0.45	-0.04	24	-0.0144	-4.2785	-0.0096
798	SLE RA 4	-0.45	-0.01	24	-0.0144	-4.279	-0.0027
798	SLE RA 5	-0.45	0	23.87	-0.0144	-4.2573	0.0017
798	SLE RA 6	-0.46	-0.04	24.17	-0.0146	-4.3068	-0.009
798	SLE RA 7	-0.46	-0.01	24.17	-0.0146	-4.3072	-0.002
798	SLE RA 8	-0.46	-0.04	24.04	-0.0145	-4.2848	-0.0093
798	SLE RA 9	-0.46	-0.01	24.04	-0.0145	-4.2853	-0.0023
798	SLE RA 10	-0.47	0.01	25.63	-0.0157	-4.5651	0.0038
798	SLE RA 11	-0.47	-0.03	25.93	-0.0159	-4.6146	-0.0069
798	SLE RA 12	-0.47	0	25.93	-0.0159	-4.615	0.0001
798	SLE RA 13	-0.47	0.01	25.8	-0.0158	-4.5934	0.0044
798	SLE RA 14	-0.48	-0.03	26.1	-0.016	-4.6429	-0.0063
798	SLE RA 15	-0.48	0	26.1	-0.016	-4.6433	0.0007
798	SLE RA 16	-0.48	-0.03	25.97	-0.0159	-4.6209	-0.0066
798	SLE RA 17	-0.48	0	25.97	-0.0159	-4.6213	0.0004
798	SLE RA 18	-0.48	-0.03	26.46	-0.0163	-4.7084	-0.0066
798	SLE RA 19	-0.48	0	26.46	-0.0163	-4.7089	0.0003
798	SLE RA 20	-0.48	-0.03	26.62	-0.0165	-4.7367	-0.006
798	SLE RA 21	-0.48	0	26.63	-0.0165	-4.7371	0.001
798	SLE FR 1	-0.45	-0.04	23.7	-0.0143	-4.2283	-0.0105
798	SLE FR 2	-0.45	-0.04	23.7	-0.0143	-4.2284	-0.0082
798	SLE FR 3	-0.45	-0.04	23.77	-0.0143	-4.2396	-0.0103
798	SLE FR 4	-0.46	-0.03	24.53	-0.0149	-4.3725	-0.007
798	SLE FR 5	-0.46	-0.04	24.59	-0.0149	-4.3836	-0.0091
798	SLE FR 6	-0.46	-0.04	25.08	-0.0153	-4.4683	-0.0086
798	SLE QP 1	-0.45	-0.04	23.7	-0.0143	-4.2283	-0.0105
798	SLE QP 2	-0.46	-0.04	24.53	-0.0149	-4.3723	-0.0094
798	SLD 1	1.96	0.89	29.31	-0.0183	-5.1783	0.2224
798	SLD 2	1.89	0.58	29.32	-0.0182	-5.1833	0.1455
798	SLD 3	1.9	-0.32	29.43	-0.0178	-5.1998	-0.0804
798	SLD 4	1.83	-0.63	29.44	-0.0177	-5.2049	-0.1573
798	SLD 5	0.37	2.13	25.77	-0.0167	-4.5805	0.5329
798	SLD 6	0.32	1.93	25.78	-0.0166	-4.5838	0.483
798	SLD 7	0.17	-1.91	26.19	-0.015	-4.6524	-0.4766
798	SLD 8	0.13	-2.11	26.19	-0.015	-4.6557	-0.5265
798	SLD 9	-1.04	2.03	22.86	-0.0148	-4.089	0.5077
798	SLD 10	-1.09	1.83	22.87	-0.0147	-4.0923	0.4578
798	SLD 11	-1.24	-2.01	23.28	-0.0131	-4.1608	-0.5017
798	SLD 12	-1.28	-2.21	23.28	-0.0131	-4.1641	-0.5516
798	SLD 13	-2.75	0.55	19.61	-0.0121	-3.5398	0.1386
798	SLD 14	-2.81	0.24	19.62	-0.012	-3.5448	0.0617
798	SLD 15	-2.8	-0.66	19.74	-0.0116	-3.5613	-0.1643
798	SLD 16	-2.87	-0.97	19.74	-0.0115	-3.5664	-0.2412
798	SLV 1	5.18	2.1	35.72	-0.0229	-6.2588	0.5242
798	SLV 2	5.03	1.38	35.73	-0.0227	-6.2706	0.3451
798	SLV 3	5.05	-0.66	36.01	-0.0217	-6.3089	-0.1666
798	SLV 4	4.9	-1.38	36.02	-0.0215	-6.3207	-0.3457
798	SLV 5	1.47	4.91	27.44	-0.0191	-4.8602	1.2287
798	SLV 6	1.37	4.45	27.45	-0.0189	-4.8678	1.1143
798	SLV 7	1.01	-4.29	28.41	-0.0152	-5.0273	-1.0739
798	SLV 8	0.92	-4.75	28.42	-0.0151	-5.0349	-1.1883
798	SLV 9	-1.83	4.67	20.64	-0.0147	-3.7098	1.1695
798	SLV 10	-1.93	4.21	20.64	-0.0145	-3.7173	1.0551
798	SLV 11	-2.28	-4.53	21.6	-0.0109	-3.8769	-1.133
798	SLV 12	-2.38	-4.99	21.61	-0.0107	-3.8844	-1.2474
798	SLV 13	-5.81	1.3	13.03	-0.0083	-2.4239	0.327
798	SLV 14	-5.96	0.58	13.04	-0.008	-2.4357	0.1479
798	SLV 15	-5.95	-1.46	13.32	-0.0071	-2.474	-0.3638
798	SLV 16	-6.1	-2.18	13.33	-0.0069	-2.4859	-0.5429
798	CRTFP Ux+	0	0	0	0	0	0
798	CRTFP Ux-	0	0	0	0	0	0
801	SLU 1	0.45	0.55	27.32	-0.0615	6.7422	-0.1926
801	SLU 2	0.44	0.63	27.33	-0.0615	6.7447	-0.2219
801	SLU 3	0.46	0.56	27.84	-0.0628	6.863	-0.1984
801	SLU 4	0.45	0.61	27.85	-0.0629	6.8645	-0.216
801	SLU 5	0.45	0.64	27.63	-0.0623	6.8131	-0.2237
801	SLU 6	0.46	0.57	28.14	-0.0636	6.9314	-0.2002
801	SLU 7	0.46	0.62	28.14	-0.0636	6.9329	-0.2178
801	SLU 8	0.46	0.56	27.91	-0.063	6.879	-0.1962
801	SLU 9	0.46	0.61	27.92	-0.0631	6.8805	-0.2138
801	SLU 10	0.48	0.74	30.72	-0.0704	7.545	-0.2612
801	SLU 11	0.49	0.67	31.23	-0.0717	7.6632	-0.2376
801	SLU 12	0.49	0.72	31.24	-0.0717	7.6647	-0.2552
801	SLU 13	0.48	0.75	31.02	-0.0711	7.6134	-0.263
801	SLU 14	0.5	0.68	31.53	-0.0724	7.7316	-0.2395
801	SLU 15	0.5	0.73	31.53	-0.0725	7.7331	-0.257
801	SLU 16	0.5	0.67	31.3	-0.0719	7.6793	-0.2355
801	SLU 17	0.49	0.72	31.31	-0.0719	7.6808	-0.2531
801	SLU 18	0.5	0.71	32.17	-0.0741	7.8854	-0.2487
801	SLU 19	0.49	0.76	32.17	-0.0742	7.8869	-0.2663
801	SLU 20	0.5	0.71	32.46	-0.0749	7.9538	-0.2505
801	SLU 21	0.5	0.76	32.47	-0.0749	7.9553	-0.2681

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
801	SLU 22	0.49	0.64	30.6	-0.07	7.5134	-0.2262
801	SLU 23	0.48	0.73	30.61	-0.07	7.5159	-0.2555
801	SLU 24	0.5	0.66	31.12	-0.0713	7.6342	-0.2319
801	SLU 25	0.5	0.71	31.12	-0.0713	7.6357	-0.2495
801	SLU 26	0.49	0.73	30.9	-0.0707	7.5843	-0.2573
801	SLU 27	0.51	0.66	31.42	-0.072	7.7026	-0.2338
801	SLU 28	0.51	0.71	31.42	-0.0721	7.7041	-0.2513
801	SLU 29	0.51	0.65	31.19	-0.0715	7.6502	-0.2298
801	SLU 30	0.5	0.7	31.19	-0.0715	7.6517	-0.2474
801	SLU 31	0.52	0.84	34	-0.0788	8.3162	-0.2947
801	SLU 32	0.54	0.77	34.51	-0.0801	8.4344	-0.2712
801	SLU 33	0.53	0.82	34.51	-0.0801	8.4359	-0.2888
801	SLU 34	0.53	0.84	34.29	-0.0796	8.3846	-0.2965
801	SLU 35	0.54	0.78	34.81	-0.0809	8.5028	-0.273
801	SLU 36	0.54	0.83	34.81	-0.0809	8.5043	-0.2906
801	SLU 37	0.54	0.76	34.58	-0.0803	8.4505	-0.2691
801	SLU 38	0.54	0.81	34.58	-0.0803	8.452	-0.2866
801	SLU 39	0.54	0.8	35.44	-0.0826	8.6566	-0.2822
801	SLU 40	0.54	0.85	35.45	-0.0826	8.6581	-0.2998
801	SLU 41	0.55	0.81	35.74	-0.0834	8.725	-0.2841
801	SLU 42	0.54	0.86	35.74	-0.0834	8.7265	-0.3016
801	SLU 43	0.56	0.68	34.4	-0.0771	8.5005	-0.2389
801	SLU 44	0.56	0.76	34.4	-0.0771	8.503	-0.2682
801	SLU 45	0.58	0.69	34.92	-0.0784	8.6212	-0.2447
801	SLU 46	0.57	0.74	34.92	-0.0784	8.6227	-0.2622
801	SLU 47	0.57	0.77	34.7	-0.0779	8.5714	-0.27
801	SLU 48	0.58	0.7	35.21	-0.0792	8.6896	-0.2465
801	SLU 49	0.58	0.75	35.22	-0.0792	8.6911	-0.2641
801	SLU 50	0.58	0.69	34.99	-0.0786	8.6373	-0.2425
801	SLU 51	0.58	0.74	34.99	-0.0786	8.6388	-0.2601
801	SLU 52	0.59	0.87	37.79	-0.0859	9.3032	-0.3074
801	SLU 53	0.61	0.81	38.31	-0.0872	9.4215	-0.2839
801	SLU 54	0.61	0.86	38.31	-0.0873	9.423	-0.3015
801	SLU 55	0.6	0.88	38.09	-0.0867	9.3716	-0.3092
801	SLU 56	0.62	0.81	38.6	-0.088	9.4899	-0.2857
801	SLU 57	0.61	0.86	38.61	-0.088	9.4914	-0.3033
801	SLU 58	0.61	0.8	38.38	-0.0874	9.4375	-0.2818
801	SLU 59	0.61	0.85	38.38	-0.0875	9.439	-0.2994
801	SLU 60	0.62	0.84	39.24	-0.0897	9.6437	-0.295
801	SLU 61	0.61	0.89	39.24	-0.0897	9.6452	-0.3125
801	SLU 62	0.62	0.84	39.54	-0.0905	9.7121	-0.2968
801	SLU 63	0.62	0.89	39.54	-0.0905	9.7136	-0.3144
801	SLU 64	0.61	0.77	37.67	-0.0855	9.2717	-0.2724
801	SLU 65	0.6	0.86	37.68	-0.0855	9.2742	-0.3017
801	SLU 66	0.62	0.79	38.19	-0.0868	9.3924	-0.2782
801	SLU 67	0.62	0.84	38.2	-0.0869	9.3939	-0.2958
801	SLU 68	0.61	0.86	37.98	-0.0863	9.3426	-0.3035
801	SLU 69	0.63	0.8	38.49	-0.0876	9.4608	-0.28
801	SLU 70	0.62	0.85	38.49	-0.0876	9.4623	-0.2976
801	SLU 71	0.62	0.78	38.26	-0.087	9.4085	-0.2761
801	SLU 72	0.62	0.83	38.27	-0.0871	9.41	-0.2937
801	SLU 73	0.64	0.97	41.07	-0.0944	10.0744	-0.341
801	SLU 74	0.66	0.9	41.58	-0.0957	10.1927	-0.3175
801	SLU 75	0.65	0.95	41.59	-0.0957	10.1942	-0.3351
801	SLU 76	0.65	0.97	41.37	-0.0951	10.1428	-0.3428
801	SLU 77	0.66	0.91	41.88	-0.0964	10.2611	-0.3193
801	SLU 78	0.66	0.96	41.88	-0.0965	10.2626	-0.3369
801	SLU 79	0.66	0.9	41.65	-0.0959	10.2087	-0.3153
801	SLU 80	0.66	0.95	41.66	-0.0959	10.2102	-0.3329
801	SLU 81	0.66	0.93	42.52	-0.0982	10.4149	-0.3285
801	SLU 82	0.66	0.98	42.52	-0.0982	10.4164	-0.3461
801	SLU 83	0.67	0.94	42.81	-0.0989	10.4833	-0.3303
801	SLU 84	0.66	0.99	42.82	-0.0989	10.4848	-0.3479
801	SLE RA 1	0.46	0.57	28.26	-0.0639	6.9626	-0.2022
801	SLE RA 2	0.45	0.63	28.26	-0.0639	6.9642	-0.2217
801	SLE RA 3	0.47	0.59	28.61	-0.0648	7.0431	-0.206
801	SLE RA 4	0.46	0.62	28.61	-0.0648	7.0441	-0.2178
801	SLE RA 5	0.46	0.63	28.46	-0.0645	7.0098	-0.2229
801	SLE RA 6	0.47	0.59	28.8	-0.0653	7.0887	-0.2073
801	SLE RA 7	0.47	0.62	28.81	-0.0653	7.0897	-0.219
801	SLE RA 8	0.47	0.58	28.65	-0.0649	7.0538	-0.2046
801	SLE RA 9	0.47	0.61	28.66	-0.065	7.0548	-0.2163
801	SLE RA 10	0.48	0.7	30.52	-0.0698	7.4977	-0.2479
801	SLE RA 11	0.49	0.66	30.87	-0.0707	7.5766	-0.2322
801	SLE RA 12	0.49	0.69	30.87	-0.0707	7.5776	-0.2439
801	SLE RA 13	0.48	0.71	30.72	-0.0703	7.5433	-0.2491
801	SLE RA 14	0.49	0.66	31.06	-0.0712	7.6222	-0.2334
801	SLE RA 15	0.49	0.7	31.07	-0.0712	7.6232	-0.2451
801	SLE RA 16	0.49	0.66	30.91	-0.0708	7.5873	-0.2308
801	SLE RA 17	0.49	0.69	30.92	-0.0709	7.5883	-0.2425
801	SLE RA 18	0.49	0.68	31.49	-0.0724	7.7247	-0.2396
801	SLE RA 19	0.49	0.71	31.49	-0.0724	7.7257	-0.2513
801	SLE RA 20	0.5	0.68	31.68	-0.0729	7.7703	-0.2408
801	SLE RA 21	0.49	0.72	31.69	-0.0729	7.7713	-0.2525
801	SLE FR 1	0.46	0.57	28.26	-0.0639	6.9626	-0.2022
801	SLE FR 2	0.46	0.59	28.26	-0.0639	6.9629	-0.2061
801	SLE FR 3	0.46	0.58	28.34	-0.0641	6.9808	-0.2027
801	SLE FR 4	0.47	0.62	29.23	-0.0665	7.1915	-0.2173
801	SLE FR 5	0.47	0.61	29.31	-0.0667	7.2094	-0.2139
801	SLE FR 6	0.48	0.63	29.87	-0.0681	7.3436	-0.2209
801	SLE QP 1	0.46	0.57	28.26	-0.0639	6.9626	-0.2022

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
801	SLE QP 2	0.47	0.61	29.23	-0.0665	7.1912	-0.2134
801	SLD 1	2.65	0.99	24.07	-0.0516	6.1066	-0.3459
801	SLD 2	2.55	1.39	24.05	-0.0518	6.1039	-0.4848
801	SLD 3	2.88	-0.55	24.2	-0.051	6.0677	0.1933
801	SLD 4	2.77	-0.15	24.18	-0.0511	6.065	0.0544
801	SLD 5	0.8	2.99	27.49	-0.0629	6.9252	-1.0468
801	SLD 6	0.73	3.25	27.48	-0.063	6.9234	-1.1369
801	SLD 7	1.55	-2.15	27.92	-0.0608	6.7957	0.7507
801	SLD 8	1.49	-1.89	27.9	-0.061	6.794	0.6606
801	SLD 9	-0.55	3.1	30.55	-0.072	7.5884	-1.0874
801	SLD 10	-0.62	3.36	30.54	-0.0721	7.5866	-1.1775
801	SLD 11	0.21	-2.04	30.98	-0.0699	7.459	0.7101
801	SLD 12	0.14	-1.78	30.96	-0.07	7.4572	0.62
801	SLD 13	-1.84	1.36	34.27	-0.0818	8.3174	-0.4812
801	SLD 14	-1.94	1.76	34.26	-0.082	8.3146	-0.6201
801	SLD 15	-1.61	-0.18	34.4	-0.0812	8.2785	0.058
801	SLD 16	-1.71	0.22	34.38	-0.0813	8.2758	-0.0809
801	SLV 1	5.58	1.47	17.16	-0.0316	4.6523	-0.5067
801	SLV 2	5.34	2.4	17.12	-0.032	4.6459	-0.8303
801	SLV 3	6.1	-2.04	17.46	-0.0302	4.5627	0.7199
801	SLV 4	5.85	-1.12	17.42	-0.0306	4.5563	0.3963
801	SLV 5	1.26	6.03	25.16	-0.0581	6.5665	-2.1069
801	SLV 6	1.11	6.63	25.14	-0.0583	6.5624	-2.3136
801	SLV 7	2.98	-5.67	26.16	-0.0534	6.2678	1.9817
801	SLV 8	2.82	-5.08	26.13	-0.0536	6.2638	1.775
801	SLV 9	-1.89	6.29	32.33	-0.0793	8.1186	-2.2018
801	SLV 10	-2.04	6.88	32.3	-0.0795	8.1146	-2.4085
801	SLV 11	-0.17	-5.41	33.32	-0.0746	7.82	1.8867
801	SLV 12	-0.32	-4.82	33.29	-0.0748	7.8159	1.6801
801	SLV 13	-4.92	2.33	41.04	-0.1023	9.8261	-0.8231
801	SLV 14	-5.16	3.26	40.99	-0.1027	9.8197	-1.1467
801	SLV 15	-4.4	-1.18	41.34	-0.1009	9.7365	0.4035
801	SLV 16	-4.64	-0.26	41.29	-0.1013	9.7301	0.0799
801	CRTFP Ux+	0	0	0	0	0	0
801	CRTFP Ux-	0	0	0	0	0	0
803	SLU 1	0.9	-0.01	52.04	0.0057	0.2214	-0.0154
803	SLU 2	0.9	0.08	52.06	0.0055	0.2207	-0.0155
803	SLU 3	0.92	-0.01	53.06	0.0058	0.2266	-0.0158
803	SLU 4	0.92	0.05	53.07	0.0057	0.2261	-0.0158
803	SLU 5	0.91	0.07	52.62	0.0055	0.2228	-0.0158
803	SLU 6	0.94	-0.01	53.62	0.0058	0.2286	-0.0161
803	SLU 7	0.94	0.04	53.63	0.0057	0.2282	-0.0161
803	SLU 8	0.93	-0.03	53.16	0.0057	0.2255	-0.016
803	SLU 9	0.93	0.03	53.18	0.0056	0.2251	-0.0161
803	SLU 10	0.97	0.12	59.1	0.0059	0.2583	-0.0175
803	SLU 11	0.99	0.04	60.1	0.0063	0.2641	-0.0178
803	SLU 12	0.99	0.09	60.11	0.0062	0.2637	-0.0178
803	SLU 13	0.99	0.12	59.66	0.006	0.2603	-0.0178
803	SLU 14	1.01	0.03	60.66	0.0063	0.2661	-0.0181
803	SLU 15	1.01	0.09	60.67	0.0062	0.2657	-0.0182
803	SLU 16	1	0.02	60.2	0.0061	0.263	-0.018
803	SLU 17	1	0.07	60.22	0.006	0.2626	-0.0181
803	SLU 18	1	0.05	62.1	0.0063	0.2751	-0.0183
803	SLU 19	1	0.11	62.11	0.0062	0.2746	-0.0183
803	SLU 20	1.02	0.04	62.66	0.0063	0.2771	-0.0186
803	SLU 21	1.02	0.1	62.67	0.0062	0.2767	-0.0186
803	SLU 22	0.98	0.04	58.77	0.0065	0.2561	-0.0171
803	SLU 23	0.98	0.13	58.79	0.0063	0.2554	-0.0172
803	SLU 24	1	0.05	59.78	0.0067	0.2613	-0.0174
803	SLU 25	1	0.1	59.8	0.0066	0.2608	-0.0175
803	SLU 26	1	0.13	59.35	0.0064	0.2575	-0.0175
803	SLU 27	1.02	0.04	60.34	0.0067	0.2633	-0.0177
803	SLU 28	1.02	0.1	60.36	0.0066	0.2629	-0.0178
803	SLU 29	1.01	0.03	59.89	0.0065	0.2602	-0.0177
803	SLU 30	1.01	0.08	59.9	0.0064	0.2598	-0.0177
803	SLU 31	1.05	0.18	65.83	0.0068	0.293	-0.0192
803	SLU 32	1.08	0.1	66.83	0.0071	0.2988	-0.0195
803	SLU 33	1.08	0.15	66.84	0.007	0.2984	-0.0195
803	SLU 34	1.07	0.17	66.39	0.0068	0.295	-0.0195
803	SLU 35	1.09	0.09	67.39	0.0071	0.3008	-0.0198
803	SLU 36	1.09	0.14	67.4	0.007	0.3004	-0.0198
803	SLU 37	1.09	0.08	66.93	0.007	0.2977	-0.0197
803	SLU 38	1.09	0.13	66.95	0.0069	0.2973	-0.0198
803	SLU 39	1.09	0.11	68.83	0.0071	0.3097	-0.0199
803	SLU 40	1.09	0.16	68.84	0.007	0.3093	-0.02
803	SLU 41	1.1	0.1	69.39	0.0071	0.3118	-0.0202
803	SLU 42	1.1	0.16	69.4	0.007	0.3114	-0.0203
803	SLU 43	1.14	-0.04	65.35	0.0071	0.276	-0.0194
803	SLU 44	1.14	0.05	65.37	0.0069	0.2753	-0.0196
803	SLU 45	1.16	-0.03	66.36	0.0072	0.2811	-0.0198
803	SLU 46	1.16	0.02	66.37	0.0071	0.2807	-0.0199
803	SLU 47	1.15	0.05	65.93	0.0069	0.2773	-0.0199
803	SLU 48	1.18	-0.04	66.92	0.0073	0.2831	-0.0201
803	SLU 49	1.18	0.02	66.93	0.0072	0.2827	-0.0202
803	SLU 50	1.17	-0.05	66.47	0.0071	0.28	-0.02
803	SLU 51	1.17	0	66.48	0.007	0.2796	-0.0201
803	SLU 52	1.21	0.1	72.41	0.0074	0.3128	-0.0216
803	SLU 53	1.23	0.02	73.4	0.0077	0.3186	-0.0218
803	SLU 54	1.23	0.07	73.42	0.0076	0.3182	-0.0219
803	SLU 55	1.23	0.09	72.97	0.0074	0.3148	-0.0219
803	SLU 56	1.25	0.01	73.96	0.0077	0.3207	-0.0221

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
803	SLU 57	1.25	0.06	73.98	0.0076	0.3202	-0.0222
803	SLU 58	1.24	0	73.51	0.0076	0.3176	-0.0221
803	SLU 59	1.24	0.05	73.52	0.0075	0.3172	-0.0221
803	SLU 60	1.24	0.03	75.41	0.0077	0.3296	-0.0223
803	SLU 61	1.24	0.08	75.42	0.0076	0.3292	-0.0224
803	SLU 62	1.26	0.02	75.97	0.0077	0.3316	-0.0226
803	SLU 63	1.26	0.08	75.98	0.0076	0.3312	-0.0227
803	SLU 64	1.22	0.02	72.08	0.0079	0.3107	-0.0211
803	SLU 65	1.22	0.11	72.1	0.0078	0.31	-0.0212
803	SLU 66	1.24	0.03	73.09	0.0081	0.3158	-0.0215
803	SLU 67	1.24	0.08	73.1	0.008	0.3154	-0.0216
803	SLU 68	1.24	0.1	72.66	0.0078	0.312	-0.0215
803	SLU 69	1.26	0.02	73.65	0.0081	0.3178	-0.0218
803	SLU 70	1.26	0.07	73.66	0.008	0.3174	-0.0219
803	SLU 71	1.25	0.01	73.2	0.008	0.3147	-0.0217
803	SLU 72	1.25	0.06	73.21	0.0079	0.3143	-0.0218
803	SLU 73	1.29	0.16	79.14	0.0082	0.3475	-0.0232
803	SLU 74	1.32	0.07	80.13	0.0085	0.3533	-0.0235
803	SLU 75	1.32	0.13	80.14	0.0084	0.3529	-0.0236
803	SLU 76	1.31	0.15	79.7	0.0082	0.3495	-0.0235
803	SLU 77	1.33	0.07	80.69	0.0085	0.3554	-0.0238
803	SLU 78	1.33	0.12	80.7	0.0084	0.3549	-0.0239
803	SLU 79	1.33	0.05	80.24	0.0084	0.3523	-0.0237
803	SLU 80	1.33	0.11	80.25	0.0083	0.3518	-0.0238
803	SLU 81	1.33	0.08	82.14	0.0085	0.3643	-0.024
803	SLU 82	1.33	0.14	82.15	0.0084	0.3639	-0.0241
803	SLU 83	1.34	0.08	82.7	0.0086	0.3663	-0.0243
803	SLU 84	1.34	0.13	82.71	0.0085	0.3659	-0.0244
803	SLE RA 1	0.92	0	53.97	0.0059	0.2314	-0.0159
803	SLE RA 2	0.92	0.06	53.98	0.0058	0.2309	-0.016
803	SLE RA 3	0.94	0.01	54.64	0.006	0.2348	-0.0161
803	SLE RA 4	0.94	0.04	54.65	0.0059	0.2345	-0.0162
803	SLE RA 5	0.93	0.06	54.35	0.0058	0.2322	-0.0162
803	SLE RA 6	0.95	0	55.01	0.006	0.2361	-0.0163
803	SLE RA 7	0.95	0.04	55.02	0.006	0.2358	-0.0164
803	SLE RA 8	0.94	-0.01	54.71	0.0059	0.2341	-0.0163
803	SLE RA 9	0.94	0.03	54.72	0.0059	0.2338	-0.0163
803	SLE RA 10	0.97	0.09	58.67	0.0061	0.2559	-0.0173
803	SLE RA 11	0.99	0.04	59.33	0.0063	0.2598	-0.0175
803	SLE RA 12	0.99	0.07	59.34	0.0062	0.2595	-0.0175
803	SLE RA 13	0.98	0.09	59.05	0.0061	0.2573	-0.0175
803	SLE RA 14	1	0.03	59.71	0.0063	0.2611	-0.0177
803	SLE RA 15	1	0.07	59.72	0.0062	0.2609	-0.0177
803	SLE RA 16	0.99	0.02	59.41	0.0062	0.2591	-0.0176
803	SLE RA 17	0.99	0.06	59.41	0.0062	0.2588	-0.0177
803	SLE RA 18	0.99	0.05	60.67	0.0063	0.2671	-0.0178
803	SLE RA 19	0.99	0.08	60.68	0.0063	0.2668	-0.0178
803	SLE RA 20	1	0.04	61.04	0.0063	0.2685	-0.018
803	SLE RA 21	1	0.08	61.05	0.0063	0.2682	-0.018
803	SLE FR 1	0.92	0	53.97	0.0059	0.2314	-0.0159
803	SLE FR 2	0.92	0.01	53.97	0.0059	0.2313	-0.0159
803	SLE FR 3	0.92	0	54.11	0.0059	0.2319	-0.016
803	SLE FR 4	0.94	0.03	55.98	0.006	0.242	-0.0165
803	SLE FR 5	0.95	0.01	56.13	0.006	0.2426	-0.0165
803	SLE FR 6	0.96	0.02	57.32	0.0061	0.2492	-0.0168
803	SLE QP 1	0.92	0	53.97	0.0059	0.2314	-0.0159
803	SLE QP 2	0.94	0.01	55.98	0.006	0.2421	-0.0164
803	SLD 1	5.81	0.91	52.54	0.0031	0.2141	-0.0385
803	SLD 2	5.67	1.19	52.54	0.0025	0.2139	-0.0338
803	SLD 3	5.93	-0.89	52.26	0.0069	0.2362	-0.0371
803	SLD 4	5.79	-0.6	52.25	0.0062	0.2361	-0.0325
803	SLD 5	2.26	2.95	55.39	-0.0005	0.2001	-0.0259
803	SLD 6	2.17	3.14	55.38	-0.0009	0.2	-0.0229
803	SLD 7	2.63	-3.03	54.42	0.0121	0.2739	-0.0214
803	SLD 8	2.54	-2.84	54.42	0.0117	0.2738	-0.0184
803	SLD 9	-0.66	2.87	57.53	0.0003	0.2103	-0.0145
803	SLD 10	-0.75	3.06	57.53	-0.0001	0.2102	-0.0115
803	SLD 11	-0.28	-3.11	56.57	0.013	0.2841	-0.01
803	SLD 12	-0.37	-2.92	56.57	0.0126	0.284	-0.007
803	SLD 13	-3.9	0.63	59.7	0.0058	0.2481	-0.0004
803	SLD 14	-4.04	0.92	59.7	0.0052	0.2479	0.0042
803	SLD 15	-3.79	-1.17	59.41	0.0096	0.2702	0.0009
803	SLD 16	-3.93	-0.88	59.41	0.009	0.2701	0.0056
803	SLV 1	12.33	2.05	47.93	-0.0007	0.176	-0.0679
803	SLV 2	12.01	2.72	47.92	-0.0022	0.1757	-0.0571
803	SLV 3	12.6	-2.04	47.27	0.0079	0.2277	-0.0648
803	SLV 4	12.27	-1.37	47.26	0.0064	0.2274	-0.054
803	SLV 5	4.02	6.71	54.57	-0.0088	0.144	-0.0384
803	SLV 6	3.81	7.14	54.56	-0.0097	0.1438	-0.0315
803	SLV 7	4.89	-6.91	52.36	0.0199	0.3161	-0.0281
803	SLV 8	4.68	-6.48	52.36	0.0189	0.3159	-0.0212
803	SLV 9	-2.8	6.51	59.59	-0.0068	0.1682	-0.0117
803	SLV 10	-3.01	6.94	59.59	-0.0078	0.168	-0.0048
803	SLV 11	-1.93	-7.11	57.39	0.0218	0.3403	-0.0014
803	SLV 12	-2.13	-6.68	57.39	0.0208	0.3401	0.0055
803	SLV 13	-10.39	1.4	64.69	0.0057	0.2568	0.0211
803	SLV 14	-10.71	2.06	64.68	0.0042	0.2565	0.0319
803	SLV 15	-10.13	-2.69	64.03	0.0143	0.3084	0.0242
803	SLV 16	-10.45	-2.02	64.02	0.0128	0.3081	0.035
803	CRTFP Ux+	0	0	0	0	0	0
803	CRTFP Ux-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
806	SLU 1	-0.66	-0.21	54.35	-0.0087	-0.2294	0.0149
806	SLU 2	-0.66	-0.11	54.37	-0.0089	-0.2283	0.015
806	SLU 3	-0.68	-0.2	55.43	-0.0089	-0.2348	0.0152
806	SLU 4	-0.68	-0.14	55.44	-0.009	-0.2341	0.0153
806	SLU 5	-0.67	-0.12	54.95	-0.0091	-0.2305	0.0152
806	SLU 6	-0.69	-0.21	56.01	-0.0091	-0.2371	0.0155
806	SLU 7	-0.69	-0.15	56.02	-0.0092	-0.2364	0.0155
806	SLU 8	-0.68	-0.22	55.51	-0.0091	-0.2339	0.0154
806	SLU 9	-0.68	-0.16	55.52	-0.0092	-0.2332	0.0154
806	SLU 10	-0.7	-0.11	61.86	-0.0109	-0.2686	0.0172
806	SLU 11	-0.71	-0.21	62.92	-0.0109	-0.2751	0.0175
806	SLU 12	-0.71	-0.15	62.93	-0.011	-0.2745	0.0176
806	SLU 13	-0.71	-0.12	62.44	-0.0111	-0.2708	0.0175
806	SLU 14	-0.72	-0.21	63.5	-0.0111	-0.2774	0.0178
806	SLU 15	-0.72	-0.15	63.51	-0.0112	-0.2767	0.0178
806	SLU 16	-0.72	-0.22	63.01	-0.011	-0.2742	0.0177
806	SLU 17	-0.72	-0.16	63.02	-0.0112	-0.2735	0.0177
806	SLU 18	-0.71	-0.22	65.05	-0.0115	-0.287	0.0182
806	SLU 19	-0.71	-0.16	65.07	-0.0117	-0.2863	0.0182
806	SLU 20	-0.72	-0.22	65.64	-0.0117	-0.2892	0.0184
806	SLU 21	-0.72	-0.16	65.65	-0.0118	-0.2886	0.0185
806	SLU 22	-0.72	-0.18	61.5	-0.0099	-0.2655	0.0165
806	SLU 23	-0.72	-0.08	61.52	-0.0101	-0.2643	0.0165
806	SLU 24	-0.74	-0.17	62.58	-0.0101	-0.2709	0.0168
806	SLU 25	-0.74	-0.11	62.59	-0.0102	-0.2702	0.0168
806	SLU 26	-0.74	-0.08	62.1	-0.0103	-0.2666	0.0168
806	SLU 27	-0.75	-0.17	63.16	-0.0103	-0.2731	0.0171
806	SLU 28	-0.75	-0.11	63.17	-0.0104	-0.2724	0.0171
806	SLU 29	-0.74	-0.19	62.66	-0.0103	-0.2699	0.017
806	SLU 30	-0.75	-0.13	62.67	-0.0104	-0.2693	0.017
806	SLU 31	-0.76	-0.08	69.01	-0.0121	-0.3047	0.0188
806	SLU 32	-0.77	-0.17	70.07	-0.0121	-0.3112	0.0191
806	SLU 33	-0.77	-0.11	70.08	-0.0122	-0.3105	0.0191
806	SLU 34	-0.77	-0.08	69.59	-0.0122	-0.3069	0.0191
806	SLU 35	-0.78	-0.17	70.65	-0.0122	-0.3134	0.0194
806	SLU 36	-0.78	-0.11	70.66	-0.0123	-0.3128	0.0194
806	SLU 37	-0.78	-0.19	70.16	-0.0122	-0.3103	0.0193
806	SLU 38	-0.78	-0.13	70.17	-0.0123	-0.3096	0.0193
806	SLU 39	-0.77	-0.18	72.2	-0.0127	-0.3231	0.0197
806	SLU 40	-0.77	-0.12	72.22	-0.0128	-0.3224	0.0198
806	SLU 41	-0.78	-0.18	72.79	-0.0129	-0.3253	0.02
806	SLU 42	-0.79	-0.12	72.8	-0.013	-0.3246	0.02
806	SLU 43	-0.84	-0.29	68.2	-0.011	-0.2858	0.0188
806	SLU 44	-0.84	-0.19	68.22	-0.0112	-0.2847	0.0189
806	SLU 45	-0.85	-0.28	69.28	-0.0111	-0.2913	0.0192
806	SLU 46	-0.86	-0.22	69.29	-0.0113	-0.2906	0.0192
806	SLU 47	-0.85	-0.19	68.81	-0.0113	-0.287	0.0191
806	SLU 48	-0.87	-0.28	69.86	-0.0113	-0.2935	0.0194
806	SLU 49	-0.87	-0.22	69.88	-0.0114	-0.2928	0.0194
806	SLU 50	-0.86	-0.29	69.37	-0.0113	-0.2903	0.0193
806	SLU 51	-0.86	-0.23	69.38	-0.0114	-0.2896	0.0194
806	SLU 52	-0.88	-0.19	75.72	-0.0131	-0.325	0.0212
806	SLU 53	-0.89	-0.28	76.78	-0.0131	-0.3316	0.0214
806	SLU 54	-0.89	-0.22	76.79	-0.0132	-0.3309	0.0215
806	SLU 55	-0.89	-0.19	76.3	-0.0133	-0.3273	0.0214
806	SLU 56	-0.9	-0.28	77.36	-0.0133	-0.3338	0.0217
806	SLU 57	-0.9	-0.22	77.37	-0.0134	-0.3332	0.0217
806	SLU 58	-0.9	-0.3	76.86	-0.0133	-0.3307	0.0216
806	SLU 59	-0.9	-0.24	76.87	-0.0134	-0.33	0.0217
806	SLU 60	-0.89	-0.29	78.91	-0.0138	-0.3434	0.0221
806	SLU 61	-0.89	-0.23	78.92	-0.0139	-0.3428	0.0221
806	SLU 62	-0.9	-0.29	79.49	-0.0139	-0.3457	0.0223
806	SLU 63	-0.9	-0.23	79.5	-0.0141	-0.345	0.0224
806	SLU 64	-0.9	-0.26	75.35	-0.0121	-0.3219	0.0204
806	SLU 65	-0.9	-0.16	75.37	-0.0123	-0.3208	0.0205
806	SLU 66	-0.92	-0.25	76.43	-0.0123	-0.3273	0.0207
806	SLU 67	-0.92	-0.19	76.44	-0.0124	-0.3267	0.0208
806	SLU 68	-0.91	-0.16	75.95	-0.0125	-0.323	0.0207
806	SLU 69	-0.93	-0.25	77.01	-0.0125	-0.3296	0.021
806	SLU 70	-0.93	-0.19	77.02	-0.0126	-0.3289	0.021
806	SLU 71	-0.92	-0.26	76.52	-0.0125	-0.3264	0.0209
806	SLU 72	-0.92	-0.2	76.53	-0.0126	-0.3257	0.021
806	SLU 73	-0.94	-0.16	82.87	-0.0143	-0.3611	0.0228
806	SLU 74	-0.95	-0.25	83.92	-0.0143	-0.3677	0.023
806	SLU 75	-0.95	-0.19	83.94	-0.0144	-0.367	0.0231
806	SLU 76	-0.95	-0.16	83.45	-0.0145	-0.3633	0.023
806	SLU 77	-0.96	-0.25	84.51	-0.0145	-0.3699	0.0233
806	SLU 78	-0.96	-0.19	84.52	-0.0146	-0.3692	0.0233
806	SLU 79	-0.96	-0.26	84.01	-0.0144	-0.3667	0.0232
806	SLU 80	-0.96	-0.2	84.02	-0.0146	-0.366	0.0232
806	SLU 81	-0.95	-0.26	86.06	-0.0149	-0.3795	0.0237
806	SLU 82	-0.95	-0.2	86.07	-0.0151	-0.3788	0.0237
806	SLU 83	-0.96	-0.26	86.64	-0.0151	-0.3818	0.0239
806	SLU 84	-0.96	-0.2	86.65	-0.0152	-0.3811	0.024
806	SLE RA 1	-0.68	-0.2	56.39	-0.0091	-0.2397	0.0154
806	SLE RA 2	-0.68	-0.14	56.41	-0.0092	-0.2389	0.0154
806	SLE RA 3	-0.69	-0.2	57.11	-0.0092	-0.2433	0.0156
806	SLE RA 4	-0.69	-0.16	57.12	-0.0093	-0.2429	0.0156
806	SLE RA 5	-0.69	-0.14	56.79	-0.0093	-0.2404	0.0156
806	SLE RA 6	-0.7	-0.2	57.5	-0.0093	-0.2448	0.0157
806	SLE RA 7	-0.7	-0.16	57.51	-0.0094	-0.2444	0.0158

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
806	SLE RA 8	-0.69	-0.21	57.17	-0.0093	-0.2427	0.0157
806	SLE RA 9	-0.69	-0.17	57.18	-0.0094	-0.2422	0.0157
806	SLE RA 10	-0.7	-0.14	61.4	-0.0105	-0.2658	0.0169
806	SLE RA 11	-0.71	-0.2	62.11	-0.0105	-0.2702	0.0171
806	SLE RA 12	-0.71	-0.16	62.11	-0.0106	-0.2697	0.0171
806	SLE RA 13	-0.71	-0.14	61.79	-0.0106	-0.2673	0.0171
806	SLE RA 14	-0.72	-0.2	62.49	-0.0106	-0.2717	0.0173
806	SLE RA 15	-0.72	-0.16	62.5	-0.0107	-0.2712	0.0173
806	SLE RA 16	-0.72	-0.21	62.16	-0.0106	-0.2696	0.0172
806	SLE RA 17	-0.72	-0.17	62.17	-0.0107	-0.2691	0.0172
806	SLE RA 18	-0.71	-0.21	63.53	-0.0109	-0.2781	0.0175
806	SLE RA 19	-0.71	-0.17	63.54	-0.011	-0.2776	0.0176
806	SLE RA 20	-0.72	-0.21	63.92	-0.0111	-0.2796	0.0177
806	SLE RA 21	-0.72	-0.17	63.92	-0.0111	-0.2791	0.0177
806	SLE FR 1	-0.68	-0.2	56.39	-0.0091	-0.2397	0.0154
806	SLE FR 2	-0.68	-0.19	56.4	-0.0091	-0.2395	0.0154
806	SLE FR 3	-0.68	-0.2	56.55	-0.0091	-0.2403	0.0154
806	SLE FR 4	-0.69	-0.19	58.54	-0.0097	-0.2511	0.016
806	SLE FR 5	-0.69	-0.2	58.69	-0.0097	-0.2518	0.0161
806	SLE FR 6	-0.7	-0.2	59.96	-0.01	-0.2589	0.0164
806	SLE QP 1	-0.68	-0.2	56.39	-0.0091	-0.2397	0.0154
806	SLE QP 2	-0.69	-0.2	58.53	-0.0096	-0.2512	0.016
806	SLD 1	4.69	1.13	63.51	-0.0111	-0.1897	-0.0062
806	SLD 2	4.54	0.81	63.5	-0.0104	-0.1926	-0.0011
806	SLD 3	4.56	-0.82	63.3	-0.0068	-0.2149	-0.0049
806	SLD 4	4.41	-1.13	63.3	-0.0061	-0.2178	0.0002
806	SLD 5	1.15	3.2	60.33	-0.0167	-0.1941	0.0064
806	SLD 6	1.05	2.99	60.33	-0.0163	-0.196	0.0097
806	SLD 7	0.71	-3.28	59.66	-0.0024	-0.278	0.0108
806	SLD 8	0.61	-3.49	59.66	-0.0019	-0.2799	0.0142
806	SLD 9	-1.99	3.08	57.41	-0.0174	-0.2225	0.0179
806	SLD 10	-2.09	2.87	57.41	-0.0169	-0.2244	0.0212
806	SLD 11	-2.43	-3.4	56.74	-0.003	-0.3065	0.0223
806	SLD 12	-2.53	-3.61	56.73	-0.0026	-0.3084	0.0256
806	SLD 13	-5.79	0.72	53.77	-0.0132	-0.2846	0.0318
806	SLD 14	-5.94	0.41	53.76	-0.0125	-0.2876	0.0369
806	SLD 15	-5.92	-1.22	53.57	-0.0089	-0.3098	0.0331
806	SLD 16	-6.07	-1.54	53.56	-0.0082	-0.3127	0.0382
806	SLV 1	11.89	2.85	70.18	-0.0128	-0.1079	-0.036
806	SLV 2	11.54	2.12	70.16	-0.0112	-0.1147	-0.0241
806	SLV 3	11.58	-1.58	69.71	-0.0031	-0.1656	-0.0329
806	SLV 4	11.24	-2.32	69.7	-0.0015	-0.1724	-0.021
806	SLV 5	3.61	7.56	62.74	-0.0257	-0.1194	-0.0063
806	SLV 6	3.39	7.1	62.73	-0.0247	-0.1238	0.0013
806	SLV 7	2.58	-7.22	61.18	0.0069	-0.312	0.004
806	SLV 8	2.36	-7.69	61.17	0.0079	-0.3163	0.0116
806	SLV 9	-3.74	7.28	55.9	-0.0272	-0.1861	0.0205
806	SLV 10	-3.96	6.81	55.89	-0.0261	-0.1904	0.028
806	SLV 11	-4.77	-7.5	54.34	0.0054	-0.3786	0.0307
806	SLV 12	-4.99	-7.97	54.33	0.0064	-0.383	0.0383
806	SLV 13	-12.62	1.91	47.37	-0.0178	-0.33	0.053
806	SLV 14	-12.96	1.18	47.36	-0.0162	-0.3368	0.0649
806	SLV 15	-12.92	-2.53	46.9	-0.0081	-0.3878	0.0561
806	SLV 16	-13.27	-3.26	46.89	-0.0064	-0.3946	0.068
806	CRTFP Ux+	0	0	0	0	0	0
806	CRTFP Ux-	0	0	0	0	0	0
809	SLU 1	0.29	0.36	43.79	0.0009	-0.0083	-0.0039
809	SLU 2	0.29	0.44	43.83	0.0007	-0.009	-0.004
809	SLU 3	0.3	0.38	44.57	0.001	-0.0079	-0.004
809	SLU 4	0.3	0.43	44.59	0.0009	-0.0083	-0.0041
809	SLU 5	0.3	0.44	44.23	0.0007	-0.0083	-0.0041
809	SLU 6	0.31	0.38	44.97	0.0009	-0.0072	-0.0041
809	SLU 7	0.31	0.43	44.99	0.0008	-0.0076	-0.0041
809	SLU 8	0.3	0.36	44.6	0.0007	-0.0069	-0.0041
809	SLU 9	0.3	0.41	44.62	0.0006	-0.0073	-0.0041
809	SLU 10	0.33	0.48	50.09	-0.0004	-0.0086	-0.0045
809	SLU 11	0.34	0.42	50.83	-0.0002	-0.0075	-0.0045
809	SLU 12	0.34	0.47	50.85	-0.0003	-0.0079	-0.0046
809	SLU 13	0.34	0.48	50.5	-0.0005	-0.0078	-0.0046
809	SLU 14	0.35	0.42	51.24	-0.0002	-0.0067	-0.0046
809	SLU 15	0.35	0.47	51.26	-0.0003	-0.0072	-0.0047
809	SLU 16	0.35	0.39	50.87	-0.0004	-0.0064	-0.0046
809	SLU 17	0.35	0.44	50.89	-0.0005	-0.0069	-0.0047
809	SLU 18	0.35	0.41	52.75	-0.0007	-0.0077	-0.0047
809	SLU 19	0.35	0.46	52.77	-0.0008	-0.0081	-0.0047
809	SLU 20	0.36	0.41	53.15	-0.0008	-0.007	-0.0048
809	SLU 21	0.36	0.46	53.17	-0.0009	-0.0074	-0.0048
809	SLU 22	0.33	0.44	49.62	0.0009	-0.0131	-0.0043
809	SLU 23	0.33	0.52	49.65	0.0008	-0.0138	-0.0044
809	SLU 24	0.34	0.46	50.39	0.001	-0.0127	-0.0044
809	SLU 25	0.34	0.51	50.41	0.0009	-0.0131	-0.0044
809	SLU 26	0.34	0.52	50.05	0.0007	-0.0131	-0.0045
809	SLU 27	0.35	0.46	50.79	0.0009	-0.012	-0.0045
809	SLU 28	0.35	0.51	50.81	0.0008	-0.0124	-0.0045
809	SLU 29	0.34	0.44	50.42	0.0008	-0.0117	-0.0045
809	SLU 30	0.34	0.49	50.44	0.0007	-0.0121	-0.0045
809	SLU 31	0.37	0.56	55.92	-0.0004	-0.0133	-0.0049
809	SLU 32	0.38	0.5	56.66	-0.0001	-0.0122	-0.0049
809	SLU 33	0.38	0.55	56.68	-0.0002	-0.0126	-0.005
809	SLU 34	0.38	0.56	56.32	-0.0004	-0.0126	-0.005
809	SLU 35	0.39	0.5	57.06	-0.0002	-0.0115	-0.005

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
809	SLU 36	0.39	0.55	57.08	-0.0003	-0.0119	-0.005
809	SLU 37	0.38	0.47	56.69	-0.0004	-0.0112	-0.005
809	SLU 38	0.39	0.52	56.71	-0.0005	-0.0116	-0.0051
809	SLU 39	0.39	0.49	58.57	-0.0007	-0.0124	-0.0051
809	SLU 40	0.39	0.54	58.59	-0.0008	-0.0129	-0.0051
809	SLU 41	0.4	0.49	58.97	-0.0008	-0.0117	-0.0052
809	SLU 42	0.4	0.54	58.99	-0.0009	-0.0121	-0.0052
809	SLU 43	0.36	0.44	54.93	0.0012	-0.0092	-0.005
809	SLU 44	0.37	0.52	54.97	0.001	-0.0099	-0.0051
809	SLU 45	0.37	0.46	55.71	0.0012	-0.0088	-0.0051
809	SLU 46	0.37	0.51	55.73	0.0011	-0.0092	-0.0051
809	SLU 47	0.37	0.52	55.37	0.0009	-0.0091	-0.0051
809	SLU 48	0.38	0.46	56.11	0.0011	-0.008	-0.0051
809	SLU 49	0.38	0.51	56.13	0.001	-0.0085	-0.0052
809	SLU 50	0.38	0.44	55.74	0.001	-0.0077	-0.0052
809	SLU 51	0.38	0.49	55.76	0.0009	-0.0082	-0.0052
809	SLU 52	0.41	0.56	61.23	-0.0001	-0.0094	-0.0056
809	SLU 53	0.42	0.49	61.97	0.0001	-0.0083	-0.0056
809	SLU 54	0.42	0.54	61.99	0	-0.0087	-0.0056
809	SLU 55	0.41	0.56	61.64	-0.0002	-0.0087	-0.0057
809	SLU 56	0.42	0.49	62.38	0	-0.0076	-0.0057
809	SLU 57	0.42	0.54	62.4	-0.0001	-0.008	-0.0057
809	SLU 58	0.42	0.47	62.01	-0.0001	-0.0073	-0.0057
809	SLU 59	0.42	0.52	62.03	-0.0002	-0.0077	-0.0057
809	SLU 60	0.43	0.49	63.89	-0.0004	-0.0085	-0.0058
809	SLU 61	0.43	0.54	63.91	-0.0005	-0.0089	-0.0058
809	SLU 62	0.43	0.49	64.29	-0.0005	-0.0078	-0.0058
809	SLU 63	0.43	0.54	64.31	-0.0006	-0.0082	-0.0059
809	SLU 64	0.4	0.52	60.76	0.0012	-0.0139	-0.0054
809	SLU 65	0.4	0.6	60.79	0.001	-0.0146	-0.0054
809	SLU 66	0.41	0.54	61.53	0.0012	-0.0135	-0.0054
809	SLU 67	0.41	0.59	61.55	0.0011	-0.0139	-0.0055
809	SLU 68	0.41	0.6	61.19	0.0009	-0.0139	-0.0055
809	SLU 69	0.42	0.54	61.93	0.0012	-0.0128	-0.0055
809	SLU 70	0.42	0.59	61.95	0.0011	-0.0132	-0.0056
809	SLU 71	0.42	0.52	61.56	0.001	-0.0125	-0.0055
809	SLU 72	0.42	0.57	61.58	0.0009	-0.0129	-0.0056
809	SLU 73	0.45	0.64	67.06	-0.0001	-0.0142	-0.006
809	SLU 74	0.46	0.58	67.8	0.0001	-0.0131	-0.006
809	SLU 75	0.46	0.63	67.82	0	-0.0135	-0.006
809	SLU 76	0.45	0.64	67.46	-0.0002	-0.0135	-0.0061
809	SLU 77	0.46	0.58	68.2	0	-0.0124	-0.0061
809	SLU 78	0.46	0.63	68.22	-0.0001	-0.0128	-0.0061
809	SLU 79	0.46	0.55	67.83	-0.0001	-0.0121	-0.0061
809	SLU 80	0.46	0.6	67.85	-0.0002	-0.0125	-0.0061
809	SLU 81	0.46	0.57	69.71	-0.0004	-0.0133	-0.0061
809	SLU 82	0.46	0.62	69.73	-0.0005	-0.0137	-0.0062
809	SLU 83	0.47	0.57	70.11	-0.0005	-0.0126	-0.0062
809	SLU 84	0.47	0.62	70.13	-0.0006	-0.013	-0.0063
809	SLE RA 1	0.3	0.38	45.46	0.0009	-0.0097	-0.0041
809	SLE RA 2	0.3	0.44	45.48	0.0008	-0.0101	-0.0041
809	SLE RA 3	0.31	0.4	45.97	0.0009	-0.0094	-0.0041
809	SLE RA 4	0.31	0.43	45.99	0.0009	-0.0097	-0.0041
809	SLE RA 5	0.31	0.44	45.75	0.0007	-0.0097	-0.0041
809	SLE RA 6	0.31	0.4	46.24	0.0009	-0.0089	-0.0042
809	SLE RA 7	0.31	0.43	46.25	0.0008	-0.0092	-0.0042
809	SLE RA 8	0.31	0.38	45.99	0.0008	-0.0087	-0.0042
809	SLE RA 9	0.31	0.41	46.01	0.0007	-0.009	-0.0042
809	SLE RA 10	0.33	0.46	49.66	0.0001	-0.0098	-0.0045
809	SLE RA 11	0.34	0.42	50.15	0.0002	-0.0091	-0.0045
809	SLE RA 12	0.34	0.45	50.16	0.0001	-0.0094	-0.0045
809	SLE RA 13	0.33	0.46	49.93	0	-0.0094	-0.0045
809	SLE RA 14	0.34	0.42	50.42	0.0001	-0.0086	-0.0045
809	SLE RA 15	0.34	0.45	50.43	0.0001	-0.0089	-0.0045
809	SLE RA 16	0.34	0.4	50.17	0.0001	-0.0084	-0.0045
809	SLE RA 17	0.34	0.44	50.19	0	-0.0087	-0.0045
809	SLE RA 18	0.34	0.41	51.43	-0.0002	-0.0092	-0.0046
809	SLE RA 19	0.34	0.45	51.44	-0.0002	-0.0095	-0.0046
809	SLE RA 20	0.35	0.41	51.69	-0.0002	-0.0088	-0.0046
809	SLE RA 21	0.35	0.45	51.71	-0.0003	-0.009	-0.0046
809	SLE FR 1	0.3	0.38	45.46	0.0009	-0.0097	-0.0041
809	SLE FR 2	0.3	0.39	45.46	0.0009	-0.0098	-0.0041
809	SLE FR 3	0.3	0.38	45.56	0.0009	-0.0095	-0.0041
809	SLE FR 4	0.31	0.4	47.25	0.0006	-0.0096	-0.0042
809	SLE FR 5	0.32	0.39	47.35	0.0006	-0.0093	-0.0042
809	SLE FR 6	0.32	0.4	48.44	0.0004	-0.0095	-0.0043
809	SLE QP 1	0.3	0.38	45.46	0.0009	-0.0097	-0.0041
809	SLE QP 2	0.31	0.39	47.25	0.0006	-0.0095	-0.0042
809	SLD 1	5.3	1.03	45.56	-0.0049	0.0643	-0.0319
809	SLD 2	5.16	1.13	45.6	-0.005	0.0644	-0.0273
809	SLD 3	5.17	-0.73	45.02	-0.0015	0.0778	-0.0308
809	SLD 4	5.03	-0.64	45.06	-0.0016	0.0779	-0.0262
809	SLD 5	2.03	3.24	47.55	-0.0062	-0.0079	-0.0151
809	SLD 6	1.94	3.3	47.58	-0.0063	-0.0078	-0.012
809	SLD 7	1.6	-2.64	45.75	0.0052	0.0371	-0.0113
809	SLD 8	1.51	-2.58	45.78	0.0051	0.0372	-0.0083
809	SLD 9	-0.88	3.36	48.71	-0.0039	-0.0563	-0.0002
809	SLD 10	-0.97	3.42	48.74	-0.004	-0.0562	0.0029
809	SLD 11	-1.31	-2.52	46.92	0.0075	-0.0113	0.0036
809	SLD 12	-1.4	-2.46	46.94	0.0074	-0.0112	0.0066
809	SLD 13	-4.4	1.42	49.43	0.0028	-0.097	0.0177

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
809	SLD 14	-4.54	1.52	49.47	0.0026	-0.0969	0.0224
809	SLD 15	-4.53	-0.34	48.89	0.0062	-0.0835	0.0189
809	SLD 16	-4.67	-0.25	48.93	0.0061	-0.0833	0.0235
809	SLV 1	11.98	1.83	43.26	-0.0122	0.1636	-0.069
809	SLV 2	11.65	2.05	43.35	-0.0126	0.1639	-0.0582
809	SLV 3	11.67	-2.19	42.04	-0.0044	0.1943	-0.0664
809	SLV 4	11.35	-1.97	42.13	-0.0048	0.1947	-0.0556
809	SLV 5	4.33	6.88	47.89	-0.015	-0.0043	-0.0295
809	SLV 6	4.12	7.02	47.95	-0.0152	-0.0041	-0.0226
809	SLV 7	3.32	-6.52	43.81	0.011	0.0982	-0.0207
809	SLV 8	3.11	-6.37	43.88	0.0107	0.0984	-0.0138
809	SLV 9	-2.48	7.16	50.62	-0.0095	-0.1175	0.0053
809	SLV 10	-2.69	7.3	50.68	-0.0098	-0.1173	0.0122
809	SLV 11	-3.49	-6.24	46.55	0.0164	-0.015	0.0142
809	SLV 12	-3.7	-6.1	46.61	0.0162	-0.0148	0.0211
809	SLV 13	-10.72	2.75	52.36	0.006	-0.2137	0.0472
809	SLV 14	-11.05	2.97	52.46	0.0056	-0.2134	0.058
809	SLV 15	-11.02	-1.27	51.14	0.0137	-0.183	0.0498
809	SLV 16	-11.35	-1.05	51.24	0.0134	-0.1827	0.0606
809	CRTFP Ux+	0	0	0	0	0	0
809	CRTFP Ux-	0	0	0	0	0	0
812	SLU 1	-0.03	0.37	41.92	-0.0014	0.0718	0.0046
812	SLU 2	-0.03	0.45	41.96	-0.0016	0.0721	0.0046
812	SLU 3	-0.04	0.4	42.66	-0.0014	0.0737	0.0047
812	SLU 4	-0.04	0.45	42.69	-0.0016	0.0739	0.0047
812	SLU 5	-0.03	0.45	42.35	-0.0017	0.073	0.0046
812	SLU 6	-0.04	0.4	43.05	-0.0016	0.0745	0.0047
812	SLU 7	-0.04	0.45	43.08	-0.0017	0.0747	0.0047
812	SLU 8	-0.03	0.37	42.69	-0.0016	0.0735	0.0047
812	SLU 9	-0.03	0.42	42.72	-0.0017	0.0737	0.0047
812	SLU 10	-0.03	0.51	47.73	-0.0026	0.0815	0.0057
812	SLU 11	-0.03	0.46	48.43	-0.0025	0.083	0.0058
812	SLU 12	-0.03	0.51	48.46	-0.0026	0.0832	0.0058
812	SLU 13	-0.03	0.52	48.12	-0.0027	0.0823	0.0058
812	SLU 14	-0.03	0.46	48.82	-0.0026	0.0838	0.0059
812	SLU 15	-0.03	0.51	48.84	-0.0027	0.084	0.0059
812	SLU 16	-0.03	0.44	48.46	-0.0027	0.0828	0.0058
812	SLU 17	-0.03	0.49	48.49	-0.0028	0.083	0.0058
812	SLU 18	-0.02	0.46	50.16	-0.0029	0.0851	0.0062
812	SLU 19	-0.02	0.51	50.18	-0.003	0.0853	0.0062
812	SLU 20	-0.02	0.46	50.55	-0.003	0.086	0.0063
812	SLU 21	-0.02	0.51	50.57	-0.0031	0.0862	0.0063
812	SLU 22	-0.05	0.49	47.36	-0.0015	0.0846	0.0052
812	SLU 23	-0.05	0.58	47.41	-0.0017	0.085	0.0051
812	SLU 24	-0.05	0.52	48.11	-0.0016	0.0865	0.0052
812	SLU 25	-0.05	0.57	48.13	-0.0017	0.0867	0.0052
812	SLU 26	-0.05	0.58	47.79	-0.0018	0.0858	0.0052
812	SLU 27	-0.05	0.53	48.49	-0.0017	0.0873	0.0053
812	SLU 28	-0.05	0.57	48.52	-0.0018	0.0875	0.0053
812	SLU 29	-0.05	0.5	48.14	-0.0017	0.0863	0.0053
812	SLU 30	-0.05	0.55	48.16	-0.0019	0.0865	0.0053
812	SLU 31	-0.04	0.64	53.17	-0.0027	0.0943	0.0063
812	SLU 32	-0.04	0.59	53.87	-0.0026	0.0958	0.0064
812	SLU 33	-0.04	0.64	53.9	-0.0027	0.096	0.0064
812	SLU 34	-0.04	0.64	53.56	-0.0028	0.0951	0.0063
812	SLU 35	-0.04	0.59	54.26	-0.0027	0.0967	0.0065
812	SLU 36	-0.04	0.64	54.29	-0.0028	0.0969	0.0064
812	SLU 37	-0.04	0.57	53.91	-0.0028	0.0956	0.0064
812	SLU 38	-0.04	0.61	53.93	-0.0029	0.0958	0.0064
812	SLU 39	-0.04	0.59	55.6	-0.003	0.098	0.0068
812	SLU 40	-0.04	0.64	55.63	-0.0031	0.0982	0.0068
812	SLU 41	-0.04	0.59	55.99	-0.0031	0.0988	0.0068
812	SLU 42	-0.04	0.64	56.02	-0.0032	0.099	0.0068
812	SLU 43	-0.04	0.44	52.63	-0.0018	0.0889	0.0057
812	SLU 44	-0.04	0.52	52.67	-0.002	0.0893	0.0057
812	SLU 45	-0.04	0.46	53.37	-0.0018	0.0908	0.0058
812	SLU 46	-0.04	0.51	53.4	-0.0019	0.091	0.0058
812	SLU 47	-0.04	0.52	53.06	-0.0021	0.0901	0.0058
812	SLU 48	-0.04	0.47	53.76	-0.0019	0.0917	0.0059
812	SLU 49	-0.04	0.52	53.79	-0.0021	0.0919	0.0059
812	SLU 50	-0.04	0.44	53.4	-0.002	0.0906	0.0059
812	SLU 51	-0.04	0.49	53.43	-0.0021	0.0908	0.0059
812	SLU 52	-0.03	0.58	58.44	-0.003	0.0986	0.0069
812	SLU 53	-0.03	0.53	59.14	-0.0029	0.1001	0.007
812	SLU 54	-0.03	0.58	59.17	-0.003	0.1003	0.007
812	SLU 55	-0.03	0.58	58.83	-0.0031	0.0994	0.0069
812	SLU 56	-0.03	0.53	59.53	-0.003	0.101	0.007
812	SLU 57	-0.03	0.58	59.55	-0.0031	0.1012	0.007
812	SLU 58	-0.03	0.51	59.17	-0.0031	0.1	0.007
812	SLU 59	-0.03	0.56	59.2	-0.0032	0.1002	0.007
812	SLU 60	-0.03	0.53	60.87	-0.0033	0.1023	0.0074
812	SLU 61	-0.03	0.58	60.89	-0.0034	0.1025	0.0074
812	SLU 62	-0.03	0.53	61.26	-0.0034	0.1031	0.0074
812	SLU 63	-0.03	0.58	61.28	-0.0035	0.1033	0.0074
812	SLU 64	-0.05	0.56	58.07	-0.0019	0.1018	0.0063
812	SLU 65	-0.05	0.64	58.11	-0.0021	0.1021	0.0063
812	SLU 66	-0.05	0.59	58.81	-0.0019	0.1036	0.0064
812	SLU 67	-0.05	0.64	58.84	-0.002	0.1038	0.0064
812	SLU 68	-0.05	0.65	58.5	-0.0022	0.1029	0.0064
812	SLU 69	-0.05	0.59	59.2	-0.0021	0.1045	0.0065
812	SLU 70	-0.05	0.64	59.23	-0.0022	0.1047	0.0065

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
812	SLU 71	-0.05	0.57	58.85	-0.0021	0.1035	0.0065
812	SLU 72	-0.05	0.62	58.87	-0.0022	0.1037	0.0065
812	SLU 73	-0.05	0.71	63.88	-0.0031	0.1114	0.0074
812	SLU 74	-0.05	0.65	64.58	-0.003	0.113	0.0076
812	SLU 75	-0.05	0.7	64.61	-0.0031	0.1132	0.0075
812	SLU 76	-0.05	0.71	64.27	-0.0032	0.1123	0.0075
812	SLU 77	-0.05	0.66	64.97	-0.0031	0.1138	0.0076
812	SLU 78	-0.05	0.71	65	-0.0032	0.114	0.0076
812	SLU 79	-0.05	0.63	64.61	-0.0032	0.1128	0.0076
812	SLU 80	-0.05	0.68	64.64	-0.0033	0.113	0.0076
812	SLU 81	-0.04	0.65	66.31	-0.0034	0.1151	0.0079
812	SLU 82	-0.04	0.7	66.34	-0.0035	0.1153	0.0079
812	SLU 83	-0.04	0.66	66.7	-0.0035	0.1159	0.008
812	SLU 84	-0.04	0.71	66.73	-0.0036	0.1161	0.008
812	SLE RA 1	-0.04	0.4	43.47	-0.0014	0.0755	0.0047
812	SLE RA 2	-0.04	0.46	43.5	-0.0016	0.0757	0.0047
812	SLE RA 3	-0.04	0.42	43.97	-0.0015	0.0767	0.0048
812	SLE RA 4	-0.04	0.46	43.99	-0.0015	0.0768	0.0048
812	SLE RA 5	-0.04	0.46	43.76	-0.0016	0.0762	0.0048
812	SLE RA 6	-0.04	0.42	44.23	-0.0015	0.0773	0.0048
812	SLE RA 7	-0.04	0.46	44.25	-0.0016	0.0774	0.0048
812	SLE RA 8	-0.04	0.41	43.99	-0.0016	0.0766	0.0048
812	SLE RA 9	-0.04	0.44	44.01	-0.0017	0.0767	0.0048
812	SLE RA 10	-0.03	0.5	47.35	-0.0022	0.0819	0.0055
812	SLE RA 11	-0.03	0.47	47.81	-0.0021	0.0829	0.0056
812	SLE RA 12	-0.03	0.5	47.83	-0.0022	0.0831	0.0056
812	SLE RA 13	-0.03	0.5	47.61	-0.0023	0.0825	0.0055
812	SLE RA 14	-0.03	0.47	48.07	-0.0022	0.0835	0.0056
812	SLE RA 15	-0.03	0.5	48.09	-0.0023	0.0836	0.0056
812	SLE RA 16	-0.03	0.45	47.84	-0.0023	0.0828	0.0056
812	SLE RA 17	-0.03	0.48	47.85	-0.0024	0.0829	0.0056
812	SLE RA 18	-0.03	0.47	48.97	-0.0024	0.0843	0.0058
812	SLE RA 19	-0.03	0.5	48.98	-0.0025	0.0845	0.0058
812	SLE RA 20	-0.03	0.47	49.23	-0.0025	0.0849	0.0059
812	SLE RA 21	-0.03	0.5	49.24	-0.0026	0.085	0.0059
812	SLE FR 1	-0.04	0.4	43.47	-0.0014	0.0755	0.0047
812	SLE FR 2	-0.04	0.42	43.48	-0.0015	0.0755	0.0047
812	SLE FR 3	-0.04	0.41	43.58	-0.0015	0.0757	0.0048
812	SLE FR 4	-0.04	0.43	45.13	-0.0018	0.0782	0.0051
812	SLE FR 5	-0.04	0.42	45.22	-0.0018	0.0784	0.0051
812	SLE FR 6	-0.03	0.44	46.22	-0.0019	0.0799	0.0053
812	SLE QP 1	-0.04	0.4	43.47	-0.0014	0.0755	0.0047
812	SLE QP 2	-0.04	0.42	45.12	-0.0017	0.0781	0.0051
812	SLD 1	4.82	1.52	46.78	0.0008	0.1399	-0.0216
812	SLD 2	4.68	1.42	46.75	0.001	0.1402	-0.017
812	SLD 3	4.94	-0.24	46.13	0.0042	0.133	-0.02
812	SLD 4	4.79	-0.34	46.1	0.0044	0.1334	-0.0154
812	SLD 5	1.27	3.44	46.61	-0.0061	0.1069	-0.0061
812	SLD 6	1.18	3.37	46.59	-0.006	0.1071	-0.0032
812	SLD 7	1.65	-2.43	44.44	0.0051	0.0842	-0.0009
812	SLD 8	1.56	-2.5	44.42	0.0052	0.0844	0.0021
812	SLD 9	-1.63	3.34	45.82	-0.0087	0.0718	0.008
812	SLD 10	-1.73	3.27	45.8	-0.0085	0.072	0.011
812	SLD 11	-1.25	-2.53	43.65	0.0025	0.0491	0.0133
812	SLD 12	-1.34	-2.6	43.63	0.0027	0.0493	0.0163
812	SLD 13	-4.86	1.19	44.14	-0.0079	0.0229	0.0256
812	SLD 14	-5.01	1.08	44.11	-0.0076	0.0232	0.0301
812	SLD 15	-4.75	-0.57	43.49	-0.0045	0.0161	0.0271
812	SLD 16	-4.89	-0.68	43.46	-0.0043	0.0164	0.0317
812	SLV 1	11.32	2.95	49.09	0.0043	0.2223	-0.0573
812	SLV 2	10.99	2.7	49.02	0.0049	0.2231	-0.0466
812	SLV 3	11.59	-1.07	47.6	0.012	0.2067	-0.0536
812	SLV 4	11.26	-1.32	47.53	0.0125	0.2074	-0.043
812	SLV 5	3.02	7.31	48.57	-0.0116	0.1451	-0.021
812	SLV 6	2.81	7.16	48.53	-0.0112	0.1455	-0.0142
812	SLV 7	3.91	-6.07	43.63	0.0139	0.0928	-0.0088
812	SLV 8	3.7	-6.23	43.59	0.0142	0.0932	-0.002
812	SLV 9	-3.77	7.08	46.66	-0.0177	0.063	0.0121
812	SLV 10	-3.98	6.92	46.61	-0.0173	0.0635	0.0189
812	SLV 11	-2.88	-6.31	41.72	0.0078	0.0107	0.0243
812	SLV 12	-3.09	-6.47	41.67	0.0081	0.0112	0.0311
812	SLV 13	-11.33	2.16	42.71	-0.016	-0.0511	0.0531
812	SLV 14	-11.66	1.92	42.64	-0.0154	-0.0504	0.0638
812	SLV 15	-11.06	-1.85	41.23	-0.0084	-0.0668	0.0567
812	SLV 16	-11.39	-2.1	41.16	-0.0078	-0.0661	0.0674
812	CRTFP Ux+	0	0	0	0	0	0
812	CRTFP Ux-	0	0	0	0	0	0
814	SLU 1	-0.45	-0.04	22.7	0.0009	-4.0347	-0.0107
814	SLU 2	-0.45	0.03	22.7	0.0009	-4.0359	0.0066
814	SLU 3	-0.46	-0.04	23.14	0.001	-4.109	-0.0093
814	SLU 4	-0.46	0	23.14	0.001	-4.1097	0.0011
814	SLU 5	-0.46	0.03	22.96	0.0009	-4.0777	0.0076
814	SLU 6	-0.47	-0.03	23.39	0.001	-4.1509	-0.0084
814	SLU 7	-0.47	0.01	23.39	0.001	-4.1516	0.002
814	SLU 8	-0.46	-0.04	23.2	0.0009	-4.1184	-0.0088
814	SLU 9	-0.46	0	23.2	0.0009	-4.1191	0.0016
814	SLU 10	-0.49	0.04	25.56	0.0008	-4.5288	0.0109
814	SLU 11	-0.49	-0.02	26	0.0009	-4.6019	-0.0051
814	SLU 12	-0.49	0.02	26	0.0009	-4.6026	0.0053
814	SLU 13	-0.49	0.05	25.81	0.0009	-4.5706	0.0118
814	SLU 14	-0.5	-0.02	26.25	0.0009	-4.6438	-0.0041

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
814	SLU 15	-0.5	0.02	26.25	0.0009	-4.6445	0.0063
814	SLU 16	-0.5	-0.02	26.06	0.0009	-4.6113	-0.0046
814	SLU 17	-0.5	0.02	26.06	0.0009	-4.612	0.0058
814	SLU 18	-0.5	-0.02	26.78	0.0008	-4.7388	-0.0046
814	SLU 19	-0.5	0.02	26.78	0.0008	-4.7396	0.0058
814	SLU 20	-0.51	-0.02	27.03	0.0008	-4.7807	-0.0037
814	SLU 21	-0.51	0.02	27.03	0.0008	-4.7814	0.0067
814	SLU 22	-0.49	-0.03	25.48	0.001	-4.5135	-0.0061
814	SLU 23	-0.49	0.04	25.49	0.001	-4.5147	0.0112
814	SLU 24	-0.5	-0.02	25.92	0.001	-4.5878	-0.0047
814	SLU 25	-0.5	0.02	25.93	0.001	-4.5885	0.0057
814	SLU 26	-0.5	0.05	25.74	0.001	-4.5565	0.0122
814	SLU 27	-0.51	-0.02	26.17	0.001	-4.6297	-0.0038
814	SLU 28	-0.51	0.02	26.18	0.001	-4.6304	0.0066
814	SLU 29	-0.51	-0.02	25.98	0.001	-4.5972	-0.0042
814	SLU 30	-0.51	0.02	25.99	0.001	-4.5979	0.0062
814	SLU 31	-0.53	0.06	28.34	0.0009	-5.0076	0.0155
814	SLU 32	-0.54	0	28.78	0.001	-5.0807	-0.0005
814	SLU 33	-0.54	0.04	28.78	0.001	-5.0814	0.0099
814	SLU 34	-0.54	0.06	28.6	0.0009	-5.0494	0.0164
814	SLU 35	-0.54	0	29.03	0.001	-5.1226	0.0005
814	SLU 36	-0.55	0.04	29.03	0.001	-5.1233	0.0109
814	SLU 37	-0.54	0	28.84	0.0009	-5.0901	0
814	SLU 38	-0.54	0.04	28.84	0.0009	-5.0908	0.0104
814	SLU 39	-0.54	0	29.56	0.0009	-5.2176	0
814	SLU 40	-0.54	0.04	29.57	0.0009	-5.2184	0.0104
814	SLU 41	-0.55	0	29.81	0.0009	-5.2595	0.0009
814	SLU 42	-0.55	0.04	29.82	0.0009	-5.2602	0.0113
814	SLU 43	-0.57	-0.06	28.55	0.0012	-5.0809	-0.0155
814	SLU 44	-0.57	0.01	28.56	0.0012	-5.0821	0.0019
814	SLU 45	-0.58	-0.06	28.99	0.0012	-5.1553	-0.0141
814	SLU 46	-0.58	-0.02	29	0.0012	-5.156	-0.0037
814	SLU 47	-0.58	0.01	28.81	0.0012	-5.124	0.0028
814	SLU 48	-0.59	-0.05	29.25	0.0012	-5.1971	-0.0132
814	SLU 49	-0.59	-0.01	29.25	0.0012	-5.1978	-0.0028
814	SLU 50	-0.58	-0.06	29.05	0.0012	-5.1646	-0.0136
814	SLU 51	-0.58	-0.01	29.06	0.0012	-5.1653	-0.0032
814	SLU 52	-0.6	0.02	31.42	0.0011	-5.575	0.0061
814	SLU 53	-0.61	-0.04	31.85	0.0011	-5.6482	-0.0099
814	SLU 54	-0.61	0	31.86	0.0011	-5.6489	0.0005
814	SLU 55	-0.61	0.03	31.67	0.0011	-5.6169	0.0071
814	SLU 56	-0.62	-0.04	32.1	0.0011	-5.69	-0.0089
814	SLU 57	-0.62	0	32.11	0.0011	-5.6907	0.0015
814	SLU 58	-0.62	-0.04	31.91	0.0011	-5.6575	-0.0094
814	SLU 59	-0.62	0	31.92	0.0011	-5.6582	0.0011
814	SLU 60	-0.62	-0.04	32.63	0.0011	-5.7851	-0.0094
814	SLU 61	-0.62	0	32.64	0.0011	-5.7858	0.001
814	SLU 62	-0.63	-0.04	32.88	0.0011	-5.8269	-0.0085
814	SLU 63	-0.63	0.01	32.89	0.0011	-5.8276	0.0019
814	SLU 64	-0.61	-0.05	31.33	0.0013	-5.5597	-0.0109
814	SLU 65	-0.61	0.02	31.34	0.0013	-5.5609	0.0065
814	SLU 66	-0.62	-0.04	31.78	0.0013	-5.6341	-0.0095
814	SLU 67	-0.62	0	31.78	0.0013	-5.6348	0.0009
814	SLU 68	-0.62	0.03	31.59	0.0013	-5.6028	0.0074
814	SLU 69	-0.63	-0.04	32.03	0.0013	-5.6759	-0.0086
814	SLU 70	-0.63	0.01	32.03	0.0013	-5.6766	0.0018
814	SLU 71	-0.63	-0.04	31.84	0.0013	-5.6434	-0.009
814	SLU 72	-0.63	0	31.84	0.0013	-5.6441	0.0014
814	SLU 73	-0.65	0.04	34.2	0.0012	-6.0538	0.0107
814	SLU 74	-0.66	-0.02	34.63	0.0012	-6.127	-0.0053
814	SLU 75	-0.66	0.02	34.64	0.0012	-6.1277	0.0051
814	SLU 76	-0.66	0.04	34.45	0.0012	-6.0957	0.0116
814	SLU 77	-0.66	-0.02	34.89	0.0012	-6.1688	-0.0043
814	SLU 78	-0.66	0.02	34.89	0.0012	-6.1695	0.0061
814	SLU 79	-0.66	-0.02	34.69	0.0012	-6.1363	-0.0048
814	SLU 80	-0.66	0.02	34.7	0.0012	-6.137	0.0057
814	SLU 81	-0.66	-0.02	35.42	0.0011	-6.2639	-0.0048
814	SLU 82	-0.66	0.02	35.42	0.0011	-6.2646	0.0056
814	SLU 83	-0.67	-0.02	35.67	0.0012	-6.3057	-0.0039
814	SLU 84	-0.67	0.02	35.67	0.0012	-6.3064	0.0065
814	SLE RA 1	-0.46	-0.04	23.49	0.0009	-4.1715	-0.0094
814	SLE RA 2	-0.46	0.01	23.5	0.0009	-4.1723	0.0022
814	SLE RA 3	-0.47	-0.04	23.79	0.001	-4.221	-0.0085
814	SLE RA 4	-0.47	-0.01	23.79	0.001	-4.2215	-0.0015
814	SLE RA 5	-0.47	0.01	23.66	0.001	-4.2002	0.0028
814	SLE RA 6	-0.47	-0.03	23.95	0.001	-4.2489	-0.0078
814	SLE RA 7	-0.47	-0.01	23.96	0.001	-4.2494	-0.0009
814	SLE RA 8	-0.47	-0.03	23.83	0.001	-4.2273	-0.0081
814	SLE RA 9	-0.47	-0.01	23.83	0.001	-4.2277	-0.0012
814	SLE RA 10	-0.49	0.02	25.4	0.0009	-4.5009	0.005
814	SLE RA 11	-0.49	-0.02	25.69	0.0009	-4.5496	-0.0056
814	SLE RA 12	-0.49	0	25.69	0.0009	-4.5501	0.0013
814	SLE RA 13	-0.49	0.02	25.57	0.0009	-4.5288	0.0056
814	SLE RA 14	-0.5	-0.02	25.86	0.0009	-4.5775	-0.005
814	SLE RA 15	-0.5	0.01	25.86	0.0009	-4.578	0.0019
814	SLE RA 16	-0.49	-0.02	25.73	0.0009	-4.5559	-0.0053
814	SLE RA 17	-0.49	0	25.73	0.0009	-4.5563	0.0016
814	SLE RA 18	-0.5	-0.02	26.21	0.0009	-4.6409	-0.0053
814	SLE RA 19	-0.5	0	26.22	0.0009	-4.6414	0.0016
814	SLE RA 20	-0.5	-0.02	26.38	0.0009	-4.6688	-0.0047
814	SLE RA 21	-0.5	0.01	26.38	0.0009	-4.6693	0.0022

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
814	SLE FR 1	-0.46	-0.04	23.49	0.0009	-4.1715	-0.0094
814	SLE FR 2	-0.46	-0.03	23.49	0.0009	-4.1716	-0.0071
814	SLE FR 3	-0.46	-0.04	23.56	0.001	-4.1826	-0.0091
814	SLE FR 4	-0.47	-0.02	24.31	0.0009	-4.3125	-0.0059
814	SLE FR 5	-0.47	-0.03	24.38	0.0009	-4.3235	-0.0079
814	SLE FR 6	-0.48	-0.03	24.85	0.0009	-4.4062	-0.0074
814	SLE QP 1	-0.46	-0.04	23.49	0.0009	-4.1715	-0.0094
814	SLE QP 2	-0.47	-0.03	24.31	0.0009	-4.3123	-0.0082
814	SLD 1	2.01	0.9	29.06	0.0015	-5.1066	0.2235
814	SLD 2	1.93	0.59	29.07	0.0016	-5.1112	0.1467
814	SLD 3	1.95	-0.31	29.18	0.0021	-5.1264	-0.0791
814	SLD 4	1.87	-0.62	29.19	0.0023	-5.131	-0.156
814	SLD 5	0.37	2.13	25.55	0	-4.5198	0.5337
814	SLD 6	0.32	1.93	25.55	0.0001	-4.5228	0.4839
814	SLD 7	0.18	-1.9	25.95	0.0023	-4.5857	-0.4751
814	SLD 8	0.13	-2.1	25.96	0.0024	-4.5887	-0.5249
814	SLD 9	-1.07	2.03	22.66	-0.0005	-4.0359	0.5086
814	SLD 10	-1.12	1.83	22.67	-0.0005	-4.0389	0.4587
814	SLD 11	-1.27	-2	23.06	0.0017	-4.1018	-0.5002
814	SLD 12	-1.32	-2.2	23.07	0.0018	-4.1048	-0.5501
814	SLD 13	-2.82	0.55	19.43	-0.0004	-3.4936	0.1396
814	SLD 14	-2.89	0.24	19.44	-0.0003	-3.4982	0.0628
814	SLD 15	-2.87	-0.66	19.55	0.0003	-3.5134	-0.163
814	SLD 16	-2.95	-0.97	19.56	0.0004	-3.518	-0.2399
814	SLV 1	5.32	2.11	35.42	0.0022	-6.1715	0.5251
814	SLV 2	5.15	1.39	35.44	0.0025	-6.1822	0.3461
814	SLV 3	5.19	-0.65	35.7	0.0038	-6.2176	-0.1652
814	SLV 4	5.01	-1.37	35.72	0.0041	-6.2283	-0.3443
814	SLV 5	1.5	4.92	27.21	-0.0011	-4.7983	1.2291
814	SLV 6	1.39	4.46	27.22	-0.0009	-4.8052	1.1148
814	SLV 7	1.05	-4.28	28.15	0.0041	-4.952	-1.072
814	SLV 8	0.94	-4.74	28.17	0.0043	-4.9589	-1.1863
814	SLV 9	-1.88	4.67	20.45	-0.0025	-3.6658	1.17
814	SLV 10	-1.99	4.22	20.46	-0.0022	-3.6726	1.0556
814	SLV 11	-2.33	-4.53	21.39	0.0028	-3.8194	-1.1312
814	SLV 12	-2.45	-4.99	21.41	0.003	-3.8263	-1.2455
814	SLV 13	-5.96	1.3	12.89	-0.0022	-2.3963	0.3279
814	SLV 14	-6.13	0.58	12.91	-0.0019	-2.407	0.1489
814	SLV 15	-6.09	-1.46	13.18	-0.0007	-2.4424	-0.3624
814	SLV 16	-6.27	-2.18	13.2	-0.0003	-2.4531	-0.5415
814	CRTFP Ux+	0	0	0	0	0	0
814	CRTFP Ux-	0	0	0	0	0	0
817	SLU 1	0.49	0.55	25.56	-0.0555	5.769	-0.1935
817	SLU 2	0.49	0.63	25.56	-0.0555	5.7712	-0.2227
817	SLU 3	0.5	0.56	26.04	-0.0567	5.8689	-0.1993
817	SLU 4	0.5	0.61	26.05	-0.0567	5.8702	-0.2168
817	SLU 5	0.49	0.64	25.84	-0.0562	5.8277	-0.2246
817	SLU 6	0.51	0.57	26.31	-0.0574	5.9254	-0.2011
817	SLU 7	0.51	0.62	26.32	-0.0574	5.9267	-0.2187
817	SLU 8	0.51	0.56	26.1	-0.0569	5.882	-0.1971
817	SLU 9	0.5	0.61	26.11	-0.0569	5.8833	-0.2147
817	SLU 10	0.53	0.74	28.7	-0.0635	6.4322	-0.2622
817	SLU 11	0.55	0.68	29.18	-0.0647	6.5299	-0.2387
817	SLU 12	0.54	0.73	29.18	-0.0647	6.5312	-0.2563
817	SLU 13	0.54	0.75	28.97	-0.0642	6.4887	-0.264
817	SLU 14	0.56	0.68	29.45	-0.0654	6.5863	-0.2405
817	SLU 15	0.55	0.73	29.46	-0.0654	6.5877	-0.2581
817	SLU 16	0.55	0.67	29.24	-0.0649	6.5429	-0.2366
817	SLU 17	0.55	0.72	29.25	-0.0649	6.5442	-0.2541
817	SLU 18	0.55	0.71	30.04	-0.0669	6.7133	-0.2498
817	SLU 19	0.55	0.76	30.04	-0.0669	6.7146	-0.2674
817	SLU 20	0.56	0.71	30.31	-0.0676	6.7697	-0.2516
817	SLU 21	0.56	0.76	30.32	-0.0676	6.771	-0.2692
817	SLU 22	0.54	0.64	28.59	-0.0631	6.4067	-0.2272
817	SLU 23	0.54	0.73	28.6	-0.0631	6.4089	-0.2564
817	SLU 24	0.56	0.66	29.08	-0.0643	6.5066	-0.233
817	SLU 25	0.55	0.71	29.08	-0.0643	6.5079	-0.2505
817	SLU 26	0.55	0.73	28.87	-0.0638	6.4654	-0.2583
817	SLU 27	0.57	0.66	29.35	-0.065	6.5631	-0.2348
817	SLU 28	0.56	0.71	29.35	-0.065	6.5644	-0.2523
817	SLU 29	0.56	0.65	29.14	-0.0645	6.5196	-0.2308
817	SLU 30	0.56	0.7	29.14	-0.0645	6.521	-0.2484
817	SLU 31	0.58	0.84	31.74	-0.0711	7.0699	-0.2958
817	SLU 32	0.6	0.77	32.21	-0.0723	7.1676	-0.2724
817	SLU 33	0.6	0.82	32.22	-0.0723	7.1689	-0.2899
817	SLU 34	0.59	0.84	32.01	-0.0718	7.1263	-0.2977
817	SLU 35	0.61	0.78	32.49	-0.073	7.224	-0.2742
817	SLU 36	0.6	0.83	32.49	-0.073	7.2254	-0.2918
817	SLU 37	0.6	0.77	32.28	-0.0725	7.1806	-0.2702
817	SLU 38	0.6	0.82	32.28	-0.0725	7.1819	-0.2878
817	SLU 39	0.61	0.8	33.07	-0.0745	7.3509	-0.2835
817	SLU 40	0.6	0.85	33.08	-0.0745	7.3523	-0.301
817	SLU 41	0.62	0.81	33.35	-0.0752	7.4074	-0.2853
817	SLU 42	0.61	0.86	33.35	-0.0752	7.4087	-0.3029
817	SLU 43	0.62	0.68	32.19	-0.0696	7.2811	-0.24
817	SLU 44	0.61	0.76	32.19	-0.0696	7.2833	-0.2692
817	SLU 45	0.63	0.7	32.67	-0.0708	7.381	-0.2458
817	SLU 46	0.63	0.75	32.67	-0.0708	7.3823	-0.2633
817	SLU 47	0.62	0.77	32.46	-0.0703	7.3398	-0.2711
817	SLU 48	0.64	0.7	32.94	-0.0714	7.4375	-0.2476
817	SLU 49	0.64	0.75	32.95	-0.0715	7.4388	-0.2652

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
817	SLU 50	0.64	0.69	32.73	-0.0709	7.394	-0.2436
817	SLU 51	0.63	0.74	32.74	-0.071	7.3953	-0.2612
817	SLU 52	0.66	0.87	35.33	-0.0775	7.9443	-0.3087
817	SLU 53	0.68	0.81	35.81	-0.0787	8.042	-0.2852
817	SLU 54	0.67	0.86	35.81	-0.0787	8.0433	-0.3028
817	SLU 55	0.67	0.88	35.6	-0.0782	8.0007	-0.3105
817	SLU 56	0.68	0.81	36.08	-0.0794	8.0984	-0.287
817	SLU 57	0.68	0.86	36.08	-0.0794	8.0997	-0.3046
817	SLU 58	0.68	0.8	35.87	-0.0789	8.055	-0.2831
817	SLU 59	0.68	0.85	35.87	-0.0789	8.0563	-0.3006
817	SLU 60	0.68	0.84	36.67	-0.0809	8.2253	-0.2963
817	SLU 61	0.68	0.89	36.67	-0.0809	8.2267	-0.3139
817	SLU 62	0.69	0.84	36.94	-0.0816	8.2818	-0.2981
817	SLU 63	0.69	0.89	36.94	-0.0816	8.2831	-0.3157
817	SLU 64	0.67	0.77	35.22	-0.0772	7.9188	-0.2737
817	SLU 65	0.67	0.86	35.23	-0.0772	7.921	-0.3029
817	SLU 66	0.69	0.79	35.7	-0.0784	8.0187	-0.2795
817	SLU 67	0.68	0.84	35.71	-0.0784	8.02	-0.297
817	SLU 68	0.68	0.86	35.5	-0.0779	7.9774	-0.3048
817	SLU 69	0.69	0.8	35.98	-0.079	8.0751	-0.2813
817	SLU 70	0.69	0.85	35.98	-0.0791	8.0765	-0.2988
817	SLU 71	0.69	0.78	35.77	-0.0785	8.0317	-0.2773
817	SLU 72	0.69	0.84	35.77	-0.0786	8.033	-0.2949
817	SLU 73	0.71	0.97	38.36	-0.0852	8.5819	-0.3423
817	SLU 74	0.73	0.9	38.84	-0.0863	8.6796	-0.3189
817	SLU 75	0.73	0.95	38.84	-0.0863	8.681	-0.3364
817	SLU 76	0.72	0.98	38.64	-0.0858	8.6384	-0.3442
817	SLU 77	0.74	0.91	39.11	-0.087	8.7361	-0.3207
817	SLU 78	0.73	0.96	39.12	-0.087	8.7374	-0.3383
817	SLU 79	0.73	0.9	38.9	-0.0865	8.6927	-0.3167
817	SLU 80	0.73	0.95	38.91	-0.0865	8.694	-0.3343
817	SLU 81	0.74	0.93	39.7	-0.0885	8.863	-0.33
817	SLU 82	0.73	0.98	39.7	-0.0886	8.8643	-0.3475
817	SLU 83	0.74	0.94	39.97	-0.0892	8.9195	-0.3318
817	SLU 84	0.74	0.99	39.98	-0.0892	8.9208	-0.3494
817	SLE RA 1	0.51	0.57	26.43	-0.0577	5.9512	-0.2031
817	SLE RA 2	0.5	0.63	26.43	-0.0577	5.9527	-0.2226
817	SLE RA 3	0.52	0.59	26.75	-0.0585	6.0178	-0.207
817	SLE RA 4	0.51	0.62	26.75	-0.0585	6.0187	-0.2187
817	SLE RA 5	0.51	0.63	26.61	-0.0582	5.9903	-0.2238
817	SLE RA 6	0.52	0.59	26.93	-0.0589	6.0555	-0.2082
817	SLE RA 7	0.52	0.62	26.93	-0.059	6.0563	-0.2199
817	SLE RA 8	0.52	0.58	26.79	-0.0586	6.0265	-0.2055
817	SLE RA 9	0.51	0.62	26.79	-0.0586	6.0274	-0.2172
817	SLE RA 10	0.53	0.71	28.52	-0.063	6.3933	-0.2489
817	SLE RA 11	0.54	0.66	28.84	-0.0638	6.4585	-0.2333
817	SLE RA 12	0.54	0.69	28.84	-0.0638	6.4593	-0.245
817	SLE RA 13	0.54	0.71	28.7	-0.0635	6.431	-0.2501
817	SLE RA 14	0.55	0.66	29.02	-0.0642	6.4961	-0.2345
817	SLE RA 15	0.55	0.7	29.02	-0.0643	6.497	-0.2462
817	SLE RA 16	0.55	0.66	28.88	-0.0639	6.4671	-0.2318
817	SLE RA 17	0.54	0.69	28.88	-0.0639	6.468	-0.2435
817	SLE RA 18	0.55	0.68	29.41	-0.0653	6.5807	-0.2407
817	SLE RA 19	0.55	0.71	29.42	-0.0653	6.5816	-0.2524
817	SLE RA 20	0.55	0.68	29.59	-0.0657	6.6183	-0.2419
817	SLE RA 21	0.55	0.72	29.6	-0.0657	6.6192	-0.2536
817	SLE FR 1	0.51	0.57	26.43	-0.0577	5.9512	-0.2031
817	SLE FR 2	0.51	0.59	26.43	-0.0577	5.9515	-0.207
817	SLE FR 3	0.51	0.58	26.5	-0.0579	5.9663	-0.2036
817	SLE FR 4	0.52	0.62	27.32	-0.06	6.1404	-0.2183
817	SLE FR 5	0.52	0.61	27.39	-0.0601	6.1551	-0.2149
817	SLE FR 6	0.53	0.63	27.92	-0.0615	6.266	-0.2219
817	SLE QP 1	0.51	0.57	26.43	-0.0577	5.9512	-0.2031
817	SLE QP 2	0.52	0.61	27.32	-0.06	6.1401	-0.2144
817	SLD 1	2.56	0.99	22.6	-0.0466	5.2492	-0.3466
817	SLD 2	2.44	1.39	22.58	-0.0468	5.2448	-0.4855
817	SLD 3	2.81	-0.55	22.72	-0.0459	5.2833	0.1927
817	SLD 4	2.69	-0.15	22.7	-0.0461	5.2789	0.0537
817	SLD 5	0.76	2.99	25.73	-0.057	5.8219	-1.0476
817	SLD 6	0.68	3.25	25.71	-0.0571	5.819	-1.1378
817	SLD 7	1.62	-2.15	26.13	-0.0546	5.9355	0.7498
817	SLD 8	1.54	-1.89	26.11	-0.0547	5.9326	0.6597
817	SLD 9	-0.5	3.11	28.53	-0.0652	6.3475	-1.0884
817	SLD 10	-0.58	3.36	28.52	-0.0653	6.3447	-1.1786
817	SLD 11	0.36	-2.04	28.93	-0.0628	6.4611	0.7091
817	SLD 12	0.28	-1.78	28.91	-0.0629	6.4582	0.6189
817	SLD 13	-1.65	1.36	31.94	-0.0739	7.0013	-0.4825
817	SLD 14	-1.78	1.76	31.92	-0.0741	6.9969	-0.6214
817	SLD 15	-1.4	-0.18	32.06	-0.0732	7.0353	0.0568
817	SLD 16	-1.52	0.22	32.04	-0.0734	7.0309	-0.0822
817	SLV 1	5.29	1.47	16.28	-0.0286	4.0557	-0.5069
817	SLV 2	5.01	2.39	16.23	-0.0291	4.0454	-0.8306
817	SLV 3	5.88	-2.05	16.56	-0.027	4.1344	0.7196
817	SLV 4	5.6	-1.12	16.5	-0.0274	4.1242	0.3959
817	SLV 5	1.11	6.03	23.6	-0.0529	5.397	-2.1076
817	SLV 6	0.93	6.63	23.56	-0.0532	5.3905	-2.3143
817	SLV 7	3.07	-5.67	24.52	-0.0475	5.6595	1.9809
817	SLV 8	2.89	-5.08	24.49	-0.0478	5.653	1.7742
817	SLV 9	-1.85	6.29	30.16	-0.0721	6.6271	-2.2029
817	SLV 10	-2.03	6.89	30.12	-0.0724	6.6206	-2.4096
817	SLV 11	0.11	-5.41	31.08	-0.0667	6.8896	1.8856

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
817	SLV 12	-0.07	-4.82	31.04	-0.067	6.8831	1.6789
817	SLV 13	-4.56	2.33	38.14	-0.0925	8.156	-0.8247
817	SLV 14	-4.84	3.26	38.08	-0.0929	8.1457	-1.1484
817	SLV 15	-3.97	-1.18	38.42	-0.0909	8.2347	0.4019
817	SLV 16	-4.25	-0.25	38.36	-0.0913	8.2245	0.0782
817	CRTFP Ux+	0	0	0	0	0	0
817	CRTFP Ux-	0	0	0	0	0	0
819	SLU 1	0.98	-0.01	52.2	0.0048	0.2571	-0.0148
819	SLU 2	0.98	0.08	52.21	0.0046	0.2564	-0.015
819	SLU 3	1.01	0	53.21	0.0049	0.263	-0.0152
819	SLU 4	1.01	0.05	53.22	0.0048	0.2626	-0.0153
819	SLU 5	1	0.08	52.77	0.0046	0.2589	-0.0153
819	SLU 6	1.02	-0.01	53.77	0.0049	0.2654	-0.0155
819	SLU 7	1.02	0.05	53.78	0.0048	0.265	-0.0156
819	SLU 8	1.02	-0.02	53.32	0.0048	0.262	-0.0154
819	SLU 9	1.01	0.03	53.33	0.0047	0.2616	-0.0155
819	SLU 10	1.06	0.13	59.26	0.0049	0.2993	-0.017
819	SLU 11	1.09	0.05	60.27	0.0052	0.3059	-0.0173
819	SLU 12	1.09	0.1	60.27	0.005	0.3055	-0.0173
819	SLU 13	1.08	0.12	59.82	0.0048	0.3017	-0.0173
819	SLU 14	1.11	0.04	60.83	0.0051	0.3083	-0.0175
819	SLU 15	1.11	0.09	60.83	0.005	0.3079	-0.0176
819	SLU 16	1.1	0.03	60.37	0.005	0.3048	-0.0175
819	SLU 17	1.1	0.08	60.38	0.0049	0.3044	-0.0176
819	SLU 18	1.1	0.06	62.27	0.0051	0.3184	-0.0178
819	SLU 19	1.1	0.11	62.28	0.005	0.3179	-0.0179
819	SLU 20	1.12	0.05	62.83	0.0051	0.3208	-0.0181
819	SLU 21	1.12	0.11	62.84	0.005	0.3204	-0.0182
819	SLU 22	1.07	0.05	58.95	0.0054	0.2971	-0.0165
819	SLU 23	1.07	0.14	58.96	0.0052	0.2964	-0.0167
819	SLU 24	1.1	0.06	59.97	0.0055	0.303	-0.0169
819	SLU 25	1.1	0.11	59.97	0.0054	0.3026	-0.017
819	SLU 26	1.09	0.13	59.52	0.0052	0.2989	-0.0169
819	SLU 27	1.12	0.05	60.53	0.0055	0.3054	-0.0172
819	SLU 28	1.12	0.1	60.53	0.0054	0.305	-0.0172
819	SLU 29	1.11	0.04	60.07	0.0054	0.302	-0.0171
819	SLU 30	1.11	0.09	60.08	0.0053	0.3016	-0.0172
819	SLU 31	1.16	0.19	66.01	0.0055	0.3393	-0.0187
819	SLU 32	1.18	0.1	67.02	0.0058	0.3459	-0.0189
819	SLU 33	1.18	0.16	67.03	0.0057	0.3455	-0.019
819	SLU 34	1.18	0.18	66.57	0.0055	0.3417	-0.019
819	SLU 35	1.2	0.1	67.58	0.0058	0.3483	-0.0192
819	SLU 36	1.2	0.15	67.59	0.0057	0.3479	-0.0193
819	SLU 37	1.19	0.08	67.12	0.0057	0.3448	-0.0192
819	SLU 38	1.19	0.14	67.13	0.0055	0.3444	-0.0192
819	SLU 39	1.19	0.11	69.02	0.0058	0.3584	-0.0195
819	SLU 40	1.19	0.17	69.03	0.0057	0.3579	-0.0195
819	SLU 41	1.21	0.11	69.58	0.0058	0.3608	-0.0197
819	SLU 42	1.21	0.16	69.59	0.0056	0.3604	-0.0198
819	SLU 43	1.24	-0.03	65.54	0.006	0.3205	-0.0187
819	SLU 44	1.24	0.06	65.56	0.0058	0.3198	-0.0189
819	SLU 45	1.27	-0.02	66.56	0.0061	0.3264	-0.0191
819	SLU 46	1.27	0.03	66.57	0.006	0.326	-0.0192
819	SLU 47	1.26	0.05	66.12	0.0058	0.3223	-0.0192
819	SLU 48	1.29	-0.03	67.12	0.0061	0.3289	-0.0194
819	SLU 49	1.28	0.03	67.13	0.006	0.3284	-0.0195
819	SLU 50	1.28	-0.04	66.66	0.006	0.3254	-0.0193
819	SLU 51	1.28	0.01	66.67	0.0059	0.325	-0.0194
819	SLU 52	1.33	0.11	72.61	0.0061	0.3627	-0.0209
819	SLU 53	1.35	0.02	73.61	0.0064	0.3693	-0.0211
819	SLU 54	1.35	0.08	73.62	0.0063	0.3689	-0.0212
819	SLU 55	1.34	0.1	73.17	0.0061	0.3651	-0.0212
819	SLU 56	1.37	0.02	74.17	0.0064	0.3717	-0.0214
819	SLU 57	1.37	0.07	74.18	0.0063	0.3713	-0.0215
819	SLU 58	1.36	0	73.71	0.0063	0.3683	-0.0214
819	SLU 59	1.36	0.06	73.72	0.0061	0.3678	-0.0214
819	SLU 60	1.36	0.03	75.61	0.0064	0.3818	-0.0217
819	SLU 61	1.36	0.09	75.62	0.0063	0.3814	-0.0217
819	SLU 62	1.38	0.03	76.18	0.0064	0.3842	-0.022
819	SLU 63	1.38	0.08	76.18	0.0062	0.3838	-0.022
819	SLU 64	1.34	0.03	72.29	0.0067	0.3605	-0.0204
819	SLU 65	1.33	0.12	72.31	0.0065	0.3599	-0.0205
819	SLU 66	1.36	0.03	73.31	0.0068	0.3664	-0.0208
819	SLU 67	1.36	0.09	73.32	0.0067	0.366	-0.0208
819	SLU 68	1.35	0.11	72.87	0.0065	0.3623	-0.0208
819	SLU 69	1.38	0.03	73.87	0.0068	0.3689	-0.021
819	SLU 70	1.38	0.08	73.88	0.0066	0.3684	-0.0211
819	SLU 71	1.37	0.01	73.41	0.0066	0.3654	-0.021
819	SLU 72	1.37	0.07	73.42	0.0065	0.365	-0.0211
819	SLU 73	1.42	0.16	79.36	0.0067	0.4027	-0.0226
819	SLU 74	1.45	0.08	80.36	0.007	0.4093	-0.0228
819	SLU 75	1.45	0.13	80.37	0.0069	0.4089	-0.0229
819	SLU 76	1.44	0.16	79.92	0.0067	0.4051	-0.0229
819	SLU 77	1.46	0.07	80.92	0.007	0.4117	-0.0231
819	SLU 78	1.46	0.13	80.93	0.0069	0.4113	-0.0232
819	SLU 79	1.46	0.06	80.46	0.0069	0.4083	-0.023
819	SLU 80	1.46	0.11	80.47	0.0068	0.4078	-0.0231
819	SLU 81	1.46	0.09	82.37	0.007	0.4218	-0.0233
819	SLU 82	1.46	0.15	82.37	0.0069	0.4214	-0.0234
819	SLU 83	1.47	0.09	82.93	0.007	0.4242	-0.0236
819	SLU 84	1.47	0.14	82.93	0.0069	0.4238	-0.0237

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
819	SLE RA 1	1.01	0.01	54.13	0.005	0.2685	-0.0153
819	SLE RA 2	1.01	0.07	54.14	0.0049	0.2681	-0.0154
819	SLE RA 3	1.02	0.01	54.8	0.0051	0.2725	-0.0156
819	SLE RA 4	1.02	0.05	54.81	0.005	0.2722	-0.0156
819	SLE RA 5	1.02	0.06	54.51	0.0049	0.2697	-0.0156
819	SLE RA 6	1.04	0.01	55.18	0.0051	0.2741	-0.0158
819	SLE RA 7	1.04	0.05	55.18	0.005	0.2738	-0.0158
819	SLE RA 8	1.03	0	54.87	0.005	0.2718	-0.0157
819	SLE RA 9	1.03	0.04	54.88	0.0049	0.2715	-0.0158
819	SLE RA 10	1.06	0.1	58.84	0.005	0.2967	-0.0168
819	SLE RA 11	1.08	0.04	59.5	0.0052	0.3011	-0.0169
819	SLE RA 12	1.08	0.08	59.51	0.0051	0.3008	-0.017
819	SLE RA 13	1.07	0.1	59.21	0.005	0.2983	-0.017
819	SLE RA 14	1.09	0.04	59.88	0.0052	0.3027	-0.0171
819	SLE RA 15	1.09	0.08	59.88	0.0051	0.3024	-0.0172
819	SLE RA 16	1.09	0.03	59.57	0.0051	0.3004	-0.0171
819	SLE RA 17	1.09	0.07	59.58	0.0051	0.3001	-0.0171
819	SLE RA 18	1.09	0.05	60.84	0.0052	0.3094	-0.0173
819	SLE RA 19	1.09	0.09	60.85	0.0051	0.3091	-0.0173
819	SLE RA 20	1.1	0.05	61.21	0.0052	0.311	-0.0175
819	SLE RA 21	1.1	0.08	61.22	0.0051	0.3107	-0.0175
819	SLE FR 1	1.01	0.01	54.13	0.005	0.2685	-0.0153
819	SLE FR 2	1.01	0.02	54.13	0.005	0.2684	-0.0153
819	SLE FR 3	1.01	0.01	54.28	0.005	0.2692	-0.0154
819	SLE FR 4	1.03	0.03	56.14	0.005	0.2807	-0.0159
819	SLE FR 5	1.04	0.02	56.29	0.0051	0.2814	-0.016
819	SLE FR 6	1.05	0.03	57.48	0.0051	0.289	-0.0163
819	SLE QP 1	1.01	0.01	54.13	0.005	0.2685	-0.0153
819	SLE QP 2	1.03	0.02	56.14	0.0051	0.2808	-0.0159
819	SLD 1	6.03	0.91	52.43	0.001	0.2491	-0.0423
819	SLD 2	5.86	1.2	52.41	0.0003	0.2491	-0.0376
819	SLD 3	6.14	-0.88	52.62	0.0056	0.2721	-0.0406
819	SLD 4	5.98	-0.59	52.6	0.0049	0.2721	-0.0359
819	SLD 5	2.38	2.96	54.75	-0.003	0.2364	-0.0271
819	SLD 6	2.28	3.14	54.74	-0.0034	0.2364	-0.0241
819	SLD 7	2.77	-3.02	55.37	0.0123	0.3131	-0.0217
819	SLD 8	2.66	-2.83	55.36	0.0118	0.3131	-0.0186
819	SLD 9	-0.6	2.88	56.93	-0.0017	0.2485	-0.0132
819	SLD 10	-0.71	3.06	56.91	-0.0022	0.2485	-0.0102
819	SLD 11	-0.21	-3.1	57.55	0.0135	0.3252	-0.0077
819	SLD 12	-0.32	-2.92	57.53	0.0131	0.3252	-0.0047
819	SLD 13	-3.92	0.64	59.68	0.0052	0.2895	0.0041
819	SLD 14	-4.08	0.92	59.66	0.0045	0.2895	0.0088
819	SLD 15	-3.8	-1.16	59.87	0.0098	0.3125	0.0057
819	SLD 16	-3.96	-0.87	59.85	0.0091	0.3125	0.0104
819	SLV 1	12.71	2.06	47.46	-0.0043	0.2061	-0.0775
819	SLV 2	12.33	2.72	47.41	-0.0059	0.2061	-0.0666
819	SLV 3	12.98	-2.03	47.89	0.0061	0.2598	-0.0737
819	SLV 4	12.6	-1.36	47.84	0.0045	0.2598	-0.0628
819	SLV 5	4.19	6.71	52.89	-0.0132	0.1769	-0.042
819	SLV 6	3.94	7.14	52.86	-0.0142	0.1769	-0.035
819	SLV 7	5.09	-6.9	54.33	0.0214	0.3559	-0.0294
819	SLV 8	4.85	-6.48	54.29	0.0203	0.3559	-0.0223
819	SLV 9	-2.79	6.52	57.99	-0.0102	0.2057	-0.0095
819	SLV 10	-3.03	6.94	57.95	-0.0113	0.2057	-0.0025
819	SLV 11	-1.88	-7.1	59.42	0.0243	0.3846	0.0032
819	SLV 12	-2.13	-6.67	59.39	0.0233	0.3846	0.0102
819	SLV 13	-10.54	1.4	64.44	0.0056	0.3018	0.0309
819	SLV 14	-10.92	2.07	64.39	0.004	0.3018	0.0419
819	SLV 15	-10.27	-2.68	64.87	0.016	0.3555	0.0347
819	SLV 16	-10.65	-2.01	64.82	0.0144	0.3555	0.0457
819	CRTFP Ux+	0	0	0	0	0	0
819	CRTFP Ux-	0	0	0	0	0	0
822	SLU 1	-0.75	-0.21	54.07	-0.0106	-0.2511	0.0143
822	SLU 2	-0.75	-0.11	54.08	-0.0108	-0.25	0.0144
822	SLU 3	-0.76	-0.2	55.14	-0.0109	-0.257	0.0146
822	SLU 4	-0.76	-0.14	55.15	-0.011	-0.2564	0.0147
822	SLU 5	-0.76	-0.11	54.65	-0.011	-0.2525	0.0146
822	SLU 6	-0.77	-0.2	55.71	-0.0111	-0.2595	0.0149
822	SLU 7	-0.78	-0.14	55.72	-0.0112	-0.2589	0.0149
822	SLU 8	-0.77	-0.22	55.22	-0.0111	-0.2561	0.0148
822	SLU 9	-0.77	-0.16	55.23	-0.0112	-0.2555	0.0148
822	SLU 10	-0.8	-0.11	61.51	-0.0134	-0.2937	0.0167
822	SLU 11	-0.81	-0.2	62.56	-0.0135	-0.3007	0.017
822	SLU 12	-0.81	-0.14	62.57	-0.0136	-0.3	0.017
822	SLU 13	-0.81	-0.11	62.08	-0.0136	-0.2962	0.0169
822	SLU 14	-0.82	-0.21	63.14	-0.0137	-0.3032	0.0172
822	SLU 15	-0.82	-0.15	63.15	-0.0138	-0.3025	0.0172
822	SLU 16	-0.82	-0.22	62.64	-0.0137	-0.2998	0.0171
822	SLU 17	-0.82	-0.16	62.65	-0.0138	-0.2991	0.0171
822	SLU 18	-0.82	-0.21	64.68	-0.0143	-0.3135	0.0176
822	SLU 19	-0.82	-0.15	64.68	-0.0145	-0.3128	0.0177
822	SLU 20	-0.83	-0.22	65.25	-0.0146	-0.316	0.0179
822	SLU 21	-0.83	-0.16	65.26	-0.0147	-0.3153	0.0179
822	SLU 22	-0.82	-0.18	61.17	-0.0124	-0.2905	0.0159
822	SLU 23	-0.82	-0.08	61.19	-0.0126	-0.2894	0.016
822	SLU 24	-0.83	-0.17	62.24	-0.0127	-0.2964	0.0162
822	SLU 25	-0.83	-0.11	62.25	-0.0128	-0.2957	0.0163
822	SLU 26	-0.83	-0.08	61.76	-0.0128	-0.2919	0.0162
822	SLU 27	-0.84	-0.17	62.82	-0.0129	-0.2989	0.0165
822	SLU 28	-0.85	-0.11	62.83	-0.013	-0.2982	0.0165

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
822	SLU 29	-0.84	-0.18	62.32	-0.0128	-0.2955	0.0164
822	SLU 30	-0.84	-0.12	62.33	-0.0129	-0.2948	0.0164
822	SLU 31	-0.87	-0.08	68.61	-0.0152	-0.333	0.0183
822	SLU 32	-0.88	-0.17	69.67	-0.0152	-0.34	0.0186
822	SLU 33	-0.88	-0.11	69.68	-0.0154	-0.3393	0.0186
822	SLU 34	-0.88	-0.08	69.19	-0.0154	-0.3355	0.0185
822	SLU 35	-0.89	-0.17	70.25	-0.0155	-0.3425	0.0188
822	SLU 36	-0.89	-0.11	70.25	-0.0156	-0.3418	0.0188
822	SLU 37	-0.89	-0.18	69.75	-0.0154	-0.3391	0.0187
822	SLU 38	-0.89	-0.12	69.76	-0.0155	-0.3384	0.0187
822	SLU 39	-0.89	-0.18	71.78	-0.0161	-0.3528	0.0192
822	SLU 40	-0.89	-0.12	71.79	-0.0162	-0.3521	0.0193
822	SLU 41	-0.9	-0.18	72.36	-0.0163	-0.3553	0.0195
822	SLU 42	-0.9	-0.12	72.37	-0.0164	-0.3546	0.0195
822	SLU 43	-0.95	-0.28	67.85	-0.0132	-0.313	0.0181
822	SLU 44	-0.95	-0.18	67.86	-0.0134	-0.3119	0.0181
822	SLU 45	-0.96	-0.27	68.92	-0.0135	-0.3189	0.0184
822	SLU 46	-0.96	-0.22	68.93	-0.0136	-0.3182	0.0184
822	SLU 47	-0.96	-0.19	68.44	-0.0136	-0.3144	0.0183
822	SLU 48	-0.97	-0.28	69.5	-0.0137	-0.3214	0.0186
822	SLU 49	-0.98	-0.22	69.5	-0.0138	-0.3207	0.0186
822	SLU 50	-0.97	-0.29	69	-0.0137	-0.318	0.0185
822	SLU 51	-0.97	-0.23	69.01	-0.0138	-0.3173	0.0186
822	SLU 52	-1	-0.19	75.29	-0.016	-0.3555	0.0204
822	SLU 53	-1.01	-0.28	76.35	-0.0161	-0.3625	0.0207
822	SLU 54	-1.01	-0.22	76.36	-0.0162	-0.3619	0.0207
822	SLU 55	-1.01	-0.19	75.87	-0.0162	-0.358	0.0207
822	SLU 56	-1.02	-0.28	76.92	-0.0163	-0.365	0.0209
822	SLU 57	-1.02	-0.22	76.93	-0.0164	-0.3644	0.021
822	SLU 58	-1.02	-0.29	76.43	-0.0163	-0.3616	0.0209
822	SLU 59	-1.02	-0.23	76.44	-0.0164	-0.361	0.0209
822	SLU 60	-1.02	-0.29	78.46	-0.0169	-0.3753	0.0214
822	SLU 61	-1.02	-0.23	78.47	-0.0171	-0.3747	0.0214
822	SLU 62	-1.03	-0.29	79.04	-0.0172	-0.3778	0.0216
822	SLU 63	-1.03	-0.23	79.04	-0.0173	-0.3772	0.0216
822	SLU 64	-1.02	-0.25	74.96	-0.015	-0.3523	0.0197
822	SLU 65	-1.02	-0.15	74.97	-0.0152	-0.3512	0.0197
822	SLU 66	-1.03	-0.24	76.03	-0.0152	-0.3582	0.02
822	SLU 67	-1.03	-0.18	76.03	-0.0154	-0.3576	0.02
822	SLU 68	-1.03	-0.15	75.54	-0.0154	-0.3537	0.0199
822	SLU 69	-1.04	-0.24	76.6	-0.0155	-0.3607	0.0202
822	SLU 70	-1.05	-0.19	76.61	-0.0156	-0.3601	0.0202
822	SLU 71	-1.04	-0.26	76.11	-0.0154	-0.3573	0.0201
822	SLU 72	-1.04	-0.2	76.12	-0.0155	-0.3567	0.0202
822	SLU 73	-1.07	-0.15	82.4	-0.0178	-0.3949	0.022
822	SLU 74	-1.08	-0.24	83.45	-0.0178	-0.4019	0.0223
822	SLU 75	-1.08	-0.18	83.46	-0.0179	-0.4012	0.0223
822	SLU 76	-1.08	-0.16	82.97	-0.018	-0.3974	0.0223
822	SLU 77	-1.09	-0.25	84.03	-0.018	-0.4044	0.0225
822	SLU 78	-1.09	-0.19	84.04	-0.0182	-0.4037	0.0226
822	SLU 79	-1.09	-0.26	83.53	-0.018	-0.401	0.0225
822	SLU 80	-1.09	-0.2	83.54	-0.0181	-0.4003	0.0225
822	SLU 81	-1.09	-0.25	85.57	-0.0187	-0.4147	0.023
822	SLU 82	-1.09	-0.19	85.57	-0.0188	-0.414	0.023
822	SLU 83	-1.1	-0.26	86.14	-0.0189	-0.4172	0.0232
822	SLU 84	-1.1	-0.2	86.15	-0.019	-0.4165	0.0232
822	SLE RA 1	-0.77	-0.2	56.1	-0.0111	-0.2624	0.0148
822	SLE RA 2	-0.77	-0.13	56.1	-0.0113	-0.2616	0.0148
822	SLE RA 3	-0.78	-0.19	56.81	-0.0113	-0.2663	0.015
822	SLE RA 4	-0.78	-0.15	56.82	-0.0114	-0.2659	0.015
822	SLE RA 5	-0.78	-0.14	56.49	-0.0114	-0.2633	0.015
822	SLE RA 6	-0.79	-0.2	57.19	-0.0115	-0.268	0.0151
822	SLE RA 7	-0.79	-0.16	57.2	-0.0115	-0.2675	0.0152
822	SLE RA 8	-0.78	-0.2	56.86	-0.0114	-0.2657	0.0151
822	SLE RA 9	-0.78	-0.16	56.87	-0.0115	-0.2653	0.0151
822	SLE RA 10	-0.8	-0.14	61.06	-0.013	-0.2907	0.0163
822	SLE RA 11	-0.81	-0.2	61.76	-0.013	-0.2954	0.0165
822	SLE RA 12	-0.81	-0.16	61.77	-0.0131	-0.295	0.0165
822	SLE RA 13	-0.81	-0.14	61.44	-0.0131	-0.2924	0.0165
822	SLE RA 14	-0.82	-0.2	62.15	-0.0132	-0.2971	0.0167
822	SLE RA 15	-0.82	-0.16	62.15	-0.0133	-0.2966	0.0167
822	SLE RA 16	-0.81	-0.21	61.82	-0.0132	-0.2948	0.0166
822	SLE RA 17	-0.82	-0.17	61.82	-0.0132	-0.2944	0.0167
822	SLE RA 18	-0.81	-0.2	63.17	-0.0136	-0.3039	0.017
822	SLE RA 19	-0.81	-0.16	63.17	-0.0137	-0.3035	0.017
822	SLE RA 20	-0.82	-0.2	63.55	-0.0138	-0.3056	0.0171
822	SLE RA 21	-0.82	-0.16	63.56	-0.0138	-0.3052	0.0172
822	SLE FR 1	-0.77	-0.2	56.1	-0.0111	-0.2624	0.0148
822	SLE FR 2	-0.77	-0.19	56.1	-0.0112	-0.2622	0.0148
822	SLE FR 3	-0.77	-0.2	56.25	-0.0112	-0.2631	0.0148
822	SLE FR 4	-0.78	-0.19	58.22	-0.0119	-0.2747	0.0154
822	SLE FR 5	-0.78	-0.2	58.37	-0.0119	-0.2755	0.0155
822	SLE FR 6	-0.79	-0.2	59.63	-0.0124	-0.2832	0.0159
822	SLE QP 1	-0.77	-0.2	56.1	-0.0111	-0.2624	0.0148
822	SLE QP 2	-0.78	-0.2	58.22	-0.0119	-0.2748	0.0154
822	SLD 1	4.73	1.13	63.05	-0.0124	-0.216	-0.0115
822	SLD 2	4.56	0.81	63.06	-0.0117	-0.2189	-0.0063
822	SLD 3	4.6	-0.81	63.19	-0.0082	-0.2411	-0.0101
822	SLD 4	4.42	-1.13	63.2	-0.0075	-0.244	-0.0049
822	SLD 5	1.11	3.2	59.45	-0.0186	-0.2185	0.0044
822	SLD 6	1	3	59.46	-0.0182	-0.2204	0.0078

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
822	SLD 7	0.66	-3.28	59.92	-0.0044	-0.3023	0.0089
822	SLD 8	0.54	-3.48	59.93	-0.004	-0.3042	0.0123
822	SLD 9	-2.1	3.08	56.51	-0.0198	-0.2455	0.0186
822	SLD 10	-2.22	2.87	56.52	-0.0193	-0.2473	0.022
822	SLD 11	-2.56	-3.4	56.97	-0.0056	-0.3293	0.0231
822	SLD 12	-2.67	-3.6	56.98	-0.0052	-0.3312	0.0265
822	SLD 13	-5.98	0.73	53.24	-0.0163	-0.3057	0.0358
822	SLD 14	-6.16	0.41	53.25	-0.0156	-0.3086	0.041
822	SLD 15	-6.12	-1.22	53.38	-0.012	-0.3308	0.0372
822	SLD 16	-6.29	-1.53	53.39	-0.0114	-0.3337	0.0423
822	SLV 1	12.12	2.85	69.52	-0.013	-0.1377	-0.0475
822	SLV 2	11.71	2.12	69.56	-0.0114	-0.1445	-0.0354
822	SLV 3	11.8	-1.58	69.85	-0.0033	-0.1954	-0.0443
822	SLV 4	11.39	-2.31	69.88	-0.0017	-0.2021	-0.0323
822	SLV 5	3.64	7.56	61.11	-0.0271	-0.145	-0.0102
822	SLV 6	3.38	7.09	61.13	-0.0261	-0.1494	-0.0025
822	SLV 7	2.58	-7.21	62.2	0.005	-0.3374	0.0002
822	SLV 8	2.31	-7.68	62.22	0.006	-0.3417	0.0079
822	SLV 9	-3.87	7.28	54.22	-0.0298	-0.208	0.023
822	SLV 10	-4.14	6.81	54.24	-0.0288	-0.2123	0.0307
822	SLV 11	-4.94	-7.5	55.31	0.0023	-0.4003	0.0334
822	SLV 12	-5.2	-7.97	55.33	0.0033	-0.4047	0.0411
822	SLV 13	-12.95	1.91	46.55	-0.022	-0.3475	0.0631
822	SLV 14	-13.36	1.18	46.59	-0.0205	-0.3543	0.0752
822	SLV 15	-13.27	-2.52	46.88	-0.0124	-0.4052	0.0663
822	SLV 16	-13.68	-3.26	46.92	-0.0108	-0.412	0.0783
822	CRTFP Ux+	0	0	0	0	0	0
822	CRTFP Ux-	0	0	0	0	0	0
825	SLU 1	0.31	0.38	43.86	0.0033	-0.0139	-0.0051
825	SLU 2	0.32	0.46	43.89	0.0031	-0.0145	-0.0051
825	SLU 3	0.32	0.4	44.64	0.0035	-0.0136	-0.0052
825	SLU 4	0.33	0.45	44.65	0.0033	-0.014	-0.0052
825	SLU 5	0.32	0.46	44.29	0.0031	-0.014	-0.0052
825	SLU 6	0.33	0.4	45.04	0.0034	-0.0131	-0.0053
825	SLU 7	0.33	0.45	45.05	0.0033	-0.0135	-0.0053
825	SLU 8	0.33	0.38	44.66	0.0033	-0.0127	-0.0053
825	SLU 9	0.33	0.43	44.68	0.0031	-0.0131	-0.0053
825	SLU 10	0.36	0.5	50.12	0.002	-0.0149	-0.0057
825	SLU 11	0.37	0.44	50.87	0.0024	-0.0141	-0.0057
825	SLU 12	0.37	0.49	50.89	0.0022	-0.0145	-0.0057
825	SLU 13	0.37	0.5	50.52	0.002	-0.0144	-0.0058
825	SLU 14	0.38	0.44	51.27	0.0023	-0.0135	-0.0058
825	SLU 15	0.38	0.49	51.29	0.0022	-0.0139	-0.0058
825	SLU 16	0.37	0.41	50.89	0.0022	-0.0132	-0.0058
825	SLU 17	0.37	0.46	50.91	0.002	-0.0136	-0.0058
825	SLU 18	0.38	0.43	52.76	0.0017	-0.0145	-0.0058
825	SLU 19	0.38	0.48	52.78	0.0016	-0.0149	-0.0059
825	SLU 20	0.39	0.43	53.16	0.0017	-0.0139	-0.0059
825	SLU 21	0.39	0.48	53.18	0.0016	-0.0143	-0.006
825	SLU 22	0.36	0.46	49.68	0.0033	-0.0191	-0.0055
825	SLU 23	0.36	0.54	49.71	0.0031	-0.0197	-0.0055
825	SLU 24	0.37	0.48	50.46	0.0035	-0.0188	-0.0056
825	SLU 25	0.37	0.53	50.48	0.0034	-0.0192	-0.0056
825	SLU 26	0.36	0.54	50.11	0.0031	-0.0192	-0.0056
825	SLU 27	0.37	0.48	50.86	0.0035	-0.0183	-0.0057
825	SLU 28	0.37	0.53	50.88	0.0033	-0.0187	-0.0057
825	SLU 29	0.37	0.46	50.49	0.0033	-0.0179	-0.0057
825	SLU 30	0.37	0.51	50.5	0.0032	-0.0183	-0.0057
825	SLU 31	0.4	0.58	55.95	0.002	-0.0202	-0.0061
825	SLU 32	0.41	0.52	56.7	0.0024	-0.0193	-0.0061
825	SLU 33	0.41	0.57	56.71	0.0023	-0.0197	-0.0061
825	SLU 34	0.41	0.58	56.35	0.002	-0.0196	-0.0062
825	SLU 35	0.42	0.52	57.1	0.0024	-0.0187	-0.0062
825	SLU 36	0.42	0.57	57.11	0.0022	-0.0191	-0.0062
825	SLU 37	0.41	0.5	56.72	0.0022	-0.0184	-0.0062
825	SLU 38	0.42	0.55	56.74	0.0021	-0.0188	-0.0062
825	SLU 39	0.42	0.51	58.59	0.0018	-0.0197	-0.0063
825	SLU 40	0.42	0.56	58.61	0.0016	-0.0201	-0.0063
825	SLU 41	0.43	0.51	58.99	0.0017	-0.0191	-0.0063
825	SLU 42	0.43	0.56	59.01	0.0016	-0.0195	-0.0064
825	SLU 43	0.39	0.46	55.02	0.0043	-0.0162	-0.0064
825	SLU 44	0.4	0.55	55.05	0.0041	-0.0169	-0.0065
825	SLU 45	0.41	0.49	55.8	0.0045	-0.016	-0.0065
825	SLU 46	0.41	0.54	55.81	0.0043	-0.0164	-0.0066
825	SLU 47	0.4	0.55	55.45	0.0041	-0.0163	-0.0066
825	SLU 48	0.41	0.49	56.2	0.0044	-0.0155	-0.0066
825	SLU 49	0.41	0.54	56.21	0.0043	-0.0158	-0.0067
825	SLU 50	0.41	0.46	55.82	0.0042	-0.0151	-0.0066
825	SLU 51	0.41	0.51	55.84	0.0041	-0.0155	-0.0067
825	SLU 52	0.44	0.58	61.28	0.003	-0.0173	-0.007
825	SLU 53	0.45	0.52	62.03	0.0034	-0.0165	-0.0071
825	SLU 54	0.45	0.57	62.05	0.0032	-0.0168	-0.0071
825	SLU 55	0.45	0.58	61.68	0.003	-0.0168	-0.0071
825	SLU 56	0.46	0.52	62.43	0.0033	-0.0159	-0.0072
825	SLU 57	0.46	0.57	62.45	0.0032	-0.0163	-0.0072
825	SLU 58	0.45	0.5	62.05	0.0031	-0.0156	-0.0072
825	SLU 59	0.45	0.55	62.07	0.003	-0.0159	-0.0072
825	SLU 60	0.46	0.51	63.92	0.0027	-0.0169	-0.0072
825	SLU 61	0.46	0.56	63.94	0.0026	-0.0173	-0.0072
825	SLU 62	0.47	0.51	64.32	0.0027	-0.0163	-0.0073
825	SLU 63	0.47	0.56	64.34	0.0026	-0.0167	-0.0073

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
825	SLU 64	0.44	0.54	60.84	0.0043	-0.0215	-0.0069
825	SLU 65	0.44	0.63	60.87	0.0041	-0.0221	-0.0069
825	SLU 66	0.45	0.57	61.62	0.0045	-0.0212	-0.007
825	SLU 67	0.45	0.62	61.64	0.0044	-0.0216	-0.007
825	SLU 68	0.44	0.63	61.27	0.0041	-0.0215	-0.007
825	SLU 69	0.45	0.57	62.02	0.0045	-0.0207	-0.007
825	SLU 70	0.45	0.62	62.04	0.0043	-0.021	-0.0071
825	SLU 71	0.45	0.55	61.65	0.0043	-0.0203	-0.007
825	SLU 72	0.45	0.6	61.66	0.0041	-0.0207	-0.0071
825	SLU 73	0.48	0.66	67.11	0.003	-0.0225	-0.0075
825	SLU 74	0.49	0.6	67.86	0.0034	-0.0217	-0.0075
825	SLU 75	0.49	0.65	67.87	0.0033	-0.022	-0.0075
825	SLU 76	0.49	0.66	67.51	0.003	-0.022	-0.0075
825	SLU 77	0.5	0.6	68.26	0.0034	-0.0211	-0.0076
825	SLU 78	0.5	0.65	68.27	0.0032	-0.0215	-0.0076
825	SLU 79	0.49	0.58	67.88	0.0032	-0.0208	-0.0076
825	SLU 80	0.5	0.63	67.9	0.003	-0.0211	-0.0076
825	SLU 81	0.5	0.6	69.75	0.0027	-0.0221	-0.0076
825	SLU 82	0.5	0.65	69.77	0.0026	-0.0225	-0.0077
825	SLU 83	0.51	0.6	70.15	0.0027	-0.0215	-0.0077
825	SLU 84	0.51	0.65	70.17	0.0026	-0.0219	-0.0078
825	SLE RA 1	0.33	0.4	45.52	0.0033	-0.0154	-0.0052
825	SLE RA 2	0.33	0.46	45.54	0.0032	-0.0158	-0.0052
825	SLE RA 3	0.33	0.42	46.04	0.0034	-0.0152	-0.0052
825	SLE RA 4	0.33	0.45	46.05	0.0033	-0.0155	-0.0053
825	SLE RA 5	0.33	0.46	45.81	0.0032	-0.0154	-0.0053
825	SLE RA 6	0.34	0.42	46.31	0.0034	-0.0148	-0.0053
825	SLE RA 7	0.34	0.45	46.32	0.0033	-0.0151	-0.0053
825	SLE RA 8	0.34	0.4	46.06	0.0033	-0.0146	-0.0053
825	SLE RA 9	0.34	0.43	46.07	0.0032	-0.0149	-0.0053
825	SLE RA 10	0.36	0.48	49.7	0.0024	-0.0161	-0.0056
825	SLE RA 11	0.36	0.44	50.2	0.0027	-0.0155	-0.0056
825	SLE RA 12	0.36	0.47	50.21	0.0026	-0.0158	-0.0056
825	SLE RA 13	0.36	0.48	49.96	0.0024	-0.0157	-0.0056
825	SLE RA 14	0.37	0.44	50.46	0.0027	-0.0151	-0.0057
825	SLE RA 15	0.37	0.47	50.48	0.0026	-0.0154	-0.0057
825	SLE RA 16	0.37	0.42	50.21	0.0025	-0.0149	-0.0057
825	SLE RA 17	0.37	0.46	50.22	0.0025	-0.0152	-0.0057
825	SLE RA 18	0.37	0.43	51.46	0.0023	-0.0158	-0.0057
825	SLE RA 19	0.37	0.47	51.47	0.0022	-0.016	-0.0057
825	SLE RA 20	0.37	0.43	51.73	0.0023	-0.0154	-0.0058
825	SLE RA 21	0.37	0.47	51.74	0.0022	-0.0157	-0.0058
825	SLE FR 1	0.33	0.4	45.52	0.0033	-0.0154	-0.0052
825	SLE FR 2	0.33	0.41	45.53	0.0033	-0.0154	-0.0052
825	SLE FR 3	0.33	0.4	45.63	0.0033	-0.0152	-0.0052
825	SLE FR 4	0.34	0.42	47.31	0.003	-0.0156	-0.0054
825	SLE FR 5	0.34	0.41	47.41	0.003	-0.0153	-0.0054
825	SLE FR 6	0.35	0.42	48.49	0.0028	-0.0156	-0.0054
825	SLE QP 1	0.33	0.4	45.52	0.0033	-0.0154	-0.0052
825	SLE QP 2	0.34	0.41	47.3	0.003	-0.0155	-0.0053
825	SLD 1	5.48	1.05	45.47	-0.0029	0.0573	-0.0369
825	SLD 2	5.32	1.14	45.51	-0.0031	0.0575	-0.0321
825	SLD 3	5.35	-0.72	45.05	0.0014	0.0698	-0.0358
825	SLD 4	5.18	-0.62	45.08	0.0012	0.07	-0.031
825	SLD 5	2.12	3.26	47.39	-0.0052	-0.0126	-0.0174
825	SLD 6	2.01	3.32	47.41	-0.0053	-0.0125	-0.0143
825	SLD 7	1.67	-2.62	45.98	0.009	0.029	-0.0136
825	SLD 8	1.56	-2.56	46	0.0089	0.0291	-0.0105
825	SLD 9	-0.88	3.38	48.6	-0.0029	-0.0601	-0.0002
825	SLD 10	-0.99	3.44	48.63	-0.003	-0.06	0.0029
825	SLD 11	-1.33	-2.5	47.2	0.0113	-0.0184	0.0036
825	SLD 12	-1.44	-2.44	47.22	0.0112	-0.0183	0.0067
825	SLD 13	-4.5	1.44	49.52	0.0048	-0.1009	0.0203
825	SLD 14	-4.67	1.54	49.56	0.0046	-0.1008	0.0251
825	SLD 15	-4.64	-0.32	49.1	0.0091	-0.0884	0.0215
825	SLD 16	-4.81	-0.23	49.14	0.0089	-0.0883	0.0262
825	SLV 1	12.37	1.84	42.98	-0.0108	0.1552	-0.0792
825	SLV 2	11.98	2.07	43.07	-0.0113	0.1556	-0.0681
825	SLV 3	12.06	-2.17	42.02	-0.0011	0.1837	-0.0765
825	SLV 4	11.67	-1.95	42.11	-0.0016	0.184	-0.0654
825	SLV 5	4.49	6.9	47.45	-0.0157	-0.0074	-0.0334
825	SLV 6	4.24	7.04	47.5	-0.016	-0.0072	-0.0263
825	SLV 7	3.44	-6.5	44.25	0.0165	0.0873	-0.0245
825	SLV 8	3.2	-6.35	44.31	0.0162	0.0875	-0.0174
825	SLV 9	-2.52	7.18	50.3	-0.0102	-0.1185	0.0068
825	SLV 10	-2.76	7.32	50.36	-0.0105	-0.1183	0.0139
825	SLV 11	-3.56	-6.22	47.11	0.022	-0.0238	0.0156
825	SLV 12	-3.81	-6.07	47.16	0.0217	-0.0235	0.0227
825	SLV 13	-10.99	2.77	52.5	0.0076	-0.215	0.0547
825	SLV 14	-11.38	3	52.58	0.0071	-0.2146	0.0658
825	SLV 15	-11.3	-1.24	51.54	0.0173	-0.1866	0.0574
825	SLV 16	-11.69	-1.02	51.62	0.0168	-0.1862	0.0685
825	CRTFP Ux+	0	0	0	0	0	0
825	CRTFP Ux-	0	0	0	0	0	0
828	SLU 1	-0.06	0.4	41.95	0.0035	0.0716	0.0058
828	SLU 2	-0.06	0.48	41.99	0.0033	0.0719	0.0058
828	SLU 3	-0.06	0.42	42.7	0.0037	0.0735	0.0059
828	SLU 4	-0.06	0.47	42.72	0.0035	0.0737	0.0059
828	SLU 5	-0.06	0.48	42.38	0.0033	0.0728	0.0059
828	SLU 6	-0.06	0.43	43.09	0.0036	0.0743	0.006
828	SLU 7	-0.06	0.48	43.11	0.0035	0.0745	0.006

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
828	SLU 8	-0.06	0.4	42.73	0.0035	0.0734	0.006
828	SLU 9	-0.06	0.45	42.75	0.0033	0.0735	0.006
828	SLU 10	-0.06	0.54	47.74	0.0029	0.0812	0.007
828	SLU 11	-0.06	0.49	48.45	0.0033	0.0827	0.0071
828	SLU 12	-0.06	0.54	48.47	0.0032	0.0829	0.0071
828	SLU 13	-0.06	0.55	48.12	0.0029	0.0821	0.0071
828	SLU 14	-0.06	0.49	48.83	0.0033	0.0836	0.0072
828	SLU 15	-0.06	0.54	48.86	0.0031	0.0838	0.0072
828	SLU 16	-0.06	0.47	48.47	0.0031	0.0826	0.0072
828	SLU 17	-0.06	0.52	48.5	0.003	0.0828	0.0072
828	SLU 18	-0.06	0.49	50.16	0.003	0.0849	0.0075
828	SLU 19	-0.06	0.54	50.19	0.0029	0.085	0.0075
828	SLU 20	-0.06	0.5	50.55	0.003	0.0857	0.0076
828	SLU 21	-0.06	0.54	50.57	0.0029	0.0859	0.0076
828	SLU 22	-0.08	0.52	47.4	0.004	0.0841	0.0064
828	SLU 23	-0.08	0.61	47.44	0.0038	0.0845	0.0064
828	SLU 24	-0.08	0.55	48.15	0.0041	0.086	0.0066
828	SLU 25	-0.08	0.6	48.17	0.004	0.0862	0.0065
828	SLU 26	-0.08	0.61	47.83	0.0037	0.0853	0.0065
828	SLU 27	-0.08	0.56	48.54	0.0041	0.0869	0.0066
828	SLU 28	-0.08	0.6	48.56	0.004	0.0871	0.0066
828	SLU 29	-0.08	0.53	48.18	0.0039	0.0859	0.0066
828	SLU 30	-0.08	0.58	48.2	0.0038	0.0861	0.0066
828	SLU 31	-0.08	0.67	53.19	0.0034	0.0937	0.0077
828	SLU 32	-0.08	0.62	53.9	0.0038	0.0953	0.0078
828	SLU 33	-0.08	0.67	53.92	0.0036	0.0955	0.0078
828	SLU 34	-0.08	0.68	53.57	0.0034	0.0946	0.0077
828	SLU 35	-0.08	0.62	54.28	0.0038	0.0961	0.0079
828	SLU 36	-0.08	0.67	54.3	0.0036	0.0963	0.0079
828	SLU 37	-0.08	0.6	53.92	0.0036	0.0952	0.0078
828	SLU 38	-0.08	0.65	53.94	0.0035	0.0954	0.0078
828	SLU 39	-0.08	0.62	55.61	0.0035	0.0974	0.0082
828	SLU 40	-0.08	0.67	55.64	0.0034	0.0976	0.0082
828	SLU 41	-0.08	0.62	56	0.0035	0.0983	0.0083
828	SLU 42	-0.08	0.67	56.02	0.0033	0.0985	0.0083
828	SLU 43	-0.07	0.47	52.67	0.0044	0.0888	0.0073
828	SLU 44	-0.07	0.55	52.71	0.0042	0.0891	0.0073
828	SLU 45	-0.08	0.5	53.42	0.0046	0.0907	0.0074
828	SLU 46	-0.08	0.55	53.44	0.0044	0.0908	0.0074
828	SLU 47	-0.07	0.55	53.1	0.0042	0.09	0.0074
828	SLU 48	-0.08	0.5	53.8	0.0045	0.0915	0.0075
828	SLU 49	-0.08	0.55	53.83	0.0044	0.0917	0.0075
828	SLU 50	-0.07	0.48	53.44	0.0044	0.0905	0.0075
828	SLU 51	-0.07	0.53	53.47	0.0042	0.0907	0.0075
828	SLU 52	-0.07	0.62	58.46	0.0038	0.0984	0.0085
828	SLU 53	-0.07	0.57	59.16	0.0042	0.0999	0.0087
828	SLU 54	-0.07	0.61	59.19	0.0041	0.1001	0.0086
828	SLU 55	-0.07	0.62	58.84	0.0038	0.0993	0.0086
828	SLU 56	-0.07	0.57	59.55	0.0042	0.1008	0.0087
828	SLU 57	-0.07	0.62	59.57	0.004	0.101	0.0087
828	SLU 58	-0.07	0.54	59.19	0.004	0.0998	0.0087
828	SLU 59	-0.07	0.59	59.21	0.0039	0.1	0.0087
828	SLU 60	-0.07	0.57	60.88	0.0039	0.102	0.0091
828	SLU 61	-0.07	0.62	60.91	0.0038	0.1022	0.0091
828	SLU 62	-0.07	0.57	61.27	0.0039	0.1029	0.0092
828	SLU 63	-0.07	0.62	61.29	0.0038	0.1031	0.0091
828	SLU 64	-0.09	0.6	58.12	0.0049	0.1013	0.008
828	SLU 65	-0.09	0.68	58.16	0.0047	0.1016	0.0079
828	SLU 66	-0.09	0.63	58.87	0.005	0.1032	0.0081
828	SLU 67	-0.09	0.68	58.89	0.0049	0.1034	0.0081
828	SLU 68	-0.09	0.68	58.55	0.0046	0.1025	0.008
828	SLU 69	-0.09	0.63	59.25	0.005	0.1041	0.0082
828	SLU 70	-0.09	0.68	59.28	0.0049	0.1042	0.0082
828	SLU 71	-0.09	0.61	58.89	0.0048	0.1031	0.0081
828	SLU 72	-0.09	0.65	58.92	0.0047	0.1033	0.0081
828	SLU 73	-0.09	0.75	63.91	0.0043	0.1109	0.0092
828	SLU 74	-0.09	0.69	64.61	0.0047	0.1125	0.0093
828	SLU 75	-0.09	0.74	64.64	0.0045	0.1126	0.0093
828	SLU 76	-0.09	0.75	64.29	0.0043	0.1118	0.0093
828	SLU 77	-0.09	0.7	65	0.0047	0.1133	0.0094
828	SLU 78	-0.09	0.75	65.02	0.0045	0.1135	0.0094
828	SLU 79	-0.09	0.67	64.64	0.0045	0.1123	0.0094
828	SLU 80	-0.09	0.72	64.66	0.0044	0.1125	0.0094
828	SLU 81	-0.09	0.7	66.33	0.0044	0.1146	0.0097
828	SLU 82	-0.09	0.74	66.35	0.0043	0.1148	0.0097
828	SLU 83	-0.09	0.7	66.72	0.0044	0.1154	0.0098
828	SLU 84	-0.09	0.75	66.74	0.0042	0.1156	0.0098
828	SLE RA 1	-0.07	0.43	43.51	0.0037	0.0752	0.006
828	SLE RA 2	-0.07	0.49	43.54	0.0035	0.0754	0.006
828	SLE RA 3	-0.07	0.45	44.01	0.0038	0.0764	0.0061
828	SLE RA 4	-0.07	0.48	44.02	0.0037	0.0766	0.006
828	SLE RA 5	-0.07	0.49	43.79	0.0035	0.076	0.006
828	SLE RA 6	-0.07	0.45	44.27	0.0037	0.077	0.0061
828	SLE RA 7	-0.07	0.49	44.28	0.0036	0.0771	0.0061
828	SLE RA 8	-0.07	0.44	44.03	0.0036	0.0764	0.0061
828	SLE RA 9	-0.07	0.47	44.04	0.0035	0.0765	0.0061
828	SLE RA 10	-0.07	0.53	47.37	0.0033	0.0816	0.0068
828	SLE RA 11	-0.07	0.5	47.84	0.0035	0.0826	0.0069
828	SLE RA 12	-0.07	0.53	47.85	0.0034	0.0827	0.0069
828	SLE RA 13	-0.07	0.53	47.63	0.0033	0.0822	0.0068
828	SLE RA 14	-0.07	0.5	48.1	0.0035	0.0832	0.0069

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
828	SLE RA 15	-0.07	0.53	48.11	0.0034	0.0833	0.0069
828	SLE RA 16	-0.07	0.48	47.86	0.0034	0.0825	0.0069
828	SLE RA 17	-0.07	0.51	47.87	0.0033	0.0827	0.0069
828	SLE RA 18	-0.07	0.5	48.98	0.0033	0.084	0.0071
828	SLE RA 19	-0.06	0.53	49	0.0032	0.0841	0.0071
828	SLE RA 20	-0.07	0.5	49.24	0.0033	0.0846	0.0072
828	SLE RA 21	-0.07	0.53	49.26	0.0032	0.0847	0.0072
828	SLE FR 1	-0.07	0.43	43.51	0.0037	0.0752	0.006
828	SLE FR 2	-0.07	0.44	43.52	0.0036	0.0752	0.006
828	SLE FR 3	-0.07	0.43	43.61	0.0037	0.0754	0.006
828	SLE FR 4	-0.07	0.46	45.16	0.0035	0.0779	0.0063
828	SLE FR 5	-0.07	0.45	45.26	0.0036	0.0781	0.0064
828	SLE FR 6	-0.07	0.46	46.25	0.0035	0.0796	0.0066
828	SLE QP 1	-0.07	0.43	43.51	0.0037	0.0752	0.006
828	SLE QP 2	-0.07	0.45	45.15	0.0036	0.0778	0.0063
828	SLD 1	5.05	1.55	46.79	0.0055	0.1394	-0.0241
828	SLD 2	4.89	1.45	46.77	0.0058	0.1397	-0.0194
828	SLD 3	4.93	-0.21	46.26	0.0098	0.1329	-0.0223
828	SLD 4	4.77	-0.31	46.24	0.0101	0.1332	-0.0176
828	SLD 5	1.68	3.47	46.46	-0.0025	0.1062	-0.0064
828	SLD 6	1.57	3.4	46.44	-0.0023	0.1064	-0.0033
828	SLD 7	1.28	-2.4	44.68	0.012	0.0844	-0.0004
828	SLD 8	1.17	-2.47	44.67	0.0122	0.0846	0.0027
828	SLD 9	-1.31	3.37	45.64	-0.005	0.0711	0.01
828	SLD 10	-1.41	3.3	45.63	-0.0049	0.0713	0.013
828	SLD 11	-1.7	-2.5	43.87	0.0094	0.0493	0.016
828	SLD 12	-1.81	-2.57	43.85	0.0096	0.0495	0.019
828	SLD 13	-4.9	1.22	44.07	-0.003	0.0225	0.0303
828	SLD 14	-5.07	1.11	44.05	-0.0027	0.0228	0.035
828	SLD 15	-5.02	-0.54	43.54	0.0013	0.0159	0.0321
828	SLD 16	-5.19	-0.65	43.52	0.0016	0.0162	0.0368
828	SLV 1	11.91	2.98	49.05	0.0084	0.2217	-0.0649
828	SLV 2	11.52	2.73	49	0.0091	0.2225	-0.054
828	SLV 3	11.63	-1.03	47.84	0.0183	0.2067	-0.0607
828	SLV 4	11.24	-1.28	47.79	0.019	0.2074	-0.0498
828	SLV 5	4.01	7.34	48.17	-0.0101	0.1437	-0.0232
828	SLV 6	3.76	7.18	48.14	-0.0096	0.1442	-0.0162
828	SLV 7	3.09	-6.04	44.13	0.0228	0.0936	-0.0093
828	SLV 8	2.84	-6.19	44.1	0.0233	0.094	-0.0024
828	SLV 9	-2.97	7.1	46.21	-0.0162	0.0617	0.015
828	SLV 10	-3.22	6.94	46.18	-0.0157	0.0621	0.022
828	SLV 11	-3.9	-6.28	42.17	0.0168	0.0115	0.0289
828	SLV 12	-4.15	-6.43	42.14	0.0172	0.012	0.0359
828	SLV 13	-11.37	2.18	42.52	-0.0119	-0.0517	0.0625
828	SLV 14	-11.76	1.94	42.47	-0.0112	-0.051	0.0734
828	SLV 15	-11.65	-1.83	41.3	-0.002	-0.0668	0.0666
828	SLV 16	-12.04	-2.08	41.25	-0.0013	-0.0661	0.0776
828	CRTFP Ux+	0	0	0	0	0	0
828	CRTFP Ux-	0	0	0	0	0	0
830	SLU 1	-0.46	-0.04	22.98	0.0175	-4.1766	-0.01
830	SLU 2	-0.46	0.03	22.98	0.0175	-4.1779	0.0073
830	SLU 3	-0.47	-0.03	23.43	0.0179	-4.2542	-0.0086
830	SLU 4	-0.47	0.01	23.43	0.0179	-4.255	0.0018
830	SLU 5	-0.46	0.03	23.24	0.0177	-4.2216	0.0082
830	SLU 6	-0.47	-0.03	23.68	0.0181	-4.2979	-0.0077
830	SLU 7	-0.47	0.01	23.68	0.0181	-4.2986	0.0027
830	SLU 8	-0.47	-0.03	23.48	0.0179	-4.2639	-0.0081
830	SLU 9	-0.47	0.01	23.49	0.0179	-4.2647	0.0023
830	SLU 10	-0.49	0.05	25.88	0.0198	-4.6878	0.0116
830	SLU 11	-0.5	-0.02	26.32	0.0202	-4.7641	-0.0043
830	SLU 12	-0.5	0.02	26.32	0.0202	-4.7648	0.0061
830	SLU 13	-0.5	0.05	26.13	0.0201	-4.7314	0.0126
830	SLU 14	-0.51	-0.01	26.57	0.0204	-4.8077	-0.0033
830	SLU 15	-0.51	0.03	26.57	0.0204	-4.8085	0.0071
830	SLU 16	-0.51	-0.02	26.38	0.0203	-4.7738	-0.0038
830	SLU 17	-0.51	0.03	26.38	0.0203	-4.7746	0.0066
830	SLU 18	-0.51	-0.02	27.11	0.0208	-4.905	-0.0038
830	SLU 19	-0.51	0.03	27.11	0.0208	-4.9058	0.0066
830	SLU 20	-0.52	-0.01	27.36	0.021	-4.9487	-0.0029
830	SLU 21	-0.52	0.03	27.37	0.021	-4.9494	0.0075
830	SLU 22	-0.5	-0.02	25.8	0.0199	-4.6732	-0.0053
830	SLU 23	-0.5	0.05	25.8	0.0199	-4.6745	0.012
830	SLU 24	-0.51	-0.02	26.25	0.0203	-4.7508	-0.0039
830	SLU 25	-0.51	0.03	26.25	0.0203	-4.7515	0.0065
830	SLU 26	-0.51	0.05	26.06	0.0201	-4.7181	0.0129
830	SLU 27	-0.52	-0.01	26.5	0.0205	-4.7944	-0.003
830	SLU 28	-0.52	0.03	26.5	0.0205	-4.7952	0.0074
830	SLU 29	-0.51	-0.01	26.3	0.0203	-4.7605	-0.0034
830	SLU 30	-0.52	0.03	26.31	0.0203	-4.7613	0.007
830	SLU 31	-0.54	0.06	28.7	0.0222	-5.1843	0.0163
830	SLU 32	-0.55	0	29.14	0.0226	-5.2606	0.0004
830	SLU 33	-0.55	0.04	29.14	0.0226	-5.2614	0.0108
830	SLU 34	-0.55	0.07	28.95	0.0225	-5.228	0.0173
830	SLU 35	-0.55	0	29.39	0.0228	-5.3043	0.0014
830	SLU 36	-0.56	0.05	29.39	0.0228	-5.305	0.0117
830	SLU 37	-0.55	0	29.2	0.0227	-5.2704	0.0009
830	SLU 38	-0.55	0.04	29.2	0.0227	-5.2711	0.0113
830	SLU 39	-0.55	0	29.93	0.0232	-5.4016	0.0009
830	SLU 40	-0.55	0.04	29.93	0.0232	-5.4023	0.0113
830	SLU 41	-0.56	0.01	30.18	0.0234	-5.4452	0.0018
830	SLU 42	-0.56	0.05	30.19	0.0234	-5.446	0.0122

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
830	SLU 43	-0.58	-0.06	28.9	0.022	-5.2594	-0.0146
830	SLU 44	-0.58	0.01	28.91	0.022	-5.2607	0.0027
830	SLU 45	-0.59	-0.05	29.35	0.0224	-5.3369	-0.0132
830	SLU 46	-0.59	-0.01	29.36	0.0224	-5.3377	-0.0028
830	SLU 47	-0.59	0.01	29.16	0.0222	-5.3043	0.0036
830	SLU 48	-0.59	-0.05	29.61	0.0226	-5.3806	-0.0123
830	SLU 49	-0.59	-0.01	29.61	0.0226	-5.3814	-0.0019
830	SLU 50	-0.59	-0.05	29.41	0.0224	-5.3467	-0.0127
830	SLU 51	-0.59	-0.01	29.42	0.0224	-5.3474	-0.0023
830	SLU 52	-0.62	0.03	31.8	0.0243	-5.7705	0.007
830	SLU 53	-0.62	-0.04	32.24	0.0247	-5.8468	-0.0089
830	SLU 54	-0.62	0.01	32.25	0.0247	-5.8476	0.0015
830	SLU 55	-0.62	0.03	32.06	0.0245	-5.8142	0.008
830	SLU 56	-0.63	-0.03	32.5	0.0249	-5.8904	-0.0079
830	SLU 57	-0.63	0.01	32.5	0.0249	-5.8912	0.0025
830	SLU 58	-0.63	-0.03	32.3	0.0247	-5.8565	-0.0084
830	SLU 59	-0.63	0.01	32.31	0.0247	-5.8573	0.002
830	SLU 60	-0.63	-0.03	33.03	0.0253	-5.9877	-0.0084
830	SLU 61	-0.63	0.01	33.04	0.0253	-5.9885	0.002
830	SLU 62	-0.64	-0.03	33.29	0.0255	-6.0314	-0.0075
830	SLU 63	-0.64	0.01	33.29	0.0255	-6.0322	0.0029
830	SLU 64	-0.62	-0.04	31.72	0.0244	-5.756	-0.0099
830	SLU 65	-0.62	0.03	31.73	0.0244	-5.7572	0.0074
830	SLU 66	-0.63	-0.03	32.17	0.0248	-5.8335	-0.0085
830	SLU 67	-0.63	0.01	32.18	0.0248	-5.8343	0.0019
830	SLU 68	-0.63	0.03	31.98	0.0246	-5.8009	0.0083
830	SLU 69	-0.64	-0.03	32.43	0.025	-5.8772	-0.0076
830	SLU 70	-0.64	0.01	32.43	0.025	-5.8779	0.0028
830	SLU 71	-0.64	-0.03	32.23	0.0248	-5.8433	-0.008
830	SLU 72	-0.64	0.01	32.24	0.0248	-5.844	0.0024
830	SLU 73	-0.66	0.05	34.62	0.0267	-6.2671	0.0117
830	SLU 74	-0.67	-0.02	35.06	0.0271	-6.3434	-0.0042
830	SLU 75	-0.67	0.02	35.07	0.0271	-6.3441	0.0062
830	SLU 76	-0.67	0.05	34.88	0.0269	-6.3107	0.0127
830	SLU 77	-0.68	-0.01	35.32	0.0273	-6.387	-0.0032
830	SLU 78	-0.68	0.03	35.32	0.0273	-6.3878	0.0071
830	SLU 79	-0.67	-0.02	35.12	0.0271	-6.3531	-0.0037
830	SLU 80	-0.67	0.03	35.13	0.0271	-6.3539	0.0067
830	SLU 81	-0.68	-0.02	35.85	0.0277	-6.4843	-0.0037
830	SLU 82	-0.68	0.03	35.86	0.0277	-6.4851	0.0067
830	SLU 83	-0.68	-0.01	36.11	0.0279	-6.528	-0.0028
830	SLU 84	-0.68	0.03	36.11	0.0279	-6.5287	0.0076
830	SLE RA 1	-0.47	-0.03	23.78	0.0182	-4.3185	-0.0087
830	SLE RA 2	-0.47	0.01	23.79	0.0182	-4.3194	0.0029
830	SLE RA 3	-0.47	-0.03	24.08	0.0185	-4.3702	-0.0077
830	SLE RA 4	-0.48	0	24.08	0.0185	-4.3707	-0.0008
830	SLE RA 5	-0.47	0.01	23.96	0.0184	-4.3485	0.0035
830	SLE RA 6	-0.48	-0.03	24.25	0.0186	-4.3993	-0.0071
830	SLE RA 7	-0.48	0	24.25	0.0186	-4.3998	-0.0002
830	SLE RA 8	-0.48	-0.03	24.12	0.0185	-4.3767	-0.0074
830	SLE RA 9	-0.48	0	24.12	0.0185	-4.3772	-0.0005
830	SLE RA 10	-0.49	0.02	25.71	0.0198	-4.6593	0.0058
830	SLE RA 11	-0.5	-0.02	26.01	0.02	-4.7101	-0.0048
830	SLE RA 12	-0.5	0.01	26.01	0.02	-4.7106	0.0021
830	SLE RA 13	-0.5	0.03	25.88	0.0199	-4.6884	0.0064
830	SLE RA 14	-0.5	-0.02	26.18	0.0202	-4.7392	-0.0042
830	SLE RA 15	-0.51	0.01	26.18	0.0202	-4.7397	0.0027
830	SLE RA 16	-0.5	-0.02	26.05	0.02	-4.7166	-0.0045
830	SLE RA 17	-0.5	0.01	26.05	0.02	-4.7171	0.0024
830	SLE RA 18	-0.5	-0.02	26.54	0.0204	-4.8041	-0.0045
830	SLE RA 19	-0.5	0.01	26.54	0.0204	-4.8046	0.0024
830	SLE RA 20	-0.51	-0.02	26.71	0.0206	-4.8332	-0.0039
830	SLE RA 21	-0.51	0.01	26.71	0.0206	-4.8337	0.003
830	SLE FR 1	-0.47	-0.03	23.78	0.0182	-4.3185	-0.0087
830	SLE FR 2	-0.47	-0.03	23.78	0.0182	-4.3187	-0.0063
830	SLE FR 3	-0.47	-0.03	23.85	0.0183	-4.3302	-0.0084
830	SLE FR 4	-0.48	-0.02	24.61	0.0189	-4.4644	-0.0051
830	SLE FR 5	-0.48	-0.03	24.68	0.0189	-4.4758	-0.0072
830	SLE FR 6	-0.49	-0.03	25.16	0.0193	-4.5613	-0.0066
830	SLE QP 1	-0.47	-0.03	23.78	0.0182	-4.3185	-0.0087
830	SLE QP 2	-0.48	-0.03	24.61	0.0189	-4.4642	-0.0074
830	SLD 1	2.08	0.9	29.44	0.0236	-5.2947	0.2241
830	SLD 2	2	0.59	29.46	0.0238	-5.2996	0.1473
830	SLD 3	2.02	-0.31	29.57	0.0245	-5.3161	-0.0782
830	SLD 4	1.94	-0.62	29.58	0.0247	-5.3209	-0.1549
830	SLD 5	0.4	2.14	25.87	0.0189	-4.6801	0.5338
830	SLD 6	0.34	1.94	25.88	0.019	-4.6832	0.484
830	SLD 7	0.2	-1.89	26.28	0.0219	-4.7513	-0.4736
830	SLD 8	0.14	-2.09	26.29	0.022	-4.7545	-0.5235
830	SLD 9	-1.1	2.03	22.93	0.0158	-4.1739	0.5086
830	SLD 10	-1.15	1.83	22.94	0.0159	-4.177	0.4588
830	SLD 11	-1.3	-2	23.34	0.0187	-4.2452	-0.4988
830	SLD 12	-1.35	-2.2	23.35	0.0188	-4.2483	-0.5487
830	SLD 13	-2.89	0.56	19.64	0.0131	-3.6074	0.1401
830	SLD 14	-2.98	0.25	19.65	0.0133	-3.6123	0.0633
830	SLD 15	-2.95	-0.65	19.76	0.014	-3.6288	-0.1621
830	SLD 16	-3.04	-0.96	19.77	0.0142	-3.6337	-0.2389
830	SLV 1	5.51	2.11	35.92	0.0299	-6.408	0.5254
830	SLV 2	5.31	1.4	35.95	0.0304	-6.4193	0.3466
830	SLV 3	5.37	-0.64	36.21	0.032	-6.4578	-0.164
830	SLV 4	5.17	-1.36	36.24	0.0324	-6.4692	-0.3428

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
830	SLV 5	1.57	4.92	27.56	0.019	-4.9698	1.2284
830	SLV 6	1.44	4.46	27.58	0.0193	-4.9771	1.1141
830	SLV 7	1.1	-4.28	28.52	0.0258	-5.1359	-1.0697
830	SLV 8	0.97	-4.74	28.54	0.0261	-5.1432	-1.184
830	SLV 9	-1.93	4.68	20.68	0.0117	-3.7852	1.1691
830	SLV 10	-2.06	4.22	20.7	0.0119	-3.7925	1.0549
830	SLV 11	-2.39	-4.52	21.63	0.0184	-3.9513	-1.129
830	SLV 12	-2.52	-4.98	21.65	0.0187	-3.9585	-1.2432
830	SLV 13	-6.13	1.3	12.98	0.0054	-2.4592	0.328
830	SLV 14	-6.33	0.58	13.01	0.0058	-2.4706	0.1492
830	SLV 15	-6.27	-1.46	13.26	0.0074	-2.5091	-0.3614
830	SLV 16	-6.47	-2.17	13.29	0.0078	-2.5204	-0.5403
830	CRTFP Ux+	0	0	0	0	0	0
830	CRTFP Ux-	0	0	0	0	0	0
833	SLU 1	0.55	0.55	23.96	-0.0504	4.8985	-0.1941
833	SLU 2	0.55	0.63	23.97	-0.0505	4.9004	-0.2234
833	SLU 3	0.57	0.56	24.41	-0.0515	4.9798	-0.1999
833	SLU 4	0.56	0.61	24.42	-0.0515	4.9809	-0.2175
833	SLU 5	0.56	0.64	24.22	-0.0511	4.9462	-0.2252
833	SLU 6	0.58	0.57	24.67	-0.0522	5.0256	-0.2018
833	SLU 7	0.57	0.62	24.67	-0.0522	5.0267	-0.2193
833	SLU 8	0.57	0.56	24.47	-0.0517	4.9901	-0.1978
833	SLU 9	0.57	0.61	24.47	-0.0517	4.9912	-0.2153
833	SLU 10	0.6	0.74	26.88	-0.0577	5.4366	-0.2629
833	SLU 11	0.62	0.68	27.32	-0.0587	5.516	-0.2395
833	SLU 12	0.62	0.73	27.32	-0.0588	5.5171	-0.257
833	SLU 13	0.61	0.75	27.13	-0.0583	5.4824	-0.2648
833	SLU 14	0.63	0.68	27.57	-0.0594	5.5618	-0.2413
833	SLU 15	0.63	0.73	27.58	-0.0594	5.5629	-0.2589
833	SLU 16	0.62	0.67	27.38	-0.0589	5.5263	-0.2374
833	SLU 17	0.62	0.72	27.38	-0.0589	5.5274	-0.2549
833	SLU 18	0.63	0.71	28.12	-0.0607	5.6646	-0.2506
833	SLU 19	0.63	0.76	28.12	-0.0608	5.6657	-0.2682
833	SLU 20	0.64	0.71	28.37	-0.0614	5.7103	-0.2525
833	SLU 21	0.64	0.76	28.37	-0.0614	5.7115	-0.27
833	SLU 22	0.62	0.64	26.78	-0.0573	5.4167	-0.2279
833	SLU 23	0.61	0.73	26.78	-0.0574	5.4186	-0.2572
833	SLU 24	0.63	0.66	27.23	-0.0584	5.498	-0.2337
833	SLU 25	0.63	0.71	27.23	-0.0584	5.4991	-0.2513
833	SLU 26	0.62	0.73	27.04	-0.058	5.4644	-0.259
833	SLU 27	0.64	0.67	27.48	-0.059	5.5437	-0.2356
833	SLU 28	0.64	0.72	27.48	-0.0591	5.5449	-0.2531
833	SLU 29	0.63	0.65	27.29	-0.0586	5.5083	-0.2316
833	SLU 30	0.63	0.7	27.29	-0.0586	5.5094	-0.2491
833	SLU 31	0.66	0.84	29.69	-0.0646	5.9548	-0.2967
833	SLU 32	0.68	0.77	30.14	-0.0656	6.0342	-0.2733
833	SLU 33	0.68	0.82	30.14	-0.0656	6.0353	-0.2908
833	SLU 34	0.67	0.84	29.95	-0.0652	6.0006	-0.2985
833	SLU 35	0.69	0.78	30.39	-0.0663	6.08	-0.2751
833	SLU 36	0.69	0.83	30.39	-0.0663	6.0811	-0.2926
833	SLU 37	0.69	0.77	30.19	-0.0658	6.0445	-0.2711
833	SLU 38	0.68	0.82	30.2	-0.0658	6.0456	-0.2887
833	SLU 39	0.69	0.8	30.93	-0.0676	6.1827	-0.2844
833	SLU 40	0.69	0.85	30.94	-0.0676	6.1839	-0.302
833	SLU 41	0.7	0.81	31.19	-0.0683	6.2285	-0.2863
833	SLU 42	0.7	0.86	31.19	-0.0683	6.2296	-0.3038
833	SLU 43	0.7	0.68	30.19	-0.0632	6.1905	-0.2408
833	SLU 44	0.69	0.76	30.19	-0.0632	6.1923	-0.27
833	SLU 45	0.71	0.7	30.64	-0.0643	6.2717	-0.2466
833	SLU 46	0.71	0.75	30.64	-0.0643	6.2728	-0.2641
833	SLU 47	0.7	0.77	30.45	-0.0639	6.2381	-0.2719
833	SLU 48	0.72	0.7	30.89	-0.0649	6.3175	-0.2484
833	SLU 49	0.72	0.75	30.89	-0.0649	6.3186	-0.266
833	SLU 50	0.71	0.69	30.69	-0.0645	6.282	-0.2445
833	SLU 51	0.71	0.74	30.7	-0.0645	6.2831	-0.262
833	SLU 52	0.75	0.88	33.1	-0.0705	6.7285	-0.3096
833	SLU 53	0.77	0.81	33.54	-0.0715	6.8079	-0.2862
833	SLU 54	0.76	0.86	33.55	-0.0715	6.809	-0.3037
833	SLU 55	0.75	0.88	33.35	-0.0711	6.7743	-0.3114
833	SLU 56	0.77	0.81	33.8	-0.0721	6.8537	-0.288
833	SLU 57	0.77	0.86	33.8	-0.0722	6.8548	-0.3055
833	SLU 58	0.77	0.8	33.6	-0.0717	6.8182	-0.284
833	SLU 59	0.76	0.85	33.6	-0.0717	6.8193	-0.3016
833	SLU 60	0.77	0.84	34.34	-0.0735	6.9565	-0.2973
833	SLU 61	0.77	0.89	34.35	-0.0735	6.9576	-0.3148
833	SLU 62	0.78	0.85	34.59	-0.0741	7.0022	-0.2991
833	SLU 63	0.78	0.9	34.6	-0.0742	7.0034	-0.3167
833	SLU 64	0.76	0.78	33	-0.0701	6.7086	-0.2746
833	SLU 65	0.76	0.86	33.01	-0.0701	6.7105	-0.3038
833	SLU 66	0.77	0.79	33.45	-0.0712	6.7899	-0.2804
833	SLU 67	0.77	0.84	33.45	-0.0712	6.791	-0.2979
833	SLU 68	0.76	0.86	33.26	-0.0708	6.7563	-0.3056
833	SLU 69	0.78	0.8	33.7	-0.0718	6.8356	-0.2822
833	SLU 70	0.78	0.85	33.71	-0.0718	6.8368	-0.2998
833	SLU 71	0.78	0.79	33.51	-0.0714	6.8002	-0.2783
833	SLU 72	0.77	0.84	33.51	-0.0714	6.8013	-0.2958
833	SLU 73	0.81	0.97	35.92	-0.0773	7.2467	-0.3434
833	SLU 74	0.83	0.9	36.36	-0.0784	7.3261	-0.3199
833	SLU 75	0.83	0.95	36.36	-0.0784	7.3272	-0.3375
833	SLU 76	0.82	0.98	36.17	-0.078	7.2925	-0.3452
833	SLU 77	0.84	0.91	36.61	-0.079	7.3719	-0.3218

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
833	SLU 78	0.83	0.96	36.62	-0.079	7.373	-0.3393
833	SLU 79	0.83	0.9	36.42	-0.0786	7.3364	-0.3178
833	SLU 80	0.83	0.95	36.42	-0.0786	7.3375	-0.3353
833	SLU 81	0.84	0.94	37.16	-0.0804	7.4746	-0.3311
833	SLU 82	0.83	0.99	37.16	-0.0804	7.4758	-0.3486
833	SLU 83	0.85	0.94	37.41	-0.081	7.5204	-0.3329
833	SLU 84	0.84	0.99	37.41	-0.081	7.5215	-0.3505
833	SLE RA 1	0.57	0.58	24.77	-0.0524	5.0466	-0.2038
833	SLE RA 2	0.57	0.63	24.77	-0.0524	5.0478	-0.2233
833	SLE RA 3	0.58	0.59	25.07	-0.0531	5.1008	-0.2077
833	SLE RA 4	0.58	0.62	25.07	-0.0531	5.1015	-0.2194
833	SLE RA 5	0.57	0.63	24.94	-0.0528	5.0784	-0.2245
833	SLE RA 6	0.59	0.59	25.24	-0.0536	5.1313	-0.2089
833	SLE RA 7	0.58	0.62	25.24	-0.0536	5.132	-0.2206
833	SLE RA 8	0.58	0.58	25.11	-0.0533	5.1076	-0.2062
833	SLE RA 9	0.58	0.62	25.11	-0.0533	5.1084	-0.2179
833	SLE RA 10	0.6	0.71	26.71	-0.0572	5.4053	-0.2496
833	SLE RA 11	0.62	0.66	27.01	-0.0579	5.4582	-0.234
833	SLE RA 12	0.61	0.69	27.01	-0.0579	5.459	-0.2457
833	SLE RA 13	0.61	0.71	26.88	-0.0577	5.4358	-0.2509
833	SLE RA 14	0.62	0.66	27.17	-0.0584	5.4888	-0.2353
833	SLE RA 15	0.62	0.7	27.18	-0.0584	5.4895	-0.2469
833	SLE RA 16	0.62	0.66	27.04	-0.0581	5.4651	-0.2326
833	SLE RA 17	0.62	0.69	27.05	-0.0581	5.4658	-0.2443
833	SLE RA 18	0.62	0.68	27.54	-0.0593	5.5573	-0.2415
833	SLE RA 19	0.62	0.72	27.54	-0.0593	5.558	-0.2532
833	SLE RA 20	0.63	0.69	27.71	-0.0597	5.5878	-0.2427
833	SLE RA 21	0.63	0.72	27.71	-0.0597	5.5885	-0.2544
833	SLE FR 1	0.57	0.58	24.77	-0.0524	5.0466	-0.2038
833	SLE FR 2	0.57	0.59	24.77	-0.0524	5.0468	-0.2077
833	SLE FR 3	0.57	0.58	24.84	-0.0526	5.0588	-0.2043
833	SLE FR 4	0.59	0.62	25.6	-0.0545	5.2	-0.219
833	SLE FR 5	0.59	0.61	25.67	-0.0546	5.212	-0.2156
833	SLE FR 6	0.6	0.63	26.15	-0.0558	5.3019	-0.2226
833	SLE QP 1	0.57	0.58	24.77	-0.0524	5.0466	-0.2038
833	SLE QP 2	0.59	0.61	25.6	-0.0545	5.1998	-0.2151
833	SLD 1	2.48	0.99	21.28	-0.0424	4.5169	-0.3471
833	SLD 2	2.35	1.39	21.25	-0.0426	4.5106	-0.4861
833	SLD 3	2.77	-0.55	21.39	-0.0416	4.5468	0.192
833	SLD 4	2.64	-0.15	21.36	-0.0418	4.5405	0.0531
833	SLD 5	0.74	2.99	24.14	-0.052	4.9507	-1.0482
833	SLD 6	0.65	3.25	24.12	-0.0522	4.9466	-1.1383
833	SLD 7	1.7	-2.15	24.51	-0.0493	5.0503	0.749
833	SLD 8	1.62	-1.89	24.49	-0.0495	5.0462	0.6588
833	SLD 9	-0.44	3.11	26.7	-0.0595	5.3534	-1.089
833	SLD 10	-0.53	3.36	26.69	-0.0596	5.3493	-1.1792
833	SLD 11	0.52	-2.04	27.08	-0.0568	5.453	0.7081
833	SLD 12	0.43	-1.78	27.06	-0.0569	5.4489	0.618
833	SLD 13	-1.46	1.37	29.84	-0.0672	5.8591	-0.4833
833	SLD 14	-1.6	1.76	29.81	-0.0674	5.8528	-0.6222
833	SLD 15	-1.17	-0.18	29.95	-0.0663	5.889	0.0559
833	SLD 16	-1.31	0.22	29.92	-0.0666	5.8827	-0.0831
833	SLV 1	5.03	1.46	15.49	-0.0261	3.6019	-0.5073
833	SLV 2	4.71	2.39	15.42	-0.0266	3.5872	-0.8309
833	SLV 3	5.69	-2.05	15.75	-0.0243	3.6711	0.7191
833	SLV 4	5.37	-1.12	15.68	-0.0248	3.6565	0.3954
833	SLV 5	0.98	6.03	22.18	-0.0487	4.6178	-2.1079
833	SLV 6	0.77	6.62	22.13	-0.049	4.6085	-2.3146
833	SLV 7	3.17	-5.67	23.06	-0.0425	4.8488	1.9799
833	SLV 8	2.96	-5.08	23.01	-0.0429	4.8394	1.7732
833	SLV 9	-1.79	6.29	28.19	-0.0661	5.5602	-2.2034
833	SLV 10	-1.99	6.88	28.14	-0.0664	5.5508	-2.4101
833	SLV 11	0.4	-5.41	29.06	-0.0599	5.7911	1.8844
833	SLV 12	0.2	-4.82	29.02	-0.0603	5.7818	1.6777
833	SLV 13	-4.2	2.33	35.52	-0.0841	6.7431	-0.8256
833	SLV 14	-4.51	3.26	35.45	-0.0846	6.7285	-1.1493
833	SLV 15	-3.54	-1.18	35.78	-0.0823	6.8124	0.4007
833	SLV 16	-3.86	-0.25	35.71	-0.0828	6.7977	0.0771
833	CRTFP Ux+	0	0	0	0	0	0
833	CRTFP Ux-	0	0	0	0	0	0
833	CRTFP Uy+	0	0	0	0	0	0
833	CRTFP Uy-	0	0	0	0	0	0
835	SLU 1	1.06	0	52.36	0.0061	0.293	-0.013
835	SLU 2	1.06	0.09	52.37	0.0059	0.2923	-0.0132
835	SLU 3	1.08	0	53.38	0.0062	0.2997	-0.0133
835	SLU 4	1.08	0.06	53.38	0.0061	0.2993	-0.0134
835	SLU 5	1.08	0.08	52.93	0.0059	0.2951	-0.0134
835	SLU 6	1.1	0	53.94	0.0062	0.3025	-0.0136
835	SLU 7	1.1	0.05	53.94	0.0061	0.3021	-0.0137
835	SLU 8	1.1	-0.02	53.48	0.0061	0.2986	-0.0135
835	SLU 9	1.1	0.04	53.48	0.006	0.2982	-0.0136
835	SLU 10	1.15	0.13	59.43	0.0063	0.3406	-0.0151
835	SLU 11	1.18	0.05	60.44	0.0066	0.3479	-0.0153
835	SLU 12	1.18	0.1	60.44	0.0064	0.3475	-0.0154
835	SLU 13	1.17	0.13	59.98	0.0062	0.3434	-0.0154
835	SLU 14	1.2	0.04	61	0.0065	0.3507	-0.0156
835	SLU 15	1.2	0.1	61	0.0064	0.3503	-0.0156
835	SLU 16	1.19	0.03	60.53	0.0064	0.3469	-0.0155
835	SLU 17	1.19	0.08	60.54	0.0063	0.3465	-0.0156
835	SLU 18	1.19	0.06	62.44	0.0066	0.3619	-0.0158
835	SLU 19	1.19	0.12	62.45	0.0065	0.3615	-0.0159

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
835	SLU 20	1.21	0.06	63	0.0066	0.3647	-0.0161
835	SLU 21	1.21	0.11	63.01	0.0064	0.3643	-0.0162
835	SLU 22	1.16	0.05	59.13	0.0068	0.3383	-0.0146
835	SLU 23	1.16	0.14	59.14	0.0066	0.3377	-0.0147
835	SLU 24	1.19	0.06	60.15	0.0069	0.345	-0.0149
835	SLU 25	1.19	0.12	60.15	0.0068	0.3446	-0.015
835	SLU 26	1.18	0.14	59.7	0.0066	0.3405	-0.015
835	SLU 27	1.21	0.05	60.71	0.0069	0.3478	-0.0152
835	SLU 28	1.21	0.11	60.71	0.0068	0.3474	-0.0152
835	SLU 29	1.2	0.04	60.25	0.0068	0.344	-0.0151
835	SLU 30	1.2	0.1	60.25	0.0067	0.3436	-0.0152
835	SLU 31	1.26	0.19	66.2	0.007	0.3859	-0.0167
835	SLU 32	1.28	0.11	67.21	0.0073	0.3932	-0.0169
835	SLU 33	1.28	0.16	67.21	0.0071	0.3928	-0.017
835	SLU 34	1.27	0.18	66.75	0.0069	0.3887	-0.017
835	SLU 35	1.3	0.1	67.77	0.0072	0.3961	-0.0171
835	SLU 36	1.3	0.16	67.77	0.0071	0.3957	-0.0172
835	SLU 37	1.29	0.09	67.3	0.0071	0.3922	-0.0171
835	SLU 38	1.29	0.14	67.31	0.007	0.3918	-0.0172
835	SLU 39	1.3	0.12	69.21	0.0073	0.4072	-0.0174
835	SLU 40	1.3	0.17	69.22	0.0072	0.4068	-0.0175
835	SLU 41	1.32	0.11	69.77	0.0073	0.4101	-0.0177
835	SLU 42	1.32	0.17	69.78	0.0071	0.4097	-0.0177
835	SLU 43	1.34	-0.02	65.74	0.0077	0.3653	-0.0164
835	SLU 44	1.34	0.07	65.75	0.0075	0.3647	-0.0166
835	SLU 45	1.37	-0.02	66.76	0.0078	0.372	-0.0167
835	SLU 46	1.37	0.04	66.77	0.0077	0.3716	-0.0168
835	SLU 47	1.36	0.06	66.31	0.0075	0.3675	-0.0168
835	SLU 48	1.39	-0.02	67.32	0.0078	0.3748	-0.017
835	SLU 49	1.39	0.03	67.33	0.0077	0.3744	-0.0171
835	SLU 50	1.38	-0.04	66.86	0.0077	0.371	-0.0169
835	SLU 51	1.38	0.02	66.87	0.0076	0.3706	-0.017
835	SLU 52	1.44	0.11	72.81	0.0078	0.4129	-0.0185
835	SLU 53	1.46	0.03	73.82	0.0082	0.4202	-0.0187
835	SLU 54	1.46	0.08	73.83	0.008	0.4198	-0.0188
835	SLU 55	1.45	0.11	73.37	0.0078	0.4157	-0.0188
835	SLU 56	1.48	0.02	74.38	0.0081	0.4231	-0.0189
835	SLU 57	1.48	0.08	74.39	0.008	0.4227	-0.019
835	SLU 58	1.47	0.01	73.92	0.008	0.4192	-0.0189
835	SLU 59	1.47	0.06	73.93	0.0079	0.4188	-0.019
835	SLU 60	1.48	0.04	75.83	0.0082	0.4342	-0.0192
835	SLU 61	1.48	0.1	75.83	0.0081	0.4338	-0.0193
835	SLU 62	1.5	0.03	76.39	0.0082	0.4371	-0.0195
835	SLU 63	1.5	0.09	76.39	0.008	0.4367	-0.0196
835	SLU 64	1.44	0.03	72.51	0.0084	0.4107	-0.018
835	SLU 65	1.44	0.12	72.52	0.0082	0.41	-0.0181
835	SLU 66	1.47	0.04	73.53	0.0085	0.4173	-0.0183
835	SLU 67	1.47	0.09	73.54	0.0084	0.417	-0.0184
835	SLU 68	1.46	0.12	73.08	0.0082	0.4128	-0.0184
835	SLU 69	1.49	0.03	74.09	0.0085	0.4202	-0.0185
835	SLU 70	1.49	0.09	74.1	0.0084	0.4198	-0.0186
835	SLU 71	1.48	0.02	73.63	0.0084	0.4163	-0.0185
835	SLU 72	1.48	0.07	73.64	0.0083	0.4159	-0.0186
835	SLU 73	1.54	0.17	79.58	0.0085	0.4583	-0.0201
835	SLU 74	1.56	0.09	80.59	0.0089	0.4656	-0.0202
835	SLU 75	1.57	0.14	80.6	0.0087	0.4652	-0.0203
835	SLU 76	1.56	0.16	80.14	0.0085	0.4611	-0.0203
835	SLU 77	1.58	0.08	81.15	0.0088	0.4684	-0.0205
835	SLU 78	1.58	0.13	81.16	0.0087	0.468	-0.0206
835	SLU 79	1.58	0.07	80.69	0.0087	0.4646	-0.0204
835	SLU 80	1.58	0.12	80.7	0.0086	0.4642	-0.0205
835	SLU 81	1.58	0.1	82.6	0.0089	0.4796	-0.0208
835	SLU 82	1.58	0.15	82.6	0.0088	0.4792	-0.0209
835	SLU 83	1.6	0.09	83.16	0.0089	0.4824	-0.021
835	SLU 84	1.6	0.15	83.16	0.0087	0.482	-0.0211
835	SLE RA 1	1.09	0.01	54.29	0.0063	0.3059	-0.0135
835	SLE RA 2	1.09	0.07	54.3	0.0062	0.3055	-0.0136
835	SLE RA 3	1.1	0.02	54.97	0.0064	0.3104	-0.0137
835	SLE RA 4	1.1	0.05	54.98	0.0063	0.3101	-0.0137
835	SLE RA 5	1.1	0.07	54.67	0.0062	0.3074	-0.0137
835	SLE RA 6	1.12	0.01	55.34	0.0064	0.3123	-0.0139
835	SLE RA 7	1.12	0.05	55.35	0.0063	0.312	-0.0139
835	SLE RA 8	1.11	0	55.04	0.0063	0.3097	-0.0138
835	SLE RA 9	1.11	0.04	55.04	0.0062	0.3094	-0.0139
835	SLE RA 10	1.15	0.1	59	0.0064	0.3377	-0.0149
835	SLE RA 11	1.17	0.05	59.68	0.0066	0.3425	-0.015
835	SLE RA 12	1.17	0.08	59.68	0.0065	0.3423	-0.0151
835	SLE RA 13	1.16	0.1	59.38	0.0064	0.3395	-0.0151
835	SLE RA 14	1.18	0.04	60.05	0.0066	0.3444	-0.0152
835	SLE RA 15	1.18	0.08	60.05	0.0065	0.3442	-0.0152
835	SLE RA 16	1.18	0.03	59.74	0.0065	0.3419	-0.0151
835	SLE RA 17	1.18	0.07	59.75	0.0064	0.3416	-0.0152
835	SLE RA 18	1.18	0.06	61.01	0.0066	0.3519	-0.0154
835	SLE RA 19	1.18	0.09	61.02	0.0066	0.3516	-0.0154
835	SLE RA 20	1.19	0.05	61.39	0.0066	0.3538	-0.0155
835	SLE RA 21	1.19	0.09	61.39	0.0065	0.3535	-0.0156
835	SLE FR 1	1.09	0.01	54.29	0.0063	0.3059	-0.0135
835	SLE FR 2	1.09	0.02	54.29	0.0063	0.3058	-0.0135
835	SLE FR 3	1.09	0.01	54.44	0.0063	0.3067	-0.0135
835	SLE FR 4	1.11	0.04	56.31	0.0064	0.3196	-0.0141
835	SLE FR 5	1.12	0.02	56.46	0.0064	0.3205	-0.0141

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
835	SLE FR 6	1.13	0.03	57.65	0.0065	0.3289	-0.0144
835	SLE QP 1	1.09	0.01	54.29	0.0063	0.3059	-0.0135
835	SLE QP 2	1.11	0.03	56.31	0.0064	0.3197	-0.014
835	SLD 1	6.25	0.92	52.55	0.0003	0.2835	-0.0442
835	SLD 2	6.06	1.2	52.51	-0.0003	0.2836	-0.0395
835	SLD 3	6.38	-0.87	52.69	0.0051	0.3074	-0.0422
835	SLD 4	6.19	-0.59	52.64	0.0044	0.3075	-0.0375
835	SLD 5	2.5	2.96	54.99	-0.0025	0.2726	-0.0269
835	SLD 6	2.38	3.15	54.96	-0.0029	0.2726	-0.0239
835	SLD 7	2.91	-3.01	55.43	0.0133	0.3523	-0.0203
835	SLD 8	2.79	-2.83	55.4	0.0129	0.3524	-0.0172
835	SLD 9	-0.56	2.88	57.21	0	0.2871	-0.0109
835	SLD 10	-0.68	3.06	57.18	-0.0005	0.2872	-0.0078
835	SLD 11	-0.15	-3.1	57.66	0.0157	0.3668	-0.0042
835	SLD 12	-0.28	-2.91	57.63	0.0153	0.3669	-0.0012
835	SLD 13	-3.96	0.64	59.97	0.0084	0.3319	0.0094
835	SLD 14	-4.15	0.93	59.93	0.0078	0.332	0.0141
835	SLD 15	-3.84	-1.15	60.11	0.0132	0.3558	0.0114
835	SLD 16	-4.03	-0.87	60.06	0.0125	0.3559	0.0161
835	SLV 1	13.13	2.06	47.51	-0.0077	0.2344	-0.0845
835	SLV 2	12.69	2.73	47.41	-0.0092	0.2347	-0.0736
835	SLV 3	13.42	-2.02	47.83	0.0031	0.2902	-0.0799
835	SLV 4	12.98	-1.36	47.73	0.0015	0.2905	-0.0689
835	SLV 5	4.36	6.71	53.21	-0.0139	0.2094	-0.044
835	SLV 6	4.08	7.14	53.15	-0.0148	0.2095	-0.037
835	SLV 7	5.31	-6.89	54.26	0.022	0.3955	-0.0286
835	SLV 8	5.03	-6.47	54.19	0.021	0.3957	-0.0217
835	SLV 9	-2.8	6.52	58.42	-0.0082	0.2437	-0.0064
835	SLV 10	-3.08	6.94	58.36	-0.0092	0.2439	0.0006
835	SLV 11	-1.85	-7.09	59.47	0.0277	0.4299	0.009
835	SLV 12	-2.14	-6.66	59.4	0.0267	0.4301	0.0159
835	SLV 13	-10.75	1.41	64.89	0.0113	0.3489	0.0409
835	SLV 14	-11.19	2.07	64.79	0.0098	0.3492	0.0518
835	SLV 15	-10.47	-2.68	65.2	0.0221	0.4047	0.0455
835	SLV 16	-10.91	-2.01	65.1	0.0205	0.405	0.0564
835	CRTFP Ux+	0	0	0	0	0	0
835	CRTFP Ux-	0	0	0	0	0	0
838	SLU 1	-0.82	-0.21	53.81	-0.0064	-0.2732	0.0122
838	SLU 2	-0.82	-0.11	53.82	-0.0066	-0.2721	0.0123
838	SLU 3	-0.84	-0.2	54.87	-0.0066	-0.2795	0.0125
838	SLU 4	-0.84	-0.14	54.88	-0.0067	-0.2789	0.0125
838	SLU 5	-0.84	-0.11	54.39	-0.0067	-0.2748	0.0124
838	SLU 6	-0.85	-0.2	55.44	-0.0068	-0.2823	0.0127
838	SLU 7	-0.86	-0.14	55.45	-0.0069	-0.2816	0.0127
838	SLU 8	-0.85	-0.21	54.95	-0.0068	-0.2787	0.0126
838	SLU 9	-0.85	-0.15	54.95	-0.0069	-0.278	0.0126
838	SLU 10	-0.89	-0.11	61.17	-0.009	-0.319	0.0145
838	SLU 11	-0.9	-0.2	62.22	-0.0091	-0.3265	0.0148
838	SLU 12	-0.9	-0.14	62.23	-0.0092	-0.3258	0.0148
838	SLU 13	-0.9	-0.11	61.74	-0.0092	-0.3218	0.0147
838	SLU 14	-0.92	-0.2	62.79	-0.0093	-0.3292	0.015
838	SLU 15	-0.92	-0.14	62.8	-0.0094	-0.3286	0.015
838	SLU 16	-0.91	-0.22	62.3	-0.0092	-0.3256	0.0149
838	SLU 17	-0.91	-0.16	62.31	-0.0093	-0.325	0.0149
838	SLU 18	-0.91	-0.21	64.31	-0.01	-0.3403	0.0155
838	SLU 19	-0.91	-0.15	64.32	-0.01	-0.3396	0.0155
838	SLU 20	-0.92	-0.21	64.88	-0.0101	-0.343	0.0156
838	SLU 21	-0.93	-0.15	64.89	-0.0102	-0.3424	0.0156
838	SLU 22	-0.9	-0.18	60.86	-0.008	-0.3158	0.0138
838	SLU 23	-0.9	-0.08	60.87	-0.0081	-0.3147	0.0138
838	SLU 24	-0.92	-0.17	61.93	-0.0082	-0.3222	0.0141
838	SLU 25	-0.92	-0.11	61.93	-0.0083	-0.3215	0.0141
838	SLU 26	-0.92	-0.08	61.44	-0.0083	-0.3175	0.014
838	SLU 27	-0.93	-0.17	62.5	-0.0084	-0.3249	0.0143
838	SLU 28	-0.93	-0.11	62.5	-0.0084	-0.3243	0.0143
838	SLU 29	-0.93	-0.18	62	-0.0083	-0.3213	0.0142
838	SLU 30	-0.93	-0.12	62.01	-0.0084	-0.3207	0.0142
838	SLU 31	-0.96	-0.08	68.23	-0.0106	-0.3617	0.0161
838	SLU 32	-0.98	-0.17	69.28	-0.0107	-0.3691	0.0163
838	SLU 33	-0.98	-0.11	69.29	-0.0107	-0.3685	0.0163
838	SLU 34	-0.98	-0.08	68.8	-0.0108	-0.3644	0.0163
838	SLU 35	-0.99	-0.17	69.85	-0.0108	-0.3719	0.0165
838	SLU 36	-1	-0.11	69.86	-0.0109	-0.3712	0.0165
838	SLU 37	-0.99	-0.18	69.36	-0.0108	-0.3683	0.0164
838	SLU 38	-0.99	-0.12	69.36	-0.0109	-0.3676	0.0164
838	SLU 39	-0.99	-0.18	71.37	-0.0115	-0.3829	0.017
838	SLU 40	-0.99	-0.12	71.37	-0.0116	-0.3822	0.017
838	SLU 41	-1	-0.18	71.94	-0.0117	-0.3857	0.0172
838	SLU 42	-1	-0.12	71.94	-0.0118	-0.385	0.0172
838	SLU 43	-1.04	-0.28	67.53	-0.0078	-0.3405	0.0154
838	SLU 44	-1.04	-0.18	67.54	-0.008	-0.3394	0.0154
838	SLU 45	-1.06	-0.27	68.59	-0.008	-0.3468	0.0156
838	SLU 46	-1.06	-0.21	68.6	-0.0081	-0.3462	0.0157
838	SLU 47	-1.06	-0.18	68.11	-0.0081	-0.3421	0.0156
838	SLU 48	-1.07	-0.27	69.16	-0.0082	-0.3496	0.0158
838	SLU 49	-1.08	-0.21	69.17	-0.0083	-0.3489	0.0158
838	SLU 50	-1.07	-0.29	68.67	-0.0082	-0.346	0.0158
838	SLU 51	-1.07	-0.23	68.67	-0.0083	-0.3453	0.0158
838	SLU 52	-1.11	-0.18	74.89	-0.0104	-0.3864	0.0176
838	SLU 53	-1.12	-0.27	75.95	-0.0105	-0.3938	0.0179
838	SLU 54	-1.12	-0.21	75.95	-0.0106	-0.3932	0.0179

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
838	SLU 55	-1.12	-0.19	75.46	-0.0106	-0.3891	0.0178
838	SLU 56	-1.14	-0.28	76.52	-0.0107	-0.3966	0.0181
838	SLU 57	-1.14	-0.22	76.52	-0.0108	-0.3959	0.0181
838	SLU 58	-1.13	-0.29	76.02	-0.0106	-0.393	0.018
838	SLU 59	-1.13	-0.23	76.03	-0.0107	-0.3923	0.018
838	SLU 60	-1.13	-0.28	78.03	-0.0114	-0.4076	0.0186
838	SLU 61	-1.13	-0.22	78.04	-0.0114	-0.4069	0.0186
838	SLU 62	-1.14	-0.29	78.6	-0.0115	-0.4103	0.0188
838	SLU 63	-1.14	-0.23	78.61	-0.0116	-0.4097	0.0188
838	SLU 64	-1.12	-0.25	74.59	-0.0094	-0.3831	0.017
838	SLU 65	-1.12	-0.15	74.6	-0.0095	-0.382	0.017
838	SLU 66	-1.14	-0.24	75.65	-0.0096	-0.3895	0.0172
838	SLU 67	-1.14	-0.18	75.66	-0.0097	-0.3888	0.0172
838	SLU 68	-1.14	-0.15	75.17	-0.0097	-0.3848	0.0172
838	SLU 69	-1.15	-0.24	76.22	-0.0098	-0.3923	0.0174
838	SLU 70	-1.15	-0.18	76.23	-0.0098	-0.3916	0.0174
838	SLU 71	-1.15	-0.25	75.73	-0.0097	-0.3886	0.0173
838	SLU 72	-1.15	-0.19	75.73	-0.0098	-0.388	0.0173
838	SLU 73	-1.18	-0.15	81.95	-0.012	-0.429	0.0192
838	SLU 74	-1.2	-0.24	83	-0.0121	-0.4365	0.0195
838	SLU 75	-1.2	-0.18	83.01	-0.0121	-0.4358	0.0195
838	SLU 76	-1.2	-0.15	82.52	-0.0122	-0.4318	0.0194
838	SLU 77	-1.21	-0.24	83.57	-0.0122	-0.4392	0.0197
838	SLU 78	-1.22	-0.18	83.58	-0.0123	-0.4386	0.0197
838	SLU 79	-1.21	-0.26	83.08	-0.0122	-0.4356	0.0196
838	SLU 80	-1.21	-0.2	83.09	-0.0123	-0.4349	0.0196
838	SLU 81	-1.21	-0.25	85.09	-0.0129	-0.4502	0.0202
838	SLU 82	-1.21	-0.19	85.1	-0.013	-0.4496	0.0202
838	SLU 83	-1.22	-0.25	85.66	-0.0131	-0.453	0.0203
838	SLU 84	-1.22	-0.19	85.67	-0.0132	-0.4523	0.0204
838	SLE RA 1	-0.85	-0.2	55.82	-0.0069	-0.2853	0.0127
838	SLE RA 2	-0.85	-0.13	55.83	-0.007	-0.2846	0.0127
838	SLE RA 3	-0.86	-0.19	56.53	-0.007	-0.2896	0.0129
838	SLE RA 4	-0.86	-0.15	56.54	-0.0071	-0.2891	0.0129
838	SLE RA 5	-0.86	-0.13	56.21	-0.0071	-0.2864	0.0128
838	SLE RA 6	-0.87	-0.19	56.91	-0.0071	-0.2914	0.013
838	SLE RA 7	-0.87	-0.15	56.92	-0.0072	-0.291	0.013
838	SLE RA 8	-0.86	-0.2	56.58	-0.0071	-0.289	0.0129
838	SLE RA 9	-0.86	-0.16	56.59	-0.0072	-0.2886	0.013
838	SLE RA 10	-0.89	-0.13	60.73	-0.0086	-0.3159	0.0142
838	SLE RA 11	-0.9	-0.19	61.43	-0.0087	-0.3209	0.0144
838	SLE RA 12	-0.9	-0.15	61.44	-0.0087	-0.3205	0.0144
838	SLE RA 13	-0.9	-0.14	61.11	-0.0087	-0.3178	0.0143
838	SLE RA 14	-0.91	-0.2	61.82	-0.0088	-0.3227	0.0145
838	SLE RA 15	-0.91	-0.16	61.82	-0.0088	-0.3223	0.0145
838	SLE RA 16	-0.9	-0.2	61.49	-0.0088	-0.3203	0.0144
838	SLE RA 17	-0.91	-0.16	61.49	-0.0088	-0.3199	0.0144
838	SLE RA 18	-0.9	-0.2	62.83	-0.0092	-0.3301	0.0148
838	SLE RA 19	-0.9	-0.16	62.83	-0.0093	-0.3296	0.0148
838	SLE RA 20	-0.91	-0.2	63.21	-0.0093	-0.3319	0.015
838	SLE RA 21	-0.91	-0.16	63.21	-0.0094	-0.3315	0.015
838	SLE FR 1	-0.85	-0.2	55.82	-0.0069	-0.2853	0.0127
838	SLE FR 2	-0.85	-0.18	55.82	-0.0069	-0.2852	0.0127
838	SLE FR 3	-0.85	-0.2	55.98	-0.0069	-0.2861	0.0127
838	SLE FR 4	-0.86	-0.19	57.93	-0.0076	-0.2986	0.0133
838	SLE FR 5	-0.87	-0.2	58.08	-0.0076	-0.2995	0.0134
838	SLE FR 6	-0.87	-0.2	59.32	-0.0081	-0.3077	0.0138
838	SLE QP 1	-0.85	-0.2	55.82	-0.0069	-0.2853	0.0127
838	SLE QP 2	-0.86	-0.2	57.92	-0.0076	-0.2988	0.0133
838	SLD 1	4.81	1.13	62.81	-0.0051	-0.2427	-0.0174
838	SLD 2	4.61	0.82	62.84	-0.0047	-0.2456	-0.0122
838	SLD 3	4.67	-0.81	62.98	-0.0021	-0.2678	-0.0161
838	SLD 4	4.46	-1.12	63.01	-0.0016	-0.2707	-0.0109
838	SLD 5	1.09	3.2	59.13	-0.0116	-0.2433	0.0012
838	SLD 6	0.96	2.99	59.15	-0.0113	-0.2452	0.0045
838	SLD 7	0.61	-3.27	59.69	-0.0014	-0.3271	0.0056
838	SLD 8	0.48	-3.48	59.71	-0.0011	-0.329	0.009
838	SLD 9	-2.21	3.08	56.14	-0.0141	-0.2686	0.0177
838	SLD 10	-2.34	2.87	56.16	-0.0138	-0.2704	0.021
838	SLD 11	-2.69	-3.39	56.7	-0.0039	-0.3523	0.0221
838	SLD 12	-2.82	-3.6	56.72	-0.0036	-0.3542	0.0255
838	SLD 13	-6.19	0.73	52.84	-0.0136	-0.3268	0.0376
838	SLD 14	-6.4	0.41	52.87	-0.0131	-0.3297	0.0428
838	SLD 15	-6.33	-1.21	53.01	-0.0105	-0.352	0.0389
838	SLD 16	-6.54	-1.53	53.04	-0.01	-0.3549	0.0441
838	SLV 1	12.41	2.85	69.36	-0.0018	-0.1681	-0.0586
838	SLV 2	11.93	2.12	69.44	-0.0007	-0.1748	-0.0465
838	SLV 3	12.08	-1.57	69.75	0.0052	-0.2258	-0.0555
838	SLV 4	11.6	-2.31	69.82	0.0063	-0.2325	-0.0434
838	SLV 5	3.71	7.56	60.76	-0.0166	-0.1709	-0.015
838	SLV 6	3.4	7.09	60.81	-0.016	-0.1752	-0.0073
838	SLV 7	2.59	-7.2	62.04	0.0067	-0.3632	-0.0046
838	SLV 8	2.29	-7.67	62.09	0.0074	-0.3675	0.0031
838	SLV 9	-4.01	7.27	53.76	-0.0226	-0.23	0.0236
838	SLV 10	-4.32	6.81	53.8	-0.0219	-0.2343	0.0313
838	SLV 11	-5.13	-7.49	55.04	0.0008	-0.4223	0.034
838	SLV 12	-5.43	-7.96	55.09	0.0015	-0.4266	0.0417
838	SLV 13	-13.32	1.91	46.03	-0.0215	-0.365	0.07
838	SLV 14	-13.8	1.18	46.1	-0.0204	-0.3718	0.0821
838	SLV 15	-13.66	-2.52	46.41	-0.0145	-0.4227	0.0732
838	SLV 16	-14.14	-3.25	46.49	-0.0134	-0.4295	0.0853

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
838	CRTFP Ux+	0	0	0	0	0	0
838	CRTFP Ux-	0	0	0	0	0	0
841	SLU 1	0.34	0.4	43.99	0.0054	-0.0195	-0.006
841	SLU 2	0.35	0.48	44.01	0.0051	-0.0201	-0.006
841	SLU 3	0.35	0.42	44.78	0.0056	-0.0194	-0.0061
841	SLU 4	0.36	0.47	44.79	0.0055	-0.0198	-0.0061
841	SLU 5	0.35	0.48	44.41	0.0051	-0.0196	-0.0061
841	SLU 6	0.36	0.42	45.18	0.0056	-0.019	-0.0062
841	SLU 7	0.36	0.47	45.19	0.0055	-0.0194	-0.0062
841	SLU 8	0.36	0.4	44.79	0.0054	-0.0186	-0.0062
841	SLU 9	0.36	0.45	44.81	0.0053	-0.019	-0.0062
841	SLU 10	0.39	0.52	50.21	0.0041	-0.0214	-0.0066
841	SLU 11	0.4	0.46	50.98	0.0046	-0.0207	-0.0066
841	SLU 12	0.4	0.51	50.99	0.0044	-0.0211	-0.0067
841	SLU 13	0.4	0.52	50.61	0.0041	-0.021	-0.0067
841	SLU 14	0.41	0.46	51.38	0.0046	-0.0203	-0.0067
841	SLU 15	0.41	0.51	51.39	0.0044	-0.0207	-0.0068
841	SLU 16	0.41	0.43	50.99	0.0044	-0.0199	-0.0067
841	SLU 17	0.41	0.48	51.01	0.0042	-0.0203	-0.0068
841	SLU 18	0.41	0.45	52.85	0.0039	-0.0213	-0.0068
841	SLU 19	0.41	0.5	52.86	0.0037	-0.0217	-0.0068
841	SLU 20	0.42	0.45	53.25	0.0039	-0.0209	-0.0069
841	SLU 21	0.42	0.5	53.26	0.0038	-0.0213	-0.0069
841	SLU 22	0.39	0.48	49.82	0.0054	-0.0251	-0.0065
841	SLU 23	0.39	0.56	49.84	0.0052	-0.0257	-0.0065
841	SLU 24	0.4	0.5	50.6	0.0057	-0.0251	-0.0066
841	SLU 25	0.4	0.55	50.62	0.0055	-0.0254	-0.0066
841	SLU 26	0.4	0.56	50.24	0.0052	-0.0253	-0.0066
841	SLU 27	0.41	0.5	51	0.0057	-0.0246	-0.0067
841	SLU 28	0.41	0.55	51.02	0.0056	-0.025	-0.0067
841	SLU 29	0.4	0.48	50.62	0.0055	-0.0243	-0.0067
841	SLU 30	0.4	0.53	50.63	0.0053	-0.0246	-0.0067
841	SLU 31	0.44	0.6	56.04	0.0042	-0.027	-0.007
841	SLU 32	0.45	0.54	56.8	0.0046	-0.0264	-0.0071
841	SLU 33	0.45	0.59	56.82	0.0045	-0.0267	-0.0071
841	SLU 34	0.44	0.6	56.44	0.0042	-0.0266	-0.0071
841	SLU 35	0.45	0.54	57.2	0.0047	-0.026	-0.0072
841	SLU 36	0.45	0.59	57.22	0.0045	-0.0263	-0.0072
841	SLU 37	0.45	0.52	56.82	0.0044	-0.0256	-0.0072
841	SLU 38	0.45	0.57	56.83	0.0043	-0.0259	-0.0072
841	SLU 39	0.46	0.53	58.68	0.004	-0.027	-0.0072
841	SLU 40	0.46	0.58	58.69	0.0038	-0.0273	-0.0072
841	SLU 41	0.46	0.53	59.08	0.004	-0.0266	-0.0073
841	SLU 42	0.46	0.58	59.09	0.0038	-0.0269	-0.0073
841	SLU 43	0.43	0.48	55.19	0.007	-0.0234	-0.0076
841	SLU 44	0.43	0.57	55.21	0.0067	-0.024	-0.0077
841	SLU 45	0.44	0.51	55.98	0.0072	-0.0233	-0.0077
841	SLU 46	0.44	0.56	55.99	0.0071	-0.0237	-0.0078
841	SLU 47	0.44	0.57	55.61	0.0067	-0.0235	-0.0078
841	SLU 48	0.45	0.51	56.38	0.0072	-0.0229	-0.0078
841	SLU 49	0.45	0.56	56.39	0.0071	-0.0233	-0.0079
841	SLU 50	0.45	0.49	55.99	0.007	-0.0225	-0.0078
841	SLU 51	0.45	0.54	56.01	0.0068	-0.0229	-0.0079
841	SLU 52	0.48	0.6	61.41	0.0057	-0.0253	-0.0082
841	SLU 53	0.49	0.55	62.18	0.0062	-0.0246	-0.0083
841	SLU 54	0.49	0.6	62.19	0.006	-0.025	-0.0083
841	SLU 55	0.49	0.61	61.81	0.0057	-0.0249	-0.0083
841	SLU 56	0.5	0.55	62.58	0.0062	-0.0242	-0.0084
841	SLU 57	0.5	0.6	62.59	0.006	-0.0246	-0.0084
841	SLU 58	0.5	0.52	62.19	0.0059	-0.0238	-0.0084
841	SLU 59	0.5	0.57	62.21	0.0058	-0.0242	-0.0084
841	SLU 60	0.5	0.54	64.05	0.0055	-0.0252	-0.0084
841	SLU 61	0.5	0.59	64.06	0.0053	-0.0256	-0.0084
841	SLU 62	0.51	0.54	64.45	0.0055	-0.0248	-0.0085
841	SLU 63	0.51	0.59	64.46	0.0053	-0.0252	-0.0085
841	SLU 64	0.48	0.57	61.02	0.007	-0.029	-0.0081
841	SLU 65	0.48	0.65	61.04	0.0068	-0.0296	-0.0081
841	SLU 66	0.49	0.59	61.8	0.0073	-0.029	-0.0082
841	SLU 67	0.49	0.64	61.82	0.0071	-0.0293	-0.0082
841	SLU 68	0.48	0.65	61.44	0.0068	-0.0292	-0.0082
841	SLU 69	0.49	0.59	62.2	0.0073	-0.0285	-0.0083
841	SLU 70	0.49	0.64	62.22	0.0071	-0.0289	-0.0083
841	SLU 71	0.49	0.57	61.82	0.0071	-0.0282	-0.0083
841	SLU 72	0.49	0.62	61.83	0.0069	-0.0285	-0.0083
841	SLU 73	0.53	0.69	67.24	0.0058	-0.0309	-0.0087
841	SLU 74	0.53	0.63	68	0.0062	-0.0303	-0.0087
841	SLU 75	0.54	0.68	68.02	0.0061	-0.0306	-0.0088
841	SLU 76	0.53	0.69	67.64	0.0058	-0.0305	-0.0088
841	SLU 77	0.54	0.63	68.4	0.0062	-0.0299	-0.0088
841	SLU 78	0.54	0.68	68.42	0.0061	-0.0302	-0.0089
841	SLU 79	0.54	0.61	68.02	0.006	-0.0295	-0.0088
841	SLU 80	0.54	0.66	68.03	0.0059	-0.0298	-0.0089
841	SLU 81	0.54	0.62	69.88	0.0055	-0.0309	-0.0089
841	SLU 82	0.55	0.67	69.89	0.0054	-0.0312	-0.0089
841	SLU 83	0.55	0.62	70.28	0.0056	-0.0305	-0.009
841	SLU 84	0.55	0.67	70.29	0.0054	-0.0308	-0.009
841	SLE RA 1	0.36	0.42	45.66	0.0054	-0.0211	-0.0061
841	SLE RA 2	0.36	0.47	45.67	0.0052	-0.0215	-0.0062
841	SLE RA 3	0.36	0.44	46.18	0.0056	-0.021	-0.0062
841	SLE RA 4	0.36	0.47	46.19	0.0055	-0.0213	-0.0062
841	SLE RA 5	0.36	0.48	45.94	0.0052	-0.0212	-0.0062

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
841	SLE RA 6	0.37	0.44	46.45	0.0056	-0.0208	-0.0063
841	SLE RA 7	0.37	0.47	46.46	0.0055	-0.021	-0.0063
841	SLE RA 8	0.37	0.42	46.19	0.0054	-0.0205	-0.0063
841	SLE RA 9	0.37	0.45	46.2	0.0053	-0.0208	-0.0063
841	SLE RA 10	0.39	0.5	49.8	0.0045	-0.0223	-0.0065
841	SLE RA 11	0.4	0.46	50.31	0.0049	-0.0219	-0.0066
841	SLE RA 12	0.4	0.49	50.32	0.0048	-0.0222	-0.0066
841	SLE RA 13	0.39	0.5	50.07	0.0045	-0.0221	-0.0066
841	SLE RA 14	0.4	0.46	50.58	0.0049	-0.0216	-0.0066
841	SLE RA 15	0.4	0.49	50.59	0.0048	-0.0219	-0.0066
841	SLE RA 16	0.4	0.44	50.33	0.0047	-0.0214	-0.0066
841	SLE RA 17	0.4	0.48	50.33	0.0046	-0.0216	-0.0066
841	SLE RA 18	0.4	0.45	51.56	0.0044	-0.0223	-0.0066
841	SLE RA 19	0.4	0.49	51.57	0.0043	-0.0226	-0.0067
841	SLE RA 20	0.41	0.45	51.83	0.0044	-0.022	-0.0067
841	SLE RA 21	0.41	0.49	51.84	0.0043	-0.0223	-0.0067
841	SLE FR 1	0.36	0.42	45.66	0.0054	-0.0211	-0.0061
841	SLE FR 2	0.36	0.43	45.66	0.0054	-0.0212	-0.0061
841	SLE FR 3	0.36	0.42	45.76	0.0054	-0.021	-0.0062
841	SLE FR 4	0.37	0.44	47.43	0.0051	-0.0215	-0.0063
841	SLE FR 5	0.37	0.43	47.54	0.0051	-0.0213	-0.0063
841	SLE FR 6	0.38	0.44	48.61	0.0049	-0.0217	-0.0064
841	SLE QP 1	0.36	0.42	45.66	0.0054	-0.0211	-0.0061
841	SLE QP 2	0.37	0.43	47.43	0.0051	-0.0215	-0.0063
841	SLD 1	5.69	1.06	45.45	-0.0012	0.0503	-0.0406
841	SLD 2	5.5	1.16	45.48	-0.0014	0.0504	-0.0358
841	SLD 3	5.55	-0.7	45.16	0.0036	0.0617	-0.0395
841	SLD 4	5.36	-0.6	45.19	0.0033	0.0619	-0.0347
841	SLD 5	2.21	3.28	47.27	-0.0039	-0.0174	-0.0192
841	SLD 6	2.09	3.34	47.29	-0.004	-0.0173	-0.0161
841	SLD 7	1.75	-2.6	46.3	0.0118	0.0209	-0.0153
841	SLD 8	1.62	-2.54	46.32	0.0117	0.021	-0.0122
841	SLD 9	-0.88	3.4	48.54	-0.0015	-0.0639	-0.0004
841	SLD 10	-1.01	3.46	48.56	-0.0016	-0.0638	0.0028
841	SLD 11	-1.35	-2.48	47.56	0.0142	-0.0256	0.0035
841	SLD 12	-1.47	-2.42	47.58	0.0141	-0.0255	0.0066
841	SLD 13	-4.62	1.46	49.67	0.0068	-0.1048	0.0221
841	SLD 14	-4.81	1.56	49.7	0.0066	-0.1046	0.0269
841	SLD 15	-4.76	-0.3	49.38	0.0116	-0.0933	0.0233
841	SLD 16	-4.95	-0.2	49.41	0.0113	-0.0932	0.0281
841	SLV 1	12.81	1.86	42.78	-0.0097	0.1467	-0.0867
841	SLV 2	12.37	2.08	42.85	-0.0102	0.1471	-0.0754
841	SLV 3	12.49	-2.16	42.11	0.001	0.1728	-0.0839
841	SLV 4	12.04	-1.94	42.18	0.0005	0.1732	-0.0727
841	SLV 5	4.67	6.91	47.03	-0.0155	-0.0107	-0.0364
841	SLV 6	4.39	7.05	47.07	-0.0158	-0.0104	-0.0292
841	SLV 7	3.59	-6.48	44.82	0.0202	0.0764	-0.0274
841	SLV 8	3.3	-6.33	44.86	0.0199	0.0766	-0.0202
841	SLV 9	-2.56	7.19	50	-0.0097	-0.1195	0.0076
841	SLV 10	-2.85	7.33	50.04	-0.01	-0.1193	0.0148
841	SLV 11	-3.65	-6.19	47.78	0.026	-0.0325	0.0167
841	SLV 12	-3.93	-6.05	47.83	0.0257	-0.0322	0.0239
841	SLV 13	-11.3	2.8	52.67	0.0097	-0.2161	0.0601
841	SLV 14	-11.75	3.02	52.74	0.0092	-0.2157	0.0714
841	SLV 15	-11.62	-1.22	52.01	0.0204	-0.19	0.0628
841	SLV 16	-12.07	-1	52.08	0.0199	-0.1896	0.0741
841	CRTFP Ux+	0	0	0	0	0	0
841	CRTFP Ux-	0	0	0	0	0	0
844	SLU 1	-0.09	0.42	42.13	0.0075	0.0714	0.0067
844	SLU 2	-0.09	0.5	42.16	0.0072	0.0718	0.0067
844	SLU 3	-0.1	0.45	42.88	0.0077	0.0733	0.0069
844	SLU 4	-0.1	0.5	42.9	0.0076	0.0735	0.0069
844	SLU 5	-0.1	0.5	42.54	0.0073	0.0727	0.0068
844	SLU 6	-0.1	0.45	43.27	0.0078	0.0742	0.007
844	SLU 7	-0.1	0.5	43.28	0.0076	0.0744	0.007
844	SLU 8	-0.1	0.43	42.9	0.0076	0.0732	0.007
844	SLU 9	-0.1	0.48	42.92	0.0074	0.0734	0.0069
844	SLU 10	-0.1	0.57	47.9	0.0074	0.081	0.008
844	SLU 11	-0.1	0.52	48.62	0.0079	0.0825	0.0081
844	SLU 12	-0.1	0.57	48.64	0.0077	0.0827	0.0081
844	SLU 13	-0.1	0.57	48.29	0.0074	0.0819	0.0081
844	SLU 14	-0.1	0.52	49.01	0.0079	0.0834	0.0083
844	SLU 15	-0.1	0.57	49.03	0.0078	0.0836	0.0082
844	SLU 16	-0.1	0.5	48.64	0.0077	0.0825	0.0082
844	SLU 17	-0.1	0.55	48.66	0.0075	0.0827	0.0082
844	SLU 18	-0.1	0.52	50.33	0.0077	0.0846	0.0086
844	SLU 19	-0.1	0.57	50.35	0.0075	0.0848	0.0086
844	SLU 20	-0.1	0.52	50.72	0.0077	0.0855	0.0087
844	SLU 21	-0.1	0.57	50.74	0.0076	0.0857	0.0087
844	SLU 22	-0.12	0.55	47.6	0.0084	0.0837	0.0074
844	SLU 23	-0.12	0.63	47.63	0.0081	0.084	0.0074
844	SLU 24	-0.12	0.58	48.35	0.0087	0.0856	0.0076
844	SLU 25	-0.12	0.63	48.37	0.0085	0.0857	0.0076
844	SLU 26	-0.12	0.64	48.02	0.0082	0.0849	0.0075
844	SLU 27	-0.12	0.58	48.74	0.0087	0.0865	0.0077
844	SLU 28	-0.12	0.63	48.75	0.0085	0.0866	0.0077
844	SLU 29	-0.12	0.56	48.37	0.0085	0.0855	0.0076
844	SLU 30	-0.12	0.61	48.39	0.0083	0.0857	0.0076
844	SLU 31	-0.12	0.7	53.37	0.0083	0.0932	0.0087
844	SLU 32	-0.12	0.65	54.1	0.0088	0.0948	0.0088
844	SLU 33	-0.12	0.7	54.11	0.0086	0.095	0.0088

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
844	SLU 34	-0.12	0.71	53.76	0.0083	0.0941	0.0088
844	SLU 35	-0.12	0.65	54.48	0.0088	0.0957	0.0089
844	SLU 36	-0.12	0.7	54.5	0.0087	0.0959	0.0089
844	SLU 37	-0.12	0.63	54.12	0.0086	0.0947	0.0089
844	SLU 38	-0.12	0.68	54.13	0.0085	0.0949	0.0089
844	SLU 39	-0.12	0.65	55.81	0.0086	0.0969	0.0093
844	SLU 40	-0.12	0.7	55.82	0.0084	0.0971	0.0092
844	SLU 41	-0.12	0.65	56.19	0.0086	0.0978	0.0094
844	SLU 42	-0.12	0.7	56.21	0.0085	0.098	0.0093
844	SLU 43	-0.12	0.5	52.89	0.0094	0.0887	0.0085
844	SLU 44	-0.12	0.58	52.92	0.0091	0.089	0.0085
844	SLU 45	-0.12	0.53	53.64	0.0097	0.0905	0.0087
844	SLU 46	-0.12	0.58	53.66	0.0095	0.0907	0.0087
844	SLU 47	-0.12	0.59	53.31	0.0092	0.0899	0.0086
844	SLU 48	-0.12	0.53	54.03	0.0097	0.0914	0.0088
844	SLU 49	-0.12	0.58	54.05	0.0095	0.0916	0.0088
844	SLU 50	-0.12	0.51	53.66	0.0095	0.0905	0.0087
844	SLU 51	-0.12	0.56	53.68	0.0093	0.0907	0.0087
844	SLU 52	-0.12	0.65	58.66	0.0093	0.0982	0.0098
844	SLU 53	-0.12	0.6	59.39	0.0098	0.0998	0.0099
844	SLU 54	-0.12	0.65	59.4	0.0097	0.0999	0.0099
844	SLU 55	-0.12	0.66	59.05	0.0093	0.0991	0.0099
844	SLU 56	-0.12	0.6	59.77	0.0099	0.1007	0.01
844	SLU 57	-0.12	0.65	59.79	0.0097	0.1008	0.01
844	SLU 58	-0.12	0.58	59.41	0.0096	0.0997	0.01
844	SLU 59	-0.12	0.63	59.42	0.0095	0.0999	0.01
844	SLU 60	-0.12	0.6	61.1	0.0096	0.1019	0.0103
844	SLU 61	-0.12	0.65	61.11	0.0095	0.102	0.0103
844	SLU 62	-0.12	0.6	61.48	0.0097	0.1028	0.0105
844	SLU 63	-0.12	0.65	61.5	0.0095	0.1029	0.0104
844	SLU 64	-0.14	0.63	58.36	0.0103	0.1009	0.0092
844	SLU 65	-0.14	0.71	58.39	0.0101	0.1012	0.0092
844	SLU 66	-0.14	0.66	59.11	0.0106	0.1028	0.0094
844	SLU 67	-0.14	0.71	59.13	0.0104	0.103	0.0093
844	SLU 68	-0.14	0.72	58.78	0.0101	0.1021	0.0093
844	SLU 69	-0.14	0.66	59.5	0.0106	0.1037	0.0095
844	SLU 70	-0.14	0.71	59.52	0.0105	0.1039	0.0094
844	SLU 71	-0.14	0.64	59.13	0.0104	0.1027	0.0094
844	SLU 72	-0.14	0.69	59.15	0.0102	0.1029	0.0094
844	SLU 73	-0.14	0.78	64.14	0.0102	0.1105	0.0105
844	SLU 74	-0.14	0.73	64.86	0.0107	0.112	0.0106
844	SLU 75	-0.14	0.78	64.88	0.0106	0.1122	0.0106
844	SLU 76	-0.14	0.79	64.52	0.0102	0.1114	0.0106
844	SLU 77	-0.15	0.73	65.24	0.0108	0.1129	0.0107
844	SLU 78	-0.15	0.78	65.26	0.0106	0.1131	0.0107
844	SLU 79	-0.14	0.71	64.88	0.0106	0.112	0.0107
844	SLU 80	-0.14	0.76	64.9	0.0104	0.1121	0.0107
844	SLU 81	-0.14	0.73	66.57	0.0105	0.1141	0.011
844	SLU 82	-0.14	0.78	66.59	0.0104	0.1143	0.011
844	SLU 83	-0.15	0.74	66.95	0.0106	0.115	0.0111
844	SLU 84	-0.14	0.78	66.97	0.0104	0.1152	0.0111
844	SLE RA 1	-0.1	0.46	43.69	0.0077	0.0749	0.0069
844	SLE RA 2	-0.1	0.51	43.71	0.0076	0.0751	0.0069
844	SLE RA 3	-0.1	0.48	44.19	0.0079	0.0762	0.007
844	SLE RA 4	-0.1	0.51	44.2	0.0078	0.0763	0.007
844	SLE RA 5	-0.1	0.51	43.97	0.0076	0.0757	0.007
844	SLE RA 6	-0.1	0.48	44.45	0.0079	0.0768	0.0071
844	SLE RA 7	-0.1	0.51	44.46	0.0078	0.0769	0.0071
844	SLE RA 8	-0.1	0.46	44.21	0.0078	0.0761	0.0071
844	SLE RA 9	-0.1	0.49	44.22	0.0077	0.0763	0.0071
844	SLE RA 10	-0.1	0.56	47.54	0.0077	0.0813	0.0078
844	SLE RA 11	-0.11	0.52	48.02	0.008	0.0823	0.0079
844	SLE RA 12	-0.11	0.56	48.03	0.0079	0.0825	0.0079
844	SLE RA 13	-0.1	0.56	47.8	0.0077	0.0819	0.0079
844	SLE RA 14	-0.11	0.53	48.28	0.008	0.0829	0.0079
844	SLE RA 15	-0.11	0.56	48.29	0.0079	0.0831	0.0079
844	SLE RA 16	-0.11	0.51	48.04	0.0079	0.0823	0.0079
844	SLE RA 17	-0.11	0.54	48.05	0.0078	0.0824	0.0079
844	SLE RA 18	-0.11	0.52	49.16	0.0079	0.0837	0.0082
844	SLE RA 19	-0.11	0.56	49.17	0.0078	0.0839	0.0081
844	SLE RA 20	-0.11	0.53	49.42	0.0079	0.0843	0.0082
844	SLE RA 21	-0.11	0.56	49.43	0.0078	0.0845	0.0082
844	SLE FR 1	-0.1	0.46	43.69	0.0077	0.0749	0.0069
844	SLE FR 2	-0.1	0.47	43.7	0.0077	0.075	0.0069
844	SLE FR 3	-0.1	0.46	43.79	0.0078	0.0752	0.007
844	SLE FR 4	-0.1	0.49	45.34	0.0077	0.0776	0.0073
844	SLE FR 5	-0.1	0.48	45.44	0.0078	0.0778	0.0073
844	SLE FR 6	-0.1	0.49	46.43	0.0078	0.0793	0.0076
844	SLE QP 1	-0.1	0.46	43.69	0.0077	0.0749	0.0069
844	SLE QP 2	-0.1	0.48	45.33	0.0078	0.0776	0.0073
844	SLD 1	5.18	1.58	46.92	0.0097	0.139	-0.026
844	SLD 2	4.99	1.47	46.91	0.01	0.1393	-0.0212
844	SLD 3	5.06	-0.18	46.53	0.0146	0.1327	-0.024
844	SLD 4	4.87	-0.28	46.52	0.0149	0.133	-0.0193
844	SLD 5	1.71	3.49	46.41	0.0008	0.1054	-0.0065
844	SLD 6	1.58	3.42	46.4	0.001	0.1056	-0.0034
844	SLD 7	1.29	-2.37	45.1	0.0172	0.0846	0.0001
844	SLD 8	1.17	-2.44	45.09	0.0175	0.0848	0.0031
844	SLD 9	-1.37	3.39	45.57	-0.0019	0.0704	0.0115
844	SLD 10	-1.49	3.32	45.57	-0.0017	0.0706	0.0146
844	SLD 11	-1.79	-2.47	44.27	0.0145	0.0495	0.018

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
844	SLD 12	-1.91	-2.54	44.26	0.0147	0.0497	0.0211
844	SLD 13	-5.07	1.24	44.15	0.0006	0.0222	0.0339
844	SLD 14	-5.26	1.13	44.14	0.001	0.0225	0.0386
844	SLD 15	-5.2	-0.52	43.76	0.0056	0.0159	0.0358
844	SLD 16	-5.39	-0.62	43.75	0.0059	0.0162	0.0406
844	SLV 1	12.26	3.01	49.1	0.0127	0.221	-0.0705
844	SLV 2	11.81	2.76	49.07	0.0134	0.2217	-0.0594
844	SLV 3	11.97	-1	48.21	0.0239	0.2066	-0.066
844	SLV 4	11.52	-1.25	48.18	0.0246	0.2073	-0.0549
844	SLV 5	4.12	7.36	47.82	-0.0079	0.1424	-0.0248
844	SLV 6	3.84	7.2	47.81	-0.0074	0.1428	-0.0177
844	SLV 7	3.15	-6	44.84	0.0295	0.0943	-0.0097
844	SLV 8	2.87	-6.16	44.83	0.0299	0.0948	-0.0026
844	SLV 9	-3.07	7.12	45.84	-0.0144	0.0604	0.0172
844	SLV 10	-3.36	6.96	45.82	-0.0139	0.0609	0.0243
844	SLV 11	-4.04	-6.24	42.86	0.0229	0.0124	0.0323
844	SLV 12	-4.33	-6.4	42.84	0.0234	0.0128	0.0394
844	SLV 13	-11.73	2.2	42.49	-0.0091	-0.0522	0.0695
844	SLV 14	-12.17	1.96	42.46	-0.0083	-0.0514	0.0806
844	SLV 15	-12.02	-1.81	41.59	0.0021	-0.0666	0.074
844	SLV 16	-12.46	-2.05	41.56	0.0029	-0.0659	0.0851
844	CRTFP Ux+	0	0	0	0	0	0
844	CRTFP Ux-	0	0	0	0	0	0
846	SLU 1	-0.45	-0.04	23.79	0.0359	-4.5412	-0.0097
846	SLU 2	-0.46	0.03	23.8	0.0359	-4.5426	0.0076
846	SLU 3	-0.46	-0.03	24.26	0.0367	-4.6268	-0.0083
846	SLU 4	-0.46	0.01	24.26	0.0367	-4.6276	0.0021
846	SLU 5	-0.46	0.03	24.06	0.0363	-4.5907	0.0085
846	SLU 6	-0.47	-0.03	24.52	0.0371	-4.6749	-0.0073
846	SLU 7	-0.47	0.01	24.53	0.0371	-4.6758	0.003
846	SLU 8	-0.47	-0.03	24.32	0.0368	-4.6375	-0.0078
846	SLU 9	-0.47	0.01	24.33	0.0368	-4.6383	0.0026
846	SLU 10	-0.49	0.05	26.8	0.0409	-5.1012	0.0119
846	SLU 11	-0.5	-0.02	27.26	0.0417	-5.1854	-0.0039
846	SLU 12	-0.5	0.03	27.27	0.0417	-5.1862	0.0064
846	SLU 13	-0.5	0.05	27.07	0.0413	-5.1493	0.0129
846	SLU 14	-0.51	-0.01	27.53	0.0421	-5.2335	-0.003
846	SLU 15	-0.51	0.03	27.53	0.0421	-5.2343	0.0074
846	SLU 16	-0.51	-0.01	27.32	0.0417	-5.1961	-0.0034
846	SLU 17	-0.51	0.03	27.33	0.0417	-5.1969	0.0069
846	SLU 18	-0.51	-0.01	28.08	0.043	-5.3391	-0.0034
846	SLU 19	-0.51	0.03	28.09	0.043	-5.34	0.0069
846	SLU 20	-0.52	-0.01	28.35	0.0434	-5.3873	-0.0025
846	SLU 21	-0.52	0.03	28.35	0.0434	-5.3881	0.0078
846	SLU 22	-0.5	-0.02	26.73	0.0409	-5.0864	-0.0049
846	SLU 23	-0.5	0.05	26.73	0.0409	-5.0878	0.0123
846	SLU 24	-0.51	-0.01	27.19	0.0417	-5.172	-0.0035
846	SLU 25	-0.51	0.03	27.2	0.0417	-5.1729	0.0068
846	SLU 26	-0.51	0.05	27	0.0413	-5.136	0.0132
846	SLU 27	-0.52	-0.01	27.46	0.0421	-5.2202	-0.0026
846	SLU 28	-0.52	0.03	27.46	0.0421	-5.221	0.0077
846	SLU 29	-0.51	-0.01	27.25	0.0417	-5.1828	-0.003
846	SLU 30	-0.51	0.03	27.26	0.0417	-5.1836	0.0073
846	SLU 31	-0.54	0.07	29.74	0.0458	-5.6464	0.0166
846	SLU 32	-0.55	0	30.19	0.0466	-5.7306	0.0008
846	SLU 33	-0.55	0.05	30.2	0.0466	-5.7314	0.0111
846	SLU 34	-0.55	0.07	30	0.0463	-5.6946	0.0176
846	SLU 35	-0.55	0.01	30.46	0.047	-5.7788	0.0018
846	SLU 36	-0.55	0.05	30.46	0.047	-5.7796	0.0121
846	SLU 37	-0.55	0.01	30.26	0.0467	-5.7413	0.0013
846	SLU 38	-0.55	0.05	30.26	0.0467	-5.7422	0.0116
846	SLU 39	-0.55	0.01	31.01	0.048	-5.8844	0.0013
846	SLU 40	-0.55	0.05	31.02	0.048	-5.8852	0.0116
846	SLU 41	-0.56	0.01	31.28	0.0484	-5.9325	0.0022
846	SLU 42	-0.56	0.05	31.28	0.0484	-5.9334	0.0126
846	SLU 43	-0.58	-0.06	29.93	0.045	-5.7166	-0.0142
846	SLU 44	-0.58	0.01	29.93	0.045	-5.718	0.003
846	SLU 45	-0.59	-0.05	30.39	0.0458	-5.8022	-0.0128
846	SLU 46	-0.59	-0.01	30.4	0.0458	-5.803	-0.0025
846	SLU 47	-0.58	0.02	30.2	0.0454	-5.7662	0.004
846	SLU 48	-0.59	-0.05	30.66	0.0462	-5.8504	-0.0119
846	SLU 49	-0.59	-0.01	30.66	0.0462	-5.8512	-0.0015
846	SLU 50	-0.59	-0.05	30.45	0.0458	-5.8129	-0.0123
846	SLU 51	-0.59	-0.01	30.46	0.0458	-5.8138	-0.002
846	SLU 52	-0.62	0.03	32.94	0.0499	-6.2766	0.0074
846	SLU 53	-0.62	-0.03	33.39	0.0507	-6.3608	-0.0084
846	SLU 54	-0.62	0.01	33.4	0.0507	-6.3616	0.0019
846	SLU 55	-0.62	0.03	33.2	0.0504	-6.3247	0.0083
846	SLU 56	-0.63	-0.03	33.66	0.0512	-6.4089	-0.0075
846	SLU 57	-0.63	0.01	33.66	0.0512	-6.4098	0.0028
846	SLU 58	-0.63	-0.03	33.46	0.0508	-6.3715	-0.0079
846	SLU 59	-0.63	0.01	33.46	0.0508	-6.3723	0.0024
846	SLU 60	-0.63	-0.03	34.21	0.0521	-6.5146	-0.008
846	SLU 61	-0.63	0.01	34.22	0.0521	-6.5154	0.0024
846	SLU 62	-0.64	-0.03	34.48	0.0525	-6.5627	-0.007
846	SLU 63	-0.64	0.01	34.48	0.0525	-6.5636	0.0033
846	SLU 64	-0.62	-0.04	32.86	0.05	-6.2619	-0.0095
846	SLU 65	-0.62	0.03	32.87	0.05	-6.2633	0.0078
846	SLU 66	-0.63	-0.03	33.32	0.0507	-6.3475	-0.0081
846	SLU 67	-0.63	0.01	33.33	0.0507	-6.3483	0.0023
846	SLU 68	-0.63	0.04	33.13	0.0504	-6.3114	0.0087

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
846	SLU 69	-0.64	-0.03	33.59	0.0512	-6.3956	-0.0071
846	SLU 70	-0.64	0.01	33.59	0.0512	-6.3965	0.0032
846	SLU 71	-0.63	-0.03	33.39	0.0508	-6.3582	-0.0076
846	SLU 72	-0.64	0.01	33.39	0.0508	-6.359	0.0028
846	SLU 73	-0.66	0.05	35.87	0.0549	-6.8218	0.0121
846	SLU 74	-0.67	-0.01	36.33	0.0557	-6.906	-0.0037
846	SLU 75	-0.67	0.03	36.33	0.0557	-6.9069	0.0066
846	SLU 76	-0.67	0.05	36.13	0.0553	-6.87	0.0131
846	SLU 77	-0.68	-0.01	36.59	0.0561	-6.9542	-0.0028
846	SLU 78	-0.68	0.03	36.6	0.0561	-6.955	0.0076
846	SLU 79	-0.67	-0.01	36.39	0.0558	-6.9167	-0.0032
846	SLU 80	-0.67	0.03	36.39	0.0558	-6.9176	0.0071
846	SLU 81	-0.67	-0.01	37.15	0.057	-7.0598	-0.0032
846	SLU 82	-0.68	0.03	37.15	0.057	-7.0606	0.0071
846	SLU 83	-0.68	-0.01	37.41	0.0575	-7.108	-0.0023
846	SLU 84	-0.68	0.03	37.42	0.0575	-7.1088	0.008
846	SLE RA 1	-0.47	-0.03	24.63	0.0373	-4.697	-0.0083
846	SLE RA 2	-0.47	0.01	24.64	0.0373	-4.6979	0.0032
846	SLE RA 3	-0.47	-0.03	24.94	0.0379	-4.754	-0.0074
846	SLE RA 4	-0.47	0	24.95	0.0379	-4.7546	-0.0005
846	SLE RA 5	-0.47	0.02	24.81	0.0376	-4.73	0.0038
846	SLE RA 6	-0.48	-0.03	25.12	0.0381	-4.7862	-0.0068
846	SLE RA 7	-0.48	0	25.12	0.0381	-4.7867	0.0001
846	SLE RA 8	-0.48	-0.03	24.98	0.0379	-4.7612	-0.0071
846	SLE RA 9	-0.48	0	24.99	0.0379	-4.7617	-0.0002
846	SLE RA 10	-0.49	0.03	26.64	0.0406	-5.0703	0.0061
846	SLE RA 11	-0.5	-0.02	26.94	0.0412	-5.1264	-0.0045
846	SLE RA 12	-0.5	0.01	26.95	0.0412	-5.127	0.0024
846	SLE RA 13	-0.5	0.03	26.81	0.0409	-5.1024	0.0067
846	SLE RA 14	-0.5	-0.01	27.12	0.0414	-5.1585	-0.0039
846	SLE RA 15	-0.5	0.01	27.12	0.0414	-5.1591	0.003
846	SLE RA 16	-0.5	-0.02	26.98	0.0412	-5.1336	-0.0042
846	SLE RA 17	-0.5	0.01	26.99	0.0412	-5.1341	0.0027
846	SLE RA 18	-0.5	-0.02	27.49	0.0421	-5.2289	-0.0042
846	SLE RA 19	-0.5	0.01	27.49	0.0421	-5.2295	0.0027
846	SLE RA 20	-0.51	-0.01	27.67	0.0423	-5.2611	-0.0035
846	SLE RA 21	-0.51	0.01	27.67	0.0423	-5.2616	0.0033
846	SLE FR 1	-0.47	-0.03	24.63	0.0373	-4.697	-0.0083
846	SLE FR 2	-0.47	-0.02	24.63	0.0373	-4.6972	-0.006
846	SLE FR 3	-0.47	-0.03	24.7	0.0374	-4.7098	-0.0081
846	SLE FR 4	-0.48	-0.02	25.49	0.0388	-4.8568	-0.0048
846	SLE FR 5	-0.48	-0.03	25.56	0.0389	-4.8694	-0.0068
846	SLE FR 6	-0.49	-0.02	26.06	0.0397	-4.963	-0.0062
846	SLE QP 1	-0.47	-0.03	24.63	0.0373	-4.697	-0.0083
846	SLE QP 2	-0.48	-0.03	25.49	0.0387	-4.8566	-0.0071
846	SLD 1	2.18	0.9	30.54	0.0479	-5.7763	0.2243
846	SLD 2	2.08	0.6	30.56	0.0481	-5.7819	0.1476
846	SLD 3	2.11	-0.3	30.67	0.049	-5.8023	-0.0773
846	SLD 4	2.01	-0.61	30.69	0.0492	-5.808	-0.154
846	SLD 5	0.43	2.14	26.8	0.0398	-5.0919	0.5332
846	SLD 6	0.37	1.94	26.81	0.04	-5.0956	0.4834
846	SLD 7	0.22	-1.89	27.24	0.0434	-5.1789	-0.4723
846	SLD 8	0.15	-2.09	27.25	0.0436	-5.1826	-0.522
846	SLD 9	-1.11	2.03	23.72	0.0339	-4.5306	0.5079
846	SLD 10	-1.17	1.83	23.74	0.0341	-4.5343	0.4581
846	SLD 11	-1.32	-1.99	24.16	0.0375	-4.6175	-0.4976
846	SLD 12	-1.39	-2.19	24.18	0.0377	-4.6212	-0.5473
846	SLD 13	-2.97	0.56	20.29	0.0283	-3.9051	0.1399
846	SLD 14	-3.07	0.25	20.31	0.0285	-3.9108	0.0632
846	SLD 15	-3.03	-0.65	20.42	0.0294	-3.9312	-0.1618
846	SLD 16	-3.13	-0.96	20.44	0.0296	-3.9369	-0.2384
846	SLV 1	5.73	2.12	37.31	0.0603	-7.0091	0.5255
846	SLV 2	5.5	1.4	37.36	0.0608	-7.0223	0.3469
846	SLV 3	5.58	-0.64	37.62	0.0627	-7.0697	-0.1625
846	SLV 4	5.35	-1.36	37.67	0.0632	-7.083	-0.3412
846	SLV 5	1.65	4.92	28.56	0.0414	-5.4081	1.2265
846	SLV 6	1.5	4.46	28.59	0.0417	-5.4166	1.1124
846	SLV 7	1.15	-4.27	29.59	0.0496	-5.6103	-1.067
846	SLV 8	1	-4.73	29.62	0.0499	-5.6187	-1.1811
846	SLV 9	-1.96	4.67	21.36	0.0276	-4.0944	1.167
846	SLV 10	-2.11	4.21	21.39	0.0279	-4.1029	1.0529
846	SLV 11	-2.46	-4.51	22.39	0.0358	-4.2966	-1.1266
846	SLV 12	-2.61	-4.97	22.42	0.0361	-4.305	-1.2407
846	SLV 13	-6.3	1.3	13.31	0.0143	-2.6302	0.327
846	SLV 14	-6.54	0.58	13.36	0.0148	-2.6434	0.1484
846	SLV 15	-6.45	-1.45	13.62	0.0167	-2.6908	-0.361
846	SLV 16	-6.69	-2.17	13.67	0.0172	-2.7041	-0.5397
846	CRTFP Ux+	0	0	0	0	0	0
846	CRTFP Ux-	0	0	0	0	0	0
846	CRTFP Uy+	0	0	0	0	0	0
846	CRTFP Uy-	0	0	0	0	0	0
849	SLU 1	0.63	0.55	22.49	-0.0475	4.1062	-0.1948
849	SLU 2	0.62	0.63	22.49	-0.0476	4.1077	-0.224
849	SLU 3	0.64	0.57	22.91	-0.0486	4.1704	-0.2006
849	SLU 4	0.64	0.62	22.91	-0.0486	4.1714	-0.2181
849	SLU 5	0.63	0.64	22.73	-0.0482	4.1437	-0.2258
849	SLU 6	0.65	0.57	23.14	-0.0492	4.2065	-0.2024
849	SLU 7	0.65	0.62	23.14	-0.0492	4.2074	-0.2199
849	SLU 8	0.65	0.56	22.96	-0.0487	4.1782	-0.1984
849	SLU 9	0.64	0.61	22.96	-0.0487	4.1792	-0.2159
849	SLU 10	0.69	0.74	25.19	-0.0543	4.5302	-0.2636

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
849	SLU 11	0.71	0.68	25.61	-0.0553	4.593	-0.2402
849	SLU 12	0.7	0.73	25.61	-0.0553	4.5939	-0.2577
849	SLU 13	0.7	0.75	25.43	-0.0549	4.5662	-0.2655
849	SLU 14	0.72	0.68	25.84	-0.0559	4.629	-0.2421
849	SLU 15	0.71	0.73	25.84	-0.0559	4.6299	-0.2596
849	SLU 16	0.71	0.67	25.66	-0.0555	4.6007	-0.2381
849	SLU 17	0.71	0.72	25.66	-0.0555	4.6017	-0.2556
849	SLU 18	0.72	0.71	26.35	-0.0572	4.7097	-0.2514
849	SLU 19	0.72	0.76	26.35	-0.0572	4.7107	-0.2689
849	SLU 20	0.73	0.71	26.58	-0.0578	4.7458	-0.2533
849	SLU 21	0.73	0.76	26.58	-0.0578	4.7467	-0.2708
849	SLU 22	0.7	0.64	25.11	-0.054	4.5155	-0.2286
849	SLU 23	0.7	0.73	25.11	-0.054	4.517	-0.2578
849	SLU 24	0.72	0.66	25.52	-0.055	4.5797	-0.2344
849	SLU 25	0.71	0.71	25.53	-0.055	4.5807	-0.252
849	SLU 26	0.71	0.73	25.34	-0.0546	4.553	-0.2597
849	SLU 27	0.73	0.67	25.76	-0.0556	4.6158	-0.2363
849	SLU 28	0.72	0.72	25.76	-0.0556	4.6167	-0.2538
849	SLU 29	0.72	0.66	25.58	-0.0552	4.5875	-0.2323
849	SLU 30	0.72	0.71	25.58	-0.0552	4.5885	-0.2498
849	SLU 31	0.76	0.84	27.81	-0.0608	4.9395	-0.2975
849	SLU 32	0.78	0.77	28.22	-0.0618	5.0023	-0.2741
849	SLU 33	0.78	0.82	28.22	-0.0618	5.0032	-0.2916
849	SLU 34	0.77	0.85	28.04	-0.0614	4.9755	-0.2993
849	SLU 35	0.79	0.78	28.46	-0.0624	5.0383	-0.2759
849	SLU 36	0.79	0.83	28.46	-0.0624	5.0392	-0.2935
849	SLU 37	0.79	0.77	28.27	-0.062	5.01	-0.272
849	SLU 38	0.78	0.82	28.28	-0.062	5.011	-0.2895
849	SLU 39	0.79	0.81	28.96	-0.0637	5.1191	-0.2853
849	SLU 40	0.79	0.86	28.96	-0.0637	5.12	-0.3028
849	SLU 41	0.8	0.81	29.2	-0.0643	5.1551	-0.2871
849	SLU 42	0.8	0.86	29.2	-0.0643	5.156	-0.3047
849	SLU 43	0.79	0.68	28.34	-0.0596	5.1977	-0.2416
849	SLU 44	0.78	0.76	28.35	-0.0596	5.1992	-0.2708
849	SLU 45	0.8	0.7	28.76	-0.0606	5.262	-0.2474
849	SLU 46	0.8	0.75	28.76	-0.0606	5.2629	-0.2649
849	SLU 47	0.79	0.77	28.58	-0.0602	5.2352	-0.2726
849	SLU 48	0.81	0.7	28.99	-0.0612	5.298	-0.2492
849	SLU 49	0.81	0.75	29	-0.0612	5.2989	-0.2667
849	SLU 50	0.81	0.69	28.81	-0.0608	5.2697	-0.2452
849	SLU 51	0.81	0.74	28.81	-0.0608	5.2707	-0.2628
849	SLU 52	0.85	0.88	31.04	-0.0664	5.6217	-0.3104
849	SLU 53	0.87	0.81	31.46	-0.0674	5.6845	-0.287
849	SLU 54	0.87	0.86	31.46	-0.0674	5.6854	-0.3046
849	SLU 55	0.86	0.88	31.28	-0.067	5.6578	-0.3123
849	SLU 56	0.88	0.81	31.69	-0.068	5.7205	-0.2889
849	SLU 57	0.88	0.86	31.69	-0.068	5.7214	-0.3064
849	SLU 58	0.87	0.8	31.51	-0.0675	5.6923	-0.2849
849	SLU 59	0.87	0.85	31.51	-0.0676	5.6932	-0.3024
849	SLU 60	0.88	0.84	32.2	-0.0692	5.8013	-0.2982
849	SLU 61	0.88	0.89	32.2	-0.0693	5.8022	-0.3158
849	SLU 62	0.89	0.85	32.43	-0.0698	5.8373	-0.3001
849	SLU 63	0.89	0.9	32.43	-0.0699	5.8382	-0.3176
849	SLU 64	0.86	0.78	30.96	-0.066	5.607	-0.2754
849	SLU 65	0.86	0.86	30.96	-0.0661	5.6085	-0.3046
849	SLU 66	0.88	0.79	31.37	-0.0671	5.6713	-0.2812
849	SLU 67	0.88	0.84	31.38	-0.0671	5.6722	-0.2988
849	SLU 68	0.87	0.87	31.2	-0.0667	5.6445	-0.3065
849	SLU 69	0.89	0.8	31.61	-0.0677	5.7073	-0.2831
849	SLU 70	0.89	0.85	31.61	-0.0677	5.7082	-0.3006
849	SLU 71	0.88	0.79	31.43	-0.0672	5.679	-0.2791
849	SLU 72	0.88	0.84	31.43	-0.0673	5.68	-0.2966
849	SLU 73	0.92	0.97	33.66	-0.0728	6.031	-0.3443
849	SLU 74	0.94	0.91	34.07	-0.0738	6.0938	-0.3209
849	SLU 75	0.94	0.96	34.07	-0.0739	6.0947	-0.3384
849	SLU 76	0.93	0.98	33.89	-0.0734	6.0671	-0.3461
849	SLU 77	0.95	0.91	34.31	-0.0744	6.1298	-0.3227
849	SLU 78	0.95	0.96	34.31	-0.0745	6.1307	-0.3403
849	SLU 79	0.95	0.9	34.12	-0.074	6.1016	-0.3188
849	SLU 80	0.94	0.95	34.13	-0.074	6.1025	-0.3363
849	SLU 81	0.96	0.94	34.81	-0.0757	6.2106	-0.3321
849	SLU 82	0.95	0.99	34.81	-0.0757	6.2115	-0.3496
849	SLU 83	0.97	0.94	35.05	-0.0763	6.2466	-0.3339
849	SLU 84	0.96	0.99	35.05	-0.0763	6.2475	-0.3515
849	SLE RA 1	0.65	0.58	23.24	-0.0494	4.2231	-0.2044
849	SLE RA 2	0.64	0.63	23.24	-0.0494	4.2241	-0.2239
849	SLE RA 3	0.66	0.59	23.52	-0.0501	4.266	-0.2083
849	SLE RA 4	0.66	0.62	23.52	-0.0501	4.2666	-0.22
849	SLE RA 5	0.65	0.64	23.4	-0.0498	4.2481	-0.2251
849	SLE RA 6	0.67	0.59	23.67	-0.0505	4.29	-0.2095
849	SLE RA 7	0.66	0.62	23.67	-0.0505	4.2906	-0.2212
849	SLE RA 8	0.66	0.58	23.55	-0.0502	4.2711	-0.2069
849	SLE RA 9	0.66	0.62	23.55	-0.0502	4.2718	-0.2186
849	SLE RA 10	0.69	0.71	25.04	-0.0539	4.5058	-0.2503
849	SLE RA 11	0.7	0.66	25.31	-0.0546	4.5476	-0.2347
849	SLE RA 12	0.7	0.7	25.32	-0.0546	4.5483	-0.2464
849	SLE RA 13	0.69	0.71	25.2	-0.0543	4.5298	-0.2516
849	SLE RA 14	0.71	0.67	25.47	-0.055	4.5717	-0.236
849	SLE RA 15	0.71	0.7	25.47	-0.055	4.5723	-0.2477
849	SLE RA 16	0.7	0.66	25.35	-0.0547	4.5528	-0.2333
849	SLE RA 17	0.7	0.69	25.35	-0.0547	4.5534	-0.245

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
849	SLE RA 18	0.71	0.68	25.81	-0.0558	4.6255	-0.2422
849	SLE RA 19	0.71	0.72	25.81	-0.0558	4.6261	-0.2539
849	SLE RA 20	0.72	0.69	25.96	-0.0562	4.6495	-0.2434
849	SLE RA 21	0.71	0.72	25.97	-0.0562	4.6501	-0.2551
849	SLE FR 1	0.65	0.58	23.24	-0.0494	4.2231	-0.2044
849	SLE FR 2	0.65	0.59	23.24	-0.0494	4.2233	-0.2083
849	SLE FR 3	0.65	0.58	23.3	-0.0495	4.2327	-0.2049
849	SLE FR 4	0.67	0.62	24.01	-0.0513	4.344	-0.2197
849	SLE FR 5	0.67	0.61	24.07	-0.0515	4.3534	-0.2163
849	SLE FR 6	0.68	0.63	24.52	-0.0526	4.4243	-0.2233
849	SLE QP 1	0.65	0.58	23.24	-0.0494	4.2231	-0.2044
849	SLE QP 2	0.67	0.61	24.01	-0.0513	4.3438	-0.2158
849	SLD 1	2.43	0.99	20.05	-0.04	3.848	-0.3476
849	SLD 2	2.28	1.39	20.01	-0.0403	3.8396	-0.4865
849	SLD 3	2.75	-0.55	20.16	-0.0391	3.8747	0.1914
849	SLD 4	2.6	-0.15	20.13	-0.0394	3.8664	0.0525
849	SLD 5	0.74	2.99	22.66	-0.0492	4.156	-1.0486
849	SLD 6	0.64	3.25	22.63	-0.0494	4.1506	-1.1387
849	SLD 7	1.8	-2.15	23.03	-0.0463	4.2451	0.7481
849	SLD 8	1.7	-1.89	23.01	-0.0464	4.2397	0.658
849	SLD 9	-0.37	3.11	25.01	-0.0562	4.448	-1.0895
849	SLD 10	-0.47	3.36	24.99	-0.0564	4.4425	-1.1796
849	SLD 11	0.69	-2.04	25.38	-0.0532	4.5371	0.7072
849	SLD 12	0.59	-1.78	25.36	-0.0534	4.5317	0.617
849	SLD 13	-1.26	1.37	27.89	-0.0633	4.8213	-0.484
849	SLD 14	-1.42	1.77	27.85	-0.0635	4.8129	-0.6229
849	SLD 15	-0.95	-0.18	28	-0.0624	4.848	0.055
849	SLD 16	-1.1	0.22	27.97	-0.0626	4.8397	-0.0839
849	SLV 1	4.8	1.46	14.75	-0.0249	3.1835	-0.5075
849	SLV 2	4.45	2.39	14.66	-0.0254	3.164	-0.8311
849	SLV 3	5.53	-2.05	15.01	-0.0228	3.2457	0.7185
849	SLV 4	5.17	-1.12	14.92	-0.0234	3.2262	0.3949
849	SLV 5	0.87	6.03	20.85	-0.0464	3.9047	-2.108
849	SLV 6	0.64	6.62	20.79	-0.0467	3.8922	-2.3146
849	SLV 7	3.28	-5.67	21.72	-0.0396	4.112	1.9788
849	SLV 8	3.06	-5.07	21.66	-0.0399	4.0996	1.7721
849	SLV 9	-1.72	6.29	26.35	-0.0627	4.588	-2.2037
849	SLV 10	-1.95	6.88	26.3	-0.063	4.5756	-2.4103
849	SLV 11	0.69	-5.41	27.22	-0.0559	4.7954	1.8831
849	SLV 12	0.46	-4.81	27.17	-0.0562	4.783	1.6764
849	SLV 13	-3.84	2.34	33.1	-0.0792	5.4614	-0.8265
849	SLV 14	-4.2	3.26	33.01	-0.0798	5.4419	-1.1501
849	SLV 15	-3.12	-1.17	33.36	-0.0772	5.5236	0.3995
849	SLV 16	-3.47	-0.25	33.27	-0.0777	5.5042	0.076
849	CRTFP Ux+	0	0	0	0	0	0
849	CRTFP Ux-	0	0	0	0	0	0
849	CRTFP Uy+	0	0	0	0	0	0
849	CRTFP Uy-	0	0	0	0	0	0
851	SLU 1	1.12	0	52.6	0.0108	0.3291	-0.0099
851	SLU 2	1.12	0.09	52.61	0.0106	0.3284	-0.01
851	SLU 3	1.15	0.01	53.63	0.011	0.3365	-0.0101
851	SLU 4	1.15	0.06	53.63	0.0108	0.3361	-0.0102
851	SLU 5	1.14	0.09	53.17	0.0106	0.3317	-0.0102
851	SLU 6	1.17	0	54.19	0.011	0.3397	-0.0103
851	SLU 7	1.17	0.06	54.19	0.0108	0.3394	-0.0104
851	SLU 8	1.16	-0.01	53.72	0.0108	0.3355	-0.0102
851	SLU 9	1.16	0.04	53.73	0.0107	0.3351	-0.0103
851	SLU 10	1.23	0.14	59.68	0.0114	0.3821	-0.0117
851	SLU 11	1.26	0.05	60.7	0.0118	0.3902	-0.0118
851	SLU 12	1.26	0.11	60.71	0.0117	0.3898	-0.0119
851	SLU 13	1.25	0.13	60.24	0.0114	0.3853	-0.0119
851	SLU 14	1.28	0.05	61.26	0.0118	0.3934	-0.012
851	SLU 15	1.28	0.1	61.27	0.0117	0.393	-0.0121
851	SLU 16	1.27	0.03	60.8	0.0116	0.3892	-0.012
851	SLU 17	1.27	0.09	60.8	0.0115	0.3888	-0.0121
851	SLU 18	1.27	0.06	62.71	0.012	0.4057	-0.0123
851	SLU 19	1.27	0.12	62.71	0.0119	0.4053	-0.0124
851	SLU 20	1.29	0.06	63.27	0.012	0.4089	-0.0125
851	SLU 21	1.29	0.11	63.27	0.0119	0.4085	-0.0126
851	SLU 22	1.23	0.06	59.4	0.012	0.3798	-0.0112
851	SLU 23	1.23	0.15	59.41	0.0118	0.3792	-0.0113
851	SLU 24	1.26	0.06	60.43	0.0122	0.3872	-0.0114
851	SLU 25	1.26	0.12	60.43	0.0121	0.3869	-0.0115
851	SLU 26	1.25	0.14	59.96	0.0118	0.3824	-0.0115
851	SLU 27	1.28	0.06	60.99	0.0122	0.3905	-0.0116
851	SLU 28	1.28	0.11	60.99	0.0121	0.3901	-0.0117
851	SLU 29	1.27	0.04	60.52	0.012	0.3862	-0.0116
851	SLU 30	1.27	0.1	60.52	0.0119	0.3859	-0.0117
851	SLU 31	1.34	0.19	66.48	0.0126	0.4328	-0.0131
851	SLU 32	1.37	0.11	67.5	0.013	0.4409	-0.0132
851	SLU 33	1.37	0.16	67.5	0.0129	0.4405	-0.0133
851	SLU 34	1.36	0.19	67.04	0.0126	0.436	-0.0133
851	SLU 35	1.39	0.1	68.06	0.013	0.4441	-0.0133
851	SLU 36	1.39	0.16	68.06	0.0129	0.4437	-0.0134
851	SLU 37	1.38	0.09	67.6	0.0128	0.4399	-0.0133
851	SLU 38	1.38	0.14	67.6	0.0127	0.4395	-0.0134
851	SLU 39	1.38	0.12	69.51	0.0132	0.4564	-0.0137
851	SLU 40	1.38	0.18	69.51	0.0131	0.456	-0.0138
851	SLU 41	1.4	0.12	70.07	0.0132	0.4596	-0.0139
851	SLU 42	1.4	0.17	70.07	0.0131	0.4593	-0.014
851	SLU 43	1.42	-0.02	66.05	0.0136	0.4104	-0.0124

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
851	SLU 44	1.42	0.07	66.06	0.0134	0.4098	-0.0125
851	SLU 45	1.45	-0.01	67.08	0.0138	0.4178	-0.0126
851	SLU 46	1.45	0.04	67.08	0.0137	0.4175	-0.0127
851	SLU 47	1.44	0.07	66.62	0.0134	0.413	-0.0127
851	SLU 48	1.47	-0.02	67.64	0.0138	0.4211	-0.0128
851	SLU 49	1.47	0.04	67.64	0.0137	0.4207	-0.0129
851	SLU 50	1.46	-0.03	67.17	0.0136	0.4168	-0.0127
851	SLU 51	1.46	0.02	67.18	0.0135	0.4165	-0.0128
851	SLU 52	1.53	0.12	73.13	0.0143	0.4634	-0.0142
851	SLU 53	1.55	0.03	74.15	0.0146	0.4715	-0.0143
851	SLU 54	1.56	0.09	74.16	0.0145	0.4711	-0.0144
851	SLU 55	1.55	0.11	73.69	0.0143	0.4666	-0.0144
851	SLU 56	1.58	0.03	74.71	0.0146	0.4747	-0.0145
851	SLU 57	1.58	0.08	74.72	0.0145	0.4743	-0.0146
851	SLU 58	1.57	0.01	74.25	0.0144	0.4705	-0.0145
851	SLU 59	1.57	0.07	74.25	0.0143	0.4701	-0.0146
851	SLU 60	1.57	0.05	76.16	0.0148	0.487	-0.0148
851	SLU 61	1.57	0.1	76.16	0.0147	0.4866	-0.0149
851	SLU 62	1.59	0.04	76.72	0.0148	0.4902	-0.015
851	SLU 63	1.59	0.09	76.72	0.0147	0.4899	-0.0151
851	SLU 64	1.53	0.04	72.85	0.0148	0.4611	-0.0137
851	SLU 65	1.53	0.13	72.86	0.0146	0.4605	-0.0138
851	SLU 66	1.56	0.04	73.88	0.015	0.4686	-0.0139
851	SLU 67	1.56	0.1	73.88	0.0149	0.4682	-0.014
851	SLU 68	1.55	0.12	73.42	0.0146	0.4637	-0.014
851	SLU 69	1.58	0.04	74.44	0.015	0.4718	-0.0141
851	SLU 70	1.58	0.09	74.44	0.0149	0.4714	-0.0142
851	SLU 71	1.57	0.02	73.97	0.0148	0.4676	-0.0141
851	SLU 72	1.57	0.08	73.97	0.0147	0.4672	-0.0142
851	SLU 73	1.64	0.17	79.93	0.0155	0.5141	-0.0156
851	SLU 74	1.67	0.09	80.95	0.0158	0.5222	-0.0157
851	SLU 75	1.67	0.14	80.95	0.0157	0.5218	-0.0158
851	SLU 76	1.66	0.17	80.49	0.0155	0.5174	-0.0158
851	SLU 77	1.69	0.08	81.51	0.0158	0.5254	-0.0158
851	SLU 78	1.69	0.14	81.51	0.0157	0.5251	-0.0159
851	SLU 79	1.68	0.07	81.05	0.0156	0.5212	-0.0158
851	SLU 80	1.68	0.13	81.05	0.0155	0.5208	-0.0159
851	SLU 81	1.68	0.1	82.96	0.016	0.5377	-0.0162
851	SLU 82	1.68	0.16	82.96	0.0159	0.5374	-0.0163
851	SLU 83	1.7	0.1	83.52	0.016	0.541	-0.0164
851	SLU 84	1.7	0.15	83.52	0.0159	0.5406	-0.0165
851	SLE RA 1	1.15	0.02	54.55	0.0111	0.3435	-0.0102
851	SLE RA 2	1.15	0.08	54.55	0.011	0.3431	-0.0103
851	SLE RA 3	1.17	0.02	55.23	0.0112	0.3485	-0.0104
851	SLE RA 4	1.17	0.06	55.23	0.0112	0.3483	-0.0105
851	SLE RA 5	1.17	0.07	54.92	0.011	0.3453	-0.0105
851	SLE RA 6	1.19	0.02	55.6	0.0112	0.3507	-0.0105
851	SLE RA 7	1.19	0.05	55.6	0.0112	0.3504	-0.0106
851	SLE RA 8	1.18	0.01	55.29	0.0111	0.3479	-0.0105
851	SLE RA 9	1.18	0.04	55.29	0.011	0.3476	-0.0105
851	SLE RA 10	1.22	0.11	59.27	0.0116	0.3789	-0.0115
851	SLE RA 11	1.24	0.05	59.95	0.0118	0.3843	-0.0115
851	SLE RA 12	1.24	0.09	59.95	0.0117	0.384	-0.0116
851	SLE RA 13	1.24	0.1	59.64	0.0116	0.381	-0.0116
851	SLE RA 14	1.26	0.05	60.32	0.0118	0.3864	-0.0117
851	SLE RA 15	1.26	0.08	60.32	0.0117	0.3862	-0.0117
851	SLE RA 16	1.25	0.04	60.01	0.0117	0.3836	-0.0116
851	SLE RA 17	1.25	0.07	60.01	0.0116	0.3834	-0.0117
851	SLE RA 18	1.25	0.06	61.28	0.0119	0.3946	-0.0119
851	SLE RA 19	1.25	0.1	61.29	0.0118	0.3944	-0.012
851	SLE RA 20	1.27	0.06	61.66	0.0119	0.3968	-0.012
851	SLE RA 21	1.27	0.09	61.66	0.0118	0.3965	-0.0121
851	SLE FR 1	1.15	0.02	54.55	0.0111	0.3435	-0.0102
851	SLE FR 2	1.15	0.03	54.55	0.0111	0.3435	-0.0103
851	SLE FR 3	1.16	0.01	54.7	0.0111	0.3444	-0.0103
851	SLE FR 4	1.18	0.04	56.57	0.0113	0.3588	-0.0108
851	SLE FR 5	1.19	0.03	56.72	0.0114	0.3597	-0.0108
851	SLE FR 6	1.2	0.04	57.92	0.0115	0.3691	-0.0111
851	SLE QP 1	1.15	0.02	54.55	0.0111	0.3435	-0.0102
851	SLE QP 2	1.18	0.03	56.57	0.0114	0.3589	-0.0107
851	SLD 1	6.61	0.92	52.62	0.0016	0.3175	-0.0436
851	SLD 2	6.4	1.21	52.55	0.0011	0.3178	-0.039
851	SLD 3	6.48	-0.87	52.82	0.006	0.3424	-0.0412
851	SLD 4	6.27	-0.58	52.76	0.0055	0.3427	-0.0366
851	SLD 5	3.04	2.96	55.09	0.0018	0.3087	-0.025
851	SLD 6	2.91	3.15	55.05	0.0015	0.3089	-0.0221
851	SLD 7	2.62	-3.01	55.76	0.0165	0.3916	-0.017
851	SLD 8	2.48	-2.82	55.72	0.0162	0.3918	-0.0141
851	SLD 9	-0.11	2.88	57.41	0.0065	0.326	-0.0074
851	SLD 10	-0.25	3.06	57.38	0.0062	0.3261	-0.0044
851	SLD 11	-0.54	-3.09	58.09	0.0212	0.4089	0.0006
851	SLD 12	-0.68	-2.91	58.05	0.0209	0.409	0.0036
851	SLD 13	-3.9	0.64	60.38	0.0172	0.3751	0.0152
851	SLD 14	-4.12	0.93	60.32	0.0167	0.3753	0.0197
851	SLD 15	-4.03	-1.15	60.58	0.0216	0.4	0.0176
851	SLD 16	-4.25	-0.86	60.52	0.0211	0.4002	0.0221
851	SLV 1	13.88	2.06	47.32	-0.0113	0.2616	-0.0875
851	SLV 2	13.38	2.73	47.18	-0.0126	0.2622	-0.0769
851	SLV 3	13.58	-2.02	47.78	-0.0013	0.3197	-0.082
851	SLV 4	13.08	-1.35	47.64	-0.0025	0.3203	-0.0714
851	SLV 5	5.53	6.71	53.11	-0.0104	0.2414	-0.0439

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
851	SLV 6	5.21	7.14	53.02	-0.0112	0.2418	-0.0371
851	SLV 7	4.53	-6.88	54.66	0.023	0.4352	-0.0256
851	SLV 8	4.21	-6.46	54.57	0.0222	0.4355	-0.0188
851	SLV 9	-1.85	6.52	58.57	0.0005	0.2822	-0.0027
851	SLV 10	-2.17	6.94	58.47	-0.0003	0.2826	0.0041
851	SLV 11	-2.85	-7.08	60.11	0.0339	0.4759	0.0157
851	SLV 12	-3.17	-6.65	60.02	0.0331	0.4763	0.0225
851	SLV 13	-10.72	1.41	65.5	0.0252	0.3975	0.0499
851	SLV 14	-11.22	2.07	65.35	0.024	0.3981	0.0606
851	SLV 15	-11.02	-2.67	65.96	0.0353	0.4556	0.0554
851	SLV 16	-11.52	-2	65.82	0.034	0.4562	0.0661
851	CRTFP Ux+	0	0	0	0	0	0
851	CRTFP Ux-	0	0	0	0	0	0
854	SLU 1	-1.4	-0.32	84.16	10.1258	-0.4991	0.1826
854	SLU 2	-1.4	-0.16	84.17	10.1268	-0.4975	0.1829
854	SLU 3	-1.43	-0.3	85.83	10.3253	-0.5106	0.1866
854	SLU 4	-1.43	-0.21	85.83	10.3259	-0.5096	0.1868
854	SLU 5	-1.43	-0.17	85.06	10.2332	-0.5026	0.1858
854	SLU 6	-1.45	-0.31	86.71	10.4317	-0.5158	0.1896
854	SLU 7	-1.46	-0.21	86.72	10.4323	-0.5148	0.1897
854	SLU 8	-1.45	-0.32	85.94	10.3387	-0.5095	0.1884
854	SLU 9	-1.45	-0.23	85.94	10.3393	-0.5085	0.1886
854	SLU 10	-1.52	-0.17	95.57	11.4904	-0.5818	0.2011
854	SLU 11	-1.55	-0.31	97.22	11.689	-0.5949	0.2049
854	SLU 12	-1.55	-0.21	97.23	11.6895	-0.5939	0.2051
854	SLU 13	-1.55	-0.17	96.46	11.5969	-0.5869	0.204
854	SLU 14	-1.57	-0.31	98.11	11.7954	-0.6001	0.2078
854	SLU 15	-1.58	-0.22	98.11	11.796	-0.5991	0.208
854	SLU 16	-1.57	-0.33	97.34	11.7024	-0.5937	0.2067
854	SLU 17	-1.57	-0.24	97.34	11.7029	-0.5927	0.2068
854	SLU 18	-1.57	-0.32	100.45	12.0739	-0.6195	0.2087
854	SLU 19	-1.57	-0.23	100.45	12.0745	-0.6185	0.2089
854	SLU 20	-1.59	-0.33	101.33	12.1804	-0.6247	0.2116
854	SLU 21	-1.6	-0.23	101.34	12.1809	-0.6237	0.2118
854	SLU 22	-1.54	-0.27	95.15	11.444	-0.5766	0.2022
854	SLU 23	-1.54	-0.11	95.16	11.4449	-0.575	0.2024
854	SLU 24	-1.57	-0.25	96.81	11.6435	-0.5881	0.2062
854	SLU 25	-1.57	-0.16	96.82	11.6441	-0.5871	0.2063
854	SLU 26	-1.57	-0.12	96.05	11.5514	-0.5801	0.2053
854	SLU 27	-1.59	-0.26	97.7	11.7499	-0.5933	0.2091
854	SLU 28	-1.6	-0.16	97.71	11.7505	-0.5923	0.2093
854	SLU 29	-1.59	-0.27	96.93	11.6569	-0.5869	0.208
854	SLU 30	-1.59	-0.18	96.93	11.6575	-0.586	0.2081
854	SLU 31	-1.66	-0.12	106.56	12.8086	-0.6593	0.2207
854	SLU 32	-1.69	-0.26	108.21	13.0072	-0.6724	0.2245
854	SLU 33	-1.69	-0.16	108.22	13.0077	-0.6714	0.2246
854	SLU 34	-1.69	-0.12	107.45	12.9151	-0.6644	0.2236
854	SLU 35	-1.71	-0.26	109.1	13.1136	-0.6776	0.2274
854	SLU 36	-1.72	-0.17	109.1	13.1142	-0.6766	0.2275
854	SLU 37	-1.71	-0.28	108.32	13.0206	-0.6712	0.2262
854	SLU 38	-1.71	-0.19	108.33	13.0211	-0.6702	0.2264
854	SLU 39	-1.71	-0.27	111.43	13.3921	-0.697	0.2283
854	SLU 40	-1.71	-0.18	111.44	13.3927	-0.696	0.2284
854	SLU 41	-1.73	-0.28	112.32	13.4985	-0.7022	0.2312
854	SLU 42	-1.74	-0.18	112.33	13.4991	-0.7012	0.2313
854	SLU 43	-1.77	-0.43	105.65	12.7116	-0.6223	0.2307
854	SLU 44	-1.78	-0.27	105.66	12.7126	-0.6207	0.2309
854	SLU 45	-1.8	-0.41	107.31	12.9111	-0.6338	0.2347
854	SLU 46	-1.81	-0.32	107.31	12.9117	-0.6328	0.2349
854	SLU 47	-1.8	-0.28	106.54	12.819	-0.6258	0.2338
854	SLU 48	-1.83	-0.42	108.19	13.0175	-0.639	0.2376
854	SLU 49	-1.83	-0.32	108.2	13.0181	-0.638	0.2378
854	SLU 50	-1.82	-0.44	107.42	12.9245	-0.6326	0.2365
854	SLU 51	-1.82	-0.34	107.43	12.9251	-0.6316	0.2366
854	SLU 52	-1.9	-0.28	117.05	14.0762	-0.7049	0.2492
854	SLU 53	-1.92	-0.42	118.7	14.2748	-0.7181	0.253
854	SLU 54	-1.93	-0.33	118.71	14.2753	-0.7171	0.2532
854	SLU 55	-1.92	-0.28	117.94	14.1827	-0.7101	0.2521
854	SLU 56	-1.95	-0.42	119.59	14.3812	-0.7232	0.2559
854	SLU 57	-1.95	-0.33	119.6	14.3818	-0.7223	0.2561
854	SLU 58	-1.94	-0.44	118.82	14.2882	-0.7169	0.2548
854	SLU 59	-1.94	-0.35	118.82	14.2887	-0.7159	0.2549
854	SLU 60	-1.94	-0.43	121.93	14.6597	-0.7427	0.2568
854	SLU 61	-1.95	-0.34	121.93	14.6603	-0.7417	0.2569
854	SLU 62	-1.97	-0.44	122.82	14.7661	-0.7479	0.2597
854	SLU 63	-1.97	-0.35	122.82	14.7667	-0.7469	0.2599
854	SLU 64	-1.91	-0.38	116.63	14.0298	-0.6998	0.2502
854	SLU 65	-1.92	-0.22	116.64	14.0307	-0.6982	0.2505
854	SLU 66	-1.94	-0.36	118.3	14.2293	-0.7113	0.2543
854	SLU 67	-1.95	-0.27	118.3	14.2298	-0.7103	0.2544
854	SLU 68	-1.94	-0.23	117.53	14.1372	-0.7033	0.2534
854	SLU 69	-1.97	-0.37	119.18	14.3357	-0.7165	0.2572
854	SLU 70	-1.97	-0.27	119.19	14.3363	-0.7155	0.2573
854	SLU 71	-1.96	-0.39	118.41	14.2427	-0.7101	0.256
854	SLU 72	-1.96	-0.29	118.41	14.2432	-0.7091	0.2562
854	SLU 73	-2.04	-0.23	128.04	15.3944	-0.7824	0.2688
854	SLU 74	-2.06	-0.37	129.69	15.5929	-0.7956	0.2726
854	SLU 75	-2.07	-0.28	129.7	15.5935	-0.7946	0.2727
854	SLU 76	-2.06	-0.23	128.93	15.5009	-0.7876	0.2717
854	SLU 77	-2.09	-0.37	130.58	15.6994	-0.8007	0.2755
854	SLU 78	-2.09	-0.28	130.58	15.7	-0.7997	0.2756

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
854	SLU 79	-2.08	-0.39	129.81	15.6063	-0.7944	0.2743
854	SLU 80	-2.08	-0.3	129.81	15.6069	-0.7934	0.2745
854	SLU 81	-2.08	-0.38	132.92	15.9779	-0.8202	0.2763
854	SLU 82	-2.09	-0.29	132.92	15.9785	-0.8192	0.2765
854	SLU 83	-2.11	-0.39	133.8	16.0843	-0.8254	0.2793
854	SLU 84	-2.11	-0.3	133.81	16.0849	-0.8244	0.2794
854	SLE RA 1	-1.44	-0.3	87.3	10.5024	-0.5213	0.1882
854	SLE RA 2	-1.44	-0.2	87.31	10.5031	-0.5202	0.1884
854	SLE RA 3	-1.46	-0.29	88.41	10.6354	-0.5289	0.1909
854	SLE RA 4	-1.46	-0.23	88.41	10.6358	-0.5283	0.191
854	SLE RA 5	-1.46	-0.2	87.9	10.574	-0.5236	0.1903
854	SLE RA 6	-1.48	-0.3	89	10.7064	-0.5324	0.1928
854	SLE RA 7	-1.48	-0.23	89.01	10.7068	-0.5317	0.1929
854	SLE RA 8	-1.47	-0.31	88.49	10.6444	-0.5282	0.1921
854	SLE RA 9	-1.47	-0.25	88.49	10.6447	-0.5275	0.1922
854	SLE RA 10	-1.52	-0.2	94.91	11.4122	-0.5764	0.2005
854	SLE RA 11	-1.54	-0.3	96.01	11.5445	-0.5851	0.2031
854	SLE RA 12	-1.54	-0.23	96.01	11.5449	-0.5845	0.2032
854	SLE RA 13	-1.54	-0.2	95.5	11.4831	-0.5798	0.2025
854	SLE RA 14	-1.56	-0.3	96.6	11.6155	-0.5886	0.205
854	SLE RA 15	-1.56	-0.24	96.6	11.6159	-0.5879	0.2051
854	SLE RA 16	-1.55	-0.31	96.08	11.5535	-0.5843	0.2043
854	SLE RA 17	-1.55	-0.25	96.09	11.5539	-0.5837	0.2044
854	SLE RA 18	-1.55	-0.31	98.16	11.8012	-0.6015	0.2056
854	SLE RA 19	-1.56	-0.24	98.16	11.8016	-0.6009	0.2057
854	SLE RA 20	-1.57	-0.31	98.75	11.8721	-0.605	0.2075
854	SLE RA 21	-1.57	-0.25	98.75	11.8725	-0.6043	0.2076
854	SLE FR 1	-1.44	-0.3	87.3	10.5024	-0.5213	0.1882
854	SLE FR 2	-1.44	-0.28	87.31	10.5026	-0.5211	0.1882
854	SLE FR 3	-1.45	-0.3	87.54	10.5308	-0.5226	0.189
854	SLE FR 4	-1.48	-0.28	90.56	10.8922	-0.5451	0.1934
854	SLE FR 5	-1.48	-0.3	90.8	10.9204	-0.5467	0.1942
854	SLE FR 6	-1.5	-0.3	92.73	11.1518	-0.5614	0.1969
854	SLE QP 1	-1.44	-0.3	87.3	10.5024	-0.5213	0.1882
854	SLE QP 2	-1.48	-0.3	90.56	10.892	-0.5454	0.1934
854	SLD 1	7.75	1.77	98.5	11.8739	-0.4689	-0.9785
854	SLD 2	7.38	1.28	98.57	11.8822	-0.4733	-0.9232
854	SLD 3	7.52	-1.26	98.86	11.9228	-0.5078	-0.9479
854	SLD 4	7.14	-1.75	98.93	11.9311	-0.5122	-0.8926
854	SLD 5	1.72	4.99	92.39	11.111	-0.4626	-0.2142
854	SLD 6	1.47	4.67	92.43	11.1164	-0.4655	-0.1783
854	SLD 7	0.93	-5.09	93.58	11.274	-0.5923	-0.1122
854	SLD 8	0.68	-5.41	93.63	11.2794	-0.5952	-0.0764
854	SLD 9	-3.63	4.8	87.49	10.5047	-0.4955	0.4632
854	SLD 10	-3.88	4.49	87.54	10.5101	-0.4984	0.4991
854	SLD 11	-4.42	-5.28	88.69	10.6677	-0.6252	0.5652
854	SLD 12	-4.67	-5.6	88.73	10.6731	-0.6281	0.601
854	SLD 13	-10.09	1.14	82.19	9.853	-0.5785	1.2795
854	SLD 14	-10.47	0.65	82.26	9.8613	-0.5829	1.3347
854	SLD 15	-10.33	-1.89	82.55	9.9019	-0.6174	1.3101
854	SLD 16	-10.7	-2.38	82.62	9.9102	-0.6219	1.3653
854	SLV 1	20.1	4.46	109.16	13.1908	-0.3673	-2.5471
854	SLV 2	19.23	3.32	109.31	13.2101	-0.3777	-2.4183
854	SLV 3	19.55	-2.45	109.98	13.3038	-0.4566	-2.4757
854	SLV 4	18.67	-3.59	110.14	13.3231	-0.467	-2.347
854	SLV 5	5.98	11.79	94.86	11.407	-0.3547	-0.7587
854	SLV 6	5.42	11.06	94.95	11.4193	-0.3613	-0.6765
854	SLV 7	4.14	-11.22	97.62	11.7837	-0.6525	-0.5209
854	SLV 8	3.58	-11.95	97.71	11.796	-0.6591	-0.4387
854	SLV 9	-6.53	11.34	83.41	9.9881	-0.4316	0.8255
854	SLV 10	-7.1	10.61	83.5	10.0004	-0.4382	0.9077
854	SLV 11	-8.37	-11.66	86.17	10.3648	-0.7294	1.0633
854	SLV 12	-8.94	-12.39	86.26	10.3771	-0.7361	1.1455
854	SLV 13	-21.62	2.98	70.98	8.461	-0.6237	2.7338
854	SLV 14	-22.5	1.84	71.14	8.4803	-0.6341	2.8625
854	SLV 15	-22.18	-3.92	71.81	8.574	-0.713	2.8052
854	SLV 16	-23.06	-5.06	71.96	8.5933	-0.7234	2.9339
854	CRTFP Ux+	0	0	0	0	0	0
854	CRTFP Ux-	0	0	0	0	0	0
854	CRTFP Uy+	0	0	0	0	0	0
854	CRTFP Uy-	0	0	0	0	0	0
857	SLU 1	0.38	0.41	44.2	0.0082	-0.0251	-0.0067
857	SLU 2	0.38	0.49	44.21	0.0079	-0.0256	-0.0067
857	SLU 3	0.39	0.44	44.99	0.0085	-0.0252	-0.0068
857	SLU 4	0.39	0.49	45	0.0084	-0.0256	-0.0068
857	SLU 5	0.39	0.5	44.61	0.008	-0.0254	-0.0068
857	SLU 6	0.4	0.44	45.39	0.0086	-0.025	-0.0069
857	SLU 7	0.4	0.49	45.4	0.0084	-0.0253	-0.007
857	SLU 8	0.39	0.41	45	0.0083	-0.0245	-0.0069
857	SLU 9	0.39	0.46	45.01	0.0082	-0.0249	-0.0069
857	SLU 10	0.43	0.53	50.38	0.0071	-0.0278	-0.0073
857	SLU 11	0.44	0.47	51.16	0.0077	-0.0274	-0.0073
857	SLU 12	0.44	0.52	51.17	0.0076	-0.0277	-0.0074
857	SLU 13	0.44	0.53	50.79	0.0072	-0.0275	-0.0074
857	SLU 14	0.45	0.47	51.57	0.0078	-0.0271	-0.0075
857	SLU 15	0.45	0.52	51.57	0.0076	-0.0275	-0.0075
857	SLU 16	0.44	0.45	51.17	0.0075	-0.0267	-0.0074
857	SLU 17	0.45	0.5	51.18	0.0074	-0.0271	-0.0075
857	SLU 18	0.45	0.47	53.01	0.007	-0.0282	-0.0074
857	SLU 19	0.45	0.52	53.02	0.0069	-0.0285	-0.0075
857	SLU 20	0.46	0.47	53.42	0.0071	-0.0279	-0.0076

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
857	SLU 21	0.46	0.52	53.43	0.0069	-0.0283	-0.0076
857	SLU 22	0.42	0.5	50.03	0.0085	-0.0312	-0.0072
857	SLU 23	0.43	0.58	50.04	0.0082	-0.0317	-0.0072
857	SLU 24	0.44	0.52	50.82	0.0088	-0.0313	-0.0073
857	SLU 25	0.44	0.57	50.83	0.0087	-0.0316	-0.0073
857	SLU 26	0.43	0.58	50.45	0.0083	-0.0314	-0.0073
857	SLU 27	0.44	0.52	51.23	0.0089	-0.031	-0.0074
857	SLU 28	0.44	0.57	51.23	0.0087	-0.0314	-0.0074
857	SLU 29	0.44	0.5	50.84	0.0086	-0.0306	-0.0074
857	SLU 30	0.44	0.55	50.84	0.0085	-0.0309	-0.0074
857	SLU 31	0.48	0.62	56.22	0.0074	-0.0339	-0.0078
857	SLU 32	0.49	0.56	57	0.008	-0.0335	-0.0078
857	SLU 33	0.49	0.61	57	0.0079	-0.0338	-0.0079
857	SLU 34	0.48	0.62	56.62	0.0075	-0.0336	-0.0079
857	SLU 35	0.49	0.56	57.4	0.0081	-0.0332	-0.008
857	SLU 36	0.5	0.61	57.41	0.0079	-0.0336	-0.008
857	SLU 37	0.49	0.54	57.01	0.0078	-0.0328	-0.0079
857	SLU 38	0.49	0.59	57.02	0.0077	-0.0331	-0.008
857	SLU 39	0.5	0.55	58.85	0.0073	-0.0343	-0.0079
857	SLU 40	0.5	0.6	58.86	0.0072	-0.0346	-0.008
857	SLU 41	0.5	0.55	59.25	0.0074	-0.034	-0.0081
857	SLU 42	0.51	0.6	59.26	0.0073	-0.0343	-0.0081
857	SLU 43	0.48	0.51	55.46	0.0105	-0.0305	-0.0085
857	SLU 44	0.48	0.59	55.47	0.0103	-0.0311	-0.0086
857	SLU 45	0.49	0.53	56.25	0.0109	-0.0307	-0.0087
857	SLU 46	0.49	0.58	56.26	0.0107	-0.031	-0.0087
857	SLU 47	0.49	0.59	55.87	0.0103	-0.0308	-0.0087
857	SLU 48	0.5	0.53	56.65	0.0109	-0.0304	-0.0088
857	SLU 49	0.5	0.58	56.66	0.0108	-0.0307	-0.0088
857	SLU 50	0.49	0.51	56.26	0.0107	-0.03	-0.0088
857	SLU 51	0.49	0.56	56.27	0.0105	-0.0303	-0.0088
857	SLU 52	0.53	0.63	61.64	0.0095	-0.0333	-0.0091
857	SLU 53	0.54	0.57	62.42	0.0101	-0.0329	-0.0092
857	SLU 54	0.54	0.62	62.43	0.0099	-0.0332	-0.0092
857	SLU 55	0.54	0.63	62.05	0.0095	-0.033	-0.0092
857	SLU 56	0.55	0.57	62.82	0.0101	-0.0326	-0.0093
857	SLU 57	0.55	0.62	62.83	0.01	-0.0329	-0.0093
857	SLU 58	0.54	0.54	62.43	0.0099	-0.0322	-0.0093
857	SLU 59	0.54	0.59	62.44	0.0097	-0.0325	-0.0093
857	SLU 60	0.55	0.56	64.27	0.0094	-0.0337	-0.0093
857	SLU 61	0.55	0.61	64.28	0.0092	-0.034	-0.0093
857	SLU 62	0.56	0.56	64.68	0.0094	-0.0334	-0.0094
857	SLU 63	0.56	0.61	64.68	0.0093	-0.0337	-0.0094
857	SLU 64	0.52	0.59	61.29	0.0108	-0.0366	-0.009
857	SLU 65	0.52	0.67	61.3	0.0106	-0.0372	-0.0091
857	SLU 66	0.53	0.62	62.08	0.0112	-0.0368	-0.0092
857	SLU 67	0.53	0.67	62.09	0.011	-0.0371	-0.0092
857	SLU 68	0.53	0.68	61.71	0.0107	-0.0369	-0.0092
857	SLU 69	0.54	0.62	62.49	0.0112	-0.0365	-0.0093
857	SLU 70	0.54	0.67	62.49	0.0111	-0.0368	-0.0093
857	SLU 71	0.54	0.59	62.1	0.011	-0.0361	-0.0092
857	SLU 72	0.54	0.64	62.1	0.0108	-0.0364	-0.0093
857	SLU 73	0.57	0.71	67.48	0.0098	-0.0393	-0.0096
857	SLU 74	0.58	0.65	68.26	0.0104	-0.0389	-0.0097
857	SLU 75	0.59	0.7	68.26	0.0102	-0.0393	-0.0097
857	SLU 76	0.58	0.71	67.88	0.0099	-0.0391	-0.0097
857	SLU 77	0.59	0.65	68.66	0.0104	-0.0387	-0.0098
857	SLU 78	0.59	0.7	68.67	0.0103	-0.039	-0.0098
857	SLU 79	0.59	0.63	68.27	0.0102	-0.0382	-0.0098
857	SLU 80	0.59	0.68	68.27	0.01	-0.0386	-0.0098
857	SLU 81	0.59	0.64	70.11	0.0097	-0.0397	-0.0098
857	SLU 82	0.6	0.69	70.12	0.0095	-0.0401	-0.0098
857	SLU 83	0.6	0.65	70.51	0.0098	-0.0395	-0.0099
857	SLU 84	0.6	0.7	70.52	0.0096	-0.0398	-0.0099
857	SLE RA 1	0.39	0.44	45.86	0.0083	-0.0268	-0.0068
857	SLE RA 2	0.39	0.49	45.87	0.0081	-0.0272	-0.0069
857	SLE RA 3	0.4	0.45	46.39	0.0085	-0.0269	-0.0069
857	SLE RA 4	0.4	0.49	46.4	0.0084	-0.0271	-0.0069
857	SLE RA 5	0.4	0.49	46.14	0.0081	-0.027	-0.0069
857	SLE RA 6	0.4	0.45	46.66	0.0085	-0.0267	-0.007
857	SLE RA 7	0.4	0.49	46.67	0.0084	-0.027	-0.007
857	SLE RA 8	0.4	0.44	46.4	0.0084	-0.0265	-0.007
857	SLE RA 9	0.4	0.47	46.41	0.0083	-0.0267	-0.007
857	SLE RA 10	0.43	0.52	49.99	0.0076	-0.0286	-0.0072
857	SLE RA 11	0.43	0.48	50.51	0.008	-0.0284	-0.0073
857	SLE RA 12	0.43	0.51	50.51	0.0079	-0.0286	-0.0073
857	SLE RA 13	0.43	0.52	50.26	0.0076	-0.0285	-0.0073
857	SLE RA 14	0.44	0.48	50.78	0.008	-0.0282	-0.0073
857	SLE RA 15	0.44	0.51	50.78	0.0079	-0.0284	-0.0074
857	SLE RA 16	0.44	0.46	50.52	0.0078	-0.0279	-0.0073
857	SLE RA 17	0.44	0.5	50.52	0.0077	-0.0281	-0.0073
857	SLE RA 18	0.44	0.47	51.74	0.0075	-0.0289	-0.0073
857	SLE RA 19	0.44	0.51	51.75	0.0074	-0.0291	-0.0074
857	SLE RA 20	0.45	0.47	52.01	0.0075	-0.0287	-0.0074
857	SLE RA 21	0.45	0.51	52.02	0.0074	-0.0289	-0.0074
857	SLE FR 1	0.39	0.44	45.86	0.0083	-0.0268	-0.0068
857	SLE FR 2	0.39	0.45	45.87	0.0082	-0.0269	-0.0068
857	SLE FR 3	0.39	0.44	45.97	0.0083	-0.0268	-0.0069
857	SLE FR 4	0.41	0.46	47.63	0.008	-0.0275	-0.007
857	SLE FR 5	0.41	0.45	47.74	0.0081	-0.0274	-0.007
857	SLE FR 6	0.42	0.45	48.8	0.0079	-0.0279	-0.0071

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
857	SLE QP 1	0.39	0.44	45.86	0.0083	-0.0268	-0.0068
857	SLE QP 2	0.41	0.45	47.63	0.008	-0.0275	-0.007
857	SLD 1	5.91	1.08	45.51	0.0014	0.0431	-0.0427
857	SLD 2	5.7	1.17	45.53	0.0012	0.0433	-0.0379
857	SLD 3	5.77	-0.68	45.34	0.0064	0.0536	-0.0415
857	SLD 4	5.55	-0.59	45.36	0.0062	0.0538	-0.0367
857	SLD 5	2.31	3.29	47.25	-0.0015	-0.0222	-0.0203
857	SLD 6	2.17	3.35	47.26	-0.0016	-0.0221	-0.0172
857	SLD 7	1.83	-2.58	46.68	0.0151	0.0127	-0.0164
857	SLD 8	1.69	-2.52	46.69	0.015	0.0128	-0.0133
857	SLD 9	-0.88	3.41	48.56	0.0011	-0.0677	-0.0007
857	SLD 10	-1.02	3.47	48.58	0.001	-0.0676	0.0024
857	SLD 11	-1.36	-2.46	47.99	0.0177	-0.0328	0.0032
857	SLD 12	-1.5	-2.4	48.01	0.0175	-0.0327	0.0064
857	SLD 13	-4.74	1.48	49.89	0.0099	-0.1087	0.0227
857	SLD 14	-4.96	1.58	49.92	0.0097	-0.1085	0.0275
857	SLD 15	-4.88	-0.28	49.72	0.0149	-0.0982	0.0239
857	SLD 16	-5.1	-0.19	49.75	0.0147	-0.098	0.0287
857	SLV 1	13.28	1.87	42.66	-0.0077	0.1381	-0.0905
857	SLV 2	12.78	2.09	42.71	-0.0082	0.1385	-0.0792
857	SLV 3	12.95	-2.15	42.27	0.0036	0.1619	-0.0877
857	SLV 4	12.44	-1.92	42.32	0.0031	0.1623	-0.0765
857	SLV 5	4.86	6.92	46.72	-0.0137	-0.014	-0.0381
857	SLV 6	4.54	7.06	46.75	-0.0141	-0.0137	-0.0309
857	SLV 7	3.74	-6.45	45.42	0.0239	0.0654	-0.0289
857	SLV 8	3.42	-6.31	45.45	0.0236	0.0657	-0.0218
857	SLV 9	-2.61	7.21	49.8	-0.0075	-0.1206	0.0078
857	SLV 10	-2.93	7.35	49.84	-0.0079	-0.1203	0.015
857	SLV 11	-3.73	-6.17	48.5	0.0302	-0.0412	0.017
857	SLV 12	-4.05	-6.03	48.54	0.0298	-0.0409	0.0241
857	SLV 13	-11.63	2.82	52.93	0.013	-0.2172	0.0625
857	SLV 14	-12.14	3.04	52.99	0.0125	-0.2168	0.0737
857	SLV 15	-11.97	-1.2	52.54	0.0243	-0.1934	0.0653
857	SLV 16	-12.47	-0.97	52.6	0.0238	-0.193	0.0765
857	CRTFP Ux+	0	0	0	0	0	0
857	CRTFP Ux-	0	0	0	0	0	0
860	SLU 1	-0.13	0.44	42.43	0.0115	0.0713	0.0074
860	SLU 2	-0.13	0.52	42.45	0.0113	0.0716	0.0074
860	SLU 3	-0.14	0.47	43.19	0.0119	0.0732	0.0076
860	SLU 4	-0.14	0.52	43.2	0.0117	0.0733	0.0076
860	SLU 5	-0.13	0.53	42.83	0.0114	0.0725	0.0075
860	SLU 6	-0.14	0.47	43.57	0.012	0.0741	0.0077
860	SLU 7	-0.14	0.52	43.59	0.0118	0.0743	0.0077
860	SLU 8	-0.14	0.45	43.2	0.0117	0.0732	0.0077
860	SLU 9	-0.14	0.5	43.21	0.0116	0.0733	0.0076
860	SLU 10	-0.14	0.6	48.2	0.0119	0.0808	0.0087
860	SLU 11	-0.15	0.54	48.94	0.0126	0.0824	0.0088
860	SLU 12	-0.15	0.59	48.96	0.0124	0.0825	0.0088
860	SLU 13	-0.15	0.6	48.59	0.012	0.0817	0.0088
860	SLU 14	-0.15	0.55	49.33	0.0127	0.0833	0.0089
860	SLU 15	-0.15	0.6	49.34	0.0125	0.0835	0.0089
860	SLU 16	-0.15	0.52	48.96	0.0124	0.0824	0.0089
860	SLU 17	-0.15	0.57	48.97	0.0122	0.0825	0.0089
860	SLU 18	-0.15	0.55	50.65	0.0125	0.0844	0.0092
860	SLU 19	-0.15	0.59	50.66	0.0123	0.0846	0.0092
860	SLU 20	-0.15	0.55	51.04	0.0126	0.0854	0.0093
860	SLU 21	-0.15	0.6	51.05	0.0124	0.0855	0.0093
860	SLU 22	-0.16	0.57	47.93	0.0129	0.0833	0.0081
860	SLU 23	-0.16	0.66	47.95	0.0126	0.0836	0.0081
860	SLU 24	-0.16	0.6	48.69	0.0133	0.0851	0.0083
860	SLU 25	-0.16	0.65	48.71	0.0131	0.0853	0.0083
860	SLU 26	-0.16	0.66	48.34	0.0127	0.0845	0.0082
860	SLU 27	-0.16	0.61	49.08	0.0134	0.0861	0.0084
860	SLU 28	-0.16	0.66	49.09	0.0132	0.0862	0.0084
860	SLU 29	-0.16	0.58	48.71	0.0131	0.0851	0.0084
860	SLU 30	-0.16	0.63	48.72	0.013	0.0853	0.0084
860	SLU 31	-0.17	0.73	53.71	0.0133	0.0928	0.0094
860	SLU 32	-0.17	0.68	54.45	0.014	0.0943	0.0095
860	SLU 33	-0.17	0.72	54.46	0.0138	0.0945	0.0095
860	SLU 34	-0.17	0.73	54.1	0.0134	0.0937	0.0095
860	SLU 35	-0.17	0.68	54.84	0.0141	0.0952	0.0097
860	SLU 36	-0.17	0.73	54.85	0.0139	0.0954	0.0096
860	SLU 37	-0.17	0.65	54.47	0.0138	0.0943	0.0096
860	SLU 38	-0.17	0.7	54.48	0.0136	0.0945	0.0096
860	SLU 39	-0.17	0.68	56.16	0.0139	0.0964	0.0099
860	SLU 40	-0.17	0.73	56.17	0.0137	0.0966	0.0099
860	SLU 41	-0.18	0.68	56.54	0.014	0.0973	0.0101
860	SLU 42	-0.17	0.73	56.56	0.0138	0.0975	0.01
860	SLU 43	-0.16	0.53	53.26	0.0145	0.0886	0.0094
860	SLU 44	-0.16	0.61	53.29	0.0142	0.0889	0.0094
860	SLU 45	-0.17	0.56	54.03	0.0149	0.0905	0.0096
860	SLU 46	-0.17	0.61	54.04	0.0147	0.0906	0.0095
860	SLU 47	-0.16	0.61	53.67	0.0143	0.0898	0.0095
860	SLU 48	-0.17	0.56	54.41	0.015	0.0914	0.0097
860	SLU 49	-0.17	0.61	54.43	0.0148	0.0916	0.0097
860	SLU 50	-0.17	0.54	54.04	0.0147	0.0905	0.0096
860	SLU 51	-0.17	0.59	54.05	0.0146	0.0906	0.0096
860	SLU 52	-0.18	0.68	59.04	0.0149	0.0981	0.0107
860	SLU 53	-0.18	0.63	59.78	0.0156	0.0996	0.0108
860	SLU 54	-0.18	0.68	59.8	0.0154	0.0998	0.0108
860	SLU 55	-0.18	0.69	59.43	0.015	0.099	0.0108

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
860	SLU 56	-0.18	0.63	60.17	0.0157	0.1006	0.0109
860	SLU 57	-0.18	0.68	60.18	0.0155	0.1007	0.0109
860	SLU 58	-0.18	0.61	59.8	0.0154	0.0996	0.0109
860	SLU 59	-0.18	0.66	59.81	0.0152	0.0998	0.0109
860	SLU 60	-0.18	0.63	61.49	0.0155	0.1017	0.0112
860	SLU 61	-0.18	0.68	61.5	0.0153	0.1019	0.0112
860	SLU 62	-0.18	0.64	61.88	0.0156	0.1027	0.0113
860	SLU 63	-0.18	0.68	61.89	0.0154	0.1028	0.0113
860	SLU 64	-0.19	0.66	58.77	0.0159	0.1006	0.0101
860	SLU 65	-0.19	0.74	58.79	0.0156	0.1009	0.0101
860	SLU 66	-0.19	0.69	59.53	0.0163	0.1024	0.0103
860	SLU 67	-0.19	0.74	59.55	0.0161	0.1026	0.0103
860	SLU 68	-0.19	0.75	59.18	0.0157	0.1018	0.0102
860	SLU 69	-0.19	0.69	59.92	0.0164	0.1034	0.0104
860	SLU 70	-0.19	0.74	59.93	0.0162	0.1035	0.0104
860	SLU 71	-0.19	0.67	59.55	0.0161	0.1024	0.0103
860	SLU 72	-0.19	0.72	59.56	0.0159	0.1026	0.0103
860	SLU 73	-0.2	0.81	64.55	0.0163	0.1101	0.0114
860	SLU 74	-0.2	0.76	65.29	0.0169	0.1116	0.0115
860	SLU 75	-0.2	0.81	65.3	0.0168	0.1118	0.0115
860	SLU 76	-0.2	0.82	64.94	0.0164	0.111	0.0115
860	SLU 77	-0.2	0.77	65.68	0.017	0.1125	0.0116
860	SLU 78	-0.2	0.82	65.69	0.0169	0.1127	0.0116
860	SLU 79	-0.2	0.74	65.3	0.0168	0.1116	0.0116
860	SLU 80	-0.2	0.79	65.32	0.0166	0.1118	0.0116
860	SLU 81	-0.2	0.76	67	0.0168	0.1137	0.0119
860	SLU 82	-0.2	0.81	67.01	0.0167	0.1139	0.0119
860	SLU 83	-0.21	0.77	67.38	0.0169	0.1146	0.012
860	SLU 84	-0.21	0.82	67.4	0.0168	0.1148	0.012
860	SLE RA 1	-0.14	0.48	44	0.0119	0.0747	0.0076
860	SLE RA 2	-0.14	0.53	44.01	0.0117	0.0749	0.0076
860	SLE RA 3	-0.14	0.5	44.51	0.0122	0.076	0.0077
860	SLE RA 4	-0.14	0.53	44.51	0.0121	0.0761	0.0077
860	SLE RA 5	-0.14	0.54	44.27	0.0118	0.0756	0.0077
860	SLE RA 6	-0.14	0.5	44.77	0.0123	0.0766	0.0078
860	SLE RA 7	-0.14	0.53	44.77	0.0121	0.0767	0.0078
860	SLE RA 8	-0.14	0.48	44.52	0.0121	0.076	0.0078
860	SLE RA 9	-0.14	0.52	44.52	0.012	0.0761	0.0078
860	SLE RA 10	-0.15	0.58	47.85	0.0122	0.0811	0.0085
860	SLE RA 11	-0.15	0.55	48.34	0.0126	0.0821	0.0086
860	SLE RA 12	-0.15	0.58	48.35	0.0125	0.0822	0.0086
860	SLE RA 13	-0.15	0.58	48.11	0.0122	0.0817	0.0085
860	SLE RA 14	-0.15	0.55	48.6	0.0127	0.0827	0.0086
860	SLE RA 15	-0.15	0.58	48.61	0.0126	0.0828	0.0086
860	SLE RA 16	-0.15	0.53	48.35	0.0125	0.0821	0.0086
860	SLE RA 17	-0.15	0.57	48.36	0.0124	0.0822	0.0086
860	SLE RA 18	-0.15	0.55	49.48	0.0126	0.0835	0.0088
860	SLE RA 19	-0.15	0.58	49.49	0.0124	0.0836	0.0088
860	SLE RA 20	-0.15	0.55	49.74	0.0126	0.0841	0.0089
860	SLE RA 21	-0.15	0.58	49.75	0.0125	0.0842	0.0089
860	SLE FR 1	-0.14	0.48	44	0.0119	0.0747	0.0076
860	SLE FR 2	-0.14	0.49	44	0.0119	0.0748	0.0076
860	SLE FR 3	-0.14	0.48	44.1	0.012	0.075	0.0077
860	SLE FR 4	-0.14	0.51	45.65	0.0121	0.0774	0.008
860	SLE FR 5	-0.14	0.5	45.75	0.0121	0.0776	0.008
860	SLE FR 6	-0.14	0.51	46.74	0.0122	0.0791	0.0082
860	SLE QP 1	-0.14	0.48	44	0.0119	0.0747	0.0076
860	SLE QP 2	-0.14	0.5	45.64	0.0121	0.0774	0.008
860	SLD 1	5.32	1.6	47.18	0.0142	0.1385	-0.0267
860	SLD 2	5.11	1.5	47.17	0.0145	0.1388	-0.022
860	SLD 3	5.19	-0.15	46.93	0.0194	0.1325	-0.0246
860	SLD 4	4.97	-0.26	46.93	0.0198	0.1328	-0.0199
860	SLD 5	1.73	3.51	46.48	0.0047	0.1048	-0.0063
860	SLD 6	1.59	3.44	46.48	0.0049	0.105	-0.0033
860	SLD 7	1.3	-2.34	45.65	0.0222	0.0847	0.0005
860	SLD 8	1.16	-2.41	45.65	0.0225	0.0849	0.0035
860	SLD 9	-1.44	3.41	45.63	0.0018	0.0698	0.0124
860	SLD 10	-1.58	3.34	45.63	0.002	0.07	0.0155
860	SLD 11	-1.88	-2.44	44.81	0.0193	0.0498	0.0193
860	SLD 12	-2.02	-2.51	44.81	0.0196	0.05	0.0223
860	SLD 13	-5.26	1.26	44.36	0.0045	0.0219	0.0359
860	SLD 14	-5.48	1.15	44.36	0.0048	0.0222	0.0406
860	SLD 15	-5.39	-0.5	44.11	0.0097	0.0159	0.038
860	SLD 16	-5.61	-0.6	44.11	0.0101	0.0162	0.0427
860	SLV 1	12.64	3.03	49.27	0.0175	0.2202	-0.0731
860	SLV 2	12.13	2.79	49.27	0.0183	0.2209	-0.0621
860	SLV 3	12.33	-0.97	48.71	0.0294	0.2064	-0.0684
860	SLV 4	11.83	-1.22	48.7	0.0302	0.2071	-0.0574
860	SLV 5	4.24	7.37	47.59	-0.0046	0.141	-0.0254
860	SLV 6	3.92	7.22	47.59	-0.0041	0.1415	-0.0183
860	SLV 7	3.22	-5.97	45.7	0.0353	0.095	-0.0096
860	SLV 8	2.9	-6.13	45.7	0.0358	0.0955	-0.0026
860	SLV 9	-3.18	7.13	45.59	-0.0116	0.0593	0.0186
860	SLV 10	-3.51	6.97	45.59	-0.0111	0.0597	0.0256
860	SLV 11	-4.2	-6.22	43.7	0.0283	0.0132	0.0343
860	SLV 12	-4.53	-6.37	43.69	0.0288	0.0137	0.0413
860	SLV 13	-12.11	2.22	42.59	-0.006	-0.0524	0.0734
860	SLV 14	-12.62	1.97	42.58	-0.0052	-0.0517	0.0844
860	SLV 15	-12.42	-1.79	42.02	0.006	-0.0662	0.0781
860	SLV 16	-12.92	-2.03	42.01	0.0068	-0.0655	0.0891
860	CRTFP Ux+	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
860	CRTFP Ux-	0	0	0	0	0	0
862	SLU 1	-0.45	-0.04	25.2	0.056	-5.1545	-0.0097
862	SLU 2	-0.45	0.03	25.21	0.056	-5.1561	0.0074
862	SLU 3	-0.46	-0.03	25.7	0.0572	-5.2535	-0.0084
862	SLU 4	-0.46	0.01	25.7	0.0572	-5.2545	0.0019
862	SLU 5	-0.45	0.04	25.49	0.0567	-5.2118	0.0083
862	SLU 6	-0.46	-0.03	25.98	0.0579	-5.3092	-0.0074
862	SLU 7	-0.46	0.01	25.98	0.0579	-5.3102	0.0029
862	SLU 8	-0.46	-0.03	25.76	0.0573	-5.2659	-0.0079
862	SLU 9	-0.46	0.01	25.77	0.0573	-5.2668	0.0024
862	SLU 10	-0.48	0.05	28.41	0.0638	-5.7987	0.0117
862	SLU 11	-0.49	-0.01	28.89	0.065	-5.8962	-0.004
862	SLU 12	-0.49	0.03	28.9	0.065	-5.8971	0.0062
862	SLU 13	-0.49	0.05	28.69	0.0645	-5.8544	0.0127
862	SLU 14	-0.5	-0.01	29.18	0.0657	-5.9518	-0.0031
862	SLU 15	-0.5	0.03	29.18	0.0657	-5.9528	0.0072
862	SLU 16	-0.5	-0.01	28.96	0.0651	-5.9085	-0.0036
862	SLU 17	-0.5	0.03	28.96	0.0651	-5.9094	0.0067
862	SLU 18	-0.5	-0.01	29.77	0.0672	-6.0725	-0.0036
862	SLU 19	-0.5	0.03	29.77	0.0672	-6.0735	0.0067
862	SLU 20	-0.51	-0.01	30.05	0.0678	-6.1282	-0.0026
862	SLU 21	-0.51	0.03	30.05	0.0678	-6.1292	0.0076
862	SLU 22	-0.49	-0.02	28.33	0.0637	-5.7828	-0.005
862	SLU 23	-0.49	0.05	28.34	0.0637	-5.7844	0.0121
862	SLU 24	-0.5	-0.01	28.82	0.065	-5.8819	-0.0036
862	SLU 25	-0.5	0.03	28.83	0.065	-5.8828	0.0066
862	SLU 26	-0.5	0.05	28.62	0.0644	-5.8401	0.0131
862	SLU 27	-0.51	-0.01	29.11	0.0656	-5.9376	-0.0027
862	SLU 28	-0.51	0.03	29.11	0.0656	-5.9385	0.0076
862	SLU 29	-0.5	-0.01	28.89	0.0651	-5.8942	-0.0032
862	SLU 30	-0.5	0.03	28.89	0.0651	-5.8952	0.0071
862	SLU 31	-0.53	0.07	31.53	0.0716	-6.427	0.0164
862	SLU 32	-0.53	0.01	32.02	0.0728	-6.5245	0.0007
862	SLU 33	-0.53	0.05	32.03	0.0728	-6.5254	0.011
862	SLU 34	-0.53	0.07	31.81	0.0722	-6.4827	0.0174
862	SLU 35	-0.54	0.01	32.3	0.0734	-6.5802	0.0016
862	SLU 36	-0.54	0.05	32.31	0.0735	-6.5811	0.0119
862	SLU 37	-0.54	0.01	32.09	0.0729	-6.5368	0.0012
862	SLU 38	-0.54	0.05	32.09	0.0729	-6.5378	0.0115
862	SLU 39	-0.54	0.01	32.9	0.0749	-6.7009	0.0012
862	SLU 40	-0.54	0.05	32.9	0.0749	-6.7018	0.0114
862	SLU 41	-0.55	0.01	33.18	0.0756	-6.7566	0.0021
862	SLU 42	-0.55	0.05	33.18	0.0756	-6.7575	0.0124
862	SLU 43	-0.57	-0.06	31.69	0.0701	-6.4854	-0.0143
862	SLU 44	-0.57	0.01	31.7	0.0701	-6.487	0.0029
862	SLU 45	-0.58	-0.05	32.19	0.0713	-6.5844	-0.0129
862	SLU 46	-0.58	-0.01	32.19	0.0713	-6.5854	-0.0026
862	SLU 47	-0.57	0.02	31.98	0.0708	-6.5427	0.0038
862	SLU 48	-0.58	-0.05	32.47	0.072	-6.6401	-0.012
862	SLU 49	-0.58	0	32.47	0.072	-6.6411	-0.0017
862	SLU 50	-0.58	-0.05	32.25	0.0715	-6.5968	-0.0124
862	SLU 51	-0.58	-0.01	32.25	0.0715	-6.5977	-0.0021
862	SLU 52	-0.6	0.03	34.89	0.0779	-7.1296	0.0072
862	SLU 53	-0.61	-0.03	35.38	0.0792	-7.2271	-0.0086
862	SLU 54	-0.61	0.01	35.39	0.0792	-7.228	0.0017
862	SLU 55	-0.61	0.03	35.17	0.0786	-7.1853	0.0081
862	SLU 56	-0.62	-0.03	35.66	0.0798	-7.2828	-0.0077
862	SLU 57	-0.62	0.01	35.67	0.0798	-7.2837	0.0026
862	SLU 58	-0.62	-0.03	35.45	0.0793	-7.2394	-0.0081
862	SLU 59	-0.62	0.01	35.45	0.0793	-7.2404	0.0022
862	SLU 60	-0.62	-0.03	36.26	0.0813	-7.4034	-0.0081
862	SLU 61	-0.62	0.01	36.26	0.0813	-7.4044	0.0022
862	SLU 62	-0.63	-0.03	36.54	0.082	-7.4591	-0.0072
862	SLU 63	-0.63	0.01	36.54	0.082	-7.4601	0.0031
862	SLU 64	-0.61	-0.04	34.82	0.0779	-7.1138	-0.0096
862	SLU 65	-0.61	0.03	34.82	0.0779	-7.1153	0.0076
862	SLU 66	-0.62	-0.03	35.31	0.0791	-7.2128	-0.0082
862	SLU 67	-0.62	0.01	35.32	0.0791	-7.2137	0.0021
862	SLU 68	-0.62	0.04	35.1	0.0786	-7.171	0.0085
862	SLU 69	-0.62	-0.03	35.59	0.0798	-7.2685	-0.0073
862	SLU 70	-0.63	0.01	35.6	0.0798	-7.2694	0.003
862	SLU 71	-0.62	-0.03	35.38	0.0792	-7.2251	-0.0077
862	SLU 72	-0.62	0.01	35.38	0.0792	-7.2261	0.0026
862	SLU 73	-0.64	0.05	38.02	0.0857	-7.758	0.0119
862	SLU 74	-0.65	-0.01	38.51	0.0869	-7.8554	-0.0039
862	SLU 75	-0.65	0.03	38.51	0.0869	-7.8564	0.0064
862	SLU 76	-0.65	0.05	38.3	0.0864	-7.8137	0.0128
862	SLU 77	-0.66	-0.01	38.79	0.0876	-7.9111	-0.0029
862	SLU 78	-0.66	0.03	38.8	0.0876	-7.9121	0.0074
862	SLU 79	-0.66	-0.01	38.57	0.087	-7.8678	-0.0034
862	SLU 80	-0.66	0.03	38.58	0.087	-7.8687	0.0069
862	SLU 81	-0.66	-0.01	39.38	0.089	-8.0318	-0.0034
862	SLU 82	-0.66	0.03	39.39	0.0891	-8.0327	0.0069
862	SLU 83	-0.67	-0.01	39.66	0.0897	-8.0875	-0.0025
862	SLU 84	-0.67	0.03	39.67	0.0897	-8.0884	0.0078
862	SLE RA 1	-0.46	-0.03	26.09	0.0582	-5.334	-0.0084
862	SLE RA 2	-0.46	0.01	26.1	0.0582	-5.3351	0.003
862	SLE RA 3	-0.46	-0.03	26.43	0.059	-5.4	-0.0075
862	SLE RA 4	-0.46	0	26.43	0.059	-5.4007	-0.0006
862	SLE RA 5	-0.46	0.02	26.29	0.0587	-5.3722	0.0037
862	SLE RA 6	-0.47	-0.03	26.61	0.0595	-5.4372	-0.0069

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
862	SLE RA 7	-0.47	0	26.62	0.0595	-5.4378	0
862	SLE RA 8	-0.47	-0.03	26.47	0.0591	-5.4083	-0.0072
862	SLE RA 9	-0.47	0	26.47	0.0591	-5.4089	-0.0003
862	SLE RA 10	-0.48	0.03	28.23	0.0634	-5.7635	0.0059
862	SLE RA 11	-0.49	-0.02	28.56	0.0642	-5.8285	-0.0046
862	SLE RA 12	-0.49	0.01	28.56	0.0642	-5.8291	0.0023
862	SLE RA 13	-0.49	0.03	28.42	0.0639	-5.8006	0.0065
862	SLE RA 14	-0.49	-0.01	28.74	0.0647	-5.8656	-0.004
862	SLE RA 15	-0.49	0.01	28.75	0.0647	-5.8662	0.0029
862	SLE RA 16	-0.49	-0.02	28.6	0.0643	-5.8367	-0.0043
862	SLE RA 17	-0.49	0.01	28.6	0.0643	-5.8373	0.0026
862	SLE RA 18	-0.49	-0.02	29.14	0.0656	-5.946	-0.0043
862	SLE RA 19	-0.49	0.01	29.14	0.0656	-5.9467	0.0026
862	SLE RA 20	-0.5	-0.01	29.33	0.0661	-5.9832	-0.0037
862	SLE RA 21	-0.5	0.01	29.33	0.0661	-5.9838	0.0032
862	SLE FR 1	-0.46	-0.03	26.09	0.0582	-5.334	-0.0084
862	SLE FR 2	-0.46	-0.02	26.09	0.0582	-5.3342	-0.0061
862	SLE FR 3	-0.46	-0.03	26.17	0.0584	-5.3489	-0.0081
862	SLE FR 4	-0.47	-0.02	27.01	0.0604	-5.5178	-0.0049
862	SLE FR 5	-0.47	-0.03	27.08	0.0606	-5.5325	-0.0069
862	SLE FR 6	-0.48	-0.02	27.62	0.0619	-5.64	-0.0063
862	SLE QP 1	-0.46	-0.03	26.09	0.0582	-5.334	-0.0084
862	SLE QP 2	-0.47	-0.03	27.01	0.0604	-5.5176	-0.0072
862	SLD 1	2.28	0.91	32.41	0.0742	-6.5842	0.2242
862	SLD 2	2.16	0.6	32.44	0.0745	-6.5912	0.1476
862	SLD 3	2.21	-0.3	32.56	0.0754	-6.6176	-0.0766
862	SLD 4	2.09	-0.61	32.59	0.0757	-6.6245	-0.1532
862	SLD 5	0.49	2.14	28.39	0.0627	-5.7858	0.5319
862	SLD 6	0.41	1.94	28.41	0.0629	-5.7903	0.4822
862	SLD 7	0.24	-1.88	28.9	0.0667	-5.897	-0.4709
862	SLD 8	0.17	-2.08	28.92	0.0669	-5.9015	-0.5206
862	SLD 9	-1.1	2.03	25.1	0.054	-5.1337	0.5063
862	SLD 10	-1.18	1.83	25.11	0.0541	-5.1382	0.4566
862	SLD 11	-1.35	-1.99	25.6	0.058	-5.245	-0.4965
862	SLD 12	-1.42	-2.19	25.62	0.0582	-5.2495	-0.5462
862	SLD 13	-3.03	0.56	21.42	0.0452	-4.4107	0.1389
862	SLD 14	-3.14	0.25	21.45	0.0454	-4.4177	0.0623
862	SLD 15	-3.1	-0.65	21.58	0.0464	-4.4441	-0.162
862	SLD 16	-3.22	-0.96	21.6	0.0466	-4.4511	-0.2385
862	SLV 1	5.96	2.12	39.66	0.0927	-8.0139	0.5254
862	SLV 2	5.69	1.4	39.72	0.0933	-8.0302	0.3471
862	SLV 3	5.79	-0.63	40.01	0.0955	-8.0914	-0.1608
862	SLV 4	5.52	-1.35	40.07	0.0961	-8.1076	-0.3392
862	SLV 5	1.76	4.91	30.25	0.0658	-6.1463	1.2236
862	SLV 6	1.59	4.45	30.29	0.0662	-6.1566	1.1097
862	SLV 7	1.2	-4.26	31.44	0.075	-6.4045	-1.0639
862	SLV 8	1.02	-4.72	31.48	0.0754	-6.4149	-1.1778
862	SLV 9	-1.96	4.66	22.54	0.0454	-4.6204	1.1635
862	SLV 10	-2.13	4.21	22.58	0.0458	-4.6307	1.0496
862	SLV 11	-2.53	-4.51	23.72	0.0547	-4.8786	-1.1241
862	SLV 12	-2.7	-4.97	23.76	0.055	-4.889	-1.238
862	SLV 13	-6.45	1.3	13.94	0.0248	-2.9276	0.3249
862	SLV 14	-6.72	0.58	14	0.0254	-2.9438	0.1465
862	SLV 15	-6.62	-1.46	14.29	0.0275	-3.0051	-0.3614
862	SLV 16	-6.89	-2.17	14.36	0.0281	-3.0213	-0.5398
862	CRTFP Ux+	0	0	0	0	0	0
862	CRTFP Ux-	0	0	0	0	0	0
862	CRTFP Uy+	0	0	0	0	0	0
862	CRTFP Uy-	0	0	0	0	0	0
865	SLU 1	0.7	0.55	21.06	-0.0474	3.3636	-0.1955
865	SLU 2	0.7	0.63	21.07	-0.0475	3.3648	-0.2247
865	SLU 3	0.72	0.57	21.45	-0.0484	3.412	-0.2013
865	SLU 4	0.72	0.62	21.45	-0.0485	3.4128	-0.2188
865	SLU 5	0.71	0.64	21.28	-0.048	3.3918	-0.2265
865	SLU 6	0.73	0.57	21.67	-0.049	3.439	-0.2032
865	SLU 7	0.73	0.62	21.67	-0.0491	3.4397	-0.2207
865	SLU 8	0.73	0.56	21.5	-0.0486	3.4175	-0.1992
865	SLU 9	0.72	0.61	21.5	-0.0486	3.4182	-0.2167
865	SLU 10	0.78	0.75	23.56	-0.0542	3.6807	-0.2645
865	SLU 11	0.8	0.68	23.95	-0.0552	3.7279	-0.2411
865	SLU 12	0.8	0.73	23.95	-0.0552	3.7286	-0.2587
865	SLU 13	0.79	0.75	23.78	-0.0548	3.7076	-0.2663
865	SLU 14	0.81	0.69	24.16	-0.0558	3.7548	-0.243
865	SLU 15	0.81	0.74	24.17	-0.0558	3.7556	-0.2605
865	SLU 16	0.8	0.67	23.99	-0.0553	3.7333	-0.239
865	SLU 17	0.8	0.72	24	-0.0554	3.7341	-0.2565
865	SLU 18	0.81	0.71	24.63	-0.057	3.8149	-0.2524
865	SLU 19	0.81	0.76	24.63	-0.0571	3.8156	-0.2699
865	SLU 20	0.82	0.72	24.85	-0.0576	3.8418	-0.2542
865	SLU 21	0.82	0.77	24.85	-0.0577	3.8425	-0.2717
865	SLU 22	0.79	0.65	23.49	-0.0539	3.6709	-0.2295
865	SLU 23	0.79	0.73	23.49	-0.0539	3.6721	-0.2587
865	SLU 24	0.81	0.66	23.87	-0.0549	3.7193	-0.2353
865	SLU 25	0.81	0.71	23.87	-0.0549	3.72	-0.2528
865	SLU 26	0.8	0.74	23.71	-0.0545	3.699	-0.2605
865	SLU 27	0.82	0.67	24.09	-0.0555	3.7462	-0.2372
865	SLU 28	0.82	0.72	24.09	-0.0555	3.7469	-0.2547
865	SLU 29	0.81	0.66	23.92	-0.0551	3.7247	-0.2332
865	SLU 30	0.81	0.71	23.92	-0.0551	3.7254	-0.2507
865	SLU 31	0.86	0.84	25.99	-0.0606	3.9879	-0.2985
865	SLU 32	0.88	0.78	26.37	-0.0616	4.0351	-0.2751

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
865	SLU 33	0.88	0.83	26.37	-0.0616	4.0359	-0.2927
865	SLU 34	0.87	0.85	26.2	-0.0612	4.0149	-0.3003
865	SLU 35	0.9	0.78	26.58	-0.0622	4.0621	-0.277
865	SLU 36	0.89	0.83	26.59	-0.0622	4.0628	-0.2945
865	SLU 37	0.89	0.77	26.42	-0.0618	4.0406	-0.273
865	SLU 38	0.89	0.82	26.42	-0.0618	4.0413	-0.2905
865	SLU 39	0.9	0.81	27.05	-0.0635	4.1221	-0.2864
865	SLU 40	0.9	0.86	27.05	-0.0635	4.1228	-0.3039
865	SLU 41	0.91	0.81	27.27	-0.0641	4.149	-0.2882
865	SLU 42	0.91	0.86	27.27	-0.0641	4.1498	-0.3057
865	SLU 43	0.89	0.68	26.55	-0.0594	4.2674	-0.2425
865	SLU 44	0.88	0.77	26.56	-0.0595	4.2686	-0.2717
865	SLU 45	0.9	0.7	26.94	-0.0605	4.3158	-0.2483
865	SLU 46	0.9	0.75	26.94	-0.0605	4.3165	-0.2658
865	SLU 47	0.89	0.77	26.77	-0.0601	4.2955	-0.2735
865	SLU 48	0.91	0.71	27.16	-0.0611	4.3427	-0.2502
865	SLU 49	0.91	0.76	27.16	-0.0611	4.3434	-0.2677
865	SLU 50	0.91	0.69	26.99	-0.0606	4.3212	-0.2462
865	SLU 51	0.9	0.74	26.99	-0.0607	4.3219	-0.2637
865	SLU 52	0.96	0.88	29.05	-0.0662	4.5845	-0.3115
865	SLU 53	0.98	0.81	29.44	-0.0672	4.6316	-0.2881
865	SLU 54	0.98	0.86	29.44	-0.0672	4.6324	-0.3057
865	SLU 55	0.97	0.89	29.27	-0.0668	4.6114	-0.3134
865	SLU 56	0.99	0.82	29.65	-0.0678	4.6586	-0.29
865	SLU 57	0.99	0.87	29.65	-0.0678	4.6593	-0.3075
865	SLU 58	0.98	0.81	29.48	-0.0674	4.6371	-0.286
865	SLU 59	0.98	0.86	29.49	-0.0674	4.6378	-0.3035
865	SLU 60	0.99	0.84	30.12	-0.0691	4.7186	-0.2994
865	SLU 61	0.99	0.89	30.12	-0.0691	4.7193	-0.3169
865	SLU 62	1	0.85	30.34	-0.0697	4.7455	-0.3012
865	SLU 63	1	0.9	30.34	-0.0697	4.7463	-0.3187
865	SLU 64	0.97	0.78	28.98	-0.0659	4.5746	-0.2765
865	SLU 65	0.97	0.86	28.98	-0.0659	4.5758	-0.3057
865	SLU 66	0.99	0.8	29.36	-0.0669	4.623	-0.2823
865	SLU 67	0.99	0.85	29.36	-0.0669	4.6238	-0.2998
865	SLU 68	0.98	0.87	29.2	-0.0665	4.6028	-0.3075
865	SLU 69	1	0.8	29.58	-0.0675	4.6499	-0.2842
865	SLU 70	1	0.85	29.58	-0.0675	4.6507	-0.3017
865	SLU 71	0.99	0.79	29.41	-0.0671	4.6285	-0.2802
865	SLU 72	0.99	0.84	29.41	-0.0671	4.6292	-0.2977
865	SLU 73	1.04	0.98	31.47	-0.0726	4.8917	-0.3455
865	SLU 74	1.07	0.91	31.86	-0.0736	4.9389	-0.3221
865	SLU 75	1.06	0.96	31.86	-0.0737	4.9396	-0.3397
865	SLU 76	1.05	0.98	31.69	-0.0732	4.9186	-0.3473
865	SLU 77	1.08	0.91	32.07	-0.0742	4.9658	-0.324
865	SLU 78	1.07	0.96	32.08	-0.0743	4.9665	-0.3415
865	SLU 79	1.07	0.9	31.9	-0.0738	4.9443	-0.32
865	SLU 80	1.07	0.95	31.91	-0.0738	4.9451	-0.3375
865	SLU 81	1.08	0.94	32.54	-0.0755	5.0258	-0.3334
865	SLU 82	1.08	0.99	32.54	-0.0755	5.0266	-0.3509
865	SLU 83	1.09	0.95	32.76	-0.0761	5.0528	-0.3352
865	SLU 84	1.09	1	32.76	-0.0761	5.0535	-0.3527
865	SLE RA 1	0.73	0.58	21.76	-0.0493	3.4514	-0.2052
865	SLE RA 2	0.73	0.63	21.76	-0.0493	3.4522	-0.2247
865	SLE RA 3	0.74	0.59	22.01	-0.0499	3.4837	-0.2091
865	SLE RA 4	0.74	0.62	22.02	-0.05	3.4842	-0.2208
865	SLE RA 5	0.73	0.64	21.9	-0.0497	3.4702	-0.2259
865	SLE RA 6	0.75	0.59	22.16	-0.0503	3.5016	-0.2103
865	SLE RA 7	0.75	0.63	22.16	-0.0504	3.5021	-0.222
865	SLE RA 8	0.74	0.59	22.05	-0.0501	3.4873	-0.2077
865	SLE RA 9	0.74	0.62	22.05	-0.0501	3.4878	-0.2194
865	SLE RA 10	0.78	0.71	23.42	-0.0538	3.6628	-0.2512
865	SLE RA 11	0.79	0.66	23.68	-0.0544	3.6943	-0.2357
865	SLE RA 12	0.79	0.7	23.68	-0.0544	3.6947	-0.2473
865	SLE RA 13	0.78	0.71	23.57	-0.0542	3.6807	-0.2525
865	SLE RA 14	0.8	0.67	23.82	-0.0548	3.7122	-0.2369
865	SLE RA 15	0.8	0.7	23.82	-0.0548	3.7127	-0.2486
865	SLE RA 16	0.79	0.66	23.71	-0.0545	3.6979	-0.2342
865	SLE RA 17	0.79	0.69	23.71	-0.0546	3.6984	-0.2459
865	SLE RA 18	0.8	0.69	24.13	-0.0557	3.7522	-0.2432
865	SLE RA 19	0.8	0.72	24.13	-0.0557	3.7527	-0.2548
865	SLE RA 20	0.81	0.69	24.28	-0.0561	3.7702	-0.2444
865	SLE RA 21	0.81	0.72	24.28	-0.0561	3.7707	-0.256
865	SLE FR 1	0.73	0.58	21.76	-0.0493	3.4514	-0.2052
865	SLE FR 2	0.73	0.59	21.76	-0.0493	3.4516	-0.2091
865	SLE FR 3	0.73	0.58	21.81	-0.0494	3.4586	-0.2057
865	SLE FR 4	0.75	0.62	22.47	-0.0512	3.5418	-0.2205
865	SLE FR 5	0.75	0.61	22.53	-0.0513	3.5488	-0.2171
865	SLE FR 6	0.76	0.63	22.94	-0.0525	3.6018	-0.2242
865	SLE QP 1	0.73	0.58	21.76	-0.0493	3.4514	-0.2052
865	SLE QP 2	0.75	0.61	22.47	-0.0512	3.5417	-0.2166
865	SLD 1	2.4	1	18.86	-0.0401	3.2136	-0.3483
865	SLD 2	2.23	1.39	18.81	-0.0403	3.2031	-0.4872
865	SLD 3	2.74	-0.55	18.98	-0.0391	3.2387	0.1905
865	SLD 4	2.57	-0.15	18.93	-0.0394	3.2283	0.0517
865	SLD 5	0.75	3	21.21	-0.0493	3.4069	-1.0491
865	SLD 6	0.64	3.25	21.19	-0.0494	3.4001	-1.1392
865	SLD 7	1.9	-2.14	21.61	-0.0461	3.4907	0.747
865	SLD 8	1.79	-1.89	21.58	-0.0462	3.484	0.6568
865	SLD 9	-0.29	3.11	23.36	-0.0561	3.5993	-1.0901
865	SLD 10	-0.4	3.37	23.33	-0.0563	3.5926	-1.1802

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
865	SLD 11	0.86	-2.03	23.75	-0.0529	3.6832	0.706
865	SLD 12	0.75	-1.77	23.72	-0.0531	3.6764	0.6159
865	SLD 13	-1.07	1.37	26.01	-0.063	3.855	-0.4849
865	SLD 14	-1.24	1.77	25.96	-0.0632	3.8446	-0.6237
865	SLD 15	-0.73	-0.17	26.13	-0.062	3.8802	0.0539
865	SLD 16	-0.89	0.23	26.08	-0.0623	3.8697	-0.0849
865	SLV 1	4.61	1.46	14.02	-0.0252	2.7739	-0.508
865	SLV 2	4.21	2.39	13.92	-0.0257	2.7496	-0.8315
865	SLV 3	5.39	-2.04	14.29	-0.023	2.8326	0.7176
865	SLV 4	5	-1.12	14.19	-0.0235	2.8082	0.3941
865	SLV 5	0.78	6.03	19.54	-0.0466	3.2265	-2.1081
865	SLV 6	0.53	6.62	19.47	-0.047	3.211	-2.3147
865	SLV 7	3.4	-5.66	20.45	-0.0393	3.422	1.9773
865	SLV 8	3.15	-5.07	20.38	-0.0397	3.4064	1.7707
865	SLV 9	-1.65	6.29	24.56	-0.0627	3.6769	-2.2039
865	SLV 10	-1.9	6.88	24.49	-0.0631	3.6613	-2.4105
865	SLV 11	0.97	-5.4	25.47	-0.0554	3.8723	1.8814
865	SLV 12	0.72	-4.81	25.4	-0.0558	3.8568	1.6749
865	SLV 13	-3.5	2.34	30.75	-0.0788	4.2751	-0.8274
865	SLV 14	-3.89	3.27	30.65	-0.0794	4.2507	-1.1508
865	SLV 15	-2.71	-1.17	31.02	-0.0766	4.3337	0.3982
865	SLV 16	-3.11	-0.24	30.92	-0.0772	4.3094	0.0748
865	CRTFP Ux+	0	0	0	0	0	0
865	CRTFP Ux-	0	0	0	0	0	0
865	CRTFP Uy+	0	0	0	0	0	0
865	CRTFP Uy-	0	0	0	0	0	0
867	SLU 1	1	0	45.68	-1.2629	0.3124	0.0234
867	SLU 2	1	0.08	45.68	-1.263	0.3119	0.0233
867	SLU 3	1.03	0.01	46.57	-1.2875	0.3195	0.024
867	SLU 4	1.03	0.06	46.57	-1.2876	0.3192	0.0239
867	SLU 5	1.02	0.08	46.17	-1.2764	0.315	0.0237
867	SLU 6	1.05	0	47.06	-1.301	0.3226	0.0244
867	SLU 7	1.05	0.05	47.06	-1.301	0.3223	0.0244
867	SLU 8	1.04	-0.01	46.65	-1.2898	0.3186	0.0242
867	SLU 9	1.04	0.04	46.65	-1.2898	0.3183	0.0242
867	SLU 10	1.1	0.12	51.81	-1.4329	0.3624	0.0249
867	SLU 11	1.13	0.05	52.7	-1.4574	0.37	0.0256
867	SLU 12	1.13	0.09	52.7	-1.4574	0.3697	0.0255
867	SLU 13	1.12	0.11	52.3	-1.4463	0.3655	0.0253
867	SLU 14	1.14	0.04	53.19	-1.4708	0.3731	0.026
867	SLU 15	1.15	0.09	53.19	-1.4709	0.3728	0.026
867	SLU 16	1.14	0.03	52.78	-1.4597	0.3692	0.0258
867	SLU 17	1.14	0.08	52.78	-1.4597	0.3689	0.0258
867	SLU 18	1.14	0.06	54.44	-1.5056	0.3846	0.0257
867	SLU 19	1.14	0.1	54.44	-1.5056	0.3843	0.0256
867	SLU 20	1.16	0.05	54.92	-1.519	0.3877	0.0261
867	SLU 21	1.16	0.1	54.92	-1.5191	0.3874	0.026
867	SLU 22	1.1	0.05	51.58	-1.4261	0.3604	0.0253
867	SLU 23	1.1	0.13	51.58	-1.4262	0.3599	0.0253
867	SLU 24	1.13	0.06	52.47	-1.4507	0.3675	0.026
867	SLU 25	1.13	0.1	52.47	-1.4508	0.3672	0.0259
867	SLU 26	1.12	0.12	52.06	-1.4396	0.363	0.0257
867	SLU 27	1.15	0.05	52.95	-1.4642	0.3706	0.0264
867	SLU 28	1.15	0.1	52.95	-1.4642	0.3703	0.0263
867	SLU 29	1.14	0.04	52.55	-1.453	0.3666	0.0262
867	SLU 30	1.14	0.09	52.55	-1.4531	0.3663	0.0261
867	SLU 31	1.2	0.17	57.71	-1.5961	0.4105	0.0269
867	SLU 32	1.23	0.1	58.6	-1.6206	0.418	0.0276
867	SLU 33	1.23	0.14	58.6	-1.6206	0.4177	0.0275
867	SLU 34	1.22	0.16	58.19	-1.6095	0.4136	0.0273
867	SLU 35	1.24	0.09	59.08	-1.634	0.4211	0.028
867	SLU 36	1.25	0.14	59.08	-1.6341	0.4208	0.0279
867	SLU 37	1.24	0.08	58.68	-1.6229	0.4172	0.0278
867	SLU 38	1.24	0.13	58.68	-1.6229	0.4169	0.0277
867	SLU 39	1.24	0.11	60.34	-1.6688	0.4327	0.0276
867	SLU 40	1.24	0.15	60.34	-1.6688	0.4323	0.0276
867	SLU 41	1.26	0.1	60.82	-1.6822	0.4358	0.028
867	SLU 42	1.26	0.15	60.82	-1.6823	0.4354	0.028
867	SLU 43	1.27	-0.01	57.37	-1.5859	0.3897	0.0297
867	SLU 44	1.27	0.06	57.37	-1.5859	0.3892	0.0296
867	SLU 45	1.29	-0.01	58.26	-1.6105	0.3967	0.0303
867	SLU 46	1.29	0.04	58.26	-1.6105	0.3964	0.0303
867	SLU 47	1.29	0.06	57.85	-1.5994	0.3923	0.0301
867	SLU 48	1.31	-0.01	58.74	-1.6239	0.3998	0.0307
867	SLU 49	1.31	0.03	58.74	-1.6239	0.3995	0.0307
867	SLU 50	1.3	-0.02	58.33	-1.6127	0.3959	0.0306
867	SLU 51	1.31	0.02	58.33	-1.6128	0.3956	0.0305
867	SLU 52	1.37	0.1	63.5	-1.7558	0.4397	0.0312
867	SLU 53	1.39	0.03	64.39	-1.7803	0.4473	0.0319
867	SLU 54	1.39	0.08	64.39	-1.7804	0.447	0.0319
867	SLU 55	1.39	0.1	63.98	-1.7692	0.4428	0.0317
867	SLU 56	1.41	0.03	64.87	-1.7937	0.4504	0.0323
867	SLU 57	1.41	0.07	64.87	-1.7938	0.4501	0.0323
867	SLU 58	1.4	0.01	64.46	-1.7826	0.4464	0.0322
867	SLU 59	1.4	0.06	64.46	-1.7826	0.4461	0.0321
867	SLU 60	1.41	0.04	66.12	-1.8285	0.4619	0.032
867	SLU 61	1.41	0.09	66.12	-1.8286	0.4616	0.0319
867	SLU 62	1.43	0.04	66.61	-1.8419	0.465	0.0324
867	SLU 63	1.43	0.08	66.61	-1.842	0.4647	0.0324
867	SLU 64	1.37	0.03	63.27	-1.7491	0.4377	0.0317
867	SLU 65	1.37	0.11	63.27	-1.7491	0.4372	0.0316

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
867	SLU 66	1.39	0.04	64.16	-1.7737	0.4448	0.0323
867	SLU 67	1.4	0.09	64.15	-1.7737	0.4444	0.0322
867	SLU 68	1.39	0.11	63.75	-1.7626	0.4403	0.032
867	SLU 69	1.41	0.04	64.64	-1.7871	0.4479	0.0327
867	SLU 70	1.41	0.08	64.64	-1.7871	0.4475	0.0327
867	SLU 71	1.4	0.02	64.23	-1.7759	0.4439	0.0325
867	SLU 72	1.41	0.07	64.23	-1.776	0.4436	0.0325
867	SLU 73	1.47	0.15	69.39	-1.919	0.4877	0.0332
867	SLU 74	1.49	0.08	70.28	-1.9435	0.4953	0.0339
867	SLU 75	1.49	0.13	70.28	-1.9436	0.495	0.0338
867	SLU 76	1.49	0.15	69.88	-1.9324	0.4908	0.0336
867	SLU 77	1.51	0.07	70.77	-1.957	0.4984	0.0343
867	SLU 78	1.51	0.12	70.77	-1.957	0.4981	0.0343
867	SLU 79	1.5	0.06	70.36	-1.9458	0.4944	0.0341
867	SLU 80	1.5	0.11	70.36	-1.9458	0.4941	0.0341
867	SLU 81	1.51	0.09	72.02	-1.9917	0.5099	0.034
867	SLU 82	1.51	0.14	72.02	-1.9918	0.5096	0.0339
867	SLU 83	1.53	0.08	72.5	-2.0052	0.513	0.0344
867	SLU 84	1.53	0.13	72.5	-2.0052	0.5127	0.0343
867	SLE RA 1	1.03	0.02	47.37	-1.3096	0.3261	0.0239
867	SLE RA 2	1.03	0.07	47.37	-1.3096	0.3258	0.0239
867	SLE RA 3	1.05	0.02	47.96	-1.326	0.3308	0.0243
867	SLE RA 4	1.05	0.05	47.96	-1.326	0.3306	0.0243
867	SLE RA 5	1.04	0.06	47.69	-1.3186	0.3279	0.0242
867	SLE RA 6	1.06	0.02	48.28	-1.3349	0.3329	0.0246
867	SLE RA 7	1.06	0.05	48.28	-1.3349	0.3327	0.0246
867	SLE RA 8	1.05	0.01	48.01	-1.3275	0.3303	0.0245
867	SLE RA 9	1.06	0.04	48.01	-1.3275	0.3301	0.0245
867	SLE RA 10	1.1	0.09	51.46	-1.4229	0.3595	0.0249
867	SLE RA 11	1.11	0.05	52.05	-1.4392	0.3645	0.0254
867	SLE RA 12	1.11	0.08	52.05	-1.4392	0.3643	0.0254
867	SLE RA 13	1.11	0.09	51.78	-1.4318	0.3616	0.0252
867	SLE RA 14	1.13	0.04	52.37	-1.4482	0.3666	0.0257
867	SLE RA 15	1.13	0.07	52.37	-1.4482	0.3664	0.0257
867	SLE RA 16	1.12	0.03	52.1	-1.4407	0.364	0.0256
867	SLE RA 17	1.12	0.07	52.1	-1.4407	0.3638	0.0255
867	SLE RA 18	1.12	0.05	53.21	-1.4713	0.3743	0.0255
867	SLE RA 19	1.12	0.08	53.21	-1.4714	0.3741	0.0254
867	SLE RA 20	1.14	0.05	53.53	-1.4803	0.3763	0.0257
867	SLE RA 21	1.14	0.08	53.53	-1.4803	0.3761	0.0257
867	SLE FR 1	1.03	0.02	47.37	-1.3096	0.3261	0.0239
867	SLE FR 2	1.03	0.03	47.37	-1.3096	0.3261	0.0239
867	SLE FR 3	1.04	0.01	47.5	-1.3131	0.327	0.024
867	SLE FR 4	1.06	0.04	49.12	-1.3581	0.3405	0.0244
867	SLE FR 5	1.06	0.03	49.25	-1.3617	0.3414	0.0245
867	SLE FR 6	1.08	0.03	50.29	-1.3904	0.3502	0.0247
867	SLE QP 1	1.03	0.02	47.37	-1.3096	0.3261	0.0239
867	SLE QP 2	1.06	0.03	49.12	-1.3581	0.3406	0.0244
867	SLD 1	5.88	0.79	45.43	-1.2645	0.3006	0.1292
867	SLD 2	5.68	1.04	45.36	-1.2629	0.3009	0.1271
867	SLD 3	5.77	-0.75	45.69	-1.2697	0.3228	0.1319
867	SLD 4	5.56	-0.5	45.62	-1.2681	0.3231	0.1298
867	SLD 5	2.72	2.55	47.63	-1.3224	0.2948	0.0521
867	SLD 6	2.59	2.71	47.59	-1.3214	0.295	0.0508
867	SLD 7	2.33	-2.59	48.49	-1.3397	0.3689	0.0611
867	SLD 8	2.2	-2.43	48.45	-1.3387	0.3691	0.0597
867	SLD 9	-0.08	2.48	49.79	-1.3775	0.312	-0.0109
867	SLD 10	-0.21	2.64	49.75	-1.3765	0.3122	-0.0123
867	SLD 11	-0.47	-2.66	50.65	-1.3948	0.3862	-0.002
867	SLD 12	-0.6	-2.5	50.61	-1.3938	0.3864	-0.0033
867	SLD 13	-3.44	0.55	52.62	-1.4481	0.358	-0.081
867	SLD 14	-3.65	0.8	52.56	-1.4465	0.3583	-0.0831
867	SLD 15	-3.56	-0.99	52.88	-1.4533	0.3803	-0.0783
867	SLD 16	-3.76	-0.74	52.81	-1.4517	0.3806	-0.0804
867	SLV 1	12.34	1.78	40.48	-1.1391	0.2465	0.2695
867	SLV 2	11.86	2.35	40.34	-1.1354	0.2472	0.2646
867	SLV 3	12.07	-1.73	41.07	-1.151	0.2985	0.2757
867	SLV 4	11.59	-1.16	40.92	-1.1473	0.2992	0.2708
867	SLV 5	4.94	5.78	45.66	-1.275	0.2334	0.0893
867	SLV 6	4.63	6.15	45.57	-1.2727	0.2339	0.0862
867	SLV 7	4.03	-5.92	47.62	-1.3146	0.4066	0.1101
867	SLV 8	3.72	-5.56	47.53	-1.3122	0.4071	0.107
867	SLV 9	-1.61	5.61	50.71	-1.404	0.274	-0.0582
867	SLV 10	-1.91	5.98	50.62	-1.4016	0.2745	-0.0613
867	SLV 11	-2.52	-6.09	52.67	-1.4435	0.4473	-0.0374
867	SLV 12	-2.82	-5.73	52.58	-1.4412	0.4478	-0.0405
867	SLV 13	-9.47	1.21	57.32	-1.5689	0.382	-0.2221
867	SLV 14	-9.95	1.79	57.17	-1.5652	0.3827	-0.2269
867	SLV 15	-9.75	-2.3	57.91	-1.5807	0.4339	-0.2158
867	SLV 16	-10.22	-1.72	57.76	-1.5771	0.4347	-0.2207
867	CRTFP Ux+	0	0	0	0	0	0
867	CRTFP Ux-	0	0	0	0	0	0
884	SLU 1	0.42	0.43	44.52	0.0132	-0.0307	-0.0071
884	SLU 2	0.42	0.51	44.53	0.0129	-0.0312	-0.0072
884	SLU 3	0.43	0.45	45.33	0.0136	-0.0311	-0.0073
884	SLU 4	0.43	0.5	45.33	0.0135	-0.0314	-0.0073
884	SLU 5	0.43	0.51	44.93	0.0131	-0.0311	-0.0073
884	SLU 6	0.44	0.45	45.73	0.0138	-0.0309	-0.0074
884	SLU 7	0.44	0.5	45.74	0.0136	-0.0312	-0.0074
884	SLU 8	0.43	0.43	45.33	0.0134	-0.0305	-0.0074
884	SLU 9	0.43	0.48	45.34	0.0133	-0.0308	-0.0074

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
884	SLU 10	0.47	0.55	50.68	0.0128	-0.0343	-0.0077
884	SLU 11	0.48	0.49	51.48	0.0135	-0.0341	-0.0078
884	SLU 12	0.48	0.54	51.49	0.0133	-0.0344	-0.0078
884	SLU 13	0.48	0.55	51.09	0.0129	-0.0342	-0.0078
884	SLU 14	0.49	0.49	51.89	0.0136	-0.034	-0.0079
884	SLU 15	0.49	0.54	51.89	0.0134	-0.0343	-0.0079
884	SLU 16	0.49	0.47	51.49	0.0133	-0.0335	-0.0079
884	SLU 17	0.49	0.52	51.49	0.0131	-0.0338	-0.0079
884	SLU 18	0.49	0.48	53.32	0.0129	-0.0351	-0.0079
884	SLU 19	0.49	0.53	53.32	0.0128	-0.0354	-0.0079
884	SLU 20	0.5	0.48	53.72	0.0131	-0.035	-0.008
884	SLU 21	0.5	0.53	53.72	0.0129	-0.0353	-0.008
884	SLU 22	0.46	0.51	50.37	0.0141	-0.0373	-0.0077
884	SLU 23	0.47	0.6	50.38	0.0138	-0.0378	-0.0077
884	SLU 24	0.48	0.54	51.18	0.0145	-0.0376	-0.0078
884	SLU 25	0.48	0.59	51.18	0.0144	-0.0379	-0.0078
884	SLU 26	0.47	0.6	50.78	0.014	-0.0376	-0.0078
884	SLU 27	0.48	0.54	51.58	0.0147	-0.0375	-0.0079
884	SLU 28	0.49	0.59	51.59	0.0145	-0.0378	-0.0079
884	SLU 29	0.48	0.51	51.18	0.0144	-0.037	-0.0079
884	SLU 30	0.48	0.56	51.19	0.0142	-0.0373	-0.0079
884	SLU 31	0.52	0.63	56.53	0.0137	-0.0408	-0.0082
884	SLU 32	0.53	0.58	57.33	0.0144	-0.0407	-0.0083
884	SLU 33	0.53	0.63	57.34	0.0142	-0.041	-0.0083
884	SLU 34	0.53	0.64	56.94	0.0138	-0.0407	-0.0083
884	SLU 35	0.54	0.58	57.74	0.0145	-0.0405	-0.0084
884	SLU 36	0.54	0.63	57.74	0.0143	-0.0408	-0.0084
884	SLU 37	0.53	0.55	57.34	0.0142	-0.0401	-0.0084
884	SLU 38	0.54	0.6	57.34	0.014	-0.0404	-0.0084
884	SLU 39	0.54	0.57	59.17	0.0138	-0.0417	-0.0084
884	SLU 40	0.54	0.62	59.17	0.0137	-0.042	-0.0084
884	SLU 41	0.55	0.57	59.57	0.014	-0.0415	-0.0085
884	SLU 42	0.55	0.62	59.57	0.0138	-0.0418	-0.0085
884	SLU 43	0.52	0.52	55.87	0.0168	-0.0377	-0.0091
884	SLU 44	0.52	0.61	55.88	0.0166	-0.0382	-0.0091
884	SLU 45	0.54	0.55	56.68	0.0173	-0.0381	-0.0092
884	SLU 46	0.54	0.6	56.68	0.0171	-0.0383	-0.0093
884	SLU 47	0.53	0.61	56.28	0.0167	-0.0381	-0.0092
884	SLU 48	0.54	0.55	57.08	0.0174	-0.0379	-0.0094
884	SLU 49	0.54	0.6	57.09	0.0173	-0.0382	-0.0094
884	SLU 50	0.54	0.53	56.68	0.0171	-0.0375	-0.0093
884	SLU 51	0.54	0.58	56.69	0.0169	-0.0378	-0.0093
884	SLU 52	0.58	0.65	62.03	0.0164	-0.0413	-0.0096
884	SLU 53	0.59	0.59	62.83	0.0171	-0.0411	-0.0097
884	SLU 54	0.59	0.64	62.84	0.0169	-0.0414	-0.0098
884	SLU 55	0.59	0.65	62.44	0.0165	-0.0412	-0.0097
884	SLU 56	0.6	0.59	63.24	0.0172	-0.041	-0.0099
884	SLU 57	0.6	0.64	63.24	0.0171	-0.0413	-0.0099
884	SLU 58	0.59	0.56	62.84	0.0169	-0.0405	-0.0098
884	SLU 59	0.59	0.61	62.84	0.0168	-0.0408	-0.0099
884	SLU 60	0.6	0.58	64.67	0.0166	-0.0421	-0.0098
884	SLU 61	0.6	0.63	64.67	0.0164	-0.0424	-0.0098
884	SLU 62	0.61	0.58	65.07	0.0167	-0.042	-0.0099
884	SLU 63	0.61	0.63	65.07	0.0165	-0.0423	-0.01
884	SLU 64	0.57	0.61	61.72	0.0177	-0.0443	-0.0096
884	SLU 65	0.57	0.69	61.73	0.0175	-0.0448	-0.0096
884	SLU 66	0.58	0.64	62.53	0.0182	-0.0446	-0.0098
884	SLU 67	0.58	0.69	62.53	0.018	-0.0449	-0.0098
884	SLU 68	0.58	0.69	62.13	0.0176	-0.0446	-0.0098
884	SLU 69	0.59	0.64	62.93	0.0183	-0.0444	-0.0099
884	SLU 70	0.59	0.69	62.94	0.0182	-0.0447	-0.0099
884	SLU 71	0.59	0.61	62.53	0.018	-0.044	-0.0099
884	SLU 72	0.59	0.66	62.54	0.0178	-0.0443	-0.0099
884	SLU 73	0.63	0.73	67.88	0.0173	-0.0478	-0.0102
884	SLU 74	0.64	0.67	68.68	0.018	-0.0477	-0.0103
884	SLU 75	0.64	0.72	68.69	0.0179	-0.0479	-0.0103
884	SLU 76	0.64	0.73	68.29	0.0174	-0.0477	-0.0103
884	SLU 77	0.65	0.67	69.09	0.0181	-0.0475	-0.0104
884	SLU 78	0.65	0.72	69.09	0.018	-0.0478	-0.0104
884	SLU 79	0.64	0.65	68.69	0.0178	-0.0471	-0.0104
884	SLU 80	0.64	0.7	68.69	0.0177	-0.0474	-0.0104
884	SLU 81	0.65	0.67	70.52	0.0175	-0.0486	-0.0103
884	SLU 82	0.65	0.72	70.52	0.0173	-0.0489	-0.0104
884	SLU 83	0.66	0.67	70.92	0.0176	-0.0485	-0.0105
884	SLU 84	0.66	0.72	70.92	0.0175	-0.0488	-0.0105
884	SLE RA 1	0.43	0.45	46.19	0.0135	-0.0326	-0.0073
884	SLE RA 2	0.43	0.51	46.2	0.0133	-0.0329	-0.0073
884	SLE RA 3	0.44	0.47	46.73	0.0137	-0.0328	-0.0074
884	SLE RA 4	0.44	0.5	46.73	0.0136	-0.033	-0.0074
884	SLE RA 5	0.44	0.51	46.47	0.0134	-0.0328	-0.0074
884	SLE RA 6	0.44	0.47	47	0.0138	-0.0327	-0.0075
884	SLE RA 7	0.44	0.5	47	0.0137	-0.0329	-0.0075
884	SLE RA 8	0.44	0.45	46.73	0.0136	-0.0324	-0.0074
884	SLE RA 9	0.44	0.49	46.74	0.0135	-0.0326	-0.0075
884	SLE RA 10	0.47	0.53	50.3	0.0132	-0.035	-0.0076
884	SLE RA 11	0.47	0.49	50.83	0.0136	-0.0349	-0.0077
884	SLE RA 12	0.47	0.53	50.84	0.0135	-0.0351	-0.0077
884	SLE RA 13	0.47	0.53	50.57	0.0132	-0.0349	-0.0077
884	SLE RA 14	0.48	0.49	51.1	0.0137	-0.0348	-0.0078
884	SLE RA 15	0.48	0.53	51.11	0.0136	-0.035	-0.0078
884	SLE RA 16	0.48	0.48	50.84	0.0135	-0.0345	-0.0078

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
884	SLE RA 17	0.48	0.51	50.84	0.0134	-0.0347	-0.0078
884	SLE RA 18	0.48	0.49	52.06	0.0133	-0.0355	-0.0078
884	SLE RA 19	0.48	0.52	52.06	0.0132	-0.0357	-0.0078
884	SLE RA 20	0.49	0.49	52.33	0.0134	-0.0354	-0.0078
884	SLE RA 21	0.49	0.52	52.33	0.0133	-0.0356	-0.0079
884	SLE FR 1	0.43	0.45	46.19	0.0135	-0.0326	-0.0073
884	SLE FR 2	0.43	0.46	46.19	0.0134	-0.0327	-0.0073
884	SLE FR 3	0.43	0.45	46.3	0.0135	-0.0326	-0.0073
884	SLE FR 4	0.44	0.47	47.95	0.0134	-0.0336	-0.0074
884	SLE FR 5	0.45	0.46	48.06	0.0134	-0.0334	-0.0075
884	SLE FR 6	0.45	0.47	49.12	0.0134	-0.0341	-0.0075
884	SLE QP 1	0.43	0.45	46.19	0.0135	-0.0326	-0.0073
884	SLE QP 2	0.44	0.46	47.95	0.0134	-0.0335	-0.0074
884	SLD 1	6.14	1.09	45.59	0.0063	0.036	-0.0425
884	SLD 2	5.9	1.19	45.61	0.0061	0.0362	-0.0378
884	SLD 3	5.99	-0.67	45.73	0.0115	0.0454	-0.0414
884	SLD 4	5.75	-0.57	45.74	0.0112	0.0456	-0.0367
884	SLD 5	2.42	3.3	47.03	0.0035	-0.0271	-0.0206
884	SLD 6	2.26	3.36	47.04	0.0033	-0.0269	-0.0175
884	SLD 7	1.93	-2.56	47.49	0.0207	0.0045	-0.0167
884	SLD 8	1.77	-2.5	47.5	0.0205	0.0047	-0.0136
884	SLD 9	-0.88	3.42	48.4	0.0063	-0.0716	-0.0013
884	SLD 10	-1.04	3.49	48.41	0.0061	-0.0715	0.0018
884	SLD 11	-1.38	-2.44	48.86	0.0235	-0.04	0.0026
884	SLD 12	-1.53	-2.38	48.87	0.0233	-0.0399	0.0057
884	SLD 13	-4.86	1.5	50.16	0.0155	-0.1126	0.0218
884	SLD 14	-5.1	1.59	50.18	0.0153	-0.1124	0.0265
884	SLD 15	-5.01	-0.26	50.3	0.0207	-0.1031	0.023
884	SLD 16	-5.25	-0.17	50.31	0.0205	-0.1029	0.0277
884	SLV 1	13.77	1.88	42.43	-0.0034	0.1293	-0.0895
884	SLV 2	13.2	2.1	42.46	-0.004	0.1298	-0.0785
884	SLV 3	13.42	-2.13	42.75	0.0083	0.1509	-0.0868
884	SLV 4	12.86	-1.91	42.79	0.0078	0.1513	-0.0758
884	SLV 5	5.06	6.93	45.8	-0.0094	-0.0174	-0.0381
884	SLV 6	4.7	7.07	45.82	-0.0097	-0.0171	-0.031
884	SLV 7	3.91	-6.43	46.87	0.0297	0.0544	-0.0289
884	SLV 8	3.55	-6.29	46.9	0.0294	0.0548	-0.0219
884	SLV 9	-2.66	7.22	49.01	-0.0026	-0.1217	0.0071
884	SLV 10	-3.02	7.36	49.03	-0.0029	-0.1214	0.0141
884	SLV 11	-3.81	-6.15	50.08	0.0365	-0.0498	0.0162
884	SLV 12	-4.17	-6.01	50.1	0.0361	-0.0495	0.0232
884	SLV 13	-11.97	2.83	53.12	0.019	-0.2183	0.0609
884	SLV 14	-12.53	3.05	53.16	0.0185	-0.2178	0.0719
884	SLV 15	-12.31	-1.18	53.44	0.0308	-0.1968	0.0637
884	SLV 16	-12.88	-0.95	53.48	0.0302	-0.1963	0.0746
884	CRTFP Ux+	0	0	0	0	0	0
884	CRTFP Ux-	0	0	0	0	0	0
887	SLU 1	-0.17	0.46	42.87	0.0172	0.0712	0.0078
887	SLU 2	-0.17	0.54	42.88	0.0169	0.0715	0.0078
887	SLU 3	-0.18	0.49	43.65	0.0177	0.0731	0.008
887	SLU 4	-0.18	0.54	43.65	0.0175	0.0732	0.008
887	SLU 5	-0.17	0.55	43.27	0.017	0.0725	0.0079
887	SLU 6	-0.18	0.49	44.04	0.0178	0.074	0.0081
887	SLU 7	-0.18	0.54	44.05	0.0177	0.0742	0.0081
887	SLU 8	-0.18	0.47	43.66	0.0175	0.0731	0.0081
887	SLU 9	-0.18	0.52	43.66	0.0173	0.0733	0.008
887	SLU 10	-0.19	0.62	48.67	0.0183	0.0806	0.009
887	SLU 11	-0.19	0.56	49.43	0.0191	0.0822	0.0092
887	SLU 12	-0.19	0.61	49.44	0.0189	0.0824	0.0092
887	SLU 13	-0.19	0.62	49.06	0.0184	0.0816	0.0091
887	SLU 14	-0.2	0.57	49.83	0.0192	0.0832	0.0093
887	SLU 15	-0.2	0.62	49.83	0.0191	0.0833	0.0093
887	SLU 16	-0.2	0.54	49.44	0.0189	0.0823	0.0093
887	SLU 17	-0.19	0.59	49.45	0.0187	0.0824	0.0092
887	SLU 18	-0.2	0.57	51.14	0.0191	0.0843	0.0095
887	SLU 19	-0.2	0.61	51.15	0.019	0.0845	0.0095
887	SLU 20	-0.2	0.57	51.53	0.0193	0.0852	0.0097
887	SLU 21	-0.2	0.62	51.54	0.0191	0.0854	0.0096
887	SLU 22	-0.2	0.59	48.43	0.0193	0.0829	0.0085
887	SLU 23	-0.2	0.68	48.44	0.019	0.0832	0.0085
887	SLU 24	-0.2	0.62	49.21	0.0198	0.0848	0.0087
887	SLU 25	-0.2	0.67	49.21	0.0196	0.0849	0.0087
887	SLU 26	-0.2	0.68	48.84	0.0191	0.0842	0.0086
887	SLU 27	-0.21	0.63	49.6	0.0199	0.0857	0.0088
887	SLU 28	-0.21	0.68	49.61	0.0198	0.0859	0.0088
887	SLU 29	-0.2	0.6	49.22	0.0196	0.0848	0.0088
887	SLU 30	-0.2	0.65	49.22	0.0194	0.085	0.0087
887	SLU 31	-0.22	0.75	54.23	0.0204	0.0923	0.0097
887	SLU 32	-0.22	0.7	54.99	0.0212	0.0939	0.0099
887	SLU 33	-0.22	0.75	55	0.021	0.0941	0.0099
887	SLU 34	-0.22	0.75	54.62	0.0205	0.0933	0.0098
887	SLU 35	-0.23	0.7	55.39	0.0213	0.0949	0.01
887	SLU 36	-0.22	0.75	55.39	0.0212	0.095	0.01
887	SLU 37	-0.22	0.68	55	0.021	0.094	0.01
887	SLU 38	-0.22	0.73	55.01	0.0208	0.0941	0.0099
887	SLU 39	-0.23	0.7	56.7	0.0212	0.096	0.0102
887	SLU 40	-0.23	0.75	56.71	0.0211	0.0962	0.0102
887	SLU 41	-0.23	0.7	57.09	0.0214	0.0969	0.0104
887	SLU 42	-0.23	0.75	57.1	0.0212	0.0971	0.0103
887	SLU 43	-0.21	0.55	53.82	0.0216	0.0886	0.0099
887	SLU 44	-0.21	0.63	53.84	0.0213	0.0889	0.0099

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
887	SLU 45	-0.22	0.58	54.6	0.0221	0.0904	0.0101
887	SLU 46	-0.22	0.63	54.61	0.0219	0.0906	0.0101
887	SLU 47	-0.22	0.64	54.23	0.0215	0.0898	0.01
887	SLU 48	-0.22	0.59	54.99	0.0223	0.0914	0.0102
887	SLU 49	-0.22	0.63	55	0.0221	0.0916	0.0102
887	SLU 50	-0.22	0.56	54.61	0.0219	0.0905	0.0102
887	SLU 51	-0.22	0.61	54.62	0.0218	0.0907	0.0101
887	SLU 52	-0.23	0.71	59.62	0.0227	0.098	0.0111
887	SLU 53	-0.24	0.66	60.39	0.0235	0.0996	0.0113
887	SLU 54	-0.24	0.7	60.4	0.0233	0.0997	0.0113
887	SLU 55	-0.23	0.71	60.02	0.0229	0.099	0.0112
887	SLU 56	-0.24	0.66	60.78	0.0237	0.1005	0.0114
887	SLU 57	-0.24	0.71	60.79	0.0235	0.1007	0.0114
887	SLU 58	-0.24	0.63	60.4	0.0233	0.0996	0.0114
887	SLU 59	-0.24	0.68	60.4	0.0232	0.0998	0.0113
887	SLU 60	-0.24	0.66	62.09	0.0236	0.1016	0.0116
887	SLU 61	-0.24	0.71	62.1	0.0234	0.1018	0.0116
887	SLU 62	-0.24	0.66	62.49	0.0237	0.1026	0.0118
887	SLU 63	-0.24	0.71	62.49	0.0236	0.1028	0.0117
887	SLU 64	-0.24	0.69	59.39	0.0237	0.1003	0.0106
887	SLU 65	-0.24	0.77	59.4	0.0234	0.1006	0.0106
887	SLU 66	-0.25	0.72	60.16	0.0242	0.1021	0.0108
887	SLU 67	-0.25	0.77	60.17	0.024	0.1023	0.0108
887	SLU 68	-0.24	0.77	59.79	0.0236	0.1015	0.0107
887	SLU 69	-0.25	0.72	60.55	0.0244	0.1031	0.0109
887	SLU 70	-0.25	0.77	60.56	0.0242	0.1033	0.0109
887	SLU 71	-0.25	0.69	60.17	0.024	0.1022	0.0109
887	SLU 72	-0.25	0.74	60.18	0.0239	0.1024	0.0109
887	SLU 73	-0.26	0.84	65.19	0.0248	0.1097	0.0118
887	SLU 74	-0.27	0.79	65.95	0.0256	0.1113	0.012
887	SLU 75	-0.26	0.84	65.96	0.0254	0.1114	0.012
887	SLU 76	-0.26	0.85	65.58	0.025	0.1107	0.0119
887	SLU 77	-0.27	0.79	66.34	0.0258	0.1122	0.0121
887	SLU 78	-0.27	0.84	66.35	0.0256	0.1124	0.0121
887	SLU 79	-0.27	0.77	65.96	0.0254	0.1113	0.0121
887	SLU 80	-0.27	0.82	65.97	0.0252	0.1115	0.0121
887	SLU 81	-0.27	0.79	67.65	0.0257	0.1133	0.0124
887	SLU 82	-0.27	0.84	67.66	0.0255	0.1135	0.0123
887	SLU 83	-0.27	0.8	68.05	0.0258	0.1143	0.0125
887	SLU 84	-0.27	0.85	68.05	0.0257	0.1145	0.0125
887	SLE RA 1	-0.18	0.5	44.46	0.0178	0.0746	0.008
887	SLE RA 2	-0.18	0.55	44.47	0.0176	0.0748	0.008
887	SLE RA 3	-0.18	0.52	44.98	0.0181	0.0758	0.0081
887	SLE RA 4	-0.18	0.55	44.98	0.018	0.0759	0.0081
887	SLE RA 5	-0.18	0.56	44.73	0.0177	0.0754	0.0081
887	SLE RA 6	-0.18	0.52	45.24	0.0182	0.0764	0.0082
887	SLE RA 7	-0.18	0.55	45.24	0.0181	0.0765	0.0082
887	SLE RA 8	-0.18	0.5	44.98	0.018	0.0758	0.0082
887	SLE RA 9	-0.18	0.54	44.99	0.0179	0.076	0.0082
887	SLE RA 10	-0.19	0.6	48.33	0.0185	0.0808	0.0088
887	SLE RA 11	-0.2	0.57	48.83	0.019	0.0819	0.0089
887	SLE RA 12	-0.2	0.6	48.84	0.0189	0.082	0.0089
887	SLE RA 13	-0.19	0.6	48.59	0.0186	0.0815	0.0089
887	SLE RA 14	-0.2	0.57	49.1	0.0191	0.0825	0.009
887	SLE RA 15	-0.2	0.6	49.1	0.019	0.0826	0.009
887	SLE RA 16	-0.2	0.55	48.84	0.0189	0.0819	0.009
887	SLE RA 17	-0.2	0.59	48.85	0.0188	0.082	0.009
887	SLE RA 18	-0.2	0.57	49.97	0.0191	0.0833	0.0092
887	SLE RA 19	-0.2	0.6	49.98	0.019	0.0834	0.0092
887	SLE RA 20	-0.2	0.57	50.23	0.0192	0.0839	0.0092
887	SLE RA 21	-0.2	0.6	50.24	0.0191	0.084	0.0092
887	SLE FR 1	-0.18	0.5	44.46	0.0178	0.0746	0.008
887	SLE FR 2	-0.18	0.51	44.46	0.0177	0.0746	0.008
887	SLE FR 3	-0.18	0.5	44.56	0.0178	0.0748	0.0081
887	SLE FR 4	-0.19	0.53	46.11	0.0181	0.0772	0.0084
887	SLE FR 5	-0.19	0.52	46.22	0.0182	0.0774	0.0084
887	SLE FR 6	-0.19	0.53	47.22	0.0184	0.0789	0.0086
887	SLE QP 1	-0.18	0.5	44.46	0.0178	0.0746	0.008
887	SLE QP 2	-0.19	0.52	46.11	0.0182	0.0772	0.0084
887	SLD 1	5.46	1.62	47.48	0.0204	0.138	-0.0259
887	SLD 2	5.22	1.52	47.49	0.0207	0.1383	-0.0213
887	SLD 3	5.32	-0.13	47.62	0.0259	0.1323	-0.0239
887	SLD 4	5.08	-0.24	47.63	0.0262	0.1326	-0.0193
887	SLD 5	1.76	3.53	46.3	0.0104	0.1041	-0.0058
887	SLD 6	1.6	3.46	46.31	0.0107	0.1043	-0.0028
887	SLD 7	1.3	-2.32	46.78	0.0287	0.0849	0.001
887	SLD 8	1.14	-2.39	46.79	0.0289	0.0851	0.004
887	SLD 9	-1.51	3.42	45.44	0.0074	0.0692	0.0127
887	SLD 10	-1.67	3.36	45.44	0.0076	0.0694	0.0157
887	SLD 11	-1.98	-2.42	45.92	0.0256	0.05	0.0196
887	SLD 12	-2.13	-2.49	45.92	0.0259	0.0502	0.0226
887	SLD 13	-5.45	1.28	44.6	0.0101	0.0218	0.036
887	SLD 14	-5.69	1.17	44.6	0.0105	0.0221	0.0406
887	SLD 15	-5.59	-0.48	44.74	0.0156	0.016	0.038
887	SLD 16	-5.83	-0.58	44.75	0.0159	0.0163	0.0427
887	SLV 1	13.02	3.05	49.34	0.024	0.2194	-0.0718
887	SLV 2	12.46	2.81	49.36	0.0248	0.2201	-0.061
887	SLV 3	12.7	-0.95	49.67	0.0364	0.2062	-0.0671
887	SLV 4	12.13	-1.19	49.7	0.0373	0.2069	-0.0563
887	SLV 5	4.36	7.39	46.57	0.0009	0.1398	-0.0246
887	SLV 6	4	7.23	46.58	0.0014	0.1402	-0.0178

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
887	SLV 7	3.28	-5.94	47.68	0.0424	0.0957	-0.0089
887	SLV 8	2.93	-6.1	47.7	0.0429	0.0961	-0.0021
887	SLV 9	-3.3	7.14	44.53	-0.0066	0.0582	0.0188
887	SLV 10	-3.66	6.98	44.54	-0.0061	0.0587	0.0257
887	SLV 11	-4.37	-6.19	45.64	0.0349	0.0141	0.0345
887	SLV 12	-4.73	-6.35	45.66	0.0355	0.0146	0.0414
887	SLV 13	-12.51	2.23	42.53	-0.0009	-0.0525	0.0731
887	SLV 14	-13.07	1.99	42.55	-0.0001	-0.0518	0.0838
887	SLV 15	-12.83	-1.77	42.86	0.0115	-0.0657	0.0778
887	SLV 16	-13.39	-2.01	42.89	0.0123	-0.065	0.0885
887	CRTFP Ux+	0	0	0	0	0	0
887	CRTFP Ux-	0	0	0	0	0	0
889	SLU 1	-0.37	-0.03	23.27	-0.6014	-5.143	-0.0189
889	SLU 2	-0.37	0.03	23.28	-0.6016	-5.1446	-0.0042
889	SLU 3	-0.38	-0.03	23.74	-0.6132	-5.2437	-0.018
889	SLU 4	-0.38	0.01	23.74	-0.6133	-5.2447	-0.0092
889	SLU 5	-0.38	0.03	23.54	-0.6082	-5.2012	-0.0036
889	SLU 6	-0.39	-0.02	24	-0.6199	-5.3003	-0.0174
889	SLU 7	-0.39	0.01	24	-0.62	-5.3013	-0.0085
889	SLU 8	-0.38	-0.03	23.79	-0.6148	-5.2562	-0.0177
889	SLU 9	-0.38	0.01	23.8	-0.6149	-5.2572	-0.0089
889	SLU 10	-0.4	0.04	26.25	-0.6778	-5.7956	-0.0013
889	SLU 11	-0.41	-0.01	26.71	-0.6895	-5.8947	-0.0151
889	SLU 12	-0.41	0.02	26.71	-0.6896	-5.8957	-0.0062
889	SLU 13	-0.4	0.04	26.52	-0.6845	-5.8522	-0.0007
889	SLU 14	-0.41	-0.01	26.97	-0.6962	-5.9513	-0.0144
889	SLU 15	-0.41	0.03	26.97	-0.6963	-5.9523	-0.0056
889	SLU 16	-0.41	-0.01	26.77	-0.691	-5.9072	-0.0148
889	SLU 17	-0.41	0.02	26.77	-0.6911	-5.9082	-0.006
889	SLU 18	-0.41	-0.01	27.52	-0.7103	-6.073	-0.0148
889	SLU 19	-0.41	0.02	27.53	-0.7104	-6.0739	-0.0059
889	SLU 20	-0.42	-0.01	27.78	-0.717	-6.1296	-0.0141
889	SLU 21	-0.42	0.03	27.79	-0.7171	-6.1306	-0.0053
889	SLU 22	-0.4	-0.02	26.18	-0.676	-5.7802	-0.0158
889	SLU 23	-0.4	0.04	26.19	-0.6761	-5.7818	-0.0011
889	SLU 24	-0.41	-0.01	26.65	-0.6878	-5.8809	-0.0148
889	SLU 25	-0.41	0.02	26.65	-0.6879	-5.8819	-0.006
889	SLU 26	-0.41	0.05	26.45	-0.6828	-5.8384	-0.0005
889	SLU 27	-0.42	-0.01	26.91	-0.6945	-5.9375	-0.0142
889	SLU 28	-0.42	0.03	26.91	-0.6946	-5.9385	-0.0054
889	SLU 29	-0.42	-0.01	26.71	-0.6893	-5.8934	-0.0145
889	SLU 30	-0.42	0.03	26.71	-0.6894	-5.8944	-0.0057
889	SLU 31	-0.43	0.06	29.17	-0.7524	-6.4328	0.0018
889	SLU 32	-0.44	0	29.62	-0.7641	-6.5319	-0.0119
889	SLU 33	-0.44	0.04	29.63	-0.7642	-6.5328	-0.0031
889	SLU 34	-0.44	0.06	29.43	-0.7591	-6.4894	0.0024
889	SLU 35	-0.45	0.01	29.88	-0.7707	-6.5885	-0.0113
889	SLU 36	-0.45	0.04	29.89	-0.7709	-6.5894	-0.0025
889	SLU 37	-0.44	0.01	29.68	-0.7656	-6.5444	-0.0116
889	SLU 38	-0.44	0.04	29.68	-0.7657	-6.5453	-0.0028
889	SLU 39	-0.44	0.01	30.43	-0.7849	-6.7102	-0.0116
889	SLU 40	-0.44	0.04	30.44	-0.785	-6.7111	-0.0028
889	SLU 41	-0.45	0.01	30.69	-0.7916	-6.7668	-0.011
889	SLU 42	-0.45	0.04	30.7	-0.7917	-6.7677	-0.0022
889	SLU 43	-0.47	-0.05	29.26	-0.7562	-6.4675	-0.0257
889	SLU 44	-0.47	0.01	29.26	-0.7564	-6.4691	-0.011
889	SLU 45	-0.48	-0.04	29.72	-0.7681	-6.5682	-0.0247
889	SLU 46	-0.48	-0.01	29.72	-0.7682	-6.5691	-0.0159
889	SLU 47	-0.48	0.01	29.52	-0.7631	-6.5257	-0.0104
889	SLU 48	-0.49	-0.04	29.98	-0.7748	-6.6248	-0.0241
889	SLU 49	-0.49	0	29.98	-0.7749	-6.6257	-0.0153
889	SLU 50	-0.48	-0.04	29.78	-0.7696	-6.5807	-0.0244
889	SLU 51	-0.48	-0.01	29.78	-0.7697	-6.5816	-0.0156
889	SLU 52	-0.5	0.03	32.24	-0.8327	-7.12	-0.0081
889	SLU 53	-0.51	-0.03	32.69	-0.8443	-7.2192	-0.0218
889	SLU 54	-0.51	0.01	32.7	-0.8444	-7.2201	-0.013
889	SLU 55	-0.5	0.03	32.5	-0.8393	-7.1766	-0.0074
889	SLU 56	-0.51	-0.02	32.95	-0.851	-7.2758	-0.0212
889	SLU 57	-0.51	0.01	32.96	-0.8511	-7.2767	-0.0124
889	SLU 58	-0.51	-0.03	32.75	-0.8458	-7.2317	-0.0215
889	SLU 59	-0.51	0.01	32.76	-0.846	-7.2326	-0.0127
889	SLU 60	-0.51	-0.03	33.51	-0.8651	-7.3975	-0.0215
889	SLU 61	-0.51	0.01	33.51	-0.8653	-7.3984	-0.0127
889	SLU 62	-0.52	-0.02	33.77	-0.8718	-7.4541	-0.0209
889	SLU 63	-0.52	0.01	33.77	-0.8719	-7.455	-0.0121
889	SLU 64	-0.5	-0.03	32.17	-0.8308	-7.1047	-0.0225
889	SLU 65	-0.5	0.03	32.18	-0.831	-7.1062	-0.0078
889	SLU 66	-0.51	-0.03	32.63	-0.8427	-7.2054	-0.0216
889	SLU 67	-0.51	0.01	32.64	-0.8428	-7.2063	-0.0128
889	SLU 68	-0.51	0.03	32.44	-0.8377	-7.1628	-0.0072
889	SLU 69	-0.52	-0.02	32.89	-0.8493	-7.262	-0.021
889	SLU 70	-0.52	0.01	32.9	-0.8495	-7.2629	-0.0121
889	SLU 71	-0.52	-0.03	32.69	-0.8442	-7.2179	-0.0213
889	SLU 72	-0.52	0.01	32.69	-0.8443	-7.2188	-0.0125
889	SLU 73	-0.53	0.04	35.15	-0.9072	-7.7572	-0.0049
889	SLU 74	-0.54	-0.01	35.61	-0.9189	-7.8563	-0.0187
889	SLU 75	-0.54	0.02	35.61	-0.919	-7.8573	-0.0099
889	SLU 76	-0.54	0.05	35.41	-0.9139	-7.8138	-0.0043
889	SLU 77	-0.55	-0.01	35.87	-0.9256	-7.913	-0.0181
889	SLU 78	-0.55	0.03	35.87	-0.9257	-7.9139	-0.0092
889	SLU 79	-0.54	-0.01	35.66	-0.9204	-7.8689	-0.0184

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
889	SLU 80	-0.54	0.03	35.67	-0.9205	-7.8698	-0.0096
889	SLU 81	-0.54	-0.01	36.42	-0.9397	-8.0346	-0.0184
889	SLU 82	-0.54	0.03	36.42	-0.9398	-8.0356	-0.0095
889	SLU 83	-0.55	-0.01	36.68	-0.9464	-8.0912	-0.0177
889	SLU 84	-0.55	0.03	36.68	-0.9465	-8.0922	-0.0089
889	SLE RA 1	-0.38	-0.03	24.11	-0.6227	-5.3251	-0.018
889	SLE RA 2	-0.38	0.01	24.11	-0.6228	-5.3261	-0.0082
889	SLE RA 3	-0.39	-0.02	24.41	-0.6306	-5.3922	-0.0174
889	SLE RA 4	-0.39	0	24.42	-0.6307	-5.3929	-0.0115
889	SLE RA 5	-0.38	0.01	24.28	-0.6273	-5.3639	-0.0078
889	SLE RA 6	-0.39	-0.02	24.59	-0.635	-5.43	-0.017
889	SLE RA 7	-0.39	0	24.59	-0.6351	-5.4306	-0.0111
889	SLE RA 8	-0.39	-0.02	24.45	-0.6316	-5.4006	-0.0172
889	SLE RA 9	-0.39	0	24.46	-0.6317	-5.4012	-0.0113
889	SLE RA 10	-0.4	0.02	26.09	-0.6736	-5.7601	-0.0063
889	SLE RA 11	-0.4	-0.01	26.4	-0.6814	-5.8262	-0.0154
889	SLE RA 12	-0.4	0.01	26.4	-0.6815	-5.8268	-0.0096
889	SLE RA 13	-0.4	0.02	26.27	-0.6781	-5.7979	-0.0059
889	SLE RA 14	-0.41	-0.01	26.57	-0.6859	-5.8639	-0.015
889	SLE RA 15	-0.41	0.01	26.57	-0.686	-5.8646	-0.0092
889	SLE RA 16	-0.41	-0.01	26.44	-0.6824	-5.8345	-0.0153
889	SLE RA 17	-0.41	0.01	26.44	-0.6825	-5.8352	-0.0094
889	SLE RA 18	-0.41	-0.01	26.94	-0.6953	-5.9451	-0.0152
889	SLE RA 19	-0.41	0.01	26.94	-0.6954	-5.9457	-0.0094
889	SLE RA 20	-0.41	-0.01	27.11	-0.6998	-5.9828	-0.0148
889	SLE RA 21	-0.41	0.01	27.11	-0.6998	-5.9834	-0.009
889	SLE FR 1	-0.38	-0.03	24.11	-0.6227	-5.3251	-0.018
889	SLE FR 2	-0.38	-0.02	24.11	-0.6227	-5.3253	-0.0161
889	SLE FR 3	-0.38	-0.03	24.17	-0.6245	-5.3402	-0.0178
889	SLE FR 4	-0.39	-0.02	24.96	-0.6445	-5.5113	-0.0152
889	SLE FR 5	-0.39	-0.02	25.02	-0.6463	-5.5262	-0.017
889	SLE FR 6	-0.39	-0.02	25.52	-0.659	-5.6351	-0.0166
889	SLE QP 1	-0.38	-0.03	24.11	-0.6227	-5.3251	-0.018
889	SLE QP 2	-0.39	-0.02	24.95	-0.6445	-5.5111	-0.0172
889	SLD 1	2.04	0.78	29.99	-0.7735	-6.5957	0.2365
889	SLD 2	1.92	0.51	30.02	-0.7742	-6.603	0.1675
889	SLD 3	1.96	-0.26	30.14	-0.7772	-6.6316	-0.0231
889	SLD 4	1.85	-0.52	30.17	-0.7779	-6.6389	-0.0921
889	SLD 5	0.48	1.83	26.23	-0.6775	-5.7806	0.4646
889	SLD 6	0.4	1.66	26.25	-0.6779	-5.7854	0.4198
889	SLD 7	0.22	-1.62	26.74	-0.6897	-5.9005	-0.4006
889	SLD 8	0.15	-1.79	26.76	-0.6902	-5.9053	-0.4453
889	SLD 9	-0.92	1.74	23.15	-0.5988	-5.1169	0.411
889	SLD 10	-1	1.57	23.17	-0.5992	-5.1216	0.3662
889	SLD 11	-1.18	-1.71	23.66	-0.611	-5.2368	-0.4542
889	SLD 12	-1.25	-1.88	23.68	-0.6114	-5.2415	-0.499
889	SLD 13	-2.62	0.47	19.74	-0.5111	-4.3832	0.0577
889	SLD 14	-2.74	0.21	19.77	-0.5117	-4.3905	-0.0113
889	SLD 15	-2.7	-0.56	19.89	-0.5148	-4.4192	-0.2018
889	SLD 16	-2.81	-0.83	19.92	-0.5154	-4.4265	-0.2708
889	SLV 1	5.28	1.82	36.74	-0.9465	-8.0495	0.5687
889	SLV 2	5.02	1.21	36.81	-0.948	-8.0665	0.408
889	SLV 3	5.1	-0.54	37.1	-0.955	-8.133	-0.0234
889	SLV 4	4.84	-1.16	37.17	-0.9566	-8.15	-0.1842
889	SLV 5	1.63	4.22	27.94	-0.7218	-6.1432	1.0838
889	SLV 6	1.46	3.82	27.98	-0.7228	-6.1541	0.9812
889	SLV 7	1.03	-3.65	29.13	-0.7504	-6.4213	-0.8899
889	SLV 8	0.86	-4.05	29.17	-0.7513	-6.4321	-0.9925
889	SLV 9	-1.64	4	20.74	-0.5376	-4.59	0.9582
889	SLV 10	-1.81	3.61	20.78	-0.5386	-4.6009	0.8555
889	SLV 11	-2.24	-3.87	21.93	-0.5661	-4.8681	-1.0155
889	SLV 12	-2.41	-4.26	21.97	-0.5671	-4.8789	-1.1182
889	SLV 13	-5.62	1.11	12.74	-0.3323	-2.8722	0.1498
889	SLV 14	-5.88	0.49	12.81	-0.3339	-2.8892	-0.011
889	SLV 15	-5.79	-1.25	13.1	-0.3409	-2.9556	-0.4423
889	SLV 16	-6.06	-1.87	13.17	-0.3424	-2.9726	-0.6031
889	CRTFP Ux+	0	0	0	0	0	0
889	CRTFP Ux-	0	0	0	0	0	0
889	CRTFP Uy+	0	0	0	0	0	0
889	CRTFP Uy-	0	0	0	0	0	0
892	SLU 1	1.33	0	60.34	-2.9979	-0.4655	0.0671
892	SLU 2	1.33	0.11	60.33	-2.9979	-0.4661	0.0686
892	SLU 3	1.36	0.01	61.51	-3.0561	-0.4733	0.0689
892	SLU 4	1.36	0.07	61.51	-3.0561	-0.4736	0.0698
892	SLU 5	1.35	0.1	60.97	-3.0296	-0.4713	0.0697
892	SLU 6	1.38	0.01	62.14	-3.0879	-0.4785	0.07
892	SLU 7	1.39	0.07	62.14	-3.0879	-0.4788	0.071
892	SLU 8	1.37	-0.01	61.6	-3.0614	-0.4759	0.0693
892	SLU 9	1.38	0.05	61.6	-3.0614	-0.4763	0.0702
892	SLU 10	1.46	0.16	68.41	-3.3997	-0.517	0.075
892	SLU 11	1.5	0.06	69.58	-3.4579	-0.5242	0.0754
892	SLU 12	1.5	0.12	69.58	-3.4579	-0.5245	0.0763
892	SLU 13	1.49	0.15	69.04	-3.4315	-0.5222	0.0762
892	SLU 14	1.52	0.06	70.22	-3.4897	-0.5293	0.0765
892	SLU 15	1.52	0.12	70.21	-3.4897	-0.5297	0.0774
892	SLU 16	1.51	0.04	69.67	-3.4632	-0.5268	0.0758
892	SLU 17	1.51	0.1	69.67	-3.4632	-0.5272	0.0767
892	SLU 18	1.52	0.08	71.87	-3.5719	-0.5382	0.0763
892	SLU 19	1.52	0.14	71.87	-3.5719	-0.5386	0.0772
892	SLU 20	1.54	0.07	72.5	-3.6037	-0.5434	0.0774
892	SLU 21	1.55	0.13	72.5	-3.6037	-0.5438	0.0783

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
892	SLU 22	1.46	0.07	68.12	-3.3844	-0.5153	0.0742
892	SLU 23	1.46	0.17	68.11	-3.3844	-0.5159	0.0757
892	SLU 24	1.5	0.07	69.29	-3.4426	-0.523	0.076
892	SLU 25	1.5	0.14	69.29	-3.4426	-0.5234	0.0769
892	SLU 26	1.49	0.16	68.75	-3.4161	-0.5211	0.0768
892	SLU 27	1.52	0.07	69.92	-3.4744	-0.5282	0.0772
892	SLU 28	1.52	0.13	69.92	-3.4744	-0.5286	0.0781
892	SLU 29	1.51	0.05	69.38	-3.4479	-0.5257	0.0764
892	SLU 30	1.51	0.11	69.38	-3.4479	-0.526	0.0773
892	SLU 31	1.6	0.22	76.19	-3.7862	-0.5668	0.0821
892	SLU 32	1.63	0.13	77.36	-3.8444	-0.5739	0.0825
892	SLU 33	1.63	0.19	77.36	-3.8444	-0.5743	0.0834
892	SLU 34	1.62	0.21	76.82	-3.8179	-0.572	0.0833
892	SLU 35	1.66	0.12	78	-3.8762	-0.5791	0.0836
892	SLU 36	1.66	0.18	77.99	-3.8762	-0.5795	0.0845
892	SLU 37	1.64	0.1	77.45	-3.8497	-0.5765	0.0829
892	SLU 38	1.65	0.16	77.45	-3.8497	-0.5769	0.0838
892	SLU 39	1.65	0.14	79.65	-3.9584	-0.588	0.0834
892	SLU 40	1.66	0.2	79.65	-3.9584	-0.5883	0.0843
892	SLU 41	1.68	0.13	80.28	-3.9901	-0.5932	0.0845
892	SLU 42	1.68	0.19	80.28	-3.9901	-0.5935	0.0854
892	SLU 43	1.68	-0.02	75.77	-3.7647	-0.5881	0.0847
892	SLU 44	1.68	0.08	75.77	-3.7647	-0.5887	0.0862
892	SLU 45	1.71	-0.01	76.95	-3.823	-0.5959	0.0866
892	SLU 46	1.71	0.05	76.94	-3.823	-0.5962	0.0875
892	SLU 47	1.7	0.08	76.4	-3.7965	-0.5939	0.0874
892	SLU 48	1.74	-0.02	77.58	-3.8547	-0.6011	0.0877
892	SLU 49	1.74	0.05	77.58	-3.8547	-0.6014	0.0886
892	SLU 50	1.73	-0.03	77.04	-3.8283	-0.5985	0.087
892	SLU 51	1.73	0.03	77.03	-3.8283	-0.5989	0.0879
892	SLU 52	1.82	0.14	83.84	-4.1666	-0.6396	0.0927
892	SLU 53	1.85	0.04	85.02	-4.2248	-0.6468	0.0931
892	SLU 54	1.85	0.1	85.01	-4.2248	-0.6471	0.094
892	SLU 55	1.84	0.13	84.47	-4.1983	-0.6448	0.0938
892	SLU 56	1.87	0.04	85.65	-4.2565	-0.6519	0.0942
892	SLU 57	1.87	0.1	85.65	-4.2565	-0.6523	0.0951
892	SLU 58	1.86	0.02	85.11	-4.2301	-0.6494	0.0934
892	SLU 59	1.86	0.08	85.11	-4.2301	-0.6498	0.0944
892	SLU 60	1.87	0.05	87.3	-4.3388	-0.6608	0.094
892	SLU 61	1.87	0.12	87.3	-4.3388	-0.6612	0.0949
892	SLU 62	1.89	0.05	87.93	-4.3705	-0.666	0.0951
892	SLU 63	1.9	0.11	87.93	-4.3705	-0.6664	0.096
892	SLU 64	1.81	0.05	83.55	-4.1512	-0.6379	0.0919
892	SLU 65	1.82	0.15	83.55	-4.1512	-0.6385	0.0934
892	SLU 66	1.85	0.05	84.73	-4.2095	-0.6456	0.0937
892	SLU 67	1.85	0.12	84.72	-4.2095	-0.646	0.0946
892	SLU 68	1.84	0.14	84.18	-4.183	-0.6437	0.0945
892	SLU 69	1.87	0.05	85.36	-4.2412	-0.6508	0.0948
892	SLU 70	1.87	0.11	85.36	-4.2412	-0.6512	0.0957
892	SLU 71	1.86	0.03	84.82	-4.2147	-0.6483	0.0941
892	SLU 72	1.86	0.09	84.81	-4.2147	-0.6486	0.095
892	SLU 73	1.95	0.2	91.62	-4.553	-0.6894	0.0998
892	SLU 74	1.98	0.1	92.8	-4.6113	-0.6965	0.1002
892	SLU 75	1.98	0.17	92.79	-4.6113	-0.6969	0.1011
892	SLU 76	1.98	0.19	92.25	-4.5848	-0.6946	0.1009
892	SLU 77	2.01	0.1	93.43	-4.643	-0.7017	0.1013
892	SLU 78	2.01	0.16	93.43	-4.643	-0.7021	0.1022
892	SLU 79	2	0.08	92.89	-4.6165	-0.6991	0.1006
892	SLU 80	2	0.14	92.89	-4.6165	-0.6995	0.1015
892	SLU 81	2.01	0.12	95.08	-4.7252	-0.7106	0.1011
892	SLU 82	2.01	0.18	95.08	-4.7252	-0.7109	0.102
892	SLU 83	2.03	0.11	95.72	-4.757	-0.7158	0.1022
892	SLU 84	2.03	0.17	95.71	-4.757	-0.7161	0.1031
892	SLE RA 1	1.36	0.02	62.56	-3.1083	-0.4797	0.0691
892	SLE RA 2	1.37	0.09	62.56	-3.1083	-0.4801	0.0701
892	SLE RA 3	1.39	0.03	63.34	-3.1471	-0.4849	0.0703
892	SLE RA 4	1.39	0.07	63.34	-3.1471	-0.4851	0.0709
892	SLE RA 5	1.38	0.08	62.98	-3.1295	-0.4836	0.0708
892	SLE RA 6	1.4	0.02	63.76	-3.1683	-0.4884	0.0711
892	SLE RA 7	1.4	0.06	63.76	-3.1683	-0.4886	0.0717
892	SLE RA 8	1.4	0.01	63.4	-3.1506	-0.4867	0.0706
892	SLE RA 9	1.4	0.05	63.4	-3.1506	-0.4869	0.0712
892	SLE RA 10	1.46	0.12	67.94	-3.3762	-0.5141	0.0744
892	SLE RA 11	1.48	0.06	68.72	-3.415	-0.5188	0.0746
892	SLE RA 12	1.48	0.1	68.72	-3.415	-0.5191	0.0752
892	SLE RA 13	1.47	0.12	68.36	-3.3974	-0.5175	0.0752
892	SLE RA 14	1.49	0.06	69.15	-3.4362	-0.5223	0.0754
892	SLE RA 15	1.49	0.1	69.14	-3.4362	-0.5225	0.076
892	SLE RA 16	1.49	0.05	68.79	-3.4185	-0.5206	0.0749
892	SLE RA 17	1.49	0.09	68.78	-3.4185	-0.5208	0.0755
892	SLE RA 18	1.49	0.07	70.25	-3.491	-0.5282	0.0752
892	SLE RA 19	1.49	0.11	70.25	-3.491	-0.5285	0.0759
892	SLE RA 20	1.51	0.06	70.67	-3.5122	-0.5317	0.076
892	SLE RA 21	1.51	0.11	70.67	-3.5122	-0.5319	0.0766
892	SLE FR 1	1.36	0.02	62.56	-3.1083	-0.4797	0.0691
892	SLE FR 2	1.37	0.03	62.56	-3.1083	-0.4798	0.0693
892	SLE FR 3	1.37	0.02	62.73	-3.1168	-0.4811	0.0694
892	SLE FR 4	1.4	0.05	64.87	-3.2231	-0.4944	0.0711
892	SLE FR 5	1.41	0.03	65.04	-3.2316	-0.4957	0.0712
892	SLE FR 6	1.43	0.05	66.4	-3.2996	-0.504	0.0722
892	SLE QP 1	1.36	0.02	62.56	-3.1083	-0.4797	0.0691

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
892	SLE QP 2	1.4	0.04	64.87	-3.2231	-0.4943	0.0709
892	SLD 1	7.89	1.04	59.46	-2.9959	-0.4731	0.3739
892	SLD 2	7.6	1.36	59.38	-2.9915	-0.4711	0.3689
892	SLD 3	7.73	-0.97	59.9	-3.0129	-0.4424	0.3433
892	SLD 4	7.43	-0.65	59.81	-3.0085	-0.4404	0.3383
892	SLD 5	3.65	3.33	62.61	-3.13	-0.5349	0.209
892	SLD 6	3.46	3.53	62.55	-3.1272	-0.5336	0.2058
892	SLD 7	3.1	-3.37	64.05	-3.1865	-0.4325	0.1072
892	SLD 8	2.91	-3.16	63.99	-3.1836	-0.4312	0.1039
892	SLD 9	-0.11	3.23	65.74	-3.2626	-0.5574	0.0379
892	SLD 10	-0.3	3.44	65.69	-3.2597	-0.5561	0.0347
892	SLD 11	-0.65	-3.46	67.19	-3.319	-0.455	-0.0639
892	SLD 12	-0.84	-3.25	67.13	-3.3162	-0.4537	-0.0671
892	SLD 13	-4.63	0.72	69.92	-3.4377	-0.5482	-0.1965
892	SLD 14	-4.92	1.04	69.84	-3.4334	-0.5462	-0.2014
892	SLD 15	-4.79	-1.29	70.36	-3.4547	-0.5175	-0.227
892	SLD 16	-5.08	-0.97	70.27	-3.4503	-0.5155	-0.232
892	SLV 1	16.57	2.32	52.23	-2.6917	-0.4448	0.7785
892	SLV 2	15.89	3.07	52.03	-2.6815	-0.4401	0.767
892	SLV 3	16.19	-2.25	53.22	-2.7304	-0.3729	0.7088
892	SLV 4	15.51	-1.51	53.02	-2.7202	-0.3683	0.6972
892	SLV 5	6.64	7.53	59.61	-3.0068	-0.5891	0.391
892	SLV 6	6.21	8.01	59.48	-3.0003	-0.5862	0.3836
892	SLV 7	5.38	-7.72	62.91	-3.1357	-0.3498	0.1584
892	SLV 8	4.95	-7.24	62.78	-3.1291	-0.3468	0.151
892	SLV 9	-2.14	7.31	66.96	-3.3171	-0.6418	-0.0092
892	SLV 10	-2.57	7.79	66.83	-3.3106	-0.6388	-0.0165
892	SLV 11	-3.4	-7.94	70.25	-3.446	-0.4024	-0.2417
892	SLV 12	-3.84	-7.46	70.12	-3.4394	-0.3994	-0.2491
892	SLV 13	-12.7	1.58	76.72	-3.726	-0.6203	-0.5553
892	SLV 14	-13.38	2.33	76.52	-3.7158	-0.6156	-0.5669
892	SLV 15	-13.08	-3	77.71	-3.7647	-0.5484	-0.6251
892	SLV 16	-13.76	-2.25	77.5	-3.7545	-0.5438	-0.6367
892	CRTFP Ux+	0	0	0	0	0	0
892	CRTFP Ux-	0	0	0	0	0	0
907	SLU 1	0.38	0.28	9.98	-1.0151	1.422	-0.0592
907	SLU 2	0.38	0.32	9.99	-1.0152	1.4224	-0.074
907	SLU 3	0.39	0.29	10.17	-1.0335	1.4406	-0.0611
907	SLU 4	0.39	0.31	10.17	-1.0336	1.4409	-0.07
907	SLU 5	0.38	0.32	10.09	-1.0255	1.4327	-0.0743
907	SLU 6	0.39	0.29	10.27	-1.0438	1.4509	-0.0614
907	SLU 7	0.39	0.31	10.27	-1.0439	1.4512	-0.0703
907	SLU 8	0.39	0.28	10.19	-1.0357	1.4425	-0.0598
907	SLU 9	0.39	0.31	10.19	-1.0358	1.4428	-0.0687
907	SLU 10	0.42	0.38	11.16	-1.1343	1.543	-0.0897
907	SLU 11	0.43	0.34	11.34	-1.1526	1.5612	-0.0768
907	SLU 12	0.43	0.37	11.34	-1.1527	1.5614	-0.0857
907	SLU 13	0.42	0.38	11.26	-1.1446	1.5533	-0.09
907	SLU 14	0.44	0.35	11.44	-1.1629	1.5714	-0.0771
907	SLU 15	0.43	0.37	11.44	-1.163	1.5717	-0.086
907	SLU 16	0.43	0.34	11.36	-1.1548	1.563	-0.0755
907	SLU 17	0.43	0.36	11.36	-1.1549	1.5633	-0.0844
907	SLU 18	0.44	0.36	11.66	-1.1852	1.5942	-0.0816
907	SLU 19	0.44	0.38	11.66	-1.1853	1.5945	-0.0905
907	SLU 20	0.44	0.36	11.76	-1.1955	1.6044	-0.0819
907	SLU 21	0.44	0.39	11.76	-1.1956	1.6047	-0.0908
907	SLU 22	0.43	0.33	11.12	-1.1307	1.5398	-0.0714
907	SLU 23	0.42	0.37	11.12	-1.1309	1.5403	-0.0862
907	SLU 24	0.44	0.33	11.3	-1.1492	1.5585	-0.0733
907	SLU 25	0.43	0.36	11.3	-1.1493	1.5588	-0.0822
907	SLU 26	0.43	0.37	11.22	-1.1412	1.5506	-0.0865
907	SLU 27	0.44	0.34	11.4	-1.1595	1.5687	-0.0736
907	SLU 28	0.44	0.36	11.4	-1.1596	1.569	-0.0825
907	SLU 29	0.44	0.33	11.32	-1.1514	1.5604	-0.072
907	SLU 30	0.44	0.36	11.33	-1.1515	1.5607	-0.0809
907	SLU 31	0.47	0.42	12.29	-1.25	1.6609	-0.1019
907	SLU 32	0.48	0.39	12.47	-1.2683	1.679	-0.089
907	SLU 33	0.48	0.42	12.47	-1.2684	1.6793	-0.0978
907	SLU 34	0.47	0.43	12.39	-1.2603	1.6711	-0.1022
907	SLU 35	0.48	0.39	12.57	-1.2786	1.6893	-0.0893
907	SLU 36	0.48	0.42	12.58	-1.2787	1.6896	-0.0981
907	SLU 37	0.48	0.39	12.49	-1.2705	1.6809	-0.0877
907	SLU 38	0.48	0.41	12.5	-1.2706	1.6812	-0.0966
907	SLU 39	0.49	0.41	12.79	-1.3009	1.712	-0.0938
907	SLU 40	0.48	0.43	12.79	-1.301	1.7123	-0.1027
907	SLU 41	0.49	0.41	12.89	-1.3112	1.7223	-0.0941
907	SLU 42	0.49	0.43	12.9	-1.3113	1.7226	-0.103
907	SLU 43	0.48	0.34	12.59	-1.2799	1.8081	-0.0728
907	SLU 44	0.47	0.39	12.59	-1.2801	1.8086	-0.0876
907	SLU 45	0.49	0.35	12.77	-1.2984	1.8268	-0.0747
907	SLU 46	0.48	0.38	12.77	-1.2985	1.8271	-0.0836
907	SLU 47	0.48	0.39	12.69	-1.2904	1.8189	-0.0879
907	SLU 48	0.49	0.36	12.87	-1.3087	1.837	-0.075
907	SLU 49	0.49	0.38	12.87	-1.3088	1.8373	-0.0839
907	SLU 50	0.49	0.35	12.79	-1.3006	1.8287	-0.0734
907	SLU 51	0.49	0.37	12.79	-1.3007	1.829	-0.0823
907	SLU 52	0.52	0.44	13.76	-1.3992	1.9292	-0.1033
907	SLU 53	0.53	0.41	13.94	-1.4175	1.9473	-0.0904
907	SLU 54	0.53	0.43	13.94	-1.4176	1.9476	-0.0992
907	SLU 55	0.52	0.45	13.86	-1.4095	1.9394	-0.1036
907	SLU 56	0.53	0.41	14.04	-1.4278	1.9576	-0.0907

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
907	SLU 57	0.53	0.44	14.04	-1.4279	1.9579	-0.0995
907	SLU 58	0.53	0.41	13.96	-1.4197	1.9492	-0.0891
907	SLU 59	0.53	0.43	13.96	-1.4198	1.9495	-0.098
907	SLU 60	0.54	0.43	14.26	-1.4501	1.9803	-0.0952
907	SLU 61	0.53	0.45	14.26	-1.4502	1.9806	-0.1041
907	SLU 62	0.54	0.43	14.36	-1.4604	1.9906	-0.0955
907	SLU 63	0.54	0.45	14.36	-1.4605	1.9909	-0.1044
907	SLU 64	0.52	0.39	13.73	-1.3956	1.926	-0.085
907	SLU 65	0.52	0.43	13.73	-1.3957	1.9265	-0.0998
907	SLU 66	0.53	0.4	13.91	-1.414	1.9446	-0.0869
907	SLU 67	0.53	0.43	13.91	-1.4141	1.9449	-0.0957
907	SLU 68	0.53	0.44	13.83	-1.4061	1.9368	-0.1001
907	SLU 69	0.54	0.4	14.01	-1.4244	1.9549	-0.0872
907	SLU 70	0.54	0.43	14.01	-1.4245	1.9552	-0.0961
907	SLU 71	0.54	0.4	13.93	-1.4162	1.9465	-0.0856
907	SLU 72	0.53	0.42	13.93	-1.4163	1.9468	-0.0945
907	SLU 73	0.56	0.49	14.9	-1.5148	2.047	-0.1154
907	SLU 74	0.57	0.46	15.08	-1.5331	2.0652	-0.1026
907	SLU 75	0.57	0.48	15.08	-1.5332	2.0655	-0.1114
907	SLU 76	0.57	0.49	15	-1.5252	2.0573	-0.1157
907	SLU 77	0.58	0.46	15.18	-1.5435	2.0755	-0.1029
907	SLU 78	0.58	0.49	15.18	-1.5436	2.0758	-0.1117
907	SLU 79	0.58	0.45	15.1	-1.5353	2.0671	-0.1013
907	SLU 80	0.58	0.48	15.1	-1.5354	2.0674	-0.1101
907	SLU 81	0.58	0.47	15.4	-1.5657	2.0982	-0.1074
907	SLU 82	0.58	0.5	15.4	-1.5658	2.0985	-0.1163
907	SLU 83	0.59	0.48	15.5	-1.5761	2.1085	-0.1077
907	SLU 84	0.59	0.5	15.5	-1.5761	2.1088	-0.1166
907	SLE RA 1	0.39	0.29	10.31	-1.0481	1.4556	-0.0627
907	SLE RA 2	0.39	0.32	10.31	-1.0482	1.456	-0.0725
907	SLE RA 3	0.4	0.3	10.43	-1.0604	1.4681	-0.064
907	SLE RA 4	0.4	0.31	10.43	-1.0605	1.4683	-0.0699
907	SLE RA 5	0.39	0.32	10.38	-1.0551	1.4628	-0.0727
907	SLE RA 6	0.4	0.3	10.5	-1.0673	1.4749	-0.0642
907	SLE RA 7	0.4	0.32	10.5	-1.0673	1.4751	-0.0701
907	SLE RA 8	0.4	0.3	10.44	-1.0619	1.4693	-0.0631
907	SLE RA 9	0.4	0.31	10.45	-1.0619	1.4695	-0.069
907	SLE RA 10	0.42	0.36	11.09	-1.1276	1.5363	-0.083
907	SLE RA 11	0.43	0.33	11.21	-1.1398	1.5484	-0.0744
907	SLE RA 12	0.43	0.35	11.21	-1.1399	1.5486	-0.0803
907	SLE RA 13	0.42	0.36	11.16	-1.1345	1.5432	-0.0832
907	SLE RA 14	0.43	0.34	11.28	-1.1467	1.5553	-0.0746
907	SLE RA 15	0.43	0.35	11.28	-1.1468	1.5555	-0.0805
907	SLE RA 16	0.43	0.33	11.22	-1.1413	1.5497	-0.0736
907	SLE RA 17	0.43	0.35	11.23	-1.1413	1.5499	-0.0795
907	SLE RA 18	0.43	0.35	11.42	-1.1615	1.5704	-0.0776
907	SLE RA 19	0.43	0.36	11.42	-1.1616	1.5706	-0.0835
907	SLE RA 20	0.44	0.35	11.49	-1.1684	1.5773	-0.0778
907	SLE RA 21	0.43	0.36	11.49	-1.1685	1.5775	-0.0837
907	SLE FR 1	0.39	0.29	10.31	-1.0481	1.4556	-0.0627
907	SLE FR 2	0.39	0.3	10.31	-1.0481	1.4557	-0.0647
907	SLE FR 3	0.39	0.29	10.34	-1.0509	1.4584	-0.0628
907	SLE FR 4	0.4	0.31	10.64	-1.0821	1.4901	-0.0692
907	SLE FR 5	0.41	0.31	10.67	-1.0849	1.4928	-0.0673
907	SLE FR 6	0.41	0.32	10.87	-1.1048	1.513	-0.0702
907	SLE QP 1	0.39	0.29	10.31	-1.0481	1.4556	-0.0627
907	SLE QP 2	0.4	0.31	10.64	-1.0821	1.4901	-0.0672
907	SLD 1	1.18	0.5	8.97	-0.9114	1.3776	-0.0623
907	SLD 2	1.09	0.7	8.94	-0.9089	1.3715	-0.141
907	SLD 3	1.37	-0.27	9.03	-0.9177	1.3903	0.2255
907	SLD 4	1.28	-0.07	9.01	-0.9152	1.3843	0.1468
907	SLD 5	0.38	1.5	10.05	-1.0217	1.4381	-0.4884
907	SLD 6	0.32	1.63	10.03	-1.0201	1.4342	-0.5395
907	SLD 7	0.99	-1.07	10.26	-1.0429	1.4805	0.4708
907	SLD 8	0.93	-0.94	10.24	-1.0412	1.4766	0.4197
907	SLD 9	-0.12	1.56	11.04	-1.123	1.5036	-0.5541
907	SLD 10	-0.18	1.69	11.03	-1.1214	1.4996	-0.6051
907	SLD 11	0.49	-1.01	11.25	-1.1442	1.546	0.4051
907	SLD 12	0.43	-0.88	11.24	-1.1425	1.5421	0.354
907	SLD 13	-0.47	0.69	12.28	-1.249	1.5959	-0.2812
907	SLD 14	-0.56	0.89	12.26	-1.2465	1.5898	-0.3599
907	SLD 15	-0.29	-0.08	12.34	-1.2554	1.6086	0.0066
907	SLD 16	-0.38	0.12	12.32	-1.2529	1.6025	-0.0721
907	SLV 1	2.23	0.73	6.72	-0.6827	1.227	-0.047
907	SLV 2	2.03	1.2	6.67	-0.6769	1.2129	-0.2303
907	SLV 3	2.65	-1.02	6.87	-0.6973	1.2567	0.6076
907	SLV 4	2.44	-0.56	6.81	-0.6915	1.2425	0.4243
907	SLV 5	0.36	3.02	9.26	-0.9411	1.3686	-1.0228
907	SLV 6	0.22	3.31	9.22	-0.9374	1.3596	-1.1399
907	SLV 7	1.75	-2.83	9.74	-0.9899	1.4674	1.159
907	SLV 8	1.61	-2.53	9.71	-0.9861	1.4584	1.042
907	SLV 9	-0.8	3.15	11.58	-1.1781	1.5218	-1.1763
907	SLV 10	-0.94	3.44	11.54	-1.1744	1.5128	-1.2934
907	SLV 11	0.58	-2.7	12.07	-1.2269	1.6206	1.0055
907	SLV 12	0.45	-2.4	12.03	-1.2232	1.6115	0.8884
907	SLV 13	-1.63	1.17	14.48	-1.4728	1.7376	-0.5586
907	SLV 14	-1.84	1.64	14.42	-1.4669	1.7235	-0.742
907	SLV 15	-1.22	-0.58	14.62	-1.4874	1.7673	0.0959
907	SLV 16	-1.43	-0.12	14.56	-1.4815	1.7531	-0.0874
907	CRTFP Ux+	0	0	0	0	0	0
907	CRTFP Ux-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
910	SLU 1	0.45	0.44	45.06	0.0226	-0.0364	-0.0073
910	SLU 2	0.46	0.52	45.06	0.0223	-0.0369	-0.0073
910	SLU 3	0.47	0.46	45.88	0.0233	-0.0369	-0.0075
910	SLU 4	0.47	0.51	45.88	0.0231	-0.0372	-0.0075
910	SLU 5	0.46	0.52	45.47	0.0226	-0.0369	-0.0074
910	SLU 6	0.48	0.46	46.29	0.0235	-0.0369	-0.0076
910	SLU 7	0.48	0.51	46.29	0.0233	-0.0372	-0.0076
910	SLU 8	0.47	0.44	45.88	0.0231	-0.0364	-0.0075
910	SLU 9	0.47	0.49	45.88	0.0229	-0.0367	-0.0075
910	SLU 10	0.51	0.56	51.23	0.0235	-0.0408	-0.0078
910	SLU 11	0.52	0.5	52.05	0.0244	-0.0409	-0.0079
910	SLU 12	0.52	0.55	52.05	0.0243	-0.0412	-0.0079
910	SLU 13	0.52	0.56	51.64	0.0237	-0.0408	-0.0079
910	SLU 14	0.53	0.5	52.46	0.0246	-0.0409	-0.008
910	SLU 15	0.53	0.55	52.46	0.0245	-0.0412	-0.0081
910	SLU 16	0.53	0.48	52.05	0.0242	-0.0404	-0.008
910	SLU 17	0.53	0.53	52.05	0.0241	-0.0407	-0.008
910	SLU 18	0.53	0.49	53.87	0.0243	-0.0421	-0.008
910	SLU 19	0.54	0.54	53.87	0.0241	-0.0423	-0.008
910	SLU 20	0.54	0.5	54.29	0.0245	-0.0421	-0.0081
910	SLU 21	0.54	0.55	54.28	0.0243	-0.0424	-0.0081
910	SLU 22	0.5	0.53	50.96	0.0248	-0.0434	-0.0078
910	SLU 23	0.51	0.61	50.96	0.0245	-0.0439	-0.0079
910	SLU 24	0.52	0.55	51.78	0.0255	-0.0439	-0.008
910	SLU 25	0.52	0.6	51.78	0.0253	-0.0442	-0.008
910	SLU 26	0.52	0.61	51.37	0.0248	-0.0439	-0.008
910	SLU 27	0.53	0.55	52.19	0.0257	-0.0439	-0.0081
910	SLU 28	0.53	0.6	52.19	0.0255	-0.0442	-0.0081
910	SLU 29	0.52	0.53	51.78	0.0253	-0.0434	-0.0081
910	SLU 30	0.52	0.58	51.78	0.0251	-0.0437	-0.0081
910	SLU 31	0.56	0.65	57.13	0.0257	-0.0478	-0.0083
910	SLU 32	0.57	0.59	57.95	0.0266	-0.0479	-0.0085
910	SLU 33	0.58	0.64	57.95	0.0265	-0.0481	-0.0085
910	SLU 34	0.57	0.65	57.54	0.0259	-0.0478	-0.0085
910	SLU 35	0.58	0.59	58.36	0.0269	-0.0479	-0.0086
910	SLU 36	0.58	0.64	58.36	0.0267	-0.0481	-0.0086
910	SLU 37	0.58	0.57	57.95	0.0264	-0.0474	-0.0086
910	SLU 38	0.58	0.62	57.95	0.0263	-0.0477	-0.0086
910	SLU 39	0.59	0.58	59.77	0.0265	-0.0491	-0.0085
910	SLU 40	0.59	0.63	59.77	0.0263	-0.0493	-0.0085
910	SLU 41	0.59	0.58	60.18	0.0267	-0.0491	-0.0086
910	SLU 42	0.6	0.63	60.18	0.0265	-0.0493	-0.0087
910	SLU 43	0.57	0.54	56.56	0.0286	-0.045	-0.0093
910	SLU 44	0.57	0.62	56.56	0.0284	-0.0454	-0.0093
910	SLU 45	0.59	0.56	57.38	0.0293	-0.0455	-0.0095
910	SLU 46	0.59	0.61	57.38	0.0291	-0.0457	-0.0095
910	SLU 47	0.58	0.62	56.97	0.0286	-0.0454	-0.0094
910	SLU 48	0.59	0.57	57.79	0.0295	-0.0455	-0.0096
910	SLU 49	0.6	0.61	57.79	0.0294	-0.0457	-0.0096
910	SLU 50	0.59	0.54	57.38	0.0291	-0.045	-0.0095
910	SLU 51	0.59	0.59	57.38	0.0289	-0.0453	-0.0095
910	SLU 52	0.63	0.66	62.73	0.0295	-0.0494	-0.0098
910	SLU 53	0.64	0.6	63.55	0.0304	-0.0494	-0.0099
910	SLU 54	0.64	0.65	63.55	0.0303	-0.0497	-0.0099
910	SLU 55	0.64	0.66	63.14	0.0298	-0.0494	-0.0099
910	SLU 56	0.65	0.6	63.96	0.0307	-0.0494	-0.01
910	SLU 57	0.65	0.65	63.96	0.0305	-0.0497	-0.01
910	SLU 58	0.65	0.58	63.55	0.0303	-0.0489	-0.01
910	SLU 59	0.65	0.63	63.55	0.0301	-0.0492	-0.01
910	SLU 60	0.65	0.6	65.37	0.0303	-0.0506	-0.01
910	SLU 61	0.65	0.65	65.37	0.0301	-0.0509	-0.01
910	SLU 62	0.66	0.6	65.78	0.0305	-0.0506	-0.0101
910	SLU 63	0.66	0.65	65.78	0.0304	-0.0509	-0.0101
910	SLU 64	0.62	0.63	62.46	0.0308	-0.0519	-0.0098
910	SLU 65	0.63	0.71	62.45	0.0306	-0.0524	-0.0099
910	SLU 66	0.64	0.65	63.28	0.0315	-0.0524	-0.01
910	SLU 67	0.64	0.7	63.28	0.0313	-0.0527	-0.01
910	SLU 68	0.63	0.71	62.86	0.0308	-0.0524	-0.01
910	SLU 69	0.65	0.65	63.69	0.0317	-0.0525	-0.0101
910	SLU 70	0.65	0.7	63.69	0.0316	-0.0527	-0.0101
910	SLU 71	0.64	0.63	63.28	0.0313	-0.052	-0.0101
910	SLU 72	0.64	0.68	63.28	0.0311	-0.0522	-0.0101
910	SLU 73	0.68	0.75	68.62	0.0317	-0.0563	-0.0103
910	SLU 74	0.69	0.69	69.45	0.0326	-0.0564	-0.0105
910	SLU 75	0.69	0.74	69.45	0.0325	-0.0567	-0.0105
910	SLU 76	0.69	0.75	69.03	0.032	-0.0564	-0.0104
910	SLU 77	0.7	0.69	69.86	0.0329	-0.0564	-0.0106
910	SLU 78	0.7	0.74	69.86	0.0327	-0.0567	-0.0106
910	SLU 79	0.7	0.67	69.45	0.0325	-0.0559	-0.0106
910	SLU 80	0.7	0.72	69.44	0.0323	-0.0562	-0.0106
910	SLU 81	0.7	0.68	71.27	0.0325	-0.0576	-0.0105
910	SLU 82	0.71	0.73	71.27	0.0323	-0.0579	-0.0105
910	SLU 83	0.71	0.68	71.68	0.0327	-0.0576	-0.0106
910	SLU 84	0.71	0.73	71.68	0.0326	-0.0579	-0.0106
910	SLE RA 1	0.47	0.46	46.75	0.0232	-0.0384	-0.0075
910	SLE RA 2	0.47	0.52	46.75	0.0231	-0.0387	-0.0075
910	SLE RA 3	0.48	0.48	47.3	0.0237	-0.0388	-0.0076
910	SLE RA 4	0.48	0.51	47.29	0.0236	-0.0389	-0.0076
910	SLE RA 5	0.48	0.52	47.02	0.0232	-0.0387	-0.0075
910	SLE RA 6	0.48	0.48	47.57	0.0238	-0.0388	-0.0076
910	SLE RA 7	0.48	0.51	47.57	0.0237	-0.0389	-0.0076

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
910	SLE RA 8	0.48	0.46	47.29	0.0235	-0.0384	-0.0076
910	SLE RA 9	0.48	0.5	47.29	0.0234	-0.0386	-0.0076
910	SLE RA 10	0.51	0.54	50.86	0.0238	-0.0414	-0.0078
910	SLE RA 11	0.51	0.51	51.41	0.0244	-0.0414	-0.0079
910	SLE RA 12	0.52	0.54	51.41	0.0243	-0.0416	-0.0079
910	SLE RA 13	0.51	0.55	51.13	0.024	-0.0414	-0.0079
910	SLE RA 14	0.52	0.51	51.68	0.0246	-0.0414	-0.008
910	SLE RA 15	0.52	0.54	51.68	0.0245	-0.0416	-0.008
910	SLE RA 16	0.52	0.49	51.41	0.0243	-0.0411	-0.0079
910	SLE RA 17	0.52	0.52	51.41	0.0242	-0.0413	-0.0079
910	SLE RA 18	0.52	0.5	52.62	0.0243	-0.0422	-0.0079
910	SLE RA 19	0.52	0.53	52.62	0.0242	-0.0424	-0.0079
910	SLE RA 20	0.53	0.5	52.9	0.0245	-0.0422	-0.008
910	SLE RA 21	0.53	0.53	52.9	0.0244	-0.0424	-0.008
910	SLE FR 1	0.47	0.46	46.75	0.0232	-0.0384	-0.0075
910	SLE FR 2	0.47	0.47	46.75	0.0232	-0.0385	-0.0075
910	SLE FR 3	0.47	0.46	46.86	0.0233	-0.0384	-0.0075
910	SLE FR 4	0.48	0.49	48.51	0.0235	-0.0396	-0.0076
910	SLE FR 5	0.49	0.47	48.62	0.0236	-0.0396	-0.0076
910	SLE FR 6	0.5	0.48	49.68	0.0238	-0.0403	-0.0077
910	SLE QP 1	0.47	0.46	46.75	0.0232	-0.0384	-0.0075
910	SLE QP 2	0.48	0.47	48.51	0.0236	-0.0395	-0.0076
910	SLD 1	6.36	1.1	45.99	0.0159	0.0287	-0.0386
910	SLD 2	6.1	1.2	46	0.0156	0.0289	-0.0341
910	SLD 3	6.21	-0.66	46.24	0.0212	0.0372	-0.0397
910	SLD 4	5.94	-0.56	46.25	0.021	0.0375	-0.0352
910	SLD 5	2.53	3.31	47.38	0.0132	-0.032	-0.0159
910	SLD 6	2.35	3.37	47.38	0.0131	-0.0319	-0.013
910	SLD 7	2.02	-2.55	48.2	0.031	-0.0036	-0.0197
910	SLD 8	1.84	-2.49	48.21	0.0308	-0.0035	-0.0168
910	SLD 9	-0.87	3.43	48.81	0.0163	-0.0756	0.0016
910	SLD 10	-1.05	3.5	48.82	0.0162	-0.0755	0.0045
910	SLD 11	-1.38	-2.43	49.64	0.0341	-0.0472	-0.0021
910	SLD 12	-1.56	-2.36	49.64	0.0339	-0.0471	0.0008
910	SLD 13	-4.97	1.51	50.77	0.0262	-0.1166	0.02
910	SLD 14	-5.24	1.6	50.78	0.0259	-0.1163	0.0245
910	SLD 15	-5.13	-0.25	51.02	0.0315	-0.108	0.0189
910	SLD 16	-5.39	-0.15	51.03	0.0313	-0.1078	0.0234
910	SLV 1	14.23	1.89	42.62	0.0053	0.1205	-0.08
910	SLV 2	13.61	2.11	42.64	0.0048	0.121	-0.0696
910	SLV 3	13.87	-2.12	43.19	0.0174	0.1398	-0.0827
910	SLV 4	13.25	-1.9	43.21	0.0169	0.1404	-0.0722
910	SLV 5	5.25	6.93	45.88	-0.0002	-0.021	-0.0271
910	SLV 6	4.86	7.07	45.89	-0.0005	-0.0206	-0.0204
910	SLV 7	4.07	-6.41	47.77	0.0402	0.0435	-0.0359
910	SLV 8	3.67	-6.27	47.79	0.0399	0.0438	-0.0292
910	SLV 9	-2.7	7.22	49.23	0.0073	-0.1229	0.014
910	SLV 10	-3.1	7.36	49.25	0.0069	-0.1226	0.0207
910	SLV 11	-3.89	-6.13	51.13	0.0477	-0.0585	0.0052
910	SLV 12	-4.29	-5.98	51.14	0.0473	-0.0581	0.0119
910	SLV 13	-12.28	2.85	53.81	0.0302	-0.2195	0.0571
910	SLV 14	-12.91	3.07	53.83	0.0297	-0.2189	0.0675
910	SLV 15	-12.64	-1.16	54.38	0.0423	-0.2001	0.0544
910	SLV 16	-13.26	-0.94	54.4	0.0418	-0.1996	0.0649
910	CRTFP Ux+	0	0	0	0	0	0
910	CRTFP Ux-	0	0	0	0	0	0
913	SLU 1	-0.21	0.48	43.54	0.0265	0.0712	0.0079
913	SLU 2	-0.21	0.56	43.55	0.0262	0.0714	0.0079
913	SLU 3	-0.22	0.51	44.34	0.0272	0.073	0.0081
913	SLU 4	-0.22	0.55	44.34	0.027	0.0732	0.0081
913	SLU 5	-0.22	0.56	43.95	0.0265	0.0724	0.008
913	SLU 6	-0.22	0.51	44.74	0.0275	0.074	0.0082
913	SLU 7	-0.22	0.56	44.74	0.0273	0.0742	0.0082
913	SLU 8	-0.22	0.48	44.34	0.027	0.0731	0.0081
913	SLU 9	-0.22	0.53	44.35	0.0269	0.0733	0.0081
913	SLU 10	-0.24	0.63	49.4	0.0289	0.0805	0.009
913	SLU 11	-0.24	0.58	50.19	0.0299	0.0821	0.0092
913	SLU 12	-0.24	0.63	50.19	0.0297	0.0823	0.0091
913	SLU 13	-0.24	0.64	49.8	0.0292	0.0815	0.0091
913	SLU 14	-0.25	0.59	50.59	0.0302	0.0831	0.0093
913	SLU 15	-0.25	0.63	50.59	0.03	0.0833	0.0093
913	SLU 16	-0.24	0.56	50.19	0.0298	0.0822	0.0092
913	SLU 17	-0.24	0.61	50.2	0.0296	0.0824	0.0092
913	SLU 18	-0.25	0.58	51.9	0.0304	0.0842	0.0095
913	SLU 19	-0.25	0.63	51.9	0.0302	0.0843	0.0095
913	SLU 20	-0.25	0.59	52.3	0.0306	0.0852	0.0096
913	SLU 21	-0.25	0.64	52.3	0.0305	0.0853	0.0096
913	SLU 22	-0.25	0.61	49.19	0.0299	0.0826	0.0086
913	SLU 23	-0.25	0.69	49.19	0.0296	0.0829	0.0086
913	SLU 24	-0.25	0.64	49.98	0.0306	0.0844	0.0087
913	SLU 25	-0.25	0.69	49.99	0.0304	0.0846	0.0087
913	SLU 26	-0.25	0.7	49.59	0.0298	0.0838	0.0087
913	SLU 27	-0.25	0.65	50.38	0.0309	0.0854	0.0089
913	SLU 28	-0.25	0.69	50.39	0.0307	0.0856	0.0088
913	SLU 29	-0.25	0.62	49.99	0.0304	0.0846	0.0088
913	SLU 30	-0.25	0.67	49.99	0.0302	0.0847	0.0088
913	SLU 31	-0.27	0.77	55.04	0.0323	0.092	0.0097
913	SLU 32	-0.28	0.72	55.84	0.0333	0.0936	0.0098
913	SLU 33	-0.27	0.77	55.84	0.0331	0.0937	0.0098
913	SLU 34	-0.27	0.77	55.44	0.0326	0.093	0.0098
913	SLU 35	-0.28	0.72	56.24	0.0336	0.0945	0.01

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
913	SLU 36	-0.28	0.77	56.24	0.0334	0.0947	0.0099
913	SLU 37	-0.28	0.7	55.84	0.0331	0.0937	0.0099
913	SLU 38	-0.28	0.74	55.84	0.033	0.0938	0.0099
913	SLU 39	-0.28	0.72	57.55	0.0337	0.0956	0.0102
913	SLU 40	-0.28	0.77	57.55	0.0336	0.0958	0.0101
913	SLU 41	-0.28	0.72	57.95	0.034	0.0966	0.0103
913	SLU 42	-0.28	0.77	57.95	0.0338	0.0968	0.0102
913	SLU 43	-0.27	0.57	54.67	0.0333	0.0886	0.0101
913	SLU 44	-0.27	0.65	54.67	0.033	0.0889	0.01
913	SLU 45	-0.27	0.6	55.47	0.034	0.0904	0.0102
913	SLU 46	-0.27	0.65	55.47	0.0338	0.0906	0.0102
913	SLU 47	-0.27	0.66	55.07	0.0332	0.0898	0.0101
913	SLU 48	-0.27	0.61	55.87	0.0343	0.0914	0.0103
913	SLU 49	-0.27	0.65	55.87	0.0341	0.0916	0.0103
913	SLU 50	-0.27	0.58	55.47	0.0338	0.0906	0.0103
913	SLU 51	-0.27	0.63	55.47	0.0336	0.0907	0.0103
913	SLU 52	-0.29	0.73	60.53	0.0357	0.098	0.0111
913	SLU 53	-0.3	0.68	61.32	0.0367	0.0996	0.0113
913	SLU 54	-0.3	0.73	61.32	0.0365	0.0997	0.0113
913	SLU 55	-0.29	0.73	60.93	0.036	0.099	0.0112
913	SLU 56	-0.3	0.68	61.72	0.037	0.1005	0.0114
913	SLU 57	-0.3	0.73	61.72	0.0368	0.1007	0.0114
913	SLU 58	-0.3	0.66	61.32	0.0365	0.0997	0.0114
913	SLU 59	-0.3	0.7	61.32	0.0364	0.0998	0.0114
913	SLU 60	-0.3	0.68	63.03	0.0371	0.1016	0.0116
913	SLU 61	-0.3	0.73	63.03	0.037	0.1018	0.0116
913	SLU 62	-0.31	0.68	63.43	0.0374	0.1026	0.0117
913	SLU 63	-0.31	0.73	63.43	0.0372	0.1028	0.0117
913	SLU 64	-0.3	0.71	60.32	0.0366	0.1	0.0107
913	SLU 65	-0.3	0.79	60.32	0.0363	0.1003	0.0107
913	SLU 66	-0.3	0.74	61.11	0.0374	0.1019	0.0109
913	SLU 67	-0.3	0.79	61.11	0.0372	0.102	0.0109
913	SLU 68	-0.3	0.79	60.72	0.0366	0.1013	0.0108
913	SLU 69	-0.31	0.74	61.51	0.0377	0.1029	0.011
913	SLU 70	-0.31	0.79	61.51	0.0375	0.103	0.011
913	SLU 71	-0.3	0.72	61.12	0.0372	0.102	0.011
913	SLU 72	-0.3	0.76	61.12	0.037	0.1022	0.0109
913	SLU 73	-0.32	0.86	66.17	0.0391	0.1094	0.0118
913	SLU 74	-0.33	0.81	66.96	0.0401	0.111	0.012
913	SLU 75	-0.33	0.86	66.96	0.0399	0.1112	0.012
913	SLU 76	-0.33	0.87	66.57	0.0393	0.1104	0.0119
913	SLU 77	-0.33	0.82	67.36	0.0404	0.112	0.0121
913	SLU 78	-0.33	0.87	67.36	0.0402	0.1121	0.0121
913	SLU 79	-0.33	0.79	66.97	0.0399	0.1111	0.0121
913	SLU 80	-0.33	0.84	66.97	0.0397	0.1113	0.012
913	SLU 81	-0.33	0.82	68.68	0.0405	0.113	0.0123
913	SLU 82	-0.33	0.86	68.68	0.0403	0.1132	0.0123
913	SLU 83	-0.34	0.82	69.08	0.0408	0.114	0.0124
913	SLU 84	-0.34	0.87	69.08	0.0406	0.1142	0.0124
913	SLE RA 1	-0.22	0.51	45.16	0.0274	0.0744	0.0081
913	SLE RA 2	-0.22	0.57	45.16	0.0272	0.0746	0.0081
913	SLE RA 3	-0.23	0.53	45.69	0.0279	0.0757	0.0082
913	SLE RA 4	-0.23	0.57	45.69	0.0278	0.0758	0.0082
913	SLE RA 5	-0.22	0.57	45.43	0.0274	0.0753	0.0082
913	SLE RA 6	-0.23	0.54	45.95	0.0281	0.0763	0.0083
913	SLE RA 7	-0.23	0.57	45.95	0.028	0.0764	0.0083
913	SLE RA 8	-0.23	0.52	45.69	0.0278	0.0757	0.0083
913	SLE RA 9	-0.23	0.55	45.69	0.0277	0.0758	0.0083
913	SLE RA 10	-0.24	0.62	49.06	0.0291	0.0807	0.0088
913	SLE RA 11	-0.24	0.58	49.59	0.0297	0.0817	0.0089
913	SLE RA 12	-0.24	0.62	49.59	0.0296	0.0818	0.0089
913	SLE RA 13	-0.24	0.62	49.33	0.0292	0.0813	0.0089
913	SLE RA 14	-0.24	0.59	49.85	0.0299	0.0824	0.009
913	SLE RA 15	-0.24	0.62	49.86	0.0298	0.0825	0.009
913	SLE RA 16	-0.24	0.57	49.59	0.0296	0.0818	0.009
913	SLE RA 17	-0.24	0.6	49.59	0.0295	0.0819	0.009
913	SLE RA 18	-0.25	0.59	50.73	0.03	0.0831	0.0092
913	SLE RA 19	-0.25	0.62	50.73	0.0299	0.0832	0.0091
913	SLE RA 20	-0.25	0.59	51	0.0302	0.0838	0.0092
913	SLE RA 21	-0.25	0.62	51	0.0301	0.0839	0.0092
913	SLE FR 1	-0.22	0.51	45.16	0.0274	0.0744	0.0081
913	SLE FR 2	-0.22	0.52	45.16	0.0274	0.0745	0.0081
913	SLE FR 3	-0.22	0.52	45.26	0.0275	0.0747	0.0081
913	SLE FR 4	-0.23	0.55	46.83	0.0282	0.0771	0.0084
913	SLE FR 5	-0.23	0.54	46.94	0.0283	0.0773	0.0085
913	SLE FR 6	-0.24	0.55	47.94	0.0287	0.0788	0.0086
913	SLE QP 1	-0.22	0.51	45.16	0.0274	0.0744	0.0081
913	SLE QP 2	-0.23	0.54	46.83	0.0282	0.077	0.0084
913	SLD 1	5.59	1.64	48.22	0.0306	0.1376	-0.0232
913	SLD 2	5.33	1.53	48.24	0.031	0.1379	-0.0188
913	SLD 3	5.45	-0.11	48.41	0.0363	0.1321	-0.0213
913	SLD 4	5.18	-0.22	48.43	0.0367	0.1324	-0.0169
913	SLD 5	1.78	3.54	46.94	0.0203	0.1035	-0.0048
913	SLD 6	1.61	3.47	46.96	0.0205	0.1037	-0.0019
913	SLD 7	1.3	-2.3	47.6	0.0392	0.0851	0.0017
913	SLD 8	1.13	-2.36	47.61	0.0394	0.0853	0.0046
913	SLD 9	-1.59	3.44	46.04	0.0171	0.0687	0.0123
913	SLD 10	-1.76	3.37	46.06	0.0173	0.0689	0.0151
913	SLD 11	-2.07	-2.4	46.7	0.0359	0.0504	0.0188
913	SLD 12	-2.24	-2.47	46.72	0.0361	0.0505	0.0216
913	SLD 13	-5.64	1.29	45.22	0.0198	0.0217	0.0337

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
913	SLD 14	-5.91	1.18	45.24	0.0202	0.022	0.0381
913	SLD 15	-5.79	-0.46	45.42	0.0254	0.0162	0.0357
913	SLD 16	-6.05	-0.57	45.44	0.0258	0.0164	0.0401
913	SLV 1	13.38	3.07	50.1	0.0345	0.2186	-0.0655
913	SLV 2	12.77	2.82	50.15	0.0354	0.2193	-0.0553
913	SLV 3	13.04	-0.92	50.55	0.0474	0.2059	-0.061
913	SLV 4	12.43	-1.17	50.6	0.0482	0.2066	-0.0508
913	SLV 5	4.47	7.39	47.11	0.0105	0.1386	-0.0223
913	SLV 6	4.08	7.24	47.14	0.011	0.139	-0.0158
913	SLV 7	3.34	-5.92	48.63	0.0533	0.0964	-0.0073
913	SLV 8	2.95	-6.07	48.66	0.0539	0.0968	-0.0008
913	SLV 9	-3.41	7.14	45	0.0026	0.0573	0.0176
913	SLV 10	-3.8	6.99	45.03	0.0031	0.0577	0.0242
913	SLV 11	-4.54	-6.16	46.52	0.0454	0.015	0.0326
913	SLV 12	-4.93	-6.32	46.55	0.046	0.0155	0.0392
913	SLV 13	-12.89	2.24	43.06	0.0082	-0.0525	0.0677
913	SLV 14	-13.5	2	43.11	0.0091	-0.0519	0.0779
913	SLV 15	-13.23	-1.75	43.51	0.0211	-0.0652	0.0722
913	SLV 16	-13.84	-2	43.56	0.0219	-0.0645	0.0824
913	CRTFP Ux+	0	0	0	0	0	0
913	CRTFP Ux-	0	0	0	0	0	0
916	SLU 1	0.33	0	15.76	0.4425	3.957	-0.009
916	SLU 2	0.33	0.03	15.76	0.4425	3.9568	-0.0155
916	SLU 3	0.33	0	16.06	0.4512	4.034	-0.0098
916	SLU 4	0.34	0.02	16.06	0.4511	4.0339	-0.0137
916	SLU 5	0.33	0.03	15.92	0.447	3.9976	-0.0153
916	SLU 6	0.34	0	16.23	0.4557	4.0748	-0.0096
916	SLU 7	0.34	0.02	16.23	0.4557	4.0747	-0.0135
916	SLU 8	0.34	0	16.08	0.4517	4.0385	-0.0085
916	SLU 9	0.34	0.01	16.08	0.4516	4.0384	-0.0124
916	SLU 10	0.36	0.04	17.87	0.5017	4.4858	-0.0199
916	SLU 11	0.37	0.02	18.17	0.5104	4.563	-0.0142
916	SLU 12	0.37	0.03	18.17	0.5103	4.5629	-0.0181
916	SLU 13	0.37	0.04	18.03	0.5062	4.5265	-0.0197
916	SLU 14	0.38	0.02	18.34	0.5149	4.6038	-0.0139
916	SLU 15	0.38	0.03	18.34	0.5149	4.6037	-0.0178
916	SLU 16	0.37	0.01	18.19	0.5109	4.5675	-0.0129
916	SLU 17	0.37	0.03	18.19	0.5108	4.5674	-0.0168
916	SLU 18	0.38	0.02	18.77	0.5271	4.7127	-0.0153
916	SLU 19	0.38	0.04	18.77	0.5271	4.7126	-0.0192
916	SLU 20	0.38	0.02	18.94	0.5317	4.7535	-0.015
916	SLU 21	0.38	0.03	18.93	0.5316	4.7533	-0.0189
916	SLU 22	0.36	0.02	17.79	0.4997	4.4674	-0.014
916	SLU 23	0.36	0.04	17.79	0.4997	4.4673	-0.0206
916	SLU 24	0.37	0.02	18.1	0.5084	4.5445	-0.0148
916	SLU 25	0.37	0.04	18.1	0.5083	4.5444	-0.0188
916	SLU 26	0.37	0.04	17.96	0.5042	4.508	-0.0203
916	SLU 27	0.38	0.02	18.26	0.5129	4.5853	-0.0146
916	SLU 28	0.38	0.03	18.26	0.5129	4.5852	-0.0185
916	SLU 29	0.37	0.01	18.12	0.5089	4.549	-0.0135
916	SLU 30	0.37	0.03	18.12	0.5088	4.5489	-0.0175
916	SLU 31	0.4	0.06	19.9	0.5589	4.9962	-0.0249
916	SLU 32	0.4	0.03	20.21	0.5676	5.0735	-0.0192
916	SLU 33	0.4	0.05	20.21	0.5675	5.0734	-0.0231
916	SLU 34	0.4	0.06	20.07	0.5634	5.037	-0.0247
916	SLU 35	0.41	0.03	20.37	0.5721	5.1143	-0.019
916	SLU 36	0.41	0.05	20.37	0.5721	5.1142	-0.0229
916	SLU 37	0.41	0.03	20.23	0.5681	5.078	-0.0179
916	SLU 38	0.41	0.04	20.23	0.568	5.0779	-0.0218
916	SLU 39	0.41	0.04	20.81	0.5843	5.2232	-0.0203
916	SLU 40	0.41	0.05	20.81	0.5843	5.223	-0.0242
916	SLU 41	0.42	0.04	20.97	0.5889	5.2639	-0.02
916	SLU 42	0.42	0.05	20.97	0.5888	5.2638	-0.0239
916	SLU 43	0.41	0	19.79	0.5557	4.969	-0.01
916	SLU 44	0.41	0.02	19.78	0.5556	4.9688	-0.0165
916	SLU 45	0.42	0	20.09	0.5643	5.0461	-0.0108
916	SLU 46	0.42	0.01	20.09	0.5643	5.046	-0.0147
916	SLU 47	0.42	0.02	19.95	0.5602	5.0096	-0.0163
916	SLU 48	0.43	0	20.26	0.5689	5.0869	-0.0105
916	SLU 49	0.43	0.01	20.26	0.5689	5.0868	-0.0145
916	SLU 50	0.42	-0.01	20.11	0.5648	5.0506	-0.0095
916	SLU 51	0.43	0.01	20.11	0.5648	5.0505	-0.0134
916	SLU 52	0.45	0.04	21.89	0.6148	5.4978	-0.0209
916	SLU 53	0.46	0.01	22.2	0.6235	5.5751	-0.0152
916	SLU 54	0.46	0.03	22.2	0.6235	5.575	-0.0191
916	SLU 55	0.45	0.03	22.06	0.6194	5.5386	-0.0206
916	SLU 56	0.46	0.01	22.37	0.6281	5.6159	-0.0149
916	SLU 57	0.46	0.03	22.37	0.628	5.6158	-0.0188
916	SLU 58	0.46	0.01	22.22	0.624	5.5796	-0.0139
916	SLU 59	0.46	0.02	22.22	0.624	5.5795	-0.0178
916	SLU 60	0.46	0.02	22.8	0.6403	5.7247	-0.0162
916	SLU 61	0.46	0.03	22.8	0.6402	5.7246	-0.0202
916	SLU 62	0.47	0.01	22.96	0.6448	5.7655	-0.016
916	SLU 63	0.47	0.03	22.96	0.6448	5.7654	-0.0199
916	SLU 64	0.45	0.01	21.82	0.6129	5.4795	-0.015
916	SLU 65	0.45	0.04	21.82	0.6128	5.4793	-0.0216
916	SLU 66	0.46	0.01	22.13	0.6215	5.5566	-0.0158
916	SLU 67	0.46	0.03	22.13	0.6215	5.5565	-0.0197
916	SLU 68	0.45	0.04	21.98	0.6174	5.5201	-0.0213
916	SLU 69	0.46	0.01	22.29	0.6261	5.5974	-0.0156
916	SLU 70	0.46	0.03	22.29	0.626	5.5973	-0.0195

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
916	SLU 71	0.46	0.01	22.15	0.622	5.5611	-0.0145
916	SLU 72	0.46	0.02	22.15	0.622	5.561	-0.0184
916	SLU 73	0.48	0.05	23.93	0.672	6.0083	-0.0259
916	SLU 74	0.49	0.03	24.24	0.6807	6.0856	-0.0202
916	SLU 75	0.49	0.04	24.24	0.6807	6.0855	-0.0241
916	SLU 76	0.49	0.05	24.09	0.6766	6.0491	-0.0257
916	SLU 77	0.5	0.03	24.4	0.6853	6.1264	-0.0199
916	SLU 78	0.5	0.04	24.4	0.6852	6.1263	-0.0239
916	SLU 79	0.49	0.02	24.26	0.6812	6.0901	-0.0189
916	SLU 80	0.49	0.04	24.26	0.6812	6.09	-0.0228
916	SLU 81	0.5	0.03	24.84	0.6975	6.2352	-0.0213
916	SLU 82	0.5	0.05	24.84	0.6974	6.2351	-0.0252
916	SLU 83	0.5	0.03	25	0.702	6.276	-0.021
916	SLU 84	0.5	0.05	25	0.702	6.2759	-0.0249
916	SLE RA 1	0.34	0.01	16.34	0.4589	4.1028	-0.0105
916	SLE RA 2	0.34	0.02	16.34	0.4588	4.1027	-0.0148
916	SLE RA 3	0.34	0.01	16.54	0.4646	4.1542	-0.011
916	SLE RA 4	0.34	0.02	16.54	0.4646	4.1541	-0.0136
916	SLE RA 5	0.34	0.02	16.45	0.4619	4.1299	-0.0146
916	SLE RA 6	0.35	0.01	16.65	0.4677	4.1814	-0.0108
916	SLE RA 7	0.35	0.02	16.65	0.4676	4.1813	-0.0134
916	SLE RA 8	0.34	0	16.56	0.465	4.1572	-0.0101
916	SLE RA 9	0.34	0.01	16.56	0.4649	4.1571	-0.0127
916	SLE RA 10	0.36	0.03	17.74	0.4983	4.4553	-0.0177
916	SLE RA 11	0.36	0.02	17.95	0.5041	4.5069	-0.0139
916	SLE RA 12	0.37	0.03	17.95	0.5041	4.5068	-0.0165
916	SLE RA 13	0.36	0.03	17.85	0.5013	4.4825	-0.0175
916	SLE RA 14	0.37	0.02	18.06	0.5071	4.5341	-0.0137
916	SLE RA 15	0.37	0.03	18.06	0.5071	4.534	-0.0163
916	SLE RA 16	0.37	0.01	17.96	0.5044	4.5099	-0.013
916	SLE RA 17	0.37	0.02	17.96	0.5044	4.5098	-0.0156
916	SLE RA 18	0.37	0.02	18.35	0.5153	4.6066	-0.0146
916	SLE RA 19	0.37	0.03	18.35	0.5152	4.6065	-0.0172
916	SLE RA 20	0.37	0.02	18.46	0.5183	4.6338	-0.0144
916	SLE RA 21	0.37	0.03	18.46	0.5183	4.6337	-0.0171
916	SLE FR 1	0.34	0.01	16.34	0.4589	4.1028	-0.0105
916	SLE FR 2	0.34	0.01	16.34	0.4589	4.1028	-0.0113
916	SLE FR 3	0.34	0.01	16.38	0.4601	4.1137	-0.0104
916	SLE FR 4	0.35	0.01	16.94	0.4758	4.2539	-0.0126
916	SLE FR 5	0.35	0.01	16.99	0.477	4.2648	-0.0116
916	SLE FR 6	0.35	0.01	17.34	0.4871	4.3547	-0.0125
916	SLE QP 1	0.34	0.01	16.34	0.4589	4.1028	-0.0105
916	SLE QP 2	0.35	0.01	16.94	0.4758	4.254	-0.0117
916	SLD 1	2.03	0.27	15.37	0.429	3.8352	-0.12
916	SLD 2	1.95	0.35	15.35	0.4284	3.8322	-0.137
916	SLD 3	1.99	-0.24	15.49	0.4326	3.8596	0.0082
916	SLD 4	1.91	-0.16	15.47	0.4321	3.8566	-0.0089
916	SLD 5	0.93	0.85	16.28	0.4562	4.0919	-0.2356
916	SLD 6	0.88	0.9	16.27	0.4559	4.0899	-0.2466
916	SLD 7	0.79	-0.85	16.7	0.4685	4.1732	0.1916
916	SLD 8	0.74	-0.8	16.69	0.4682	4.1712	0.1805
916	SLD 9	-0.04	0.82	17.2	0.4834	4.3367	-0.2039
916	SLD 10	-0.09	0.87	17.18	0.4831	4.3347	-0.215
916	SLD 11	-0.19	-0.88	17.62	0.4957	4.418	0.2232
916	SLD 12	-0.24	-0.83	17.6	0.4954	4.416	0.2122
916	SLD 13	-1.22	0.18	18.41	0.5195	4.6513	-0.0146
916	SLD 14	-1.3	0.26	18.39	0.5189	4.6483	-0.0316
916	SLD 15	-1.26	-0.33	18.54	0.5232	4.6757	0.1136
916	SLD 16	-1.34	-0.25	18.52	0.5226	4.6727	0.0966
916	SLV 1	4.29	0.61	13.26	0.3663	3.2743	-0.2612
916	SLV 2	4.11	0.79	13.21	0.365	3.2673	-0.3009
916	SLV 3	4.19	-0.55	13.54	0.3747	3.3305	0.0307
916	SLV 4	4	-0.37	13.5	0.3734	3.3234	-0.009
916	SLV 5	1.72	1.92	15.41	0.4304	3.8761	-0.5225
916	SLV 6	1.6	2.04	15.38	0.4296	3.8716	-0.5478
916	SLV 7	1.38	-1.95	16.37	0.4585	4.0632	0.4504
916	SLV 8	1.26	-1.84	16.34	0.4577	4.0587	0.4251
916	SLV 9	-0.57	1.86	17.55	0.4939	4.4492	-0.4485
916	SLV 10	-0.68	1.97	17.52	0.4931	4.4447	-0.4738
916	SLV 11	-0.91	-2.02	18.51	0.522	4.6363	0.5244
916	SLV 12	-1.02	-1.9	18.48	0.5212	4.6318	0.4991
916	SLV 13	-3.31	0.39	20.39	0.5781	5.1845	-0.0144
916	SLV 14	-3.5	0.57	20.34	0.5769	5.1774	-0.0541
916	SLV 15	-3.41	-0.77	20.68	0.5866	5.2406	0.2774
916	SLV 16	-3.6	-0.59	20.63	0.5853	5.2336	0.2378
916	CRTFP Ux+	0	0	0	0	0	0
916	CRTFP Ux-	0	0	0	0	0	0
916	CRTFP Uy+	0	0	0	0	0	0
916	CRTFP Uy-	0	0	0	0	0	0
917	SLU 1	-0.62	-0.05	39.87	-14.1716	-7.0655	-0.2493
917	SLU 2	-0.62	0.05	39.89	-14.1758	-7.0677	-0.2318
917	SLU 3	-0.64	-0.04	40.67	-14.4521	-7.2059	-0.2532
917	SLU 4	-0.64	0.02	40.68	-14.4547	-7.2071	-0.2427
917	SLU 5	-0.63	0.06	40.33	-14.3341	-7.1466	-0.2349
917	SLU 6	-0.65	-0.04	41.12	-14.6105	-7.2848	-0.2563
917	SLU 7	-0.65	0.02	41.12	-14.613	-7.2861	-0.2458
917	SLU 8	-0.64	-0.04	40.77	-14.4882	-7.2235	-0.2555
917	SLU 9	-0.64	0.02	40.78	-14.4907	-7.2247	-0.245
917	SLU 10	-0.67	0.08	44.99	-15.9783	-7.9715	-0.2461
917	SLU 11	-0.68	-0.01	45.77	-16.2547	-8.1097	-0.2675
917	SLU 12	-0.68	0.05	45.78	-16.2572	-8.111	-0.257

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
917	SLU 13	-0.68	0.08	45.44	-16.1366	-8.0505	-0.2492
917	SLU 14	-0.69	-0.01	46.22	-16.413	-8.1887	-0.2706
917	SLU 15	-0.69	0.05	46.23	-16.4155	-8.1899	-0.2601
917	SLU 16	-0.69	-0.01	45.87	-16.2907	-8.1273	-0.2698
917	SLU 17	-0.69	0.05	45.88	-16.2933	-8.1286	-0.2593
917	SLU 18	-0.69	-0.01	47.17	-16.7466	-8.3567	-0.2697
917	SLU 19	-0.69	0.05	47.17	-16.7491	-8.358	-0.2592
917	SLU 20	-0.7	0	47.61	-16.9049	-8.4357	-0.2728
917	SLU 21	-0.7	0.06	47.62	-16.9074	-8.437	-0.2623
917	SLU 22	-0.68	-0.02	44.87	-15.9356	-7.9504	-0.2659
917	SLU 23	-0.68	0.08	44.88	-15.9398	-7.9526	-0.2485
917	SLU 24	-0.69	-0.01	45.67	-16.2162	-8.0908	-0.2699
917	SLU 25	-0.69	0.05	45.67	-16.2187	-8.0921	-0.2594
917	SLU 26	-0.69	0.09	45.33	-16.0981	-8.0315	-0.2516
917	SLU 27	-0.7	-0.01	46.11	-16.3745	-8.1698	-0.273
917	SLU 28	-0.7	0.05	46.12	-16.377	-8.171	-0.2625
917	SLU 29	-0.7	-0.01	45.77	-16.2522	-8.1084	-0.2722
917	SLU 30	-0.7	0.05	45.77	-16.2548	-8.1097	-0.2617
917	SLU 31	-0.72	0.11	49.99	-17.7423	-8.8564	-0.2628
917	SLU 32	-0.74	0.02	50.77	-18.0187	-8.9946	-0.2842
917	SLU 33	-0.74	0.08	50.78	-18.0212	-8.9959	-0.2737
917	SLU 34	-0.73	0.11	50.43	-17.9006	-8.9354	-0.2659
917	SLU 35	-0.75	0.02	51.22	-18.177	-9.0736	-0.2873
917	SLU 36	-0.75	0.08	51.22	-18.1795	-9.0748	-0.2768
917	SLU 37	-0.75	0.02	50.87	-18.0548	-9.0122	-0.2865
917	SLU 38	-0.75	0.08	50.88	-18.0573	-9.0135	-0.276
917	SLU 39	-0.74	0.02	52.16	-18.5106	-9.2416	-0.2864
917	SLU 40	-0.74	0.08	52.17	-18.5131	-9.2429	-0.2759
917	SLU 41	-0.75	0.03	52.61	-18.6689	-9.3206	-0.2895
917	SLU 42	-0.75	0.08	52.62	-18.6715	-9.3219	-0.279
917	SLU 43	-0.79	-0.07	50.12	-17.8182	-8.8818	-0.3184
917	SLU 44	-0.79	0.03	50.14	-17.8224	-8.8839	-0.3009
917	SLU 45	-0.8	-0.07	50.92	-18.0988	-9.0221	-0.3223
917	SLU 46	-0.8	-0.01	50.93	-18.1013	-9.0234	-0.3118
917	SLU 47	-0.8	0.03	50.58	-17.9807	-8.9629	-0.304
917	SLU 48	-0.81	-0.06	51.37	-18.2571	-9.1011	-0.3254
917	SLU 49	-0.81	0	51.37	-18.2597	-9.1024	-0.3149
917	SLU 50	-0.81	-0.06	51.02	-18.1349	-9.0397	-0.3246
917	SLU 51	-0.81	0	51.03	-18.1374	-9.041	-0.3141
917	SLU 52	-0.84	0.05	55.24	-19.6249	-9.7877	-0.3152
917	SLU 53	-0.85	-0.04	56.02	-19.9013	-9.926	-0.3366
917	SLU 54	-0.85	0.02	56.03	-19.9039	-9.9272	-0.3261
917	SLU 55	-0.85	0.06	55.69	-19.7833	-9.8667	-0.3183
917	SLU 56	-0.86	-0.03	56.47	-20.0597	-10.0049	-0.3397
917	SLU 57	-0.86	0.03	56.48	-20.0622	-10.0062	-0.3292
917	SLU 58	-0.86	-0.04	56.12	-19.9374	-9.9436	-0.3389
917	SLU 59	-0.86	0.02	56.13	-19.9399	-9.9448	-0.3284
917	SLU 60	-0.86	-0.03	57.42	-20.3933	-10.173	-0.3388
917	SLU 61	-0.86	0.03	57.42	-20.3958	-10.1743	-0.3283
917	SLU 62	-0.87	-0.03	57.86	-20.5516	-10.252	-0.3419
917	SLU 63	-0.87	0.03	57.87	-20.5541	-10.2532	-0.3314
917	SLU 64	-0.85	-0.04	55.12	-19.5822	-9.7667	-0.335
917	SLU 65	-0.84	0.06	55.13	-19.5864	-9.7688	-0.3175
917	SLU 66	-0.86	-0.04	55.91	-19.8628	-9.907	-0.3389
917	SLU 67	-0.86	0.02	55.92	-19.8654	-9.9083	-0.3285
917	SLU 68	-0.86	0.06	55.58	-19.7448	-9.8478	-0.3206
917	SLU 69	-0.87	-0.03	56.36	-20.0212	-9.986	-0.3421
917	SLU 70	-0.87	0.03	56.37	-20.0237	-9.9873	-0.3316
917	SLU 71	-0.87	-0.03	56.02	-19.8989	-9.9247	-0.3412
917	SLU 72	-0.87	0.03	56.02	-19.9014	-9.9259	-0.3308
917	SLU 73	-0.89	0.08	60.24	-21.389	-10.6727	-0.3318
917	SLU 74	-0.91	-0.01	61.02	-21.6654	-10.8109	-0.3532
917	SLU 75	-0.91	0.05	61.03	-21.6679	-10.8121	-0.3427
917	SLU 76	-0.9	0.09	60.68	-21.5473	-10.7516	-0.3349
917	SLU 77	-0.92	0	61.47	-21.8237	-10.8898	-0.3564
917	SLU 78	-0.92	0.06	61.47	-21.8262	-10.8911	-0.3459
917	SLU 79	-0.91	-0.01	61.12	-21.7014	-10.8285	-0.3555
917	SLU 80	-0.91	0.05	61.13	-21.7039	-10.8297	-0.345
917	SLU 81	-0.91	0	62.41	-22.1573	-11.0579	-0.3554
917	SLU 82	-0.91	0.05	62.42	-22.1598	-11.0592	-0.345
917	SLU 83	-0.92	0	62.86	-22.3156	-11.1369	-0.3586
917	SLU 84	-0.92	0.06	62.87	-22.3181	-11.1381	-0.3481
917	SLE RA 1	-0.64	-0.04	41.3	-14.6756	-7.3184	-0.254
917	SLE RA 2	-0.64	0.03	41.31	-14.6784	-7.3198	-0.2424
917	SLE RA 3	-0.65	-0.03	41.83	-14.8626	-7.4119	-0.2567
917	SLE RA 4	-0.65	0	41.84	-14.8643	-7.4128	-0.2497
917	SLE RA 5	-0.64	0.03	41.61	-14.7839	-7.3724	-0.2445
917	SLE RA 6	-0.65	-0.03	42.13	-14.9682	-7.4646	-0.2587
917	SLE RA 7	-0.65	0.01	42.13	-14.9699	-7.4654	-0.2517
917	SLE RA 8	-0.65	-0.03	41.9	-14.8867	-7.4237	-0.2582
917	SLE RA 9	-0.65	0.01	41.9	-14.8883	-7.4245	-0.2512
917	SLE RA 10	-0.67	0.04	44.71	-15.88	-7.9223	-0.2519
917	SLE RA 11	-0.68	-0.02	45.23	-16.0643	-8.0145	-0.2662
917	SLE RA 12	-0.68	0.02	45.24	-16.066	-8.0153	-0.2592
917	SLE RA 13	-0.68	0.05	45.01	-15.9856	-7.975	-0.254
917	SLE RA 14	-0.69	-0.01	45.53	-16.1699	-8.0671	-0.2683
917	SLE RA 15	-0.69	0.03	45.54	-16.1715	-8.068	-0.2613
917	SLE RA 16	-0.68	-0.01	45.3	-16.0883	-8.0262	-0.2677
917	SLE RA 17	-0.68	0.02	45.31	-16.09	-8.0271	-0.2607
917	SLE RA 18	-0.68	-0.01	46.16	-16.3923	-8.1792	-0.2677
917	SLE RA 19	-0.68	0.03	46.17	-16.3939	-8.18	-0.2607

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
917	SLE RA 20	-0.69	-0.01	46.46	-16.4978	-8.2318	-0.2697
917	SLE RA 21	-0.69	0.03	46.47	-16.4995	-8.2327	-0.2627
917	SLE FR 1	-0.64	-0.04	41.3	-14.6756	-7.3184	-0.254
917	SLE FR 2	-0.64	-0.03	41.3	-14.6761	-7.3187	-0.2517
917	SLE FR 3	-0.64	-0.04	41.42	-14.7178	-7.3394	-0.2549
917	SLE FR 4	-0.65	-0.02	42.76	-15.1911	-7.5769	-0.2558
917	SLE FR 5	-0.65	-0.03	42.88	-15.2328	-7.5977	-0.259
917	SLE FR 6	-0.66	-0.03	43.73	-15.5339	-7.7488	-0.2609
917	SLE QP 1	-0.64	-0.04	41.3	-14.6756	-7.3184	-0.254
917	SLE QP 2	-0.65	-0.03	42.76	-15.1906	-7.5766	-0.2581
917	SLD 1	3.45	1.32	51.46	-18.2824	-9.0983	1.4931
917	SLD 2	3.25	0.88	51.52	-18.2998	-9.108	1.3433
917	SLD 3	3.32	-0.42	51.73	-18.3725	-9.1469	1.1526
917	SLD 4	3.12	-0.87	51.78	-18.3899	-9.1566	1.0028
917	SLD 5	0.81	3.1	44.96	-15.9784	-7.9578	0.8098
917	SLD 6	0.68	2.81	44.99	-15.9898	-7.964	0.7126
917	SLD 7	0.38	-2.72	45.84	-16.2787	-8.1197	-0.3252
917	SLD 8	0.25	-3.01	45.88	-16.2901	-8.126	-0.4224
917	SLD 9	-1.55	2.95	39.64	-14.0911	-7.0272	-0.0939
917	SLD 10	-1.68	2.66	39.68	-14.1024	-7.0335	-0.1911
917	SLD 11	-1.99	-2.88	40.53	-14.3914	-7.1892	-1.2288
917	SLD 12	-2.11	-3.17	40.56	-14.4027	-7.1955	-1.326
917	SLD 13	-4.43	0.81	33.74	-11.9912	-5.9966	-1.5191
917	SLD 14	-4.62	0.36	33.79	-12.0087	-6.0063	-1.6689
917	SLD 15	-4.56	-0.94	34.01	-12.0813	-6.0452	-1.8596
917	SLD 16	-4.75	-1.39	34.06	-12.0988	-6.0549	-2.0094
917	SLV 1	8.93	3.09	63.13	-22.4265	-11.1381	3.828
917	SLV 2	8.48	2.05	63.25	-22.4672	-11.1606	3.479
917	SLV 3	8.63	-0.89	63.74	-22.6359	-11.2508	3.0502
917	SLV 4	8.18	-1.94	63.87	-22.6765	-11.2733	2.7012
917	SLV 5	2.76	7.12	47.92	-17.0369	-8.4703	2.2064
917	SLV 6	2.47	6.46	48	-17.0629	-8.4846	1.9835
917	SLV 7	1.75	-6.16	49.97	-17.7348	-8.846	-0.3861
917	SLV 8	1.46	-6.82	50.05	-17.7608	-8.8604	-0.609
917	SLV 9	-2.77	6.76	35.47	-12.6203	-6.2928	0.0927
917	SLV 10	-3.05	6.09	35.56	-12.6463	-6.3072	-0.1301
917	SLV 11	-3.77	-6.52	37.53	-13.3183	-6.6686	-2.4998
917	SLV 12	-4.06	-7.19	37.61	-13.3442	-6.6829	-2.7227
917	SLV 13	-9.48	1.87	21.66	-7.7046	-3.8799	-3.2175
917	SLV 14	-9.93	0.83	21.78	-7.7453	-3.9024	-3.5665
917	SLV 15	-9.79	-2.11	22.27	-7.914	-3.9926	-3.9953
917	SLV 16	-10.24	-3.16	22.4	-7.9546	-4.0151	-4.3443
917	CRTFP Ux+	0	0	0	0	0	0
917	CRTFP Ux-	0	0	0	0	0	0
917	CRTFP Uy+	0	0	0	0	0	0
917	CRTFP Uy-	0	0	0	0	0	0
919	SLU 1	-0.48	-0.05	26.38	-14.3043	-0.6825	-0.2755
919	SLU 2	-0.48	0.02	26.39	-14.3087	-0.6828	-0.2743
919	SLU 3	-0.49	-0.05	26.9	-14.584	-0.6958	-0.2815
919	SLU 4	-0.49	0	26.91	-14.5866	-0.696	-0.2807
919	SLU 5	-0.48	0.02	26.68	-14.4663	-0.6902	-0.2788
919	SLU 6	-0.49	-0.04	27.19	-14.7416	-0.7033	-0.286
919	SLU 7	-0.49	0	27.2	-14.7443	-0.7034	-0.2853
919	SLU 8	-0.49	-0.05	26.97	-14.6196	-0.6975	-0.2847
919	SLU 9	-0.49	0	26.97	-14.6222	-0.6976	-0.2839
919	SLU 10	-0.52	0.03	29.74	-16.1099	-0.7688	-0.2962
919	SLU 11	-0.52	-0.03	30.25	-16.3852	-0.7819	-0.3034
919	SLU 12	-0.53	0.01	30.25	-16.3879	-0.782	-0.3027
919	SLU 13	-0.52	0.04	30.03	-16.2676	-0.7763	-0.3008
919	SLU 14	-0.53	-0.03	30.54	-16.5429	-0.7894	-0.308
919	SLU 15	-0.53	0.01	30.54	-16.5455	-0.7895	-0.3072
919	SLU 16	-0.53	-0.03	30.31	-16.4208	-0.7835	-0.3066
919	SLU 17	-0.53	0.01	30.32	-16.4234	-0.7837	-0.3059
919	SLU 18	-0.53	-0.03	31.16	-16.8775	-0.8055	-0.3069
919	SLU 19	-0.53	0.01	31.17	-16.8801	-0.8056	-0.3062
919	SLU 20	-0.54	-0.03	31.45	-17.0351	-0.8129	-0.3115
919	SLU 21	-0.54	0.02	31.46	-17.0378	-0.8131	-0.3107
919	SLU 22	-0.52	-0.03	29.66	-16.0662	-0.7667	-0.3003
919	SLU 23	-0.52	0.04	29.66	-16.0706	-0.7669	-0.2991
919	SLU 24	-0.53	-0.03	30.17	-16.3459	-0.78	-0.3063
919	SLU 25	-0.53	0.01	30.18	-16.3486	-0.7801	-0.3055
919	SLU 26	-0.53	0.04	29.96	-16.2283	-0.7744	-0.3036
919	SLU 27	-0.54	-0.03	30.47	-16.5036	-0.7875	-0.3108
919	SLU 28	-0.54	0.02	30.47	-16.5062	-0.7876	-0.3101
919	SLU 29	-0.54	-0.03	30.24	-16.3815	-0.7816	-0.3095
919	SLU 30	-0.54	0.02	30.24	-16.3842	-0.7818	-0.3087
919	SLU 31	-0.56	0.05	33.01	-17.8719	-0.8529	-0.3211
919	SLU 32	-0.57	-0.01	33.52	-18.1472	-0.866	-0.3282
919	SLU 33	-0.57	0.03	33.52	-18.1498	-0.8662	-0.3275
919	SLU 34	-0.57	0.06	33.3	-18.0295	-0.8604	-0.3256
919	SLU 35	-0.58	-0.01	33.81	-18.3048	-0.8735	-0.3328
919	SLU 36	-0.58	0.03	33.82	-18.3075	-0.8736	-0.3321
919	SLU 37	-0.57	-0.01	33.59	-18.1828	-0.8677	-0.3314
919	SLU 38	-0.57	0.03	33.59	-18.1854	-0.8678	-0.3307
919	SLU 39	-0.57	-0.01	34.43	-18.6394	-0.8896	-0.3317
919	SLU 40	-0.58	0.03	34.44	-18.6421	-0.8897	-0.331
919	SLU 41	-0.58	-0.01	34.73	-18.7971	-0.8971	-0.3363
919	SLU 42	-0.58	0.03	34.73	-18.7997	-0.8972	-0.3355
919	SLU 43	-0.6	-0.07	33.18	-17.9914	-0.8585	-0.3497
919	SLU 44	-0.6	0	33.18	-17.9958	-0.8587	-0.3484
919	SLU 45	-0.61	-0.07	33.69	-18.2711	-0.8718	-0.3556

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
919	SLU 46	-0.61	-0.03	33.7	-18.2738	-0.8719	-0.3548
919	SLU 47	-0.61	0	33.48	-18.1535	-0.8661	-0.353
919	SLU 48	-0.62	-0.07	33.99	-18.4288	-0.8792	-0.3602
919	SLU 49	-0.62	-0.02	33.99	-18.4314	-0.8794	-0.3594
919	SLU 50	-0.62	-0.07	33.76	-18.3067	-0.8734	-0.3588
919	SLU 51	-0.62	-0.02	33.76	-18.3094	-0.8735	-0.358
919	SLU 52	-0.64	0.01	36.53	-19.7971	-0.9447	-0.3704
919	SLU 53	-0.65	-0.05	37.04	-20.0724	-0.9578	-0.3776
919	SLU 54	-0.65	-0.01	37.04	-20.075	-0.9579	-0.3768
919	SLU 55	-0.65	0.02	36.82	-19.9547	-0.9522	-0.3749
919	SLU 56	-0.66	-0.05	37.33	-20.23	-0.9653	-0.3821
919	SLU 57	-0.66	-0.01	37.34	-20.2327	-0.9654	-0.3814
919	SLU 58	-0.66	-0.05	37.1	-20.108	-0.9594	-0.3808
919	SLU 59	-0.66	-0.01	37.11	-20.1106	-0.9596	-0.38
919	SLU 60	-0.66	-0.05	37.95	-20.5647	-0.9814	-0.3811
919	SLU 61	-0.66	-0.01	37.96	-20.5673	-0.9815	-0.3803
919	SLU 62	-0.67	-0.05	38.25	-20.7223	-0.9888	-0.3856
919	SLU 63	-0.67	-0.01	38.25	-20.7249	-0.989	-0.3849
919	SLU 64	-0.65	-0.06	36.45	-19.7534	-0.9426	-0.3745
919	SLU 65	-0.65	0.01	36.46	-19.7578	-0.9428	-0.3732
919	SLU 66	-0.66	-0.05	36.97	-20.0331	-0.9559	-0.3804
919	SLU 67	-0.66	-0.01	36.97	-20.0357	-0.956	-0.3797
919	SLU 68	-0.66	0.02	36.75	-19.9154	-0.9503	-0.3778
919	SLU 69	-0.67	-0.05	37.26	-20.1908	-0.9634	-0.385
919	SLU 70	-0.67	0	37.26	-20.1934	-0.9635	-0.3842
919	SLU 71	-0.66	-0.05	37.03	-20.0687	-0.9575	-0.3836
919	SLU 72	-0.66	-0.01	37.04	-20.0713	-0.9577	-0.3829
919	SLU 73	-0.69	0.03	39.8	-21.559	-1.0289	-0.3952
919	SLU 74	-0.7	-0.04	40.31	-21.8344	-1.0419	-0.4024
919	SLU 75	-0.7	0.01	40.32	-21.837	-1.0421	-0.4016
919	SLU 76	-0.69	0.03	40.09	-21.7167	-1.0363	-0.3998
919	SLU 77	-0.7	-0.03	40.6	-21.992	-1.0494	-0.407
919	SLU 78	-0.71	0.01	40.61	-21.9946	-1.0495	-0.4062
919	SLU 79	-0.7	-0.03	40.38	-21.87	-1.0436	-0.4056
919	SLU 80	-0.7	0.01	40.38	-21.8726	-1.0437	-0.4048
919	SLU 81	-0.7	-0.03	41.23	-22.3266	-1.0655	-0.4059
919	SLU 82	-0.7	0.01	41.23	-22.3292	-1.0656	-0.4051
919	SLU 83	-0.71	-0.03	41.52	-22.4843	-1.073	-0.4104
919	SLU 84	-0.71	0.01	41.52	-22.4869	-1.0731	-0.4097
919	SLE RA 1	-0.49	-0.05	27.32	-14.8077	-0.7066	-0.2826
919	SLE RA 2	-0.49	0	27.32	-14.8106	-0.7067	-0.2818
919	SLE RA 3	-0.5	-0.04	27.66	-14.9941	-0.7155	-0.2866
919	SLE RA 4	-0.5	-0.02	27.67	-14.9959	-0.7155	-0.2861
919	SLE RA 5	-0.49	0	27.52	-14.9157	-0.7117	-0.2848
919	SLE RA 6	-0.5	-0.04	27.86	-15.0992	-0.7204	-0.2896
919	SLE RA 7	-0.5	-0.01	27.86	-15.101	-0.7205	-0.2891
919	SLE RA 8	-0.5	-0.04	27.71	-15.0179	-0.7165	-0.2887
919	SLE RA 9	-0.5	-0.01	27.71	-15.0196	-0.7166	-0.2882
919	SLE RA 10	-0.51	0.01	29.55	-16.0114	-0.7641	-0.2964
919	SLE RA 11	-0.52	-0.03	29.89	-16.195	-0.7728	-0.3012
919	SLE RA 12	-0.52	0	29.9	-16.1967	-0.7729	-0.3007
919	SLE RA 13	-0.52	0.01	29.75	-16.1165	-0.7691	-0.2995
919	SLE RA 14	-0.53	-0.03	30.09	-16.3001	-0.7778	-0.3043
919	SLE RA 15	-0.53	0	30.09	-16.3018	-0.7779	-0.3038
919	SLE RA 16	-0.52	-0.03	29.94	-16.2187	-0.7739	-0.3033
919	SLE RA 17	-0.53	0	29.94	-16.2205	-0.774	-0.3028
919	SLE RA 18	-0.52	-0.03	30.5	-16.5232	-0.7885	-0.3035
919	SLE RA 19	-0.53	0	30.51	-16.5249	-0.7886	-0.303
919	SLE RA 20	-0.53	-0.03	30.7	-16.6283	-0.7935	-0.3066
919	SLE RA 21	-0.53	0	30.7	-16.63	-0.7936	-0.3061
919	SLE FR 1	-0.49	-0.05	27.32	-14.8077	-0.7066	-0.2826
919	SLE FR 2	-0.49	-0.04	27.32	-14.8083	-0.7066	-0.2824
919	SLE FR 3	-0.49	-0.05	27.4	-14.8497	-0.7086	-0.2838
919	SLE FR 4	-0.5	-0.03	28.27	-15.3229	-0.7312	-0.2887
919	SLE FR 5	-0.5	-0.04	28.35	-15.3644	-0.7332	-0.2901
919	SLE FR 6	-0.51	-0.04	28.91	-15.6654	-0.7476	-0.2931
919	SLE QP 1	-0.49	-0.05	27.32	-14.8077	-0.7066	-0.2826
919	SLE QP 2	-0.5	-0.04	28.27	-15.3223	-0.7312	-0.2889
919	SLD 1	2.51	0.93	33.86	-18.3459	-0.8696	1.4586
919	SLD 2	2.37	0.61	33.89	-18.3619	-0.8703	1.3739
919	SLD 3	2.43	-0.32	34.03	-18.442	-0.8746	1.3888
919	SLD 4	2.29	-0.64	34.07	-18.458	-0.8753	1.3041
919	SLD 5	0.55	2.21	29.68	-16.0809	-0.765	0.3561
919	SLD 6	0.46	2	29.7	-16.0912	-0.7655	0.3011
919	SLD 7	0.28	-1.98	30.26	-16.4012	-0.7816	0.1232
919	SLD 8	0.19	-2.18	30.28	-16.4116	-0.7821	0.0683
919	SLD 9	-1.19	2.1	26.26	-14.2331	-0.6803	-0.6461
919	SLD 10	-1.28	1.89	26.28	-14.2434	-0.6807	-0.701
919	SLD 11	-1.46	-2.09	26.85	-14.5534	-0.6968	-0.8789
919	SLD 12	-1.55	-2.3	26.87	-14.5638	-0.6973	-0.9339
919	SLD 13	-3.29	0.56	22.48	-12.1867	-0.5871	-1.8819
919	SLD 14	-3.42	0.24	22.51	-12.2026	-0.5878	-1.9666
919	SLD 15	-3.37	-0.7	22.66	-12.2828	-0.592	-1.9517
919	SLD 16	-3.51	-1.02	22.69	-12.2987	-0.5928	-2.0364
919	SLV 1	6.53	2.2	41.34	-22.3985	-1.0551	3.7968
919	SLV 2	6.22	1.46	41.42	-22.4357	-1.0567	3.5995
919	SLV 3	6.34	-0.66	41.75	-22.6223	-1.0667	3.6354
919	SLV 4	6.03	-1.41	41.83	-22.6595	-1.0683	3.4381
919	SLV 5	1.95	5.1	31.56	-17.0995	-0.8105	1.215
919	SLV 6	1.75	4.63	31.61	-17.1232	-0.8115	1.089
919	SLV 7	1.32	-4.45	32.93	-17.8455	-0.8491	0.6771

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
919	SLV 8	1.12	-4.92	32.97	-17.8692	-0.8502	0.551
919	SLV 9	-2.12	4.84	23.57	-12.7755	-0.6122	-1.1288
919	SLV 10	-2.32	4.36	23.62	-12.7992	-0.6132	-1.2548
919	SLV 11	-2.75	-4.71	24.94	-13.5214	-0.6508	-1.6667
919	SLV 12	-2.95	-5.19	24.99	-13.5452	-0.6519	-1.7928
919	SLV 13	-7.03	1.32	14.72	-7.9852	-0.394	-4.0159
919	SLV 14	-7.34	0.58	14.79	-8.0223	-0.3957	-4.2132
919	SLV 15	-7.22	-1.54	15.13	-8.209	-0.4056	-4.1772
919	SLV 16	-7.53	-2.29	15.2	-8.2461	-0.4072	-4.3746
919	CRTFP Ux+	0	0	0	0	0	0
919	CRTFP Ux-	0	0	0	0	0	0
919	CRTFP Uy+	0	0	0	0	0	0
919	CRTFP Uy-	0	0	0	0	0	0
920	SLU 1	-0.56	-0.09	28.5	-15.0863	0.0741	-0.3223
920	SLU 2	-0.56	-0.01	28.51	-15.0912	0.0742	-0.3232
920	SLU 3	-0.57	-0.08	29.06	-15.3772	0.0758	-0.3294
920	SLU 4	-0.57	-0.03	29.06	-15.3801	0.0758	-0.33
920	SLU 5	-0.57	0	28.82	-15.2547	0.0751	-0.3287
920	SLU 6	-0.58	-0.08	29.37	-15.5408	0.0767	-0.3349
920	SLU 7	-0.58	-0.03	29.37	-15.5437	0.0768	-0.3355
920	SLU 8	-0.58	-0.08	29.12	-15.4134	0.0761	-0.3333
920	SLU 9	-0.58	-0.03	29.13	-15.4163	0.0761	-0.3338
920	SLU 10	-0.61	0	32.1	-16.9728	0.0842	-0.3497
920	SLU 11	-0.62	-0.07	32.65	-17.2589	0.0858	-0.356
920	SLU 12	-0.62	-0.02	32.65	-17.2618	0.0858	-0.3565
920	SLU 13	-0.62	0.01	32.41	-17.1364	0.0851	-0.3552
920	SLU 14	-0.63	-0.07	32.96	-17.4224	0.0868	-0.3615
920	SLU 15	-0.63	-0.02	32.97	-17.4253	0.0868	-0.362
920	SLU 16	-0.62	-0.07	32.72	-17.295	0.0861	-0.3598
920	SLU 17	-0.62	-0.02	32.72	-17.298	0.0861	-0.3603
920	SLU 18	-0.62	-0.07	33.63	-17.7744	0.0885	-0.3602
920	SLU 19	-0.63	-0.02	33.64	-17.7773	0.0885	-0.3607
920	SLU 20	-0.63	-0.07	33.94	-17.9379	0.0894	-0.3657
920	SLU 21	-0.63	-0.02	33.95	-17.9409	0.0894	-0.3662
920	SLU 22	-0.61	-0.07	32.01	-16.926	0.084	-0.3522
920	SLU 23	-0.61	0.01	32.02	-16.9308	0.084	-0.3531
920	SLU 24	-0.62	-0.06	32.57	-17.2169	0.0857	-0.3593
920	SLU 25	-0.62	-0.02	32.57	-17.2198	0.0857	-0.3599
920	SLU 26	-0.62	0.01	32.33	-17.0943	0.085	-0.3586
920	SLU 27	-0.63	-0.06	32.88	-17.3804	0.0866	-0.3648
920	SLU 28	-0.63	-0.01	32.89	-17.3833	0.0866	-0.3654
920	SLU 29	-0.63	-0.06	32.64	-17.253	0.0859	-0.3632
920	SLU 30	-0.63	-0.02	32.64	-17.2559	0.0859	-0.3637
920	SLU 31	-0.66	0.02	35.62	-18.8125	0.0941	-0.3796
920	SLU 32	-0.67	-0.05	36.16	-19.0985	0.0957	-0.3859
920	SLU 33	-0.67	-0.01	36.17	-19.1014	0.0957	-0.3864
920	SLU 34	-0.67	0.02	35.93	-18.976	0.095	-0.3851
920	SLU 35	-0.68	-0.05	36.47	-19.2621	0.0967	-0.3914
920	SLU 36	-0.68	0	36.48	-19.265	0.0967	-0.3919
920	SLU 37	-0.68	-0.05	36.23	-19.1347	0.096	-0.3897
920	SLU 38	-0.68	0	36.24	-19.1376	0.096	-0.3902
920	SLU 39	-0.68	-0.06	37.15	-19.6141	0.0984	-0.3901
920	SLU 40	-0.68	-0.01	37.15	-19.617	0.0984	-0.3906
920	SLU 41	-0.69	-0.05	37.46	-19.7776	0.0993	-0.3956
920	SLU 42	-0.69	0	37.46	-19.7805	0.0993	-0.3961
920	SLU 43	-0.71	-0.12	35.85	-18.9815	0.093	-0.4087
920	SLU 44	-0.71	-0.04	35.86	-18.9863	0.093	-0.4096
920	SLU 45	-0.72	-0.11	36.4	-19.2724	0.0946	-0.4159
920	SLU 46	-0.72	-0.06	36.41	-19.2753	0.0947	-0.4164
920	SLU 47	-0.72	-0.03	36.17	-19.1499	0.094	-0.4151
920	SLU 48	-0.73	-0.11	36.71	-19.4359	0.0956	-0.4214
920	SLU 49	-0.73	-0.06	36.72	-19.4388	0.0956	-0.4219
920	SLU 50	-0.73	-0.11	36.47	-19.3085	0.0949	-0.4197
920	SLU 51	-0.73	-0.06	36.48	-19.3114	0.0949	-0.4202
920	SLU 52	-0.76	-0.03	39.45	-20.868	0.103	-0.4362
920	SLU 53	-0.77	-0.1	39.99	-21.1541	0.1047	-0.4424
920	SLU 54	-0.77	-0.05	40	-21.157	0.1047	-0.443
920	SLU 55	-0.77	-0.02	39.76	-21.0315	0.104	-0.4416
920	SLU 56	-0.78	-0.1	40.31	-21.3176	0.1056	-0.4479
920	SLU 57	-0.78	-0.05	40.31	-21.3205	0.1056	-0.4484
920	SLU 58	-0.77	-0.1	40.06	-21.1902	0.1049	-0.4462
920	SLU 59	-0.77	-0.05	40.07	-21.1931	0.105	-0.4468
920	SLU 60	-0.77	-0.1	40.98	-21.6696	0.1073	-0.4466
920	SLU 61	-0.78	-0.05	40.98	-21.6725	0.1073	-0.4472
920	SLU 62	-0.78	-0.1	41.29	-21.8331	0.1083	-0.4521
920	SLU 63	-0.78	-0.05	41.3	-21.836	0.1083	-0.4527
920	SLU 64	-0.76	-0.1	39.36	-20.8211	0.1029	-0.4386
920	SLU 65	-0.76	-0.02	39.37	-20.826	0.1029	-0.4395
920	SLU 66	-0.77	-0.1	39.91	-21.112	0.1045	-0.4458
920	SLU 67	-0.77	-0.05	39.92	-21.1149	0.1045	-0.4463
920	SLU 68	-0.77	-0.02	39.68	-20.9895	0.1038	-0.445
920	SLU 69	-0.78	-0.09	40.23	-21.2756	0.1055	-0.4513
920	SLU 70	-0.78	-0.04	40.23	-21.2785	0.1055	-0.4518
920	SLU 71	-0.78	-0.1	39.98	-21.1482	0.1048	-0.4496
920	SLU 72	-0.78	-0.05	39.99	-21.1511	0.1048	-0.4501
920	SLU 73	-0.81	-0.01	42.96	-22.7076	0.1129	-0.4661
920	SLU 74	-0.82	-0.09	43.51	-22.9937	0.1146	-0.4723
920	SLU 75	-0.82	-0.04	43.51	-22.9966	0.1146	-0.4729
920	SLU 76	-0.82	-0.01	43.27	-22.8712	0.1139	-0.4715
920	SLU 77	-0.83	-0.08	43.82	-23.1572	0.1155	-0.4778
920	SLU 78	-0.83	-0.03	43.82	-23.1601	0.1155	-0.4783

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
920	SLU 79	-0.83	-0.08	43.58	-23.0299	0.1148	-0.4761
920	SLU 80	-0.83	-0.04	43.58	-23.0328	0.1148	-0.4767
920	SLU 81	-0.83	-0.09	44.49	-23.5092	0.1172	-0.4765
920	SLU 82	-0.83	-0.04	44.5	-23.5121	0.1172	-0.4771
920	SLU 83	-0.84	-0.08	44.8	-23.6728	0.1182	-0.482
920	SLU 84	-0.84	-0.04	44.81	-23.6757	0.1182	-0.4826
920	SLE RA 1	-0.57	-0.08	29.5	-15.6119	0.077	-0.3308
920	SLE RA 2	-0.57	-0.03	29.51	-15.6152	0.077	-0.3314
920	SLE RA 3	-0.58	-0.08	29.87	-15.8059	0.0781	-0.3356
920	SLE RA 4	-0.58	-0.05	29.88	-15.8078	0.0781	-0.336
920	SLE RA 5	-0.58	-0.03	29.72	-15.7242	0.0776	-0.3351
920	SLE RA 6	-0.59	-0.08	30.08	-15.9149	0.0787	-0.3393
920	SLE RA 7	-0.59	-0.04	30.09	-15.9168	0.0787	-0.3396
920	SLE RA 8	-0.59	-0.08	29.92	-15.83	0.0782	-0.3381
920	SLE RA 9	-0.59	-0.05	29.92	-15.8319	0.0782	-0.3385
920	SLE RA 10	-0.61	-0.02	31.91	-16.8696	0.0837	-0.3491
920	SLE RA 11	-0.61	-0.07	32.27	-17.0603	0.0848	-0.3533
920	SLE RA 12	-0.61	-0.04	32.27	-17.0623	0.0848	-0.3537
920	SLE RA 13	-0.61	-0.02	32.11	-16.9786	0.0843	-0.3528
920	SLE RA 14	-0.62	-0.07	32.48	-17.1693	0.0854	-0.3569
920	SLE RA 15	-0.62	-0.04	32.48	-17.1713	0.0854	-0.3573
920	SLE RA 16	-0.62	-0.07	32.32	-17.0844	0.0849	-0.3558
920	SLE RA 17	-0.62	-0.04	32.32	-17.0864	0.0849	-0.3562
920	SLE RA 18	-0.62	-0.07	32.93	-17.404	0.0865	-0.3561
920	SLE RA 19	-0.62	-0.04	32.93	-17.4059	0.0865	-0.3565
920	SLE RA 20	-0.62	-0.07	33.13	-17.513	0.0872	-0.3598
920	SLE RA 21	-0.62	-0.04	33.14	-17.515	0.0872	-0.3601
920	SLE FR 1	-0.57	-0.08	29.5	-15.6119	0.077	-0.3308
920	SLE FR 2	-0.57	-0.07	29.51	-15.6126	0.077	-0.331
920	SLE FR 3	-0.58	-0.08	29.59	-15.6555	0.0772	-0.3323
920	SLE FR 4	-0.59	-0.07	30.53	-16.1502	0.0798	-0.3385
920	SLE FR 5	-0.59	-0.08	30.61	-16.1932	0.0801	-0.3399
920	SLE FR 6	-0.6	-0.08	31.22	-16.508	0.0817	-0.3435
920	SLE QP 1	-0.57	-0.08	29.5	-15.6119	0.077	-0.3308
920	SLE QP 2	-0.59	-0.08	30.53	-16.1496	0.0798	-0.3384
920	SLD 1	2.93	1.02	36.28	-19.1834	0.1043	1.6854
920	SLD 2	2.78	0.67	36.31	-19.1983	0.1045	1.5969
920	SLD 3	2.84	-0.39	36.49	-19.2997	0.1058	1.6321
920	SLD 4	2.68	-0.74	36.52	-19.3147	0.106	1.5436
920	SLD 5	0.64	2.45	31.93	-16.8806	0.085	0.365
920	SLD 6	0.54	2.23	31.95	-16.8903	0.0851	0.3075
920	SLD 7	0.33	-2.25	32.63	-17.2685	0.0897	0.1874
920	SLD 8	0.22	-2.48	32.65	-17.2782	0.0899	0.13
920	SLD 9	-1.4	2.32	28.41	-15.0209	0.0698	-0.8068
920	SLD 10	-1.5	2.1	28.43	-15.0306	0.0699	-0.8642
920	SLD 11	-1.71	-2.38	29.11	-15.4088	0.0746	-0.9843
920	SLD 12	-1.81	-2.61	29.13	-15.4185	0.0747	-1.0418
920	SLD 13	-3.86	0.59	24.54	-12.9844	0.0537	-2.2205
920	SLD 14	-4.01	0.23	24.57	-12.9994	0.0539	-2.309
920	SLD 15	-3.95	-0.83	24.75	-13.1008	0.0551	-2.2737
920	SLD 16	-4.11	-1.18	24.78	-13.1157	0.0553	-2.3622
920	SLV 1	7.65	2.45	43.99	-23.2496	0.1372	4.3943
920	SLV 2	7.28	1.63	44.06	-23.2844	0.1377	4.1881
920	SLV 3	7.43	-0.77	44.48	-23.521	0.1405	4.27
920	SLV 4	7.06	-1.59	44.54	-23.5558	0.141	4.0638
920	SLV 5	2.28	5.71	33.81	-17.862	0.0919	1.3047
920	SLV 6	2.05	5.18	33.86	-17.8843	0.0922	1.173
920	SLV 7	1.54	-5.04	35.44	-18.7667	0.103	0.8906
920	SLV 8	1.31	-5.56	35.49	-18.789	0.1033	0.7589
920	SLV 9	-2.49	5.4	25.57	-13.5101	0.0564	-1.4357
920	SLV 10	-2.72	4.88	25.62	-13.5324	0.0567	-1.5674
920	SLV 11	-3.22	-5.34	27.2	-14.4149	0.0674	-1.8499
920	SLV 12	-3.45	-5.87	27.25	-14.4371	0.0678	-1.9815
920	SLV 13	-8.24	1.43	16.52	-8.7433	0.0187	-4.7406
920	SLV 14	-8.6	0.61	16.59	-8.7781	0.0192	-4.9468
920	SLV 15	-8.46	-1.79	17.01	-9.0147	0.022	-4.8649
920	SLV 16	-8.82	-2.61	17.08	-9.0495	0.0225	-5.0711
920	CRTFP Ux+	0	0	0	0	0	0
920	CRTFP Ux-	0	0	0	0	0	0
920	CRTFP Uy+	0	0	0	0	0	0
920	CRTFP Uy-	0	0	0	0	0	0
921	SLU 1	-0.56	-0.11	26.4	-13.6464	0.0579	-0.3237
921	SLU 2	-0.56	-0.03	26.41	-13.651	0.0579	-0.3246
921	SLU 3	-0.57	-0.1	26.91	-13.9055	0.0592	-0.3309
921	SLU 4	-0.58	-0.05	26.91	-13.9082	0.0592	-0.3314
921	SLU 5	-0.57	-0.03	26.69	-13.7961	0.0587	-0.3301
921	SLU 6	-0.58	-0.1	27.19	-14.0506	0.06	-0.3364
921	SLU 7	-0.59	-0.05	27.2	-14.0534	0.06	-0.3369
921	SLU 8	-0.58	-0.1	26.97	-13.9366	0.0594	-0.3347
921	SLU 9	-0.58	-0.05	26.98	-13.9394	0.0594	-0.3353
921	SLU 10	-0.61	-0.03	29.72	-15.3371	0.0656	-0.3514
921	SLU 11	-0.62	-0.1	30.22	-15.5916	0.0669	-0.3577
921	SLU 12	-0.62	-0.05	30.22	-15.5944	0.0669	-0.3583
921	SLU 13	-0.62	-0.02	30	-15.4822	0.0664	-0.3569
921	SLU 14	-0.63	-0.09	30.5	-15.7367	0.0677	-0.3632
921	SLU 15	-0.63	-0.05	30.51	-15.7395	0.0677	-0.3638
921	SLU 16	-0.63	-0.1	30.28	-15.6227	0.0672	-0.3615
921	SLU 17	-0.63	-0.05	30.29	-15.6255	0.0672	-0.3621
921	SLU 18	-0.63	-0.1	31.13	-16.0551	0.069	-0.362
921	SLU 19	-0.63	-0.05	31.13	-16.0579	0.069	-0.3626
921	SLU 20	-0.64	-0.1	31.41	-16.2002	0.0697	-0.3675

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
921	SLU 21	-0.64	-0.05	31.42	-16.203	0.0697	-0.3681
921	SLU 22	-0.61	-0.09	29.64	-15.2936	0.0655	-0.3539
921	SLU 23	-0.62	-0.02	29.64	-15.2982	0.0656	-0.3548
921	SLU 24	-0.63	-0.09	30.14	-15.5527	0.0668	-0.361
921	SLU 25	-0.63	-0.04	30.15	-15.5555	0.0668	-0.3616
921	SLU 26	-0.63	-0.02	29.93	-15.4433	0.0663	-0.3603
921	SLU 27	-0.64	-0.09	30.43	-15.6978	0.0676	-0.3666
921	SLU 28	-0.64	-0.04	30.43	-15.7006	0.0676	-0.3671
921	SLU 29	-0.63	-0.09	30.2	-15.5838	0.0671	-0.3649
921	SLU 30	-0.63	-0.04	30.21	-15.5866	0.0671	-0.3654
921	SLU 31	-0.66	-0.01	32.95	-16.9843	0.0733	-0.3816
921	SLU 32	-0.67	-0.08	33.45	-17.2388	0.0746	-0.3879
921	SLU 33	-0.67	-0.04	33.46	-17.2416	0.0746	-0.3884
921	SLU 34	-0.67	-0.01	33.24	-17.1294	0.074	-0.3871
921	SLU 35	-0.68	-0.08	33.74	-17.3839	0.0753	-0.3934
921	SLU 36	-0.68	-0.04	33.74	-17.3867	0.0753	-0.3939
921	SLU 37	-0.68	-0.08	33.51	-17.2699	0.0748	-0.3917
921	SLU 38	-0.68	-0.04	33.52	-17.2727	0.0748	-0.3922
921	SLU 39	-0.68	-0.09	34.36	-17.7023	0.0766	-0.3922
921	SLU 40	-0.68	-0.04	34.37	-17.7051	0.0766	-0.3927
921	SLU 41	-0.69	-0.09	34.65	-17.8474	0.0773	-0.3977
921	SLU 42	-0.69	-0.04	34.65	-17.8502	0.0773	-0.3982
921	SLU 43	-0.71	-0.14	33.21	-17.1755	0.0727	-0.4105
921	SLU 44	-0.71	-0.07	33.22	-17.1801	0.0727	-0.4114
921	SLU 45	-0.73	-0.14	33.72	-17.4346	0.074	-0.4177
921	SLU 46	-0.73	-0.09	33.73	-17.4374	0.074	-0.4182
921	SLU 47	-0.72	-0.06	33.51	-17.3252	0.0734	-0.4169
921	SLU 48	-0.73	-0.13	34.01	-17.5798	0.0747	-0.4232
921	SLU 49	-0.74	-0.09	34.01	-17.5825	0.0747	-0.4237
921	SLU 50	-0.73	-0.14	33.78	-17.4658	0.0742	-0.4215
921	SLU 51	-0.73	-0.09	33.79	-17.4685	0.0742	-0.422
921	SLU 52	-0.76	-0.06	36.53	-18.8662	0.0804	-0.4382
921	SLU 53	-0.77	-0.13	37.03	-19.1208	0.0817	-0.4445
921	SLU 54	-0.77	-0.09	37.04	-19.1235	0.0817	-0.445
921	SLU 55	-0.77	-0.06	36.82	-19.0114	0.0812	-0.4437
921	SLU 56	-0.78	-0.13	37.32	-19.2659	0.0824	-0.45
921	SLU 57	-0.78	-0.08	37.32	-19.2687	0.0824	-0.4505
921	SLU 58	-0.78	-0.13	37.09	-19.1519	0.0819	-0.4483
921	SLU 59	-0.78	-0.09	37.1	-19.1547	0.0819	-0.4489
921	SLU 60	-0.78	-0.14	37.94	-19.5842	0.0837	-0.4488
921	SLU 61	-0.78	-0.09	37.95	-19.587	0.0837	-0.4493
921	SLU 62	-0.79	-0.13	38.23	-19.7294	0.0845	-0.4543
921	SLU 63	-0.79	-0.09	38.23	-19.7321	0.0845	-0.4549
921	SLU 64	-0.77	-0.13	36.45	-18.8227	0.0803	-0.4406
921	SLU 65	-0.77	-0.05	36.46	-18.8273	0.0803	-0.4416
921	SLU 66	-0.78	-0.12	36.96	-19.0818	0.0816	-0.4478
921	SLU 67	-0.78	-0.08	36.96	-19.0846	0.0816	-0.4484
921	SLU 68	-0.78	-0.05	36.74	-18.9724	0.0811	-0.4471
921	SLU 69	-0.79	-0.12	37.24	-19.227	0.0823	-0.4533
921	SLU 70	-0.79	-0.08	37.25	-19.2297	0.0824	-0.4539
921	SLU 71	-0.78	-0.12	37.02	-19.113	0.0818	-0.4517
921	SLU 72	-0.79	-0.08	37.02	-19.1157	0.0818	-0.4522
921	SLU 73	-0.81	-0.05	39.77	-20.5134	0.088	-0.4684
921	SLU 74	-0.82	-0.12	40.27	-20.768	0.0893	-0.4746
921	SLU 75	-0.82	-0.07	40.27	-20.7707	0.0893	-0.4752
921	SLU 76	-0.82	-0.05	40.05	-20.6586	0.0888	-0.4739
921	SLU 77	-0.83	-0.12	40.55	-20.9131	0.0901	-0.4801
921	SLU 78	-0.83	-0.07	40.56	-20.9159	0.0901	-0.4807
921	SLU 79	-0.83	-0.12	40.33	-20.7991	0.0895	-0.4785
921	SLU 80	-0.83	-0.07	40.33	-20.8019	0.0895	-0.479
921	SLU 81	-0.83	-0.12	41.18	-21.2315	0.0913	-0.479
921	SLU 82	-0.83	-0.08	41.18	-21.2342	0.0913	-0.4795
921	SLU 83	-0.84	-0.12	41.46	-21.3766	0.0921	-0.4845
921	SLU 84	-0.84	-0.08	41.47	-21.3794	0.0921	-0.485
921	SLE RA 1	-0.58	-0.1	27.33	-14.117	0.0601	-0.3323
921	SLE RA 2	-0.58	-0.05	27.33	-14.1201	0.0601	-0.3329
921	SLE RA 3	-0.59	-0.1	27.66	-14.2897	0.061	-0.3371
921	SLE RA 4	-0.59	-0.07	27.67	-14.2916	0.061	-0.3375
921	SLE RA 5	-0.58	-0.05	27.52	-14.2168	0.0606	-0.3366
921	SLE RA 6	-0.59	-0.1	27.85	-14.3865	0.0615	-0.3408
921	SLE RA 7	-0.59	-0.07	27.86	-14.3883	0.0615	-0.3412
921	SLE RA 8	-0.59	-0.1	27.7	-14.3105	0.0611	-0.3397
921	SLE RA 9	-0.59	-0.07	27.71	-14.3123	0.0611	-0.34
921	SLE RA 10	-0.61	-0.05	29.54	-15.2441	0.0653	-0.3508
921	SLE RA 11	-0.62	-0.1	29.87	-15.4138	0.0661	-0.355
921	SLE RA 12	-0.62	-0.07	29.87	-15.4157	0.0661	-0.3554
921	SLE RA 13	-0.62	-0.05	29.73	-15.3409	0.0658	-0.3545
921	SLE RA 14	-0.62	-0.09	30.06	-15.5106	0.0666	-0.3587
921	SLE RA 15	-0.62	-0.06	30.06	-15.5124	0.0666	-0.359
921	SLE RA 16	-0.62	-0.1	29.91	-15.4346	0.0663	-0.3575
921	SLE RA 17	-0.62	-0.07	29.91	-15.4364	0.0663	-0.3579
921	SLE RA 18	-0.62	-0.1	30.48	-15.7228	0.0675	-0.3579
921	SLE RA 19	-0.62	-0.07	30.48	-15.7247	0.0675	-0.3582
921	SLE RA 20	-0.63	-0.1	30.67	-15.8196	0.068	-0.3615
921	SLE RA 21	-0.63	-0.07	30.67	-15.8214	0.068	-0.3619
921	SLE FR 1	-0.58	-0.1	27.33	-14.117	0.0601	-0.3323
921	SLE FR 2	-0.58	-0.09	27.33	-14.1176	0.0601	-0.3325
921	SLE FR 3	-0.58	-0.1	27.4	-14.1557	0.0603	-0.3338
921	SLE FR 4	-0.59	-0.09	28.27	-14.5993	0.0623	-0.3401
921	SLE FR 5	-0.59	-0.1	28.35	-14.6374	0.0625	-0.3415
921	SLE FR 6	-0.6	-0.1	28.9	-14.9199	0.0638	-0.3451

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
921	SLE QP 1	-0.58	-0.1	27.33	-14.117	0.0601	-0.3323
921	SLE QP 2	-0.59	-0.1	28.27	-14.5987	0.0623	-0.34
921	SLD 1	2.93	0.96	33.27	-17.1613	0.0833	1.6858
921	SLD 2	2.78	0.63	33.29	-17.1725	0.0835	1.5973
921	SLD 3	2.84	-0.39	33.49	-17.2873	0.0846	1.6327
921	SLD 4	2.68	-0.72	33.52	-17.2986	0.0848	1.5442
921	SLD 5	0.64	2.33	29.43	-15.1744	0.0666	0.3638
921	SLD 6	0.54	2.11	29.44	-15.1817	0.0668	0.3063
921	SLD 7	0.32	-2.18	30.17	-15.5944	0.0709	0.1867
921	SLD 8	0.22	-2.4	30.19	-15.6018	0.071	0.1292
921	SLD 9	-1.4	2.2	26.36	-13.5957	0.0536	-0.8092
921	SLD 10	-1.5	1.98	26.37	-13.603	0.0537	-0.8667
921	SLD 11	-1.72	-2.32	27.1	-14.0157	0.0579	-0.9863
921	SLD 12	-1.82	-2.53	27.11	-14.0231	0.058	-1.0438
921	SLD 13	-3.86	0.52	23.03	-11.8989	0.0398	-2.2242
921	SLD 14	-4.02	0.19	23.05	-11.9102	0.04	-2.3127
921	SLD 15	-3.96	-0.83	23.25	-12.0249	0.0411	-2.2773
921	SLD 16	-4.11	-1.16	23.27	-12.0362	0.0413	-2.3658
921	SLV 1	7.65	2.35	39.97	-20.5956	0.1114	4.3974
921	SLV 2	7.29	1.58	40.03	-20.6219	0.1119	4.1911
921	SLV 3	7.43	-0.74	40.49	-20.89	0.1144	4.2735
921	SLV 4	7.07	-1.51	40.55	-20.9163	0.1148	4.0672
921	SLV 5	2.27	5.45	30.98	-15.9469	0.0725	1.3041
921	SLV 6	2.04	4.96	31.02	-15.9637	0.0728	1.1723
921	SLV 7	1.55	-4.85	32.72	-16.9281	0.0824	0.891
921	SLV 8	1.31	-5.34	32.75	-16.9449	0.0826	0.7593
921	SLV 9	-2.5	5.14	23.79	-12.2525	0.042	-1.4393
921	SLV 10	-2.73	4.64	23.83	-12.2693	0.0423	-1.571
921	SLV 11	-3.22	-5.16	25.52	-13.2338	0.0519	-1.8523
921	SLV 12	-3.46	-5.65	25.56	-13.2506	0.0521	-1.9841
921	SLV 13	-8.25	1.31	16	-8.2812	0.0098	-4.7472
921	SLV 14	-8.61	0.54	16.05	-8.3074	0.0102	-4.9535
921	SLV 15	-8.47	-1.78	16.52	-8.5755	0.0127	-4.8711
921	SLV 16	-8.83	-2.55	16.57	-8.6018	0.0132	-5.0774
921	CRTFP Ux+	0	0	0	0	0	0
921	CRTFP Ux-	0	0	0	0	0	0
921	CRTFP Uy+	0	0	0	0	0	0
921	CRTFP Uy-	0	0	0	0	0	0
922	SLU 1	-0.56	-0.12	24.85	-12.5949	0.0398	-0.3249
922	SLU 2	-0.57	-0.04	24.86	-12.5994	0.0398	-0.3258
922	SLU 3	-0.58	-0.11	25.32	-12.8308	0.0407	-0.3321
922	SLU 4	-0.58	-0.07	25.33	-12.8335	0.0407	-0.3326
922	SLU 5	-0.58	-0.04	25.12	-12.7309	0.0404	-0.3313
922	SLU 6	-0.59	-0.11	25.59	-12.9623	0.0412	-0.3376
922	SLU 7	-0.59	-0.07	25.59	-12.965	0.0412	-0.3381
922	SLU 8	-0.58	-0.11	25.38	-12.8579	0.0409	-0.3359
922	SLU 9	-0.58	-0.07	25.38	-12.8606	0.0409	-0.3364
922	SLU 10	-0.61	-0.05	27.96	-14.1452	0.045	-0.3529
922	SLU 11	-0.62	-0.11	28.43	-14.3766	0.0458	-0.3592
922	SLU 12	-0.62	-0.07	28.43	-14.3793	0.0458	-0.3597
922	SLU 13	-0.62	-0.04	28.23	-14.2767	0.0455	-0.3584
922	SLU 14	-0.63	-0.11	28.69	-14.5081	0.0464	-0.3647
922	SLU 15	-0.63	-0.07	28.7	-14.5108	0.0464	-0.3652
922	SLU 16	-0.63	-0.11	28.48	-14.4037	0.046	-0.363
922	SLU 17	-0.63	-0.07	28.49	-14.4064	0.046	-0.3635
922	SLU 18	-0.63	-0.12	29.28	-14.8032	0.0472	-0.3636
922	SLU 19	-0.63	-0.08	29.29	-14.8059	0.0472	-0.3641
922	SLU 20	-0.64	-0.12	29.55	-14.9347	0.0477	-0.3691
922	SLU 21	-0.64	-0.07	29.55	-14.9374	0.0477	-0.3696
922	SLU 22	-0.62	-0.11	27.88	-14.1035	0.0449	-0.3553
922	SLU 23	-0.62	-0.04	27.89	-14.108	0.0449	-0.3562
922	SLU 24	-0.63	-0.1	28.35	-14.3394	0.0458	-0.3625
922	SLU 25	-0.63	-0.06	28.36	-14.3421	0.0458	-0.363
922	SLU 26	-0.63	-0.03	28.15	-14.2395	0.0455	-0.3617
922	SLU 27	-0.64	-0.1	28.62	-14.4709	0.0463	-0.368
922	SLU 28	-0.64	-0.06	28.62	-14.4736	0.0463	-0.3685
922	SLU 29	-0.64	-0.1	28.41	-14.3665	0.046	-0.3663
922	SLU 30	-0.64	-0.06	28.41	-14.3692	0.046	-0.3668
922	SLU 31	-0.67	-0.04	30.99	-15.6538	0.0501	-0.3833
922	SLU 32	-0.68	-0.11	31.46	-15.8852	0.051	-0.3896
922	SLU 33	-0.68	-0.06	31.47	-15.8879	0.051	-0.3901
922	SLU 34	-0.68	-0.04	31.26	-15.7853	0.0506	-0.3888
922	SLU 35	-0.69	-0.1	31.72	-16.0167	0.0515	-0.3951
922	SLU 36	-0.69	-0.06	31.73	-16.0194	0.0515	-0.3956
922	SLU 37	-0.68	-0.11	31.51	-15.9123	0.0511	-0.3934
922	SLU 38	-0.68	-0.06	31.52	-15.915	0.0511	-0.3939
922	SLU 39	-0.68	-0.11	32.32	-16.3118	0.0523	-0.394
922	SLU 40	-0.69	-0.07	32.32	-16.3145	0.0523	-0.3945
922	SLU 41	-0.69	-0.11	32.58	-16.4433	0.0528	-0.3995
922	SLU 42	-0.69	-0.07	32.59	-16.446	0.0528	-0.4
922	SLU 43	-0.72	-0.16	31.26	-15.8561	0.05	-0.4119
922	SLU 44	-0.72	-0.08	31.27	-15.8606	0.05	-0.4128
922	SLU 45	-0.73	-0.15	31.74	-16.092	0.0509	-0.4191
922	SLU 46	-0.73	-0.11	31.74	-16.0947	0.0509	-0.4197
922	SLU 47	-0.73	-0.08	31.54	-15.9921	0.0505	-0.4183
922	SLU 48	-0.74	-0.15	32	-16.2235	0.0514	-0.4246
922	SLU 49	-0.74	-0.1	32.01	-16.2262	0.0514	-0.4252
922	SLU 50	-0.73	-0.15	31.79	-16.1191	0.0511	-0.4229
922	SLU 51	-0.74	-0.11	31.8	-16.1218	0.0511	-0.4235
922	SLU 52	-0.76	-0.08	34.38	-17.4064	0.0552	-0.4399
922	SLU 53	-0.78	-0.15	34.84	-17.6378	0.056	-0.4462

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
922	SLU 54	-0.78	-0.11	34.85	-17.6405	0.056	-0.4468
922	SLU 55	-0.77	-0.08	34.64	-17.5379	0.0557	-0.4454
922	SLU 56	-0.78	-0.15	35.11	-17.7693	0.0566	-0.4517
922	SLU 57	-0.79	-0.1	35.11	-17.772	0.0566	-0.4523
922	SLU 58	-0.78	-0.15	34.9	-17.6649	0.0562	-0.45
922	SLU 59	-0.78	-0.11	34.9	-17.6676	0.0562	-0.4506
922	SLU 60	-0.78	-0.16	35.7	-18.0644	0.0574	-0.4506
922	SLU 61	-0.78	-0.11	35.7	-18.0671	0.0574	-0.4512
922	SLU 62	-0.79	-0.15	35.96	-18.1959	0.0579	-0.4561
922	SLU 63	-0.79	-0.11	35.97	-18.1986	0.0579	-0.4567
922	SLU 64	-0.77	-0.15	34.3	-17.3647	0.0551	-0.4423
922	SLU 65	-0.77	-0.07	34.3	-17.3692	0.0551	-0.4432
922	SLU 66	-0.78	-0.14	34.77	-17.6006	0.056	-0.4495
922	SLU 67	-0.78	-0.1	34.77	-17.6033	0.056	-0.4501
922	SLU 68	-0.78	-0.07	34.57	-17.5007	0.0557	-0.4487
922	SLU 69	-0.79	-0.14	35.03	-17.7321	0.0565	-0.455
922	SLU 70	-0.79	-0.1	35.04	-17.7348	0.0565	-0.4556
922	SLU 71	-0.79	-0.14	34.82	-17.6277	0.0562	-0.4533
922	SLU 72	-0.79	-0.1	34.83	-17.6304	0.0562	-0.4539
922	SLU 73	-0.82	-0.08	37.41	-18.915	0.0603	-0.4703
922	SLU 74	-0.83	-0.14	37.87	-19.1465	0.0611	-0.4766
922	SLU 75	-0.83	-0.1	37.88	-19.1491	0.0611	-0.4772
922	SLU 76	-0.83	-0.07	37.67	-19.0465	0.0608	-0.4758
922	SLU 77	-0.84	-0.14	38.14	-19.2779	0.0617	-0.4821
922	SLU 78	-0.84	-0.1	38.14	-19.2806	0.0617	-0.4827
922	SLU 79	-0.83	-0.14	37.93	-19.1736	0.0613	-0.4804
922	SLU 80	-0.84	-0.1	37.93	-19.1763	0.0613	-0.481
922	SLU 81	-0.84	-0.15	38.73	-19.5731	0.0625	-0.481
922	SLU 82	-0.84	-0.11	38.74	-19.5758	0.0625	-0.4816
922	SLU 83	-0.85	-0.15	39	-19.7046	0.063	-0.4865
922	SLU 84	-0.85	-0.1	39	-19.7073	0.063	-0.4871
922	SLE RA 1	-0.58	-0.11	25.71	-13.0259	0.0413	-0.3336
922	SLE RA 2	-0.58	-0.07	25.72	-13.0289	0.0413	-0.3342
922	SLE RA 3	-0.59	-0.11	26.03	-13.1832	0.0419	-0.3384
922	SLE RA 4	-0.59	-0.08	26.03	-13.185	0.0419	-0.3387
922	SLE RA 5	-0.59	-0.06	25.9	-13.1166	0.0416	-0.3378
922	SLE RA 6	-0.59	-0.11	26.21	-13.2708	0.0422	-0.342
922	SLE RA 7	-0.59	-0.08	26.21	-13.2726	0.0422	-0.3424
922	SLE RA 8	-0.59	-0.11	26.07	-13.2013	0.042	-0.3409
922	SLE RA 9	-0.59	-0.08	26.07	-13.203	0.042	-0.3413
922	SLE RA 10	-0.61	-0.07	27.79	-14.0595	0.0447	-0.3522
922	SLE RA 11	-0.62	-0.11	28.1	-14.2137	0.0453	-0.3564
922	SLE RA 12	-0.62	-0.08	28.1	-14.2155	0.0453	-0.3568
922	SLE RA 13	-0.62	-0.07	27.97	-14.1471	0.0451	-0.3559
922	SLE RA 14	-0.63	-0.11	28.28	-14.3014	0.0457	-0.3601
922	SLE RA 15	-0.63	-0.08	28.28	-14.3032	0.0457	-0.3605
922	SLE RA 16	-0.62	-0.11	28.14	-14.2318	0.0454	-0.359
922	SLE RA 17	-0.62	-0.08	28.14	-14.2336	0.0454	-0.3593
922	SLE RA 18	-0.62	-0.12	28.67	-14.4981	0.0462	-0.3594
922	SLE RA 19	-0.62	-0.09	28.68	-14.4999	0.0462	-0.3597
922	SLE RA 20	-0.63	-0.11	28.85	-14.5858	0.0465	-0.363
922	SLE RA 21	-0.63	-0.09	28.85	-14.5876	0.0465	-0.3634
922	SLE FR 1	-0.58	-0.11	25.71	-13.0259	0.0413	-0.3336
922	SLE FR 2	-0.58	-0.11	25.72	-13.0265	0.0413	-0.3337
922	SLE FR 3	-0.58	-0.11	25.78	-13.061	0.0414	-0.335
922	SLE FR 4	-0.59	-0.11	26.6	-13.4682	0.0427	-0.3414
922	SLE FR 5	-0.6	-0.11	26.67	-13.5027	0.0429	-0.3428
922	SLE FR 6	-0.6	-0.12	27.19	-13.762	0.0437	-0.3465
922	SLE QP 1	-0.58	-0.11	25.71	-13.0259	0.0413	-0.3336
922	SLE QP 2	-0.59	-0.12	26.6	-13.4676	0.0427	-0.3413
922	SLD 1	2.93	0.92	30.97	-15.6405	0.06	1.6863
922	SLD 2	2.78	0.61	30.99	-15.6486	0.0601	1.5977
922	SLD 3	2.84	-0.38	31.21	-15.7781	0.061	1.6333
922	SLD 4	2.68	-0.69	31.23	-15.7862	0.0612	1.5447
922	SLD 5	0.63	2.22	27.55	-13.9093	0.0463	0.3629
922	SLD 6	0.53	2.02	27.56	-13.9146	0.0464	0.3054
922	SLD 7	0.32	-2.11	28.34	-14.3681	0.0498	0.1861
922	SLD 8	0.22	-2.31	28.35	-14.3734	0.0499	0.1286
922	SLD 9	-1.41	2.08	24.85	-12.5618	0.0356	-0.8112
922	SLD 10	-1.51	1.88	24.86	-12.5671	0.0357	-0.8687
922	SLD 11	-1.72	-2.25	25.65	-13.0206	0.0391	-0.988
922	SLD 12	-1.82	-2.45	25.66	-13.0259	0.0392	-1.0455
922	SLD 13	-3.87	0.46	21.98	-11.1489	0.0243	-2.2273
922	SLD 14	-4.03	0.15	22	-11.1571	0.0245	-2.3159
922	SLD 15	-3.96	-0.84	22.22	-11.2866	0.0254	-2.2803
922	SLD 16	-4.12	-1.15	22.23	-11.2947	0.0255	-2.3689
922	SLV 1	7.65	2.27	36.82	-18.5526	0.0831	4.4002
922	SLV 2	7.29	1.54	36.86	-18.5715	0.0835	4.1938
922	SLV 3	7.44	-0.7	37.38	-18.8744	0.0855	4.2765
922	SLV 4	7.07	-1.42	37.42	-18.8933	0.0859	4.0701
922	SLV 5	2.27	5.21	28.81	-14.5018	0.0511	1.3037
922	SLV 6	2.04	4.75	28.84	-14.5139	0.0513	1.1719
922	SLV 7	1.55	-4.66	30.68	-15.5745	0.0592	0.8914
922	SLV 8	1.32	-5.12	30.7	-15.5866	0.0595	0.7595
922	SLV 9	-2.5	4.89	22.5	-11.3486	0.026	-1.4422
922	SLV 10	-2.73	4.43	22.53	-11.3607	0.0263	-1.574
922	SLV 11	-3.23	-4.98	24.36	-12.4213	0.0342	-1.8545
922	SLV 12	-3.46	-5.45	24.39	-12.4334	0.0344	-1.9863
922	SLV 13	-8.26	1.19	15.78	-8.0419	-0.0004	-4.7527
922	SLV 14	-8.62	0.47	15.82	-8.0608	0	-4.9591
922	SLV 15	-8.48	-1.77	16.34	-8.3637	0.002	-4.8764

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
922	SLV 16	-8.84	-2.5	16.38	-8.3826	0.0024	-5.0828
922	CRTFP Ux+	0	0	0	0	0	0
922	CRTFP Ux-	0	0	0	0	0	0
922	CRTFP Uy+	0	0	0	0	0	0
922	CRTFP Uy-	0	0	0	0	0	0
923	SLU 1	-0.57	-0.12	23.88	-11.9566	0.021	-0.3257
923	SLU 2	-0.57	-0.05	23.89	-11.961	0.021	-0.3266
923	SLU 3	-0.58	-0.12	24.34	-12.1783	0.0214	-0.3329
923	SLU 4	-0.58	-0.08	24.34	-12.181	0.0214	-0.3335
923	SLU 5	-0.58	-0.05	24.14	-12.084	0.0213	-0.3321
923	SLU 6	-0.59	-0.11	24.59	-12.3012	0.0217	-0.3384
923	SLU 7	-0.59	-0.07	24.59	-12.3039	0.0217	-0.339
923	SLU 8	-0.59	-0.12	24.39	-12.2025	0.0216	-0.3367
923	SLU 9	-0.59	-0.08	24.39	-12.2051	0.0216	-0.3373
923	SLU 10	-0.62	-0.06	26.88	-13.4256	0.0234	-0.354
923	SLU 11	-0.63	-0.12	27.32	-13.6429	0.0239	-0.3603
923	SLU 12	-0.63	-0.08	27.33	-13.6455	0.0239	-0.3608
923	SLU 13	-0.62	-0.06	27.13	-13.5485	0.0237	-0.3595
923	SLU 14	-0.64	-0.12	27.57	-13.7658	0.0242	-0.3658
923	SLU 15	-0.64	-0.08	27.58	-13.7684	0.0242	-0.3663
923	SLU 16	-0.63	-0.12	27.37	-13.667	0.024	-0.3641
923	SLU 17	-0.63	-0.08	27.38	-13.6697	0.024	-0.3646
923	SLU 18	-0.63	-0.13	28.15	-14.0488	0.0245	-0.3648
923	SLU 19	-0.63	-0.09	28.15	-14.0515	0.0245	-0.3653
923	SLU 20	-0.64	-0.13	28.4	-14.1717	0.0248	-0.3703
923	SLU 21	-0.64	-0.09	28.4	-14.1744	0.0248	-0.3709
923	SLU 22	-0.62	-0.12	26.8	-13.3842	0.0235	-0.3564
923	SLU 23	-0.62	-0.05	26.8	-13.3886	0.0235	-0.3573
923	SLU 24	-0.63	-0.11	27.25	-13.6059	0.0239	-0.3636
923	SLU 25	-0.63	-0.07	27.25	-13.6085	0.0239	-0.3641
923	SLU 26	-0.63	-0.05	27.05	-13.5115	0.0238	-0.3628
923	SLU 27	-0.64	-0.11	27.5	-13.7288	0.0242	-0.3691
923	SLU 28	-0.64	-0.07	27.5	-13.7314	0.0242	-0.3696
923	SLU 29	-0.64	-0.11	27.3	-13.63	0.0241	-0.3674
923	SLU 30	-0.64	-0.07	27.3	-13.6326	0.0241	-0.3679
923	SLU 31	-0.67	-0.05	29.79	-14.8531	0.0259	-0.3846
923	SLU 32	-0.68	-0.12	30.23	-15.0704	0.0264	-0.3909
923	SLU 33	-0.68	-0.08	30.24	-15.0731	0.0264	-0.3915
923	SLU 34	-0.68	-0.05	30.04	-14.976	0.0262	-0.3901
923	SLU 35	-0.69	-0.12	30.48	-15.1933	0.0267	-0.3964
923	SLU 36	-0.69	-0.07	30.49	-15.196	0.0267	-0.397
923	SLU 37	-0.69	-0.12	30.28	-15.0945	0.0265	-0.3948
923	SLU 38	-0.69	-0.08	30.29	-15.0972	0.0265	-0.3953
923	SLU 39	-0.69	-0.13	31.06	-15.4764	0.0269	-0.3955
923	SLU 40	-0.69	-0.08	31.07	-15.479	0.0269	-0.396
923	SLU 41	-0.7	-0.12	31.31	-15.5993	0.0272	-0.401
923	SLU 42	-0.7	-0.08	31.32	-15.6019	0.0272	-0.4015
923	SLU 43	-0.72	-0.16	30.05	-15.0542	0.0264	-0.4129
923	SLU 44	-0.72	-0.09	30.06	-15.0586	0.0264	-0.4138
923	SLU 45	-0.73	-0.16	30.5	-15.2759	0.0269	-0.4201
923	SLU 46	-0.73	-0.11	30.51	-15.2785	0.0269	-0.4207
923	SLU 47	-0.73	-0.09	30.31	-15.1815	0.0267	-0.4193
923	SLU 48	-0.74	-0.15	30.75	-15.3988	0.0272	-0.4257
923	SLU 49	-0.74	-0.11	30.76	-15.4015	0.0272	-0.4262
923	SLU 50	-0.74	-0.16	30.55	-15.3	0.027	-0.424
923	SLU 51	-0.74	-0.12	30.56	-15.3027	0.027	-0.4245
923	SLU 52	-0.77	-0.1	33.04	-16.5231	0.0289	-0.4412
923	SLU 53	-0.78	-0.16	33.49	-16.7404	0.0293	-0.4475
923	SLU 54	-0.78	-0.12	33.49	-16.7431	0.0293	-0.448
923	SLU 55	-0.78	-0.1	33.3	-16.6461	0.0292	-0.4467
923	SLU 56	-0.79	-0.16	33.74	-16.8633	0.0296	-0.453
923	SLU 57	-0.79	-0.12	33.74	-16.866	0.0296	-0.4535
923	SLU 58	-0.78	-0.16	33.54	-16.7645	0.0295	-0.4513
923	SLU 59	-0.79	-0.12	33.54	-16.7672	0.0295	-0.4518
923	SLU 60	-0.79	-0.17	34.32	-17.1464	0.0299	-0.452
923	SLU 61	-0.79	-0.13	34.32	-17.149	0.0299	-0.4526
923	SLU 62	-0.8	-0.17	34.57	-17.2693	0.0302	-0.4575
923	SLU 63	-0.8	-0.13	34.57	-17.2719	0.0302	-0.4581
923	SLU 64	-0.77	-0.16	32.96	-16.4817	0.0289	-0.4436
923	SLU 65	-0.77	-0.09	32.97	-16.4861	0.0289	-0.4445
923	SLU 66	-0.78	-0.15	33.41	-16.7034	0.0294	-0.4508
923	SLU 67	-0.78	-0.11	33.42	-16.7061	0.0294	-0.4513
923	SLU 68	-0.78	-0.08	33.22	-16.609	0.0292	-0.45
923	SLU 69	-0.79	-0.15	33.67	-16.8263	0.0297	-0.4563
923	SLU 70	-0.79	-0.11	33.67	-16.829	0.0297	-0.4568
923	SLU 71	-0.79	-0.15	33.46	-16.7275	0.0295	-0.4546
923	SLU 72	-0.79	-0.11	33.47	-16.7302	0.0295	-0.4551
923	SLU 73	-0.82	-0.09	35.96	-17.9507	0.0313	-0.4718
923	SLU 74	-0.83	-0.16	36.4	-18.168	0.0318	-0.4782
923	SLU 75	-0.83	-0.11	36.41	-18.1706	0.0318	-0.4787
923	SLU 76	-0.83	-0.09	36.21	-18.0736	0.0316	-0.4773
923	SLU 77	-0.84	-0.15	36.65	-18.2909	0.0321	-0.4837
923	SLU 78	-0.84	-0.11	36.66	-18.2935	0.0321	-0.4842
923	SLU 79	-0.84	-0.16	36.45	-18.1921	0.0319	-0.482
923	SLU 80	-0.84	-0.12	36.45	-18.1947	0.0319	-0.4825
923	SLU 81	-0.84	-0.16	37.23	-18.5739	0.0324	-0.4827
923	SLU 82	-0.84	-0.12	37.23	-18.5766	0.0324	-0.4832
923	SLU 83	-0.85	-0.16	37.48	-18.6968	0.0327	-0.4882
923	SLU 84	-0.85	-0.12	37.48	-18.6995	0.0327	-0.4887
923	SLE RA 1	-0.58	-0.12	24.72	-12.3645	0.0217	-0.3345
923	SLE RA 2	-0.58	-0.07	24.72	-12.3674	0.0217	-0.3351

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
923	SLE RA 3	-0.59	-0.12	25.02	-12.5123	0.022	-0.3393
923	SLE RA 4	-0.59	-0.09	25.02	-12.5141	0.022	-0.3396
923	SLE RA 5	-0.59	-0.07	24.89	-12.4494	0.0219	-0.3387
923	SLE RA 6	-0.6	-0.12	25.18	-12.5942	0.0222	-0.343
923	SLE RA 7	-0.6	-0.09	25.19	-12.596	0.0222	-0.3433
923	SLE RA 8	-0.59	-0.12	25.05	-12.5284	0.0221	-0.3418
923	SLE RA 9	-0.59	-0.09	25.05	-12.5301	0.0221	-0.3422
923	SLE RA 10	-0.61	-0.08	26.71	-13.3438	0.0233	-0.3533
923	SLE RA 11	-0.62	-0.12	27.01	-13.4887	0.0236	-0.3575
923	SLE RA 12	-0.62	-0.09	27.01	-13.4904	0.0236	-0.3579
923	SLE RA 13	-0.62	-0.08	26.88	-13.4257	0.0235	-0.357
923	SLE RA 14	-0.63	-0.12	27.17	-13.5706	0.0238	-0.3612
923	SLE RA 15	-0.63	-0.09	27.18	-13.5724	0.0238	-0.3616
923	SLE RA 16	-0.63	-0.12	27.04	-13.5047	0.0237	-0.3601
923	SLE RA 17	-0.63	-0.09	27.04	-13.5065	0.0237	-0.3604
923	SLE RA 18	-0.63	-0.13	27.56	-13.7593	0.024	-0.3605
923	SLE RA 19	-0.63	-0.1	27.56	-13.7611	0.024	-0.3609
923	SLE RA 20	-0.63	-0.13	27.73	-13.8412	0.0242	-0.3642
923	SLE RA 21	-0.63	-0.1	27.73	-13.843	0.0242	-0.3646
923	SLE FR 1	-0.58	-0.12	24.72	-12.3645	0.0217	-0.3345
923	SLE FR 2	-0.58	-0.11	24.72	-12.3651	0.0217	-0.3346
923	SLE FR 3	-0.58	-0.12	24.78	-12.3973	0.0218	-0.336
923	SLE FR 4	-0.6	-0.11	25.57	-12.7835	0.0224	-0.3424
923	SLE FR 5	-0.6	-0.12	25.64	-12.8157	0.0225	-0.3438
923	SLE FR 6	-0.6	-0.12	26.14	-13.0619	0.0228	-0.3475
923	SLE QP 1	-0.58	-0.12	24.72	-12.3645	0.0217	-0.3345
923	SLE QP 2	-0.6	-0.12	25.57	-12.7829	0.0224	-0.3423
923	SLD 1	2.93	0.89	29.43	-14.6521	0.0358	1.6868
923	SLD 2	2.78	0.6	29.44	-14.6577	0.036	1.5981
923	SLD 3	2.84	-0.36	29.68	-14.7999	0.0366	1.6338
923	SLD 4	2.69	-0.65	29.69	-14.8056	0.0368	1.5451
923	SLD 5	0.63	2.13	26.34	-13.1185	0.0252	0.3622
923	SLD 6	0.53	1.94	26.35	-13.1221	0.0253	0.3047
923	SLD 7	0.32	-2.04	27.18	-13.6113	0.0278	0.1856
923	SLD 8	0.22	-2.23	27.19	-13.6149	0.0279	0.1281
923	SLD 9	-1.41	1.98	23.94	-11.9509	0.0169	-0.8127
923	SLD 10	-1.51	1.79	23.95	-11.9546	0.0169	-0.8703
923	SLD 11	-1.72	-2.18	24.79	-12.4437	0.0195	-0.9893
923	SLD 12	-1.82	-2.37	24.8	-12.4474	0.0196	-1.0469
923	SLD 13	-3.88	0.41	21.44	-10.7603	0.008	-2.2297
923	SLD 14	-4.03	0.12	21.45	-10.7659	0.0081	-2.3184
923	SLD 15	-3.97	-0.84	21.7	-10.9081	0.0088	-2.2827
923	SLD 16	-4.12	-1.13	21.71	-10.9138	0.0089	-2.3714
923	SLV 1	7.66	2.2	34.6	-17.1572	0.0539	4.4026
923	SLV 2	7.3	1.53	34.63	-17.1703	0.0542	4.196
923	SLV 3	7.44	-0.65	35.2	-17.5029	0.0557	4.2791
923	SLV 4	7.08	-1.32	35.22	-17.516	0.056	4.0725
923	SLV 5	2.27	5.02	27.37	-13.5686	0.029	1.3036
923	SLV 6	2.04	4.58	27.39	-13.577	0.0292	1.1716
923	SLV 7	1.55	-4.49	29.35	-14.721	0.0351	0.8917
923	SLV 8	1.32	-4.92	29.37	-14.7294	0.0353	0.7597
923	SLV 9	-2.51	4.68	21.77	-10.8364	0.0095	-1.4443
923	SLV 10	-2.74	4.25	21.79	-10.8448	0.0097	-1.5763
923	SLV 11	-3.23	-4.83	23.74	-11.9888	0.0156	-1.8563
923	SLV 12	-3.46	-5.26	23.76	-11.9972	0.0157	-1.9882
923	SLV 13	-8.27	1.08	15.91	-8.0498	-0.0112	-4.7571
923	SLV 14	-8.63	0.4	15.94	-8.063	-0.0109	-4.9637
923	SLV 15	-8.49	-1.77	16.51	-8.3955	-0.0094	-4.8807
923	SLV 16	-8.85	-2.45	16.53	-8.4087	-0.0091	-5.0873
923	CRTFP Ux+	0	0	0	0	0	0
923	CRTFP Ux-	0	0	0	0	0	0
923	CRTFP Uy+	0	0	0	0	0	0
923	CRTFP Uy-	0	0	0	0	0	0
924	SLU 1	-0.57	-0.12	23.51	-11.735	0.0024	-0.3263
924	SLU 2	-0.57	-0.06	23.52	-11.7394	0.0024	-0.3271
924	SLU 3	-0.58	-0.12	23.96	-11.9517	0.0024	-0.3335
924	SLU 4	-0.58	-0.08	23.96	-11.9544	0.0024	-0.334
924	SLU 5	-0.58	-0.06	23.77	-11.8589	0.0025	-0.3326
924	SLU 6	-0.59	-0.12	24.2	-12.0711	0.0025	-0.339
924	SLU 7	-0.59	-0.08	24.21	-12.0738	0.0025	-0.3395
924	SLU 8	-0.59	-0.12	24	-11.9738	0.0025	-0.3373
924	SLU 9	-0.59	-0.08	24.01	-11.9765	0.0025	-0.3378
924	SLU 10	-0.62	-0.07	26.47	-13.1824	0.0021	-0.3547
924	SLU 11	-0.63	-0.13	26.91	-13.3947	0.0022	-0.3611
924	SLU 12	-0.63	-0.09	26.91	-13.3974	0.0022	-0.3616
924	SLU 13	-0.63	-0.07	26.72	-13.3018	0.0022	-0.3602
924	SLU 14	-0.64	-0.13	27.15	-13.5141	0.0023	-0.3666
924	SLU 15	-0.64	-0.09	27.16	-13.5168	0.0023	-0.3671
924	SLU 16	-0.63	-0.13	26.96	-13.4168	0.0023	-0.3649
924	SLU 17	-0.64	-0.09	26.96	-13.4195	0.0023	-0.3654
924	SLU 18	-0.64	-0.14	27.73	-13.7964	0.002	-0.3657
924	SLU 19	-0.64	-0.1	27.74	-13.7991	0.002	-0.3662
924	SLU 20	-0.65	-0.14	27.97	-13.9158	0.0021	-0.3712
924	SLU 21	-0.65	-0.1	27.98	-13.9185	0.0021	-0.3717
924	SLU 22	-0.62	-0.12	26.39	-13.1396	0.0023	-0.3571
924	SLU 23	-0.62	-0.05	26.4	-13.144	0.0023	-0.358
924	SLU 24	-0.63	-0.11	26.83	-13.3563	0.0023	-0.3643
924	SLU 25	-0.63	-0.07	26.84	-13.359	0.0023	-0.3649
924	SLU 26	-0.63	-0.05	26.64	-13.2634	0.0023	-0.3635
924	SLU 27	-0.64	-0.11	27.08	-13.4757	0.0024	-0.3698
924	SLU 28	-0.64	-0.07	27.08	-13.4784	0.0024	-0.3703

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
924	SLU 29	-0.64	-0.12	26.88	-13.3784	0.0024	-0.3681
924	SLU 30	-0.64	-0.08	26.88	-13.3811	0.0024	-0.3686
924	SLU 31	-0.67	-0.06	29.35	-14.587	0.002	-0.3856
924	SLU 32	-0.68	-0.12	29.78	-14.7993	0.0021	-0.392
924	SLU 33	-0.68	-0.08	29.79	-14.8019	0.0021	-0.3925
924	SLU 34	-0.68	-0.06	29.59	-14.7064	0.0021	-0.3911
924	SLU 35	-0.69	-0.12	30.03	-14.9187	0.0022	-0.3975
924	SLU 36	-0.69	-0.08	30.03	-14.9214	0.0022	-0.398
924	SLU 37	-0.69	-0.13	29.83	-14.8214	0.0022	-0.3958
924	SLU 38	-0.69	-0.09	29.83	-14.8241	0.0022	-0.3963
924	SLU 39	-0.69	-0.13	30.6	-15.201	0.0019	-0.3966
924	SLU 40	-0.69	-0.09	30.61	-15.2037	0.0019	-0.3971
924	SLU 41	-0.7	-0.13	30.85	-15.3204	0.002	-0.4021
924	SLU 42	-0.7	-0.09	30.85	-15.3231	0.002	-0.4026
924	SLU 43	-0.72	-0.16	29.58	-14.7739	0.0031	-0.4136
924	SLU 44	-0.72	-0.1	29.59	-14.7784	0.0031	-0.4144
924	SLU 45	-0.73	-0.16	30.03	-14.9907	0.0032	-0.4208
924	SLU 46	-0.73	-0.12	30.03	-14.9933	0.0032	-0.4213
924	SLU 47	-0.73	-0.09	29.84	-14.8978	0.0032	-0.4199
924	SLU 48	-0.74	-0.16	30.27	-15.1101	0.0033	-0.4262
924	SLU 49	-0.74	-0.12	30.28	-15.1127	0.0033	-0.4268
924	SLU 50	-0.74	-0.16	30.07	-15.0128	0.0033	-0.4245
924	SLU 51	-0.74	-0.12	30.08	-15.0154	0.0033	-0.4251
924	SLU 52	-0.77	-0.11	32.54	-16.2213	0.0029	-0.442
924	SLU 53	-0.78	-0.17	32.98	-16.4336	0.003	-0.4484
924	SLU 54	-0.78	-0.13	32.98	-16.4363	0.003	-0.4489
924	SLU 55	-0.78	-0.1	32.79	-16.3408	0.003	-0.4475
924	SLU 56	-0.79	-0.17	33.22	-16.5531	0.003	-0.4539
924	SLU 57	-0.79	-0.13	33.23	-16.5557	0.003	-0.4544
924	SLU 58	-0.79	-0.17	33.02	-16.4558	0.003	-0.4522
924	SLU 59	-0.79	-0.13	33.03	-16.4584	0.003	-0.4527
924	SLU 60	-0.79	-0.18	33.8	-16.8353	0.0028	-0.453
924	SLU 61	-0.79	-0.14	33.8	-16.838	0.0028	-0.4535
924	SLU 62	-0.8	-0.17	34.04	-16.9548	0.0029	-0.4585
924	SLU 63	-0.8	-0.13	34.05	-16.9574	0.0029	-0.459
924	SLU 64	-0.77	-0.16	32.46	-16.1785	0.003	-0.4444
924	SLU 65	-0.77	-0.09	32.47	-16.183	0.003	-0.4453
924	SLU 66	-0.79	-0.15	32.9	-16.3952	0.0031	-0.4516
924	SLU 67	-0.79	-0.11	32.91	-16.3979	0.0031	-0.4521
924	SLU 68	-0.78	-0.09	32.71	-16.3024	0.0031	-0.4508
924	SLU 69	-0.79	-0.15	33.15	-16.5147	0.0031	-0.4571
924	SLU 70	-0.8	-0.11	33.15	-16.5173	0.0031	-0.4576
924	SLU 71	-0.79	-0.16	32.95	-16.4174	0.0032	-0.4554
924	SLU 72	-0.79	-0.12	32.95	-16.42	0.0032	-0.4559
924	SLU 73	-0.82	-0.1	35.42	-17.6259	0.0028	-0.4729
924	SLU 74	-0.83	-0.16	35.85	-17.8382	0.0028	-0.4793
924	SLU 75	-0.83	-0.12	35.86	-17.8409	0.0028	-0.4798
924	SLU 76	-0.83	-0.1	35.66	-17.7454	0.0029	-0.4784
924	SLU 77	-0.84	-0.16	36.1	-17.9576	0.0029	-0.4847
924	SLU 78	-0.84	-0.12	36.1	-17.9603	0.0029	-0.4853
924	SLU 79	-0.84	-0.16	35.9	-17.8603	0.0029	-0.483
924	SLU 80	-0.84	-0.12	35.9	-17.863	0.0029	-0.4836
924	SLU 81	-0.84	-0.17	36.67	-18.2399	0.0027	-0.4839
924	SLU 82	-0.84	-0.13	36.68	-18.2426	0.0027	-0.4844
924	SLU 83	-0.85	-0.17	36.92	-18.3593	0.0028	-0.4894
924	SLU 84	-0.85	-0.13	36.92	-18.362	0.0028	-0.4899
924	SLE RA 1	-0.58	-0.12	24.34	-12.1363	0.0023	-0.3351
924	SLE RA 2	-0.58	-0.08	24.34	-12.1393	0.0023	-0.3357
924	SLE RA 3	-0.59	-0.12	24.63	-12.2808	0.0024	-0.3399
924	SLE RA 4	-0.59	-0.09	24.64	-12.2826	0.0024	-0.3402
924	SLE RA 5	-0.59	-0.08	24.51	-12.2189	0.0024	-0.3393
924	SLE RA 6	-0.6	-0.12	24.8	-12.3604	0.0024	-0.3435
924	SLE RA 7	-0.6	-0.09	24.8	-12.3622	0.0024	-0.3439
924	SLE RA 8	-0.6	-0.12	24.66	-12.2955	0.0024	-0.3424
924	SLE RA 9	-0.6	-0.09	24.67	-12.2973	0.0024	-0.3428
924	SLE RA 10	-0.62	-0.08	26.31	-13.1013	0.0022	-0.3541
924	SLE RA 11	-0.62	-0.13	26.6	-13.2428	0.0022	-0.3583
924	SLE RA 12	-0.62	-0.1	26.6	-13.2446	0.0022	-0.3586
924	SLE RA 13	-0.62	-0.08	26.47	-13.1809	0.0022	-0.3577
924	SLE RA 14	-0.63	-0.12	26.76	-13.3224	0.0023	-0.362
924	SLE RA 15	-0.63	-0.1	26.77	-13.3242	0.0023	-0.3623
924	SLE RA 16	-0.63	-0.13	26.63	-13.2575	0.0023	-0.3608
924	SLE RA 17	-0.63	-0.1	26.63	-13.2593	0.0023	-0.3612
924	SLE RA 18	-0.63	-0.13	27.15	-13.5106	0.0021	-0.3614
924	SLE RA 19	-0.63	-0.11	27.15	-13.5124	0.0021	-0.3617
924	SLE RA 20	-0.63	-0.13	27.31	-13.5902	0.0022	-0.3651
924	SLE RA 21	-0.64	-0.1	27.31	-13.592	0.0022	-0.3654
924	SLE FR 1	-0.58	-0.12	24.34	-12.1363	0.0023	-0.3351
924	SLE FR 2	-0.58	-0.11	24.34	-12.1369	0.0023	-0.3352
924	SLE FR 3	-0.59	-0.12	24.4	-12.1682	0.0024	-0.3366
924	SLE FR 4	-0.6	-0.12	25.18	-12.5492	0.0023	-0.3431
924	SLE FR 5	-0.6	-0.12	25.24	-12.5804	0.0023	-0.3444
924	SLE FR 6	-0.61	-0.13	25.74	-12.8235	0.0022	-0.3482
924	SLE QP 1	-0.58	-0.12	24.34	-12.1363	0.0023	-0.3351
924	SLE QP 2	-0.6	-0.13	25.18	-12.5486	0.0023	-0.343
924	SLD 1	2.93	0.87	28.66	-14.1996	0.0121	1.6872
924	SLD 2	2.78	0.59	28.67	-14.2035	0.0122	1.5985
924	SLD 3	2.84	-0.34	28.92	-14.3538	0.0126	1.6342
924	SLD 4	2.69	-0.62	28.93	-14.3577	0.0127	1.5455
924	SLD 5	0.63	2.05	25.82	-12.8094	0.0045	0.3619
924	SLD 6	0.53	1.88	25.83	-12.8119	0.0045	0.3043

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
924	SLD 7	0.32	-1.98	26.7	-13.3233	0.0061	0.1854
924	SLD 8	0.22	-2.15	26.7	-13.3259	0.0062	0.1278
924	SLD 9	-1.41	1.9	23.65	-11.7713	-0.0016	-0.8137
924	SLD 10	-1.51	1.73	23.66	-11.7739	-0.0016	-0.8713
924	SLD 11	-1.72	-2.13	24.53	-12.2853	0	-0.9902
924	SLD 12	-1.82	-2.3	24.54	-12.2878	0.0001	-1.0478
924	SLD 13	-3.88	0.37	21.43	-10.7395	-0.0082	-2.2315
924	SLD 14	-4.03	0.09	21.44	-10.7434	-0.0081	-2.3202
924	SLD 15	-3.97	-0.84	21.69	-10.8937	-0.0077	-2.2844
924	SLD 16	-4.13	-1.12	21.7	-10.8976	-0.0076	-2.3732
924	SLV 1	7.66	2.16	33.32	-16.4123	0.0253	4.4045
924	SLV 2	7.3	1.52	33.34	-16.4214	0.0255	4.1978
924	SLV 3	7.44	-0.6	33.93	-16.7729	0.0265	4.281
924	SLV 4	7.08	-1.24	33.95	-16.782	0.0267	4.0743
924	SLV 5	2.27	4.85	26.69	-13.1592	0.0074	1.3036
924	SLV 6	2.04	4.45	26.7	-13.165	0.0075	1.1716
924	SLV 7	1.55	-4.34	28.73	-14.3613	0.0113	0.8919
924	SLV 8	1.32	-4.75	28.75	-14.3671	0.0114	0.7599
924	SLV 9	-2.51	4.5	21.61	-10.7301	-0.0069	-1.4458
924	SLV 10	-2.74	4.09	21.63	-10.7359	-0.0067	-1.5779
924	SLV 11	-3.23	-4.7	23.66	-11.9322	-0.003	-1.8575
924	SLV 12	-3.46	-5.1	23.67	-11.938	-0.0028	-1.9896
924	SLV 13	-8.27	0.99	16.4	-8.3152	-0.0222	-4.7602
924	SLV 14	-8.64	0.35	16.43	-8.3243	-0.022	-4.967
924	SLV 15	-8.49	-1.77	17.02	-8.6758	-0.021	-4.8837
924	SLV 16	-8.85	-2.41	17.04	-8.6849	-0.0208	-5.0905
924	CRTFP Ux+	0	0	0	0	0	0
924	CRTFP Ux-	0	0	0	0	0	0
924	CRTFP Uy+	0	0	0	0	0	0
924	CRTFP Uy-	0	0	0	0	0	0
925	SLU 1	-0.57	-0.12	23.72	-11.9132	-0.015	-0.3265
925	SLU 2	-0.57	-0.06	23.73	-11.9176	-0.015	-0.3273
925	SLU 3	-0.58	-0.12	24.17	-12.1337	-0.0153	-0.3337
925	SLU 4	-0.58	-0.08	24.17	-12.1364	-0.0153	-0.3342
925	SLU 5	-0.58	-0.06	23.97	-12.0384	-0.0152	-0.3328
925	SLU 6	-0.59	-0.12	24.41	-12.2545	-0.0155	-0.3392
925	SLU 7	-0.59	-0.08	24.42	-12.2572	-0.0155	-0.3397
925	SLU 8	-0.59	-0.12	24.21	-12.1548	-0.0153	-0.3375
925	SLU 9	-0.59	-0.08	24.22	-12.1574	-0.0153	-0.3379
925	SLU 10	-0.62	-0.07	26.73	-13.3966	-0.0178	-0.3552
925	SLU 11	-0.63	-0.13	27.17	-13.6127	-0.0181	-0.3616
925	SLU 12	-0.63	-0.09	27.17	-13.6153	-0.0181	-0.362
925	SLU 13	-0.63	-0.07	26.97	-13.5174	-0.0179	-0.3607
925	SLU 14	-0.64	-0.13	27.41	-13.7335	-0.0182	-0.367
925	SLU 15	-0.64	-0.09	27.42	-13.7361	-0.0182	-0.3675
925	SLU 16	-0.64	-0.13	27.21	-13.6337	-0.018	-0.3653
925	SLU 17	-0.64	-0.09	27.21	-13.6364	-0.018	-0.3658
925	SLU 18	-0.64	-0.14	28	-14.026	-0.0189	-0.3663
925	SLU 19	-0.64	-0.1	28.01	-14.0287	-0.0189	-0.3668
925	SLU 20	-0.65	-0.14	28.25	-14.1468	-0.0191	-0.3718
925	SLU 21	-0.65	-0.1	28.25	-14.1494	-0.0191	-0.3723
925	SLU 22	-0.62	-0.12	26.64	-13.3508	-0.0176	-0.3576
925	SLU 23	-0.62	-0.05	26.65	-13.3553	-0.0176	-0.3584
925	SLU 24	-0.63	-0.11	27.09	-13.5714	-0.0179	-0.3648
925	SLU 25	-0.64	-0.08	27.09	-13.574	-0.0179	-0.3653
925	SLU 26	-0.63	-0.05	26.89	-13.4761	-0.0177	-0.3639
925	SLU 27	-0.64	-0.11	27.33	-13.6921	-0.018	-0.3703
925	SLU 28	-0.64	-0.07	27.34	-13.6948	-0.018	-0.3708
925	SLU 29	-0.64	-0.12	27.13	-13.5924	-0.0179	-0.3686
925	SLU 30	-0.64	-0.08	27.13	-13.5951	-0.0179	-0.3691
925	SLU 31	-0.67	-0.07	29.64	-14.8342	-0.0203	-0.3863
925	SLU 32	-0.68	-0.13	30.08	-15.0503	-0.0207	-0.3927
925	SLU 33	-0.68	-0.09	30.09	-15.053	-0.0207	-0.3932
925	SLU 34	-0.68	-0.07	29.89	-14.955	-0.0205	-0.3918
925	SLU 35	-0.69	-0.12	30.33	-15.1711	-0.0208	-0.3982
925	SLU 36	-0.69	-0.09	30.33	-15.1738	-0.0208	-0.3986
925	SLU 37	-0.69	-0.13	30.13	-15.0714	-0.0206	-0.3965
925	SLU 38	-0.69	-0.09	30.13	-15.074	-0.0206	-0.3969
925	SLU 39	-0.69	-0.14	30.92	-15.4636	-0.0215	-0.3974
925	SLU 40	-0.69	-0.1	30.93	-15.4663	-0.0215	-0.3979
925	SLU 41	-0.7	-0.14	31.17	-15.5844	-0.0216	-0.4029
925	SLU 42	-0.7	-0.1	31.17	-15.5871	-0.0216	-0.4034
925	SLU 43	-0.72	-0.16	29.83	-14.9943	-0.0187	-0.4138
925	SLU 44	-0.72	-0.1	29.84	-14.9987	-0.0187	-0.4146
925	SLU 45	-0.73	-0.16	30.28	-15.2148	-0.019	-0.421
925	SLU 46	-0.73	-0.12	30.29	-15.2174	-0.019	-0.4215
925	SLU 47	-0.73	-0.1	30.09	-15.1195	-0.0188	-0.4201
925	SLU 48	-0.74	-0.16	30.53	-15.3356	-0.0191	-0.4264
925	SLU 49	-0.74	-0.12	30.53	-15.3382	-0.0191	-0.4269
925	SLU 50	-0.74	-0.16	30.33	-15.2358	-0.0189	-0.4247
925	SLU 51	-0.74	-0.12	30.33	-15.2385	-0.0189	-0.4252
925	SLU 52	-0.77	-0.11	32.84	-16.4777	-0.0214	-0.4425
925	SLU 53	-0.78	-0.17	33.28	-16.6937	-0.0217	-0.4488
925	SLU 54	-0.78	-0.13	33.29	-16.6964	-0.0217	-0.4493
925	SLU 55	-0.78	-0.11	33.09	-16.5984	-0.0215	-0.4479
925	SLU 56	-0.79	-0.17	33.53	-16.8145	-0.0219	-0.4543
925	SLU 57	-0.79	-0.13	33.53	-16.8172	-0.0219	-0.4548
925	SLU 58	-0.79	-0.17	33.32	-16.7148	-0.0217	-0.4526
925	SLU 59	-0.79	-0.13	33.33	-16.7174	-0.0217	-0.4531
925	SLU 60	-0.79	-0.18	34.12	-17.1071	-0.0226	-0.4536
925	SLU 61	-0.79	-0.14	34.12	-17.1097	-0.0226	-0.4541

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
925	SLU 62	-0.8	-0.18	34.36	-17.2278	-0.0227	-0.4591
925	SLU 63	-0.8	-0.14	34.37	-17.2305	-0.0227	-0.4596
925	SLU 64	-0.77	-0.16	32.75	-16.4319	-0.0212	-0.4449
925	SLU 65	-0.78	-0.09	32.76	-16.4363	-0.0212	-0.4457
925	SLU 66	-0.79	-0.15	33.2	-16.6524	-0.0215	-0.4521
925	SLU 67	-0.79	-0.11	33.21	-16.6551	-0.0215	-0.4526
925	SLU 68	-0.78	-0.09	33.01	-16.5571	-0.0213	-0.4512
925	SLU 69	-0.8	-0.15	33.45	-16.7732	-0.0217	-0.4576
925	SLU 70	-0.8	-0.11	33.45	-16.7759	-0.0217	-0.4581
925	SLU 71	-0.79	-0.16	33.24	-16.6735	-0.0215	-0.4559
925	SLU 72	-0.79	-0.12	33.25	-16.6761	-0.0215	-0.4563
925	SLU 73	-0.82	-0.11	35.76	-17.9153	-0.024	-0.4736
925	SLU 74	-0.83	-0.16	36.2	-18.1314	-0.0243	-0.48
925	SLU 75	-0.84	-0.13	36.2	-18.134	-0.0243	-0.4805
925	SLU 76	-0.83	-0.1	36.01	-18.0361	-0.0241	-0.4791
925	SLU 77	-0.84	-0.16	36.44	-18.2522	-0.0244	-0.4854
925	SLU 78	-0.84	-0.12	36.45	-18.2548	-0.0244	-0.4859
925	SLU 79	-0.84	-0.17	36.24	-18.1524	-0.0242	-0.4837
925	SLU 80	-0.84	-0.13	36.25	-18.1551	-0.0242	-0.4842
925	SLU 81	-0.84	-0.17	37.04	-18.5447	-0.0251	-0.4847
925	SLU 82	-0.84	-0.14	37.04	-18.5474	-0.0251	-0.4852
925	SLU 83	-0.85	-0.17	37.28	-18.6655	-0.0253	-0.4902
925	SLU 84	-0.85	-0.14	37.29	-18.6681	-0.0253	-0.4907
925	SLE RA 1	-0.58	-0.12	24.55	-12.324	-0.0158	-0.3354
925	SLE RA 2	-0.58	-0.08	24.56	-12.3269	-0.0158	-0.3359
925	SLE RA 3	-0.59	-0.12	24.85	-12.471	-0.016	-0.3402
925	SLE RA 4	-0.59	-0.09	24.86	-12.4727	-0.016	-0.3405
925	SLE RA 5	-0.59	-0.08	24.72	-12.4074	-0.0158	-0.3396
925	SLE RA 6	-0.6	-0.12	25.02	-12.5515	-0.0161	-0.3438
925	SLE RA 7	-0.6	-0.09	25.02	-12.5533	-0.0161	-0.3442
925	SLE RA 8	-0.6	-0.12	24.88	-12.485	-0.0159	-0.3427
925	SLE RA 9	-0.6	-0.1	24.88	-12.4868	-0.0159	-0.343
925	SLE RA 10	-0.62	-0.09	26.56	-13.3129	-0.0176	-0.3545
925	SLE RA 11	-0.62	-0.13	26.85	-13.4569	-0.0178	-0.3588
925	SLE RA 12	-0.62	-0.1	26.85	-13.4587	-0.0178	-0.3591
925	SLE RA 13	-0.62	-0.09	26.72	-13.3934	-0.0177	-0.3582
925	SLE RA 14	-0.63	-0.13	27.01	-13.5375	-0.0179	-0.3624
925	SLE RA 15	-0.63	-0.1	27.02	-13.5392	-0.0179	-0.3627
925	SLE RA 16	-0.63	-0.13	26.88	-13.471	-0.0178	-0.3613
925	SLE RA 17	-0.63	-0.1	26.88	-13.4727	-0.0178	-0.3616
925	SLE RA 18	-0.63	-0.13	27.41	-13.7325	-0.0184	-0.3619
925	SLE RA 19	-0.63	-0.11	27.41	-13.7343	-0.0184	-0.3623
925	SLE RA 20	-0.64	-0.13	27.57	-13.813	-0.0185	-0.3656
925	SLE RA 21	-0.64	-0.11	27.58	-13.8148	-0.0185	-0.3659
925	SLE FR 1	-0.58	-0.12	24.55	-12.324	-0.0158	-0.3354
925	SLE FR 2	-0.58	-0.11	24.55	-12.3246	-0.0158	-0.3355
925	SLE FR 3	-0.59	-0.12	24.62	-12.3562	-0.0158	-0.3369
925	SLE FR 4	-0.6	-0.12	25.41	-12.7471	-0.0165	-0.3435
925	SLE FR 5	-0.6	-0.13	25.48	-12.7787	-0.0166	-0.3448
925	SLE FR 6	-0.61	-0.13	25.98	-13.0282	-0.0171	-0.3487
925	SLE QP 1	-0.58	-0.12	24.55	-12.324	-0.0158	-0.3354
925	SLE QP 2	-0.6	-0.13	25.41	-12.7465	-0.0165	-0.3434
925	SLD 1	2.94	0.85	28.62	-14.2605	-0.01	1.6875
925	SLD 2	2.78	0.59	28.63	-14.2634	-0.01	1.5987
925	SLD 3	2.84	-0.33	28.89	-14.4158	-0.0097	1.6345
925	SLD 4	2.69	-0.59	28.89	-14.4187	-0.0097	1.5457
925	SLD 5	0.63	1.99	25.97	-12.9646	-0.0151	0.3617
925	SLD 6	0.53	1.83	25.98	-12.9665	-0.015	0.3041
925	SLD 7	0.32	-1.93	26.85	-13.4824	-0.014	0.1852
925	SLD 8	0.22	-2.09	26.86	-13.4843	-0.014	0.1276
925	SLD 9	-1.41	1.84	23.96	-12.0088	-0.0191	-0.8143
925	SLD 10	-1.52	1.67	23.97	-12.0107	-0.0191	-0.8719
925	SLD 11	-1.72	-2.08	24.84	-12.5265	-0.0181	-0.9908
925	SLD 12	-1.82	-2.25	24.85	-12.5284	-0.018	-1.0484
925	SLD 13	-3.88	0.34	21.92	-11.0743	-0.0234	-2.2325
925	SLD 14	-4.04	0.08	21.93	-11.0773	-0.0234	-2.3212
925	SLD 15	-3.97	-0.84	22.19	-11.2297	-0.0231	-2.2854
925	SLD 16	-4.13	-1.1	22.2	-11.2326	-0.0231	-2.3742
925	SLV 1	7.66	2.12	32.93	-16.2895	-0.0012	4.4057
925	SLV 2	7.3	1.52	32.95	-16.2963	-0.0011	4.1988
925	SLV 3	7.45	-0.57	33.55	-16.6528	-0.0005	4.2822
925	SLV 4	7.08	-1.17	33.56	-16.6596	-0.0004	4.0754
925	SLV 5	2.27	4.72	26.72	-13.2572	-0.013	1.3036
925	SLV 6	2.04	4.34	26.74	-13.2616	-0.013	1.1715
925	SLV 7	1.55	-4.23	28.79	-14.4683	-0.0107	0.8921
925	SLV 8	1.32	-4.61	28.8	-14.4726	-0.0106	0.76
925	SLV 9	-2.51	4.36	22.02	-11.0204	-0.0225	-1.4467
925	SLV 10	-2.74	3.98	22.03	-11.0248	-0.0224	-1.5788
925	SLV 11	-3.23	-4.59	24.08	-12.2314	-0.0201	-1.8583
925	SLV 12	-3.46	-4.97	24.09	-12.2358	-0.02	-1.9903
925	SLV 13	-8.28	0.92	17.26	-8.8334	-0.0326	-4.7621
925	SLV 14	-8.64	0.32	17.27	-8.8402	-0.0325	-4.969
925	SLV 15	-8.5	-1.77	17.87	-9.1967	-0.0319	-4.8856
925	SLV 16	-8.86	-2.37	17.89	-9.2036	-0.0318	-5.0924
925	CRTFP Ux+	0	0	0	0	0	0
925	CRTFP Ux-	0	0	0	0	0	0
925	CRTFP Uy+	0	0	0	0	0	0
925	CRTFP Uy-	0	0	0	0	0	0
926	SLU 1	-0.57	-0.12	24.44	-12.4542	-0.0302	-0.3265
926	SLU 2	-0.57	-0.06	24.45	-12.4586	-0.0302	-0.3273
926	SLU 3	-0.58	-0.12	24.91	-12.6865	-0.0309	-0.3337

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
926	SLU 4	-0.58	-0.08	24.91	-12.6892	-0.0309	-0.3342
926	SLU 5	-0.58	-0.06	24.7	-12.5851	-0.0305	-0.3327
926	SLU 6	-0.59	-0.12	25.16	-12.813	-0.0312	-0.3392
926	SLU 7	-0.59	-0.08	25.17	-12.8157	-0.0312	-0.3396
926	SLU 8	-0.59	-0.12	24.95	-12.7072	-0.0308	-0.3374
926	SLU 9	-0.59	-0.08	24.95	-12.7099	-0.0308	-0.3379
926	SLU 10	-0.62	-0.07	27.57	-14.026	-0.0351	-0.3554
926	SLU 11	-0.63	-0.13	28.03	-14.254	-0.0358	-0.3618
926	SLU 12	-0.63	-0.09	28.03	-14.2566	-0.0358	-0.3623
926	SLU 13	-0.63	-0.07	27.83	-14.1526	-0.0355	-0.3609
926	SLU 14	-0.64	-0.13	28.28	-14.3805	-0.0361	-0.3673
926	SLU 15	-0.64	-0.09	28.29	-14.3831	-0.0361	-0.3677
926	SLU 16	-0.64	-0.13	28.07	-14.2747	-0.0358	-0.3656
926	SLU 17	-0.64	-0.1	28.08	-14.2773	-0.0358	-0.366
926	SLU 18	-0.64	-0.14	28.9	-14.6934	-0.0373	-0.3667
926	SLU 19	-0.64	-0.1	28.91	-14.696	-0.0373	-0.3672
926	SLU 20	-0.65	-0.14	29.15	-14.8199	-0.0376	-0.3722
926	SLU 21	-0.65	-0.1	29.16	-14.8226	-0.0376	-0.3726
926	SLU 22	-0.62	-0.12	27.48	-13.9759	-0.0349	-0.3579
926	SLU 23	-0.62	-0.05	27.48	-13.9803	-0.0349	-0.3587
926	SLU 24	-0.64	-0.11	27.94	-14.2082	-0.0356	-0.3651
926	SLU 25	-0.64	-0.07	27.95	-14.2108	-0.0356	-0.3655
926	SLU 26	-0.63	-0.05	27.74	-14.1068	-0.0352	-0.3641
926	SLU 27	-0.64	-0.11	28.19	-14.3347	-0.0359	-0.3705
926	SLU 28	-0.65	-0.07	28.2	-14.3374	-0.0359	-0.371
926	SLU 29	-0.64	-0.12	27.98	-14.2289	-0.0355	-0.3688
926	SLU 30	-0.64	-0.08	27.99	-14.2316	-0.0355	-0.3693
926	SLU 31	-0.67	-0.07	30.61	-15.5477	-0.0398	-0.3868
926	SLU 32	-0.68	-0.12	31.06	-15.7756	-0.0405	-0.3932
926	SLU 33	-0.68	-0.09	31.07	-15.7783	-0.0405	-0.3937
926	SLU 34	-0.68	-0.07	30.86	-15.6742	-0.0402	-0.3923
926	SLU 35	-0.69	-0.12	31.31	-15.9021	-0.0408	-0.3987
926	SLU 36	-0.69	-0.09	31.32	-15.9048	-0.0408	-0.3991
926	SLU 37	-0.69	-0.13	31.1	-15.7963	-0.0405	-0.3969
926	SLU 38	-0.69	-0.09	31.11	-15.799	-0.0405	-0.3974
926	SLU 39	-0.69	-0.14	31.93	-16.215	-0.042	-0.3981
926	SLU 40	-0.69	-0.1	31.94	-16.2177	-0.042	-0.3986
926	SLU 41	-0.7	-0.14	32.19	-16.3416	-0.0423	-0.4035
926	SLU 42	-0.7	-0.1	32.19	-16.3442	-0.0423	-0.404
926	SLU 43	-0.72	-0.16	30.74	-15.6688	-0.0377	-0.4137
926	SLU 44	-0.72	-0.1	30.74	-15.6732	-0.0377	-0.4145
926	SLU 45	-0.73	-0.15	31.2	-15.9011	-0.0383	-0.4209
926	SLU 46	-0.73	-0.12	31.2	-15.9037	-0.0383	-0.4214
926	SLU 47	-0.73	-0.1	31	-15.7997	-0.038	-0.4199
926	SLU 48	-0.74	-0.15	31.45	-16.0276	-0.0386	-0.4264
926	SLU 49	-0.74	-0.12	31.46	-16.0302	-0.0386	-0.4268
926	SLU 50	-0.74	-0.16	31.24	-15.9218	-0.0383	-0.4246
926	SLU 51	-0.74	-0.12	31.25	-15.9244	-0.0383	-0.4251
926	SLU 52	-0.77	-0.11	33.87	-17.2406	-0.0426	-0.4426
926	SLU 53	-0.78	-0.17	34.32	-17.4685	-0.0433	-0.449
926	SLU 54	-0.78	-0.13	34.33	-17.4711	-0.0433	-0.4495
926	SLU 55	-0.78	-0.11	34.12	-17.3671	-0.0429	-0.4481
926	SLU 56	-0.79	-0.17	34.57	-17.595	-0.0436	-0.4545
926	SLU 57	-0.79	-0.13	34.58	-17.5977	-0.0436	-0.4549
926	SLU 58	-0.79	-0.17	34.36	-17.4892	-0.0432	-0.4528
926	SLU 59	-0.79	-0.13	34.37	-17.4919	-0.0432	-0.4532
926	SLU 60	-0.79	-0.18	35.19	-17.9079	-0.0447	-0.4539
926	SLU 61	-0.79	-0.14	35.2	-17.9106	-0.0447	-0.4544
926	SLU 62	-0.8	-0.18	35.45	-18.0345	-0.045	-0.4594
926	SLU 63	-0.8	-0.14	35.45	-18.0371	-0.045	-0.4598
926	SLU 64	-0.77	-0.15	33.77	-17.1904	-0.0424	-0.4451
926	SLU 65	-0.78	-0.09	33.78	-17.1948	-0.0424	-0.4459
926	SLU 66	-0.79	-0.15	34.23	-17.4227	-0.043	-0.4523
926	SLU 67	-0.79	-0.11	34.24	-17.4254	-0.043	-0.4527
926	SLU 68	-0.79	-0.09	34.03	-17.3213	-0.0427	-0.4513
926	SLU 69	-0.8	-0.15	34.49	-17.5493	-0.0433	-0.4577
926	SLU 70	-0.8	-0.11	34.49	-17.5519	-0.0433	-0.4582
926	SLU 71	-0.79	-0.15	34.28	-17.4435	-0.043	-0.456
926	SLU 72	-0.79	-0.12	34.28	-17.4461	-0.043	-0.4565
926	SLU 73	-0.82	-0.11	36.9	-18.7623	-0.0473	-0.474
926	SLU 74	-0.84	-0.16	37.35	-18.9902	-0.048	-0.4804
926	SLU 75	-0.84	-0.13	37.36	-18.9928	-0.048	-0.4809
926	SLU 76	-0.83	-0.11	37.15	-18.8888	-0.0476	-0.4795
926	SLU 77	-0.85	-0.16	37.61	-19.1167	-0.0483	-0.4859
926	SLU 78	-0.85	-0.13	37.61	-19.1193	-0.0483	-0.4863
926	SLU 79	-0.84	-0.17	37.4	-19.0109	-0.0479	-0.4841
926	SLU 80	-0.84	-0.13	37.4	-19.0135	-0.0479	-0.4846
926	SLU 81	-0.84	-0.17	38.23	-19.4296	-0.0494	-0.4853
926	SLU 82	-0.84	-0.14	38.23	-19.4322	-0.0494	-0.4858
926	SLU 83	-0.85	-0.17	38.48	-19.5561	-0.0497	-0.4907
926	SLU 84	-0.85	-0.14	38.49	-19.5588	-0.0497	-0.4912
926	SLE RA 1	-0.58	-0.12	25.31	-12.889	-0.0316	-0.3355
926	SLE RA 2	-0.58	-0.08	25.32	-12.8919	-0.0315	-0.336
926	SLE RA 3	-0.59	-0.12	25.62	-13.0438	-0.032	-0.3403
926	SLE RA 4	-0.59	-0.09	25.62	-13.0456	-0.032	-0.3406
926	SLE RA 5	-0.59	-0.08	25.48	-12.9763	-0.0318	-0.3396
926	SLE RA 6	-0.6	-0.12	25.79	-13.1282	-0.0322	-0.3439
926	SLE RA 7	-0.6	-0.09	25.79	-13.13	-0.0322	-0.3442
926	SLE RA 8	-0.6	-0.12	25.65	-13.0577	-0.032	-0.3428
926	SLE RA 9	-0.6	-0.09	25.65	-13.0594	-0.032	-0.3431
926	SLE RA 10	-0.62	-0.09	27.4	-13.9369	-0.0348	-0.3548

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
926	SLE RA 11	-0.62	-0.13	27.7	-14.0888	-0.0353	-0.359
926	SLE RA 12	-0.63	-0.1	27.7	-14.0906	-0.0353	-0.3593
926	SLE RA 13	-0.62	-0.09	27.56	-14.0212	-0.0351	-0.3584
926	SLE RA 14	-0.63	-0.13	27.87	-14.1731	-0.0355	-0.3627
926	SLE RA 15	-0.63	-0.1	27.87	-14.1749	-0.0355	-0.363
926	SLE RA 16	-0.63	-0.13	27.73	-14.1026	-0.0353	-0.3615
926	SLE RA 17	-0.63	-0.1	27.73	-14.1044	-0.0353	-0.3618
926	SLE RA 18	-0.63	-0.13	28.28	-14.3818	-0.0363	-0.3623
926	SLE RA 19	-0.63	-0.11	28.29	-14.3835	-0.0363	-0.3626
926	SLE RA 20	-0.64	-0.13	28.45	-14.4661	-0.0365	-0.3659
926	SLE RA 21	-0.64	-0.11	28.45	-14.4679	-0.0365	-0.3662
926	SLE FR 1	-0.58	-0.12	25.31	-12.889	-0.0316	-0.3355
926	SLE FR 2	-0.58	-0.11	25.31	-12.8896	-0.0316	-0.3356
926	SLE FR 3	-0.59	-0.12	25.38	-12.9227	-0.0316	-0.3369
926	SLE FR 4	-0.6	-0.12	26.2	-13.3374	-0.033	-0.3436
926	SLE FR 5	-0.6	-0.12	26.27	-13.3705	-0.033	-0.345
926	SLE FR 6	-0.61	-0.13	26.8	-13.6354	-0.0339	-0.3489
926	SLE QP 1	-0.58	-0.12	25.31	-12.889	-0.0316	-0.3355
926	SLE QP 2	-0.6	-0.12	26.2	-13.3368	-0.033	-0.3435
926	SLD 1	2.94	0.83	29.26	-14.7867	-0.029	1.6875
926	SLD 2	2.78	0.59	29.26	-14.7894	-0.029	1.5987
926	SLD 3	2.84	-0.32	29.51	-14.9374	-0.0294	1.6346
926	SLD 4	2.69	-0.57	29.52	-14.9402	-0.0294	1.5458
926	SLD 5	0.63	1.95	26.73	-13.5426	-0.0312	0.3616
926	SLD 6	0.53	1.79	26.73	-13.5444	-0.0312	0.3039
926	SLD 7	0.32	-1.89	27.58	-14.0451	-0.0325	0.1851
926	SLD 8	0.22	-2.04	27.59	-14.0469	-0.0325	0.1275
926	SLD 9	-1.42	1.8	24.81	-12.6267	-0.0334	-0.8145
926	SLD 10	-1.52	1.64	24.82	-12.6285	-0.0334	-0.8722
926	SLD 11	-1.72	-2.04	25.67	-13.1292	-0.0348	-0.991
926	SLD 12	-1.82	-2.2	25.68	-13.131	-0.0347	-1.0486
926	SLD 13	-3.88	0.32	22.88	-11.7334	-0.0365	-2.2328
926	SLD 14	-4.04	0.08	22.89	-11.7362	-0.0365	-2.3216
926	SLD 15	-3.98	-0.83	23.14	-11.8842	-0.0369	-2.2858
926	SLD 16	-4.13	-1.08	23.15	-11.8869	-0.0369	-2.3746
926	SLV 1	7.66	2.07	33.35	-16.7299	-0.0237	4.406
926	SLV 2	7.3	1.51	33.36	-16.7363	-0.0237	4.1991
926	SLV 3	7.45	-0.56	33.95	-17.0825	-0.0246	4.2826
926	SLV 4	7.09	-1.12	33.97	-17.0889	-0.0246	4.0757
926	SLV 5	2.27	4.62	27.43	-13.8189	-0.0288	1.3035
926	SLV 6	2.04	4.26	27.44	-13.823	-0.0288	1.1714
926	SLV 7	1.55	-4.14	29.44	-14.9942	-0.0319	0.8921
926	SLV 8	1.32	-4.5	29.45	-14.9983	-0.0319	0.76
926	SLV 9	-2.51	4.26	22.96	-11.6753	-0.0341	-1.4471
926	SLV 10	-2.75	3.9	22.97	-11.6794	-0.0341	-1.5792
926	SLV 11	-3.23	-4.5	24.96	-12.8506	-0.0371	-1.8585
926	SLV 12	-3.46	-4.86	24.97	-12.8547	-0.0371	-1.9906
926	SLV 13	-8.28	0.87	18.44	-9.5847	-0.0413	-4.7628
926	SLV 14	-8.64	0.31	18.45	-9.5911	-0.0413	-4.9696
926	SLV 15	-8.5	-1.75	19.04	-9.9373	-0.0422	-4.8862
926	SLV 16	-8.86	-2.32	19.05	-9.9437	-0.0422	-5.093
926	CRTFP Ux+	0	0	0	0	0	0
926	CRTFP Ux-	0	0	0	0	0	0
926	CRTFP Uy+	0	0	0	0	0	0
926	CRTFP Uy-	0	0	0	0	0	0
927	SLU 1	-0.57	-0.12	25.6	-13.2989	-0.042	-0.3264
927	SLU 2	-0.57	-0.06	25.6	-13.3032	-0.042	-0.3271
927	SLU 3	-0.58	-0.11	26.09	-13.5497	-0.0429	-0.3335
927	SLU 4	-0.58	-0.08	26.09	-13.5523	-0.0429	-0.334
927	SLU 5	-0.58	-0.06	25.87	-13.4391	-0.0424	-0.3325
927	SLU 6	-0.59	-0.11	26.35	-13.6857	-0.0434	-0.339
927	SLU 7	-0.59	-0.08	26.36	-13.6883	-0.0434	-0.3394
927	SLU 8	-0.59	-0.12	26.13	-13.5708	-0.0429	-0.3372
927	SLU 9	-0.59	-0.08	26.13	-13.5733	-0.0429	-0.3377
927	SLU 10	-0.62	-0.07	28.91	-15.0033	-0.0486	-0.3555
927	SLU 11	-0.63	-0.13	29.39	-15.2498	-0.0496	-0.362
927	SLU 12	-0.63	-0.09	29.4	-15.2524	-0.0496	-0.3624
927	SLU 13	-0.63	-0.07	29.18	-15.1392	-0.0491	-0.3609
927	SLU 14	-0.64	-0.13	29.66	-15.3858	-0.05	-0.3674
927	SLU 15	-0.64	-0.09	29.66	-15.3883	-0.05	-0.3678
927	SLU 16	-0.64	-0.13	29.43	-15.2709	-0.0496	-0.3656
927	SLU 17	-0.64	-0.1	29.44	-15.2734	-0.0496	-0.3661
927	SLU 18	-0.64	-0.14	30.32	-15.7276	-0.0515	-0.367
927	SLU 19	-0.64	-0.1	30.32	-15.7302	-0.0515	-0.3674
927	SLU 20	-0.65	-0.14	30.59	-15.8635	-0.052	-0.3724
927	SLU 21	-0.65	-0.1	30.59	-15.8661	-0.0519	-0.3728
927	SLU 22	-0.62	-0.11	28.81	-14.9475	-0.0483	-0.358
927	SLU 23	-0.62	-0.05	28.82	-14.9517	-0.0483	-0.3588
927	SLU 24	-0.64	-0.11	29.3	-15.1983	-0.0493	-0.3652
927	SLU 25	-0.64	-0.07	29.3	-15.2009	-0.0493	-0.3656
927	SLU 26	-0.63	-0.05	29.08	-15.0877	-0.0488	-0.3642
927	SLU 27	-0.64	-0.11	29.56	-15.3342	-0.0497	-0.3706
927	SLU 28	-0.65	-0.07	29.57	-15.3368	-0.0497	-0.3711
927	SLU 29	-0.64	-0.11	29.34	-15.2193	-0.0493	-0.3689
927	SLU 30	-0.64	-0.08	29.34	-15.2219	-0.0493	-0.3693
927	SLU 31	-0.67	-0.07	32.12	-16.6518	-0.055	-0.3872
927	SLU 32	-0.68	-0.12	32.6	-16.8984	-0.0559	-0.3936
927	SLU 33	-0.69	-0.08	32.61	-16.901	-0.0559	-0.3941
927	SLU 34	-0.68	-0.07	32.39	-16.7878	-0.0554	-0.3926
927	SLU 35	-0.69	-0.12	32.87	-17.0343	-0.0564	-0.399
927	SLU 36	-0.7	-0.08	32.87	-17.0369	-0.0564	-0.3995

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
927	SLU 37	-0.69	-0.13	32.64	-16.9194	-0.0559	-0.3973
927	SLU 38	-0.69	-0.09	32.65	-16.922	-0.0559	-0.3977
927	SLU 39	-0.69	-0.13	33.53	-17.3762	-0.0578	-0.3986
927	SLU 40	-0.69	-0.1	33.53	-17.3787	-0.0578	-0.3991
927	SLU 41	-0.7	-0.13	33.8	-17.5121	-0.0583	-0.404
927	SLU 42	-0.7	-0.1	33.8	-17.5147	-0.0583	-0.4045
927	SLU 43	-0.72	-0.15	32.17	-16.7233	-0.0524	-0.4134
927	SLU 44	-0.72	-0.09	32.18	-16.7276	-0.0524	-0.4142
927	SLU 45	-0.73	-0.15	32.66	-16.9742	-0.0533	-0.4206
927	SLU 46	-0.73	-0.11	32.67	-16.9768	-0.0533	-0.421
927	SLU 47	-0.73	-0.09	32.45	-16.8636	-0.0529	-0.4196
927	SLU 48	-0.74	-0.15	32.93	-17.1101	-0.0538	-0.426
927	SLU 49	-0.74	-0.11	32.94	-17.1127	-0.0538	-0.4265
927	SLU 50	-0.74	-0.15	32.71	-16.9952	-0.0533	-0.4243
927	SLU 51	-0.74	-0.12	32.71	-16.9978	-0.0533	-0.4247
927	SLU 52	-0.77	-0.11	35.49	-18.4277	-0.059	-0.4426
927	SLU 53	-0.78	-0.16	35.97	-18.6743	-0.06	-0.449
927	SLU 54	-0.78	-0.13	35.98	-18.6769	-0.06	-0.4495
927	SLU 55	-0.78	-0.11	35.76	-18.5637	-0.0595	-0.448
927	SLU 56	-0.79	-0.16	36.24	-18.8102	-0.0604	-0.4544
927	SLU 57	-0.79	-0.13	36.24	-18.8128	-0.0604	-0.4549
927	SLU 58	-0.79	-0.17	36.01	-18.6953	-0.06	-0.4527
927	SLU 59	-0.79	-0.13	36.02	-18.6979	-0.06	-0.4531
927	SLU 60	-0.79	-0.17	36.9	-19.152	-0.0619	-0.454
927	SLU 61	-0.79	-0.14	36.9	-19.1546	-0.0619	-0.4545
927	SLU 62	-0.8	-0.17	37.16	-19.288	-0.0624	-0.4595
927	SLU 63	-0.8	-0.14	37.17	-19.2906	-0.0624	-0.4599
927	SLU 64	-0.77	-0.15	35.39	-18.3719	-0.0588	-0.4451
927	SLU 65	-0.78	-0.09	35.39	-18.3762	-0.0587	-0.4458
927	SLU 66	-0.79	-0.14	35.87	-18.6227	-0.0597	-0.4523
927	SLU 67	-0.79	-0.11	35.88	-18.6253	-0.0597	-0.4527
927	SLU 68	-0.79	-0.09	35.66	-18.5121	-0.0592	-0.4512
927	SLU 69	-0.8	-0.14	36.14	-18.7587	-0.0601	-0.4577
927	SLU 70	-0.8	-0.11	36.15	-18.7613	-0.0601	-0.4581
927	SLU 71	-0.79	-0.15	35.92	-18.6438	-0.0597	-0.4559
927	SLU 72	-0.79	-0.11	35.92	-18.6463	-0.0597	-0.4564
927	SLU 73	-0.83	-0.1	38.7	-20.0763	-0.0654	-0.4742
927	SLU 74	-0.84	-0.16	39.18	-20.3228	-0.0663	-0.4807
927	SLU 75	-0.84	-0.12	39.19	-20.3254	-0.0663	-0.4811
927	SLU 76	-0.83	-0.1	38.97	-20.2122	-0.0659	-0.4797
927	SLU 77	-0.85	-0.16	39.45	-20.4588	-0.0668	-0.4861
927	SLU 78	-0.85	-0.12	39.45	-20.4614	-0.0668	-0.4865
927	SLU 79	-0.84	-0.16	39.22	-20.3439	-0.0663	-0.4844
927	SLU 80	-0.84	-0.13	39.23	-20.3464	-0.0663	-0.4848
927	SLU 81	-0.85	-0.17	40.11	-20.8006	-0.0683	-0.4857
927	SLU 82	-0.85	-0.13	40.11	-20.8032	-0.0683	-0.4861
927	SLU 83	-0.85	-0.17	40.37	-20.9365	-0.0687	-0.4911
927	SLU 84	-0.86	-0.13	40.38	-20.9391	-0.0687	-0.4915
927	SLE RA 1	-0.58	-0.12	26.51	-13.7699	-0.0438	-0.3354
927	SLE RA 2	-0.58	-0.08	26.52	-13.7728	-0.0438	-0.3359
927	SLE RA 3	-0.59	-0.11	26.84	-13.9371	-0.0444	-0.3402
927	SLE RA 4	-0.59	-0.09	26.84	-13.9389	-0.0444	-0.3405
927	SLE RA 5	-0.59	-0.08	26.7	-13.8634	-0.0441	-0.3395
927	SLE RA 6	-0.6	-0.11	27.02	-14.0278	-0.0447	-0.3438
927	SLE RA 7	-0.6	-0.09	27.02	-14.0295	-0.0447	-0.3441
927	SLE RA 8	-0.6	-0.12	26.87	-13.9512	-0.0444	-0.3427
927	SLE RA 9	-0.6	-0.09	26.87	-13.9529	-0.0444	-0.3429
927	SLE RA 10	-0.62	-0.09	28.72	-14.9062	-0.0482	-0.3549
927	SLE RA 11	-0.62	-0.12	29.04	-15.0705	-0.0489	-0.3591
927	SLE RA 12	-0.63	-0.1	29.05	-15.0723	-0.0488	-0.3594
927	SLE RA 13	-0.62	-0.09	28.9	-14.9968	-0.0485	-0.3585
927	SLE RA 14	-0.63	-0.12	29.22	-15.1612	-0.0492	-0.3628
927	SLE RA 15	-0.63	-0.1	29.22	-15.1629	-0.0492	-0.363
927	SLE RA 16	-0.63	-0.13	29.07	-15.0845	-0.0489	-0.3616
927	SLE RA 17	-0.63	-0.1	29.08	-15.0863	-0.0488	-0.3619
927	SLE RA 18	-0.63	-0.13	29.66	-15.389	-0.0501	-0.3625
927	SLE RA 19	-0.63	-0.11	29.67	-15.3908	-0.0501	-0.3628
927	SLE RA 20	-0.64	-0.13	29.84	-15.4797	-0.0504	-0.3661
927	SLE RA 21	-0.64	-0.11	29.84	-15.4814	-0.0504	-0.3664
927	SLE FR 1	-0.58	-0.12	26.51	-13.7699	-0.0438	-0.3354
927	SLE FR 2	-0.58	-0.11	26.51	-13.7705	-0.0438	-0.3355
927	SLE FR 3	-0.59	-0.12	26.58	-13.8062	-0.0439	-0.3369
927	SLE FR 4	-0.6	-0.11	27.46	-14.2562	-0.0457	-0.3436
927	SLE FR 5	-0.6	-0.12	27.53	-14.2919	-0.0458	-0.345
927	SLE FR 6	-0.61	-0.12	28.09	-14.5795	-0.047	-0.349
927	SLE QP 1	-0.58	-0.12	26.51	-13.7699	-0.0438	-0.3354
927	SLE QP 2	-0.6	-0.12	27.46	-14.2556	-0.0457	-0.3435
927	SLD 1	2.94	0.81	30.44	-15.7028	-0.0439	1.6872
927	SLD 2	2.78	0.58	30.45	-15.7062	-0.0439	1.5984
927	SLD 3	2.84	-0.33	30.68	-15.8434	-0.0445	1.6343
927	SLD 4	2.69	-0.56	30.69	-15.8468	-0.0446	1.5455
927	SLD 5	0.63	1.92	27.99	-14.4759	-0.0441	0.3614
927	SLD 6	0.53	1.77	27.99	-14.4782	-0.0442	0.3038
927	SLD 7	0.32	-1.86	28.79	-14.9446	-0.0463	0.1851
927	SLD 8	0.22	-2.01	28.8	-14.9468	-0.0464	0.1274
927	SLD 9	-1.42	1.77	26.12	-13.5645	-0.045	-0.8145
927	SLD 10	-1.52	1.62	26.12	-13.5667	-0.0451	-0.8721
927	SLD 11	-1.72	-2.01	26.93	-14.0331	-0.0472	-0.9909
927	SLD 12	-1.82	-2.16	26.93	-14.0354	-0.0473	-1.0485
927	SLD 13	-3.88	0.31	24.23	-12.6645	-0.0468	-2.2326
927	SLD 14	-4.04	0.09	24.23	-12.6679	-0.0469	-2.3214

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
927	SLD 15	-3.98	-0.82	24.47	-12.8051	-0.0475	-2.2855
927	SLD 16	-4.13	-1.05	24.47	-12.8085	-0.0475	-2.3743
927	SLV 1	7.66	2.02	34.44	-17.6424	-0.0414	4.4053
927	SLV 2	7.3	1.49	34.46	-17.6504	-0.0415	4.1985
927	SLV 3	7.45	-0.57	35.01	-17.9712	-0.0429	4.282
927	SLV 4	7.09	-1.1	35.02	-17.9792	-0.043	4.0752
927	SLV 5	2.27	4.54	28.69	-14.7716	-0.0421	1.3032
927	SLV 6	2.04	4.2	28.7	-14.7767	-0.0421	1.1711
927	SLV 7	1.55	-4.09	30.58	-15.8677	-0.0472	0.892
927	SLV 8	1.32	-4.43	30.59	-15.8728	-0.0472	0.76
927	SLV 9	-2.52	4.19	24.33	-12.6385	-0.0442	-1.4471
927	SLV 10	-2.75	3.85	24.34	-12.6436	-0.0442	-1.5791
927	SLV 11	-3.23	-4.44	26.21	-13.7346	-0.0493	-1.8582
927	SLV 12	-3.46	-4.78	26.22	-13.7397	-0.0493	-1.9903
927	SLV 13	-8.28	0.86	19.89	-10.5321	-0.0484	-4.7623
927	SLV 14	-8.64	0.33	19.91	-10.5401	-0.0485	-4.969
927	SLV 15	-8.5	-1.73	20.46	-10.8609	-0.0499	-4.8856
927	SLV 16	-8.86	-2.26	20.47	-10.8689	-0.05	-5.0924
927	CRTFP Ux+	0	0	0	0	0	0
927	CRTFP Ux-	0	0	0	0	0	0
927	CRTFP Uy+	0	0	0	0	0	0
927	CRTFP Uy-	0	0	0	0	0	0
928	SLU 1	-0.57	-0.11	27.05	-14.3619	-0.0489	-0.3261
928	SLU 2	-0.57	-0.05	27.06	-14.3659	-0.0488	-0.3268
928	SLU 3	-0.58	-0.11	27.57	-14.6362	-0.05	-0.3332
928	SLU 4	-0.58	-0.07	27.58	-14.6386	-0.0499	-0.3336
928	SLU 5	-0.58	-0.05	27.34	-14.5139	-0.0494	-0.3321
928	SLU 6	-0.59	-0.11	27.85	-14.7841	-0.0505	-0.3386
928	SLU 7	-0.59	-0.07	27.86	-14.7865	-0.0505	-0.339
928	SLU 8	-0.59	-0.11	27.61	-14.6579	-0.05	-0.3368
928	SLU 9	-0.59	-0.08	27.62	-14.6603	-0.0499	-0.3373
928	SLU 10	-0.62	-0.07	30.59	-16.2308	-0.0565	-0.3555
928	SLU 11	-0.63	-0.12	31.11	-16.501	-0.0576	-0.3619
928	SLU 12	-0.63	-0.08	31.11	-16.5034	-0.0576	-0.3623
928	SLU 13	-0.63	-0.07	30.88	-16.3788	-0.0571	-0.3609
928	SLU 14	-0.64	-0.12	31.39	-16.649	-0.0582	-0.3673
928	SLU 15	-0.64	-0.08	31.39	-16.6514	-0.0582	-0.3677
928	SLU 16	-0.64	-0.13	31.15	-16.5227	-0.0576	-0.3655
928	SLU 17	-0.64	-0.09	31.15	-16.5251	-0.0576	-0.366
928	SLU 18	-0.64	-0.13	32.1	-17.026	-0.0598	-0.3671
928	SLU 19	-0.64	-0.09	32.11	-17.0284	-0.0598	-0.3675
928	SLU 20	-0.65	-0.13	32.38	-17.174	-0.0604	-0.3725
928	SLU 21	-0.65	-0.1	32.39	-17.1764	-0.0604	-0.3729
928	SLU 22	-0.62	-0.1	30.48	-16.1684	-0.0562	-0.358
928	SLU 23	-0.62	-0.05	30.49	-16.1724	-0.0562	-0.3587
928	SLU 24	-0.64	-0.1	31	-16.4426	-0.0573	-0.3652
928	SLU 25	-0.64	-0.06	31.01	-16.445	-0.0573	-0.3656
928	SLU 26	-0.63	-0.05	30.77	-16.3204	-0.0567	-0.3641
928	SLU 27	-0.64	-0.1	31.28	-16.5906	-0.0578	-0.3706
928	SLU 28	-0.65	-0.06	31.29	-16.593	-0.0578	-0.371
928	SLU 29	-0.64	-0.11	31.04	-16.4643	-0.0573	-0.3688
928	SLU 30	-0.64	-0.07	31.05	-16.4667	-0.0573	-0.3692
928	SLU 31	-0.67	-0.06	34.02	-18.0372	-0.0638	-0.3874
928	SLU 32	-0.69	-0.11	34.54	-18.3074	-0.065	-0.3939
928	SLU 33	-0.69	-0.08	34.54	-18.3099	-0.0649	-0.3943
928	SLU 34	-0.68	-0.06	34.3	-18.1852	-0.0644	-0.3928
928	SLU 35	-0.7	-0.11	34.82	-18.4554	-0.0655	-0.3993
928	SLU 36	-0.7	-0.08	34.82	-18.4578	-0.0655	-0.3997
928	SLU 37	-0.69	-0.12	34.58	-18.3292	-0.065	-0.3975
928	SLU 38	-0.69	-0.08	34.58	-18.3316	-0.0649	-0.3979
928	SLU 39	-0.69	-0.12	35.53	-18.8324	-0.0672	-0.399
928	SLU 40	-0.7	-0.09	35.53	-18.8348	-0.0671	-0.3995
928	SLU 41	-0.7	-0.12	35.81	-18.9804	-0.0677	-0.4044
928	SLU 42	-0.7	-0.09	35.82	-18.9828	-0.0677	-0.4048
928	SLU 43	-0.72	-0.15	33.99	-18.0511	-0.061	-0.4129
928	SLU 44	-0.72	-0.09	34	-18.0552	-0.061	-0.4136
928	SLU 45	-0.73	-0.14	34.51	-18.3254	-0.0621	-0.4201
928	SLU 46	-0.73	-0.11	34.52	-18.3278	-0.0621	-0.4205
928	SLU 47	-0.73	-0.09	34.28	-18.2031	-0.0615	-0.419
928	SLU 48	-0.74	-0.14	34.79	-18.4733	-0.0626	-0.4255
928	SLU 49	-0.74	-0.11	34.8	-18.4758	-0.0626	-0.4259
928	SLU 50	-0.74	-0.15	34.55	-18.3471	-0.0621	-0.4237
928	SLU 51	-0.74	-0.11	34.56	-18.3495	-0.0621	-0.4241
928	SLU 52	-0.77	-0.1	37.53	-19.92	-0.0687	-0.4423
928	SLU 53	-0.78	-0.16	38.05	-20.1902	-0.0698	-0.4488
928	SLU 54	-0.78	-0.12	38.05	-20.1926	-0.0698	-0.4492
928	SLU 55	-0.78	-0.1	37.81	-20.068	-0.0692	-0.4477
928	SLU 56	-0.79	-0.16	38.33	-20.3382	-0.0703	-0.4542
928	SLU 57	-0.79	-0.12	38.33	-20.3406	-0.0703	-0.4546
928	SLU 58	-0.79	-0.16	38.09	-20.2119	-0.0698	-0.4524
928	SLU 59	-0.79	-0.13	38.09	-20.2143	-0.0698	-0.4528
928	SLU 60	-0.79	-0.17	39.04	-20.7152	-0.072	-0.4539
928	SLU 61	-0.79	-0.13	39.04	-20.7176	-0.072	-0.4544
928	SLU 62	-0.8	-0.17	39.32	-20.8632	-0.0725	-0.4593
928	SLU 63	-0.8	-0.13	39.33	-20.8656	-0.0725	-0.4597
928	SLU 64	-0.77	-0.14	37.42	-19.8576	-0.0684	-0.4449
928	SLU 65	-0.78	-0.08	37.43	-19.8616	-0.0683	-0.4456
928	SLU 66	-0.79	-0.14	37.94	-20.1318	-0.0694	-0.452
928	SLU 67	-0.79	-0.1	37.94	-20.1342	-0.0694	-0.4525
928	SLU 68	-0.78	-0.08	37.71	-20.0096	-0.0689	-0.451
928	SLU 69	-0.8	-0.14	38.22	-20.2798	-0.07	-0.4574

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
928	SLU 70	-0.8	-0.1	38.23	-20.2822	-0.07	-0.4578
928	SLU 71	-0.79	-0.14	37.98	-20.1535	-0.0694	-0.4557
928	SLU 72	-0.79	-0.11	37.99	-20.1559	-0.0694	-0.4561
928	SLU 73	-0.83	-0.09	40.96	-21.7265	-0.076	-0.4743
928	SLU 74	-0.84	-0.15	41.48	-21.9967	-0.0771	-0.4808
928	SLU 75	-0.84	-0.11	41.48	-21.9991	-0.0771	-0.4812
928	SLU 76	-0.83	-0.09	41.24	-21.8744	-0.0765	-0.4797
928	SLU 77	-0.85	-0.15	41.76	-22.1446	-0.0776	-0.4861
928	SLU 78	-0.85	-0.11	41.76	-22.147	-0.0776	-0.4865
928	SLU 79	-0.84	-0.15	41.52	-22.0184	-0.0771	-0.4844
928	SLU 80	-0.84	-0.12	41.52	-22.0208	-0.0771	-0.4848
928	SLU 81	-0.85	-0.16	42.47	-22.5217	-0.0793	-0.4859
928	SLU 82	-0.85	-0.12	42.47	-22.5241	-0.0793	-0.4863
928	SLU 83	-0.86	-0.16	42.75	-22.6696	-0.0799	-0.4913
928	SLU 84	-0.86	-0.12	42.76	-22.672	-0.0798	-0.4917
928	SLE RA 1	-0.58	-0.11	28.03	-14.878	-0.051	-0.3352
928	SLE RA 2	-0.58	-0.07	28.03	-14.8807	-0.051	-0.3357
928	SLE RA 3	-0.59	-0.11	28.38	-15.0609	-0.0517	-0.34
928	SLE RA 4	-0.59	-0.08	28.38	-15.0625	-0.0517	-0.3402
928	SLE RA 5	-0.59	-0.07	28.22	-14.9794	-0.0513	-0.3393
928	SLE RA 6	-0.6	-0.11	28.57	-15.1595	-0.0521	-0.3436
928	SLE RA 7	-0.6	-0.08	28.57	-15.1611	-0.052	-0.3438
928	SLE RA 8	-0.6	-0.11	28.41	-15.0753	-0.0517	-0.3424
928	SLE RA 9	-0.6	-0.09	28.41	-15.0769	-0.0517	-0.3427
928	SLE RA 10	-0.62	-0.08	30.39	-16.124	-0.0561	-0.3548
928	SLE RA 11	-0.63	-0.11	30.73	-16.3041	-0.0568	-0.3591
928	SLE RA 12	-0.63	-0.09	30.74	-16.3057	-0.0568	-0.3594
928	SLE RA 13	-0.62	-0.08	30.58	-16.2226	-0.0564	-0.3584
928	SLE RA 14	-0.63	-0.12	30.92	-16.4027	-0.0572	-0.3627
928	SLE RA 15	-0.63	-0.09	30.93	-16.4044	-0.0572	-0.363
928	SLE RA 16	-0.63	-0.12	30.76	-16.3186	-0.0568	-0.3615
928	SLE RA 17	-0.63	-0.1	30.77	-16.3202	-0.0568	-0.3618
928	SLE RA 18	-0.63	-0.12	31.4	-16.6541	-0.0583	-0.3625
928	SLE RA 19	-0.63	-0.1	31.4	-16.6557	-0.0583	-0.3628
928	SLE RA 20	-0.64	-0.12	31.58	-16.7527	-0.0586	-0.3661
928	SLE RA 21	-0.64	-0.1	31.59	-16.7543	-0.0586	-0.3664
928	SLE FR 1	-0.58	-0.11	28.03	-14.878	-0.051	-0.3352
928	SLE FR 2	-0.58	-0.1	28.03	-14.8786	-0.051	-0.3353
928	SLE FR 3	-0.59	-0.11	28.1	-14.9175	-0.0511	-0.3366
928	SLE FR 4	-0.6	-0.11	29.04	-15.4114	-0.0532	-0.3435
928	SLE FR 5	-0.6	-0.11	29.11	-15.4503	-0.0533	-0.3448
928	SLE FR 6	-0.61	-0.12	29.71	-15.7661	-0.0546	-0.3489
928	SLE QP 1	-0.58	-0.11	28.03	-14.878	-0.051	-0.3352
928	SLE QP 2	-0.6	-0.11	29.04	-15.4109	-0.0532	-0.3434
928	SLD 1	2.93	0.79	32.02	-16.9011	-0.0533	1.6866
928	SLD 2	2.78	0.57	32.03	-16.9061	-0.0534	1.5979
928	SLD 3	2.84	-0.34	32.24	-17.0268	-0.0543	1.6337
928	SLD 4	2.69	-0.56	32.25	-17.0318	-0.0544	1.5451
928	SLD 5	0.63	1.9	29.6	-15.6665	-0.0517	0.3612
928	SLD 6	0.53	1.76	29.61	-15.6697	-0.0518	0.3037
928	SLD 7	0.32	-1.85	30.33	-16.0854	-0.0549	0.1851
928	SLD 8	0.22	-1.99	30.34	-16.0886	-0.055	0.1275
928	SLD 9	-1.42	1.76	27.74	-14.7331	-0.0513	-0.8143
928	SLD 10	-1.52	1.62	27.75	-14.7363	-0.0514	-0.8719
928	SLD 11	-1.72	-1.99	28.47	-15.152	-0.0545	-0.9905
928	SLD 12	-1.82	-2.13	28.48	-15.1552	-0.0546	-1.048
928	SLD 13	-3.88	0.33	25.83	-13.7899	-0.052	-2.2319
928	SLD 14	-4.04	0.11	25.84	-13.7949	-0.0521	-2.3206
928	SLD 15	-3.98	-0.8	26.05	-13.9156	-0.0529	-2.2847
928	SLD 16	-4.13	-1.01	26.06	-13.9206	-0.053	-2.3734
928	SLV 1	7.66	1.96	36.01	-18.8987	-0.0535	4.4037
928	SLV 2	7.3	1.45	36.03	-18.9102	-0.0537	4.1971
928	SLV 3	7.45	-0.61	36.52	-19.1926	-0.0557	4.2805
928	SLV 4	7.09	-1.12	36.55	-19.2042	-0.056	4.0739
928	SLV 5	2.27	4.49	30.35	-16.0095	-0.0498	1.3026
928	SLV 6	2.04	4.16	30.37	-16.0169	-0.05	1.1706
928	SLV 7	1.55	-4.07	32.06	-16.9892	-0.0573	0.8919
928	SLV 8	1.32	-4.39	32.07	-16.9966	-0.0574	0.7599
928	SLV 9	-2.52	4.17	26.01	-13.8251	-0.0489	-1.4468
928	SLV 10	-2.75	3.84	26.02	-13.8325	-0.049	-1.5787
928	SLV 11	-3.23	-4.39	27.71	-14.8049	-0.0563	-1.8574
928	SLV 12	-3.46	-4.71	27.73	-14.8122	-0.0565	-1.9894
928	SLV 13	-8.28	0.89	21.53	-11.6176	-0.0504	-4.7607
928	SLV 14	-8.64	0.38	21.56	-11.6291	-0.0506	-4.9673
928	SLV 15	-8.5	-1.68	22.05	-11.9115	-0.0526	-4.8839
928	SLV 16	-8.86	-2.18	22.07	-11.923	-0.0528	-5.0905
928	CRTFP Ux+	0	0	0	0	0	0
928	CRTFP Ux-	0	0	0	0	0	0
928	CRTFP Uy+	0	0	0	0	0	0
928	CRTFP Uy-	0	0	0	0	0	0
929	SLU 1	-0.57	-0.11	28.62	-15.529	-0.049	-0.3254
929	SLU 2	-0.57	-0.05	28.63	-15.5325	-0.049	-0.3261
929	SLU 3	-0.58	-0.1	29.18	-15.829	-0.0501	-0.3326
929	SLU 4	-0.58	-0.07	29.18	-15.8311	-0.0501	-0.333
929	SLU 5	-0.58	-0.05	28.93	-15.6938	-0.0495	-0.3314
929	SLU 6	-0.59	-0.1	29.48	-15.9902	-0.0507	-0.3379
929	SLU 7	-0.59	-0.07	29.48	-15.9923	-0.0506	-0.3383
929	SLU 8	-0.58	-0.11	29.22	-15.8515	-0.0501	-0.3361
929	SLU 9	-0.59	-0.07	29.22	-15.8536	-0.0501	-0.3365
929	SLU 10	-0.62	-0.06	32.41	-17.5778	-0.0567	-0.3551
929	SLU 11	-0.63	-0.11	32.96	-17.8743	-0.0578	-0.3616

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
929	SLU 12	-0.63	-0.07	32.96	-17.8764	-0.0578	-0.362
929	SLU 13	-0.63	-0.06	32.71	-17.739	-0.0573	-0.3604
929	SLU 14	-0.64	-0.11	33.26	-18.0355	-0.0584	-0.3669
929	SLU 15	-0.64	-0.08	33.26	-18.0376	-0.0584	-0.3673
929	SLU 16	-0.64	-0.12	33	-17.8968	-0.0578	-0.3651
929	SLU 17	-0.64	-0.08	33	-17.8989	-0.0578	-0.3655
929	SLU 18	-0.64	-0.12	34.02	-18.4508	-0.06	-0.3669
929	SLU 19	-0.64	-0.08	34.03	-18.4529	-0.06	-0.3672
929	SLU 20	-0.65	-0.12	34.32	-18.6121	-0.0606	-0.3722
929	SLU 21	-0.65	-0.08	34.33	-18.6142	-0.0606	-0.3726
929	SLU 22	-0.62	-0.09	32.28	-17.5083	-0.0564	-0.3577
929	SLU 23	-0.62	-0.04	32.29	-17.5118	-0.0564	-0.3583
929	SLU 24	-0.64	-0.09	32.84	-17.8083	-0.0575	-0.3648
929	SLU 25	-0.64	-0.05	32.84	-17.8104	-0.0575	-0.3652
929	SLU 26	-0.63	-0.04	32.59	-17.673	-0.0569	-0.3637
929	SLU 27	-0.64	-0.09	33.14	-17.9695	-0.058	-0.3702
929	SLU 28	-0.65	-0.05	33.14	-17.9716	-0.058	-0.3706
929	SLU 29	-0.64	-0.1	32.88	-17.8308	-0.0575	-0.3684
929	SLU 30	-0.64	-0.06	32.89	-17.8329	-0.0575	-0.3688
929	SLU 31	-0.67	-0.04	36.07	-19.5571	-0.0641	-0.3873
929	SLU 32	-0.69	-0.1	36.62	-19.8536	-0.0652	-0.3938
929	SLU 33	-0.69	-0.06	36.63	-19.8557	-0.0652	-0.3942
929	SLU 34	-0.68	-0.05	36.37	-19.7183	-0.0646	-0.3927
929	SLU 35	-0.7	-0.1	36.92	-20.0148	-0.0657	-0.3992
929	SLU 36	-0.7	-0.06	36.93	-20.0169	-0.0657	-0.3996
929	SLU 37	-0.69	-0.1	36.66	-19.8761	-0.0652	-0.3974
929	SLU 38	-0.69	-0.07	36.67	-19.8782	-0.0652	-0.3978
929	SLU 39	-0.7	-0.11	37.69	-20.4301	-0.0674	-0.3991
929	SLU 40	-0.7	-0.07	37.69	-20.4322	-0.0674	-0.3995
929	SLU 41	-0.7	-0.11	37.99	-20.5914	-0.068	-0.4044
929	SLU 42	-0.7	-0.07	37.99	-20.5935	-0.0679	-0.4048
929	SLU 43	-0.72	-0.14	35.95	-19.5091	-0.0612	-0.412
929	SLU 44	-0.72	-0.08	35.96	-19.5126	-0.0612	-0.4127
929	SLU 45	-0.73	-0.14	36.51	-19.8091	-0.0623	-0.4191
929	SLU 46	-0.73	-0.1	36.51	-19.8112	-0.0623	-0.4195
929	SLU 47	-0.73	-0.08	36.26	-19.6738	-0.0617	-0.418
929	SLU 48	-0.74	-0.14	36.81	-19.9703	-0.0629	-0.4245
929	SLU 49	-0.74	-0.1	36.81	-19.9724	-0.0628	-0.4249
929	SLU 50	-0.74	-0.14	36.55	-19.8316	-0.0623	-0.4227
929	SLU 51	-0.74	-0.11	36.55	-19.8337	-0.0623	-0.4231
929	SLU 52	-0.77	-0.09	39.74	-21.5579	-0.0689	-0.4417
929	SLU 53	-0.78	-0.15	40.29	-21.8544	-0.07	-0.4481
929	SLU 54	-0.78	-0.11	40.29	-21.8565	-0.07	-0.4485
929	SLU 55	-0.78	-0.09	40.04	-21.7191	-0.0694	-0.447
929	SLU 56	-0.79	-0.15	40.59	-22.0156	-0.0706	-0.4535
929	SLU 57	-0.79	-0.11	40.59	-22.0177	-0.0705	-0.4539
929	SLU 58	-0.79	-0.15	40.33	-21.8769	-0.07	-0.4517
929	SLU 59	-0.79	-0.12	40.33	-21.879	-0.07	-0.4521
929	SLU 60	-0.79	-0.15	41.35	-22.4309	-0.0722	-0.4534
929	SLU 61	-0.79	-0.12	41.36	-22.433	-0.0722	-0.4538
929	SLU 62	-0.8	-0.16	41.65	-22.5922	-0.0728	-0.4588
929	SLU 63	-0.8	-0.12	41.66	-22.5943	-0.0728	-0.4592
929	SLU 64	-0.77	-0.13	39.61	-21.4884	-0.0686	-0.4443
929	SLU 65	-0.77	-0.07	39.62	-21.4919	-0.0685	-0.4449
929	SLU 66	-0.79	-0.12	40.17	-21.7884	-0.0697	-0.4514
929	SLU 67	-0.79	-0.09	40.17	-21.7905	-0.0696	-0.4518
929	SLU 68	-0.78	-0.07	39.92	-21.6531	-0.0691	-0.4503
929	SLU 69	-0.79	-0.12	40.47	-21.9496	-0.0702	-0.4567
929	SLU 70	-0.8	-0.09	40.47	-21.9517	-0.0702	-0.4571
929	SLU 71	-0.79	-0.13	40.21	-21.8109	-0.0697	-0.4549
929	SLU 72	-0.79	-0.1	40.22	-21.813	-0.0696	-0.4553
929	SLU 73	-0.83	-0.08	43.4	-23.5372	-0.0763	-0.4739
929	SLU 74	-0.84	-0.13	43.95	-23.8336	-0.0774	-0.4804
929	SLU 75	-0.84	-0.1	43.96	-23.8357	-0.0774	-0.4808
929	SLU 76	-0.83	-0.08	43.7	-23.6984	-0.0768	-0.4793
929	SLU 77	-0.85	-0.13	44.25	-23.9949	-0.0779	-0.4857
929	SLU 78	-0.85	-0.1	44.26	-23.997	-0.0779	-0.4861
929	SLU 79	-0.84	-0.14	43.99	-23.8562	-0.0774	-0.4839
929	SLU 80	-0.84	-0.11	44	-23.8583	-0.0774	-0.4843
929	SLU 81	-0.85	-0.14	45.02	-24.4102	-0.0796	-0.4857
929	SLU 82	-0.85	-0.11	45.02	-24.4123	-0.0796	-0.4861
929	SLU 83	-0.85	-0.14	45.32	-24.5714	-0.0801	-0.491
929	SLU 84	-0.86	-0.11	45.32	-24.5736	-0.0801	-0.4914
929	SLE RA 1	-0.58	-0.1	29.67	-16.0945	-0.0511	-0.3346
929	SLE RA 2	-0.58	-0.06	29.67	-16.0968	-0.0511	-0.3351
929	SLE RA 3	-0.59	-0.1	30.04	-16.2945	-0.0519	-0.3394
929	SLE RA 4	-0.59	-0.08	30.04	-16.2959	-0.0518	-0.3397
929	SLE RA 5	-0.59	-0.06	29.87	-16.2043	-0.0515	-0.3386
929	SLE RA 6	-0.6	-0.1	30.24	-16.402	-0.0522	-0.343
929	SLE RA 7	-0.6	-0.08	30.24	-16.4034	-0.0522	-0.3432
929	SLE RA 8	-0.59	-0.1	30.07	-16.3095	-0.0519	-0.3418
929	SLE RA 9	-0.6	-0.08	30.07	-16.3109	-0.0518	-0.342
929	SLE RA 10	-0.62	-0.07	32.19	-17.4604	-0.0563	-0.3544
929	SLE RA 11	-0.62	-0.1	32.56	-17.658	-0.057	-0.3587
929	SLE RA 12	-0.62	-0.08	32.56	-17.6594	-0.057	-0.359
929	SLE RA 13	-0.62	-0.07	32.39	-17.5679	-0.0566	-0.358
929	SLE RA 14	-0.63	-0.11	32.76	-17.7655	-0.0574	-0.3623
929	SLE RA 15	-0.63	-0.08	32.76	-17.7669	-0.0574	-0.3626
929	SLE RA 16	-0.63	-0.11	32.59	-17.673	-0.057	-0.3611
929	SLE RA 17	-0.63	-0.09	32.59	-17.6744	-0.057	-0.3614
929	SLE RA 18	-0.63	-0.11	33.27	-18.0424	-0.0585	-0.3623

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
929	SLE RA 19	-0.63	-0.09	33.27	-18.0438	-0.0585	-0.3625
929	SLE RA 20	-0.64	-0.11	33.47	-18.1499	-0.0588	-0.3658
929	SLE RA 21	-0.64	-0.09	33.47	-18.1513	-0.0588	-0.3661
929	SLE FR 1	-0.58	-0.1	29.67	-16.0945	-0.0511	-0.3346
929	SLE FR 2	-0.58	-0.09	29.67	-16.095	-0.0511	-0.3347
929	SLE FR 3	-0.58	-0.1	29.75	-16.1375	-0.0513	-0.3361
929	SLE FR 4	-0.6	-0.1	30.75	-16.6793	-0.0533	-0.343
929	SLE FR 5	-0.6	-0.11	30.83	-16.7219	-0.0535	-0.3444
929	SLE FR 6	-0.61	-0.11	31.47	-17.0684	-0.0548	-0.3485
929	SLE QP 1	-0.58	-0.1	29.67	-16.0945	-0.0511	-0.3346
929	SLE QP 2	-0.6	-0.1	30.75	-16.6789	-0.0533	-0.3429
929	SLD 1	2.93	0.75	33.76	-18.2382	-0.0536	1.6859
929	SLD 2	2.78	0.55	33.77	-18.2456	-0.0537	1.5974
929	SLD 3	2.84	-0.37	33.95	-18.3461	-0.0549	1.6331
929	SLD 4	2.69	-0.57	33.96	-18.3535	-0.055	1.5446
929	SLD 5	0.63	1.89	31.36	-16.9818	-0.0514	0.3612
929	SLD 6	0.53	1.75	31.37	-16.9866	-0.0515	0.3037
929	SLD 7	0.32	-1.85	32	-17.3414	-0.0557	0.1854
929	SLD 8	0.22	-1.98	32	-17.3462	-0.0558	0.1279
929	SLD 9	-1.42	1.77	29.49	-16.0116	-0.0509	-0.8138
929	SLD 10	-1.52	1.64	29.5	-16.0164	-0.0509	-0.8712
929	SLD 11	-1.72	-1.96	30.13	-16.3712	-0.0552	-0.9896
929	SLD 12	-1.82	-2.1	30.14	-16.376	-0.0552	-1.047
929	SLD 13	-3.88	0.36	27.53	-15.0043	-0.0517	-2.2305
929	SLD 14	-4.04	0.16	27.55	-15.0116	-0.0518	-2.319
929	SLD 15	-3.97	-0.76	27.72	-15.1121	-0.0529	-2.2832
929	SLD 16	-4.13	-0.96	27.74	-15.1195	-0.0531	-2.3718
929	SLV 1	7.66	1.87	37.79	-20.3285	-0.054	4.4014
929	SLV 2	7.3	1.39	37.82	-20.3457	-0.0543	4.1952
929	SLV 3	7.45	-0.68	38.24	-20.5807	-0.057	4.2785
929	SLV 4	7.09	-1.16	38.27	-20.5979	-0.0573	4.0722
929	SLV 5	2.27	4.45	32.18	-17.3884	-0.0489	1.3018
929	SLV 6	2.04	4.14	32.2	-17.3994	-0.0492	1.1701
929	SLV 7	1.55	-4.08	33.67	-18.229	-0.0589	0.8919
929	SLV 8	1.32	-4.38	33.69	-18.24	-0.0591	0.7602
929	SLV 9	-2.52	4.17	27.81	-15.1178	-0.0476	-1.4461
929	SLV 10	-2.75	3.87	27.83	-15.1288	-0.0478	-1.5778
929	SLV 11	-3.23	-4.35	29.3	-15.9584	-0.0575	-1.8559
929	SLV 12	-3.46	-4.66	29.32	-15.9694	-0.0577	-1.9876
929	SLV 13	-8.28	0.95	23.23	-12.7599	-0.0494	-4.7581
929	SLV 14	-8.64	0.47	23.26	-12.7771	-0.0497	-4.9643
929	SLV 15	-8.49	-1.6	23.67	-13.012	-0.0524	-4.881
929	SLV 16	-8.85	-2.08	23.7	-13.0292	-0.0527	-5.0873
929	CRTFP Ux+	0	0	0	0	0	0
929	CRTFP Ux-	0	0	0	0	0	0
929	CRTFP Uy+	0	0	0	0	0	0
929	CRTFP Uy-	0	0	0	0	0	0
930	SLU 1	-0.38	-0.07	20.22	-11.1773	1.2412	-0.2154
930	SLU 2	-0.38	-0.03	20.23	-11.1793	1.2415	-0.2182
930	SLU 3	-0.39	-0.07	20.62	-11.3951	1.2654	-0.2204
930	SLU 4	-0.39	-0.04	20.62	-11.3963	1.2656	-0.2221
930	SLU 5	-0.39	-0.03	20.44	-11.296	1.2545	-0.2218
930	SLU 6	-0.4	-0.07	20.83	-11.5119	1.2785	-0.224
930	SLU 7	-0.4	-0.04	20.83	-11.513	1.2786	-0.2257
930	SLU 8	-0.39	-0.07	20.65	-11.4108	1.2672	-0.2225
930	SLU 9	-0.39	-0.05	20.65	-11.4119	1.2674	-0.2242
930	SLU 10	-0.42	-0.03	22.92	-12.6669	1.4065	-0.2378
930	SLU 11	-0.42	-0.07	23.31	-12.8828	1.4304	-0.24
930	SLU 12	-0.43	-0.05	23.31	-12.8839	1.4306	-0.2417
930	SLU 13	-0.42	-0.03	23.13	-12.7836	1.4195	-0.2413
930	SLU 14	-0.43	-0.07	23.52	-12.9995	1.4435	-0.2435
930	SLU 15	-0.43	-0.05	23.52	-13.0007	1.4436	-0.2452
930	SLU 16	-0.43	-0.07	23.34	-12.8984	1.4322	-0.242
930	SLU 17	-0.43	-0.05	23.34	-12.8996	1.4324	-0.2437
930	SLU 18	-0.43	-0.07	24.07	-13.3025	1.4769	-0.2433
930	SLU 19	-0.43	-0.05	24.07	-13.3037	1.4771	-0.245
930	SLU 20	-0.44	-0.08	24.28	-13.4193	1.4899	-0.2469
930	SLU 21	-0.44	-0.05	24.28	-13.4204	1.4901	-0.2486
930	SLU 22	-0.42	-0.06	22.83	-12.6157	1.401	-0.238
930	SLU 23	-0.42	-0.02	22.83	-12.6177	1.4012	-0.2409
930	SLU 24	-0.43	-0.05	23.22	-12.8336	1.4252	-0.2431
930	SLU 25	-0.43	-0.03	23.23	-12.8347	1.4254	-0.2448
930	SLU 26	-0.43	-0.02	23.04	-12.7344	1.4143	-0.2444
930	SLU 27	-0.43	-0.06	23.44	-12.9503	1.4382	-0.2466
930	SLU 28	-0.44	-0.03	23.44	-12.9514	1.4384	-0.2483
930	SLU 29	-0.43	-0.06	23.25	-12.8492	1.427	-0.2451
930	SLU 30	-0.43	-0.04	23.26	-12.8504	1.4272	-0.2468
930	SLU 31	-0.46	-0.02	25.53	-14.1053	1.5662	-0.2605
930	SLU 32	-0.46	-0.06	25.92	-14.3212	1.5902	-0.2626
930	SLU 33	-0.46	-0.04	25.92	-14.3224	1.5904	-0.2644
930	SLU 34	-0.46	-0.02	25.74	-14.222	1.5792	-0.264
930	SLU 35	-0.47	-0.06	26.13	-14.4379	1.6032	-0.2662
930	SLU 36	-0.47	-0.04	26.13	-14.4391	1.6034	-0.2679
930	SLU 37	-0.47	-0.06	25.95	-14.3368	1.592	-0.2647
930	SLU 38	-0.47	-0.04	25.95	-14.338	1.5922	-0.2664
930	SLU 39	-0.47	-0.06	26.68	-14.7409	1.6367	-0.266
930	SLU 40	-0.47	-0.04	26.68	-14.7421	1.6368	-0.2677
930	SLU 41	-0.48	-0.06	26.89	-14.8577	1.6497	-0.2695
930	SLU 42	-0.48	-0.04	26.89	-14.8588	1.6499	-0.2712
930	SLU 43	-0.48	-0.09	25.39	-14.0373	1.5588	-0.2722
930	SLU 44	-0.48	-0.05	25.4	-14.0393	1.559	-0.2751

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
930	SLU 45	-0.49	-0.09	25.79	-14.2552	1.583	-0.2773
930	SLU 46	-0.49	-0.07	25.79	-14.2563	1.5832	-0.279
930	SLU 47	-0.49	-0.05	25.61	-14.156	1.5721	-0.2786
930	SLU 48	-0.5	-0.09	26	-14.3719	1.596	-0.2808
930	SLU 49	-0.5	-0.07	26	-14.373	1.5962	-0.2825
930	SLU 50	-0.5	-0.09	25.82	-14.2708	1.5848	-0.2793
930	SLU 51	-0.5	-0.07	25.82	-14.272	1.585	-0.281
930	SLU 52	-0.52	-0.06	28.09	-15.5269	1.724	-0.2946
930	SLU 53	-0.53	-0.09	28.48	-15.7428	1.748	-0.2968
930	SLU 54	-0.53	-0.07	28.48	-15.744	1.7482	-0.2985
930	SLU 55	-0.52	-0.06	28.3	-15.6436	1.7371	-0.2982
930	SLU 56	-0.53	-0.09	28.69	-15.8595	1.761	-0.3004
930	SLU 57	-0.53	-0.07	28.7	-15.8607	1.7612	-0.3021
930	SLU 58	-0.53	-0.1	28.51	-15.7584	1.7498	-0.2989
930	SLU 59	-0.53	-0.07	28.51	-15.7596	1.75	-0.3006
930	SLU 60	-0.53	-0.1	29.24	-16.1625	1.7945	-0.3002
930	SLU 61	-0.53	-0.08	29.24	-16.1637	1.7947	-0.3019
930	SLU 62	-0.54	-0.1	29.45	-16.2793	1.8075	-0.3037
930	SLU 63	-0.54	-0.08	29.46	-16.2804	1.8077	-0.3054
930	SLU 64	-0.52	-0.08	28	-15.4758	1.7186	-0.2949
930	SLU 65	-0.52	-0.04	28.01	-15.4777	1.7188	-0.2977
930	SLU 66	-0.53	-0.08	28.4	-15.6936	1.7428	-0.2999
930	SLU 67	-0.53	-0.06	28.4	-15.6947	1.743	-0.3016
930	SLU 68	-0.53	-0.04	28.22	-15.5944	1.7318	-0.3013
930	SLU 69	-0.54	-0.08	28.61	-15.8103	1.7558	-0.3035
930	SLU 70	-0.54	-0.06	28.61	-15.8115	1.756	-0.3052
930	SLU 71	-0.53	-0.08	28.43	-15.7092	1.7446	-0.302
930	SLU 72	-0.53	-0.06	28.43	-15.7104	1.7447	-0.3037
930	SLU 73	-0.56	-0.05	30.7	-16.9653	1.8838	-0.3173
930	SLU 74	-0.56	-0.08	31.09	-17.1812	1.9078	-0.3195
930	SLU 75	-0.57	-0.06	31.09	-17.1824	1.908	-0.3212
930	SLU 76	-0.56	-0.05	30.91	-17.0821	1.8968	-0.3208
930	SLU 77	-0.57	-0.08	31.3	-17.2979	1.9208	-0.323
930	SLU 78	-0.57	-0.06	31.3	-17.2991	1.921	-0.3247
930	SLU 79	-0.57	-0.09	31.12	-17.1969	1.9096	-0.3215
930	SLU 80	-0.57	-0.06	31.12	-17.198	1.9097	-0.3232
930	SLU 81	-0.57	-0.09	31.85	-17.601	1.9543	-0.3228
930	SLU 82	-0.57	-0.06	31.85	-17.6021	1.9544	-0.3245
930	SLU 83	-0.58	-0.09	32.06	-17.7177	1.9673	-0.3264
930	SLU 84	-0.58	-0.07	32.06	-17.7189	1.9674	-0.3281
930	SLE RA 1	-0.39	-0.07	20.97	-11.5883	1.2869	-0.2218
930	SLE RA 2	-0.39	-0.04	20.97	-11.5896	1.287	-0.2238
930	SLE RA 3	-0.4	-0.06	21.23	-11.7335	1.303	-0.2252
930	SLE RA 4	-0.4	-0.05	21.23	-11.7343	1.3031	-0.2264
930	SLE RA 5	-0.4	-0.04	21.11	-11.6674	1.2957	-0.2261
930	SLE RA 6	-0.4	-0.06	21.37	-11.8113	1.3117	-0.2276
930	SLE RA 7	-0.4	-0.05	21.37	-11.8121	1.3118	-0.2287
930	SLE RA 8	-0.4	-0.07	21.25	-11.7439	1.3042	-0.2266
930	SLE RA 9	-0.4	-0.05	21.25	-11.7447	1.3043	-0.2277
930	SLE RA 10	-0.42	-0.04	22.76	-12.5814	1.397	-0.2368
930	SLE RA 11	-0.42	-0.07	23.03	-12.7253	1.413	-0.2383
930	SLE RA 12	-0.42	-0.05	23.03	-12.726	1.4131	-0.2394
930	SLE RA 13	-0.42	-0.04	22.91	-12.6592	1.4057	-0.2392
930	SLE RA 14	-0.43	-0.07	23.17	-12.8031	1.4217	-0.2406
930	SLE RA 15	-0.43	-0.05	23.17	-12.8039	1.4218	-0.2418
930	SLE RA 16	-0.42	-0.07	23.04	-12.7357	1.4142	-0.2396
930	SLE RA 17	-0.42	-0.05	23.05	-12.7365	1.4143	-0.2408
930	SLE RA 18	-0.43	-0.07	23.53	-13.0051	1.444	-0.2405
930	SLE RA 19	-0.43	-0.05	23.53	-13.0059	1.4441	-0.2416
930	SLE RA 20	-0.43	-0.07	23.67	-13.0829	1.4527	-0.2428
930	SLE RA 21	-0.43	-0.05	23.67	-13.0837	1.4528	-0.244
930	SLE FR 1	-0.39	-0.07	20.97	-11.5883	1.2869	-0.2218
930	SLE FR 2	-0.39	-0.06	20.97	-11.5886	1.2869	-0.2222
930	SLE FR 3	-0.39	-0.07	21.02	-11.6194	1.2903	-0.2228
930	SLE FR 4	-0.4	-0.06	21.74	-12.0136	1.334	-0.2278
930	SLE FR 5	-0.4	-0.07	21.79	-12.0445	1.3375	-0.2284
930	SLE FR 6	-0.41	-0.07	22.25	-12.2967	1.3654	-0.2312
930	SLE QP 1	-0.39	-0.07	20.97	-11.5883	1.2869	-0.2218
930	SLE QP 2	-0.4	-0.07	21.74	-12.0133	1.334	-0.2274
930	SLD 1	1.99	0.49	23.79	-13.1119	1.4613	1.0985
930	SLD 2	1.88	0.35	23.8	-13.1188	1.462	1.0467
930	SLD 3	1.93	-0.27	23.91	-13.1754	1.4687	1.1419
930	SLD 4	1.82	-0.4	23.92	-13.1822	1.4693	1.0902
930	SLD 5	0.43	1.27	22.18	-12.2455	1.361	0.1135
930	SLD 6	0.36	1.19	22.19	-12.2499	1.3614	0.0799
930	SLD 7	0.22	-1.25	22.56	-12.457	1.3854	0.2583
930	SLD 8	0.15	-1.34	22.56	-12.4615	1.3858	0.2247
930	SLD 9	-0.96	1.21	20.91	-11.5652	1.2822	-0.6795
930	SLD 10	-1.03	1.12	20.91	-11.5697	1.2826	-0.7131
930	SLD 11	-1.16	-1.32	21.29	-11.7768	1.3066	-0.5348
930	SLD 12	-1.23	-1.41	21.29	-11.7812	1.307	-0.5684
930	SLD 13	-2.63	0.27	19.55	-10.8445	1.1987	-1.545
930	SLD 14	-2.73	0.14	19.57	-10.8513	1.1993	-1.5968
930	SLD 15	-2.69	-0.49	19.67	-10.9079	1.206	-1.5016
930	SLD 16	-2.79	-0.62	19.68	-10.9148	1.2067	-1.5534
930	SLV 1	5.19	1.21	26.55	-14.5847	1.632	2.8742
930	SLV 2	4.94	0.9	26.57	-14.6007	1.6336	2.7536
930	SLV 3	5.04	-0.52	26.81	-14.7328	1.6491	2.974
930	SLV 4	4.8	-0.83	26.84	-14.7487	1.6507	2.8534
930	SLV 5	1.54	2.99	22.77	-12.5575	1.3972	0.5721
930	SLV 6	1.38	2.79	22.79	-12.5677	1.3982	0.4951

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
930	SLV 7	1.05	-2.78	23.66	-13.051	1.4542	0.9048
930	SLV 8	0.9	-2.97	23.68	-13.0612	1.4552	0.8277
930	SLV 9	-1.7	2.84	19.8	-10.9655	1.2128	-1.2826
930	SLV 10	-1.86	2.64	19.81	-10.9757	1.2138	-1.3596
930	SLV 11	-2.19	-2.93	20.68	-11.459	1.2698	-0.95
930	SLV 12	-2.34	-3.13	20.7	-11.4692	1.2708	-1.027
930	SLV 13	-5.61	0.7	16.63	-9.278	1.0173	-3.3083
930	SLV 14	-5.85	0.39	16.66	-9.2939	1.0189	-3.4289
930	SLV 15	-5.75	-1.03	16.9	-9.426	1.0344	-3.2085
930	SLV 16	-5.99	-1.34	16.92	-9.4419	1.036	-3.3291
930	CRTFP Ux+	0	0	0	0	0	0
930	CRTFP Ux-	0	0	0	0	0	0
930	CRTFP Uy+	0	0	0	0	0	0
930	CRTFP Uy-	0	0	0	0	0	0
933	SLU 1	-1.47	-0.31	86.2	-23.1361	-1.0597	-0.4061
933	SLU 2	-1.47	-0.15	86.2	-23.1386	-1.0583	-0.4064
933	SLU 3	-1.5	-0.29	87.89	-23.5914	-1.0827	-0.4149
933	SLU 4	-1.5	-0.2	87.9	-23.5929	-1.0818	-0.4151
933	SLU 5	-1.49	-0.15	87.11	-23.3816	-1.0695	-0.413
933	SLU 6	-1.52	-0.3	88.8	-23.8343	-1.0939	-0.4215
933	SLU 7	-1.53	-0.2	88.8	-23.8359	-1.0931	-0.4217
933	SLU 8	-1.52	-0.31	88	-23.622	-1.0823	-0.4193
933	SLU 9	-1.52	-0.22	88.01	-23.6235	-1.0814	-0.4195
933	SLU 10	-1.61	-0.15	97.75	-26.2418	-1.2197	-0.4428
933	SLU 11	-1.65	-0.3	99.44	-26.6945	-1.2441	-0.4513
933	SLU 12	-1.65	-0.2	99.44	-26.696	-1.2432	-0.4515
933	SLU 13	-1.64	-0.16	98.65	-26.4847	-1.2309	-0.4494
933	SLU 14	-1.67	-0.3	100.34	-26.9374	-1.2553	-0.4579
933	SLU 15	-1.67	-0.21	100.35	-26.939	-1.2544	-0.4581
933	SLU 16	-1.66	-0.32	99.55	-26.7251	-1.2437	-0.4557
933	SLU 17	-1.66	-0.23	99.56	-26.7266	-1.2428	-0.4559
933	SLU 18	-1.67	-0.31	102.69	-27.5691	-1.2903	-0.4581
933	SLU 19	-1.68	-0.22	102.7	-27.5706	-1.2894	-0.4583
933	SLU 20	-1.7	-0.32	103.59	-27.8121	-1.3016	-0.4647
933	SLU 21	-1.7	-0.22	103.6	-27.8136	-1.3007	-0.4649
933	SLU 22	-1.63	-0.26	97.39	-26.1409	-1.214	-0.4468
933	SLU 23	-1.63	-0.1	97.4	-26.1434	-1.2125	-0.4471
933	SLU 24	-1.66	-0.24	99.09	-26.5961	-1.2369	-0.4556
933	SLU 25	-1.66	-0.15	99.09	-26.5977	-1.2361	-0.4558
933	SLU 26	-1.65	-0.1	98.3	-26.3863	-1.2238	-0.4537
933	SLU 27	-1.68	-0.25	99.99	-26.8391	-1.2482	-0.4622
933	SLU 28	-1.68	-0.15	100	-26.8406	-1.2473	-0.4624
933	SLU 29	-1.67	-0.26	99.2	-26.6267	-1.2365	-0.46
933	SLU 30	-1.67	-0.17	99.2	-26.6282	-1.2356	-0.4602
933	SLU 31	-1.77	-0.1	108.94	-29.2465	-1.3739	-0.4835
933	SLU 32	-1.8	-0.25	110.63	-29.6993	-1.3983	-0.492
933	SLU 33	-1.8	-0.15	110.64	-29.7008	-1.3974	-0.4922
933	SLU 34	-1.8	-0.11	109.85	-29.4894	-1.3852	-0.4901
933	SLU 35	-1.83	-0.25	111.54	-29.9422	-1.4096	-0.4986
933	SLU 36	-1.83	-0.16	111.54	-29.9437	-1.4087	-0.4988
933	SLU 37	-1.82	-0.27	110.75	-29.7298	-1.3979	-0.4964
933	SLU 38	-1.82	-0.18	110.75	-29.7313	-1.397	-0.4966
933	SLU 39	-1.83	-0.26	113.88	-30.5739	-1.4446	-0.4988
933	SLU 40	-1.83	-0.17	113.89	-30.5754	-1.4437	-0.4989
933	SLU 41	-1.85	-0.27	114.79	-30.8168	-1.4558	-0.5054
933	SLU 42	-1.86	-0.17	114.79	-30.8183	-1.4549	-0.5056
933	SLU 43	-1.86	-0.41	108.22	-29.0468	-1.3248	-0.514
933	SLU 44	-1.86	-0.26	108.22	-29.0493	-1.3233	-0.5143
933	SLU 45	-1.89	-0.4	109.91	-29.502	-1.3477	-0.5228
933	SLU 46	-1.89	-0.31	109.92	-29.5036	-1.3468	-0.523
933	SLU 47	-1.88	-0.26	109.13	-29.2922	-1.3346	-0.5209
933	SLU 48	-1.91	-0.4	110.82	-29.745	-1.359	-0.5294
933	SLU 49	-1.91	-0.31	110.82	-29.7465	-1.3581	-0.5296
933	SLU 50	-1.9	-0.42	110.03	-29.5326	-1.3473	-0.5272
933	SLU 51	-1.9	-0.33	110.03	-29.5341	-1.3464	-0.5273
933	SLU 52	-2	-0.26	119.77	-32.1524	-1.4847	-0.5507
933	SLU 53	-2.03	-0.4	121.46	-32.6052	-1.5091	-0.5592
933	SLU 54	-2.03	-0.31	121.46	-32.6067	-1.5082	-0.5594
933	SLU 55	-2.02	-0.27	120.68	-32.3953	-1.496	-0.5573
933	SLU 56	-2.06	-0.41	122.36	-32.8481	-1.5204	-0.5658
933	SLU 57	-2.06	-0.32	122.37	-32.8496	-1.5195	-0.566
933	SLU 58	-2.05	-0.43	121.57	-32.6357	-1.5087	-0.5636
933	SLU 59	-2.05	-0.33	121.58	-32.6372	-1.5078	-0.5637
933	SLU 60	-2.06	-0.42	124.71	-33.4798	-1.5553	-0.566
933	SLU 61	-2.06	-0.33	124.72	-33.4813	-1.5544	-0.5661
933	SLU 62	-2.08	-0.42	125.62	-33.7227	-1.5666	-0.5726
933	SLU 63	-2.09	-0.33	125.62	-33.7242	-1.5657	-0.5727
933	SLU 64	-2.01	-0.36	119.41	-32.0515	-1.479	-0.5546
933	SLU 65	-2.01	-0.21	119.42	-32.054	-1.4776	-0.5549
933	SLU 66	-2.05	-0.35	121.11	-32.5068	-1.502	-0.5635
933	SLU 67	-2.05	-0.26	121.11	-32.5083	-1.5011	-0.5637
933	SLU 68	-2.04	-0.21	120.32	-32.297	-1.4888	-0.5615
933	SLU 69	-2.07	-0.35	122.01	-32.7497	-1.5132	-0.5701
933	SLU 70	-2.07	-0.26	122.02	-32.7512	-1.5124	-0.5703
933	SLU 71	-2.06	-0.37	121.22	-32.5374	-1.5016	-0.5679
933	SLU 72	-2.06	-0.28	121.22	-32.5389	-1.5007	-0.568
933	SLU 73	-2.16	-0.21	130.96	-35.1571	-1.639	-0.5913
933	SLU 74	-2.19	-0.35	132.65	-35.6099	-1.6634	-0.5999
933	SLU 75	-2.19	-0.26	132.66	-35.6114	-1.6625	-0.6001
933	SLU 76	-2.18	-0.22	131.87	-35.4001	-1.6502	-0.5979
933	SLU 77	-2.21	-0.36	133.56	-35.8528	-1.6746	-0.6065

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
933	SLU 78	-2.21	-0.27	133.56	-35.8543	-1.6737	-0.6067
933	SLU 79	-2.2	-0.38	132.77	-35.6405	-1.663	-0.6043
933	SLU 80	-2.2	-0.28	132.77	-35.642	-1.6621	-0.6044
933	SLU 81	-2.22	-0.37	135.9	-36.4845	-1.7096	-0.6066
933	SLU 82	-2.22	-0.28	135.91	-36.486	-1.7087	-0.6068
933	SLU 83	-2.24	-0.37	136.81	-36.7274	-1.7209	-0.6132
933	SLU 84	-2.24	-0.28	136.81	-36.729	-1.72	-0.6134
933	SLE RA 1	-1.51	-0.29	89.39	-23.9946	-1.1038	-0.4177
933	SLE RA 2	-1.52	-0.19	89.4	-23.9963	-1.1028	-0.4179
933	SLE RA 3	-1.54	-0.28	90.53	-24.2981	-1.1191	-0.4236
933	SLE RA 4	-1.54	-0.22	90.53	-24.2992	-1.1185	-0.4237
933	SLE RA 5	-1.53	-0.19	90	-24.1583	-1.1103	-0.4223
933	SLE RA 6	-1.55	-0.28	91.13	-24.4601	-1.1266	-0.428
933	SLE RA 7	-1.55	-0.22	91.13	-24.4611	-1.126	-0.4281
933	SLE RA 8	-1.55	-0.3	90.6	-24.3185	-1.1188	-0.4265
933	SLE RA 9	-1.55	-0.23	90.6	-24.3195	-1.1182	-0.4266
933	SLE RA 10	-1.61	-0.19	97.1	-26.065	-1.2104	-0.4422
933	SLE RA 11	-1.63	-0.28	98.22	-26.3669	-1.2267	-0.4479
933	SLE RA 12	-1.63	-0.22	98.23	-26.3679	-1.2261	-0.448
933	SLE RA 13	-1.63	-0.19	97.7	-26.227	-1.2179	-0.4466
933	SLE RA 14	-1.65	-0.29	98.83	-26.5288	-1.2342	-0.4523
933	SLE RA 15	-1.65	-0.23	98.83	-26.5298	-1.2336	-0.4524
933	SLE RA 16	-1.64	-0.3	98.3	-26.3873	-1.2264	-0.4508
933	SLE RA 17	-1.64	-0.24	98.3	-26.3883	-1.2258	-0.4509
933	SLE RA 18	-1.65	-0.3	100.39	-26.95	-1.2575	-0.4524
933	SLE RA 19	-1.65	-0.23	100.39	-26.951	-1.2569	-0.4525
933	SLE RA 20	-1.67	-0.3	100.99	-27.1119	-1.265	-0.4568
933	SLE RA 21	-1.67	-0.24	101	-27.1129	-1.2644	-0.4569
933	SLE FR 1	-1.51	-0.29	89.39	-23.9946	-1.1038	-0.4177
933	SLE FR 2	-1.51	-0.27	89.39	-23.995	-1.1036	-0.4177
933	SLE FR 3	-1.52	-0.29	89.63	-24.0594	-1.1068	-0.4195
933	SLE FR 4	-1.56	-0.27	92.69	-24.8816	-1.1497	-0.4281
933	SLE FR 5	-1.56	-0.29	92.93	-24.946	-1.1529	-0.4299
933	SLE FR 6	-1.58	-0.29	94.89	-25.4723	-1.1807	-0.435
933	SLE QP 1	-1.51	-0.29	89.39	-23.9946	-1.1038	-0.4177
933	SLE QP 2	-1.56	-0.29	92.69	-24.8812	-1.1499	-0.4281
933	SLD 1	8.14	1.78	101.39	-27.1827	-1.1617	2.1518
933	SLD 2	7.7	1.29	101.46	-27.2005	-1.1664	2.0393
933	SLD 3	7.89	-1.24	101.85	-27.3004	-1.2003	2.0804
933	SLD 4	7.45	-1.73	101.92	-27.3182	-1.205	1.9679
933	SLD 5	1.81	4.99	94.6	-25.39	-1.0941	0.4737
933	SLD 6	1.52	4.68	94.65	-25.4015	-1.0972	0.4007
933	SLD 7	0.97	-5.07	96.12	-25.7825	-1.2227	0.2358
933	SLD 8	0.69	-5.39	96.16	-25.794	-1.2258	0.1628
933	SLD 9	-3.8	4.8	89.22	-23.9684	-1.0741	-1.019
933	SLD 10	-4.08	4.49	89.27	-23.98	-1.0771	-1.0921
933	SLD 11	-4.63	-5.26	90.74	-24.3609	-1.2027	-1.2569
933	SLD 12	-4.92	-5.58	90.78	-24.3725	-1.2057	-1.33
933	SLD 13	-10.56	1.15	83.47	-22.4442	-1.0949	-2.8241
933	SLD 14	-11	0.66	83.54	-22.462	-1.0996	-2.9366
933	SLD 15	-10.81	-1.87	83.92	-22.562	-1.1334	-2.8955
933	SLD 16	-11.25	-2.36	83.99	-22.5797	-1.1381	-3.008
933	SLV 1	21.11	4.46	113.06	-30.2687	-1.1785	5.6048
933	SLV 2	20.08	3.32	113.22	-30.3101	-1.1894	5.3427
933	SLV 3	20.53	-2.43	114.11	-30.5417	-1.267	5.4387
933	SLV 4	19.5	-3.57	114.27	-30.5832	-1.278	5.1765
933	SLV 5	6.31	11.77	97.18	-26.0763	-1.0224	1.6781
933	SLV 6	5.65	11.05	97.28	-26.1027	-1.0294	1.5107
933	SLV 7	4.35	-11.19	100.69	-26.9866	-1.3175	1.1244
933	SLV 8	3.7	-11.92	100.79	-27.013	-1.3244	0.9569
933	SLV 9	-6.81	11.33	84.59	-22.7494	-0.9754	-1.8132
933	SLV 10	-7.46	10.6	84.7	-22.7759	-0.9824	-1.9806
933	SLV 11	-8.76	-11.63	88.1	-23.6597	-1.2705	-2.3669
933	SLV 12	-9.42	-12.36	88.21	-23.6862	-1.2775	-2.5343
933	SLV 13	-22.61	2.98	71.11	-19.1793	-1.0219	-6.0328
933	SLV 14	-23.64	1.84	71.27	-19.2207	-1.0328	-6.2949
933	SLV 15	-23.19	-3.91	72.17	-19.4524	-1.1104	-6.1989
933	SLV 16	-24.22	-5.05	72.32	-19.4938	-1.1214	-6.461
933	CRTFP Ux+	0	0	0	0	0	0
933	CRTFP Ux-	0	0	0	0	0	0
933	CRTFP Uy+	0	0	0	0	0	0
933	CRTFP Uy-	0	0	0	0	0	0
936	SLU 1	0.53	0	23.21	-7.5242	-1.4827	0.1867
936	SLU 2	0.53	0.04	23.2	-7.5239	-1.4826	0.1897
936	SLU 3	0.55	0	23.65	-7.6687	-1.5113	0.1917
936	SLU 4	0.55	0.03	23.65	-7.6685	-1.5113	0.1936
936	SLU 5	0.54	0.04	23.45	-7.6021	-1.4982	0.193
936	SLU 6	0.56	0	23.9	-7.7469	-1.5268	0.195
936	SLU 7	0.56	0.02	23.9	-7.7467	-1.5268	0.1968
936	SLU 8	0.55	-0.01	23.69	-7.6806	-1.5137	0.1931
936	SLU 9	0.55	0.02	23.69	-7.6805	-1.5137	0.195
936	SLU 10	0.59	0.06	26.28	-8.5189	-1.679	0.2099
936	SLU 11	0.6	0.02	26.73	-8.6637	-1.7076	0.2119
936	SLU 12	0.6	0.04	26.73	-8.6635	-1.7076	0.2137
936	SLU 13	0.6	0.05	26.53	-8.5972	-1.6945	0.2131
936	SLU 14	0.61	0.02	26.97	-8.7419	-1.7231	0.2151
936	SLU 15	0.61	0.04	26.97	-8.7418	-1.7231	0.2169
936	SLU 16	0.61	0.01	26.77	-8.6757	-1.7101	0.2133
936	SLU 17	0.61	0.03	26.77	-8.6755	-1.71	0.2151
936	SLU 18	0.61	0.02	27.6	-8.9457	-1.7631	0.2155
936	SLU 19	0.61	0.05	27.6	-8.9455	-1.7631	0.2173

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
936	SLU 20	0.62	0.02	27.85	-9.0239	-1.7787	0.2187
936	SLU 21	0.62	0.04	27.85	-9.0237	-1.7786	0.2205
936	SLU 22	0.59	0.02	26.17	-8.484	-1.6721	0.2072
936	SLU 23	0.59	0.06	26.17	-8.4837	-1.672	0.2103
936	SLU 24	0.6	0.03	26.62	-8.6285	-1.7007	0.2123
936	SLU 25	0.6	0.05	26.62	-8.6283	-1.7007	0.2141
936	SLU 26	0.6	0.06	26.42	-8.5619	-1.6876	0.2135
936	SLU 27	0.61	0.02	26.87	-8.7067	-1.7162	0.2155
936	SLU 28	0.61	0.05	26.87	-8.7065	-1.7162	0.2173
936	SLU 29	0.61	0.02	26.66	-8.6404	-1.7031	0.2137
936	SLU 30	0.61	0.04	26.66	-8.6403	-1.7031	0.2155
936	SLU 31	0.64	0.08	29.25	-9.4787	-1.8684	0.2304
936	SLU 32	0.66	0.04	29.7	-9.6235	-1.897	0.2324
936	SLU 33	0.66	0.07	29.7	-9.6233	-1.897	0.2343
936	SLU 34	0.65	0.08	29.5	-9.557	-1.8839	0.2337
936	SLU 35	0.67	0.04	29.94	-9.7017	-1.9125	0.2356
936	SLU 36	0.67	0.06	29.94	-9.7015	-1.9125	0.2375
936	SLU 37	0.66	0.03	29.74	-9.6355	-1.8995	0.2338
936	SLU 38	0.66	0.06	29.74	-9.6353	-1.8994	0.2357
936	SLU 39	0.67	0.05	30.57	-9.9055	-1.9525	0.236
936	SLU 40	0.67	0.07	30.57	-9.9053	-1.9525	0.2379
936	SLU 41	0.68	0.04	30.82	-9.9837	-1.968	0.2392
936	SLU 42	0.68	0.07	30.81	-9.9835	-1.968	0.2411
936	SLU 43	0.68	-0.01	29.15	-9.4524	-1.8625	0.2357
936	SLU 44	0.68	0.03	29.15	-9.4521	-1.8625	0.2387
936	SLU 45	0.69	-0.01	29.6	-9.5969	-1.8912	0.2407
936	SLU 46	0.69	0.02	29.6	-9.5967	-1.8911	0.2425
936	SLU 47	0.69	0.03	29.39	-9.5303	-1.8781	0.2419
936	SLU 48	0.7	-0.01	29.84	-9.6751	-1.9067	0.2439
936	SLU 49	0.7	0.02	29.84	-9.6749	-1.9067	0.2457
936	SLU 50	0.69	-0.01	29.64	-9.6088	-1.8936	0.2421
936	SLU 51	0.7	0.01	29.63	-9.6087	-1.8936	0.2439
936	SLU 52	0.73	0.05	32.23	-10.4471	-2.0588	0.2588
936	SLU 53	0.74	0.01	32.68	-10.5919	-2.0875	0.2608
936	SLU 54	0.74	0.04	32.67	-10.5917	-2.0874	0.2627
936	SLU 55	0.74	0.05	32.47	-10.5254	-2.0744	0.2621
936	SLU 56	0.75	0.01	32.92	-10.6701	-2.103	0.2641
936	SLU 57	0.75	0.03	32.92	-10.6699	-2.103	0.2659
936	SLU 58	0.75	0	32.71	-10.6039	-2.0899	0.2622
936	SLU 59	0.75	0.03	32.71	-10.6037	-2.0899	0.2641
936	SLU 60	0.75	0.01	33.55	-10.8739	-2.143	0.2644
936	SLU 61	0.75	0.04	33.55	-10.8737	-2.143	0.2663
936	SLU 62	0.76	0.01	33.79	-10.9521	-2.1585	0.2677
936	SLU 63	0.76	0.04	33.79	-10.9519	-2.1585	0.2695
936	SLU 64	0.73	0.01	32.12	-10.4122	-2.0519	0.2562
936	SLU 65	0.73	0.05	32.12	-10.4119	-2.0519	0.2593
936	SLU 66	0.74	0.02	32.57	-10.5567	-2.0805	0.2612
936	SLU 67	0.74	0.04	32.57	-10.5565	-2.0805	0.2631
936	SLU 68	0.74	0.05	32.36	-10.4901	-2.0674	0.2625
936	SLU 69	0.75	0.01	32.81	-10.6349	-2.0961	0.2645
936	SLU 70	0.75	0.04	32.81	-10.6347	-2.0961	0.2663
936	SLU 71	0.75	0.01	32.6	-10.5686	-2.083	0.2627
936	SLU 72	0.75	0.03	32.6	-10.5684	-2.083	0.2645
936	SLU 73	0.79	0.07	35.2	-11.4069	-2.2482	0.2794
936	SLU 74	0.8	0.03	35.64	-11.5517	-2.2769	0.2814
936	SLU 75	0.8	0.06	35.64	-11.5515	-2.2768	0.2832
936	SLU 76	0.8	0.07	35.44	-11.4851	-2.2638	0.2826
936	SLU 77	0.81	0.03	35.89	-11.6299	-2.2924	0.2846
936	SLU 78	0.81	0.06	35.89	-11.6297	-2.2924	0.2864
936	SLU 79	0.8	0.03	35.68	-11.5637	-2.2793	0.2828
936	SLU 80	0.8	0.05	35.68	-11.5635	-2.2793	0.2846
936	SLU 81	0.81	0.04	36.52	-11.8337	-2.3324	0.285
936	SLU 82	0.81	0.06	36.52	-11.8335	-2.3324	0.2868
936	SLU 83	0.82	0.04	36.76	-11.9119	-2.3479	0.2882
936	SLU 84	0.82	0.06	36.76	-11.9117	-2.3479	0.29
936	SLE RA 1	0.55	0.01	24.05	-7.7984	-1.5368	0.1926
936	SLE RA 2	0.55	0.03	24.05	-7.7982	-1.5368	0.1946
936	SLE RA 3	0.56	0.01	24.35	-7.8947	-1.5559	0.1959
936	SLE RA 4	0.56	0.02	24.35	-7.8946	-1.5559	0.1971
936	SLE RA 5	0.56	0.03	24.22	-7.8504	-1.5471	0.1967
936	SLE RA 6	0.56	0.01	24.51	-7.9469	-1.5662	0.1981
936	SLE RA 7	0.57	0.02	24.51	-7.9468	-1.5662	0.1993
936	SLE RA 8	0.56	0	24.38	-7.9027	-1.5575	0.1969
936	SLE RA 9	0.56	0.02	24.38	-7.9026	-1.5575	0.1981
936	SLE RA 10	0.59	0.04	26.11	-8.4616	-1.6676	0.208
936	SLE RA 11	0.59	0.02	26.4	-8.5581	-1.6867	0.2094
936	SLE RA 12	0.6	0.04	26.4	-8.558	-1.6867	0.2106
936	SLE RA 13	0.59	0.04	26.27	-8.5137	-1.678	0.2102
936	SLE RA 14	0.6	0.02	26.57	-8.6103	-1.6971	0.2115
936	SLE RA 15	0.6	0.03	26.57	-8.6101	-1.6971	0.2127
936	SLE RA 16	0.6	0.01	26.43	-8.5661	-1.6884	0.2103
936	SLE RA 17	0.6	0.03	26.43	-8.566	-1.6884	0.2115
936	SLE RA 18	0.6	0.02	26.99	-8.7461	-1.7238	0.2117
936	SLE RA 19	0.6	0.04	26.98	-8.746	-1.7237	0.213
936	SLE RA 20	0.61	0.02	27.15	-8.7982	-1.7341	0.2139
936	SLE RA 21	0.61	0.04	27.15	-8.7981	-1.7341	0.2151
936	SLE FR 1	0.55	0.01	24.05	-7.7984	-1.5368	0.1926
936	SLE FR 2	0.55	0.01	24.05	-7.7984	-1.5368	0.193
936	SLE FR 3	0.55	0	24.12	-7.8193	-1.5409	0.1934
936	SLE FR 4	0.56	0.02	24.93	-8.0827	-1.5929	0.1987
936	SLE FR 5	0.57	0.01	25	-8.1036	-1.597	0.1992

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
936	SLE FR 6	0.58	0.01	25.52	-8.2723	-1.6303	0.2022
936	SLE QP 1	0.55	0.01	24.05	-7.7984	-1.5368	0.1926
936	SLE QP 2	0.56	0.01	24.93	-8.0827	-1.5929	0.1983
936	SLD 1	3.16	0.22	22.8	-7.4249	-1.4559	1.1165
936	SLD 2	3.05	0.36	22.77	-7.4139	-1.4537	1.0847
936	SLD 3	3.1	-0.57	23	-7.4911	-1.4691	1.0526
936	SLD 4	2.98	-0.43	22.96	-7.4801	-1.4668	1.0208
936	SLD 5	1.46	1.25	24	-7.7869	-1.5323	0.5763
936	SLD 6	1.39	1.34	23.98	-7.7797	-1.5308	0.5557
936	SLD 7	1.25	-1.39	24.66	-8.0076	-1.5761	0.3632
936	SLD 8	1.17	-1.3	24.64	-8.0005	-1.5746	0.3425
936	SLD 9	-0.04	1.32	25.23	-8.165	-1.6112	0.0541
936	SLD 10	-0.12	1.41	25.21	-8.1579	-1.6097	0.0335
936	SLD 11	-0.26	-1.32	25.89	-8.3857	-1.655	-0.159
936	SLD 12	-0.33	-1.23	25.87	-8.3786	-1.6535	-0.1797
936	SLD 13	-1.85	0.45	26.9	-8.6854	-1.719	-0.6241
936	SLD 14	-1.97	0.59	26.87	-8.6744	-1.7167	-0.656
936	SLD 15	-1.92	-0.34	27.1	-8.7516	-1.7321	-0.6881
936	SLD 16	-2.03	-0.2	27.07	-8.7406	-1.7298	-0.7199
936	SLV 1	6.64	0.47	19.95	-6.5444	-1.2726	2.3441
936	SLV 2	6.37	0.8	19.86	-6.5188	-1.2673	2.27
936	SLV 3	6.49	-1.33	20.4	-6.6964	-1.3029	2.1978
936	SLV 4	6.22	-1	20.32	-6.6708	-1.2976	2.1237
936	SLV 5	2.67	2.83	22.76	-7.395	-1.4518	1.0765
936	SLV 6	2.49	3.04	22.71	-7.3787	-1.4484	1.0292
936	SLV 7	2.16	-3.18	24.28	-7.9017	-1.5527	0.5888
936	SLV 8	1.98	-2.97	24.23	-7.8854	-1.5493	0.5414
936	SLV 9	-0.85	2.99	25.64	-8.2801	-1.6365	-0.1448
936	SLV 10	-1.03	3.2	25.59	-8.2638	-1.6331	-0.1922
936	SLV 11	-1.36	-3.02	27.16	-8.7868	-1.7373	-0.6325
936	SLV 12	-1.54	-2.81	27.11	-8.7704	-1.7339	-0.6799
936	SLV 13	-5.09	1.02	29.55	-9.4947	-1.8882	-1.727
936	SLV 14	-5.36	1.35	29.46	-9.4691	-1.8829	-1.8012
936	SLV 15	-5.24	-0.78	30	-9.6467	-1.9184	-1.8733
936	SLV 16	-5.51	-0.45	29.92	-9.6211	-1.9131	-1.9475
936	CRTFP Ux+	0	0	0	0	0	0
936	CRTFP Ux-	0	0	0	0	0	0
936	CRTFP Uy+	0	0	0	0	0	0
936	CRTFP Uy-	0	0	0	0	0	0
937	SLU 1	0.78	0	32.56	-10.0935	0.0543	0.2747
937	SLU 2	0.79	0.06	32.56	-10.0934	0.0543	0.2753
937	SLU 3	0.8	0.01	33.19	-10.285	0.0555	0.2818
937	SLU 4	0.8	0.04	33.19	-10.2849	0.0555	0.2821
937	SLU 5	0.8	0.06	32.9	-10.1975	0.0549	0.2803
937	SLU 6	0.82	0.01	33.53	-10.3891	0.0561	0.2868
937	SLU 7	0.82	0.04	33.53	-10.389	0.0561	0.2871
937	SLU 8	0.81	0	33.24	-10.3017	0.0555	0.2847
937	SLU 9	0.81	0.03	33.24	-10.3016	0.0555	0.2851
937	SLU 10	0.86	0.09	36.85	-11.4126	0.0627	0.3031
937	SLU 11	0.88	0.03	37.48	-11.6042	0.064	0.3095
937	SLU 12	0.88	0.07	37.48	-11.6041	0.064	0.3099
937	SLU 13	0.88	0.08	37.19	-11.5167	0.0633	0.3081
937	SLU 14	0.9	0.03	37.82	-11.7083	0.0646	0.3145
937	SLU 15	0.9	0.06	37.82	-11.7082	0.0646	0.3149
937	SLU 16	0.89	0.02	37.53	-11.6209	0.064	0.3124
937	SLU 17	0.89	0.06	37.53	-11.6208	0.064	0.3128
937	SLU 18	0.9	0.04	38.69	-11.9781	0.0664	0.3143
937	SLU 19	0.9	0.07	38.69	-11.978	0.0664	0.3147
937	SLU 20	0.91	0.03	39.03	-12.0822	0.067	0.3193
937	SLU 21	0.91	0.07	39.03	-12.0821	0.067	0.3197
937	SLU 22	0.86	0.04	36.7	-11.3666	0.0625	0.3025
937	SLU 23	0.86	0.1	36.7	-11.3665	0.0624	0.3032
937	SLU 24	0.88	0.04	37.33	-11.5581	0.0637	0.3096
937	SLU 25	0.88	0.08	37.33	-11.558	0.0636	0.31
937	SLU 26	0.88	0.09	37.04	-11.4706	0.063	0.3082
937	SLU 27	0.9	0.04	37.67	-11.6622	0.0642	0.3146
937	SLU 28	0.9	0.07	37.67	-11.6621	0.0642	0.315
937	SLU 29	0.89	0.03	37.38	-11.5748	0.0636	0.3125
937	SLU 30	0.89	0.06	37.38	-11.5747	0.0636	0.3129
937	SLU 31	0.94	0.12	40.99	-12.6857	0.0709	0.3309
937	SLU 32	0.96	0.07	41.62	-12.8773	0.0721	0.3374
937	SLU 33	0.96	0.1	41.62	-12.8772	0.0721	0.3377
937	SLU 34	0.96	0.12	41.33	-12.7898	0.0715	0.3359
937	SLU 35	0.98	0.06	41.96	-12.9814	0.0727	0.3424
937	SLU 36	0.98	0.1	41.96	-12.9813	0.0727	0.3427
937	SLU 37	0.97	0.05	41.67	-12.894	0.0721	0.3403
937	SLU 38	0.97	0.09	41.67	-12.8939	0.0721	0.3407
937	SLU 39	0.98	0.07	42.83	-13.2512	0.0745	0.3422
937	SLU 40	0.98	0.11	42.83	-13.2511	0.0745	0.3426
937	SLU 41	0.99	0.07	43.17	-13.3553	0.0751	0.3472
937	SLU 42	0.99	0.1	43.17	-13.3552	0.0751	0.3476
937	SLU 43	0.99	-0.01	40.91	-12.6851	0.0678	0.3475
937	SLU 44	0.99	0.05	40.91	-12.685	0.0678	0.3482
937	SLU 45	1.01	0	41.54	-12.8766	0.069	0.3546
937	SLU 46	1.01	0.03	41.54	-12.8765	0.069	0.355
937	SLU 47	1.01	0.05	41.25	-12.789	0.0684	0.3532
937	SLU 48	1.03	0	41.88	-12.9806	0.0696	0.3596
937	SLU 49	1.03	0.03	41.88	-12.9806	0.0696	0.36
937	SLU 50	1.02	-0.01	41.59	-12.8932	0.069	0.3575
937	SLU 51	1.02	0.02	41.59	-12.8932	0.069	0.3579
937	SLU 52	1.07	0.08	45.2	-14.0042	0.0763	0.3759

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
937	SLU 53	1.09	0.02	45.83	-14.1958	0.0775	0.3824
937	SLU 54	1.09	0.06	45.83	-14.1957	0.0775	0.3828
937	SLU 55	1.09	0.07	45.54	-14.1082	0.0769	0.3809
937	SLU 56	1.11	0.02	46.17	-14.2998	0.0781	0.3874
937	SLU 57	1.11	0.05	46.17	-14.2998	0.0781	0.3878
937	SLU 58	1.1	0.01	45.88	-14.2124	0.0775	0.3853
937	SLU 59	1.1	0.05	45.88	-14.2124	0.0775	0.3857
937	SLU 60	1.1	0.03	47.04	-14.5697	0.0799	0.3872
937	SLU 61	1.11	0.06	47.04	-14.5696	0.0799	0.3876
937	SLU 62	1.12	0.02	47.38	-14.6737	0.0805	0.3922
937	SLU 63	1.12	0.06	47.38	-14.6737	0.0805	0.3926
937	SLU 64	1.07	0.03	45.05	-13.9582	0.076	0.3754
937	SLU 65	1.07	0.09	45.05	-13.9581	0.0759	0.376
937	SLU 66	1.09	0.03	45.68	-14.1497	0.0772	0.3825
937	SLU 67	1.09	0.07	45.68	-14.1496	0.0771	0.3828
937	SLU 68	1.09	0.08	45.39	-14.0621	0.0765	0.381
937	SLU 69	1.11	0.03	46.02	-14.2537	0.0778	0.3875
937	SLU 70	1.11	0.06	46.02	-14.2537	0.0777	0.3878
937	SLU 71	1.1	0.02	45.73	-14.1663	0.0772	0.3854
937	SLU 72	1.1	0.05	45.73	-14.1663	0.0771	0.3858
937	SLU 73	1.15	0.11	49.34	-15.2773	0.0844	0.4038
937	SLU 74	1.17	0.06	49.97	-15.4689	0.0856	0.4102
937	SLU 75	1.17	0.09	49.97	-15.4688	0.0856	0.4106
937	SLU 76	1.17	0.11	49.68	-15.3814	0.085	0.4088
937	SLU 77	1.18	0.05	50.31	-15.5729	0.0862	0.4152
937	SLU 78	1.19	0.09	50.31	-15.5729	0.0862	0.4156
937	SLU 79	1.18	0.04	50.02	-15.4855	0.0856	0.4131
937	SLU 80	1.18	0.08	50.02	-15.4855	0.0856	0.4135
937	SLU 81	1.18	0.06	51.18	-15.8428	0.0881	0.415
937	SLU 82	1.19	0.1	51.18	-15.8427	0.088	0.4154
937	SLU 83	1.2	0.06	51.52	-15.9468	0.0886	0.42
937	SLU 84	1.2	0.09	51.52	-15.9468	0.0886	0.4204
937	SLE RA 1	0.81	0.01	33.74	-10.4573	0.0567	0.2826
937	SLE RA 2	0.81	0.05	33.74	-10.4572	0.0566	0.2831
937	SLE RA 3	0.82	0.02	34.16	-10.5849	0.0574	0.2874
937	SLE RA 4	0.82	0.04	34.16	-10.5849	0.0574	0.2876
937	SLE RA 5	0.82	0.05	33.97	-10.5266	0.057	0.2864
937	SLE RA 6	0.83	0.01	34.39	-10.6543	0.0578	0.2907
937	SLE RA 7	0.83	0.04	34.39	-10.6543	0.0578	0.2909
937	SLE RA 8	0.83	0.01	34.2	-10.596	0.0574	0.2893
937	SLE RA 9	0.83	0.03	34.2	-10.596	0.0574	0.2896
937	SLE RA 10	0.86	0.07	36.6	-11.3367	0.0623	0.3016
937	SLE RA 11	0.87	0.03	37.02	-11.4644	0.0631	0.3059
937	SLE RA 12	0.87	0.06	37.02	-11.4643	0.0631	0.3061
937	SLE RA 13	0.87	0.07	36.83	-11.406	0.0627	0.3049
937	SLE RA 14	0.88	0.03	37.25	-11.5338	0.0635	0.3092
937	SLE RA 15	0.88	0.05	37.25	-11.5337	0.0635	0.3095
937	SLE RA 16	0.88	0.02	37.06	-11.4755	0.0631	0.3078
937	SLE RA 17	0.88	0.05	37.06	-11.4754	0.0631	0.3081
937	SLE RA 18	0.88	0.04	37.83	-11.7137	0.0647	0.3091
937	SLE RA 19	0.88	0.06	37.83	-11.7136	0.0647	0.3093
937	SLE RA 20	0.89	0.03	38.06	-11.783	0.0651	0.3124
937	SLE RA 21	0.89	0.06	38.06	-11.783	0.0651	0.3127
937	SLE FR 1	0.81	0.01	33.74	-10.4573	0.0567	0.2826
937	SLE FR 2	0.81	0.02	33.74	-10.4573	0.0566	0.2827
937	SLE FR 3	0.81	0.01	33.84	-10.485	0.0568	0.284
937	SLE FR 4	0.83	0.03	34.97	-10.8342	0.0591	0.2907
937	SLE FR 5	0.83	0.02	35.06	-10.8619	0.0592	0.2919
937	SLE FR 6	0.84	0.02	35.79	-11.0855	0.0607	0.2959
937	SLE QP 1	0.81	0.01	33.74	-10.4573	0.0567	0.2826
937	SLE QP 2	0.83	0.02	34.97	-10.8342	0.0591	0.2906
937	SLD 1	4.62	0.25	31.9	-9.9637	0.0562	1.6135
937	SLD 2	4.45	0.47	31.85	-9.9483	0.0561	1.554
937	SLD 3	4.52	-0.89	32.22	-10.0772	0.0583	1.5803
937	SLD 4	4.35	-0.68	32.17	-10.0618	0.0583	1.5208
937	SLD 5	2.14	1.79	33.57	-10.4035	0.0549	0.7482
937	SLD 6	2.03	1.93	33.54	-10.3936	0.0549	0.7096
937	SLD 7	1.82	-2.03	34.64	-10.7819	0.0621	0.6375
937	SLD 8	1.71	-1.89	34.6	-10.7719	0.0621	0.5989
937	SLD 9	-0.05	1.93	35.34	-10.8964	0.0561	-0.0177
937	SLD 10	-0.16	2.07	35.3	-10.8865	0.056	-0.0564
937	SLD 11	-0.37	-1.89	36.4	-11.2748	0.0632	-0.1284
937	SLD 12	-0.48	-1.75	36.37	-11.2648	0.0632	-0.1671
937	SLD 13	-2.69	0.72	37.77	-11.6066	0.0599	-0.9396
937	SLD 14	-2.86	0.93	37.72	-11.5912	0.0598	-0.9992
937	SLD 15	-2.79	-0.43	38.09	-11.7201	0.062	-0.9728
937	SLD 16	-2.96	-0.21	38.04	-11.7047	0.062	-1.0324
937	SLV 1	9.69	0.53	27.78	-8.7986	0.0522	3.3843
937	SLV 2	9.29	1.03	27.67	-8.7628	0.0521	3.2456
937	SLV 3	9.46	-2.08	28.52	-9.0606	0.0572	3.3069
937	SLV 4	9.06	-1.57	28.4	-9.0248	0.0571	3.1682
937	SLV 5	3.89	4.04	31.72	-9.8322	0.0494	1.3596
937	SLV 6	3.64	4.36	31.64	-9.8093	0.0493	1.271
937	SLV 7	3.15	-4.64	34.17	-10.7056	0.0662	1.1015
937	SLV 8	2.89	-4.32	34.1	-10.6827	0.0661	1.0129
937	SLV 9	-1.24	4.36	35.84	-10.9857	0.0521	-0.4318
937	SLV 10	-1.49	4.68	35.77	-10.9628	0.052	-0.5204
937	SLV 11	-1.98	-4.32	38.3	-11.859	0.0688	-0.6899
937	SLV 12	-2.23	-4	38.22	-11.8362	0.0687	-0.7785
937	SLV 13	-7.41	1.61	41.54	-12.6435	0.061	-2.5871
937	SLV 14	-7.81	2.12	41.42	-12.6077	0.0609	-2.7257

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
937	SLV 15	-7.63	-0.99	42.27	-12.9055	0.0661	-2.6645
937	SLV 16	-8.03	-0.49	42.16	-12.8698	0.0659	-2.8032
937	CRTFP Ux+	0	0	0	0	0	0
937	CRTFP Ux-	0	0	0	0	0	0
937	CRTFP Uy+	0	0	0	0	0	0
937	CRTFP Uy-	0	0	0	0	0	0
938	SLU 1	0.79	0.03	30.9	-9.069	0.0564	0.2771
938	SLU 2	0.79	0.09	30.9	-9.0692	0.0564	0.2778
938	SLU 3	0.81	0.03	31.49	-9.2381	0.0576	0.2843
938	SLU 4	0.81	0.07	31.49	-9.2383	0.0576	0.2847
938	SLU 5	0.8	0.08	31.22	-9.1616	0.057	0.2828
938	SLU 6	0.82	0.03	31.81	-9.3305	0.0582	0.2893
938	SLU 7	0.82	0.06	31.81	-9.3307	0.0582	0.2897
938	SLU 8	0.82	0.02	31.55	-9.2537	0.0576	0.2872
938	SLU 9	0.82	0.06	31.55	-9.2539	0.0576	0.2876
938	SLU 10	0.87	0.11	34.93	-10.2343	0.0651	0.3056
938	SLU 11	0.89	0.06	35.52	-10.4032	0.0664	0.3121
938	SLU 12	0.89	0.09	35.52	-10.4033	0.0664	0.3125
938	SLU 13	0.88	0.11	35.26	-10.3267	0.0657	0.3106
938	SLU 14	0.9	0.06	35.84	-10.4956	0.067	0.3171
938	SLU 15	0.9	0.09	35.84	-10.4957	0.067	0.3175
938	SLU 16	0.9	0.05	35.58	-10.4188	0.0664	0.315
938	SLU 17	0.9	0.08	35.58	-10.4189	0.0664	0.3154
938	SLU 18	0.9	0.06	36.66	-10.7333	0.0689	0.3168
938	SLU 19	0.9	0.1	36.66	-10.7335	0.0689	0.3172
938	SLU 20	0.92	0.06	36.98	-10.8257	0.0695	0.3219
938	SLU 21	0.92	0.1	36.98	-10.8259	0.0695	0.3223
938	SLU 22	0.87	0.06	34.79	-10.1937	0.0648	0.305
938	SLU 23	0.87	0.12	34.79	-10.1939	0.0648	0.3057
938	SLU 24	0.89	0.07	35.38	-10.3628	0.0661	0.3122
938	SLU 25	0.89	0.1	35.38	-10.363	0.066	0.3126
938	SLU 26	0.88	0.12	35.11	-10.2863	0.0654	0.3107
938	SLU 27	0.9	0.06	35.7	-10.4552	0.0667	0.3172
938	SLU 28	0.9	0.1	35.7	-10.4554	0.0667	0.3176
938	SLU 29	0.9	0.05	35.44	-10.3784	0.0661	0.3151
938	SLU 30	0.9	0.09	35.44	-10.3786	0.0661	0.3155
938	SLU 31	0.95	0.15	38.82	-11.359	0.0736	0.3335
938	SLU 32	0.97	0.09	39.41	-11.5279	0.0748	0.34
938	SLU 33	0.97	0.13	39.41	-11.528	0.0748	0.3404
938	SLU 34	0.96	0.14	39.15	-11.4514	0.0742	0.3385
938	SLU 35	0.98	0.09	39.73	-11.6203	0.0754	0.345
938	SLU 36	0.98	0.12	39.73	-11.6204	0.0754	0.3454
938	SLU 37	0.98	0.08	39.47	-11.5435	0.0748	0.3429
938	SLU 38	0.98	0.12	39.47	-11.5436	0.0748	0.3433
938	SLU 39	0.98	0.1	40.55	-11.858	0.0773	0.3447
938	SLU 40	0.98	0.13	40.55	-11.8582	0.0773	0.3451
938	SLU 41	1	0.09	40.87	-11.9504	0.078	0.3498
938	SLU 42	1	0.13	40.87	-11.9506	0.0779	0.3502
938	SLU 43	1	0.02	38.84	-11.4041	0.0704	0.3507
938	SLU 44	1	0.08	38.84	-11.4043	0.0704	0.3513
938	SLU 45	1.02	0.03	39.43	-11.5732	0.0716	0.3578
938	SLU 46	1.02	0.06	39.43	-11.5734	0.0716	0.3582
938	SLU 47	1.01	0.08	39.16	-11.4967	0.071	0.3564
938	SLU 48	1.03	0.03	39.75	-11.6656	0.0723	0.3629
938	SLU 49	1.03	0.06	39.75	-11.6657	0.0722	0.3633
938	SLU 50	1.03	0.02	39.48	-11.5888	0.0717	0.3608
938	SLU 51	1.03	0.05	39.48	-11.589	0.0716	0.3612
938	SLU 52	1.08	0.11	42.87	-12.5694	0.0791	0.3791
938	SLU 53	1.1	0.06	43.46	-12.7383	0.0804	0.3856
938	SLU 54	1.1	0.09	43.46	-12.7384	0.0804	0.386
938	SLU 55	1.09	0.1	43.19	-12.6617	0.0798	0.3842
938	SLU 56	1.11	0.05	43.78	-12.8306	0.081	0.3907
938	SLU 57	1.11	0.09	43.78	-12.8308	0.081	0.3911
938	SLU 58	1.11	0.04	43.51	-12.7539	0.0804	0.3886
938	SLU 59	1.11	0.08	43.51	-12.754	0.0804	0.389
938	SLU 60	1.11	0.06	44.6	-13.0684	0.0829	0.3904
938	SLU 61	1.11	0.1	44.6	-13.0686	0.0829	0.3908
938	SLU 62	1.13	0.06	44.92	-13.1608	0.0836	0.3955
938	SLU 63	1.13	0.09	44.92	-13.161	0.0835	0.3959
938	SLU 64	1.08	0.06	42.73	-12.5288	0.0788	0.3786
938	SLU 65	1.08	0.12	42.73	-12.529	0.0788	0.3792
938	SLU 66	1.1	0.06	43.32	-12.6979	0.0801	0.3857
938	SLU 67	1.1	0.1	43.32	-12.6981	0.0801	0.3861
938	SLU 68	1.09	0.11	43.05	-12.6214	0.0794	0.3843
938	SLU 69	1.11	0.06	43.64	-12.7903	0.0807	0.3908
938	SLU 70	1.11	0.1	43.64	-12.7904	0.0807	0.3912
938	SLU 71	1.11	0.05	43.37	-12.7135	0.0801	0.3887
938	SLU 72	1.11	0.09	43.37	-12.7137	0.0801	0.3891
938	SLU 73	1.16	0.14	46.76	-13.6941	0.0876	0.407
938	SLU 74	1.18	0.09	47.35	-13.863	0.0888	0.4135
938	SLU 75	1.18	0.12	47.35	-13.8631	0.0888	0.4139
938	SLU 76	1.17	0.14	47.08	-13.7864	0.0882	0.4121
938	SLU 77	1.19	0.09	47.67	-13.9553	0.0895	0.4186
938	SLU 78	1.19	0.12	47.67	-13.9555	0.0894	0.419
938	SLU 79	1.19	0.08	47.4	-13.8786	0.0889	0.4165
938	SLU 80	1.19	0.11	47.4	-13.8787	0.0888	0.4169
938	SLU 81	1.19	0.09	48.49	-14.1931	0.0914	0.4183
938	SLU 82	1.19	0.13	48.49	-14.1933	0.0913	0.4187
938	SLU 83	1.2	0.09	48.81	-14.2855	0.092	0.4234
938	SLU 84	1.21	0.13	48.81	-14.2857	0.092	0.4238
938	SLE RA 1	0.81	0.04	32.01	-9.3903	0.0588	0.2851

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
938	SLE RA 2	0.81	0.08	32.01	-9.3905	0.0588	0.2855
938	SLE RA 3	0.82	0.04	32.41	-9.5031	0.0596	0.2899
938	SLE RA 4	0.83	0.06	32.41	-9.5032	0.0596	0.2901
938	SLE RA 5	0.82	0.07	32.23	-9.4521	0.0592	0.2889
938	SLE RA 6	0.83	0.04	32.62	-9.5647	0.06	0.2932
938	SLE RA 7	0.84	0.06	32.62	-9.5648	0.06	0.2935
938	SLE RA 8	0.83	0.03	32.44	-9.5135	0.0596	0.2918
938	SLE RA 9	0.83	0.06	32.44	-9.5136	0.0596	0.2921
938	SLE RA 10	0.87	0.09	34.7	-10.1672	0.0646	0.3041
938	SLE RA 11	0.88	0.06	35.09	-10.2798	0.0655	0.3084
938	SLE RA 12	0.88	0.08	35.09	-10.2799	0.0654	0.3086
938	SLE RA 13	0.87	0.09	34.92	-10.2288	0.065	0.3074
938	SLE RA 14	0.89	0.06	35.31	-10.3414	0.0659	0.3118
938	SLE RA 15	0.89	0.08	35.31	-10.3415	0.0659	0.312
938	SLE RA 16	0.88	0.05	35.13	-10.2902	0.0655	0.3104
938	SLE RA 17	0.88	0.07	35.13	-10.2903	0.0655	0.3106
938	SLE RA 18	0.89	0.06	35.85	-10.4999	0.0671	0.3116
938	SLE RA 19	0.89	0.08	35.85	-10.5	0.0671	0.3118
938	SLE RA 20	0.9	0.06	36.07	-10.5615	0.0676	0.3149
938	SLE RA 21	0.9	0.08	36.07	-10.5616	0.0675	0.3152
938	SLE FR 1	0.81	0.04	32.01	-9.3903	0.0588	0.2851
938	SLE FR 2	0.81	0.04	32.01	-9.3904	0.0588	0.2852
938	SLE FR 3	0.82	0.04	32.1	-9.415	0.059	0.2864
938	SLE FR 4	0.83	0.05	33.16	-9.7232	0.0613	0.2931
938	SLE FR 5	0.84	0.04	33.25	-9.7478	0.0615	0.2944
938	SLE FR 6	0.85	0.05	33.93	-9.9451	0.063	0.2983
938	SLE QP 1	0.81	0.04	32.01	-9.3903	0.0588	0.2851
938	SLE QP 2	0.83	0.04	33.16	-9.7232	0.0613	0.293
938	SLD 1	4.62	0.21	30.09	-8.9352	0.0596	1.6165
938	SLD 2	4.45	0.44	30.04	-8.9209	0.0595	1.5569
938	SLD 3	4.53	-0.92	30.45	-9.0704	0.0613	1.5833
938	SLD 4	4.35	-0.69	30.4	-9.0561	0.0612	1.5236
938	SLD 5	2.14	1.77	31.71	-9.2843	0.0581	0.751
938	SLD 6	2.03	1.92	31.68	-9.275	0.0581	0.7123
938	SLD 7	1.83	-2	32.9	-9.7348	0.064	0.64
938	SLD 8	1.72	-1.86	32.87	-9.7256	0.0639	0.6013
938	SLD 9	-0.05	1.95	33.46	-9.7208	0.0587	-0.0153
938	SLD 10	-0.16	2.09	33.43	-9.7116	0.0586	-0.054
938	SLD 11	-0.37	-1.83	34.65	-10.1714	0.0645	-0.1262
938	SLD 12	-0.48	-1.68	34.62	-10.1621	0.0645	-0.1649
938	SLD 13	-2.69	0.78	35.93	-10.3903	0.0613	-0.9376
938	SLD 14	-2.86	1.01	35.88	-10.376	0.0613	-0.9972
938	SLD 15	-2.78	-0.35	36.29	-10.5255	0.0631	-0.9708
938	SLD 16	-2.95	-0.12	36.24	-10.5112	0.063	-1.0305
938	SLV 1	9.69	0.4	25.98	-7.8807	0.0572	3.388
938	SLV 2	9.29	0.93	25.86	-7.8474	0.057	3.2491
938	SLV 3	9.47	-2.18	26.8	-8.1941	0.0613	3.3105
938	SLV 4	9.07	-1.65	26.69	-8.1608	0.0611	3.1716
938	SLV 5	3.9	3.98	29.77	-8.7008	0.0539	1.3627
938	SLV 6	3.64	4.32	29.7	-8.6796	0.0537	1.274
938	SLV 7	3.15	-4.63	32.53	-9.7454	0.0676	1.1041
938	SLV 8	2.9	-4.29	32.46	-9.7241	0.0675	1.0154
938	SLV 9	-1.23	4.38	33.87	-9.7223	0.0551	-0.4294
938	SLV 10	-1.49	4.72	33.8	-9.701	0.055	-0.5181
938	SLV 11	-1.97	-4.23	36.63	-10.7668	0.0688	-0.6879
938	SLV 12	-2.23	-3.89	36.56	-10.7456	0.0687	-0.7766
938	SLV 13	-7.4	1.74	39.64	-11.2856	0.0614	-2.5855
938	SLV 14	-7.8	2.27	39.53	-11.2523	0.0612	-2.7244
938	SLV 15	-7.62	-0.84	40.47	-11.599	0.0656	-2.6631
938	SLV 16	-8.02	-0.31	40.35	-11.5657	0.0654	-2.802
938	CRTFP Ux+	0	0	0	0	0	0
938	CRTFP Ux-	0	0	0	0	0	0
938	CRTFP Uy+	0	0	0	0	0	0
938	CRTFP Uy-	0	0	0	0	0	0
939	SLU 1	0.79	0.07	29.3	-8.1105	0.0508	0.2793
939	SLU 2	0.8	0.13	29.3	-8.111	0.0508	0.28
939	SLU 3	0.81	0.08	29.85	-8.2588	0.0519	0.2865
939	SLU 4	0.81	0.11	29.85	-8.2591	0.0519	0.2869
939	SLU 5	0.81	0.12	29.61	-8.1924	0.0514	0.2851
939	SLU 6	0.83	0.07	30.16	-8.3402	0.0525	0.2916
939	SLU 7	0.83	0.11	30.16	-8.3406	0.0525	0.2921
939	SLU 8	0.82	0.06	29.91	-8.2733	0.052	0.2896
939	SLU 9	0.82	0.1	29.91	-8.2736	0.0519	0.29
939	SLU 10	0.87	0.16	33.08	-9.1316	0.0588	0.3078
939	SLU 11	0.89	0.11	33.63	-9.2794	0.0599	0.3144
939	SLU 12	0.89	0.14	33.64	-9.2797	0.0599	0.3148
939	SLU 13	0.89	0.15	33.39	-9.213	0.0593	0.313
939	SLU 14	0.91	0.1	33.94	-9.3608	0.0605	0.3195
939	SLU 15	0.91	0.14	33.94	-9.3611	0.0604	0.3199
939	SLU 16	0.9	0.09	33.69	-9.2938	0.0599	0.3174
939	SLU 17	0.9	0.13	33.69	-9.2942	0.0599	0.3178
939	SLU 18	0.91	0.11	34.7	-9.5684	0.0622	0.3191
939	SLU 19	0.91	0.15	34.7	-9.5687	0.0622	0.3195
939	SLU 20	0.92	0.11	35	-9.6498	0.0628	0.3242
939	SLU 21	0.92	0.14	35.01	-9.6501	0.0628	0.3246
939	SLU 22	0.87	0.11	32.95	-9.0958	0.0585	0.3073
939	SLU 23	0.87	0.16	32.95	-9.0964	0.0585	0.308
939	SLU 24	0.89	0.11	33.5	-9.2442	0.0596	0.3145
939	SLU 25	0.89	0.15	33.5	-9.2445	0.0596	0.3149
939	SLU 26	0.89	0.16	33.25	-9.1778	0.059	0.3131
939	SLU 27	0.91	0.11	33.81	-9.3256	0.0602	0.3196

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
939	SLU 28	0.91	0.15	33.81	-9.3259	0.0601	0.32
939	SLU 29	0.9	0.1	33.56	-9.2587	0.0596	0.3175
939	SLU 30	0.9	0.14	33.56	-9.259	0.0596	0.3179
939	SLU 31	0.95	0.2	36.73	-10.1169	0.0664	0.3358
939	SLU 32	0.97	0.14	37.28	-10.2647	0.0676	0.3423
939	SLU 33	0.97	0.18	37.28	-10.265	0.0675	0.3428
939	SLU 34	0.97	0.19	37.04	-10.1983	0.067	0.3409
939	SLU 35	0.99	0.14	37.59	-10.3461	0.0681	0.3475
939	SLU 36	0.99	0.18	37.59	-10.3464	0.0681	0.3479
939	SLU 37	0.98	0.13	37.34	-10.2792	0.0676	0.3454
939	SLU 38	0.98	0.17	37.34	-10.2795	0.0676	0.3458
939	SLU 39	0.99	0.15	38.35	-10.5538	0.0699	0.3471
939	SLU 40	0.99	0.19	38.35	-10.5541	0.0699	0.3475
939	SLU 41	1	0.15	38.65	-10.6352	0.0704	0.3522
939	SLU 42	1	0.18	38.66	-10.6355	0.0704	0.3526
939	SLU 43	1	0.08	36.84	-10.2058	0.0635	0.3535
939	SLU 44	1.01	0.13	36.84	-10.2063	0.0634	0.3542
939	SLU 45	1.02	0.08	37.39	-10.3541	0.0645	0.3607
939	SLU 46	1.03	0.12	37.39	-10.3545	0.0645	0.3611
939	SLU 47	1.02	0.13	37.14	-10.2877	0.064	0.3593
939	SLU 48	1.04	0.08	37.7	-10.4356	0.0651	0.3659
939	SLU 49	1.04	0.11	37.7	-10.4359	0.0651	0.3663
939	SLU 50	1.03	0.07	37.45	-10.3686	0.0646	0.3638
939	SLU 51	1.03	0.11	37.45	-10.3689	0.0646	0.3642
939	SLU 52	1.08	0.16	40.62	-11.2269	0.0714	0.382
939	SLU 53	1.1	0.11	41.17	-11.3747	0.0725	0.3886
939	SLU 54	1.1	0.15	41.17	-11.375	0.0725	0.389
939	SLU 55	1.1	0.16	40.92	-11.3083	0.072	0.3872
939	SLU 56	1.12	0.11	41.48	-11.4561	0.0731	0.3937
939	SLU 57	1.12	0.15	41.48	-11.4564	0.0731	0.3941
939	SLU 58	1.11	0.1	41.23	-11.3892	0.0725	0.3916
939	SLU 59	1.11	0.14	41.23	-11.3895	0.0725	0.392
939	SLU 60	1.12	0.12	42.24	-11.6637	0.0748	0.3933
939	SLU 61	1.12	0.15	42.24	-11.664	0.0748	0.3937
939	SLU 62	1.13	0.12	42.54	-11.7451	0.0754	0.3984
939	SLU 63	1.13	0.15	42.54	-11.7454	0.0754	0.3988
939	SLU 64	1.08	0.11	40.49	-11.1912	0.0711	0.3815
939	SLU 65	1.09	0.17	40.49	-11.1917	0.0711	0.3822
939	SLU 66	1.1	0.12	41.04	-11.3395	0.0722	0.3887
939	SLU 67	1.11	0.16	41.04	-11.3398	0.0722	0.3891
939	SLU 68	1.1	0.17	40.79	-11.2731	0.0717	0.3873
939	SLU 69	1.12	0.12	41.35	-11.4209	0.0728	0.3938
939	SLU 70	1.12	0.15	41.35	-11.4212	0.0728	0.3942
939	SLU 71	1.11	0.11	41.1	-11.354	0.0722	0.3917
939	SLU 72	1.11	0.14	41.1	-11.3543	0.0722	0.3921
939	SLU 73	1.16	0.2	44.27	-12.2122	0.0791	0.41
939	SLU 74	1.18	0.15	44.82	-12.36	0.0802	0.4165
939	SLU 75	1.18	0.19	44.82	-12.3604	0.0802	0.417
939	SLU 76	1.18	0.2	44.57	-12.2936	0.0796	0.4151
939	SLU 77	1.2	0.15	45.13	-12.4414	0.0807	0.4217
939	SLU 78	1.2	0.18	45.13	-12.4418	0.0807	0.4221
939	SLU 79	1.19	0.14	44.88	-12.3745	0.0802	0.4196
939	SLU 80	1.19	0.17	44.88	-12.3748	0.0802	0.42
939	SLU 81	1.2	0.16	45.89	-12.6491	0.0825	0.4213
939	SLU 82	1.2	0.19	45.89	-12.6494	0.0825	0.4217
939	SLU 83	1.21	0.16	46.19	-12.7305	0.0831	0.4264
939	SLU 84	1.21	0.19	46.19	-12.7308	0.083	0.4268
939	SLE RA 1	0.82	0.08	30.34	-8.392	0.053	0.2873
939	SLE RA 2	0.82	0.12	30.34	-8.3924	0.053	0.2878
939	SLE RA 3	0.83	0.08	30.71	-8.4909	0.0538	0.2921
939	SLE RA 4	0.83	0.11	30.71	-8.4911	0.0537	0.2924
939	SLE RA 5	0.83	0.12	30.55	-8.4466	0.0534	0.2912
939	SLE RA 6	0.84	0.08	30.91	-8.5452	0.0541	0.2955
939	SLE RA 7	0.84	0.11	30.91	-8.5454	0.0541	0.2958
939	SLE RA 8	0.84	0.08	30.75	-8.5006	0.0538	0.2941
939	SLE RA 9	0.84	0.1	30.75	-8.5008	0.0538	0.2944
939	SLE RA 10	0.87	0.14	32.86	-9.0727	0.0583	0.3063
939	SLE RA 11	0.88	0.1	33.23	-9.1713	0.0591	0.3107
939	SLE RA 12	0.88	0.13	33.23	-9.1715	0.0591	0.311
939	SLE RA 13	0.88	0.14	33.07	-9.127	0.0587	0.3097
939	SLE RA 14	0.89	0.1	33.43	-9.2255	0.0594	0.3141
939	SLE RA 15	0.89	0.13	33.44	-9.2258	0.0594	0.3144
939	SLE RA 16	0.89	0.1	33.27	-9.1809	0.0591	0.3127
939	SLE RA 17	0.89	0.12	33.27	-9.1811	0.0591	0.313
939	SLE RA 18	0.89	0.11	33.94	-9.364	0.0606	0.3138
939	SLE RA 19	0.89	0.13	33.94	-9.3642	0.0606	0.3141
939	SLE RA 20	0.9	0.11	34.15	-9.4182	0.061	0.3172
939	SLE RA 21	0.9	0.13	34.15	-9.4184	0.061	0.3175
939	SLE FR 1	0.82	0.08	30.34	-8.392	0.053	0.2873
939	SLE FR 2	0.82	0.09	30.34	-8.3921	0.053	0.2874
939	SLE FR 3	0.82	0.08	30.42	-8.4137	0.0532	0.2887
939	SLE FR 4	0.84	0.1	31.42	-8.6837	0.0553	0.2953
939	SLE FR 5	0.84	0.09	31.5	-8.7053	0.0554	0.2966
939	SLE FR 6	0.85	0.09	32.14	-8.878	0.0568	0.3006
939	SLE QP 1	0.82	0.08	30.34	-8.392	0.053	0.2873
939	SLE QP 2	0.84	0.09	31.42	-8.6836	0.0553	0.2953
939	SLD 1	4.62	0.21	28.29	-7.9483	0.0574	1.6192
939	SLD 2	4.45	0.45	28.24	-7.9355	0.0573	1.5596
939	SLD 3	4.53	-0.92	28.68	-8.1023	0.0587	1.5858
939	SLD 4	4.36	-0.68	28.63	-8.0895	0.0586	1.5262
939	SLD 5	2.15	1.8	29.9	-8.2317	0.054	0.7536

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
939	SLD 6	2.04	1.95	29.87	-8.2233	0.054	0.7148
939	SLD 7	1.83	-1.97	31.2	-8.7451	0.0582	0.6421
939	SLD 8	1.72	-1.81	31.17	-8.7367	0.0582	0.6034
939	SLD 9	-0.04	1.99	31.68	-8.6305	0.0524	-0.0129
939	SLD 10	-0.15	2.15	31.65	-8.6222	0.0524	-0.0516
939	SLD 11	-0.36	-1.78	32.97	-9.1439	0.0566	-0.1243
939	SLD 12	-0.47	-1.62	32.94	-9.1355	0.0565	-0.163
939	SLD 13	-2.68	0.85	34.21	-9.2777	0.052	-0.9356
939	SLD 14	-2.85	1.09	34.17	-9.2649	0.0519	-0.9953
939	SLD 15	-2.78	-0.28	34.6	-9.4317	0.0533	-0.9691
939	SLD 16	-2.95	-0.04	34.56	-9.4189	0.0532	-1.0287
939	SLV 1	9.69	0.34	24.09	-6.9644	0.0603	3.3914
939	SLV 2	9.29	0.9	23.98	-6.9344	0.0601	3.2524
939	SLV 3	9.47	-2.23	24.99	-7.3224	0.0632	3.3135
939	SLV 4	9.07	-1.67	24.89	-7.2924	0.063	3.1745
939	SLV 5	3.9	3.97	27.87	-7.63	0.0524	1.3658
939	SLV 6	3.64	4.33	27.8	-7.6108	0.0522	1.277
939	SLV 7	3.16	-4.6	30.88	-8.8233	0.0622	1.1061
939	SLV 8	2.9	-4.25	30.81	-8.8042	0.062	1.0174
939	SLV 9	-1.23	4.42	32.03	-8.5631	0.0486	-0.4269
939	SLV 10	-1.48	4.78	31.96	-8.5439	0.0484	-0.5156
939	SLV 11	-1.97	-4.15	35.04	-9.7564	0.0584	-0.6865
939	SLV 12	-2.22	-3.8	34.97	-9.7373	0.0582	-0.7753
939	SLV 13	-7.39	1.85	37.96	-10.0748	0.0476	-2.584
939	SLV 14	-7.79	2.41	37.85	-10.0448	0.0474	-2.723
939	SLV 15	-7.62	-0.73	38.86	-10.4328	0.0505	-2.6619
939	SLV 16	-8.02	-0.17	38.75	-10.4028	0.0503	-2.8009
939	CRTFP Ux+	0	0	0	0	0	0
939	CRTFP Ux-	0	0	0	0	0	0
939	CRTFP Uy+	0	0	0	0	0	0
939	CRTFP Uy-	0	0	0	0	0	0
940	SLU 1	0.8	0.13	27.94	-7.2962	0.0403	0.2813
940	SLU 2	0.8	0.18	27.94	-7.297	0.0403	0.282
940	SLU 3	0.82	0.13	28.46	-7.427	0.0411	0.2885
940	SLU 4	0.82	0.17	28.47	-7.4274	0.0411	0.289
940	SLU 5	0.81	0.18	28.23	-7.3691	0.0407	0.2872
940	SLU 6	0.83	0.13	28.75	-7.4991	0.0416	0.2937
940	SLU 7	0.83	0.17	28.76	-7.4995	0.0416	0.2942
940	SLU 8	0.83	0.12	28.52	-7.4404	0.0411	0.2916
940	SLU 9	0.83	0.16	28.52	-7.4409	0.0411	0.292
940	SLU 10	0.88	0.22	31.51	-8.1941	0.0467	0.3099
940	SLU 11	0.9	0.17	32.03	-8.324	0.0476	0.3164
940	SLU 12	0.9	0.21	32.03	-8.3245	0.0476	0.3169
940	SLU 13	0.89	0.22	31.8	-8.2661	0.0471	0.315
940	SLU 14	0.91	0.17	32.32	-8.3961	0.048	0.3216
940	SLU 15	0.91	0.21	32.32	-8.3966	0.048	0.322
940	SLU 16	0.91	0.16	32.08	-8.3375	0.0476	0.3195
940	SLU 17	0.91	0.2	32.09	-8.3379	0.0476	0.3199
940	SLU 18	0.91	0.18	33.03	-8.5778	0.0495	0.3211
940	SLU 19	0.91	0.22	33.04	-8.5782	0.0495	0.3215
940	SLU 20	0.92	0.18	33.32	-8.6499	0.0499	0.3263
940	SLU 21	0.93	0.21	33.32	-8.6503	0.0499	0.3267
940	SLU 22	0.88	0.17	31.38	-8.1625	0.0465	0.3093
940	SLU 23	0.88	0.23	31.38	-8.1632	0.0464	0.31
940	SLU 24	0.9	0.18	31.91	-8.2932	0.0473	0.3166
940	SLU 25	0.9	0.21	31.91	-8.2937	0.0473	0.317
940	SLU 26	0.89	0.23	31.67	-8.2353	0.0469	0.3152
940	SLU 27	0.91	0.18	32.2	-8.3653	0.0478	0.3218
940	SLU 28	0.91	0.21	32.2	-8.3658	0.0478	0.3222
940	SLU 29	0.91	0.17	31.96	-8.3067	0.0473	0.3196
940	SLU 30	0.91	0.2	31.96	-8.3071	0.0473	0.3201
940	SLU 31	0.96	0.27	34.95	-9.0603	0.0529	0.3379
940	SLU 32	0.98	0.22	35.47	-9.1903	0.0538	0.3445
940	SLU 33	0.98	0.25	35.47	-9.1907	0.0538	0.3449
940	SLU 34	0.97	0.27	35.24	-9.1324	0.0533	0.3431
940	SLU 35	0.99	0.22	35.76	-9.2624	0.0542	0.3496
940	SLU 36	0.99	0.25	35.76	-9.2628	0.0542	0.3501
940	SLU 37	0.98	0.21	35.53	-9.2037	0.0538	0.3475
940	SLU 38	0.99	0.24	35.53	-9.2042	0.0538	0.348
940	SLU 39	0.99	0.23	36.48	-9.444	0.0557	0.3491
940	SLU 40	0.99	0.26	36.48	-9.4445	0.0557	0.3496
940	SLU 41	1	0.22	36.77	-9.5161	0.0561	0.3543
940	SLU 42	1.01	0.26	36.77	-9.5166	0.0561	0.3547
940	SLU 43	1.01	0.15	35.14	-9.1881	0.0502	0.356
940	SLU 44	1.01	0.21	35.14	-9.1889	0.0502	0.3568
940	SLU 45	1.03	0.16	35.67	-9.3189	0.0511	0.3633
940	SLU 46	1.03	0.19	35.67	-9.3193	0.0511	0.3637
940	SLU 47	1.03	0.2	35.43	-9.261	0.0507	0.3619
940	SLU 48	1.04	0.15	35.96	-9.3909	0.0515	0.3685
940	SLU 49	1.05	0.19	35.96	-9.3914	0.0515	0.3689
940	SLU 50	1.04	0.14	35.72	-9.3323	0.0511	0.3664
940	SLU 51	1.04	0.18	35.72	-9.3327	0.0511	0.3668
940	SLU 52	1.09	0.25	38.71	-10.0859	0.0567	0.3846
940	SLU 53	1.11	0.19	39.23	-10.2159	0.0575	0.3912
940	SLU 54	1.11	0.23	39.23	-10.2164	0.0575	0.3916
940	SLU 55	1.1	0.24	39	-10.158	0.0571	0.3898
940	SLU 56	1.12	0.19	39.52	-10.288	0.058	0.3964
940	SLU 57	1.12	0.23	39.52	-10.2885	0.058	0.3968
940	SLU 58	1.12	0.18	39.29	-10.2294	0.0575	0.3942
940	SLU 59	1.12	0.22	39.29	-10.2298	0.0575	0.3947
940	SLU 60	1.12	0.2	40.23	-10.4696	0.0594	0.3959

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
940	SLU 61	1.12	0.24	40.24	-10.4701	0.0594	0.3963
940	SLU 62	1.14	0.2	40.52	-10.5417	0.0599	0.401
940	SLU 63	1.14	0.24	40.53	-10.5422	0.0599	0.4015
940	SLU 64	1.09	0.19	38.58	-10.0544	0.0564	0.3841
940	SLU 65	1.09	0.25	38.59	-10.0551	0.0564	0.3848
940	SLU 66	1.11	0.2	39.11	-10.1851	0.0573	0.3913
940	SLU 67	1.11	0.24	39.11	-10.1855	0.0573	0.3918
940	SLU 68	1.11	0.25	38.88	-10.1272	0.0568	0.39
940	SLU 69	1.12	0.2	39.4	-10.2572	0.0577	0.3965
940	SLU 70	1.13	0.23	39.4	-10.2576	0.0577	0.397
940	SLU 71	1.12	0.19	39.16	-10.1985	0.0573	0.3944
940	SLU 72	1.12	0.22	39.16	-10.199	0.0573	0.3948
940	SLU 73	1.17	0.29	42.15	-10.9522	0.0628	0.4127
940	SLU 74	1.19	0.24	42.67	-11.0822	0.0637	0.4192
940	SLU 75	1.19	0.27	42.68	-11.0826	0.0637	0.4197
940	SLU 76	1.18	0.29	42.44	-11.0243	0.0633	0.4178
940	SLU 77	1.2	0.24	42.96	-11.1543	0.0642	0.4244
940	SLU 78	1.2	0.27	42.97	-11.1547	0.0642	0.4248
940	SLU 79	1.2	0.23	42.73	-11.0956	0.0637	0.4223
940	SLU 80	1.2	0.26	42.73	-11.0961	0.0637	0.4227
940	SLU 81	1.2	0.25	43.68	-11.3359	0.0656	0.4239
940	SLU 82	1.2	0.28	43.68	-11.3363	0.0656	0.4243
940	SLU 83	1.22	0.25	43.97	-11.408	0.0661	0.4291
940	SLU 84	1.22	0.28	43.97	-11.4084	0.0661	0.4295
940	SLE RA 1	0.82	0.14	28.92	-7.5437	0.042	0.2893
940	SLE RA 2	0.82	0.18	28.92	-7.5442	0.042	0.2898
940	SLE RA 3	0.83	0.14	29.27	-7.6309	0.0426	0.2941
940	SLE RA 4	0.83	0.17	29.27	-7.6312	0.0426	0.2944
940	SLE RA 5	0.83	0.18	29.12	-7.5923	0.0423	0.2932
940	SLE RA 6	0.84	0.14	29.47	-7.679	0.0429	0.2976
940	SLE RA 7	0.84	0.17	29.47	-7.6793	0.0429	0.2979
940	SLE RA 8	0.84	0.14	29.31	-7.6399	0.0426	0.2962
940	SLE RA 9	0.84	0.16	29.31	-7.6402	0.0426	0.2965
940	SLE RA 10	0.87	0.2	31.3	-8.1423	0.0463	0.3083
940	SLE RA 11	0.89	0.17	31.65	-8.2289	0.0469	0.3127
940	SLE RA 12	0.89	0.19	31.65	-8.2292	0.0469	0.313
940	SLE RA 13	0.88	0.2	31.5	-8.1903	0.0466	0.3118
940	SLE RA 14	0.9	0.17	31.84	-8.277	0.0472	0.3162
940	SLE RA 15	0.9	0.19	31.84	-8.2773	0.0472	0.3165
940	SLE RA 16	0.89	0.16	31.69	-8.2379	0.0469	0.3148
940	SLE RA 17	0.89	0.19	31.69	-8.2382	0.0469	0.315
940	SLE RA 18	0.9	0.18	32.32	-8.3981	0.0482	0.3158
940	SLE RA 19	0.9	0.2	32.32	-8.3984	0.0482	0.3161
940	SLE RA 20	0.9	0.17	32.51	-8.4462	0.0485	0.3193
940	SLE RA 21	0.91	0.2	32.51	-8.4465	0.0485	0.3196
940	SLE FR 1	0.82	0.14	28.92	-7.5437	0.042	0.2893
940	SLE FR 2	0.82	0.15	28.92	-7.5438	0.042	0.2894
940	SLE FR 3	0.82	0.14	29	-7.563	0.0422	0.2906
940	SLE FR 4	0.84	0.16	29.94	-7.8001	0.0439	0.2973
940	SLE FR 5	0.85	0.15	30.02	-7.8193	0.044	0.2986
940	SLE FR 6	0.86	0.16	30.62	-7.9709	0.0451	0.3025
940	SLE QP 1	0.82	0.14	28.92	-7.5437	0.042	0.2893
940	SLE QP 2	0.84	0.15	29.94	-7.8	0.0439	0.2972
940	SLD 1	4.63	0.25	26.68	-7.0822	0.0488	1.6216
940	SLD 2	4.46	0.5	26.64	-7.0709	0.0488	1.562
940	SLD 3	4.53	-0.89	27.09	-7.2494	0.0496	1.588
940	SLD 4	4.36	-0.63	27.05	-7.2381	0.0495	1.5283
940	SLD 5	2.15	1.86	28.35	-7.333	0.0443	0.756
940	SLD 6	2.04	2.02	28.32	-7.3257	0.0442	0.7173
940	SLD 7	1.83	-1.93	29.71	-7.8905	0.0467	0.6439
940	SLD 8	1.72	-1.76	29.69	-7.8831	0.0467	0.6051
940	SLD 9	-0.04	2.06	30.2	-7.717	0.0411	-0.0107
940	SLD 10	-0.15	2.23	30.17	-7.7096	0.0411	-0.0494
940	SLD 11	-0.36	-1.72	31.56	-8.2744	0.0435	-0.1228
940	SLD 12	-0.47	-1.56	31.53	-8.267	0.0435	-0.1615
940	SLD 13	-2.68	0.93	32.84	-8.362	0.0383	-0.9339
940	SLD 14	-2.85	1.19	32.79	-8.3507	0.0382	-0.9935
940	SLD 15	-2.77	-0.2	33.25	-8.5292	0.039	-0.9675
940	SLD 16	-2.94	0.05	33.2	-8.5179	0.0389	-1.0272
940	SLV 1	9.7	0.35	22.31	-6.1216	0.0555	3.3943
940	SLV 2	9.29	0.94	22.21	-6.0952	0.0553	3.2553
940	SLV 3	9.47	-2.24	23.26	-6.5109	0.0572	3.316
940	SLV 4	9.07	-1.65	23.16	-6.4845	0.057	3.177
940	SLV 5	3.9	4.04	26.23	-6.7106	0.0448	1.3687
940	SLV 6	3.65	4.41	26.16	-6.6937	0.0447	1.28
940	SLV 7	3.16	-4.59	29.4	-8.0082	0.0505	1.1075
940	SLV 8	2.91	-4.22	29.33	-7.9913	0.0504	1.0188
940	SLV 9	-1.22	4.51	30.55	-7.6088	0.0374	-0.4243
940	SLV 10	-1.48	4.89	30.48	-7.5919	0.0373	-0.5131
940	SLV 11	-1.96	-4.11	33.72	-8.9064	0.0431	-0.6855
940	SLV 12	-2.22	-3.74	33.66	-8.8895	0.043	-0.7743
940	SLV 13	-7.39	1.95	36.72	-9.1156	0.0308	-2.5825
940	SLV 14	-7.79	2.54	36.62	-9.0892	0.0306	-2.7215
940	SLV 15	-7.61	-0.64	37.67	-9.5049	0.0325	-2.6609
940	SLV 16	-8.01	-0.05	37.57	-9.4785	0.0323	-2.7998
940	CRTFP Ux+	0	0	0	0	0	0
940	CRTFP Ux-	0	0	0	0	0	0
940	CRTFP Uy+	0	0	0	0	0	0
940	CRTFP Uy-	0	0	0	0	0	0
941	SLU 1	0.8	0.2	26.94	-6.6818	0.0269	0.283
941	SLU 2	0.8	0.26	26.94	-6.6827	0.0269	0.2837

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
941	SLU 3	0.82	0.21	27.44	-6.7993	0.0274	0.2903
941	SLU 4	0.82	0.24	27.44	-6.7999	0.0274	0.2908
941	SLU 5	0.82	0.26	27.22	-6.7478	0.0271	0.2889
941	SLU 6	0.84	0.2	27.72	-6.8645	0.0277	0.2955
941	SLU 7	0.84	0.24	27.72	-6.865	0.0277	0.296
941	SLU 8	0.83	0.2	27.5	-6.8121	0.0274	0.2934
941	SLU 9	0.83	0.23	27.5	-6.8126	0.0274	0.2939
941	SLU 10	0.88	0.31	30.34	-7.4852	0.0314	0.3117
941	SLU 11	0.9	0.26	30.85	-7.6019	0.032	0.3182
941	SLU 12	0.9	0.29	30.85	-7.6024	0.0319	0.3187
941	SLU 13	0.9	0.31	30.62	-7.5504	0.0317	0.3169
941	SLU 14	0.92	0.25	31.13	-7.667	0.0322	0.3234
941	SLU 15	0.92	0.29	31.13	-7.6676	0.0322	0.3239
941	SLU 16	0.91	0.24	30.9	-7.6146	0.0319	0.3213
941	SLU 17	0.91	0.28	30.9	-7.6151	0.0319	0.3218
941	SLU 18	0.91	0.27	31.8	-7.8283	0.0333	0.3229
941	SLU 19	0.91	0.3	31.8	-7.8288	0.0333	0.3233
941	SLU 20	0.93	0.27	32.08	-7.8934	0.0336	0.3281
941	SLU 21	0.93	0.3	32.08	-7.8939	0.0336	0.3285
941	SLU 22	0.88	0.25	30.23	-7.4569	0.0312	0.3111
941	SLU 23	0.88	0.31	30.23	-7.4578	0.0312	0.3118
941	SLU 24	0.9	0.26	30.73	-7.5744	0.0318	0.3184
941	SLU 25	0.9	0.29	30.73	-7.575	0.0317	0.3189
941	SLU 26	0.9	0.31	30.51	-7.5229	0.0315	0.3171
941	SLU 27	0.92	0.26	31.01	-7.6396	0.032	0.3236
941	SLU 28	0.92	0.29	31.01	-7.6401	0.032	0.3241
941	SLU 29	0.91	0.25	30.78	-7.5872	0.0317	0.3215
941	SLU 30	0.91	0.28	30.79	-7.5877	0.0317	0.322
941	SLU 31	0.96	0.36	33.63	-8.2603	0.0357	0.3398
941	SLU 32	0.98	0.31	34.13	-8.377	0.0363	0.3463
941	SLU 33	0.98	0.34	34.13	-8.3775	0.0363	0.3468
941	SLU 34	0.98	0.36	33.91	-8.3255	0.036	0.345
941	SLU 35	0.99	0.31	34.41	-8.4421	0.0365	0.3516
941	SLU 36	1	0.34	34.41	-8.4427	0.0365	0.352
941	SLU 37	0.99	0.3	34.19	-8.3897	0.0363	0.3494
941	SLU 38	0.99	0.33	34.19	-8.3902	0.0363	0.3499
941	SLU 39	0.99	0.32	35.09	-8.6034	0.0376	0.351
941	SLU 40	0.99	0.36	35.09	-8.6039	0.0376	0.3514
941	SLU 41	1.01	0.32	35.37	-8.6685	0.0379	0.3562
941	SLU 42	1.01	0.36	35.37	-8.6691	0.0379	0.3566
941	SLU 43	1.01	0.24	33.89	-8.4206	0.0335	0.3582
941	SLU 44	1.02	0.3	33.9	-8.4215	0.0334	0.359
941	SLU 45	1.03	0.25	34.4	-8.5381	0.034	0.3656
941	SLU 46	1.04	0.28	34.4	-8.5387	0.034	0.366
941	SLU 47	1.03	0.3	34.18	-8.4866	0.0337	0.3642
941	SLU 48	1.05	0.25	34.68	-8.6033	0.0343	0.3708
941	SLU 49	1.05	0.28	34.68	-8.6038	0.0343	0.3712
941	SLU 50	1.04	0.24	34.45	-8.5508	0.034	0.3686
941	SLU 51	1.04	0.27	34.45	-8.5514	0.034	0.3691
941	SLU 52	1.09	0.35	37.3	-9.224	0.038	0.3869
941	SLU 53	1.11	0.3	37.8	-9.3407	0.0385	0.3935
941	SLU 54	1.11	0.33	37.8	-9.3412	0.0385	0.3939
941	SLU 55	1.11	0.35	37.58	-9.2892	0.0382	0.3921
941	SLU 56	1.13	0.3	38.08	-9.4058	0.0388	0.3987
941	SLU 57	1.13	0.33	38.08	-9.4063	0.0388	0.3992
941	SLU 58	1.12	0.29	37.86	-9.3534	0.0385	0.3966
941	SLU 59	1.12	0.32	37.86	-9.3539	0.0385	0.397
941	SLU 60	1.13	0.31	38.76	-9.567	0.0399	0.3981
941	SLU 61	1.13	0.34	38.76	-9.5676	0.0399	0.3986
941	SLU 62	1.14	0.31	39.03	-9.6322	0.0402	0.4033
941	SLU 63	1.14	0.34	39.04	-9.6327	0.0402	0.4038
941	SLU 64	1.09	0.29	37.18	-9.1957	0.0378	0.3863
941	SLU 65	1.1	0.35	37.18	-9.1966	0.0378	0.3871
941	SLU 66	1.11	0.3	37.68	-9.3132	0.0383	0.3937
941	SLU 67	1.12	0.34	37.69	-9.3138	0.0383	0.3941
941	SLU 68	1.11	0.35	37.46	-9.2617	0.038	0.3923
941	SLU 69	1.13	0.3	37.96	-9.3784	0.0386	0.3989
941	SLU 70	1.13	0.33	37.97	-9.3789	0.0386	0.3993
941	SLU 71	1.12	0.29	37.74	-9.3259	0.0383	0.3967
941	SLU 72	1.12	0.32	37.74	-9.3265	0.0383	0.3972
941	SLU 73	1.17	0.4	40.59	-9.9991	0.0423	0.415
941	SLU 74	1.19	0.35	41.09	-10.1158	0.0428	0.4216
941	SLU 75	1.19	0.39	41.09	-10.1163	0.0428	0.422
941	SLU 76	1.19	0.4	40.87	-10.0643	0.0426	0.4202
941	SLU 77	1.21	0.35	41.37	-10.1809	0.0431	0.4268
941	SLU 78	1.21	0.38	41.37	-10.1814	0.0431	0.4273
941	SLU 79	1.2	0.34	41.14	-10.1285	0.0428	0.4247
941	SLU 80	1.2	0.37	41.14	-10.129	0.0428	0.4251
941	SLU 81	1.21	0.36	42.04	-10.3422	0.0442	0.4262
941	SLU 82	1.21	0.4	42.04	-10.3427	0.0442	0.4267
941	SLU 83	1.22	0.36	42.32	-10.4073	0.0445	0.4314
941	SLU 84	1.22	0.4	42.32	-10.4078	0.0445	0.4319
941	SLE RA 1	0.82	0.21	27.88	-6.9032	0.0281	0.291
941	SLE RA 2	0.83	0.25	27.88	-6.9039	0.0281	0.2915
941	SLE RA 3	0.84	0.22	28.21	-6.9816	0.0285	0.2959
941	SLE RA 4	0.84	0.24	28.22	-6.982	0.0285	0.2962
941	SLE RA 5	0.83	0.25	28.07	-6.9473	0.0283	0.295
941	SLE RA 6	0.85	0.22	28.4	-7.025	0.0287	0.2994
941	SLE RA 7	0.85	0.24	28.4	-7.0254	0.0287	0.2997
941	SLE RA 8	0.84	0.21	28.25	-6.9901	0.0285	0.2979
941	SLE RA 9	0.84	0.23	28.25	-6.9905	0.0285	0.2983

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
941	SLE RA 10	0.88	0.28	30.15	-7.4389	0.0311	0.3101
941	SLE RA 11	0.89	0.25	30.48	-7.5166	0.0315	0.3145
941	SLE RA 12	0.89	0.27	30.48	-7.517	0.0315	0.3148
941	SLE RA 13	0.89	0.28	30.33	-7.4823	0.0313	0.3136
941	SLE RA 14	0.9	0.25	30.67	-7.5601	0.0317	0.318
941	SLE RA 15	0.9	0.27	30.67	-7.5604	0.0317	0.3183
941	SLE RA 16	0.9	0.24	30.52	-7.5251	0.0315	0.3166
941	SLE RA 17	0.9	0.27	30.52	-7.5255	0.0315	0.3169
941	SLE RA 18	0.9	0.26	31.12	-7.6676	0.0324	0.3176
941	SLE RA 19	0.9	0.28	31.12	-7.6679	0.0324	0.3179
941	SLE RA 20	0.91	0.26	31.3	-7.711	0.0326	0.3211
941	SLE RA 21	0.91	0.28	31.31	-7.7114	0.0326	0.3214
941	SLE FR 1	0.82	0.21	27.88	-6.9032	0.0281	0.291
941	SLE FR 2	0.82	0.22	27.88	-6.9034	0.0281	0.2911
941	SLE FR 3	0.83	0.21	27.95	-6.9206	0.0282	0.2924
941	SLE FR 4	0.85	0.23	28.85	-7.1327	0.0294	0.2991
941	SLE FR 5	0.85	0.23	28.92	-7.1499	0.0295	0.3004
941	SLE FR 6	0.86	0.24	29.5	-7.2854	0.0303	0.3043
941	SLE QP 1	0.82	0.21	27.88	-6.9032	0.0281	0.291
941	SLE QP 2	0.85	0.23	28.85	-7.1325	0.0294	0.299
941	SLD 1	4.63	0.32	25.39	-6.394	0.0373	1.6236
941	SLD 2	4.46	0.59	25.35	-6.3841	0.0373	1.564
941	SLD 3	4.54	-0.83	25.8	-6.5675	0.0377	1.5898
941	SLD 4	4.36	-0.56	25.76	-6.5576	0.0376	1.5301
941	SLD 5	2.16	1.96	27.19	-6.6495	0.0313	0.7582
941	SLD 6	2.05	2.14	27.16	-6.643	0.0312	0.7195
941	SLD 7	1.84	-1.89	28.58	-7.228	0.0324	0.6452
941	SLD 8	1.73	-1.72	28.55	-7.2216	0.0324	0.6065
941	SLD 9	-0.03	2.17	29.15	-7.0435	0.0264	-0.0086
941	SLD 10	-0.15	2.34	29.12	-7.0371	0.0264	-0.0473
941	SLD 11	-0.35	-1.68	30.54	-7.622	0.0276	-0.1216
941	SLD 12	-0.46	-1.51	30.51	-7.6156	0.0275	-0.1602
941	SLD 13	-2.67	1.02	31.94	-7.7074	0.0212	-0.9322
941	SLD 14	-2.84	1.28	31.9	-7.6975	0.0211	-0.9918
941	SLD 15	-2.77	-0.14	32.35	-7.881	0.0215	-0.9661
941	SLD 16	-2.94	0.13	32.31	-7.8711	0.0215	-1.0257
941	SLV 1	9.7	0.42	20.75	-5.4055	0.0479	3.3967
941	SLV 2	9.3	1.04	20.66	-5.3825	0.0478	3.2578
941	SLV 3	9.47	-2.21	21.72	-5.8099	0.0487	3.3178
941	SLV 4	9.07	-1.59	21.62	-5.7868	0.0486	3.1789
941	SLV 5	3.91	4.17	24.97	-6.005	0.0338	1.3715
941	SLV 6	3.65	4.57	24.9	-5.9903	0.0337	1.2828
941	SLV 7	3.16	-4.6	28.2	-7.3529	0.0364	1.1084
941	SLV 8	2.91	-4.2	28.14	-7.3382	0.0363	1.0197
941	SLV 9	-1.22	4.66	29.56	-6.9269	0.0225	-0.4218
941	SLV 10	-1.47	5.05	29.5	-6.9121	0.0224	-0.5105
941	SLV 11	-1.96	-4.12	32.8	-8.2748	0.0251	-0.6849
941	SLV 12	-2.22	-3.72	32.73	-8.26	0.025	-0.7736
941	SLV 13	-7.38	2.04	36.08	-8.4782	0.0102	-2.581
941	SLV 14	-7.78	2.66	35.98	-8.4552	0.0101	-2.7198
941	SLV 15	-7.6	-0.59	37.04	-8.8826	0.011	-2.6599
941	SLV 16	-8	0.03	36.95	-8.8596	0.0109	-2.7988
941	CRTFP Ux+	0	0	0	0	0	0
941	CRTFP Ux-	0	0	0	0	0	0
941	CRTFP Uy+	0	0	0	0	0	0
941	CRTFP Uy-	0	0	0	0	0	0
942	SLU 1	0.8	0.28	26.36	-6.2968	0.0122	0.2843
942	SLU 2	0.81	0.34	26.36	-6.2979	0.0121	0.2851
942	SLU 3	0.82	0.29	26.85	-6.4062	0.0124	0.2917
942	SLU 4	0.83	0.33	26.85	-6.4069	0.0124	0.2922
942	SLU 5	0.82	0.34	26.64	-6.3588	0.0122	0.2904
942	SLU 6	0.84	0.29	27.12	-6.4671	0.0125	0.297
942	SLU 7	0.84	0.33	27.13	-6.4678	0.0125	0.2974
942	SLU 8	0.83	0.28	26.91	-6.4186	0.0124	0.2948
942	SLU 9	0.83	0.32	26.91	-6.4193	0.0123	0.2953
942	SLU 10	0.88	0.4	29.66	-7.0389	0.0145	0.3131
942	SLU 11	0.9	0.35	30.15	-7.1473	0.0148	0.3197
942	SLU 12	0.9	0.39	30.15	-7.1479	0.0148	0.3201
942	SLU 13	0.9	0.4	29.94	-7.0998	0.0146	0.3183
942	SLU 14	0.92	0.35	30.42	-7.2082	0.0149	0.3249
942	SLU 15	0.92	0.39	30.43	-7.2088	0.0149	0.3254
942	SLU 16	0.91	0.34	30.21	-7.1597	0.0147	0.3228
942	SLU 17	0.91	0.38	30.21	-7.1603	0.0147	0.3233
942	SLU 18	0.92	0.37	31.07	-7.3555	0.0156	0.3242
942	SLU 19	0.92	0.41	31.08	-7.3561	0.0156	0.3247
942	SLU 20	0.93	0.37	31.35	-7.4164	0.0157	0.3295
942	SLU 21	0.93	0.41	31.35	-7.417	0.0157	0.33
942	SLU 22	0.88	0.34	29.55	-7.0128	0.0144	0.3125
942	SLU 23	0.89	0.4	29.55	-7.0138	0.0144	0.3133
942	SLU 24	0.9	0.35	30.04	-7.1222	0.0146	0.3199
942	SLU 25	0.91	0.39	30.04	-7.1228	0.0146	0.3204
942	SLU 26	0.9	0.41	29.82	-7.0747	0.0145	0.3185
942	SLU 27	0.92	0.35	30.31	-7.1831	0.0147	0.3251
942	SLU 28	0.92	0.39	30.31	-7.1837	0.0147	0.3256
942	SLU 29	0.91	0.34	30.09	-7.1346	0.0146	0.323
942	SLU 30	0.91	0.38	30.1	-7.1352	0.0146	0.3235
942	SLU 31	0.96	0.47	32.85	-7.7549	0.0168	0.3412
942	SLU 32	0.98	0.42	33.34	-7.8632	0.017	0.3478
942	SLU 33	0.98	0.45	33.34	-7.8638	0.017	0.3483
942	SLU 34	0.98	0.47	33.12	-7.8158	0.0169	0.3465
942	SLU 35	1	0.42	33.61	-7.9241	0.0171	0.3531

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
942	SLU 36	1	0.45	33.62	-7.9247	0.0171	0.3536
942	SLU 37	0.99	0.41	33.39	-7.8756	0.017	0.3509
942	SLU 38	0.99	0.44	33.4	-7.8763	0.017	0.3514
942	SLU 39	1	0.43	34.26	-8.0714	0.0178	0.3524
942	SLU 40	1	0.47	34.26	-8.072	0.0178	0.3529
942	SLU 41	1.01	0.43	34.54	-8.1323	0.0179	0.3577
942	SLU 42	1.01	0.47	34.54	-8.1329	0.0179	0.3581
942	SLU 43	1.02	0.34	33.17	-7.9404	0.015	0.3599
942	SLU 44	1.02	0.4	33.18	-7.9415	0.015	0.3608
942	SLU 45	1.04	0.35	33.67	-8.0498	0.0153	0.3673
942	SLU 46	1.04	0.39	33.67	-8.0504	0.0153	0.3678
942	SLU 47	1.03	0.4	33.45	-8.0024	0.0151	0.366
942	SLU 48	1.05	0.35	33.94	-8.1107	0.0154	0.3726
942	SLU 49	1.05	0.39	33.94	-8.1114	0.0154	0.3731
942	SLU 50	1.05	0.34	33.72	-8.0622	0.0152	0.3704
942	SLU 51	1.05	0.38	33.72	-8.0629	0.0152	0.3709
942	SLU 52	1.1	0.47	36.48	-8.6825	0.0174	0.3887
942	SLU 53	1.12	0.42	36.97	-8.7909	0.0177	0.3953
942	SLU 54	1.12	0.45	36.97	-8.7915	0.0177	0.3958
942	SLU 55	1.11	0.47	36.75	-8.7434	0.0175	0.394
942	SLU 56	1.13	0.42	37.24	-8.8518	0.0178	0.4005
942	SLU 57	1.13	0.45	37.24	-8.8524	0.0178	0.401
942	SLU 58	1.13	0.41	37.02	-8.8033	0.0176	0.3984
942	SLU 59	1.13	0.44	37.02	-8.8039	0.0176	0.3989
942	SLU 60	1.13	0.43	37.89	-8.999	0.0184	0.3999
942	SLU 61	1.13	0.47	37.89	-8.9997	0.0184	0.4004
942	SLU 62	1.14	0.43	38.16	-9.0599	0.0185	0.4051
942	SLU 63	1.15	0.47	38.16	-9.0606	0.0185	0.4056
942	SLU 64	1.1	0.41	36.36	-8.6564	0.0173	0.3881
942	SLU 65	1.1	0.47	36.36	-8.6574	0.0173	0.3889
942	SLU 66	1.12	0.42	36.85	-8.7658	0.0175	0.3955
942	SLU 67	1.12	0.45	36.86	-8.7664	0.0175	0.396
942	SLU 68	1.11	0.47	36.64	-8.7183	0.0174	0.3942
942	SLU 69	1.13	0.42	37.13	-8.8267	0.0176	0.4008
942	SLU 70	1.13	0.45	37.13	-8.8273	0.0176	0.4012
942	SLU 71	1.13	0.41	36.91	-8.7782	0.0175	0.3986
942	SLU 72	1.13	0.44	36.91	-8.7788	0.0175	0.3991
942	SLU 73	1.18	0.53	39.66	-9.3984	0.0197	0.4169
942	SLU 74	1.2	0.48	40.15	-9.5068	0.0199	0.4235
942	SLU 75	1.2	0.52	40.16	-9.5074	0.0199	0.4239
942	SLU 76	1.19	0.53	39.94	-9.4593	0.0198	0.4221
942	SLU 77	1.21	0.48	40.43	-9.5677	0.02	0.4287
942	SLU 78	1.21	0.52	40.43	-9.5683	0.02	0.4292
942	SLU 79	1.21	0.47	40.21	-9.5192	0.0199	0.4266
942	SLU 80	1.21	0.51	40.21	-9.5198	0.0199	0.4271
942	SLU 81	1.21	0.5	41.08	-9.715	0.0207	0.428
942	SLU 82	1.21	0.53	41.08	-9.7156	0.0207	0.4285
942	SLU 83	1.22	0.5	41.35	-9.7759	0.0208	0.4333
942	SLU 84	1.23	0.53	41.35	-9.7765	0.0208	0.4338
942	SLE RA 1	0.83	0.3	27.27	-6.5014	0.0128	0.2924
942	SLE RA 2	0.83	0.34	27.27	-6.5021	0.0128	0.2929
942	SLE RA 3	0.84	0.31	27.6	-6.5743	0.013	0.2973
942	SLE RA 4	0.84	0.33	27.6	-6.5747	0.013	0.2976
942	SLE RA 5	0.84	0.34	27.45	-6.5427	0.0129	0.2964
942	SLE RA 6	0.85	0.31	27.78	-6.6149	0.013	0.3008
942	SLE RA 7	0.85	0.33	27.78	-6.6153	0.013	0.3011
942	SLE RA 8	0.85	0.3	27.63	-6.5826	0.0129	0.2994
942	SLE RA 9	0.85	0.32	27.64	-6.583	0.0129	0.2997
942	SLE RA 10	0.88	0.38	29.47	-6.9961	0.0144	0.3115
942	SLE RA 11	0.89	0.35	29.8	-7.0683	0.0146	0.3159
942	SLE RA 12	0.89	0.37	29.8	-7.0688	0.0146	0.3162
942	SLE RA 13	0.89	0.38	29.65	-7.0367	0.0145	0.315
942	SLE RA 14	0.9	0.35	29.98	-7.109	0.0146	0.3194
942	SLE RA 15	0.9	0.37	29.98	-7.1094	0.0146	0.3197
942	SLE RA 16	0.9	0.34	29.83	-7.0766	0.0145	0.318
942	SLE RA 17	0.9	0.37	29.84	-7.077	0.0145	0.3183
942	SLE RA 18	0.9	0.36	30.41	-7.2071	0.0151	0.319
942	SLE RA 19	0.9	0.38	30.41	-7.2076	0.0151	0.3193
942	SLE RA 20	0.91	0.36	30.6	-7.2477	0.0151	0.3225
942	SLE RA 21	0.91	0.38	30.6	-7.2482	0.0151	0.3228
942	SLE FR 1	0.83	0.3	27.27	-6.5014	0.0128	0.2924
942	SLE FR 2	0.83	0.31	27.27	-6.5015	0.0128	0.2925
942	SLE FR 3	0.83	0.3	27.34	-6.5176	0.0128	0.2938
942	SLE FR 4	0.85	0.32	28.21	-6.7133	0.0135	0.3004
942	SLE FR 5	0.85	0.32	28.29	-6.7294	0.0135	0.3017
942	SLE FR 6	0.86	0.33	28.84	-6.8543	0.0139	0.3057
942	SLE QP 1	0.83	0.3	27.27	-6.5014	0.0128	0.2924
942	SLE QP 2	0.85	0.32	28.21	-6.7131	0.0135	0.3003
942	SLD 1	4.63	0.43	24.47	-5.9141	0.0247	1.6252
942	SLD 2	4.46	0.71	24.43	-5.9054	0.0247	1.5657
942	SLD 3	4.54	-0.76	24.88	-6.0871	0.0242	1.591
942	SLD 4	4.36	-0.48	24.84	-6.0784	0.0241	1.5315
942	SLD 5	2.16	2.1	26.47	-6.2126	0.0177	0.76
942	SLD 6	2.05	2.29	26.45	-6.2069	0.0177	0.7214
942	SLD 7	1.84	-1.86	27.84	-6.7892	0.0159	0.6461
942	SLD 8	1.73	-1.67	27.82	-6.7835	0.0159	0.6075
942	SLD 9	-0.03	2.31	28.61	-6.6427	0.0111	-0.0068
942	SLD 10	-0.14	2.49	28.58	-6.637	0.0111	-0.0454
942	SLD 11	-0.35	-1.66	29.98	-7.2193	0.0093	-0.1207
942	SLD 12	-0.46	-1.47	29.95	-7.2137	0.0093	-0.1593
942	SLD 13	-2.67	1.11	31.58	-7.3479	0.0028	-0.9308

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
942	SLD 14	-2.84	1.39	31.54	-7.3391	0.0028	-0.9903
942	SLD 15	-2.76	-0.08	31.99	-7.5209	0.0023	-0.965
942	SLD 16	-2.94	0.2	31.95	-7.5121	0.0023	-1.0245
942	SLV 1	9.7	0.54	19.46	-4.8446	0.0397	3.3985
942	SLV 2	9.3	1.21	19.37	-4.8242	0.0397	3.2598
942	SLV 3	9.47	-2.16	20.42	-5.2478	0.0384	3.3189
942	SLV 4	9.07	-1.5	20.33	-5.2275	0.0384	3.1802
942	SLV 5	3.91	4.37	24.15	-5.5444	0.0233	1.374
942	SLV 6	3.66	4.8	24.09	-5.5314	0.0232	1.2854
942	SLV 7	3.16	-4.64	27.34	-6.8886	0.0191	1.1087
942	SLV 8	2.91	-4.22	27.28	-6.8756	0.019	1.0201
942	SLV 9	-1.21	4.85	29.14	-6.5507	0.0079	-0.4194
942	SLV 10	-1.47	5.28	29.08	-6.5377	0.0079	-0.508
942	SLV 11	-1.96	-4.17	32.33	-7.8948	0.0037	-0.6847
942	SLV 12	-2.21	-3.74	32.27	-7.8818	0.0037	-0.7733
942	SLV 13	-7.38	2.13	36.1	-8.1988	-0.0114	-2.5795
942	SLV 14	-7.78	2.8	36	-8.1784	-0.0115	-2.7182
942	SLV 15	-7.6	-0.58	37.05	-8.602	-0.0127	-2.6591
942	SLV 16	-8	0.09	36.96	-8.5816	-0.0127	-2.7978
942	CRTFP Ux+	0	0	0	0	0	0
942	CRTFP Ux-	0	0	0	0	0	0
942	CRTFP Uy+	0	0	0	0	0	0
942	CRTFP Uy-	0	0	0	0	0	0
943	SLU 1	0.81	0.37	26.22	-6.1529	-0.0026	0.2853
943	SLU 2	0.81	0.44	26.22	-6.154	-0.0026	0.2861
943	SLU 3	0.83	0.39	26.71	-6.2594	-0.0027	0.2927
943	SLU 4	0.83	0.43	26.71	-6.2601	-0.0027	0.2932
943	SLU 5	0.82	0.44	26.49	-6.2136	-0.0027	0.2914
943	SLU 6	0.84	0.39	26.98	-6.319	-0.0027	0.298
943	SLU 7	0.84	0.43	26.98	-6.3197	-0.0027	0.2985
943	SLU 8	0.84	0.38	26.76	-6.272	-0.0027	0.2959
943	SLU 9	0.84	0.42	26.77	-6.2727	-0.0027	0.2964
943	SLU 10	0.89	0.52	29.48	-6.868	-0.0023	0.3141
943	SLU 11	0.9	0.47	29.97	-6.9734	-0.0024	0.3207
943	SLU 12	0.91	0.5	29.97	-6.9741	-0.0024	0.3212
943	SLU 13	0.9	0.52	29.75	-6.9276	-0.0024	0.3194
943	SLU 14	0.92	0.47	30.24	-7.033	-0.0024	0.326
943	SLU 15	0.92	0.51	30.24	-7.0337	-0.0025	0.3265
943	SLU 16	0.91	0.46	30.02	-6.986	-0.0024	0.3238
943	SLU 17	0.91	0.49	30.03	-6.9867	-0.0024	0.3243
943	SLU 18	0.92	0.49	30.88	-7.1729	-0.0022	0.3252
943	SLU 19	0.92	0.53	30.88	-7.1736	-0.0022	0.3258
943	SLU 20	0.93	0.49	31.15	-7.2325	-0.0022	0.3305
943	SLU 21	0.93	0.53	31.15	-7.2331	-0.0022	0.331
943	SLU 22	0.88	0.45	29.37	-6.8431	-0.0024	0.3135
943	SLU 23	0.89	0.51	29.37	-6.8443	-0.0024	0.3143
943	SLU 24	0.91	0.46	29.86	-6.9496	-0.0024	0.3209
943	SLU 25	0.91	0.5	29.86	-6.9503	-0.0025	0.3214
943	SLU 26	0.9	0.52	29.65	-6.9038	-0.0024	0.3196
943	SLU 27	0.92	0.46	30.13	-7.0092	-0.0025	0.3262
943	SLU 28	0.92	0.5	30.13	-7.0099	-0.0025	0.3267
943	SLU 29	0.91	0.45	29.92	-6.9622	-0.0025	0.324
943	SLU 30	0.92	0.49	29.92	-6.9629	-0.0025	0.3246
943	SLU 31	0.97	0.59	32.63	-7.5583	-0.0021	0.3423
943	SLU 32	0.98	0.54	33.12	-7.6636	-0.0022	0.3489
943	SLU 33	0.99	0.58	33.12	-7.6643	-0.0022	0.3494
943	SLU 34	0.98	0.59	32.91	-7.6178	-0.0022	0.3476
943	SLU 35	1	0.54	33.39	-7.7232	-0.0022	0.3542
943	SLU 36	1	0.58	33.4	-7.7239	-0.0022	0.3547
943	SLU 37	0.99	0.53	33.18	-7.6762	-0.0022	0.352
943	SLU 38	0.99	0.57	33.18	-7.6769	-0.0022	0.3525
943	SLU 39	1	0.56	34.03	-7.8631	-0.0019	0.3534
943	SLU 40	1	0.6	34.03	-7.8638	-0.0019	0.3539
943	SLU 41	1.01	0.56	34.3	-7.9227	-0.002	0.3587
943	SLU 42	1.01	0.6	34.3	-7.9234	-0.002	0.3592
943	SLU 43	1.02	0.46	33	-7.7621	-0.0034	0.3612
943	SLU 44	1.02	0.52	33.01	-7.7633	-0.0034	0.3621
943	SLU 45	1.04	0.47	33.49	-7.8686	-0.0035	0.3686
943	SLU 46	1.04	0.51	33.49	-7.8693	-0.0035	0.3692
943	SLU 47	1.04	0.53	33.28	-7.8228	-0.0035	0.3673
943	SLU 48	1.06	0.47	33.76	-7.9282	-0.0036	0.3739
943	SLU 49	1.06	0.51	33.77	-7.9289	-0.0036	0.3744
943	SLU 50	1.05	0.46	33.55	-7.8812	-0.0036	0.3718
943	SLU 51	1.05	0.5	33.55	-7.8819	-0.0036	0.3723
943	SLU 52	1.1	0.6	36.27	-8.4773	-0.0031	0.39
943	SLU 53	1.12	0.55	36.75	-8.5826	-0.0032	0.3966
943	SLU 54	1.12	0.59	36.75	-8.5833	-0.0032	0.3971
943	SLU 55	1.12	0.61	36.54	-8.5368	-0.0032	0.3953
943	SLU 56	1.13	0.55	37.03	-8.6422	-0.0033	0.4019
943	SLU 57	1.14	0.59	37.03	-8.6429	-0.0033	0.4024
943	SLU 58	1.13	0.54	36.81	-8.5952	-0.0033	0.3997
943	SLU 59	1.13	0.58	36.81	-8.5959	-0.0033	0.4003
943	SLU 60	1.13	0.57	37.66	-8.7821	-0.003	0.4012
943	SLU 61	1.13	0.61	37.66	-8.7828	-0.003	0.4017
943	SLU 62	1.15	0.57	37.93	-8.8417	-0.0031	0.4064
943	SLU 63	1.15	0.61	37.93	-8.8424	-0.0031	0.407
943	SLU 64	1.1	0.54	36.15	-8.4523	-0.0032	0.3894
943	SLU 65	1.1	0.6	36.16	-8.4535	-0.0032	0.3903
943	SLU 66	1.12	0.55	36.64	-8.5588	-0.0033	0.3968
943	SLU 67	1.12	0.59	36.65	-8.5595	-0.0033	0.3974
943	SLU 68	1.12	0.6	36.43	-8.513	-0.0033	0.3955

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
943	SLU 69	1.14	0.55	36.92	-8.6184	-0.0034	0.4021
943	SLU 70	1.14	0.59	36.92	-8.6191	-0.0034	0.4026
943	SLU 71	1.13	0.54	36.7	-8.5715	-0.0034	0.4
943	SLU 72	1.13	0.58	36.7	-8.5721	-0.0034	0.4005
943	SLU 73	1.18	0.68	39.42	-9.1675	-0.0029	0.4182
943	SLU 74	1.2	0.63	39.9	-9.2728	-0.003	0.4248
943	SLU 75	1.2	0.67	39.91	-9.2735	-0.003	0.4253
943	SLU 76	1.19	0.68	39.69	-9.227	-0.003	0.4235
943	SLU 77	1.21	0.63	40.18	-9.3324	-0.0031	0.4301
943	SLU 78	1.21	0.67	40.18	-9.3331	-0.0031	0.4306
943	SLU 79	1.21	0.62	39.96	-9.2855	-0.0031	0.4279
943	SLU 80	1.21	0.66	39.96	-9.2861	-0.0031	0.4284
943	SLU 81	1.21	0.65	40.81	-9.4723	-0.0028	0.4294
943	SLU 82	1.21	0.69	40.81	-9.473	-0.0028	0.4299
943	SLU 83	1.23	0.65	41.08	-9.5319	-0.0029	0.4346
943	SLU 84	1.23	0.69	41.09	-9.5326	-0.0029	0.4351
943	SLE RA 1	0.83	0.4	27.12	-6.3501	-0.0025	0.2933
943	SLE RA 2	0.83	0.44	27.12	-6.3509	-0.0025	0.2939
943	SLE RA 3	0.84	0.4	27.44	-6.4211	-0.0026	0.2983
943	SLE RA 4	0.84	0.43	27.45	-6.4216	-0.0026	0.2986
943	SLE RA 5	0.84	0.44	27.3	-6.3906	-0.0026	0.2974
943	SLE RA 6	0.85	0.41	27.63	-6.4608	-0.0026	0.3018
943	SLE RA 7	0.85	0.43	27.63	-6.4613	-0.0026	0.3022
943	SLE RA 8	0.85	0.4	27.48	-6.4295	-0.0026	0.3004
943	SLE RA 9	0.85	0.42	27.48	-6.43	-0.0026	0.3007
943	SLE RA 10	0.88	0.49	29.29	-6.8269	-0.0023	0.3126
943	SLE RA 11	0.89	0.46	29.62	-6.8971	-0.0024	0.3169
943	SLE RA 12	0.9	0.48	29.62	-6.8976	-0.0024	0.3173
943	SLE RA 13	0.89	0.49	29.48	-6.8666	-0.0024	0.3161
943	SLE RA 14	0.9	0.46	29.8	-6.9368	-0.0024	0.3205
943	SLE RA 15	0.91	0.48	29.8	-6.9373	-0.0024	0.3208
943	SLE RA 16	0.9	0.45	29.66	-6.9055	-0.0024	0.319
943	SLE RA 17	0.9	0.48	29.66	-6.906	-0.0024	0.3194
943	SLE RA 18	0.9	0.47	30.22	-7.0301	-0.0022	0.32
943	SLE RA 19	0.9	0.5	30.22	-7.0306	-0.0022	0.3203
943	SLE RA 20	0.91	0.47	30.41	-7.0698	-0.0023	0.3235
943	SLE RA 21	0.91	0.5	30.41	-7.0703	-0.0023	0.3238
943	SLE FR 1	0.83	0.4	27.12	-6.3501	-0.0025	0.2933
943	SLE FR 2	0.83	0.4	27.12	-6.3502	-0.0025	0.2935
943	SLE FR 3	0.83	0.4	27.19	-6.366	-0.0025	0.2948
943	SLE FR 4	0.85	0.43	28.05	-6.5542	-0.0024	0.3014
943	SLE FR 5	0.85	0.42	28.12	-6.57	-0.0024	0.3027
943	SLE FR 6	0.87	0.43	28.67	-6.6901	-0.0024	0.3067
943	SLE QP 1	0.83	0.4	27.12	-6.3501	-0.0025	0.2933
943	SLE QP 2	0.85	0.42	28.05	-6.5541	-0.0024	0.3013
943	SLD 1	4.63	0.56	23.95	-5.6542	0.0118	1.6263
943	SLD 2	4.46	0.87	23.91	-5.6462	0.0118	1.5668
943	SLD 3	4.54	-0.67	24.35	-5.8206	0.0109	1.5918
943	SLD 4	4.37	-0.37	24.31	-5.8126	0.0109	1.5324
943	SLD 5	2.16	2.28	26.23	-6.0332	0.0032	0.7615
943	SLD 6	2.05	2.48	26.2	-6.028	0.0032	0.7229
943	SLD 7	1.84	-1.84	27.55	-6.5878	0.0002	0.6466
943	SLD 8	1.73	-1.64	27.52	-6.5826	0.0002	0.608
943	SLD 9	-0.03	2.47	28.58	-6.5256	-0.005	-0.0053
943	SLD 10	-0.14	2.67	28.55	-6.5204	-0.005	-0.0439
943	SLD 11	-0.35	-1.64	29.9	-7.0802	-0.0081	-0.1202
943	SLD 12	-0.46	-1.44	29.87	-7.075	-0.0081	-0.1588
943	SLD 13	-2.66	1.21	31.79	-7.2956	-0.0158	-0.9297
943	SLD 14	-2.84	1.51	31.75	-7.2876	-0.0157	-0.9891
943	SLD 15	-2.76	-0.03	32.19	-7.462	-0.0167	-0.9642
943	SLD 16	-2.93	0.28	32.15	-7.454	-0.0167	-1.0236
943	SLV 1	9.7	0.71	18.47	-4.4495	0.0309	3.3996
943	SLV 2	9.3	1.43	18.37	-4.4308	0.0309	3.2611
943	SLV 3	9.47	-2.1	19.39	-4.8374	0.0287	3.3194
943	SLV 4	9.07	-1.39	19.29	-4.8188	0.0287	3.1809
943	SLV 5	3.91	4.65	23.8	-5.3375	0.0108	1.376
943	SLV 6	3.66	5.11	23.74	-5.3256	0.0108	1.2875
943	SLV 7	3.16	-4.72	26.86	-6.6306	0.0036	1.1085
943	SLV 8	2.91	-4.27	26.8	-6.6187	0.0037	1.0201
943	SLV 9	-1.21	5.1	29.3	-6.4895	-0.0085	-0.4174
943	SLV 10	-1.46	5.56	29.24	-6.4776	-0.0085	-0.5058
943	SLV 11	-1.96	-4.27	32.36	-7.7826	-0.0157	-0.6849
943	SLV 12	-2.21	-3.81	32.3	-7.7707	-0.0157	-0.7733
943	SLV 13	-7.37	2.22	36.81	-8.2894	-0.0336	-2.5782
943	SLV 14	-7.77	2.94	36.71	-8.2708	-0.0336	-2.7167
943	SLV 15	-7.6	-0.59	37.73	-8.6773	-0.0358	-2.6585
943	SLV 16	-8	0.12	37.63	-8.6587	-0.0357	-2.797
943	CRTFP Ux+	0	0	0	0	0	0
943	CRTFP Ux-	0	0	0	0	0	0
943	CRTFP Uy+	0	0	0	0	0	0
943	CRTFP Uy-	0	0	0	0	0	0
944	SLU 1	0.81	0.48	26.5	-6.2425	-0.0163	0.2859
944	SLU 2	0.81	0.55	26.5	-6.2438	-0.0163	0.2868
944	SLU 3	0.83	0.49	27	-6.3512	-0.0166	0.2933
944	SLU 4	0.83	0.53	27	-6.352	-0.0166	0.2939
944	SLU 5	0.82	0.55	26.78	-6.3048	-0.0165	0.2921
944	SLU 6	0.84	0.5	27.27	-6.4123	-0.0169	0.2986
944	SLU 7	0.84	0.54	27.28	-6.413	-0.0169	0.2992
944	SLU 8	0.84	0.49	27.06	-6.3646	-0.0167	0.2965
944	SLU 9	0.84	0.53	27.06	-6.3653	-0.0167	0.297
944	SLU 10	0.89	0.64	29.78	-6.964	-0.0179	0.3147

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
944	SLU 11	0.91	0.59	30.28	-7.0715	-0.0183	0.3213
944	SLU 12	0.91	0.63	30.28	-7.0722	-0.0183	0.3218
944	SLU 13	0.9	0.65	30.06	-7.025	-0.0182	0.32
944	SLU 14	0.92	0.59	30.56	-7.1325	-0.0185	0.3266
944	SLU 15	0.92	0.63	30.56	-7.1333	-0.0185	0.3271
944	SLU 16	0.91	0.58	30.34	-7.0849	-0.0184	0.3244
944	SLU 17	0.92	0.62	30.34	-7.0856	-0.0184	0.325
944	SLU 18	0.92	0.62	31.19	-7.2714	-0.0186	0.3258
944	SLU 19	0.92	0.66	31.19	-7.2722	-0.0186	0.3263
944	SLU 20	0.93	0.62	31.47	-7.3325	-0.0189	0.3311
944	SLU 21	0.93	0.66	31.47	-7.3332	-0.0189	0.3316
944	SLU 22	0.89	0.57	29.67	-6.9393	-0.0179	0.3141
944	SLU 23	0.89	0.64	29.68	-6.9405	-0.0179	0.315
944	SLU 24	0.91	0.58	30.17	-7.048	-0.0183	0.3215
944	SLU 25	0.91	0.62	30.17	-7.0487	-0.0183	0.3221
944	SLU 26	0.9	0.64	29.96	-7.0015	-0.0182	0.3203
944	SLU 27	0.92	0.59	30.45	-7.109	-0.0186	0.3268
944	SLU 28	0.92	0.63	30.45	-7.1098	-0.0186	0.3274
944	SLU 29	0.92	0.58	30.23	-7.0613	-0.0184	0.3247
944	SLU 30	0.92	0.62	30.23	-7.0621	-0.0184	0.3252
944	SLU 31	0.97	0.73	32.96	-7.6607	-0.0196	0.3429
944	SLU 32	0.98	0.68	33.45	-7.7682	-0.02	0.3495
944	SLU 33	0.99	0.72	33.45	-7.769	-0.02	0.35
944	SLU 34	0.98	0.74	33.24	-7.7218	-0.0198	0.3482
944	SLU 35	1	0.68	33.73	-7.8293	-0.0202	0.3548
944	SLU 36	1	0.72	33.73	-7.83	-0.0202	0.3553
944	SLU 37	0.99	0.67	33.51	-7.7816	-0.0201	0.3526
944	SLU 38	0.99	0.71	33.51	-7.7823	-0.0201	0.3532
944	SLU 39	1	0.71	34.36	-7.9682	-0.0203	0.354
944	SLU 40	1	0.75	34.36	-7.9689	-0.0203	0.3545
944	SLU 41	1.01	0.71	34.64	-8.0292	-0.0206	0.3593
944	SLU 42	1.01	0.75	34.64	-8.03	-0.0206	0.3598
944	SLU 43	1.02	0.59	33.36	-7.8764	-0.0206	0.362
944	SLU 44	1.02	0.66	33.36	-7.8776	-0.0206	0.3629
944	SLU 45	1.04	0.61	33.86	-7.9851	-0.0209	0.3694
944	SLU 46	1.04	0.65	33.86	-7.9859	-0.0209	0.37
944	SLU 47	1.04	0.66	33.64	-7.9387	-0.0208	0.3682
944	SLU 48	1.06	0.61	34.14	-8.0462	-0.0212	0.3747
944	SLU 49	1.06	0.65	34.14	-8.0469	-0.0212	0.3753
944	SLU 50	1.05	0.6	33.92	-7.9985	-0.021	0.3726
944	SLU 51	1.05	0.64	33.92	-7.9992	-0.021	0.3731
944	SLU 52	1.1	0.76	36.65	-8.5979	-0.0222	0.3908
944	SLU 53	1.12	0.7	37.14	-8.7054	-0.0226	0.3974
944	SLU 54	1.12	0.74	37.14	-8.7061	-0.0226	0.3979
944	SLU 55	1.12	0.76	36.92	-8.6589	-0.0225	0.3961
944	SLU 56	1.14	0.71	37.42	-8.7664	-0.0228	0.4027
944	SLU 57	1.14	0.75	37.42	-8.7671	-0.0228	0.4032
944	SLU 58	1.13	0.7	37.2	-8.7187	-0.0227	0.4005
944	SLU 59	1.13	0.74	37.2	-8.7195	-0.0227	0.4011
944	SLU 60	1.13	0.73	38.05	-8.9053	-0.0229	0.4019
944	SLU 61	1.13	0.77	38.05	-8.9061	-0.0229	0.4024
944	SLU 62	1.15	0.73	38.33	-8.9664	-0.0232	0.4072
944	SLU 63	1.15	0.77	38.33	-8.9671	-0.0232	0.4077
944	SLU 64	1.1	0.68	36.54	-8.5731	-0.0222	0.3902
944	SLU 65	1.1	0.75	36.54	-8.5744	-0.0222	0.3911
944	SLU 66	1.12	0.7	37.03	-8.6818	-0.0226	0.3976
944	SLU 67	1.12	0.74	37.03	-8.6826	-0.0226	0.3982
944	SLU 68	1.12	0.75	36.82	-8.6354	-0.0225	0.3964
944	SLU 69	1.14	0.7	37.31	-8.7429	-0.0229	0.4029
944	SLU 70	1.14	0.74	37.31	-8.7436	-0.0229	0.4035
944	SLU 71	1.13	0.69	37.09	-8.6952	-0.0227	0.4008
944	SLU 72	1.13	0.73	37.09	-8.696	-0.0227	0.4013
944	SLU 73	1.18	0.85	39.82	-9.2946	-0.0239	0.419
944	SLU 74	1.2	0.79	40.31	-9.4021	-0.0243	0.4256
944	SLU 75	1.2	0.83	40.32	-9.4028	-0.0243	0.4261
944	SLU 76	1.2	0.85	40.1	-9.3557	-0.0241	0.4243
944	SLU 77	1.21	0.8	40.59	-9.4631	-0.0245	0.4309
944	SLU 78	1.22	0.84	40.59	-9.4639	-0.0245	0.4314
944	SLU 79	1.21	0.79	40.37	-9.4155	-0.0244	0.4287
944	SLU 80	1.21	0.83	40.37	-9.4162	-0.0244	0.4293
944	SLU 81	1.21	0.82	41.22	-9.6021	-0.0246	0.4301
944	SLU 82	1.21	0.86	41.22	-9.6028	-0.0246	0.4306
944	SLU 83	1.23	0.82	41.5	-9.6631	-0.0249	0.4354
944	SLU 84	1.23	0.86	41.5	-9.6638	-0.0249	0.4359
944	SLE RA 1	0.83	0.51	27.41	-6.4416	-0.0167	0.2939
944	SLE RA 2	0.83	0.55	27.41	-6.4424	-0.0167	0.2945
944	SLE RA 3	0.84	0.52	27.74	-6.5141	-0.017	0.2989
944	SLE RA 4	0.84	0.54	27.74	-6.5146	-0.017	0.2993
944	SLE RA 5	0.84	0.55	27.59	-6.4831	-0.0169	0.2981
944	SLE RA 6	0.85	0.52	27.92	-6.5548	-0.0172	0.3024
944	SLE RA 7	0.85	0.54	27.92	-6.5553	-0.0172	0.3028
944	SLE RA 8	0.85	0.51	27.78	-6.523	-0.0171	0.301
944	SLE RA 9	0.85	0.54	27.78	-6.5235	-0.0171	0.3014
944	SLE RA 10	0.88	0.61	29.6	-6.9226	-0.0178	0.3132
944	SLE RA 11	0.89	0.58	29.93	-6.9942	-0.0181	0.3175
944	SLE RA 12	0.9	0.61	29.93	-6.9947	-0.0181	0.3179
944	SLE RA 13	0.89	0.62	29.78	-6.9633	-0.018	0.3167
944	SLE RA 14	0.9	0.58	30.11	-7.0349	-0.0183	0.3211
944	SLE RA 15	0.91	0.61	30.11	-7.0354	-0.0183	0.3214
944	SLE RA 16	0.9	0.57	29.96	-7.0031	-0.0182	0.3196
944	SLE RA 17	0.9	0.6	29.97	-7.0036	-0.0182	0.32

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
944	SLE RA 18	0.9	0.6	30.53	-7.1275	-0.0183	0.3206
944	SLE RA 19	0.9	0.62	30.53	-7.128	-0.0183	0.3209
944	SLE RA 20	0.91	0.6	30.72	-7.1682	-0.0185	0.3241
944	SLE RA 21	0.91	0.63	30.72	-7.1687	-0.0185	0.3244
944	SLE FR 1	0.83	0.51	27.41	-6.4416	-0.0167	0.2939
944	SLE FR 2	0.83	0.51	27.41	-6.4418	-0.0167	0.294
944	SLE FR 3	0.83	0.51	27.48	-6.4579	-0.0168	0.2953
944	SLE FR 4	0.85	0.54	28.34	-6.6475	-0.0172	0.302
944	SLE FR 5	0.86	0.53	28.42	-6.6637	-0.0173	0.3033
944	SLE FR 6	0.87	0.55	28.97	-6.7846	-0.0175	0.3072
944	SLE QP 1	0.83	0.51	27.41	-6.4416	-0.0167	0.2939
944	SLE QP 2	0.85	0.53	28.34	-6.6474	-0.0172	0.3019
944	SLD 1	4.63	0.72	23.81	-5.6067	-0.0001	1.6268
944	SLD 2	4.46	1.05	23.77	-5.599	-0.0001	1.5675
944	SLD 3	4.54	-0.58	24.18	-5.762	-0.0014	1.5921
944	SLD 4	4.36	-0.25	24.14	-5.7543	-0.0013	1.5328
944	SLD 5	2.16	2.5	26.43	-6.101	-0.0102	0.7624
944	SLD 6	2.05	2.71	26.4	-6.0961	-0.0102	0.7239
944	SLD 7	1.84	-1.82	27.67	-6.6186	-0.0144	0.6466
944	SLD 8	1.73	-1.61	27.64	-6.6136	-0.0143	0.6081
944	SLD 9	-0.03	2.67	29.05	-6.6812	-0.0201	-0.0043
944	SLD 10	-0.14	2.89	29.02	-6.6762	-0.0201	-0.0428
944	SLD 11	-0.35	-1.64	30.29	-7.1987	-0.0242	-0.1201
944	SLD 12	-0.46	-1.43	30.26	-7.1937	-0.0242	-0.1586
944	SLD 13	-2.66	1.31	32.54	-7.5405	-0.0331	-0.9289
944	SLD 14	-2.83	1.64	32.5	-7.5328	-0.033	-0.9883
944	SLD 15	-2.76	0.02	32.92	-7.6957	-0.0343	-0.9637
944	SLD 16	-2.93	0.35	32.87	-7.688	-0.0343	-1.023
944	SLV 1	9.7	0.93	17.75	-4.2132	0.0227	3.4002
944	SLV 2	9.3	1.69	17.65	-4.1954	0.0228	3.2619
944	SLV 3	9.47	-2.02	18.61	-4.5753	0.0198	3.3193
944	SLV 4	9.07	-1.26	18.51	-4.5574	0.0199	3.1811
944	SLV 5	3.91	4.99	23.87	-5.3711	-0.0008	1.3774
944	SLV 6	3.66	5.48	23.81	-5.3597	-0.0008	1.2891
944	SLV 7	3.16	-4.83	26.75	-6.5779	-0.0105	1.1079
944	SLV 8	2.91	-4.35	26.69	-6.5664	-0.0105	1.0196
944	SLV 9	-1.21	5.41	30	-6.7283	-0.024	-0.4158
944	SLV 10	-1.46	5.9	29.94	-6.7169	-0.0239	-0.5041
944	SLV 11	-1.96	-4.42	32.88	-7.9351	-0.0337	-0.6853
944	SLV 12	-2.21	-3.93	32.82	-7.9237	-0.0336	-0.7736
944	SLV 13	-7.37	2.32	38.18	-8.7374	-0.0544	-2.5773
944	SLV 14	-7.77	3.09	38.08	-8.7195	-0.0542	-2.7155
944	SLV 15	-7.59	-0.63	39.04	-9.0994	-0.0573	-2.6581
944	SLV 16	-7.99	0.14	38.94	-9.0815	-0.0571	-2.7963
944	CRTFP Ux+	0	0	0	0	0	0
944	CRTFP Ux-	0	0	0	0	0	0
944	CRTFP Uy+	0	0	0	0	0	0
944	CRTFP Uy-	0	0	0	0	0	0
945	SLU 1	0.81	0.59	27.16	-6.5417	-0.0278	0.2861
945	SLU 2	0.81	0.67	27.16	-6.543	-0.0277	0.287
945	SLU 3	0.83	0.61	27.67	-6.6571	-0.0284	0.2936
945	SLU 4	0.83	0.65	27.67	-6.6579	-0.0284	0.2942
945	SLU 5	0.82	0.67	27.45	-6.6081	-0.0281	0.2924
945	SLU 6	0.84	0.62	27.96	-6.7222	-0.0288	0.2989
945	SLU 7	0.84	0.66	27.96	-6.723	-0.0288	0.2995
945	SLU 8	0.84	0.6	27.73	-6.6718	-0.0285	0.2967
945	SLU 9	0.84	0.65	27.73	-6.6726	-0.0285	0.2973
945	SLU 10	0.89	0.78	30.52	-7.2992	-0.031	0.315
945	SLU 11	0.91	0.73	31.03	-7.4134	-0.0317	0.3215
945	SLU 12	0.91	0.77	31.03	-7.4142	-0.0317	0.3221
945	SLU 13	0.9	0.79	30.8	-7.3643	-0.0314	0.3203
945	SLU 14	0.92	0.73	31.31	-7.4784	-0.0321	0.3268
945	SLU 15	0.92	0.77	31.32	-7.4792	-0.0321	0.3274
945	SLU 16	0.91	0.72	31.09	-7.428	-0.0318	0.3247
945	SLU 17	0.92	0.76	31.09	-7.4288	-0.0318	0.3252
945	SLU 18	0.92	0.76	31.95	-7.622	-0.0325	0.326
945	SLU 19	0.92	0.8	31.95	-7.6228	-0.0325	0.3266
945	SLU 20	0.93	0.76	32.24	-7.687	-0.0328	0.3313
945	SLU 21	0.93	0.81	32.24	-7.6878	-0.0328	0.3319
945	SLU 22	0.89	0.7	30.41	-7.2737	-0.031	0.3143
945	SLU 23	0.89	0.77	30.41	-7.2751	-0.031	0.3152
945	SLU 24	0.91	0.72	30.92	-7.3892	-0.0317	0.3218
945	SLU 25	0.91	0.76	30.92	-7.39	-0.0317	0.3223
945	SLU 26	0.9	0.78	30.7	-7.3401	-0.0314	0.3205
945	SLU 27	0.92	0.72	31.21	-7.4543	-0.0321	0.3271
945	SLU 28	0.92	0.76	31.21	-7.4551	-0.0321	0.3277
945	SLU 29	0.92	0.71	30.98	-7.4039	-0.0318	0.3249
945	SLU 30	0.92	0.75	30.98	-7.4047	-0.0318	0.3255
945	SLU 31	0.97	0.89	33.77	-8.0313	-0.0343	0.3432
945	SLU 32	0.98	0.83	34.27	-8.1454	-0.035	0.3497
945	SLU 33	0.99	0.88	34.28	-8.1462	-0.035	0.3503
945	SLU 34	0.98	0.89	34.05	-8.0964	-0.0347	0.3485
945	SLU 35	1	0.84	34.56	-8.2105	-0.0353	0.355
945	SLU 36	1	0.88	34.56	-8.2113	-0.0353	0.3556
945	SLU 37	0.99	0.82	34.34	-8.1601	-0.0351	0.3529
945	SLU 38	0.99	0.87	34.34	-8.1609	-0.0351	0.3534
945	SLU 39	1	0.86	35.2	-8.354	-0.0357	0.3542
945	SLU 40	1	0.91	35.2	-8.3548	-0.0357	0.3548
945	SLU 41	1.01	0.87	35.49	-8.4191	-0.0361	0.3595
945	SLU 42	1.01	0.91	35.49	-8.4199	-0.0361	0.3601
945	SLU 43	1.02	0.74	34.19	-8.2532	-0.035	0.3623

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
945	SLU 44	1.02	0.81	34.19	-8.2545	-0.035	0.3632
945	SLU 45	1.04	0.75	34.7	-8.3686	-0.0356	0.3698
945	SLU 46	1.04	0.8	34.71	-8.3694	-0.0356	0.3703
945	SLU 47	1.04	0.81	34.48	-8.3196	-0.0353	0.3685
945	SLU 48	1.06	0.76	34.99	-8.4337	-0.036	0.3751
945	SLU 49	1.06	0.8	34.99	-8.4345	-0.036	0.3756
945	SLU 50	1.05	0.75	34.77	-8.3833	-0.0357	0.3729
945	SLU 51	1.05	0.79	34.77	-8.3841	-0.0357	0.3735
945	SLU 52	1.1	0.92	37.55	-9.0107	-0.0382	0.3911
945	SLU 53	1.12	0.87	38.06	-9.1249	-0.0389	0.3977
945	SLU 54	1.12	0.91	38.06	-9.1257	-0.0389	0.3982
945	SLU 55	1.12	0.93	37.84	-9.0758	-0.0386	0.3965
945	SLU 56	1.13	0.87	38.35	-9.1899	-0.0393	0.403
945	SLU 57	1.14	0.92	38.35	-9.1907	-0.0393	0.4036
945	SLU 58	1.13	0.86	38.12	-9.1395	-0.039	0.4008
945	SLU 59	1.13	0.91	38.12	-9.1403	-0.039	0.4014
945	SLU 60	1.13	0.9	38.98	-9.3335	-0.0397	0.4022
945	SLU 61	1.13	0.95	38.99	-9.3343	-0.0397	0.4027
945	SLU 62	1.15	0.91	39.27	-9.3985	-0.04	0.4075
945	SLU 63	1.15	0.95	39.27	-9.3993	-0.04	0.408
945	SLU 64	1.1	0.84	37.44	-8.9852	-0.0382	0.3905
945	SLU 65	1.1	0.91	37.44	-8.9866	-0.0382	0.3914
945	SLU 66	1.12	0.86	37.95	-9.1007	-0.0389	0.398
945	SLU 67	1.12	0.9	37.95	-9.1015	-0.0389	0.3985
945	SLU 68	1.12	0.92	37.73	-9.0516	-0.0386	0.3967
945	SLU 69	1.14	0.86	38.24	-9.1658	-0.0393	0.4033
945	SLU 70	1.14	0.91	38.24	-9.1666	-0.0393	0.4038
945	SLU 71	1.13	0.85	38.01	-9.1154	-0.039	0.4011
945	SLU 72	1.13	0.89	38.02	-9.1162	-0.039	0.4017
945	SLU 73	1.18	1.03	40.8	-9.7428	-0.0415	0.4193
945	SLU 74	1.2	0.97	41.31	-9.8569	-0.0422	0.4259
945	SLU 75	1.2	1.02	41.31	-9.8577	-0.0422	0.4264
945	SLU 76	1.19	1.03	41.09	-9.8079	-0.0419	0.4246
945	SLU 77	1.21	0.98	41.6	-9.922	-0.0426	0.4312
945	SLU 78	1.22	1.02	41.6	-9.9228	-0.0426	0.4318
945	SLU 79	1.21	0.97	41.37	-9.8716	-0.0423	0.429
945	SLU 80	1.21	1.01	41.37	-9.8724	-0.0423	0.4296
945	SLU 81	1.21	1.01	42.23	-10.0655	-0.0429	0.4304
945	SLU 82	1.21	1.05	42.24	-10.0663	-0.0429	0.4309
945	SLU 83	1.23	1.01	42.52	-10.1306	-0.0433	0.4357
945	SLU 84	1.23	1.05	42.52	-10.1314	-0.0433	0.4362
945	SLE RA 1	0.83	0.62	28.09	-6.7508	-0.0287	0.2942
945	SLE RA 2	0.83	0.67	28.09	-6.7517	-0.0287	0.2948
945	SLE RA 3	0.84	0.64	28.43	-6.8278	-0.0291	0.2992
945	SLE RA 4	0.84	0.66	28.43	-6.8284	-0.0291	0.2995
945	SLE RA 5	0.84	0.68	28.28	-6.7951	-0.0289	0.2983
945	SLE RA 6	0.85	0.64	28.62	-6.8712	-0.0294	0.3027
945	SLE RA 7	0.85	0.67	28.62	-6.8717	-0.0294	0.3031
945	SLE RA 8	0.85	0.63	28.47	-6.8376	-0.0292	0.3013
945	SLE RA 9	0.85	0.66	28.47	-6.8381	-0.0292	0.3016
945	SLE RA 10	0.88	0.75	30.32	-7.2559	-0.0309	0.3134
945	SLE RA 11	0.89	0.71	30.66	-7.332	-0.0313	0.3178
945	SLE RA 12	0.9	0.74	30.67	-7.3325	-0.0313	0.3181
945	SLE RA 13	0.89	0.75	30.52	-7.2992	-0.0311	0.3169
945	SLE RA 14	0.9	0.72	30.86	-7.3753	-0.0316	0.3213
945	SLE RA 15	0.91	0.74	30.86	-7.3759	-0.0316	0.3217
945	SLE RA 16	0.9	0.71	30.71	-7.3417	-0.0314	0.3199
945	SLE RA 17	0.9	0.74	30.71	-7.3423	-0.0314	0.3202
945	SLE RA 18	0.9	0.73	31.28	-7.471	-0.0318	0.3208
945	SLE RA 19	0.9	0.76	31.28	-7.4716	-0.0318	0.3211
945	SLE RA 20	0.91	0.74	31.47	-7.5144	-0.0321	0.3243
945	SLE RA 21	0.91	0.77	31.47	-7.5149	-0.0321	0.3247
945	SLE FR 1	0.83	0.62	28.09	-6.7508	-0.0287	0.2942
945	SLE FR 2	0.83	0.63	28.09	-6.751	-0.0287	0.2943
945	SLE FR 3	0.83	0.63	28.16	-6.7682	-0.0288	0.2956
945	SLE FR 4	0.85	0.67	29.04	-6.9671	-0.0296	0.3023
945	SLE FR 5	0.85	0.66	29.12	-6.9842	-0.0297	0.3036
945	SLE FR 6	0.87	0.68	29.68	-7.1109	-0.0303	0.3075
945	SLE QP 1	0.83	0.62	28.09	-6.7508	-0.0287	0.2942
945	SLE QP 2	0.85	0.66	29.04	-6.9669	-0.0296	0.3022
945	SLD 1	4.63	0.9	24.01	-5.7483	-0.0101	1.627
945	SLD 2	4.46	1.25	23.96	-5.7406	-0.01	1.5677
945	SLD 3	4.54	-0.47	24.35	-5.8897	-0.0116	1.592
945	SLD 4	4.36	-0.12	24.31	-5.882	-0.0115	1.5328
945	SLD 5	2.16	2.74	27.02	-6.3882	-0.0216	0.763
945	SLD 6	2.05	2.97	26.99	-6.3832	-0.0215	0.7245
945	SLD 7	1.84	-1.82	28.17	-6.8595	-0.0264	0.6464
945	SLD 8	1.73	-1.59	28.14	-6.8545	-0.0264	0.608
945	SLD 9	-0.03	2.9	29.95	-7.0793	-0.0329	-0.0037
945	SLD 10	-0.14	3.13	29.92	-7.0743	-0.0328	-0.0421
945	SLD 11	-0.35	-1.66	31.1	-7.5505	-0.0377	-0.1202
945	SLD 12	-0.46	-1.43	31.07	-7.5455	-0.0377	-0.1587
945	SLD 13	-2.66	1.43	33.78	-8.0518	-0.0478	-0.9285
945	SLD 14	-2.83	1.79	33.74	-8.0441	-0.0477	-0.9877
945	SLD 15	-2.76	0.07	34.13	-8.1932	-0.0492	-0.9634
945	SLD 16	-2.93	0.42	34.08	-8.1854	-0.0491	-1.0227
945	SLV 1	9.69	1.18	17.26	-4.1165	0.016	3.4002
945	SLV 2	9.29	2	17.16	-4.0985	0.0162	3.2622
945	SLV 3	9.47	-1.94	18.06	-4.4461	0.0126	3.3189
945	SLV 4	9.07	-1.11	17.96	-4.4281	0.0128	3.1809
945	SLV 5	3.91	5.39	24.31	-5.6148	-0.0108	1.3783

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
945	SLV 6	3.66	5.92	24.25	-5.6033	-0.0107	1.2901
945	SLV 7	3.16	-4.98	26.98	-6.7137	-0.0222	1.1072
945	SLV 8	2.91	-4.46	26.91	-6.7022	-0.0221	1.019
945	SLV 9	-1.2	5.77	31.17	-7.2316	-0.0372	-0.4147
945	SLV 10	-1.46	6.3	31.11	-7.2201	-0.0371	-0.5029
945	SLV 11	-1.96	-4.6	33.84	-8.3304	-0.0486	-0.6858
945	SLV 12	-2.21	-4.08	33.78	-8.319	-0.0485	-0.774
945	SLV 13	-7.37	2.43	40.13	-9.5057	-0.072	-2.5766
945	SLV 14	-7.77	3.25	40.03	-9.4877	-0.0718	-2.7146
945	SLV 15	-7.59	-0.68	40.93	-9.8353	-0.0755	-2.6579
945	SLV 16	-7.99	0.14	40.83	-9.8173	-0.0753	-2.7959
945	CRTFP Ux+	0	0	0	0	0	0
945	CRTFP Ux-	0	0	0	0	0	0
945	CRTFP Uy+	0	0	0	0	0	0
945	CRTFP Uy-	0	0	0	0	0	0
946	SLU 1	0.7	0.61	24.23	-6.0211	0.6534	0.2292
946	SLU 2	0.7	0.68	24.23	-6.0224	0.6535	0.2282
946	SLU 3	0.71	0.63	24.69	-6.1291	0.6657	0.2352
946	SLU 4	0.72	0.67	24.69	-6.1299	0.6658	0.2346
946	SLU 5	0.71	0.68	24.49	-6.0834	0.6604	0.2326
946	SLU 6	0.73	0.63	24.95	-6.1902	0.6726	0.2397
946	SLU 7	0.73	0.67	24.95	-6.1909	0.6727	0.239
946	SLU 8	0.72	0.62	24.75	-6.1431	0.6672	0.2381
946	SLU 9	0.72	0.66	24.75	-6.1439	0.6673	0.2375
946	SLU 10	0.77	0.79	27.22	-6.7228	0.7342	0.2489
946	SLU 11	0.78	0.75	27.68	-6.8295	0.7464	0.2559
946	SLU 12	0.78	0.78	27.68	-6.8303	0.7465	0.2553
946	SLU 13	0.78	0.8	27.48	-6.7838	0.7411	0.2533
946	SLU 14	0.79	0.75	27.94	-6.8906	0.7533	0.2604
946	SLU 15	0.8	0.79	27.94	-6.8913	0.7534	0.2597
946	SLU 16	0.79	0.74	27.74	-6.8436	0.7479	0.2588
946	SLU 17	0.79	0.78	27.74	-6.8443	0.748	0.2582
946	SLU 18	0.79	0.78	28.5	-7.0217	0.7687	0.2588
946	SLU 19	0.79	0.82	28.51	-7.0224	0.7687	0.2582
946	SLU 20	0.8	0.78	28.76	-7.0827	0.7756	0.2632
946	SLU 21	0.81	0.82	28.76	-7.0835	0.7756	0.2626
946	SLU 22	0.76	0.72	27.13	-6.6996	0.7315	0.2505
946	SLU 23	0.77	0.78	27.13	-6.7009	0.7316	0.2495
946	SLU 24	0.78	0.73	27.59	-6.8076	0.7438	0.2565
946	SLU 25	0.78	0.77	27.59	-6.8084	0.7439	0.2559
946	SLU 26	0.78	0.79	27.39	-6.7619	0.7385	0.2539
946	SLU 27	0.8	0.74	27.85	-6.8687	0.7508	0.261
946	SLU 28	0.8	0.78	27.85	-6.8694	0.7508	0.2604
946	SLU 29	0.79	0.73	27.65	-6.8217	0.7453	0.2594
946	SLU 30	0.79	0.77	27.65	-6.8224	0.7454	0.2588
946	SLU 31	0.83	0.9	30.12	-7.4013	0.8123	0.2702
946	SLU 32	0.85	0.85	30.58	-7.5081	0.8245	0.2772
946	SLU 33	0.85	0.89	30.58	-7.5088	0.8246	0.2766
946	SLU 34	0.85	0.9	30.38	-7.4623	0.8192	0.2746
946	SLU 35	0.86	0.85	30.84	-7.5691	0.8314	0.2817
946	SLU 36	0.86	0.89	30.84	-7.5698	0.8315	0.281
946	SLU 37	0.86	0.84	30.64	-7.5221	0.826	0.2801
946	SLU 38	0.86	0.88	30.64	-7.5228	0.8261	0.2795
946	SLU 39	0.86	0.88	31.4	-7.7002	0.8468	0.2801
946	SLU 40	0.86	0.92	31.4	-7.7009	0.8468	0.2795
946	SLU 41	0.87	0.89	31.66	-7.7612	0.8537	0.2845
946	SLU 42	0.87	0.93	31.66	-7.762	0.8537	0.2839
946	SLU 43	0.88	0.76	30.5	-7.5948	0.8226	0.2907
946	SLU 44	0.88	0.83	30.51	-7.5961	0.8227	0.2896
946	SLU 45	0.9	0.78	30.96	-7.7028	0.8349	0.2967
946	SLU 46	0.9	0.82	30.97	-7.7036	0.835	0.2961
946	SLU 47	0.9	0.83	30.76	-7.6571	0.8296	0.2941
946	SLU 48	0.91	0.78	31.22	-7.7639	0.8419	0.3011
946	SLU 49	0.91	0.82	31.22	-7.7646	0.8419	0.3005
946	SLU 50	0.91	0.77	31.02	-7.7168	0.8364	0.2996
946	SLU 51	0.91	0.81	31.02	-7.7176	0.8365	0.2989
946	SLU 52	0.95	0.94	33.5	-8.2965	0.9034	0.3103
946	SLU 53	0.97	0.89	33.96	-8.4032	0.9156	0.3174
946	SLU 54	0.97	0.93	33.96	-8.404	0.9157	0.3168
946	SLU 55	0.96	0.95	33.76	-8.3575	0.9103	0.3148
946	SLU 56	0.98	0.9	34.21	-8.4643	0.9226	0.3218
946	SLU 57	0.98	0.94	34.22	-8.465	0.9226	0.3212
946	SLU 58	0.97	0.89	34.01	-8.4173	0.9171	0.3203
946	SLU 59	0.98	0.93	34.01	-8.418	0.9172	0.3196
946	SLU 60	0.98	0.93	34.78	-8.5954	0.9379	0.3202
946	SLU 61	0.98	0.97	34.78	-8.5961	0.9379	0.3196
946	SLU 62	0.99	0.93	35.04	-8.6564	0.9448	0.3247
946	SLU 63	0.99	0.97	35.04	-8.6572	0.9449	0.3241
946	SLU 64	0.95	0.86	33.4	-8.2733	0.9007	0.312
946	SLU 65	0.95	0.93	33.41	-8.2746	0.9008	0.311
946	SLU 66	0.97	0.88	33.86	-8.3813	0.9131	0.318
946	SLU 67	0.97	0.92	33.86	-8.3821	0.9131	0.3174
946	SLU 68	0.96	0.93	33.66	-8.3356	0.9077	0.3154
946	SLU 69	0.98	0.89	34.12	-8.4424	0.92	0.3224
946	SLU 70	0.98	0.93	34.12	-8.4431	0.92	0.3218
946	SLU 71	0.98	0.87	33.92	-8.3954	0.9146	0.3209
946	SLU 72	0.98	0.91	33.92	-8.3961	0.9146	0.3203
946	SLU 73	1.02	1.05	36.4	-8.975	0.9815	0.3317
946	SLU 74	1.04	1	36.86	-9.0818	0.9938	0.3387
946	SLU 75	1.04	1.04	36.86	-9.0825	0.9938	0.3381
946	SLU 76	1.03	1.05	36.66	-9.036	0.9884	0.3361

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
946	SLU 77	1.05	1	37.11	-9.1428	1.0007	0.3431
946	SLU 78	1.05	1.04	37.12	-9.1435	1.0007	0.3425
946	SLU 79	1.04	0.99	36.91	-9.0958	0.9953	0.3416
946	SLU 80	1.04	1.03	36.91	-9.0965	0.9953	0.3409
946	SLU 81	1.05	1.03	37.68	-9.2739	1.016	0.3416
946	SLU 82	1.05	1.07	37.68	-9.2746	1.0161	0.3409
946	SLU 83	1.06	1.04	37.94	-9.3349	1.0229	0.346
946	SLU 84	1.06	1.08	37.94	-9.3357	1.023	0.3454
946	SLE RA 1	0.72	0.64	25.06	-6.215	0.6757	0.2353
946	SLE RA 2	0.72	0.69	25.06	-6.2158	0.6758	0.2346
946	SLE RA 3	0.73	0.65	25.36	-6.287	0.6839	0.2393
946	SLE RA 4	0.73	0.68	25.36	-6.2875	0.684	0.2389
946	SLE RA 5	0.73	0.69	25.23	-6.2565	0.6804	0.2376
946	SLE RA 6	0.74	0.66	25.54	-6.3277	0.6885	0.2423
946	SLE RA 7	0.74	0.68	25.54	-6.3282	0.6886	0.2419
946	SLE RA 8	0.73	0.65	25.4	-6.2963	0.6849	0.2412
946	SLE RA 9	0.73	0.68	25.4	-6.2968	0.685	0.2408
946	SLE RA 10	0.76	0.76	27.05	-6.6827	0.7296	0.2484
946	SLE RA 11	0.77	0.73	27.36	-6.7539	0.7377	0.2531
946	SLE RA 12	0.77	0.76	27.36	-6.7544	0.7378	0.2527
946	SLE RA 13	0.77	0.77	27.23	-6.7234	0.7342	0.2514
946	SLE RA 14	0.78	0.73	27.53	-6.7946	0.7423	0.2561
946	SLE RA 15	0.78	0.76	27.53	-6.7951	0.7424	0.2557
946	SLE RA 16	0.78	0.73	27.4	-6.7633	0.7387	0.255
946	SLE RA 17	0.78	0.75	27.4	-6.7638	0.7388	0.2546
946	SLE RA 18	0.78	0.75	27.91	-6.882	0.7526	0.255
946	SLE RA 19	0.78	0.78	27.91	-6.8825	0.7526	0.2546
946	SLE RA 20	0.79	0.76	28.08	-6.9227	0.7572	0.258
946	SLE RA 21	0.79	0.78	28.08	-6.9232	0.7572	0.2576
946	SLE FR 1	0.72	0.64	25.06	-6.215	0.6757	0.2353
946	SLE FR 2	0.72	0.65	25.06	-6.2151	0.6757	0.2352
946	SLE FR 3	0.72	0.64	25.13	-6.2312	0.6775	0.2365
946	SLE FR 4	0.73	0.68	25.91	-6.4152	0.6988	0.2411
946	SLE FR 5	0.74	0.68	25.98	-6.4314	0.7006	0.2424
946	SLE FR 6	0.75	0.7	26.48	-6.5485	0.7141	0.2452
946	SLE QP 1	0.72	0.64	25.06	-6.215	0.6757	0.2353
946	SLE QP 2	0.73	0.68	25.91	-6.4151	0.6988	0.2412
946	SLD 1	4	0.93	21.1	-5.1959	0.5773	1.363
946	SLD 2	3.85	1.26	21.06	-5.1891	0.5763	1.3025
946	SLD 3	3.92	-0.32	21.38	-5.3055	0.5856	1.3973
946	SLD 4	3.77	0.01	21.34	-5.2986	0.5846	1.3368
946	SLD 5	1.87	2.59	24.05	-5.8844	0.6499	0.5363
946	SLD 6	1.77	2.8	24.03	-5.88	0.6492	0.4971
946	SLD 7	1.59	-1.57	24.98	-6.2495	0.6776	0.6506
946	SLD 8	1.49	-1.36	24.95	-6.2451	0.6769	0.6114
946	SLD 9	-0.02	2.71	26.87	-6.5851	0.7206	-0.1289
946	SLD 10	-0.12	2.92	26.84	-6.5806	0.7199	-0.1681
946	SLD 11	-0.3	-1.45	27.79	-6.9502	0.7483	-0.0146
946	SLD 12	-0.4	-1.24	27.77	-6.9458	0.7476	-0.0538
946	SLD 13	-2.3	1.34	30.49	-7.5315	0.813	-0.8543
946	SLD 14	-2.45	1.67	30.45	-7.5247	0.8119	-0.9148
946	SLD 15	-2.38	0.09	30.76	-7.6411	0.8213	-0.82
946	SLD 16	-2.53	0.42	30.72	-7.6342	0.8202	-0.8805
946	SLV 1	8.37	1.23	14.66	-3.5631	0.4146	2.8651
946	SLV 2	8.03	2	14.56	-3.5472	0.4122	2.7242
946	SLV 3	8.18	-1.6	15.3	-3.8185	0.4339	2.9442
946	SLV 4	7.83	-0.84	15.21	-3.8025	0.4315	2.8033
946	SLV 5	3.38	5.02	21.58	-5.1749	0.5847	0.9323
946	SLV 6	3.16	5.51	21.52	-5.1647	0.5831	0.8423
946	SLV 7	2.73	-4.44	23.72	-6.0261	0.6489	1.1959
946	SLV 8	2.51	-3.96	23.66	-6.016	0.6474	1.106
946	SLV 9	-1.04	5.31	28.16	-6.8142	0.7501	-0.6235
946	SLV 10	-1.26	5.79	28.1	-6.804	0.7486	-0.7135
946	SLV 11	-1.69	-4.16	30.31	-7.6655	0.8144	-0.3598
946	SLV 12	-1.91	-3.67	30.25	-7.6553	0.8128	-0.4498
946	SLV 13	-6.36	2.19	36.62	-9.0276	0.966	-2.3208
946	SLV 14	-6.71	2.96	36.52	-9.0117	0.9636	-2.4617
946	SLV 15	-6.56	-0.65	37.26	-9.283	0.9853	-2.2417
946	SLV 16	-6.91	0.12	37.17	-9.2671	0.9829	-2.3826
946	CRTFP Ux+	0	0	0	0	0	0
946	CRTFP Ux-	0	0	0	0	0	0
946	CRTFP Uy+	0	0	0	0	0	0
946	CRTFP Uy-	0	0	0	0	0	0
947	SLU 1	0.51	0.51	18.35	-4.6844	2.4005	0.1133
947	SLU 2	0.51	0.56	18.36	-4.6854	2.4008	0.1072
947	SLU 3	0.53	0.52	18.7	-4.7695	2.4463	0.1163
947	SLU 4	0.53	0.55	18.71	-4.7702	2.4465	0.1126
947	SLU 5	0.52	0.57	18.55	-4.7336	2.4266	0.11
947	SLU 6	0.54	0.53	18.9	-4.8177	2.4721	0.119
947	SLU 7	0.54	0.56	18.9	-4.8183	2.4723	0.1154
947	SLU 8	0.53	0.52	18.75	-4.7808	2.4521	0.1188
947	SLU 9	0.53	0.55	18.75	-4.7814	2.4523	0.1151
947	SLU 10	0.56	0.66	20.62	-5.2336	2.6973	0.1121
947	SLU 11	0.57	0.62	20.97	-5.3178	2.7429	0.1211
947	SLU 12	0.58	0.65	20.97	-5.3184	2.7431	0.1175
947	SLU 13	0.57	0.66	20.82	-5.2818	2.7231	0.1148
947	SLU 14	0.58	0.62	21.17	-5.3659	2.7687	0.1239
947	SLU 15	0.59	0.65	21.17	-5.3665	2.7689	0.1203
947	SLU 16	0.58	0.62	21.02	-5.329	2.7486	0.1236
947	SLU 17	0.58	0.65	21.02	-5.3296	2.7488	0.12
947	SLU 18	0.58	0.65	21.59	-5.4676	2.8241	0.1202

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
947	SLU 19	0.58	0.68	21.59	-5.4682	2.8243	0.1166
947	SLU 20	0.59	0.65	21.79	-5.5157	2.8499	0.123
947	SLU 21	0.59	0.68	21.79	-5.5163	2.8501	0.1193
947	SLU 22	0.56	0.59	20.55	-5.2157	2.6879	0.1199
947	SLU 23	0.56	0.64	20.55	-5.2167	2.6882	0.1138
947	SLU 24	0.58	0.61	20.9	-5.3009	2.7338	0.1229
947	SLU 25	0.58	0.64	20.9	-5.3015	2.7339	0.1193
947	SLU 26	0.57	0.65	20.75	-5.2649	2.714	0.1166
947	SLU 27	0.59	0.61	21.1	-5.349	2.7596	0.1256
947	SLU 28	0.59	0.64	21.1	-5.3497	2.7597	0.122
947	SLU 29	0.58	0.6	20.95	-5.3121	2.7395	0.1254
947	SLU 30	0.58	0.63	20.95	-5.3127	2.7397	0.1218
947	SLU 31	0.61	0.74	22.82	-5.7649	2.9847	0.1187
947	SLU 32	0.62	0.7	23.17	-5.8491	3.0303	0.1278
947	SLU 33	0.63	0.73	23.17	-5.8497	3.0305	0.1241
947	SLU 34	0.62	0.75	23.02	-5.8131	3.0105	0.1215
947	SLU 35	0.63	0.71	23.37	-5.8973	3.0561	0.1305
947	SLU 36	0.64	0.74	23.37	-5.8979	3.0563	0.1269
947	SLU 37	0.63	0.7	23.21	-5.8603	3.0361	0.1303
947	SLU 38	0.63	0.73	23.21	-5.8609	3.0362	0.1266
947	SLU 39	0.63	0.73	23.79	-5.9989	3.1116	0.1269
947	SLU 40	0.63	0.76	23.79	-5.9995	3.1117	0.1232
947	SLU 41	0.64	0.74	23.99	-6.0471	3.1374	0.1296
947	SLU 42	0.64	0.77	23.99	-6.0477	3.1375	0.126
947	SLU 43	0.65	0.63	23.11	-5.9075	3.0221	0.145
947	SLU 44	0.65	0.68	23.11	-5.9085	3.0224	0.1389
947	SLU 45	0.66	0.65	23.46	-5.9927	3.0679	0.148
947	SLU 46	0.66	0.68	23.46	-5.9933	3.0681	0.1443
947	SLU 47	0.66	0.69	23.31	-5.9567	3.0482	0.1417
947	SLU 48	0.67	0.65	23.65	-6.0409	3.0937	0.1507
947	SLU 49	0.67	0.68	23.66	-6.0415	3.0939	0.1471
947	SLU 50	0.67	0.64	23.5	-6.0039	3.0737	0.1505
947	SLU 51	0.67	0.67	23.5	-6.0045	3.0739	0.1468
947	SLU 52	0.7	0.78	25.38	-6.4568	3.3189	0.1438
947	SLU 53	0.71	0.74	25.72	-6.5409	3.3645	0.1529
947	SLU 54	0.71	0.77	25.73	-6.5415	3.3647	0.1492
947	SLU 55	0.71	0.79	25.57	-6.5049	3.3447	0.1465
947	SLU 56	0.72	0.75	25.92	-6.5891	3.3903	0.1556
947	SLU 57	0.72	0.78	25.92	-6.5897	3.3905	0.152
947	SLU 58	0.72	0.74	25.77	-6.5521	3.3702	0.1554
947	SLU 59	0.72	0.77	25.77	-6.5527	3.3704	0.1517
947	SLU 60	0.72	0.77	26.34	-6.6907	3.4457	0.1519
947	SLU 61	0.72	0.8	26.35	-6.6913	3.4459	0.1483
947	SLU 62	0.73	0.78	26.54	-6.7389	3.4715	0.1547
947	SLU 63	0.73	0.81	26.54	-6.7395	3.4717	0.1511
947	SLU 64	0.7	0.72	25.3	-6.4389	3.3095	0.1516
947	SLU 65	0.7	0.77	25.31	-6.4399	3.3098	0.1455
947	SLU 66	0.71	0.73	25.65	-6.524	3.3554	0.1546
947	SLU 67	0.71	0.76	25.66	-6.5246	3.3555	0.151
947	SLU 68	0.71	0.77	25.5	-6.4881	3.3356	0.1483
947	SLU 69	0.72	0.74	25.85	-6.5722	3.3812	0.1574
947	SLU 70	0.72	0.77	25.85	-6.5728	3.3813	0.1537
947	SLU 71	0.72	0.73	25.7	-6.5352	3.3611	0.1571
947	SLU 72	0.72	0.76	25.7	-6.5358	3.3613	0.1535
947	SLU 73	0.75	0.86	27.57	-6.9881	3.6063	0.1504
947	SLU 74	0.76	0.83	27.92	-7.0722	3.6519	0.1595
947	SLU 75	0.76	0.86	27.92	-7.0728	3.6521	0.1558
947	SLU 76	0.76	0.87	27.77	-7.0363	3.6321	0.1532
947	SLU 77	0.77	0.83	28.12	-7.1204	3.6777	0.1622
947	SLU 78	0.77	0.86	28.12	-7.121	3.6779	0.1586
947	SLU 79	0.77	0.82	27.97	-7.0834	3.6577	0.162
947	SLU 80	0.77	0.85	27.97	-7.084	3.6578	0.1583
947	SLU 81	0.77	0.86	28.54	-7.222	3.7332	0.1586
947	SLU 82	0.77	0.89	28.54	-7.2226	3.7333	0.1549
947	SLU 83	0.78	0.86	28.74	-7.2702	3.759	0.1613
947	SLU 84	0.78	0.89	28.74	-7.2708	3.7591	0.1577
947	SLE RA 1	0.53	0.53	18.98	-4.8362	2.4826	0.1152
947	SLE RA 2	0.53	0.57	18.98	-4.8369	2.4828	0.1111
947	SLE RA 3	0.54	0.54	19.22	-4.893	2.5132	0.1172
947	SLE RA 4	0.54	0.56	19.22	-4.8934	2.5133	0.1147
947	SLE RA 5	0.53	0.57	19.11	-4.869	2.5	0.113
947	SLE RA 6	0.54	0.55	19.35	-4.9251	2.5304	0.119
947	SLE RA 7	0.54	0.57	19.35	-4.9255	2.5305	0.1166
947	SLE RA 8	0.54	0.54	19.24	-4.9004	2.517	0.1188
947	SLE RA 9	0.54	0.56	19.25	-4.9008	2.5171	0.1164
947	SLE RA 10	0.56	0.63	20.49	-5.2023	2.6805	0.1144
947	SLE RA 11	0.57	0.61	20.73	-5.2584	2.7109	0.1204
947	SLE RA 12	0.57	0.63	20.73	-5.2588	2.711	0.118
947	SLE RA 13	0.57	0.63	20.63	-5.2345	2.6977	0.1162
947	SLE RA 14	0.57	0.61	20.86	-5.2906	2.7281	0.1222
947	SLE RA 15	0.58	0.63	20.86	-5.291	2.7282	0.1198
947	SLE RA 16	0.57	0.6	20.76	-5.2659	2.7147	0.1221
947	SLE RA 17	0.57	0.62	20.76	-5.2663	2.7148	0.1197
947	SLE RA 18	0.57	0.63	21.14	-5.3583	2.765	0.1198
947	SLE RA 19	0.57	0.65	21.14	-5.3587	2.7651	0.1174
947	SLE RA 20	0.58	0.63	21.27	-5.3904	2.7822	0.1216
947	SLE RA 21	0.58	0.65	21.27	-5.3908	2.7823	0.1192
947	SLE FR 1	0.53	0.53	18.98	-4.8362	2.4826	0.1152
947	SLE FR 2	0.53	0.54	18.98	-4.8363	2.4827	0.1144
947	SLE FR 3	0.53	0.54	19.03	-4.849	2.4895	0.1159
947	SLE FR 4	0.54	0.57	19.63	-4.993	2.5674	0.1158

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
947	SLE FR 5	0.54	0.56	19.68	-5.0057	2.5742	0.1173
947	SLE FR 6	0.55	0.58	20.06	-5.0973	2.6238	0.1175
947	SLE QP 1	0.53	0.53	18.98	-4.8362	2.4826	0.1152
947	SLE QP 2	0.54	0.56	19.63	-4.9928	2.5673	0.1166
947	SLD 1	2.94	0.78	15.8	-3.9917	2.0699	0.919
947	SLD 2	2.83	1.03	15.77	-3.9867	2.0659	0.8476
947	SLD 3	2.88	-0.18	15.99	-4.064	2.0955	1.0373
947	SLD 4	2.77	0.07	15.96	-4.0589	2.0915	0.966
947	SLD 5	1.37	2.04	18.19	-4.5838	2.38	0.1902
947	SLD 6	1.3	2.2	18.17	-4.5805	2.3773	0.1439
947	SLD 7	1.17	-1.16	18.84	-4.8246	2.4653	0.5847
947	SLD 8	1.1	-1	18.82	-4.8214	2.4627	0.5384
947	SLD 9	-0.02	2.12	20.44	-5.1643	2.672	-0.3053
947	SLD 10	-0.09	2.28	20.42	-5.161	2.6693	-0.3516
947	SLD 11	-0.22	-1.08	21.09	-5.4051	2.7573	0.0892
947	SLD 12	-0.29	-0.91	21.07	-5.4019	2.7547	0.0429
947	SLD 13	-1.69	1.05	23.29	-5.9267	3.0432	-0.7329
947	SLD 14	-1.8	1.3	23.26	-5.9217	3.0392	-0.8042
947	SLD 15	-1.75	0.09	23.49	-5.999	3.0688	-0.6145
947	SLD 16	-1.86	0.34	23.46	-5.9939	3.0648	-0.6859
947	SLV 1	6.16	1.04	10.67	-2.6508	1.4037	1.9967
947	SLV 2	5.91	1.63	10.6	-2.6391	1.3943	1.8305
947	SLV 3	6.02	-1.14	11.12	-2.8192	1.463	2.2659
947	SLV 4	5.76	-0.55	11.05	-2.8076	1.4536	2.0997
947	SLV 5	2.49	3.92	16.27	-4.0367	2.1298	0.3004
947	SLV 6	2.32	4.29	16.23	-4.0293	2.1238	0.1942
947	SLV 7	2.01	-3.36	17.77	-4.5982	2.3277	1.1979
947	SLV 8	1.85	-2.98	17.72	-4.5907	2.3216	1.0917
947	SLV 9	-0.77	4.11	21.53	-5.3949	2.813	-0.8586
947	SLV 10	-0.93	4.48	21.49	-5.3874	2.807	-0.9648
947	SLV 11	-1.24	-3.17	23.03	-5.9564	3.0109	0.0389
947	SLV 12	-1.41	-2.79	22.98	-5.9489	3.0049	-0.0673
947	SLV 13	-4.68	1.67	28.21	-7.1781	3.6811	-1.8666
947	SLV 14	-4.94	2.26	28.14	-7.1664	3.6717	-2.0328
947	SLV 15	-4.83	-0.51	28.66	-7.3465	3.7404	-1.5974
947	SLV 16	-5.08	0.08	28.58	-7.3349	3.731	-1.7636
947	CRTFP Ux+	0	0	0	0	0	0
947	CRTFP Ux-	0	0	0	0	0	0
947	CRTFP Uy+	0	0	0	0	0	0
947	CRTFP Uy-	0	0	0	0	0	0
949	SLU 1	0.42	0	22.42	0.4267	5.5948	-0.0064
949	SLU 2	0.42	0.04	22.41	0.4266	5.5946	-0.0155
949	SLU 3	0.43	0	22.85	0.435	5.7036	-0.0073
949	SLU 4	0.43	0.02	22.85	0.435	5.7035	-0.0128
949	SLU 5	0.43	0.03	22.64	0.4309	5.6515	-0.015
949	SLU 6	0.44	0	23.08	0.4393	5.7605	-0.0069
949	SLU 7	0.44	0.02	23.08	0.4393	5.7604	-0.0123
949	SLU 8	0.43	0	22.88	0.4353	5.7086	-0.0054
949	SLU 9	0.43	0.02	22.88	0.4352	5.7085	-0.0109
949	SLU 10	0.46	0.06	25.41	0.4835	6.3402	-0.021
949	SLU 11	0.47	0.02	25.85	0.4919	6.4492	-0.0128
949	SLU 12	0.48	0.04	25.85	0.4918	6.4491	-0.0183
949	SLU 13	0.47	0.05	25.64	0.4878	6.3971	-0.0205
949	SLU 14	0.48	0.02	26.08	0.4962	6.5061	-0.0123
949	SLU 15	0.48	0.04	26.08	0.4961	6.506	-0.0178
949	SLU 16	0.48	0.01	25.87	0.4922	6.4542	-0.0109
949	SLU 17	0.48	0.04	25.87	0.4921	6.4541	-0.0164
949	SLU 18	0.48	0.03	26.7	0.5079	6.66	-0.0142
949	SLU 19	0.48	0.05	26.7	0.5079	6.6599	-0.0197
949	SLU 20	0.49	0.02	26.93	0.5122	6.7169	-0.0137
949	SLU 21	0.49	0.05	26.93	0.5122	6.7168	-0.0192
949	SLU 22	0.46	0.02	25.31	0.4818	6.3154	-0.0128
949	SLU 23	0.46	0.06	25.31	0.4817	6.3152	-0.0219
949	SLU 24	0.47	0.03	25.75	0.4901	6.4242	-0.0137
949	SLU 25	0.47	0.05	25.75	0.4901	6.4241	-0.0192
949	SLU 26	0.47	0.06	25.54	0.486	6.3721	-0.0214
949	SLU 27	0.48	0.02	25.98	0.4944	6.4811	-0.0133
949	SLU 28	0.48	0.05	25.98	0.4944	6.481	-0.0187
949	SLU 29	0.48	0.02	25.77	0.4904	6.4292	-0.0118
949	SLU 30	0.48	0.04	25.77	0.4903	6.4291	-0.0173
949	SLU 31	0.51	0.08	28.31	0.5386	7.0608	-0.0274
949	SLU 32	0.52	0.04	28.75	0.547	7.1698	-0.0192
949	SLU 33	0.52	0.07	28.75	0.5469	7.1697	-0.0247
949	SLU 34	0.52	0.08	28.54	0.5429	7.1177	-0.0269
949	SLU 35	0.53	0.04	28.98	0.5513	7.2267	-0.0187
949	SLU 36	0.53	0.06	28.98	0.5512	7.2266	-0.0242
949	SLU 37	0.52	0.04	28.77	0.5473	7.1748	-0.0173
949	SLU 38	0.52	0.06	28.77	0.5472	7.1747	-0.0228
949	SLU 39	0.53	0.05	29.59	0.5631	7.3806	-0.0206
949	SLU 40	0.53	0.07	29.59	0.563	7.3805	-0.0261
949	SLU 41	0.54	0.05	29.82	0.5673	7.4375	-0.0201
949	SLU 42	0.54	0.07	29.82	0.5673	7.4374	-0.0256
949	SLU 43	0.53	-0.01	28.15	0.5358	7.0262	-0.0061
949	SLU 44	0.53	0.03	28.15	0.5357	7.026	-0.0152
949	SLU 45	0.54	0	28.59	0.5441	7.135	-0.007
949	SLU 46	0.54	0.02	28.58	0.5441	7.1349	-0.0125
949	SLU 47	0.54	0.03	28.38	0.54	7.0829	-0.0147
949	SLU 48	0.55	-0.01	28.82	0.5484	7.1919	-0.0066
949	SLU 49	0.55	0.01	28.81	0.5484	7.1918	-0.012
949	SLU 50	0.54	-0.01	28.61	0.5444	7.14	-0.0051
949	SLU 51	0.54	0.01	28.61	0.5444	7.1399	-0.0106

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
949	SLU 52	0.57	0.05	31.14	0.5926	7.7716	-0.0207
949	SLU 53	0.58	0.01	31.58	0.601	7.8806	-0.0125
949	SLU 54	0.59	0.04	31.58	0.601	7.8805	-0.018
949	SLU 55	0.58	0.05	31.37	0.5969	7.8285	-0.0202
949	SLU 56	0.59	0.01	31.81	0.6053	7.9375	-0.012
949	SLU 57	0.59	0.03	31.81	0.6053	7.9374	-0.0175
949	SLU 58	0.59	0.01	31.61	0.6013	7.8856	-0.0106
949	SLU 59	0.59	0.03	31.6	0.6012	7.8855	-0.0161
949	SLU 60	0.59	0.02	32.43	0.6171	8.0914	-0.0139
949	SLU 61	0.59	0.04	32.43	0.617	8.0912	-0.0194
949	SLU 62	0.6	0.02	32.66	0.6214	8.1483	-0.0134
949	SLU 63	0.6	0.04	32.66	0.6213	8.1481	-0.0189
949	SLU 64	0.57	0.01	31.05	0.5909	7.7468	-0.0125
949	SLU 65	0.57	0.05	31.04	0.5908	7.7466	-0.0216
949	SLU 66	0.58	0.02	31.48	0.5992	7.8556	-0.0134
949	SLU 67	0.58	0.04	31.48	0.5992	7.8555	-0.0189
949	SLU 68	0.58	0.05	31.27	0.5951	7.8035	-0.0212
949	SLU 69	0.59	0.02	31.71	0.6035	7.9125	-0.013
949	SLU 70	0.59	0.04	31.71	0.6035	7.9124	-0.0185
949	SLU 71	0.59	0.01	31.51	0.5995	7.8606	-0.0115
949	SLU 72	0.59	0.03	31.5	0.5995	7.8605	-0.017
949	SLU 73	0.62	0.07	34.04	0.6477	8.4922	-0.0271
949	SLU 74	0.63	0.04	34.48	0.6561	8.6012	-0.0189
949	SLU 75	0.63	0.06	34.48	0.6561	8.6011	-0.0244
949	SLU 76	0.63	0.07	34.27	0.652	8.5491	-0.0266
949	SLU 77	0.64	0.03	34.71	0.6604	8.6581	-0.0184
949	SLU 78	0.64	0.06	34.71	0.6604	8.658	-0.0239
949	SLU 79	0.63	0.03	34.5	0.6564	8.6062	-0.017
949	SLU 80	0.63	0.05	34.5	0.6563	8.6061	-0.0225
949	SLU 81	0.64	0.04	35.33	0.6722	8.812	-0.0203
949	SLU 82	0.64	0.06	35.33	0.6721	8.8118	-0.0258
949	SLU 83	0.65	0.04	35.56	0.6765	8.8689	-0.0198
949	SLU 84	0.65	0.06	35.56	0.6764	8.8687	-0.0253
949	SLE RA 1	0.43	0.01	23.25	0.4424	5.8007	-0.0082
949	SLE RA 2	0.43	0.03	23.24	0.4424	5.8006	-0.0143
949	SLE RA 3	0.44	0.01	23.54	0.448	5.8732	-0.0088
949	SLE RA 4	0.44	0.02	23.54	0.448	5.8731	-0.0125
949	SLE RA 5	0.44	0.03	23.4	0.4453	5.8385	-0.014
949	SLE RA 6	0.44	0.01	23.69	0.4508	5.9112	-0.0085
949	SLE RA 7	0.44	0.02	23.69	0.4508	5.9111	-0.0122
949	SLE RA 8	0.44	0	23.55	0.4482	5.8766	-0.0076
949	SLE RA 9	0.44	0.02	23.55	0.4481	5.8765	-0.0112
949	SLE RA 10	0.46	0.04	25.24	0.4803	6.2976	-0.0179
949	SLE RA 11	0.47	0.02	25.53	0.4859	6.3703	-0.0125
949	SLE RA 12	0.47	0.04	25.53	0.4859	6.3702	-0.0161
949	SLE RA 13	0.47	0.04	25.39	0.4832	6.3356	-0.0176
949	SLE RA 14	0.47	0.02	25.69	0.4888	6.4082	-0.0122
949	SLE RA 15	0.47	0.03	25.69	0.4887	6.4082	-0.0158
949	SLE RA 16	0.47	0.02	25.55	0.4861	6.3736	-0.0112
949	SLE RA 17	0.47	0.03	25.55	0.4861	6.3736	-0.0149
949	SLE RA 18	0.47	0.02	26.1	0.4966	6.5108	-0.0134
949	SLE RA 19	0.47	0.04	26.1	0.4966	6.5107	-0.0171
949	SLE RA 20	0.48	0.02	26.25	0.4995	6.5487	-0.0131
949	SLE RA 21	0.48	0.04	26.25	0.4994	6.5487	-0.0167
949	SLE FR 1	0.43	0.01	23.25	0.4424	5.8007	-0.0082
949	SLE FR 2	0.43	0.01	23.24	0.4424	5.8007	-0.0094
949	SLE FR 3	0.43	0.01	23.31	0.4436	5.8159	-0.0081
949	SLE FR 4	0.44	0.02	24.1	0.4587	6.0137	-0.011
949	SLE FR 5	0.45	0.01	24.16	0.4598	6.0289	-0.0096
949	SLE FR 6	0.45	0.02	24.67	0.4695	6.1557	-0.0108
949	SLE QP 1	0.43	0.01	23.25	0.4424	5.8007	-0.0082
949	SLE QP 2	0.44	0.01	24.1	0.4587	6.0137	-0.0098
949	SLD 1	2.86	0.38	21.58	0.4012	5.342	-0.1413
949	SLD 2	2.75	0.49	21.56	0.401	5.3401	-0.1661
949	SLD 3	2.8	-0.34	21.77	0.405	5.378	0.0383
949	SLD 4	2.68	-0.23	21.75	0.4048	5.3761	0.0135
949	SLD 5	1.29	1.19	23.06	0.4357	5.7579	-0.3173
949	SLD 6	1.21	1.26	23.05	0.4356	5.7567	-0.3333
949	SLD 7	1.08	-1.2	23.69	0.4484	5.8779	0.2813
949	SLD 8	1	-1.13	23.68	0.4482	5.8767	0.2653
949	SLD 9	-0.11	1.15	24.53	0.4691	6.1508	-0.2848
949	SLD 10	-0.19	1.22	24.51	0.469	6.1495	-0.3009
949	SLD 11	-0.32	-1.24	25.15	0.4818	6.2708	0.3138
949	SLD 12	-0.4	-1.17	25.14	0.4816	6.2695	0.2978
949	SLD 13	-1.8	0.25	26.45	0.5126	6.6514	-0.033
949	SLD 14	-1.91	0.36	26.43	0.5123	6.6495	-0.0578
949	SLD 15	-1.86	-0.46	26.64	0.5163	6.6874	0.1465
949	SLD 16	-1.98	-0.36	26.62	0.5161	6.6855	0.1218
949	SLV 1	6.11	0.85	18.21	0.3243	4.4419	-0.3122
949	SLV 2	5.83	1.1	18.16	0.3238	4.4374	-0.3698
949	SLV 3	5.96	-0.78	18.64	0.333	4.5252	0.0968
949	SLV 4	5.69	-0.53	18.59	0.3325	4.5207	0.0392
949	SLV 5	2.41	2.69	21.69	0.4053	5.4165	-0.7111
949	SLV 6	2.24	2.86	21.66	0.4049	5.4137	-0.7479
949	SLV 7	1.92	-2.74	23.13	0.4343	5.6943	0.6524
949	SLV 8	1.75	-2.58	23.09	0.434	5.6914	0.6156
949	SLV 9	-0.86	2.61	25.11	0.4834	6.336	-0.6351
949	SLV 10	-1.03	2.77	25.08	0.4831	6.3331	-0.6719
949	SLV 11	-1.35	-2.83	26.55	0.5124	6.6138	0.7284
949	SLV 12	-1.52	-2.67	26.51	0.5121	6.6109	0.6916
949	SLV 13	-4.8	0.55	29.61	0.5849	7.5067	-0.0587

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
949	SLV 14	-5.07	0.81	29.56	0.5844	7.5022	-0.1163
949	SLV 15	-4.94	-1.08	30.04	0.5936	7.59	0.3503
949	SLV 16	-5.22	-0.83	29.99	0.5931	7.5856	0.2927
949	CRTFP Ux+	0	0	0	0	0	0
949	CRTFP Ux-	0	0	0	0	0	0
949	CRTFP Uy+	0	0	0	0	0	0
949	CRTFP Uy-	0	0	0	0	0	0
952	SLU 1	-0.24	-0.06	15.8	0.0036	-5.0896	-0.019
952	SLU 2	-0.24	-0.03	15.8	0.0036	-5.0898	-0.0103
952	SLU 3	-0.25	-0.05	16.11	0.0037	-5.1901	-0.0182
952	SLU 4	-0.25	-0.04	16.11	0.0037	-5.1901	-0.013
952	SLU 5	-0.24	-0.03	15.96	0.0036	-5.143	-0.0106
952	SLU 6	-0.25	-0.06	16.27	0.0037	-5.2433	-0.0185
952	SLU 7	-0.25	-0.04	16.28	0.0037	-5.2433	-0.0133
952	SLU 8	-0.25	-0.06	16.13	0.0037	-5.1961	-0.0195
952	SLU 9	-0.25	-0.04	16.13	0.0037	-5.1961	-0.0143
952	SLU 10	-0.27	-0.03	17.91	0.004	-5.7704	-0.0102
952	SLU 11	-0.27	-0.05	18.22	0.0041	-5.8707	-0.0181
952	SLU 12	-0.27	-0.04	18.22	0.0041	-5.8708	-0.0129
952	SLU 13	-0.27	-0.03	18.08	0.004	-5.8236	-0.0105
952	SLU 14	-0.28	-0.06	18.39	0.0041	-5.9239	-0.0184
952	SLU 15	-0.28	-0.04	18.39	0.0041	-5.924	-0.0132
952	SLU 16	-0.28	-0.06	18.24	0.0041	-5.8767	-0.0195
952	SLU 17	-0.28	-0.04	18.24	0.0041	-5.8768	-0.0143
952	SLU 18	-0.28	-0.06	18.81	0.0042	-6.062	-0.0189
952	SLU 19	-0.28	-0.04	18.82	0.0042	-6.0621	-0.0137
952	SLU 20	-0.28	-0.06	18.98	0.0042	-6.1152	-0.0192
952	SLU 21	-0.28	-0.04	18.98	0.0042	-6.1153	-0.014
952	SLU 22	-0.27	-0.05	17.85	0.0041	-5.7517	-0.016
952	SLU 23	-0.27	-0.02	17.85	0.0041	-5.7518	-0.0073
952	SLU 24	-0.27	-0.05	18.16	0.0041	-5.8521	-0.0152
952	SLU 25	-0.27	-0.03	18.16	0.0041	-5.8522	-0.01
952	SLU 26	-0.27	-0.02	18.02	0.0041	-5.805	-0.0076
952	SLU 27	-0.28	-0.05	18.33	0.0042	-5.9053	-0.0155
952	SLU 28	-0.28	-0.03	18.33	0.0042	-5.9054	-0.0102
952	SLU 29	-0.28	-0.05	18.18	0.0041	-5.8581	-0.0165
952	SLU 30	-0.28	-0.03	18.18	0.0041	-5.8582	-0.0113
952	SLU 31	-0.3	-0.02	19.97	0.0044	-6.4325	-0.0072
952	SLU 32	-0.3	-0.05	20.28	0.0045	-6.5328	-0.0151
952	SLU 33	-0.3	-0.03	20.28	0.0045	-6.5328	-0.0099
952	SLU 34	-0.3	-0.02	20.13	0.0045	-6.4857	-0.0075
952	SLU 35	-0.3	-0.05	20.44	0.0046	-6.586	-0.0154
952	SLU 36	-0.3	-0.03	20.44	0.0045	-6.586	-0.0102
952	SLU 37	-0.3	-0.05	20.3	0.0045	-6.5388	-0.0165
952	SLU 38	-0.3	-0.03	20.3	0.0045	-6.5388	-0.0113
952	SLU 39	-0.31	-0.05	20.87	0.0046	-6.7241	-0.0159
952	SLU 40	-0.31	-0.03	20.87	0.0046	-6.7241	-0.0107
952	SLU 41	-0.31	-0.05	21.04	0.0046	-6.7773	-0.0162
952	SLU 42	-0.31	-0.03	21.04	0.0046	-6.7773	-0.011
952	SLU 43	-0.3	-0.08	19.83	0.0046	-6.3896	-0.0257
952	SLU 44	-0.3	-0.05	19.83	0.0046	-6.3897	-0.017
952	SLU 45	-0.31	-0.08	20.14	0.0046	-6.49	-0.0249
952	SLU 46	-0.31	-0.06	20.14	0.0046	-6.49	-0.0197
952	SLU 47	-0.31	-0.05	20	0.0046	-6.4429	-0.0173
952	SLU 48	-0.31	-0.08	20.31	0.0047	-6.5432	-0.0252
952	SLU 49	-0.31	-0.06	20.31	0.0047	-6.5432	-0.02
952	SLU 50	-0.31	-0.08	20.16	0.0046	-6.496	-0.0263
952	SLU 51	-0.31	-0.06	20.16	0.0046	-6.496	-0.021
952	SLU 52	-0.33	-0.05	21.94	0.0049	-7.0703	-0.017
952	SLU 53	-0.34	-0.08	22.26	0.005	-7.1706	-0.0249
952	SLU 54	-0.34	-0.06	22.26	0.005	-7.1707	-0.0196
952	SLU 55	-0.33	-0.05	22.11	0.005	-7.1235	-0.0172
952	SLU 56	-0.34	-0.08	22.42	0.005	-7.2238	-0.0251
952	SLU 57	-0.34	-0.06	22.42	0.005	-7.2239	-0.0199
952	SLU 58	-0.34	-0.08	22.28	0.005	-7.1766	-0.0262
952	SLU 59	-0.34	-0.06	22.28	0.005	-7.1767	-0.021
952	SLU 60	-0.34	-0.08	22.85	0.0051	-7.3619	-0.0256
952	SLU 61	-0.34	-0.06	22.85	0.0051	-7.362	-0.0204
952	SLU 62	-0.35	-0.08	23.01	0.0051	-7.4151	-0.0259
952	SLU 63	-0.35	-0.06	23.02	0.0051	-7.4152	-0.0207
952	SLU 64	-0.33	-0.07	21.89	0.005	-7.0516	-0.0227
952	SLU 65	-0.33	-0.04	21.89	0.005	-7.0517	-0.014
952	SLU 66	-0.34	-0.07	22.2	0.0051	-7.152	-0.0219
952	SLU 67	-0.34	-0.05	22.2	0.0051	-7.1521	-0.0167
952	SLU 68	-0.34	-0.04	22.05	0.005	-7.1049	-0.0143
952	SLU 69	-0.34	-0.07	22.36	0.0051	-7.2052	-0.0222
952	SLU 70	-0.34	-0.05	22.36	0.0051	-7.2053	-0.017
952	SLU 71	-0.34	-0.07	22.22	0.0051	-7.158	-0.0233
952	SLU 72	-0.34	-0.05	22.22	0.0051	-7.1581	-0.018
952	SLU 73	-0.36	-0.04	24	0.0054	-7.7324	-0.0139
952	SLU 74	-0.36	-0.07	24.31	0.0055	-7.8327	-0.0219
952	SLU 75	-0.36	-0.05	24.31	0.0054	-7.8327	-0.0166
952	SLU 76	-0.36	-0.04	24.17	0.0054	-7.7856	-0.0142
952	SLU 77	-0.37	-0.07	24.48	0.0055	-7.8859	-0.0221
952	SLU 78	-0.37	-0.05	24.48	0.0055	-7.8859	-0.0169
952	SLU 79	-0.37	-0.07	24.33	0.0054	-7.8387	-0.0232
952	SLU 80	-0.37	-0.05	24.33	0.0054	-7.8387	-0.018
952	SLU 81	-0.37	-0.07	24.9	0.0055	-8.024	-0.0226
952	SLU 82	-0.37	-0.05	24.9	0.0055	-8.024	-0.0174
952	SLU 83	-0.37	-0.07	25.07	0.0056	-8.0772	-0.0229
952	SLU 84	-0.37	-0.05	25.07	0.0056	-8.0772	-0.0177

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
952	SLE RA 1	-0.25	-0.05	16.38	0.0037	-5.2788	-0.0181
952	SLE RA 2	-0.25	-0.04	16.38	0.0037	-5.2789	-0.0123
952	SLE RA 3	-0.25	-0.05	16.59	0.0038	-5.3457	-0.0176
952	SLE RA 4	-0.25	-0.04	16.59	0.0038	-5.3458	-0.0141
952	SLE RA 5	-0.25	-0.04	16.5	0.0038	-5.3143	-0.0125
952	SLE RA 6	-0.26	-0.05	16.7	0.0038	-5.3812	-0.0178
952	SLE RA 7	-0.26	-0.04	16.7	0.0038	-5.3813	-0.0143
952	SLE RA 8	-0.25	-0.06	16.61	0.0038	-5.3497	-0.0185
952	SLE RA 9	-0.25	-0.05	16.61	0.0038	-5.3498	-0.015
952	SLE RA 10	-0.27	-0.04	17.79	0.004	-5.7327	-0.0123
952	SLE RA 11	-0.27	-0.05	18	0.0041	-5.7995	-0.0176
952	SLE RA 12	-0.27	-0.04	18	0.004	-5.7996	-0.0141
952	SLE RA 13	-0.27	-0.04	17.9	0.004	-5.7681	-0.0125
952	SLE RA 14	-0.27	-0.05	18.11	0.0041	-5.835	-0.0177
952	SLE RA 15	-0.27	-0.04	18.11	0.0041	-5.835	-0.0143
952	SLE RA 16	-0.27	-0.06	18.01	0.004	-5.8035	-0.0185
952	SLE RA 17	-0.27	-0.05	18.01	0.004	-5.8036	-0.015
952	SLE RA 18	-0.27	-0.05	18.4	0.0041	-5.9271	-0.0181
952	SLE RA 19	-0.27	-0.04	18.4	0.0041	-5.9271	-0.0146
952	SLE RA 20	-0.28	-0.06	18.51	0.0041	-5.9625	-0.0183
952	SLE RA 21	-0.28	-0.04	18.51	0.0041	-5.9626	-0.0148
952	SLE FR 1	-0.25	-0.05	16.38	0.0037	-5.2788	-0.0181
952	SLE FR 2	-0.25	-0.05	16.38	0.0037	-5.2788	-0.0169
952	SLE FR 3	-0.25	-0.05	16.43	0.0038	-5.293	-0.0182
952	SLE FR 4	-0.26	-0.05	16.99	0.0039	-5.4733	-0.0169
952	SLE FR 5	-0.26	-0.05	17.03	0.0039	-5.4875	-0.0182
952	SLE FR 6	-0.26	-0.05	17.39	0.0039	-5.6029	-0.0181
952	SLE QP 1	-0.25	-0.05	16.38	0.0037	-5.2788	-0.0181
952	SLE QP 2	-0.26	-0.05	16.99	0.0039	-5.4733	-0.0181
952	SLD 1	1.49	0.19	18.63	0.005	-5.9941	0.062
952	SLD 2	1.4	0.11	18.65	0.005	-5.999	0.0357
952	SLD 3	1.44	-0.33	18.73	0.0052	-6.0251	-0.1084
952	SLD 4	1.36	-0.41	18.74	0.0052	-6.0301	-0.1347
952	SLD 5	0.35	0.83	17.34	0.0039	-5.5816	0.269
952	SLD 6	0.3	0.78	17.35	0.0039	-5.5848	0.2519
952	SLD 7	0.2	-0.92	17.65	0.0045	-5.685	-0.299
952	SLD 8	0.14	-0.97	17.66	0.0045	-5.6882	-0.3161
952	SLD 9	-0.66	0.86	16.32	0.0032	-5.2583	0.2799
952	SLD 10	-0.71	0.81	16.33	0.0032	-5.2615	0.2628
952	SLD 11	-0.81	-0.89	16.63	0.0038	-5.3617	-0.2881
952	SLD 12	-0.86	-0.94	16.64	0.0038	-5.365	-0.3051
952	SLD 13	-1.87	0.3	15.23	0.0025	-4.9165	0.0985
952	SLD 14	-1.96	0.22	15.25	0.0026	-4.9215	0.0722
952	SLD 15	-1.92	-0.22	15.33	0.0027	-4.9475	-0.0719
952	SLD 16	-2	-0.3	15.34	0.0027	-4.9525	-0.0982
952	SLV 1	3.82	0.51	20.84	0.0065	-6.6925	0.1642
952	SLV 2	3.62	0.32	20.88	0.0065	-6.7041	0.103
952	SLV 3	3.72	-0.69	21.06	0.0069	-6.764	-0.2245
952	SLV 4	3.52	-0.88	21.09	0.0069	-6.7756	-0.2858
952	SLV 5	1.16	1.96	17.81	0.004	-5.7286	0.6366
952	SLV 6	1.04	1.84	17.83	0.004	-5.736	0.5975
952	SLV 7	0.81	-2.03	18.53	0.0054	-5.967	-0.6593
952	SLV 8	0.68	-2.15	18.55	0.0054	-5.9744	-0.6984
952	SLV 9	-1.19	2.04	15.42	0.0023	-4.9721	0.6622
952	SLV 10	-1.32	1.92	15.44	0.0023	-4.9795	0.6231
952	SLV 11	-1.55	-1.95	16.14	0.0037	-5.2106	-0.6337
952	SLV 12	-1.68	-2.07	16.16	0.0037	-5.218	-0.6728
952	SLV 13	-4.03	0.77	12.88	0.0008	-4.171	0.2496
952	SLV 14	-4.23	0.58	12.92	0.0008	-4.1825	0.1883
952	SLV 15	-4.14	-0.43	13.1	0.0012	-4.2425	-0.1392
952	SLV 16	-4.34	-0.62	13.13	0.0012	-4.2541	-0.2004
952	CRTFP Ux+	0	0	0	0	0	0
952	CRTFP Ux-	0	0	0	0	0	0
952	CRTFP Uy+	0	0	0	0	0	0
952	CRTFP Uy-	0	0	0	0	0	0
955	SLU 1	0.42	0.38	39.42	-1.0763	-0.0358	0.0059
955	SLU 2	0.42	0.45	39.41	-1.0762	-0.0361	0.0059
955	SLU 3	0.43	0.4	40.14	-1.0959	-0.0364	0.0061
955	SLU 4	0.43	0.45	40.14	-1.0959	-0.0366	0.0061
955	SLU 5	0.43	0.45	39.77	-1.086	-0.0362	0.0061
955	SLU 6	0.44	0.41	40.5	-1.1057	-0.0365	0.0062
955	SLU 7	0.44	0.45	40.5	-1.1057	-0.0367	0.0062
955	SLU 8	0.44	0.39	40.14	-1.0959	-0.036	0.0061
955	SLU 9	0.44	0.43	40.13	-1.0958	-0.0362	0.0062
955	SLU 10	0.47	0.49	44.76	-1.2234	-0.0402	0.007
955	SLU 11	0.48	0.44	45.49	-1.2431	-0.0404	0.0071
955	SLU 12	0.48	0.48	45.49	-1.243	-0.0407	0.0072
955	SLU 13	0.48	0.49	45.12	-1.2332	-0.0403	0.0071
955	SLU 14	0.49	0.44	45.85	-1.2529	-0.0406	0.0073
955	SLU 15	0.49	0.48	45.85	-1.2528	-0.0408	0.0073
955	SLU 16	0.49	0.42	45.49	-1.243	-0.0401	0.0072
955	SLU 17	0.49	0.46	45.48	-1.243	-0.0403	0.0072
955	SLU 18	0.49	0.43	47.06	-1.2865	-0.0416	0.0074
955	SLU 19	0.49	0.47	47.06	-1.2865	-0.0418	0.0074
955	SLU 20	0.5	0.43	47.42	-1.2963	-0.0417	0.0075
955	SLU 21	0.5	0.48	47.42	-1.2963	-0.0419	0.0076
955	SLU 22	0.47	0.46	44.56	-1.217	-0.0421	0.0067
955	SLU 23	0.47	0.53	44.55	-1.217	-0.0425	0.0068
955	SLU 24	0.48	0.48	45.28	-1.2366	-0.0427	0.0069
955	SLU 25	0.48	0.52	45.28	-1.2366	-0.0429	0.0069
955	SLU 26	0.48	0.53	44.91	-1.2268	-0.0426	0.0069

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
955	SLU 27	0.49	0.48	45.64	-1.2464	-0.0428	0.007
955	SLU 28	0.49	0.52	45.64	-1.2464	-0.043	0.0071
955	SLU 29	0.48	0.46	45.28	-1.2366	-0.0424	0.007
955	SLU 30	0.48	0.5	45.27	-1.2366	-0.0426	0.007
955	SLU 31	0.52	0.56	49.9	-1.3641	-0.0466	0.0078
955	SLU 32	0.53	0.51	50.63	-1.3838	-0.0468	0.008
955	SLU 33	0.53	0.56	50.63	-1.3838	-0.047	0.008
955	SLU 34	0.53	0.57	50.26	-1.3739	-0.0467	0.0079
955	SLU 35	0.54	0.52	50.99	-1.3936	-0.0469	0.0081
955	SLU 36	0.54	0.56	50.99	-1.3936	-0.0471	0.0081
955	SLU 37	0.53	0.5	50.63	-1.3838	-0.0465	0.008
955	SLU 38	0.54	0.54	50.62	-1.3837	-0.0467	0.0081
955	SLU 39	0.54	0.51	52.2	-1.4273	-0.048	0.0082
955	SLU 40	0.54	0.55	52.2	-1.4272	-0.0482	0.0082
955	SLU 41	0.55	0.51	52.56	-1.4371	-0.0481	0.0083
955	SLU 42	0.55	0.55	52.56	-1.437	-0.0483	0.0084
955	SLU 43	0.53	0.47	49.48	-1.3509	-0.0443	0.0073
955	SLU 44	0.53	0.54	49.47	-1.3509	-0.0447	0.0074
955	SLU 45	0.54	0.49	50.2	-1.3705	-0.0449	0.0075
955	SLU 46	0.54	0.54	50.2	-1.3705	-0.0451	0.0076
955	SLU 47	0.54	0.54	49.83	-1.3607	-0.0448	0.0075
955	SLU 48	0.55	0.49	50.56	-1.3803	-0.045	0.0077
955	SLU 49	0.55	0.54	50.56	-1.3803	-0.0452	0.0077
955	SLU 50	0.55	0.47	50.2	-1.3705	-0.0446	0.0076
955	SLU 51	0.55	0.52	50.19	-1.3705	-0.0448	0.0076
955	SLU 52	0.58	0.58	54.82	-1.498	-0.0488	0.0085
955	SLU 53	0.59	0.53	55.55	-1.5177	-0.049	0.0086
955	SLU 54	0.59	0.57	55.55	-1.5177	-0.0492	0.0086
955	SLU 55	0.59	0.58	55.18	-1.5078	-0.0489	0.0086
955	SLU 56	0.6	0.53	55.91	-1.5275	-0.0491	0.0087
955	SLU 57	0.6	0.57	55.91	-1.5275	-0.0493	0.0088
955	SLU 58	0.6	0.51	55.55	-1.5177	-0.0487	0.0087
955	SLU 59	0.6	0.55	55.54	-1.5176	-0.0489	0.0087
955	SLU 60	0.6	0.52	57.12	-1.5611	-0.0502	0.0089
955	SLU 61	0.6	0.56	57.12	-1.5611	-0.0504	0.0089
955	SLU 62	0.61	0.52	57.48	-1.5709	-0.0503	0.009
955	SLU 63	0.61	0.56	57.48	-1.5709	-0.0505	0.009
955	SLU 64	0.58	0.55	54.62	-1.4917	-0.0507	0.0082
955	SLU 65	0.58	0.62	54.61	-1.4916	-0.051	0.0082
955	SLU 66	0.59	0.57	55.35	-1.5113	-0.0513	0.0084
955	SLU 67	0.59	0.61	55.34	-1.5112	-0.0515	0.0084
955	SLU 68	0.59	0.62	54.97	-1.5014	-0.0512	0.0084
955	SLU 69	0.6	0.57	55.71	-1.5211	-0.0514	0.0085
955	SLU 70	0.6	0.61	55.7	-1.521	-0.0516	0.0085
955	SLU 71	0.59	0.55	55.34	-1.5113	-0.0509	0.0084
955	SLU 72	0.59	0.59	55.34	-1.5112	-0.0511	0.0085
955	SLU 73	0.63	0.65	59.96	-1.6388	-0.0551	0.0093
955	SLU 74	0.64	0.6	60.7	-1.6584	-0.0554	0.0094
955	SLU 75	0.64	0.65	60.69	-1.6584	-0.0556	0.0095
955	SLU 76	0.64	0.65	60.32	-1.6486	-0.0552	0.0094
955	SLU 77	0.65	0.6	61.06	-1.6682	-0.0555	0.0096
955	SLU 78	0.65	0.65	61.05	-1.6682	-0.0557	0.0096
955	SLU 79	0.64	0.58	60.69	-1.6584	-0.055	0.0095
955	SLU 80	0.65	0.63	60.69	-1.6584	-0.0552	0.0095
955	SLU 81	0.65	0.6	62.26	-1.7019	-0.0565	0.0097
955	SLU 82	0.65	0.64	62.26	-1.7018	-0.0567	0.0097
955	SLU 83	0.66	0.6	62.62	-1.7117	-0.0566	0.0098
955	SLU 84	0.66	0.64	62.62	-1.7116	-0.0569	0.0099
955	SLE RA 1	0.43	0.4	40.89	-1.1165	-0.0376	0.0061
955	SLE RA 2	0.43	0.45	40.88	-1.1165	-0.0378	0.0061
955	SLE RA 3	0.44	0.42	41.37	-1.1296	-0.038	0.0062
955	SLE RA 4	0.44	0.45	41.37	-1.1296	-0.0381	0.0063
955	SLE RA 5	0.44	0.45	41.12	-1.123	-0.0379	0.0062
955	SLE RA 6	0.45	0.42	41.61	-1.1361	-0.0381	0.0063
955	SLE RA 7	0.45	0.45	41.61	-1.1361	-0.0382	0.0063
955	SLE RA 8	0.44	0.41	41.37	-1.1296	-0.0378	0.0063
955	SLE RA 9	0.45	0.43	41.36	-1.1295	-0.0379	0.0063
955	SLE RA 10	0.47	0.47	44.45	-1.2146	-0.0405	0.0069
955	SLE RA 11	0.48	0.44	44.94	-1.2277	-0.0407	0.0069
955	SLE RA 12	0.48	0.47	44.93	-1.2277	-0.0408	0.007
955	SLE RA 13	0.47	0.48	44.69	-1.2211	-0.0406	0.0069
955	SLE RA 14	0.48	0.44	45.18	-1.2342	-0.0408	0.007
955	SLE RA 15	0.48	0.47	45.17	-1.2342	-0.0409	0.0071
955	SLE RA 16	0.48	0.43	44.93	-1.2277	-0.0405	0.007
955	SLE RA 17	0.48	0.46	44.93	-1.2276	-0.0406	0.007
955	SLE RA 18	0.48	0.44	45.98	-1.2566	-0.0415	0.0071
955	SLE RA 19	0.48	0.47	45.98	-1.2566	-0.0416	0.0071
955	SLE RA 20	0.49	0.44	46.22	-1.2632	-0.0416	0.0072
955	SLE RA 21	0.49	0.47	46.22	-1.2632	-0.0417	0.0072
955	SLE FR 1	0.43	0.4	40.89	-1.1165	-0.0376	0.0061
955	SLE FR 2	0.43	0.41	40.89	-1.1165	-0.0376	0.0061
955	SLE FR 3	0.44	0.4	40.98	-1.1191	-0.0376	0.0061
955	SLE FR 4	0.45	0.42	42.41	-1.1585	-0.0388	0.0064
955	SLE FR 5	0.45	0.41	42.51	-1.1612	-0.0388	0.0064
955	SLE FR 6	0.46	0.42	43.43	-1.1866	-0.0395	0.0066
955	SLE QP 1	0.43	0.4	40.89	-1.1165	-0.0376	0.0061
955	SLE QP 2	0.45	0.41	42.41	-1.1585	-0.0388	0.0064
955	SLD 1	5.62	0.95	40.09	-1.0982	0.019	0.1291
955	SLD 2	5.38	1.03	40.09	-1.0984	0.0192	0.1256
955	SLD 3	5.49	-0.56	40.42	-1.1043	0.0256	0.1258
955	SLD 4	5.24	-0.47	40.42	-1.1045	0.0258	0.1223

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
955	SLD 5	2.25	2.85	41.21	-1.1311	-0.0314	0.0489
955	SLD 6	2.09	2.9	41.21	-1.1312	-0.0313	0.0467
955	SLD 7	1.8	-2.18	42.32	-1.1515	-0.0095	0.0377
955	SLD 8	1.64	-2.12	42.32	-1.1517	-0.0094	0.0355
955	SLD 9	-0.74	2.95	42.51	-1.1654	-0.0681	-0.0227
955	SLD 10	-0.9	3	42.51	-1.1656	-0.068	-0.0249
955	SLD 11	-1.19	-2.07	43.62	-1.1858	-0.0462	-0.0338
955	SLD 12	-1.35	-2.02	43.62	-1.186	-0.0461	-0.0361
955	SLD 13	-4.34	1.3	44.41	-1.2126	-0.1033	-0.1095
955	SLD 14	-4.59	1.38	44.41	-1.2128	-0.1031	-0.113
955	SLD 15	-4.48	-0.2	44.74	-1.2187	-0.0967	-0.1128
955	SLD 16	-4.73	-0.12	44.74	-1.2189	-0.0965	-0.1163
955	SLV 1	12.55	1.62	36.98	-1.0174	0.0967	0.2934
955	SLV 2	11.97	1.81	36.98	-1.0179	0.0971	0.2853
955	SLV 3	12.24	-1.81	37.74	-1.0315	0.1116	0.2857
955	SLV 4	11.66	-1.62	37.75	-1.032	0.112	0.2775
955	SLV 5	4.65	5.95	39.63	-1.0947	-0.0208	0.1057
955	SLV 6	4.28	6.07	39.63	-1.095	-0.0205	0.1005
955	SLV 7	3.61	-5.49	42.17	-1.1417	0.0289	0.0798
955	SLV 8	3.24	-5.37	42.17	-1.142	0.0292	0.0745
955	SLV 9	-2.34	6.2	42.66	-1.175	-0.1067	-0.0617
955	SLV 10	-2.71	6.32	42.66	-1.1754	-0.1064	-0.0669
955	SLV 11	-3.39	-5.24	45.2	-1.2221	-0.057	-0.0877
955	SLV 12	-3.75	-5.12	45.2	-1.2224	-0.0567	-0.0929
955	SLV 13	-10.76	2.45	47.08	-1.2851	-0.1896	-0.2647
955	SLV 14	-11.34	2.64	47.09	-1.2856	-0.1891	-0.2728
955	SLV 15	-11.08	-0.98	47.85	-1.2992	-0.1747	-0.2725
955	SLV 16	-11.65	-0.79	47.85	-1.2997	-0.1742	-0.2806
955	CRTFP Ux+	0	0	0	0	0	0
955	CRTFP Ux-	0	0	0	0	0	0
958	SLU 1	-0.22	0.42	38.11	-1.0381	0.061	0.0003
958	SLU 2	-0.22	0.48	38.1	-1.0382	0.0612	0.0003
958	SLU 3	-0.22	0.44	38.81	-1.0571	0.0626	0.0003
958	SLU 4	-0.22	0.48	38.81	-1.0571	0.0627	0.0003
958	SLU 5	-0.22	0.49	38.46	-1.0477	0.0621	0.0003
958	SLU 6	-0.22	0.44	39.16	-1.0666	0.0634	0.0003
958	SLU 7	-0.22	0.49	39.16	-1.0666	0.0636	0.0003
958	SLU 8	-0.22	0.42	38.81	-1.0572	0.0627	0.0003
958	SLU 9	-0.22	0.46	38.81	-1.0572	0.0628	0.0003
958	SLU 10	-0.24	0.55	43.21	-1.1775	0.069	0.0003
958	SLU 11	-0.25	0.51	43.91	-1.1964	0.0703	0.0003
958	SLU 12	-0.25	0.55	43.91	-1.1965	0.0705	0.0003
958	SLU 13	-0.24	0.55	43.56	-1.1871	0.0698	0.0003
958	SLU 14	-0.25	0.51	44.26	-1.206	0.0712	0.0004
958	SLU 15	-0.25	0.55	44.26	-1.206	0.0713	0.0003
958	SLU 16	-0.25	0.49	43.91	-1.1965	0.0705	0.0004
958	SLU 17	-0.25	0.53	43.91	-1.1966	0.0706	0.0004
958	SLU 18	-0.25	0.51	45.4	-1.2372	0.0721	0.0004
958	SLU 19	-0.25	0.55	45.39	-1.2372	0.0722	0.0004
958	SLU 20	-0.26	0.51	45.75	-1.2467	0.073	0.0004
958	SLU 21	-0.25	0.55	45.75	-1.2468	0.0731	0.0004
958	SLU 22	-0.25	0.53	43.05	-1.1727	0.0706	0
958	SLU 23	-0.25	0.6	43.05	-1.1727	0.0708	-0.0001
958	SLU 24	-0.25	0.56	43.75	-1.1916	0.0722	0
958	SLU 25	-0.25	0.6	43.75	-1.1916	0.0723	-0.0001
958	SLU 26	-0.25	0.61	43.4	-1.1822	0.0717	-0.0001
958	SLU 27	-0.25	0.56	44.1	-1.2011	0.073	0
958	SLU 28	-0.25	0.6	44.1	-1.2011	0.0732	0
958	SLU 29	-0.25	0.54	43.75	-1.1917	0.0723	0
958	SLU 30	-0.25	0.58	43.75	-1.1917	0.0724	0
958	SLU 31	-0.27	0.67	48.15	-1.3121	0.0786	0
958	SLU 32	-0.28	0.62	48.86	-1.331	0.0799	0
958	SLU 33	-0.28	0.67	48.85	-1.331	0.0801	0
958	SLU 34	-0.27	0.67	48.5	-1.3216	0.0794	0
958	SLU 35	-0.28	0.63	49.21	-1.3405	0.0808	0
958	SLU 36	-0.28	0.67	49.2	-1.3405	0.0809	0
958	SLU 37	-0.28	0.61	48.85	-1.3311	0.0801	0
958	SLU 38	-0.28	0.65	48.85	-1.3311	0.0802	0
958	SLU 39	-0.28	0.63	50.34	-1.3717	0.0817	0
958	SLU 40	-0.28	0.67	50.34	-1.3718	0.0818	0
958	SLU 41	-0.29	0.63	50.69	-1.3813	0.0826	0.0001
958	SLU 42	-0.28	0.67	50.69	-1.3813	0.0827	0
958	SLU 43	-0.27	0.5	47.85	-1.3034	0.076	0.0005
958	SLU 44	-0.27	0.57	47.84	-1.3035	0.0762	0.0005
958	SLU 45	-0.28	0.53	48.55	-1.3224	0.0776	0.0005
958	SLU 46	-0.28	0.57	48.55	-1.3224	0.0777	0.0005
958	SLU 47	-0.27	0.57	48.19	-1.313	0.0771	0.0005
958	SLU 48	-0.28	0.53	48.9	-1.3319	0.0784	0.0005
958	SLU 49	-0.28	0.57	48.9	-1.3319	0.0786	0.0005
958	SLU 50	-0.28	0.51	48.55	-1.3225	0.0777	0.0005
958	SLU 51	-0.28	0.55	48.55	-1.3225	0.0778	0.0005
958	SLU 52	-0.3	0.63	52.94	-1.4429	0.084	0.0005
958	SLU 53	-0.3	0.59	53.65	-1.4618	0.0854	0.0005
958	SLU 54	-0.3	0.63	53.65	-1.4618	0.0855	0.0005
958	SLU 55	-0.3	0.64	53.3	-1.4524	0.0849	0.0005
958	SLU 56	-0.3	0.6	54	-1.4713	0.0862	0.0006
958	SLU 57	-0.3	0.64	54	-1.4713	0.0863	0.0005
958	SLU 58	-0.3	0.57	53.65	-1.4619	0.0855	0.0006
958	SLU 59	-0.3	0.61	53.65	-1.4619	0.0856	0.0006
958	SLU 60	-0.31	0.59	55.14	-1.5025	0.0871	0.0006
958	SLU 61	-0.31	0.64	55.13	-1.5026	0.0872	0.0006

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
958	SLU 62	-0.31	0.6	55.49	-1.5121	0.088	0.0006
958	SLU 63	-0.31	0.64	55.48	-1.5121	0.0881	0.0006
958	SLU 64	-0.3	0.62	52.79	-1.438	0.0856	0.0002
958	SLU 65	-0.3	0.69	52.78	-1.438	0.0858	0.0001
958	SLU 66	-0.31	0.64	53.49	-1.4569	0.0872	0.0002
958	SLU 67	-0.31	0.68	53.49	-1.4569	0.0873	0.0001
958	SLU 68	-0.3	0.69	53.14	-1.4475	0.0867	0.0001
958	SLU 69	-0.31	0.65	53.84	-1.4664	0.088	0.0002
958	SLU 70	-0.31	0.69	53.84	-1.4665	0.0882	0.0001
958	SLU 71	-0.31	0.62	53.49	-1.457	0.0873	0.0002
958	SLU 72	-0.31	0.67	53.49	-1.457	0.0874	0.0002
958	SLU 73	-0.33	0.75	57.89	-1.5774	0.0936	0.0002
958	SLU 74	-0.33	0.71	58.59	-1.5963	0.0949	0.0002
958	SLU 75	-0.33	0.75	58.59	-1.5963	0.0951	0.0002
958	SLU 76	-0.33	0.76	58.24	-1.5869	0.0944	0.0002
958	SLU 77	-0.33	0.71	58.94	-1.6058	0.0958	0.0002
958	SLU 78	-0.33	0.75	58.94	-1.6058	0.0959	0.0002
958	SLU 79	-0.33	0.69	58.59	-1.5964	0.0951	0.0002
958	SLU 80	-0.33	0.73	58.59	-1.5964	0.0952	0.0002
958	SLU 81	-0.34	0.71	60.08	-1.6371	0.0967	0.0002
958	SLU 82	-0.34	0.75	60.08	-1.6371	0.0968	0.0002
958	SLU 83	-0.34	0.71	60.43	-1.6466	0.0976	0.0003
958	SLU 84	-0.34	0.76	60.43	-1.6466	0.0977	0.0002
958	SLE RA 1	-0.23	0.45	39.52	-1.0766	0.0637	0.0002
958	SLE RA 2	-0.22	0.49	39.52	-1.0766	0.0639	0.0002
958	SLE RA 3	-0.23	0.47	39.99	-1.0892	0.0648	0.0002
958	SLE RA 4	-0.23	0.49	39.99	-1.0892	0.0649	0.0002
958	SLE RA 5	-0.23	0.5	39.75	-1.0829	0.0644	0.0002
958	SLE RA 6	-0.23	0.47	40.22	-1.0955	0.0653	0.0002
958	SLE RA 7	-0.23	0.5	40.22	-1.0956	0.0654	0.0002
958	SLE RA 8	-0.23	0.45	39.99	-1.0893	0.0649	0.0002
958	SLE RA 9	-0.23	0.48	39.99	-1.0893	0.065	0.0002
958	SLE RA 10	-0.24	0.54	42.92	-1.1695	0.0691	0.0002
958	SLE RA 11	-0.24	0.51	43.39	-1.1821	0.07	0.0002
958	SLE RA 12	-0.24	0.54	43.39	-1.1821	0.0701	0.0002
958	SLE RA 13	-0.24	0.54	43.15	-1.1758	0.0696	0.0002
958	SLE RA 14	-0.25	0.51	43.62	-1.1885	0.0705	0.0002
958	SLE RA 15	-0.25	0.54	43.62	-1.1885	0.0706	0.0002
958	SLE RA 16	-0.25	0.5	43.39	-1.1822	0.0701	0.0002
958	SLE RA 17	-0.25	0.53	43.39	-1.1822	0.0701	0.0002
958	SLE RA 18	-0.25	0.51	44.38	-1.2093	0.0711	0.0003
958	SLE RA 19	-0.25	0.54	44.38	-1.2093	0.0712	0.0002
958	SLE RA 20	-0.25	0.51	44.61	-1.2156	0.0717	0.0003
958	SLE RA 21	-0.25	0.54	44.61	-1.2157	0.0718	0.0002
958	SLE FR 1	-0.23	0.45	39.52	-1.0766	0.0637	0.0002
958	SLE FR 2	-0.22	0.46	39.52	-1.0766	0.0637	0.0002
958	SLE FR 3	-0.23	0.45	39.62	-1.0791	0.0639	0.0002
958	SLE FR 4	-0.23	0.48	40.98	-1.1164	0.066	0.0002
958	SLE FR 5	-0.23	0.47	41.07	-1.1189	0.0662	0.0002
958	SLE FR 6	-0.24	0.48	41.95	-1.1429	0.0674	0.0002
958	SLE QP 1	-0.23	0.45	39.52	-1.0766	0.0637	0.0002
958	SLE QP 2	-0.23	0.47	40.98	-1.1164	0.0659	0.0002
958	SLD 1	4.88	1.41	42.17	-1.1494	0.1177	0.1184
958	SLD 2	4.63	1.32	42.2	-1.1499	0.1179	0.1149
958	SLD 3	4.75	-0.09	42.46	-1.1544	0.1131	0.1212
958	SLD 4	4.5	-0.18	42.48	-1.1549	0.1134	0.1177
958	SLD 5	1.54	3.04	40.89	-1.1186	0.0883	0.0321
958	SLD 6	1.38	2.98	40.91	-1.119	0.0885	0.0298
958	SLD 7	1.11	-1.95	41.86	-1.1352	0.0731	0.0413
958	SLD 8	0.95	-2.01	41.87	-1.1356	0.0733	0.039
958	SLD 9	-1.41	2.95	40.09	-1.0972	0.0586	-0.0386
958	SLD 10	-1.57	2.89	40.1	-1.0975	0.0587	-0.0409
958	SLD 11	-1.85	-2.04	41.05	-1.1138	0.0434	-0.0294
958	SLD 12	-2.01	-2.1	41.06	-1.1141	0.0436	-0.0317
958	SLD 13	-4.97	1.11	39.47	-1.0779	0.0185	-0.1173
958	SLD 14	-5.21	1.02	39.5	-1.0784	0.0188	-0.1208
958	SLD 15	-5.1	-0.39	39.76	-1.0829	0.014	-0.1145
958	SLD 16	-5.34	-0.48	39.79	-1.0834	0.0142	-0.118
958	SLV 1	11.72	2.63	43.78	-1.1941	0.1868	0.2767
958	SLV 2	11.15	2.42	43.84	-1.1953	0.1874	0.2686
958	SLV 3	11.41	-0.78	44.44	-1.2056	0.1764	0.2832
958	SLV 4	10.84	-0.99	44.5	-1.2068	0.1769	0.275
958	SLV 5	3.91	6.33	40.81	-1.1221	0.118	0.0747
958	SLV 6	3.55	6.2	40.85	-1.1228	0.1183	0.0695
958	SLV 7	2.9	-5.05	43.01	-1.1604	0.0831	0.0963
958	SLV 8	2.53	-5.18	43.05	-1.1611	0.0835	0.0911
958	SLV 9	-3	6.12	38.91	-1.0716	0.0484	-0.0907
958	SLV 10	-3.36	5.98	38.95	-1.0724	0.0488	-0.0959
958	SLV 11	-4.01	-5.26	41.11	-1.1099	0.0136	-0.0691
958	SLV 12	-4.37	-5.4	41.15	-1.1107	0.0139	-0.0743
958	SLV 13	-11.31	1.92	37.46	-1.026	-0.045	-0.2746
958	SLV 14	-11.88	1.71	37.52	-1.0272	-0.0445	-0.2828
958	SLV 15	-11.61	-1.49	38.12	-1.0375	-0.0555	-0.2681
958	SLV 16	-12.18	-1.7	38.18	-1.0387	-0.0549	-0.2763
958	CRTFP Ux+	0	0	0	0	0	0
958	CRTFP Ux-	0	0	0	0	0	0
997	SLU 1	-0.22	-0.06	15.99	0.0037	-5.1191	-0.0191
997	SLU 2	-0.22	-0.03	15.99	0.0037	-5.1192	-0.0104
997	SLU 3	-0.23	-0.06	16.3	0.0038	-5.22	-0.0183
997	SLU 4	-0.23	-0.04	16.3	0.0038	-5.22	-0.0131
997	SLU 5	-0.23	-0.03	16.15	0.0038	-5.1725	-0.0107

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
997	SLU 6	-0.23	-0.06	16.47	0.0038	-5.2733	-0.0186
997	SLU 7	-0.23	-0.04	16.47	0.0038	-5.2734	-0.0134
997	SLU 8	-0.23	-0.06	16.32	0.0038	-5.2258	-0.0197
997	SLU 9	-0.23	-0.04	16.32	0.0038	-5.2259	-0.0145
997	SLU 10	-0.25	-0.03	18.12	0.0041	-5.8013	-0.0104
997	SLU 11	-0.26	-0.06	18.43	0.0042	-5.9021	-0.0183
997	SLU 12	-0.26	-0.04	18.43	0.0042	-5.9021	-0.0131
997	SLU 13	-0.25	-0.03	18.29	0.0042	-5.8546	-0.0107
997	SLU 14	-0.26	-0.06	18.6	0.0043	-5.9554	-0.0186
997	SLU 15	-0.26	-0.04	18.6	0.0043	-5.9555	-0.0134
997	SLU 16	-0.26	-0.06	18.45	0.0042	-5.9079	-0.0197
997	SLU 17	-0.26	-0.04	18.45	0.0042	-5.908	-0.0145
997	SLU 18	-0.26	-0.06	19.03	0.0043	-6.0935	-0.0191
997	SLU 19	-0.26	-0.04	19.03	0.0043	-6.0936	-0.0139
997	SLU 20	-0.26	-0.06	19.2	0.0044	-6.1469	-0.0194
997	SLU 21	-0.26	-0.04	19.2	0.0044	-6.1469	-0.0142
997	SLU 22	-0.25	-0.05	18.06	0.0042	-5.7839	-0.0161
997	SLU 23	-0.25	-0.02	18.06	0.0042	-5.7839	-0.0074
997	SLU 24	-0.26	-0.05	18.38	0.0043	-5.8847	-0.0153
997	SLU 25	-0.26	-0.03	18.38	0.0043	-5.8847	-0.0101
997	SLU 26	-0.26	-0.02	18.23	0.0042	-5.8373	-0.0077
997	SLU 27	-0.26	-0.05	18.55	0.0043	-5.9381	-0.0156
997	SLU 28	-0.26	-0.03	18.55	0.0043	-5.9381	-0.0104
997	SLU 29	-0.26	-0.05	18.4	0.0043	-5.8906	-0.0167
997	SLU 30	-0.26	-0.03	18.4	0.0043	-5.8906	-0.0115
997	SLU 31	-0.28	-0.02	20.2	0.0046	-6.466	-0.0075
997	SLU 32	-0.28	-0.05	20.51	0.0047	-6.5668	-0.0154
997	SLU 33	-0.28	-0.03	20.51	0.0047	-6.5668	-0.0101
997	SLU 34	-0.28	-0.02	20.36	0.0046	-6.5194	-0.0078
997	SLU 35	-0.29	-0.05	20.68	0.0047	-6.6202	-0.0157
997	SLU 36	-0.29	-0.03	20.68	0.0047	-6.6202	-0.0104
997	SLU 37	-0.28	-0.05	20.53	0.0047	-6.5727	-0.0167
997	SLU 38	-0.28	-0.03	20.53	0.0047	-6.5727	-0.0115
997	SLU 39	-0.29	-0.05	21.11	0.0048	-6.7583	-0.0161
997	SLU 40	-0.29	-0.03	21.11	0.0048	-6.7583	-0.0109
997	SLU 41	-0.29	-0.05	21.28	0.0048	-6.8116	-0.0164
997	SLU 42	-0.29	-0.03	21.28	0.0048	-6.8117	-0.0112
997	SLU 43	-0.28	-0.08	20.07	0.0047	-6.4269	-0.0258
997	SLU 44	-0.28	-0.05	20.07	0.0047	-6.427	-0.0172
997	SLU 45	-0.29	-0.08	20.39	0.0048	-6.5278	-0.0251
997	SLU 46	-0.29	-0.06	20.39	0.0048	-6.5278	-0.0198
997	SLU 47	-0.28	-0.05	20.24	0.0047	-6.4804	-0.0174
997	SLU 48	-0.29	-0.08	20.55	0.0048	-6.5812	-0.0253
997	SLU 49	-0.29	-0.06	20.55	0.0048	-6.5812	-0.0201
997	SLU 50	-0.29	-0.08	20.4	0.0048	-6.5337	-0.0264
997	SLU 51	-0.29	-0.06	20.4	0.0048	-6.5337	-0.0212
997	SLU 52	-0.31	-0.05	22.2	0.0051	-7.1091	-0.0172
997	SLU 53	-0.31	-0.08	22.52	0.0052	-7.2099	-0.0251
997	SLU 54	-0.31	-0.06	22.52	0.0052	-7.2099	-0.0199
997	SLU 55	-0.31	-0.05	22.37	0.0051	-7.1625	-0.0175
997	SLU 56	-0.32	-0.08	22.68	0.0052	-7.2633	-0.0254
997	SLU 57	-0.32	-0.06	22.68	0.0052	-7.2633	-0.0202
997	SLU 58	-0.31	-0.08	22.54	0.0052	-7.2158	-0.0264
997	SLU 59	-0.31	-0.06	22.54	0.0052	-7.2158	-0.0212
997	SLU 60	-0.32	-0.08	23.12	0.0053	-7.4014	-0.0259
997	SLU 61	-0.32	-0.06	23.12	0.0053	-7.4014	-0.0206
997	SLU 62	-0.32	-0.08	23.28	0.0053	-7.4547	-0.0262
997	SLU 63	-0.32	-0.06	23.28	0.0053	-7.4548	-0.0209
997	SLU 64	-0.31	-0.07	22.15	0.0052	-7.0917	-0.0229
997	SLU 65	-0.31	-0.04	22.15	0.0052	-7.0917	-0.0142
997	SLU 66	-0.31	-0.07	22.46	0.0052	-7.1925	-0.0221
997	SLU 67	-0.31	-0.05	22.46	0.0052	-7.1926	-0.0169
997	SLU 68	-0.31	-0.04	22.32	0.0052	-7.1451	-0.0145
997	SLU 69	-0.32	-0.07	22.63	0.0053	-7.2459	-0.0224
997	SLU 70	-0.32	-0.05	22.63	0.0053	-7.2459	-0.0172
997	SLU 71	-0.32	-0.07	22.48	0.0052	-7.1984	-0.0235
997	SLU 72	-0.32	-0.05	22.48	0.0052	-7.1984	-0.0182
997	SLU 73	-0.34	-0.04	24.28	0.0056	-7.7738	-0.0142
997	SLU 74	-0.34	-0.07	24.6	0.0057	-7.8746	-0.0221
997	SLU 75	-0.34	-0.05	24.6	0.0057	-7.8747	-0.0169
997	SLU 76	-0.34	-0.04	24.45	0.0056	-7.8272	-0.0145
997	SLU 77	-0.34	-0.07	24.76	0.0057	-7.928	-0.0224
997	SLU 78	-0.34	-0.05	24.76	0.0057	-7.928	-0.0172
997	SLU 79	-0.34	-0.07	24.61	0.0056	-7.8805	-0.0235
997	SLU 80	-0.34	-0.05	24.62	0.0056	-7.8805	-0.0183
997	SLU 81	-0.35	-0.07	25.19	0.0058	-8.0661	-0.0229
997	SLU 82	-0.35	-0.05	25.19	0.0058	-8.0661	-0.0177
997	SLU 83	-0.35	-0.07	25.36	0.0058	-8.1195	-0.0232
997	SLU 84	-0.35	-0.05	25.36	0.0058	-8.1195	-0.018
997	SLE RA 1	-0.23	-0.06	16.58	0.0039	-5.309	-0.0182
997	SLE RA 2	-0.23	-0.04	16.58	0.0039	-5.3091	-0.0125
997	SLE RA 3	-0.24	-0.05	16.79	0.0039	-5.3763	-0.0177
997	SLE RA 4	-0.24	-0.04	16.79	0.0039	-5.3763	-0.0143
997	SLE RA 5	-0.23	-0.04	16.69	0.0039	-5.3447	-0.0127
997	SLE RA 6	-0.24	-0.05	16.9	0.0039	-5.4119	-0.0179
997	SLE RA 7	-0.24	-0.04	16.9	0.0039	-5.4119	-0.0144
997	SLE RA 8	-0.24	-0.06	16.8	0.0039	-5.3802	-0.0186
997	SLE RA 9	-0.24	-0.05	16.8	0.0039	-5.3802	-0.0152
997	SLE RA 10	-0.25	-0.04	18	0.0041	-5.7638	-0.0125
997	SLE RA 11	-0.25	-0.05	18.21	0.0042	-5.831	-0.0177
997	SLE RA 12	-0.25	-0.04	18.21	0.0042	-5.831	-0.0143

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
997	SLE RA 13	-0.25	-0.04	18.11	0.0042	-5.7994	-0.0127
997	SLE RA 14	-0.26	-0.05	18.32	0.0042	-5.8666	-0.0179
997	SLE RA 15	-0.26	-0.04	18.32	0.0042	-5.8666	-0.0145
997	SLE RA 16	-0.25	-0.06	18.22	0.0042	-5.8349	-0.0186
997	SLE RA 17	-0.25	-0.05	18.22	0.0042	-5.835	-0.0152
997	SLE RA 18	-0.26	-0.06	18.61	0.0043	-5.9587	-0.0183
997	SLE RA 19	-0.26	-0.04	18.61	0.0043	-5.9587	-0.0148
997	SLE RA 20	-0.26	-0.06	18.72	0.0043	-5.9942	-0.0185
997	SLE RA 21	-0.26	-0.05	18.72	0.0043	-5.9943	-0.015
997	SLE FR 1	-0.23	-0.06	16.58	0.0039	-5.309	-0.0182
997	SLE FR 2	-0.23	-0.05	16.58	0.0039	-5.3091	-0.0171
997	SLE FR 3	-0.23	-0.06	16.62	0.0039	-5.3233	-0.0183
997	SLE FR 4	-0.24	-0.05	17.19	0.004	-5.5039	-0.0171
997	SLE FR 5	-0.24	-0.06	17.23	0.004	-5.5182	-0.0183
997	SLE FR 6	-0.24	-0.06	17.6	0.0041	-5.6339	-0.0183
997	SLE QP 1	-0.23	-0.06	16.58	0.0039	-5.309	-0.0182
997	SLE QP 2	-0.24	-0.06	17.19	0.004	-5.5039	-0.0182
997	SLD 1	1.53	0.19	18.89	0.005	-6.0398	0.062
997	SLD 2	1.44	0.11	18.91	0.0051	-6.0449	0.0357
997	SLD 3	1.48	-0.33	19	0.0053	-6.0734	-0.1082
997	SLD 4	1.4	-0.41	19.01	0.0053	-6.0785	-0.1345
997	SLD 5	0.38	0.83	17.54	0.0039	-5.6128	0.2687
997	SLD 6	0.32	0.78	17.55	0.0039	-5.6162	0.2516
997	SLD 7	0.22	-0.92	17.88	0.0048	-5.7248	-0.2989
997	SLD 8	0.16	-0.97	17.89	0.0048	-5.7281	-0.316
997	SLD 9	-0.64	0.86	16.48	0.0032	-5.2797	0.2795
997	SLD 10	-0.7	0.81	16.49	0.0032	-5.2831	0.2624
997	SLD 11	-0.8	-0.89	16.83	0.004	-5.3917	-0.2881
997	SLD 12	-0.86	-0.94	16.84	0.0041	-5.395	-0.3052
997	SLD 13	-1.88	0.3	15.37	0.0027	-4.9294	0.098
997	SLD 14	-1.96	0.22	15.38	0.0027	-4.9345	0.0717
997	SLD 15	-1.92	-0.22	15.47	0.0029	-4.963	-0.0722
997	SLD 16	-2.01	-0.3	15.49	0.0029	-4.9681	-0.0985
997	SLV 1	3.9	0.51	21.18	0.0064	-6.7583	0.1645
997	SLV 2	3.7	0.32	21.21	0.0065	-6.7702	0.1032
997	SLV 3	3.79	-0.69	21.41	0.007	-6.8358	-0.224
997	SLV 4	3.59	-0.88	21.45	0.0071	-6.8477	-0.2853
997	SLV 5	1.21	1.96	18.02	0.0038	-5.7607	0.6361
997	SLV 6	1.07	1.84	18.04	0.0039	-5.7683	0.597
997	SLV 7	0.84	-2.03	18.81	0.0058	-6.019	-0.6588
997	SLV 8	0.71	-2.15	18.83	0.0058	-6.0266	-0.6979
997	SLV 9	-1.18	2.04	15.55	0.0022	-4.9812	0.6614
997	SLV 10	-1.32	1.92	15.57	0.0022	-4.9889	0.6223
997	SLV 11	-1.55	-1.95	16.34	0.0041	-5.2395	-0.6335
997	SLV 12	-1.69	-2.07	16.36	0.0041	-5.2472	-0.6726
997	SLV 13	-4.07	0.77	12.93	0.0009	-4.1601	0.2488
997	SLV 14	-4.27	0.58	12.96	0.001	-4.1721	0.1875
997	SLV 15	-4.18	-0.43	13.16	0.0015	-4.2376	-0.1397
997	SLV 16	-4.38	-0.62	13.2	0.0015	-4.2496	-0.201
997	CRTFP Ux+	0	0	0	0	0	0
997	CRTFP Ux-	0	0	0	0	0	0
997	CRTFP Uy+	0	0	0	0	0	0
997	CRTFP Uy-	0	0	0	0	0	0
999	SLU 1	-0.4	-0.11	30.41	-8.1526	-5.3431	-0.1283
999	SLU 2	-0.4	-0.06	30.41	-8.153	-5.3432	-0.1193
999	SLU 3	-0.41	-0.1	31.01	-8.3141	-5.4487	-0.13
999	SLU 4	-0.41	-0.07	31.01	-8.3143	-5.4487	-0.1246
999	SLU 5	-0.41	-0.06	30.73	-8.2389	-5.3991	-0.1213
999	SLU 6	-0.42	-0.11	31.33	-8.4	-5.5046	-0.132
999	SLU 7	-0.42	-0.08	31.33	-8.4002	-5.5046	-0.1266
999	SLU 8	-0.41	-0.11	31.05	-8.3244	-5.4549	-0.1322
999	SLU 9	-0.41	-0.08	31.05	-8.3246	-5.4549	-0.1269
999	SLU 10	-0.45	-0.06	34.48	-9.2447	-6.0559	-0.1322
999	SLU 11	-0.46	-0.11	35.08	-9.4058	-6.1614	-0.1429
999	SLU 12	-0.46	-0.08	35.08	-9.4061	-6.1614	-0.1375
999	SLU 13	-0.45	-0.06	34.79	-9.3306	-6.1118	-0.1342
999	SLU 14	-0.46	-0.11	35.4	-9.4917	-6.2173	-0.1448
999	SLU 15	-0.46	-0.08	35.4	-9.4919	-6.2173	-0.1395
999	SLU 16	-0.46	-0.11	35.11	-9.4161	-6.1676	-0.1451
999	SLU 17	-0.46	-0.08	35.11	-9.4164	-6.1677	-0.1397
999	SLU 18	-0.47	-0.11	36.22	-9.7122	-6.3613	-0.1467
999	SLU 19	-0.47	-0.08	36.22	-9.7125	-6.3613	-0.1413
999	SLU 20	-0.47	-0.11	36.54	-9.7981	-6.4172	-0.1486
999	SLU 21	-0.47	-0.08	36.54	-9.7984	-6.4172	-0.1433
999	SLU 22	-0.45	-0.09	34.37	-9.2144	-6.0379	-0.1388
999	SLU 23	-0.45	-0.04	34.37	-9.2148	-6.0379	-0.1299
999	SLU 24	-0.46	-0.09	34.97	-9.3759	-6.1434	-0.1405
999	SLU 25	-0.46	-0.06	34.97	-9.3761	-6.1435	-0.1351
999	SLU 26	-0.46	-0.04	34.69	-9.3007	-6.0938	-0.1318
999	SLU 27	-0.47	-0.09	35.29	-9.4618	-6.1993	-0.1425
999	SLU 28	-0.47	-0.06	35.29	-9.462	-6.1993	-0.1371
999	SLU 29	-0.46	-0.1	35.01	-9.3862	-6.1497	-0.1428
999	SLU 30	-0.46	-0.07	35.01	-9.3865	-6.1497	-0.1374
999	SLU 31	-0.5	-0.04	38.44	-10.3066	-6.7506	-0.1427
999	SLU 32	-0.51	-0.09	39.04	-10.4676	-6.8561	-0.1534
999	SLU 33	-0.51	-0.06	39.04	-10.4679	-6.8562	-0.148
999	SLU 34	-0.5	-0.05	38.76	-10.3925	-6.8065	-0.1447
999	SLU 35	-0.51	-0.09	39.36	-10.5535	-6.912	-0.1553
999	SLU 36	-0.51	-0.06	39.36	-10.5538	-6.9121	-0.15
999	SLU 37	-0.51	-0.1	39.07	-10.4779	-6.8624	-0.1556
999	SLU 38	-0.51	-0.07	39.07	-10.4782	-6.8624	-0.1502

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
999	SLU 39	-0.52	-0.1	40.18	-10.774	-7.056	-0.1572
999	SLU 40	-0.52	-0.07	40.18	-10.7743	-7.0561	-0.1518
999	SLU 41	-0.52	-0.1	40.5	-10.8599	-7.1119	-0.1591
999	SLU 42	-0.52	-0.07	40.5	-10.8602	-7.112	-0.1538
999	SLU 43	-0.5	-0.15	38.17	-10.2343	-6.7079	-0.1632
999	SLU 44	-0.5	-0.1	38.18	-10.2347	-6.7079	-0.1542
999	SLU 45	-0.51	-0.14	38.78	-10.3958	-6.8134	-0.1649
999	SLU 46	-0.51	-0.11	38.78	-10.3961	-6.8134	-0.1595
999	SLU 47	-0.51	-0.1	38.49	-10.3206	-6.7638	-0.1562
999	SLU 48	-0.52	-0.14	39.1	-10.4817	-6.8693	-0.1669
999	SLU 49	-0.52	-0.11	39.1	-10.482	-6.8693	-0.1615
999	SLU 50	-0.52	-0.15	38.81	-10.4061	-6.8196	-0.1671
999	SLU 51	-0.52	-0.12	38.81	-10.4064	-6.8197	-0.1618
999	SLU 52	-0.55	-0.1	42.24	-11.3265	-7.4206	-0.1671
999	SLU 53	-0.56	-0.14	42.84	-11.4875	-7.5261	-0.1778
999	SLU 54	-0.56	-0.11	42.84	-11.4878	-7.5261	-0.1724
999	SLU 55	-0.56	-0.1	42.56	-11.4124	-7.4765	-0.1691
999	SLU 56	-0.57	-0.15	43.16	-11.5734	-7.582	-0.1797
999	SLU 57	-0.57	-0.12	43.16	-11.5737	-7.582	-0.1744
999	SLU 58	-0.56	-0.15	42.88	-11.4978	-7.5324	-0.18
999	SLU 59	-0.56	-0.12	42.88	-11.4981	-7.5324	-0.1746
999	SLU 60	-0.57	-0.15	43.98	-11.7939	-7.726	-0.1816
999	SLU 61	-0.57	-0.12	43.98	-11.7942	-7.726	-0.1762
999	SLU 62	-0.58	-0.15	44.3	-11.8798	-7.7819	-0.1835
999	SLU 63	-0.58	-0.12	44.3	-11.8801	-7.7819	-0.1782
999	SLU 64	-0.55	-0.13	42.14	-11.2962	-7.4026	-0.1737
999	SLU 65	-0.55	-0.08	42.14	-11.2966	-7.4027	-0.1647
999	SLU 66	-0.56	-0.13	42.74	-11.4576	-7.5082	-0.1754
999	SLU 67	-0.56	-0.1	42.74	-11.4579	-7.5082	-0.17
999	SLU 68	-0.56	-0.08	42.46	-11.3825	-7.4586	-0.1667
999	SLU 69	-0.57	-0.13	43.06	-11.5435	-7.5641	-0.1774
999	SLU 70	-0.57	-0.1	43.06	-11.5438	-7.5641	-0.172
999	SLU 71	-0.57	-0.14	42.77	-11.4679	-7.5144	-0.1776
999	SLU 72	-0.57	-0.1	42.77	-11.4682	-7.5144	-0.1723
999	SLU 73	-0.6	-0.08	46.2	-12.3883	-8.1154	-0.1776
999	SLU 74	-0.61	-0.13	46.8	-12.5494	-8.2209	-0.1883
999	SLU 75	-0.61	-0.1	46.8	-12.5496	-8.2209	-0.1829
999	SLU 76	-0.61	-0.08	46.52	-12.4742	-8.1713	-0.1796
999	SLU 77	-0.62	-0.13	47.12	-12.6352	-8.2768	-0.1902
999	SLU 78	-0.62	-0.1	47.12	-12.6355	-8.2768	-0.1849
999	SLU 79	-0.61	-0.14	46.84	-12.5597	-8.2271	-0.1905
999	SLU 80	-0.61	-0.11	46.84	-12.5599	-8.2272	-0.1851
999	SLU 81	-0.62	-0.13	47.94	-12.8558	-8.4208	-0.1921
999	SLU 82	-0.62	-0.1	47.94	-12.856	-8.4208	-0.1867
999	SLU 83	-0.63	-0.14	48.26	-12.9417	-8.4767	-0.194
999	SLU 84	-0.63	-0.11	48.26	-12.9419	-8.4767	-0.1887
999	SLE RA 1	-0.42	-0.1	31.54	-8.456	-5.5416	-0.1313
999	SLE RA 2	-0.42	-0.07	31.54	-8.4563	-5.5417	-0.1253
999	SLE RA 3	-0.42	-0.1	31.94	-8.5636	-5.612	-0.1324
999	SLE RA 4	-0.42	-0.08	31.94	-8.5638	-5.612	-0.1289
999	SLE RA 5	-0.42	-0.07	31.75	-8.5135	-5.5789	-0.1266
999	SLE RA 6	-0.43	-0.1	32.16	-8.6209	-5.6492	-0.1338
999	SLE RA 7	-0.43	-0.08	32.16	-8.6211	-5.6493	-0.1302
999	SLE RA 8	-0.42	-0.11	31.97	-8.5705	-5.6162	-0.1339
999	SLE RA 9	-0.42	-0.09	31.97	-8.5707	-5.6162	-0.1304
999	SLE RA 10	-0.45	-0.07	34.25	-9.1841	-6.0168	-0.1339
999	SLE RA 11	-0.45	-0.1	34.65	-9.2915	-6.0871	-0.141
999	SLE RA 12	-0.45	-0.08	34.65	-9.2916	-6.0871	-0.1374
999	SLE RA 13	-0.45	-0.07	34.46	-9.2413	-6.0541	-0.1352
999	SLE RA 14	-0.46	-0.1	34.87	-9.3487	-6.1244	-0.1423
999	SLE RA 15	-0.46	-0.08	34.87	-9.3489	-6.1244	-0.1387
999	SLE RA 16	-0.46	-0.11	34.68	-9.2983	-6.0913	-0.1425
999	SLE RA 17	-0.45	-0.09	34.68	-9.2985	-6.0913	-0.1389
999	SLE RA 18	-0.46	-0.11	35.41	-9.4957	-6.2204	-0.1435
999	SLE RA 19	-0.46	-0.09	35.41	-9.4959	-6.2204	-0.14
999	SLE RA 20	-0.46	-0.11	35.63	-9.553	-6.2577	-0.1449
999	SLE RA 21	-0.46	-0.09	35.63	-9.5531	-6.2577	-0.1413
999	SLE FR 1	-0.42	-0.1	31.54	-8.456	-5.5416	-0.1313
999	SLE FR 2	-0.42	-0.1	31.54	-8.456	-5.5416	-0.1301
999	SLE FR 3	-0.42	-0.11	31.63	-8.4789	-5.5565	-0.1318
999	SLE FR 4	-0.43	-0.1	32.7	-8.768	-5.7453	-0.1338
999	SLE FR 5	-0.43	-0.11	32.79	-8.7908	-5.7602	-0.1355
999	SLE FR 6	-0.44	-0.11	33.48	-8.9759	-5.881	-0.1374
999	SLE QP 1	-0.42	-0.1	31.54	-8.456	-5.5416	-0.1313
999	SLE QP 2	-0.43	-0.11	32.7	-8.7679	-5.7453	-0.135
999	SLD 1	2.9	0.57	36	-9.6392	-6.3176	0.8631
999	SLD 2	2.74	0.41	36.03	-9.6467	-6.323	0.7912
999	SLD 3	2.82	-0.42	36.19	-9.6852	-6.3523	0.6763
999	SLD 4	2.65	-0.57	36.22	-9.6927	-6.3577	0.6044
999	SLD 5	0.73	1.62	33.4	-8.9582	-5.8634	0.4603
999	SLD 6	0.63	1.52	33.42	-8.963	-5.8669	0.4137
999	SLD 7	0.44	-1.67	34.03	-9.1116	-5.979	-0.1624
999	SLD 8	0.33	-1.77	34.05	-9.1165	-5.9826	-0.209
999	SLD 9	-1.19	1.56	31.35	-8.4193	-5.508	-0.0609
999	SLD 10	-1.3	1.46	31.37	-8.4242	-5.5115	-0.1076
999	SLD 11	-1.48	-1.73	31.99	-8.5728	-5.6236	-0.6836
999	SLD 12	-1.59	-1.83	32.01	-8.5776	-5.6271	-0.7303
999	SLD 13	-3.51	0.36	29.19	-7.8431	-5.1328	-0.8744
999	SLD 14	-3.67	0.21	29.22	-7.8506	-5.1382	-0.9462
999	SLD 15	-3.6	-0.62	29.38	-7.8891	-5.1675	-1.0612
999	SLD 16	-3.76	-0.78	29.41	-7.8966	-5.1729	-1.133

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
999	SLV 1	7.36	1.44	40.41	-10.8075	-7.0851	2.1941
999	SLV 2	6.98	1.08	40.49	-10.8249	-7.0977	2.0267
999	SLV 3	7.16	-0.81	40.85	-10.9138	-7.165	1.7672
999	SLV 4	6.77	-1.17	40.92	-10.9312	-7.1777	1.5998
999	SLV 5	2.29	3.83	34.34	-9.2156	-6.0238	1.2395
999	SLV 6	2.04	3.6	34.39	-9.2267	-6.0319	1.1326
999	SLV 7	1.6	-3.67	35.8	-9.57	-6.2903	-0.1834
999	SLV 8	1.36	-3.9	35.85	-9.5811	-6.2984	-0.2903
999	SLV 9	-2.21	3.69	29.56	-7.9547	-5.1921	0.0204
999	SLV 10	-2.46	3.46	29.61	-7.9658	-5.2002	-0.0865
999	SLV 11	-2.9	-3.81	31.02	-8.3091	-5.4587	-1.4026
999	SLV 12	-3.14	-4.04	31.07	-8.3202	-5.4667	-1.5095
999	SLV 13	-7.63	0.96	24.48	-6.6046	-4.3129	-1.8698
999	SLV 14	-8.02	0.6	24.56	-6.622	-4.3255	-2.0372
999	SLV 15	-7.84	-1.29	24.92	-6.7109	-4.3928	-2.2967
999	SLV 16	-8.22	-1.65	24.99	-6.7283	-4.4055	-2.4641
999	CRTFP Ux+	0	0	0	0	0	0
999	CRTFP Ux-	0	0	0	0	0	0
999	CRTFP Uy+	0	0	0	0	0	0
999	CRTFP Uy-	0	0	0	0	0	0
1001	SLU 1	-0.38	-0.1	28.34	-9.5172	-0.7529	-0.1355
1001	SLU 2	-0.38	-0.06	28.34	-9.5181	-0.753	-0.1342
1001	SLU 3	-0.39	-0.1	28.89	-9.7039	-0.7676	-0.1384
1001	SLU 4	-0.39	-0.07	28.89	-9.7044	-0.7676	-0.1377
1001	SLU 5	-0.38	-0.06	28.63	-9.6174	-0.7607	-0.1363
1001	SLU 6	-0.39	-0.1	29.19	-9.8032	-0.7754	-0.1405
1001	SLU 7	-0.39	-0.07	29.19	-9.8037	-0.7754	-0.1397
1001	SLU 8	-0.39	-0.11	28.93	-9.7158	-0.7684	-0.1397
1001	SLU 9	-0.39	-0.08	28.93	-9.7163	-0.7685	-0.1389
1001	SLU 10	-0.42	-0.06	32.11	-10.7835	-0.8528	-0.1497
1001	SLU 11	-0.43	-0.1	32.67	-10.9693	-0.8674	-0.1539
1001	SLU 12	-0.43	-0.07	32.67	-10.9698	-0.8675	-0.1531
1001	SLU 13	-0.43	-0.06	32.41	-10.8828	-0.8605	-0.1517
1001	SLU 14	-0.44	-0.1	32.96	-11.0686	-0.8752	-0.156
1001	SLU 15	-0.44	-0.07	32.97	-11.0691	-0.8752	-0.1552
1001	SLU 16	-0.44	-0.11	32.7	-10.9811	-0.8683	-0.1552
1001	SLU 17	-0.44	-0.08	32.7	-10.9817	-0.8683	-0.1544
1001	SLU 18	-0.44	-0.1	33.73	-11.3249	-0.8955	-0.1576
1001	SLU 19	-0.44	-0.08	33.73	-11.3254	-0.8955	-0.1568
1001	SLU 20	-0.45	-0.11	34.03	-11.4242	-0.9033	-0.1597
1001	SLU 21	-0.45	-0.08	34.03	-11.4247	-0.9033	-0.1589
1001	SLU 22	-0.43	-0.09	32.01	-10.7479	-0.8501	-0.1513
1001	SLU 23	-0.43	-0.04	32.01	-10.7488	-0.8502	-0.15
1001	SLU 24	-0.43	-0.08	32.57	-10.9346	-0.8648	-0.1542
1001	SLU 25	-0.43	-0.05	32.57	-10.9351	-0.8649	-0.1534
1001	SLU 26	-0.43	-0.04	32.31	-10.8481	-0.8579	-0.1521
1001	SLU 27	-0.44	-0.08	32.87	-11.0339	-0.8726	-0.1563
1001	SLU 28	-0.44	-0.06	32.87	-11.0344	-0.8726	-0.1555
1001	SLU 29	-0.44	-0.09	32.6	-10.9464	-0.8657	-0.1555
1001	SLU 30	-0.44	-0.06	32.6	-10.947	-0.8657	-0.1547
1001	SLU 31	-0.47	-0.04	35.79	-12.0142	-0.95	-0.1654
1001	SLU 32	-0.48	-0.08	36.35	-12.2	-0.9647	-0.1697
1001	SLU 33	-0.48	-0.05	36.35	-12.2005	-0.9647	-0.1689
1001	SLU 34	-0.48	-0.04	36.09	-12.1134	-0.9578	-0.1675
1001	SLU 35	-0.48	-0.08	36.64	-12.2992	-0.9724	-0.1718
1001	SLU 36	-0.48	-0.06	36.64	-12.2998	-0.9724	-0.171
1001	SLU 37	-0.48	-0.09	36.38	-12.2118	-0.9655	-0.1709
1001	SLU 38	-0.48	-0.06	36.38	-12.2124	-0.9655	-0.1701
1001	SLU 39	-0.49	-0.09	37.41	-12.5556	-0.9927	-0.1734
1001	SLU 40	-0.49	-0.06	37.41	-12.5561	-0.9928	-0.1726
1001	SLU 41	-0.49	-0.09	37.7	-12.6548	-1.0005	-0.1755
1001	SLU 42	-0.49	-0.06	37.7	-12.6554	-1.0005	-0.1747
1001	SLU 43	-0.48	-0.14	35.57	-11.9504	-0.9455	-0.1708
1001	SLU 44	-0.48	-0.09	35.58	-11.9513	-0.9455	-0.1695
1001	SLU 45	-0.49	-0.14	36.13	-12.1371	-0.9602	-0.1737
1001	SLU 46	-0.49	-0.11	36.13	-12.1377	-0.9602	-0.1729
1001	SLU 47	-0.48	-0.1	35.87	-12.0506	-0.9533	-0.1716
1001	SLU 48	-0.49	-0.14	36.43	-12.2364	-0.9679	-0.1758
1001	SLU 49	-0.49	-0.11	36.43	-12.2369	-0.9679	-0.175
1001	SLU 50	-0.49	-0.14	36.17	-12.149	-0.961	-0.175
1001	SLU 51	-0.49	-0.12	36.17	-12.1495	-0.961	-0.1742
1001	SLU 52	-0.52	-0.09	39.35	-13.2167	-1.0453	-0.1849
1001	SLU 53	-0.53	-0.14	39.91	-13.4025	-1.06	-0.1891
1001	SLU 54	-0.53	-0.11	39.91	-13.403	-1.06	-0.1883
1001	SLU 55	-0.53	-0.09	39.65	-13.316	-1.0531	-0.187
1001	SLU 56	-0.54	-0.14	40.2	-13.5018	-1.0677	-0.1912
1001	SLU 57	-0.54	-0.11	40.2	-13.5023	-1.0678	-0.1904
1001	SLU 58	-0.53	-0.14	39.94	-13.4143	-1.0608	-0.1904
1001	SLU 59	-0.53	-0.12	39.94	-13.4149	-1.0608	-0.1896
1001	SLU 60	-0.54	-0.14	40.97	-13.7581	-1.0881	-0.1928
1001	SLU 61	-0.54	-0.11	40.97	-13.7586	-1.0881	-0.192
1001	SLU 62	-0.55	-0.14	41.26	-13.8574	-1.0958	-0.1949
1001	SLU 63	-0.55	-0.11	41.27	-13.8579	-1.0958	-0.1941
1001	SLU 64	-0.52	-0.12	39.25	-13.1811	-1.0427	-0.1866
1001	SLU 65	-0.52	-0.08	39.25	-13.182	-1.0427	-0.1852
1001	SLU 66	-0.53	-0.12	39.81	-13.3678	-1.0574	-0.1895
1001	SLU 67	-0.53	-0.09	39.81	-13.3683	-1.0574	-0.1887
1001	SLU 68	-0.53	-0.08	39.55	-13.2813	-1.0505	-0.1873
1001	SLU 69	-0.54	-0.12	40.11	-13.4671	-1.0651	-0.1916
1001	SLU 70	-0.54	-0.09	40.11	-13.4676	-1.0652	-0.1908
1001	SLU 71	-0.54	-0.13	39.84	-13.3796	-1.0582	-0.1907

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1001	SLU 72	-0.54	-0.1	39.84	-13.3802	-1.0582	-0.19
1001	SLU 73	-0.57	-0.08	43.03	-14.4474	-1.1425	-0.2007
1001	SLU 74	-0.58	-0.12	43.59	-14.6332	-1.1572	-0.2049
1001	SLU 75	-0.58	-0.09	43.59	-14.6337	-1.1572	-0.2041
1001	SLU 76	-0.57	-0.08	43.32	-14.5467	-1.1503	-0.2028
1001	SLU 77	-0.58	-0.12	43.88	-14.7324	-1.165	-0.207
1001	SLU 78	-0.58	-0.09	43.88	-14.733	-1.165	-0.2062
1001	SLU 79	-0.58	-0.13	43.62	-14.645	-1.158	-0.2062
1001	SLU 80	-0.58	-0.1	43.62	-14.6456	-1.158	-0.2054
1001	SLU 81	-0.59	-0.12	44.65	-14.9888	-1.1853	-0.2086
1001	SLU 82	-0.59	-0.1	44.65	-14.9893	-1.1853	-0.2078
1001	SLU 83	-0.59	-0.13	44.94	-15.0881	-1.193	-0.2107
1001	SLU 84	-0.59	-0.1	44.94	-15.0886	-1.1931	-0.2099
1001	SLE RA 1	-0.39	-0.1	29.39	-9.8688	-0.7807	-0.14
1001	SLE RA 2	-0.39	-0.07	29.39	-9.8694	-0.7807	-0.1392
1001	SLE RA 3	-0.4	-0.1	29.76	-9.9933	-0.7905	-0.142
1001	SLE RA 4	-0.4	-0.08	29.76	-9.9937	-0.7905	-0.1415
1001	SLE RA 5	-0.4	-0.07	29.58	-9.9356	-0.7859	-0.1406
1001	SLE RA 6	-0.4	-0.1	29.95	-10.0595	-0.7957	-0.1434
1001	SLE RA 7	-0.4	-0.08	29.96	-10.0598	-0.7957	-0.1428
1001	SLE RA 8	-0.4	-0.1	29.78	-10.0012	-0.791	-0.1428
1001	SLE RA 9	-0.4	-0.08	29.78	-10.0016	-0.7911	-0.1423
1001	SLE RA 10	-0.42	-0.07	31.9	-10.713	-0.8473	-0.1495
1001	SLE RA 11	-0.43	-0.1	32.28	-10.8369	-0.857	-0.1523
1001	SLE RA 12	-0.43	-0.08	32.28	-10.8372	-0.8571	-0.1517
1001	SLE RA 13	-0.43	-0.07	32.1	-10.7792	-0.8524	-0.1508
1001	SLE RA 14	-0.43	-0.1	32.47	-10.9031	-0.8622	-0.1537
1001	SLE RA 15	-0.43	-0.08	32.47	-10.9034	-0.8622	-0.1531
1001	SLE RA 16	-0.43	-0.1	32.3	-10.8448	-0.8576	-0.1531
1001	SLE RA 17	-0.43	-0.08	32.3	-10.8451	-0.8576	-0.1526
1001	SLE RA 18	-0.43	-0.1	32.98	-11.0739	-0.8758	-0.1548
1001	SLE RA 19	-0.43	-0.08	32.98	-11.0743	-0.8758	-0.1542
1001	SLE RA 20	-0.44	-0.1	33.18	-11.1401	-0.8809	-0.1561
1001	SLE RA 21	-0.44	-0.08	33.18	-11.1405	-0.881	-0.1556
1001	SLE FR 1	-0.39	-0.1	29.39	-9.8688	-0.7807	-0.14
1001	SLE FR 2	-0.39	-0.09	29.39	-9.8689	-0.7807	-0.1399
1001	SLE FR 3	-0.39	-0.1	29.46	-9.8953	-0.7828	-0.1406
1001	SLE FR 4	-0.41	-0.09	30.46	-10.2305	-0.8092	-0.1443
1001	SLE FR 5	-0.41	-0.1	30.54	-10.2568	-0.8113	-0.145
1001	SLE FR 6	-0.41	-0.1	31.18	-10.4714	-0.8282	-0.1474
1001	SLE QP 1	-0.39	-0.1	29.39	-9.8688	-0.7807	-0.14
1001	SLE QP 2	-0.41	-0.1	30.46	-10.2304	-0.8092	-0.1445
1001	SLD 1	2.83	0.35	33.42	-11.2108	-0.8838	0.9971
1001	SLD 2	2.67	0.2	33.44	-11.218	-0.8845	0.9379
1001	SLD 3	2.74	-0.6	33.6	-11.2702	-0.889	0.9498
1001	SLD 4	2.59	-0.74	33.62	-11.2774	-0.8897	0.8907
1001	SLD 5	0.72	1.5	31.07	-10.4332	-0.8236	0.2799
1001	SLD 6	0.62	1.41	31.09	-10.4379	-0.824	0.2416
1001	SLD 7	0.44	-1.66	31.67	-10.6311	-0.8409	0.1225
1001	SLD 8	0.34	-1.76	31.69	-10.6358	-0.8414	0.0842
1001	SLD 9	-1.15	1.56	29.24	-9.8249	-0.7771	-0.3731
1001	SLD 10	-1.25	1.46	29.26	-9.8296	-0.7775	-0.4115
1001	SLD 11	-1.43	-1.6	29.84	-10.0228	-0.7944	-0.5305
1001	SLD 12	-1.53	-1.7	29.86	-10.0275	-0.7948	-0.5688
1001	SLD 13	-3.4	0.55	27.31	-9.1833	-0.7287	-1.1796
1001	SLD 14	-3.55	0.4	27.33	-9.1905	-0.7294	-1.2388
1001	SLD 15	-3.48	-0.4	27.49	-9.2427	-0.734	-1.2269
1001	SLD 16	-3.64	-0.55	27.51	-9.2499	-0.7346	-1.286
1001	SLV 1	7.16	0.92	37.38	-12.5251	-0.9839	2.5245
1001	SLV 2	6.79	0.58	37.44	-12.5419	-0.9854	2.3867
1001	SLV 3	6.96	-1.24	37.79	-12.6632	-0.996	2.4154
1001	SLV 4	6.59	-1.58	37.85	-12.68	-0.9975	2.2777
1001	SLV 5	2.22	3.55	31.9	-10.7064	-0.843	0.8449
1001	SLV 6	1.99	3.33	31.94	-10.7172	-0.844	0.757
1001	SLV 7	1.57	-3.67	33.28	-11.1668	-0.8833	0.4814
1001	SLV 8	1.33	-3.88	33.32	-11.1776	-0.8843	0.3935
1001	SLV 9	-2.14	3.69	27.61	-9.2831	-0.7342	-0.6824
1001	SLV 10	-2.38	3.47	27.65	-9.2939	-0.7351	-0.7703
1001	SLV 11	-2.8	-3.53	28.99	-9.7435	-0.7744	-1.0459
1001	SLV 12	-3.03	-3.75	29.03	-9.7543	-0.7754	-1.1339
1001	SLV 13	-7.4	1.38	23.08	-7.7807	-0.621	-2.5666
1001	SLV 14	-7.77	1.04	23.14	-7.7976	-0.6225	-2.7043
1001	SLV 15	-7.6	-0.78	23.49	-7.9188	-0.6331	-2.6757
1001	SLV 16	-7.97	-1.12	23.55	-7.9357	-0.6346	-2.8134
1001	CRTFP Ux+	0	0	0	0	0	0
1001	CRTFP Ux-	0	0	0	0	0	0
1001	CRTFP Uy+	0	0	0	0	0	0
1001	CRTFP Uy-	0	0	0	0	0	0
1002	SLU 1	-0.43	-0.12	31.39	-10.2243	0.0585	-0.1499
1002	SLU 2	-0.43	-0.06	31.39	-10.2255	0.0585	-0.1499
1002	SLU 3	-0.44	-0.11	32	-10.4222	0.0598	-0.1533
1002	SLU 4	-0.44	-0.08	32	-10.4229	0.0598	-0.1533
1002	SLU 5	-0.44	-0.06	31.72	-10.3304	0.0592	-0.1522
1002	SLU 6	-0.45	-0.11	32.33	-10.527	0.0606	-0.1556
1002	SLU 7	-0.45	-0.08	32.33	-10.5277	0.0606	-0.1557
1002	SLU 8	-0.44	-0.12	32.04	-10.4341	0.06	-0.1545
1002	SLU 9	-0.44	-0.09	32.04	-10.4348	0.06	-0.1545
1002	SLU 10	-0.48	-0.06	35.55	-11.5727	0.067	-0.1675
1002	SLU 11	-0.49	-0.11	36.16	-11.7694	0.0684	-0.1709
1002	SLU 12	-0.49	-0.07	36.16	-11.7701	0.0684	-0.1709
1002	SLU 13	-0.49	-0.06	35.88	-11.6776	0.0678	-0.1698

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1002	SLU 14	-0.5	-0.11	36.49	-11.8742	0.0691	-0.1732
1002	SLU 15	-0.5	-0.08	36.49	-11.8749	0.0691	-0.1732
1002	SLU 16	-0.49	-0.12	36.2	-11.7813	0.0685	-0.1721
1002	SLU 17	-0.49	-0.08	36.2	-11.782	0.0685	-0.1721
1002	SLU 18	-0.5	-0.11	37.33	-12.1489	0.0707	-0.175
1002	SLU 19	-0.5	-0.08	37.33	-12.1496	0.0707	-0.175
1002	SLU 20	-0.51	-0.11	37.66	-12.2538	0.0714	-0.1773
1002	SLU 21	-0.51	-0.08	37.66	-12.2545	0.0714	-0.1773
1002	SLU 22	-0.48	-0.09	35.44	-11.5348	0.0668	-0.1684
1002	SLU 23	-0.48	-0.04	35.44	-11.5359	0.0668	-0.1684
1002	SLU 24	-0.49	-0.09	36.06	-11.7326	0.0681	-0.1718
1002	SLU 25	-0.49	-0.05	36.06	-11.7333	0.0681	-0.1718
1002	SLU 26	-0.49	-0.04	35.77	-11.6408	0.0675	-0.1707
1002	SLU 27	-0.5	-0.09	36.38	-11.8375	0.0689	-0.1741
1002	SLU 28	-0.5	-0.05	36.38	-11.8382	0.0689	-0.1741
1002	SLU 29	-0.5	-0.1	36.09	-11.7445	0.0683	-0.173
1002	SLU 30	-0.5	-0.06	36.09	-11.7452	0.0683	-0.173
1002	SLU 31	-0.53	-0.03	39.6	-12.8831	0.0753	-0.186
1002	SLU 32	-0.54	-0.08	40.22	-13.0798	0.0767	-0.1894
1002	SLU 33	-0.54	-0.05	40.22	-13.0805	0.0767	-0.1894
1002	SLU 34	-0.54	-0.03	39.93	-12.988	0.0761	-0.1883
1002	SLU 35	-0.55	-0.08	40.54	-13.1847	0.0774	-0.1917
1002	SLU 36	-0.55	-0.05	40.54	-13.1854	0.0774	-0.1917
1002	SLU 37	-0.55	-0.09	40.25	-13.0917	0.0768	-0.1906
1002	SLU 38	-0.55	-0.06	40.25	-13.0924	0.0768	-0.1906
1002	SLU 39	-0.55	-0.09	41.39	-13.4593	0.079	-0.1935
1002	SLU 40	-0.55	-0.05	41.39	-13.46	0.079	-0.1935
1002	SLU 41	-0.56	-0.09	41.71	-13.5642	0.0797	-0.1958
1002	SLU 42	-0.56	-0.06	41.71	-13.5649	0.0797	-0.1958
1002	SLU 43	-0.54	-0.16	39.42	-12.8423	0.0732	-0.1885
1002	SLU 44	-0.54	-0.1	39.42	-12.8435	0.0732	-0.1886
1002	SLU 45	-0.55	-0.15	40.03	-13.0402	0.0745	-0.192
1002	SLU 46	-0.55	-0.12	40.03	-13.0409	0.0745	-0.192
1002	SLU 47	-0.55	-0.11	39.74	-12.9484	0.0739	-0.1909
1002	SLU 48	-0.56	-0.15	40.35	-13.1451	0.0753	-0.1943
1002	SLU 49	-0.56	-0.12	40.36	-13.1458	0.0753	-0.1943
1002	SLU 50	-0.55	-0.16	40.07	-13.0521	0.0747	-0.1932
1002	SLU 51	-0.55	-0.13	40.07	-13.0528	0.0747	-0.1932
1002	SLU 52	-0.59	-0.1	43.58	-14.1907	0.0817	-0.2061
1002	SLU 53	-0.6	-0.15	44.19	-14.3874	0.0831	-0.2095
1002	SLU 54	-0.6	-0.12	44.19	-14.3881	0.0831	-0.2095
1002	SLU 55	-0.6	-0.1	43.9	-14.2956	0.0825	-0.2084
1002	SLU 56	-0.61	-0.15	44.51	-14.4923	0.0838	-0.2118
1002	SLU 57	-0.61	-0.12	44.52	-14.493	0.0838	-0.2119
1002	SLU 58	-0.6	-0.16	44.23	-14.3993	0.0832	-0.2107
1002	SLU 59	-0.6	-0.13	44.23	-14.4	0.0832	-0.2107
1002	SLU 60	-0.61	-0.15	45.36	-14.7669	0.0854	-0.2136
1002	SLU 61	-0.61	-0.12	45.36	-14.7676	0.0854	-0.2136
1002	SLU 62	-0.62	-0.16	45.69	-14.8718	0.0861	-0.2159
1002	SLU 63	-0.62	-0.12	45.69	-14.8725	0.0861	-0.216
1002	SLU 64	-0.59	-0.13	43.47	-14.1528	0.0815	-0.207
1002	SLU 65	-0.59	-0.08	43.47	-14.1539	0.0815	-0.207
1002	SLU 66	-0.6	-0.13	44.08	-14.3506	0.0828	-0.2104
1002	SLU 67	-0.6	-0.1	44.08	-14.3513	0.0828	-0.2105
1002	SLU 68	-0.6	-0.08	43.8	-14.2588	0.0822	-0.2093
1002	SLU 69	-0.61	-0.13	44.41	-14.4555	0.0836	-0.2127
1002	SLU 70	-0.61	-0.1	44.41	-14.4562	0.0836	-0.2128
1002	SLU 71	-0.61	-0.14	44.12	-14.3625	0.083	-0.2116
1002	SLU 72	-0.61	-0.11	44.12	-14.3632	0.083	-0.2116
1002	SLU 73	-0.64	-0.08	47.63	-15.5011	0.09	-0.2246
1002	SLU 74	-0.65	-0.13	48.24	-15.6978	0.0913	-0.228
1002	SLU 75	-0.65	-0.09	48.24	-15.6985	0.0913	-0.228
1002	SLU 76	-0.65	-0.08	47.96	-15.606	0.0908	-0.2269
1002	SLU 77	-0.66	-0.13	48.57	-15.8027	0.0921	-0.2303
1002	SLU 78	-0.66	-0.09	48.57	-15.8034	0.0921	-0.2303
1002	SLU 79	-0.66	-0.14	48.28	-15.7097	0.0915	-0.2292
1002	SLU 80	-0.66	-0.1	48.28	-15.7104	0.0915	-0.2292
1002	SLU 81	-0.67	-0.13	49.41	-16.0773	0.0937	-0.2321
1002	SLU 82	-0.67	-0.1	49.41	-16.078	0.0937	-0.2321
1002	SLU 83	-0.67	-0.13	49.74	-16.1822	0.0944	-0.2344
1002	SLU 84	-0.67	-0.1	49.74	-16.1829	0.0944	-0.2344
1002	SLE RA 1	-0.44	-0.11	32.55	-10.5987	0.0608	-0.1552
1002	SLE RA 2	-0.44	-0.07	32.55	-10.5995	0.0608	-0.1552
1002	SLE RA 3	-0.45	-0.1	32.96	-10.7306	0.0617	-0.1575
1002	SLE RA 4	-0.45	-0.08	32.96	-10.7311	0.0617	-0.1575
1002	SLE RA 5	-0.45	-0.07	32.77	-10.6694	0.0614	-0.1567
1002	SLE RA 6	-0.46	-0.11	33.17	-10.8005	0.0623	-0.159
1002	SLE RA 7	-0.46	-0.08	33.17	-10.801	0.0623	-0.159
1002	SLE RA 8	-0.45	-0.11	32.98	-10.7386	0.0619	-0.1583
1002	SLE RA 9	-0.45	-0.09	32.98	-10.7391	0.0619	-0.1583
1002	SLE RA 10	-0.48	-0.07	35.32	-11.4977	0.0665	-0.1669
1002	SLE RA 11	-0.48	-0.1	35.73	-11.6288	0.0674	-0.1692
1002	SLE RA 12	-0.48	-0.08	35.73	-11.6292	0.0674	-0.1692
1002	SLE RA 13	-0.48	-0.07	35.54	-11.5676	0.067	-0.1684
1002	SLE RA 14	-0.49	-0.1	35.95	-11.6987	0.0679	-0.1707
1002	SLE RA 15	-0.49	-0.08	35.95	-11.6991	0.0679	-0.1707
1002	SLE RA 16	-0.49	-0.11	35.75	-11.6367	0.0675	-0.17
1002	SLE RA 17	-0.49	-0.09	35.75	-11.6372	0.0675	-0.17
1002	SLE RA 18	-0.49	-0.11	36.51	-11.8818	0.069	-0.1719
1002	SLE RA 19	-0.49	-0.08	36.51	-11.8823	0.069	-0.1719
1002	SLE RA 20	-0.5	-0.11	36.73	-11.9517	0.0695	-0.1734

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1002	SLE RA 21	-0.5	-0.08	36.73	-11.9522	0.0695	-0.1735
1002	SLE FR 1	-0.44	-0.11	32.55	-10.5987	0.0608	-0.1552
1002	SLE FR 2	-0.44	-0.1	32.55	-10.5989	0.0608	-0.1552
1002	SLE FR 3	-0.45	-0.11	32.63	-10.6267	0.0611	-0.1558
1002	SLE FR 4	-0.46	-0.1	33.74	-10.9838	0.0633	-0.1602
1002	SLE FR 5	-0.46	-0.11	33.82	-11.0116	0.0635	-0.1608
1002	SLE FR 6	-0.47	-0.11	34.53	-11.2403	0.0649	-0.1635
1002	SLE QP 1	-0.44	-0.11	32.55	-10.5987	0.0608	-0.1552
1002	SLE QP 2	-0.46	-0.11	33.74	-10.9837	0.0633	-0.1602
1002	SLD 1	3.33	0.41	36.83	-11.9761	0.0749	1.1666
1002	SLD 2	3.15	0.25	36.85	-11.9829	0.075	1.1022
1002	SLD 3	3.23	-0.69	37.05	-12.0549	0.076	1.1322
1002	SLD 4	3.05	-0.85	37.07	-12.0617	0.0761	1.0678
1002	SLD 5	0.86	1.74	34.33	-11.1608	0.0652	0.3011
1002	SLD 6	0.74	1.63	34.34	-11.1652	0.0653	0.2594
1002	SLD 7	0.53	-1.92	35.06	-11.4233	0.0686	0.1867
1002	SLD 8	0.41	-2.02	35.08	-11.4277	0.0687	0.1449
1002	SLD 9	-1.33	1.8	32.4	-10.5396	0.0579	-0.4653
1002	SLD 10	-1.45	1.7	32.42	-10.5441	0.0579	-0.5071
1002	SLD 11	-1.66	-1.85	33.13	-10.8021	0.0613	-0.5797
1002	SLD 12	-1.78	-1.95	33.15	-10.8065	0.0614	-0.6215
1002	SLD 13	-3.97	0.63	30.4	-9.9056	0.0505	-1.3882
1002	SLD 14	-4.15	0.47	30.43	-9.9124	0.0506	-1.4526
1002	SLD 15	-4.06	-0.46	30.62	-9.9844	0.0515	-1.4225
1002	SLD 16	-4.25	-0.62	30.65	-9.9912	0.0516	-1.4869
1002	SLV 1	8.41	1.07	40.97	-13.3065	0.0905	2.9425
1002	SLV 2	7.98	0.7	41.03	-13.3223	0.0908	2.7925
1002	SLV 3	8.18	-1.43	41.48	-13.4901	0.0929	2.8624
1002	SLV 4	7.75	-1.8	41.54	-13.5059	0.0932	2.7124
1002	SLV 5	2.62	4.1	35.12	-11.3993	0.0678	0.9176
1002	SLV 6	2.35	3.86	35.16	-11.4094	0.0679	0.8218
1002	SLV 7	1.86	-4.24	36.82	-12.0114	0.0758	0.6504
1002	SLV 8	1.58	-4.47	36.86	-12.0215	0.076	0.5546
1002	SLV 9	-2.5	4.26	30.61	-9.9458	0.0506	-0.875
1002	SLV 10	-2.77	4.02	30.65	-9.9559	0.0508	-0.9708
1002	SLV 11	-3.27	-4.08	32.31	-10.5579	0.0586	-1.1421
1002	SLV 12	-3.54	-4.32	32.35	-10.568	0.0588	-1.238
1002	SLV 13	-8.66	1.59	25.93	-8.4614	0.0334	-3.0327
1002	SLV 14	-9.09	1.22	26	-8.4772	0.0336	-3.1828
1002	SLV 15	-8.89	-0.91	26.45	-8.645	0.0358	-3.1129
1002	SLV 16	-9.32	-1.28	26.51	-8.6609	0.036	-3.2629
1002	CRTFP Ux+	0	0	0	0	0	0
1002	CRTFP Ux-	0	0	0	0	0	0
1002	CRTFP Uy+	0	0	0	0	0	0
1002	CRTFP Uy-	0	0	0	0	0	0
1003	SLU 1	-0.41	-0.1	29.65	-9.3478	0.0502	-0.1438
1003	SLU 2	-0.41	-0.05	29.65	-9.3489	0.0502	-0.1438
1003	SLU 3	-0.42	-0.09	30.22	-9.5257	0.0514	-0.1471
1003	SLU 4	-0.42	-0.06	30.23	-9.5264	0.0514	-0.1471
1003	SLU 5	-0.42	-0.05	29.95	-9.4428	0.0509	-0.146
1003	SLU 6	-0.43	-0.1	30.53	-9.6196	0.0521	-0.1493
1003	SLU 7	-0.43	-0.06	30.53	-9.6202	0.0521	-0.1493
1003	SLU 8	-0.43	-0.1	30.25	-9.5355	0.0516	-0.1482
1003	SLU 9	-0.43	-0.07	30.25	-9.5362	0.0516	-0.1483
1003	SLU 10	-0.46	-0.04	33.56	-10.5689	0.0575	-0.1608
1003	SLU 11	-0.47	-0.09	34.13	-10.7457	0.0586	-0.1641
1003	SLU 12	-0.47	-0.05	34.13	-10.7463	0.0586	-0.1641
1003	SLU 13	-0.47	-0.04	33.86	-10.6627	0.0581	-0.163
1003	SLU 14	-0.48	-0.09	34.43	-10.8395	0.0593	-0.1663
1003	SLU 15	-0.48	-0.06	34.43	-10.8402	0.0593	-0.1663
1003	SLU 16	-0.47	-0.1	34.16	-10.7554	0.0588	-0.1652
1003	SLU 17	-0.47	-0.07	34.16	-10.7561	0.0588	-0.1652
1003	SLU 18	-0.48	-0.09	35.24	-11.0906	0.0606	-0.168
1003	SLU 19	-0.48	-0.06	35.24	-11.0913	0.0606	-0.168
1003	SLU 20	-0.49	-0.09	35.54	-11.1844	0.0613	-0.1702
1003	SLU 21	-0.49	-0.06	35.54	-11.1851	0.0613	-0.1703
1003	SLU 22	-0.46	-0.07	33.46	-10.5346	0.0573	-0.1616
1003	SLU 23	-0.46	-0.02	33.46	-10.5357	0.0573	-0.1617
1003	SLU 24	-0.47	-0.06	34.03	-10.7125	0.0584	-0.1649
1003	SLU 25	-0.47	-0.03	34.03	-10.7132	0.0585	-0.165
1003	SLU 26	-0.47	-0.02	33.76	-10.6296	0.058	-0.1639
1003	SLU 27	-0.48	-0.07	34.33	-10.8064	0.0591	-0.1672
1003	SLU 28	-0.48	-0.03	34.33	-10.807	0.0591	-0.1672
1003	SLU 29	-0.48	-0.07	34.06	-10.7223	0.0586	-0.1661
1003	SLU 30	-0.48	-0.04	34.06	-10.7229	0.0586	-0.1661
1003	SLU 31	-0.51	-0.01	37.37	-11.7557	0.0645	-0.1786
1003	SLU 32	-0.52	-0.06	37.94	-11.9325	0.0657	-0.1819
1003	SLU 33	-0.52	-0.03	37.94	-11.9331	0.0657	-0.1819
1003	SLU 34	-0.52	-0.01	37.67	-11.8495	0.0652	-0.1808
1003	SLU 35	-0.53	-0.06	38.24	-12.0263	0.0664	-0.1841
1003	SLU 36	-0.53	-0.03	38.24	-12.027	0.0664	-0.1841
1003	SLU 37	-0.53	-0.07	37.97	-11.9422	0.0659	-0.183
1003	SLU 38	-0.53	-0.04	37.97	-11.9429	0.0659	-0.183
1003	SLU 39	-0.53	-0.06	39.04	-12.2774	0.0676	-0.1859
1003	SLU 40	-0.53	-0.03	39.04	-12.2781	0.0676	-0.1859
1003	SLU 41	-0.54	-0.06	39.34	-12.3712	0.0683	-0.1881
1003	SLU 42	-0.54	-0.03	39.34	-12.3719	0.0683	-0.1881
1003	SLU 43	-0.52	-0.14	37.24	-11.7452	0.0629	-0.1808
1003	SLU 44	-0.52	-0.09	37.24	-11.7463	0.0629	-0.1809
1003	SLU 45	-0.53	-0.13	37.82	-11.9231	0.064	-0.1841
1003	SLU 46	-0.53	-0.1	37.82	-11.9238	0.064	-0.1841

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1003	SLU 47	-0.53	-0.09	37.55	-11.8402	0.0635	-0.1831
1003	SLU 48	-0.53	-0.14	38.12	-12.017	0.0647	-0.1863
1003	SLU 49	-0.53	-0.1	38.12	-12.0177	0.0647	-0.1864
1003	SLU 50	-0.53	-0.14	37.84	-11.9329	0.0642	-0.1853
1003	SLU 51	-0.53	-0.11	37.85	-11.9336	0.0642	-0.1853
1003	SLU 52	-0.57	-0.08	41.15	-12.9663	0.0701	-0.1978
1003	SLU 53	-0.58	-0.13	41.72	-13.1431	0.0713	-0.2011
1003	SLU 54	-0.58	-0.1	41.72	-13.1438	0.0713	-0.2011
1003	SLU 55	-0.57	-0.08	41.45	-13.0601	0.0708	-0.2
1003	SLU 56	-0.58	-0.13	42.02	-13.2369	0.072	-0.2033
1003	SLU 57	-0.58	-0.1	42.02	-13.2376	0.072	-0.2033
1003	SLU 58	-0.58	-0.14	41.75	-13.1529	0.0715	-0.2022
1003	SLU 59	-0.58	-0.11	41.75	-13.1535	0.0715	-0.2022
1003	SLU 60	-0.59	-0.13	42.83	-13.488	0.0732	-0.2051
1003	SLU 61	-0.59	-0.1	42.83	-13.4887	0.0732	-0.2051
1003	SLU 62	-0.59	-0.13	43.13	-13.5819	0.0739	-0.2073
1003	SLU 63	-0.59	-0.1	43.13	-13.5825	0.0739	-0.2073
1003	SLU 64	-0.57	-0.11	41.05	-12.932	0.0699	-0.1987
1003	SLU 65	-0.57	-0.06	41.05	-12.9331	0.0699	-0.1987
1003	SLU 66	-0.58	-0.1	41.62	-13.1099	0.0711	-0.202
1003	SLU 67	-0.58	-0.07	41.62	-13.1106	0.0711	-0.202
1003	SLU 68	-0.58	-0.06	41.35	-13.027	0.0706	-0.2009
1003	SLU 69	-0.59	-0.11	41.92	-13.2038	0.0718	-0.2042
1003	SLU 70	-0.59	-0.07	41.92	-13.2045	0.0718	-0.2042
1003	SLU 71	-0.58	-0.11	41.65	-13.1197	0.0713	-0.2031
1003	SLU 72	-0.58	-0.08	41.65	-13.1204	0.0713	-0.2031
1003	SLU 73	-0.62	-0.05	44.96	-14.1531	0.0772	-0.2157
1003	SLU 74	-0.63	-0.1	45.53	-14.3299	0.0783	-0.2189
1003	SLU 75	-0.63	-0.07	45.53	-14.3306	0.0784	-0.2189
1003	SLU 76	-0.63	-0.05	45.26	-14.2469	0.0779	-0.2179
1003	SLU 77	-0.63	-0.1	45.83	-14.4237	0.079	-0.2211
1003	SLU 78	-0.63	-0.07	45.83	-14.4244	0.079	-0.2212
1003	SLU 79	-0.63	-0.11	45.56	-14.3397	0.0785	-0.2201
1003	SLU 80	-0.63	-0.08	45.56	-14.3403	0.0785	-0.2201
1003	SLU 81	-0.64	-0.1	46.63	-14.6748	0.0803	-0.2229
1003	SLU 82	-0.64	-0.07	46.63	-14.6755	0.0803	-0.2229
1003	SLU 83	-0.65	-0.1	46.93	-14.7687	0.081	-0.2251
1003	SLU 84	-0.65	-0.07	46.93	-14.7693	0.081	-0.2251
1003	SLE RA 1	-0.43	-0.09	30.74	-9.6869	0.0522	-0.1489
1003	SLE RA 2	-0.43	-0.06	30.74	-9.6876	0.0522	-0.1489
1003	SLE RA 3	-0.43	-0.09	31.12	-9.8055	0.053	-0.1511
1003	SLE RA 4	-0.43	-0.07	31.12	-9.8059	0.053	-0.1511
1003	SLE RA 5	-0.43	-0.06	30.94	-9.7502	0.0527	-0.1504
1003	SLE RA 6	-0.44	-0.09	31.32	-9.8681	0.0535	-0.1526
1003	SLE RA 7	-0.44	-0.07	31.32	-9.8685	0.0535	-0.1526
1003	SLE RA 8	-0.44	-0.09	31.14	-9.812	0.0531	-0.1519
1003	SLE RA 9	-0.44	-0.07	31.14	-9.8124	0.0531	-0.1519
1003	SLE RA 10	-0.46	-0.05	33.35	-10.5009	0.0571	-0.1602
1003	SLE RA 11	-0.47	-0.08	33.73	-10.6188	0.0579	-0.1624
1003	SLE RA 12	-0.47	-0.06	33.73	-10.6192	0.0579	-0.1624
1003	SLE RA 13	-0.46	-0.05	33.55	-10.5635	0.0575	-0.1617
1003	SLE RA 14	-0.47	-0.08	33.93	-10.6814	0.0583	-0.1639
1003	SLE RA 15	-0.47	-0.06	33.93	-10.6818	0.0583	-0.1639
1003	SLE RA 16	-0.47	-0.09	33.75	-10.6253	0.058	-0.1632
1003	SLE RA 17	-0.47	-0.07	33.75	-10.6258	0.058	-0.1632
1003	SLE RA 18	-0.47	-0.09	34.46	-10.8487	0.0591	-0.1651
1003	SLE RA 19	-0.47	-0.06	34.46	-10.8492	0.0591	-0.1651
1003	SLE RA 20	-0.48	-0.09	34.66	-10.9113	0.0596	-0.1665
1003	SLE RA 21	-0.48	-0.07	34.66	-10.9118	0.0596	-0.1665
1003	SLE FR 1	-0.43	-0.09	30.74	-9.6869	0.0522	-0.1489
1003	SLE FR 2	-0.43	-0.08	30.74	-9.687	0.0522	-0.1489
1003	SLE FR 3	-0.43	-0.09	30.82	-9.7119	0.0524	-0.1495
1003	SLE FR 4	-0.44	-0.08	31.86	-10.0356	0.0543	-0.1538
1003	SLE FR 5	-0.44	-0.09	31.94	-10.0605	0.0545	-0.1543
1003	SLE FR 6	-0.45	-0.09	32.6	-10.2678	0.0557	-0.157
1003	SLE QP 1	-0.43	-0.09	30.74	-9.6869	0.0522	-0.1489
1003	SLE QP 2	-0.44	-0.09	31.86	-10.0354	0.0543	-0.1538
1003	SLD 1	3.36	0.42	34.56	-10.8705	0.0653	1.1758
1003	SLD 2	3.17	0.27	34.59	-10.876	0.0654	1.1113
1003	SLD 3	3.26	-0.66	34.8	-10.9594	0.066	1.1414
1003	SLD 4	3.07	-0.81	34.82	-10.9649	0.0661	1.077
1003	SLD 5	0.88	1.73	32.31	-10.1502	0.0565	0.3085
1003	SLD 6	0.76	1.63	32.32	-10.1537	0.0565	0.2666
1003	SLD 7	0.55	-1.88	33.09	-10.4465	0.0589	0.1939
1003	SLD 8	0.43	-1.97	33.11	-10.4501	0.059	0.1521
1003	SLD 9	-1.31	1.79	30.61	-9.6208	0.0496	-0.4596
1003	SLD 10	-1.43	1.7	30.62	-9.6244	0.0497	-0.5014
1003	SLD 11	-1.64	-1.81	31.39	-9.9171	0.0521	-0.5742
1003	SLD 12	-1.76	-1.91	31.4	-9.9207	0.0522	-0.616
1003	SLD 13	-3.96	0.63	28.89	-9.106	0.0425	-1.3845
1003	SLD 14	-4.14	0.48	28.92	-9.1115	0.0426	-1.4489
1003	SLD 15	-4.05	-0.45	29.13	-9.1949	0.0433	-1.4189
1003	SLD 16	-4.24	-0.6	29.15	-9.2004	0.0433	-1.4833
1003	SLV 1	8.44	1.07	38.19	-11.9899	0.08	2.9555
1003	SLV 2	8.01	0.73	38.25	-12.0028	0.0802	2.8054
1003	SLV 3	8.21	-1.4	38.74	-12.1975	0.0817	2.8753
1003	SLV 4	7.78	-1.74	38.79	-12.2103	0.0819	2.7252
1003	SLV 5	2.65	4.06	32.92	-10.3048	0.0593	0.9261
1003	SLV 6	2.37	3.84	32.96	-10.313	0.0595	0.8302
1003	SLV 7	1.88	-4.17	34.74	-10.9967	0.0651	0.6587
1003	SLV 8	1.6	-4.39	34.77	-11.0049	0.0653	0.5629

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1003	SLV 9	-2.49	4.21	28.94	-9.066	0.0434	-0.8704
1003	SLV 10	-2.76	3.99	28.98	-9.0742	0.0435	-0.9662
1003	SLV 11	-3.25	-4.02	30.76	-9.7578	0.0492	-1.1377
1003	SLV 12	-3.53	-4.24	30.79	-9.7661	0.0493	-1.2336
1003	SLV 13	-8.66	1.56	24.92	-7.8605	0.0267	-3.0327
1003	SLV 14	-9.09	1.22	24.98	-7.8734	0.0269	-3.1828
1003	SLV 15	-8.89	-0.91	25.46	-8.0681	0.0285	-3.1129
1003	SLV 16	-9.32	-1.25	25.52	-8.081	0.0286	-3.263
1003	CRTFP Ux+	0	0	0	0	0	0
1003	CRTFP Ux-	0	0	0	0	0	0
1003	CRTFP Uy+	0	0	0	0	0	0
1003	CRTFP Uy-	0	0	0	0	0	0
1004	SLU 1	-0.39	-0.07	28.24	-8.655	0.0384	-0.1372
1004	SLU 2	-0.39	-0.02	28.24	-8.656	0.0384	-0.1372
1004	SLU 3	-0.4	-0.07	28.78	-8.817	0.0393	-0.1403
1004	SLU 4	-0.4	-0.04	28.78	-8.8176	0.0393	-0.1403
1004	SLU 5	-0.4	-0.02	28.52	-8.7408	0.039	-0.1393
1004	SLU 6	-0.41	-0.07	29.06	-8.9018	0.0398	-0.1424
1004	SLU 7	-0.41	-0.04	29.06	-8.9024	0.0399	-0.1424
1004	SLU 8	-0.41	-0.08	28.8	-8.8247	0.0395	-0.1414
1004	SLU 9	-0.41	-0.05	28.8	-8.8253	0.0395	-0.1414
1004	SLU 10	-0.44	-0.01	31.94	-9.7764	0.0439	-0.1534
1004	SLU 11	-0.45	-0.06	32.48	-9.9374	0.0448	-0.1565
1004	SLU 12	-0.45	-0.02	32.48	-9.938	0.0448	-0.1565
1004	SLU 13	-0.45	-0.01	32.22	-9.8613	0.0444	-0.1555
1004	SLU 14	-0.46	-0.06	32.76	-10.0223	0.0453	-0.1587
1004	SLU 15	-0.46	-0.03	32.76	-10.0229	0.0453	-0.1587
1004	SLU 16	-0.45	-0.07	32.51	-9.9451	0.0449	-0.1576
1004	SLU 17	-0.45	-0.04	32.51	-9.9457	0.0449	-0.1576
1004	SLU 18	-0.46	-0.06	33.53	-10.2556	0.0462	-0.1604
1004	SLU 19	-0.46	-0.03	33.53	-10.2562	0.0462	-0.1604
1004	SLU 20	-0.47	-0.06	33.81	-10.3405	0.0467	-0.1625
1004	SLU 21	-0.47	-0.03	33.81	-10.3411	0.0467	-0.1625
1004	SLU 22	-0.44	-0.04	31.85	-9.7451	0.0437	-0.1543
1004	SLU 23	-0.44	0.01	31.85	-9.746	0.0437	-0.1543
1004	SLU 24	-0.45	-0.03	32.39	-9.907	0.0446	-0.1574
1004	SLU 25	-0.45	0	32.39	-9.9076	0.0446	-0.1574
1004	SLU 26	-0.45	0.01	32.13	-9.8309	0.0443	-0.1564
1004	SLU 27	-0.46	-0.03	32.67	-9.9919	0.0452	-0.1595
1004	SLU 28	-0.46	0	32.67	-9.9925	0.0452	-0.1595
1004	SLU 29	-0.46	-0.04	32.41	-9.9148	0.0448	-0.1585
1004	SLU 30	-0.46	-0.01	32.41	-9.9153	0.0448	-0.1585
1004	SLU 31	-0.49	0.02	35.55	-10.8665	0.0492	-0.1705
1004	SLU 32	-0.5	-0.02	36.09	-11.0275	0.0501	-0.1737
1004	SLU 33	-0.5	0.01	36.09	-11.0281	0.0501	-0.1737
1004	SLU 34	-0.5	0.02	35.83	-10.9513	0.0497	-0.1726
1004	SLU 35	-0.51	-0.02	36.37	-11.1123	0.0506	-0.1758
1004	SLU 36	-0.51	0.01	36.37	-11.1129	0.0506	-0.1758
1004	SLU 37	-0.5	-0.03	36.11	-11.0352	0.0502	-0.1747
1004	SLU 38	-0.5	0	36.11	-11.0358	0.0503	-0.1747
1004	SLU 39	-0.51	-0.02	37.14	-11.3457	0.0515	-0.1775
1004	SLU 40	-0.51	0.01	37.14	-11.3463	0.0515	-0.1775
1004	SLU 41	-0.52	-0.03	37.42	-11.4305	0.052	-0.1796
1004	SLU 42	-0.52	0.01	37.42	-11.4311	0.0521	-0.1796
1004	SLU 43	-0.5	-0.11	35.47	-10.8778	0.0481	-0.1724
1004	SLU 44	-0.5	-0.06	35.47	-10.8788	0.0481	-0.1724
1004	SLU 45	-0.51	-0.1	36.01	-11.0398	0.049	-0.1756
1004	SLU 46	-0.51	-0.07	36.01	-11.0404	0.049	-0.1756
1004	SLU 47	-0.5	-0.06	35.75	-10.9636	0.0486	-0.1745
1004	SLU 48	-0.51	-0.1	36.29	-11.1246	0.0495	-0.1777
1004	SLU 49	-0.51	-0.07	36.29	-11.1252	0.0496	-0.1777
1004	SLU 50	-0.51	-0.11	36.03	-11.0475	0.0492	-0.1766
1004	SLU 51	-0.51	-0.08	36.04	-11.0481	0.0492	-0.1766
1004	SLU 52	-0.54	-0.05	39.18	-11.9992	0.0536	-0.1887
1004	SLU 53	-0.55	-0.09	39.72	-12.1602	0.0545	-0.1918
1004	SLU 54	-0.55	-0.06	39.72	-12.1608	0.0545	-0.1918
1004	SLU 55	-0.55	-0.05	39.46	-12.084	0.0541	-0.1908
1004	SLU 56	-0.56	-0.09	40	-12.245	0.055	-0.1939
1004	SLU 57	-0.56	-0.06	40	-12.2456	0.055	-0.1939
1004	SLU 58	-0.56	-0.1	39.74	-12.1679	0.0546	-0.1929
1004	SLU 59	-0.55	-0.07	39.74	-12.1685	0.0546	-0.1929
1004	SLU 60	-0.56	-0.09	40.77	-12.4784	0.0559	-0.1957
1004	SLU 61	-0.56	-0.06	40.77	-12.479	0.0559	-0.1957
1004	SLU 62	-0.57	-0.1	41.05	-12.5632	0.0564	-0.1978
1004	SLU 63	-0.57	-0.06	41.05	-12.5638	0.0564	-0.1978
1004	SLU 64	-0.55	-0.07	39.08	-11.9678	0.0534	-0.1895
1004	SLU 65	-0.55	-0.02	39.08	-11.9688	0.0534	-0.1896
1004	SLU 66	-0.55	-0.07	39.62	-12.1298	0.0543	-0.1927
1004	SLU 67	-0.55	-0.03	39.62	-12.1304	0.0543	-0.1927
1004	SLU 68	-0.55	-0.02	39.36	-12.0537	0.054	-0.1917
1004	SLU 69	-0.56	-0.07	39.9	-12.2147	0.0549	-0.1948
1004	SLU 70	-0.56	-0.04	39.9	-12.2152	0.0549	-0.1948
1004	SLU 71	-0.56	-0.08	39.64	-12.1375	0.0545	-0.1938
1004	SLU 72	-0.56	-0.04	39.64	-12.1381	0.0545	-0.1938
1004	SLU 73	-0.59	-0.01	42.79	-13.0892	0.0589	-0.2058
1004	SLU 74	-0.6	-0.06	43.32	-13.2502	0.0598	-0.2089
1004	SLU 75	-0.6	-0.02	43.33	-13.2508	0.0598	-0.2089
1004	SLU 76	-0.6	-0.01	43.07	-13.1741	0.0594	-0.2079
1004	SLU 77	-0.61	-0.06	43.61	-13.3351	0.0603	-0.211
1004	SLU 78	-0.61	-0.03	43.61	-13.3357	0.0603	-0.211
1004	SLU 79	-0.6	-0.07	43.35	-13.258	0.0599	-0.21

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1004	SLU 80	-0.6	-0.03	43.35	-13.2585	0.06	-0.21
1004	SLU 81	-0.61	-0.06	44.37	-13.5684	0.0612	-0.2128
1004	SLU 82	-0.61	-0.03	44.37	-13.569	0.0612	-0.2128
1004	SLU 83	-0.62	-0.06	44.65	-13.6533	0.0617	-0.2149
1004	SLU 84	-0.62	-0.03	44.66	-13.6539	0.0618	-0.2149
1004	SLE RA 1	-0.41	-0.06	29.27	-8.9665	0.0399	-0.142
1004	SLE RA 2	-0.41	-0.03	29.27	-8.9671	0.0399	-0.142
1004	SLE RA 3	-0.41	-0.06	29.63	-9.0744	0.0405	-0.1441
1004	SLE RA 4	-0.41	-0.04	29.63	-9.0748	0.0405	-0.1441
1004	SLE RA 5	-0.41	-0.03	29.46	-9.0237	0.0403	-0.1435
1004	SLE RA 6	-0.42	-0.06	29.82	-9.131	0.0409	-0.1455
1004	SLE RA 7	-0.42	-0.04	29.82	-9.1314	0.0409	-0.1455
1004	SLE RA 8	-0.42	-0.07	29.64	-9.0796	0.0406	-0.1449
1004	SLE RA 9	-0.42	-0.05	29.64	-9.08	0.0406	-0.1449
1004	SLE RA 10	-0.44	-0.02	31.74	-9.7141	0.0436	-0.1529
1004	SLE RA 11	-0.45	-0.05	32.1	-9.8214	0.0442	-0.155
1004	SLE RA 12	-0.45	-0.03	32.1	-9.8218	0.0442	-0.155
1004	SLE RA 13	-0.44	-0.02	31.93	-9.7706	0.0439	-0.1543
1004	SLE RA 14	-0.45	-0.05	32.29	-9.878	0.0445	-0.1564
1004	SLE RA 15	-0.45	-0.03	32.29	-9.8783	0.0445	-0.1564
1004	SLE RA 16	-0.45	-0.06	32.11	-9.8265	0.0443	-0.1557
1004	SLE RA 17	-0.45	-0.04	32.11	-9.8269	0.0443	-0.1557
1004	SLE RA 18	-0.45	-0.05	32.8	-10.0335	0.0451	-0.1575
1004	SLE RA 19	-0.45	-0.03	32.8	-10.0339	0.0451	-0.1575
1004	SLE RA 20	-0.46	-0.06	32.99	-10.0901	0.0455	-0.1589
1004	SLE RA 21	-0.46	-0.03	32.99	-10.0905	0.0455	-0.1589
1004	SLE FR 1	-0.41	-0.06	29.27	-8.9665	0.0399	-0.142
1004	SLE FR 2	-0.41	-0.06	29.27	-8.9666	0.0399	-0.142
1004	SLE FR 3	-0.41	-0.06	29.34	-8.9891	0.0401	-0.1426
1004	SLE FR 4	-0.42	-0.05	30.33	-9.2867	0.0415	-0.1467
1004	SLE FR 5	-0.42	-0.06	30.4	-9.3092	0.0416	-0.1472
1004	SLE FR 6	-0.43	-0.06	31.03	-9.5	0.0425	-0.1498
1004	SLE QP 1	-0.41	-0.06	29.27	-8.9665	0.0399	-0.142
1004	SLE QP 2	-0.42	-0.06	30.33	-9.2866	0.0415	-0.1467
1004	SLD 1	3.38	0.65	32.69	-9.9821	0.0514	1.1851
1004	SLD 2	3.2	0.51	32.71	-9.9868	0.0515	1.1207
1004	SLD 3	3.28	-0.43	32.93	-10.0786	0.0519	1.1508
1004	SLD 4	3.1	-0.57	32.96	-10.0834	0.0519	1.0863
1004	SLD 5	0.9	1.8	30.66	-9.348	0.0438	0.3163
1004	SLD 6	0.78	1.71	30.67	-9.351	0.0438	0.2744
1004	SLD 7	0.57	-1.77	31.48	-9.6698	0.0453	0.2016
1004	SLD 8	0.45	-1.86	31.49	-9.6729	0.0453	0.1598
1004	SLD 9	-1.3	1.74	29.16	-8.9003	0.0376	-0.4532
1004	SLD 10	-1.42	1.65	29.18	-8.9033	0.0377	-0.495
1004	SLD 11	-1.62	-1.83	29.98	-9.2221	0.0392	-0.5678
1004	SLD 12	-1.75	-1.92	30	-9.2252	0.0392	-0.6096
1004	SLD 13	-3.94	0.44	27.7	-8.4898	0.031	-1.3797
1004	SLD 14	-4.13	0.3	27.72	-8.4945	0.0311	-1.4441
1004	SLD 15	-4.04	-0.63	27.95	-8.5864	0.0315	-1.414
1004	SLD 16	-4.23	-0.77	27.97	-8.5911	0.0315	-1.4785
1004	SLV 1	8.47	1.56	35.85	-10.9146	0.0647	2.9679
1004	SLV 2	8.04	1.24	35.9	-10.9256	0.0649	2.8177
1004	SLV 3	8.24	-0.89	36.42	-11.1401	0.0658	2.8877
1004	SLV 4	7.81	-1.21	36.47	-11.1511	0.0659	2.7374
1004	SLV 5	2.67	4.19	31.11	-9.4312	0.0468	0.9349
1004	SLV 6	2.39	3.98	31.14	-9.4382	0.0469	0.8389
1004	SLV 7	1.9	-3.97	33.02	-10.1828	0.0504	0.6673
1004	SLV 8	1.63	-4.17	33.05	-10.1898	0.0504	0.5714
1004	SLV 9	-2.47	4.05	27.61	-8.3834	0.0325	-0.8648
1004	SLV 10	-2.75	3.84	27.64	-8.3904	0.0326	-0.9607
1004	SLV 11	-3.24	-4.11	29.52	-9.135	0.036	-1.1323
1004	SLV 12	-3.51	-4.31	29.55	-9.142	0.0361	-1.2282
1004	SLV 13	-8.66	1.09	24.18	-7.4221	0.017	-3.0308
1004	SLV 14	-9.09	0.76	24.23	-7.4331	0.0172	-3.181
1004	SLV 15	-8.89	-1.36	24.75	-7.6476	0.0181	-3.1111
1004	SLV 16	-9.32	-1.68	24.8	-7.6585	0.0182	-3.2613
1004	CRTFP Ux+	0	0	0	0	0	0
1004	CRTFP Ux-	0	0	0	0	0	0
1004	CRTFP Uy+	0	0	0	0	0	0
1004	CRTFP Uy-	0	0	0	0	0	0
1005	SLU 1	-0.37	-0.04	27.23	-8.1902	0.0248	-0.1298
1005	SLU 2	-0.37	0.01	27.23	-8.1909	0.0248	-0.1298
1005	SLU 3	-0.38	-0.03	27.75	-8.3411	0.0254	-0.1328
1005	SLU 4	-0.38	0	27.75	-8.3416	0.0255	-0.1328
1005	SLU 5	-0.38	0.01	27.5	-8.2694	0.0252	-0.1318
1005	SLU 6	-0.39	-0.03	28.01	-8.4195	0.0258	-0.1347
1005	SLU 7	-0.39	0	28.01	-8.42	0.0258	-0.1347
1005	SLU 8	-0.39	-0.04	27.76	-8.347	0.0256	-0.1338
1005	SLU 9	-0.39	-0.01	27.76	-8.3475	0.0256	-0.1338
1005	SLU 10	-0.42	0.03	30.79	-9.2459	0.0282	-0.1452
1005	SLU 11	-0.43	-0.01	31.31	-9.3961	0.0288	-0.1482
1005	SLU 12	-0.43	0.02	31.31	-9.3966	0.0289	-0.1482
1005	SLU 13	-0.42	0.03	31.06	-9.3243	0.0286	-0.1472
1005	SLU 14	-0.43	-0.02	31.58	-9.4745	0.0292	-0.1502
1005	SLU 15	-0.43	0.02	31.58	-9.475	0.0292	-0.1502
1005	SLU 16	-0.43	-0.03	31.33	-9.402	0.029	-0.1492
1005	SLU 17	-0.43	0.01	31.33	-9.4024	0.029	-0.1492
1005	SLU 18	-0.44	-0.02	32.32	-9.6973	0.0297	-0.1519
1005	SLU 19	-0.44	0.01	32.32	-9.6977	0.0297	-0.1518
1005	SLU 20	-0.44	-0.02	32.59	-9.7757	0.0301	-0.1538
1005	SLU 21	-0.44	0.01	32.59	-9.7761	0.0301	-0.1538

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1005	SLU 22	-0.42	0	30.7	-9.2165	0.0281	-0.1461
1005	SLU 23	-0.42	0.06	30.7	-9.2173	0.0282	-0.1461
1005	SLU 24	-0.43	0.01	31.22	-9.3675	0.0288	-0.1491
1005	SLU 25	-0.43	0.04	31.22	-9.368	0.0288	-0.149
1005	SLU 26	-0.43	0.05	30.97	-9.2957	0.0286	-0.1481
1005	SLU 27	-0.44	0.01	31.48	-9.4459	0.0292	-0.151
1005	SLU 28	-0.44	0.04	31.48	-9.4464	0.0292	-0.151
1005	SLU 29	-0.43	0	31.23	-9.3733	0.0289	-0.1501
1005	SLU 30	-0.43	0.03	31.23	-9.3738	0.0289	-0.15
1005	SLU 31	-0.47	0.07	34.27	-10.2723	0.0316	-0.1615
1005	SLU 32	-0.47	0.03	34.78	-10.4225	0.0322	-0.1645
1005	SLU 33	-0.47	0.06	34.78	-10.4229	0.0322	-0.1645
1005	SLU 34	-0.47	0.07	34.53	-10.3507	0.032	-0.1635
1005	SLU 35	-0.48	0.03	35.05	-10.5009	0.0326	-0.1665
1005	SLU 36	-0.48	0.06	35.05	-10.5013	0.0326	-0.1665
1005	SLU 37	-0.48	0.02	34.8	-10.4283	0.0323	-0.1655
1005	SLU 38	-0.48	0.05	34.8	-10.4288	0.0323	-0.1655
1005	SLU 39	-0.49	0.02	35.79	-10.7236	0.033	-0.1681
1005	SLU 40	-0.49	0.06	35.79	-10.7241	0.033	-0.1681
1005	SLU 41	-0.49	0.02	36.06	-10.802	0.0334	-0.1701
1005	SLU 42	-0.49	0.05	36.06	-10.8025	0.0334	-0.1701
1005	SLU 43	-0.47	-0.06	34.21	-10.2953	0.0311	-0.1632
1005	SLU 44	-0.47	-0.01	34.21	-10.2961	0.0311	-0.1631
1005	SLU 45	-0.48	-0.05	34.72	-10.4463	0.0317	-0.1661
1005	SLU 46	-0.48	-0.02	34.72	-10.4468	0.0318	-0.1661
1005	SLU 47	-0.48	-0.01	34.48	-10.3745	0.0315	-0.1651
1005	SLU 48	-0.49	-0.06	34.99	-10.5247	0.0321	-0.1681
1005	SLU 49	-0.49	-0.02	34.99	-10.5252	0.0321	-0.1681
1005	SLU 50	-0.48	-0.07	34.74	-10.4521	0.0319	-0.1671
1005	SLU 51	-0.48	-0.03	34.74	-10.4526	0.0319	-0.1671
1005	SLU 52	-0.52	0	37.77	-11.3511	0.0345	-0.1786
1005	SLU 53	-0.52	-0.04	38.29	-11.5013	0.0351	-0.1816
1005	SLU 54	-0.52	-0.01	38.29	-11.5017	0.0352	-0.1815
1005	SLU 55	-0.52	0	38.04	-11.4295	0.0349	-0.1806
1005	SLU 56	-0.53	-0.04	38.55	-11.5797	0.0355	-0.1835
1005	SLU 57	-0.53	-0.01	38.55	-11.5801	0.0355	-0.1835
1005	SLU 58	-0.53	-0.05	38.31	-11.5071	0.0353	-0.1826
1005	SLU 59	-0.53	-0.02	38.31	-11.5076	0.0353	-0.1825
1005	SLU 60	-0.53	-0.04	39.3	-11.8024	0.036	-0.1852
1005	SLU 61	-0.53	-0.01	39.3	-11.8029	0.036	-0.1852
1005	SLU 62	-0.54	-0.04	39.57	-11.8808	0.0364	-0.1872
1005	SLU 63	-0.54	-0.01	39.57	-11.8813	0.0364	-0.1872
1005	SLU 64	-0.52	-0.02	37.68	-11.3217	0.0345	-0.1794
1005	SLU 65	-0.52	0.03	37.68	-11.3225	0.0345	-0.1794
1005	SLU 66	-0.53	-0.01	38.2	-11.4726	0.0351	-0.1824
1005	SLU 67	-0.53	0.02	38.2	-11.4731	0.0351	-0.1824
1005	SLU 68	-0.52	0.03	37.95	-11.4009	0.0349	-0.1814
1005	SLU 69	-0.53	-0.01	38.46	-11.5511	0.0355	-0.1844
1005	SLU 70	-0.53	0.02	38.46	-11.5515	0.0355	-0.1844
1005	SLU 71	-0.53	-0.02	38.21	-11.4785	0.0352	-0.1834
1005	SLU 72	-0.53	0.01	38.21	-11.479	0.0352	-0.1834
1005	SLU 73	-0.56	0.04	41.24	-12.3774	0.0379	-0.1949
1005	SLU 74	-0.57	0	41.76	-12.5276	0.0385	-0.1978
1005	SLU 75	-0.57	0.03	41.76	-12.5281	0.0385	-0.1978
1005	SLU 76	-0.57	0.04	41.51	-12.4558	0.0383	-0.1968
1005	SLU 77	-0.58	0	42.03	-12.606	0.0389	-0.1998
1005	SLU 78	-0.58	0.03	42.03	-12.6065	0.0389	-0.1998
1005	SLU 79	-0.57	-0.01	41.78	-12.5335	0.0386	-0.1988
1005	SLU 80	-0.57	0.02	41.78	-12.5339	0.0386	-0.1988
1005	SLU 81	-0.58	0	42.77	-12.8288	0.0393	-0.2015
1005	SLU 82	-0.58	0.03	42.77	-12.8292	0.0393	-0.2015
1005	SLU 83	-0.59	0	43.04	-12.9072	0.0397	-0.2035
1005	SLU 84	-0.59	0.03	43.04	-12.9077	0.0397	-0.2035
1005	SLE RA 1	-0.39	-0.03	28.22	-8.4834	0.0258	-0.1345
1005	SLE RA 2	-0.39	0.01	28.22	-8.4839	0.0258	-0.1344
1005	SLE RA 3	-0.39	-0.02	28.57	-8.5841	0.0262	-0.1364
1005	SLE RA 4	-0.39	0	28.57	-8.5844	0.0262	-0.1364
1005	SLE RA 5	-0.39	0.01	28.4	-8.5362	0.026	-0.1358
1005	SLE RA 6	-0.4	-0.02	28.74	-8.6363	0.0264	-0.1378
1005	SLE RA 7	-0.4	0	28.74	-8.6366	0.0264	-0.1377
1005	SLE RA 8	-0.4	-0.03	28.58	-8.588	0.0263	-0.1371
1005	SLE RA 9	-0.4	-0.01	28.58	-8.5883	0.0263	-0.1371
1005	SLE RA 10	-0.42	0.02	30.6	-9.1872	0.0281	-0.1447
1005	SLE RA 11	-0.42	-0.01	30.94	-9.2874	0.0285	-0.1467
1005	SLE RA 12	-0.42	0.01	30.94	-9.2877	0.0285	-0.1467
1005	SLE RA 13	-0.42	0.02	30.78	-9.2395	0.0283	-0.1461
1005	SLE RA 14	-0.43	-0.01	31.12	-9.3396	0.0287	-0.148
1005	SLE RA 15	-0.43	0.01	31.12	-9.34	0.0287	-0.148
1005	SLE RA 16	-0.43	-0.02	30.95	-9.2913	0.0286	-0.1474
1005	SLE RA 17	-0.43	0	30.95	-9.2916	0.0286	-0.1474
1005	SLE RA 18	-0.43	-0.01	31.62	-9.4881	0.029	-0.1492
1005	SLE RA 19	-0.43	0.01	31.62	-9.4885	0.029	-0.1491
1005	SLE RA 20	-0.43	-0.01	31.79	-9.5404	0.0293	-0.1505
1005	SLE RA 21	-0.43	0.01	31.79	-9.5407	0.0293	-0.1505
1005	SLE FR 1	-0.39	-0.03	28.22	-8.4834	0.0258	-0.1345
1005	SLE FR 2	-0.39	-0.02	28.22	-8.4835	0.0258	-0.1345
1005	SLE FR 3	-0.39	-0.03	28.29	-8.5043	0.0259	-0.135
1005	SLE FR 4	-0.4	-0.02	29.24	-8.7849	0.0267	-0.1389
1005	SLE FR 5	-0.4	-0.02	29.31	-8.8057	0.0268	-0.1394
1005	SLE FR 6	-0.41	-0.02	29.92	-8.9858	0.0274	-0.1418
1005	SLE QP 1	-0.39	-0.03	28.22	-8.4834	0.0258	-0.1345

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1005	SLE QP 2	-0.4	-0.02	29.24	-8.7848	0.0267	-0.1389
1005	SLD 1	3.41	0.68	31.3	-9.3633	0.0354	1.1947
1005	SLD 2	3.22	0.55	31.32	-9.3676	0.0354	1.1302
1005	SLD 3	3.31	-0.39	31.55	-9.4634	0.0357	1.1603
1005	SLD 4	3.12	-0.52	31.57	-9.4677	0.0358	1.0958
1005	SLD 5	0.92	1.83	29.47	-8.8058	0.0289	0.3247
1005	SLD 6	0.8	1.75	29.48	-8.8086	0.0289	0.2828
1005	SLD 7	0.6	-1.73	30.31	-9.1394	0.0299	0.2099
1005	SLD 8	0.48	-1.81	30.33	-9.1422	0.0299	0.1681
1005	SLD 9	-1.28	1.77	28.16	-8.4274	0.0235	-0.4458
1005	SLD 10	-1.4	1.68	28.17	-8.4302	0.0236	-0.4877
1005	SLD 11	-1.6	-1.79	29	-8.761	0.0246	-0.5605
1005	SLD 12	-1.72	-1.87	29.01	-8.7638	0.0246	-0.6024
1005	SLD 13	-3.93	0.47	26.91	-8.102	0.0177	-1.3735
1005	SLD 14	-4.11	0.34	26.93	-8.1063	0.0178	-1.438
1005	SLD 15	-4.02	-0.59	27.17	-8.202	0.018	-1.408
1005	SLD 16	-4.21	-0.72	27.19	-8.2064	0.0181	-1.4725
1005	SLV 1	8.51	1.59	34.05	-10.1391	0.047	2.9799
1005	SLV 2	8.07	1.29	34.1	-10.1492	0.0471	2.8296
1005	SLV 3	8.28	-0.85	34.64	-10.3728	0.0478	2.8995
1005	SLV 4	7.84	-1.15	34.69	-10.3829	0.0478	2.7493
1005	SLV 5	2.69	4.21	29.78	-8.835	0.0317	0.944
1005	SLV 6	2.42	4.01	29.82	-8.8415	0.0317	0.848
1005	SLV 7	1.93	-3.91	31.74	-9.6139	0.0342	0.6763
1005	SLV 8	1.65	-4.11	31.77	-9.6204	0.0342	0.5803
1005	SLV 9	-2.45	4.06	26.71	-7.9493	0.0193	-0.858
1005	SLV 10	-2.73	3.87	26.74	-7.9558	0.0193	-0.954
1005	SLV 11	-3.22	-4.06	28.67	-8.7282	0.0217	-1.1258
1005	SLV 12	-3.49	-4.25	28.7	-8.7347	0.0218	-1.2217
1005	SLV 13	-8.65	1.1	23.79	-7.1868	0.0056	-3.027
1005	SLV 14	-9.08	0.8	23.84	-7.1969	0.0057	-3.1773
1005	SLV 15	-8.88	-1.33	24.38	-7.4204	0.0064	-3.1073
1005	SLV 16	-9.31	-1.63	24.43	-7.4305	0.0065	-3.2576
1005	CRTFP Ux+	0	0	0	0	0	0
1005	CRTFP Ux-	0	0	0	0	0	0
1005	CRTFP Uy+	0	0	0	0	0	0
1005	CRTFP Uy-	0	0	0	0	0	0
1006	SLU 1	-0.35	0.01	26.66	-7.9682	0.011	-0.1217
1006	SLU 2	-0.35	0.06	26.66	-7.9687	0.011	-0.1216
1006	SLU 3	-0.36	0.02	27.16	-8.1134	0.0113	-0.1244
1006	SLU 4	-0.36	0.05	27.16	-8.1137	0.0113	-0.1244
1006	SLU 5	-0.36	0.06	26.92	-8.0434	0.0113	-0.1235
1006	SLU 6	-0.37	0.02	27.42	-8.1881	0.0116	-0.1263
1006	SLU 7	-0.37	0.05	27.42	-8.1884	0.0116	-0.1263
1006	SLU 8	-0.36	0.01	27.18	-8.1176	0.0115	-0.1254
1006	SLU 9	-0.36	0.04	27.18	-8.1179	0.0115	-0.1253
1006	SLU 10	-0.39	0.08	30.15	-8.9944	0.0123	-0.1361
1006	SLU 11	-0.4	0.04	30.65	-9.1391	0.0126	-0.1389
1006	SLU 12	-0.4	0.07	30.65	-9.1394	0.0127	-0.1389
1006	SLU 13	-0.4	0.08	30.41	-9.0691	0.0126	-0.138
1006	SLU 14	-0.41	0.04	30.91	-9.2138	0.0129	-0.1408
1006	SLU 15	-0.41	0.07	30.91	-9.2141	0.0129	-0.1408
1006	SLU 16	-0.4	0.03	30.66	-9.1433	0.0128	-0.1399
1006	SLU 17	-0.4	0.06	30.66	-9.1436	0.0128	-0.1398
1006	SLU 18	-0.41	0.03	31.65	-9.4334	0.0129	-0.1424
1006	SLU 19	-0.41	0.07	31.65	-9.4338	0.0129	-0.1424
1006	SLU 20	-0.42	0.03	31.9	-9.5082	0.0131	-0.1442
1006	SLU 21	-0.42	0.06	31.9	-9.5085	0.0131	-0.1442
1006	SLU 22	-0.4	0.06	30.06	-8.9659	0.0123	-0.137
1006	SLU 23	-0.4	0.11	30.06	-8.9664	0.0123	-0.137
1006	SLU 24	-0.4	0.07	30.56	-9.1111	0.0126	-0.1398
1006	SLU 25	-0.4	0.1	30.56	-9.1114	0.0127	-0.1398
1006	SLU 26	-0.4	0.11	30.32	-9.0412	0.0126	-0.1388
1006	SLU 27	-0.41	0.07	30.82	-9.1858	0.0129	-0.1416
1006	SLU 28	-0.41	0.1	30.82	-9.1861	0.0129	-0.1416
1006	SLU 29	-0.41	0.05	30.57	-9.1153	0.0128	-0.1407
1006	SLU 30	-0.41	0.09	30.57	-9.1157	0.0128	-0.1407
1006	SLU 31	-0.44	0.13	33.55	-9.9921	0.0137	-0.1515
1006	SLU 32	-0.45	0.09	34.05	-10.1368	0.014	-0.1543
1006	SLU 33	-0.45	0.12	34.05	-10.1371	0.014	-0.1543
1006	SLU 34	-0.44	0.13	33.8	-10.0669	0.0139	-0.1533
1006	SLU 35	-0.45	0.09	34.3	-10.2115	0.0142	-0.1561
1006	SLU 36	-0.45	0.12	34.3	-10.2118	0.0142	-0.1561
1006	SLU 37	-0.45	0.07	34.06	-10.141	0.0141	-0.1552
1006	SLU 38	-0.45	0.1	34.06	-10.1414	0.0141	-0.1552
1006	SLU 39	-0.46	0.08	35.04	-10.4312	0.0142	-0.1577
1006	SLU 40	-0.46	0.11	35.04	-10.4315	0.0142	-0.1577
1006	SLU 41	-0.46	0.08	35.3	-10.5059	0.0144	-0.1596
1006	SLU 42	-0.46	0.11	35.3	-10.5062	0.0145	-0.1596
1006	SLU 43	-0.44	-0.01	33.5	-10.0165	0.0139	-0.1529
1006	SLU 44	-0.44	0.04	33.5	-10.0171	0.0139	-0.1529
1006	SLU 45	-0.45	0	34	-10.1617	0.0142	-0.1557
1006	SLU 46	-0.45	0.03	34	-10.1621	0.0142	-0.1557
1006	SLU 47	-0.45	0.04	33.75	-10.0918	0.0141	-0.1547
1006	SLU 48	-0.46	0	34.25	-10.2364	0.0144	-0.1575
1006	SLU 49	-0.46	0.03	34.25	-10.2368	0.0144	-0.1575
1006	SLU 50	-0.45	-0.01	34.01	-10.166	0.0143	-0.1566
1006	SLU 51	-0.45	0.02	34.01	-10.1663	0.0143	-0.1566
1006	SLU 52	-0.48	0.06	36.98	-11.0428	0.0152	-0.1674
1006	SLU 53	-0.49	0.02	37.48	-11.1874	0.0155	-0.1702
1006	SLU 54	-0.49	0.05	37.48	-11.1878	0.0155	-0.1702

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1006	SLU 55	-0.49	0.06	37.24	-11.1175	0.0154	-0.1692
1006	SLU 56	-0.5	0.02	37.74	-11.2621	0.0157	-0.172
1006	SLU 57	-0.5	0.05	37.74	-11.2625	0.0157	-0.172
1006	SLU 58	-0.49	0.01	37.5	-11.1917	0.0156	-0.1711
1006	SLU 59	-0.49	0.04	37.5	-11.192	0.0156	-0.1711
1006	SLU 60	-0.5	0.02	38.48	-11.4818	0.0157	-0.1736
1006	SLU 61	-0.5	0.05	38.48	-11.4821	0.0158	-0.1736
1006	SLU 62	-0.51	0.02	38.74	-11.5565	0.016	-0.1755
1006	SLU 63	-0.51	0.05	38.74	-11.5569	0.016	-0.1754
1006	SLU 64	-0.49	0.04	36.89	-11.0142	0.0152	-0.1683
1006	SLU 65	-0.49	0.09	36.89	-11.0148	0.0152	-0.1682
1006	SLU 66	-0.49	0.05	37.39	-11.1595	0.0155	-0.171
1006	SLU 67	-0.49	0.08	37.39	-11.1598	0.0155	-0.171
1006	SLU 68	-0.49	0.09	37.15	-11.0895	0.0154	-0.1701
1006	SLU 69	-0.5	0.05	37.65	-11.2342	0.0157	-0.1729
1006	SLU 70	-0.5	0.08	37.65	-11.2345	0.0157	-0.1729
1006	SLU 71	-0.5	0.04	37.41	-11.1637	0.0156	-0.1719
1006	SLU 72	-0.5	0.07	37.41	-11.164	0.0156	-0.1719
1006	SLU 73	-0.53	0.11	40.38	-12.0405	0.0165	-0.1827
1006	SLU 74	-0.54	0.07	40.88	-12.1852	0.0168	-0.1855
1006	SLU 75	-0.54	0.1	40.88	-12.1855	0.0168	-0.1855
1006	SLU 76	-0.53	0.11	40.64	-12.1152	0.0167	-0.1846
1006	SLU 77	-0.54	0.07	41.14	-12.2599	0.017	-0.1874
1006	SLU 78	-0.54	0.1	41.14	-12.2602	0.0171	-0.1874
1006	SLU 79	-0.54	0.06	40.9	-12.1894	0.0169	-0.1864
1006	SLU 80	-0.54	0.09	40.9	-12.1897	0.017	-0.1864
1006	SLU 81	-0.55	0.07	41.88	-12.4795	0.0171	-0.189
1006	SLU 82	-0.55	0.1	41.88	-12.4799	0.0171	-0.189
1006	SLU 83	-0.55	0.07	42.13	-12.5543	0.0173	-0.1908
1006	SLU 84	-0.55	0.1	42.13	-12.5546	0.0173	-0.1908
1006	SLE RA 1	-0.36	0.02	27.63	-8.2532	0.0114	-0.1261
1006	SLE RA 2	-0.36	0.06	27.63	-8.2536	0.0114	-0.126
1006	SLE RA 3	-0.37	0.03	27.97	-8.35	0.0116	-0.1279
1006	SLE RA 4	-0.37	0.05	27.97	-8.3502	0.0116	-0.1279
1006	SLE RA 5	-0.37	0.05	27.8	-8.3034	0.0115	-0.1273
1006	SLE RA 6	-0.37	0.03	28.14	-8.3998	0.0117	-0.1291
1006	SLE RA 7	-0.37	0.05	28.14	-8.4001	0.0118	-0.1291
1006	SLE RA 8	-0.37	0.02	27.98	-8.3528	0.0117	-0.1285
1006	SLE RA 9	-0.37	0.04	27.98	-8.3531	0.0117	-0.1285
1006	SLE RA 10	-0.39	0.07	29.96	-8.9374	0.0123	-0.1357
1006	SLE RA 11	-0.4	0.04	30.29	-9.0338	0.0125	-0.1376
1006	SLE RA 12	-0.4	0.06	30.29	-9.0341	0.0125	-0.1376
1006	SLE RA 13	-0.4	0.07	30.13	-8.9872	0.0124	-0.1369
1006	SLE RA 14	-0.4	0.04	30.46	-9.0836	0.0126	-0.1388
1006	SLE RA 15	-0.4	0.06	30.46	-9.0839	0.0126	-0.1388
1006	SLE RA 16	-0.4	0.03	30.3	-9.0366	0.0126	-0.1382
1006	SLE RA 17	-0.4	0.05	30.3	-9.0369	0.0126	-0.1382
1006	SLE RA 18	-0.4	0.04	30.96	-9.2301	0.0126	-0.1399
1006	SLE RA 19	-0.4	0.06	30.96	-9.2303	0.0126	-0.1399
1006	SLE RA 20	-0.41	0.04	31.13	-9.2799	0.0128	-0.1411
1006	SLE RA 21	-0.41	0.06	31.13	-9.2801	0.0128	-0.1411
1006	SLE FR 1	-0.36	0.02	27.63	-8.2532	0.0114	-0.1261
1006	SLE FR 2	-0.36	0.03	27.63	-8.2533	0.0114	-0.1261
1006	SLE FR 3	-0.37	0.02	27.7	-8.2731	0.0114	-0.1265
1006	SLE FR 4	-0.38	0.03	28.63	-8.5463	0.0118	-0.1302
1006	SLE FR 5	-0.38	0.03	28.7	-8.5662	0.0118	-0.1307
1006	SLE FR 6	-0.38	0.03	29.29	-8.7416	0.012	-0.133
1006	SLE QP 1	-0.36	0.02	27.63	-8.2532	0.0114	-0.1261
1006	SLE QP 2	-0.38	0.03	28.63	-8.5463	0.0118	-0.1302
1006	SLD 1	3.43	0.73	30.43	-9.0322	0.0195	1.2046
1006	SLD 2	3.25	0.61	30.45	-9.0365	0.0195	1.1401
1006	SLD 3	3.34	-0.33	30.68	-9.1309	0.019	1.1702
1006	SLD 4	3.15	-0.45	30.7	-9.1353	0.019	1.1056
1006	SLD 5	0.95	1.88	28.78	-8.5415	0.0149	0.3337
1006	SLD 6	0.83	1.8	28.8	-8.5443	0.0149	0.2918
1006	SLD 7	0.62	-1.68	29.62	-8.8707	0.0131	0.2189
1006	SLD 8	0.5	-1.76	29.64	-8.8736	0.0131	0.1771
1006	SLD 9	-1.25	1.81	27.62	-8.219	0.0104	-0.4375
1006	SLD 10	-1.37	1.73	27.64	-8.2218	0.0104	-0.4793
1006	SLD 11	-1.58	-1.75	28.46	-8.5483	0.0086	-0.5522
1006	SLD 12	-1.7	-1.83	28.48	-8.5511	0.0087	-0.5941
1006	SLD 13	-3.91	0.51	26.56	-7.9573	0.0045	-1.366
1006	SLD 14	-4.09	0.39	26.58	-7.9616	0.0045	-1.4306
1006	SLD 15	-4	-0.56	26.81	-8.0561	0.004	-1.4005
1006	SLD 16	-4.19	-0.68	26.83	-8.0604	0.004	-1.465
1006	SLV 1	8.54	1.65	32.84	-9.6842	0.0299	2.9913
1006	SLV 2	8.11	1.37	32.88	-9.6943	0.0299	2.841
1006	SLV 3	8.31	-0.79	33.42	-9.9148	0.0287	2.911
1006	SLV 4	7.88	-1.07	33.47	-9.9248	0.0287	2.7607
1006	SLV 5	2.72	4.26	29	-8.5363	0.019	0.9536
1006	SLV 6	2.44	4.08	29.03	-8.5428	0.019	0.8576
1006	SLV 7	1.95	-3.86	30.95	-9.3047	0.015	0.6857
1006	SLV 8	1.68	-4.04	30.98	-9.3112	0.015	0.5897
1006	SLV 9	-2.43	4.1	26.28	-7.7814	0.0085	-0.8501
1006	SLV 10	-2.71	3.92	26.31	-7.7878	0.0085	-0.9461
1006	SLV 11	-3.2	-4.02	28.23	-8.5498	0.0045	-1.118
1006	SLV 12	-3.47	-4.2	28.26	-8.5562	0.0045	-1.214
1006	SLV 13	-8.63	1.12	23.79	-7.1677	-0.0052	-3.0211
1006	SLV 14	-9.06	0.84	23.84	-7.1778	-0.0052	-3.1714
1006	SLV 15	-8.86	-1.32	24.38	-7.3982	-0.0064	-3.1014
1006	SLV 16	-9.29	-1.6	24.42	-7.4083	-0.0064	-3.2517

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1006	CRTFP Ux+	0	0	0	0	0	0
1006	CRTFP Ux-	0	0	0	0	0	0
1006	CRTFP Uy+	0	0	0	0	0	0
1006	CRTFP Uy-	0	0	0	0	0	0
1007	SLU 1	-0.33	0.06	26.52	-7.9792	-0.0017	-0.1127
1007	SLU 2	-0.33	0.11	26.52	-7.9795	-0.0016	-0.1127
1007	SLU 3	-0.33	0.07	27.01	-8.1236	-0.0016	-0.1153
1007	SLU 4	-0.33	0.1	27.01	-8.1238	-0.0016	-0.1152
1007	SLU 5	-0.33	0.11	26.77	-8.0532	-0.0016	-0.1144
1007	SLU 6	-0.34	0.07	27.26	-8.1973	-0.0015	-0.117
1007	SLU 7	-0.34	0.1	27.26	-8.1975	-0.0015	-0.1169
1007	SLU 8	-0.34	0.06	27.02	-8.1265	-0.0015	-0.1161
1007	SLU 9	-0.34	0.09	27.02	-8.1267	-0.0015	-0.1161
1007	SLU 10	-0.37	0.13	29.99	-9.0105	-0.0022	-0.1261
1007	SLU 11	-0.37	0.1	30.49	-9.1547	-0.0022	-0.1287
1007	SLU 12	-0.37	0.13	30.49	-9.1549	-0.0022	-0.1287
1007	SLU 13	-0.37	0.13	30.25	-9.0842	-0.0021	-0.1278
1007	SLU 14	-0.38	0.1	30.74	-9.2283	-0.0021	-0.1304
1007	SLU 15	-0.38	0.13	30.74	-9.2285	-0.0021	-0.1304
1007	SLU 16	-0.38	0.08	30.5	-9.1575	-0.0021	-0.1296
1007	SLU 17	-0.38	0.11	30.5	-9.1577	-0.0021	-0.1295
1007	SLU 18	-0.38	0.09	31.49	-9.4521	-0.0025	-0.1319
1007	SLU 19	-0.38	0.12	31.49	-9.4523	-0.0025	-0.1319
1007	SLU 20	-0.39	0.09	31.74	-9.5257	-0.0024	-0.1336
1007	SLU 21	-0.39	0.12	31.74	-9.5259	-0.0024	-0.1336
1007	SLU 22	-0.37	0.12	29.9	-8.9818	-0.0022	-0.1271
1007	SLU 23	-0.37	0.17	29.9	-8.9821	-0.0022	-0.127
1007	SLU 24	-0.38	0.13	30.4	-9.1262	-0.0021	-0.1296
1007	SLU 25	-0.38	0.16	30.4	-9.1264	-0.0021	-0.1296
1007	SLU 26	-0.37	0.17	30.15	-9.0558	-0.0021	-0.1287
1007	SLU 27	-0.38	0.13	30.65	-9.1999	-0.0021	-0.1313
1007	SLU 28	-0.38	0.16	30.65	-9.2001	-0.002	-0.1313
1007	SLU 29	-0.38	0.12	30.41	-9.1291	-0.002	-0.1304
1007	SLU 30	-0.38	0.15	30.41	-9.1293	-0.002	-0.1304
1007	SLU 31	-0.41	0.19	33.38	-10.0131	-0.0027	-0.1404
1007	SLU 32	-0.41	0.15	33.87	-10.1573	-0.0027	-0.1431
1007	SLU 33	-0.41	0.18	33.87	-10.1575	-0.0027	-0.143
1007	SLU 34	-0.41	0.19	33.63	-10.0868	-0.0027	-0.1421
1007	SLU 35	-0.42	0.15	34.13	-10.2309	-0.0026	-0.1447
1007	SLU 36	-0.42	0.18	34.13	-10.2311	-0.0026	-0.1447
1007	SLU 37	-0.42	0.14	33.88	-10.1601	-0.0026	-0.1439
1007	SLU 38	-0.42	0.17	33.88	-10.1603	-0.0026	-0.1438
1007	SLU 39	-0.42	0.15	34.87	-10.4547	-0.003	-0.1463
1007	SLU 40	-0.42	0.18	34.87	-10.4549	-0.003	-0.1462
1007	SLU 41	-0.43	0.15	35.12	-10.5283	-0.0029	-0.148
1007	SLU 42	-0.43	0.18	35.12	-10.5285	-0.0029	-0.1479
1007	SLU 43	-0.41	0.06	33.31	-10.0292	-0.002	-0.1416
1007	SLU 44	-0.41	0.11	33.31	-10.0295	-0.002	-0.1416
1007	SLU 45	-0.42	0.07	33.81	-10.1736	-0.0019	-0.1442
1007	SLU 46	-0.42	0.1	33.81	-10.1738	-0.0019	-0.1442
1007	SLU 47	-0.42	0.11	33.56	-10.1032	-0.0019	-0.1433
1007	SLU 48	-0.42	0.07	34.06	-10.2473	-0.0019	-0.1459
1007	SLU 49	-0.42	0.1	34.06	-10.2475	-0.0018	-0.1458
1007	SLU 50	-0.42	0.06	33.82	-10.1765	-0.0018	-0.145
1007	SLU 51	-0.42	0.09	33.82	-10.1767	-0.0018	-0.145
1007	SLU 52	-0.45	0.13	36.79	-11.0605	-0.0025	-0.155
1007	SLU 53	-0.46	0.09	37.28	-11.2047	-0.0025	-0.1576
1007	SLU 54	-0.46	0.12	37.28	-11.2049	-0.0025	-0.1576
1007	SLU 55	-0.45	0.13	37.04	-11.1342	-0.0025	-0.1567
1007	SLU 56	-0.46	0.09	37.54	-11.2783	-0.0024	-0.1593
1007	SLU 57	-0.46	0.12	37.54	-11.2785	-0.0024	-0.1593
1007	SLU 58	-0.46	0.08	37.29	-11.2075	-0.0024	-0.1585
1007	SLU 59	-0.46	0.11	37.29	-11.2077	-0.0024	-0.1584
1007	SLU 60	-0.47	0.09	38.28	-11.5021	-0.0028	-0.1609
1007	SLU 61	-0.47	0.12	38.28	-11.5023	-0.0028	-0.1608
1007	SLU 62	-0.47	0.09	38.53	-11.5757	-0.0027	-0.1625
1007	SLU 63	-0.47	0.12	38.53	-11.5759	-0.0027	-0.1625
1007	SLU 64	-0.45	0.11	36.7	-11.0318	-0.0025	-0.156
1007	SLU 65	-0.45	0.16	36.7	-11.0321	-0.0025	-0.1559
1007	SLU 66	-0.46	0.13	37.19	-11.1762	-0.0025	-0.1585
1007	SLU 67	-0.46	0.16	37.19	-11.1764	-0.0024	-0.1585
1007	SLU 68	-0.46	0.16	36.95	-11.1058	-0.0024	-0.1576
1007	SLU 69	-0.46	0.13	37.44	-11.2499	-0.0024	-0.1602
1007	SLU 70	-0.46	0.16	37.44	-11.2501	-0.0024	-0.1602
1007	SLU 71	-0.46	0.11	37.2	-11.1791	-0.0023	-0.1593
1007	SLU 72	-0.46	0.14	37.2	-11.1793	-0.0023	-0.1593
1007	SLU 73	-0.49	0.19	40.17	-12.0631	-0.0031	-0.1693
1007	SLU 74	-0.5	0.15	40.67	-12.2073	-0.003	-0.172
1007	SLU 75	-0.5	0.18	40.67	-12.2075	-0.003	-0.1719
1007	SLU 76	-0.5	0.19	40.43	-12.1368	-0.003	-0.171
1007	SLU 77	-0.5	0.15	40.92	-12.2809	-0.003	-0.1737
1007	SLU 78	-0.5	0.18	40.92	-12.2811	-0.0029	-0.1736
1007	SLU 79	-0.5	0.14	40.68	-12.2101	-0.0029	-0.1728
1007	SLU 80	-0.5	0.17	40.68	-12.2103	-0.0029	-0.1728
1007	SLU 81	-0.51	0.15	41.67	-12.5047	-0.0033	-0.1752
1007	SLU 82	-0.51	0.18	41.67	-12.5049	-0.0033	-0.1751
1007	SLU 83	-0.51	0.15	41.92	-12.5783	-0.0032	-0.1769
1007	SLU 84	-0.51	0.18	41.92	-12.5785	-0.0032	-0.1768
1007	SLE RA 1	-0.34	0.07	27.49	-8.2656	-0.0018	-0.1168
1007	SLE RA 2	-0.34	0.11	27.48	-8.2658	-0.0018	-0.1168
1007	SLE RA 3	-0.34	0.08	27.81	-8.3619	-0.0018	-0.1185

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1007	SLE RA 4	-0.34	0.1	27.81	-8.3621	-0.0018	-0.1185
1007	SLE RA 5	-0.34	0.11	27.65	-8.3149	-0.0017	-0.1179
1007	SLE RA 6	-0.35	0.08	27.98	-8.411	-0.0017	-0.1197
1007	SLE RA 7	-0.35	0.1	27.98	-8.4112	-0.0017	-0.1196
1007	SLE RA 8	-0.35	0.07	27.82	-8.3638	-0.0017	-0.1191
1007	SLE RA 9	-0.35	0.1	27.82	-8.364	-0.0017	-0.1191
1007	SLE RA 10	-0.36	0.13	29.8	-8.9532	-0.0022	-0.1257
1007	SLE RA 11	-0.37	0.1	30.13	-9.0493	-0.0022	-0.1275
1007	SLE RA 12	-0.37	0.12	30.13	-9.0494	-0.0022	-0.1275
1007	SLE RA 13	-0.37	0.13	29.97	-9.0023	-0.0021	-0.1269
1007	SLE RA 14	-0.37	0.1	30.3	-9.0984	-0.0021	-0.1286
1007	SLE RA 15	-0.37	0.12	30.3	-9.0985	-0.0021	-0.1286
1007	SLE RA 16	-0.37	0.09	30.14	-9.0512	-0.0021	-0.128
1007	SLE RA 17	-0.37	0.11	30.14	-9.0513	-0.0021	-0.128
1007	SLE RA 18	-0.38	0.1	30.8	-9.2476	-0.0024	-0.1296
1007	SLE RA 19	-0.38	0.12	30.8	-9.2477	-0.0024	-0.1296
1007	SLE RA 20	-0.38	0.1	30.97	-9.2967	-0.0023	-0.1308
1007	SLE RA 21	-0.38	0.12	30.96	-9.2968	-0.0023	-0.1307
1007	SLE FR 1	-0.34	0.07	27.49	-8.2656	-0.0018	-0.1168
1007	SLE FR 2	-0.34	0.08	27.49	-8.2657	-0.0018	-0.1168
1007	SLE FR 3	-0.34	0.07	27.55	-8.2853	-0.0018	-0.1173
1007	SLE FR 4	-0.35	0.09	28.48	-8.5602	-0.002	-0.1207
1007	SLE FR 5	-0.35	0.08	28.55	-8.5798	-0.002	-0.1211
1007	SLE FR 6	-0.36	0.09	29.14	-8.7566	-0.0021	-0.1232
1007	SLE QP 1	-0.34	0.07	27.49	-8.2656	-0.0018	-0.1168
1007	SLE QP 2	-0.35	0.08	28.48	-8.5602	-0.002	-0.1207
1007	SLD 1	3.46	0.8	30.06	-8.9778	0.0047	1.2147
1007	SLD 2	3.28	0.69	30.08	-8.9824	0.0047	1.1502
1007	SLD 3	3.37	-0.27	30.31	-9.0708	0.0039	1.1803
1007	SLD 4	3.18	-0.38	30.33	-9.0754	0.0039	1.1158
1007	SLD 5	0.98	1.94	28.58	-8.5436	0.0012	0.3434
1007	SLD 6	0.86	1.87	28.59	-8.5466	0.0012	0.3016
1007	SLD 7	0.65	-1.63	29.4	-8.8537	-0.0014	0.2286
1007	SLD 8	0.53	-1.7	29.41	-8.8566	-0.0014	0.1868
1007	SLD 9	-1.23	1.87	27.55	-8.2638	-0.0025	-0.4281
1007	SLD 10	-1.35	1.8	27.56	-8.2667	-0.0025	-0.47
1007	SLD 11	-1.56	-1.71	28.37	-8.5738	-0.0052	-0.5429
1007	SLD 12	-1.68	-1.78	28.38	-8.5768	-0.0052	-0.5848
1007	SLD 13	-3.88	0.55	26.63	-8.045	-0.0078	-1.3571
1007	SLD 14	-4.07	0.43	26.65	-8.0496	-0.0078	-1.4216
1007	SLD 15	-3.98	-0.53	26.88	-8.138	-0.0086	-1.3916
1007	SLD 16	-4.16	-0.64	26.9	-8.1426	-0.0086	-1.4561
1007	SLV 1	8.57	1.74	32.19	-9.5389	0.0135	3.0023
1007	SLV 2	8.14	1.47	32.23	-9.5495	0.0135	2.852
1007	SLV 3	8.34	-0.71	32.76	-9.7557	0.0117	2.9219
1007	SLV 4	7.91	-0.97	32.8	-9.7664	0.0117	2.7716
1007	SLV 5	2.75	4.33	28.72	-8.5232	0.0055	0.9635
1007	SLV 6	2.47	4.17	28.75	-8.53	0.0054	0.8676
1007	SLV 7	1.98	-3.82	30.62	-9.2459	-0.0006	0.6957
1007	SLV 8	1.71	-3.99	30.65	-9.2527	-0.0006	0.5997
1007	SLV 9	-2.41	4.15	26.31	-7.8677	-0.0033	-0.841
1007	SLV 10	-2.68	3.99	26.34	-7.8745	-0.0033	-0.937
1007	SLV 11	-3.17	-4	28.21	-8.5904	-0.0094	-1.1089
1007	SLV 12	-3.45	-4.17	28.24	-8.5972	-0.0094	-1.2049
1007	SLV 13	-8.61	1.14	24.15	-7.354	-0.0157	-3.013
1007	SLV 14	-9.04	0.88	24.2	-7.3647	-0.0157	-3.1632
1007	SLV 15	-8.84	-1.31	24.72	-7.5708	-0.0175	-3.0933
1007	SLV 16	-9.27	-1.57	24.77	-7.5815	-0.0175	-3.2436
1007	CRTFP Ux+	0	0	0	0	0	0
1007	CRTFP Ux-	0	0	0	0	0	0
1007	CRTFP Uy+	0	0	0	0	0	0
1007	CRTFP Uy-	0	0	0	0	0	0
1008	SLU 1	-0.3	0.11	26.74	-8.1905	-0.0117	-0.103
1008	SLU 2	-0.3	0.17	26.74	-8.1906	-0.0117	-0.1029
1008	SLU 3	-0.31	0.13	27.23	-8.3386	-0.0119	-0.1053
1008	SLU 4	-0.31	0.16	27.23	-8.3386	-0.0119	-0.1052
1008	SLU 5	-0.3	0.17	26.99	-8.2655	-0.0117	-0.1044
1008	SLU 6	-0.31	0.13	27.49	-8.4135	-0.0119	-0.1068
1008	SLU 7	-0.31	0.16	27.48	-8.4135	-0.0119	-0.1068
1008	SLU 8	-0.31	0.12	27.24	-8.3403	-0.0118	-0.106
1008	SLU 9	-0.31	0.15	27.24	-8.3404	-0.0118	-0.106
1008	SLU 10	-0.33	0.2	30.26	-9.2566	-0.0138	-0.1152
1008	SLU 11	-0.34	0.16	30.76	-9.4046	-0.014	-0.1176
1008	SLU 12	-0.34	0.19	30.75	-9.4046	-0.014	-0.1175
1008	SLU 13	-0.34	0.2	30.51	-9.3315	-0.0138	-0.1167
1008	SLU 14	-0.35	0.16	31.01	-9.4795	-0.014	-0.1191
1008	SLU 15	-0.35	0.19	31.01	-9.4795	-0.014	-0.1191
1008	SLU 16	-0.34	0.15	30.76	-9.4063	-0.0139	-0.1183
1008	SLU 17	-0.34	0.18	30.76	-9.4064	-0.0139	-0.1183
1008	SLU 18	-0.35	0.16	31.77	-9.7134	-0.0147	-0.1205
1008	SLU 19	-0.35	0.19	31.77	-9.7134	-0.0147	-0.1205
1008	SLU 20	-0.35	0.16	32.02	-9.7883	-0.0147	-0.1221
1008	SLU 21	-0.35	0.19	32.02	-9.7883	-0.0147	-0.122
1008	SLU 22	-0.34	0.18	30.16	-9.2266	-0.0137	-0.1162
1008	SLU 23	-0.34	0.23	30.16	-9.2266	-0.0137	-0.1161
1008	SLU 24	-0.34	0.19	30.66	-9.3746	-0.0139	-0.1185
1008	SLU 25	-0.34	0.22	30.66	-9.3747	-0.0139	-0.1184
1008	SLU 26	-0.34	0.23	30.41	-9.3016	-0.0137	-0.1176
1008	SLU 27	-0.35	0.19	30.91	-9.4495	-0.0139	-0.12
1008	SLU 28	-0.35	0.22	30.91	-9.4496	-0.0139	-0.12
1008	SLU 29	-0.35	0.18	30.67	-9.3764	-0.0138	-0.1192

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1008	SLU 30	-0.35	0.21	30.67	-9.3764	-0.0138	-0.1192
1008	SLU 31	-0.37	0.26	33.68	-10.2927	-0.0157	-0.1284
1008	SLU 32	-0.38	0.22	34.18	-10.4406	-0.0159	-0.1308
1008	SLU 33	-0.38	0.25	34.18	-10.4407	-0.0159	-0.1307
1008	SLU 34	-0.38	0.26	33.93	-10.3676	-0.0158	-0.1299
1008	SLU 35	-0.38	0.22	34.43	-10.5156	-0.016	-0.1323
1008	SLU 36	-0.38	0.25	34.43	-10.5156	-0.016	-0.1322
1008	SLU 37	-0.38	0.21	34.19	-10.4424	-0.0158	-0.1315
1008	SLU 38	-0.38	0.24	34.19	-10.4424	-0.0158	-0.1315
1008	SLU 39	-0.39	0.22	35.19	-10.7494	-0.0167	-0.1337
1008	SLU 40	-0.39	0.25	35.19	-10.7495	-0.0166	-0.1337
1008	SLU 41	-0.39	0.22	35.44	-10.8243	-0.0167	-0.1353
1008	SLU 42	-0.39	0.25	35.44	-10.8244	-0.0167	-0.1352
1008	SLU 43	-0.38	0.13	33.59	-10.2924	-0.0146	-0.1294
1008	SLU 44	-0.38	0.18	33.58	-10.2925	-0.0146	-0.1293
1008	SLU 45	-0.38	0.14	34.08	-10.4405	-0.0148	-0.1317
1008	SLU 46	-0.38	0.17	34.08	-10.4405	-0.0147	-0.1316
1008	SLU 47	-0.38	0.18	33.84	-10.3674	-0.0146	-0.1308
1008	SLU 48	-0.39	0.14	34.33	-10.5154	-0.0148	-0.1332
1008	SLU 49	-0.39	0.17	34.33	-10.5154	-0.0148	-0.1331
1008	SLU 50	-0.38	0.13	34.09	-10.4422	-0.0147	-0.1324
1008	SLU 51	-0.38	0.16	34.09	-10.4423	-0.0146	-0.1323
1008	SLU 52	-0.41	0.21	37.1	-11.3585	-0.0166	-0.1416
1008	SLU 53	-0.42	0.17	37.6	-11.5065	-0.0168	-0.144
1008	SLU 54	-0.42	0.2	37.6	-11.5065	-0.0168	-0.1439
1008	SLU 55	-0.42	0.21	37.36	-11.4334	-0.0167	-0.1431
1008	SLU 56	-0.42	0.17	37.85	-11.5814	-0.0169	-0.1455
1008	SLU 57	-0.42	0.2	37.85	-11.5815	-0.0169	-0.1454
1008	SLU 58	-0.42	0.16	37.61	-11.5082	-0.0167	-0.1447
1008	SLU 59	-0.42	0.19	37.61	-11.5083	-0.0167	-0.1446
1008	SLU 60	-0.43	0.17	38.62	-11.8153	-0.0176	-0.1469
1008	SLU 61	-0.43	0.2	38.61	-11.8153	-0.0175	-0.1469
1008	SLU 62	-0.43	0.17	38.87	-11.8902	-0.0176	-0.1484
1008	SLU 63	-0.43	0.2	38.87	-11.8902	-0.0176	-0.1484
1008	SLU 64	-0.41	0.19	37.01	-11.3285	-0.0165	-0.1426
1008	SLU 65	-0.41	0.24	37.01	-11.3286	-0.0165	-0.1425
1008	SLU 66	-0.42	0.21	37.51	-11.4766	-0.0167	-0.1449
1008	SLU 67	-0.42	0.24	37.51	-11.4766	-0.0167	-0.1448
1008	SLU 68	-0.42	0.24	37.26	-11.4035	-0.0166	-0.144
1008	SLU 69	-0.43	0.21	37.76	-11.5515	-0.0168	-0.1464
1008	SLU 70	-0.43	0.24	37.76	-11.5515	-0.0167	-0.1463
1008	SLU 71	-0.42	0.19	37.51	-11.4783	-0.0166	-0.1456
1008	SLU 72	-0.42	0.22	37.51	-11.4784	-0.0166	-0.1455
1008	SLU 73	-0.45	0.27	40.53	-12.3946	-0.0186	-0.1547
1008	SLU 74	-0.46	0.23	41.03	-12.5426	-0.0188	-0.1572
1008	SLU 75	-0.46	0.27	41.03	-12.5426	-0.0188	-0.1571
1008	SLU 76	-0.45	0.27	40.78	-12.4695	-0.0186	-0.1563
1008	SLU 77	-0.46	0.24	41.28	-12.6175	-0.0188	-0.1587
1008	SLU 78	-0.46	0.27	41.28	-12.6175	-0.0188	-0.1586
1008	SLU 79	-0.46	0.22	41.03	-12.5443	-0.0187	-0.1579
1008	SLU 80	-0.46	0.25	41.03	-12.5444	-0.0187	-0.1578
1008	SLU 81	-0.47	0.23	42.04	-12.8513	-0.0195	-0.1601
1008	SLU 82	-0.47	0.26	42.04	-12.8514	-0.0195	-0.1601
1008	SLU 83	-0.47	0.23	42.29	-12.9263	-0.0195	-0.1616
1008	SLU 84	-0.47	0.26	42.29	-12.9263	-0.0195	-0.1616
1008	SLE RA 1	-0.31	0.13	27.72	-8.4865	-0.0123	-0.1068
1008	SLE RA 2	-0.31	0.17	27.72	-8.4866	-0.0123	-0.1067
1008	SLE RA 3	-0.31	0.14	28.05	-8.5852	-0.0124	-0.1083
1008	SLE RA 4	-0.31	0.16	28.05	-8.5853	-0.0124	-0.1083
1008	SLE RA 5	-0.31	0.17	27.88	-8.5365	-0.0123	-0.1077
1008	SLE RA 6	-0.32	0.14	28.22	-8.6352	-0.0124	-0.1093
1008	SLE RA 7	-0.32	0.16	28.21	-8.6352	-0.0124	-0.1093
1008	SLE RA 8	-0.32	0.13	28.05	-8.5864	-0.0123	-0.1088
1008	SLE RA 9	-0.32	0.15	28.05	-8.5864	-0.0123	-0.1087
1008	SLE RA 10	-0.33	0.19	30.06	-9.1972	-0.0137	-0.1149
1008	SLE RA 11	-0.34	0.16	30.4	-9.2959	-0.0138	-0.1165
1008	SLE RA 12	-0.34	0.18	30.39	-9.2959	-0.0138	-0.1165
1008	SLE RA 13	-0.34	0.19	30.23	-9.2472	-0.0137	-0.1159
1008	SLE RA 14	-0.34	0.16	30.56	-9.3458	-0.0138	-0.1175
1008	SLE RA 15	-0.34	0.18	30.56	-9.3459	-0.0138	-0.1175
1008	SLE RA 16	-0.34	0.15	30.4	-9.2971	-0.0137	-0.117
1008	SLE RA 17	-0.34	0.17	30.4	-9.2971	-0.0137	-0.1169
1008	SLE RA 18	-0.34	0.16	31.07	-9.5018	-0.0143	-0.1185
1008	SLE RA 19	-0.34	0.18	31.07	-9.5018	-0.0143	-0.1184
1008	SLE RA 20	-0.35	0.16	31.24	-9.5517	-0.0143	-0.1195
1008	SLE RA 21	-0.35	0.18	31.24	-9.5517	-0.0143	-0.1194
1008	SLE FR 1	-0.31	0.13	27.72	-8.4865	-0.0123	-0.1068
1008	SLE FR 2	-0.31	0.14	27.72	-8.4865	-0.0123	-0.1067
1008	SLE FR 3	-0.31	0.13	27.78	-8.5065	-0.0123	-0.1072
1008	SLE FR 4	-0.32	0.15	28.72	-8.7911	-0.0129	-0.1103
1008	SLE FR 5	-0.32	0.14	28.79	-8.8111	-0.0129	-0.1107
1008	SLE FR 6	-0.33	0.15	29.39	-8.9941	-0.0133	-0.1126
1008	SLE QP 1	-0.31	0.13	27.72	-8.4865	-0.0123	-0.1068
1008	SLE QP 2	-0.32	0.14	28.72	-8.7911	-0.0129	-0.1103
1008	SLD 1	3.49	0.88	30.13	-9.1628	-0.0072	1.2251
1008	SLD 2	3.31	0.77	30.15	-9.1678	-0.0072	1.1607
1008	SLD 3	3.4	-0.21	30.37	-9.2469	-0.0082	1.1907
1008	SLD 4	3.21	-0.31	30.39	-9.2519	-0.0082	1.1263
1008	SLD 5	1	2.02	28.78	-8.7741	-0.0097	0.3538
1008	SLD 6	0.88	1.95	28.8	-8.7773	-0.0097	0.312
1008	SLD 7	0.68	-1.58	29.57	-9.0546	-0.013	0.2391

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1008	SLD 8	0.56	-1.65	29.58	-9.0579	-0.013	0.1972
1008	SLD 9	-1.2	1.94	27.86	-8.5243	-0.0128	-0.4178
1008	SLD 10	-1.32	1.87	27.87	-8.5275	-0.0128	-0.4596
1008	SLD 11	-1.53	-1.67	28.65	-8.8049	-0.0161	-0.5325
1008	SLD 12	-1.65	-1.74	28.66	-8.8081	-0.0161	-0.5743
1008	SLD 13	-3.85	0.59	27.06	-8.3302	-0.0176	-1.3468
1008	SLD 14	-4.04	0.49	27.08	-8.3352	-0.0176	-1.4112
1008	SLD 15	-3.95	-0.49	27.3	-8.4144	-0.0186	-1.3812
1008	SLD 16	-4.13	-0.59	27.32	-8.4194	-0.0186	-1.4457
1008	SLV 1	8.6	1.83	32.02	-9.6628	0.0004	3.0127
1008	SLV 2	8.17	1.58	32.07	-9.6744	0.0004	2.8626
1008	SLV 3	8.37	-0.64	32.57	-9.8586	-0.0019	2.9324
1008	SLV 4	7.94	-0.88	32.62	-9.8702	-0.0019	2.7822
1008	SLV 5	2.78	4.43	28.88	-8.7536	-0.0054	0.9739
1008	SLV 6	2.5	4.27	28.91	-8.7611	-0.0054	0.878
1008	SLV 7	2.01	-3.79	30.7	-9.4063	-0.0131	0.7061
1008	SLV 8	1.74	-3.95	30.73	-9.4137	-0.0131	0.6102
1008	SLV 9	-2.38	4.23	26.72	-8.1684	-0.0127	-0.8308
1008	SLV 10	-2.65	4.08	26.75	-8.1758	-0.0127	-0.9266
1008	SLV 11	-3.14	-3.99	28.54	-8.8211	-0.0204	-1.0985
1008	SLV 12	-3.42	-4.15	28.57	-8.8285	-0.0204	-1.1944
1008	SLV 13	-8.58	1.17	24.83	-7.7119	-0.0239	-3.0028
1008	SLV 14	-9.01	0.92	24.88	-7.7236	-0.0239	-3.1529
1008	SLV 15	-8.81	-1.3	25.38	-7.9077	-0.0262	-3.0831
1008	SLV 16	-9.24	-1.54	25.42	-7.9194	-0.0262	-3.2332
1008	CRTFP Ux+	0	0	0	0	0	0
1008	CRTFP Ux-	0	0	0	0	0	0
1008	CRTFP Uy+	0	0	0	0	0	0
1008	CRTFP Uy-	0	0	0	0	0	0
1009	SLU 1	-0.27	0.17	27.22	-8.5471	-0.0176	-0.0924
1009	SLU 2	-0.27	0.22	27.21	-8.547	-0.0176	-0.0923
1009	SLU 3	-0.28	0.19	27.72	-8.702	-0.0179	-0.0945
1009	SLU 4	-0.28	0.22	27.72	-8.7019	-0.0179	-0.0944
1009	SLU 5	-0.27	0.22	27.47	-8.6248	-0.0177	-0.0937
1009	SLU 6	-0.28	0.19	27.97	-8.7799	-0.018	-0.0958
1009	SLU 7	-0.28	0.22	27.97	-8.7798	-0.018	-0.0958
1009	SLU 8	-0.28	0.17	27.72	-8.7029	-0.0179	-0.0951
1009	SLU 9	-0.28	0.21	27.72	-8.7028	-0.0178	-0.095
1009	SLU 10	-0.3	0.26	30.82	-9.6692	-0.0205	-0.1033
1009	SLU 11	-0.31	0.22	31.32	-9.8242	-0.0209	-0.1055
1009	SLU 12	-0.31	0.25	31.32	-9.8241	-0.0209	-0.1054
1009	SLU 13	-0.3	0.26	31.07	-9.7471	-0.0206	-0.1047
1009	SLU 14	-0.31	0.22	31.58	-9.9021	-0.021	-0.1069
1009	SLU 15	-0.31	0.25	31.57	-9.902	-0.021	-0.1068
1009	SLU 16	-0.31	0.21	31.33	-9.8251	-0.0208	-0.1061
1009	SLU 17	-0.31	0.24	31.32	-9.825	-0.0208	-0.1061
1009	SLU 18	-0.31	0.22	32.36	-10.1503	-0.0218	-0.1082
1009	SLU 19	-0.31	0.25	32.36	-10.1502	-0.0218	-0.1081
1009	SLU 20	-0.32	0.22	32.62	-10.2282	-0.0219	-0.1095
1009	SLU 21	-0.32	0.25	32.61	-10.2281	-0.0219	-0.1095
1009	SLU 22	-0.3	0.24	30.72	-9.6371	-0.0204	-0.1044
1009	SLU 23	-0.3	0.29	30.72	-9.6369	-0.0204	-0.1043
1009	SLU 24	-0.31	0.26	31.22	-9.7919	-0.0207	-0.1065
1009	SLU 25	-0.31	0.29	31.22	-9.7918	-0.0207	-0.1064
1009	SLU 26	-0.31	0.3	30.97	-9.7148	-0.0205	-0.1056
1009	SLU 27	-0.31	0.26	31.48	-9.8698	-0.0208	-0.1078
1009	SLU 28	-0.31	0.29	31.47	-9.8697	-0.0208	-0.1077
1009	SLU 29	-0.31	0.25	31.23	-9.7928	-0.0206	-0.1071
1009	SLU 30	-0.31	0.28	31.22	-9.7927	-0.0206	-0.107
1009	SLU 31	-0.34	0.33	34.32	-10.7591	-0.0233	-0.1153
1009	SLU 32	-0.34	0.29	34.82	-10.9142	-0.0236	-0.1175
1009	SLU 33	-0.34	0.32	34.82	-10.9141	-0.0236	-0.1174
1009	SLU 34	-0.34	0.33	34.57	-10.837	-0.0234	-0.1167
1009	SLU 35	-0.35	0.3	35.08	-10.992	-0.0238	-0.1188
1009	SLU 36	-0.35	0.33	35.08	-10.9919	-0.0237	-0.1188
1009	SLU 37	-0.34	0.28	34.83	-10.9151	-0.0236	-0.1181
1009	SLU 38	-0.34	0.31	34.83	-10.915	-0.0235	-0.118
1009	SLU 39	-0.35	0.29	35.86	-11.2403	-0.0246	-0.1201
1009	SLU 40	-0.35	0.32	35.86	-11.2402	-0.0246	-0.1201
1009	SLU 41	-0.35	0.29	36.12	-11.3181	-0.0247	-0.1215
1009	SLU 42	-0.35	0.33	36.12	-11.318	-0.0247	-0.1214
1009	SLU 43	-0.34	0.2	34.18	-10.7376	-0.022	-0.1161
1009	SLU 44	-0.34	0.25	34.18	-10.7374	-0.0219	-0.116
1009	SLU 45	-0.34	0.21	34.68	-10.8924	-0.0223	-0.1181
1009	SLU 46	-0.34	0.25	34.68	-10.8923	-0.0223	-0.1181
1009	SLU 47	-0.34	0.25	34.43	-10.8153	-0.0221	-0.1173
1009	SLU 48	-0.35	0.22	34.94	-10.9703	-0.0224	-0.1195
1009	SLU 49	-0.35	0.25	34.94	-10.9702	-0.0224	-0.1194
1009	SLU 50	-0.35	0.2	34.69	-10.8933	-0.0222	-0.1187
1009	SLU 51	-0.35	0.23	34.69	-10.8932	-0.0222	-0.1187
1009	SLU 52	-0.37	0.29	37.78	-11.8596	-0.0249	-0.127
1009	SLU 53	-0.38	0.25	38.29	-12.0147	-0.0252	-0.1291
1009	SLU 54	-0.38	0.28	38.29	-12.0146	-0.0252	-0.1291
1009	SLU 55	-0.37	0.29	38.03	-11.9375	-0.025	-0.1283
1009	SLU 56	-0.38	0.25	38.54	-12.0925	-0.0253	-0.1305
1009	SLU 57	-0.38	0.28	38.54	-12.0924	-0.0253	-0.1304
1009	SLU 58	-0.38	0.24	38.29	-12.0156	-0.0251	-0.1298
1009	SLU 59	-0.38	0.27	38.29	-12.0155	-0.0251	-0.1297
1009	SLU 60	-0.38	0.25	39.33	-12.3408	-0.0262	-0.1318
1009	SLU 61	-0.38	0.28	39.32	-12.3407	-0.0261	-0.1317
1009	SLU 62	-0.39	0.25	39.58	-12.4186	-0.0263	-0.1331

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1009	SLU 63	-0.39	0.28	39.58	-12.4185	-0.0263	-0.1331
1009	SLU 64	-0.37	0.27	37.68	-11.8275	-0.0247	-0.128
1009	SLU 65	-0.37	0.32	37.68	-11.8274	-0.0247	-0.1279
1009	SLU 66	-0.38	0.29	38.19	-11.9824	-0.025	-0.1301
1009	SLU 67	-0.38	0.32	38.19	-11.9823	-0.025	-0.13
1009	SLU 68	-0.38	0.32	37.93	-11.9052	-0.0248	-0.1293
1009	SLU 69	-0.38	0.29	38.44	-12.0602	-0.0252	-0.1314
1009	SLU 70	-0.38	0.32	38.44	-12.0601	-0.0251	-0.1314
1009	SLU 71	-0.38	0.27	38.19	-11.9833	-0.025	-0.1307
1009	SLU 72	-0.38	0.3	38.19	-11.9832	-0.025	-0.1306
1009	SLU 73	-0.4	0.36	41.28	-12.9496	-0.0276	-0.1389
1009	SLU 74	-0.41	0.32	41.79	-13.1046	-0.028	-0.1411
1009	SLU 75	-0.41	0.35	41.79	-13.1045	-0.028	-0.141
1009	SLU 76	-0.41	0.36	41.54	-13.0275	-0.0278	-0.1403
1009	SLU 77	-0.41	0.32	42.04	-13.1825	-0.0281	-0.1424
1009	SLU 78	-0.41	0.35	42.04	-13.1824	-0.0281	-0.1424
1009	SLU 79	-0.41	0.31	41.79	-13.1055	-0.0279	-0.1417
1009	SLU 80	-0.41	0.34	41.79	-13.1054	-0.0279	-0.1417
1009	SLU 81	-0.42	0.32	42.83	-13.4307	-0.0289	-0.1438
1009	SLU 82	-0.42	0.35	42.83	-13.4306	-0.0289	-0.1437
1009	SLU 83	-0.42	0.32	43.08	-13.5086	-0.029	-0.1451
1009	SLU 84	-0.42	0.35	43.08	-13.5085	-0.029	-0.145
1009	SLE RA 1	-0.28	0.19	28.22	-8.8585	-0.0184	-0.0959
1009	SLE RA 2	-0.28	0.23	28.22	-8.8584	-0.0184	-0.0958
1009	SLE RA 3	-0.28	0.2	28.55	-8.9618	-0.0186	-0.0972
1009	SLE RA 4	-0.28	0.22	28.55	-8.9617	-0.0186	-0.0972
1009	SLE RA 5	-0.28	0.23	28.38	-8.9103	-0.0185	-0.0967
1009	SLE RA 6	-0.29	0.2	28.72	-9.0137	-0.0187	-0.0981
1009	SLE RA 7	-0.29	0.22	28.72	-9.0136	-0.0187	-0.0981
1009	SLE RA 8	-0.28	0.19	28.56	-8.9624	-0.0186	-0.0976
1009	SLE RA 9	-0.28	0.21	28.55	-8.9623	-0.0186	-0.0976
1009	SLE RA 10	-0.3	0.25	30.62	-9.6066	-0.0204	-0.1031
1009	SLE RA 11	-0.3	0.23	30.95	-9.7099	-0.0206	-0.1046
1009	SLE RA 12	-0.3	0.25	30.95	-9.7099	-0.0206	-0.1045
1009	SLE RA 13	-0.3	0.25	30.79	-9.6585	-0.0204	-0.104
1009	SLE RA 14	-0.31	0.23	31.12	-9.7618	-0.0207	-0.1055
1009	SLE RA 15	-0.31	0.25	31.12	-9.7618	-0.0206	-0.1054
1009	SLE RA 16	-0.31	0.22	30.96	-9.7105	-0.0205	-0.105
1009	SLE RA 17	-0.31	0.24	30.96	-9.7105	-0.0205	-0.1049
1009	SLE RA 18	-0.31	0.23	31.65	-9.9273	-0.0212	-0.1064
1009	SLE RA 19	-0.31	0.25	31.65	-9.9273	-0.0212	-0.1063
1009	SLE RA 20	-0.31	0.23	31.82	-9.9792	-0.0213	-0.1072
1009	SLE RA 21	-0.31	0.25	31.82	-9.9792	-0.0213	-0.1072
1009	SLE FR 1	-0.28	0.19	28.22	-8.8585	-0.0184	-0.0959
1009	SLE FR 2	-0.28	0.2	28.22	-8.8585	-0.0184	-0.0958
1009	SLE FR 3	-0.28	0.19	28.29	-8.8793	-0.0185	-0.0962
1009	SLE FR 4	-0.29	0.21	29.25	-9.1791	-0.0193	-0.099
1009	SLE FR 5	-0.29	0.2	29.31	-9.1999	-0.0193	-0.0994
1009	SLE FR 6	-0.29	0.21	29.93	-9.3929	-0.0198	-0.1011
1009	SLE QP 1	-0.28	0.19	28.22	-8.8585	-0.0184	-0.0959
1009	SLE QP 2	-0.29	0.2	29.25	-9.1792	-0.0193	-0.099
1009	SLD 1	3.53	0.95	30.51	-9.5229	-0.0143	1.2358
1009	SLD 2	3.34	0.85	30.53	-9.5284	-0.0143	1.1715
1009	SLD 3	3.43	-0.15	30.74	-9.5976	-0.0154	1.2015
1009	SLD 4	3.24	-0.24	30.76	-9.603	-0.0154	1.1371
1009	SLD 5	1.04	2.1	29.28	-9.1681	-0.0161	0.3648
1009	SLD 6	0.92	2.04	29.29	-9.1717	-0.0162	0.323
1009	SLD 7	0.71	-1.54	30.04	-9.417	-0.0197	0.2502
1009	SLD 8	0.59	-1.6	30.05	-9.4205	-0.0197	0.2085
1009	SLD 9	-1.17	2.01	28.44	-8.9378	-0.0188	-0.4065
1009	SLD 10	-1.29	1.95	28.46	-8.9414	-0.0188	-0.4482
1009	SLD 11	-1.49	-1.63	29.2	-9.1867	-0.0224	-0.5211
1009	SLD 12	-1.61	-1.69	29.22	-9.1902	-0.0224	-0.5628
1009	SLD 13	-3.82	0.65	27.74	-8.7553	-0.0231	-1.3351
1009	SLD 14	-4	0.55	27.76	-8.7608	-0.0231	-1.3995
1009	SLD 15	-3.92	-0.44	27.96	-8.83	-0.0242	-1.3695
1009	SLD 16	-4.1	-0.54	27.98	-8.8354	-0.0242	-1.4339
1009	SLV 1	8.63	1.91	32.21	-9.9861	-0.0077	3.0227
1009	SLV 2	8.2	1.69	32.25	-9.9988	-0.0077	2.8727
1009	SLV 3	8.4	-0.58	32.73	-10.1592	-0.0102	2.9425
1009	SLV 4	7.97	-0.81	32.78	-10.1719	-0.0102	2.7925
1009	SLV 5	2.81	4.53	29.33	-9.1566	-0.012	0.9846
1009	SLV 6	2.53	4.39	29.36	-9.1647	-0.012	0.8888
1009	SLV 7	2.04	-3.77	31.08	-9.7335	-0.0203	0.7171
1009	SLV 8	1.77	-3.92	31.11	-9.7416	-0.0204	0.6214
1009	SLV 9	-2.35	4.32	27.38	-8.6167	-0.0182	-0.8194
1009	SLV 10	-2.62	4.18	27.41	-8.6248	-0.0182	-0.9152
1009	SLV 11	-3.11	-3.98	29.13	-9.1936	-0.0265	-1.0868
1009	SLV 12	-3.38	-4.13	29.16	-9.2017	-0.0265	-1.1826
1009	SLV 13	-8.55	1.21	25.71	-8.1865	-0.0283	-2.9905
1009	SLV 14	-8.98	0.99	25.76	-8.1991	-0.0283	-3.1405
1009	SLV 15	-8.78	-1.28	26.24	-8.3595	-0.0308	-3.0707
1009	SLV 16	-9.21	-1.51	26.29	-8.3722	-0.0308	-3.2207
1009	CRTFP Ux+	0	0	0	0	0	0
1009	CRTFP Ux-	0	0	0	0	0	0
1009	CRTFP Uy+	0	0	0	0	0	0
1009	CRTFP Uy-	0	0	0	0	0	0
1010	SLU 1	-0.24	0.23	27.79	-8.9706	-0.0174	-0.081
1010	SLU 2	-0.24	0.28	27.79	-8.9702	-0.0174	-0.0809
1010	SLU 3	-0.24	0.25	28.3	-9.1338	-0.0177	-0.0828
1010	SLU 4	-0.24	0.28	28.3	-9.1336	-0.0177	-0.0827

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1010	SLU 5	-0.24	0.28	28.04	-9.052	-0.0175	-0.082
1010	SLU 6	-0.24	0.25	28.56	-9.2155	-0.0179	-0.0839
1010	SLU 7	-0.24	0.28	28.56	-9.2153	-0.0179	-0.0838
1010	SLU 8	-0.24	0.23	28.31	-9.1341	-0.0177	-0.0833
1010	SLU 9	-0.24	0.26	28.3	-9.1339	-0.0177	-0.0832
1010	SLU 10	-0.26	0.32	31.48	-10.158	-0.0203	-0.0905
1010	SLU 11	-0.27	0.29	32	-10.3216	-0.0206	-0.0924
1010	SLU 12	-0.27	0.32	32	-10.3213	-0.0206	-0.0923
1010	SLU 13	-0.27	0.32	31.74	-10.2398	-0.0204	-0.0917
1010	SLU 14	-0.27	0.29	32.26	-10.4033	-0.0207	-0.0936
1010	SLU 15	-0.27	0.32	32.26	-10.4031	-0.0207	-0.0935
1010	SLU 16	-0.27	0.27	32	-10.3219	-0.0205	-0.0929
1010	SLU 17	-0.27	0.3	32	-10.3217	-0.0205	-0.0928
1010	SLU 18	-0.28	0.29	33.07	-10.6674	-0.0215	-0.0948
1010	SLU 19	-0.28	0.32	33.07	-10.6672	-0.0215	-0.0947
1010	SLU 20	-0.28	0.29	33.33	-10.7492	-0.0216	-0.0959
1010	SLU 21	-0.28	0.32	33.33	-10.749	-0.0216	-0.0958
1010	SLU 22	-0.27	0.31	31.38	-10.1231	-0.0201	-0.0917
1010	SLU 23	-0.27	0.36	31.38	-10.1227	-0.0201	-0.0915
1010	SLU 24	-0.27	0.32	31.9	-10.2863	-0.0204	-0.0934
1010	SLU 25	-0.27	0.35	31.89	-10.286	-0.0204	-0.0934
1010	SLU 26	-0.27	0.36	31.64	-10.2045	-0.0202	-0.0927
1010	SLU 27	-0.28	0.33	32.15	-10.368	-0.0205	-0.0946
1010	SLU 28	-0.28	0.36	32.15	-10.3678	-0.0205	-0.0945
1010	SLU 29	-0.27	0.31	31.9	-10.2866	-0.0204	-0.0939
1010	SLU 30	-0.27	0.34	31.89	-10.2864	-0.0203	-0.0938
1010	SLU 31	-0.29	0.4	35.07	-11.3105	-0.0229	-0.1012
1010	SLU 32	-0.3	0.36	35.59	-11.474	-0.0233	-0.1031
1010	SLU 33	-0.3	0.39	35.59	-11.4738	-0.0233	-0.103
1010	SLU 34	-0.3	0.4	35.33	-11.3923	-0.0231	-0.1023
1010	SLU 35	-0.3	0.37	35.85	-11.5558	-0.0234	-0.1042
1010	SLU 36	-0.3	0.4	35.85	-11.5556	-0.0234	-0.1041
1010	SLU 37	-0.3	0.35	35.59	-11.4744	-0.0232	-0.1036
1010	SLU 38	-0.3	0.38	35.59	-11.4742	-0.0232	-0.1035
1010	SLU 39	-0.31	0.36	36.66	-11.8199	-0.0242	-0.1054
1010	SLU 40	-0.31	0.39	36.66	-11.8197	-0.0242	-0.1053
1010	SLU 41	-0.31	0.37	36.92	-11.9017	-0.0243	-0.1066
1010	SLU 42	-0.31	0.4	36.92	-11.9014	-0.0243	-0.1065
1010	SLU 43	-0.3	0.27	34.9	-11.2666	-0.0217	-0.1017
1010	SLU 44	-0.3	0.32	34.89	-11.2663	-0.0217	-0.1015
1010	SLU 45	-0.3	0.29	35.41	-11.4298	-0.022	-0.1034
1010	SLU 46	-0.3	0.32	35.41	-11.4296	-0.022	-0.1034
1010	SLU 47	-0.3	0.32	35.15	-11.348	-0.0218	-0.1027
1010	SLU 48	-0.31	0.29	35.67	-11.5116	-0.0222	-0.1046
1010	SLU 49	-0.3	0.32	35.66	-11.5114	-0.0222	-0.1045
1010	SLU 50	-0.3	0.27	35.41	-11.4302	-0.022	-0.1039
1010	SLU 51	-0.3	0.3	35.41	-11.4299	-0.022	-0.1039
1010	SLU 52	-0.32	0.36	38.59	-12.454	-0.0246	-0.1112
1010	SLU 53	-0.33	0.33	39.11	-12.6176	-0.0249	-0.1131
1010	SLU 54	-0.33	0.36	39.1	-12.6174	-0.0249	-0.113
1010	SLU 55	-0.33	0.36	38.85	-12.5358	-0.0247	-0.1123
1010	SLU 56	-0.33	0.33	39.36	-12.6994	-0.025	-0.1142
1010	SLU 57	-0.33	0.36	39.36	-12.6991	-0.025	-0.1141
1010	SLU 58	-0.33	0.31	39.11	-12.6179	-0.0248	-0.1136
1010	SLU 59	-0.33	0.34	39.1	-12.6177	-0.0248	-0.1135
1010	SLU 60	-0.34	0.33	40.18	-12.9635	-0.0258	-0.1154
1010	SLU 61	-0.34	0.36	40.17	-12.9632	-0.0258	-0.1154
1010	SLU 62	-0.34	0.33	40.43	-13.0452	-0.0259	-0.1166
1010	SLU 63	-0.34	0.36	40.43	-13.045	-0.0259	-0.1165
1010	SLU 64	-0.33	0.35	38.49	-12.4191	-0.0244	-0.1123
1010	SLU 65	-0.33	0.4	38.48	-12.4187	-0.0244	-0.1122
1010	SLU 66	-0.33	0.36	39	-12.5823	-0.0247	-0.1141
1010	SLU 67	-0.33	0.4	39	-12.5821	-0.0247	-0.114
1010	SLU 68	-0.33	0.4	38.74	-12.5005	-0.0245	-0.1133
1010	SLU 69	-0.34	0.37	39.26	-12.6641	-0.0249	-0.1152
1010	SLU 70	-0.34	0.4	39.26	-12.6638	-0.0248	-0.1151
1010	SLU 71	-0.33	0.35	39	-12.5826	-0.0247	-0.1146
1010	SLU 72	-0.33	0.38	39	-12.5824	-0.0247	-0.1145
1010	SLU 73	-0.36	0.44	42.18	-13.6065	-0.0273	-0.1218
1010	SLU 74	-0.36	0.41	42.7	-13.7701	-0.0276	-0.1237
1010	SLU 75	-0.36	0.44	42.69	-13.7699	-0.0276	-0.1236
1010	SLU 76	-0.36	0.44	42.44	-13.6883	-0.0274	-0.123
1010	SLU 77	-0.36	0.41	42.95	-13.8518	-0.0277	-0.1249
1010	SLU 78	-0.36	0.44	42.95	-13.8516	-0.0277	-0.1248
1010	SLU 79	-0.36	0.39	42.7	-13.7704	-0.0275	-0.1242
1010	SLU 80	-0.36	0.42	42.7	-13.7702	-0.0275	-0.1241
1010	SLU 81	-0.37	0.41	43.77	-14.1159	-0.0285	-0.1261
1010	SLU 82	-0.37	0.44	43.77	-14.1157	-0.0285	-0.126
1010	SLU 83	-0.37	0.41	44.03	-14.1977	-0.0286	-0.1272
1010	SLU 84	-0.37	0.44	44.02	-14.1975	-0.0286	-0.1271
1010	SLE RA 1	-0.25	0.25	28.82	-9.2999	-0.0182	-0.0841
1010	SLE RA 2	-0.24	0.28	28.81	-9.2996	-0.0182	-0.084
1010	SLE RA 3	-0.25	0.26	29.16	-9.4087	-0.0184	-0.0852
1010	SLE RA 4	-0.25	0.28	29.16	-9.4085	-0.0184	-0.0852
1010	SLE RA 5	-0.25	0.29	28.99	-9.3541	-0.0183	-0.0847
1010	SLE RA 6	-0.25	0.26	29.33	-9.4632	-0.0185	-0.086
1010	SLE RA 7	-0.25	0.28	29.33	-9.463	-0.0185	-0.0859
1010	SLE RA 8	-0.25	0.25	29.16	-9.4089	-0.0184	-0.0856
1010	SLE RA 9	-0.25	0.27	29.16	-9.4087	-0.0183	-0.0855
1010	SLE RA 10	-0.26	0.31	31.28	-10.0915	-0.0201	-0.0904
1010	SLE RA 11	-0.27	0.29	31.62	-10.2005	-0.0203	-0.0917

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1010	SLE RA 12	-0.27	0.31	31.62	-10.2004	-0.0203	-0.0916
1010	SLE RA 13	-0.27	0.31	31.45	-10.146	-0.0202	-0.0911
1010	SLE RA 14	-0.27	0.29	31.79	-10.255	-0.0204	-0.0924
1010	SLE RA 15	-0.27	0.31	31.79	-10.2549	-0.0204	-0.0924
1010	SLE RA 16	-0.27	0.28	31.62	-10.2007	-0.0203	-0.092
1010	SLE RA 17	-0.27	0.3	31.62	-10.2006	-0.0203	-0.0919
1010	SLE RA 18	-0.27	0.29	32.34	-10.4311	-0.0209	-0.0932
1010	SLE RA 19	-0.27	0.31	32.33	-10.4309	-0.0209	-0.0932
1010	SLE RA 20	-0.27	0.29	32.51	-10.4856	-0.021	-0.094
1010	SLE RA 21	-0.27	0.31	32.51	-10.4855	-0.021	-0.0939
1010	SLE FR 1	-0.25	0.25	28.82	-9.2999	-0.0182	-0.0841
1010	SLE FR 2	-0.25	0.26	28.82	-9.2998	-0.0182	-0.084
1010	SLE FR 3	-0.25	0.25	28.88	-9.3217	-0.0182	-0.0844
1010	SLE FR 4	-0.25	0.27	29.87	-9.6392	-0.019	-0.0868
1010	SLE FR 5	-0.25	0.26	29.94	-9.661	-0.019	-0.0871
1010	SLE FR 6	-0.26	0.27	30.58	-9.8655	-0.0196	-0.0886
1010	SLE QP 1	-0.25	0.25	28.82	-9.2999	-0.0182	-0.0841
1010	SLE QP 2	-0.25	0.26	29.87	-9.6392	-0.019	-0.0868
1010	SLD 1	3.56	1	31.01	-9.9669	-0.0145	1.247
1010	SLD 2	3.37	0.92	31.03	-9.9727	-0.0145	1.1827
1010	SLD 3	3.46	-0.1	31.23	-10.0341	-0.0155	1.2127
1010	SLD 4	3.28	-0.19	31.25	-10.0399	-0.0155	1.1484
1010	SLD 5	1.07	2.17	29.87	-9.6346	-0.0162	0.3766
1010	SLD 6	0.95	2.11	29.88	-9.6383	-0.0162	0.3348
1010	SLD 7	0.75	-1.5	30.62	-9.8586	-0.0195	0.2622
1010	SLD 8	0.63	-1.56	30.63	-9.8624	-0.0195	0.2205
1010	SLD 9	-1.13	2.08	29.11	-9.4161	-0.0185	-0.3941
1010	SLD 10	-1.25	2.03	29.13	-9.4199	-0.0186	-0.4358
1010	SLD 11	-1.46	-1.59	29.86	-9.6401	-0.0218	-0.5085
1010	SLD 12	-1.58	-1.65	29.88	-9.6439	-0.0219	-0.5502
1010	SLD 13	-3.78	0.71	28.49	-9.2386	-0.0225	-1.322
1010	SLD 14	-3.97	0.62	28.51	-9.2444	-0.0225	-1.3863
1010	SLD 15	-3.88	-0.39	28.72	-9.3058	-0.0235	-1.3563
1010	SLD 16	-4.07	-0.48	28.74	-9.3116	-0.0235	-1.4206
1010	SLV 1	8.66	1.97	32.53	-10.4091	-0.0086	3.0324
1010	SLV 2	8.23	1.76	32.58	-10.4226	-0.0086	2.8826
1010	SLV 3	8.43	-0.55	33.05	-10.5642	-0.0109	2.9523
1010	SLV 4	8	-0.75	33.1	-10.5778	-0.0109	2.8026
1010	SLV 5	2.84	4.62	29.88	-9.6326	-0.0124	0.9957
1010	SLV 6	2.57	4.49	29.91	-9.6412	-0.0124	0.9001
1010	SLV 7	2.08	-3.76	31.6	-10.1498	-0.0201	0.7289
1010	SLV 8	1.81	-3.89	31.63	-10.1584	-0.0201	0.6333
1010	SLV 9	-2.31	4.41	28.11	-9.12	-0.0179	-0.8069
1010	SLV 10	-2.59	4.28	28.15	-9.1287	-0.018	-0.9025
1010	SLV 11	-3.07	-3.97	29.83	-9.6373	-0.0256	-1.0737
1010	SLV 12	-3.35	-4.1	29.86	-9.6459	-0.0257	-1.1693
1010	SLV 13	-8.51	1.28	26.65	-8.7007	-0.0271	-2.9762
1010	SLV 14	-8.94	1.07	26.7	-8.7142	-0.0272	-3.1259
1010	SLV 15	-8.74	-1.24	27.16	-8.8558	-0.0294	-3.0562
1010	SLV 16	-9.17	-1.44	27.21	-8.8694	-0.0295	-3.206
1010	CRTFP Ux+	0	0	0	0	0	0
1010	CRTFP Ux-	0	0	0	0	0	0
1010	CRTFP Uy+	0	0	0	0	0	0
1010	CRTFP Uy-	0	0	0	0	0	0
1011	SLU 1	-0.18	0.25	25.48	-8.4446	0.4671	-0.0672
1011	SLU 2	-0.18	0.29	25.47	-8.4441	0.467	-0.068
1011	SLU 3	-0.19	0.27	25.95	-8.5988	0.4757	-0.0689
1011	SLU 4	-0.19	0.29	25.95	-8.5985	0.4757	-0.0693
1011	SLU 5	-0.18	0.3	25.71	-8.5213	0.4714	-0.0688
1011	SLU 6	-0.19	0.27	26.18	-8.676	0.4801	-0.0698
1011	SLU 7	-0.19	0.3	26.18	-8.6757	0.48	-0.0702
1011	SLU 8	-0.19	0.25	25.95	-8.5989	0.4758	-0.069
1011	SLU 9	-0.19	0.28	25.95	-8.5986	0.4757	-0.0694
1011	SLU 10	-0.2	0.34	28.88	-9.5692	0.5292	-0.0761
1011	SLU 11	-0.21	0.31	29.35	-9.724	0.5379	-0.0771
1011	SLU 12	-0.21	0.33	29.35	-9.7237	0.5378	-0.0775
1011	SLU 13	-0.21	0.34	29.11	-9.6464	0.5335	-0.077
1011	SLU 14	-0.21	0.31	29.59	-9.8011	0.5422	-0.078
1011	SLU 15	-0.21	0.34	29.58	-9.8009	0.5422	-0.0784
1011	SLU 16	-0.21	0.29	29.35	-9.7241	0.5379	-0.0772
1011	SLU 17	-0.21	0.32	29.35	-9.7238	0.5378	-0.0776
1011	SLU 18	-0.21	0.31	30.34	-10.0519	0.5558	-0.0789
1011	SLU 19	-0.21	0.33	30.34	-10.0516	0.5558	-0.0794
1011	SLU 20	-0.21	0.31	30.57	-10.1291	0.5602	-0.0798
1011	SLU 21	-0.21	0.34	30.57	-10.1288	0.5601	-0.0802
1011	SLU 22	-0.21	0.32	28.78	-9.5349	0.5275	-0.077
1011	SLU 23	-0.21	0.37	28.78	-9.5345	0.5274	-0.0778
1011	SLU 24	-0.21	0.34	29.25	-9.6892	0.5361	-0.0787
1011	SLU 25	-0.21	0.37	29.25	-9.6889	0.5361	-0.0791
1011	SLU 26	-0.21	0.37	29.01	-9.6116	0.5318	-0.0786
1011	SLU 27	-0.21	0.34	29.49	-9.7664	0.5405	-0.0796
1011	SLU 28	-0.21	0.37	29.48	-9.7661	0.5404	-0.08
1011	SLU 29	-0.21	0.33	29.25	-9.6893	0.5362	-0.0788
1011	SLU 30	-0.21	0.36	29.25	-9.689	0.5361	-0.0792
1011	SLU 31	-0.23	0.41	32.18	-10.6596	0.5895	-0.0859
1011	SLU 32	-0.23	0.38	32.65	-10.8143	0.5982	-0.0869
1011	SLU 33	-0.23	0.41	32.65	-10.814	0.5982	-0.0873
1011	SLU 34	-0.23	0.41	32.41	-10.7368	0.5939	-0.0868
1011	SLU 35	-0.23	0.38	32.89	-10.8915	0.6026	-0.0877
1011	SLU 36	-0.23	0.41	32.89	-10.8912	0.6025	-0.0882
1011	SLU 37	-0.23	0.37	32.65	-10.8144	0.5983	-0.087

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1011	SLU 38	-0.23	0.4	32.65	-10.8141	0.5982	-0.0874
1011	SLU 39	-0.24	0.38	33.64	-11.1423	0.6162	-0.0887
1011	SLU 40	-0.24	0.41	33.64	-11.142	0.6162	-0.0891
1011	SLU 41	-0.24	0.38	33.88	-11.2195	0.6205	-0.0896
1011	SLU 42	-0.24	0.41	33.87	-11.2192	0.6205	-0.09
1011	SLU 43	-0.23	0.3	31.99	-10.6041	0.5865	-0.084
1011	SLU 44	-0.23	0.34	31.99	-10.6036	0.5865	-0.0848
1011	SLU 45	-0.23	0.31	32.46	-10.7584	0.5952	-0.0857
1011	SLU 46	-0.23	0.34	32.46	-10.7581	0.5951	-0.0861
1011	SLU 47	-0.23	0.35	32.22	-10.6808	0.5908	-0.0857
1011	SLU 48	-0.23	0.32	32.7	-10.8355	0.5995	-0.0866
1011	SLU 49	-0.23	0.34	32.69	-10.8352	0.5995	-0.087
1011	SLU 50	-0.23	0.3	32.46	-10.7585	0.5952	-0.0858
1011	SLU 51	-0.23	0.33	32.46	-10.7582	0.5952	-0.0862
1011	SLU 52	-0.25	0.38	35.39	-11.7288	0.6486	-0.0929
1011	SLU 53	-0.25	0.35	35.86	-11.8835	0.6573	-0.0939
1011	SLU 54	-0.25	0.38	35.86	-11.8832	0.6572	-0.0943
1011	SLU 55	-0.25	0.39	35.62	-11.8059	0.6529	-0.0938
1011	SLU 56	-0.26	0.36	36.1	-11.9607	0.6616	-0.0948
1011	SLU 57	-0.26	0.38	36.1	-11.9604	0.6616	-0.0952
1011	SLU 58	-0.25	0.34	35.86	-11.8836	0.6573	-0.094
1011	SLU 59	-0.25	0.37	35.86	-11.8833	0.6573	-0.0944
1011	SLU 60	-0.26	0.36	36.85	-12.2115	0.6753	-0.0957
1011	SLU 61	-0.26	0.38	36.85	-12.2112	0.6752	-0.0962
1011	SLU 62	-0.26	0.36	37.08	-12.2886	0.6796	-0.0966
1011	SLU 63	-0.26	0.39	37.08	-12.2883	0.6796	-0.097
1011	SLU 64	-0.25	0.37	35.29	-11.6945	0.6469	-0.0938
1011	SLU 65	-0.25	0.42	35.29	-11.694	0.6469	-0.0946
1011	SLU 66	-0.26	0.39	35.76	-11.8487	0.6556	-0.0955
1011	SLU 67	-0.26	0.42	35.76	-11.8484	0.6555	-0.0959
1011	SLU 68	-0.25	0.42	35.52	-11.7712	0.6512	-0.0954
1011	SLU 69	-0.26	0.39	36	-11.9259	0.6599	-0.0964
1011	SLU 70	-0.26	0.42	36	-11.9256	0.6599	-0.0968
1011	SLU 71	-0.26	0.38	35.76	-11.8488	0.6556	-0.0956
1011	SLU 72	-0.26	0.4	35.76	-11.8485	0.6555	-0.096
1011	SLU 73	-0.27	0.46	38.69	-12.8191	0.709	-0.1027
1011	SLU 74	-0.28	0.43	39.16	-12.9739	0.7177	-0.1037
1011	SLU 75	-0.28	0.46	39.16	-12.9736	0.7176	-0.1041
1011	SLU 76	-0.28	0.46	38.92	-12.8963	0.7133	-0.1036
1011	SLU 77	-0.28	0.43	39.4	-13.051	0.722	-0.1046
1011	SLU 78	-0.28	0.46	39.4	-13.0507	0.722	-0.105
1011	SLU 79	-0.28	0.42	39.16	-12.974	0.7177	-0.1038
1011	SLU 80	-0.28	0.45	39.16	-12.9737	0.7177	-0.1042
1011	SLU 81	-0.28	0.43	40.15	-13.3018	0.7356	-0.1055
1011	SLU 82	-0.28	0.46	40.15	-13.3015	0.7356	-0.106
1011	SLU 83	-0.29	0.43	40.39	-13.379	0.74	-0.1064
1011	SLU 84	-0.29	0.46	40.38	-13.3787	0.7399	-0.1068
1011	SLE RA 1	-0.19	0.27	26.42	-8.7561	0.4844	-0.07
1011	SLE RA 2	-0.19	0.3	26.42	-8.7558	0.4843	-0.0705
1011	SLE RA 3	-0.19	0.28	26.74	-8.8589	0.4901	-0.0711
1011	SLE RA 4	-0.19	0.3	26.73	-8.8587	0.4901	-0.0714
1011	SLE RA 5	-0.19	0.3	26.58	-8.8072	0.4872	-0.0711
1011	SLE RA 6	-0.19	0.28	26.89	-8.9104	0.493	-0.0717
1011	SLE RA 7	-0.19	0.3	26.89	-8.9102	0.493	-0.072
1011	SLE RA 8	-0.19	0.27	26.74	-8.859	0.4901	-0.0712
1011	SLE RA 9	-0.19	0.29	26.73	-8.8588	0.4901	-0.0715
1011	SLE RA 10	-0.2	0.33	28.69	-9.5059	0.5257	-0.076
1011	SLE RA 11	-0.21	0.31	29	-9.609	0.5315	-0.0766
1011	SLE RA 12	-0.21	0.33	29	-9.6088	0.5315	-0.0769
1011	SLE RA 13	-0.2	0.33	28.84	-9.5573	0.5286	-0.0766
1011	SLE RA 14	-0.21	0.31	29.16	-9.6605	0.5344	-0.0772
1011	SLE RA 15	-0.21	0.33	29.16	-9.6603	0.5344	-0.0775
1011	SLE RA 16	-0.21	0.3	29	-9.6091	0.5315	-0.0767
1011	SLE RA 17	-0.21	0.32	29	-9.6089	0.5315	-0.077
1011	SLE RA 18	-0.21	0.31	29.66	-9.8277	0.5435	-0.0778
1011	SLE RA 19	-0.21	0.33	29.66	-9.8275	0.5435	-0.0781
1011	SLE RA 20	-0.21	0.31	29.82	-9.8791	0.5464	-0.0784
1011	SLE RA 21	-0.21	0.33	29.82	-9.8789	0.5464	-0.0787
1011	SLE FR 1	-0.19	0.27	26.42	-8.7561	0.4844	-0.07
1011	SLE FR 2	-0.19	0.28	26.42	-8.756	0.4843	-0.0701
1011	SLE FR 3	-0.19	0.27	26.48	-8.7767	0.4855	-0.0703
1011	SLE FR 4	-0.19	0.29	27.39	-9.0775	0.5021	-0.0725
1011	SLE FR 5	-0.2	0.28	27.46	-9.0982	0.5033	-0.0726
1011	SLE FR 6	-0.2	0.29	28.04	-9.2919	0.5139	-0.0739
1011	SLE QP 1	-0.19	0.27	26.42	-8.7561	0.4844	-0.07
1011	SLE QP 2	-0.19	0.28	27.39	-9.0776	0.5021	-0.0724
1011	SLD 1	3.25	0.94	28.31	-9.364	0.5221	1.099
1011	SLD 2	3.08	0.87	28.33	-9.3694	0.5224	1.0423
1011	SLD 3	3.16	-0.06	28.52	-9.4214	0.5258	1.1277
1011	SLD 4	2.99	-0.13	28.54	-9.4268	0.5262	1.0711
1011	SLD 5	1	2.01	27.36	-9.0755	0.5023	0.2453
1011	SLD 6	0.89	1.96	27.37	-9.079	0.5026	0.2086
1011	SLD 7	0.71	-1.33	28.04	-9.2669	0.5148	0.3411
1011	SLD 8	0.6	-1.37	28.05	-9.2704	0.5151	0.3043
1011	SLD 9	-0.99	1.94	26.74	-8.8848	0.4891	-0.4491
1011	SLD 10	-1.1	1.89	26.75	-8.8883	0.4894	-0.4858
1011	SLD 11	-1.28	-1.4	27.42	-9.0762	0.5016	-0.3533
1011	SLD 12	-1.39	-1.45	27.43	-9.0797	0.5019	-0.3901
1011	SLD 13	-3.38	0.7	26.25	-8.7283	0.478	-1.2158
1011	SLD 14	-3.55	0.63	26.27	-8.7338	0.4784	-1.2724
1011	SLD 15	-3.47	-0.3	26.46	-8.7857	0.4818	-1.1871

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1011	SLD 16	-3.64	-0.38	26.48	-8.7912	0.4821	-1.2437
1011	SLV 1	7.85	1.79	29.55	-9.7511	0.5489	2.6672
1011	SLV 2	7.46	1.62	29.6	-9.7638	0.5498	2.5352
1011	SLV 3	7.64	-0.49	30.02	-9.8832	0.5575	2.7341
1011	SLV 4	7.26	-0.66	30.06	-9.8958	0.5584	2.6021
1011	SLV 5	2.6	4.22	27.32	-9.0773	0.503	0.6705
1011	SLV 6	2.35	4.12	27.35	-9.0853	0.5035	0.5862
1011	SLV 7	1.91	-3.38	28.88	-9.5174	0.5316	0.8933
1011	SLV 8	1.66	-3.49	28.91	-9.5254	0.5322	0.809
1011	SLV 9	-2.05	4.05	25.88	-8.6297	0.472	-0.9537
1011	SLV 10	-2.3	3.95	25.9	-8.6378	0.4726	-1.038
1011	SLV 11	-2.74	-3.55	27.43	-9.0698	0.5007	-0.7309
1011	SLV 12	-2.99	-3.66	27.46	-9.0779	0.5012	-0.8152
1011	SLV 13	-7.65	1.22	24.72	-8.2594	0.4458	-2.7468
1011	SLV 14	-8.03	1.06	24.77	-8.272	0.4467	-2.8788
1011	SLV 15	-7.85	-1.06	25.19	-8.3914	0.4544	-2.68
1011	SLV 16	-8.24	-1.23	25.24	-8.404	0.4553	-2.8119
1011	CRTFP Ux+	0	0	0	0	0	0
1011	CRTFP Ux-	0	0	0	0	0	0
1011	CRTFP Uy+	0	0	0	0	0	0
1011	CRTFP Uy-	0	0	0	0	0	0
1013	SLU 1	-0.38	0.69	64.01	-15.4774	-0.1491	-0.0857
1013	SLU 2	-0.38	0.81	63.99	-15.4755	-0.1489	-0.0851
1013	SLU 3	-0.39	0.74	65.19	-15.7618	-0.1515	-0.0874
1013	SLU 4	-0.39	0.81	65.19	-15.7606	-0.1513	-0.087
1013	SLU 5	-0.39	0.82	64.59	-15.6176	-0.15	-0.0862
1013	SLU 6	-0.4	0.74	65.78	-15.9039	-0.1525	-0.0885
1013	SLU 7	-0.4	0.81	65.78	-15.9028	-0.1524	-0.0881
1013	SLU 8	-0.39	0.71	65.19	-15.7617	-0.1513	-0.0879
1013	SLU 9	-0.39	0.78	65.18	-15.7606	-0.1512	-0.0875
1013	SLU 10	-0.43	0.92	72.55	-17.5453	-0.1692	-0.0951
1013	SLU 11	-0.44	0.85	73.75	-17.8316	-0.1717	-0.0974
1013	SLU 12	-0.44	0.92	73.74	-17.8304	-0.1716	-0.097
1013	SLU 13	-0.43	0.92	73.14	-17.6875	-0.1703	-0.0962
1013	SLU 14	-0.44	0.85	74.34	-17.9737	-0.1728	-0.0985
1013	SLU 15	-0.44	0.92	74.33	-17.9726	-0.1727	-0.0981
1013	SLU 16	-0.44	0.82	73.75	-17.8315	-0.1716	-0.0979
1013	SLU 17	-0.44	0.89	73.74	-17.8304	-0.1714	-0.0975
1013	SLU 18	-0.45	0.85	76.23	-18.4343	-0.1781	-0.1
1013	SLU 19	-0.45	0.92	76.22	-18.4331	-0.178	-0.0996
1013	SLU 20	-0.45	0.86	76.82	-18.5764	-0.1792	-0.1011
1013	SLU 21	-0.45	0.93	76.81	-18.5753	-0.179	-0.1007
1013	SLU 22	-0.44	0.89	72.31	-17.4814	-0.167	-0.0973
1013	SLU 23	-0.43	1	72.3	-17.4795	-0.1668	-0.0967
1013	SLU 24	-0.44	0.93	73.5	-17.7658	-0.1693	-0.099
1013	SLU 25	-0.44	1	73.49	-17.7647	-0.1692	-0.0987
1013	SLU 26	-0.44	1.01	72.89	-17.6217	-0.1679	-0.0978
1013	SLU 27	-0.45	0.94	74.09	-17.908	-0.1704	-0.1001
1013	SLU 28	-0.45	1.01	74.08	-17.9068	-0.1703	-0.0998
1013	SLU 29	-0.45	0.9	73.49	-17.7658	-0.1692	-0.0995
1013	SLU 30	-0.45	0.97	73.48	-17.7646	-0.169	-0.0992
1013	SLU 31	-0.48	1.11	80.85	-19.5493	-0.187	-0.1067
1013	SLU 32	-0.49	1.04	82.05	-19.8356	-0.1896	-0.109
1013	SLU 33	-0.49	1.11	82.04	-19.8345	-0.1895	-0.1087
1013	SLU 34	-0.48	1.12	81.44	-19.6915	-0.1881	-0.1078
1013	SLU 35	-0.49	1.05	82.64	-19.9778	-0.1907	-0.1101
1013	SLU 36	-0.49	1.12	82.63	-19.9766	-0.1906	-0.1098
1013	SLU 37	-0.49	1.01	82.05	-19.8356	-0.1895	-0.1095
1013	SLU 38	-0.49	1.08	82.04	-19.8344	-0.1893	-0.1092
1013	SLU 39	-0.5	1.05	84.53	-20.4383	-0.196	-0.1116
1013	SLU 40	-0.5	1.11	84.53	-20.4372	-0.1958	-0.1113
1013	SLU 41	-0.5	1.05	85.12	-20.5805	-0.1971	-0.1127
1013	SLU 42	-0.5	1.12	85.12	-20.5793	-0.1969	-0.1124
1013	SLU 43	-0.48	0.84	80.37	-19.4335	-0.1877	-0.1074
1013	SLU 44	-0.48	0.95	80.35	-19.4316	-0.1875	-0.1068
1013	SLU 45	-0.49	0.88	81.55	-19.7179	-0.1901	-0.1091
1013	SLU 46	-0.49	0.95	81.54	-19.7167	-0.1899	-0.1087
1013	SLU 47	-0.49	0.96	80.94	-19.5737	-0.1886	-0.1079
1013	SLU 48	-0.49	0.89	82.14	-19.86	-0.1912	-0.1102
1013	SLU 49	-0.49	0.95	82.13	-19.8589	-0.191	-0.1098
1013	SLU 50	-0.49	0.85	81.55	-19.7178	-0.1899	-0.1096
1013	SLU 51	-0.49	0.92	81.54	-19.7167	-0.1898	-0.1092
1013	SLU 52	-0.53	1.06	88.91	-21.5014	-0.2078	-0.1168
1013	SLU 53	-0.53	0.99	90.11	-21.7877	-0.2104	-0.1191
1013	SLU 54	-0.53	1.06	90.1	-21.7865	-0.2102	-0.1187
1013	SLU 55	-0.53	1.07	89.5	-21.6436	-0.2089	-0.1179
1013	SLU 56	-0.54	1	90.7	-21.9299	-0.2114	-0.1202
1013	SLU 57	-0.54	1.06	90.69	-21.9287	-0.2113	-0.1198
1013	SLU 58	-0.54	0.96	90.1	-21.7876	-0.2102	-0.1196
1013	SLU 59	-0.54	1.03	90.09	-21.7865	-0.2101	-0.1192
1013	SLU 60	-0.55	0.99	92.59	-22.3904	-0.2167	-0.1217
1013	SLU 61	-0.55	1.06	92.58	-22.3892	-0.2166	-0.1213
1013	SLU 62	-0.55	1	93.18	-22.5325	-0.2178	-0.1228
1013	SLU 63	-0.55	1.07	93.17	-22.5314	-0.2177	-0.1224
1013	SLU 64	-0.53	1.03	88.67	-21.4375	-0.2056	-0.119
1013	SLU 65	-0.53	1.14	88.65	-21.4356	-0.2054	-0.1184
1013	SLU 66	-0.54	1.07	89.85	-21.7219	-0.2079	-0.1207
1013	SLU 67	-0.54	1.14	89.84	-21.7208	-0.2078	-0.1204
1013	SLU 68	-0.54	1.15	89.24	-21.5778	-0.2065	-0.1195
1013	SLU 69	-0.55	1.08	90.44	-21.8641	-0.209	-0.1218
1013	SLU 70	-0.55	1.15	90.43	-21.8629	-0.2089	-0.1215

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1013	SLU 71	-0.54	1.04	89.85	-21.7219	-0.2078	-0.1212
1013	SLU 72	-0.54	1.11	89.84	-21.7207	-0.2076	-0.1209
1013	SLU 73	-0.58	1.25	97.21	-23.5054	-0.2257	-0.1284
1013	SLU 74	-0.59	1.18	98.41	-23.7917	-0.2282	-0.1307
1013	SLU 75	-0.59	1.25	98.4	-23.7906	-0.2281	-0.1304
1013	SLU 76	-0.58	1.26	97.8	-23.6476	-0.2267	-0.1295
1013	SLU 77	-0.59	1.19	99	-23.9339	-0.2293	-0.1318
1013	SLU 78	-0.59	1.26	98.99	-23.9328	-0.2292	-0.1315
1013	SLU 79	-0.59	1.15	98.4	-23.7917	-0.2281	-0.1312
1013	SLU 80	-0.59	1.22	98.4	-23.7905	-0.2279	-0.1309
1013	SLU 81	-0.6	1.19	100.89	-24.3944	-0.2346	-0.1333
1013	SLU 82	-0.6	1.26	100.88	-24.3933	-0.2344	-0.133
1013	SLU 83	-0.6	1.19	101.48	-24.5366	-0.2357	-0.1344
1013	SLU 84	-0.6	1.26	101.47	-24.5354	-0.2355	-0.1341
1013	SLE RA 1	-0.4	0.75	66.38	-16.05	-0.1542	-0.089
1013	SLE RA 2	-0.4	0.83	66.37	-16.0487	-0.1541	-0.0886
1013	SLE RA 3	-0.4	0.78	67.17	-16.2395	-0.1558	-0.0901
1013	SLE RA 4	-0.4	0.82	67.17	-16.2388	-0.1557	-0.0899
1013	SLE RA 5	-0.4	0.83	66.77	-16.1435	-0.1548	-0.0893
1013	SLE RA 6	-0.41	0.78	67.56	-16.3343	-0.1565	-0.0909
1013	SLE RA 7	-0.41	0.83	67.56	-16.3336	-0.1564	-0.0906
1013	SLE RA 8	-0.41	0.76	67.17	-16.2395	-0.1557	-0.0905
1013	SLE RA 9	-0.41	0.8	67.16	-16.2388	-0.1556	-0.0902
1013	SLE RA 10	-0.43	0.9	72.08	-17.4286	-0.1676	-0.0953
1013	SLE RA 11	-0.43	0.85	72.88	-17.6194	-0.1693	-0.0968
1013	SLE RA 12	-0.43	0.9	72.87	-17.6187	-0.1692	-0.0966
1013	SLE RA 13	-0.43	0.9	72.47	-17.5233	-0.1683	-0.096
1013	SLE RA 14	-0.44	0.86	73.27	-17.7142	-0.17	-0.0975
1013	SLE RA 15	-0.44	0.9	73.26	-17.7134	-0.1699	-0.0973
1013	SLE RA 16	-0.44	0.83	72.87	-17.6194	-0.1692	-0.0971
1013	SLE RA 17	-0.43	0.88	72.87	-17.6186	-0.1691	-0.0969
1013	SLE RA 18	-0.44	0.85	74.53	-18.0212	-0.1736	-0.0985
1013	SLE RA 19	-0.44	0.9	74.52	-18.0205	-0.1735	-0.0983
1013	SLE RA 20	-0.45	0.86	74.92	-18.116	-0.1743	-0.0993
1013	SLE RA 21	-0.44	0.9	74.92	-18.1152	-0.1742	-0.099
1013	SLE FR 1	-0.4	0.75	66.38	-16.05	-0.1542	-0.089
1013	SLE FR 2	-0.4	0.77	66.38	-16.0497	-0.1542	-0.0889
1013	SLE FR 3	-0.4	0.75	66.54	-16.0879	-0.1545	-0.0893
1013	SLE FR 4	-0.41	0.8	68.82	-16.6411	-0.16	-0.0918
1013	SLE FR 5	-0.41	0.78	68.98	-16.6792	-0.1603	-0.0921
1013	SLE FR 6	-0.42	0.8	70.46	-17.0356	-0.1639	-0.0938
1013	SLE QP 1	-0.4	0.75	66.38	-16.05	-0.1542	-0.089
1013	SLE QP 2	-0.41	0.78	68.83	-16.6413	-0.16	-0.0919
1013	SLD 1	8.16	2.34	70.8	-17.1232	-0.1192	2.0178
1013	SLD 2	7.74	2.2	70.86	-17.1338	-0.1191	1.9169
1013	SLD 3	7.94	-0.14	71.39	-17.2367	-0.1244	1.9604
1013	SLD 4	7.52	-0.29	71.44	-17.2473	-0.1243	1.8595
1013	SLD 5	2.57	5.04	68.53	-16.6119	-0.14	0.6456
1013	SLD 6	2.29	4.94	68.56	-16.6187	-0.1399	0.5802
1013	SLD 7	1.83	-3.23	70.47	-16.9903	-0.1572	0.4544
1013	SLD 8	1.56	-3.33	70.5	-16.9972	-0.1571	0.3889
1013	SLD 9	-2.38	4.89	67.15	-16.2855	-0.1629	-0.5727
1013	SLD 10	-2.65	4.79	67.18	-16.2924	-0.1629	-0.6381
1013	SLD 11	-3.12	-3.38	69.09	-16.6639	-0.1802	-0.7639
1013	SLD 12	-3.39	-3.48	69.13	-16.6708	-0.1801	-0.8294
1013	SLD 13	-8.34	1.85	66.21	-16.0354	-0.1958	-2.0432
1013	SLD 14	-8.76	1.7	66.26	-16.046	-0.1957	-2.1441
1013	SLD 15	-8.56	-0.63	66.8	-16.1489	-0.2009	-2.1006
1013	SLD 16	-8.98	-0.78	66.85	-16.1595	-0.2009	-2.2015
1013	SLV 1	19.63	4.37	73.48	-17.7752	-0.0647	4.8416
1013	SLV 2	18.65	4.02	73.6	-17.7999	-0.0645	4.6066
1013	SLV 3	19.11	-1.29	74.81	-18.0351	-0.0765	4.7079
1013	SLV 4	18.14	-1.63	74.93	-18.0598	-0.0763	4.4729
1013	SLV 5	6.55	10.5	68.18	-16.5831	-0.1136	1.6307
1013	SLV 6	5.92	10.27	68.26	-16.5989	-0.1135	1.4807
1013	SLV 7	4.83	-8.36	72.62	-17.4495	-0.1529	1.1851
1013	SLV 8	4.21	-8.58	72.7	-17.4652	-0.1528	1.035
1013	SLV 9	-5.03	10.14	64.95	-15.8174	-0.1673	-1.2187
1013	SLV 10	-5.65	9.92	65.03	-15.8332	-0.1672	-1.3688
1013	SLV 11	-6.75	-8.71	69.39	-16.6838	-0.2066	-1.6644
1013	SLV 12	-7.37	-8.93	69.47	-16.6995	-0.2065	-1.8144
1013	SLV 13	-18.96	3.2	62.72	-15.2229	-0.2437	-4.6566
1013	SLV 14	-19.94	2.85	62.84	-15.2476	-0.2436	-4.8916
1013	SLV 15	-19.47	-2.46	64.05	-15.4828	-0.2555	-4.7903
1013	SLV 16	-20.45	-2.81	64.17	-15.5075	-0.2554	-5.0253
1013	CRTFP Ux+	0	0	0	0	0	0
1013	CRTFP Ux-	0	0	0	0	0	0
1013	CRTFP Uy+	0	0	0	0	0	0
1013	CRTFP Uy-	0	0	0	0	0	0
1015	SLU 1	-0.12	0.31	26.83	-8.867	-0.4795	-0.0371
1015	SLU 2	-0.12	0.36	26.82	-8.866	-0.4794	-0.036
1015	SLU 3	-0.13	0.33	27.32	-9.028	-0.4882	-0.0376
1015	SLU 4	-0.12	0.36	27.32	-9.0274	-0.4882	-0.0369
1015	SLU 5	-0.12	0.37	27.07	-8.9466	-0.4837	-0.0364
1015	SLU 6	-0.13	0.33	27.57	-9.1087	-0.4926	-0.038
1015	SLU 7	-0.13	0.36	27.56	-9.108	-0.4925	-0.0374
1015	SLU 8	-0.13	0.32	27.32	-9.0282	-0.4882	-0.0379
1015	SLU 9	-0.13	0.35	27.32	-9.0276	-0.4881	-0.0373
1015	SLU 10	-0.14	0.41	30.41	-10.0476	-0.5431	-0.0401
1015	SLU 11	-0.14	0.38	30.91	-10.2096	-0.552	-0.0417
1015	SLU 12	-0.14	0.41	30.9	-10.209	-0.5519	-0.0411

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1015	SLU 13	-0.14	0.41	30.65	-10.1282	-0.5475	-0.0406
1015	SLU 14	-0.14	0.38	31.15	-10.2902	-0.5564	-0.0421
1015	SLU 15	-0.14	0.41	31.15	-10.2896	-0.5563	-0.0415
1015	SLU 16	-0.14	0.37	30.9	-10.2098	-0.552	-0.0421
1015	SLU 17	-0.14	0.4	30.9	-10.2092	-0.5519	-0.0414
1015	SLU 18	-0.14	0.38	31.95	-10.555	-0.5706	-0.043
1015	SLU 19	-0.14	0.41	31.95	-10.5544	-0.5705	-0.0423
1015	SLU 20	-0.14	0.39	32.19	-10.6356	-0.575	-0.0434
1015	SLU 21	-0.14	0.41	32.19	-10.635	-0.5749	-0.0428
1015	SLU 22	-0.14	0.4	30.3	-10.0073	-0.5411	-0.0417
1015	SLU 23	-0.14	0.45	30.29	-10.0063	-0.541	-0.0406
1015	SLU 24	-0.14	0.42	30.79	-10.1684	-0.5498	-0.0422
1015	SLU 25	-0.14	0.45	30.79	-10.1678	-0.5498	-0.0415
1015	SLU 26	-0.14	0.45	30.54	-10.0869	-0.5453	-0.041
1015	SLU 27	-0.14	0.42	31.04	-10.249	-0.5542	-0.0426
1015	SLU 28	-0.14	0.45	31.03	-10.2484	-0.5541	-0.042
1015	SLU 29	-0.14	0.4	30.79	-10.1686	-0.5498	-0.0425
1015	SLU 30	-0.14	0.43	30.79	-10.168	-0.5497	-0.0419
1015	SLU 31	-0.15	0.49	33.88	-11.1879	-0.6048	-0.0447
1015	SLU 32	-0.16	0.46	34.37	-11.35	-0.6136	-0.0463
1015	SLU 33	-0.16	0.49	34.37	-11.3493	-0.6136	-0.0456
1015	SLU 34	-0.16	0.5	34.12	-11.2685	-0.6091	-0.0452
1015	SLU 35	-0.16	0.47	34.62	-11.4306	-0.618	-0.0467
1015	SLU 36	-0.16	0.5	34.62	-11.43	-0.6179	-0.0461
1015	SLU 37	-0.16	0.45	34.37	-11.3502	-0.6136	-0.0467
1015	SLU 38	-0.16	0.48	34.37	-11.3496	-0.6135	-0.046
1015	SLU 39	-0.16	0.47	35.42	-11.6953	-0.6322	-0.0476
1015	SLU 40	-0.16	0.5	35.41	-11.6947	-0.6321	-0.0469
1015	SLU 41	-0.16	0.47	35.66	-11.7759	-0.6366	-0.048
1015	SLU 42	-0.16	0.5	35.66	-11.7753	-0.6365	-0.0474
1015	SLU 43	-0.15	0.38	33.69	-11.1361	-0.6022	-0.0466
1015	SLU 44	-0.15	0.43	33.68	-11.1351	-0.6021	-0.0455
1015	SLU 45	-0.16	0.4	34.18	-11.2971	-0.6109	-0.0471
1015	SLU 46	-0.16	0.43	34.18	-11.2965	-0.6109	-0.0465
1015	SLU 47	-0.15	0.43	33.93	-11.2157	-0.6064	-0.046
1015	SLU 48	-0.16	0.4	34.43	-11.3778	-0.6153	-0.0476
1015	SLU 49	-0.16	0.43	34.42	-11.3772	-0.6152	-0.0469
1015	SLU 50	-0.16	0.38	34.18	-11.2974	-0.6109	-0.0475
1015	SLU 51	-0.16	0.41	34.18	-11.2967	-0.6108	-0.0468
1015	SLU 52	-0.17	0.48	37.27	-12.3167	-0.6659	-0.0497
1015	SLU 53	-0.17	0.45	37.77	-12.4787	-0.6747	-0.0512
1015	SLU 54	-0.17	0.47	37.76	-12.4781	-0.6747	-0.0506
1015	SLU 55	-0.17	0.48	37.51	-12.3973	-0.6702	-0.0501
1015	SLU 56	-0.17	0.45	38.01	-12.5594	-0.6791	-0.0517
1015	SLU 57	-0.17	0.48	38.01	-12.5588	-0.679	-0.051
1015	SLU 58	-0.17	0.43	37.76	-12.479	-0.6747	-0.0516
1015	SLU 59	-0.17	0.46	37.76	-12.4783	-0.6746	-0.051
1015	SLU 60	-0.17	0.45	38.81	-12.8241	-0.6933	-0.0525
1015	SLU 61	-0.17	0.48	38.8	-12.8235	-0.6932	-0.0519
1015	SLU 62	-0.18	0.45	39.05	-12.9047	-0.6977	-0.0529
1015	SLU 63	-0.17	0.48	39.05	-12.9041	-0.6976	-0.0523
1015	SLU 64	-0.17	0.46	37.16	-12.2764	-0.6638	-0.0512
1015	SLU 65	-0.17	0.51	37.15	-12.2754	-0.6637	-0.0501
1015	SLU 66	-0.17	0.48	37.65	-12.4375	-0.6726	-0.0517
1015	SLU 67	-0.17	0.51	37.65	-12.4369	-0.6725	-0.0511
1015	SLU 68	-0.17	0.51	37.4	-12.3561	-0.6681	-0.0506
1015	SLU 69	-0.17	0.48	37.9	-12.5181	-0.6769	-0.0521
1015	SLU 70	-0.17	0.51	37.89	-12.5175	-0.6768	-0.0515
1015	SLU 71	-0.17	0.47	37.65	-12.4377	-0.6725	-0.0521
1015	SLU 72	-0.17	0.5	37.65	-12.4371	-0.6725	-0.0514
1015	SLU 73	-0.18	0.56	40.74	-13.457	-0.7275	-0.0543
1015	SLU 74	-0.19	0.53	41.23	-13.6191	-0.7363	-0.0558
1015	SLU 75	-0.19	0.56	41.23	-13.6185	-0.7363	-0.0552
1015	SLU 76	-0.19	0.56	40.98	-13.5376	-0.7318	-0.0547
1015	SLU 77	-0.19	0.53	41.48	-13.6997	-0.7407	-0.0563
1015	SLU 78	-0.19	0.56	41.48	-13.6991	-0.7406	-0.0556
1015	SLU 79	-0.19	0.52	41.23	-13.6193	-0.7363	-0.0562
1015	SLU 80	-0.19	0.55	41.23	-13.6187	-0.7362	-0.0556
1015	SLU 81	-0.19	0.53	42.28	-13.9644	-0.7549	-0.0571
1015	SLU 82	-0.19	0.56	42.27	-13.9638	-0.7549	-0.0565
1015	SLU 83	-0.19	0.53	42.52	-14.0451	-0.7593	-0.0575
1015	SLU 84	-0.19	0.56	42.52	-14.0444	-0.7592	-0.0569
1015	SLE RA 1	-0.13	0.34	27.82	-9.1928	-0.4971	-0.0384
1015	SLE RA 2	-0.13	0.37	27.82	-9.1921	-0.497	-0.0377
1015	SLE RA 3	-0.13	0.35	28.15	-9.3002	-0.5029	-0.0387
1015	SLE RA 4	-0.13	0.37	28.15	-9.2997	-0.5029	-0.0383
1015	SLE RA 5	-0.13	0.37	27.98	-9.2459	-0.4999	-0.038
1015	SLE RA 6	-0.13	0.35	28.31	-9.3539	-0.5058	-0.039
1015	SLE RA 7	-0.13	0.37	28.31	-9.3535	-0.5058	-0.0386
1015	SLE RA 8	-0.13	0.34	28.15	-9.3003	-0.5029	-0.039
1015	SLE RA 9	-0.13	0.36	28.15	-9.2999	-0.5028	-0.0385
1015	SLE RA 10	-0.14	0.4	30.21	-9.9798	-0.5395	-0.0404
1015	SLE RA 11	-0.14	0.38	30.54	-10.0879	-0.5454	-0.0415
1015	SLE RA 12	-0.14	0.4	30.54	-10.0875	-0.5454	-0.041
1015	SLE RA 13	-0.14	0.4	30.37	-10.0336	-0.5424	-0.0407
1015	SLE RA 14	-0.14	0.38	30.7	-10.1416	-0.5483	-0.0418
1015	SLE RA 15	-0.14	0.4	30.7	-10.1412	-0.5483	-0.0413
1015	SLE RA 16	-0.14	0.37	30.54	-10.088	-0.5454	-0.0417
1015	SLE RA 17	-0.14	0.39	30.53	-10.0876	-0.5454	-0.0413
1015	SLE RA 18	-0.14	0.38	31.23	-10.3181	-0.5578	-0.0423
1015	SLE RA 19	-0.14	0.4	31.23	-10.3177	-0.5578	-0.0419

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1015	SLE RA 20	-0.14	0.39	31.4	-10.3719	-0.5607	-0.0426
1015	SLE RA 21	-0.14	0.4	31.39	-10.3715	-0.5607	-0.0422
1015	SLE FR 1	-0.13	0.34	27.82	-9.1928	-0.4971	-0.0384
1015	SLE FR 2	-0.13	0.34	27.82	-9.1927	-0.4971	-0.0382
1015	SLE FR 3	-0.13	0.34	27.89	-9.2143	-0.4982	-0.0385
1015	SLE FR 4	-0.13	0.36	28.84	-9.5303	-0.5153	-0.0394
1015	SLE FR 5	-0.13	0.35	28.91	-9.5519	-0.5165	-0.0397
1015	SLE FR 6	-0.13	0.36	29.53	-9.7555	-0.5275	-0.0403
1015	SLE QP 1	-0.13	0.34	27.82	-9.1928	-0.4971	-0.0384
1015	SLE QP 2	-0.13	0.35	28.84	-9.5304	-0.5153	-0.0396
1015	SLD 1	3.55	0.8	29.53	-9.7745	-0.5237	1.2526
1015	SLD 2	3.37	0.75	29.55	-9.78	-0.5241	1.1898
1015	SLD 3	3.45	-0.26	29.77	-9.8401	-0.5283	1.2081
1015	SLD 4	3.28	-0.31	29.79	-9.8456	-0.5286	1.1452
1015	SLD 5	1.15	2.1	28.7	-9.5031	-0.5109	0.4266
1015	SLD 6	1.03	2.07	28.71	-9.5067	-0.5111	0.3859
1015	SLD 7	0.83	-1.43	29.47	-9.7219	-0.526	0.2781
1015	SLD 8	0.72	-1.46	29.48	-9.7255	-0.5262	0.2373
1015	SLD 9	-0.98	2.17	28.21	-9.3353	-0.5044	-0.3164
1015	SLD 10	-1.1	2.13	28.22	-9.3389	-0.5046	-0.3572
1015	SLD 11	-1.29	-1.37	28.98	-9.5541	-0.5195	-0.465
1015	SLD 12	-1.41	-1.4	28.99	-9.5577	-0.5197	-0.5057
1015	SLD 13	-3.54	1.01	27.9	-9.2152	-0.502	-1.2243
1015	SLD 14	-3.72	0.96	27.92	-9.2207	-0.5023	-1.2872
1015	SLD 15	-3.63	-0.05	28.13	-9.2808	-0.5066	-1.2689
1015	SLD 16	-3.81	-0.1	28.15	-9.2863	-0.5069	-1.3317
1015	SLV 1	8.47	1.37	30.47	-10.1062	-0.5352	2.9819
1015	SLV 2	8.06	1.25	30.52	-10.1191	-0.536	2.8355
1015	SLV 3	8.25	-1.04	31	-10.2564	-0.5456	2.8786
1015	SLV 4	7.84	-1.17	31.05	-10.2693	-0.5463	2.7322
1015	SLV 5	2.85	4.34	28.52	-9.4731	-0.5055	1.0482
1015	SLV 6	2.59	4.27	28.55	-9.4813	-0.5059	0.9547
1015	SLV 7	2.12	-3.71	30.29	-9.9739	-0.54	0.7042
1015	SLV 8	1.86	-3.79	30.31	-9.9821	-0.5404	0.6107
1015	SLV 9	-2.12	4.49	27.37	-9.0787	-0.4902	-0.6898
1015	SLV 10	-2.38	4.42	27.4	-9.0869	-0.4906	-0.7833
1015	SLV 11	-2.85	-3.56	29.14	-9.5795	-0.5247	-1.0338
1015	SLV 12	-3.12	-3.64	29.17	-9.5877	-0.5251	-1.1273
1015	SLV 13	-8.1	1.87	26.64	-8.7914	-0.4843	-2.8114
1015	SLV 14	-8.51	1.75	26.69	-8.8044	-0.485	-2.9577
1015	SLV 15	-8.32	-0.55	27.17	-8.9417	-0.4946	-2.9146
1015	SLV 16	-8.73	-0.67	27.22	-8.9546	-0.4954	-3.061
1015	CRTFP Ux+	0	0	0	0	0	0
1015	CRTFP Ux-	0	0	0	0	0	0
1015	CRTFP Uy+	0	0	0	0	0	0
1015	CRTFP Uy-	0	0	0	0	0	0
1016	SLU 1	-0.09	0.34	28.63	-9.1795	0.0355	-0.0334
1016	SLU 2	-0.09	0.39	28.62	-9.1781	0.0355	-0.0332
1016	SLU 3	-0.1	0.36	29.15	-9.3445	0.0362	-0.034
1016	SLU 4	-0.1	0.39	29.15	-9.3437	0.0363	-0.0339
1016	SLU 5	-0.09	0.4	28.89	-9.2607	0.0359	-0.0335
1016	SLU 6	-0.1	0.36	29.42	-9.4271	0.0366	-0.0343
1016	SLU 7	-0.1	0.39	29.41	-9.4263	0.0366	-0.0342
1016	SLU 8	-0.1	0.35	29.15	-9.3447	0.0363	-0.034
1016	SLU 9	-0.1	0.38	29.15	-9.3439	0.0363	-0.0339
1016	SLU 10	-0.1	0.44	32.44	-10.3935	0.0408	-0.0371
1016	SLU 11	-0.11	0.41	32.97	-10.5599	0.0415	-0.0379
1016	SLU 12	-0.11	0.44	32.96	-10.5591	0.0415	-0.0378
1016	SLU 13	-0.11	0.45	32.7	-10.4761	0.0412	-0.0374
1016	SLU 14	-0.11	0.41	33.23	-10.6425	0.0419	-0.0382
1016	SLU 15	-0.11	0.45	33.22	-10.6417	0.0419	-0.0381
1016	SLU 16	-0.11	0.4	32.96	-10.5601	0.0416	-0.0379
1016	SLU 17	-0.11	0.43	32.96	-10.5593	0.0416	-0.0378
1016	SLU 18	-0.11	0.41	34.07	-10.9158	0.0431	-0.0389
1016	SLU 19	-0.11	0.44	34.07	-10.915	0.0431	-0.0388
1016	SLU 20	-0.11	0.42	34.34	-10.9984	0.0434	-0.0393
1016	SLU 21	-0.11	0.45	34.33	-10.9976	0.0434	-0.0391
1016	SLU 22	-0.11	0.43	32.32	-10.3502	0.0407	-0.0385
1016	SLU 23	-0.11	0.48	32.31	-10.3488	0.0408	-0.0384
1016	SLU 24	-0.11	0.45	32.84	-10.5152	0.0415	-0.0391
1016	SLU 25	-0.11	0.48	32.84	-10.5143	0.0415	-0.039
1016	SLU 26	-0.11	0.48	32.57	-10.4314	0.0411	-0.0387
1016	SLU 27	-0.11	0.45	33.1	-10.5978	0.0419	-0.0394
1016	SLU 28	-0.11	0.48	33.1	-10.597	0.0419	-0.0393
1016	SLU 29	-0.11	0.43	32.84	-10.5154	0.0415	-0.0392
1016	SLU 30	-0.11	0.47	32.83	-10.5146	0.0415	-0.039
1016	SLU 31	-0.12	0.53	36.12	-11.5642	0.046	-0.0423
1016	SLU 32	-0.12	0.5	36.65	-11.7306	0.0468	-0.043
1016	SLU 33	-0.12	0.53	36.65	-11.7297	0.0468	-0.0429
1016	SLU 34	-0.12	0.54	36.38	-11.6468	0.0464	-0.0426
1016	SLU 35	-0.12	0.5	36.91	-11.8132	0.0472	-0.0434
1016	SLU 36	-0.12	0.54	36.91	-11.8123	0.0472	-0.0432
1016	SLU 37	-0.12	0.49	36.65	-11.7308	0.0468	-0.0431
1016	SLU 38	-0.12	0.52	36.64	-11.73	0.0468	-0.043
1016	SLU 39	-0.12	0.5	37.76	-12.0865	0.0483	-0.0441
1016	SLU 40	-0.12	0.53	37.76	-12.0856	0.0483	-0.044
1016	SLU 41	-0.13	0.5	38.02	-12.1691	0.0487	-0.0444
1016	SLU 42	-0.12	0.54	38.02	-12.1682	0.0487	-0.0443
1016	SLU 43	-0.12	0.41	35.96	-11.532	0.0443	-0.0416
1016	SLU 44	-0.12	0.46	35.95	-11.5306	0.0444	-0.0414
1016	SLU 45	-0.12	0.43	36.48	-11.697	0.0451	-0.0422

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1016	SLU 46	-0.12	0.46	36.48	-11.6961	0.0451	-0.0421
1016	SLU 47	-0.12	0.47	36.21	-11.6132	0.0447	-0.0417
1016	SLU 48	-0.12	0.43	36.74	-11.7796	0.0455	-0.0425
1016	SLU 49	-0.12	0.47	36.74	-11.7787	0.0455	-0.0424
1016	SLU 50	-0.12	0.42	36.48	-11.6972	0.0451	-0.0422
1016	SLU 51	-0.12	0.45	36.47	-11.6964	0.0451	-0.0421
1016	SLU 52	-0.13	0.51	39.76	-12.746	0.0496	-0.0453
1016	SLU 53	-0.13	0.48	40.29	-12.9123	0.0504	-0.0461
1016	SLU 54	-0.13	0.51	40.29	-12.9115	0.0504	-0.046
1016	SLU 55	-0.13	0.52	40.02	-12.8286	0.05	-0.0456
1016	SLU 56	-0.13	0.48	40.55	-12.9949	0.0508	-0.0464
1016	SLU 57	-0.13	0.52	40.55	-12.9941	0.0508	-0.0463
1016	SLU 58	-0.13	0.47	40.29	-12.9126	0.0504	-0.0461
1016	SLU 59	-0.13	0.5	40.29	-12.9118	0.0504	-0.046
1016	SLU 60	-0.13	0.48	41.4	-13.2683	0.0519	-0.0472
1016	SLU 61	-0.13	0.52	41.4	-13.2674	0.0519	-0.0471
1016	SLU 62	-0.13	0.49	41.66	-13.3509	0.0523	-0.0475
1016	SLU 63	-0.13	0.52	41.66	-13.35	0.0523	-0.0474
1016	SLU 64	-0.13	0.5	39.64	-12.7027	0.0496	-0.0468
1016	SLU 65	-0.13	0.55	39.63	-12.7013	0.0496	-0.0466
1016	SLU 66	-0.13	0.52	40.16	-12.8676	0.0503	-0.0474
1016	SLU 67	-0.13	0.55	40.16	-12.8668	0.0504	-0.0473
1016	SLU 68	-0.13	0.56	39.9	-12.7839	0.05	-0.0469
1016	SLU 69	-0.13	0.52	40.43	-12.9502	0.0507	-0.0477
1016	SLU 70	-0.13	0.56	40.42	-12.9494	0.0507	-0.0476
1016	SLU 71	-0.13	0.51	40.16	-12.8679	0.0504	-0.0474
1016	SLU 72	-0.13	0.54	40.16	-12.8671	0.0504	-0.0473
1016	SLU 73	-0.14	0.6	43.45	-13.9167	0.0549	-0.0505
1016	SLU 74	-0.14	0.57	43.98	-14.083	0.0556	-0.0513
1016	SLU 75	-0.14	0.6	43.97	-14.0822	0.0556	-0.0512
1016	SLU 76	-0.14	0.61	43.71	-13.9993	0.0553	-0.0508
1016	SLU 77	-0.15	0.57	44.24	-14.1656	0.056	-0.0516
1016	SLU 78	-0.15	0.61	44.23	-14.1648	0.056	-0.0515
1016	SLU 79	-0.14	0.56	43.97	-14.0833	0.0557	-0.0513
1016	SLU 80	-0.14	0.59	43.97	-14.0824	0.0557	-0.0512
1016	SLU 81	-0.15	0.57	45.09	-14.4389	0.0572	-0.0524
1016	SLU 82	-0.15	0.6	45.08	-14.4381	0.0572	-0.0522
1016	SLU 83	-0.15	0.58	45.35	-14.5215	0.0575	-0.0527
1016	SLU 84	-0.15	0.61	45.34	-14.5207	0.0575	-0.0526
1016	SLE RA 1	-0.1	0.36	29.68	-9.514	0.037	-0.0348
1016	SLE RA 2	-0.1	0.4	29.68	-9.5131	0.037	-0.0347
1016	SLE RA 3	-0.1	0.38	30.03	-9.624	0.0375	-0.0352
1016	SLE RA 4	-0.1	0.4	30.03	-9.6234	0.0375	-0.0352
1016	SLE RA 5	-0.1	0.4	29.85	-9.5681	0.0373	-0.0349
1016	SLE RA 6	-0.1	0.38	30.21	-9.679	0.0378	-0.0355
1016	SLE RA 7	-0.1	0.4	30.2	-9.6785	0.0378	-0.0354
1016	SLE RA 8	-0.1	0.37	30.03	-9.6241	0.0375	-0.0353
1016	SLE RA 9	-0.1	0.39	30.03	-9.6236	0.0375	-0.0352
1016	SLE RA 10	-0.11	0.43	32.22	-10.3233	0.0405	-0.0373
1016	SLE RA 11	-0.11	0.41	32.57	-10.4342	0.041	-0.0378
1016	SLE RA 12	-0.11	0.43	32.57	-10.4337	0.041	-0.0378
1016	SLE RA 13	-0.11	0.44	32.39	-10.3784	0.0408	-0.0375
1016	SLE RA 14	-0.11	0.41	32.75	-10.4893	0.0413	-0.0381
1016	SLE RA 15	-0.11	0.44	32.74	-10.4888	0.0413	-0.038
1016	SLE RA 16	-0.11	0.4	32.57	-10.4344	0.041	-0.0379
1016	SLE RA 17	-0.11	0.42	32.57	-10.4338	0.041	-0.0378
1016	SLE RA 18	-0.11	0.41	33.31	-10.6715	0.042	-0.0386
1016	SLE RA 19	-0.11	0.43	33.31	-10.671	0.042	-0.0385
1016	SLE RA 20	-0.11	0.42	33.49	-10.7266	0.0423	-0.0388
1016	SLE RA 21	-0.11	0.44	33.48	-10.726	0.0423	-0.0387
1016	SLE FR 1	-0.1	0.36	29.68	-9.514	0.037	-0.0348
1016	SLE FR 2	-0.1	0.37	29.68	-9.5138	0.037	-0.0348
1016	SLE FR 3	-0.1	0.37	29.75	-9.536	0.0371	-0.0349
1016	SLE FR 4	-0.1	0.39	30.77	-9.8611	0.0385	-0.0359
1016	SLE FR 5	-0.1	0.38	30.84	-9.8833	0.0386	-0.036
1016	SLE FR 6	-0.1	0.39	31.5	-10.0927	0.0395	-0.0367
1016	SLE QP 1	-0.1	0.36	29.68	-9.514	0.037	-0.0348
1016	SLE QP 2	-0.1	0.38	30.77	-9.8612	0.0385	-0.036
1016	SLD 1	3.95	0.86	31.36	-10.076	0.0444	1.3821
1016	SLD 2	3.76	0.81	31.37	-10.0815	0.0445	1.314
1016	SLD 3	3.85	-0.3	31.62	-10.1552	0.0453	1.346
1016	SLD 4	3.65	-0.34	31.64	-10.1608	0.0453	1.2779
1016	SLD 5	1.31	2.28	30.54	-9.8045	0.039	0.4561
1016	SLD 6	1.18	2.25	30.56	-9.8081	0.0391	0.4119
1016	SLD 7	0.96	-1.56	31.42	-10.0687	0.0418	0.3357
1016	SLD 8	0.83	-1.59	31.44	-10.0723	0.0418	0.2915
1016	SLD 9	-1.04	2.35	30.11	-9.6502	0.0352	-0.3634
1016	SLD 10	-1.16	2.32	30.12	-9.6538	0.0352	-0.4077
1016	SLD 11	-1.38	-1.49	30.99	-9.9144	0.038	-0.4838
1016	SLD 12	-1.51	-1.52	31	-9.918	0.038	-0.5281
1016	SLD 13	-3.86	1.1	29.91	-9.5617	0.0317	-1.3498
1016	SLD 14	-4.05	1.05	29.93	-9.5673	0.0317	-1.4179
1016	SLD 15	-3.96	-0.05	30.17	-9.641	0.0325	-1.3859
1016	SLD 16	-4.16	-0.1	30.19	-9.6465	0.0326	-1.454
1016	SLV 1	9.38	1.46	32.15	-10.3692	0.0524	3.2804
1016	SLV 2	8.92	1.35	32.19	-10.3822	0.0526	3.1217
1016	SLV 3	9.14	-1.17	32.75	-10.5508	0.0544	3.1961
1016	SLV 4	8.68	-1.28	32.8	-10.5637	0.0545	3.0373
1016	SLV 5	3.19	4.7	30.26	-9.7361	0.0397	1.1137
1016	SLV 6	2.9	4.64	30.29	-9.7444	0.0398	1.0123
1016	SLV 7	2.38	-4.05	32.27	-10.3413	0.0462	0.8327

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1016	SLV 8	2.09	-4.12	32.3	-10.3495	0.0463	0.7313
1016	SLV 9	-2.29	4.88	29.24	-9.373	0.0307	-0.8032
1016	SLV 10	-2.58	4.81	29.27	-9.3812	0.0308	-0.9046
1016	SLV 11	-3.1	-3.88	31.25	-9.9781	0.0372	-1.0842
1016	SLV 12	-3.39	-3.95	31.28	-9.9864	0.0373	-1.1856
1016	SLV 13	-8.89	2.04	28.75	-9.1588	0.0225	-3.1093
1016	SLV 14	-9.34	1.93	28.79	-9.1717	0.0227	-3.268
1016	SLV 15	-9.13	-0.59	29.35	-9.3403	0.0244	-3.1936
1016	SLV 16	-9.58	-0.7	29.4	-9.3532	0.0246	-3.3523
1016	CRTFP Ux+	0	0	0	0	0	0
1016	CRTFP Ux-	0	0	0	0	0	0
1016	CRTFP Uy+	0	0	0	0	0	0
1016	CRTFP Uy-	0	0	0	0	0	0
1017	SLU 1	-0.05	0.33	27.54	-8.5423	0.0361	-0.0194
1017	SLU 2	-0.05	0.38	27.53	-8.5408	0.0361	-0.0192
1017	SLU 3	-0.05	0.35	28.04	-8.6939	0.0369	-0.0197
1017	SLU 4	-0.05	0.38	28.04	-8.693	0.0369	-0.0195
1017	SLU 5	-0.05	0.38	27.78	-8.6167	0.0365	-0.0193
1017	SLU 6	-0.05	0.35	28.29	-8.7698	0.0373	-0.0197
1017	SLU 7	-0.05	0.38	28.29	-8.7689	0.0373	-0.0196
1017	SLU 8	-0.05	0.33	28.04	-8.6941	0.0369	-0.0196
1017	SLU 9	-0.05	0.36	28.03	-8.6932	0.0369	-0.0194
1017	SLU 10	-0.06	0.43	31.18	-9.6619	0.0415	-0.0215
1017	SLU 11	-0.06	0.39	31.69	-9.8151	0.0423	-0.0219
1017	SLU 12	-0.06	0.43	31.69	-9.8142	0.0423	-0.0218
1017	SLU 13	-0.06	0.43	31.43	-9.7378	0.0419	-0.0215
1017	SLU 14	-0.06	0.4	31.94	-9.891	0.0427	-0.022
1017	SLU 15	-0.06	0.43	31.93	-9.8901	0.0427	-0.0219
1017	SLU 16	-0.06	0.38	31.69	-9.8153	0.0423	-0.0218
1017	SLU 17	-0.06	0.41	31.68	-9.8144	0.0423	-0.0217
1017	SLU 18	-0.06	0.39	32.75	-10.144	0.0438	-0.0227
1017	SLU 19	-0.06	0.43	32.75	-10.143	0.0438	-0.0225
1017	SLU 20	-0.06	0.4	33	-10.2199	0.0442	-0.0227
1017	SLU 21	-0.06	0.43	33	-10.219	0.0442	-0.0226
1017	SLU 22	-0.06	0.41	31.06	-9.6201	0.0415	-0.023
1017	SLU 23	-0.06	0.46	31.06	-9.6186	0.0415	-0.0228
1017	SLU 24	-0.06	0.43	31.56	-9.7717	0.0422	-0.0232
1017	SLU 25	-0.06	0.46	31.56	-9.7708	0.0422	-0.0231
1017	SLU 26	-0.06	0.47	31.31	-9.6945	0.0419	-0.0228
1017	SLU 27	-0.06	0.43	31.81	-9.8477	0.0426	-0.0233
1017	SLU 28	-0.06	0.47	31.81	-9.8467	0.0426	-0.0231
1017	SLU 29	-0.06	0.42	31.56	-9.7719	0.0422	-0.0231
1017	SLU 30	-0.06	0.45	31.56	-9.771	0.0422	-0.023
1017	SLU 31	-0.07	0.51	34.71	-10.7397	0.0469	-0.025
1017	SLU 32	-0.07	0.48	35.21	-10.8929	0.0476	-0.0255
1017	SLU 33	-0.07	0.51	35.21	-10.892	0.0476	-0.0253
1017	SLU 34	-0.07	0.51	34.95	-10.8157	0.0473	-0.0251
1017	SLU 35	-0.07	0.48	35.46	-10.9688	0.048	-0.0255
1017	SLU 36	-0.07	0.51	35.46	-10.9679	0.048	-0.0254
1017	SLU 37	-0.07	0.47	35.21	-10.8931	0.0476	-0.0254
1017	SLU 38	-0.07	0.5	35.21	-10.8922	0.0476	-0.0252
1017	SLU 39	-0.07	0.48	36.28	-11.2218	0.0492	-0.0262
1017	SLU 40	-0.07	0.51	36.27	-11.2209	0.0492	-0.0261
1017	SLU 41	-0.07	0.48	36.52	-11.2977	0.0496	-0.0263
1017	SLU 42	-0.07	0.51	36.52	-11.2968	0.0496	-0.0261
1017	SLU 43	-0.07	0.4	34.59	-10.7355	0.0452	-0.024
1017	SLU 44	-0.07	0.45	34.59	-10.7339	0.0452	-0.0238
1017	SLU 45	-0.07	0.41	35.09	-10.8871	0.0459	-0.0243
1017	SLU 46	-0.07	0.45	35.09	-10.8862	0.0459	-0.0242
1017	SLU 47	-0.07	0.45	34.84	-10.8098	0.0455	-0.0239
1017	SLU 48	-0.07	0.42	35.34	-10.963	0.0463	-0.0244
1017	SLU 49	-0.07	0.45	35.34	-10.9621	0.0463	-0.0242
1017	SLU 50	-0.07	0.4	35.09	-10.8873	0.0459	-0.0242
1017	SLU 51	-0.07	0.43	35.09	-10.8864	0.0459	-0.0241
1017	SLU 52	-0.07	0.5	38.24	-11.8551	0.0506	-0.0261
1017	SLU 53	-0.07	0.46	38.74	-12.0083	0.0513	-0.0265
1017	SLU 54	-0.07	0.49	38.74	-12.0073	0.0513	-0.0264
1017	SLU 55	-0.07	0.5	38.49	-11.931	0.0509	-0.0262
1017	SLU 56	-0.07	0.47	38.99	-12.0842	0.0517	-0.0266
1017	SLU 57	-0.07	0.5	38.99	-12.0832	0.0517	-0.0265
1017	SLU 58	-0.07	0.45	38.74	-12.0085	0.0513	-0.0264
1017	SLU 59	-0.07	0.48	38.74	-12.0075	0.0513	-0.0263
1017	SLU 60	-0.08	0.46	39.81	-12.3371	0.0529	-0.0273
1017	SLU 61	-0.08	0.49	39.8	-12.3362	0.0529	-0.0271
1017	SLU 62	-0.08	0.47	40.06	-12.413	0.0532	-0.0273
1017	SLU 63	-0.08	0.5	40.05	-12.4121	0.0532	-0.0272
1017	SLU 64	-0.08	0.48	38.12	-11.8133	0.0505	-0.0276
1017	SLU 65	-0.08	0.53	38.11	-11.8117	0.0505	-0.0274
1017	SLU 66	-0.08	0.5	38.62	-11.9649	0.0512	-0.0278
1017	SLU 67	-0.08	0.53	38.61	-11.964	0.0512	-0.0277
1017	SLU 68	-0.08	0.54	38.36	-11.8876	0.0509	-0.0274
1017	SLU 69	-0.08	0.5	38.87	-12.0408	0.0516	-0.0279
1017	SLU 70	-0.08	0.53	38.86	-12.0399	0.0516	-0.0278
1017	SLU 71	-0.08	0.49	38.62	-11.9651	0.0513	-0.0277
1017	SLU 72	-0.08	0.52	38.61	-11.9642	0.0513	-0.0276
1017	SLU 73	-0.08	0.58	41.76	-12.9329	0.0559	-0.0296
1017	SLU 74	-0.08	0.55	42.27	-13.0861	0.0566	-0.0301
1017	SLU 75	-0.08	0.58	42.26	-13.0851	0.0566	-0.03
1017	SLU 76	-0.08	0.58	42.01	-13.0088	0.0563	-0.0297
1017	SLU 77	-0.08	0.55	42.52	-13.162	0.057	-0.0301
1017	SLU 78	-0.08	0.58	42.51	-13.1611	0.057	-0.03

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1017	SLU 79	-0.08	0.53	42.26	-13.0863	0.0566	-0.03
1017	SLU 80	-0.08	0.57	42.26	-13.0853	0.0566	-0.0298
1017	SLU 81	-0.09	0.55	43.33	-13.4149	0.0582	-0.0308
1017	SLU 82	-0.09	0.58	43.33	-13.414	0.0582	-0.0307
1017	SLU 83	-0.09	0.55	43.58	-13.4909	0.0586	-0.0309
1017	SLU 84	-0.09	0.58	43.57	-13.4899	0.0586	-0.0307
1017	SLE RA 1	-0.06	0.35	28.55	-8.8502	0.0377	-0.0204
1017	SLE RA 2	-0.06	0.39	28.54	-8.8492	0.0377	-0.0203
1017	SLE RA 3	-0.06	0.36	28.88	-8.9513	0.0382	-0.0206
1017	SLE RA 4	-0.06	0.38	28.88	-8.9507	0.0382	-0.0205
1017	SLE RA 5	-0.06	0.39	28.71	-8.8998	0.0379	-0.0203
1017	SLE RA 6	-0.06	0.37	29.05	-9.0019	0.0384	-0.0206
1017	SLE RA 7	-0.06	0.39	29.04	-9.0013	0.0384	-0.0206
1017	SLE RA 8	-0.06	0.35	28.88	-8.9515	0.0382	-0.0205
1017	SLE RA 9	-0.06	0.38	28.88	-8.9509	0.0382	-0.0204
1017	SLE RA 10	-0.06	0.42	30.97	-9.5967	0.0413	-0.0218
1017	SLE RA 11	-0.06	0.4	31.31	-9.6988	0.0418	-0.0221
1017	SLE RA 12	-0.06	0.42	31.31	-9.6982	0.0418	-0.022
1017	SLE RA 13	-0.06	0.42	31.14	-9.6473	0.0415	-0.0218
1017	SLE RA 14	-0.06	0.4	31.48	-9.7494	0.042	-0.0222
1017	SLE RA 15	-0.06	0.42	31.48	-9.7488	0.042	-0.0221
1017	SLE RA 16	-0.06	0.39	31.31	-9.6989	0.0418	-0.022
1017	SLE RA 17	-0.06	0.41	31.31	-9.6983	0.0418	-0.0219
1017	SLE RA 18	-0.06	0.4	32.02	-9.918	0.0428	-0.0226
1017	SLE RA 19	-0.06	0.42	32.02	-9.9174	0.0428	-0.0225
1017	SLE RA 20	-0.06	0.4	32.19	-9.9686	0.0431	-0.0226
1017	SLE RA 21	-0.06	0.42	32.18	-9.968	0.0431	-0.0225
1017	SLE FR 1	-0.06	0.35	28.55	-8.8502	0.0377	-0.0204
1017	SLE FR 2	-0.06	0.36	28.55	-8.85	0.0377	-0.0204
1017	SLE FR 3	-0.06	0.35	28.61	-8.8705	0.0378	-0.0205
1017	SLE FR 4	-0.06	0.37	29.59	-9.1704	0.0392	-0.0211
1017	SLE FR 5	-0.06	0.37	29.66	-9.1908	0.0393	-0.0211
1017	SLE FR 6	-0.06	0.37	30.28	-9.3841	0.0402	-0.0215
1017	SLE QP 1	-0.06	0.35	28.55	-8.8502	0.0377	-0.0204
1017	SLE QP 2	-0.06	0.36	29.59	-9.1706	0.0392	-0.0211
1017	SLD 1	4	0.82	29.97	-9.322	0.0454	1.3994
1017	SLD 2	3.81	0.79	29.99	-9.3268	0.0455	1.3311
1017	SLD 3	3.9	-0.31	30.25	-9.4107	0.0464	1.3632
1017	SLD 4	3.7	-0.35	30.27	-9.4155	0.0465	1.295
1017	SLD 5	1.35	2.23	29.28	-9.0805	0.0396	0.4718
1017	SLD 6	1.22	2.21	29.29	-9.0837	0.0396	0.4275
1017	SLD 7	1	-1.55	30.2	-9.3764	0.0428	0.3512
1017	SLD 8	0.88	-1.58	30.22	-9.3795	0.0429	0.307
1017	SLD 9	-0.99	2.3	28.96	-8.9616	0.0355	-0.3491
1017	SLD 10	-1.12	2.28	28.97	-8.9648	0.0356	-0.3934
1017	SLD 11	-1.34	-1.48	29.89	-9.2575	0.0388	-0.4697
1017	SLD 12	-1.47	-1.5	29.9	-9.2606	0.0388	-0.514
1017	SLD 13	-3.82	1.08	28.91	-8.9256	0.0319	-1.3371
1017	SLD 14	-4.01	1.04	28.93	-8.9304	0.032	-1.4054
1017	SLD 15	-3.92	-0.06	29.19	-9.0144	0.0329	-1.3733
1017	SLD 16	-4.12	-0.09	29.21	-9.0192	0.033	-1.4415
1017	SLV 1	9.44	1.4	30.5	-9.5306	0.0538	3.3008
1017	SLV 2	8.98	1.32	30.54	-9.5417	0.0539	3.1418
1017	SLV 3	9.19	-1.19	31.13	-9.7343	0.056	3.2164
1017	SLV 4	8.74	-1.27	31.17	-9.7455	0.0562	3.0574
1017	SLV 5	3.24	4.61	28.89	-8.9676	0.0401	1.1304
1017	SLV 6	2.94	4.56	28.92	-8.9748	0.0402	1.0289
1017	SLV 7	2.43	-4.01	31.01	-9.6469	0.0477	0.849
1017	SLV 8	2.13	-4.06	31.03	-9.654	0.0478	0.7475
1017	SLV 9	-2.25	4.79	28.14	-8.6871	0.0306	-0.7897
1017	SLV 10	-2.54	4.74	28.17	-8.6943	0.0307	-0.8912
1017	SLV 11	-3.06	-3.83	30.26	-9.3664	0.0382	-1.0711
1017	SLV 12	-3.35	-3.88	30.29	-9.3735	0.0383	-1.1726
1017	SLV 13	-8.85	2	28	-8.5956	0.0222	-3.0996
1017	SLV 14	-9.31	1.91	28.05	-8.6068	0.0224	-3.2585
1017	SLV 15	-9.1	-0.59	28.64	-8.7994	0.0245	-3.184
1017	SLV 16	-9.55	-0.67	28.68	-8.8106	0.0247	-3.343
1017	CRTFP Ux+	0	0	0	0	0	0
1017	CRTFP Ux-	0	0	0	0	0	0
1017	CRTFP Uy+	0	0	0	0	0	0
1017	CRTFP Uy-	0	0	0	0	0	0
1018	SLU 1	-0.02	0.31	26.54	-7.9765	0.0297	-0.0057
1018	SLU 2	-0.01	0.36	26.54	-7.9748	0.0297	-0.0055
1018	SLU 3	-0.01	0.33	27.02	-8.1163	0.0303	-0.0056
1018	SLU 4	-0.01	0.36	27.02	-8.1153	0.0303	-0.0055
1018	SLU 5	-0.01	0.37	26.77	-8.0448	0.03	-0.0053
1018	SLU 6	-0.01	0.33	27.26	-8.1863	0.0306	-0.0054
1018	SLU 7	-0.01	0.37	27.26	-8.1853	0.0306	-0.0053
1018	SLU 8	-0.01	0.32	27.02	-8.1165	0.0303	-0.0054
1018	SLU 9	-0.01	0.35	27.02	-8.1155	0.0303	-0.0052
1018	SLU 10	-0.02	0.41	30.04	-9.0123	0.0341	-0.0061
1018	SLU 11	-0.02	0.38	30.52	-9.1538	0.0347	-0.0062
1018	SLU 12	-0.02	0.41	30.52	-9.1528	0.0347	-0.0061
1018	SLU 13	-0.02	0.41	30.27	-9.0823	0.0344	-0.0059
1018	SLU 14	-0.02	0.38	30.76	-9.2238	0.035	-0.006
1018	SLU 15	-0.02	0.41	30.76	-9.2228	0.035	-0.0059
1018	SLU 16	-0.02	0.36	30.52	-9.154	0.0347	-0.006
1018	SLU 17	-0.01	0.39	30.52	-9.153	0.0347	-0.0058
1018	SLU 18	-0.02	0.38	31.54	-9.4586	0.036	-0.0066
1018	SLU 19	-0.02	0.41	31.54	-9.4576	0.036	-0.0064
1018	SLU 20	-0.02	0.38	31.78	-9.5286	0.0363	-0.0064

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1018	SLU 21	-0.02	0.41	31.78	-9.5276	0.0363	-0.0063
1018	SLU 22	-0.02	0.39	29.92	-8.9718	0.034	-0.0076
1018	SLU 23	-0.02	0.44	29.91	-8.9702	0.034	-0.0074
1018	SLU 24	-0.02	0.41	30.4	-9.1117	0.0347	-0.0075
1018	SLU 25	-0.02	0.44	30.39	-9.1107	0.0347	-0.0074
1018	SLU 26	-0.02	0.45	30.15	-9.0402	0.0344	-0.0072
1018	SLU 27	-0.02	0.41	30.64	-9.1817	0.035	-0.0073
1018	SLU 28	-0.02	0.45	30.63	-9.1807	0.035	-0.0072
1018	SLU 29	-0.02	0.4	30.4	-9.1119	0.0347	-0.0073
1018	SLU 30	-0.02	0.43	30.39	-9.1109	0.0347	-0.0071
1018	SLU 31	-0.02	0.49	33.41	-10.0077	0.0384	-0.008
1018	SLU 32	-0.02	0.46	33.9	-10.1492	0.0391	-0.0081
1018	SLU 33	-0.02	0.49	33.89	-10.1482	0.0391	-0.008
1018	SLU 34	-0.02	0.49	33.65	-10.0777	0.0388	-0.0078
1018	SLU 35	-0.02	0.46	34.14	-10.2192	0.0394	-0.0079
1018	SLU 36	-0.02	0.49	34.13	-10.2182	0.0394	-0.0078
1018	SLU 37	-0.02	0.44	33.9	-10.1494	0.0391	-0.0079
1018	SLU 38	-0.02	0.47	33.89	-10.1484	0.0391	-0.0077
1018	SLU 39	-0.02	0.46	34.92	-10.454	0.0403	-0.0085
1018	SLU 40	-0.02	0.49	34.91	-10.453	0.0403	-0.0083
1018	SLU 41	-0.02	0.46	35.16	-10.524	0.0406	-0.0083
1018	SLU 42	-0.02	0.49	35.15	-10.523	0.0406	-0.0082
1018	SLU 43	-0.02	0.38	33.35	-10.0281	0.0371	-0.0068
1018	SLU 44	-0.02	0.43	33.34	-10.0265	0.0371	-0.0065
1018	SLU 45	-0.02	0.4	33.83	-10.168	0.0377	-0.0067
1018	SLU 46	-0.02	0.43	33.82	-10.167	0.0377	-0.0065
1018	SLU 47	-0.02	0.43	33.58	-10.0965	0.0374	-0.0064
1018	SLU 48	-0.02	0.4	34.07	-10.238	0.038	-0.0065
1018	SLU 49	-0.02	0.43	34.06	-10.237	0.038	-0.0063
1018	SLU 50	-0.02	0.38	33.82	-10.1682	0.0377	-0.0064
1018	SLU 51	-0.02	0.42	33.82	-10.1672	0.0377	-0.0063
1018	SLU 52	-0.02	0.47	36.84	-11.064	0.0415	-0.0071
1018	SLU 53	-0.02	0.44	37.33	-11.2055	0.0421	-0.0073
1018	SLU 54	-0.02	0.47	37.32	-11.2045	0.0421	-0.0071
1018	SLU 55	-0.02	0.48	37.08	-11.134	0.0418	-0.007
1018	SLU 56	-0.02	0.44	37.57	-11.2755	0.0424	-0.0071
1018	SLU 57	-0.02	0.48	37.56	-11.2745	0.0424	-0.007
1018	SLU 58	-0.02	0.43	37.32	-11.2057	0.0421	-0.007
1018	SLU 59	-0.02	0.46	37.32	-11.2047	0.0421	-0.0069
1018	SLU 60	-0.02	0.44	38.35	-11.5103	0.0434	-0.0077
1018	SLU 61	-0.02	0.47	38.34	-11.5093	0.0434	-0.0075
1018	SLU 62	-0.02	0.44	38.59	-11.5803	0.0437	-0.0075
1018	SLU 63	-0.02	0.48	38.58	-11.5793	0.0437	-0.0073
1018	SLU 64	-0.02	0.46	36.72	-11.0235	0.0415	-0.0087
1018	SLU 65	-0.02	0.51	36.72	-11.0218	0.0415	-0.0084
1018	SLU 66	-0.02	0.48	37.2	-11.1634	0.0421	-0.0086
1018	SLU 67	-0.02	0.51	37.2	-11.1623	0.0421	-0.0084
1018	SLU 68	-0.02	0.51	36.96	-11.0919	0.0418	-0.0083
1018	SLU 69	-0.02	0.48	37.44	-11.2334	0.0424	-0.0084
1018	SLU 70	-0.02	0.51	37.44	-11.2324	0.0424	-0.0082
1018	SLU 71	-0.02	0.46	37.2	-11.1636	0.0421	-0.0083
1018	SLU 72	-0.02	0.5	37.2	-11.1626	0.0421	-0.0082
1018	SLU 73	-0.02	0.55	40.22	-12.0593	0.0459	-0.009
1018	SLU 74	-0.02	0.52	40.7	-12.2008	0.0465	-0.0092
1018	SLU 75	-0.02	0.55	40.7	-12.1998	0.0465	-0.009
1018	SLU 76	-0.02	0.56	40.46	-12.1293	0.0462	-0.0089
1018	SLU 77	-0.02	0.52	40.94	-12.2709	0.0468	-0.009
1018	SLU 78	-0.02	0.56	40.94	-12.2699	0.0468	-0.0089
1018	SLU 79	-0.02	0.51	40.7	-12.201	0.0465	-0.0089
1018	SLU 80	-0.02	0.54	40.7	-12.2	0.0465	-0.0088
1018	SLU 81	-0.02	0.52	41.72	-12.5056	0.0477	-0.0096
1018	SLU 82	-0.02	0.55	41.72	-12.5046	0.0477	-0.0094
1018	SLU 83	-0.02	0.52	41.96	-12.5757	0.0481	-0.0094
1018	SLU 84	-0.02	0.56	41.96	-12.5747	0.0481	-0.0092
1018	SLE RA 1	-0.02	0.34	27.51	-8.2609	0.0309	-0.0062
1018	SLE RA 2	-0.02	0.37	27.5	-8.2597	0.0309	-0.0061
1018	SLE RA 3	-0.02	0.35	27.83	-8.3541	0.0313	-0.0062
1018	SLE RA 4	-0.02	0.37	27.82	-8.3534	0.0313	-0.0061
1018	SLE RA 5	-0.02	0.37	27.66	-8.3064	0.0311	-0.006
1018	SLE RA 6	-0.02	0.35	27.99	-8.4008	0.0315	-0.0061
1018	SLE RA 7	-0.02	0.37	27.98	-8.4001	0.0315	-0.006
1018	SLE RA 8	-0.02	0.34	27.83	-8.3542	0.0313	-0.006
1018	SLE RA 9	-0.02	0.36	27.82	-8.3536	0.0313	-0.0059
1018	SLE RA 10	-0.02	0.4	29.84	-8.9514	0.0339	-0.0065
1018	SLE RA 11	-0.02	0.38	30.16	-9.0457	0.0343	-0.0066
1018	SLE RA 12	-0.02	0.4	30.16	-9.0451	0.0343	-0.0065
1018	SLE RA 13	-0.02	0.4	29.99	-8.9981	0.0341	-0.0064
1018	SLE RA 14	-0.02	0.38	30.32	-9.0924	0.0345	-0.0065
1018	SLE RA 15	-0.02	0.4	30.32	-9.0918	0.0345	-0.0064
1018	SLE RA 16	-0.02	0.37	30.16	-9.0459	0.0343	-0.0064
1018	SLE RA 17	-0.02	0.39	30.16	-9.0452	0.0343	-0.0063
1018	SLE RA 18	-0.02	0.38	30.84	-9.2489	0.0351	-0.0068
1018	SLE RA 19	-0.02	0.4	30.84	-9.2483	0.0351	-0.0067
1018	SLE RA 20	-0.02	0.38	31	-9.2956	0.0353	-0.0067
1018	SLE RA 21	-0.02	0.4	31	-9.295	0.0353	-0.0066
1018	SLE FR 1	-0.02	0.34	27.51	-8.2609	0.0309	-0.0062
1018	SLE FR 2	-0.02	0.34	27.51	-8.2606	0.0309	-0.0062
1018	SLE FR 3	-0.02	0.34	27.57	-8.2795	0.031	-0.0062
1018	SLE FR 4	-0.02	0.35	28.51	-8.5571	0.0322	-0.0064
1018	SLE FR 5	-0.02	0.35	28.57	-8.576	0.0323	-0.0064
1018	SLE FR 6	-0.02	0.36	29.17	-8.7549	0.033	-0.0065

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1018	SLE QP 1	-0.02	0.34	27.51	-8.2609	0.0309	-0.0062
1018	SLE QP 2	-0.02	0.35	28.51	-8.5573	0.0322	-0.0064
1018	SLD 1	4.05	0.8	28.68	-8.6404	0.0387	1.4157
1018	SLD 2	3.85	0.77	28.7	-8.6445	0.0387	1.3474
1018	SLD 3	3.94	-0.32	28.98	-8.7398	0.0395	1.3795
1018	SLD 4	3.75	-0.35	28.99	-8.7438	0.0396	1.3112
1018	SLD 5	1.39	2.18	28.11	-8.4308	0.0328	0.4871
1018	SLD 6	1.27	2.17	28.12	-8.4335	0.0328	0.4428
1018	SLD 7	1.05	-1.54	29.09	-8.762	0.0357	0.3663
1018	SLD 8	0.92	-1.56	29.1	-8.7646	0.0358	0.322
1018	SLD 9	-0.95	2.26	27.92	-8.3499	0.0286	-0.3348
1018	SLD 10	-1.08	2.24	27.93	-8.3525	0.0287	-0.3791
1018	SLD 11	-1.3	-1.47	28.89	-8.6811	0.0315	-0.4556
1018	SLD 12	-1.43	-1.49	28.9	-8.6837	0.0316	-0.5
1018	SLD 13	-3.78	1.04	28.02	-8.3707	0.0248	-1.324
1018	SLD 14	-3.98	1.02	28.04	-8.3748	0.0248	-1.3923
1018	SLD 15	-3.88	-0.08	28.32	-8.4701	0.0256	-1.3603
1018	SLD 16	-4.08	-0.1	28.33	-8.4741	0.0257	-1.4286
1018	SLV 1	9.49	1.36	28.93	-8.7578	0.0474	3.3194
1018	SLV 2	9.03	1.3	28.97	-8.7672	0.0475	3.1602
1018	SLV 3	9.24	-1.19	29.6	-8.9865	0.0494	3.2348
1018	SLV 4	8.79	-1.25	29.64	-8.9959	0.0496	3.0757
1018	SLV 5	3.28	4.53	27.61	-8.2691	0.0336	1.1465
1018	SLV 6	2.99	4.49	27.64	-8.2751	0.0337	1.0449
1018	SLV 7	2.47	-3.97	29.85	-9.0312	0.0404	0.8646
1018	SLV 8	2.18	-4.01	29.87	-9.0372	0.0405	0.763
1018	SLV 9	-2.21	4.7	27.15	-8.0773	0.0238	-0.7758
1018	SLV 10	-2.5	4.66	27.17	-8.0834	0.0239	-0.8775
1018	SLV 11	-3.02	-3.79	29.38	-8.8395	0.0307	-1.0578
1018	SLV 12	-3.31	-3.83	29.4	-8.8455	0.0308	-1.1594
1018	SLV 13	-8.82	1.94	27.38	-8.1187	0.0148	-3.0885
1018	SLV 14	-9.28	1.88	27.41	-8.1281	0.015	-3.2477
1018	SLV 15	-9.06	-0.61	28.05	-8.3473	0.0168	-3.1731
1018	SLV 16	-9.52	-0.67	28.08	-8.3567	0.017	-3.3322
1018	CRTFP Ux+	0	0	0	0	0	0
1018	CRTFP Ux-	0	0	0	0	0	0
1018	CRTFP Uy+	0	0	0	0	0	0
1018	CRTFP Uy-	0	0	0	0	0	0
1019	SLU 1	0.02	0.3	25.81	-7.5656	0.0186	0.0079
1019	SLU 2	0.02	0.35	25.8	-7.5638	0.0186	0.0082
1019	SLU 3	0.03	0.32	26.28	-7.6969	0.019	0.0084
1019	SLU 4	0.03	0.35	26.27	-7.6958	0.019	0.0086
1019	SLU 5	0.03	0.35	26.04	-7.6295	0.0188	0.0086
1019	SLU 6	0.03	0.32	26.51	-7.7627	0.0192	0.0088
1019	SLU 7	0.03	0.35	26.5	-7.7616	0.0192	0.009
1019	SLU 8	0.03	0.31	26.27	-7.6971	0.019	0.0088
1019	SLU 9	0.03	0.34	26.27	-7.696	0.019	0.0089
1019	SLU 10	0.03	0.39	29.2	-8.541	0.0213	0.0092
1019	SLU 11	0.03	0.36	29.67	-8.6741	0.0217	0.0094
1019	SLU 12	0.03	0.39	29.66	-8.673	0.0217	0.0096
1019	SLU 13	0.03	0.39	29.43	-8.6067	0.0215	0.0096
1019	SLU 14	0.03	0.36	29.9	-8.7399	0.0219	0.0098
1019	SLU 15	0.03	0.39	29.9	-8.7388	0.0219	0.01
1019	SLU 16	0.03	0.35	29.67	-8.6743	0.0217	0.0098
1019	SLU 17	0.03	0.38	29.66	-8.6732	0.0217	0.0099
1019	SLU 18	0.03	0.36	30.66	-8.9615	0.0225	0.0094
1019	SLU 19	0.03	0.39	30.65	-8.9605	0.0225	0.0096
1019	SLU 20	0.03	0.36	30.89	-9.0273	0.0227	0.0098
1019	SLU 21	0.03	0.39	30.88	-9.0262	0.0227	0.01
1019	SLU 22	0.02	0.38	29.08	-8.5012	0.0213	0.0077
1019	SLU 23	0.02	0.43	29.07	-8.4994	0.0214	0.008
1019	SLU 24	0.02	0.39	29.55	-8.6325	0.0217	0.0081
1019	SLU 25	0.03	0.43	29.54	-8.6315	0.0217	0.0083
1019	SLU 26	0.03	0.43	29.31	-8.5652	0.0215	0.0084
1019	SLU 27	0.03	0.4	29.78	-8.6983	0.0219	0.0086
1019	SLU 28	0.03	0.43	29.77	-8.6972	0.0219	0.0087
1019	SLU 29	0.03	0.38	29.54	-8.6327	0.0217	0.0085
1019	SLU 30	0.03	0.41	29.54	-8.6317	0.0217	0.0087
1019	SLU 31	0.03	0.47	32.47	-9.4766	0.0241	0.009
1019	SLU 32	0.03	0.43	32.94	-9.6097	0.0244	0.0092
1019	SLU 33	0.03	0.47	32.93	-9.6087	0.0244	0.0093
1019	SLU 34	0.03	0.47	32.7	-9.5424	0.0243	0.0094
1019	SLU 35	0.03	0.44	33.17	-9.6755	0.0246	0.0096
1019	SLU 36	0.03	0.47	33.16	-9.6744	0.0246	0.0097
1019	SLU 37	0.03	0.42	32.93	-9.6099	0.0244	0.0095
1019	SLU 38	0.03	0.45	32.93	-9.6089	0.0244	0.0097
1019	SLU 39	0.03	0.43	33.93	-9.8972	0.0252	0.0091
1019	SLU 40	0.03	0.46	33.92	-9.8961	0.0252	0.0093
1019	SLU 41	0.03	0.44	34.16	-9.9629	0.0254	0.0096
1019	SLU 42	0.03	0.47	34.15	-9.9619	0.0254	0.0097
1019	SLU 43	0.03	0.37	32.43	-9.5144	0.0233	0.0104
1019	SLU 44	0.03	0.42	32.43	-9.5126	0.0233	0.0107
1019	SLU 45	0.03	0.38	32.9	-9.6458	0.0237	0.0109
1019	SLU 46	0.03	0.41	32.89	-9.6447	0.0237	0.011
1019	SLU 47	0.03	0.42	32.66	-9.5784	0.0235	0.0111
1019	SLU 48	0.03	0.39	33.13	-9.7115	0.0239	0.0113
1019	SLU 49	0.03	0.42	33.13	-9.7105	0.0239	0.0114
1019	SLU 50	0.03	0.37	32.9	-9.646	0.0237	0.0112
1019	SLU 51	0.03	0.4	32.89	-9.6449	0.0237	0.0114
1019	SLU 52	0.03	0.46	35.82	-10.4898	0.026	0.0117
1019	SLU 53	0.04	0.42	36.29	-10.623	0.0264	0.0119

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1019	SLU 54	0.04	0.45	36.29	-10.6219	0.0264	0.012
1019	SLU 55	0.04	0.46	36.05	-10.5556	0.0262	0.0121
1019	SLU 56	0.04	0.43	36.52	-10.6887	0.0266	0.0123
1019	SLU 57	0.04	0.46	36.52	-10.6877	0.0266	0.0125
1019	SLU 58	0.04	0.41	36.29	-10.6232	0.0264	0.0122
1019	SLU 59	0.04	0.44	36.28	-10.6221	0.0264	0.0124
1019	SLU 60	0.04	0.42	37.28	-10.9104	0.0271	0.0119
1019	SLU 61	0.04	0.45	37.28	-10.9093	0.0271	0.012
1019	SLU 62	0.04	0.43	37.51	-10.9762	0.0273	0.0123
1019	SLU 63	0.04	0.46	37.51	-10.9751	0.0273	0.0124
1019	SLU 64	0.03	0.44	35.7	-10.4501	0.026	0.0102
1019	SLU 65	0.03	0.49	35.7	-10.4483	0.026	0.0104
1019	SLU 66	0.03	0.46	36.17	-10.5814	0.0264	0.0106
1019	SLU 67	0.03	0.49	36.16	-10.5803	0.0264	0.0108
1019	SLU 68	0.03	0.49	35.93	-10.5141	0.0262	0.0108
1019	SLU 69	0.03	0.46	36.4	-10.6472	0.0266	0.011
1019	SLU 70	0.03	0.49	36.39	-10.6461	0.0266	0.0112
1019	SLU 71	0.03	0.45	36.17	-10.5816	0.0264	0.011
1019	SLU 72	0.03	0.48	36.16	-10.5805	0.0264	0.0111
1019	SLU 73	0.03	0.53	39.09	-11.4255	0.0287	0.0114
1019	SLU 74	0.04	0.5	39.56	-11.5586	0.0291	0.0116
1019	SLU 75	0.04	0.53	39.56	-11.5575	0.0291	0.0118
1019	SLU 76	0.04	0.53	39.32	-11.4912	0.0289	0.0119
1019	SLU 77	0.04	0.5	39.79	-11.6244	0.0293	0.012
1019	SLU 78	0.04	0.53	39.79	-11.6233	0.0293	0.0122
1019	SLU 79	0.04	0.49	39.56	-11.5588	0.0291	0.012
1019	SLU 80	0.04	0.52	39.55	-11.5577	0.0291	0.0122
1019	SLU 81	0.04	0.5	40.55	-11.8461	0.0299	0.0116
1019	SLU 82	0.04	0.53	40.55	-11.845	0.0299	0.0118
1019	SLU 83	0.04	0.5	40.78	-11.9118	0.0301	0.012
1019	SLU 84	0.04	0.53	40.78	-11.9107	0.0301	0.0122
1019	SLE RA 1	0.02	0.32	26.75	-7.8329	0.0194	0.0079
1019	SLE RA 2	0.02	0.36	26.74	-7.8317	0.0194	0.008
1019	SLE RA 3	0.02	0.33	27.06	-7.9204	0.0197	0.0082
1019	SLE RA 4	0.02	0.35	27.05	-7.9197	0.0197	0.0083
1019	SLE RA 5	0.02	0.36	26.9	-7.8755	0.0195	0.0083
1019	SLE RA 6	0.03	0.34	27.21	-7.9643	0.0198	0.0084
1019	SLE RA 7	0.03	0.36	27.21	-7.9636	0.0198	0.0086
1019	SLE RA 8	0.03	0.33	27.05	-7.9206	0.0197	0.0084
1019	SLE RA 9	0.03	0.35	27.05	-7.9199	0.0197	0.0085
1019	SLE RA 10	0.03	0.38	29	-8.4831	0.0212	0.0087
1019	SLE RA 11	0.03	0.36	29.32	-8.5719	0.0215	0.0088
1019	SLE RA 12	0.03	0.38	29.31	-8.5712	0.0215	0.009
1019	SLE RA 13	0.03	0.39	29.16	-8.527	0.0213	0.009
1019	SLE RA 14	0.03	0.36	29.47	-8.6157	0.0216	0.0091
1019	SLE RA 15	0.03	0.38	29.47	-8.615	0.0216	0.0092
1019	SLE RA 16	0.03	0.35	29.31	-8.572	0.0215	0.0091
1019	SLE RA 17	0.03	0.37	29.31	-8.5713	0.0215	0.0092
1019	SLE RA 18	0.03	0.36	29.98	-8.7635	0.022	0.0088
1019	SLE RA 19	0.03	0.38	29.97	-8.7628	0.022	0.0089
1019	SLE RA 20	0.03	0.36	30.13	-8.8074	0.0221	0.0091
1019	SLE RA 21	0.03	0.38	30.13	-8.8067	0.0221	0.0092
1019	SLE FR 1	0.02	0.32	26.75	-7.8329	0.0194	0.0079
1019	SLE FR 2	0.02	0.33	26.74	-7.8326	0.0194	0.0079
1019	SLE FR 3	0.02	0.32	26.81	-7.8504	0.0195	0.008
1019	SLE FR 4	0.02	0.34	27.71	-8.1118	0.0202	0.0082
1019	SLE FR 5	0.02	0.33	27.78	-8.1296	0.0202	0.0083
1019	SLE FR 6	0.03	0.34	28.36	-8.2982	0.0207	0.0083
1019	SLE QP 1	0.02	0.32	26.75	-7.8329	0.0194	0.0079
1019	SLE QP 2	0.02	0.33	27.71	-8.1121	0.0202	0.0082
1019	SLD 1	4.09	0.78	27.7	-8.1281	0.0269	1.4312
1019	SLD 2	3.89	0.76	27.71	-8.1315	0.027	1.3629
1019	SLD 3	3.99	-0.32	28	-8.2368	0.0275	1.3949
1019	SLD 4	3.79	-0.34	28.01	-8.2402	0.0276	1.3266
1019	SLD 5	1.44	2.15	27.24	-7.9514	0.0213	0.5021
1019	SLD 6	1.31	2.14	27.25	-7.9536	0.0213	0.4577
1019	SLD 7	1.09	-1.54	28.26	-8.3138	0.0233	0.381
1019	SLD 8	0.96	-1.55	28.27	-8.3159	0.0233	0.3367
1019	SLD 9	-0.91	2.22	27.16	-7.9082	0.017	-0.3203
1019	SLD 10	-1.04	2.2	27.17	-7.9104	0.0171	-0.3647
1019	SLD 11	-1.26	-1.47	28.18	-8.2705	0.019	-0.4414
1019	SLD 12	-1.39	-1.48	28.19	-8.2727	0.0191	-0.4858
1019	SLD 13	-3.74	1.01	27.42	-7.984	0.0127	-1.3103
1019	SLD 14	-3.94	0.99	27.43	-7.9874	0.0128	-1.3786
1019	SLD 15	-3.84	-0.1	27.72	-8.0927	0.0133	-1.3466
1019	SLD 16	-4.04	-0.11	27.73	-8.0961	0.0134	-1.4149
1019	SLV 1	9.53	1.34	27.68	-8.1564	0.036	3.3362
1019	SLV 2	9.08	1.3	27.71	-8.1642	0.0362	3.1769
1019	SLV 3	9.29	-1.18	28.39	-8.4069	0.0374	3.2514
1019	SLV 4	8.83	-1.22	28.42	-8.4147	0.0376	3.0922
1019	SLV 5	3.32	4.47	26.63	-7.7441	0.0228	1.1621
1019	SLV 6	3.03	4.44	26.65	-7.7491	0.0229	1.0604
1019	SLV 7	2.51	-3.93	28.98	-8.5792	0.0275	0.8795
1019	SLV 8	2.22	-3.96	29	-8.5842	0.0276	0.7778
1019	SLV 9	-2.17	4.63	26.43	-7.64	0.0128	-0.7615
1019	SLV 10	-2.46	4.6	26.45	-7.645	0.0129	-0.8632
1019	SLV 11	-2.98	-3.77	28.78	-8.4751	0.0175	-1.0441
1019	SLV 12	-3.27	-3.8	28.8	-8.4801	0.0176	-1.1458
1019	SLV 13	-8.78	1.88	27.01	-7.8094	0.0027	-3.0759
1019	SLV 14	-9.24	1.84	27.04	-7.8173	0.0029	-3.2351
1019	SLV 15	-9.03	-0.64	27.72	-8.0599	0.0041	-3.1606

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1019	SLV 16	-9.48	-0.68	27.75	-8.0678	0.0043	-3.3199
1019	CRTFP Ux+	0	0	0	0	0	0
1019	CRTFP Ux-	0	0	0	0	0	0
1019	CRTFP Uy+	0	0	0	0	0	0
1019	CRTFP Uy-	0	0	0	0	0	0
1020	SLU 1	0.06	0.29	25.45	-7.362	0.005	0.0215
1020	SLU 2	0.06	0.34	25.45	-7.3601	0.005	0.0218
1020	SLU 3	0.06	0.31	25.91	-7.4891	0.0051	0.0223
1020	SLU 4	0.07	0.34	25.91	-7.488	0.0051	0.0225
1020	SLU 5	0.06	0.35	25.67	-7.4237	0.0051	0.0225
1020	SLU 6	0.07	0.31	26.14	-7.5528	0.0052	0.023
1020	SLU 7	0.07	0.34	26.13	-7.5517	0.0052	0.0232
1020	SLU 8	0.07	0.3	25.91	-7.4893	0.0051	0.0228
1020	SLU 9	0.07	0.33	25.9	-7.4882	0.0051	0.023
1020	SLU 10	0.07	0.38	28.79	-8.3083	0.0056	0.0245
1020	SLU 11	0.07	0.35	29.25	-8.4374	0.0057	0.025
1020	SLU 12	0.07	0.38	29.25	-8.4363	0.0057	0.0252
1020	SLU 13	0.07	0.38	29.02	-8.372	0.0057	0.0252
1020	SLU 14	0.07	0.35	29.48	-8.5011	0.0058	0.0257
1020	SLU 15	0.07	0.38	29.48	-8.5	0.0058	0.0258
1020	SLU 16	0.07	0.33	29.25	-8.4376	0.0057	0.0255
1020	SLU 17	0.07	0.36	29.25	-8.4365	0.0057	0.0257
1020	SLU 18	0.07	0.34	30.23	-8.7167	0.0059	0.0253
1020	SLU 19	0.07	0.38	30.22	-8.7155	0.0059	0.0255
1020	SLU 20	0.08	0.35	30.46	-8.7804	0.006	0.026
1020	SLU 21	0.08	0.38	30.45	-8.7792	0.006	0.0262
1020	SLU 22	0.07	0.36	28.67	-8.2683	0.0057	0.0229
1020	SLU 23	0.07	0.41	28.66	-8.2664	0.0057	0.0232
1020	SLU 24	0.07	0.38	29.13	-8.3955	0.0058	0.0237
1020	SLU 25	0.07	0.41	29.12	-8.3943	0.0058	0.0239
1020	SLU 26	0.07	0.42	28.89	-8.3301	0.0058	0.0239
1020	SLU 27	0.07	0.38	29.36	-8.4592	0.0059	0.0244
1020	SLU 28	0.07	0.41	29.35	-8.458	0.0059	0.0246
1020	SLU 29	0.07	0.37	29.13	-8.3957	0.0058	0.0242
1020	SLU 30	0.07	0.4	29.12	-8.3945	0.0058	0.0244
1020	SLU 31	0.08	0.45	32.01	-9.2147	0.0064	0.0259
1020	SLU 32	0.08	0.42	32.47	-9.3438	0.0064	0.0264
1020	SLU 33	0.08	0.45	32.47	-9.3426	0.0065	0.0266
1020	SLU 34	0.08	0.45	32.23	-9.2784	0.0064	0.0266
1020	SLU 35	0.08	0.42	32.7	-9.4074	0.0065	0.0271
1020	SLU 36	0.08	0.45	32.69	-9.4063	0.0065	0.0272
1020	SLU 37	0.08	0.4	32.47	-9.3439	0.0064	0.0269
1020	SLU 38	0.08	0.44	32.46	-9.3428	0.0065	0.0271
1020	SLU 39	0.08	0.42	33.45	-9.623	0.0066	0.0267
1020	SLU 40	0.08	0.45	33.44	-9.6218	0.0066	0.0269
1020	SLU 41	0.08	0.42	33.67	-9.6867	0.0067	0.0274
1020	SLU 42	0.08	0.45	33.67	-9.6855	0.0067	0.0276
1020	SLU 43	0.08	0.36	31.99	-9.2598	0.0063	0.0275
1020	SLU 44	0.08	0.41	31.98	-9.2579	0.0063	0.0278
1020	SLU 45	0.08	0.37	32.44	-9.387	0.0064	0.0283
1020	SLU 46	0.08	0.4	32.44	-9.3859	0.0064	0.0285
1020	SLU 47	0.08	0.41	32.21	-9.3216	0.0063	0.0285
1020	SLU 48	0.08	0.38	32.67	-9.4507	0.0064	0.029
1020	SLU 49	0.08	0.41	32.67	-9.4495	0.0064	0.0292
1020	SLU 50	0.08	0.36	32.44	-9.3872	0.0064	0.0288
1020	SLU 51	0.08	0.39	32.44	-9.3861	0.0064	0.029
1020	SLU 52	0.09	0.44	35.32	-10.2062	0.0069	0.0305
1020	SLU 53	0.09	0.41	35.79	-10.3353	0.007	0.031
1020	SLU 54	0.09	0.44	35.78	-10.3341	0.007	0.0312
1020	SLU 55	0.09	0.45	35.55	-10.2699	0.007	0.0311
1020	SLU 56	0.09	0.41	36.01	-10.399	0.0071	0.0316
1020	SLU 57	0.09	0.44	36.01	-10.3978	0.0071	0.0318
1020	SLU 58	0.09	0.4	35.78	-10.3355	0.007	0.0315
1020	SLU 59	0.09	0.43	35.78	-10.3343	0.007	0.0317
1020	SLU 60	0.09	0.41	36.76	-10.6145	0.0072	0.0313
1020	SLU 61	0.09	0.44	36.76	-10.6134	0.0072	0.0315
1020	SLU 62	0.09	0.41	36.99	-10.6782	0.0072	0.032
1020	SLU 63	0.09	0.44	36.98	-10.6771	0.0072	0.0321
1020	SLU 64	0.08	0.43	35.2	-10.1661	0.007	0.0289
1020	SLU 65	0.08	0.48	35.2	-10.1642	0.007	0.0292
1020	SLU 66	0.09	0.44	35.66	-10.2933	0.0071	0.0297
1020	SLU 67	0.09	0.47	35.66	-10.2922	0.0071	0.0299
1020	SLU 68	0.09	0.48	35.42	-10.2279	0.0071	0.0299
1020	SLU 69	0.09	0.45	35.89	-10.357	0.0071	0.0304
1020	SLU 70	0.09	0.48	35.88	-10.3559	0.0072	0.0306
1020	SLU 71	0.09	0.43	35.66	-10.2935	0.0071	0.0302
1020	SLU 72	0.09	0.46	35.65	-10.2924	0.0071	0.0304
1020	SLU 73	0.09	0.51	38.54	-11.1125	0.0076	0.0319
1020	SLU 74	0.09	0.48	39	-11.2416	0.0077	0.0324
1020	SLU 75	0.09	0.51	39	-11.2405	0.0077	0.0326
1020	SLU 76	0.09	0.52	38.77	-11.1762	0.0077	0.0325
1020	SLU 77	0.1	0.48	39.23	-11.3053	0.0078	0.033
1020	SLU 78	0.1	0.51	39.23	-11.3041	0.0078	0.0332
1020	SLU 79	0.1	0.47	39	-11.2418	0.0077	0.0329
1020	SLU 80	0.1	0.5	39	-11.2407	0.0077	0.0331
1020	SLU 81	0.1	0.48	39.98	-11.5208	0.0079	0.0327
1020	SLU 82	0.1	0.51	39.97	-11.5197	0.0079	0.0329
1020	SLU 83	0.1	0.48	40.21	-11.5845	0.0079	0.0334
1020	SLU 84	0.1	0.51	40.2	-11.5834	0.0079	0.0336
1020	SLE RA 1	0.06	0.31	26.37	-7.6209	0.0052	0.0219
1020	SLE RA 2	0.06	0.35	26.37	-7.6196	0.0052	0.0221

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1020	SLE RA 3	0.07	0.32	26.68	-7.7057	0.0053	0.0225
1020	SLE RA 4	0.07	0.34	26.68	-7.7049	0.0053	0.0226
1020	SLE RA 5	0.07	0.35	26.52	-7.6621	0.0053	0.0226
1020	SLE RA 6	0.07	0.33	26.83	-7.7482	0.0053	0.0229
1020	SLE RA 7	0.07	0.35	26.83	-7.7474	0.0053	0.023
1020	SLE RA 8	0.07	0.32	26.68	-7.7058	0.0053	0.0228
1020	SLE RA 9	0.07	0.34	26.67	-7.7051	0.0053	0.0229
1020	SLE RA 10	0.07	0.37	28.6	-8.2518	0.0056	0.0239
1020	SLE RA 11	0.07	0.35	28.91	-8.3379	0.0057	0.0242
1020	SLE RA 12	0.07	0.37	28.9	-8.3371	0.0057	0.0244
1020	SLE RA 13	0.07	0.37	28.75	-8.2943	0.0057	0.0243
1020	SLE RA 14	0.07	0.35	29.06	-8.3804	0.0057	0.0247
1020	SLE RA 15	0.07	0.37	29.05	-8.3796	0.0057	0.0248
1020	SLE RA 16	0.07	0.34	28.9	-8.338	0.0057	0.0246
1020	SLE RA 17	0.07	0.36	28.9	-8.3373	0.0057	0.0247
1020	SLE RA 18	0.07	0.35	29.56	-8.524	0.0058	0.0245
1020	SLE RA 19	0.07	0.37	29.55	-8.5233	0.0058	0.0246
1020	SLE RA 20	0.07	0.35	29.71	-8.5665	0.0058	0.0249
1020	SLE RA 21	0.07	0.37	29.7	-8.5657	0.0058	0.025
1020	SLE FR 1	0.06	0.31	26.37	-7.6209	0.0052	0.0219
1020	SLE FR 2	0.06	0.32	26.37	-7.6207	0.0052	0.022
1020	SLE FR 3	0.06	0.31	26.43	-7.6379	0.0052	0.0221
1020	SLE FR 4	0.07	0.33	27.33	-7.8916	0.0054	0.0227
1020	SLE FR 5	0.07	0.32	27.39	-7.9088	0.0054	0.0229
1020	SLE FR 6	0.07	0.33	27.96	-8.0725	0.0055	0.0232
1020	SLE QP 1	0.06	0.31	26.37	-7.6209	0.0052	0.0219
1020	SLE QP 2	0.07	0.32	27.33	-7.8919	0.0054	0.0227
1020	SLD 1	4.13	0.77	27.02	-7.7839	0.0128	1.446
1020	SLD 2	3.94	0.76	27.04	-7.7867	0.0128	1.3776
1020	SLD 3	4.03	-0.33	27.34	-7.8984	0.0125	1.4095
1020	SLD 4	3.83	-0.33	27.35	-7.9012	0.0126	1.3412
1020	SLD 5	1.48	2.12	26.76	-7.6853	0.008	0.5168
1020	SLD 6	1.35	2.12	26.76	-7.6872	0.0081	0.4725
1020	SLD 7	1.13	-1.54	27.81	-8.067	0.0071	0.3954
1020	SLD 8	1	-1.54	27.82	-8.0688	0.0071	0.3511
1020	SLD 9	-0.87	2.19	26.84	-7.7149	0.0037	-0.3057
1020	SLD 10	-1	2.18	26.85	-7.7167	0.0037	-0.35
1020	SLD 11	-1.22	-1.47	27.89	-8.0966	0.0027	-0.4271
1020	SLD 12	-1.35	-1.48	27.9	-8.0984	0.0028	-0.4715
1020	SLD 13	-3.7	0.98	27.31	-7.8825	-0.0018	-1.2958
1020	SLD 14	-3.9	0.97	27.32	-7.8853	-0.0017	-1.3642
1020	SLD 15	-3.8	-0.12	27.62	-7.997	-0.002	-1.3322
1020	SLD 16	-4	-0.13	27.63	-7.9998	-0.002	-1.4006
1020	SLV 1	9.57	1.34	26.62	-7.637	0.0227	3.3512
1020	SLV 2	9.12	1.32	26.65	-7.6436	0.0228	3.1919
1020	SLV 3	9.33	-1.17	27.35	-7.9011	0.022	3.2662
1020	SLV 4	8.87	-1.18	27.37	-7.9077	0.0222	3.1069
1020	SLV 5	3.36	4.43	26.01	-7.4138	0.0115	1.1771
1020	SLV 6	3.07	4.42	26.03	-7.418	0.0116	1.0754
1020	SLV 7	2.55	-3.92	28.43	-8.294	0.0094	0.8938
1020	SLV 8	2.26	-3.93	28.45	-8.2983	0.0095	0.7921
1020	SLV 9	-2.13	4.58	26.21	-7.4855	0.0013	-0.7467
1020	SLV 10	-2.42	4.56	26.23	-7.4897	0.0014	-0.8484
1020	SLV 11	-2.94	-3.77	28.63	-8.3657	-0.0008	-1.03
1020	SLV 12	-3.23	-3.78	28.64	-8.37	-0.0007	-1.1317
1020	SLV 13	-8.74	1.83	27.28	-7.876	-0.0114	-3.0615
1020	SLV 14	-9.2	1.81	27.31	-7.8826	-0.0112	-3.2208
1020	SLV 15	-8.99	-0.67	28.01	-8.1401	-0.012	-3.1465
1020	SLV 16	-9.44	-0.69	28.03	-8.1467	-0.0119	-3.3058
1020	CRTFP Ux+	0	0	0	0	0	0
1020	CRTFP Ux-	0	0	0	0	0	0
1020	CRTFP Uy+	0	0	0	0	0	0
1020	CRTFP Uy-	0	0	0	0	0	0
1021	SLU 1	0.1	0.29	25.52	-7.39	-0.0093	0.0351
1021	SLU 2	0.1	0.34	25.51	-7.3879	-0.0093	0.0354
1021	SLU 3	0.1	0.3	25.98	-7.5178	-0.0095	0.0362
1021	SLU 4	0.1	0.34	25.97	-7.5166	-0.0095	0.0364
1021	SLU 5	0.1	0.34	25.74	-7.452	-0.0094	0.0363
1021	SLU 6	0.11	0.31	26.21	-7.5818	-0.0096	0.0371
1021	SLU 7	0.11	0.34	26.2	-7.5806	-0.0096	0.0373
1021	SLU 8	0.11	0.29	25.97	-7.518	-0.0095	0.0369
1021	SLU 9	0.11	0.32	25.97	-7.5168	-0.0095	0.0371
1021	SLU 10	0.11	0.37	28.87	-8.3425	-0.0109	0.0397
1021	SLU 11	0.12	0.34	29.33	-8.4723	-0.0111	0.0405
1021	SLU 12	0.12	0.37	29.33	-8.4711	-0.0111	0.0407
1021	SLU 13	0.12	0.37	29.1	-8.4065	-0.011	0.0406
1021	SLU 14	0.12	0.34	29.56	-8.5364	-0.0112	0.0414
1021	SLU 15	0.12	0.37	29.56	-8.5351	-0.0112	0.0416
1021	SLU 16	0.12	0.32	29.33	-8.4725	-0.0111	0.0411
1021	SLU 17	0.12	0.36	29.33	-8.4713	-0.0111	0.0414
1021	SLU 18	0.12	0.34	30.31	-8.7536	-0.0116	0.0412
1021	SLU 19	0.12	0.37	30.31	-8.7524	-0.0116	0.0414
1021	SLU 20	0.12	0.34	30.54	-8.8176	-0.0117	0.0421
1021	SLU 21	0.12	0.37	30.54	-8.8164	-0.0117	0.0423
1021	SLU 22	0.11	0.35	28.75	-8.3009	-0.0107	0.0381
1021	SLU 23	0.11	0.41	28.74	-8.2989	-0.0107	0.0385
1021	SLU 24	0.11	0.37	29.21	-8.4288	-0.0109	0.0393
1021	SLU 25	0.11	0.4	29.2	-8.4275	-0.0109	0.0395
1021	SLU 26	0.11	0.41	28.97	-8.3629	-0.0108	0.0394
1021	SLU 27	0.12	0.37	29.43	-8.4928	-0.011	0.0402
1021	SLU 28	0.12	0.4	29.43	-8.4916	-0.011	0.0404

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1021	SLU 29	0.11	0.36	29.2	-8.429	-0.0109	0.0399
1021	SLU 30	0.12	0.39	29.2	-8.4277	-0.0109	0.0401
1021	SLU 31	0.12	0.44	32.1	-9.2534	-0.0123	0.0428
1021	SLU 32	0.13	0.41	32.56	-9.3833	-0.0125	0.0436
1021	SLU 33	0.13	0.44	32.56	-9.3821	-0.0125	0.0438
1021	SLU 34	0.13	0.44	32.32	-9.3174	-0.0124	0.0437
1021	SLU 35	0.13	0.41	32.79	-9.4473	-0.0126	0.0445
1021	SLU 36	0.13	0.44	32.79	-9.4461	-0.0126	0.0447
1021	SLU 37	0.13	0.39	32.56	-9.3835	-0.0125	0.0442
1021	SLU 38	0.13	0.42	32.55	-9.3823	-0.0125	0.0444
1021	SLU 39	0.13	0.4	33.54	-9.6645	-0.013	0.0443
1021	SLU 40	0.13	0.43	33.54	-9.6633	-0.013	0.0445
1021	SLU 41	0.13	0.4	33.77	-9.7285	-0.0131	0.0452
1021	SLU 42	0.13	0.43	33.77	-9.7273	-0.0131	0.0454
1021	SLU 43	0.13	0.35	32.07	-9.2947	-0.0116	0.0445
1021	SLU 44	0.13	0.4	32.06	-9.2926	-0.0116	0.0449
1021	SLU 45	0.13	0.37	32.53	-9.4225	-0.0118	0.0457
1021	SLU 46	0.13	0.4	32.52	-9.4213	-0.0118	0.0459
1021	SLU 47	0.13	0.4	32.29	-9.3566	-0.0117	0.0458
1021	SLU 48	0.13	0.37	32.75	-9.4865	-0.0119	0.0466
1021	SLU 49	0.13	0.4	32.75	-9.4853	-0.0119	0.0468
1021	SLU 50	0.13	0.35	32.52	-9.4227	-0.0118	0.0463
1021	SLU 51	0.13	0.39	32.52	-9.4215	-0.0118	0.0465
1021	SLU 52	0.14	0.44	35.42	-10.2471	-0.0132	0.0492
1021	SLU 53	0.14	0.4	35.88	-10.377	-0.0134	0.05
1021	SLU 54	0.14	0.43	35.88	-10.3758	-0.0134	0.0502
1021	SLU 55	0.14	0.44	35.64	-10.3111	-0.0133	0.0501
1021	SLU 56	0.15	0.4	36.11	-10.441	-0.0135	0.0509
1021	SLU 57	0.15	0.43	36.11	-10.4398	-0.0135	0.0511
1021	SLU 58	0.15	0.39	35.88	-10.3772	-0.0134	0.0506
1021	SLU 59	0.15	0.42	35.88	-10.376	-0.0134	0.0508
1021	SLU 60	0.15	0.4	36.86	-10.6582	-0.0139	0.0507
1021	SLU 61	0.15	0.43	36.86	-10.657	-0.0139	0.0509
1021	SLU 62	0.15	0.4	37.09	-10.7223	-0.014	0.0516
1021	SLU 63	0.15	0.43	37.09	-10.721	-0.014	0.0518
1021	SLU 64	0.14	0.42	35.3	-10.2056	-0.0131	0.0476
1021	SLU 65	0.14	0.47	35.29	-10.2036	-0.013	0.048
1021	SLU 66	0.14	0.44	35.75	-10.3334	-0.0133	0.0488
1021	SLU 67	0.14	0.47	35.75	-10.3322	-0.0132	0.049
1021	SLU 68	0.14	0.47	35.52	-10.2676	-0.0131	0.0488
1021	SLU 69	0.14	0.44	35.98	-10.3975	-0.0134	0.0497
1021	SLU 70	0.14	0.47	35.98	-10.3962	-0.0133	0.0499
1021	SLU 71	0.14	0.42	35.75	-10.3336	-0.0132	0.0494
1021	SLU 72	0.14	0.45	35.75	-10.3324	-0.0132	0.0496
1021	SLU 73	0.15	0.5	38.65	-11.1581	-0.0146	0.0522
1021	SLU 74	0.15	0.47	39.11	-11.288	-0.0148	0.0531
1021	SLU 75	0.15	0.5	39.11	-11.2867	-0.0148	0.0533
1021	SLU 76	0.15	0.5	38.87	-11.2221	-0.0147	0.0531
1021	SLU 77	0.16	0.47	39.34	-11.352	-0.0149	0.054
1021	SLU 78	0.16	0.5	39.33	-11.3508	-0.0149	0.0542
1021	SLU 79	0.15	0.46	39.11	-11.2882	-0.0148	0.0537
1021	SLU 80	0.15	0.49	39.1	-11.2869	-0.0148	0.0539
1021	SLU 81	0.15	0.47	40.09	-11.5692	-0.0153	0.0537
1021	SLU 82	0.16	0.5	40.09	-11.568	-0.0153	0.0539
1021	SLU 83	0.16	0.47	40.32	-11.6332	-0.0154	0.0546
1021	SLU 84	0.16	0.5	40.31	-11.632	-0.0154	0.0548
1021	SLE RA 1	0.1	0.31	26.44	-7.6503	-0.0097	0.0359
1021	SLE RA 2	0.1	0.34	26.44	-7.6489	-0.0097	0.0362
1021	SLE RA 3	0.11	0.32	26.75	-7.7355	-0.0099	0.0367
1021	SLE RA 4	0.11	0.34	26.74	-7.7347	-0.0099	0.0369
1021	SLE RA 5	0.11	0.34	26.59	-7.6916	-0.0098	0.0368
1021	SLE RA 6	0.11	0.32	26.9	-7.7782	-0.0099	0.0373
1021	SLE RA 7	0.11	0.34	26.9	-7.7773	-0.0099	0.0375
1021	SLE RA 8	0.11	0.31	26.74	-7.7356	-0.0099	0.0371
1021	SLE RA 9	0.11	0.33	26.74	-7.7348	-0.0099	0.0373
1021	SLE RA 10	0.11	0.36	28.67	-8.2852	-0.0108	0.039
1021	SLE RA 11	0.11	0.34	28.98	-8.3718	-0.0109	0.0396
1021	SLE RA 12	0.11	0.36	28.98	-8.371	-0.0109	0.0397
1021	SLE RA 13	0.11	0.36	28.83	-8.3279	-0.0108	0.0396
1021	SLE RA 14	0.12	0.34	29.14	-8.4145	-0.011	0.0402
1021	SLE RA 15	0.12	0.36	29.13	-8.4137	-0.011	0.0403
1021	SLE RA 16	0.11	0.33	28.98	-8.372	-0.0109	0.04
1021	SLE RA 17	0.12	0.35	28.98	-8.3711	-0.0109	0.0401
1021	SLE RA 18	0.12	0.34	29.64	-8.5593	-0.0112	0.04
1021	SLE RA 19	0.12	0.36	29.63	-8.5585	-0.0112	0.0402
1021	SLE RA 20	0.12	0.34	29.79	-8.602	-0.0113	0.0406
1021	SLE RA 21	0.12	0.36	29.79	-8.6012	-0.0113	0.0408
1021	SLE FR 1	0.1	0.31	26.44	-7.6503	-0.0097	0.0359
1021	SLE FR 2	0.1	0.31	26.44	-7.65	-0.0097	0.036
1021	SLE FR 3	0.1	0.31	26.5	-7.6673	-0.0098	0.0362
1021	SLE FR 4	0.11	0.32	27.4	-7.9227	-0.0102	0.0372
1021	SLE FR 5	0.11	0.32	27.46	-7.94	-0.0102	0.0374
1021	SLE FR 6	0.11	0.32	28.04	-8.1048	-0.0105	0.038
1021	SLE QP 1	0.1	0.31	26.44	-7.6503	-0.0097	0.0359
1021	SLE QP 2	0.11	0.32	27.4	-7.923	-0.0102	0.0372
1021	SLD 1	4.17	0.77	26.9	-7.7557	-0.0026	1.4598
1021	SLD 2	3.97	0.77	26.9	-7.7581	-0.0025	1.3915
1021	SLD 3	4.07	-0.33	27.21	-7.8712	-0.003	1.4233
1021	SLD 4	3.87	-0.33	27.22	-7.8736	-0.0029	1.355
1021	SLD 5	1.52	2.12	26.76	-7.6971	-0.0073	0.5313
1021	SLD 6	1.39	2.12	26.77	-7.6987	-0.0073	0.4869

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1021	SLD 7	1.17	-1.54	27.83	-8.0823	-0.0086	0.4096
1021	SLD 8	1.04	-1.54	27.83	-8.0838	-0.0086	0.3652
1021	SLD 9	-0.83	2.17	26.97	-7.7621	-0.0118	-0.2909
1021	SLD 10	-0.96	2.17	26.97	-7.7637	-0.0118	-0.3352
1021	SLD 11	-1.18	-1.48	28.03	-8.1472	-0.0131	-0.4126
1021	SLD 12	-1.3	-1.48	28.04	-8.1488	-0.013	-0.4569
1021	SLD 13	-3.66	0.96	27.58	-7.9723	-0.0175	-1.2806
1021	SLD 14	-3.85	0.96	27.59	-7.9747	-0.0174	-1.349
1021	SLD 15	-3.76	-0.14	27.9	-8.0879	-0.0179	-1.3172
1021	SLD 16	-3.96	-0.14	27.9	-8.0903	-0.0178	-1.3855
1021	SLV 1	9.61	1.34	26.23	-7.5326	0.0077	3.3642
1021	SLV 2	9.15	1.34	26.25	-7.5382	0.0078	3.205
1021	SLV 3	9.37	-1.16	26.96	-7.799	0.0068	3.279
1021	SLV 4	8.91	-1.16	26.98	-7.8046	0.0069	3.1198
1021	SLV 5	3.4	4.42	25.93	-7.4009	-0.0035	1.1914
1021	SLV 6	3.11	4.42	25.95	-7.4045	-0.0034	1.0897
1021	SLV 7	2.59	-3.92	28.37	-8.2888	-0.0065	0.9075
1021	SLV 8	2.3	-3.92	28.39	-8.2924	-0.0064	0.8059
1021	SLV 9	-2.09	4.55	26.41	-7.5535	-0.014	-0.7315
1021	SLV 10	-2.38	4.55	26.43	-7.5571	-0.0139	-0.8332
1021	SLV 11	-2.9	-3.79	28.85	-8.4414	-0.017	-1.0154
1021	SLV 12	-3.19	-3.79	28.87	-8.445	-0.0169	-1.1171
1021	SLV 13	-8.7	1.79	27.82	-8.0413	-0.0273	-3.0455
1021	SLV 14	-9.15	1.79	27.84	-8.047	-0.0271	-3.2047
1021	SLV 15	-8.94	-0.71	28.55	-8.3077	-0.0282	-3.1307
1021	SLV 16	-9.4	-0.71	28.57	-8.3133	-0.028	-3.2899
1021	CRTFP Ux+	0	0	0	0	0	0
1021	CRTFP Ux-	0	0	0	0	0	0
1021	CRTFP Uy+	0	0	0	0	0	0
1021	CRTFP Uy-	0	0	0	0	0	0
1022	SLU 1	0.14	0.29	26	-7.6481	-0.0227	0.0485
1022	SLU 2	0.14	0.34	25.99	-7.6459	-0.0227	0.0489
1022	SLU 3	0.14	0.3	26.47	-7.7814	-0.0232	0.0501
1022	SLU 4	0.14	0.33	26.47	-7.7801	-0.0232	0.0503
1022	SLU 5	0.14	0.34	26.23	-7.7126	-0.0229	0.05
1022	SLU 6	0.15	0.31	26.7	-7.8481	-0.0234	0.0512
1022	SLU 7	0.15	0.34	26.7	-7.8468	-0.0234	0.0514
1022	SLU 8	0.14	0.29	26.47	-7.7815	-0.0232	0.0508
1022	SLU 9	0.15	0.32	26.46	-7.7802	-0.0232	0.051
1022	SLU 10	0.16	0.37	29.43	-8.6415	-0.0263	0.0548
1022	SLU 11	0.16	0.33	29.91	-8.777	-0.0268	0.056
1022	SLU 12	0.16	0.37	29.9	-8.7757	-0.0268	0.0562
1022	SLU 13	0.16	0.37	29.66	-8.7082	-0.0266	0.056
1022	SLU 14	0.16	0.34	30.14	-8.8437	-0.0271	0.0571
1022	SLU 15	0.16	0.37	30.13	-8.8424	-0.027	0.0573
1022	SLU 16	0.16	0.32	29.9	-8.7771	-0.0268	0.0567
1022	SLU 17	0.16	0.35	29.9	-8.7758	-0.0268	0.0569
1022	SLU 18	0.16	0.33	30.91	-9.0704	-0.0279	0.057
1022	SLU 19	0.16	0.36	30.91	-9.069	-0.0279	0.0572
1022	SLU 20	0.17	0.33	31.14	-9.1371	-0.0281	0.0581
1022	SLU 21	0.17	0.36	31.14	-9.1358	-0.0281	0.0583
1022	SLU 22	0.15	0.35	29.3	-8.5974	-0.0261	0.0532
1022	SLU 23	0.15	0.4	29.3	-8.5952	-0.0261	0.0536
1022	SLU 24	0.16	0.37	29.77	-8.7307	-0.0266	0.0548
1022	SLU 25	0.16	0.4	29.77	-8.7294	-0.0266	0.055
1022	SLU 26	0.16	0.4	29.53	-8.662	-0.0263	0.0547
1022	SLU 27	0.16	0.37	30	-8.7974	-0.0268	0.0559
1022	SLU 28	0.16	0.4	30	-8.7961	-0.0268	0.0561
1022	SLU 29	0.16	0.35	29.77	-8.7309	-0.0266	0.0555
1022	SLU 30	0.16	0.39	29.76	-8.7296	-0.0266	0.0557
1022	SLU 31	0.17	0.43	32.73	-9.5908	-0.0297	0.0595
1022	SLU 32	0.17	0.4	33.21	-9.7263	-0.0302	0.0607
1022	SLU 33	0.17	0.43	33.2	-9.725	-0.0302	0.0609
1022	SLU 34	0.17	0.43	32.96	-9.6575	-0.03	0.0607
1022	SLU 35	0.18	0.4	33.44	-9.793	-0.0305	0.0618
1022	SLU 36	0.18	0.43	33.44	-9.7917	-0.0304	0.062
1022	SLU 37	0.18	0.38	33.2	-9.7265	-0.0302	0.0614
1022	SLU 38	0.18	0.42	33.2	-9.7251	-0.0302	0.0616
1022	SLU 39	0.18	0.39	34.21	-10.0197	-0.0313	0.0617
1022	SLU 40	0.18	0.43	34.21	-10.0184	-0.0313	0.0619
1022	SLU 41	0.18	0.4	34.44	-10.0864	-0.0315	0.0628
1022	SLU 42	0.18	0.43	34.44	-10.0851	-0.0315	0.063
1022	SLU 43	0.18	0.35	32.67	-9.617	-0.0283	0.0615
1022	SLU 44	0.18	0.4	32.66	-9.6149	-0.0283	0.0619
1022	SLU 45	0.18	0.37	33.14	-9.7503	-0.0288	0.063
1022	SLU 46	0.18	0.4	33.14	-9.749	-0.0288	0.0632
1022	SLU 47	0.18	0.4	32.9	-9.6816	-0.0286	0.063
1022	SLU 48	0.18	0.37	33.37	-9.8171	-0.0291	0.0641
1022	SLU 49	0.18	0.4	33.37	-9.8157	-0.0291	0.0644
1022	SLU 50	0.18	0.35	33.14	-9.7505	-0.0288	0.0637
1022	SLU 51	0.18	0.39	33.13	-9.7492	-0.0288	0.064
1022	SLU 52	0.19	0.43	36.1	-10.6104	-0.032	0.0678
1022	SLU 53	0.2	0.4	36.58	-10.7459	-0.0325	0.0689
1022	SLU 54	0.2	0.43	36.57	-10.7446	-0.0324	0.0691
1022	SLU 55	0.2	0.43	36.33	-10.6772	-0.0322	0.0689
1022	SLU 56	0.2	0.4	36.81	-10.8126	-0.0327	0.07
1022	SLU 57	0.2	0.43	36.8	-10.8113	-0.0327	0.0703
1022	SLU 58	0.2	0.39	36.57	-10.7461	-0.0325	0.0696
1022	SLU 59	0.2	0.42	36.57	-10.7448	-0.0324	0.0699
1022	SLU 60	0.2	0.39	37.58	-11.0393	-0.0335	0.0699
1022	SLU 61	0.2	0.43	37.57	-11.038	-0.0335	0.0702

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1022	SLU 62	0.2	0.4	37.81	-11.106	-0.0338	0.0711
1022	SLU 63	0.2	0.43	37.81	-11.1047	-0.0338	0.0713
1022	SLU 64	0.19	0.41	35.97	-10.5664	-0.0318	0.0662
1022	SLU 65	0.19	0.47	35.96	-10.5642	-0.0317	0.0666
1022	SLU 66	0.19	0.43	36.44	-10.6996	-0.0322	0.0677
1022	SLU 67	0.19	0.46	36.44	-10.6983	-0.0322	0.0679
1022	SLU 68	0.19	0.47	36.2	-10.6309	-0.032	0.0677
1022	SLU 69	0.2	0.43	36.67	-10.7664	-0.0325	0.0688
1022	SLU 70	0.2	0.46	36.67	-10.7651	-0.0325	0.0691
1022	SLU 71	0.2	0.42	36.44	-10.6998	-0.0322	0.0684
1022	SLU 72	0.2	0.45	36.43	-10.6985	-0.0322	0.0687
1022	SLU 73	0.21	0.5	39.4	-11.5598	-0.0354	0.0725
1022	SLU 74	0.21	0.46	39.88	-11.6952	-0.0359	0.0736
1022	SLU 75	0.21	0.49	39.87	-11.6939	-0.0359	0.0738
1022	SLU 76	0.21	0.5	39.63	-11.6265	-0.0356	0.0736
1022	SLU 77	0.21	0.46	40.11	-11.762	-0.0361	0.0747
1022	SLU 78	0.21	0.5	40.1	-11.7606	-0.0361	0.075
1022	SLU 79	0.21	0.45	39.87	-11.6954	-0.0359	0.0743
1022	SLU 80	0.21	0.48	39.87	-11.6941	-0.0358	0.0746
1022	SLU 81	0.21	0.46	40.88	-11.9886	-0.0369	0.0746
1022	SLU 82	0.21	0.49	40.88	-11.9873	-0.0369	0.0749
1022	SLU 83	0.22	0.46	41.11	-12.0554	-0.0372	0.0758
1022	SLU 84	0.22	0.49	41.11	-12.054	-0.0372	0.076
1022	SLE RA 1	0.14	0.31	26.95	-7.9193	-0.0237	0.0499
1022	SLE RA 2	0.14	0.34	26.94	-7.9179	-0.0237	0.0501
1022	SLE RA 3	0.15	0.32	27.26	-8.0082	-0.024	0.0509
1022	SLE RA 4	0.15	0.34	27.25	-8.0073	-0.024	0.051
1022	SLE RA 5	0.15	0.34	27.1	-7.9624	-0.0238	0.0509
1022	SLE RA 6	0.15	0.32	27.41	-8.0527	-0.0242	0.0516
1022	SLE RA 7	0.15	0.34	27.41	-8.0518	-0.0241	0.0518
1022	SLE RA 8	0.15	0.31	27.26	-8.0083	-0.024	0.0514
1022	SLE RA 9	0.15	0.33	27.25	-8.0074	-0.024	0.0515
1022	SLE RA 10	0.15	0.36	29.23	-8.5816	-0.0261	0.0541
1022	SLE RA 11	0.16	0.34	29.55	-8.6719	-0.0264	0.0548
1022	SLE RA 12	0.16	0.36	29.55	-8.671	-0.0264	0.055
1022	SLE RA 13	0.16	0.36	29.39	-8.6261	-0.0262	0.0548
1022	SLE RA 14	0.16	0.34	29.7	-8.7164	-0.0266	0.0556
1022	SLE RA 15	0.16	0.36	29.7	-8.7155	-0.0266	0.0557
1022	SLE RA 16	0.16	0.33	29.55	-8.672	-0.0264	0.0553
1022	SLE RA 17	0.16	0.35	29.54	-8.6711	-0.0264	0.0555
1022	SLE RA 18	0.16	0.33	30.22	-8.8675	-0.0271	0.0555
1022	SLE RA 19	0.16	0.35	30.21	-8.8666	-0.0271	0.0557
1022	SLE RA 20	0.16	0.34	30.37	-8.912	-0.0273	0.0563
1022	SLE RA 21	0.16	0.36	30.37	-8.9111	-0.0273	0.0564
1022	SLE FR 1	0.14	0.31	26.95	-7.9193	-0.0237	0.0499
1022	SLE FR 2	0.14	0.31	26.94	-7.919	-0.0237	0.0499
1022	SLE FR 3	0.14	0.31	27.01	-7.9371	-0.0237	0.0502
1022	SLE FR 4	0.15	0.32	27.93	-8.2035	-0.0247	0.0516
1022	SLE FR 5	0.15	0.31	27.99	-8.2216	-0.0248	0.0519
1022	SLE FR 6	0.15	0.32	28.58	-8.3934	-0.0254	0.0527
1022	SLE QP 1	0.14	0.31	26.95	-7.9193	-0.0237	0.0499
1022	SLE QP 2	0.15	0.31	27.93	-8.2038	-0.0247	0.0516
1022	SLD 1	4.21	0.77	27.2	-7.9618	-0.0167	1.4728
1022	SLD 2	4.01	0.78	27.21	-7.9639	-0.0166	1.4046
1022	SLD 3	4.1	-0.33	27.52	-8.0738	-0.0175	1.4362
1022	SLD 4	3.91	-0.32	27.53	-8.0759	-0.0174	1.368
1022	SLD 5	1.56	2.12	27.23	-7.9609	-0.0212	0.5454
1022	SLD 6	1.43	2.13	27.23	-7.9623	-0.0211	0.5011
1022	SLD 7	1.21	-1.55	28.28	-8.3343	-0.0237	0.4234
1022	SLD 8	1.08	-1.55	28.29	-8.3356	-0.0237	0.3791
1022	SLD 9	-0.79	2.18	27.57	-8.0719	-0.0258	-0.2759
1022	SLD 10	-0.92	2.18	27.57	-8.0733	-0.0257	-0.3202
1022	SLD 11	-1.14	-1.5	28.62	-8.4453	-0.0283	-0.3979
1022	SLD 12	-1.26	-1.49	28.62	-8.4466	-0.0283	-0.4422
1022	SLD 13	-3.61	0.95	28.33	-8.3317	-0.032	-1.2648
1022	SLD 14	-3.81	0.96	28.33	-8.3338	-0.032	-1.3331
1022	SLD 15	-3.72	-0.15	28.64	-8.4437	-0.0328	-1.3014
1022	SLD 16	-3.91	-0.14	28.65	-8.4458	-0.0327	-1.3697
1022	SLV 1	9.64	1.35	26.24	-7.6395	-0.006	3.3753
1022	SLV 2	9.19	1.37	26.26	-7.6443	-0.0058	3.2162
1022	SLV 3	9.4	-1.17	26.97	-7.8973	-0.0077	3.29
1022	SLV 4	8.94	-1.14	26.98	-7.9022	-0.0076	3.1309
1022	SLV 5	3.44	4.43	26.32	-7.6426	-0.0164	1.205
1022	SLV 6	3.15	4.45	26.33	-7.6457	-0.0163	1.1035
1022	SLV 7	2.63	-3.95	28.73	-8.5021	-0.0223	0.9206
1022	SLV 8	2.34	-3.93	28.74	-8.5052	-0.0222	0.819
1022	SLV 9	-2.04	4.56	27.11	-7.9024	-0.0272	-0.7159
1022	SLV 10	-2.34	4.58	27.12	-7.9055	-0.0271	-0.8174
1022	SLV 11	-2.86	-3.82	29.52	-8.7619	-0.0331	-1.0003
1022	SLV 12	-3.15	-3.81	29.53	-8.765	-0.033	-1.1019
1022	SLV 13	-8.65	1.77	28.87	-8.5054	-0.0418	-3.0278
1022	SLV 14	-9.1	1.79	28.89	-8.5102	-0.0417	-3.1868
1022	SLV 15	-8.89	-0.74	29.6	-8.7632	-0.0436	-3.1131
1022	SLV 16	-9.35	-0.72	29.61	-8.7681	-0.0435	-3.2722
1022	CRTFP Ux+	0	0	0	0	0	0
1022	CRTFP Ux-	0	0	0	0	0	0
1022	CRTFP Uy+	0	0	0	0	0	0
1022	CRTFP Uy-	0	0	0	0	0	0
1023	SLU 1	0.18	0.29	26.85	-8.1085	-0.0333	0.0619
1023	SLU 2	0.18	0.34	26.84	-8.1062	-0.0333	0.0623
1023	SLU 3	0.18	0.31	27.34	-8.2514	-0.034	0.0638

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1023	SLU 4	0.18	0.34	27.33	-8.25	-0.034	0.064
1023	SLU 5	0.18	0.34	27.08	-8.1777	-0.0336	0.0637
1023	SLU 6	0.19	0.31	27.58	-8.3229	-0.0343	0.0651
1023	SLU 7	0.19	0.34	27.57	-8.3215	-0.0343	0.0654
1023	SLU 8	0.18	0.29	27.33	-8.2515	-0.034	0.0646
1023	SLU 9	0.18	0.33	27.33	-8.2501	-0.034	0.0649
1023	SLU 10	0.2	0.37	30.41	-9.1733	-0.0385	0.0698
1023	SLU 11	0.2	0.34	30.9	-9.3185	-0.0392	0.0713
1023	SLU 12	0.2	0.37	30.9	-9.3172	-0.0392	0.0715
1023	SLU 13	0.2	0.37	30.65	-9.2448	-0.0389	0.0712
1023	SLU 14	0.21	0.34	31.15	-9.3901	-0.0396	0.0726
1023	SLU 15	0.21	0.37	31.14	-9.3887	-0.0396	0.0729
1023	SLU 16	0.21	0.32	30.9	-9.3187	-0.0392	0.0721
1023	SLU 17	0.21	0.35	30.9	-9.3173	-0.0392	0.0724
1023	SLU 18	0.21	0.33	31.95	-9.633	-0.0408	0.0726
1023	SLU 19	0.21	0.36	31.94	-9.6316	-0.0408	0.0729
1023	SLU 20	0.21	0.33	32.19	-9.7045	-0.0411	0.074
1023	SLU 21	0.21	0.36	32.18	-9.7031	-0.0411	0.0742
1023	SLU 22	0.19	0.35	30.28	-9.1259	-0.0383	0.0682
1023	SLU 23	0.2	0.4	30.27	-9.1235	-0.0382	0.0686
1023	SLU 24	0.2	0.37	30.76	-9.2688	-0.0389	0.0701
1023	SLU 25	0.2	0.4	30.76	-9.2674	-0.0389	0.0703
1023	SLU 26	0.2	0.41	30.51	-9.1951	-0.0386	0.07
1023	SLU 27	0.2	0.37	31	-9.3403	-0.0393	0.0715
1023	SLU 28	0.2	0.4	31	-9.3389	-0.0393	0.0717
1023	SLU 29	0.2	0.36	30.76	-9.2689	-0.0389	0.071
1023	SLU 30	0.2	0.39	30.75	-9.2675	-0.0389	0.0712
1023	SLU 31	0.22	0.43	33.84	-10.1907	-0.0435	0.0762
1023	SLU 32	0.22	0.4	34.33	-10.3359	-0.0442	0.0776
1023	SLU 33	0.22	0.43	34.33	-10.3345	-0.0442	0.0779
1023	SLU 34	0.22	0.43	34.08	-10.2622	-0.0438	0.0775
1023	SLU 35	0.23	0.4	34.57	-10.4074	-0.0445	0.079
1023	SLU 36	0.23	0.43	34.57	-10.406	-0.0445	0.0792
1023	SLU 37	0.22	0.38	34.33	-10.336	-0.0442	0.0785
1023	SLU 38	0.22	0.42	34.32	-10.3346	-0.0442	0.0787
1023	SLU 39	0.23	0.39	35.38	-10.6503	-0.0457	0.079
1023	SLU 40	0.23	0.42	35.37	-10.6489	-0.0457	0.0792
1023	SLU 41	0.23	0.39	35.62	-10.7219	-0.0461	0.0803
1023	SLU 42	0.23	0.43	35.61	-10.7205	-0.0461	0.0806
1023	SLU 43	0.22	0.36	33.73	-10.1922	-0.0416	0.0783
1023	SLU 44	0.22	0.41	33.72	-10.1899	-0.0416	0.0787
1023	SLU 45	0.23	0.37	34.21	-10.3351	-0.0423	0.0802
1023	SLU 46	0.23	0.41	34.21	-10.3338	-0.0423	0.0804
1023	SLU 47	0.23	0.41	33.96	-10.2614	-0.0419	0.0801
1023	SLU 48	0.23	0.38	34.46	-10.4067	-0.0426	0.0815
1023	SLU 49	0.23	0.41	34.45	-10.4053	-0.0426	0.0818
1023	SLU 50	0.23	0.36	34.21	-10.3353	-0.0423	0.081
1023	SLU 51	0.23	0.39	34.21	-10.3339	-0.0422	0.0813
1023	SLU 52	0.25	0.44	37.29	-11.2571	-0.0468	0.0862
1023	SLU 53	0.25	0.4	37.78	-11.4023	-0.0475	0.0877
1023	SLU 54	0.25	0.43	37.78	-11.4009	-0.0475	0.0879
1023	SLU 55	0.25	0.44	37.53	-11.3286	-0.0471	0.0876
1023	SLU 56	0.25	0.4	38.03	-11.4738	-0.0478	0.089
1023	SLU 57	0.25	0.44	38.02	-11.4724	-0.0478	0.0893
1023	SLU 58	0.25	0.39	37.78	-11.4024	-0.0475	0.0885
1023	SLU 59	0.25	0.42	37.78	-11.401	-0.0475	0.0888
1023	SLU 60	0.25	0.4	38.83	-11.7167	-0.049	0.089
1023	SLU 61	0.25	0.43	38.82	-11.7153	-0.049	0.0893
1023	SLU 62	0.26	0.4	39.07	-11.7882	-0.0494	0.0904
1023	SLU 63	0.26	0.43	39.06	-11.7868	-0.0494	0.0906
1023	SLU 64	0.24	0.42	37.16	-11.2096	-0.0465	0.0846
1023	SLU 65	0.24	0.47	37.15	-11.2073	-0.0465	0.0851
1023	SLU 66	0.25	0.44	37.64	-11.3525	-0.0472	0.0865
1023	SLU 67	0.25	0.47	37.64	-11.3511	-0.0472	0.0867
1023	SLU 68	0.25	0.47	37.39	-11.2788	-0.0469	0.0864
1023	SLU 69	0.25	0.44	37.88	-11.424	-0.0476	0.0879
1023	SLU 70	0.25	0.47	37.88	-11.4226	-0.0476	0.0881
1023	SLU 71	0.25	0.42	37.64	-11.3526	-0.0472	0.0874
1023	SLU 72	0.25	0.45	37.63	-11.3512	-0.0472	0.0876
1023	SLU 73	0.26	0.5	40.72	-12.2744	-0.0518	0.0926
1023	SLU 74	0.27	0.46	41.21	-12.4196	-0.0525	0.094
1023	SLU 75	0.27	0.49	41.21	-12.4183	-0.0525	0.0943
1023	SLU 76	0.27	0.5	40.96	-12.3459	-0.0521	0.0939
1023	SLU 77	0.27	0.47	41.45	-12.4912	-0.0528	0.0954
1023	SLU 78	0.27	0.5	41.45	-12.4898	-0.0528	0.0956
1023	SLU 79	0.27	0.45	41.21	-12.4198	-0.0525	0.0949
1023	SLU 80	0.27	0.48	41.2	-12.4184	-0.0525	0.0951
1023	SLU 81	0.27	0.46	42.25	-12.7341	-0.054	0.0954
1023	SLU 82	0.27	0.49	42.25	-12.7327	-0.054	0.0956
1023	SLU 83	0.28	0.46	42.5	-12.8056	-0.0544	0.0967
1023	SLU 84	0.28	0.49	42.49	-12.8042	-0.0544	0.097
1023	SLE RA 1	0.18	0.31	27.83	-8.3992	-0.0347	0.0637
1023	SLE RA 2	0.18	0.34	27.82	-8.3976	-0.0347	0.064
1023	SLE RA 3	0.19	0.32	28.15	-8.4944	-0.0352	0.065
1023	SLE RA 4	0.19	0.34	28.15	-8.4935	-0.0352	0.0651
1023	SLE RA 5	0.18	0.34	27.98	-8.4453	-0.0349	0.0649
1023	SLE RA 6	0.19	0.32	28.31	-8.5421	-0.0354	0.0659
1023	SLE RA 7	0.19	0.34	28.31	-8.5412	-0.0354	0.066
1023	SLE RA 8	0.19	0.31	28.15	-8.4945	-0.0352	0.0655
1023	SLE RA 9	0.19	0.33	28.15	-8.4936	-0.0352	0.0657
1023	SLE RA 10	0.2	0.36	30.2	-9.109	-0.0382	0.069

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1023	SLE RA 11	0.2	0.34	30.53	-9.2059	-0.0387	0.07
1023	SLE RA 12	0.2	0.36	30.53	-9.2049	-0.0387	0.0701
1023	SLE RA 13	0.2	0.36	30.36	-9.1567	-0.0384	0.0699
1023	SLE RA 14	0.2	0.34	30.69	-9.2535	-0.0389	0.0709
1023	SLE RA 15	0.2	0.36	30.69	-9.2526	-0.0389	0.071
1023	SLE RA 16	0.2	0.33	30.53	-9.206	-0.0387	0.0705
1023	SLE RA 17	0.2	0.35	30.53	-9.205	-0.0387	0.0707
1023	SLE RA 18	0.2	0.34	31.23	-9.4155	-0.0397	0.0709
1023	SLE RA 19	0.2	0.36	31.22	-9.4146	-0.0397	0.071
1023	SLE RA 20	0.2	0.34	31.39	-9.4632	-0.0399	0.0718
1023	SLE RA 21	0.21	0.36	31.39	-9.4622	-0.0399	0.0719
1023	SLE FR 1	0.18	0.31	27.83	-8.3992	-0.0347	0.0637
1023	SLE FR 2	0.18	0.32	27.83	-8.3989	-0.0347	0.0638
1023	SLE FR 3	0.18	0.31	27.89	-8.4182	-0.0348	0.0641
1023	SLE FR 4	0.19	0.32	28.85	-8.7038	-0.0362	0.0659
1023	SLE FR 5	0.19	0.32	28.91	-8.7231	-0.0363	0.0662
1023	SLE FR 6	0.19	0.32	29.53	-8.9073	-0.0372	0.0673
1023	SLE QP 1	0.18	0.31	27.83	-8.3992	-0.0347	0.0637
1023	SLE QP 2	0.19	0.32	28.85	-8.7041	-0.0362	0.0659
1023	SLD 1	4.24	0.78	27.9	-8.3856	-0.0279	1.4849
1023	SLD 2	4.05	0.8	27.9	-8.3874	-0.0278	1.4168
1023	SLD 3	4.14	-0.34	28.21	-8.491	-0.0289	1.4483
1023	SLD 4	3.94	-0.32	28.21	-8.4928	-0.0289	1.3801
1023	SLD 5	1.6	2.14	28.09	-8.4483	-0.0321	0.5591
1023	SLD 6	1.47	2.15	28.1	-8.4494	-0.0321	0.5148
1023	SLD 7	1.25	-1.57	29.12	-8.7998	-0.0356	0.4369
1023	SLD 8	1.12	-1.56	29.13	-8.8009	-0.0356	0.3926
1023	SLD 9	-0.75	2.19	28.57	-8.6072	-0.0368	-0.2609
1023	SLD 10	-0.87	2.21	28.57	-8.6084	-0.0368	-0.3052
1023	SLD 11	-1.09	-1.52	29.6	-8.9587	-0.0403	-0.3831
1023	SLD 12	-1.22	-1.51	29.6	-8.9598	-0.0403	-0.4274
1023	SLD 13	-3.57	0.95	29.48	-8.9153	-0.0435	-1.2484
1023	SLD 14	-3.76	0.97	29.49	-8.9171	-0.0435	-1.3166
1023	SLD 15	-3.67	-0.16	29.79	-9.0208	-0.0446	-1.2851
1023	SLD 16	-3.87	-0.14	29.8	-9.0225	-0.0445	-1.3532
1023	SLV 1	9.67	1.36	26.63	-7.9612	-0.0167	3.3845
1023	SLV 2	9.21	1.4	26.65	-7.9653	-0.0166	3.2257
1023	SLV 3	9.43	-1.18	27.34	-8.2034	-0.0191	3.299
1023	SLV 4	8.97	-1.14	27.35	-8.2075	-0.019	3.1402
1023	SLV 5	3.48	4.47	27.11	-8.1132	-0.0267	1.218
1023	SLV 6	3.19	4.5	27.12	-8.1158	-0.0266	1.1165
1023	SLV 7	2.67	-3.99	29.47	-8.9205	-0.0348	0.9331
1023	SLV 8	2.38	-3.96	29.48	-8.9231	-0.0347	0.8317
1023	SLV 9	-2	4.6	28.22	-8.485	-0.0377	-0.6999
1023	SLV 10	-2.29	4.62	28.23	-8.4876	-0.0376	-0.8014
1023	SLV 11	-2.81	-3.87	30.58	-9.2923	-0.0458	-0.9848
1023	SLV 12	-3.1	-3.84	30.59	-9.295	-0.0457	-1.0862
1023	SLV 13	-8.59	1.77	30.34	-9.2006	-0.0534	-3.0085
1023	SLV 14	-9.05	1.81	30.35	-9.2048	-0.0533	-3.1673
1023	SLV 15	-8.84	-0.77	31.05	-9.4428	-0.0558	-3.094
1023	SLV 16	-9.29	-0.73	31.06	-9.447	-0.0557	-3.2528
1023	CRTFP Ux+	0	0	0	0	0	0
1023	CRTFP Ux-	0	0	0	0	0	0
1023	CRTFP Uy+	0	0	0	0	0	0
1023	CRTFP Uy-	0	0	0	0	0	0
1024	SLU 1	0.21	0.3	27.94	-8.7143	-0.0389	0.0752
1024	SLU 2	0.22	0.35	27.93	-8.7119	-0.0389	0.0757
1024	SLU 3	0.22	0.32	28.45	-8.8699	-0.0397	0.0774
1024	SLU 4	0.22	0.35	28.45	-8.8684	-0.0397	0.0777
1024	SLU 5	0.22	0.35	28.19	-8.7897	-0.0393	0.0773
1024	SLU 6	0.22	0.32	28.71	-8.9476	-0.0401	0.079
1024	SLU 7	0.23	0.35	28.7	-8.9462	-0.0401	0.0793
1024	SLU 8	0.22	0.3	28.45	-8.8699	-0.0397	0.0784
1024	SLU 9	0.22	0.33	28.44	-8.8684	-0.0397	0.0787
1024	SLU 10	0.24	0.38	31.68	-9.8722	-0.045	0.0848
1024	SLU 11	0.25	0.34	32.19	-10.0301	-0.0458	0.0865
1024	SLU 12	0.25	0.37	32.19	-10.0287	-0.0458	0.0868
1024	SLU 13	0.25	0.38	31.93	-9.95	-0.0454	0.0864
1024	SLU 14	0.25	0.34	32.45	-10.1079	-0.0462	0.0881
1024	SLU 15	0.25	0.38	32.44	-10.1065	-0.0462	0.0884
1024	SLU 16	0.25	0.33	32.19	-10.0301	-0.0458	0.0875
1024	SLU 17	0.25	0.36	32.19	-10.0287	-0.0458	0.0878
1024	SLU 18	0.25	0.34	33.29	-10.3719	-0.0476	0.0882
1024	SLU 19	0.25	0.37	33.28	-10.3704	-0.0476	0.0885
1024	SLU 20	0.26	0.34	33.54	-10.4496	-0.048	0.0898
1024	SLU 21	0.26	0.37	33.54	-10.4482	-0.048	0.0901
1024	SLU 22	0.24	0.36	31.53	-9.821	-0.0447	0.0832
1024	SLU 23	0.24	0.41	31.53	-9.8186	-0.0447	0.0836
1024	SLU 24	0.24	0.38	32.04	-9.9766	-0.0456	0.0854
1024	SLU 25	0.24	0.41	32.04	-9.9751	-0.0455	0.0856
1024	SLU 26	0.24	0.41	31.78	-9.8964	-0.0451	0.0852
1024	SLU 27	0.25	0.38	32.3	-10.0543	-0.046	0.087
1024	SLU 28	0.25	0.41	32.29	-10.0529	-0.046	0.0872
1024	SLU 29	0.25	0.36	32.04	-9.9766	-0.0455	0.0863
1024	SLU 30	0.25	0.39	32.04	-9.9752	-0.0455	0.0866
1024	SLU 31	0.26	0.44	35.27	-10.9789	-0.0508	0.0927
1024	SLU 32	0.27	0.4	35.78	-11.1368	-0.0516	0.0945
1024	SLU 33	0.27	0.43	35.78	-11.1354	-0.0516	0.0947
1024	SLU 34	0.27	0.44	35.52	-11.0567	-0.0512	0.0943
1024	SLU 35	0.27	0.4	36.04	-11.2146	-0.052	0.096
1024	SLU 36	0.27	0.44	36.03	-11.2132	-0.052	0.0963

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1024	SLU 37	0.27	0.39	35.78	-11.1369	-0.0516	0.0954
1024	SLU 38	0.27	0.42	35.78	-11.1354	-0.0516	0.0957
1024	SLU 39	0.27	0.4	36.88	-11.4786	-0.0534	0.0961
1024	SLU 40	0.27	0.43	36.87	-11.4771	-0.0534	0.0964
1024	SLU 41	0.28	0.4	37.13	-11.5563	-0.0538	0.0977
1024	SLU 42	0.28	0.43	37.13	-11.5549	-0.0538	0.098
1024	SLU 43	0.27	0.37	35.09	-10.9492	-0.0486	0.0951
1024	SLU 44	0.27	0.42	35.09	-10.9468	-0.0486	0.0955
1024	SLU 45	0.28	0.38	35.6	-11.1047	-0.0494	0.0973
1024	SLU 46	0.28	0.42	35.6	-11.1033	-0.0494	0.0976
1024	SLU 47	0.28	0.42	35.34	-11.0246	-0.049	0.0971
1024	SLU 48	0.28	0.39	35.86	-11.1825	-0.0498	0.0989
1024	SLU 49	0.28	0.42	35.85	-11.1811	-0.0498	0.0991
1024	SLU 50	0.28	0.37	35.6	-11.1047	-0.0494	0.0983
1024	SLU 51	0.28	0.4	35.6	-11.1033	-0.0494	0.0985
1024	SLU 52	0.3	0.45	38.83	-12.1071	-0.0547	0.1046
1024	SLU 53	0.3	0.41	39.35	-12.265	-0.0555	0.1064
1024	SLU 54	0.3	0.44	39.34	-12.2636	-0.0555	0.1066
1024	SLU 55	0.3	0.45	39.08	-12.1848	-0.0551	0.1062
1024	SLU 56	0.31	0.41	39.6	-12.3428	-0.0559	0.108
1024	SLU 57	0.31	0.44	39.59	-12.3413	-0.0559	0.1082
1024	SLU 58	0.31	0.4	39.34	-12.265	-0.0555	0.1073
1024	SLU 59	0.31	0.43	39.34	-12.2636	-0.0555	0.1076
1024	SLU 60	0.31	0.41	40.44	-12.6067	-0.0573	0.1081
1024	SLU 61	0.31	0.44	40.43	-12.6053	-0.0573	0.1083
1024	SLU 62	0.31	0.41	40.69	-12.6845	-0.0577	0.1096
1024	SLU 63	0.31	0.44	40.69	-12.6831	-0.0577	0.1099
1024	SLU 64	0.29	0.43	38.69	-12.0559	-0.0544	0.103
1024	SLU 65	0.29	0.48	38.68	-12.0535	-0.0544	0.1035
1024	SLU 66	0.3	0.44	39.2	-12.2114	-0.0552	0.1052
1024	SLU 67	0.3	0.48	39.19	-12.21	-0.0552	0.1055
1024	SLU 68	0.3	0.48	38.93	-12.1313	-0.0548	0.105
1024	SLU 69	0.3	0.45	39.45	-12.2892	-0.0556	0.1068
1024	SLU 70	0.3	0.48	39.44	-12.2878	-0.0556	0.1071
1024	SLU 71	0.3	0.43	39.19	-12.2114	-0.0552	0.1062
1024	SLU 72	0.3	0.46	39.19	-12.21	-0.0552	0.1065
1024	SLU 73	0.32	0.51	42.42	-13.2138	-0.0605	0.1125
1024	SLU 74	0.33	0.47	42.94	-13.3717	-0.0613	0.1143
1024	SLU 75	0.33	0.5	42.93	-13.3703	-0.0613	0.1146
1024	SLU 76	0.33	0.51	42.67	-13.2915	-0.0609	0.1141
1024	SLU 77	0.33	0.47	43.19	-13.4495	-0.0617	0.1159
1024	SLU 78	0.33	0.5	43.18	-13.448	-0.0617	0.1162
1024	SLU 79	0.33	0.46	42.93	-13.3717	-0.0613	0.1153
1024	SLU 80	0.33	0.49	42.93	-13.3703	-0.0613	0.1155
1024	SLU 81	0.33	0.47	44.03	-13.7134	-0.0631	0.116
1024	SLU 82	0.33	0.5	44.02	-13.712	-0.0631	0.1163
1024	SLU 83	0.33	0.47	44.28	-13.7912	-0.0635	0.1176
1024	SLU 84	0.34	0.5	44.28	-13.7898	-0.0635	0.1178
1024	SLE RA 1	0.22	0.32	28.97	-9.0305	-0.0406	0.0775
1024	SLE RA 2	0.22	0.35	28.96	-9.0289	-0.0406	0.0778
1024	SLE RA 3	0.22	0.33	29.31	-9.1342	-0.0411	0.079
1024	SLE RA 4	0.23	0.35	29.31	-9.1333	-0.0411	0.0791
1024	SLE RA 5	0.22	0.35	29.13	-9.0808	-0.0409	0.0789
1024	SLE RA 6	0.23	0.33	29.48	-9.1861	-0.0414	0.08
1024	SLE RA 7	0.23	0.35	29.47	-9.1851	-0.0414	0.0802
1024	SLE RA 8	0.23	0.32	29.31	-9.1342	-0.0411	0.0796
1024	SLE RA 9	0.23	0.34	29.3	-9.1333	-0.0411	0.0798
1024	SLE RA 10	0.24	0.37	31.46	-9.8024	-0.0446	0.0838
1024	SLE RA 11	0.24	0.34	31.8	-9.9077	-0.0452	0.085
1024	SLE RA 12	0.24	0.37	31.8	-9.9068	-0.0452	0.0852
1024	SLE RA 13	0.24	0.37	31.63	-9.8543	-0.0449	0.0849
1024	SLE RA 14	0.25	0.35	31.97	-9.9596	-0.0454	0.0861
1024	SLE RA 15	0.25	0.37	31.97	-9.9586	-0.0454	0.0863
1024	SLE RA 16	0.24	0.34	31.8	-9.9077	-0.0452	0.0857
1024	SLE RA 17	0.24	0.36	31.8	-9.9068	-0.0452	0.0859
1024	SLE RA 18	0.25	0.34	32.53	-10.1355	-0.0464	0.0861
1024	SLE RA 19	0.25	0.36	32.53	-10.1346	-0.0464	0.0863
1024	SLE RA 20	0.25	0.34	32.7	-10.1874	-0.0466	0.0872
1024	SLE RA 21	0.25	0.36	32.7	-10.1864	-0.0466	0.0874
1024	SLE FR 1	0.22	0.32	28.97	-9.0305	-0.0406	0.0775
1024	SLE FR 2	0.22	0.32	28.97	-9.0302	-0.0406	0.0776
1024	SLE FR 3	0.22	0.32	29.04	-9.0513	-0.0407	0.0779
1024	SLE FR 4	0.23	0.33	30.04	-9.3617	-0.0423	0.0801
1024	SLE FR 5	0.23	0.32	30.11	-9.3828	-0.0424	0.0805
1024	SLE FR 6	0.23	0.33	30.75	-9.583	-0.0435	0.0818
1024	SLE QP 1	0.22	0.32	28.97	-9.0305	-0.0406	0.0775
1024	SLE QP 2	0.23	0.32	30.04	-9.362	-0.0423	0.0801
1024	SLD 1	4.27	0.79	28.86	-8.9674	-0.0339	1.4963
1024	SLD 2	4.08	0.82	28.86	-8.9689	-0.0339	1.4282
1024	SLD 3	4.17	-0.34	29.16	-9.0655	-0.035	1.4596
1024	SLD 4	3.98	-0.31	29.16	-9.067	-0.035	1.3915
1024	SLD 5	1.63	2.17	29.23	-9.0946	-0.0381	0.5724
1024	SLD 6	1.51	2.19	29.23	-9.0956	-0.0381	0.5283
1024	SLD 7	1.29	-1.59	30.23	-9.4216	-0.0419	0.4502
1024	SLD 8	1.16	-1.57	30.23	-9.4225	-0.0418	0.406
1024	SLD 9	-0.7	2.22	29.84	-9.3015	-0.0428	-0.2458
1024	SLD 10	-0.83	2.24	29.85	-9.3025	-0.0428	-0.29
1024	SLD 11	-1.05	-1.54	30.85	-9.6285	-0.0466	-0.3681
1024	SLD 12	-1.18	-1.52	30.85	-9.6294	-0.0465	-0.4123
1024	SLD 13	-3.52	0.96	30.91	-9.6571	-0.0497	-1.2314
1024	SLD 14	-3.71	0.99	30.92	-9.6586	-0.0496	-1.2994

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1024	SLD 15	-3.62	-0.17	31.21	-9.7552	-0.0508	-1.268
1024	SLD 16	-3.82	-0.14	31.22	-9.7567	-0.0507	-1.3361
1024	SLV 1	9.69	1.37	27.29	-8.4411	-0.0226	3.3919
1024	SLV 2	9.24	1.44	27.29	-8.4446	-0.0225	3.2334
1024	SLV 3	9.45	-1.2	27.97	-8.6658	-0.0253	3.3064
1024	SLV 4	8.99	-1.14	27.98	-8.6693	-0.0252	3.1479
1024	SLV 5	3.51	4.53	28.16	-8.7443	-0.0325	1.2301
1024	SLV 6	3.22	4.57	28.17	-8.7466	-0.0324	1.1289
1024	SLV 7	2.7	-4.05	30.46	-9.4934	-0.0412	0.9451
1024	SLV 8	2.41	-4	30.47	-9.4956	-0.0411	0.8439
1024	SLV 9	-1.96	4.65	29.61	-9.2285	-0.0435	-0.6837
1024	SLV 10	-2.25	4.69	29.61	-9.2307	-0.0435	-0.785
1024	SLV 11	-2.77	-3.92	31.91	-9.9775	-0.0523	-0.9687
1024	SLV 12	-3.06	-3.88	31.91	-9.9797	-0.0522	-1.07
1024	SLV 13	-8.54	1.78	32.09	-10.0548	-0.0595	-2.9877
1024	SLV 14	-8.99	1.85	32.1	-10.0583	-0.0594	-3.1462
1024	SLV 15	-8.78	-0.79	32.78	-10.2795	-0.0621	-3.0732
1024	SLV 16	-9.24	-0.73	32.79	-10.283	-0.062	-3.2317
1024	CRTFP Ux+	0	0	0	0	0	0
1024	CRTFP Ux-	0	0	0	0	0	0
1024	CRTFP Uy+	0	0	0	0	0	0
1024	CRTFP Uy-	0	0	0	0	0	0
1025	SLU 1	0.25	0.31	29.1	-9.3759	-0.037	0.0886
1025	SLU 2	0.25	0.36	29.09	-9.3735	-0.037	0.0891
1025	SLU 3	0.26	0.32	29.63	-9.5452	-0.0378	0.0912
1025	SLU 4	0.26	0.36	29.63	-9.5438	-0.0378	0.0915
1025	SLU 5	0.26	0.36	29.36	-9.4581	-0.0374	0.0909
1025	SLU 6	0.26	0.33	29.9	-9.6297	-0.0382	0.093
1025	SLU 7	0.27	0.36	29.89	-9.6283	-0.0382	0.0933
1025	SLU 8	0.26	0.31	29.63	-9.545	-0.0378	0.0923
1025	SLU 9	0.26	0.34	29.62	-9.5436	-0.0378	0.0926
1025	SLU 10	0.28	0.39	33.01	-10.6345	-0.0427	0.0998
1025	SLU 11	0.29	0.35	33.55	-10.8061	-0.0435	0.1019
1025	SLU 12	0.29	0.38	33.55	-10.8047	-0.0435	0.1021
1025	SLU 13	0.29	0.39	33.28	-10.719	-0.0431	0.1016
1025	SLU 14	0.3	0.35	33.82	-10.8907	-0.0439	0.1037
1025	SLU 15	0.3	0.38	33.81	-10.8893	-0.0439	0.104
1025	SLU 16	0.29	0.34	33.55	-10.8059	-0.0435	0.103
1025	SLU 17	0.29	0.37	33.54	-10.8045	-0.0435	0.1032
1025	SLU 18	0.3	0.35	34.7	-11.1772	-0.0452	0.1039
1025	SLU 19	0.3	0.38	34.69	-11.1758	-0.0452	0.1041
1025	SLU 20	0.3	0.35	34.96	-11.2618	-0.0456	0.1057
1025	SLU 21	0.3	0.38	34.96	-11.2604	-0.0456	0.106
1025	SLU 22	0.28	0.37	32.86	-10.5801	-0.0426	0.0982
1025	SLU 23	0.28	0.42	32.85	-10.5777	-0.0426	0.0986
1025	SLU 24	0.29	0.38	33.4	-10.7493	-0.0433	0.1007
1025	SLU 25	0.29	0.42	33.39	-10.7479	-0.0433	0.101
1025	SLU 26	0.29	0.42	33.12	-10.6623	-0.0429	0.1005
1025	SLU 27	0.29	0.39	33.66	-10.8339	-0.0437	0.1026
1025	SLU 28	0.29	0.42	33.66	-10.8325	-0.0437	0.1028
1025	SLU 29	0.29	0.37	33.39	-10.7492	-0.0433	0.1018
1025	SLU 30	0.29	0.4	33.39	-10.7477	-0.0433	0.1021
1025	SLU 31	0.31	0.45	36.77	-11.8387	-0.0483	0.1093
1025	SLU 32	0.32	0.41	37.32	-12.0103	-0.049	0.1114
1025	SLU 33	0.32	0.44	37.31	-12.0089	-0.049	0.1117
1025	SLU 34	0.32	0.45	37.04	-11.9232	-0.0487	0.1111
1025	SLU 35	0.32	0.41	37.58	-12.0948	-0.0494	0.1132
1025	SLU 36	0.32	0.44	37.58	-12.0934	-0.0494	0.1135
1025	SLU 37	0.32	0.4	37.31	-12.0101	-0.049	0.1125
1025	SLU 38	0.32	0.43	37.31	-12.0087	-0.049	0.1128
1025	SLU 39	0.32	0.41	38.46	-12.3814	-0.0507	0.1134
1025	SLU 40	0.32	0.44	38.46	-12.38	-0.0507	0.1137
1025	SLU 41	0.33	0.41	38.73	-12.466	-0.0511	0.1152
1025	SLU 42	0.33	0.44	38.72	-12.4646	-0.0511	0.1155
1025	SLU 43	0.32	0.38	36.54	-11.7758	-0.0462	0.112
1025	SLU 44	0.32	0.43	36.53	-11.7734	-0.0462	0.1124
1025	SLU 45	0.33	0.4	37.07	-11.9451	-0.047	0.1145
1025	SLU 46	0.33	0.43	37.07	-11.9437	-0.047	0.1148
1025	SLU 47	0.33	0.43	36.8	-11.858	-0.0466	0.1143
1025	SLU 48	0.33	0.4	37.34	-12.0296	-0.0474	0.1163
1025	SLU 49	0.33	0.43	37.33	-12.0282	-0.0474	0.1166
1025	SLU 50	0.33	0.38	37.07	-11.9449	-0.047	0.1156
1025	SLU 51	0.33	0.41	37.06	-11.9435	-0.047	0.1159
1025	SLU 52	0.35	0.46	40.45	-13.0344	-0.052	0.1231
1025	SLU 53	0.36	0.42	40.99	-13.206	-0.0527	0.1252
1025	SLU 54	0.36	0.46	40.99	-13.2046	-0.0527	0.1255
1025	SLU 55	0.36	0.46	40.72	-13.1189	-0.0523	0.1249
1025	SLU 56	0.36	0.42	41.26	-13.2906	-0.0531	0.127
1025	SLU 57	0.36	0.46	41.25	-13.2892	-0.0531	0.1273
1025	SLU 58	0.36	0.41	40.99	-13.2058	-0.0527	0.1263
1025	SLU 59	0.36	0.44	40.98	-13.2044	-0.0527	0.1266
1025	SLU 60	0.36	0.42	42.14	-13.5771	-0.0544	0.1272
1025	SLU 61	0.36	0.45	42.13	-13.5757	-0.0544	0.1275
1025	SLU 62	0.37	0.42	42.4	-13.6617	-0.0548	0.129
1025	SLU 63	0.37	0.45	42.4	-13.6603	-0.0548	0.1293
1025	SLU 64	0.35	0.44	40.3	-12.98	-0.0518	0.1215
1025	SLU 65	0.35	0.49	40.29	-12.9776	-0.0518	0.122
1025	SLU 66	0.35	0.46	40.84	-13.1492	-0.0525	0.1241
1025	SLU 67	0.35	0.49	40.83	-13.1478	-0.0525	0.1243
1025	SLU 68	0.35	0.49	40.56	-13.0622	-0.0521	0.1238
1025	SLU 69	0.36	0.46	41.1	-13.2338	-0.0529	0.1259

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1025	SLU 70	0.36	0.49	41.1	-13.2324	-0.0529	0.1262
1025	SLU 71	0.36	0.44	40.83	-13.1491	-0.0525	0.1252
1025	SLU 72	0.36	0.47	40.83	-13.1477	-0.0525	0.1254
1025	SLU 73	0.38	0.52	44.21	-14.2386	-0.0575	0.1326
1025	SLU 74	0.38	0.48	44.76	-14.4102	-0.0583	0.1347
1025	SLU 75	0.38	0.51	44.75	-14.4088	-0.0583	0.135
1025	SLU 76	0.38	0.52	44.48	-14.3231	-0.0579	0.1344
1025	SLU 77	0.39	0.48	45.02	-14.4947	-0.0586	0.1365
1025	SLU 78	0.39	0.52	45.02	-14.4933	-0.0586	0.1368
1025	SLU 79	0.39	0.47	44.75	-14.41	-0.0582	0.1358
1025	SLU 80	0.39	0.5	44.75	-14.4086	-0.0582	0.1361
1025	SLU 81	0.39	0.48	45.9	-14.7813	-0.0599	0.1367
1025	SLU 82	0.39	0.51	45.9	-14.7799	-0.0599	0.137
1025	SLU 83	0.39	0.48	46.17	-14.8659	-0.0603	0.1386
1025	SLU 84	0.4	0.51	46.16	-14.8645	-0.0603	0.1388
1025	SLE RA 1	0.26	0.32	30.17	-9.7199	-0.0386	0.0914
1025	SLE RA 2	0.26	0.36	30.17	-9.7184	-0.0386	0.0917
1025	SLE RA 3	0.27	0.34	30.53	-9.8328	-0.0391	0.0931
1025	SLE RA 4	0.27	0.36	30.53	-9.8318	-0.0391	0.0933
1025	SLE RA 5	0.26	0.36	30.35	-9.7747	-0.0389	0.0929
1025	SLE RA 6	0.27	0.34	30.71	-9.8891	-0.0394	0.0943
1025	SLE RA 7	0.27	0.36	30.7	-9.8882	-0.0394	0.0945
1025	SLE RA 8	0.27	0.33	30.53	-9.8327	-0.0391	0.0938
1025	SLE RA 9	0.27	0.35	30.52	-9.8317	-0.0391	0.094
1025	SLE RA 10	0.28	0.38	32.78	-10.559	-0.0424	0.0988
1025	SLE RA 11	0.29	0.35	33.14	-10.6734	-0.0429	0.1002
1025	SLE RA 12	0.29	0.38	33.14	-10.6725	-0.0429	0.1004
1025	SLE RA 13	0.28	0.38	32.96	-10.6154	-0.0427	0.1
1025	SLE RA 14	0.29	0.35	33.32	-10.7298	-0.0432	0.1014
1025	SLE RA 15	0.29	0.38	33.32	-10.7288	-0.0432	0.1016
1025	SLE RA 16	0.29	0.34	33.14	-10.6733	-0.0429	0.1009
1025	SLE RA 17	0.29	0.37	33.14	-10.6724	-0.0429	0.1011
1025	SLE RA 18	0.29	0.35	33.91	-10.9208	-0.0441	0.1015
1025	SLE RA 19	0.29	0.37	33.91	-10.9199	-0.0441	0.1017
1025	SLE RA 20	0.29	0.35	34.08	-10.9772	-0.0443	0.1027
1025	SLE RA 21	0.29	0.37	34.08	-10.9763	-0.0443	0.1029
1025	SLE FR 1	0.26	0.32	30.17	-9.7199	-0.0386	0.0914
1025	SLE FR 2	0.26	0.33	30.17	-9.7196	-0.0386	0.0914
1025	SLE FR 3	0.26	0.32	30.25	-9.7425	-0.0387	0.0919
1025	SLE FR 4	0.27	0.34	31.29	-10.0799	-0.0402	0.0945
1025	SLE FR 5	0.27	0.33	31.37	-10.1027	-0.0403	0.0949
1025	SLE FR 6	0.27	0.34	32.04	-10.3204	-0.0413	0.0964
1025	SLE QP 1	0.26	0.32	30.17	-9.7199	-0.0386	0.0914
1025	SLE QP 2	0.27	0.33	31.29	-10.0802	-0.0402	0.0944
1025	SLD 1	4.31	0.8	29.89	-9.6112	-0.0321	1.507
1025	SLD 2	4.11	0.83	29.89	-9.6124	-0.0321	1.4391
1025	SLD 3	4.2	-0.35	30.18	-9.7026	-0.0331	1.4703
1025	SLD 4	4.01	-0.31	30.18	-9.7039	-0.033	1.4024
1025	SLD 5	1.67	2.2	30.42	-9.8005	-0.0363	0.5856
1025	SLD 6	1.55	2.22	30.43	-9.8014	-0.0363	0.5415
1025	SLD 7	1.33	-1.61	31.41	-10.1055	-0.0395	0.4634
1025	SLD 8	1.2	-1.59	31.41	-10.1063	-0.0395	0.4194
1025	SLD 9	-0.66	2.25	31.18	-10.0541	-0.041	-0.2306
1025	SLD 10	-0.79	2.28	31.18	-10.0549	-0.0409	-0.2746
1025	SLD 11	-1.01	-1.56	32.16	-10.3591	-0.0442	-0.3527
1025	SLD 12	-1.13	-1.54	32.17	-10.3599	-0.0441	-0.3968
1025	SLD 13	-3.47	0.97	32.41	-10.4565	-0.0474	-1.2136
1025	SLD 14	-3.66	1.01	32.41	-10.4578	-0.0474	-1.2815
1025	SLD 15	-3.57	-0.17	32.7	-10.548	-0.0484	-1.2503
1025	SLD 16	-3.77	-0.13	32.7	-10.5492	-0.0484	-1.3181
1025	SLV 1	9.71	1.38	28.01	-8.9852	-0.0212	3.3978
1025	SLV 2	9.26	1.47	28.01	-8.9881	-0.0211	3.2396
1025	SLV 3	9.47	-1.23	28.68	-9.1944	-0.0234	3.3123
1025	SLV 4	9.02	-1.14	28.69	-9.1974	-0.0234	3.1542
1025	SLV 5	3.55	4.59	29.28	-9.4338	-0.0311	1.2417
1025	SLV 6	3.26	4.64	29.29	-9.4357	-0.0311	1.1407
1025	SLV 7	2.74	-4.1	31.53	-10.1313	-0.0386	0.957
1025	SLV 8	2.45	-4.05	31.54	-10.1332	-0.0386	0.856
1025	SLV 9	-1.91	4.71	31.05	-10.0272	-0.0419	-0.6672
1025	SLV 10	-2.2	4.77	31.06	-10.0291	-0.0419	-0.7682
1025	SLV 11	-2.72	-3.98	33.3	-10.7247	-0.0494	-0.9519
1025	SLV 12	-3.01	-3.92	33.31	-10.7266	-0.0493	-1.0529
1025	SLV 13	-8.48	1.8	33.9	-10.963	-0.0571	-2.9654
1025	SLV 14	-8.93	1.89	33.91	-10.966	-0.057	-3.1235
1025	SLV 15	-8.72	-0.81	34.58	-11.1723	-0.0594	-3.0508
1025	SLV 16	-9.17	-0.72	34.58	-11.1753	-0.0593	-3.2089
1025	CRTFP Ux+	0	0	0	0	0	0
1025	CRTFP Ux-	0	0	0	0	0	0
1025	CRTFP Uy+	0	0	0	0	0	0
1025	CRTFP Uy-	0	0	0	0	0	0
1026	SLU 1	0.26	0.28	27.27	-9.0454	0.4886	0.0873
1026	SLU 2	0.27	0.33	27.26	-9.0435	0.4884	0.0868
1026	SLU 3	0.27	0.3	27.77	-9.2101	0.4975	0.0896
1026	SLU 4	0.27	0.33	27.77	-9.2089	0.4974	0.0893
1026	SLU 5	0.27	0.33	27.51	-9.1256	0.4929	0.0886
1026	SLU 6	0.28	0.3	28.02	-9.2922	0.502	0.0915
1026	SLU 7	0.28	0.33	28.02	-9.2911	0.5019	0.0912
1026	SLU 8	0.28	0.29	27.77	-9.2096	0.4975	0.091
1026	SLU 9	0.28	0.31	27.76	-9.2085	0.4974	0.0907
1026	SLU 10	0.3	0.36	30.95	-10.2681	0.5542	0.0974
1026	SLU 11	0.3	0.32	31.46	-10.4347	0.5633	0.1002

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1026	SLU 12	0.3	0.35	31.46	-10.4336	0.5632	0.0999
1026	SLU 13	0.3	0.36	31.2	-10.3502	0.5586	0.0993
1026	SLU 14	0.31	0.32	31.71	-10.5168	0.5677	0.1021
1026	SLU 15	0.31	0.35	31.7	-10.5157	0.5677	0.1018
1026	SLU 16	0.31	0.31	31.46	-10.4343	0.5632	0.1016
1026	SLU 17	0.31	0.34	31.45	-10.4331	0.5632	0.1013
1026	SLU 18	0.31	0.32	32.54	-10.7949	0.5825	0.1024
1026	SLU 19	0.31	0.35	32.53	-10.7937	0.5825	0.1022
1026	SLU 20	0.32	0.32	32.79	-10.877	0.587	0.1043
1026	SLU 21	0.32	0.35	32.78	-10.8758	0.5869	0.104
1026	SLU 22	0.29	0.34	30.81	-10.217	0.5517	0.0964
1026	SLU 23	0.29	0.39	30.81	-10.2151	0.5515	0.0959
1026	SLU 24	0.3	0.35	31.31	-10.3817	0.5606	0.0987
1026	SLU 25	0.3	0.38	31.31	-10.3806	0.5605	0.0984
1026	SLU 26	0.3	0.39	31.05	-10.2972	0.556	0.0977
1026	SLU 27	0.31	0.35	31.56	-10.4638	0.5651	0.1005
1026	SLU 28	0.31	0.38	31.56	-10.4627	0.565	0.1002
1026	SLU 29	0.3	0.34	31.31	-10.3813	0.5606	0.1
1026	SLU 30	0.3	0.37	31.31	-10.3801	0.5605	0.0998
1026	SLU 31	0.33	0.41	34.49	-11.4397	0.6173	0.1065
1026	SLU 32	0.33	0.38	35	-11.6064	0.6264	0.1093
1026	SLU 33	0.33	0.41	35	-11.6052	0.6263	0.109
1026	SLU 34	0.33	0.41	34.74	-11.5219	0.6217	0.1083
1026	SLU 35	0.34	0.38	35.25	-11.6885	0.6308	0.1112
1026	SLU 36	0.34	0.41	35.25	-11.6873	0.6308	0.1109
1026	SLU 37	0.34	0.36	35	-11.6059	0.6263	0.1107
1026	SLU 38	0.34	0.39	35	-11.6048	0.6263	0.1104
1026	SLU 39	0.34	0.37	36.08	-11.9665	0.6456	0.1115
1026	SLU 40	0.34	0.4	36.08	-11.9654	0.6456	0.1112
1026	SLU 41	0.34	0.37	36.33	-12.0486	0.6501	0.1134
1026	SLU 42	0.34	0.4	36.33	-12.0475	0.65	0.1131
1026	SLU 43	0.33	0.35	34.23	-11.3573	0.6135	0.1104
1026	SLU 44	0.34	0.4	34.23	-11.3554	0.6133	0.1099
1026	SLU 45	0.34	0.36	34.74	-11.522	0.6224	0.1127
1026	SLU 46	0.34	0.39	34.73	-11.5208	0.6224	0.1124
1026	SLU 47	0.34	0.4	34.48	-11.4375	0.6178	0.1117
1026	SLU 48	0.35	0.37	34.99	-11.6041	0.6269	0.1145
1026	SLU 49	0.35	0.4	34.98	-11.603	0.6268	0.1142
1026	SLU 50	0.34	0.35	34.73	-11.5215	0.6224	0.114
1026	SLU 51	0.35	0.38	34.73	-11.5204	0.6223	0.1138
1026	SLU 52	0.37	0.42	37.92	-12.58	0.6791	0.1205
1026	SLU 53	0.37	0.39	38.43	-12.7466	0.6882	0.1233
1026	SLU 54	0.37	0.42	38.42	-12.7455	0.6881	0.123
1026	SLU 55	0.37	0.42	38.17	-12.6621	0.6836	0.1223
1026	SLU 56	0.38	0.39	38.67	-12.8288	0.6927	0.1252
1026	SLU 57	0.38	0.42	38.67	-12.8276	0.6926	0.1249
1026	SLU 58	0.38	0.38	38.42	-12.7462	0.6882	0.1247
1026	SLU 59	0.38	0.41	38.42	-12.745	0.6881	0.1244
1026	SLU 60	0.38	0.38	39.5	-13.1068	0.7075	0.1255
1026	SLU 61	0.38	0.41	39.5	-13.1056	0.7074	0.1252
1026	SLU 62	0.38	0.39	39.75	-13.1889	0.7119	0.1274
1026	SLU 63	0.39	0.42	39.75	-13.1878	0.7118	0.1271
1026	SLU 64	0.36	0.4	37.78	-12.5289	0.6766	0.1194
1026	SLU 65	0.36	0.45	37.77	-12.527	0.6764	0.1189
1026	SLU 66	0.37	0.42	38.28	-12.6936	0.6855	0.1218
1026	SLU 67	0.37	0.45	38.28	-12.6925	0.6855	0.1215
1026	SLU 68	0.37	0.45	38.02	-12.6091	0.6809	0.1208
1026	SLU 69	0.38	0.42	38.53	-12.7758	0.69	0.1236
1026	SLU 70	0.38	0.45	38.53	-12.7746	0.6899	0.1233
1026	SLU 71	0.37	0.41	38.28	-12.6932	0.6855	0.1231
1026	SLU 72	0.37	0.44	38.27	-12.692	0.6854	0.1228
1026	SLU 73	0.4	0.48	41.46	-13.7517	0.7422	0.1296
1026	SLU 74	0.4	0.44	41.97	-13.9183	0.7513	0.1324
1026	SLU 75	0.4	0.47	41.97	-13.9171	0.7512	0.1321
1026	SLU 76	0.4	0.48	41.71	-13.8338	0.7467	0.1314
1026	SLU 77	0.41	0.44	42.22	-14.0004	0.7558	0.1342
1026	SLU 78	0.41	0.47	42.21	-13.9992	0.7557	0.1339
1026	SLU 79	0.41	0.43	41.97	-13.9178	0.7513	0.1337
1026	SLU 80	0.41	0.46	41.96	-13.9167	0.7512	0.1334
1026	SLU 81	0.41	0.44	43.05	-14.2784	0.7706	0.1346
1026	SLU 82	0.41	0.47	43.04	-14.2773	0.7705	0.1343
1026	SLU 83	0.41	0.44	43.3	-14.3605	0.775	0.1364
1026	SLU 84	0.41	0.47	43.29	-14.3594	0.7749	0.1361
1026	SLE RA 1	0.27	0.3	28.28	-9.3801	0.5066	0.0899
1026	SLE RA 2	0.27	0.33	28.28	-9.3789	0.5065	0.0895
1026	SLE RA 3	0.28	0.31	28.62	-9.4899	0.5126	0.0914
1026	SLE RA 4	0.28	0.33	28.61	-9.4892	0.5125	0.0912
1026	SLE RA 5	0.28	0.33	28.44	-9.4336	0.5095	0.0908
1026	SLE RA 6	0.28	0.31	28.78	-9.5447	0.5155	0.0927
1026	SLE RA 7	0.28	0.33	28.78	-9.5439	0.5155	0.0925
1026	SLE RA 8	0.28	0.3	28.61	-9.4896	0.5125	0.0923
1026	SLE RA 9	0.28	0.32	28.61	-9.4889	0.5125	0.0921
1026	SLE RA 10	0.29	0.35	30.74	-10.1953	0.5503	0.0966
1026	SLE RA 11	0.3	0.33	31.08	-10.3064	0.5564	0.0985
1026	SLE RA 12	0.3	0.35	31.07	-10.3056	0.5564	0.0983
1026	SLE RA 13	0.3	0.35	30.9	-10.25	0.5533	0.0979
1026	SLE RA 14	0.3	0.33	31.24	-10.3611	0.5594	0.0997
1026	SLE RA 15	0.3	0.35	31.24	-10.3603	0.5593	0.0995
1026	SLE RA 16	0.3	0.32	31.07	-10.3061	0.5564	0.0994
1026	SLE RA 17	0.3	0.34	31.07	-10.3053	0.5563	0.0992
1026	SLE RA 18	0.3	0.32	31.8	-10.5465	0.5692	0.1

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1026	SLE RA 19	0.3	0.34	31.79	-10.5457	0.5692	0.0998
1026	SLE RA 20	0.31	0.32	31.96	-10.6012	0.5722	0.1012
1026	SLE RA 21	0.31	0.34	31.96	-10.6004	0.5721	0.101
1026	SLE FR 1	0.27	0.3	28.28	-9.3801	0.5066	0.0899
1026	SLE FR 2	0.27	0.31	28.28	-9.3799	0.5066	0.0898
1026	SLE FR 3	0.27	0.3	28.35	-9.402	0.5078	0.0904
1026	SLE FR 4	0.28	0.31	29.33	-9.7298	0.5254	0.0928
1026	SLE FR 5	0.28	0.31	29.4	-9.7519	0.5266	0.0934
1026	SLE FR 6	0.29	0.31	30.04	-9.9633	0.5379	0.0949
1026	SLE QP 1	0.27	0.3	28.28	-9.3801	0.5066	0.0899
1026	SLE QP 2	0.28	0.31	29.34	-9.73	0.5254	0.0929
1026	SLD 1	3.94	0.72	27.87	-9.2431	0.5033	1.3426
1026	SLD 2	3.77	0.76	27.87	-9.2442	0.5033	1.2802
1026	SLD 3	3.85	-0.33	28.13	-9.3208	0.5083	1.3723
1026	SLD 4	3.67	-0.29	28.13	-9.3219	0.5084	1.3099
1026	SLD 5	1.55	2.01	28.5	-9.4659	0.511	0.4336
1026	SLD 6	1.44	2.04	28.5	-9.4666	0.511	0.3931
1026	SLD 7	1.24	-1.49	29.37	-9.7249	0.528	0.5327
1026	SLD 8	1.12	-1.46	29.37	-9.7256	0.528	0.4922
1026	SLD 9	-0.56	2.07	29.3	-9.7344	0.5227	-0.3064
1026	SLD 10	-0.68	2.1	29.3	-9.7351	0.5228	-0.3469
1026	SLD 11	-0.88	-1.43	30.17	-9.9935	0.5397	-0.2073
1026	SLD 12	-0.99	-1.4	30.17	-9.9942	0.5398	-0.2478
1026	SLD 13	-3.11	0.9	30.54	-10.1382	0.5424	-1.1241
1026	SLD 14	-3.28	0.94	30.54	-10.1393	0.5424	-1.1865
1026	SLD 15	-3.2	-0.15	30.8	-10.2159	0.5475	-1.0944
1026	SLD 16	-3.38	-0.11	30.8	-10.217	0.5475	-1.1568
1026	SLV 1	8.84	1.24	25.9	-8.5927	0.4737	3.0157
1026	SLV 2	8.43	1.34	25.91	-8.5952	0.4739	2.8702
1026	SLV 3	8.62	-1.16	26.5	-8.7705	0.4854	3.0849
1026	SLV 4	8.21	-1.05	26.51	-8.773	0.4855	2.9395
1026	SLV 5	3.25	4.2	27.4	-9.1188	0.4922	0.8893
1026	SLV 6	2.99	4.26	27.4	-9.1204	0.4923	0.7964
1026	SLV 7	2.52	-3.78	29.39	-9.7114	0.531	1.1202
1026	SLV 8	2.26	-3.71	29.4	-9.713	0.5311	1.0273
1026	SLV 9	-1.69	4.32	29.27	-9.7471	0.5197	-0.8415
1026	SLV 10	-1.95	4.39	29.28	-9.7487	0.5197	-0.9344
1026	SLV 11	-2.43	-3.65	31.27	-10.3397	0.5585	-0.6106
1026	SLV 12	-2.69	-3.59	31.27	-10.3413	0.5586	-0.7035
1026	SLV 13	-7.65	1.66	32.16	-10.6871	0.5653	-2.7537
1026	SLV 14	-8.06	1.77	32.17	-10.6895	0.5654	-2.8991
1026	SLV 15	-7.87	-0.73	32.76	-10.8649	0.5769	-2.6844
1026	SLV 16	-8.28	-0.63	32.77	-10.8673	0.577	-2.8299
1026	CRTFP Ux+	0	0	0	0	0	0
1026	CRTFP Ux-	0	0	0	0	0	0
1026	CRTFP Uy+	0	0	0	0	0	0
1026	CRTFP Uy-	0	0	0	0	0	0
1028	SLU 1	0.71	0.63	65.51	-15.8963	0.1169	0.1695
1028	SLU 2	0.72	0.75	65.49	-15.8931	0.1166	0.17
1028	SLU 3	0.73	0.67	66.72	-16.188	0.1191	0.1742
1028	SLU 4	0.74	0.74	66.71	-16.1861	0.1189	0.1745
1028	SLU 5	0.73	0.75	66.09	-16.038	0.1178	0.1734
1028	SLU 6	0.75	0.67	67.32	-16.3329	0.1203	0.1776
1028	SLU 7	0.75	0.74	67.31	-16.331	0.1201	0.1779
1028	SLU 8	0.74	0.64	66.71	-16.186	0.1193	0.1763
1028	SLU 9	0.74	0.71	66.69	-16.1841	0.1191	0.1766
1028	SLU 10	0.8	0.81	74.35	-18.0494	0.133	0.1904
1028	SLU 11	0.82	0.73	75.58	-18.3443	0.1356	0.1947
1028	SLU 12	0.82	0.8	75.56	-18.3424	0.1354	0.195
1028	SLU 13	0.82	0.81	74.95	-18.1943	0.1343	0.1938
1028	SLU 14	0.83	0.73	76.18	-18.4892	0.1368	0.1981
1028	SLU 15	0.84	0.8	76.16	-18.4873	0.1366	0.1984
1028	SLU 16	0.83	0.69	75.56	-18.3423	0.1358	0.1968
1028	SLU 17	0.83	0.76	75.55	-18.3404	0.1356	0.197
1028	SLU 18	0.84	0.71	78.16	-18.9767	0.1404	0.1987
1028	SLU 19	0.84	0.78	78.15	-18.9748	0.1402	0.199
1028	SLU 20	0.85	0.72	78.76	-19.1215	0.1417	0.2021
1028	SLU 21	0.85	0.79	78.75	-19.1196	0.1415	0.2024
1028	SLU 22	0.79	0.76	74.04	-17.9675	0.1307	0.1881
1028	SLU 23	0.8	0.87	74.02	-17.9643	0.1304	0.1886
1028	SLU 24	0.81	0.79	75.25	-18.2592	0.1329	0.1928
1028	SLU 25	0.81	0.86	75.24	-18.2573	0.1327	0.1931
1028	SLU 26	0.81	0.88	74.62	-18.1092	0.1316	0.192
1028	SLU 27	0.83	0.8	75.85	-18.4041	0.1341	0.1962
1028	SLU 28	0.83	0.87	75.84	-18.4022	0.1339	0.1965
1028	SLU 29	0.82	0.76	75.24	-18.2573	0.1331	0.1949
1028	SLU 30	0.82	0.83	75.23	-18.2554	0.1329	0.1952
1028	SLU 31	0.88	0.93	82.88	-20.1206	0.1468	0.209
1028	SLU 32	0.9	0.85	84.11	-20.4155	0.1494	0.2133
1028	SLU 33	0.9	0.92	84.1	-20.4136	0.1492	0.2136
1028	SLU 34	0.89	0.93	83.48	-20.2655	0.1481	0.2124
1028	SLU 35	0.91	0.85	84.71	-20.5604	0.1506	0.2167
1028	SLU 36	0.91	0.92	84.7	-20.5585	0.1504	0.217
1028	SLU 37	0.91	0.82	84.1	-20.4135	0.1496	0.2153
1028	SLU 38	0.91	0.89	84.09	-20.4116	0.1494	0.2156
1028	SLU 39	0.91	0.84	86.7	-21.0479	0.1542	0.2173
1028	SLU 40	0.92	0.91	86.68	-21.046	0.154	0.2176
1028	SLU 41	0.93	0.84	87.29	-21.1928	0.1554	0.2207
1028	SLU 42	0.93	0.91	87.28	-21.1909	0.1552	0.221
1028	SLU 43	0.9	0.78	82.23	-19.955	0.1473	0.214
1028	SLU 44	0.91	0.9	82.22	-19.9519	0.1469	0.2145

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1028	SLU 45	0.92	0.82	83.44	-20.2468	0.1494	0.2187
1028	SLU 46	0.92	0.89	83.43	-20.2449	0.1492	0.219
1028	SLU 47	0.92	0.9	82.81	-20.0968	0.1481	0.2178
1028	SLU 48	0.94	0.82	84.04	-20.3916	0.1507	0.2221
1028	SLU 49	0.94	0.89	84.03	-20.3897	0.1505	0.2224
1028	SLU 50	0.93	0.78	83.43	-20.2448	0.1497	0.2208
1028	SLU 51	0.93	0.85	83.42	-20.2429	0.1495	0.2211
1028	SLU 52	0.99	0.95	91.07	-22.1081	0.1634	0.2349
1028	SLU 53	1.01	0.87	92.3	-22.403	0.1659	0.2392
1028	SLU 54	1.01	0.94	92.29	-22.4011	0.1657	0.2394
1028	SLU 55	1	0.96	91.67	-22.253	0.1646	0.2383
1028	SLU 56	1.02	0.87	92.9	-22.5479	0.1671	0.2426
1028	SLU 57	1.02	0.94	92.89	-22.546	0.1669	0.2428
1028	SLU 58	1.02	0.84	92.29	-22.4011	0.1662	0.2412
1028	SLU 59	1.02	0.91	92.28	-22.3992	0.166	0.2415
1028	SLU 60	1.02	0.86	94.89	-23.0354	0.1708	0.2432
1028	SLU 61	1.02	0.93	94.88	-23.0335	0.1706	0.2435
1028	SLU 62	1.04	0.86	95.49	-23.1803	0.172	0.2466
1028	SLU 63	1.04	0.93	95.48	-23.1784	0.1718	0.2469
1028	SLU 64	0.98	0.91	90.77	-22.0263	0.161	0.2326
1028	SLU 65	0.98	1.02	90.75	-22.0231	0.1607	0.2331
1028	SLU 66	1	0.94	91.98	-22.318	0.1632	0.2373
1028	SLU 67	1	1.01	91.97	-22.3161	0.163	0.2376
1028	SLU 68	1	1.02	91.35	-22.168	0.1619	0.2364
1028	SLU 69	1.01	0.94	92.58	-22.4629	0.1644	0.2407
1028	SLU 70	1.02	1.01	92.57	-22.461	0.1642	0.241
1028	SLU 71	1.01	0.91	91.97	-22.316	0.1635	0.2394
1028	SLU 72	1.01	0.98	91.95	-22.3141	0.1633	0.2396
1028	SLU 73	1.07	1.08	99.61	-24.1794	0.1772	0.2535
1028	SLU 74	1.09	1	100.84	-24.4743	0.1797	0.2578
1028	SLU 75	1.09	1.07	100.82	-24.4724	0.1795	0.258
1028	SLU 76	1.08	1.08	100.21	-24.3242	0.1784	0.2569
1028	SLU 77	1.1	1	101.44	-24.6191	0.1809	0.2612
1028	SLU 78	1.1	1.07	101.42	-24.6172	0.1807	0.2614
1028	SLU 79	1.09	0.97	100.82	-24.4723	0.1799	0.2598
1028	SLU 80	1.1	1.04	100.81	-24.4704	0.1797	0.2601
1028	SLU 81	1.1	0.99	103.42	-25.1066	0.1846	0.2618
1028	SLU 82	1.1	1.06	103.41	-25.1047	0.1844	0.2621
1028	SLU 83	1.12	0.99	104.02	-25.2515	0.1858	0.2652
1028	SLU 84	1.12	1.06	104.01	-25.2496	0.1856	0.2655
1028	SLE RA 1	0.74	0.67	67.95	-16.4881	0.1208	0.1748
1028	SLE RA 2	0.74	0.75	67.93	-16.486	0.1206	0.1751
1028	SLE RA 3	0.75	0.69	68.75	-16.6826	0.1223	0.178
1028	SLE RA 4	0.75	0.74	68.75	-16.6813	0.1222	0.1782
1028	SLE RA 5	0.75	0.75	68.33	-16.5825	0.1214	0.1774
1028	SLE RA 6	0.76	0.69	69.15	-16.7791	0.1231	0.1802
1028	SLE RA 7	0.76	0.74	69.14	-16.7779	0.123	0.1804
1028	SLE RA 8	0.76	0.67	68.74	-16.6812	0.1225	0.1793
1028	SLE RA 9	0.76	0.72	68.74	-16.68	0.1223	0.1795
1028	SLE RA 10	0.8	0.78	73.84	-17.9235	0.1316	0.1888
1028	SLE RA 11	0.81	0.73	74.66	-18.1201	0.1333	0.1916
1028	SLE RA 12	0.81	0.78	74.65	-18.1188	0.1332	0.1918
1028	SLE RA 13	0.8	0.79	74.24	-18.02	0.1324	0.191
1028	SLE RA 14	0.82	0.73	75.06	-18.2166	0.1341	0.1939
1028	SLE RA 15	0.82	0.78	75.05	-18.2154	0.134	0.1941
1028	SLE RA 16	0.81	0.71	74.65	-18.1187	0.1335	0.193
1028	SLE RA 17	0.81	0.76	74.64	-18.1175	0.1333	0.1932
1028	SLE RA 18	0.82	0.72	76.38	-18.5416	0.1365	0.1943
1028	SLE RA 19	0.82	0.77	76.37	-18.5404	0.1364	0.1945
1028	SLE RA 20	0.83	0.72	76.78	-18.6382	0.1373	0.1966
1028	SLE RA 21	0.83	0.77	76.77	-18.637	0.1372	0.1968
1028	SLE FR 1	0.74	0.67	67.95	-16.4881	0.1208	0.1748
1028	SLE FR 2	0.74	0.68	67.94	-16.4876	0.1208	0.1749
1028	SLE FR 3	0.74	0.67	68.11	-16.5267	0.1212	0.1757
1028	SLE FR 4	0.76	0.7	70.47	-17.1037	0.1255	0.1807
1028	SLE FR 5	0.77	0.69	70.64	-17.1428	0.1259	0.1816
1028	SLE FR 6	0.78	0.7	72.16	-17.5149	0.1287	0.1846
1028	SLE QP 1	0.74	0.67	67.95	-16.4881	0.1208	0.1748
1028	SLE QP 2	0.76	0.69	70.48	-17.1041	0.1256	0.1807
1028	SLD 1	9.36	1.57	66.51	-16.1709	0.169	2.299
1028	SLD 2	8.94	1.7	66.51	-16.1721	0.1692	2.1978
1028	SLD 3	9.14	-0.91	67.16	-16.3027	0.1757	2.2465
1028	SLD 4	8.72	-0.77	67.16	-16.3039	0.1759	2.1453
1028	SLD 5	3.75	4.68	68.3	-16.6241	0.1284	0.9135
1028	SLD 6	3.48	4.77	68.3	-16.6249	0.1285	0.8478
1028	SLD 7	3.01	-3.57	70.47	-17.0634	0.1507	0.7384
1028	SLD 8	2.74	-3.48	70.47	-17.0642	0.1508	0.6727
1028	SLD 9	-1.21	4.85	70.49	-17.1441	0.1003	-0.3114
1028	SLD 10	-1.49	4.94	70.49	-17.1449	0.1004	-0.3771
1028	SLD 11	-1.96	-3.4	72.65	-17.5834	0.1226	-0.4865
1028	SLD 12	-2.23	-3.31	72.65	-17.5842	0.1227	-0.5522
1028	SLD 13	-7.19	2.14	73.79	-17.9043	0.0752	-1.7839
1028	SLD 14	-7.61	2.28	73.79	-17.9056	0.0754	-1.8852
1028	SLD 15	-7.42	-0.33	74.44	-18.0361	0.0819	-1.8364
1028	SLD 16	-7.84	-0.2	74.44	-18.0374	0.0821	-1.9377
1028	SLV 1	20.87	2.67	61.21	-14.9237	0.2274	5.1347
1028	SLV 2	19.89	2.98	61.21	-14.9266	0.2278	4.8988
1028	SLV 3	20.35	-2.97	62.69	-15.2256	0.2426	5.0121
1028	SLV 4	19.37	-2.65	62.69	-15.2284	0.243	4.7762
1028	SLV 5	7.75	9.78	65.44	-15.9917	0.1329	1.8927
1028	SLV 6	7.12	9.98	65.45	-15.9935	0.1332	1.7421

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1028	SLV 7	6.02	-9.01	70.39	-16.9979	0.1837	1.4841
1028	SLV 8	5.39	-8.81	70.39	-16.9998	0.1839	1.3335
1028	SLV 9	-3.87	10.18	70.56	-17.2085	0.0672	-0.9722
1028	SLV 10	-4.49	10.38	70.56	-17.2103	0.0674	-1.1228
1028	SLV 11	-5.6	-8.61	75.51	-18.2148	0.1179	-1.3807
1028	SLV 12	-6.22	-8.41	75.51	-18.2166	0.1182	-1.5314
1028	SLV 13	-17.85	4.03	78.26	-18.9798	0.0081	-4.4149
1028	SLV 14	-18.83	4.34	78.26	-18.9827	0.0085	-4.6508
1028	SLV 15	-18.37	-1.61	79.74	-19.2817	0.0233	-4.5375
1028	SLV 16	-19.35	-1.3	79.74	-19.2846	0.0237	-4.7733
1028	CRTFP Ux+	0	0	0	0	0	0
1028	CRTFP Ux-	0	0	0	0	0	0
1028	CRTFP Uy+	0	0	0	0	0	0
1028	CRTFP Uy-	0	0	0	0	0	0
1030	SLU 1	0.32	0.23	26.27	-8.7124	-0.4799	0.1145
1030	SLU 2	0.32	0.28	26.26	-8.7112	-0.4798	0.1158
1030	SLU 3	0.33	0.24	26.75	-8.8708	-0.4887	0.1178
1030	SLU 4	0.33	0.27	26.75	-8.8701	-0.4887	0.1186
1030	SLU 5	0.33	0.28	26.5	-8.7898	-0.4842	0.118
1030	SLU 6	0.33	0.24	26.99	-8.9494	-0.4931	0.12
1030	SLU 7	0.33	0.27	26.99	-8.9487	-0.493	0.1207
1030	SLU 8	0.33	0.23	26.75	-8.8696	-0.4886	0.1188
1030	SLU 9	0.33	0.26	26.75	-8.8689	-0.4886	0.1196
1030	SLU 10	0.36	0.3	29.82	-9.8899	-0.5444	0.1293
1030	SLU 11	0.36	0.26	30.3	-10.0494	-0.5533	0.1313
1030	SLU 12	0.37	0.29	30.3	-10.0488	-0.5532	0.1321
1030	SLU 13	0.36	0.3	30.06	-9.9684	-0.5487	0.1315
1030	SLU 14	0.37	0.26	30.54	-10.128	-0.5576	0.1335
1030	SLU 15	0.37	0.29	30.54	-10.1273	-0.5576	0.1343
1030	SLU 16	0.37	0.25	30.3	-10.0482	-0.5532	0.1323
1030	SLU 17	0.37	0.28	30.3	-10.0475	-0.5531	0.1331
1030	SLU 18	0.37	0.26	31.34	-10.3961	-0.5721	0.1338
1030	SLU 19	0.37	0.29	31.34	-10.3954	-0.5721	0.1346
1030	SLU 20	0.38	0.26	31.58	-10.4747	-0.5765	0.136
1030	SLU 21	0.38	0.29	31.58	-10.474	-0.5764	0.1368
1030	SLU 22	0.35	0.28	29.69	-9.8455	-0.5422	0.1276
1030	SLU 23	0.35	0.32	29.69	-9.8444	-0.5421	0.1289
1030	SLU 24	0.36	0.29	30.18	-10.004	-0.551	0.1309
1030	SLU 25	0.36	0.32	30.17	-10.0033	-0.551	0.1317
1030	SLU 26	0.36	0.32	29.93	-9.923	-0.5465	0.1311
1030	SLU 27	0.37	0.29	30.41	-10.0826	-0.5554	0.133
1030	SLU 28	0.37	0.32	30.41	-10.0819	-0.5553	0.1338
1030	SLU 29	0.37	0.28	30.17	-10.0027	-0.5509	0.1319
1030	SLU 30	0.37	0.31	30.17	-10.002	-0.5509	0.1327
1030	SLU 31	0.39	0.35	33.24	-11.023	-0.6067	0.1424
1030	SLU 32	0.4	0.31	33.73	-11.1826	-0.6156	0.1444
1030	SLU 33	0.4	0.34	33.72	-11.1819	-0.6155	0.1452
1030	SLU 34	0.4	0.35	33.48	-11.1016	-0.611	0.1446
1030	SLU 35	0.41	0.31	33.97	-11.2612	-0.6199	0.1466
1030	SLU 36	0.41	0.34	33.96	-11.2605	-0.6199	0.1474
1030	SLU 37	0.4	0.3	33.72	-11.1813	-0.6155	0.1454
1030	SLU 38	0.4	0.33	33.72	-11.1806	-0.6154	0.1462
1030	SLU 39	0.41	0.31	34.77	-11.5293	-0.6344	0.1469
1030	SLU 40	0.41	0.34	34.76	-11.5286	-0.6344	0.1477
1030	SLU 41	0.41	0.31	35	-11.6079	-0.6388	0.1491
1030	SLU 42	0.41	0.34	35	-11.6072	-0.6387	0.1499
1030	SLU 43	0.4	0.28	32.98	-10.9376	-0.6025	0.1444
1030	SLU 44	0.4	0.33	32.97	-10.9365	-0.6024	0.1457
1030	SLU 45	0.41	0.29	33.46	-11.096	-0.6113	0.1477
1030	SLU 46	0.41	0.32	33.46	-11.0953	-0.6113	0.1485
1030	SLU 47	0.41	0.33	33.21	-11.015	-0.6068	0.1478
1030	SLU 48	0.42	0.29	33.7	-11.1746	-0.6157	0.1498
1030	SLU 49	0.42	0.32	33.7	-11.1739	-0.6156	0.1506
1030	SLU 50	0.41	0.28	33.46	-11.0948	-0.6112	0.1487
1030	SLU 51	0.41	0.31	33.45	-11.0941	-0.6112	0.1495
1030	SLU 52	0.44	0.35	36.52	-12.1151	-0.667	0.1592
1030	SLU 53	0.45	0.31	37.01	-12.2747	-0.6759	0.1612
1030	SLU 54	0.45	0.34	37.01	-12.274	-0.6758	0.162
1030	SLU 55	0.45	0.35	36.76	-12.1936	-0.6713	0.1614
1030	SLU 56	0.45	0.32	37.25	-12.3532	-0.6802	0.1634
1030	SLU 57	0.45	0.34	37.25	-12.3525	-0.6802	0.1641
1030	SLU 58	0.45	0.3	37.01	-12.2734	-0.6758	0.1622
1030	SLU 59	0.45	0.33	37	-12.2727	-0.6757	0.163
1030	SLU 60	0.46	0.31	38.05	-12.6213	-0.6947	0.1637
1030	SLU 61	0.46	0.34	38.05	-12.6206	-0.6947	0.1645
1030	SLU 62	0.46	0.31	38.29	-12.6999	-0.6991	0.1658
1030	SLU 63	0.46	0.34	38.29	-12.6992	-0.699	0.1666
1030	SLU 64	0.44	0.33	36.4	-12.0707	-0.6648	0.1574
1030	SLU 65	0.44	0.38	36.39	-12.0696	-0.6647	0.1588
1030	SLU 66	0.45	0.34	36.88	-12.2292	-0.6736	0.1608
1030	SLU 67	0.45	0.37	36.88	-12.2285	-0.6736	0.1615
1030	SLU 68	0.44	0.38	36.63	-12.1482	-0.6691	0.1609
1030	SLU 69	0.45	0.34	37.12	-12.3078	-0.678	0.1629
1030	SLU 70	0.45	0.37	37.12	-12.3071	-0.6779	0.1637
1030	SLU 71	0.45	0.33	36.88	-12.2279	-0.6735	0.1618
1030	SLU 72	0.45	0.36	36.88	-12.2272	-0.6735	0.1625
1030	SLU 73	0.48	0.4	39.95	-13.2482	-0.7293	0.1723
1030	SLU 74	0.48	0.36	40.43	-13.4078	-0.7382	0.1743
1030	SLU 75	0.48	0.39	40.43	-13.4071	-0.7381	0.1751
1030	SLU 76	0.48	0.4	40.18	-13.3268	-0.7336	0.1744
1030	SLU 77	0.49	0.36	40.67	-13.4864	-0.7425	0.1764

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1030	SLU 78	0.49	0.39	40.67	-13.4857	-0.7425	0.1772
1030	SLU 79	0.49	0.35	40.43	-13.4065	-0.7381	0.1753
1030	SLU 80	0.49	0.38	40.43	-13.4058	-0.738	0.1761
1030	SLU 81	0.49	0.36	41.47	-13.7545	-0.757	0.1768
1030	SLU 82	0.49	0.39	41.47	-13.7538	-0.757	0.1776
1030	SLU 83	0.5	0.36	41.71	-13.8331	-0.7614	0.1789
1030	SLU 84	0.5	0.39	41.71	-13.8324	-0.7613	0.1797
1030	SLE RA 1	0.33	0.24	27.25	-9.0361	-0.4977	0.1182
1030	SLE RA 2	0.33	0.27	27.24	-9.0354	-0.4976	0.1191
1030	SLE RA 3	0.33	0.25	27.57	-9.1418	-0.5036	0.1204
1030	SLE RA 4	0.33	0.27	27.57	-9.1413	-0.5035	0.121
1030	SLE RA 5	0.33	0.27	27.4	-9.0878	-0.5005	0.1206
1030	SLE RA 6	0.34	0.25	27.73	-9.1942	-0.5065	0.1219
1030	SLE RA 7	0.34	0.27	27.73	-9.1937	-0.5064	0.1224
1030	SLE RA 8	0.34	0.24	27.57	-9.1409	-0.5035	0.1211
1030	SLE RA 9	0.34	0.26	27.56	-9.1405	-0.5035	0.1216
1030	SLE RA 10	0.35	0.29	29.61	-9.8211	-0.5407	0.1281
1030	SLE RA 11	0.36	0.27	29.94	-9.9275	-0.5466	0.1295
1030	SLE RA 12	0.36	0.28	29.94	-9.9271	-0.5466	0.13
1030	SLE RA 13	0.36	0.29	29.77	-9.8735	-0.5436	0.1296
1030	SLE RA 14	0.36	0.27	30.1	-9.9799	-0.5495	0.1309
1030	SLE RA 15	0.36	0.28	30.09	-9.9794	-0.5495	0.1314
1030	SLE RA 16	0.36	0.26	29.93	-9.9267	-0.5466	0.1301
1030	SLE RA 17	0.36	0.28	29.93	-9.9262	-0.5465	0.1307
1030	SLE RA 18	0.36	0.26	30.63	-10.1586	-0.5592	0.1311
1030	SLE RA 19	0.36	0.28	30.63	-10.1582	-0.5591	0.1316
1030	SLE RA 20	0.37	0.26	30.79	-10.211	-0.5621	0.1326
1030	SLE RA 21	0.37	0.28	30.79	-10.2106	-0.562	0.1331
1030	SLE FR 1	0.33	0.24	27.25	-9.0361	-0.4977	0.1182
1030	SLE FR 2	0.33	0.25	27.25	-9.036	-0.4977	0.1184
1030	SLE FR 3	0.33	0.24	27.31	-9.0571	-0.4989	0.1188
1030	SLE FR 4	0.34	0.25	28.26	-9.3727	-0.5161	0.1223
1030	SLE FR 5	0.34	0.25	28.33	-9.3938	-0.5173	0.1227
1030	SLE FR 6	0.35	0.25	28.94	-9.5974	-0.5284	0.1247
1030	SLE QP 1	0.33	0.24	27.25	-9.0361	-0.4977	0.1182
1030	SLE QP 2	0.34	0.25	28.26	-9.3729	-0.5161	0.1221
1030	SLD 1	3.82	0.56	26.55	-8.8365	-0.4811	1.3429
1030	SLD 2	3.65	0.63	26.55	-8.8371	-0.4811	1.2854
1030	SLD 3	3.73	-0.44	26.78	-8.902	-0.4852	1.2995
1030	SLD 4	3.56	-0.37	26.78	-8.9026	-0.4852	1.242
1030	SLD 5	1.55	1.85	27.4	-9.1125	-0.4994	0.5642
1030	SLD 6	1.44	1.9	27.4	-9.1129	-0.4994	0.5269
1030	SLD 7	1.25	-1.49	28.16	-9.3309	-0.5131	0.4195
1030	SLD 8	1.14	-1.45	28.17	-9.3313	-0.5131	0.3822
1030	SLD 9	-0.46	1.95	28.36	-9.4145	-0.5192	-0.138
1030	SLD 10	-0.57	1.99	28.36	-9.4149	-0.5192	-0.1753
1030	SLD 11	-0.76	-1.4	29.12	-9.6329	-0.5329	-0.2827
1030	SLD 12	-0.87	-1.36	29.12	-9.6333	-0.5329	-0.32
1030	SLD 13	-2.88	0.87	29.75	-9.8432	-0.547	-0.9978
1030	SLD 14	-3.05	0.94	29.75	-9.8438	-0.547	-1.0552
1030	SLD 15	-2.98	-0.13	29.98	-9.9087	-0.5511	-1.0412
1030	SLD 16	-3.14	-0.07	29.98	-9.9093	-0.5511	-1.0987
1030	SLV 1	8.48	0.96	24.25	-8.1192	-0.4343	2.9765
1030	SLV 2	8.09	1.11	24.26	-8.1205	-0.4343	2.8426
1030	SLV 3	8.27	-1.33	24.78	-8.2697	-0.4437	2.8761
1030	SLV 4	7.88	-1.18	24.78	-8.271	-0.4437	2.7422
1030	SLV 5	3.17	3.9	26.26	-8.7683	-0.4773	1.1533
1030	SLV 6	2.92	4	26.26	-8.7691	-0.4773	1.0678
1030	SLV 7	2.47	-3.72	28.02	-9.27	-0.5087	0.8188
1030	SLV 8	2.22	-3.62	28.02	-9.2708	-0.5087	0.7333
1030	SLV 9	-1.54	4.12	28.51	-9.475	-0.5236	-0.4891
1030	SLV 10	-1.79	4.22	28.51	-9.4758	-0.5236	-0.5746
1030	SLV 11	-2.24	-3.51	30.26	-9.9767	-0.555	-0.8236
1030	SLV 12	-2.49	-3.41	30.26	-9.9775	-0.555	-0.9091
1030	SLV 13	-7.2	1.67	31.74	-10.4748	-0.5885	-2.498
1030	SLV 14	-7.59	1.83	31.74	-10.4761	-0.5885	-2.6319
1030	SLV 15	-7.41	-0.61	32.27	-10.6253	-0.598	-2.5984
1030	SLV 16	-7.81	-0.46	32.27	-10.6266	-0.5979	-2.7323
1030	CRTFP Ux+	0	0	0	0	0	0
1030	CRTFP Ux-	0	0	0	0	0	0
1030	CRTFP Uy+	0	0	0	0	0	0
1030	CRTFP Uy-	0	0	0	0	0	0
1031	SLU 1	0.39	0.21	28.54	-9.2122	0.0199	0.1335
1031	SLU 2	0.39	0.26	28.54	-9.2111	0.0199	0.134
1031	SLU 3	0.4	0.22	29.07	-9.3787	0.0203	0.1372
1031	SLU 4	0.4	0.25	29.07	-9.378	0.0203	0.1374
1031	SLU 5	0.39	0.26	28.8	-9.2937	0.0201	0.1366
1031	SLU 6	0.4	0.22	29.33	-9.4612	0.0205	0.1397
1031	SLU 7	0.4	0.25	29.33	-9.4605	0.0205	0.14
1031	SLU 8	0.4	0.21	29.06	-9.3773	0.0203	0.1386
1031	SLU 9	0.4	0.24	29.06	-9.3766	0.0203	0.1389
1031	SLU 10	0.43	0.28	32.38	-10.4492	0.0233	0.1498
1031	SLU 11	0.44	0.24	32.91	-10.6167	0.0237	0.153
1031	SLU 12	0.44	0.27	32.91	-10.6161	0.0237	0.1533
1031	SLU 13	0.44	0.28	32.64	-10.5317	0.0235	0.1524
1031	SLU 14	0.45	0.24	33.17	-10.6993	0.0239	0.1556
1031	SLU 15	0.45	0.27	33.17	-10.6986	0.0239	0.1559
1031	SLU 16	0.45	0.23	32.91	-10.6154	0.0237	0.1545
1031	SLU 17	0.45	0.26	32.9	-10.6147	0.0236	0.1548
1031	SLU 18	0.45	0.24	34.03	-10.9809	0.0247	0.1561
1031	SLU 19	0.45	0.27	34.03	-10.9802	0.0247	0.1564

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1031	SLU 20	0.46	0.24	34.29	-11.0634	0.0249	0.1587
1031	SLU 21	0.46	0.27	34.29	-11.0628	0.0249	0.159
1031	SLU 22	0.43	0.26	32.25	-10.4042	0.0231	0.1483
1031	SLU 23	0.43	0.31	32.24	-10.4032	0.023	0.1488
1031	SLU 24	0.44	0.27	32.77	-10.5707	0.0235	0.1519
1031	SLU 25	0.44	0.3	32.77	-10.57	0.0234	0.1522
1031	SLU 26	0.44	0.31	32.5	-10.4857	0.0232	0.1514
1031	SLU 27	0.45	0.27	33.04	-10.6532	0.0236	0.1545
1031	SLU 28	0.45	0.3	33.03	-10.6526	0.0236	0.1548
1031	SLU 29	0.44	0.26	32.77	-10.5693	0.0234	0.1534
1031	SLU 30	0.44	0.29	32.77	-10.5687	0.0234	0.1537
1031	SLU 31	0.48	0.33	36.09	-11.6412	0.0264	0.1646
1031	SLU 32	0.48	0.29	36.62	-11.8087	0.0268	0.1678
1031	SLU 33	0.49	0.32	36.61	-11.8081	0.0268	0.1681
1031	SLU 34	0.48	0.33	36.35	-11.7238	0.0266	0.1672
1031	SLU 35	0.49	0.29	36.88	-11.8913	0.027	0.1704
1031	SLU 36	0.49	0.32	36.87	-11.8906	0.027	0.1707
1031	SLU 37	0.49	0.28	36.61	-11.8074	0.0268	0.1693
1031	SLU 38	0.49	0.31	36.61	-11.8067	0.0268	0.1696
1031	SLU 39	0.49	0.29	37.74	-12.1729	0.0279	0.1709
1031	SLU 40	0.49	0.32	37.74	-12.1723	0.0278	0.1712
1031	SLU 41	0.5	0.29	38	-12.2554	0.028	0.1735
1031	SLU 42	0.5	0.32	38	-12.2548	0.028	0.1738
1031	SLU 43	0.49	0.25	35.84	-11.5672	0.0249	0.1685
1031	SLU 44	0.49	0.3	35.83	-11.5661	0.0248	0.169
1031	SLU 45	0.5	0.27	36.36	-11.7336	0.0253	0.1721
1031	SLU 46	0.5	0.3	36.36	-11.733	0.0252	0.1724
1031	SLU 47	0.5	0.3	36.09	-11.6487	0.025	0.1715
1031	SLU 48	0.51	0.27	36.62	-11.8162	0.0254	0.1747
1031	SLU 49	0.51	0.3	36.62	-11.8155	0.0254	0.175
1031	SLU 50	0.5	0.25	36.36	-11.7323	0.0252	0.1736
1031	SLU 51	0.5	0.28	36.35	-11.7316	0.0252	0.1739
1031	SLU 52	0.53	0.33	39.67	-12.8042	0.0282	0.1848
1031	SLU 53	0.54	0.29	40.2	-12.9717	0.0286	0.188
1031	SLU 54	0.54	0.32	40.2	-12.9711	0.0286	0.1883
1031	SLU 55	0.54	0.33	39.93	-12.8867	0.0284	0.1874
1031	SLU 56	0.55	0.29	40.46	-13.0542	0.0288	0.1905
1031	SLU 57	0.55	0.32	40.46	-13.0536	0.0288	0.1908
1031	SLU 58	0.55	0.27	40.2	-12.9703	0.0286	0.1895
1031	SLU 59	0.55	0.31	40.2	-12.9697	0.0286	0.1898
1031	SLU 60	0.55	0.28	41.33	-13.3359	0.0297	0.1911
1031	SLU 61	0.55	0.31	41.32	-13.3352	0.0296	0.1914
1031	SLU 62	0.56	0.28	41.59	-13.4184	0.0298	0.1937
1031	SLU 63	0.56	0.31	41.58	-13.4177	0.0298	0.194
1031	SLU 64	0.53	0.3	39.54	-12.7592	0.028	0.1833
1031	SLU 65	0.53	0.35	39.54	-12.7581	0.028	0.1838
1031	SLU 66	0.54	0.32	40.07	-12.9256	0.0284	0.1869
1031	SLU 67	0.54	0.35	40.06	-12.925	0.0284	0.1872
1031	SLU 68	0.54	0.35	39.8	-12.8407	0.0281	0.1863
1031	SLU 69	0.55	0.32	40.33	-13.0082	0.0285	0.1895
1031	SLU 70	0.55	0.35	40.32	-13.0075	0.0285	0.1898
1031	SLU 71	0.54	0.3	40.06	-12.9243	0.0283	0.1884
1031	SLU 72	0.55	0.33	40.06	-12.9236	0.0283	0.1887
1031	SLU 73	0.58	0.38	43.38	-13.9962	0.0313	0.1996
1031	SLU 74	0.59	0.34	43.91	-14.1637	0.0317	0.2028
1031	SLU 75	0.59	0.37	43.91	-14.1631	0.0317	0.2031
1031	SLU 76	0.58	0.38	43.64	-14.0787	0.0315	0.2022
1031	SLU 77	0.59	0.34	44.17	-14.2462	0.0319	0.2053
1031	SLU 78	0.59	0.37	44.17	-14.2456	0.0319	0.2056
1031	SLU 79	0.59	0.32	43.91	-14.1623	0.0317	0.2043
1031	SLU 80	0.59	0.35	43.9	-14.1617	0.0317	0.2046
1031	SLU 81	0.59	0.33	45.03	-14.5279	0.0328	0.2059
1031	SLU 82	0.6	0.36	45.03	-14.5272	0.0328	0.2062
1031	SLU 83	0.6	0.33	45.29	-14.6104	0.033	0.2085
1031	SLU 84	0.6	0.36	45.29	-14.6098	0.0329	0.2088
1031	SLE RA 1	0.4	0.22	29.6	-9.5528	0.0208	0.1377
1031	SLE RA 2	0.4	0.26	29.6	-9.5521	0.0208	0.138
1031	SLE RA 3	0.41	0.23	29.95	-9.6638	0.0211	0.1402
1031	SLE RA 4	0.41	0.25	29.95	-9.6633	0.0211	0.1404
1031	SLE RA 5	0.4	0.26	29.77	-9.6071	0.0209	0.1398
1031	SLE RA 6	0.41	0.23	30.13	-9.7188	0.0212	0.1419
1031	SLE RA 7	0.41	0.25	30.12	-9.7183	0.0212	0.1421
1031	SLE RA 8	0.41	0.22	29.95	-9.6628	0.0211	0.1412
1031	SLE RA 9	0.41	0.24	29.95	-9.6624	0.0211	0.1413
1031	SLE RA 10	0.43	0.27	32.16	-10.3775	0.0231	0.1486
1031	SLE RA 11	0.44	0.24	32.51	-10.4891	0.0233	0.1507
1031	SLE RA 12	0.44	0.27	32.51	-10.4887	0.0233	0.1509
1031	SLE RA 13	0.43	0.27	32.33	-10.4325	0.0232	0.1503
1031	SLE RA 14	0.44	0.24	32.69	-10.5442	0.0235	0.1524
1031	SLE RA 15	0.44	0.27	32.69	-10.5437	0.0234	0.1526
1031	SLE RA 16	0.44	0.24	32.51	-10.4882	0.0233	0.1517
1031	SLE RA 17	0.44	0.26	32.51	-10.4878	0.0233	0.1519
1031	SLE RA 18	0.44	0.24	33.26	-10.7319	0.024	0.1528
1031	SLE RA 19	0.44	0.26	33.26	-10.7315	0.024	0.153
1031	SLE RA 20	0.45	0.24	33.44	-10.7869	0.0242	0.1545
1031	SLE RA 21	0.45	0.26	33.43	-10.7865	0.0241	0.1547
1031	SLE FR 1	0.4	0.22	29.6	-9.5528	0.0208	0.1377
1031	SLE FR 2	0.4	0.23	29.6	-9.5526	0.0208	0.1378
1031	SLE FR 3	0.4	0.22	29.67	-9.5748	0.0209	0.1384
1031	SLE FR 4	0.41	0.23	30.7	-9.9064	0.0218	0.1423
1031	SLE FR 5	0.41	0.23	30.77	-9.9285	0.0218	0.1429

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1031	SLE FR 6	0.42	0.23	31.43	-10.1423	0.0224	0.1453
1031	SLE QP 1	0.4	0.22	29.6	-9.5528	0.0208	0.1377
1031	SLE QP 2	0.41	0.23	30.7	-9.9065	0.0218	0.1422
1031	SLD 1	4.26	0.56	28.69	-9.3089	0.0251	1.4893
1031	SLD 2	4.07	0.64	28.69	-9.3089	0.0251	1.4244
1031	SLD 3	4.16	-0.55	28.94	-9.3829	0.026	1.4544
1031	SLD 4	3.97	-0.46	28.94	-9.3829	0.026	1.3895
1031	SLD 5	1.75	1.98	29.72	-9.6151	0.0214	0.6106
1031	SLD 6	1.63	2.04	29.72	-9.6151	0.0214	0.5685
1031	SLD 7	1.42	-1.69	30.55	-9.8615	0.0244	0.4943
1031	SLD 8	1.3	-1.64	30.55	-9.8616	0.0245	0.4522
1031	SLD 9	-0.47	2.09	30.85	-9.9515	0.0191	-0.1677
1031	SLD 10	-0.59	2.15	30.85	-9.9515	0.0191	-0.2099
1031	SLD 11	-0.81	-1.58	31.68	-10.1979	0.0222	-0.284
1031	SLD 12	-0.93	-1.53	31.68	-10.1979	0.0222	-0.3261
1031	SLD 13	-3.15	0.92	32.46	-10.4302	0.0175	-1.105
1031	SLD 14	-3.34	1	32.46	-10.4302	0.0176	-1.1699
1031	SLD 15	-3.25	-0.18	32.71	-10.5041	0.0185	-1.1399
1031	SLD 16	-3.44	-0.1	32.71	-10.5041	0.0185	-1.2048
1031	SLV 1	9.41	0.96	26	-8.5096	0.0296	3.2924
1031	SLV 2	8.98	1.15	26	-8.5097	0.0296	3.1412
1031	SLV 3	9.18	-1.55	26.57	-8.6798	0.0317	3.2112
1031	SLV 4	8.75	-1.36	26.57	-8.6799	0.0317	3.06
1031	SLV 5	3.54	4.22	28.43	-9.2293	0.0209	1.2362
1031	SLV 6	3.26	4.35	28.42	-9.2293	0.0209	1.1396
1031	SLV 7	2.76	-4.15	30.33	-9.7967	0.028	0.9653
1031	SLV 8	2.48	-4.03	30.33	-9.7967	0.028	0.8687
1031	SLV 9	-1.66	4.48	31.07	-10.0164	0.0156	-0.5842
1031	SLV 10	-1.94	4.6	31.07	-10.0164	0.0156	-0.6808
1031	SLV 11	-2.44	-3.89	32.98	-10.5837	0.0227	-0.8551
1031	SLV 12	-2.72	-3.77	32.98	-10.5837	0.0227	-0.9517
1031	SLV 13	-7.92	1.82	34.83	-11.1332	0.0118	-2.7755
1031	SLV 14	-8.36	2.01	34.83	-11.1332	0.0119	-2.9267
1031	SLV 15	-8.16	-0.7	35.4	-11.3034	0.014	-2.8567
1031	SLV 16	-8.59	-0.5	35.4	-11.3034	0.014	-3.0079
1031	CRTFP Ux+	0	0	0	0	0	0
1031	CRTFP Ux-	0	0	0	0	0	0
1031	CRTFP Uy+	0	0	0	0	0	0
1031	CRTFP Uy-	0	0	0	0	0	0
1032	SLU 1	0.42	0.16	27.91	-8.759	0.0194	0.1449
1032	SLU 2	0.42	0.21	27.91	-8.7581	0.0194	0.1454
1032	SLU 3	0.43	0.17	28.42	-8.9163	0.0198	0.1489
1032	SLU 4	0.43	0.2	28.42	-8.9158	0.0198	0.1492
1032	SLU 5	0.43	0.21	28.16	-8.8363	0.0195	0.1482
1032	SLU 6	0.44	0.17	28.68	-8.9945	0.0199	0.1516
1032	SLU 7	0.44	0.2	28.68	-8.994	0.0199	0.1519
1032	SLU 8	0.43	0.15	28.42	-8.9154	0.0197	0.1505
1032	SLU 9	0.44	0.19	28.42	-8.9149	0.0197	0.1508
1032	SLU 10	0.47	0.23	31.64	-9.9246	0.0227	0.1626
1032	SLU 11	0.48	0.19	32.16	-10.0829	0.0231	0.166
1032	SLU 12	0.48	0.22	32.16	-10.0823	0.0231	0.1663
1032	SLU 13	0.48	0.23	31.9	-10.0028	0.0229	0.1653
1032	SLU 14	0.49	0.19	32.41	-10.1611	0.0233	0.1688
1032	SLU 15	0.49	0.22	32.41	-10.1605	0.0233	0.1691
1032	SLU 16	0.48	0.17	32.16	-10.082	0.0231	0.1676
1032	SLU 17	0.48	0.2	32.15	-10.0814	0.0231	0.1679
1032	SLU 18	0.49	0.18	33.25	-10.4255	0.0242	0.1694
1032	SLU 19	0.49	0.22	33.24	-10.425	0.0242	0.1697
1032	SLU 20	0.5	0.18	33.5	-10.5037	0.0243	0.1722
1032	SLU 21	0.5	0.21	33.5	-10.5032	0.0243	0.1725
1032	SLU 22	0.47	0.2	31.52	-9.8835	0.0226	0.161
1032	SLU 23	0.47	0.25	31.51	-9.8825	0.0225	0.1615
1032	SLU 24	0.48	0.21	32.03	-10.0408	0.0229	0.1649
1032	SLU 25	0.48	0.24	32.03	-10.0402	0.0229	0.1653
1032	SLU 26	0.47	0.25	31.77	-9.9607	0.0227	0.1643
1032	SLU 27	0.48	0.21	32.29	-10.1189	0.0231	0.1677
1032	SLU 28	0.49	0.24	32.28	-10.1184	0.0231	0.168
1032	SLU 29	0.48	0.2	32.03	-10.0398	0.0229	0.1665
1032	SLU 30	0.48	0.23	32.02	-10.0393	0.0228	0.1669
1032	SLU 31	0.52	0.27	35.25	-11.0491	0.0259	0.1786
1032	SLU 32	0.53	0.23	35.77	-11.2073	0.0263	0.1821
1032	SLU 33	0.53	0.26	35.76	-11.2067	0.0263	0.1824
1032	SLU 34	0.52	0.27	35.5	-11.1273	0.026	0.1814
1032	SLU 35	0.53	0.23	36.02	-11.2855	0.0264	0.1848
1032	SLU 36	0.53	0.26	36.02	-11.2849	0.0264	0.1852
1032	SLU 37	0.53	0.22	35.76	-11.2064	0.0262	0.1837
1032	SLU 38	0.53	0.25	35.76	-11.2058	0.0262	0.184
1032	SLU 39	0.54	0.23	36.85	-11.5499	0.0273	0.1855
1032	SLU 40	0.54	0.26	36.85	-11.5494	0.0273	0.1858
1032	SLU 41	0.54	0.23	37.11	-11.6281	0.0275	0.1882
1032	SLU 42	0.54	0.26	37.11	-11.6276	0.0275	0.1886
1032	SLU 43	0.53	0.19	35.05	-11.0012	0.0242	0.1829
1032	SLU 44	0.53	0.24	35.04	-11.0003	0.0241	0.1834
1032	SLU 45	0.54	0.2	35.56	-11.1585	0.0245	0.1868
1032	SLU 46	0.54	0.23	35.56	-11.158	0.0245	0.1871
1032	SLU 47	0.54	0.24	35.3	-11.0785	0.0243	0.1862
1032	SLU 48	0.55	0.2	35.82	-11.2367	0.0247	0.1896
1032	SLU 49	0.55	0.23	35.81	-11.2362	0.0247	0.1899
1032	SLU 50	0.54	0.19	35.56	-11.1576	0.0245	0.1884
1032	SLU 51	0.55	0.22	35.56	-11.1571	0.0244	0.1887
1032	SLU 52	0.58	0.26	38.78	-12.1668	0.0275	0.2005

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1032	SLU 53	0.59	0.22	39.3	-12.3251	0.0279	0.204
1032	SLU 54	0.59	0.25	39.29	-12.3245	0.0279	0.2043
1032	SLU 55	0.59	0.26	39.03	-12.245	0.0276	0.2033
1032	SLU 56	0.6	0.22	39.55	-12.4033	0.028	0.2067
1032	SLU 57	0.6	0.25	39.55	-12.4027	0.028	0.207
1032	SLU 58	0.59	0.21	39.29	-12.3242	0.0278	0.2056
1032	SLU 59	0.59	0.24	39.29	-12.3236	0.0278	0.2059
1032	SLU 60	0.6	0.22	40.38	-12.6677	0.0289	0.2074
1032	SLU 61	0.6	0.25	40.38	-12.6672	0.0289	0.2077
1032	SLU 62	0.61	0.21	40.64	-12.7459	0.0291	0.2101
1032	SLU 63	0.61	0.25	40.64	-12.7454	0.0291	0.2104
1032	SLU 64	0.57	0.23	38.66	-12.1256	0.0273	0.199
1032	SLU 65	0.58	0.28	38.65	-12.1247	0.0273	0.1995
1032	SLU 66	0.59	0.24	39.17	-12.2829	0.0277	0.2029
1032	SLU 67	0.59	0.28	39.17	-12.2824	0.0277	0.2032
1032	SLU 68	0.58	0.28	38.91	-12.2029	0.0274	0.2023
1032	SLU 69	0.59	0.24	39.42	-12.3611	0.0278	0.2057
1032	SLU 70	0.6	0.27	39.42	-12.3606	0.0278	0.206
1032	SLU 71	0.59	0.23	39.17	-12.282	0.0276	0.2045
1032	SLU 72	0.59	0.26	39.16	-12.2815	0.0276	0.2048
1032	SLU 73	0.63	0.3	42.39	-13.2913	0.0306	0.2166
1032	SLU 74	0.64	0.26	42.9	-13.4495	0.031	0.22
1032	SLU 75	0.64	0.3	42.9	-13.4489	0.031	0.2203
1032	SLU 76	0.63	0.3	42.64	-13.3695	0.0308	0.2194
1032	SLU 77	0.64	0.26	43.16	-13.5277	0.0312	0.2228
1032	SLU 78	0.64	0.29	43.15	-13.5271	0.0311	0.2231
1032	SLU 79	0.64	0.25	42.9	-13.4486	0.031	0.2216
1032	SLU 80	0.64	0.28	42.9	-13.448	0.0309	0.2219
1032	SLU 81	0.65	0.26	43.99	-13.7921	0.0321	0.2234
1032	SLU 82	0.65	0.29	43.99	-13.7916	0.0321	0.2237
1032	SLU 83	0.65	0.26	44.25	-13.8703	0.0322	0.2262
1032	SLU 84	0.65	0.29	44.24	-13.8698	0.0322	0.2265
1032	SLE RA 1	0.43	0.17	28.94	-9.0803	0.0203	0.1495
1032	SLE RA 2	0.43	0.2	28.94	-9.0797	0.0203	0.1499
1032	SLE RA 3	0.44	0.18	29.28	-9.1852	0.0206	0.1521
1032	SLE RA 4	0.44	0.2	29.28	-9.1848	0.0205	0.1524
1032	SLE RA 5	0.44	0.2	29.11	-9.1318	0.0204	0.1517
1032	SLE RA 6	0.44	0.18	29.45	-9.2373	0.0207	0.154
1032	SLE RA 7	0.45	0.2	29.45	-9.2369	0.0206	0.1542
1032	SLE RA 8	0.44	0.17	29.28	-9.1846	0.0205	0.1532
1032	SLE RA 9	0.44	0.19	29.28	-9.1842	0.0205	0.1534
1032	SLE RA 10	0.47	0.22	31.43	-9.8574	0.0225	0.1613
1032	SLE RA 11	0.47	0.19	31.77	-9.9629	0.0228	0.1636
1032	SLE RA 12	0.47	0.21	31.77	-9.9625	0.0228	0.1638
1032	SLE RA 13	0.47	0.22	31.6	-9.9095	0.0226	0.1631
1032	SLE RA 14	0.48	0.19	31.94	-10.015	0.0229	0.1654
1032	SLE RA 15	0.48	0.21	31.94	-10.0146	0.0229	0.1656
1032	SLE RA 16	0.48	0.18	31.77	-9.9622	0.0227	0.1646
1032	SLE RA 17	0.48	0.2	31.77	-9.9619	0.0227	0.1648
1032	SLE RA 18	0.48	0.19	32.5	-10.1913	0.0235	0.1658
1032	SLE RA 19	0.48	0.21	32.5	-10.1909	0.0235	0.166
1032	SLE RA 20	0.48	0.19	32.67	-10.2434	0.0236	0.1677
1032	SLE RA 21	0.48	0.21	32.67	-10.243	0.0236	0.1679
1032	SLE FR 1	0.43	0.17	28.94	-9.0803	0.0203	0.1495
1032	SLE FR 2	0.43	0.18	28.94	-9.0802	0.0203	0.1496
1032	SLE FR 3	0.43	0.17	29.01	-9.1011	0.0204	0.1503
1032	SLE FR 4	0.45	0.18	30.01	-9.4135	0.0213	0.1545
1032	SLE FR 5	0.45	0.17	30.08	-9.4344	0.0213	0.1552
1032	SLE FR 6	0.46	0.18	30.72	-9.6358	0.0219	0.1577
1032	SLE QP 1	0.43	0.17	28.94	-9.0803	0.0203	0.1495
1032	SLE QP 2	0.45	0.17	30.01	-9.4136	0.0213	0.1544
1032	SLD 1	4.3	0.5	27.88	-8.8093	0.0247	1.5019
1032	SLD 2	4.11	0.59	27.88	-8.8086	0.0247	1.4369
1032	SLD 3	4.2	-0.59	28.13	-8.8889	0.0256	1.467
1032	SLD 4	4.01	-0.5	28.13	-8.8882	0.0257	1.402
1032	SLD 5	1.79	1.91	28.99	-9.1117	0.0209	0.6229
1032	SLD 6	1.66	1.97	28.99	-9.1112	0.0209	0.5808
1032	SLD 7	1.45	-1.73	29.82	-9.377	0.024	0.5066
1032	SLD 8	1.33	-1.67	29.82	-9.3766	0.024	0.4644
1032	SLD 9	-0.44	2.02	30.19	-9.4506	0.0185	-0.1556
1032	SLD 10	-0.56	2.08	30.19	-9.4501	0.0185	-0.1977
1032	SLD 11	-0.77	-1.62	31.03	-9.716	0.0216	-0.2719
1032	SLD 12	-0.89	-1.56	31.03	-9.7155	0.0217	-0.3141
1032	SLD 13	-3.12	0.85	31.89	-9.939	0.0169	-1.0932
1032	SLD 14	-3.3	0.94	31.89	-9.9383	0.0169	-1.1581
1032	SLD 15	-3.22	-0.24	32.14	-10.0186	0.0178	-1.1281
1032	SLD 16	-3.4	-0.15	32.14	-10.0179	0.0178	-1.193
1032	SLV 1	9.45	0.9	25.03	-8.0009	0.0293	3.3055
1032	SLV 2	9.01	1.11	25.03	-7.9993	0.0294	3.1542
1032	SLV 3	9.21	-1.59	25.61	-8.1847	0.0315	3.2242
1032	SLV 4	8.78	-1.38	25.6	-8.1831	0.0316	3.0728
1032	SLV 5	3.57	4.13	27.65	-8.7113	0.0203	1.2488
1032	SLV 6	3.3	4.26	27.64	-8.7103	0.0204	1.1521
1032	SLV 7	2.8	-4.16	29.56	-9.3239	0.0276	0.9776
1032	SLV 8	2.52	-4.03	29.56	-9.3229	0.0277	0.8809
1032	SLV 9	-1.63	4.38	30.46	-9.5043	0.0148	-0.5721
1032	SLV 10	-1.9	4.51	30.46	-9.5033	0.0149	-0.6687
1032	SLV 11	-2.4	-3.91	32.38	-10.1169	0.0221	-0.8433
1032	SLV 12	-2.68	-3.78	32.37	-10.1158	0.0222	-0.9399
1032	SLV 13	-7.89	1.73	34.41	-10.6441	0.011	-2.764
1032	SLV 14	-8.32	1.94	34.41	-10.6425	0.011	-2.9153

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1032	SLV 15	-8.12	-0.76	34.99	-10.8279	0.0132	-2.8453
1032	SLV 16	-8.56	-0.55	34.99	-10.8263	0.0132	-2.9967
1032	CRTFP Ux+	0	0	0	0	0	0
1032	CRTFP Ux-	0	0	0	0	0	0
1032	CRTFP Uy+	0	0	0	0	0	0
1032	CRTFP Uy-	0	0	0	0	0	0
1033	SLU 1	0.45	0.11	27.4	-8.389	0.0123	0.1556
1033	SLU 2	0.45	0.16	27.4	-8.3881	0.0123	0.1561
1033	SLU 3	0.46	0.12	27.91	-8.5391	0.0125	0.1598
1033	SLU 4	0.46	0.15	27.91	-8.5386	0.0125	0.1601
1033	SLU 5	0.46	0.16	27.65	-8.4631	0.0124	0.1591
1033	SLU 6	0.47	0.11	28.16	-8.6141	0.0126	0.1627
1033	SLU 7	0.47	0.15	28.16	-8.6136	0.0126	0.1631
1033	SLU 8	0.47	0.1	27.91	-8.539	0.0124	0.1615
1033	SLU 9	0.47	0.13	27.9	-8.5385	0.0124	0.1618
1033	SLU 10	0.5	0.18	31.04	-9.4946	0.0146	0.1744
1033	SLU 11	0.51	0.13	31.55	-9.6455	0.0148	0.1781
1033	SLU 12	0.51	0.17	31.55	-9.645	0.0148	0.1784
1033	SLU 13	0.51	0.17	31.3	-9.5696	0.0147	0.1774
1033	SLU 14	0.52	0.13	31.8	-9.7206	0.0149	0.1811
1033	SLU 15	0.52	0.16	31.8	-9.72	0.0149	0.1814
1033	SLU 16	0.52	0.12	31.55	-9.6455	0.0148	0.1798
1033	SLU 17	0.52	0.15	31.55	-9.6449	0.0148	0.1801
1033	SLU 18	0.52	0.13	32.61	-9.9696	0.0156	0.1817
1033	SLU 19	0.52	0.16	32.61	-9.9691	0.0156	0.1821
1033	SLU 20	0.53	0.13	32.86	-10.0446	0.0157	0.1847
1033	SLU 21	0.53	0.16	32.86	-10.0441	0.0157	0.185
1033	SLU 22	0.5	0.15	30.92	-9.4564	0.0145	0.1729
1033	SLU 23	0.5	0.2	30.92	-9.4555	0.0145	0.1734
1033	SLU 24	0.51	0.16	31.43	-9.6065	0.0147	0.1771
1033	SLU 25	0.51	0.19	31.43	-9.606	0.0147	0.1774
1033	SLU 26	0.51	0.2	31.17	-9.5306	0.0145	0.1764
1033	SLU 27	0.52	0.15	31.68	-9.6815	0.0148	0.18
1033	SLU 28	0.52	0.19	31.68	-9.681	0.0147	0.1803
1033	SLU 29	0.52	0.14	31.43	-9.6064	0.0146	0.1788
1033	SLU 30	0.52	0.17	31.43	-9.6059	0.0146	0.1791
1033	SLU 31	0.55	0.22	34.56	-10.562	0.0168	0.1917
1033	SLU 32	0.56	0.17	35.07	-10.713	0.017	0.1954
1033	SLU 33	0.56	0.21	35.07	-10.7125	0.017	0.1957
1033	SLU 34	0.56	0.21	34.82	-10.637	0.0169	0.1947
1033	SLU 35	0.57	0.17	35.32	-10.788	0.0171	0.1983
1033	SLU 36	0.57	0.2	35.32	-10.7875	0.0171	0.1987
1033	SLU 37	0.57	0.16	35.07	-10.7129	0.0169	0.1971
1033	SLU 38	0.57	0.19	35.07	-10.7124	0.0169	0.1974
1033	SLU 39	0.57	0.17	36.13	-11.0371	0.0178	0.199
1033	SLU 40	0.57	0.2	36.13	-11.0366	0.0178	0.1994
1033	SLU 41	0.58	0.17	36.38	-11.1121	0.0179	0.202
1033	SLU 42	0.58	0.2	36.38	-11.1116	0.0179	0.2023
1033	SLU 43	0.57	0.12	34.42	-10.5397	0.0153	0.1963
1033	SLU 44	0.57	0.17	34.41	-10.5388	0.0153	0.1969
1033	SLU 45	0.58	0.13	34.92	-10.6898	0.0155	0.2005
1033	SLU 46	0.58	0.16	34.92	-10.6893	0.0155	0.2009
1033	SLU 47	0.58	0.17	34.67	-10.6138	0.0153	0.1998
1033	SLU 48	0.59	0.13	35.17	-10.7648	0.0155	0.2035
1033	SLU 49	0.59	0.16	35.17	-10.7643	0.0155	0.2038
1033	SLU 50	0.58	0.12	34.92	-10.6897	0.0154	0.2022
1033	SLU 51	0.58	0.15	34.92	-10.6892	0.0154	0.2026
1033	SLU 52	0.62	0.19	38.06	-11.6453	0.0176	0.2152
1033	SLU 53	0.63	0.15	38.57	-11.7963	0.0178	0.2189
1033	SLU 54	0.63	0.18	38.56	-11.7957	0.0178	0.2192
1033	SLU 55	0.63	0.19	38.31	-11.7203	0.0176	0.2181
1033	SLU 56	0.64	0.15	38.82	-11.8713	0.0179	0.2218
1033	SLU 57	0.64	0.18	38.82	-11.8708	0.0178	0.2221
1033	SLU 58	0.64	0.14	38.57	-11.7962	0.0177	0.2206
1033	SLU 59	0.64	0.17	38.56	-11.7957	0.0177	0.2209
1033	SLU 60	0.64	0.15	39.62	-12.1203	0.0186	0.2225
1033	SLU 61	0.64	0.18	39.62	-12.1198	0.0186	0.2228
1033	SLU 62	0.65	0.15	39.88	-12.1954	0.0187	0.2255
1033	SLU 63	0.65	0.18	39.87	-12.1948	0.0186	0.2258
1033	SLU 64	0.62	0.16	37.94	-11.6071	0.0174	0.2136
1033	SLU 65	0.62	0.22	37.93	-11.6063	0.0174	0.2142
1033	SLU 66	0.63	0.17	38.44	-11.7572	0.0176	0.2178
1033	SLU 67	0.63	0.21	38.44	-11.7567	0.0176	0.2181
1033	SLU 68	0.63	0.21	38.19	-11.6813	0.0175	0.2171
1033	SLU 69	0.64	0.17	38.69	-11.8322	0.0177	0.2208
1033	SLU 70	0.64	0.2	38.69	-11.8317	0.0177	0.2211
1033	SLU 71	0.63	0.16	38.44	-11.7571	0.0176	0.2195
1033	SLU 72	0.63	0.19	38.44	-11.7566	0.0176	0.2198
1033	SLU 73	0.67	0.23	41.58	-12.7127	0.0198	0.2325
1033	SLU 74	0.68	0.19	42.09	-12.8637	0.02	0.2361
1033	SLU 75	0.68	0.22	42.08	-12.8632	0.02	0.2365
1033	SLU 76	0.68	0.23	41.83	-12.7877	0.0198	0.2354
1033	SLU 77	0.69	0.19	42.34	-12.9387	0.02	0.2391
1033	SLU 78	0.69	0.22	42.34	-12.9382	0.02	0.2394
1033	SLU 79	0.69	0.18	42.09	-12.8636	0.0199	0.2378
1033	SLU 80	0.69	0.21	42.08	-12.8631	0.0199	0.2382
1033	SLU 81	0.69	0.19	43.14	-13.1878	0.0208	0.2398
1033	SLU 82	0.69	0.22	43.14	-13.1873	0.0208	0.2401
1033	SLU 83	0.7	0.19	43.4	-13.2628	0.0208	0.2427
1033	SLU 84	0.7	0.22	43.39	-13.2623	0.0208	0.2431
1033	SLE RA 1	0.46	0.12	28.41	-8.6939	0.0129	0.1605

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1033	SLE RA 2	0.46	0.15	28.41	-8.6934	0.0129	0.1609
1033	SLE RA 3	0.47	0.12	28.75	-8.794	0.0131	0.1633
1033	SLE RA 4	0.47	0.14	28.74	-8.7937	0.0131	0.1635
1033	SLE RA 5	0.47	0.15	28.57	-8.7434	0.013	0.1628
1033	SLE RA 6	0.48	0.12	28.91	-8.844	0.0131	0.1653
1033	SLE RA 7	0.48	0.14	28.91	-8.8437	0.0131	0.1655
1033	SLE RA 8	0.47	0.11	28.75	-8.794	0.013	0.1645
1033	SLE RA 9	0.48	0.14	28.74	-8.7936	0.013	0.1647
1033	SLE RA 10	0.5	0.16	30.84	-9.431	0.0145	0.1731
1033	SLE RA 11	0.51	0.14	31.18	-9.5317	0.0146	0.1755
1033	SLE RA 12	0.51	0.16	31.17	-9.5313	0.0146	0.1757
1033	SLE RA 13	0.5	0.16	31	-9.481	0.0145	0.1751
1033	SLE RA 14	0.51	0.13	31.34	-9.5817	0.0147	0.1775
1033	SLE RA 15	0.51	0.16	31.34	-9.5813	0.0147	0.1777
1033	SLE RA 16	0.51	0.13	31.17	-9.5316	0.0146	0.1767
1033	SLE RA 17	0.51	0.15	31.17	-9.5313	0.0146	0.1769
1033	SLE RA 18	0.51	0.13	31.88	-9.7477	0.0152	0.178
1033	SLE RA 19	0.51	0.15	31.88	-9.7474	0.0152	0.1782
1033	SLE RA 20	0.52	0.13	32.05	-9.7977	0.0152	0.1799
1033	SLE RA 21	0.52	0.15	32.05	-9.7974	0.0152	0.1801
1033	SLE FR 1	0.46	0.12	28.41	-8.6939	0.0129	0.1605
1033	SLE FR 2	0.46	0.12	28.41	-8.6938	0.0129	0.1606
1033	SLE FR 3	0.47	0.12	28.48	-8.7139	0.013	0.1613
1033	SLE FR 4	0.48	0.13	29.45	-9.01	0.0136	0.1658
1033	SLE FR 5	0.48	0.12	29.52	-9.0301	0.0136	0.1665
1033	SLE FR 6	0.49	0.13	30.15	-9.2208	0.0141	0.1692
1033	SLE QP 1	0.46	0.12	28.41	-8.6939	0.0129	0.1605
1033	SLE QP 2	0.48	0.12	29.45	-9.0101	0.0136	0.1658
1033	SLD 1	4.33	0.46	27.19	-8.3896	0.0177	1.5131
1033	SLD 2	4.14	0.56	27.19	-8.388	0.0178	1.4481
1033	SLD 3	4.23	-0.63	27.45	-8.4775	0.0185	1.4782
1033	SLD 4	4.04	-0.53	27.44	-8.4759	0.0186	1.4132
1033	SLD 5	1.82	1.85	28.38	-8.6909	0.0136	0.6343
1033	SLD 6	1.7	1.91	28.38	-8.6899	0.0136	0.5922
1033	SLD 7	1.48	-1.76	29.24	-8.9839	0.0163	0.5178
1033	SLD 8	1.36	-1.69	29.24	-8.9829	0.0163	0.4756
1033	SLD 9	-0.41	1.94	29.66	-9.0373	0.0109	-0.1441
1033	SLD 10	-0.53	2	29.66	-9.0363	0.0109	-0.1863
1033	SLD 11	-0.74	-1.67	30.52	-9.3303	0.0136	-0.2607
1033	SLD 12	-0.86	-1.6	30.52	-9.3293	0.0136	-0.3028
1033	SLD 13	-3.08	0.77	31.46	-9.5442	0.0086	-1.0817
1033	SLD 14	-3.27	0.87	31.46	-9.5427	0.0087	-1.1467
1033	SLD 15	-3.18	-0.31	31.72	-9.6321	0.0094	-1.1166
1033	SLD 16	-3.37	-0.21	31.71	-9.6306	0.0095	-1.1816
1033	SLV 1	9.48	0.87	24.16	-7.5594	0.0233	3.3167
1033	SLV 2	9.04	1.1	24.16	-7.5559	0.0234	3.1653
1033	SLV 3	9.24	-1.59	24.75	-7.7628	0.0251	3.2352
1033	SLV 4	8.81	-1.36	24.75	-7.7592	0.0252	3.0838
1033	SLV 5	3.61	4.04	26.97	-8.2671	0.0136	1.2602
1033	SLV 6	3.33	4.19	26.97	-8.2648	0.0137	1.1635
1033	SLV 7	2.83	-4.17	28.94	-8.9449	0.0199	0.9886
1033	SLV 8	2.55	-4.02	28.94	-8.9426	0.02	0.8919
1033	SLV 9	-1.59	4.26	29.97	-9.0776	0.0073	-0.5604
1033	SLV 10	-1.87	4.41	29.96	-9.0753	0.0073	-0.6571
1033	SLV 11	-2.37	-3.95	31.94	-9.7553	0.0135	-0.832
1033	SLV 12	-2.65	-3.8	31.93	-9.753	0.0136	-0.9287
1033	SLV 13	-7.85	1.6	34.15	-10.261	0.002	-2.7523
1033	SLV 14	-8.29	1.84	34.15	-10.2574	0.0021	-2.9037
1033	SLV 15	-8.09	-0.86	34.75	-10.4643	0.0038	-2.8338
1033	SLV 16	-8.52	-0.63	34.74	-10.4607	0.004	-2.9852
1033	CRTFP Ux+	0	0	0	0	0	0
1033	CRTFP Ux-	0	0	0	0	0	0
1033	CRTFP Uy+	0	0	0	0	0	0
1033	CRTFP Uy-	0	0	0	0	0	0
1034	SLU 1	0.48	0.06	27.19	-8.1851	0.0007	0.1655
1034	SLU 2	0.48	0.11	27.19	-8.1843	0.0007	0.1661
1034	SLU 3	0.49	0.07	27.69	-8.3317	0.0007	0.17
1034	SLU 4	0.49	0.1	27.69	-8.3312	0.0007	0.1703
1034	SLU 5	0.49	0.11	27.44	-8.2581	0.0007	0.1692
1034	SLU 6	0.5	0.06	27.95	-8.4056	0.0006	0.1731
1034	SLU 7	0.5	0.1	27.94	-8.4051	0.0006	0.1735
1034	SLU 8	0.5	0.05	27.7	-8.3328	0.0006	0.1718
1034	SLU 9	0.5	0.08	27.69	-8.3323	0.0006	0.1721
1034	SLU 10	0.53	0.13	30.79	-9.255	0.0013	0.1855
1034	SLU 11	0.55	0.08	31.29	-9.4024	0.0013	0.1894
1034	SLU 12	0.55	0.12	31.29	-9.4019	0.0013	0.1898
1034	SLU 13	0.54	0.13	31.04	-9.3288	0.0013	0.1886
1034	SLU 14	0.55	0.08	31.54	-9.4762	0.0012	0.1925
1034	SLU 15	0.56	0.11	31.54	-9.4757	0.0012	0.1929
1034	SLU 16	0.55	0.07	31.29	-9.4035	0.0012	0.1912
1034	SLU 17	0.55	0.1	31.29	-9.4029	0.0012	0.1915
1034	SLU 18	0.56	0.08	32.33	-9.7147	0.0016	0.1933
1034	SLU 19	0.56	0.11	32.33	-9.7142	0.0016	0.1936
1034	SLU 20	0.57	0.08	32.58	-9.7885	0.0015	0.1964
1034	SLU 21	0.57	0.11	32.58	-9.788	0.0015	0.1967
1034	SLU 22	0.53	0.1	30.67	-9.2187	0.0013	0.1839
1034	SLU 23	0.53	0.15	30.67	-9.2178	0.0013	0.1845
1034	SLU 24	0.54	0.1	31.17	-9.3653	0.0012	0.1884
1034	SLU 25	0.54	0.14	31.17	-9.3648	0.0012	0.1887
1034	SLU 26	0.54	0.14	30.92	-9.2917	0.0012	0.1876
1034	SLU 27	0.55	0.1	31.42	-9.4391	0.0011	0.1915

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1034	SLU 28	0.55	0.13	31.42	-9.4386	0.0011	0.1919
1034	SLU 29	0.55	0.09	31.17	-9.3663	0.0011	0.1902
1034	SLU 30	0.55	0.12	31.17	-9.3658	0.0011	0.1905
1034	SLU 31	0.59	0.16	34.26	-10.2885	0.0019	0.2039
1034	SLU 32	0.6	0.12	34.77	-10.4359	0.0018	0.2078
1034	SLU 33	0.6	0.15	34.77	-10.4354	0.0018	0.2082
1034	SLU 34	0.6	0.16	34.51	-10.3623	0.0018	0.207
1034	SLU 35	0.61	0.12	35.02	-10.5097	0.0018	0.2109
1034	SLU 36	0.61	0.15	35.02	-10.5092	0.0018	0.2113
1034	SLU 37	0.6	0.11	34.77	-10.437	0.0017	0.2096
1034	SLU 38	0.6	0.14	34.77	-10.4365	0.0017	0.2099
1034	SLU 39	0.61	0.12	35.81	-10.7482	0.0022	0.2117
1034	SLU 40	0.61	0.15	35.81	-10.7477	0.0021	0.212
1034	SLU 41	0.62	0.12	36.06	-10.822	0.0021	0.2148
1034	SLU 42	0.62	0.15	36.06	-10.8215	0.0021	0.2151
1034	SLU 43	0.6	0.06	34.16	-10.2863	0.0008	0.2089
1034	SLU 44	0.6	0.11	34.15	-10.2855	0.0008	0.2095
1034	SLU 45	0.61	0.07	34.66	-10.4329	0.0007	0.2134
1034	SLU 46	0.62	0.1	34.66	-10.4324	0.0007	0.2137
1034	SLU 47	0.61	0.11	34.41	-10.3593	0.0007	0.2126
1034	SLU 48	0.62	0.07	34.91	-10.5068	0.0006	0.2165
1034	SLU 49	0.62	0.1	34.91	-10.5062	0.0006	0.2168
1034	SLU 50	0.62	0.06	34.66	-10.434	0.0006	0.2152
1034	SLU 51	0.62	0.09	34.66	-10.4335	0.0006	0.2155
1034	SLU 52	0.66	0.13	37.75	-11.3562	0.0014	0.2289
1034	SLU 53	0.67	0.09	38.26	-11.5036	0.0013	0.2328
1034	SLU 54	0.67	0.12	38.25	-11.5031	0.0013	0.2331
1034	SLU 55	0.67	0.13	38	-11.43	0.0013	0.232
1034	SLU 56	0.68	0.09	38.51	-11.5774	0.0013	0.2359
1034	SLU 57	0.68	0.12	38.51	-11.5769	0.0013	0.2362
1034	SLU 58	0.68	0.08	38.26	-11.5046	0.0012	0.2346
1034	SLU 59	0.68	0.11	38.26	-11.5041	0.0012	0.2349
1034	SLU 60	0.68	0.09	39.3	-11.8159	0.0016	0.2366
1034	SLU 61	0.68	0.12	39.29	-11.8154	0.0016	0.237
1034	SLU 62	0.69	0.09	39.55	-11.8897	0.0016	0.2398
1034	SLU 63	0.69	0.12	39.55	-11.8892	0.0016	0.2401
1034	SLU 64	0.65	0.1	37.63	-11.3199	0.0013	0.2273
1034	SLU 65	0.66	0.15	37.63	-11.319	0.0013	0.2279
1034	SLU 66	0.67	0.11	38.14	-11.4664	0.0013	0.2318
1034	SLU 67	0.67	0.14	38.13	-11.4659	0.0013	0.2321
1034	SLU 68	0.67	0.15	37.88	-11.3928	0.0012	0.231
1034	SLU 69	0.68	0.11	38.39	-11.5403	0.0012	0.2349
1034	SLU 70	0.68	0.14	38.39	-11.5398	0.0012	0.2352
1034	SLU 71	0.67	0.1	38.14	-11.4675	0.0012	0.2336
1034	SLU 72	0.67	0.13	38.14	-11.467	0.0012	0.2339
1034	SLU 73	0.71	0.17	41.23	-12.3897	0.0019	0.2473
1034	SLU 74	0.72	0.13	41.73	-12.5371	0.0019	0.2512
1034	SLU 75	0.72	0.16	41.73	-12.5366	0.0019	0.2515
1034	SLU 76	0.72	0.17	41.48	-12.4635	0.0018	0.2504
1034	SLU 77	0.73	0.12	41.98	-12.6109	0.0018	0.2543
1034	SLU 78	0.73	0.16	41.98	-12.6104	0.0018	0.2546
1034	SLU 79	0.73	0.11	41.74	-12.5382	0.0018	0.253
1034	SLU 80	0.73	0.14	41.73	-12.5377	0.0018	0.2533
1034	SLU 81	0.73	0.13	42.77	-12.8494	0.0022	0.255
1034	SLU 82	0.74	0.16	42.77	-12.8489	0.0022	0.2554
1034	SLU 83	0.74	0.12	43.02	-12.9232	0.0021	0.2582
1034	SLU 84	0.74	0.15	43.02	-12.9227	0.0021	0.2585
1034	SLE RA 1	0.49	0.07	28.19	-8.4804	0.0009	0.1708
1034	SLE RA 2	0.49	0.1	28.18	-8.4799	0.0009	0.1712
1034	SLE RA 3	0.5	0.07	28.52	-8.5782	0.0009	0.1738
1034	SLE RA 4	0.5	0.1	28.52	-8.5778	0.0009	0.174
1034	SLE RA 5	0.5	0.1	28.35	-8.5291	0.0008	0.1733
1034	SLE RA 6	0.51	0.07	28.69	-8.6274	0.0008	0.1759
1034	SLE RA 7	0.51	0.09	28.69	-8.627	0.0008	0.1761
1034	SLE RA 8	0.5	0.07	28.52	-8.5789	0.0008	0.175
1034	SLE RA 9	0.5	0.09	28.52	-8.5785	0.0008	0.1752
1034	SLE RA 10	0.53	0.11	30.58	-9.1937	0.0013	0.1841
1034	SLE RA 11	0.54	0.09	30.92	-9.2919	0.0013	0.1867
1034	SLE RA 12	0.54	0.11	30.92	-9.2916	0.0013	0.1869
1034	SLE RA 13	0.54	0.11	30.75	-9.2429	0.0012	0.1862
1034	SLE RA 14	0.54	0.08	31.09	-9.3412	0.0012	0.1888
1034	SLE RA 15	0.54	0.11	31.08	-9.3408	0.0012	0.189
1034	SLE RA 16	0.54	0.08	30.92	-9.2926	0.0012	0.1879
1034	SLE RA 17	0.54	0.1	30.92	-9.2923	0.0012	0.1881
1034	SLE RA 18	0.55	0.09	31.61	-9.5001	0.0015	0.1893
1034	SLE RA 19	0.55	0.11	31.61	-9.4998	0.0015	0.1895
1034	SLE RA 20	0.55	0.08	31.78	-9.5493	0.0014	0.1914
1034	SLE RA 21	0.55	0.1	31.78	-9.549	0.0014	0.1916
1034	SLE FR 1	0.49	0.07	28.19	-8.4804	0.0009	0.1708
1034	SLE FR 2	0.49	0.08	28.18	-8.4803	0.0009	0.1709
1034	SLE FR 3	0.49	0.07	28.25	-8.5001	0.0009	0.1716
1034	SLE FR 4	0.51	0.08	29.21	-8.7862	0.0011	0.1764
1034	SLE FR 5	0.51	0.07	29.28	-8.806	0.001	0.1772
1034	SLE FR 6	0.52	0.08	29.9	-8.9903	0.0012	0.18
1034	SLE QP 1	0.49	0.07	28.19	-8.4804	0.0009	0.1708
1034	SLE QP 2	0.51	0.07	29.21	-8.7863	0.0011	0.1764
1034	SLD 1	4.35	0.43	26.79	-8.1347	0.0063	1.5232
1034	SLD 2	4.17	0.54	26.79	-8.1321	0.0064	1.4582
1034	SLD 3	4.25	-0.65	27.06	-8.2308	0.0068	1.4881
1034	SLD 4	4.07	-0.54	27.05	-8.2282	0.0069	1.4231
1034	SLD 5	1.85	1.79	28.08	-8.4456	0.0018	0.6449

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1034	SLD 6	1.73	1.86	28.08	-8.4439	0.0018	0.6027
1034	SLD 7	1.51	-1.79	28.97	-8.7658	0.0036	0.5281
1034	SLD 8	1.39	-1.72	28.97	-8.7642	0.0037	0.4859
1034	SLD 9	-0.37	1.87	29.46	-8.8085	-0.0015	-0.1332
1034	SLD 10	-0.5	1.94	29.46	-8.8069	-0.0015	-0.1754
1034	SLD 11	-0.71	-1.71	30.34	-9.1288	0.0003	-0.25
1034	SLD 12	-0.83	-1.64	30.34	-9.1271	0.0003	-0.2922
1034	SLD 13	-3.05	0.68	31.37	-9.3445	-0.0048	-1.0704
1034	SLD 14	-3.24	0.79	31.37	-9.3419	-0.0047	-1.1354
1034	SLD 15	-3.15	-0.39	31.64	-9.4405	-0.0042	-1.1055
1034	SLD 16	-3.34	-0.28	31.64	-9.438	-0.0042	-1.1705
1034	SLV 1	9.5	0.87	23.55	-7.2628	0.0133	3.3259
1034	SLV 2	9.07	1.12	23.54	-7.2568	0.0135	3.1745
1034	SLV 3	9.27	-1.58	24.16	-7.4853	0.0146	3.2443
1034	SLV 4	8.83	-1.32	24.15	-7.4793	0.0148	3.0928
1034	SLV 5	3.63	3.98	26.59	-7.9929	0.0028	1.2707
1034	SLV 6	3.36	4.14	26.58	-7.9891	0.0029	1.1739
1034	SLV 7	2.85	-4.17	28.63	-8.7344	0.007	0.9986
1034	SLV 8	2.58	-4.01	28.62	-8.7306	0.0071	0.9019
1034	SLV 9	-1.56	4.16	29.8	-8.8421	-0.005	-0.5492
1034	SLV 10	-1.84	4.32	29.8	-8.8383	-0.0049	-0.6459
1034	SLV 11	-2.34	-3.99	31.85	-9.5836	-0.0007	-0.8212
1034	SLV 12	-2.62	-3.83	31.84	-9.5798	-0.0006	-0.918
1034	SLV 13	-7.82	1.47	34.27	-10.0934	-0.0126	-2.7401
1034	SLV 14	-8.25	1.72	34.26	-10.0874	-0.0125	-2.8916
1034	SLV 15	-8.05	-0.97	34.89	-10.3159	-0.0113	-2.8218
1034	SLV 16	-8.48	-0.72	34.88	-10.3099	-0.0112	-2.9732
1034	CRTFP Ux+	0	0	0	0	0	0
1034	CRTFP Ux-	0	0	0	0	0	0
1034	CRTFP Uy+	0	0	0	0	0	0
1034	CRTFP Uy-	0	0	0	0	0	0
1035	SLU 1	0.5	0.02	27.39	-8.2054	-0.0136	0.1748
1035	SLU 2	0.5	0.07	27.39	-8.2045	-0.0136	0.1754
1035	SLU 3	0.52	0.02	27.9	-8.3533	-0.014	0.1795
1035	SLU 4	0.52	0.06	27.89	-8.3527	-0.014	0.1799
1035	SLU 5	0.51	0.07	27.64	-8.2797	-0.0138	0.1787
1035	SLU 6	0.53	0.02	28.15	-8.4285	-0.0142	0.1828
1035	SLU 7	0.53	0.05	28.15	-8.4279	-0.0142	0.1831
1035	SLU 8	0.52	0.01	27.9	-8.3558	-0.0141	0.1814
1035	SLU 9	0.52	0.04	27.9	-8.3553	-0.0141	0.1817
1035	SLU 10	0.56	0.09	31	-9.2725	-0.0151	0.1958
1035	SLU 11	0.57	0.04	31.51	-9.4212	-0.0155	0.1999
1035	SLU 12	0.58	0.07	31.51	-9.4207	-0.0155	0.2003
1035	SLU 13	0.57	0.08	31.25	-9.3477	-0.0154	0.1991
1035	SLU 14	0.58	0.04	31.76	-9.4965	-0.0157	0.2032
1035	SLU 15	0.59	0.07	31.76	-9.4959	-0.0157	0.2036
1035	SLU 16	0.58	0.03	31.51	-9.4238	-0.0156	0.2018
1035	SLU 17	0.58	0.06	31.51	-9.4232	-0.0156	0.2021
1035	SLU 18	0.59	0.04	32.55	-9.7311	-0.0158	0.204
1035	SLU 19	0.59	0.07	32.54	-9.7305	-0.0158	0.2043
1035	SLU 20	0.6	0.04	32.8	-9.8063	-0.016	0.2073
1035	SLU 21	0.6	0.07	32.8	-9.8057	-0.016	0.2076
1035	SLU 22	0.56	0.05	30.88	-9.2367	-0.0151	0.1942
1035	SLU 23	0.56	0.1	30.88	-9.2358	-0.0151	0.1948
1035	SLU 24	0.57	0.06	31.39	-9.3846	-0.0155	0.1989
1035	SLU 25	0.57	0.09	31.39	-9.3841	-0.0155	0.1993
1035	SLU 26	0.57	0.1	31.13	-9.311	-0.0154	0.1981
1035	SLU 27	0.58	0.06	31.65	-9.4598	-0.0157	0.2022
1035	SLU 28	0.58	0.09	31.64	-9.4593	-0.0157	0.2026
1035	SLU 29	0.58	0.05	31.39	-9.3871	-0.0156	0.2008
1035	SLU 30	0.58	0.08	31.39	-9.3866	-0.0156	0.2012
1035	SLU 31	0.62	0.12	34.49	-10.3038	-0.0166	0.2152
1035	SLU 32	0.63	0.08	35	-10.4526	-0.017	0.2193
1035	SLU 33	0.63	0.11	35	-10.4521	-0.017	0.2197
1035	SLU 34	0.63	0.12	34.74	-10.379	-0.0169	0.2185
1035	SLU 35	0.64	0.07	35.26	-10.5278	-0.0173	0.2226
1035	SLU 36	0.64	0.1	35.25	-10.5273	-0.0173	0.223
1035	SLU 37	0.64	0.06	35	-10.4551	-0.0171	0.2212
1035	SLU 38	0.64	0.09	35	-10.4546	-0.0171	0.2216
1035	SLU 39	0.64	0.08	36.04	-10.7624	-0.0173	0.2234
1035	SLU 40	0.64	0.11	36.04	-10.7619	-0.0173	0.2238
1035	SLU 41	0.65	0.07	36.3	-10.8376	-0.0175	0.2267
1035	SLU 42	0.65	0.1	36.29	-10.8371	-0.0175	0.227
1035	SLU 43	0.63	0.01	34.41	-10.3134	-0.0172	0.2206
1035	SLU 44	0.64	0.06	34.4	-10.3125	-0.0172	0.2212
1035	SLU 45	0.65	0.02	34.92	-10.4613	-0.0175	0.2253
1035	SLU 46	0.65	0.05	34.91	-10.4607	-0.0175	0.2256
1035	SLU 47	0.65	0.06	34.66	-10.3877	-0.0174	0.2245
1035	SLU 48	0.66	0.02	35.17	-10.5365	-0.0178	0.2286
1035	SLU 49	0.66	0.05	35.17	-10.536	-0.0178	0.2289
1035	SLU 50	0.65	0	34.92	-10.4638	-0.0176	0.2272
1035	SLU 51	0.65	0.04	34.92	-10.4633	-0.0176	0.2275
1035	SLU 52	0.69	0.08	38.02	-11.3805	-0.0187	0.2416
1035	SLU 53	0.71	0.04	38.53	-11.5293	-0.019	0.2457
1035	SLU 54	0.71	0.07	38.52	-11.5287	-0.0191	0.246
1035	SLU 55	0.7	0.08	38.27	-11.4557	-0.0189	0.2449
1035	SLU 56	0.72	0.03	38.78	-11.6045	-0.0193	0.249
1035	SLU 57	0.72	0.06	38.78	-11.6039	-0.0193	0.2493
1035	SLU 58	0.71	0.02	38.53	-11.5318	-0.0192	0.2476
1035	SLU 59	0.71	0.05	38.53	-11.5312	-0.0192	0.2479
1035	SLU 60	0.72	0.04	39.57	-11.8391	-0.0193	0.2498

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1035	SLU 61	0.72	0.07	39.56	-11.8385	-0.0193	0.2501
1035	SLU 62	0.73	0.03	39.82	-11.9143	-0.0196	0.253
1035	SLU 63	0.73	0.06	39.82	-11.9137	-0.0196	0.2534
1035	SLU 64	0.69	0.04	37.9	-11.3447	-0.0187	0.24
1035	SLU 65	0.69	0.1	37.9	-11.3438	-0.0187	0.2406
1035	SLU 66	0.7	0.05	38.41	-11.4926	-0.019	0.2447
1035	SLU 67	0.7	0.08	38.41	-11.4921	-0.019	0.2451
1035	SLU 68	0.7	0.09	38.15	-11.419	-0.0189	0.2439
1035	SLU 69	0.71	0.05	38.66	-11.5678	-0.0193	0.248
1035	SLU 70	0.71	0.08	38.66	-11.5673	-0.0193	0.2483
1035	SLU 71	0.71	0.04	38.41	-11.4952	-0.0192	0.2466
1035	SLU 72	0.71	0.07	38.41	-11.4946	-0.0192	0.2469
1035	SLU 73	0.75	0.11	41.51	-12.4118	-0.0202	0.261
1035	SLU 74	0.76	0.07	42.02	-12.5606	-0.0206	0.2651
1035	SLU 75	0.76	0.1	42.02	-12.5601	-0.0206	0.2655
1035	SLU 76	0.76	0.11	41.76	-12.487	-0.0204	0.2643
1035	SLU 77	0.77	0.07	42.28	-12.6358	-0.0208	0.2684
1035	SLU 78	0.77	0.1	42.27	-12.6353	-0.0208	0.2688
1035	SLU 79	0.77	0.06	42.02	-12.5631	-0.0207	0.267
1035	SLU 80	0.77	0.09	42.02	-12.5626	-0.0207	0.2674
1035	SLU 81	0.77	0.07	43.06	-12.8704	-0.0209	0.2692
1035	SLU 82	0.77	0.1	43.06	-12.8699	-0.0209	0.2695
1035	SLU 83	0.78	0.07	43.32	-12.9456	-0.0211	0.2725
1035	SLU 84	0.78	0.1	43.31	-12.9451	-0.0211	0.2728
1035	SLE RA 1	0.52	0.03	28.39	-8.5001	-0.014	0.1804
1035	SLE RA 2	0.52	0.06	28.38	-8.4995	-0.014	0.1808
1035	SLE RA 3	0.53	0.03	28.72	-8.5986	-0.0143	0.1835
1035	SLE RA 4	0.53	0.05	28.72	-8.5983	-0.0143	0.1837
1035	SLE RA 5	0.53	0.06	28.56	-8.5496	-0.0142	0.1829
1035	SLE RA 6	0.53	0.03	28.9	-8.6488	-0.0144	0.1857
1035	SLE RA 7	0.53	0.05	28.89	-8.6484	-0.0144	0.1859
1035	SLE RA 8	0.53	0.02	28.73	-8.6003	-0.0144	0.1847
1035	SLE RA 9	0.53	0.04	28.73	-8.6	-0.0144	0.185
1035	SLE RA 10	0.56	0.07	30.79	-9.2114	-0.0151	0.1944
1035	SLE RA 11	0.57	0.04	31.13	-9.3106	-0.0153	0.1971
1035	SLE RA 12	0.57	0.06	31.13	-9.3103	-0.0153	0.1973
1035	SLE RA 13	0.57	0.07	30.96	-9.2616	-0.0152	0.1966
1035	SLE RA 14	0.57	0.04	31.3	-9.3608	-0.0155	0.1993
1035	SLE RA 15	0.57	0.06	31.3	-9.3604	-0.0155	0.1995
1035	SLE RA 16	0.57	0.03	31.14	-9.3123	-0.0154	0.1984
1035	SLE RA 17	0.57	0.06	31.13	-9.312	-0.0154	0.1986
1035	SLE RA 18	0.57	0.04	31.83	-9.5172	-0.0155	0.1998
1035	SLE RA 19	0.57	0.06	31.82	-9.5168	-0.0155	0.2
1035	SLE RA 20	0.58	0.04	32	-9.5673	-0.0157	0.202
1035	SLE RA 21	0.58	0.06	31.99	-9.567	-0.0157	0.2022
1035	SLE FR 1	0.52	0.03	28.39	-8.5001	-0.014	0.1804
1035	SLE FR 2	0.52	0.03	28.39	-8.4999	-0.014	0.1804
1035	SLE FR 3	0.52	0.03	28.45	-8.5201	-0.0141	0.1812
1035	SLE FR 4	0.54	0.04	29.42	-8.8051	-0.0145	0.1863
1035	SLE FR 5	0.54	0.03	29.49	-8.8252	-0.0145	0.1871
1035	SLE FR 6	0.55	0.04	30.11	-9.0086	-0.0148	0.1901
1035	SLE QP 1	0.52	0.03	28.39	-8.5001	-0.014	0.1804
1035	SLE QP 2	0.54	0.03	29.42	-8.8052	-0.0145	0.1862
1035	SLD 1	4.38	0.41	26.8	-8.1044	-0.0076	1.5319
1035	SLD 2	4.19	0.53	26.8	-8.1005	-0.0075	1.4669
1035	SLD 3	4.28	-0.66	27.08	-8.2063	-0.0079	1.4968
1035	SLD 4	4.09	-0.54	27.07	-8.2024	-0.0078	1.4318
1035	SLD 5	1.87	1.75	28.22	-8.4411	-0.012	0.6545
1035	SLD 6	1.75	1.82	28.22	-8.4385	-0.012	0.6123
1035	SLD 7	1.54	-1.82	29.13	-8.7808	-0.0129	0.5375
1035	SLD 8	1.42	-1.74	29.13	-8.7782	-0.0129	0.4953
1035	SLD 9	-0.35	1.81	29.71	-8.8322	-0.0161	-0.1229
1035	SLD 10	-0.47	1.88	29.71	-8.8296	-0.016	-0.1651
1035	SLD 11	-0.68	-1.76	30.62	-9.1718	-0.017	-0.2399
1035	SLD 12	-0.8	-1.68	30.62	-9.1693	-0.0169	-0.2821
1035	SLD 13	-3.02	0.61	31.77	-9.408	-0.0211	-1.0594
1035	SLD 14	-3.21	0.73	31.76	-9.4041	-0.021	-1.1244
1035	SLD 15	-3.12	-0.46	32.04	-9.5099	-0.0214	-1.0945
1035	SLD 16	-3.31	-0.34	32.03	-9.506	-0.0213	-1.1595
1035	SLV 1	9.52	0.88	23.3	-7.1665	0.0016	3.3331
1035	SLV 2	9.08	1.15	23.29	-7.1575	0.0018	3.1817
1035	SLV 3	9.29	-1.56	23.93	-7.4025	0.0009	3.2514
1035	SLV 4	8.85	-1.28	23.92	-7.3934	0.0011	3.1
1035	SLV 5	3.66	3.94	26.63	-7.9572	-0.0087	1.2799
1035	SLV 6	3.38	4.11	26.62	-7.9514	-0.0086	1.1832
1035	SLV 7	2.88	-4.19	28.73	-8.7438	-0.0108	1.0074
1035	SLV 8	2.6	-4.01	28.72	-8.738	-0.0107	0.9107
1035	SLV 9	-1.53	4.08	30.11	-8.8724	-0.0182	-0.5383
1035	SLV 10	-1.81	4.25	30.1	-8.8666	-0.0181	-0.635
1035	SLV 11	-2.31	-4.05	32.22	-9.6589	-0.0203	-0.8108
1035	SLV 12	-2.59	-3.87	32.21	-9.6531	-0.0202	-0.9075
1035	SLV 13	-7.78	1.35	34.92	-10.217	-0.0301	-2.7276
1035	SLV 14	-8.21	1.62	34.9	-10.2079	-0.0299	-2.879
1035	SLV 15	-8.01	-1.09	35.55	-10.4529	-0.0307	-2.8093
1035	SLV 16	-8.45	-0.82	35.54	-10.4438	-0.0305	-2.9607
1035	CRTFP Ux+	0	0	0	0	0	0
1035	CRTFP Ux-	0	0	0	0	0	0
1035	CRTFP Uy+	0	0	0	0	0	0
1035	CRTFP Uy-	0	0	0	0	0	0
1036	SLU 1	0.53	-0.01	28.06	-8.4838	-0.0291	0.1834
1036	SLU 2	0.53	0.04	28.05	-8.4827	-0.0291	0.184

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1036	SLU 3	0.54	-0.01	28.58	-8.6385	-0.0298	0.1883
1036	SLU 4	0.54	0.02	28.58	-8.6379	-0.0298	0.1886
1036	SLU 5	0.54	0.03	28.32	-8.5623	-0.0295	0.1874
1036	SLU 6	0.55	-0.01	28.85	-8.718	-0.0302	0.1917
1036	SLU 7	0.55	0.02	28.85	-8.7174	-0.0302	0.1921
1036	SLU 8	0.55	-0.02	28.59	-8.6428	-0.03	0.1902
1036	SLU 9	0.55	0.01	28.59	-8.6422	-0.03	0.1906
1036	SLU 10	0.59	0.06	31.75	-9.5863	-0.033	0.2053
1036	SLU 11	0.6	0.01	32.28	-9.7421	-0.0337	0.2096
1036	SLU 12	0.6	0.04	32.27	-9.7415	-0.0337	0.2099
1036	SLU 13	0.6	0.05	32.01	-9.6659	-0.0334	0.2087
1036	SLU 14	0.61	0.01	32.54	-9.8216	-0.0341	0.213
1036	SLU 15	0.61	0.04	32.54	-9.821	-0.0341	0.2134
1036	SLU 16	0.61	0	32.29	-9.7464	-0.0338	0.2115
1036	SLU 17	0.61	0.03	32.28	-9.7458	-0.0338	0.2119
1036	SLU 18	0.61	0.01	33.33	-10.0604	-0.0347	0.2138
1036	SLU 19	0.61	0.04	33.33	-10.0597	-0.0347	0.2142
1036	SLU 20	0.62	0.01	33.6	-10.1399	-0.0351	0.2172
1036	SLU 21	0.62	0.04	33.6	-10.1393	-0.0351	0.2176
1036	SLU 22	0.58	0.02	31.63	-9.5498	-0.0329	0.2037
1036	SLU 23	0.59	0.07	31.63	-9.5487	-0.0329	0.2043
1036	SLU 24	0.6	0.02	32.15	-9.7045	-0.0336	0.2086
1036	SLU 25	0.6	0.06	32.15	-9.7039	-0.0336	0.209
1036	SLU 26	0.6	0.07	31.89	-9.6282	-0.0333	0.2078
1036	SLU 27	0.61	0.02	32.42	-9.784	-0.034	0.2121
1036	SLU 28	0.61	0.05	32.42	-9.7834	-0.034	0.2124
1036	SLU 29	0.6	0.01	32.16	-9.7088	-0.0337	0.2106
1036	SLU 30	0.61	0.04	32.16	-9.7082	-0.0337	0.211
1036	SLU 31	0.65	0.09	35.32	-10.6523	-0.0367	0.2256
1036	SLU 32	0.66	0.04	35.85	-10.8081	-0.0374	0.2299
1036	SLU 33	0.66	0.07	35.85	-10.8075	-0.0374	0.2303
1036	SLU 34	0.66	0.09	35.59	-10.7319	-0.0372	0.2291
1036	SLU 35	0.67	0.04	36.12	-10.8876	-0.0379	0.2334
1036	SLU 36	0.67	0.07	36.11	-10.887	-0.0379	0.2337
1036	SLU 37	0.67	0.03	35.86	-10.8124	-0.0376	0.2319
1036	SLU 38	0.67	0.06	35.86	-10.8118	-0.0376	0.2323
1036	SLU 39	0.67	0.04	36.91	-11.1263	-0.0384	0.2342
1036	SLU 40	0.67	0.08	36.91	-11.1257	-0.0384	0.2345
1036	SLU 41	0.68	0.04	37.18	-11.2059	-0.0388	0.2376
1036	SLU 42	0.68	0.07	37.17	-11.2052	-0.0388	0.238
1036	SLU 43	0.66	-0.03	35.25	-10.6634	-0.0366	0.2314
1036	SLU 44	0.67	0.02	35.24	-10.6624	-0.0366	0.232
1036	SLU 45	0.68	-0.02	35.77	-10.8181	-0.0373	0.2363
1036	SLU 46	0.68	0.01	35.77	-10.8175	-0.0373	0.2367
1036	SLU 47	0.68	0.02	35.51	-10.7419	-0.037	0.2354
1036	SLU 48	0.69	-0.03	36.04	-10.8977	-0.0377	0.2397
1036	SLU 49	0.69	0	36.04	-10.897	-0.0377	0.2401
1036	SLU 50	0.68	-0.04	35.78	-10.8225	-0.0374	0.2383
1036	SLU 51	0.68	-0.01	35.78	-10.8218	-0.0374	0.2386
1036	SLU 52	0.73	0.04	38.94	-11.766	-0.0404	0.2533
1036	SLU 53	0.74	-0.01	39.47	-11.9218	-0.0411	0.2576
1036	SLU 54	0.74	0.03	39.46	-11.9211	-0.0411	0.258
1036	SLU 55	0.74	0.04	39.21	-11.8455	-0.0409	0.2567
1036	SLU 56	0.75	-0.01	39.73	-12.0013	-0.0416	0.261
1036	SLU 57	0.75	0.02	39.73	-12.0007	-0.0416	0.2614
1036	SLU 58	0.74	-0.02	39.48	-11.9261	-0.0413	0.2596
1036	SLU 59	0.75	0.01	39.47	-11.9254	-0.0413	0.2599
1036	SLU 60	0.75	0	40.53	-12.24	-0.0421	0.2618
1036	SLU 61	0.75	0.03	40.52	-12.2394	-0.0421	0.2622
1036	SLU 62	0.76	-0.01	40.79	-12.3195	-0.0425	0.2653
1036	SLU 63	0.76	0.02	40.79	-12.3189	-0.0425	0.2656
1036	SLU 64	0.72	0	38.82	-11.7294	-0.0403	0.2517
1036	SLU 65	0.72	0.06	38.82	-11.7284	-0.0403	0.2524
1036	SLU 66	0.74	0.01	39.35	-11.8841	-0.041	0.2566
1036	SLU 67	0.74	0.04	39.34	-11.8835	-0.041	0.257
1036	SLU 68	0.73	0.05	39.08	-11.8079	-0.0408	0.2558
1036	SLU 69	0.75	0.01	39.61	-11.9636	-0.0415	0.2601
1036	SLU 70	0.75	0.04	39.61	-11.963	-0.0415	0.2604
1036	SLU 71	0.74	0	39.36	-11.8884	-0.0412	0.2586
1036	SLU 72	0.74	0.03	39.35	-11.8878	-0.0412	0.259
1036	SLU 73	0.78	0.07	42.51	-12.832	-0.0442	0.2737
1036	SLU 74	0.8	0.03	43.04	-12.9877	-0.0449	0.278
1036	SLU 75	0.8	0.06	43.04	-12.9871	-0.0449	0.2783
1036	SLU 76	0.79	0.07	42.78	-12.9115	-0.0446	0.2771
1036	SLU 77	0.81	0.02	43.31	-13.0673	-0.0453	0.2814
1036	SLU 78	0.81	0.06	43.31	-13.0666	-0.0453	0.2818
1036	SLU 79	0.8	0.01	43.05	-12.9921	-0.045	0.2799
1036	SLU 80	0.8	0.05	43.05	-12.9914	-0.045	0.2803
1036	SLU 81	0.81	0.03	44.1	-13.306	-0.0459	0.2822
1036	SLU 82	0.81	0.06	44.1	-13.3054	-0.0459	0.2826
1036	SLU 83	0.82	0.03	44.37	-13.3855	-0.0463	0.2856
1036	SLU 84	0.82	0.06	44.36	-13.3849	-0.0463	0.286
1036	SLE RA 1	0.54	-0.01	29.08	-8.7883	-0.0302	0.1892
1036	SLE RA 2	0.54	0.03	29.07	-8.7876	-0.0302	0.1896
1036	SLE RA 3	0.55	0	29.43	-8.8915	-0.0307	0.1924
1036	SLE RA 4	0.55	0.02	29.42	-8.8911	-0.0307	0.1927
1036	SLE RA 5	0.55	0.03	29.25	-8.8407	-0.0305	0.1919
1036	SLE RA 6	0.56	0	29.6	-8.9445	-0.0309	0.1947
1036	SLE RA 7	0.56	0.02	29.6	-8.9441	-0.0309	0.195
1036	SLE RA 8	0.56	-0.01	29.43	-8.8944	-0.0308	0.1938
1036	SLE RA 9	0.56	0.01	29.43	-8.8939	-0.0308	0.194

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1036	SLE RA 10	0.58	0.04	31.54	-9.5234	-0.0328	0.2038
1036	SLE RA 11	0.59	0.01	31.89	-9.6272	-0.0332	0.2067
1036	SLE RA 12	0.59	0.03	31.89	-9.6268	-0.0332	0.2069
1036	SLE RA 13	0.59	0.04	31.72	-9.5764	-0.0331	0.2061
1036	SLE RA 14	0.6	0.01	32.07	-9.6802	-0.0335	0.2089
1036	SLE RA 15	0.6	0.03	32.07	-9.6798	-0.0335	0.2092
1036	SLE RA 16	0.6	0	31.9	-9.6301	-0.0333	0.208
1036	SLE RA 17	0.6	0.02	31.9	-9.6297	-0.0333	0.2082
1036	SLE RA 18	0.6	0.01	32.6	-9.8394	-0.0339	0.2095
1036	SLE RA 19	0.6	0.03	32.59	-9.839	-0.0339	0.2097
1036	SLE RA 20	0.61	0.01	32.77	-9.8924	-0.0342	0.2118
1036	SLE RA 21	0.61	0.03	32.77	-9.892	-0.0342	0.212
1036	SLE FR 1	0.54	-0.01	29.08	-8.7883	-0.0302	0.1892
1036	SLE FR 2	0.54	0	29.08	-8.7882	-0.0302	0.1893
1036	SLE FR 3	0.55	-0.01	29.15	-8.8095	-0.0303	0.1901
1036	SLE FR 4	0.56	0.01	30.13	-9.1035	-0.0313	0.1953
1036	SLE FR 5	0.56	0	30.2	-9.1249	-0.0314	0.1962
1036	SLE FR 6	0.57	0	30.84	-9.3139	-0.032	0.1993
1036	SLE QP 1	0.54	-0.01	29.08	-8.7883	-0.0302	0.1892
1036	SLE QP 2	0.56	0	30.13	-9.1036	-0.0313	0.1953
1036	SLD 1	4.4	0.39	27.29	-8.3342	-0.0231	1.5393
1036	SLD 2	4.21	0.52	27.28	-8.3285	-0.023	1.4744
1036	SLD 3	4.3	-0.68	27.56	-8.4387	-0.0235	1.5042
1036	SLD 4	4.11	-0.55	27.55	-8.433	-0.0234	1.4392
1036	SLD 5	1.9	1.72	28.86	-8.7153	-0.0283	0.6631
1036	SLD 6	1.77	1.8	28.85	-8.7117	-0.0282	0.621
1036	SLD 7	1.56	-1.85	29.78	-9.0636	-0.0295	0.546
1036	SLD 8	1.44	-1.77	29.78	-9.06	-0.0295	0.5038
1036	SLD 9	-0.32	1.77	30.49	-9.1473	-0.0331	-0.1133
1036	SLD 10	-0.44	1.85	30.48	-9.1437	-0.0331	-0.1554
1036	SLD 11	-0.65	-1.8	31.41	-9.4956	-0.0344	-0.2304
1036	SLD 12	-0.78	-1.72	31.41	-9.492	-0.0343	-0.2726
1036	SLD 13	-2.99	0.55	32.71	-9.7743	-0.0392	-1.0487
1036	SLD 14	-3.18	0.68	32.7	-9.7686	-0.0391	-1.1136
1036	SLD 15	-3.09	-0.52	32.99	-9.8787	-0.0396	-1.0838
1036	SLD 16	-3.28	-0.39	32.98	-9.8731	-0.0395	-1.1488
1036	SLV 1	9.53	0.89	23.47	-7.3044	-0.0122	3.3383
1036	SLV 2	9.1	1.18	23.45	-7.2913	-0.0119	3.187
1036	SLV 3	9.3	-1.55	24.11	-7.5461	-0.013	3.2565
1036	SLV 4	8.87	-1.26	24.09	-7.533	-0.0128	3.1052
1036	SLV 5	3.68	3.92	27.17	-8.1995	-0.0243	1.2879
1036	SLV 6	3.4	4.1	27.15	-8.1912	-0.0241	1.1913
1036	SLV 7	2.9	-4.22	29.3	-9.0052	-0.0272	1.0151
1036	SLV 8	2.62	-4.03	29.29	-8.9968	-0.027	0.9185
1036	SLV 9	-1.5	4.03	30.98	-9.2105	-0.0356	-0.5279
1036	SLV 10	-1.78	4.22	30.96	-9.2021	-0.0354	-0.6246
1036	SLV 11	-2.28	-4.1	33.11	-10.0161	-0.0385	-0.8008
1036	SLV 12	-2.56	-3.92	33.1	-10.0078	-0.0383	-0.8974
1036	SLV 13	-7.74	1.26	36.17	-10.6743	-0.0499	-2.7146
1036	SLV 14	-8.18	1.55	36.15	-10.6612	-0.0496	-2.8659
1036	SLV 15	-7.98	-1.18	36.81	-10.916	-0.0507	-2.7965
1036	SLV 16	-8.41	-0.89	36.79	-10.9029	-0.0504	-2.9478
1036	CRTFP Ux+	0	0	0	0	0	0
1036	CRTFP Ux-	0	0	0	0	0	0
1036	CRTFP Uy+	0	0	0	0	0	0
1036	CRTFP Uy-	0	0	0	0	0	0
1037	SLU 1	0.55	-0.03	29.21	-9.0302	-0.0443	0.1912
1037	SLU 2	0.55	0.02	29.2	-9.0289	-0.0443	0.1918
1037	SLU 3	0.56	-0.03	29.76	-9.1975	-0.0454	0.1963
1037	SLU 4	0.56	0	29.76	-9.1967	-0.0454	0.1967
1037	SLU 5	0.56	0.02	29.49	-9.1158	-0.0449	0.1954
1037	SLU 6	0.57	-0.03	30.04	-9.2843	-0.046	0.1999
1037	SLU 7	0.57	0	30.04	-9.2836	-0.046	0.2003
1037	SLU 8	0.57	-0.04	29.77	-9.2039	-0.0455	0.1983
1037	SLU 9	0.57	-0.01	29.77	-9.2032	-0.0455	0.1987
1037	SLU 10	0.61	0.04	33.06	-10.208	-0.0505	0.2139
1037	SLU 11	0.63	-0.01	33.61	-10.3766	-0.0515	0.2184
1037	SLU 12	0.63	0.02	33.61	-10.3758	-0.0515	0.2188
1037	SLU 13	0.62	0.04	33.34	-10.2949	-0.0511	0.2175
1037	SLU 14	0.64	-0.01	33.89	-10.4634	-0.0521	0.222
1037	SLU 15	0.64	0.02	33.89	-10.4627	-0.0521	0.2224
1037	SLU 16	0.63	-0.02	33.63	-10.383	-0.0517	0.2204
1037	SLU 17	0.63	0.01	33.62	-10.3823	-0.0517	0.2208
1037	SLU 18	0.64	-0.01	34.71	-10.7146	-0.0531	0.2228
1037	SLU 19	0.64	0.03	34.71	-10.7138	-0.0531	0.2232
1037	SLU 20	0.65	-0.01	34.99	-10.8015	-0.0537	0.2264
1037	SLU 21	0.65	0.02	34.99	-10.8007	-0.0537	0.2267
1037	SLU 22	0.61	0	32.93	-10.1692	-0.0503	0.2124
1037	SLU 23	0.61	0.05	32.93	-10.1679	-0.0503	0.213
1037	SLU 24	0.62	0	33.48	-10.3365	-0.0513	0.2175
1037	SLU 25	0.62	0.03	33.48	-10.3357	-0.0513	0.2179
1037	SLU 26	0.62	0.05	33.21	-10.2548	-0.0509	0.2166
1037	SLU 27	0.63	0	33.77	-10.4233	-0.0519	0.2211
1037	SLU 28	0.63	0.03	33.77	-10.4226	-0.0519	0.2214
1037	SLU 29	0.63	-0.01	33.5	-10.3429	-0.0515	0.2195
1037	SLU 30	0.63	0.02	33.5	-10.3422	-0.0515	0.2199
1037	SLU 31	0.67	0.07	36.78	-11.347	-0.0565	0.2351
1037	SLU 32	0.69	0.02	37.34	-11.5156	-0.0575	0.2396
1037	SLU 33	0.69	0.05	37.33	-11.5148	-0.0575	0.24
1037	SLU 34	0.68	0.07	37.06	-11.4339	-0.057	0.2387
1037	SLU 35	0.7	0.02	37.62	-11.6024	-0.0581	0.2432

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1037	SLU 36	0.7	0.05	37.62	-11.6017	-0.0581	0.2435
1037	SLU 37	0.69	0.01	37.35	-11.522	-0.0577	0.2416
1037	SLU 38	0.69	0.04	37.35	-11.5213	-0.0576	0.242
1037	SLU 39	0.7	0.03	38.44	-11.8536	-0.0591	0.244
1037	SLU 40	0.7	0.06	38.43	-11.8528	-0.0591	0.2444
1037	SLU 41	0.71	0.02	38.72	-11.9405	-0.0597	0.2475
1037	SLU 42	0.71	0.05	38.72	-11.9397	-0.0597	0.2479
1037	SLU 43	0.69	-0.05	36.69	-11.3487	-0.0556	0.2413
1037	SLU 44	0.69	0	36.69	-11.3475	-0.0556	0.2419
1037	SLU 45	0.71	-0.05	37.24	-11.516	-0.0566	0.2464
1037	SLU 46	0.71	-0.02	37.24	-11.5153	-0.0566	0.2468
1037	SLU 47	0.7	-0.01	36.97	-11.4343	-0.0562	0.2455
1037	SLU 48	0.72	-0.05	37.53	-11.6029	-0.0572	0.25
1037	SLU 49	0.72	-0.02	37.52	-11.6021	-0.0572	0.2504
1037	SLU 50	0.71	-0.06	37.26	-11.5224	-0.0568	0.2484
1037	SLU 51	0.71	-0.03	37.26	-11.5217	-0.0568	0.2488
1037	SLU 52	0.76	0.02	40.54	-12.5266	-0.0618	0.264
1037	SLU 53	0.77	-0.03	41.1	-12.6951	-0.0628	0.2685
1037	SLU 54	0.77	0	41.09	-12.6944	-0.0628	0.2689
1037	SLU 55	0.77	0.01	40.82	-12.6134	-0.0624	0.2676
1037	SLU 56	0.78	-0.03	41.38	-12.782	-0.0634	0.2721
1037	SLU 57	0.78	0	41.38	-12.7812	-0.0634	0.2725
1037	SLU 58	0.77	-0.04	41.11	-12.7015	-0.063	0.2705
1037	SLU 59	0.78	-0.01	41.11	-12.7008	-0.0629	0.2709
1037	SLU 60	0.78	-0.03	42.19	-13.0331	-0.0644	0.2729
1037	SLU 61	0.78	0.01	42.19	-13.0324	-0.0644	0.2733
1037	SLU 62	0.79	-0.03	42.48	-13.12	-0.065	0.2765
1037	SLU 63	0.79	0	42.48	-13.1193	-0.065	0.2768
1037	SLU 64	0.75	-0.02	40.42	-12.4877	-0.0616	0.2625
1037	SLU 65	0.75	0.03	40.41	-12.4865	-0.0616	0.2631
1037	SLU 66	0.77	-0.02	40.97	-12.655	-0.0626	0.2676
1037	SLU 67	0.77	0.01	40.97	-12.6543	-0.0626	0.268
1037	SLU 68	0.76	0.03	40.7	-12.5733	-0.0622	0.2667
1037	SLU 69	0.78	-0.02	41.25	-12.7419	-0.0632	0.2712
1037	SLU 70	0.78	0.01	41.25	-12.7411	-0.0632	0.2715
1037	SLU 71	0.77	-0.03	40.98	-12.6614	-0.0628	0.2696
1037	SLU 72	0.77	0	40.98	-12.6607	-0.0628	0.27
1037	SLU 73	0.82	0.05	44.27	-13.6656	-0.0677	0.2852
1037	SLU 74	0.83	0	44.82	-13.8341	-0.0687	0.2897
1037	SLU 75	0.83	0.03	44.82	-13.8334	-0.0687	0.2901
1037	SLU 76	0.83	0.05	44.55	-13.7524	-0.0683	0.2888
1037	SLU 77	0.84	0	45.1	-13.921	-0.0693	0.2933
1037	SLU 78	0.84	0.03	45.1	-13.9202	-0.0693	0.2936
1037	SLU 79	0.83	-0.01	44.84	-13.8405	-0.0689	0.2917
1037	SLU 80	0.84	0.02	44.83	-13.8398	-0.0689	0.2921
1037	SLU 81	0.84	0	45.92	-14.1721	-0.0704	0.2941
1037	SLU 82	0.84	0.04	45.92	-14.1714	-0.0704	0.2945
1037	SLU 83	0.85	0	46.2	-14.259	-0.071	0.2976
1037	SLU 84	0.85	0.03	46.2	-14.2583	-0.071	0.298
1037	SLE RA 1	0.56	-0.03	30.27	-9.3556	-0.0461	0.1973
1037	SLE RA 2	0.57	0.01	30.27	-9.3548	-0.046	0.1977
1037	SLE RA 3	0.57	-0.02	30.64	-9.4671	-0.0467	0.2007
1037	SLE RA 4	0.58	0	30.64	-9.4666	-0.0467	0.2009
1037	SLE RA 5	0.57	0.01	30.46	-9.4127	-0.0464	0.2001
1037	SLE RA 6	0.58	-0.02	30.83	-9.525	-0.0471	0.203
1037	SLE RA 7	0.58	0	30.83	-9.5245	-0.0471	0.2033
1037	SLE RA 8	0.58	-0.03	30.65	-9.4714	-0.0468	0.202
1037	SLE RA 9	0.58	-0.01	30.65	-9.4709	-0.0468	0.2023
1037	SLE RA 10	0.61	0.02	32.84	-10.1408	-0.0501	0.2124
1037	SLE RA 11	0.62	-0.01	33.21	-10.2532	-0.0508	0.2154
1037	SLE RA 12	0.62	0.01	33.21	-10.2527	-0.0508	0.2157
1037	SLE RA 13	0.61	0.02	33.03	-10.1987	-0.0505	0.2148
1037	SLE RA 14	0.62	-0.01	33.4	-10.3111	-0.0512	0.2178
1037	SLE RA 15	0.62	0.01	33.39	-10.3106	-0.0512	0.218
1037	SLE RA 16	0.62	-0.02	33.22	-10.2575	-0.0509	0.2168
1037	SLE RA 17	0.62	0	33.22	-10.257	-0.0509	0.217
1037	SLE RA 18	0.62	-0.01	33.94	-10.4785	-0.0519	0.2183
1037	SLE RA 19	0.63	0.02	33.94	-10.478	-0.0519	0.2186
1037	SLE RA 20	0.63	-0.01	34.13	-10.5365	-0.0523	0.2207
1037	SLE RA 21	0.63	0.01	34.13	-10.536	-0.0523	0.2209
1037	SLE FR 1	0.56	-0.03	30.27	-9.3556	-0.0461	0.1973
1037	SLE FR 2	0.57	-0.02	30.27	-9.3554	-0.046	0.1974
1037	SLE FR 3	0.57	-0.03	30.35	-9.3788	-0.0462	0.1982
1037	SLE FR 4	0.58	-0.01	31.37	-9.6923	-0.0478	0.2037
1037	SLE FR 5	0.59	-0.02	31.45	-9.7156	-0.048	0.2045
1037	SLE FR 6	0.59	-0.02	32.11	-9.9171	-0.049	0.2078
1037	SLE QP 1	0.56	-0.03	30.27	-9.3556	-0.0461	0.1973
1037	SLE QP 2	0.58	-0.02	31.37	-9.6925	-0.0478	0.2036
1037	SLD 1	4.41	0.53	28.26	-8.8343	-0.0382	1.5454
1037	SLD 2	4.23	0.66	28.24	-8.8265	-0.0381	1.4805
1037	SLD 3	4.31	-0.55	28.54	-8.9386	-0.039	1.5103
1037	SLD 4	4.13	-0.41	28.52	-8.9308	-0.0388	1.4454
1037	SLD 5	1.92	1.76	30.02	-9.2781	-0.0439	0.6708
1037	SLD 6	1.8	1.84	30.01	-9.273	-0.0438	0.6287
1037	SLD 7	1.58	-1.84	30.95	-9.6259	-0.0463	0.5536
1037	SLD 8	1.46	-1.75	30.94	-9.6209	-0.0462	0.5115
1037	SLD 9	-0.3	1.71	31.81	-9.7641	-0.0494	-0.1043
1037	SLD 10	-0.42	1.8	31.8	-9.759	-0.0493	-0.1464
1037	SLD 11	-0.63	-1.88	32.74	-10.1119	-0.0518	-0.2215
1037	SLD 12	-0.75	-1.79	32.73	-10.1068	-0.0517	-0.2636
1037	SLD 13	-2.96	0.37	34.22	-10.4541	-0.0568	-1.0382

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1037	SLD 14	-3.15	0.51	34.21	-10.4463	-0.0567	-1.1031
1037	SLD 15	-3.06	-0.7	34.5	-10.5585	-0.0575	-1.0734
1037	SLD 16	-3.25	-0.57	34.49	-10.5507	-0.0574	-1.1383
1037	SLV 1	9.54	1.23	24.08	-7.6858	-0.0254	3.3416
1037	SLV 2	9.11	1.55	24.05	-7.6676	-0.0251	3.1904
1037	SLV 3	9.31	-1.22	24.73	-7.9265	-0.0271	3.2597
1037	SLV 4	8.87	-0.91	24.69	-7.9083	-0.0267	3.1085
1037	SLV 5	3.7	4.02	28.21	-8.7284	-0.0386	1.2948
1037	SLV 6	3.42	4.23	28.19	-8.7167	-0.0384	1.1982
1037	SLV 7	2.92	-4.16	30.36	-9.5309	-0.0442	1.0218
1037	SLV 8	2.64	-3.95	30.34	-9.5193	-0.044	0.9253
1037	SLV 9	-1.48	3.91	32.4	-9.8656	-0.0517	-0.5181
1037	SLV 10	-1.75	4.12	32.38	-9.854	-0.0514	-0.6147
1037	SLV 11	-2.25	-4.26	34.55	-10.6682	-0.0572	-0.791
1037	SLV 12	-2.53	-4.06	34.53	-10.6566	-0.057	-0.8876
1037	SLV 13	-7.71	0.87	38.05	-11.4766	-0.0689	-2.7013
1037	SLV 14	-8.14	1.18	38.02	-11.4584	-0.0685	-2.8525
1037	SLV 15	-7.94	-1.59	38.69	-11.7174	-0.0706	-2.7832
1037	SLV 16	-8.38	-1.27	38.66	-11.6992	-0.0702	-2.9344
1037	CRTFP Ux+	0	0	0	0	0	0
1037	CRTFP Ux-	0	0	0	0	0	0
1037	CRTFP Uy+	0	0	0	0	0	0
1037	CRTFP Uy-	0	0	0	0	0	0
1038	SLU 1	0.57	-0.04	30.81	-9.8301	-0.0576	0.1984
1038	SLU 2	0.57	0.02	30.8	-9.8286	-0.0576	0.1991
1038	SLU 3	0.58	-0.03	31.4	-10.0155	-0.0589	0.2037
1038	SLU 4	0.58	0	31.39	-10.0146	-0.0589	0.2041
1038	SLU 5	0.58	0.01	31.11	-9.9257	-0.0583	0.2027
1038	SLU 6	0.59	-0.04	31.7	-10.1125	-0.0597	0.2074
1038	SLU 7	0.59	-0.01	31.7	-10.1116	-0.0597	0.2078
1038	SLU 8	0.59	-0.05	31.42	-10.0243	-0.0591	0.2058
1038	SLU 9	0.59	-0.01	31.41	-10.0234	-0.0591	0.2062
1038	SLU 10	0.63	0.04	34.88	-11.1209	-0.0657	0.2218
1038	SLU 11	0.65	-0.01	35.47	-11.3077	-0.0671	0.2265
1038	SLU 12	0.65	0.02	35.47	-11.3068	-0.0671	0.2269
1038	SLU 13	0.64	0.03	35.18	-11.218	-0.0665	0.2255
1038	SLU 14	0.66	-0.02	35.78	-11.4048	-0.0678	0.2302
1038	SLU 15	0.66	0.02	35.77	-11.4039	-0.0678	0.2305
1038	SLU 16	0.65	-0.03	35.49	-11.3166	-0.0673	0.2286
1038	SLU 17	0.65	0.01	35.49	-11.3157	-0.0672	0.229
1038	SLU 18	0.66	-0.01	36.63	-11.6762	-0.0693	0.231
1038	SLU 19	0.66	0.03	36.63	-11.6753	-0.0692	0.2314
1038	SLU 20	0.67	-0.01	36.94	-11.7733	-0.07	0.2347
1038	SLU 21	0.67	0.02	36.93	-11.7724	-0.07	0.235
1038	SLU 22	0.63	-0.01	34.75	-11.0785	-0.0655	0.2203
1038	SLU 23	0.63	0.05	34.75	-11.077	-0.0655	0.221
1038	SLU 24	0.64	0	35.34	-11.2638	-0.0668	0.2256
1038	SLU 25	0.65	0.03	35.34	-11.2629	-0.0668	0.226
1038	SLU 26	0.64	0.04	35.05	-11.174	-0.0662	0.2247
1038	SLU 27	0.65	-0.01	35.64	-11.3609	-0.0675	0.2293
1038	SLU 28	0.66	0.03	35.64	-11.36	-0.0675	0.2297
1038	SLU 29	0.65	-0.02	35.36	-11.2726	-0.067	0.2277
1038	SLU 30	0.65	0.02	35.36	-11.2717	-0.067	0.2281
1038	SLU 31	0.7	0.07	38.82	-12.3692	-0.0736	0.2438
1038	SLU 32	0.71	0.02	39.42	-12.5561	-0.0749	0.2484
1038	SLU 33	0.71	0.05	39.41	-12.5552	-0.0749	0.2488
1038	SLU 34	0.71	0.06	39.13	-12.4663	-0.0744	0.2475
1038	SLU 35	0.72	0.02	39.72	-12.6532	-0.0757	0.2521
1038	SLU 36	0.72	0.05	39.72	-12.6523	-0.0757	0.2525
1038	SLU 37	0.72	0.01	39.44	-12.5649	-0.0751	0.2505
1038	SLU 38	0.72	0.04	39.43	-12.564	-0.0751	0.2509
1038	SLU 39	0.72	0.02	40.58	-12.9246	-0.0771	0.2529
1038	SLU 40	0.72	0.06	40.57	-12.9237	-0.0771	0.2533
1038	SLU 41	0.73	0.02	40.88	-13.0217	-0.0779	0.2566
1038	SLU 42	0.73	0.05	40.88	-13.0208	-0.0779	0.257
1038	SLU 43	0.72	-0.06	38.7	-12.3512	-0.0722	0.2504
1038	SLU 44	0.72	-0.01	38.69	-12.3497	-0.0722	0.2511
1038	SLU 45	0.73	-0.06	39.29	-12.5365	-0.0735	0.2557
1038	SLU 46	0.73	-0.02	39.28	-12.5356	-0.0735	0.2561
1038	SLU 47	0.73	-0.01	39	-12.4467	-0.0729	0.2548
1038	SLU 48	0.74	-0.06	39.59	-12.6336	-0.0742	0.2594
1038	SLU 49	0.74	-0.03	39.59	-12.6327	-0.0742	0.2598
1038	SLU 50	0.74	-0.07	39.31	-12.5453	-0.0737	0.2578
1038	SLU 51	0.74	-0.04	39.3	-12.5444	-0.0737	0.2582
1038	SLU 52	0.78	0.02	42.77	-13.6419	-0.0803	0.2738
1038	SLU 53	0.8	-0.03	43.36	-13.8288	-0.0817	0.2785
1038	SLU 54	0.8	0	43.36	-13.8279	-0.0816	0.2789
1038	SLU 55	0.79	0.01	43.07	-13.739	-0.0811	0.2775
1038	SLU 56	0.81	-0.04	43.67	-13.9258	-0.0824	0.2822
1038	SLU 57	0.81	-0.01	43.66	-13.9249	-0.0824	0.2826
1038	SLU 58	0.8	-0.05	43.38	-13.8376	-0.0818	0.2806
1038	SLU 59	0.8	-0.01	43.38	-13.8367	-0.0818	0.281
1038	SLU 60	0.81	-0.03	44.52	-14.1973	-0.0838	0.283
1038	SLU 61	0.81	0	44.52	-14.1964	-0.0838	0.2834
1038	SLU 62	0.82	-0.03	44.83	-14.2944	-0.0846	0.2867
1038	SLU 63	0.82	0	44.82	-14.2934	-0.0846	0.287
1038	SLU 64	0.78	-0.03	42.64	-13.5995	-0.0801	0.2723
1038	SLU 65	0.78	0.02	42.64	-13.598	-0.0801	0.273
1038	SLU 66	0.79	-0.03	43.23	-13.7848	-0.0814	0.2776
1038	SLU 67	0.79	0.01	43.23	-13.7839	-0.0814	0.278
1038	SLU 68	0.79	0.02	42.94	-13.6951	-0.0808	0.2767

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1038	SLU 69	0.8	-0.03	43.53	-13.8819	-0.0821	0.2813
1038	SLU 70	0.8	0	43.53	-13.881	-0.0821	0.2817
1038	SLU 71	0.8	-0.04	43.25	-13.7937	-0.0816	0.2797
1038	SLU 72	0.8	-0.01	43.25	-13.7928	-0.0816	0.2801
1038	SLU 73	0.84	0.05	46.71	-14.8903	-0.0882	0.2958
1038	SLU 74	0.86	0	47.31	-15.0771	-0.0895	0.3004
1038	SLU 75	0.86	0.03	47.3	-15.0762	-0.0895	0.3008
1038	SLU 76	0.85	0.04	47.02	-14.9874	-0.089	0.2995
1038	SLU 77	0.87	-0.01	47.61	-15.1742	-0.0903	0.3041
1038	SLU 78	0.87	0.03	47.61	-15.1733	-0.0903	0.3045
1038	SLU 79	0.86	-0.02	47.33	-15.0859	-0.0897	0.3025
1038	SLU 80	0.86	0.02	47.32	-15.085	-0.0897	0.3029
1038	SLU 81	0.87	0	48.47	-15.4456	-0.0917	0.3049
1038	SLU 82	0.87	0.03	48.46	-15.4447	-0.0917	0.3053
1038	SLU 83	0.88	0	48.77	-15.5427	-0.0925	0.3086
1038	SLU 84	0.88	0.03	48.77	-15.5418	-0.0925	0.309
1038	SLE RA 1	0.58	-0.03	31.93	-10.1868	-0.0599	0.2047
1038	SLE RA 2	0.59	0.01	31.93	-10.1858	-0.0599	0.2051
1038	SLE RA 3	0.59	-0.03	32.33	-10.3103	-0.0607	0.2082
1038	SLE RA 4	0.6	-0.01	32.32	-10.3097	-0.0607	0.2084
1038	SLE RA 5	0.59	0	32.13	-10.2505	-0.0603	0.2076
1038	SLE RA 6	0.6	-0.03	32.53	-10.3751	-0.0612	0.2106
1038	SLE RA 7	0.6	-0.01	32.53	-10.3745	-0.0612	0.2109
1038	SLE RA 8	0.6	-0.04	32.34	-10.3162	-0.0609	0.2096
1038	SLE RA 9	0.6	-0.01	32.34	-10.3156	-0.0609	0.2099
1038	SLE RA 10	0.63	0.02	34.65	-11.0473	-0.0653	0.2203
1038	SLE RA 11	0.64	-0.01	35.04	-11.1719	-0.0662	0.2234
1038	SLE RA 12	0.64	0.01	35.04	-11.1713	-0.0662	0.2236
1038	SLE RA 13	0.64	0.02	34.85	-11.112	-0.0658	0.2228
1038	SLE RA 14	0.64	-0.01	35.25	-11.2366	-0.0667	0.2258
1038	SLE RA 15	0.65	0.01	35.25	-11.236	-0.0667	0.2261
1038	SLE RA 16	0.64	-0.02	35.06	-11.1778	-0.0663	0.2248
1038	SLE RA 17	0.64	0	35.06	-11.1772	-0.0663	0.225
1038	SLE RA 18	0.65	-0.01	35.82	-11.4175	-0.0676	0.2264
1038	SLE RA 19	0.65	0.01	35.82	-11.4169	-0.0676	0.2266
1038	SLE RA 20	0.65	-0.01	36.02	-11.4823	-0.0681	0.2288
1038	SLE RA 21	0.65	0.01	36.02	-11.4817	-0.0681	0.2291
1038	SLE FR 1	0.58	-0.03	31.93	-10.1868	-0.0599	0.2047
1038	SLE FR 2	0.58	-0.02	31.93	-10.1866	-0.0599	0.2048
1038	SLE FR 3	0.59	-0.03	32.02	-10.2127	-0.0601	0.2057
1038	SLE FR 4	0.6	-0.02	33.1	-10.5558	-0.0622	0.2113
1038	SLE FR 5	0.61	-0.02	33.18	-10.5819	-0.0624	0.2122
1038	SLE FR 6	0.62	-0.02	33.88	-10.8022	-0.0637	0.2155
1038	SLE QP 1	0.58	-0.03	31.93	-10.1868	-0.0599	0.2047
1038	SLE QP 2	0.6	-0.02	33.1	-10.556	-0.0622	0.2112
1038	SLD 1	4.43	0.53	29.68	-9.5888	-0.0515	1.5504
1038	SLD 2	4.24	0.68	29.66	-9.5783	-0.0513	1.4855
1038	SLD 3	4.33	-0.55	29.96	-9.692	-0.0525	1.5152
1038	SLD 4	4.14	-0.41	29.94	-9.6815	-0.0523	1.4504
1038	SLD 5	1.93	1.77	31.65	-10.1111	-0.0574	0.6775
1038	SLD 6	1.81	1.86	31.64	-10.1043	-0.0573	0.6355
1038	SLD 7	1.6	-1.86	32.59	-10.4552	-0.0609	0.5604
1038	SLD 8	1.48	-1.76	32.57	-10.4484	-0.0608	0.5183
1038	SLD 9	-0.27	1.71	33.62	-10.6636	-0.0636	-0.096
1038	SLD 10	-0.4	1.81	33.61	-10.6568	-0.0635	-0.1381
1038	SLD 11	-0.61	-1.91	34.56	-11.0077	-0.0671	-0.2131
1038	SLD 12	-0.73	-1.81	34.55	-11.0009	-0.067	-0.2552
1038	SLD 13	-2.94	0.36	36.26	-11.4305	-0.072	-1.028
1038	SLD 14	-3.12	0.51	36.24	-11.42	-0.0719	-1.0929
1038	SLD 15	-3.04	-0.73	36.54	-11.5337	-0.0731	-1.0632
1038	SLD 16	-3.22	-0.58	36.52	-11.5233	-0.0729	-1.128
1038	SLV 1	9.55	1.25	25.1	-8.2943	-0.0371	3.3429
1038	SLV 2	9.11	1.59	25.05	-8.27	-0.0367	3.1918
1038	SLV 3	9.31	-1.23	25.75	-8.5317	-0.0396	3.2611
1038	SLV 4	8.88	-0.89	25.7	-8.5074	-0.0391	3.11
1038	SLV 5	3.71	4.06	29.73	-9.5216	-0.0511	1.3004
1038	SLV 6	3.44	4.27	29.7	-9.5061	-0.0508	1.2039
1038	SLV 7	2.94	-4.2	31.88	-10.3128	-0.0592	1.0276
1038	SLV 8	2.66	-3.98	31.85	-10.2973	-0.0589	0.9312
1038	SLV 9	-1.45	3.93	34.35	-10.8147	-0.0655	-0.5088
1038	SLV 10	-1.73	4.15	34.32	-10.7992	-0.0652	-0.6053
1038	SLV 11	-2.23	-4.32	36.5	-11.6059	-0.0736	-0.7815
1038	SLV 12	-2.51	-4.1	36.47	-11.5904	-0.0733	-0.878
1038	SLV 13	-7.67	0.84	40.5	-12.6046	-0.0853	-2.6877
1038	SLV 14	-8.11	1.18	40.45	-12.5803	-0.0848	-2.8387
1038	SLV 15	-7.91	-1.64	41.14	-12.842	-0.0877	-2.7695
1038	SLV 16	-8.34	-1.3	41.1	-12.8177	-0.0873	-2.9206
1038	CRTFP Ux+	0	0	0	0	0	0
1038	CRTFP Ux-	0	0	0	0	0	0
1038	CRTFP Uy+	0	0	0	0	0	0
1038	CRTFP Uy-	0	0	0	0	0	0
1039	SLU 1	0.58	-0.03	32.77	-10.8461	-0.067	0.2051
1039	SLU 2	0.59	0.03	32.76	-10.8443	-0.0669	0.2057
1039	SLU 3	0.6	-0.02	33.4	-11.0541	-0.0685	0.2105
1039	SLU 4	0.6	0.01	33.4	-11.0531	-0.0685	0.2109
1039	SLU 5	0.6	0.02	33.09	-10.954	-0.0678	0.2095
1039	SLU 6	0.61	-0.03	33.73	-11.1638	-0.0693	0.2143
1039	SLU 7	0.61	0.01	33.73	-11.1627	-0.0693	0.2147
1039	SLU 8	0.61	-0.04	33.43	-11.0655	-0.0687	0.2127
1039	SLU 9	0.61	0	33.42	-11.0645	-0.0687	0.2131
1039	SLU 10	0.65	0.05	37.12	-12.2819	-0.0765	0.2291

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1039	SLU 11	0.67	0	37.75	-12.4917	-0.078	0.2339
1039	SLU 12	0.67	0.03	37.75	-12.4906	-0.078	0.2343
1039	SLU 13	0.66	0.05	37.45	-12.3916	-0.0774	0.2329
1039	SLU 14	0.68	0	38.08	-12.6013	-0.0789	0.2377
1039	SLU 15	0.68	0.03	38.08	-12.6003	-0.0789	0.2381
1039	SLU 16	0.67	-0.01	37.78	-12.5031	-0.0782	0.2361
1039	SLU 17	0.67	0.02	37.78	-12.502	-0.0782	0.2365
1039	SLU 18	0.68	0.01	38.99	-12.8998	-0.0806	0.2385
1039	SLU 19	0.68	0.04	38.99	-12.8987	-0.0806	0.2389
1039	SLU 20	0.69	0	39.32	-13.0094	-0.0815	0.2423
1039	SLU 21	0.69	0.04	39.32	-13.0084	-0.0815	0.2427
1039	SLU 22	0.65	0	36.98	-12.2348	-0.0762	0.2277
1039	SLU 23	0.65	0.06	36.97	-12.233	-0.0762	0.2283
1039	SLU 24	0.66	0.01	37.61	-12.4428	-0.0777	0.2331
1039	SLU 25	0.67	0.04	37.61	-12.4417	-0.0777	0.2335
1039	SLU 26	0.66	0.06	37.3	-12.3427	-0.077	0.2321
1039	SLU 27	0.67	0	37.94	-12.5525	-0.0786	0.2369
1039	SLU 28	0.68	0.04	37.94	-12.5514	-0.0786	0.2373
1039	SLU 29	0.67	0	37.64	-12.4542	-0.0779	0.2353
1039	SLU 30	0.67	0.03	37.64	-12.4531	-0.0779	0.2357
1039	SLU 31	0.72	0.09	41.33	-13.6705	-0.0857	0.2517
1039	SLU 32	0.73	0.03	41.97	-13.8803	-0.0873	0.2565
1039	SLU 33	0.73	0.07	41.96	-13.8792	-0.0873	0.2569
1039	SLU 34	0.73	0.08	41.66	-13.7802	-0.0866	0.2555
1039	SLU 35	0.74	0.03	42.3	-13.99	-0.0881	0.2603
1039	SLU 36	0.74	0.06	42.29	-13.9889	-0.0881	0.2607
1039	SLU 37	0.74	0.02	41.99	-13.8917	-0.0875	0.2586
1039	SLU 38	0.74	0.05	41.99	-13.8906	-0.0875	0.259
1039	SLU 39	0.74	0.04	43.2	-14.2884	-0.0899	0.2611
1039	SLU 40	0.74	0.07	43.2	-14.2873	-0.0899	0.2615
1039	SLU 41	0.75	0.04	43.53	-14.3981	-0.0907	0.2649
1039	SLU 42	0.76	0.07	43.53	-14.397	-0.0907	0.2653
1039	SLU 43	0.74	-0.05	41.15	-13.6239	-0.0839	0.2589
1039	SLU 44	0.74	0.01	41.15	-13.6221	-0.0839	0.2595
1039	SLU 45	0.75	-0.04	41.78	-13.8319	-0.0854	0.2643
1039	SLU 46	0.75	-0.01	41.78	-13.8308	-0.0854	0.2647
1039	SLU 47	0.75	0	41.48	-13.7318	-0.0847	0.2633
1039	SLU 48	0.76	-0.05	42.11	-13.9416	-0.0863	0.2681
1039	SLU 49	0.76	-0.01	42.11	-13.9405	-0.0862	0.2685
1039	SLU 50	0.76	-0.06	41.81	-13.8433	-0.0856	0.2665
1039	SLU 51	0.76	-0.02	41.81	-13.8422	-0.0856	0.2669
1039	SLU 52	0.81	0.03	45.5	-15.0596	-0.0934	0.2829
1039	SLU 53	0.82	-0.02	46.14	-15.2694	-0.095	0.2877
1039	SLU 54	0.82	0.02	46.14	-15.2683	-0.0949	0.2881
1039	SLU 55	0.82	0.03	45.83	-15.1693	-0.0943	0.2867
1039	SLU 56	0.83	-0.02	46.47	-15.3791	-0.0958	0.2915
1039	SLU 57	0.83	0.01	46.47	-15.378	-0.0958	0.2919
1039	SLU 58	0.83	-0.03	46.17	-15.2808	-0.0952	0.2899
1039	SLU 59	0.83	0	46.16	-15.2797	-0.0951	0.2902
1039	SLU 60	0.83	-0.01	47.37	-15.6775	-0.0976	0.2923
1039	SLU 61	0.83	0.02	47.37	-15.6764	-0.0975	0.2927
1039	SLU 62	0.84	-0.02	47.7	-15.7872	-0.0984	0.2961
1039	SLU 63	0.84	0.02	47.7	-15.7861	-0.0984	0.2965
1039	SLU 64	0.8	-0.02	45.37	-15.0125	-0.0931	0.2814
1039	SLU 65	0.8	0.04	45.36	-15.0107	-0.0931	0.2821
1039	SLU 66	0.82	-0.01	46	-15.2205	-0.0946	0.2869
1039	SLU 67	0.82	0.02	45.99	-15.2194	-0.0946	0.2873
1039	SLU 68	0.81	0.04	45.69	-15.1204	-0.094	0.2859
1039	SLU 69	0.83	-0.01	46.33	-15.3302	-0.0955	0.2907
1039	SLU 70	0.83	0.02	46.32	-15.3291	-0.0955	0.2911
1039	SLU 71	0.82	-0.02	46.02	-15.2319	-0.0948	0.289
1039	SLU 72	0.82	0.01	46.02	-15.2308	-0.0948	0.2894
1039	SLU 73	0.87	0.07	49.72	-16.4483	-0.1027	0.3055
1039	SLU 74	0.88	0.01	50.35	-16.658	-0.1042	0.3103
1039	SLU 75	0.88	0.05	50.35	-16.657	-0.1042	0.3106
1039	SLU 76	0.88	0.06	50.04	-16.558	-0.1035	0.3093
1039	SLU 77	0.89	0.01	50.68	-16.7677	-0.105	0.3141
1039	SLU 78	0.9	0.04	50.68	-16.7667	-0.105	0.3145
1039	SLU 79	0.89	0	50.38	-16.6694	-0.1044	0.3124
1039	SLU 80	0.89	0.04	50.38	-16.6684	-0.1044	0.3128
1039	SLU 81	0.9	0.02	51.59	-17.0661	-0.1068	0.3148
1039	SLU 82	0.9	0.05	51.58	-17.0651	-0.1068	0.3152
1039	SLU 83	0.91	0.02	51.92	-17.1758	-0.1076	0.3186
1039	SLU 84	0.91	0.05	51.91	-17.1748	-0.1076	0.319
1039	SLE RA 1	0.6	-0.02	33.97	-11.2429	-0.0696	0.2115
1039	SLE RA 2	0.6	0.02	33.97	-11.2417	-0.0696	0.212
1039	SLE RA 3	0.61	-0.02	34.39	-11.3816	-0.0706	0.2152
1039	SLE RA 4	0.61	0.01	34.39	-11.3808	-0.0706	0.2154
1039	SLE RA 5	0.61	0.02	34.19	-11.3148	-0.0702	0.2145
1039	SLE RA 6	0.62	-0.02	34.61	-11.4547	-0.0712	0.2177
1039	SLE RA 7	0.62	0	34.61	-11.454	-0.0712	0.218
1039	SLE RA 8	0.62	-0.02	34.41	-11.3892	-0.0707	0.2166
1039	SLE RA 9	0.62	0	34.41	-11.3884	-0.0707	0.2169
1039	SLE RA 10	0.65	0.03	36.87	-12.2001	-0.076	0.2276
1039	SLE RA 11	0.66	0	37.3	-12.3399	-0.077	0.2307
1039	SLE RA 12	0.66	0.02	37.29	-12.3392	-0.077	0.231
1039	SLE RA 13	0.66	0.03	37.09	-12.2732	-0.0765	0.2301
1039	SLE RA 14	0.66	0	37.51	-12.413	-0.0776	0.2333
1039	SLE RA 15	0.67	0.02	37.51	-12.4123	-0.0775	0.2335
1039	SLE RA 16	0.66	-0.01	37.31	-12.3475	-0.0771	0.2322
1039	SLE RA 17	0.66	0.01	37.31	-12.3468	-0.0771	0.2325

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1039	SLE RA 18	0.67	0.01	38.12	-12.612	-0.0787	0.2338
1039	SLE RA 19	0.67	0.03	38.12	-12.6113	-0.0787	0.2341
1039	SLE RA 20	0.67	0	38.34	-12.6851	-0.0793	0.2363
1039	SLE RA 21	0.67	0.02	38.34	-12.6844	-0.0793	0.2366
1039	SLE FR 1	0.6	-0.02	33.97	-11.2429	-0.0696	0.2115
1039	SLE FR 2	0.6	-0.01	33.97	-11.2427	-0.0696	0.2116
1039	SLE FR 3	0.61	-0.02	34.06	-11.2722	-0.0698	0.2125
1039	SLE FR 4	0.62	0	35.21	-11.6534	-0.0723	0.2183
1039	SLE FR 5	0.62	-0.01	35.3	-11.6829	-0.0726	0.2192
1039	SLE FR 6	0.63	-0.01	36.04	-11.9274	-0.0742	0.2227
1039	SLE QP 1	0.6	-0.02	33.97	-11.2429	-0.0696	0.2115
1039	SLE QP 2	0.62	-0.01	35.21	-11.6536	-0.0723	0.2182
1039	SLD 1	4.44	0.56	31.46	-10.5538	-0.061	1.5542
1039	SLD 2	4.25	0.71	31.44	-10.5405	-0.0607	1.4894
1039	SLD 3	4.34	-0.54	31.75	-10.657	-0.0622	1.5192
1039	SLD 4	4.15	-0.39	31.72	-10.6437	-0.062	1.4544
1039	SLD 5	1.95	1.8	33.66	-11.1695	-0.067	0.6835
1039	SLD 6	1.83	1.9	33.64	-11.1609	-0.0669	0.6414
1039	SLD 7	1.62	-1.87	34.61	-11.5134	-0.0713	0.5666
1039	SLD 8	1.5	-1.76	34.6	-11.5048	-0.0712	0.5246
1039	SLD 9	-0.25	1.74	35.83	-11.8024	-0.0735	-0.0882
1039	SLD 10	-0.37	1.84	35.82	-11.7938	-0.0734	-0.1302
1039	SLD 11	-0.59	-1.92	36.79	-12.1463	-0.0778	-0.205
1039	SLD 12	-0.71	-1.82	36.77	-12.1377	-0.0777	-0.2471
1039	SLD 13	-2.91	0.36	38.7	-12.6635	-0.0827	-1.018
1039	SLD 14	-3.1	0.52	38.68	-12.6503	-0.0824	-1.0827
1039	SLD 15	-3.01	-0.74	38.99	-12.7667	-0.0839	-1.053
1039	SLD 16	-3.2	-0.58	38.97	-12.7535	-0.0837	-1.1178
1039	SLV 1	9.55	1.28	26.44	-9.082	-0.0457	3.3425
1039	SLV 2	9.11	1.65	26.38	-9.0511	-0.0452	3.1916
1039	SLV 3	9.32	-1.22	27.1	-9.3183	-0.0487	3.2608
1039	SLV 4	8.88	-0.86	27.04	-9.2874	-0.0482	3.1099
1039	SLV 5	3.73	4.11	31.6	-10.5289	-0.0599	1.3049
1039	SLV 6	3.45	4.35	31.56	-10.5092	-0.0596	1.2085
1039	SLV 7	2.95	-4.23	33.79	-11.3167	-0.0699	1.0327
1039	SLV 8	2.67	-4	33.75	-11.297	-0.0695	0.9363
1039	SLV 9	-1.43	3.98	36.68	-12.0103	-0.0751	-0.4999
1039	SLV 10	-1.71	4.21	36.64	-11.9906	-0.0748	-0.5963
1039	SLV 11	-2.21	-4.37	38.87	-12.798	-0.0851	-0.7721
1039	SLV 12	-2.48	-4.14	38.83	-12.7783	-0.0848	-0.8685
1039	SLV 13	-7.64	0.83	43.39	-14.0198	-0.0965	-2.6735
1039	SLV 14	-8.07	1.2	43.33	-13.9889	-0.096	-2.8244
1039	SLV 15	-7.87	-1.67	44.05	-14.2561	-0.0995	-2.7551
1039	SLV 16	-8.3	-1.31	43.99	-14.2253	-0.099	-2.9061
1039	CRTFP Ux+	0	0	0	0	0	0
1039	CRTFP Ux-	0	0	0	0	0	0
1039	CRTFP Uy+	0	0	0	0	0	0
1039	CRTFP Uy-	0	0	0	0	0	0
1040	SLU 1	0.64	-0.01	37.83	-8.8845	1.5561	0.1556
1040	SLU 2	0.64	0.05	37.83	-8.8831	1.556	0.1533
1040	SLU 3	0.66	0	38.57	-9.0572	1.586	0.1595
1040	SLU 4	0.66	0.04	38.56	-9.0563	1.5859	0.1581
1040	SLU 5	0.65	0.05	38.21	-8.9739	1.5715	0.1564
1040	SLU 6	0.67	-0.01	38.95	-9.148	1.6014	0.1626
1040	SLU 7	0.67	0.03	38.95	-9.1471	1.6014	0.1612
1040	SLU 8	0.66	-0.01	38.6	-9.0662	1.587	0.1617
1040	SLU 9	0.66	0.02	38.6	-9.0653	1.587	0.1604
1040	SLU 10	0.71	0.09	42.87	-10.0684	1.7621	0.1695
1040	SLU 11	0.73	0.03	43.62	-10.2425	1.792	0.1757
1040	SLU 12	0.73	0.07	43.61	-10.2416	1.792	0.1743
1040	SLU 13	0.73	0.08	43.26	-10.1592	1.7775	0.1725
1040	SLU 14	0.74	0.03	44	-10.3333	1.8075	0.1788
1040	SLU 15	0.74	0.06	44	-10.3325	1.8074	0.1774
1040	SLU 16	0.74	0.02	43.65	-10.2515	1.7931	0.1779
1040	SLU 17	0.74	0.05	43.64	-10.2506	1.793	0.1765
1040	SLU 18	0.74	0.04	45.04	-10.5779	1.8505	0.1787
1040	SLU 19	0.74	0.07	45.04	-10.577	1.8504	0.1773
1040	SLU 20	0.76	0.03	45.43	-10.6687	1.8659	0.1818
1040	SLU 21	0.76	0.07	45.42	-10.6678	1.8659	0.1804
1040	SLU 22	0.71	0.03	42.72	-10.0304	1.7554	0.171
1040	SLU 23	0.71	0.09	42.71	-10.029	1.7553	0.1687
1040	SLU 24	0.73	0.04	43.45	-10.2031	1.7853	0.1749
1040	SLU 25	0.73	0.07	43.45	-10.2022	1.7852	0.1735
1040	SLU 26	0.72	0.09	43.09	-10.1198	1.7708	0.1717
1040	SLU 27	0.74	0.03	43.84	-10.2939	1.8007	0.178
1040	SLU 28	0.74	0.07	43.83	-10.293	1.8007	0.1766
1040	SLU 29	0.73	0.02	43.48	-10.212	1.7863	0.1771
1040	SLU 30	0.74	0.06	43.48	-10.2112	1.7863	0.1757
1040	SLU 31	0.78	0.12	47.76	-11.2143	1.9614	0.1849
1040	SLU 32	0.8	0.07	48.5	-11.3884	1.9913	0.1911
1040	SLU 33	0.8	0.1	48.5	-11.3875	1.9913	0.1897
1040	SLU 34	0.8	0.12	48.14	-11.3051	1.9768	0.1879
1040	SLU 35	0.81	0.06	48.88	-11.4792	2.0068	0.1941
1040	SLU 36	0.81	0.1	48.88	-11.4783	2.0067	0.1928
1040	SLU 37	0.81	0.05	48.53	-11.3974	1.9924	0.1933
1040	SLU 38	0.81	0.09	48.53	-11.3965	1.9923	0.1919
1040	SLU 39	0.81	0.07	49.93	-11.7238	2.0498	0.1941
1040	SLU 40	0.81	0.11	49.92	-11.7229	2.0497	0.1927
1040	SLU 41	0.83	0.07	50.31	-11.8146	2.0652	0.1972
1040	SLU 42	0.83	0.11	50.31	-11.8137	2.0652	0.1958
1040	SLU 43	0.81	-0.02	47.51	-11.157	1.9546	0.197

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1040	SLU 44	0.81	0.04	47.5	-11.1555	1.9545	0.1947
1040	SLU 45	0.82	-0.02	48.24	-11.3297	1.9845	0.2009
1040	SLU 46	0.83	0.02	48.24	-11.3288	1.9844	0.1995
1040	SLU 47	0.82	0.04	47.88	-11.2464	1.97	0.1978
1040	SLU 48	0.84	-0.02	48.63	-11.4205	1.9999	0.204
1040	SLU 49	0.84	0.02	48.62	-11.4196	1.9999	0.2026
1040	SLU 50	0.83	-0.03	48.27	-11.3386	1.9856	0.2031
1040	SLU 51	0.83	0.01	48.27	-11.3378	1.9855	0.2018
1040	SLU 52	0.88	0.07	52.55	-12.3409	2.1606	0.2109
1040	SLU 53	0.9	0.01	53.29	-12.515	2.1905	0.2171
1040	SLU 54	0.9	0.05	53.29	-12.5141	2.1905	0.2157
1040	SLU 55	0.89	0.07	52.93	-12.4317	2.176	0.214
1040	SLU 56	0.91	0.01	53.67	-12.6058	2.206	0.2202
1040	SLU 57	0.91	0.05	53.67	-12.6049	2.2059	0.2188
1040	SLU 58	0.9	0	53.32	-12.524	2.1916	0.2193
1040	SLU 59	0.9	0.04	53.32	-12.5231	2.1915	0.2179
1040	SLU 60	0.91	0.02	54.72	-12.8504	2.249	0.2201
1040	SLU 61	0.91	0.06	54.71	-12.8495	2.2489	0.2188
1040	SLU 62	0.92	0.02	55.1	-12.9412	2.2645	0.2232
1040	SLU 63	0.92	0.05	55.1	-12.9403	2.2644	0.2218
1040	SLU 64	0.88	0.02	52.39	-12.3029	2.1539	0.2124
1040	SLU 65	0.88	0.08	52.38	-12.3014	2.1538	0.2101
1040	SLU 66	0.9	0.02	53.13	-12.4756	2.1838	0.2163
1040	SLU 67	0.9	0.06	53.12	-12.4747	2.1837	0.2149
1040	SLU 68	0.89	0.07	52.77	-12.3922	2.1693	0.2132
1040	SLU 69	0.91	0.02	53.51	-12.5664	2.1992	0.2194
1040	SLU 70	0.91	0.05	53.51	-12.5655	2.1992	0.218
1040	SLU 71	0.9	0.01	53.16	-12.4845	2.1848	0.2185
1040	SLU 72	0.9	0.04	53.15	-12.4836	2.1848	0.2171
1040	SLU 73	0.95	0.11	57.43	-13.4868	2.3599	0.2263
1040	SLU 74	0.97	0.05	58.17	-13.6609	2.3898	0.2325
1040	SLU 75	0.97	0.09	58.17	-13.66	2.3898	0.2311
1040	SLU 76	0.96	0.1	57.82	-13.5776	2.3753	0.2293
1040	SLU 77	0.98	0.05	58.56	-13.7517	2.4053	0.2355
1040	SLU 78	0.98	0.08	58.55	-13.7508	2.4052	0.2342
1040	SLU 79	0.97	0.04	58.21	-13.6699	2.3909	0.2347
1040	SLU 80	0.98	0.08	58.2	-13.669	2.3908	0.2333
1040	SLU 81	0.98	0.06	59.6	-13.9962	2.4483	0.2355
1040	SLU 82	0.98	0.1	59.6	-13.9954	2.4482	0.2341
1040	SLU 83	0.99	0.06	59.99	-14.0871	2.4637	0.2386
1040	SLU 84	0.99	0.09	59.98	-14.0862	2.4637	0.2372
1040	SLE RA 1	0.66	0	39.23	-9.2119	1.6131	0.16
1040	SLE RA 2	0.66	0.04	39.22	-9.2109	1.613	0.1585
1040	SLE RA 3	0.67	0.01	39.72	-9.327	1.633	0.1626
1040	SLE RA 4	0.67	0.03	39.72	-9.3264	1.6329	0.1617
1040	SLE RA 5	0.67	0.04	39.48	-9.2715	1.6233	0.1605
1040	SLE RA 6	0.68	0	39.97	-9.3876	1.6433	0.1646
1040	SLE RA 7	0.68	0.03	39.97	-9.387	1.6432	0.1637
1040	SLE RA 8	0.68	0	39.74	-9.333	1.6337	0.1641
1040	SLE RA 9	0.68	0.02	39.74	-9.3324	1.6336	0.1632
1040	SLE RA 10	0.71	0.07	42.59	-10.0012	1.7504	0.1693
1040	SLE RA 11	0.72	0.03	43.08	-10.1173	1.7703	0.1734
1040	SLE RA 12	0.72	0.05	43.08	-10.1167	1.7703	0.1725
1040	SLE RA 13	0.72	0.06	42.84	-10.0617	1.7607	0.1713
1040	SLE RA 14	0.73	0.03	43.34	-10.1778	1.7806	0.1754
1040	SLE RA 15	0.73	0.05	43.34	-10.1772	1.7806	0.1745
1040	SLE RA 16	0.72	0.02	43.1	-10.1232	1.771	0.1749
1040	SLE RA 17	0.72	0.04	43.1	-10.1226	1.771	0.174
1040	SLE RA 18	0.73	0.03	44.03	-10.3408	1.8093	0.1754
1040	SLE RA 19	0.73	0.06	44.03	-10.3402	1.8093	0.1745
1040	SLE RA 20	0.74	0.03	44.29	-10.4014	1.8196	0.1775
1040	SLE RA 21	0.74	0.05	44.29	-10.4008	1.8196	0.1765
1040	SLE FR 1	0.66	0	39.23	-9.2119	1.6131	0.16
1040	SLE FR 2	0.66	0.01	39.23	-9.2117	1.6131	0.1597
1040	SLE FR 3	0.66	0	39.33	-9.2361	1.6172	0.1608
1040	SLE FR 4	0.68	0.02	40.67	-9.5504	1.6719	0.1643
1040	SLE FR 5	0.68	0.01	40.77	-9.5748	1.6761	0.1654
1040	SLE FR 6	0.69	0.02	41.63	-9.7764	1.7112	0.1677
1040	SLE QP 1	0.66	0	39.23	-9.2119	1.6131	0.16
1040	SLE QP 2	0.68	0.01	40.67	-9.5506	1.6719	0.1646
1040	SLD 1	4.81	0.63	36.01	-8.5541	1.4878	1.1212
1040	SLD 2	4.6	0.81	35.98	-8.5447	1.4873	1.0644
1040	SLD 3	4.7	-0.57	36.33	-8.6311	1.4999	1.1691
1040	SLD 4	4.5	-0.39	36.31	-8.6217	1.4995	1.1123
1040	SLD 5	2.12	1.99	38.79	-9.1365	1.5983	0.3889
1040	SLD 6	1.98	2.1	38.77	-9.1304	1.598	0.352
1040	SLD 7	1.76	-2.02	39.86	-9.3931	1.6389	0.5485
1040	SLD 8	1.63	-1.9	39.85	-9.3871	1.6386	0.5116
1040	SLD 9	-0.27	1.92	41.49	-9.7141	1.7053	-0.1824
1040	SLD 10	-0.4	2.04	41.47	-9.7081	1.705	-0.2192
1040	SLD 11	-0.62	-2.08	42.57	-9.9708	1.7459	-0.0228
1040	SLD 12	-0.75	-1.96	42.55	-9.9647	1.7456	-0.0596
1040	SLD 13	-3.13	0.42	45.03	-10.4795	1.8444	-0.783
1040	SLD 14	-3.34	0.6	45	-10.4701	1.8439	-0.8398
1040	SLD 15	-3.24	-0.78	45.35	-10.5565	1.8566	-0.7351
1040	SLD 16	-3.45	-0.6	45.33	-10.5471	1.8561	-0.7919
1040	SLV 1	10.33	1.42	29.77	-7.22	1.241	2.403
1040	SLV 2	9.85	1.84	29.71	-7.1983	1.24	2.2706
1040	SLV 3	10.08	-1.32	30.52	-7.3963	1.2692	2.5123
1040	SLV 4	9.6	-0.9	30.45	-7.3745	1.2682	2.3799
1040	SLV 5	4.03	4.51	36.29	-8.5878	1.5001	0.6927

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1040	SLV 6	3.73	4.78	36.25	-8.574	1.4994	0.6082
1040	SLV 7	3.21	-4.61	38.76	-9.1752	1.5941	1.0571
1040	SLV 8	2.9	-4.34	38.72	-9.1614	1.5934	0.9726
1040	SLV 9	-1.54	4.36	42.62	-9.9398	1.7505	-0.6433
1040	SLV 10	-1.84	4.63	42.58	-9.9259	1.7498	-0.7279
1040	SLV 11	-2.37	-4.75	45.09	-10.5272	1.8445	-0.279
1040	SLV 12	-2.67	-4.49	45.05	-10.5133	1.8438	-0.3635
1040	SLV 13	-8.24	0.92	50.89	-11.7267	2.0757	-2.0507
1040	SLV 14	-8.72	1.34	50.82	-11.7049	2.0747	-2.183
1040	SLV 15	-8.49	-1.81	51.63	-11.9029	2.1039	-1.9413
1040	SLV 16	-8.97	-1.39	51.56	-11.8811	2.1029	-2.0737
1040	CRTFP Ux+	0	0	0	0	0	0
1040	CRTFP Ux-	0	0	0	0	0	0
1040	CRTFP Uy+	0	0	0	0	0	0
1040	CRTFP Uy-	0	0	0	0	0	0
18058	SLU 1	-0.38	18.55	18.73	-5.3222	-0.031	-0.0006
18058	SLU 2	-0.39	20.96	19.05	-5.309	-0.032	-0.0006
18058	SLU 3	-0.43	18.36	23.17	-5.3814	-0.0402	-0.0007
18058	SLU 4	-0.43	19.8	23.36	-5.3735	-0.0407	-0.0007
18058	SLU 5	-0.41	20.73	24.18	-5.2894	-0.0412	-0.0007
18058	SLU 6	-0.46	18.13	28.3	-5.3617	-0.0494	-0.0008
18058	SLU 7	-0.46	19.57	28.49	-5.3539	-0.05	-0.0008
18058	SLU 8	-0.44	18.09	28.99	-5.2829	-0.0495	-0.0008
18058	SLU 9	-0.44	19.53	29.18	-5.275	-0.0501	-0.0008
18058	SLU 10	-0.54	23.04	20.65	-6.0447	-0.0398	-0.0006
18058	SLU 11	-0.58	20.44	24.76	-6.1171	-0.048	-0.0007
18058	SLU 12	-0.58	21.89	24.95	-6.1092	-0.0485	-0.0007
18058	SLU 13	-0.56	22.81	25.77	-6.0251	-0.049	-0.0007
18058	SLU 14	-0.61	20.21	29.89	-6.0975	-0.0572	-0.0008
18058	SLU 15	-0.61	21.65	30.08	-6.0896	-0.0578	-0.0008
18058	SLU 16	-0.58	20.17	30.58	-6.0186	-0.0573	-0.0008
18058	SLU 17	-0.59	21.62	30.77	-6.0108	-0.0579	-0.0008
18058	SLU 18	-0.6	21.53	21.01	-6.3732	-0.0422	-0.0006
18058	SLU 19	-0.6	22.97	21.2	-6.3653	-0.0427	-0.0006
18058	SLU 20	-0.62	21.29	26.14	-6.3536	-0.0514	-0.0007
18058	SLU 21	-0.62	22.74	26.33	-6.3457	-0.052	-0.0007
18058	SLU 22	-0.47	19.58	23.17	-5.9671	-0.0403	-0.0007
18058	SLU 23	-0.48	21.99	23.49	-5.9539	-0.0413	-0.0007
18058	SLU 24	-0.52	19.39	27.6	-6.0263	-0.0495	-0.0008
18058	SLU 25	-0.52	20.84	27.8	-6.0184	-0.05	-0.0008
18058	SLU 26	-0.5	21.76	28.62	-5.9343	-0.0505	-0.0008
18058	SLU 27	-0.55	19.16	32.73	-6.0067	-0.0587	-0.0009
18058	SLU 28	-0.55	20.6	32.93	-5.9988	-0.0593	-0.0009
18058	SLU 29	-0.53	19.12	33.42	-5.9278	-0.0588	-0.0009
18058	SLU 30	-0.53	20.57	33.62	-5.9199	-0.0594	-0.0009
18058	SLU 31	-0.63	24.08	25.08	-6.6897	-0.0491	-0.0007
18058	SLU 32	-0.67	21.47	29.2	-6.762	-0.0573	-0.0008
18058	SLU 33	-0.67	22.92	29.39	-6.7541	-0.0578	-0.0008
18058	SLU 34	-0.65	23.84	30.21	-6.67	-0.0583	-0.0008
18058	SLU 35	-0.7	21.24	34.33	-6.7424	-0.0665	-0.0009
18058	SLU 36	-0.7	22.69	34.52	-6.7345	-0.0671	-0.0009
18058	SLU 37	-0.67	21.2	35.02	-6.6636	-0.0666	-0.0009
18058	SLU 38	-0.68	22.65	35.21	-6.6557	-0.0672	-0.0009
18058	SLU 39	-0.68	22.56	25.44	-7.0181	-0.0515	-0.0007
18058	SLU 40	-0.69	24	25.64	-7.0102	-0.052	-0.0007
18058	SLU 41	-0.71	22.33	30.57	-6.9985	-0.0607	-0.0008
18058	SLU 42	-0.71	23.77	30.77	-6.9906	-0.0613	-0.0008
18058	SLU 43	-0.47	23.76	22.83	-6.6977	-0.0372	-0.0007
18058	SLU 44	-0.47	26.17	23.15	-6.6846	-0.0381	-0.0007
18058	SLU 45	-0.51	23.57	27.27	-6.7569	-0.0463	-0.0008
18058	SLU 46	-0.52	25.02	27.46	-6.749	-0.0469	-0.0008
18058	SLU 47	-0.5	25.94	28.28	-6.6649	-0.0473	-0.0008
18058	SLU 48	-0.54	23.34	32.39	-6.7373	-0.0556	-0.0009
18058	SLU 49	-0.54	24.78	32.59	-6.7294	-0.0561	-0.0009
18058	SLU 50	-0.52	23.3	33.09	-6.6585	-0.0557	-0.0009
18058	SLU 51	-0.52	24.75	33.28	-6.6506	-0.0562	-0.001
18058	SLU 52	-0.62	28.26	24.74	-7.4203	-0.0459	-0.0007
18058	SLU 53	-0.66	25.65	28.86	-7.4926	-0.0541	-0.0008
18058	SLU 54	-0.67	27.1	29.05	-7.4847	-0.0547	-0.0008
18058	SLU 55	-0.65	28.02	29.87	-7.4007	-0.0551	-0.0008
18058	SLU 56	-0.69	25.42	33.99	-7.473	-0.0634	-0.0009
18058	SLU 57	-0.69	26.87	34.18	-7.4651	-0.0639	-0.0009
18058	SLU 58	-0.67	25.38	34.68	-7.3942	-0.0635	-0.0009
18058	SLU 59	-0.67	26.83	34.87	-7.3863	-0.064	-0.001
18058	SLU 60	-0.68	26.74	25.11	-7.7487	-0.0483	-0.0007
18058	SLU 61	-0.68	28.18	25.3	-7.7409	-0.0489	-0.0007
18058	SLU 62	-0.71	26.51	30.23	-7.7291	-0.0575	-0.0008
18058	SLU 63	-0.71	27.95	30.43	-7.7212	-0.0581	-0.0008
18058	SLU 64	-0.56	24.8	27.27	-7.3426	-0.0465	-0.0008
18058	SLU 65	-0.56	27.21	27.59	-7.3295	-0.0474	-0.0008
18058	SLU 66	-0.6	24.6	31.7	-7.4018	-0.0556	-0.0009
18058	SLU 67	-0.61	26.05	31.89	-7.3939	-0.0562	-0.0009
18058	SLU 68	-0.59	26.97	32.71	-7.3098	-0.0566	-0.0009
18058	SLU 69	-0.63	24.37	36.83	-7.3822	-0.0648	-0.001
18058	SLU 70	-0.63	25.82	37.02	-7.3743	-0.0654	-0.001
18058	SLU 71	-0.61	24.33	37.52	-7.3034	-0.065	-0.001
18058	SLU 72	-0.61	25.78	37.72	-7.2955	-0.0655	-0.0011
18058	SLU 73	-0.71	29.29	29.18	-8.0652	-0.0552	-0.0008
18058	SLU 74	-0.75	26.68	33.3	-8.1375	-0.0634	-0.0009
18058	SLU 75	-0.76	28.13	33.49	-8.1297	-0.064	-0.0009
18058	SLU 76	-0.74	29.06	34.31	-8.0456	-0.0644	-0.001

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18058	SLU 77	-0.78	26.45	38.42	-8.1179	-0.0726	-0.001
18058	SLU 78	-0.78	27.9	38.62	-8.11	-0.0732	-0.001
18058	SLU 79	-0.76	26.41	39.12	-8.0391	-0.0728	-0.001
18058	SLU 80	-0.76	27.86	39.31	-8.0312	-0.0733	-0.0011
18058	SLU 81	-0.77	27.77	29.54	-8.3937	-0.0576	-0.0008
18058	SLU 82	-0.77	29.22	29.74	-8.3858	-0.0582	-0.0008
18058	SLU 83	-0.8	27.54	34.67	-8.374	-0.0668	-0.0009
18058	SLU 84	-0.8	28.98	34.86	-8.3661	-0.0674	-0.0009
18058	SLE RA 1	-0.41	18.85	20	-5.5064	-0.0337	-0.0006
18058	SLE RA 2	-0.41	20.45	20.21	-5.4977	-0.0343	-0.0006
18058	SLE RA 3	-0.44	18.72	22.96	-5.5459	-0.0398	-0.0006
18058	SLE RA 4	-0.44	19.68	23.08	-5.5406	-0.0402	-0.0007
18058	SLE RA 5	-0.43	20.3	23.63	-5.4846	-0.0405	-0.0007
18058	SLE RA 6	-0.46	18.56	26.38	-5.5328	-0.046	-0.0007
18058	SLE RA 7	-0.46	19.53	26.5	-5.5276	-0.0463	-0.0007
18058	SLE RA 8	-0.44	18.54	26.84	-5.4803	-0.046	-0.0007
18058	SLE RA 9	-0.44	19.5	26.96	-5.475	-0.0464	-0.0008
18058	SLE RA 10	-0.51	21.84	21.27	-5.9881	-0.0395	-0.0006
18058	SLE RA 11	-0.54	20.11	24.02	-6.0364	-0.045	-0.0007
18058	SLE RA 12	-0.54	21.07	24.15	-6.0311	-0.0454	-0.0007
18058	SLE RA 13	-0.53	21.69	24.69	-5.9751	-0.0457	-0.0007
18058	SLE RA 14	-0.56	19.95	27.44	-6.0233	-0.0512	-0.0007
18058	SLE RA 15	-0.56	20.91	27.57	-6.018	-0.0515	-0.0007
18058	SLE RA 16	-0.54	19.93	27.9	-5.9707	-0.0512	-0.0008
18058	SLE RA 17	-0.54	20.89	28.03	-5.9655	-0.0516	-0.0008
18058	SLE RA 18	-0.55	20.83	21.52	-6.2071	-0.0411	-0.0006
18058	SLE RA 19	-0.55	21.79	21.64	-6.2019	-0.0415	-0.0006
18058	SLE RA 20	-0.57	20.67	24.94	-6.194	-0.0473	-0.0007
18058	SLE RA 21	-0.57	21.64	25.06	-6.1888	-0.0477	-0.0007
18058	SLE FR 1	-0.41	18.85	20	-5.5064	-0.0337	-0.0006
18058	SLE FR 2	-0.41	19.17	20.04	-5.5047	-0.0338	-0.0006
18058	SLE FR 3	-0.41	18.78	21.37	-5.5012	-0.0362	-0.0006
18058	SLE FR 4	-0.45	19.76	20.5	-5.7149	-0.036	-0.0006
18058	SLE FR 5	-0.46	19.38	21.82	-5.7114	-0.0384	-0.0006
18058	SLE FR 6	-0.48	19.84	20.76	-5.8568	-0.0374	-0.0006
18058	SLE QP 1	-0.41	18.85	20	-5.5064	-0.0337	-0.0006
18058	SLE QP 2	-0.45	19.44	20.45	-5.7166	-0.0359	-0.0006
18058	SLD 1	21.45	40.76	21.18	-6.3512	1.1024	-0.0133
18058	SLD 2	21.52	12.86	21.09	-6.1478	1.1056	-0.0123
18058	SLD 3	21.95	11.7	22.04	-6.1487	1.1308	-0.013
18058	SLD 4	22.01	-16.2	21.95	-5.9453	1.1341	-0.0119
18058	SLD 5	5.36	74.78	19.39	-6.2496	0.2619	-0.0051
18058	SLD 6	5.4	56.68	19.33	-6.1176	0.264	-0.0044
18058	SLD 7	7.01	-22.09	22.24	-5.5746	0.3567	-0.004
18058	SLD 8	7.05	-40.2	22.18	-5.4426	0.3588	-0.0033
18058	SLD 9	-7.95	79.08	18.72	-5.9906	-0.4306	0.0021
18058	SLD 10	-7.91	60.98	18.67	-5.8587	-0.4285	0.0028
18058	SLD 11	-6.3	-17.8	21.57	-5.3156	-0.3358	0.0033
18058	SLD 12	-6.26	-35.9	21.52	-5.1837	-0.3337	0.0039
18058	SLD 13	-22.91	55.08	18.96	-5.488	-1.2059	0.0108
18058	SLD 14	-22.85	27.19	18.87	-5.2846	-1.2026	0.0118
18058	SLD 15	-22.42	26.02	19.81	-5.2855	-1.1775	0.0111
18058	SLD 16	-22.35	-1.88	19.72	-5.0821	-1.1742	0.0121
18058	SLV 1	50.8	68.88	22.17	-7.2005	2.6278	-0.0303
18058	SLV 2	50.95	3.89	21.96	-6.7267	2.6355	-0.028
18058	SLV 3	51.96	1.36	24.16	-6.7279	2.6936	-0.0295
18058	SLV 4	52.1	-63.64	23.95	-6.2542	2.7012	-0.0272
18058	SLV 5	13.16	147.69	17.99	-6.9587	0.6622	-0.0111
18058	SLV 6	13.25	106.18	17.86	-6.6561	0.6671	-0.0096
18058	SLV 7	16.99	-77.39	24.61	-5.3836	0.8814	-0.0085
18058	SLV 8	17.09	-118.9	24.48	-5.081	0.8862	-0.007
18058	SLV 9	-17.99	157.78	16.43	-6.3523	-0.9581	0.0058
18058	SLV 10	-17.89	116.27	16.3	-6.0497	-0.9532	0.0073
18058	SLV 11	-14.15	-67.3	23.05	-4.7771	-0.7389	0.0084
18058	SLV 12	-14.06	-108.81	22.92	-4.4746	-0.734	0.0099
18058	SLV 13	-53	102.52	16.96	-5.1791	-2.773	0.026
18058	SLV 14	-52.86	37.53	16.75	-4.7054	-2.7654	0.0284
18058	SLV 15	-51.85	35	18.94	-4.7066	-2.7073	0.0268
18058	SLV 16	-51.7	-30	18.74	-4.2328	-2.6997	0.0291
18058	CRTFP Ux+	0	0	0	0	0	0
18058	CRTFP Ux-	0	0	0	0	0	0
18058	CRTFP Uy+	0	0	0	0	0	0
18058	CRTFP Uy-	0	0	0	0	0	0
18059	SLU 1	-0.11	15.1	24.49	-4.8146	0.047	0.0014
18059	SLU 2	-0.11	17.68	24.5	-4.8361	0.0475	0.0014
18059	SLU 3	-0.12	14.78	29.74	-4.8521	0.0495	0.0015
18059	SLU 4	-0.12	16.33	29.74	-4.865	0.0498	0.0015
18059	SLU 5	-0.09	17.37	30.48	-4.804	0.0513	0.0015
18059	SLU 6	-0.1	14.46	35.73	-4.82	0.0532	0.0016
18059	SLU 7	-0.1	16.01	35.73	-4.8329	0.0536	0.0016
18059	SLU 8	-0.08	14.47	36.46	-4.7505	0.0545	0.0016
18059	SLU 9	-0.08	16.02	36.47	-4.7634	0.0548	0.0016
18059	SLU 10	-0.23	19.25	26.92	-5.511	0.0489	0.0016
18059	SLU 11	-0.24	16.35	32.17	-5.527	0.0509	0.0018
18059	SLU 12	-0.24	17.9	32.17	-5.5399	0.0512	0.0018
18059	SLU 13	-0.21	18.94	32.91	-5.479	0.0527	0.0018
18059	SLU 14	-0.22	16.04	38.16	-5.495	0.0546	0.0019
18059	SLU 15	-0.22	17.59	38.16	-5.5078	0.055	0.0019
18059	SLU 16	-0.19	16.05	38.89	-5.4254	0.0559	0.0019
18059	SLU 17	-0.19	17.6	38.89	-5.4383	0.0562	0.0019
18059	SLU 18	-0.28	17.35	27.96	-5.7788	0.049	0.0017

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18059	SLU 19	-0.28	18.9	27.96	-5.7917	0.0493	0.0017
18059	SLU 20	-0.26	17.04	33.95	-5.7467	0.0527	0.0018
18059	SLU 21	-0.26	18.58	33.95	-5.7596	0.0531	0.0018
18059	SLU 22	-0.15	15.57	30.11	-5.3693	0.0529	0.0016
18059	SLU 23	-0.15	18.16	30.11	-5.3908	0.0535	0.0016
18059	SLU 24	-0.16	15.25	35.36	-5.4068	0.0555	0.0018
18059	SLU 25	-0.16	16.8	35.36	-5.4197	0.0558	0.0018
18059	SLU 26	-0.13	17.84	36.1	-5.3587	0.0573	0.0018
18059	SLU 27	-0.14	14.94	41.34	-5.3747	0.0592	0.0019
18059	SLU 28	-0.14	16.49	41.35	-5.3876	0.0596	0.0019
18059	SLU 29	-0.11	14.95	42.08	-5.3051	0.0605	0.0019
18059	SLU 30	-0.11	16.5	42.08	-5.318	0.0608	0.0019
18059	SLU 31	-0.26	19.73	32.54	-6.0657	0.0549	0.0019
18059	SLU 32	-0.27	16.83	37.79	-6.0817	0.0569	0.002
18059	SLU 33	-0.27	18.37	37.79	-6.0946	0.0572	0.002
18059	SLU 34	-0.25	19.42	38.53	-6.0336	0.0587	0.002
18059	SLU 35	-0.26	16.51	43.77	-6.0496	0.0606	0.0021
18059	SLU 36	-0.26	18.06	43.77	-6.0625	0.061	0.0021
18059	SLU 37	-0.23	16.52	44.51	-5.9801	0.0619	0.0021
18059	SLU 38	-0.23	18.07	44.51	-5.9929	0.0622	0.0021
18059	SLU 39	-0.31	17.82	33.58	-6.3335	0.0549	0.002
18059	SLU 40	-0.31	19.37	33.58	-6.3464	0.0553	0.002
18059	SLU 41	-0.3	17.51	39.56	-6.3014	0.0587	0.0021
18059	SLU 42	-0.3	19.06	39.57	-6.3143	0.059	0.0021
18059	SLU 43	-0.13	19.47	29.91	-6.0688	0.059	0.0017
18059	SLU 44	-0.13	22.05	29.92	-6.0903	0.0596	0.0017
18059	SLU 45	-0.14	19.14	35.16	-6.1063	0.0615	0.0019
18059	SLU 46	-0.14	20.69	35.17	-6.1192	0.0619	0.0019
18059	SLU 47	-0.11	21.73	35.9	-6.0582	0.0633	0.0019
18059	SLU 48	-0.12	18.83	41.15	-6.0742	0.0653	0.002
18059	SLU 49	-0.12	20.38	41.15	-6.0871	0.0656	0.002
18059	SLU 50	-0.1	18.84	41.88	-6.0047	0.0665	0.002
18059	SLU 51	-0.1	20.39	41.89	-6.0176	0.0669	0.002
18059	SLU 52	-0.25	23.62	32.35	-6.7653	0.061	0.002
18059	SLU 53	-0.26	20.72	37.59	-6.7813	0.0629	0.0021
18059	SLU 54	-0.26	22.27	37.59	-6.7941	0.0633	0.0021
18059	SLU 55	-0.23	23.31	38.33	-6.7332	0.0647	0.0021
18059	SLU 56	-0.24	20.41	43.58	-6.7492	0.0667	0.0022
18059	SLU 57	-0.24	21.95	43.58	-6.7621	0.067	0.0022
18059	SLU 58	-0.21	20.42	44.31	-6.6796	0.0679	0.0022
18059	SLU 59	-0.21	21.96	44.32	-6.6925	0.0683	0.0022
18059	SLU 60	-0.3	21.71	33.38	-7.033	0.061	0.0021
18059	SLU 61	-0.3	23.26	33.39	-7.0459	0.0613	0.0021
18059	SLU 62	-0.28	21.4	39.37	-7.0009	0.0648	0.0022
18059	SLU 63	-0.28	22.95	39.37	-7.0138	0.0651	0.0022
18059	SLU 64	-0.17	19.94	35.53	-6.6235	0.065	0.002
18059	SLU 65	-0.17	22.52	35.53	-6.645	0.0655	0.002
18059	SLU 66	-0.18	19.62	40.78	-6.661	0.0675	0.0021
18059	SLU 67	-0.18	21.17	40.78	-6.6739	0.0678	0.0021
18059	SLU 68	-0.15	22.21	41.52	-6.6129	0.0693	0.0021
18059	SLU 69	-0.16	19.31	46.77	-6.6289	0.0713	0.0022
18059	SLU 70	-0.16	20.86	46.77	-6.6418	0.0716	0.0022
18059	SLU 71	-0.13	19.32	47.5	-6.5593	0.0725	0.0022
18059	SLU 72	-0.13	20.87	47.5	-6.5722	0.0728	0.0022
18059	SLU 73	-0.28	24.1	37.96	-7.3199	0.0669	0.0022
18059	SLU 74	-0.29	21.19	43.21	-7.3359	0.0689	0.0023
18059	SLU 75	-0.29	22.74	43.21	-7.3488	0.0692	0.0023
18059	SLU 76	-0.27	23.78	43.95	-7.2878	0.0707	0.0023
18059	SLU 77	-0.28	20.88	49.19	-7.3038	0.0727	0.0025
18059	SLU 78	-0.28	22.43	49.2	-7.3167	0.073	0.0025
18059	SLU 79	-0.25	20.89	49.93	-7.2343	0.0739	0.0024
18059	SLU 80	-0.25	22.44	49.93	-7.2472	0.0742	0.0024
18059	SLU 81	-0.33	22.19	39	-7.5877	0.067	0.0023
18059	SLU 82	-0.33	23.74	39	-7.6006	0.0673	0.0023
18059	SLU 83	-0.32	21.88	44.98	-7.5556	0.0707	0.0024
18059	SLU 84	-0.32	23.43	44.99	-7.5685	0.0711	0.0024
18059	SLE RA 1	-0.12	15.23	26.1	-4.9731	0.0487	0.0015
18059	SLE RA 2	-0.12	16.96	26.1	-4.9874	0.049	0.0015
18059	SLE RA 3	-0.13	15.02	29.6	-4.9981	0.0503	0.0015
18059	SLE RA 4	-0.13	16.05	29.6	-5.0067	0.0506	0.0016
18059	SLE RA 5	-0.11	16.75	30.09	-4.966	0.0515	0.0015
18059	SLE RA 6	-0.11	14.81	33.59	-4.9767	0.0529	0.0016
18059	SLE RA 7	-0.11	15.84	33.59	-4.9853	0.0531	0.0016
18059	SLE RA 8	-0.1	14.82	34.08	-4.9303	0.0537	0.0016
18059	SLE RA 9	-0.1	15.85	34.08	-4.9389	0.0539	0.0016
18059	SLE RA 10	-0.2	18	27.72	-5.4374	0.05	0.0016
18059	SLE RA 11	-0.2	16.07	31.21	-5.448	0.0513	0.0017
18059	SLE RA 12	-0.2	17.1	31.22	-5.4566	0.0515	0.0017
18059	SLE RA 13	-0.19	17.8	31.71	-5.416	0.0525	0.0017
18059	SLE RA 14	-0.19	15.86	35.21	-5.4267	0.0538	0.0018
18059	SLE RA 15	-0.19	16.89	35.21	-5.4352	0.054	0.0018
18059	SLE RA 16	-0.18	15.87	35.7	-5.3803	0.0546	0.0018
18059	SLE RA 17	-0.18	16.9	35.7	-5.3889	0.0548	0.0018
18059	SLE RA 18	-0.23	16.73	28.41	-5.6159	0.05	0.0017
18059	SLE RA 19	-0.23	17.77	28.41	-5.6245	0.0502	0.0017
18059	SLE RA 20	-0.22	16.53	32.4	-5.5945	0.0525	0.0018
18059	SLE RA 21	-0.22	17.56	32.4	-5.6031	0.0527	0.0018
18059	SLE FR 1	-0.12	15.23	26.1	-4.9731	0.0487	0.0015
18059	SLE FR 2	-0.12	15.58	26.1	-4.976	0.0487	0.0015
18059	SLE FR 3	-0.12	15.15	27.69	-4.9645	0.0497	0.0015
18059	SLE FR 4	-0.15	16.03	26.79	-5.1688	0.0491	0.0015

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18059	SLE FR 5	-0.15	15.6	28.39	-5.1574	0.0501	0.0016
18059	SLE FR 6	-0.18	15.98	27.25	-5.2945	0.0493	0.0016
18059	SLE QP 1	-0.12	15.23	26.1	-4.9731	0.0487	0.0015
18059	SLE QP 2	-0.15	15.68	26.79	-5.1659	0.0491	0.0015
18059	SLD 1	21.75	32.78	27.02	-5.5547	1.1933	-0.0108
18059	SLD 2	21.81	15.07	26.98	-5.4231	1.1965	-0.0098
18059	SLD 3	22.24	3.82	27.76	-5.3218	1.2218	-0.0112
18059	SLD 4	22.3	-13.89	27.72	-5.1902	1.2251	-0.0101
18059	SLD 5	5.66	67.83	25.73	-5.6588	0.3484	-0.0019
18059	SLD 6	5.7	56.34	25.71	-5.5734	0.3505	-0.0012
18059	SLD 7	7.3	-28.72	28.22	-4.8824	0.4437	-0.0029
18059	SLD 8	7.34	-40.21	28.19	-4.797	0.4458	-0.0023
18059	SLD 9	-7.65	71.58	25.38	-5.5349	-0.3477	0.0053
18059	SLD 10	-7.61	60.08	25.36	-5.4495	-0.3456	0.006
18059	SLD 11	-6.01	-24.97	27.87	-4.7585	-0.2524	0.0043
18059	SLD 12	-5.96	-36.47	27.85	-4.6731	-0.2503	0.0049
18059	SLD 13	-22.61	45.26	25.85	-5.1417	-1.127	0.0132
18059	SLD 14	-22.55	27.55	25.82	-5.01	-1.1237	0.0142
18059	SLD 15	-22.12	16.3	26.6	-4.9088	-1.0984	0.0129
18059	SLD 16	-22.05	-1.41	26.56	-4.7771	-1.0951	0.0139
18059	SLV 1	51.1	55.28	27.33	-6.0752	2.7267	-0.0274
18059	SLV 2	51.24	14.03	27.24	-5.7686	2.7342	-0.025
18059	SLV 3	52.25	-11.95	29.06	-5.5318	2.7928	-0.0281
18059	SLV 4	52.4	-53.21	28.97	-5.2252	2.8004	-0.0258
18059	SLV 5	13.45	136.52	24.34	-6.3147	0.7507	-0.0064
18059	SLV 6	13.54	110.17	24.29	-6.1189	0.7556	-0.0049
18059	SLV 7	17.29	-87.59	30.11	-4.5035	0.9712	-0.0089
18059	SLV 8	17.38	-113.94	30.05	-4.3077	0.9761	-0.0074
18059	SLV 9	-17.69	145.31	23.53	-6.0242	-0.8779	0.0104
18059	SLV 10	-17.6	118.96	23.47	-5.8284	-0.8731	0.012
18059	SLV 11	-13.85	-78.81	29.29	-4.213	-0.6575	0.008
18059	SLV 12	-13.76	-105.16	29.24	-4.0171	-0.6526	0.0095
18059	SLV 13	-52.7	84.58	24.61	-5.1067	-2.7023	0.0288
18059	SLV 14	-52.56	43.32	24.52	-4.8	-2.6947	0.0312
18059	SLV 15	-51.55	17.34	26.34	-4.5633	-2.6361	0.0281
18059	SLV 16	-51.4	-23.92	26.25	-4.2567	-2.6285	0.0304
18059	CRTFP Ux+	0	0	0	0	0	0
18059	CRTFP Ux-	0	0	0	0	0	0
18059	CRTFP Uy+	0	0	0	0	0	0
18059	CRTFP Uy-	0	0	0	0	0	0
18061	SLU 1	-0.48	9.44	24.1	-4.6296	-0.0592	-0.0012
18061	SLU 2	-0.47	12.11	24.12	-4.6515	-0.0586	-0.0012
18061	SLU 3	-0.5	9.06	29.32	-4.6932	-0.0609	-0.0014
18061	SLU 4	-0.5	10.66	29.33	-4.7063	-0.0606	-0.0014
18061	SLU 5	-0.48	11.82	30.07	-4.655	-0.0586	-0.0014
18061	SLU 6	-0.5	8.78	35.27	-4.6966	-0.0608	-0.0015
18061	SLU 7	-0.5	10.38	35.28	-4.7097	-0.0605	-0.0015
18061	SLU 8	-0.48	8.87	36	-4.6365	-0.059	-0.0015
18061	SLU 9	-0.48	10.47	36.01	-4.6497	-0.0587	-0.0015
18061	SLU 10	-0.64	12.61	26.46	-5.2776	-0.0719	-0.0013
18061	SLU 11	-0.67	9.56	31.66	-5.3192	-0.0742	-0.0015
18061	SLU 12	-0.67	11.16	31.67	-5.3323	-0.0739	-0.0015
18061	SLU 13	-0.64	12.32	32.41	-5.281	-0.0718	-0.0015
18061	SLU 14	-0.67	9.28	37.61	-5.3226	-0.0741	-0.0016
18061	SLU 15	-0.67	10.88	37.62	-5.3358	-0.0738	-0.0016
18061	SLU 16	-0.64	9.37	38.33	-5.2626	-0.0723	-0.0016
18061	SLU 17	-0.64	10.97	38.35	-5.2757	-0.072	-0.0016
18061	SLU 18	-0.71	10.15	27.44	-5.524	-0.0781	-0.0014
18061	SLU 19	-0.71	11.75	27.45	-5.5371	-0.0778	-0.0014
18061	SLU 20	-0.71	9.87	33.39	-5.5274	-0.078	-0.0015
18061	SLU 21	-0.71	11.47	33.4	-5.5406	-0.0777	-0.0015
18061	SLU 22	-0.56	9.15	29.63	-5.1718	-0.0678	-0.0014
18061	SLU 23	-0.56	11.82	29.66	-5.1937	-0.0673	-0.0014
18061	SLU 24	-0.59	8.78	34.85	-5.2353	-0.0696	-0.0016
18061	SLU 25	-0.59	10.38	34.87	-5.2484	-0.0693	-0.0016
18061	SLU 26	-0.57	11.53	35.61	-5.1971	-0.0672	-0.0016
18061	SLU 27	-0.59	8.49	40.8	-5.2387	-0.0695	-0.0017
18061	SLU 28	-0.59	10.09	40.82	-5.2519	-0.0692	-0.0017
18061	SLU 29	-0.57	8.58	41.53	-5.1787	-0.0677	-0.0017
18061	SLU 30	-0.57	10.18	41.54	-5.1918	-0.0674	-0.0017
18061	SLU 31	-0.73	12.32	32	-5.8197	-0.0806	-0.0015
18061	SLU 32	-0.76	9.28	37.19	-5.8613	-0.0829	-0.0017
18061	SLU 33	-0.76	10.88	37.21	-5.8745	-0.0826	-0.0017
18061	SLU 34	-0.73	12.03	37.94	-5.8232	-0.0805	-0.0017
18061	SLU 35	-0.76	8.99	43.14	-5.8648	-0.0828	-0.0018
18061	SLU 36	-0.76	10.59	43.15	-5.8779	-0.0825	-0.0018
18061	SLU 37	-0.73	9.08	43.87	-5.8047	-0.0809	-0.0018
18061	SLU 38	-0.73	10.68	43.88	-5.8178	-0.0806	-0.0018
18061	SLU 39	-0.8	9.87	32.98	-6.0661	-0.0868	-0.0016
18061	SLU 40	-0.8	11.47	32.99	-6.0793	-0.0865	-0.0016
18061	SLU 41	-0.8	9.58	38.92	-6.0696	-0.0867	-0.0017
18061	SLU 42	-0.8	11.18	38.94	-6.0827	-0.0864	-0.0017
18061	SLU 43	-0.59	12.37	29.43	-5.8327	-0.0739	-0.0015
18061	SLU 44	-0.59	15.04	29.45	-5.8546	-0.0734	-0.0015
18061	SLU 45	-0.62	12	34.65	-5.8962	-0.0757	-0.0017
18061	SLU 46	-0.62	13.59	34.66	-5.9093	-0.0754	-0.0017
18061	SLU 47	-0.59	14.75	35.4	-5.858	-0.0733	-0.0017
18061	SLU 48	-0.62	11.71	40.6	-5.8996	-0.0756	-0.0018
18061	SLU 49	-0.62	13.31	40.61	-5.9127	-0.0753	-0.0018
18061	SLU 50	-0.59	11.8	41.33	-5.8395	-0.0738	-0.0018
18061	SLU 51	-0.59	13.4	41.34	-5.8527	-0.0735	-0.0018

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18061	SLU 52	-0.75	15.54	31.79	-6.4806	-0.0867	-0.0016
18061	SLU 53	-0.78	12.49	36.99	-6.5222	-0.089	-0.0018
18061	SLU 54	-0.78	14.09	37	-6.5354	-0.0887	-0.0018
18061	SLU 55	-0.75	15.25	37.74	-6.484	-0.0866	-0.0018
18061	SLU 56	-0.78	12.21	42.94	-6.5257	-0.0889	-0.0019
18061	SLU 57	-0.78	13.81	42.95	-6.5388	-0.0886	-0.0019
18061	SLU 58	-0.76	12.3	43.67	-6.4656	-0.087	-0.0019
18061	SLU 59	-0.76	13.9	43.68	-6.4787	-0.0867	-0.0019
18061	SLU 60	-0.82	13.08	32.77	-6.727	-0.0929	-0.0017
18061	SLU 61	-0.82	14.68	32.79	-6.7402	-0.0926	-0.0017
18061	SLU 62	-0.83	12.8	38.72	-6.7304	-0.0928	-0.0018
18061	SLU 63	-0.83	14.4	38.73	-6.7436	-0.0925	-0.0018
18061	SLU 64	-0.68	12.09	34.97	-6.3748	-0.0826	-0.0017
18061	SLU 65	-0.68	14.75	34.99	-6.3967	-0.0821	-0.0017
18061	SLU 66	-0.7	11.71	40.18	-6.4383	-0.0844	-0.0019
18061	SLU 67	-0.7	13.31	40.2	-6.4514	-0.0841	-0.0019
18061	SLU 68	-0.68	14.47	40.94	-6.4001	-0.082	-0.0019
18061	SLU 69	-0.71	11.42	46.13	-6.4417	-0.0843	-0.002
18061	SLU 70	-0.71	13.02	46.15	-6.4549	-0.084	-0.002
18061	SLU 71	-0.68	11.51	46.86	-6.3817	-0.0824	-0.002
18061	SLU 72	-0.68	13.11	46.88	-6.3948	-0.0821	-0.002
18061	SLU 73	-0.84	15.25	37.33	-7.0227	-0.0954	-0.0018
18061	SLU 74	-0.87	12.21	42.52	-7.0644	-0.0976	-0.002
18061	SLU 75	-0.87	13.81	42.54	-7.0775	-0.0973	-0.002
18061	SLU 76	-0.84	14.96	43.28	-7.0262	-0.0953	-0.002
18061	SLU 77	-0.87	11.92	48.47	-7.0678	-0.0976	-0.0021
18061	SLU 78	-0.87	13.52	48.49	-7.0809	-0.0973	-0.0021
18061	SLU 79	-0.85	12.01	49.2	-7.0077	-0.0957	-0.0021
18061	SLU 80	-0.84	13.61	49.22	-7.0209	-0.0954	-0.0021
18061	SLU 81	-0.91	12.8	38.31	-7.2692	-0.1016	-0.0019
18061	SLU 82	-0.91	14.4	38.32	-7.2823	-0.1013	-0.0019
18061	SLU 83	-0.92	12.51	44.26	-7.2726	-0.1015	-0.002
18061	SLU 84	-0.92	14.11	44.27	-7.2857	-0.1012	-0.002
18061	SLE RA 1	-0.5	9.36	25.68	-4.7845	-0.0616	-0.0013
18061	SLE RA 2	-0.5	11.14	25.7	-4.7991	-0.0613	-0.0013
18061	SLE RA 3	-0.52	9.11	29.16	-4.8269	-0.0628	-0.0014
18061	SLE RA 4	-0.52	10.17	29.17	-4.8356	-0.0626	-0.0014
18061	SLE RA 5	-0.5	10.95	29.66	-4.8014	-0.0612	-0.0014
18061	SLE RA 6	-0.52	8.92	33.13	-4.8292	-0.0628	-0.0015
18061	SLE RA 7	-0.52	9.98	33.13	-4.8379	-0.0625	-0.0015
18061	SLE RA 8	-0.5	8.98	33.61	-4.7891	-0.0615	-0.0015
18061	SLE RA 9	-0.5	10.04	33.62	-4.7979	-0.0613	-0.0015
18061	SLE RA 10	-0.61	11.47	27.26	-5.2165	-0.0701	-0.0014
18061	SLE RA 11	-0.63	9.44	30.72	-5.2442	-0.0717	-0.0015
18061	SLE RA 12	-0.63	10.51	30.73	-5.253	-0.0715	-0.0015
18061	SLE RA 13	-0.61	11.28	31.22	-5.2188	-0.0701	-0.0015
18061	SLE RA 14	-0.63	9.25	34.68	-5.2465	-0.0716	-0.0015
18061	SLE RA 15	-0.63	10.32	34.69	-5.2553	-0.0714	-0.0015
18061	SLE RA 16	-0.61	9.31	35.17	-5.2065	-0.0704	-0.0016
18061	SLE RA 17	-0.61	10.38	35.18	-5.2152	-0.0702	-0.0016
18061	SLE RA 18	-0.66	9.83	27.91	-5.3808	-0.0743	-0.0014
18061	SLE RA 19	-0.66	10.9	27.92	-5.3895	-0.0741	-0.0014
18061	SLE RA 20	-0.66	9.64	31.87	-5.3831	-0.0742	-0.0015
18061	SLE RA 21	-0.66	10.71	31.88	-5.3918	-0.074	-0.0015
18061	SLE FR 1	-0.5	9.36	25.68	-4.7845	-0.0616	-0.0013
18061	SLE FR 2	-0.5	9.71	25.68	-4.7875	-0.0616	-0.0013
18061	SLE FR 3	-0.5	9.28	27.27	-4.7855	-0.0616	-0.0013
18061	SLE FR 4	-0.55	9.86	26.35	-4.9663	-0.0654	-0.0013
18061	SLE FR 5	-0.55	9.43	27.93	-4.9643	-0.0654	-0.0014
18061	SLE FR 6	-0.58	9.6	26.79	-5.0827	-0.068	-0.0013
18061	SLE QP 1	-0.5	9.36	25.68	-4.7845	-0.0616	-0.0013
18061	SLE QP 2	-0.55	9.5	26.35	-4.9634	-0.0654	-0.0013
18061	SLD 1	21.3	19.05	25.34	-4.7924	1.085	-0.0137
18061	SLD 2	21.36	37.52	25.38	-4.9312	1.0882	-0.0127
18061	SLD 3	21.79	-9.19	26.05	-4.5666	1.1135	-0.0141
18061	SLD 4	21.86	9.28	26.08	-4.7054	1.1167	-0.0131
18061	SLD 5	5.25	51.97	24.97	-5.2304	0.2359	-0.0047
18061	SLD 6	5.29	63.95	24.99	-5.3204	0.238	-0.0041
18061	SLD 7	6.89	-42.15	27.33	-4.4777	0.3309	-0.0058
18061	SLD 8	6.93	-30.17	27.35	-4.5678	0.333	-0.0052
18061	SLD 9	-8.03	49.17	25.35	-5.3591	-0.4639	0.0025
18061	SLD 10	-7.99	61.16	25.37	-5.4491	-0.4617	0.0032
18061	SLD 11	-6.39	-44.95	27.71	-4.6064	-0.3689	0.0014
18061	SLD 12	-6.35	-32.97	27.73	-4.6965	-0.3668	0.0021
18061	SLD 13	-22.95	9.72	26.62	-5.2214	-1.2476	0.0104
18061	SLD 14	-22.89	28.19	26.65	-5.3602	-1.2443	0.0114
18061	SLD 15	-22.46	-18.52	27.32	-4.9956	-1.2191	0.0101
18061	SLD 16	-22.4	-0.05	27.36	-5.1344	-1.2158	0.0111
18061	SLV 1	50.58	31.61	24	-4.5625	2.6267	-0.0304
18061	SLV 2	50.73	74.63	24.08	-4.8858	2.6343	-0.028
18061	SLV 3	51.73	-33.73	25.64	-4.0368	2.6926	-0.0311
18061	SLV 4	51.88	9.3	25.72	-4.3601	2.7002	-0.0288
18061	SLV 5	13.02	107.93	23.14	-5.5858	0.6409	-0.0093
18061	SLV 6	13.12	135.41	23.19	-5.7922	0.6458	-0.0078
18061	SLV 7	16.85	-109.84	28.61	-3.8333	0.8606	-0.0118
18061	SLV 8	16.94	-82.36	28.66	-4.0398	0.8655	-0.0103
18061	SLV 9	-18.04	101.36	24.04	-5.887	-0.9964	0.0076
18061	SLV 10	-17.95	128.84	24.09	-6.0935	-0.9915	0.0091
18061	SLV 11	-14.21	-116.41	29.5	-4.1346	-0.7767	0.0052
18061	SLV 12	-14.12	-88.93	29.55	-4.3411	-0.7718	0.0066
18061	SLV 13	-52.97	9.7	26.98	-5.5668	-2.8311	0.0261

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18061	SLV 14	-52.83	52.73	27.06	-5.89	-2.8234	0.0285
18061	SLV 15	-51.82	-55.63	28.62	-5.041	-2.7652	0.0254
18061	SLV 16	-51.68	-12.6	28.7	-5.3643	-2.7575	0.0277
18061	CRTFP Ux+	0	0	0	0	0	0
18061	CRTFP Ux-	0	0	0	0	0	0
18061	CRTFP Uy+	0	0	0	0	0	0
18061	CRTFP Uy-	0	0	0	0	0	0
18062	SLU 1	-0.17	9.14	20.02	-4.8727	0.028	0.0008
18062	SLU 2	-0.17	11.76	20.33	-4.8814	0.0296	0.0008
18062	SLU 3	-0.16	8.8	24.45	-4.9549	0.0389	0.0009
18062	SLU 4	-0.15	10.38	24.64	-4.9601	0.0399	0.0009
18062	SLU 5	-0.12	11.51	25.42	-4.9003	0.0437	0.001
18062	SLU 6	-0.11	8.56	29.55	-4.9738	0.053	0.0011
18062	SLU 7	-0.11	10.13	29.73	-4.979	0.054	0.0011
18062	SLU 8	-0.08	8.65	30.21	-4.9106	0.0562	0.0011
18062	SLU 9	-0.07	10.22	30.4	-4.9158	0.0572	0.0011
18062	SLU 10	-0.3	12.13	22.09	-5.532	0.0265	0.001
18062	SLU 11	-0.29	9.17	26.21	-5.6055	0.0358	0.0011
18062	SLU 12	-0.28	10.74	26.4	-5.6107	0.0368	0.0011
18062	SLU 13	-0.25	11.88	27.19	-5.551	0.0406	0.0011
18062	SLU 14	-0.24	8.92	31.31	-5.6245	0.0499	0.0012
18062	SLU 15	-0.24	10.5	31.5	-5.6296	0.0509	0.0012
18062	SLU 16	-0.21	9.01	31.97	-5.5612	0.0531	0.0012
18062	SLU 17	-0.2	10.59	32.16	-5.5664	0.0541	0.0012
18062	SLU 18	-0.36	9.66	22.53	-5.8022	0.0235	0.001
18062	SLU 19	-0.35	11.24	22.72	-5.8074	0.0245	0.001
18062	SLU 20	-0.31	9.42	27.63	-5.8211	0.0376	0.0011
18062	SLU 21	-0.31	10.99	27.82	-5.8263	0.0386	0.0011
18062	SLU 22	-0.2	8.88	24.6	-5.4699	0.0362	0.001
18062	SLU 23	-0.2	11.5	24.91	-5.4785	0.0378	0.001
18062	SLU 24	-0.19	8.55	29.03	-5.552	0.0471	0.0011
18062	SLU 25	-0.18	10.12	29.22	-5.5572	0.0481	0.0011
18062	SLU 26	-0.15	11.26	30.01	-5.4974	0.052	0.0011
18062	SLU 27	-0.14	8.3	34.13	-5.5709	0.0612	0.0012
18062	SLU 28	-0.14	9.88	34.32	-5.5761	0.0622	0.0012
18062	SLU 29	-0.11	8.39	34.79	-5.5077	0.0644	0.0012
18062	SLU 30	-0.11	9.96	34.98	-5.5129	0.0654	0.0012
18062	SLU 31	-0.33	11.87	26.67	-6.1292	0.0347	0.0011
18062	SLU 32	-0.32	8.92	30.79	-6.2027	0.044	0.0012
18062	SLU 33	-0.31	10.49	30.98	-6.2079	0.045	0.0013
18062	SLU 34	-0.28	11.63	31.77	-6.1481	0.0488	0.0013
18062	SLU 35	-0.27	8.67	35.89	-6.2216	0.0581	0.0014
18062	SLU 36	-0.27	10.24	36.08	-6.2268	0.0591	0.0014
18062	SLU 37	-0.24	8.76	36.56	-6.1583	0.0613	0.0014
18062	SLU 38	-0.24	10.33	36.74	-6.1635	0.0623	0.0014
18062	SLU 39	-0.39	9.41	27.11	-6.3994	0.0317	0.0012
18062	SLU 40	-0.38	10.98	27.3	-6.4046	0.0327	0.0012
18062	SLU 41	-0.34	9.16	32.21	-6.4183	0.0459	0.0013
18062	SLU 42	-0.34	10.74	32.4	-6.4235	0.0468	0.0013
18062	SLU 43	-0.21	11.97	24.45	-6.1298	0.0335	0.001
18062	SLU 44	-0.21	14.59	24.76	-6.1385	0.0352	0.001
18062	SLU 45	-0.2	11.63	28.89	-6.212	0.0445	0.0011
18062	SLU 46	-0.19	13.2	29.07	-6.2172	0.0454	0.0011
18062	SLU 47	-0.16	14.34	29.86	-6.1574	0.0493	0.0011
18062	SLU 48	-0.15	11.39	33.98	-6.2309	0.0586	0.0012
18062	SLU 49	-0.15	12.96	34.17	-6.2361	0.0596	0.0013
18062	SLU 50	-0.12	11.48	34.65	-6.1677	0.0618	0.0012
18062	SLU 51	-0.11	13.05	34.83	-6.1729	0.0628	0.0013
18062	SLU 52	-0.34	14.96	26.52	-6.7891	0.0321	0.0012
18062	SLU 53	-0.33	12	30.65	-6.8626	0.0413	0.0013
18062	SLU 54	-0.32	13.57	30.83	-6.8678	0.0423	0.0013
18062	SLU 55	-0.29	14.71	31.62	-6.808	0.0462	0.0013
18062	SLU 56	-0.28	11.75	35.74	-6.8815	0.0555	0.0014
18062	SLU 57	-0.28	13.33	35.93	-6.8867	0.0564	0.0014
18062	SLU 58	-0.25	11.84	36.41	-6.8183	0.0586	0.0014
18062	SLU 59	-0.24	13.42	36.59	-6.8235	0.0596	0.0014
18062	SLU 60	-0.4	12.49	26.97	-7.0593	0.0291	0.0012
18062	SLU 61	-0.39	14.06	27.15	-7.0645	0.0301	0.0012
18062	SLU 62	-0.35	12.25	32.07	-7.0782	0.0432	0.0013
18062	SLU 63	-0.35	13.82	32.25	-7.0834	0.0442	0.0013
18062	SLU 64	-0.24	11.71	29.03	-6.727	0.0418	0.0012
18062	SLU 65	-0.24	14.33	29.34	-6.7356	0.0434	0.0012
18062	SLU 66	-0.23	11.38	33.47	-6.8091	0.0527	0.0013
18062	SLU 67	-0.22	12.95	33.65	-6.8143	0.0537	0.0013
18062	SLU 68	-0.19	14.09	34.44	-6.7545	0.0575	0.0013
18062	SLU 69	-0.18	11.13	38.56	-6.828	0.0668	0.0014
18062	SLU 70	-0.18	12.7	38.75	-6.8332	0.0678	0.0014
18062	SLU 71	-0.15	11.22	39.23	-6.7648	0.07	0.0014
18062	SLU 72	-0.15	12.79	39.41	-6.77	0.071	0.0014
18062	SLU 73	-0.37	14.7	31.1	-7.3863	0.0403	0.0013
18062	SLU 74	-0.36	11.74	35.23	-7.4598	0.0496	0.0014
18062	SLU 75	-0.35	13.32	35.41	-7.465	0.0506	0.0014
18062	SLU 76	-0.32	14.46	36.2	-7.4052	0.0544	0.0015
18062	SLU 77	-0.31	11.5	40.33	-7.4787	0.0637	0.0015
18062	SLU 78	-0.31	13.07	40.51	-7.4839	0.0647	0.0016
18062	SLU 79	-0.28	11.59	40.99	-7.4154	0.0669	0.0015
18062	SLU 80	-0.28	13.16	41.18	-7.4206	0.0679	0.0016
18062	SLU 81	-0.43	12.24	31.55	-7.6565	0.0373	0.0014
18062	SLU 82	-0.42	13.81	31.74	-7.6616	0.0383	0.0014
18062	SLU 83	-0.38	11.99	36.65	-7.6754	0.0514	0.0015
18062	SLU 84	-0.38	13.56	36.83	-7.6806	0.0524	0.0015

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18062	SLE RA 1	-0.18	9.07	21.33	-5.0434	0.0303	0.0009
18062	SLE RA 2	-0.18	10.81	21.53	-5.0491	0.0314	0.0009
18062	SLE RA 3	-0.17	8.84	24.28	-5.0981	0.0376	0.0009
18062	SLE RA 4	-0.17	9.89	24.41	-5.1016	0.0383	0.0009
18062	SLE RA 5	-0.14	10.65	24.93	-5.0617	0.0408	0.001
18062	SLE RA 6	-0.14	8.68	27.68	-5.1107	0.047	0.001
18062	SLE RA 7	-0.14	9.73	27.8	-5.1142	0.0477	0.001
18062	SLE RA 8	-0.12	8.74	28.12	-5.0686	0.0491	0.001
18062	SLE RA 9	-0.11	9.79	28.25	-5.072	0.0498	0.001
18062	SLE RA 10	-0.26	11.06	22.71	-5.4829	0.0293	0.001
18062	SLE RA 11	-0.26	9.09	25.46	-5.5319	0.0355	0.001
18062	SLE RA 12	-0.25	10.14	25.58	-5.5353	0.0362	0.001
18062	SLE RA 13	-0.23	10.89	26.11	-5.4955	0.0387	0.001
18062	SLE RA 14	-0.22	8.92	28.85	-5.5445	0.0449	0.0011
18062	SLE RA 15	-0.22	9.97	28.98	-5.548	0.0456	0.0011
18062	SLE RA 16	-0.2	8.98	29.3	-5.5023	0.0471	0.0011
18062	SLE RA 17	-0.2	10.03	29.42	-5.5058	0.0477	0.0011
18062	SLE RA 18	-0.3	9.41	23	-5.663	0.0273	0.001
18062	SLE RA 19	-0.3	10.46	23.13	-5.6665	0.028	0.001
18062	SLE RA 20	-0.27	9.25	26.4	-5.6756	0.0368	0.0011
18062	SLE RA 21	-0.27	10.3	26.53	-5.6791	0.0374	0.0011
18062	SLE FR 1	-0.18	9.07	21.33	-5.0434	0.0303	0.0009
18062	SLE FR 2	-0.18	9.41	21.37	-5.0445	0.0305	0.0009
18062	SLE FR 3	-0.17	9	22.69	-5.0484	0.0341	0.0009
18062	SLE FR 4	-0.22	9.52	21.87	-5.2304	0.0296	0.0009
18062	SLE FR 5	-0.2	9.1	23.19	-5.2343	0.0332	0.0009
18062	SLE FR 6	-0.24	9.24	22.17	-5.3532	0.0288	0.0009
18062	SLE QP 1	-0.18	9.07	21.33	-5.0434	0.0303	0.0009
18062	SLE QP 2	-0.22	9.17	21.83	-5.2293	0.0294	0.0009
18062	SLD 1	21.6	14.12	20.32	-4.835	1.205	-0.0116
18062	SLD 2	21.66	42.62	20.4	-5.0478	1.2083	-0.0106
18062	SLD 3	22.09	-13.87	21.09	-4.6359	1.1763	-0.0119
18062	SLD 4	22.16	14.62	21.17	-4.8487	1.1796	-0.0109
18062	SLD 5	5.57	48.14	20.19	-5.3758	0.425	-0.0025
18062	SLD 6	5.61	66.63	20.25	-5.5139	0.4272	-0.0019
18062	SLD 7	7.21	-45.17	22.76	-4.7122	0.3294	-0.0036
18062	SLD 8	7.25	-26.68	22.81	-4.8503	0.3315	-0.003
18062	SLD 9	-7.68	45.02	20.85	-5.6082	-0.2727	0.0048
18062	SLD 10	-7.64	63.51	20.9	-5.7463	-0.2705	0.0054
18062	SLD 11	-6.04	-48.29	23.41	-4.9446	-0.3683	0.0037
18062	SLD 12	-6	-29.8	23.46	-5.0827	-0.3662	0.0043
18062	SLD 13	-22.59	3.72	22.49	-5.6098	-1.1207	0.0127
18062	SLD 14	-22.53	32.21	22.57	-5.8226	-1.1174	0.0137
18062	SLD 15	-22.1	-24.28	23.26	-5.4107	-1.1494	0.0124
18062	SLD 16	-22.03	4.22	23.34	-5.6235	-1.1461	0.0134
18062	SLV 1	50.84	20.56	18.3	-4.3068	2.7797	-0.0283
18062	SLV 2	50.98	86.94	18.49	-4.8026	2.7873	-0.026
18062	SLV 3	51.99	-44.15	20.09	-3.8425	2.7133	-0.0291
18062	SLV 4	52.13	22.23	20.28	-4.3382	2.7209	-0.0267
18062	SLV 5	13.33	99.49	18.02	-5.5729	0.9539	-0.0071
18062	SLV 6	13.43	141.89	18.14	-5.8895	0.9588	-0.0056
18062	SLV 7	17.16	-116.21	24	-4.025	0.7326	-0.0096
18062	SLV 8	17.26	-73.82	24.11	-4.3415	0.7375	-0.0082
18062	SLV 9	-17.69	92.16	19.55	-6.117	-0.6786	0.0099
18062	SLV 10	-17.59	134.55	19.66	-6.4335	-0.6737	0.0114
18062	SLV 11	-13.86	-123.55	25.52	-4.569	-0.8999	0.0074
18062	SLV 12	-13.76	-81.15	25.64	-4.8856	-0.895	0.0089
18062	SLV 13	-52.57	-3.89	23.38	-6.1203	-2.6621	0.0285
18062	SLV 14	-52.42	62.49	23.56	-6.616	-2.6544	0.0308
18062	SLV 15	-51.42	-68.6	25.17	-5.6559	-2.7285	0.0278
18062	SLV 16	-51.27	-2.22	25.36	-6.1517	-2.7208	0.0301
18062	CRTFP Ux+	0	0	0	0	0	0
18062	CRTFP Ux-	0	0	0	0	0	0
18062	CRTFP Uy+	0	0	0	0	0	0
18062	CRTFP Uy-	0	0	0	0	0	0
18183	SLU 1	0.28	73.82	808.48	-12.282	0.2913	-0.022
18183	SLU 2	0.27	77.03	809.14	-12.2925	0.2912	-0.0221
18183	SLU 3	0.25	75.64	832.57	-12.64	0.2961	-0.0236
18183	SLU 4	0.25	77.57	832.97	-12.6462	0.296	-0.0237
18183	SLU 5	0.29	78.26	822.85	-12.4941	0.2939	-0.0221
18183	SLU 6	0.27	76.87	846.28	-12.8416	0.2988	-0.0236
18183	SLU 7	0.26	78.8	846.68	-12.8479	0.2988	-0.0236
18183	SLU 8	0.31	76.28	835.9	-12.6853	0.2968	-0.022
18183	SLU 9	0.3	78.21	836.3	-12.6916	0.2967	-0.022
18183	SLU 10	0.12	86.5	918.68	-13.9609	0.3241	-0.0313
18183	SLU 11	0.1	85.11	942.1	-14.3084	0.329	-0.0328
18183	SLU 12	0.1	87.04	942.5	-14.3146	0.329	-0.0329
18183	SLU 13	0.14	87.73	932.39	-14.1625	0.3269	-0.0313
18183	SLU 14	0.12	86.34	955.81	-14.51	0.3318	-0.0328
18183	SLU 15	0.11	88.27	956.21	-14.5163	0.3317	-0.0329
18183	SLU 16	0.15	85.74	945.44	-14.3537	0.3297	-0.0312
18183	SLU 17	0.15	87.67	945.83	-14.36	0.3297	-0.0312
18183	SLU 18	0.06	87.34	964.96	-14.6655	0.3384	-0.0352
18183	SLU 19	0.06	89.27	965.36	-14.6718	0.3383	-0.0353
18183	SLU 20	0.07	88.57	978.67	-14.8671	0.3411	-0.0352
18183	SLU 21	0.07	90.5	979.07	-14.8734	0.341	-0.0352
18183	SLU 22	0.26	82.35	918.19	-13.9366	0.3267	-0.0266
18183	SLU 23	0.26	85.57	918.85	-13.947	0.3266	-0.0267
18183	SLU 24	0.24	84.18	942.28	-14.2945	0.3315	-0.0282
18183	SLU 25	0.23	86.11	942.68	-14.3008	0.3314	-0.0283
18183	SLU 26	0.27	86.8	932.56	-14.1487	0.3293	-0.0267

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18183	SLU 27	0.25	85.41	955.99	-14.4962	0.3342	-0.0282
18183	SLU 28	0.25	87.34	956.39	-14.5024	0.3341	-0.0282
18183	SLU 29	0.29	84.81	945.61	-14.3399	0.3322	-0.0266
18183	SLU 30	0.29	86.74	946.01	-14.3461	0.3321	-0.0266
18183	SLU 31	0.11	95.03	1028.39	-15.6154	0.3595	-0.036
18183	SLU 32	0.08	93.65	1051.81	-15.9629	0.3644	-0.0375
18183	SLU 33	0.08	95.57	1052.21	-15.9692	0.3643	-0.0375
18183	SLU 34	0.12	96.26	1042.1	-15.8171	0.3623	-0.0359
18183	SLU 35	0.1	94.87	1065.52	-16.1646	0.3671	-0.0374
18183	SLU 36	0.1	96.8	1065.92	-16.1708	0.3671	-0.0375
18183	SLU 37	0.14	94.28	1055.15	-16.0083	0.3651	-0.0358
18183	SLU 38	0.14	96.21	1055.54	-16.0145	0.365	-0.0359
18183	SLU 39	0.04	95.88	1074.67	-16.32	0.3738	-0.0398
18183	SLU 40	0.04	97.81	1075.07	-16.3263	0.3737	-0.0399
18183	SLU 41	0.06	97.11	1088.38	-16.5217	0.3765	-0.0398
18183	SLU 42	0.06	99.03	1088.78	-16.5279	0.3764	-0.0399
18183	SLU 43	0.36	93.04	1013.41	-15.3994	0.3666	-0.027
18183	SLU 44	0.36	96.25	1014.07	-15.4098	0.3665	-0.0271
18183	SLU 45	0.34	94.86	1037.5	-15.7573	0.3714	-0.0286
18183	SLU 46	0.34	96.79	1037.9	-15.7636	0.3713	-0.0287
18183	SLU 47	0.38	97.48	1027.78	-15.6114	0.3692	-0.0271
18183	SLU 48	0.35	96.09	1051.21	-15.9589	0.3741	-0.0286
18183	SLU 49	0.35	98.02	1051.61	-15.9652	0.374	-0.0286
18183	SLU 50	0.39	95.5	1040.83	-15.8026	0.3721	-0.027
18183	SLU 51	0.39	97.43	1041.23	-15.8089	0.372	-0.027
18183	SLU 52	0.21	105.72	1123.61	-17.0782	0.3994	-0.0364
18183	SLU 53	0.19	104.33	1147.03	-17.4257	0.4043	-0.0379
18183	SLU 54	0.19	106.26	1147.43	-17.432	0.4042	-0.0379
18183	SLU 55	0.22	106.95	1137.32	-17.2799	0.4022	-0.0363
18183	SLU 56	0.2	105.56	1160.74	-17.6274	0.407	-0.0378
18183	SLU 57	0.2	107.49	1161.14	-17.6336	0.407	-0.0379
18183	SLU 58	0.24	104.96	1150.37	-17.4711	0.405	-0.0362
18183	SLU 59	0.24	106.89	1150.76	-17.4773	0.4049	-0.0363
18183	SLU 60	0.15	106.56	1169.89	-17.7828	0.4137	-0.0402
18183	SLU 61	0.15	108.49	1170.29	-17.7891	0.4136	-0.0403
18183	SLU 62	0.16	107.79	1183.6	-17.9845	0.4164	-0.0402
18183	SLU 63	0.16	109.72	1184	-17.9907	0.4163	-0.0402
18183	SLU 64	0.35	101.57	1123.12	-17.0539	0.402	-0.0317
18183	SLU 65	0.34	104.79	1123.78	-17.0644	0.4019	-0.0317
18183	SLU 66	0.32	103.4	1147.21	-17.4119	0.4067	-0.0332
18183	SLU 67	0.32	105.33	1147.61	-17.4181	0.4067	-0.0333
18183	SLU 68	0.36	106.02	1137.49	-17.266	0.4046	-0.0317
18183	SLU 69	0.34	104.63	1160.92	-17.6135	0.4095	-0.0332
18183	SLU 70	0.34	106.56	1161.32	-17.6198	0.4094	-0.0333
18183	SLU 71	0.38	104.03	1150.54	-17.4572	0.4075	-0.0316
18183	SLU 72	0.38	105.96	1150.94	-17.4635	0.4074	-0.0316
18183	SLU 73	0.19	114.25	1233.32	-18.7328	0.4348	-0.041
18183	SLU 74	0.17	112.87	1256.74	-19.0803	0.4397	-0.0425
18183	SLU 75	0.17	114.79	1257.14	-19.0865	0.4396	-0.0425
18183	SLU 76	0.21	115.48	1247.03	-18.9344	0.4375	-0.0409
18183	SLU 77	0.19	114.09	1270.45	-19.2819	0.4424	-0.0425
18183	SLU 78	0.19	116.02	1270.85	-19.2882	0.4423	-0.0425
18183	SLU 79	0.23	113.5	1260.08	-19.1256	0.4404	-0.0408
18183	SLU 80	0.22	115.43	1260.47	-19.1319	0.4403	-0.0409
18183	SLU 81	0.13	115.1	1279.6	-19.4374	0.449	-0.0449
18183	SLU 82	0.13	117.02	1280	-19.4436	0.449	-0.0449
18183	SLU 83	0.15	116.33	1293.31	-19.639	0.4518	-0.0448
18183	SLU 84	0.14	118.25	1293.71	-19.6453	0.4517	-0.0449
18183	SLE RA 1	0.27	76.26	839.83	-12.7548	0.3014	-0.0233
18183	SLE RA 2	0.27	78.4	840.27	-12.7617	0.3014	-0.0234
18183	SLE RA 3	0.26	77.47	855.89	-12.9934	0.3046	-0.0244
18183	SLE RA 4	0.25	78.76	856.15	-12.9976	0.3046	-0.0244
18183	SLE RA 5	0.28	79.22	849.41	-12.8961	0.3032	-0.0234
18183	SLE RA 6	0.26	78.29	865.03	-13.1278	0.3064	-0.0244
18183	SLE RA 7	0.26	79.58	865.29	-13.132	0.3064	-0.0244
18183	SLE RA 8	0.29	77.9	858.11	-13.0236	0.3051	-0.0233
18183	SLE RA 9	0.29	79.18	858.37	-13.0278	0.305	-0.0233
18183	SLE RA 10	0.17	84.71	913.29	-13.874	0.3233	-0.0295
18183	SLE RA 11	0.15	83.79	928.91	-14.1057	0.3266	-0.0306
18183	SLE RA 12	0.15	85.07	929.17	-14.1098	0.3265	-0.0306
18183	SLE RA 13	0.18	85.53	922.43	-14.0084	0.3251	-0.0295
18183	SLE RA 14	0.16	84.6	938.05	-14.2401	0.3284	-0.0305
18183	SLE RA 15	0.16	85.89	938.31	-14.2443	0.3283	-0.0306
18183	SLE RA 16	0.19	84.21	931.13	-14.1359	0.327	-0.0295
18183	SLE RA 17	0.19	85.49	931.4	-14.1401	0.327	-0.0295
18183	SLE RA 18	0.13	85.27	944.15	-14.3437	0.3328	-0.0321
18183	SLE RA 19	0.13	86.56	944.41	-14.3479	0.3328	-0.0322
18183	SLE RA 20	0.14	86.09	953.29	-14.4782	0.3346	-0.0321
18183	SLE RA 21	0.14	87.38	953.55	-14.4823	0.3346	-0.0321
18183	SLE FR 1	0.27	76.26	839.83	-12.7548	0.3014	-0.0233
18183	SLE FR 2	0.27	76.69	839.92	-12.7562	0.3014	-0.0233
18183	SLE FR 3	0.27	76.59	843.49	-12.8085	0.3022	-0.0233
18183	SLE FR 4	0.23	79.39	871.21	-13.2329	0.3108	-0.026
18183	SLE FR 5	0.23	79.29	874.78	-13.2852	0.3116	-0.026
18183	SLE FR 6	0.2	80.77	891.99	-13.5493	0.3171	-0.0277
18183	SLE QP 1	0.27	76.26	839.83	-12.7548	0.3014	-0.0233
18183	SLE QP 2	0.23	78.96	871.13	-13.2315	0.3109	-0.026
18183	SLD 1	39.87	132.96	990.57	-15.3679	1.5631	1.3078
18183	SLD 2	39.86	83.18	989.93	-15.0327	1.5626	1.3087
18183	SLD 3	40.77	95.04	984.61	-14.8658	1.5912	1.3382
18183	SLD 4	40.76	45.26	983.97	-14.5306	1.5908	1.3391

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18183	SLD 5	10.76	161.37	916.11	-14.6924	0.6439	0.328
18183	SLD 6	10.75	129.06	915.69	-14.4748	0.6436	0.3285
18183	SLD 7	13.75	34.96	896.24	-13.0187	0.7377	0.4292
18183	SLD 8	13.75	2.65	895.82	-12.8012	0.7375	0.4297
18183	SLD 9	-13.29	155.28	846.43	-13.6617	-0.1157	-0.4817
18183	SLD 10	-13.3	122.97	846.01	-13.4442	-0.116	-0.4811
18183	SLD 11	-10.3	28.87	826.56	-11.9881	-0.0219	-0.3805
18183	SLD 12	-10.31	-3.44	826.14	-11.7705	-0.0222	-0.3799
18183	SLD 13	-40.3	112.67	758.28	-11.9323	-0.9691	-1.391
18183	SLD 14	-40.31	62.88	757.64	-11.5971	-0.9695	-1.3901
18183	SLD 15	-39.41	74.74	752.32	-11.4303	-0.9409	-1.3607
18183	SLD 16	-39.42	24.96	751.68	-11.0951	-0.9414	-1.3598
18183	SLV 1	93	204.93	1150.62	-18.2286	3.2412	3.0952
18183	SLV 2	92.97	88.95	1149.12	-17.4477	3.2401	3.0973
18183	SLV 3	95.1	116.76	1136.7	-17.0548	3.3068	3.1661
18183	SLV 4	95.07	0.78	1135.2	-16.2739	3.3058	3.1682
18183	SLV 5	24.88	270.12	976.34	-16.6431	1.0906	0.8024
18183	SLV 6	24.87	196.06	975.38	-16.1444	1.0899	0.8037
18183	SLV 7	31.87	-23.8	929.94	-12.7304	1.3094	1.0389
18183	SLV 8	31.86	-97.86	928.98	-12.2317	1.3087	1.0403
18183	SLV 9	-31.4	255.79	813.27	-14.2313	-0.687	-1.0922
18183	SLV 10	-31.42	181.72	812.31	-13.7325	-0.6876	-1.0909
18183	SLV 11	-24.41	-38.13	766.87	-10.3185	-0.4682	-0.8557
18183	SLV 12	-24.43	-112.2	765.91	-9.8198	-0.4689	-0.8543
18183	SLV 13	-94.61	157.15	607.05	-10.189	-2.6841	-3.2202
18183	SLV 14	-94.64	41.17	605.55	-9.4081	-2.6851	-3.2181
18183	SLV 15	-92.52	68.97	593.13	-9.0152	-2.6184	-3.1492
18183	SLV 16	-92.54	-47.01	591.63	-8.2343	-2.6195	-3.1471
18183	CRTFP Ux+	0	0	0	0	0	0
18183	CRTFP Ux-	0	0	0	0	0	0
18183	CRTFP Uy+	0	0	0	0	0	0
18183	CRTFP Uy-	0	0	0	0	0	0
18184	SLU 1	-1.23	-41.32	44.59	0.6892	-0.336	-0.0167
18184	SLU 2	-1.23	-38.47	44.6	0.6883	-0.336	-0.0168
18184	SLU 3	-1.33	-42.06	47.74	0.6943	-0.3615	-0.0179
18184	SLU 4	-1.33	-40.35	47.74	0.6938	-0.3615	-0.0179
18184	SLU 5	-1.29	-38.04	47.59	0.678	-0.3596	-0.0164
18184	SLU 6	-1.38	-41.62	50.74	0.684	-0.3851	-0.0175
18184	SLU 7	-1.38	-39.92	50.74	0.6835	-0.3851	-0.0176
18184	SLU 8	-1.34	-40.45	50.59	0.6686	-0.3832	-0.0159
18184	SLU 9	-1.34	-38.74	50.59	0.668	-0.3832	-0.016
18184	SLU 10	-1.54	-45.37	50.23	0.7937	-0.3843	-0.0252
18184	SLU 11	-1.63	-48.96	53.38	0.7997	-0.4098	-0.0264
18184	SLU 12	-1.63	-47.25	53.38	0.7992	-0.4098	-0.0264
18184	SLU 13	-1.59	-44.94	53.23	0.7834	-0.4079	-0.0249
18184	SLU 14	-1.69	-48.52	56.37	0.7894	-0.4334	-0.026
18184	SLU 15	-1.69	-46.82	56.38	0.7889	-0.4334	-0.0261
18184	SLU 16	-1.65	-47.35	56.22	0.774	-0.4315	-0.0244
18184	SLU 17	-1.65	-45.64	56.22	0.7735	-0.4315	-0.0245
18184	SLU 18	-1.67	-51.18	52.64	0.8398	-0.405	-0.0288
18184	SLU 19	-1.67	-49.47	52.64	0.8393	-0.405	-0.0288
18184	SLU 20	-1.72	-50.74	55.64	0.8295	-0.4286	-0.0284
18184	SLU 21	-1.72	-49.03	55.64	0.829	-0.4286	-0.0285
18184	SLU 22	-1.46	-48.06	51.41	0.7792	-0.392	-0.0204
18184	SLU 23	-1.46	-45.21	51.41	0.7783	-0.392	-0.0205
18184	SLU 24	-1.55	-48.8	54.56	0.7844	-0.4175	-0.0217
18184	SLU 25	-1.55	-47.09	54.56	0.7838	-0.4175	-0.0217
18184	SLU 26	-1.52	-44.78	54.41	0.768	-0.4156	-0.0201
18184	SLU 27	-1.61	-48.36	57.55	0.7741	-0.4411	-0.0213
18184	SLU 28	-1.61	-46.66	57.55	0.7735	-0.4411	-0.0213
18184	SLU 29	-1.57	-47.19	57.4	0.7586	-0.4392	-0.0197
18184	SLU 30	-1.57	-45.48	57.4	0.7581	-0.4392	-0.0197
18184	SLU 31	-1.77	-52.11	57.04	0.8838	-0.4403	-0.029
18184	SLU 32	-1.86	-55.7	60.19	0.8898	-0.4658	-0.0301
18184	SLU 33	-1.86	-53.99	60.19	0.8893	-0.4658	-0.0302
18184	SLU 34	-1.82	-51.68	60.04	0.8735	-0.4639	-0.0286
18184	SLU 35	-1.91	-55.26	63.19	0.8795	-0.4894	-0.0298
18184	SLU 36	-1.91	-53.56	63.19	0.879	-0.4894	-0.0298
18184	SLU 37	-1.87	-54.09	63.04	0.8641	-0.4875	-0.0282
18184	SLU 38	-1.88	-52.38	63.04	0.8635	-0.4875	-0.0282
18184	SLU 39	-1.9	-57.92	59.46	0.9299	-0.461	-0.0326
18184	SLU 40	-1.9	-56.21	59.46	0.9293	-0.461	-0.0326
18184	SLU 41	-1.95	-57.48	62.45	0.9196	-0.4846	-0.0322
18184	SLU 42	-1.95	-55.77	62.45	0.919	-0.4846	-0.0322
18184	SLU 43	-1.53	-51.4	55.64	0.8651	-0.4176	-0.0204
18184	SLU 44	-1.53	-48.56	55.64	0.8642	-0.4176	-0.0205
18184	SLU 45	-1.62	-52.14	58.78	0.8702	-0.4431	-0.0216
18184	SLU 46	-1.62	-50.44	58.79	0.8696	-0.4431	-0.0216
18184	SLU 47	-1.58	-48.12	58.64	0.8538	-0.4412	-0.0201
18184	SLU 48	-1.67	-51.71	61.78	0.8599	-0.4667	-0.0212
18184	SLU 49	-1.67	-50	61.78	0.8593	-0.4667	-0.0213
18184	SLU 50	-1.63	-50.54	61.63	0.8444	-0.4648	-0.0196
18184	SLU 51	-1.64	-48.83	61.63	0.8439	-0.4648	-0.0197
18184	SLU 52	-1.83	-55.46	61.27	0.9696	-0.4659	-0.029
18184	SLU 53	-1.92	-59.04	64.42	0.9756	-0.4914	-0.0301
18184	SLU 54	-1.92	-57.33	64.42	0.9751	-0.4914	-0.0301
18184	SLU 55	-1.89	-55.02	64.27	0.9593	-0.4895	-0.0286
18184	SLU 56	-1.98	-58.61	67.42	0.9653	-0.515	-0.0297
18184	SLU 57	-1.98	-56.9	67.42	0.9648	-0.515	-0.0298
18184	SLU 58	-1.94	-57.44	67.27	0.9499	-0.5131	-0.0281
18184	SLU 59	-1.94	-55.73	67.27	0.9493	-0.5131	-0.0282

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18184	SLU 60	-1.96	-61.26	63.68	1.0157	-0.4866	-0.0325
18184	SLU 61	-1.96	-59.55	63.69	1.0151	-0.4866	-0.0326
18184	SLU 62	-2.02	-60.83	66.68	1.0054	-0.5102	-0.0321
18184	SLU 63	-2.02	-59.12	66.68	1.0048	-0.5102	-0.0322
18184	SLU 64	-1.75	-58.14	62.45	0.9551	-0.4736	-0.0241
18184	SLU 65	-1.75	-55.3	62.45	0.9542	-0.4736	-0.0242
18184	SLU 66	-1.84	-58.88	65.6	0.9602	-0.4991	-0.0254
18184	SLU 67	-1.85	-57.18	65.6	0.9597	-0.4991	-0.0254
18184	SLU 68	-1.81	-54.86	65.45	0.9439	-0.4972	-0.0239
18184	SLU 69	-1.9	-58.45	68.6	0.9499	-0.5227	-0.025
18184	SLU 70	-1.9	-56.74	68.6	0.9494	-0.5227	-0.025
18184	SLU 71	-1.86	-57.28	68.44	0.9345	-0.5208	-0.0234
18184	SLU 72	-1.86	-55.57	68.45	0.9339	-0.5208	-0.0235
18184	SLU 73	-2.06	-62.2	68.08	1.0597	-0.5219	-0.0327
18184	SLU 74	-2.15	-65.78	71.23	1.0657	-0.5474	-0.0339
18184	SLU 75	-2.15	-64.08	71.23	1.0651	-0.5474	-0.0339
18184	SLU 76	-2.11	-61.76	71.08	1.0493	-0.5455	-0.0323
18184	SLU 77	-2.2	-65.35	74.23	1.0554	-0.571	-0.0335
18184	SLU 78	-2.21	-63.64	74.23	1.0548	-0.571	-0.0335
18184	SLU 79	-2.17	-64.18	74.08	1.0399	-0.5691	-0.0319
18184	SLU 80	-2.17	-62.47	74.08	1.0394	-0.5691	-0.0319
18184	SLU 81	-2.19	-68	70.5	1.1057	-0.5426	-0.0363
18184	SLU 82	-2.19	-66.29	70.5	1.1052	-0.5426	-0.0363
18184	SLU 83	-2.24	-67.57	73.5	1.0954	-0.5662	-0.0359
18184	SLU 84	-2.24	-65.86	73.5	1.0949	-0.5662	-0.036
18184	SLE RA 1	-1.3	-43.24	46.54	0.7149	-0.352	-0.0177
18184	SLE RA 2	-1.3	-41.35	46.54	0.7143	-0.352	-0.0178
18184	SLE RA 3	-1.36	-43.74	48.64	0.7183	-0.369	-0.0186
18184	SLE RA 4	-1.36	-42.6	48.64	0.718	-0.369	-0.0186
18184	SLE RA 5	-1.34	-41.06	48.54	0.7074	-0.3677	-0.0176
18184	SLE RA 6	-1.4	-43.45	50.64	0.7115	-0.3847	-0.0183
18184	SLE RA 7	-1.4	-42.31	50.64	0.7111	-0.3847	-0.0183
18184	SLE RA 8	-1.37	-42.67	50.54	0.7012	-0.3835	-0.0173
18184	SLE RA 9	-1.37	-41.53	50.54	0.7008	-0.3835	-0.0173
18184	SLE RA 10	-1.5	-45.95	50.3	0.7846	-0.3842	-0.0235
18184	SLE RA 11	-1.56	-48.34	52.4	0.7886	-0.4012	-0.0242
18184	SLE RA 12	-1.56	-47.2	52.4	0.7883	-0.4012	-0.0243
18184	SLE RA 13	-1.54	-45.66	52.3	0.7777	-0.3999	-0.0232
18184	SLE RA 14	-1.6	-48.05	54.39	0.7817	-0.4169	-0.024
18184	SLE RA 15	-1.6	-46.91	54.39	0.7814	-0.4169	-0.024
18184	SLE RA 16	-1.57	-47.27	54.29	0.7715	-0.4157	-0.0229
18184	SLE RA 17	-1.57	-46.13	54.29	0.7711	-0.4157	-0.0229
18184	SLE RA 18	-1.59	-49.82	51.91	0.8153	-0.398	-0.0258
18184	SLE RA 19	-1.59	-48.68	51.91	0.815	-0.398	-0.0259
18184	SLE RA 20	-1.62	-49.53	53.9	0.8085	-0.4138	-0.0256
18184	SLE RA 21	-1.63	-48.39	53.91	0.8081	-0.4138	-0.0256
18184	SLE FR 1	-1.3	-43.24	46.54	0.7149	-0.352	-0.0177
18184	SLE FR 2	-1.3	-42.87	46.54	0.7148	-0.352	-0.0178
18184	SLE FR 3	-1.31	-43.13	47.34	0.7122	-0.3583	-0.0176
18184	SLE FR 4	-1.39	-44.84	48.15	0.7449	-0.3658	-0.0202
18184	SLE FR 5	-1.4	-45.1	48.95	0.7423	-0.3721	-0.0201
18184	SLE FR 6	-1.44	-46.53	49.22	0.7651	-0.375	-0.0218
18184	SLE QP 1	-1.3	-43.24	46.54	0.7149	-0.352	-0.0177
18184	SLE QP 2	-1.39	-45.22	48.15	0.745	-0.3658	-0.0202
18184	SLD 1	27.63	-26.6	49.8	0.7568	0.1788	1.3045
18184	SLD 2	27.62	-46.92	49.94	0.7645	0.1777	1.3053
18184	SLD 3	28.29	-58.02	49.08	0.7729	0.1629	1.3347
18184	SLD 4	28.28	-78.34	49.22	0.7805	0.1618	1.3354
18184	SLD 5	6.33	11.56	49.72	0.7229	-0.1782	0.3313
18184	SLD 6	6.32	-1.62	49.8	0.7278	-0.1789	0.3319
18184	SLD 7	8.51	-93.16	47.31	0.7764	-0.2311	0.4319
18184	SLD 8	8.51	-106.35	47.4	0.7814	-0.2318	0.4324
18184	SLD 9	-11.28	15.92	48.9	0.7087	-0.4999	-0.4727
18184	SLD 10	-11.28	2.73	48.99	0.7137	-0.5006	-0.4722
18184	SLD 11	-9.09	-88.81	46.5	0.7622	-0.5528	-0.3722
18184	SLD 12	-9.1	-102	46.58	0.7672	-0.5535	-0.3717
18184	SLD 13	-31.05	-12.09	47.08	0.7096	-0.8935	-1.3758
18184	SLD 14	-31.06	-32.41	47.22	0.7172	-0.8945	-1.375
18184	SLD 15	-30.39	-43.51	46.36	0.7256	-0.9093	-1.3456
18184	SLD 16	-30.4	-63.83	46.5	0.7333	-0.9104	-1.3448
18184	SLV 1	66.52	-2.12	52.02	0.7728	0.9078	3.0797
18184	SLV 2	66.5	-49.46	52.34	0.7906	0.9052	3.0815
18184	SLV 3	68.05	-75.02	50.34	0.8103	0.8714	3.1502
18184	SLV 4	68.03	-122.36	50.65	0.8281	0.8689	3.152
18184	SLV 5	16.67	86.3	51.82	0.6935	0.0718	0.8026
18184	SLV 6	16.65	56.06	52.02	0.7049	0.0702	0.8037
18184	SLV 7	21.77	-156.71	46.19	0.8184	-0.0494	1.0375
18184	SLV 8	21.76	-186.94	46.39	0.8298	-0.051	1.0387
18184	SLV 9	-24.53	96.51	49.91	0.6603	-0.6806	-1.079
18184	SLV 10	-24.54	66.28	50.11	0.6716	-0.6823	-1.0779
18184	SLV 11	-19.42	-146.5	44.28	0.7852	-0.8019	-0.8441
18184	SLV 12	-19.44	-176.73	44.48	0.7966	-0.8035	-0.8429
18184	SLV 13	-70.8	31.92	45.65	0.662	-1.6005	-3.1923
18184	SLV 14	-70.82	-15.41	45.96	0.6798	-1.603	-3.1905
18184	SLV 15	-69.27	-40.98	43.96	0.6995	-1.6369	-3.1218
18184	SLV 16	-69.29	-88.31	44.28	0.7173	-1.6394	-3.12
18184	CRTFP Ux+	0	0	0	0	0	0
18184	CRTFP Ux-	0	0	0	0	0	0
18184	CRTFP Uy+	0	0	0	0	0	0
18184	CRTFP Uy-	0	0	0	0	0	0
18185	SLU 1	-0.45	8.14	22.51	0.3476	-0.0272	-0.018

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18185	SLU 2	-0.45	10.75	22.53	0.3471	-0.0272	-0.0181
18185	SLU 3	-0.49	8.47	23.77	0.3526	-0.0297	-0.0193
18185	SLU 4	-0.49	10.03	23.79	0.3523	-0.0297	-0.0194
18185	SLU 5	-0.46	11.29	23.7	0.3436	-0.0293	-0.0179
18185	SLU 6	-0.49	9.01	24.94	0.3491	-0.0317	-0.0191
18185	SLU 7	-0.49	10.58	24.96	0.3488	-0.0317	-0.0191
18185	SLU 8	-0.46	9.22	24.85	0.3405	-0.0313	-0.0176
18185	SLU 9	-0.46	10.79	24.86	0.3402	-0.0313	-0.0176
18185	SLU 10	-0.64	11.2	25.3	0.406	-0.0329	-0.0265
18185	SLU 11	-0.67	8.91	26.54	0.4115	-0.0354	-0.0278
18185	SLU 12	-0.67	10.48	26.55	0.4112	-0.0354	-0.0278
18185	SLU 13	-0.64	11.74	26.47	0.4024	-0.035	-0.0263
18185	SLU 14	-0.68	9.45	27.71	0.4079	-0.0374	-0.0275
18185	SLU 15	-0.68	11.02	27.72	0.4076	-0.0375	-0.0276
18185	SLU 16	-0.64	9.66	27.61	0.3994	-0.037	-0.026
18185	SLU 17	-0.65	11.23	27.62	0.3991	-0.037	-0.026
18185	SLU 18	-0.72	8.77	26.46	0.4317	-0.0353	-0.0301
18185	SLU 19	-0.72	10.34	26.47	0.4314	-0.0354	-0.0301
18185	SLU 20	-0.72	9.31	27.63	0.4281	-0.0374	-0.0298
18185	SLU 21	-0.72	10.88	27.64	0.4278	-0.0374	-0.0299
18185	SLU 22	-0.55	8.25	25.59	0.3956	-0.0323	-0.022
18185	SLU 23	-0.55	10.87	25.61	0.3951	-0.0324	-0.022
18185	SLU 24	-0.58	8.58	26.85	0.4006	-0.0348	-0.0233
18185	SLU 25	-0.58	10.15	26.86	0.4003	-0.0348	-0.0233
18185	SLU 26	-0.55	11.41	26.78	0.3915	-0.0344	-0.0218
18185	SLU 27	-0.59	9.12	28.02	0.397	-0.0369	-0.023
18185	SLU 28	-0.59	10.69	28.03	0.3967	-0.0369	-0.0231
18185	SLU 29	-0.55	9.33	27.92	0.3885	-0.0364	-0.0215
18185	SLU 30	-0.56	10.9	27.94	0.3882	-0.0365	-0.0215
18185	SLU 31	-0.74	11.31	28.37	0.4539	-0.0381	-0.0305
18185	SLU 32	-0.77	9.02	29.61	0.4594	-0.0405	-0.0317
18185	SLU 33	-0.77	10.59	29.63	0.4591	-0.0405	-0.0317
18185	SLU 34	-0.74	11.85	29.54	0.4504	-0.0401	-0.0302
18185	SLU 35	-0.77	9.56	30.78	0.4559	-0.0426	-0.0315
18185	SLU 36	-0.77	11.13	30.8	0.4556	-0.0426	-0.0315
18185	SLU 37	-0.74	9.78	30.69	0.4473	-0.0422	-0.0299
18185	SLU 38	-0.74	11.35	30.7	0.447	-0.0422	-0.03
18185	SLU 39	-0.81	8.89	29.54	0.4796	-0.0405	-0.034
18185	SLU 40	-0.82	10.46	29.55	0.4793	-0.0405	-0.0341
18185	SLU 41	-0.82	9.43	30.7	0.4761	-0.0425	-0.0338
18185	SLU 42	-0.82	11	30.72	0.4758	-0.0426	-0.0338
18185	SLU 43	-0.55	10.54	28.21	0.4354	-0.0336	-0.0221
18185	SLU 44	-0.55	13.15	28.23	0.4349	-0.0336	-0.0222
18185	SLU 45	-0.59	10.87	29.47	0.4404	-0.036	-0.0234
18185	SLU 46	-0.59	12.44	29.49	0.4401	-0.0361	-0.0234
18185	SLU 47	-0.56	13.7	29.4	0.4314	-0.0357	-0.0219
18185	SLU 48	-0.59	11.41	30.64	0.4369	-0.0381	-0.0232
18185	SLU 49	-0.59	12.98	30.65	0.4366	-0.0381	-0.0232
18185	SLU 50	-0.56	11.62	30.55	0.4283	-0.0377	-0.0216
18185	SLU 51	-0.56	13.19	30.56	0.428	-0.0377	-0.0217
18185	SLU 52	-0.74	13.6	31	0.4938	-0.0393	-0.0306
18185	SLU 53	-0.77	11.31	32.24	0.4993	-0.0418	-0.0318
18185	SLU 54	-0.78	12.88	32.25	0.499	-0.0418	-0.0319
18185	SLU 55	-0.74	14.14	32.16	0.4902	-0.0414	-0.0304
18185	SLU 56	-0.78	11.85	33.4	0.4957	-0.0438	-0.0316
18185	SLU 57	-0.78	13.42	33.42	0.4955	-0.0438	-0.0316
18185	SLU 58	-0.75	12.07	33.31	0.4872	-0.0434	-0.0301
18185	SLU 59	-0.75	13.64	33.32	0.4869	-0.0434	-0.0301
18185	SLU 60	-0.82	11.17	32.16	0.5195	-0.0417	-0.0341
18185	SLU 61	-0.82	12.74	32.17	0.5192	-0.0417	-0.0342
18185	SLU 62	-0.82	11.72	33.33	0.516	-0.0438	-0.0339
18185	SLU 63	-0.82	13.29	33.34	0.5157	-0.0438	-0.0339
18185	SLU 64	-0.65	10.65	31.29	0.4834	-0.0387	-0.026
18185	SLU 65	-0.65	13.27	31.31	0.4829	-0.0387	-0.0261
18185	SLU 66	-0.68	10.98	32.55	0.4884	-0.0412	-0.0273
18185	SLU 67	-0.69	12.55	32.56	0.4881	-0.0412	-0.0274
18185	SLU 68	-0.65	13.81	32.48	0.4794	-0.0408	-0.0259
18185	SLU 69	-0.69	11.52	33.72	0.4849	-0.0433	-0.0271
18185	SLU 70	-0.69	13.09	33.73	0.4846	-0.0433	-0.0271
18185	SLU 71	-0.66	11.73	33.62	0.4763	-0.0428	-0.0256
18185	SLU 72	-0.66	13.3	33.64	0.476	-0.0428	-0.0256
18185	SLU 73	-0.84	13.71	34.07	0.5418	-0.0445	-0.0345
18185	SLU 74	-0.87	11.43	35.31	0.5473	-0.0469	-0.0358
18185	SLU 75	-0.87	13	35.33	0.547	-0.0469	-0.0358
18185	SLU 76	-0.84	14.25	35.24	0.5382	-0.0465	-0.0343
18185	SLU 77	-0.88	11.97	36.48	0.5437	-0.049	-0.0355
18185	SLU 78	-0.88	13.54	36.49	0.5434	-0.049	-0.0356
18185	SLU 79	-0.84	12.18	36.39	0.5352	-0.0485	-0.034
18185	SLU 80	-0.84	13.75	36.4	0.5349	-0.0486	-0.034
18185	SLU 81	-0.92	11.29	35.23	0.5675	-0.0469	-0.0381
18185	SLU 82	-0.92	12.86	35.25	0.5672	-0.0469	-0.0381
18185	SLU 83	-0.92	11.83	36.4	0.5639	-0.0489	-0.0378
18185	SLU 84	-0.92	13.4	36.42	0.5636	-0.0489	-0.0379
18185	SLE RA 1	-0.48	8.17	23.39	0.3613	-0.0286	-0.0192
18185	SLE RA 2	-0.48	9.91	23.41	0.361	-0.0287	-0.0192
18185	SLE RA 3	-0.5	8.39	24.23	0.3646	-0.0303	-0.02
18185	SLE RA 4	-0.5	9.43	24.24	0.3644	-0.0303	-0.0201
18185	SLE RA 5	-0.48	10.27	24.18	0.3586	-0.03	-0.0191
18185	SLE RA 6	-0.5	8.75	25.01	0.3623	-0.0317	-0.0199
18185	SLE RA 7	-0.5	9.79	25.02	0.3621	-0.0317	-0.0199
18185	SLE RA 8	-0.48	8.89	24.95	0.3566	-0.0314	-0.0188

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18185	SLE RA 9	-0.48	9.94	24.96	0.3564	-0.0314	-0.0189
18185	SLE RA 10	-0.6	10.21	25.25	0.4002	-0.0325	-0.0248
18185	SLE RA 11	-0.63	8.68	26.07	0.4039	-0.0341	-0.0256
18185	SLE RA 12	-0.63	9.73	26.08	0.4037	-0.0341	-0.0257
18185	SLE RA 13	-0.61	10.57	26.03	0.3978	-0.0338	-0.0247
18185	SLE RA 14	-0.63	9.05	26.85	0.4015	-0.0355	-0.0255
18185	SLE RA 15	-0.63	10.09	26.86	0.4013	-0.0355	-0.0255
18185	SLE RA 16	-0.61	9.19	26.79	0.3958	-0.0352	-0.0245
18185	SLE RA 17	-0.61	10.23	26.8	0.3956	-0.0352	-0.0245
18185	SLE RA 18	-0.66	8.59	26.02	0.4173	-0.0341	-0.0272
18185	SLE RA 19	-0.66	9.64	26.03	0.4172	-0.0341	-0.0272
18185	SLE RA 20	-0.66	8.95	26.8	0.415	-0.0355	-0.027
18185	SLE RA 21	-0.66	10	26.81	0.4148	-0.0355	-0.0271
18185	SLE FR 1	-0.48	8.17	23.39	0.3613	-0.0286	-0.0192
18185	SLE FR 2	-0.48	8.52	23.39	0.3612	-0.0286	-0.0192
18185	SLE FR 3	-0.48	8.31	23.7	0.3604	-0.0292	-0.0191
18185	SLE FR 4	-0.53	8.64	24.18	0.378	-0.0303	-0.0216
18185	SLE FR 5	-0.53	8.44	24.49	0.3772	-0.0308	-0.0215
18185	SLE FR 6	-0.57	8.38	24.71	0.3893	-0.0314	-0.0232
18185	SLE QP 1	-0.48	8.17	23.39	0.3613	-0.0286	-0.0192
18185	SLE QP 2	-0.53	8.3	24.18	0.3781	-0.0303	-0.0216
18185	SLD 1	26.75	21.59	24.15	0.3207	0.5499	1.2478
18185	SLD 2	26.75	31.87	24.19	0.3186	0.5497	1.2485
18185	SLD 3	27.37	-6.62	23.71	0.3791	0.5676	1.2768
18185	SLD 4	27.36	3.65	23.75	0.377	0.5674	1.2774
18185	SLD 5	6.72	53.28	24.83	0.2727	0.1168	0.3153
18185	SLD 6	6.71	59.95	24.85	0.2714	0.1167	0.3157
18185	SLD 7	8.78	-40.76	23.37	0.4673	0.1761	0.4117
18185	SLD 8	8.77	-34.09	23.4	0.4659	0.176	0.4121
18185	SLD 9	-9.84	50.69	24.96	0.2903	-0.2365	-0.4552
18185	SLD 10	-9.84	57.35	24.99	0.2889	-0.2367	-0.4548
18185	SLD 11	-7.78	-43.36	23.51	0.4848	-0.1773	-0.3588
18185	SLD 12	-7.78	-36.69	23.53	0.4835	-0.1774	-0.3584
18185	SLD 13	-28.43	12.94	24.61	0.3792	-0.628	-1.3206
18185	SLD 14	-28.43	23.21	24.65	0.3771	-0.6282	-1.3199
18185	SLD 15	-27.81	-15.27	24.17	0.4376	-0.6102	-1.2916
18185	SLD 16	-27.82	-5	24.21	0.4355	-0.6104	-1.291
18185	SLV 1	63.32	39.14	24.11	0.244	1.3273	2.9489
18185	SLV 2	63.3	63.07	24.19	0.2391	1.3268	2.9505
18185	SLV 3	64.76	-26.17	23.09	0.3803	1.3682	3.0165
18185	SLV 4	64.74	-2.23	23.18	0.3755	1.3677	3.0181
18185	SLV 5	16.44	112.54	25.68	0.1319	0.3151	0.7668
18185	SLV 6	16.43	127.82	25.74	0.1289	0.3148	0.7678
18185	SLV 7	21.25	-105.14	22.3	0.5863	0.4514	0.9921
18185	SLV 8	21.24	-89.85	22.35	0.5833	0.451	0.9931
18185	SLV 9	-22.3	106.44	26.01	0.173	-0.5116	-1.0363
18185	SLV 10	-22.31	121.73	26.06	0.1699	-0.5119	-1.0353
18185	SLV 11	-17.49	-111.23	22.62	0.6274	-0.3753	-0.8109
18185	SLV 12	-17.5	-95.95	22.68	0.6243	-0.3756	-0.8099
18185	SLV 13	-65.81	18.82	25.18	0.3808	-1.4283	-3.0613
18185	SLV 14	-65.82	42.76	25.27	0.3759	-1.4287	-3.0597
18185	SLV 15	-64.36	-46.48	24.17	0.5171	-1.3874	-2.9937
18185	SLV 16	-64.38	-22.55	24.25	0.5122	-1.3879	-2.9921
18185	CRTFP Ux+	0	0	0	0	0	0
18185	CRTFP Ux-	0	0	0	0	0	0
18185	CRTFP Uy+	0	0	0	0	0	0
18185	CRTFP Uy-	0	0	0	0	0	0
18186	SLU 1	-0.41	-19.26	7.17	0.1291	-0.0047	-0.0192
18186	SLU 2	-0.41	-16.3	7.17	0.1283	-0.0047	-0.0192
18186	SLU 3	-0.44	-18.36	7.59	0.1002	-0.0041	-0.0206
18186	SLU 4	-0.44	-16.59	7.59	0.0997	-0.0041	-0.0206
18186	SLU 5	-0.4	-14.39	7.62	0.0886	-0.0035	-0.019
18186	SLU 6	-0.43	-16.46	8.04	0.0605	-0.0029	-0.0204
18186	SLU 7	-0.43	-14.68	8.04	0.0601	-0.0029	-0.0204
18186	SLU 8	-0.4	-15.44	8.08	0.0498	-0.0023	-0.0188
18186	SLU 9	-0.4	-13.67	8.08	0.0493	-0.0023	-0.0188
18186	SLU 10	-0.6	-20.15	7.54	0.1522	-0.007	-0.0281
18186	SLU 11	-0.62	-22.22	7.96	0.1242	-0.0064	-0.0294
18186	SLU 12	-0.63	-20.45	7.96	0.1237	-0.0064	-0.0294
18186	SLU 13	-0.59	-18.25	7.99	0.1126	-0.0058	-0.0279
18186	SLU 14	-0.62	-20.31	8.41	0.0845	-0.0052	-0.0292
18186	SLU 15	-0.62	-18.54	8.41	0.084	-0.0052	-0.0292
18186	SLU 16	-0.58	-19.3	8.44	0.0737	-0.0046	-0.0276
18186	SLU 17	-0.59	-17.52	8.44	0.0732	-0.0046	-0.0276
18186	SLU 18	-0.68	-24.76	7.69	0.1633	-0.008	-0.0318
18186	SLU 19	-0.68	-22.99	7.69	0.1628	-0.008	-0.0318
18186	SLU 20	-0.67	-22.86	8.15	0.1236	-0.0068	-0.0316
18186	SLU 21	-0.67	-21.08	8.15	0.1232	-0.0068	-0.0316
18186	SLU 22	-0.5	-22.2	7.77	0.1282	-0.0051	-0.0233
18186	SLU 23	-0.5	-19.24	7.77	0.1274	-0.0051	-0.0234
18186	SLU 24	-0.52	-21.31	8.19	0.0993	-0.0045	-0.0247
18186	SLU 25	-0.52	-19.53	8.19	0.0988	-0.0045	-0.0248
18186	SLU 26	-0.49	-17.33	8.22	0.0877	-0.0039	-0.0232
18186	SLU 27	-0.52	-19.4	8.64	0.0597	-0.0033	-0.0245
18186	SLU 28	-0.52	-17.62	8.64	0.0592	-0.0034	-0.0246
18186	SLU 29	-0.48	-18.38	8.67	0.0489	-0.0027	-0.0229
18186	SLU 30	-0.48	-16.61	8.67	0.0484	-0.0028	-0.023
18186	SLU 31	-0.69	-23.09	8.13	0.1513	-0.0074	-0.0322
18186	SLU 32	-0.71	-25.16	8.55	0.1233	-0.0068	-0.0336
18186	SLU 33	-0.71	-23.39	8.55	0.1228	-0.0068	-0.0336
18186	SLU 34	-0.68	-21.19	8.58	0.1117	-0.0062	-0.032

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18186	SLU 35	-0.71	-23.25	9.01	0.0836	-0.0056	-0.0334
18186	SLU 36	-0.71	-21.48	9.01	0.0831	-0.0056	-0.0334
18186	SLU 37	-0.67	-22.24	9.04	0.0728	-0.005	-0.0318
18186	SLU 38	-0.67	-20.46	9.04	0.0723	-0.0051	-0.0318
18186	SLU 39	-0.76	-27.7	8.29	0.1624	-0.0084	-0.036
18186	SLU 40	-0.77	-25.93	8.29	0.1619	-0.0084	-0.036
18186	SLU 41	-0.76	-25.8	8.74	0.1228	-0.0072	-0.0358
18186	SLU 42	-0.76	-24.02	8.74	0.1223	-0.0072	-0.0358
18186	SLU 43	-0.5	-24.02	9.12	0.1681	-0.0059	-0.0235
18186	SLU 44	-0.5	-21.07	9.12	0.1673	-0.0059	-0.0236
18186	SLU 45	-0.53	-23.13	9.54	0.1392	-0.0054	-0.0249
18186	SLU 46	-0.53	-21.36	9.54	0.1388	-0.0054	-0.0249
18186	SLU 47	-0.49	-19.16	9.57	0.1276	-0.0048	-0.0234
18186	SLU 48	-0.52	-21.23	9.99	0.0996	-0.0042	-0.0247
18186	SLU 49	-0.52	-19.45	9.99	0.0991	-0.0042	-0.0247
18186	SLU 50	-0.49	-20.21	10.02	0.0888	-0.0036	-0.0231
18186	SLU 51	-0.49	-18.44	10.02	0.0883	-0.0036	-0.0231
18186	SLU 52	-0.69	-24.92	9.48	0.1913	-0.0082	-0.0324
18186	SLU 53	-0.72	-26.99	9.91	0.1632	-0.0077	-0.0337
18186	SLU 54	-0.72	-25.21	9.9	0.1627	-0.0077	-0.0338
18186	SLU 55	-0.68	-23.01	9.94	0.1516	-0.0071	-0.0322
18186	SLU 56	-0.71	-25.08	10.36	0.1235	-0.0065	-0.0335
18186	SLU 57	-0.71	-23.31	10.36	0.123	-0.0065	-0.0336
18186	SLU 58	-0.68	-24.07	10.39	0.1127	-0.0059	-0.0319
18186	SLU 59	-0.68	-22.29	10.39	0.1123	-0.0059	-0.032
18186	SLU 60	-0.77	-29.53	9.64	0.2023	-0.0092	-0.0361
18186	SLU 61	-0.77	-27.76	9.64	0.2019	-0.0092	-0.0361
18186	SLU 62	-0.76	-27.62	10.09	0.1627	-0.008	-0.0359
18186	SLU 63	-0.76	-25.85	10.09	0.1622	-0.0081	-0.0359
18186	SLU 64	-0.59	-26.96	9.71	0.1672	-0.0063	-0.0277
18186	SLU 65	-0.59	-24.01	9.71	0.1664	-0.0064	-0.0277
18186	SLU 66	-0.62	-26.07	10.13	0.1384	-0.0058	-0.0291
18186	SLU 67	-0.62	-24.3	10.13	0.1379	-0.0058	-0.0291
18186	SLU 68	-0.58	-22.1	10.17	0.1268	-0.0052	-0.0275
18186	SLU 69	-0.61	-24.17	10.59	0.0987	-0.0046	-0.0289
18186	SLU 70	-0.61	-22.39	10.59	0.0982	-0.0046	-0.0289
18186	SLU 71	-0.58	-23.15	10.62	0.0879	-0.004	-0.0273
18186	SLU 72	-0.58	-21.38	10.62	0.0874	-0.004	-0.0273
18186	SLU 73	-0.78	-27.86	10.08	0.1904	-0.0087	-0.0366
18186	SLU 74	-0.8	-29.93	10.5	0.1623	-0.0081	-0.0379
18186	SLU 75	-0.81	-28.15	10.5	0.1618	-0.0081	-0.0379
18186	SLU 76	-0.77	-25.96	10.53	0.1507	-0.0075	-0.0364
18186	SLU 77	-0.8	-28.02	10.95	0.1226	-0.0069	-0.0377
18186	SLU 78	-0.8	-26.25	10.95	0.1222	-0.0069	-0.0377
18186	SLU 79	-0.76	-27.01	10.99	0.1119	-0.0063	-0.0361
18186	SLU 80	-0.77	-25.23	10.98	0.1114	-0.0063	-0.0361
18186	SLU 81	-0.86	-32.47	10.24	0.2014	-0.0096	-0.0403
18186	SLU 82	-0.86	-30.7	10.24	0.201	-0.0096	-0.0403
18186	SLU 83	-0.85	-30.57	10.69	0.1618	-0.0085	-0.0401
18186	SLU 84	-0.85	-28.79	10.69	0.1613	-0.0085	-0.0401
18186	SLE RA 1	-0.43	-20.1	7.34	0.1288	-0.0048	-0.0204
18186	SLE RA 2	-0.43	-18.12	7.34	0.1283	-0.0048	-0.0204
18186	SLE RA 3	-0.45	-19.5	7.62	0.1096	-0.0044	-0.0213
18186	SLE RA 4	-0.45	-18.32	7.62	0.1093	-0.0044	-0.0213
18186	SLE RA 5	-0.43	-16.85	7.64	0.1019	-0.004	-0.0203
18186	SLE RA 6	-0.45	-18.23	7.92	0.0831	-0.0036	-0.0212
18186	SLE RA 7	-0.45	-17.05	7.92	0.0828	-0.0036	-0.0212
18186	SLE RA 8	-0.42	-17.55	7.94	0.0759	-0.0032	-0.0201
18186	SLE RA 9	-0.43	-16.37	7.94	0.0756	-0.0032	-0.0201
18186	SLE RA 10	-0.56	-20.69	7.58	0.1443	-0.0063	-0.0263
18186	SLE RA 11	-0.58	-22.07	7.87	0.1256	-0.0059	-0.0272
18186	SLE RA 12	-0.58	-20.89	7.87	0.1252	-0.0059	-0.0272
18186	SLE RA 13	-0.56	-19.42	7.89	0.1178	-0.0056	-0.0262
18186	SLE RA 14	-0.57	-20.8	8.17	0.0991	-0.0052	-0.027
18186	SLE RA 15	-0.57	-19.62	8.17	0.0988	-0.0052	-0.0271
18186	SLE RA 16	-0.55	-20.12	8.19	0.0919	-0.0048	-0.026
18186	SLE RA 17	-0.55	-18.94	8.19	0.0916	-0.0048	-0.026
18186	SLE RA 18	-0.61	-23.77	7.69	0.1516	-0.007	-0.0288
18186	SLE RA 19	-0.61	-22.58	7.69	0.1513	-0.007	-0.0288
18186	SLE RA 20	-0.61	-22.5	7.99	0.1252	-0.0062	-0.0286
18186	SLE RA 21	-0.61	-21.31	7.99	0.1249	-0.0062	-0.0287
18186	SLE FR 1	-0.43	-20.1	7.34	0.1288	-0.0048	-0.0204
18186	SLE FR 2	-0.43	-19.7	7.34	0.1287	-0.0048	-0.0204
18186	SLE FR 3	-0.43	-19.59	7.46	0.1183	-0.0045	-0.0203
18186	SLE FR 4	-0.49	-20.8	7.45	0.1356	-0.0054	-0.0229
18186	SLE FR 5	-0.48	-20.69	7.57	0.1251	-0.0051	-0.0228
18186	SLE FR 6	-0.52	-21.93	7.52	0.1402	-0.0059	-0.0246
18186	SLE QP 1	-0.43	-20.1	7.34	0.1288	-0.0048	-0.0204
18186	SLE QP 2	-0.49	-21.2	7.45	0.1357	-0.0054	-0.0229
18186	SLD 1	28.47	-10.55	7.22	0.1156	0.5139	1.3021
18186	SLD 2	28.46	10.69	7.2	0.1098	0.5138	1.3029
18186	SLD 3	29.13	-41.55	7.42	0.1462	0.5314	1.3323
18186	SLD 4	29.12	-20.31	7.41	0.1404	0.5313	1.333
18186	SLD 5	7.2	25.31	7.06	0.0843	0.1239	0.3288
18186	SLD 6	7.2	39.09	7.05	0.0805	0.1238	0.3293
18186	SLD 7	9.4	-78.03	7.76	0.1862	0.1822	0.4293
18186	SLD 8	9.39	-64.24	7.75	0.1825	0.1821	0.4298
18186	SLD 9	-10.37	21.85	7.15	0.0889	-0.193	-0.4755
18186	SLD 10	-10.37	35.63	7.13	0.0851	-0.1931	-0.475
18186	SLD 11	-8.17	-81.49	7.84	0.1908	-0.1347	-0.375
18186	SLD 12	-8.17	-67.7	7.83	0.1871	-0.1348	-0.3745

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18186	SLD 13	-30.09	-22.08	7.49	0.1309	-0.5422	-1.3788
18186	SLD 14	-30.1	-0.85	7.47	0.1252	-0.5423	-1.378
18186	SLD 15	-29.44	-53.09	7.69	0.1615	-0.5247	-1.3487
18186	SLD 16	-29.44	-31.85	7.68	0.1558	-0.5248	-1.3479
18186	SLV 1	67.27	3.43	6.9	0.0884	1.2098	3.0777
18186	SLV 2	67.26	52.91	6.86	0.075	1.2095	3.0795
18186	SLV 3	68.82	-68.26	7.39	0.1602	1.25	3.1482
18186	SLV 4	68.8	-18.78	7.35	0.1468	1.2496	3.15
18186	SLV 5	17.51	86.54	6.55	0.0149	0.2983	0.8001
18186	SLV 6	17.5	118.14	6.52	0.0064	0.2981	0.8013
18186	SLV 7	22.64	-152.42	8.18	0.2542	0.4321	1.035
18186	SLV 8	22.63	-120.82	8.15	0.2456	0.4319	1.0362
18186	SLV 9	-23.6	78.43	6.74	0.0258	-0.4428	-1.0819
18186	SLV 10	-23.62	110.03	6.71	0.0172	-0.443	-1.0808
18186	SLV 11	-18.47	-160.53	8.37	0.265	-0.309	-0.847
18186	SLV 12	-18.48	-128.93	8.34	0.2564	-0.3092	-0.8459
18186	SLV 13	-69.77	-23.61	7.54	0.1245	-1.2605	-3.1958
18186	SLV 14	-69.79	25.87	7.5	0.1111	-1.2609	-3.194
18186	SLV 15	-68.23	-95.3	8.03	0.1963	-1.2204	-3.1253
18186	SLV 16	-68.25	-45.82	7.99	0.1829	-1.2207	-3.1235
18186	CRTFP Ux+	0	0	0	0	0	0
18186	CRTFP Ux-	0	0	0	0	0	0
18186	CRTFP Uy+	0	0	0	0	0	0
18186	CRTFP Uy-	0	0	0	0	0	0
18187	SLU 1	-1.35	55.9	792.47	-11.9227	-0.3121	-0.0157
18187	SLU 2	-1.36	59.35	792.97	-11.9434	-0.3124	-0.0157
18187	SLU 3	-1.41	57.29	816.1	-12.2834	-0.317	-0.0168
18187	SLU 4	-1.41	59.36	816.4	-12.2959	-0.3172	-0.0169
18187	SLU 5	-1.35	60.36	806.52	-12.1577	-0.3121	-0.0153
18187	SLU 6	-1.4	58.3	829.64	-12.4977	-0.3168	-0.0164
18187	SLU 7	-1.4	60.37	829.95	-12.5102	-0.3169	-0.0165
18187	SLU 8	-1.34	57.91	819.56	-12.3513	-0.3115	-0.0149
18187	SLU 9	-1.34	59.98	819.87	-12.3637	-0.3117	-0.0149
18187	SLU 10	-1.72	65.63	899.16	-13.5351	-0.3593	-0.024
18187	SLU 11	-1.77	63.57	922.28	-13.8751	-0.364	-0.0251
18187	SLU 12	-1.77	65.64	922.59	-13.8876	-0.3642	-0.0251
18187	SLU 13	-1.71	66.64	912.71	-13.7494	-0.359	-0.0236
18187	SLU 14	-1.76	64.58	935.83	-14.0894	-0.3637	-0.0247
18187	SLU 15	-1.76	66.65	936.13	-14.1019	-0.3639	-0.0247
18187	SLU 16	-1.71	64.19	925.75	-13.943	-0.3585	-0.0231
18187	SLU 17	-1.71	66.26	926.05	-13.9554	-0.3586	-0.0232
18187	SLU 18	-1.87	64.87	944.17	-14.1966	-0.3792	-0.0274
18187	SLU 19	-1.88	66.94	944.47	-14.209	-0.3793	-0.0275
18187	SLU 20	-1.87	65.87	957.71	-14.4109	-0.3789	-0.027
18187	SLU 21	-1.87	67.94	958.02	-14.4233	-0.3791	-0.0271
18187	SLU 22	-1.57	61.9	899.46	-13.525	-0.3519	-0.0193
18187	SLU 23	-1.58	65.35	899.96	-13.5457	-0.3521	-0.0193
18187	SLU 24	-1.62	63.29	923.08	-13.8857	-0.3568	-0.0204
18187	SLU 25	-1.63	65.36	923.39	-13.8982	-0.3569	-0.0205
18187	SLU 26	-1.57	66.36	913.51	-13.76	-0.3518	-0.0189
18187	SLU 27	-1.62	64.3	936.63	-14.1	-0.3565	-0.02
18187	SLU 28	-1.62	66.37	936.93	-14.1125	-0.3567	-0.0201
18187	SLU 29	-1.56	63.91	926.55	-13.9536	-0.3513	-0.0185
18187	SLU 30	-1.56	65.98	926.85	-13.966	-0.3514	-0.0185
18187	SLU 31	-1.94	71.63	1006.15	-15.1374	-0.3991	-0.0276
18187	SLU 32	-1.99	69.57	1029.27	-15.4775	-0.4038	-0.0287
18187	SLU 33	-1.99	71.64	1029.57	-15.4899	-0.4039	-0.0287
18187	SLU 34	-1.93	72.64	1019.7	-15.3517	-0.3988	-0.0272
18187	SLU 35	-1.98	70.58	1042.82	-15.6918	-0.4035	-0.0283
18187	SLU 36	-1.98	72.65	1043.12	-15.7042	-0.4036	-0.0283
18187	SLU 37	-1.92	70.19	1032.74	-15.5453	-0.3982	-0.0267
18187	SLU 38	-1.93	72.26	1033.04	-15.5577	-0.3984	-0.0268
18187	SLU 39	-2.09	70.87	1051.15	-15.7989	-0.419	-0.031
18187	SLU 40	-2.09	72.94	1051.46	-15.8113	-0.4191	-0.0311
18187	SLU 41	-2.09	71.87	1064.7	-16.0132	-0.4187	-0.0306
18187	SLU 42	-2.09	73.94	1065	-16.0256	-0.4188	-0.0307
18187	SLU 43	-1.69	70.61	993.53	-14.9501	-0.3921	-0.0191
18187	SLU 44	-1.69	74.06	994.03	-14.9708	-0.3924	-0.0192
18187	SLU 45	-1.74	72.01	1017.16	-15.3109	-0.3971	-0.0203
18187	SLU 46	-1.74	74.08	1017.46	-15.3233	-0.3972	-0.0203
18187	SLU 47	-1.68	75.07	1007.58	-15.1851	-0.3921	-0.0188
18187	SLU 48	-1.73	73.01	1030.7	-15.5252	-0.3968	-0.0199
18187	SLU 49	-1.73	75.08	1031	-15.5376	-0.3969	-0.0199
18187	SLU 50	-1.67	72.63	1020.62	-15.3787	-0.3915	-0.0183
18187	SLU 51	-1.68	74.7	1020.93	-15.3911	-0.3917	-0.0184
18187	SLU 52	-2.05	80.34	1100.22	-16.5626	-0.4393	-0.0274
18187	SLU 53	-2.1	78.28	1123.34	-16.9026	-0.444	-0.0285
18187	SLU 54	-2.1	80.35	1123.65	-16.915	-0.4442	-0.0286
18187	SLU 55	-2.05	81.35	1113.77	-16.7769	-0.439	-0.027
18187	SLU 56	-2.09	79.29	1136.89	-17.1169	-0.4437	-0.0281
18187	SLU 57	-2.1	81.36	1137.19	-17.1293	-0.4439	-0.0282
18187	SLU 58	-2.04	78.9	1126.81	-16.9704	-0.4385	-0.0266
18187	SLU 59	-2.04	80.97	1127.11	-16.9829	-0.4386	-0.0266
18187	SLU 60	-2.2	79.58	1145.23	-17.224	-0.4592	-0.0309
18187	SLU 61	-2.21	81.65	1145.53	-17.2364	-0.4594	-0.031
18187	SLU 62	-2.2	80.59	1158.77	-17.4383	-0.4589	-0.0305
18187	SLU 63	-2.2	82.66	1159.08	-17.4507	-0.4591	-0.0306
18187	SLU 64	-1.9	76.61	1100.52	-16.5524	-0.4319	-0.0227
18187	SLU 65	-1.91	80.06	1101.02	-16.5731	-0.4321	-0.0228
18187	SLU 66	-1.96	78.01	1124.14	-16.9132	-0.4368	-0.0239
18187	SLU 67	-1.96	80.08	1124.45	-16.9256	-0.437	-0.0239

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18187	SLU 68	-1.9	81.07	1114.57	-16.7874	-0.4318	-0.0224
18187	SLU 69	-1.95	79.01	1137.69	-17.1275	-0.4365	-0.0235
18187	SLU 70	-1.95	81.08	1137.99	-17.1399	-0.4367	-0.0235
18187	SLU 71	-1.89	78.63	1127.61	-16.981	-0.4313	-0.0219
18187	SLU 72	-1.89	80.7	1127.91	-16.9935	-0.4314	-0.022
18187	SLU 73	-2.27	86.34	1207.21	-18.1649	-0.4791	-0.031
18187	SLU 74	-2.32	84.28	1230.33	-18.5049	-0.4838	-0.0321
18187	SLU 75	-2.32	86.35	1230.63	-18.5173	-0.4839	-0.0322
18187	SLU 76	-2.26	87.35	1220.76	-18.3792	-0.4788	-0.0306
18187	SLU 77	-2.31	85.29	1243.88	-18.7192	-0.4835	-0.0317
18187	SLU 78	-2.31	87.36	1244.18	-18.7316	-0.4836	-0.0318
18187	SLU 79	-2.26	84.9	1233.8	-18.5727	-0.4782	-0.0302
18187	SLU 80	-2.26	86.97	1234.1	-18.5852	-0.4784	-0.0302
18187	SLU 81	-2.42	85.58	1252.21	-18.8263	-0.499	-0.0345
18187	SLU 82	-2.43	87.65	1252.52	-18.8388	-0.4991	-0.0346
18187	SLU 83	-2.42	86.59	1265.76	-19.0406	-0.4987	-0.0341
18187	SLU 84	-2.42	88.66	1266.06	-19.0531	-0.4988	-0.0342
18187	SLE RA 1	-1.42	57.61	823.04	-12.3805	-0.3235	-0.0167
18187	SLE RA 2	-1.42	59.91	823.37	-12.3943	-0.3236	-0.0167
18187	SLE RA 3	-1.45	58.54	838.79	-12.621	-0.3268	-0.0175
18187	SLE RA 4	-1.45	59.92	838.99	-12.6293	-0.3269	-0.0175
18187	SLE RA 5	-1.42	60.59	832.41	-12.5372	-0.3234	-0.0165
18187	SLE RA 6	-1.45	59.21	847.82	-12.7638	-0.3266	-0.0172
18187	SLE RA 7	-1.45	60.6	848.02	-12.7721	-0.3267	-0.0172
18187	SLE RA 8	-1.41	58.96	841.1	-12.6662	-0.3231	-0.0162
18187	SLE RA 9	-1.41	60.34	841.3	-12.6745	-0.3232	-0.0162
18187	SLE RA 10	-1.66	64.1	894.17	-13.4554	-0.3549	-0.0222
18187	SLE RA 11	-1.69	62.73	909.58	-13.6821	-0.3581	-0.023
18187	SLE RA 12	-1.69	64.11	909.78	-13.6904	-0.3582	-0.023
18187	SLE RA 13	-1.66	64.77	903.2	-13.5983	-0.3548	-0.022
18187	SLE RA 14	-1.69	63.4	918.61	-13.825	-0.3579	-0.0227
18187	SLE RA 15	-1.69	64.78	918.81	-13.8333	-0.358	-0.0227
18187	SLE RA 16	-1.65	63.14	911.89	-13.7274	-0.3544	-0.0217
18187	SLE RA 17	-1.65	64.52	912.09	-13.7356	-0.3545	-0.0217
18187	SLE RA 18	-1.76	63.59	924.17	-13.8964	-0.3682	-0.0245
18187	SLE RA 19	-1.76	64.97	924.37	-13.9047	-0.3683	-0.0246
18187	SLE RA 20	-1.76	64.26	933.2	-14.0393	-0.368	-0.0243
18187	SLE RA 21	-1.76	65.64	933.4	-14.0476	-0.3681	-0.0243
18187	SLE FR 1	-1.42	57.61	823.04	-12.3805	-0.3235	-0.0167
18187	SLE FR 2	-1.42	58.07	823.11	-12.3832	-0.3235	-0.0167
18187	SLE FR 3	-1.42	57.88	826.65	-12.4376	-0.3234	-0.0166
18187	SLE FR 4	-1.52	59.87	853.44	-12.838	-0.3369	-0.0191
18187	SLE FR 5	-1.52	59.67	856.99	-12.8924	-0.3368	-0.0189
18187	SLE FR 6	-1.59	60.6	873.6	-13.1384	-0.3458	-0.0206
18187	SLE QP 1	-1.42	57.61	823.04	-12.3805	-0.3235	-0.0167
18187	SLE QP 2	-1.52	59.41	853.38	-12.8353	-0.3369	-0.019
18187	SLD 1	37.6	45.46	751.41	-11.3454	0.9243	1.2786
18187	SLD 2	37.59	94.74	751.77	-11.6872	0.9239	1.2795
18187	SLD 3	38.48	9.73	745.54	-10.8355	0.953	1.3082
18187	SLD 4	38.47	59	745.9	-11.1773	0.9526	1.3091
18187	SLD 5	8.87	100.82	831.63	-13.1019	-0.002	0.3253
18187	SLD 6	8.86	132.8	831.86	-13.3237	-0.0022	0.3259
18187	SLD 7	11.83	-18.29	812.06	-11.4025	0.0936	0.4238
18187	SLD 8	11.82	13.69	812.29	-11.6243	0.0934	0.4243
18187	SLD 9	-14.86	105.12	894.46	-14.0462	-0.7672	-0.4624
18187	SLD 10	-14.87	137.1	894.69	-14.268	-0.7674	-0.4618
18187	SLD 11	-11.91	-13.99	874.89	-12.3468	-0.6716	-0.364
18187	SLD 12	-11.91	17.99	875.12	-12.5686	-0.6718	-0.3634
18187	SLD 13	-41.51	59.81	960.86	-14.4932	-1.6264	-1.3471
18187	SLD 14	-41.53	109.08	961.21	-14.835	-1.6268	-1.3463
18187	SLD 15	-40.63	24.07	954.98	-13.9833	-1.5977	-1.3176
18187	SLD 16	-40.64	73.35	955.34	-14.3251	-1.5981	-1.3167
18187	SLV 1	90.02	26.33	614.8	-9.3497	2.6144	3.0177
18187	SLV 2	89.99	141.13	615.63	-10.146	2.6135	3.0197
18187	SLV 3	92.09	-56.18	601.09	-8.1584	2.6812	3.0867
18187	SLV 4	92.06	58.61	601.92	-8.9546	2.6804	3.0888
18187	SLV 5	22.8	155.2	802.47	-13.4617	0.4473	0.7869
18187	SLV 6	22.79	228.51	803	-13.9702	0.4467	0.7882
18187	SLV 7	29.71	-119.86	756.74	-9.4905	0.67	1.017
18187	SLV 8	29.69	-46.55	757.28	-9.999	0.6695	1.0183
18187	SLV 9	-32.73	165.36	949.48	-15.6715	-1.3433	-1.0564
18187	SLV 10	-32.75	238.67	950.01	-16.18	-1.3438	-1.0551
18187	SLV 11	-25.83	-109.7	903.75	-11.7003	-1.1205	-0.8263
18187	SLV 12	-25.84	-36.39	904.29	-12.2088	-1.1211	-0.825
18187	SLV 13	-95.11	60.2	1104.84	-16.7159	-3.3541	-3.1268
18187	SLV 14	-95.13	175	1105.67	-17.5121	-3.355	-3.1248
18187	SLV 15	-93.03	-22.32	1091.12	-15.5245	-3.2873	-3.0578
18187	SLV 16	-93.06	92.48	1091.95	-16.3208	-3.2882	-3.0557
18187	CRTFP Ux+	0	0	0	0	0	0
18187	CRTFP Ux-	0	0	0	0	0	0
18187	CRTFP Uy+	0	0	0	0	0	0
18187	CRTFP Uy-	0	0	0	0	0	0
18188	SLU 1	-0.04	-34.4	203.34	0.1105	-2.6113	-0.0006
18188	SLU 2	-0.04	-33.35	202.64	0.1111	-2.6118	-0.0006
18188	SLU 3	-0.05	-35.1	208.38	0.0914	-2.7495	-0.0007
18188	SLU 4	-0.05	-34.47	207.96	0.0918	-2.7498	-0.0007
18188	SLU 5	-0.04	-33.72	205.79	0.0942	-2.7349	-0.0007
18188	SLU 6	-0.04	-35.47	211.53	0.0745	-2.8726	-0.0007
18188	SLU 7	-0.04	-34.84	211.11	0.0749	-2.8729	-0.0007
18188	SLU 8	-0.04	-35.14	209.65	0.0767	-2.8575	-0.0007
18188	SLU 9	-0.04	-34.51	209.23	0.0771	-2.8578	-0.0007

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18188	SLU 10	-0.06	-37.5	228.64	0.0995	-2.9427	-0.0009
18188	SLU 11	-0.06	-39.25	234.38	0.0797	-3.0804	-0.001
18188	SLU 12	-0.06	-38.62	233.96	0.0801	-3.0807	-0.001
18188	SLU 13	-0.06	-37.87	231.79	0.0826	-3.0658	-0.001
18188	SLU 14	-0.06	-39.62	237.53	0.0628	-3.2035	-0.001
18188	SLU 15	-0.06	-38.99	237.11	0.0632	-3.2038	-0.001
18188	SLU 16	-0.06	-39.29	235.65	0.0651	-3.1884	-0.001
18188	SLU 17	-0.06	-38.66	235.23	0.0654	-3.1887	-0.001
18188	SLU 18	-0.07	-40.33	240.48	0.0938	-3.084	-0.0011
18188	SLU 19	-0.07	-39.7	240.06	0.0942	-3.0843	-0.0011
18188	SLU 20	-0.07	-40.7	243.64	0.077	-3.2071	-0.0011
18188	SLU 21	-0.07	-40.07	243.22	0.0773	-3.2074	-0.0011
18188	SLU 22	-0.05	-39.02	229.96	0.1021	-2.9743	-0.0008
18188	SLU 23	-0.05	-37.96	229.26	0.1028	-2.9748	-0.0008
18188	SLU 24	-0.05	-39.72	235	0.083	-3.1126	-0.0009
18188	SLU 25	-0.05	-39.08	234.58	0.0834	-3.1129	-0.0009
18188	SLU 26	-0.05	-38.33	232.41	0.0859	-3.0979	-0.0008
18188	SLU 27	-0.05	-40.08	238.15	0.0661	-3.2357	-0.0009
18188	SLU 28	-0.05	-39.45	237.73	0.0665	-3.2359	-0.0009
18188	SLU 29	-0.05	-39.75	236.27	0.0683	-3.2205	-0.0008
18188	SLU 30	-0.05	-39.12	235.85	0.0687	-3.2208	-0.0008
18188	SLU 31	-0.07	-42.12	255.26	0.0911	-3.3057	-0.0011
18188	SLU 32	-0.07	-43.87	261	0.0714	-3.4434	-0.0012
18188	SLU 33	-0.07	-43.23	260.58	0.0718	-3.4437	-0.0012
18188	SLU 34	-0.07	-42.48	258.41	0.0742	-3.4288	-0.0011
18188	SLU 35	-0.07	-44.23	264.16	0.0545	-3.5665	-0.0012
18188	SLU 36	-0.07	-43.6	263.74	0.0549	-3.5668	-0.0012
18188	SLU 37	-0.07	-43.9	262.27	0.0567	-3.5514	-0.0011
18188	SLU 38	-0.07	-43.27	261.85	0.0571	-3.5517	-0.0011
18188	SLU 39	-0.08	-44.95	267.1	0.0855	-3.447	-0.0012
18188	SLU 40	-0.08	-44.32	266.68	0.0859	-3.4473	-0.0012
18188	SLU 41	-0.08	-45.32	270.26	0.0686	-3.5701	-0.0012
18188	SLU 42	-0.08	-44.68	269.84	0.069	-3.5704	-0.0012
18188	SLU 43	-0.05	-43.14	255.21	0.1465	-3.2702	-0.0008
18188	SLU 44	-0.05	-42.09	254.51	0.1471	-3.2707	-0.0008
18188	SLU 45	-0.05	-43.84	260.25	0.1274	-3.4084	-0.0009
18188	SLU 46	-0.05	-43.21	259.83	0.1278	-3.4087	-0.0009
18188	SLU 47	-0.05	-42.46	257.67	0.1302	-3.3938	-0.0008
18188	SLU 48	-0.05	-44.21	263.41	0.1105	-3.5315	-0.0009
18188	SLU 49	-0.05	-43.58	262.99	0.1109	-3.5318	-0.0009
18188	SLU 50	-0.05	-43.88	261.52	0.1127	-3.5164	-0.0008
18188	SLU 51	-0.05	-43.25	261.1	0.1131	-3.5167	-0.0008
18188	SLU 52	-0.07	-46.24	280.51	0.1355	-3.6016	-0.0011
18188	SLU 53	-0.07	-47.99	286.26	0.1157	-3.7393	-0.0011
18188	SLU 54	-0.07	-47.36	285.83	0.1161	-3.7396	-0.0011
18188	SLU 55	-0.07	-46.61	283.67	0.1186	-3.7247	-0.0011
18188	SLU 56	-0.07	-48.36	289.41	0.0989	-3.8624	-0.0012
18188	SLU 57	-0.07	-47.73	288.99	0.0992	-3.8627	-0.0012
18188	SLU 58	-0.07	-48.03	287.52	0.1011	-3.8473	-0.0011
18188	SLU 59	-0.07	-47.4	287.1	0.1015	-3.8476	-0.0011
18188	SLU 60	-0.08	-49.07	292.36	0.1298	-3.7429	-0.0012
18188	SLU 61	-0.08	-48.44	291.94	0.1302	-3.7432	-0.0012
18188	SLU 62	-0.08	-49.44	295.51	0.113	-3.866	-0.0012
18188	SLU 63	-0.08	-48.81	295.09	0.1134	-3.8663	-0.0012
18188	SLU 64	-0.06	-47.76	281.83	0.1381	-3.6333	-0.0009
18188	SLU 65	-0.06	-46.7	281.13	0.1388	-3.6337	-0.0009
18188	SLU 66	-0.06	-48.46	286.87	0.119	-3.7715	-0.001
18188	SLU 67	-0.06	-47.82	286.45	0.1194	-3.7718	-0.001
18188	SLU 68	-0.06	-47.07	284.29	0.1219	-3.7568	-0.001
18188	SLU 69	-0.06	-48.82	290.03	0.1021	-3.8946	-0.001
18188	SLU 70	-0.06	-48.19	289.61	0.1025	-3.8949	-0.001
18188	SLU 71	-0.06	-48.49	288.14	0.1043	-3.8795	-0.001
18188	SLU 72	-0.06	-47.86	287.72	0.1047	-3.8797	-0.001
18188	SLU 73	-0.08	-50.85	307.13	0.1271	-3.9646	-0.0012
18188	SLU 74	-0.08	-52.61	312.88	0.1074	-4.1024	-0.0013
18188	SLU 75	-0.08	-51.97	312.46	0.1078	-4.1026	-0.0013
18188	SLU 76	-0.08	-51.22	310.29	0.1102	-4.0877	-0.0013
18188	SLU 77	-0.08	-52.97	316.03	0.0905	-4.2255	-0.0013
18188	SLU 78	-0.08	-52.34	315.61	0.0909	-4.2257	-0.0013
18188	SLU 79	-0.08	-52.64	314.14	0.0927	-4.2103	-0.0013
18188	SLU 80	-0.08	-52.01	313.72	0.0931	-4.2106	-0.0013
18188	SLU 81	-0.09	-53.69	318.98	0.1215	-4.1059	-0.0013
18188	SLU 82	-0.09	-53.06	318.56	0.1219	-4.1062	-0.0013
18188	SLU 83	-0.09	-54.05	322.13	0.1046	-4.229	-0.0014
18188	SLU 84	-0.09	-53.42	321.71	0.105	-4.2293	-0.0014
18188	SLE RA 1	-0.04	-35.72	210.94	0.1081	-2.715	-0.0007
18188	SLE RA 2	-0.04	-35.02	210.48	0.1085	-2.7153	-0.0007
18188	SLE RA 3	-0.05	-36.19	214.3	0.0954	-2.8072	-0.0007
18188	SLE RA 4	-0.05	-35.77	214.02	0.0956	-2.8074	-0.0007
18188	SLE RA 5	-0.04	-35.27	212.58	0.0973	-2.7974	-0.0007
18188	SLE RA 6	-0.05	-36.43	216.41	0.0841	-2.8892	-0.0008
18188	SLE RA 7	-0.05	-36.01	216.13	0.0844	-2.8894	-0.0008
18188	SLE RA 8	-0.04	-36.21	215.15	0.0856	-2.8792	-0.0007
18188	SLE RA 9	-0.04	-35.79	214.87	0.0858	-2.8794	-0.0007
18188	SLE RA 10	-0.06	-37.79	227.81	0.1008	-2.9359	-0.0009
18188	SLE RA 11	-0.06	-38.95	231.64	0.0876	-3.0278	-0.0009
18188	SLE RA 12	-0.06	-38.53	231.36	0.0879	-3.0279	-0.0009
18188	SLE RA 13	-0.06	-38.03	229.91	0.0895	-3.018	-0.0009
18188	SLE RA 14	-0.06	-39.2	233.74	0.0763	-3.1098	-0.0009
18188	SLE RA 15	-0.06	-38.78	233.46	0.0766	-3.11	-0.0009
18188	SLE RA 16	-0.06	-38.98	232.48	0.0778	-3.0997	-0.0009

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18188	SLE RA 17	-0.06	-38.56	232.2	0.0781	-3.0999	-0.0009
18188	SLE RA 18	-0.06	-39.68	235.71	0.097	-3.0302	-0.001
18188	SLE RA 19	-0.06	-39.25	235.43	0.0973	-3.0303	-0.001
18188	SLE RA 20	-0.06	-39.92	237.81	0.0857	-3.1122	-0.001
18188	SLE RA 21	-0.06	-39.5	237.53	0.086	-3.1124	-0.001
18188	SLE FR 1	-0.04	-35.72	210.94	0.1081	-2.715	-0.0007
18188	SLE FR 2	-0.04	-35.58	210.85	0.1082	-2.7151	-0.0007
18188	SLE FR 3	-0.04	-35.82	211.79	0.1036	-2.7479	-0.0007
18188	SLE FR 4	-0.05	-36.77	218.28	0.1048	-2.8096	-0.0008
18188	SLE FR 5	-0.05	-37.01	219.21	0.1003	-2.8424	-0.0008
18188	SLE FR 6	-0.05	-37.7	223.33	0.1025	-2.8726	-0.0008
18188	SLE QP 1	-0.04	-35.72	210.94	0.1081	-2.715	-0.0007
18188	SLE QP 2	-0.05	-36.91	218.37	0.1048	-2.8096	-0.0008
18188	SLD 1	2.97	-32.31	218.27	0.1182	-2.9854	0.0448
18188	SLD 2	2.97	-35.67	219.05	0.1028	-2.9862	0.0448
18188	SLD 3	2.89	-44.36	229.88	0.2003	-3.0176	0.0461
18188	SLD 4	2.89	-47.73	230.66	0.1849	-3.0185	0.0461
18188	SLD 5	0.97	-16.66	200.61	-0.0131	-2.8132	0.0109
18188	SLD 6	0.97	-18.84	201.12	-0.0231	-2.8137	0.0109
18188	SLD 7	0.72	-56.84	239.29	0.2606	-2.9208	0.0152
18188	SLD 8	0.72	-59.03	239.79	0.2506	-2.9214	0.0153
18188	SLD 9	-0.82	-14.79	196.95	-0.0411	-2.6978	-0.0168
18188	SLD 10	-0.82	-16.98	197.46	-0.0511	-2.6983	-0.0168
18188	SLD 11	-1.07	-54.98	235.63	0.2326	-2.8054	-0.0125
18188	SLD 12	-1.07	-57.16	236.14	0.2226	-2.8059	-0.0124
18188	SLD 13	-2.99	-26.09	206.09	0.0246	-2.6006	-0.0477
18188	SLD 14	-2.99	-29.46	206.87	0.0092	-2.6015	-0.0476
18188	SLD 15	-3.07	-38.15	217.69	0.1067	-2.6329	-0.0464
18188	SLD 16	-3.07	-41.51	218.47	0.0913	-2.6338	-0.0463
18188	SLV 1	7.01	-26.41	218.76	0.1412	-3.2282	0.1058
18188	SLV 2	7	-34.26	220.58	0.1053	-3.2302	0.106
18188	SLV 3	6.83	-54.22	245.18	0.331	-3.3026	0.1088
18188	SLV 4	6.83	-62.06	247	0.2951	-3.3046	0.109
18188	SLV 5	2.33	9.74	178.1	-0.166	-2.822	0.0266
18188	SLV 6	2.33	4.73	179.27	-0.189	-2.8232	0.0267
18188	SLV 7	1.75	-82.95	266.18	0.4665	-3.07	0.0367
18188	SLV 8	1.75	-87.96	267.35	0.4436	-3.0713	0.0368
18188	SLV 9	-1.85	14.14	169.4	-0.2341	-2.5479	-0.0383
18188	SLV 10	-1.86	9.13	170.56	-0.257	-2.5492	-0.0382
18188	SLV 11	-2.43	-78.55	257.48	0.3985	-2.7959	-0.0282
18188	SLV 12	-2.43	-83.56	258.64	0.3755	-2.7972	-0.0281
18188	SLV 13	-6.93	-11.75	189.75	-0.0856	-2.3146	-0.1105
18188	SLV 14	-6.94	-19.6	191.57	-0.1215	-2.3166	-0.1104
18188	SLV 15	-7.1	-39.56	216.17	0.1042	-2.389	-0.1075
18188	SLV 16	-7.11	-47.4	217.99	0.0683	-2.391	-0.1073
18188	CRTFP Ux+	0	0	0	0	0	0
18188	CRTFP Ux-	0	0	0	0	0	0
18188	CRTFP Uy+	0	0	0	0	0	0
18188	CRTFP Uy-	0	0	0	0	0	0
18230	SLU 1	0.06	-28.38	28.39	5.1884	0.0872	-0.0019
18230	SLU 2	0.05	-25.7	28.39	5.1661	0.0872	-0.0019
18230	SLU 3	0.17	-30.58	36.7	5.4484	0.1255	-0.0024
18230	SLU 4	0.17	-28.97	36.7	5.435	0.1256	-0.0024
18230	SLU 5	0.21	-27.43	38.02	5.3546	0.1331	-0.0024
18230	SLU 6	0.32	-32.31	46.33	5.6369	0.1714	-0.0029
18230	SLU 7	0.32	-30.7	46.33	5.6235	0.1714	-0.0029
18230	SLU 8	0.37	-31.84	47.65	5.5654	0.1789	-0.0029
18230	SLU 9	0.37	-30.23	47.65	5.5521	0.1789	-0.0029
18230	SLU 10	-0.05	-30.46	30.78	5.931	0.0896	-0.0022
18230	SLU 11	0.06	-35.34	39.08	6.2132	0.1279	-0.0027
18230	SLU 12	0.06	-33.73	39.08	6.1999	0.128	-0.0027
18230	SLU 13	0.1	-32.19	40.4	6.1195	0.1355	-0.0027
18230	SLU 14	0.22	-37.07	48.71	6.4017	0.1738	-0.0032
18230	SLU 15	0.22	-35.46	48.71	6.3884	0.1738	-0.0032
18230	SLU 16	0.26	-36.59	50.03	6.3303	0.1813	-0.0032
18230	SLU 17	0.26	-34.99	50.03	6.3169	0.1813	-0.0032
18230	SLU 18	-0.1	-35.17	31.8	6.281	0.0906	-0.0024
18230	SLU 19	-0.1	-33.57	31.8	6.2677	0.0906	-0.0024
18230	SLU 20	0.06	-36.9	41.42	6.4696	0.1364	-0.0029
18230	SLU 21	0.06	-35.3	41.42	6.4562	0.1365	-0.0029
18230	SLU 22	0.11	-34.27	36.21	6.0186	0.1191	-0.0024
18230	SLU 23	0.11	-31.6	36.21	5.9964	0.1191	-0.0024
18230	SLU 24	0.22	-36.48	44.51	6.2786	0.1575	-0.0029
18230	SLU 25	0.22	-34.87	44.51	6.2653	0.1575	-0.0029
18230	SLU 26	0.27	-33.33	45.83	6.1849	0.165	-0.0029
18230	SLU 27	0.38	-38.2	54.14	6.4671	0.2033	-0.0034
18230	SLU 28	0.38	-36.6	54.14	6.4538	0.2033	-0.0034
18230	SLU 29	0.42	-37.73	55.46	6.3957	0.2108	-0.0034
18230	SLU 30	0.42	-36.13	55.46	6.3823	0.2108	-0.0034
18230	SLU 31	0	-36.36	38.59	6.7612	0.1215	-0.0027
18230	SLU 32	0.11	-41.23	46.89	7.0435	0.1599	-0.0032
18230	SLU 33	0.11	-39.63	46.89	7.0301	0.1599	-0.0032
18230	SLU 34	0.16	-38.09	48.21	6.9498	0.1674	-0.0033
18230	SLU 35	0.27	-42.96	56.52	7.232	0.2057	-0.0037
18230	SLU 36	0.27	-41.36	56.52	7.2186	0.2057	-0.0037
18230	SLU 37	0.32	-42.49	57.84	7.1605	0.2132	-0.0037
18230	SLU 38	0.32	-40.89	57.84	7.1472	0.2132	-0.0038
18230	SLU 39	-0.05	-41.07	39.61	7.1113	0.1225	-0.0029
18230	SLU 40	-0.05	-39.47	39.61	7.0979	0.1225	-0.0029
18230	SLU 41	0.11	-42.8	49.23	7.2998	0.1684	-0.0034
18230	SLU 42	0.11	-41.2	49.23	7.2865	0.1684	-0.0034

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18230	SLU 43	0.05	-34.87	34.23	6.4602	0.1024	-0.0023
18230	SLU 44	0.05	-32.19	34.23	6.438	0.1024	-0.0023
18230	SLU 45	0.16	-37.07	42.54	6.7202	0.1407	-0.0028
18230	SLU 46	0.16	-35.46	42.54	6.7069	0.1408	-0.0028
18230	SLU 47	0.21	-33.92	43.86	6.6265	0.1483	-0.0028
18230	SLU 48	0.32	-38.8	52.17	6.9087	0.1866	-0.0033
18230	SLU 49	0.32	-37.19	52.17	6.8954	0.1866	-0.0033
18230	SLU 50	0.37	-38.33	53.49	6.8373	0.1941	-0.0033
18230	SLU 51	0.37	-36.72	53.49	6.8239	0.1941	-0.0033
18230	SLU 52	-0.06	-36.95	36.62	7.2028	0.1048	-0.0026
18230	SLU 53	0.06	-41.83	44.92	7.4851	0.1432	-0.0031
18230	SLU 54	0.06	-40.22	44.92	7.4717	0.1432	-0.0031
18230	SLU 55	0.1	-38.68	46.24	7.3913	0.1507	-0.0031
18230	SLU 56	0.21	-43.56	54.55	7.6736	0.189	-0.0036
18230	SLU 57	0.21	-41.95	54.55	7.6602	0.189	-0.0036
18230	SLU 58	0.26	-43.08	55.87	7.6021	0.1965	-0.0036
18230	SLU 59	0.26	-41.48	55.87	7.5888	0.1965	-0.0036
18230	SLU 60	-0.1	-41.67	37.64	7.5529	0.1058	-0.0028
18230	SLU 61	-0.1	-40.06	37.64	7.5395	0.1058	-0.0028
18230	SLU 62	0.06	-43.39	47.26	7.7414	0.1517	-0.0033
18230	SLU 63	0.06	-41.79	47.26	7.7281	0.1517	-0.0033
18230	SLU 64	0.11	-40.77	42.05	7.2905	0.1343	-0.0028
18230	SLU 65	0.11	-38.09	42.05	7.2682	0.1343	-0.0028
18230	SLU 66	0.22	-42.97	50.35	7.5505	0.1727	-0.0033
18230	SLU 67	0.22	-41.36	50.35	7.5371	0.1727	-0.0033
18230	SLU 68	0.26	-39.82	51.67	7.4567	0.1802	-0.0033
18230	SLU 69	0.38	-44.7	59.98	7.739	0.2185	-0.0038
18230	SLU 70	0.38	-43.09	59.98	7.7256	0.2185	-0.0038
18230	SLU 71	0.42	-44.22	61.3	7.6675	0.226	-0.0038
18230	SLU 72	0.42	-42.62	61.3	7.6542	0.226	-0.0038
18230	SLU 73	0	-42.85	44.43	8.0331	0.1367	-0.0031
18230	SLU 74	0.11	-47.72	52.73	8.3153	0.1751	-0.0036
18230	SLU 75	0.11	-46.12	52.73	8.302	0.1751	-0.0036
18230	SLU 76	0.16	-44.58	54.05	8.2216	0.1826	-0.0036
18230	SLU 77	0.27	-49.45	62.36	8.5039	0.2209	-0.0041
18230	SLU 78	0.27	-47.85	62.36	8.4905	0.2209	-0.0041
18230	SLU 79	0.31	-48.98	63.68	8.4324	0.2284	-0.0041
18230	SLU 80	0.31	-47.38	63.68	8.419	0.2284	-0.0041
18230	SLU 81	-0.05	-47.56	45.45	8.3832	0.1377	-0.0033
18230	SLU 82	-0.05	-45.96	45.45	8.3698	0.1377	-0.0033
18230	SLU 83	0.11	-49.29	55.07	8.5717	0.1836	-0.0038
18230	SLU 84	0.11	-47.69	55.07	8.5583	0.1836	-0.0038
18230	SLE RA 1	0.07	-30.06	30.63	5.4256	0.0963	-0.0021
18230	SLE RA 2	0.07	-28.28	30.63	5.4107	0.0963	-0.0021
18230	SLE RA 3	0.14	-31.53	36.16	5.5989	0.1219	-0.0024
18230	SLE RA 4	0.14	-30.46	36.16	5.59	0.1219	-0.0024
18230	SLE RA 5	0.18	-29.43	37.04	5.5364	0.1269	-0.0024
18230	SLE RA 6	0.25	-32.68	42.58	5.7246	0.1524	-0.0027
18230	SLE RA 7	0.25	-31.61	42.58	5.7157	0.1525	-0.0027
18230	SLE RA 8	0.28	-32.37	43.46	5.677	0.1574	-0.0027
18230	SLE RA 9	0.28	-31.3	43.46	5.668	0.1574	-0.0027
18230	SLE RA 10	0	-31.45	32.21	5.9207	0.0979	-0.0023
18230	SLE RA 11	0.07	-34.7	37.75	6.1088	0.1235	-0.0026
18230	SLE RA 12	0.07	-33.63	37.75	6.0999	0.1235	-0.0026
18230	SLE RA 13	0.1	-32.6	38.63	6.0463	0.1285	-0.0026
18230	SLE RA 14	0.18	-35.85	44.17	6.2345	0.154	-0.0029
18230	SLE RA 15	0.18	-34.78	44.17	6.2256	0.1541	-0.0029
18230	SLE RA 16	0.21	-35.54	45.05	6.1869	0.159	-0.0029
18230	SLE RA 17	0.21	-34.47	45.05	6.178	0.159	-0.0029
18230	SLE RA 18	-0.03	-34.59	32.89	6.154	0.0986	-0.0024
18230	SLE RA 19	-0.03	-33.52	32.89	6.1451	0.0986	-0.0024
18230	SLE RA 20	0.07	-35.75	39.31	6.2797	0.1291	-0.0027
18230	SLE RA 21	0.07	-34.68	39.31	6.2708	0.1292	-0.0027
18230	SLE FR 1	0.07	-30.06	30.63	5.4256	0.0963	-0.0021
18230	SLE FR 2	0.07	-29.71	30.63	5.4226	0.0963	-0.0021
18230	SLE FR 3	0.11	-30.52	33.19	5.4759	0.1085	-0.0022
18230	SLE FR 4	0.04	-31.07	31.31	5.6412	0.097	-0.0022
18230	SLE FR 5	0.08	-31.88	33.87	5.6944	0.1092	-0.0023
18230	SLE FR 6	0.02	-32.33	31.76	5.7898	0.0974	-0.0022
18230	SLE QP 1	0.07	-30.06	30.63	5.4256	0.0963	-0.0021
18230	SLE QP 2	0.04	-31.42	31.31	5.6441	0.097	-0.0022
18230	SLD 1	21.75	-20.5	30.51	5.2243	1.209	0.0181
18230	SLD 2	21.67	-2.52	30.41	5.0547	1.2057	0.0191
18230	SLD 3	22.24	-48.87	29.86	5.5161	1.236	0.0186
18230	SLD 4	22.16	-30.9	29.77	5.3465	1.2327	0.0196
18230	SLD 5	5.82	11.76	32.06	5.1052	0.3901	0.003
18230	SLD 6	5.77	23.42	32	4.9951	0.388	0.0037
18230	SLD 7	7.46	-82.83	29.91	6.0779	0.4803	0.0046
18230	SLD 8	7.41	-71.16	29.85	5.9678	0.4782	0.0053
18230	SLD 9	-7.33	8.32	32.76	5.3204	-0.2842	-0.0096
18230	SLD 10	-7.38	19.99	32.7	5.2103	-0.2864	-0.0089
18230	SLD 11	-5.69	-86.26	30.61	6.2932	-0.194	-0.008
18230	SLD 12	-5.74	-74.6	30.55	6.1831	-0.1962	-0.0073
18230	SLD 13	-22.08	-31.94	32.84	5.9418	-1.0388	-0.0239
18230	SLD 14	-22.16	-13.97	32.75	5.7721	-1.0421	-0.0229
18230	SLD 15	-21.59	-60.32	32.2	6.2336	-1.0118	-0.0234
18230	SLD 16	-21.67	-42.35	32.11	6.064	-1.0151	-0.0224
18230	SLV 1	50.84	-6.12	29.43	4.6622	2.6992	0.0452
18230	SLV 2	50.66	35.75	29.21	4.267	2.6915	0.0475
18230	SLV 3	51.98	-71.78	27.93	5.3427	2.762	0.0464
18230	SLV 4	51.81	-29.91	27.71	4.9475	2.7543	0.0486

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18230	SLV 5	13.57	68.66	33.05	4.3845	0.7837	0.01
18230	SLV 6	13.46	95.4	32.91	4.1321	0.7788	0.0114
18230	SLV 7	17.39	-150.2	28.06	6.6526	0.993	0.0137
18230	SLV 8	17.28	-123.46	27.92	6.4002	0.9881	0.0152
18230	SLV 9	-17.2	60.62	34.69	4.888	-0.7942	-0.0195
18230	SLV 10	-17.31	87.36	34.55	4.6357	-0.7991	-0.018
18230	SLV 11	-13.38	-158.24	29.7	7.1562	-0.5849	-0.0157
18230	SLV 12	-13.49	-131.5	29.56	6.9038	-0.5898	-0.0143
18230	SLV 13	-51.73	-32.94	34.9	6.3408	-2.5604	-0.053
18230	SLV 14	-51.9	8.93	34.68	5.9456	-2.5681	-0.0507
18230	SLV 15	-50.58	-98.59	33.4	7.0212	-2.4976	-0.0518
18230	SLV 16	-50.76	-56.72	33.18	6.626	-2.5053	-0.0495
18230	CRTFP Ux+	0	0	0	0	0	0
18230	CRTFP Ux-	0	0	0	0	0	0
18230	CRTFP Uy+	0	0	0	0	0	0
18230	CRTFP Uy-	0	0	0	0	0	0
18231	SLU 1	-0.5	0.92	27.55	32.078	-0.0745	-0.0041
18231	SLU 2	-0.51	6.1	27.57	32.0967	-0.0744	-0.0041
18231	SLU 3	-0.66	-0.35	34.91	32.4872	-0.1273	-0.0051
18231	SLU 4	-0.66	2.76	34.91	32.4984	-0.1272	-0.0051
18231	SLU 5	-0.66	5.17	36.03	31.83	-0.1352	-0.0052
18231	SLU 6	-0.82	-1.29	43.37	32.2204	-0.1881	-0.0062
18231	SLU 7	-0.82	1.82	43.38	32.2317	-0.188	-0.0062
18231	SLU 8	-0.82	-0.95	44.47	31.5446	-0.1962	-0.0062
18231	SLU 9	-0.82	2.16	44.48	31.5558	-0.1961	-0.0062
18231	SLU 10	-0.66	5.24	29.94	36.856	-0.083	-0.0048
18231	SLU 11	-0.82	-1.21	37.28	37.2464	-0.1359	-0.0058
18231	SLU 12	-0.82	1.9	37.29	37.2576	-0.1358	-0.0058
18231	SLU 13	-0.82	4.31	38.4	36.5893	-0.1438	-0.0059
18231	SLU 14	-0.98	-2.15	45.74	36.9797	-0.1967	-0.0068
18231	SLU 15	-0.98	0.96	45.75	36.9909	-0.1967	-0.0068
18231	SLU 16	-0.97	-1.81	46.85	36.3039	-0.2048	-0.0069
18231	SLU 17	-0.98	1.3	46.85	36.3151	-0.2047	-0.0069
18231	SLU 18	-0.73	-0.3	30.94	38.877	-0.0868	-0.0051
18231	SLU 19	-0.73	2.8	30.95	38.8882	-0.0867	-0.0051
18231	SLU 20	-0.88	-1.24	39.4	38.6103	-0.1477	-0.0061
18231	SLU 21	-0.89	1.87	39.41	38.6215	-0.1476	-0.0061
18231	SLU 22	-0.67	-1.68	34.76	36.4738	-0.115	-0.0052
18231	SLU 23	-0.68	3.5	34.77	36.4925	-0.1148	-0.0052
18231	SLU 24	-0.83	-2.95	42.11	36.8829	-0.1677	-0.0062
18231	SLU 25	-0.84	0.15	42.12	36.8941	-0.1676	-0.0062
18231	SLU 26	-0.83	2.56	43.24	36.2258	-0.1756	-0.0063
18231	SLU 27	-0.99	-3.89	50.58	36.6162	-0.2286	-0.0073
18231	SLU 28	-0.99	-0.79	50.58	36.6274	-0.2285	-0.0073
18231	SLU 29	-0.99	-3.55	51.68	35.9404	-0.2366	-0.0073
18231	SLU 30	-0.99	-0.45	51.69	35.9516	-0.2365	-0.0073
18231	SLU 31	-0.83	2.64	37.15	41.2518	-0.1234	-0.0059
18231	SLU 32	-0.99	-3.81	44.49	41.6422	-0.1764	-0.0069
18231	SLU 33	-0.99	-0.71	44.49	41.6534	-0.1763	-0.0069
18231	SLU 34	-0.99	1.7	45.61	40.985	-0.1843	-0.0069
18231	SLU 35	-1.15	-4.75	52.95	41.3755	-0.2372	-0.0079
18231	SLU 36	-1.15	-1.65	52.96	41.3867	-0.2371	-0.0079
18231	SLU 37	-1.15	-4.42	54.05	40.6996	-0.2453	-0.008
18231	SLU 38	-1.15	-1.31	54.06	40.7108	-0.2452	-0.008
18231	SLU 39	-0.9	-2.91	38.15	43.2727	-0.1273	-0.0062
18231	SLU 40	-0.9	0.2	38.16	43.284	-0.1272	-0.0062
18231	SLU 41	-1.06	-3.85	46.61	43.006	-0.1881	-0.0072
18231	SLU 42	-1.06	-0.74	46.62	43.0172	-0.188	-0.0072
18231	SLU 43	-0.6	2.1	33.34	40.1943	-0.083	-0.005
18231	SLU 44	-0.6	7.27	33.36	40.213	-0.0829	-0.005
18231	SLU 45	-0.76	0.82	40.7	40.6035	-0.1358	-0.006
18231	SLU 46	-0.76	3.93	40.71	40.6147	-0.1357	-0.006
18231	SLU 47	-0.75	6.34	41.82	39.9463	-0.1437	-0.0061
18231	SLU 48	-0.91	-0.12	49.16	40.3367	-0.1966	-0.007
18231	SLU 49	-0.91	2.99	49.17	40.3479	-0.1965	-0.007
18231	SLU 50	-0.91	0.22	50.27	39.6609	-0.2047	-0.0071
18231	SLU 51	-0.91	3.33	50.28	39.6721	-0.2046	-0.0071
18231	SLU 52	-0.75	6.41	35.73	44.9723	-0.0915	-0.0057
18231	SLU 53	-0.91	-0.04	43.07	45.3627	-0.1444	-0.0066
18231	SLU 54	-0.91	3.07	43.08	45.3739	-0.1443	-0.0066
18231	SLU 55	-0.91	5.48	44.19	44.7056	-0.1523	-0.0067
18231	SLU 56	-1.07	-0.98	51.53	45.096	-0.2052	-0.0077
18231	SLU 57	-1.07	2.13	51.54	45.1072	-0.2051	-0.0077
18231	SLU 58	-1.07	-0.64	52.64	44.4202	-0.2133	-0.0078
18231	SLU 59	-1.07	2.47	52.65	44.4314	-0.2132	-0.0078
18231	SLU 60	-0.82	0.87	36.73	46.9933	-0.0953	-0.0059
18231	SLU 61	-0.82	3.97	36.74	47.0045	-0.0952	-0.0059
18231	SLU 62	-0.98	-0.07	45.19	46.7266	-0.1562	-0.007
18231	SLU 63	-0.98	3.04	45.2	46.7378	-0.1561	-0.007
18231	SLU 64	-0.77	-0.51	40.55	44.5901	-0.1235	-0.0061
18231	SLU 65	-0.77	4.67	40.57	44.6088	-0.1233	-0.0061
18231	SLU 66	-0.93	-1.78	47.91	44.9992	-0.1762	-0.0071
18231	SLU 67	-0.93	1.32	47.92	45.0104	-0.1761	-0.0071
18231	SLU 68	-0.93	3.73	49.03	44.3421	-0.1841	-0.0071
18231	SLU 69	-1.08	-2.72	56.37	44.7325	-0.2371	-0.0081
18231	SLU 70	-1.08	0.39	56.38	44.7437	-0.237	-0.0081
18231	SLU 71	-1.08	-2.38	57.48	44.0567	-0.2451	-0.0082
18231	SLU 72	-1.08	0.72	57.49	44.0679	-0.245	-0.0082
18231	SLU 73	-0.92	3.81	42.94	49.368	-0.1319	-0.0067
18231	SLU 74	-1.08	-2.64	50.28	49.7585	-0.1848	-0.0077
18231	SLU 75	-1.08	0.46	50.29	49.7697	-0.1848	-0.0077

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18231	SLU 76	-1.08	2.87	51.4	49.1013	-0.1928	-0.0078
18231	SLU 77	-1.24	-3.58	58.74	49.4918	-0.2457	-0.0088
18231	SLU 78	-1.24	-0.47	58.75	49.503	-0.2456	-0.0088
18231	SLU 79	-1.24	-3.24	59.85	48.8159	-0.2537	-0.0089
18231	SLU 80	-1.24	-0.14	59.86	48.8271	-0.2537	-0.0089
18231	SLU 81	-0.99	-1.74	43.94	51.389	-0.1358	-0.007
18231	SLU 82	-0.99	1.37	43.95	51.4003	-0.1357	-0.007
18231	SLU 83	-1.15	-2.68	52.4	51.1223	-0.1966	-0.0081
18231	SLU 84	-1.15	0.43	52.41	51.1335	-0.1965	-0.0081
18231	SLE RA 1	-0.55	0.18	29.61	33.334	-0.0861	-0.0044
18231	SLE RA 2	-0.55	3.63	29.62	33.3464	-0.086	-0.0044
18231	SLE RA 3	-0.66	-0.67	34.51	33.6067	-0.1213	-0.0051
18231	SLE RA 4	-0.66	1.4	34.52	33.6142	-0.1212	-0.0051
18231	SLE RA 5	-0.66	3.01	35.26	33.1686	-0.1265	-0.0051
18231	SLE RA 6	-0.76	-1.29	40.15	33.4289	-0.1618	-0.0058
18231	SLE RA 7	-0.76	0.78	40.16	33.4364	-0.1618	-0.0058
18231	SLE RA 8	-0.76	-1.07	40.89	32.9783	-0.1672	-0.0059
18231	SLE RA 9	-0.76	1	40.9	32.9858	-0.1671	-0.0059
18231	SLE RA 10	-0.66	3.06	31.2	36.5193	-0.0917	-0.0049
18231	SLE RA 11	-0.76	-1.24	36.09	36.7796	-0.127	-0.0055
18231	SLE RA 12	-0.76	0.83	36.1	36.787	-0.1269	-0.0055
18231	SLE RA 13	-0.76	2.43	36.84	36.3415	-0.1323	-0.0056
18231	SLE RA 14	-0.87	-1.87	41.74	36.6017	-0.1676	-0.0062
18231	SLE RA 15	-0.87	0.2	41.74	36.6092	-0.1675	-0.0062
18231	SLE RA 16	-0.87	-1.64	42.47	36.1512	-0.1729	-0.0063
18231	SLE RA 17	-0.87	0.43	42.48	36.1587	-0.1729	-0.0063
18231	SLE RA 18	-0.7	-0.64	31.87	37.8666	-0.0943	-0.0051
18231	SLE RA 19	-0.7	1.43	31.87	37.8741	-0.0942	-0.0051
18231	SLE RA 20	-0.81	-1.26	37.51	37.6888	-0.1348	-0.0058
18231	SLE RA 21	-0.81	0.81	37.52	37.6963	-0.1348	-0.0058
18231	SLE FR 1	-0.55	0.18	29.61	33.334	-0.0861	-0.0044
18231	SLE FR 2	-0.55	0.87	29.61	33.3365	-0.0861	-0.0044
18231	SLE FR 3	-0.59	-0.07	31.87	33.2628	-0.1023	-0.0047
18231	SLE FR 4	-0.6	0.63	30.29	34.6963	-0.0885	-0.0046
18231	SLE FR 5	-0.64	-0.32	32.54	34.6226	-0.1048	-0.0049
18231	SLE FR 6	-0.63	-0.23	30.74	35.6003	-0.0902	-0.0048
18231	SLE QP 1	-0.55	0.18	29.61	33.334	-0.0861	-0.0044
18231	SLE QP 2	-0.6	-0.06	30.29	34.6938	-0.0885	-0.0046
18231	SLD 1	22.09	33.28	31.62	37.5268	1.0637	0.0413
18231	SLD 2	22.01	-0.8	31.58	37.5232	1.0601	0.043
18231	SLD 3	22.61	-24.75	31.02	36.6505	1.0367	0.0424
18231	SLD 4	22.53	-58.83	30.98	36.6469	1.0332	0.0442
18231	SLD 5	5.45	103.89	31.61	36.8733	0.2986	0.0071
18231	SLD 6	5.39	81.77	31.59	36.8709	0.2963	0.0083
18231	SLD 7	7.15	-89.53	29.6	33.9525	0.2088	0.0109
18231	SLD 8	7.1	-111.64	29.57	33.9501	0.2065	0.012
18231	SLD 9	-8.3	111.51	31	35.4374	-0.3836	-0.0213
18231	SLD 10	-8.35	89.4	30.98	35.4351	-0.3859	-0.0201
18231	SLD 11	-6.59	-81.9	28.99	32.5166	-0.4734	-0.0175
18231	SLD 12	-6.64	-104.02	28.96	32.5143	-0.4757	-0.0164
18231	SLD 13	-23.72	58.7	29.59	32.7406	-1.2103	-0.0534
18231	SLD 14	-23.8	24.62	29.56	32.737	-1.2138	-0.0516
18231	SLD 15	-23.21	0.67	28.99	31.8644	-1.2372	-0.0523
18231	SLD 16	-23.29	-33.41	28.95	31.8608	-1.2408	-0.0505
18231	SLV 1	52.5	77.13	33.43	41.3101	2.6072	0.1027
18231	SLV 2	52.31	-2.27	33.33	41.3018	2.5989	0.1069
18231	SLV 3	53.7	-57.52	32.02	39.2786	2.5447	0.1054
18231	SLV 4	53.51	-136.91	31.92	39.2702	2.5365	0.1095
18231	SLV 5	13.55	240.74	33.38	39.7613	0.8163	0.0229
18231	SLV 6	13.43	190.04	33.32	39.7559	0.811	0.0256
18231	SLV 7	17.54	-208.06	28.68	32.9894	0.6081	0.0316
18231	SLV 8	17.42	-258.77	28.63	32.9841	0.6028	0.0343
18231	SLV 9	-18.61	258.64	31.95	36.4035	-0.7799	-0.0436
18231	SLV 10	-18.73	207.93	31.89	36.3981	-0.7852	-0.0409
18231	SLV 11	-14.62	-190.17	27.25	29.6316	-0.9881	-0.0348
18231	SLV 12	-14.74	-240.87	27.19	29.6262	-0.9934	-0.0322
18231	SLV 13	-54.7	136.78	28.65	30.1173	-2.7135	-0.1188
18231	SLV 14	-54.89	57.39	28.56	30.109	-2.7218	-0.1146
18231	SLV 15	-53.51	2.14	27.24	28.0858	-2.776	-0.1162
18231	SLV 16	-53.7	-77.26	27.15	28.0774	-2.7843	-0.112
18231	CRTFP Ux+	0	0	0	0	0	0
18231	CRTFP Ux-	0	0	0	0	0	0
18231	CRTFP Uy+	0	0	0	0	0	0
18231	CRTFP Uy-	0	0	0	0	0	0
18247	SLU 1	-0.17	-6.82	424.52	5.477	-5.0895	-0.0007
18247	SLU 2	-0.17	-5.83	425.06	5.5003	-5.0894	-0.0007
18247	SLU 3	-0.17	-7.04	438.48	5.5511	-6.4396	-0.0007
18247	SLU 4	-0.17	-6.45	438.81	5.5651	-6.4396	-0.0007
18247	SLU 5	-0.17	-5.78	436.36	5.4887	-6.6519	-0.0007
18247	SLU 6	-0.17	-6.98	449.78	5.5395	-8.0021	-0.0007
18247	SLU 7	-0.17	-6.39	450.1	5.5535	-8.002	-0.0007
18247	SLU 8	-0.17	-6.71	447.11	5.4538	-8.2145	-0.0007
18247	SLU 9	-0.17	-6.12	447.44	5.4677	-8.2144	-0.0007
18247	SLU 10	-0.2	-7.24	475.92	6.2498	-5.5341	-0.0008
18247	SLU 11	-0.2	-8.45	489.34	6.3007	-6.8844	-0.0008
18247	SLU 12	-0.2	-7.86	489.67	6.3147	-6.8843	-0.0008
18247	SLU 13	-0.2	-7.19	487.22	6.2382	-7.0966	-0.0008
18247	SLU 14	-0.2	-8.39	500.64	6.2891	-8.4469	-0.0008
18247	SLU 15	-0.2	-7.8	500.96	6.3031	-8.4468	-0.0008
18247	SLU 16	-0.2	-8.11	497.97	6.2033	-8.6592	-0.0008
18247	SLU 17	-0.2	-7.52	498.3	6.2173	-8.6592	-0.0008

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18247	SLU 18	-0.21	-8.83	497.18	6.5478	-5.7249	-0.0008
18247	SLU 19	-0.21	-8.24	497.51	6.5617	-5.7248	-0.0008
18247	SLU 20	-0.21	-8.77	508.48	6.5362	-7.2874	-0.0008
18247	SLU 21	-0.21	-8.18	508.8	6.5501	-7.2873	-0.0008
18247	SLU 22	-0.19	-8.25	481.43	6.1883	-6.4303	-0.0008
18247	SLU 23	-0.19	-7.27	481.98	6.2116	-6.4301	-0.0008
18247	SLU 24	-0.19	-8.47	495.39	6.2625	-7.7804	-0.0008
18247	SLU 25	-0.19	-7.88	495.72	6.2765	-7.7803	-0.0008
18247	SLU 26	-0.19	-7.21	493.27	6.2	-7.9926	-0.0008
18247	SLU 27	-0.19	-8.42	506.69	6.2509	-9.3429	-0.0008
18247	SLU 28	-0.19	-7.83	507.01	6.2649	-9.3428	-0.0008
18247	SLU 29	-0.19	-8.14	504.02	6.1651	-9.5552	-0.0008
18247	SLU 30	-0.19	-7.55	504.35	6.1791	-9.5552	-0.0008
18247	SLU 31	-0.22	-8.68	532.84	6.9612	-6.8749	-0.0009
18247	SLU 32	-0.22	-9.88	546.26	7.0121	-8.2252	-0.0009
18247	SLU 33	-0.22	-9.29	546.58	7.0261	-8.2251	-0.0009
18247	SLU 34	-0.22	-8.62	544.13	6.9496	-8.4374	-0.0009
18247	SLU 35	-0.22	-9.82	557.55	7.0005	-9.7876	-0.0009
18247	SLU 36	-0.22	-9.23	557.88	7.0145	-9.7876	-0.0009
18247	SLU 37	-0.22	-9.55	554.89	6.9147	-10	-0.0009
18247	SLU 38	-0.22	-8.96	555.21	6.9287	-9.9999	-0.0009
18247	SLU 39	-0.23	-10.26	554.1	7.2591	-7.0656	-0.0009
18247	SLU 40	-0.23	-9.67	554.42	7.2731	-7.0656	-0.0009
18247	SLU 41	-0.23	-10.21	565.39	7.2475	-8.6281	-0.0009
18247	SLU 42	-0.23	-9.62	565.72	7.2615	-8.628	-0.0009
18247	SLU 43	-0.21	-8.37	532.36	6.8761	-6.1567	-0.0009
18247	SLU 44	-0.21	-7.39	532.9	6.8995	-6.1565	-0.0009
18247	SLU 45	-0.21	-8.59	546.32	6.9503	-7.5068	-0.0009
18247	SLU 46	-0.21	-8	546.65	6.9643	-7.5067	-0.0009
18247	SLU 47	-0.21	-7.33	544.2	6.8879	-7.719	-0.0009
18247	SLU 48	-0.21	-8.54	557.62	6.9387	-9.0693	-0.0009
18247	SLU 49	-0.21	-7.95	557.94	6.9527	-9.0692	-0.0009
18247	SLU 50	-0.21	-8.26	554.95	6.8529	-9.2816	-0.0009
18247	SLU 51	-0.21	-7.67	555.28	6.8669	-9.2816	-0.0009
18247	SLU 52	-0.24	-8.8	583.77	7.649	-6.6013	-0.001
18247	SLU 53	-0.24	-10	597.19	7.6999	-7.9516	-0.001
18247	SLU 54	-0.24	-9.41	597.51	7.7139	-7.9515	-0.001
18247	SLU 55	-0.24	-8.74	595.06	7.6374	-8.1638	-0.001
18247	SLU 56	-0.24	-9.94	608.48	7.6883	-9.514	-0.001
18247	SLU 57	-0.24	-9.35	608.81	7.7023	-9.514	-0.001
18247	SLU 58	-0.24	-9.67	605.82	7.6025	-9.7264	-0.001
18247	SLU 59	-0.24	-9.08	606.14	7.6165	-9.7263	-0.001
18247	SLU 60	-0.25	-10.38	605.02	7.9469	-6.792	-0.001
18247	SLU 61	-0.25	-9.79	605.35	7.9609	-6.792	-0.001
18247	SLU 62	-0.25	-10.33	616.32	7.9353	-8.3545	-0.001
18247	SLU 63	-0.25	-9.74	616.64	7.9493	-8.3544	-0.001
18247	SLU 64	-0.23	-9.81	589.28	7.5875	-7.4974	-0.001
18247	SLU 65	-0.23	-8.82	589.82	7.6108	-7.4973	-0.001
18247	SLU 66	-0.24	-10.03	603.24	7.6617	-8.8476	-0.001
18247	SLU 67	-0.24	-9.44	603.56	7.6757	-8.8475	-0.001
18247	SLU 68	-0.23	-8.77	601.11	7.5992	-9.0598	-0.001
18247	SLU 69	-0.24	-9.97	614.53	7.6501	-10.41	-0.001
18247	SLU 70	-0.24	-9.38	614.86	7.6641	-10.41	-0.001
18247	SLU 71	-0.23	-9.69	611.87	7.5643	-10.6224	-0.001
18247	SLU 72	-0.23	-9.1	612.19	7.5783	-10.6223	-0.001
18247	SLU 73	-0.26	-10.23	640.68	8.3604	-7.9421	-0.0011
18247	SLU 74	-0.27	-11.43	654.1	8.4113	-9.2923	-0.0011
18247	SLU 75	-0.27	-10.84	654.42	8.4253	-9.2922	-0.0011
18247	SLU 76	-0.26	-10.17	651.98	8.3488	-9.5045	-0.0011
18247	SLU 77	-0.27	-11.38	665.4	8.3997	-10.8548	-0.0011
18247	SLU 78	-0.27	-10.79	665.72	8.4137	-10.8547	-0.0011
18247	SLU 79	-0.26	-11.1	662.73	8.3139	-11.0672	-0.0011
18247	SLU 80	-0.26	-10.51	663.06	8.3279	-11.0671	-0.0011
18247	SLU 81	-0.28	-11.82	661.94	8.6583	-8.1328	-0.0011
18247	SLU 82	-0.28	-11.23	662.26	8.6723	-8.1327	-0.0011
18247	SLU 83	-0.28	-11.76	673.23	8.6467	-9.6953	-0.0011
18247	SLU 84	-0.28	-11.17	673.56	8.6607	-9.6952	-0.0011
18247	SLE RA 1	-0.17	-7.23	440.78	5.6802	-5.4726	-0.0007
18247	SLE RA 2	-0.17	-6.57	441.14	5.6957	-5.4725	-0.0007
18247	SLE RA 3	-0.18	-7.37	450.09	5.7297	-6.3727	-0.0007
18247	SLE RA 4	-0.18	-6.98	450.3	5.739	-6.3726	-0.0007
18247	SLE RA 5	-0.17	-6.54	448.67	5.688	-6.5142	-0.0007
18247	SLE RA 6	-0.18	-7.34	457.62	5.7219	-7.4143	-0.0007
18247	SLE RA 7	-0.18	-6.94	457.84	5.7313	-7.4143	-0.0007
18247	SLE RA 8	-0.17	-7.15	455.84	5.6647	-7.5559	-0.0007
18247	SLE RA 9	-0.17	-6.76	456.06	5.6741	-7.5558	-0.0007
18247	SLE RA 10	-0.19	-7.51	475.05	6.1955	-5.769	-0.0008
18247	SLE RA 11	-0.2	-8.31	484	6.2294	-6.6692	-0.0008
18247	SLE RA 12	-0.2	-7.92	484.21	6.2387	-6.6691	-0.0008
18247	SLE RA 13	-0.19	-7.47	482.58	6.1877	-6.8107	-0.0008
18247	SLE RA 14	-0.2	-8.28	491.53	6.2216	-7.7108	-0.0008
18247	SLE RA 15	-0.2	-7.88	491.74	6.231	-7.7108	-0.0008
18247	SLE RA 16	-0.19	-8.09	489.75	6.1644	-7.8524	-0.0008
18247	SLE RA 17	-0.19	-7.7	489.97	6.1738	-7.8523	-0.0008
18247	SLE RA 18	-0.2	-8.57	489.22	6.3941	-5.8962	-0.0008
18247	SLE RA 19	-0.2	-8.18	489.44	6.4034	-5.8961	-0.0008
18247	SLE RA 20	-0.2	-8.53	496.75	6.3863	-6.9378	-0.0008
18247	SLE RA 21	-0.2	-8.14	496.97	6.3957	-6.9378	-0.0008
18247	SLE FR 1	-0.17	-7.23	440.78	5.6802	-5.4726	-0.0007
18247	SLE FR 2	-0.17	-7.1	440.85	5.6833	-5.4726	-0.0007
18247	SLE FR 3	-0.17	-7.21	443.79	5.6771	-5.8892	-0.0007

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18247	SLE FR 4	-0.18	-7.5	455.39	5.8975	-5.5996	-0.0008
18247	SLE FR 5	-0.18	-7.62	458.33	5.8913	-6.0163	-0.0008
18247	SLE FR 6	-0.19	-7.9	465	6.0371	-5.6844	-0.0008
18247	SLE QP 1	-0.17	-7.23	440.78	5.6802	-5.4726	-0.0007
18247	SLE QP 2	-0.18	-7.63	455.31	5.8944	-5.5997	-0.0008
18247	SLD 1	1.79	-2.6	476.28	6.2172	-6.5021	-0.004
18247	SLD 2	1.78	-6.1	476.1	6.1815	-6.5084	-0.0039
18247	SLD 3	1.84	-13.41	469.66	5.8913	-6.314	-0.0042
18247	SLD 4	1.83	-16.92	469.47	5.8555	-6.3203	-0.0041
18247	SLD 5	0.34	10.9	471.69	6.4918	-6.1545	-0.0015
18247	SLD 6	0.33	8.62	471.57	6.4686	-6.1586	-0.0014
18247	SLD 7	0.5	-25.16	449.6	5.4053	-5.5276	-0.0021
18247	SLD 8	0.49	-27.43	449.48	5.3821	-5.5317	-0.002
18247	SLD 9	-0.86	12.17	461.15	6.4066	-5.6676	0.0005
18247	SLD 10	-0.86	9.9	461.03	6.3834	-5.6717	0.0006
18247	SLD 11	-0.7	-23.88	439.06	5.3201	-5.0407	-0.0001
18247	SLD 12	-0.7	-26.16	438.94	5.2969	-5.0448	0
18247	SLD 13	-2.2	1.65	441.15	5.9332	-4.879	0.0026
18247	SLD 14	-2.21	-1.85	440.97	5.8974	-4.8853	0.0027
18247	SLD 15	-2.15	-9.16	434.52	5.6072	-4.6909	0.0024
18247	SLD 16	-2.16	-12.67	434.34	5.5715	-4.6972	0.0025
18247	SLV 1	4.46	3.99	504.67	6.641	-7.8919	-0.0087
18247	SLV 2	4.44	-4.17	504.25	6.5578	-7.9066	-0.0085
18247	SLV 3	4.58	-21.07	489.62	5.8984	-7.4531	-0.0091
18247	SLV 4	4.56	-29.23	489.2	5.8152	-7.4678	-0.0089
18247	SLV 5	1.04	35.24	493.02	7.2587	-6.9503	-0.0025
18247	SLV 6	1.03	30.03	492.75	7.2055	-6.9597	-0.0024
18247	SLV 7	1.42	-48.28	442.85	4.7834	-5.4877	-0.0039
18247	SLV 8	1.41	-53.5	442.58	4.7303	-5.4971	-0.0038
18247	SLV 9	-1.77	38.24	468.05	7.0585	-5.7022	0.0023
18247	SLV 10	-1.79	33.02	467.77	7.0053	-5.7116	0.0024
18247	SLV 11	-1.39	-45.29	417.88	4.5832	-4.2396	0.0009
18247	SLV 12	-1.41	-50.5	417.61	4.53	-4.249	0.001
18247	SLV 13	-4.92	13.97	421.43	5.9735	-3.7315	0.0074
18247	SLV 14	-4.94	5.8	421	5.8903	-3.7462	0.0076
18247	SLV 15	-4.81	-11.09	406.38	5.231	-3.2927	0.007
18247	SLV 16	-4.83	-19.25	405.95	5.1477	-3.3074	0.0072
18247	CRTFP Ux+	0	0	0	0	0	0
18247	CRTFP Ux-	0	0	0	0	0	0
18247	CRTFP Uy+	0	0	0	0	0	0
18247	CRTFP Uy-	0	0	0	0	0	0
18249	SLU 1	-0.31	-26.78	17.51	6.606	-0.0174	0.0016
18249	SLU 2	-0.31	-24.23	17.49	6.583	-0.0174	0.0016
18249	SLU 3	-0.33	-27.69	24.42	6.7833	-0.0184	0.0018
18249	SLU 4	-0.33	-26.16	24.41	6.7695	-0.0184	0.0018
18249	SLU 5	-0.3	-24.46	25.61	6.6549	-0.0168	0.0016
18249	SLU 6	-0.32	-27.92	32.54	6.8552	-0.0178	0.0017
18249	SLU 7	-0.32	-26.39	32.53	6.8414	-0.0178	0.0017
18249	SLU 8	-0.29	-27.25	33.76	6.7498	-0.0163	0.0016
18249	SLU 9	-0.3	-25.72	33.75	6.736	-0.0163	0.0016
18249	SLU 10	-0.45	-28.68	18.69	7.5218	-0.0258	0.0025
18249	SLU 11	-0.47	-32.14	25.62	7.7221	-0.0267	0.0026
18249	SLU 12	-0.47	-30.61	25.61	7.7083	-0.0268	0.0026
18249	SLU 13	-0.45	-28.92	26.82	7.5936	-0.0252	0.0024
18249	SLU 14	-0.47	-32.38	33.75	7.794	-0.0262	0.0026
18249	SLU 15	-0.47	-30.84	33.74	7.7802	-0.0262	0.0026
18249	SLU 16	-0.44	-31.7	34.96	7.6885	-0.0246	0.0024
18249	SLU 17	-0.44	-30.17	34.95	7.6747	-0.0246	0.0024
18249	SLU 18	-0.51	-33.15	19.23	7.9471	-0.0293	0.0028
18249	SLU 19	-0.51	-31.61	19.22	7.9333	-0.0293	0.0028
18249	SLU 20	-0.51	-33.38	27.36	8.019	-0.0288	0.0028
18249	SLU 21	-0.51	-31.85	27.34	8.0052	-0.0288	0.0028
18249	SLU 22	-0.37	-31.64	23.39	7.5407	-0.0211	0.002
18249	SLU 23	-0.37	-29.08	23.36	7.5177	-0.0211	0.002
18249	SLU 24	-0.39	-32.54	30.29	7.718	-0.0221	0.0021
18249	SLU 25	-0.39	-31.01	30.28	7.7042	-0.0221	0.0021
18249	SLU 26	-0.37	-29.31	31.49	7.5895	-0.0205	0.002
18249	SLU 27	-0.39	-32.77	38.42	7.7899	-0.0215	0.0021
18249	SLU 28	-0.39	-31.24	38.41	7.7761	-0.0215	0.0021
18249	SLU 29	-0.36	-32.1	39.64	7.6845	-0.0199	0.002
18249	SLU 30	-0.36	-30.57	39.62	7.6706	-0.02	0.002
18249	SLU 31	-0.52	-33.53	24.57	8.4564	-0.0295	0.0028
18249	SLU 32	-0.54	-37	31.5	8.6568	-0.0304	0.003
18249	SLU 33	-0.54	-35.46	31.49	8.6429	-0.0304	0.003
18249	SLU 34	-0.51	-33.77	32.69	8.5283	-0.0289	0.0028
18249	SLU 35	-0.53	-37.23	39.62	8.7286	-0.0299	0.0029
18249	SLU 36	-0.54	-35.7	39.61	8.7148	-0.0299	0.0029
18249	SLU 37	-0.51	-36.56	40.84	8.6232	-0.0283	0.0028
18249	SLU 38	-0.51	-35.02	40.83	8.6094	-0.0283	0.0028
18249	SLU 39	-0.58	-38	25.11	8.8818	-0.033	0.0032
18249	SLU 40	-0.58	-36.47	25.09	8.868	-0.033	0.0032
18249	SLU 41	-0.58	-38.23	33.23	8.9537	-0.0325	0.0032
18249	SLU 42	-0.58	-36.7	33.22	8.9399	-0.0325	0.0032
18249	SLU 43	-0.37	-33.16	20.75	8.2673	-0.0213	0.002
18249	SLU 44	-0.38	-30.6	20.73	8.2443	-0.0214	0.002
18249	SLU 45	-0.4	-34.06	27.66	8.4446	-0.0223	0.0021
18249	SLU 46	-0.4	-32.53	27.65	8.4308	-0.0223	0.0021
18249	SLU 47	-0.37	-30.83	28.85	8.3162	-0.0208	0.002
18249	SLU 48	-0.39	-34.29	35.78	8.5165	-0.0218	0.0021
18249	SLU 49	-0.39	-32.76	35.77	8.5027	-0.0218	0.0021
18249	SLU 50	-0.36	-33.62	37	8.4111	-0.0202	0.0019

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18249	SLU 51	-0.36	-32.09	36.99	8.3973	-0.0202	0.002
18249	SLU 52	-0.52	-35.05	21.93	9.1831	-0.0297	0.0028
18249	SLU 53	-0.54	-38.52	28.86	9.3834	-0.0307	0.0029
18249	SLU 54	-0.54	-36.98	28.85	9.3696	-0.0307	0.0029
18249	SLU 55	-0.52	-35.29	30.06	9.255	-0.0292	0.0028
18249	SLU 56	-0.54	-38.75	36.99	9.4553	-0.0301	0.0029
18249	SLU 57	-0.54	-37.21	36.97	9.4415	-0.0301	0.0029
18249	SLU 58	-0.51	-38.07	38.2	9.3499	-0.0286	0.0028
18249	SLU 59	-0.51	-36.54	38.19	9.3361	-0.0286	0.0028
18249	SLU 60	-0.58	-39.52	22.47	9.6084	-0.0333	0.0032
18249	SLU 61	-0.58	-37.99	22.46	9.5946	-0.0333	0.0032
18249	SLU 62	-0.58	-39.75	30.59	9.6803	-0.0327	0.0031
18249	SLU 63	-0.58	-38.22	30.58	9.6665	-0.0327	0.0031
18249	SLU 64	-0.44	-38.01	26.62	9.202	-0.025	0.0024
18249	SLU 65	-0.44	-35.45	26.6	9.179	-0.025	0.0024
18249	SLU 66	-0.46	-38.91	33.53	9.3793	-0.026	0.0025
18249	SLU 67	-0.46	-37.38	33.52	9.3655	-0.026	0.0025
18249	SLU 68	-0.44	-35.68	34.73	9.2509	-0.0245	0.0024
18249	SLU 69	-0.46	-39.15	41.66	9.4512	-0.0255	0.0025
18249	SLU 70	-0.46	-37.61	41.65	9.4374	-0.0255	0.0025
18249	SLU 71	-0.43	-38.47	42.87	9.3458	-0.0239	0.0023
18249	SLU 72	-0.43	-36.94	42.86	9.332	-0.0239	0.0023
18249	SLU 73	-0.59	-39.91	27.81	10.1178	-0.0334	0.0032
18249	SLU 74	-0.61	-43.37	34.74	10.3181	-0.0344	0.0033
18249	SLU 75	-0.61	-41.83	34.72	10.3043	-0.0344	0.0033
18249	SLU 76	-0.58	-40.14	35.93	10.1897	-0.0328	0.0032
18249	SLU 77	-0.6	-43.6	42.86	10.39	-0.0338	0.0033
18249	SLU 78	-0.6	-42.07	42.85	10.3762	-0.0338	0.0033
18249	SLU 79	-0.58	-42.93	44.08	10.2846	-0.0323	0.0031
18249	SLU 80	-0.58	-41.39	44.06	10.2708	-0.0323	0.0031
18249	SLU 81	-0.65	-44.37	28.34	10.5431	-0.037	0.0035
18249	SLU 82	-0.65	-42.84	28.33	10.5293	-0.037	0.0035
18249	SLU 83	-0.64	-44.6	36.47	10.615	-0.0364	0.0035
18249	SLU 84	-0.64	-43.07	36.46	10.6012	-0.0364	0.0035
18249	SLE RA 1	-0.32	-28.17	19.19	6.8731	-0.0184	0.0017
18249	SLE RA 2	-0.33	-26.47	19.17	6.8577	-0.0185	0.0017
18249	SLE RA 3	-0.34	-28.77	23.8	6.9913	-0.0191	0.0018
18249	SLE RA 4	-0.34	-27.75	23.79	6.982	-0.0191	0.0018
18249	SLE RA 5	-0.32	-26.62	24.59	6.9056	-0.0181	0.0017
18249	SLE RA 6	-0.34	-28.93	29.21	7.0392	-0.0187	0.0018
18249	SLE RA 7	-0.34	-27.91	29.2	7.03	-0.0187	0.0018
18249	SLE RA 8	-0.32	-28.48	30.02	6.9689	-0.0177	0.0017
18249	SLE RA 9	-0.32	-27.46	30.01	6.9597	-0.0177	0.0017
18249	SLE RA 10	-0.42	-29.44	19.98	7.4836	-0.024	0.0023
18249	SLE RA 11	-0.44	-31.74	24.6	7.6171	-0.0247	0.0024
18249	SLE RA 12	-0.44	-30.72	24.59	7.6079	-0.0247	0.0024
18249	SLE RA 13	-0.42	-29.59	25.39	7.5315	-0.0237	0.0023
18249	SLE RA 14	-0.43	-31.9	30.01	7.665	-0.0243	0.0024
18249	SLE RA 15	-0.43	-30.88	30.01	7.6558	-0.0243	0.0024
18249	SLE RA 16	-0.41	-31.45	30.82	7.5947	-0.0233	0.0023
18249	SLE RA 17	-0.42	-30.43	30.82	7.5855	-0.0233	0.0023
18249	SLE RA 18	-0.46	-32.41	20.34	7.7671	-0.0264	0.0025
18249	SLE RA 19	-0.46	-31.39	20.33	7.7579	-0.0264	0.0025
18249	SLE RA 20	-0.46	-32.57	25.75	7.815	-0.026	0.0025
18249	SLE RA 21	-0.46	-31.55	25.74	7.8058	-0.026	0.0025
18249	SLE FR 1	-0.32	-28.17	19.19	6.8731	-0.0184	0.0017
18249	SLE FR 2	-0.32	-27.83	19.19	6.87	-0.0184	0.0017
18249	SLE FR 3	-0.32	-28.23	21.36	6.8922	-0.0183	0.0017
18249	SLE FR 4	-0.37	-29.1	19.53	7.1382	-0.0208	0.002
18249	SLE FR 5	-0.36	-29.5	21.7	7.1604	-0.0207	0.002
18249	SLE FR 6	-0.39	-30.29	19.76	7.3201	-0.0224	0.0021
18249	SLE QP 1	-0.32	-28.17	19.19	6.8731	-0.0184	0.0017
18249	SLE QP 2	-0.37	-29.44	19.53	7.1413	-0.0208	0.002
18249	SLD 1	22.29	-11.18	19.34	6.8984	1.3372	-0.1283
18249	SLD 2	22.18	-10.53	19.34	6.895	1.3312	-0.1266
18249	SLD 3	22.8	-39.09	20.25	7.2261	1.3681	-0.1312
18249	SLD 4	22.7	-38.44	20.25	7.2226	1.3621	-0.1296
18249	SLD 5	5.67	18.25	18.1	6.5721	0.3408	-0.0329
18249	SLD 6	5.6	18.67	18.1	6.5699	0.3368	-0.0318
18249	SLD 7	7.38	-74.78	21.12	7.6642	0.4438	-0.0428
18249	SLD 8	7.31	-74.36	21.12	7.662	0.4398	-0.0418
18249	SLD 9	-8.04	15.48	17.94	6.6206	-0.4815	0.0457
18249	SLD 10	-8.11	15.9	17.94	6.6183	-0.4854	0.0467
18249	SLD 11	-6.34	-77.56	20.97	7.7127	-0.3785	0.0357
18249	SLD 12	-6.4	-77.14	20.97	7.7104	-0.3824	0.0368
18249	SLD 13	-23.43	-20.44	18.82	7.0599	-1.4037	0.1336
18249	SLD 14	-23.53	-19.79	18.82	7.0565	-1.4098	0.1352
18249	SLD 15	-22.92	-48.35	19.72	7.3876	-1.3728	0.1306
18249	SLD 16	-23.02	-47.7	19.73	7.3841	-1.3789	0.1322
18249	SLV 1	52.65	13.01	19.09	6.5722	3.157	-0.3028
18249	SLV 2	52.41	14.52	19.1	6.5641	3.1429	-0.299
18249	SLV 3	53.84	-51.68	21.2	7.3358	3.229	-0.3097
18249	SLV 4	53.6	-50.16	21.2	7.3278	3.2149	-0.306
18249	SLV 5	13.76	81.14	16.2	5.8137	0.8258	-0.0795
18249	SLV 6	13.61	82.11	16.21	5.8086	0.8168	-0.0771
18249	SLV 7	17.75	-134.48	23.23	8.3592	1.0657	-0.1028
18249	SLV 8	17.6	-133.51	23.23	8.3541	1.0567	-0.1003
18249	SLV 9	-18.33	74.62	15.84	5.9285	-1.0983	0.1043
18249	SLV 10	-18.48	75.59	15.84	5.9234	-1.1073	0.1067
18249	SLV 11	-14.34	-140.99	22.86	8.474	-0.8584	0.081
18249	SLV 12	-14.5	-140.03	22.86	8.4688	-0.8674	0.0834

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18249	SLV 13	-54.33	-8.72	17.86	6.9548	-3.2566	0.3099
18249	SLV 14	-54.57	-7.21	17.87	6.9467	-3.2707	0.3137
18249	SLV 15	-53.14	-73.41	19.97	7.7184	-3.1846	0.3029
18249	SLV 16	-53.38	-71.89	19.97	7.7104	-3.1987	0.3067
18249	CRTFP Ux+	0	0	0	0	0	0
18249	CRTFP Ux-	0	0	0	0	0	0
18249	CRTFP Uy+	0	0	0	0	0	0
18249	CRTFP Uy-	0	0	0	0	0	0
18250	SLU 1	-2.05	-30.2	445.54	7.4459	-28.5625	-0.0011
18250	SLU 2	-2.05	-27.59	445.4	7.4251	-28.5536	-0.0011
18250	SLU 3	-2.11	-31.08	460.23	7.6267	-29.1661	-0.001
18250	SLU 4	-2.11	-29.51	460.14	7.6142	-29.1608	-0.001
18250	SLU 5	-2.06	-27.64	456.76	7.489	-28.8728	-0.0012
18250	SLU 6	-2.12	-31.13	471.59	7.6906	-29.4853	-0.0011
18250	SLU 7	-2.12	-29.56	471.5	7.6781	-29.4799	-0.0011
18250	SLU 8	-2.08	-30.31	468.26	7.5737	-29.2008	-0.0013
18250	SLU 9	-2.08	-28.74	468.18	7.5612	-29.1955	-0.0013
18250	SLU 10	-2.42	-32.82	501.6	8.4867	-32.2148	-0.0006
18250	SLU 11	-2.48	-36.31	516.43	8.6883	-32.8273	-0.0005
18250	SLU 12	-2.48	-34.74	516.34	8.6758	-32.8219	-0.0005
18250	SLU 13	-2.43	-32.87	512.96	8.5506	-32.5339	-0.0006
18250	SLU 14	-2.49	-36.36	527.79	8.7522	-33.1464	-0.0006
18250	SLU 15	-2.49	-34.79	527.7	8.7397	-33.1411	-0.0006
18250	SLU 16	-2.45	-35.53	524.47	8.6353	-32.862	-0.0007
18250	SLU 17	-2.45	-33.97	524.38	8.6228	-32.8567	-0.0007
18250	SLU 18	-2.57	-37.67	525.83	8.9625	-33.7927	-0.0003
18250	SLU 19	-2.57	-36.1	525.75	8.95	-33.7874	-0.0003
18250	SLU 20	-2.59	-37.72	537.19	9.0264	-34.1119	-0.0004
18250	SLU 21	-2.59	-36.16	537.11	9.0139	-34.1066	-0.0004
18250	SLU 22	-2.34	-35.57	506.72	8.4902	-32.3017	-0.0011
18250	SLU 23	-2.34	-32.96	506.57	8.4694	-32.2928	-0.0011
18250	SLU 24	-2.4	-36.45	521.4	8.671	-32.9053	-0.001
18250	SLU 25	-2.4	-34.88	521.31	8.6585	-32.9	-0.001
18250	SLU 26	-2.36	-33.01	517.93	8.5333	-32.612	-0.0011
18250	SLU 27	-2.42	-36.5	532.76	8.7349	-33.2245	-0.0011
18250	SLU 28	-2.42	-34.93	532.67	8.7224	-33.2192	-0.0011
18250	SLU 29	-2.38	-35.68	529.44	8.618	-32.94	-0.0012
18250	SLU 30	-2.38	-34.11	529.35	8.6055	-32.9347	-0.0012
18250	SLU 31	-2.71	-38.19	562.78	9.531	-35.954	-0.0005
18250	SLU 32	-2.77	-41.68	577.61	9.7326	-36.5665	-0.0004
18250	SLU 33	-2.77	-40.11	577.52	9.7202	-36.5612	-0.0004
18250	SLU 34	-2.73	-38.24	574.14	9.5949	-36.2732	-0.0006
18250	SLU 35	-2.79	-41.73	588.97	9.7965	-36.8857	-0.0005
18250	SLU 36	-2.79	-40.16	588.88	9.784	-36.8803	-0.0005
18250	SLU 37	-2.74	-40.9	585.64	9.6796	-36.6012	-0.0007
18250	SLU 38	-2.75	-39.34	585.56	9.6671	-36.5959	-0.0007
18250	SLU 39	-2.87	-43.04	587.01	10.0068	-37.5319	-0.0003
18250	SLU 40	-2.87	-41.47	586.92	9.9943	-37.5266	-0.0003
18250	SLU 41	-2.89	-43.09	598.37	10.0707	-37.8511	-0.0004
18250	SLU 42	-2.89	-41.52	598.28	10.0582	-37.8458	-0.0004
18250	SLU 43	-2.56	-37.43	558.23	9.3216	-35.8492	-0.0014
18250	SLU 44	-2.56	-34.81	558.08	9.3008	-35.8403	-0.0014
18250	SLU 45	-2.62	-38.3	572.91	9.5024	-36.4528	-0.0014
18250	SLU 46	-2.62	-36.73	572.83	9.4899	-36.4475	-0.0014
18250	SLU 47	-2.58	-34.86	569.44	9.3647	-36.1595	-0.0015
18250	SLU 48	-2.63	-38.35	584.27	9.5663	-36.772	-0.0015
18250	SLU 49	-2.64	-36.78	584.19	9.5538	-36.7667	-0.0015
18250	SLU 50	-2.59	-37.53	580.95	9.4494	-36.4875	-0.0016
18250	SLU 51	-2.59	-35.96	580.86	9.4369	-36.4822	-0.0016
18250	SLU 52	-2.93	-40.04	614.29	10.3624	-39.5015	-0.0009
18250	SLU 53	-2.99	-43.53	629.12	10.564	-40.114	-0.0008
18250	SLU 54	-2.99	-41.96	629.03	10.5515	-40.1087	-0.0008
18250	SLU 55	-2.95	-40.09	625.65	10.4263	-39.8207	-0.001
18250	SLU 56	-3	-43.58	640.48	10.6279	-40.4331	-0.0009
18250	SLU 57	-3	-42.01	640.39	10.6154	-40.4278	-0.0009
18250	SLU 58	-2.96	-42.76	637.16	10.511	-40.1487	-0.0011
18250	SLU 59	-2.96	-41.19	637.07	10.4985	-40.1434	-0.0011
18250	SLU 60	-3.09	-44.89	638.52	10.8382	-41.0794	-0.0007
18250	SLU 61	-3.09	-43.32	638.43	10.8257	-41.0741	-0.0007
18250	SLU 62	-3.1	-44.94	649.88	10.9021	-41.3986	-0.0008
18250	SLU 63	-3.1	-43.38	649.79	10.8896	-41.3933	-0.0008
18250	SLU 64	-2.85	-42.79	619.41	10.3659	-39.5884	-0.0014
18250	SLU 65	-2.86	-40.18	619.26	10.3451	-39.5795	-0.0014
18250	SLU 66	-2.91	-43.67	634.09	10.5467	-40.192	-0.0013
18250	SLU 67	-2.91	-42.1	634	10.5342	-40.1867	-0.0013
18250	SLU 68	-2.87	-40.23	630.62	10.409	-39.8987	-0.0015
18250	SLU 69	-2.93	-43.72	645.45	10.6106	-40.5112	-0.0014
18250	SLU 70	-2.93	-42.15	645.36	10.5981	-40.5059	-0.0014
18250	SLU 71	-2.89	-42.9	642.13	10.4937	-40.2268	-0.0016
18250	SLU 72	-2.89	-41.33	642.04	10.4812	-40.2214	-0.0016
18250	SLU 73	-3.22	-45.41	675.46	11.4067	-43.2407	-0.0009
18250	SLU 74	-3.28	-48.9	690.29	11.6083	-43.8532	-0.0008
18250	SLU 75	-3.28	-47.33	690.21	11.5959	-43.8479	-0.0008
18250	SLU 76	-3.24	-45.46	686.82	11.4706	-43.5599	-0.0009
18250	SLU 77	-3.3	-48.95	701.65	11.6722	-44.1724	-0.0009
18250	SLU 78	-3.3	-47.38	701.57	11.6598	-44.1671	-0.0009
18250	SLU 79	-3.26	-48.12	698.33	11.5553	-43.8879	-0.001
18250	SLU 80	-3.26	-46.56	698.24	11.5428	-43.8826	-0.001
18250	SLU 81	-3.38	-50.26	699.7	11.8825	-44.8187	-0.0006
18250	SLU 82	-3.38	-48.69	699.61	11.87	-44.8133	-0.0006
18250	SLU 83	-3.4	-50.31	711.06	11.9464	-45.1378	-0.0007

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18250	SLU 84	-3.4	-48.75	710.97	11.9339	-45.1325	-0.0007
18250	SLE RA 1	-2.13	-31.74	463.02	7.7443	-29.6308	-0.0011
18250	SLE RA 2	-2.13	-30	462.92	7.7304	-29.6249	-0.0011
18250	SLE RA 3	-2.17	-32.32	472.81	7.8648	-30.0332	-0.001
18250	SLE RA 4	-2.17	-31.28	472.75	7.8565	-30.0297	-0.001
18250	SLE RA 5	-2.14	-30.03	470.5	7.773	-29.8377	-0.0011
18250	SLE RA 6	-2.18	-32.36	480.38	7.9074	-30.246	-0.0011
18250	SLE RA 7	-2.18	-31.31	480.33	7.8991	-30.2425	-0.0011
18250	SLE RA 8	-2.15	-31.81	478.17	7.8294	-30.0564	-0.0012
18250	SLE RA 9	-2.15	-30.76	478.11	7.8211	-30.0528	-0.0012
18250	SLE RA 10	-2.38	-33.48	500.39	8.4381	-32.0657	-0.0007
18250	SLE RA 11	-2.42	-35.81	510.28	8.5725	-32.474	-0.0007
18250	SLE RA 12	-2.42	-34.76	510.22	8.5642	-32.4705	-0.0007
18250	SLE RA 13	-2.39	-33.52	507.97	8.4807	-32.2785	-0.0008
18250	SLE RA 14	-2.43	-35.84	517.85	8.6151	-32.6868	-0.0007
18250	SLE RA 15	-2.43	-34.79	517.79	8.6068	-32.6832	-0.0007
18250	SLE RA 16	-2.4	-35.29	515.64	8.5372	-32.4972	-0.0009
18250	SLE RA 17	-2.4	-34.25	515.58	8.5289	-32.4936	-0.0009
18250	SLE RA 18	-2.48	-36.72	516.55	8.7553	-33.1176	-0.0006
18250	SLE RA 19	-2.48	-35.67	516.49	8.747	-33.1141	-0.0006
18250	SLE RA 20	-2.49	-36.75	524.12	8.7979	-33.3304	-0.0006
18250	SLE RA 21	-2.49	-35.71	524.06	8.7896	-33.3269	-0.0006
18250	SLE FR 1	-2.13	-31.74	463.02	7.7443	-29.6308	-0.0011
18250	SLE FR 2	-2.13	-31.39	463	7.7415	-29.6296	-0.0011
18250	SLE FR 3	-2.13	-31.75	466.05	7.7613	-29.7159	-0.0011
18250	SLE FR 4	-2.24	-32.88	479.06	8.0448	-30.6757	-0.0009
18250	SLE FR 5	-2.24	-33.25	482.11	8.0646	-30.762	-0.001
18250	SLE FR 6	-2.31	-34.23	489.79	8.2498	-31.3742	-0.0008
18250	SLE QP 1	-2.13	-31.74	463.02	7.7443	-29.6308	-0.0011
18250	SLE QP 2	-2.24	-33.23	479.08	8.0476	-30.6769	-0.0009
18250	SLD 1	20.72	-19.52	454.34	7.5782	-28.018	-0.1302
18250	SLD 2	20.62	-9.22	454.18	7.4679	-28.0152	-0.1286
18250	SLD 3	21.24	-47.52	458.87	7.8568	-28.298	-0.1332
18250	SLD 4	21.14	-37.22	458.7	7.7465	-28.2952	-0.1316
18250	SLD 5	3.88	11.56	464.82	7.5036	-29.455	-0.0355
18250	SLD 6	3.82	18.24	464.71	7.432	-29.4532	-0.0345
18250	SLD 7	5.61	-81.79	479.92	8.432	-30.3883	-0.0454
18250	SLD 8	5.55	-75.1	479.81	8.3605	-30.3865	-0.0443
18250	SLD 9	-10.02	8.64	478.35	7.7347	-30.9672	0.0425
18250	SLD 10	-10.08	15.32	478.25	7.6631	-30.9654	0.0435
18250	SLD 11	-8.29	-84.7	493.45	8.6632	-31.9005	0.0326
18250	SLD 12	-8.35	-78.02	493.34	8.5916	-31.8987	0.0336
18250	SLD 13	-25.61	-29.24	499.46	8.3487	-33.0585	0.1297
18250	SLD 14	-25.71	-18.94	499.29	8.2384	-33.0557	0.1313
18250	SLD 15	-25.09	-57.24	503.99	8.6272	-33.3385	0.1267
18250	SLD 16	-25.2	-46.94	503.82	8.5169	-33.3357	0.1283
18250	SLV 1	51.49	-1.42	420.62	6.9479	-24.444	-0.3034
18250	SLV 2	51.25	22.58	420.23	6.6909	-24.4375	-0.2997
18250	SLV 3	52.7	-66.25	431.01	7.5979	-25.0881	-0.3103
18250	SLV 4	52.46	-42.25	430.62	7.341	-25.0816	-0.3066
18250	SLV 5	12.08	70.57	445.85	6.7753	-27.8313	-0.0818
18250	SLV 6	11.93	85.9	445.6	6.6112	-27.8271	-0.0794
18250	SLV 7	16.13	-145.52	480.48	8.9421	-29.9782	-0.1049
18250	SLV 8	15.97	-130.2	480.24	8.778	-29.974	-0.1025
18250	SLV 9	-20.44	63.73	477.93	7.3172	-31.3797	0.1006
18250	SLV 10	-20.6	79.06	477.68	7.1531	-31.3756	0.103
18250	SLV 11	-16.4	-152.36	512.56	9.484	-33.5266	0.0776
18250	SLV 12	-16.56	-137.04	512.31	9.3199	-33.5225	0.08
18250	SLV 13	-56.93	-24.21	527.54	8.7542	-36.2721	0.3047
18250	SLV 14	-57.17	-0.22	527.15	8.4972	-36.2656	0.3085
18250	SLV 15	-55.72	-89.04	537.93	9.4042	-36.9162	0.2978
18250	SLV 16	-55.96	-65.05	537.54	9.1473	-36.9097	0.3016
18250	CRTFP Ux+	0	0	0	0	0	0
18250	CRTFP Ux-	0	0	0	0	0	0
18250	CRTFP Uy+	0	0	0	0	0	0
18250	CRTFP Uy-	0	0	0	0	0	0

1.3 Pressioni massime sul terreno

Nodo: *Nodo che interagisce col terreno.*
Ind.: *indice del nodo.*
Pressione minima: *situazione in cui si verifica la pressione minima nel nodo.*
Cont.: *nome breve della condizione o combinazione di carico a cui si riferisce la pressione minima.*
uz: *spostamento massimo verticale del nodo. [m]*
Valore: *pressione minima sul terreno del nodo. [kN/m²]*
Pressione massima: *situazione in cui si verifica la pressione massima nel nodo.*
Cont.: *nome breve della condizione o combinazione di carico a cui si riferisce la pressione massima.*
uz: *spostamento minimo verticale del nodo. [m]*
Valore: *pressione massima sul terreno del nodo. [kN/m²]*

Compressione estrema massima -178.886 al nodo di indice 135, di coordinate x = -17.05, y = -4.78, z = -0.98, nel contesto SLU 84.
Spostamento estremo minimo -0.0059629 al nodo di indice 135, di coordinate x = -17.05, y = -4.78, z = -0.98, nel contesto SLU 84.
Spostamento estremo massimo -0.0011941 al nodo di indice 905, di coordinate x = -0.47, y = 5.53, z = -0.98, nel contesto SLV 2.

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
10	SLU 84	-0.0049473	-148.419	SLU 1	-0.0031233	-93.698
11	SLU 84	-0.0049181	-147.543	SLU 1	-0.0031067	-93.201
12	SLU 84	-0.0048864	-146.591	SLU 1	-0.0030887	-92.66
13	SLU 84	-0.0048536	-145.609	SLU 1	-0.0030702	-92.105
14	SLU 84	-0.0048207	-144.62	SLU 1	-0.0030516	-91.547
15	SLU 84	-0.0047861	-143.584	SLV 4	-0.0030175	-90.524
16	SLU 84	-0.0047475	-142.425	SLV 4	-0.0029426	-88.278
17	SLU 84	-0.0046957	-140.872	SLV 4	-0.0028496	-85.487
18	SLU 84	-0.0049364	-148.091	SLU 1	-0.0031124	-93.372
19	SLU 84	-0.0049252	-147.756	SLU 1	-0.0031061	-93.182
21	SLU 84	-0.0048916	-146.747	SLU 1	-0.0030868	-92.603
22	SLU 84	-0.0048532	-145.595	SLU 1	-0.0030646	-91.938
23	SLU 84	-0.0048158	-144.475	SLU 1	-0.0030432	-91.295
24	SLU 84	-0.0047804	-143.412	SLU 1	-0.0030229	-90.687
25	SLU 84	-0.0047419	-142.256	SLV 4	-0.0029599	-88.796
26	SLU 84	-0.0046887	-140.661	SLV 4	-0.0028664	-85.992
27	SLU 83	-0.0049118	-147.353	SLU 2	-0.0030935	-92.805
28	SLU 84	-0.004895	-146.851	SLU 1	-0.0030838	-92.514
30	SLU 84	-0.0048559	-145.677	SLU 1	-0.0030606	-91.819
31	SLU 84	-0.0048118	-144.354	SLU 1	-0.0030344	-91.033
32	SLU 84	-0.0047743	-143.229	SLU 1	-0.0030124	-90.371
33	SLU 84	-0.0047449	-142.347	SLU 1	-0.0029954	-89.861
34	SLU 84	-0.0047156	-141.468	SLV 4	-0.0029635	-88.905
35	SLU 84	-0.0046684	-140.051	SLV 4	-0.0028744	-86.233
37	SLU 83	-0.0048854	-146.562	SLU 2	-0.0030728	-92.185
38	SLU 83	-0.0048618	-145.854	SLU 2	-0.0030589	-91.768
40	SLU 83	-0.0048186	-144.557	SLU 2	-0.003033	-90.99
41	SLU 83	-0.0047717	-143.15	SLU 2	-0.0030048	-90.144
42	SLU 84	-0.0047348	-142.043	SLU 1	-0.0029826	-89.478
43	SLU 84	-0.0047088	-141.265	SLU 1	-0.0029672	-89.016
44	SLU 84	-0.0046839	-140.516	SLU 1	-0.0029524	-88.573
45	SLU 84	-0.0046384	-139.153	SLV 2	-0.0028723	-86.169
46	SLU 83	-0.0048618	-145.853	SLU 2	-0.0030536	-91.609
47	SLU 83	-0.0048321	-144.963	SLU 2	-0.0030357	-91.072
49	SLU 83	-0.0047909	-143.727	SLU 2	-0.0030106	-90.318
50	SLU 83	-0.0047478	-142.435	SLU 2	-0.0029843	-89.528
51	SLU 83	-0.004712	-141.36	SLU 2	-0.0029625	-88.874
52	SLU 83	-0.0046836	-140.508	SLU 2	-0.0029453	-88.36
53	SLU 83	-0.0046551	-139.652	SLU 2	-0.0029282	-87.846
54	SLU 84	-0.0046063	-138.189	SLV 2	-0.0028593	-85.779
55	SLU 83	-0.0048383	-145.15	SLU 2	-0.0030342	-91.025
56	SLU 83	-0.0048048	-144.144	SLU 2	-0.0030136	-90.409
57	SLU 83	-0.0047703	-143.108	SLU 2	-0.0029923	-89.768
58	SLU 83	-0.0047336	-142.009	SLU 2	-0.0029695	-89.085
59	SLU 83	-0.0046983	-140.948	SLU 2	-0.0029476	-88.427
60	SLU 83	-0.0046641	-139.924	SLU 2	-0.0029265	-87.795
61	SLU 83	-0.0046279	-138.836	SLU 2	-0.0029043	-87.128
62	SLU 83	-0.0045743	-137.228	SLV 2	-0.0028382	-85.145
63	SLU 83	-0.0048254	-144.761	SLV 10	-0.0030219	-90.657
64	SLU 83	-0.0047921	-143.764	SLU 2	-0.0030028	-90.085
65	SLU 83	-0.0047599	-142.798	SLU 2	-0.0029828	-89.483
66	SLU 83	-0.0047245	-141.735	SLU 2	-0.0029606	-88.817
67	SLU 83	-0.0046883	-140.65	SLU 2	-0.0029379	-88.137
68	SLU 83	-0.0046514	-139.543	SLU 2	-0.002915	-87.449
69	SLU 83	-0.004612	-138.359	SLU 2	-0.0028906	-86.719
70	SLU 83	-0.0045573	-136.72	SLV 2	-0.0028253	-84.76
128	SLU 84	-0.0058238	-174.715	SLV 16	-0.0035007	-105.021
129	SLU 84	-0.00581	-174.3	SLV 16	-0.0035538	-106.613
130	SLU 84	-0.0058142	-174.426	SLV 16	-0.0036165	-108.495
131	SLU 84	-0.0058361	-175.083	SLV 12	-0.0036542	-109.625
132	SLU 84	-0.0058735	-176.206	SLV 12	-0.0036924	-110.771
133	SLU 84	-0.0059218	-177.654	SLV 12	-0.003735	-112.05
134	SLU 84	-0.0059553	-178.658	SLV 12	-0.0037644	-112.931
135	SLU 84	-0.0059629	-178.886	SLV 16	-0.0033984	-101.953
136	SLU 84	-0.0059001	-177.004	SLV 16	-0.0034254	-102.762
137	SLU 84	-0.0058514	-175.542	SLV 16	-0.0034612	-103.836
151	SLU 84	-0.0057663	-172.99	SLV 7	-0.0036404	-109.212
153	SLU 84	-0.0057435	-172.305	SLV 7	-0.003619	-108.57
155	SLU 84	-0.0057291	-171.873	SLV 7	-0.003604	-108.12
157	SLU 84	-0.0057146	-171.439	SLV 7	-0.0035866	-107.599
159	SLU 84	-0.0057035	-171.106	SLV 7	-0.0035689	-107.066
161	SLU 84	-0.0057001	-171.003	SLV 3	-0.0035247	-105.741
163	SLU 84	-0.0057076	-171.229	SLV 3	-0.0034771	-104.312
165	SLU 84	-0.0057281	-171.842	SLV 3	-0.0034351	-103.052
166	SLU 84	-0.0057583	-172.749	SLV 3	-0.003403	-102.091
167	SLU 84	-0.0058072	-174.216	SLV 3	-0.0033737	-101.212
168	SLU 84	-0.0058681	-176.042	SLV 3	-0.0033518	-100.554
177	SLU 84	-0.005782	-173.459	SLU 1	-0.0036561	-109.684
178	SLU 84	-0.0057583	-172.749	SLU 1	-0.0036417	-109.251
179	SLU 84	-0.0057246	-171.737	SLU 1	-0.0036216	-108.648
180	SLU 84	-0.005691	-170.729	SLU 1	-0.003602	-108.06
181	SLU 84	-0.0056635	-169.905	SLU 1	-0.0035865	-107.594
182	SLU 84	-0.0056442	-169.325	SLU 1	-0.003576	-107.28
183	SLU 84	-0.0056307	-168.922	SLU 1	-0.0035692	-107.076
184	SLU 84	-0.0056155	-168.466	SLU 1	-0.0035613	-106.839
185	SLU 84	-0.0057372	-172.116	SLV 16	-0.003371	-101.131
186	SLU 84	-0.0056693	-170.079	SLV 16	-0.0033868	-101.604
187	SLU 84	-0.005617	-168.511	SLV 16	-0.0034122	-102.366
188	SLU 84	-0.0055876	-167.629	SLV 16	-0.0034512	-103.537
189	SLU 84	-0.005586	-167.58	SLV 16	-0.0035064	-105.191
190	SLU 84	-0.0056134	-168.403	SLU 1	-0.0035548	-106.645

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
191	SLU 84	-0.0056668	-170.003	SLU 1	-0.0035868	-107.605
192	SLU 84	-0.0057361	-172.083	SLU 1	-0.0036287	-108.861
193	SLU 84	-0.0058083	-174.25	SLU 1	-0.0036724	-110.173
194	SLU 83	-0.0058126	-174.379	SLV 16	-0.0033598	-100.793
196	SLU 84	-0.0056252	-168.756	SLU 1	-0.0035655	-106.965
198	SLU 84	-0.0055915	-167.746	SLU 1	-0.0035466	-106.399
199	SLU 84	-0.0055645	-166.934	SLU 1	-0.0035313	-105.938
200	SLU 84	-0.005536	-166.081	SLV 7	-0.0035119	-105.356
201	SLU 84	-0.0055145	-165.435	SLV 3	-0.0034843	-104.53
202	SLU 84	-0.0055076	-165.228	SLV 3	-0.0034354	-103.062
203	SLU 84	-0.0055202	-165.607	SLV 3	-0.0033954	-101.863
204	SLU 84	-0.0055537	-166.61	SLV 3	-0.0033661	-100.984
205	SLU 84	-0.0056054	-168.161	SLV 3	-0.0033468	-100.404
206	SLU 84	-0.0056702	-170.107	SLV 3	-0.0033351	-100.052
207	SLU 83	-0.0057417	-172.25	SLV 3	-0.003327	-99.81
208	SLU 83	-0.005577	-167.309	SLV 16	-0.0033202	-99.607
209	SLU 83	-0.0054897	-164.692	SLV 16	-0.003319	-99.571
210	SLU 84	-0.0054158	-162.475	SLV 16	-0.0033268	-99.803
211	SLU 84	-0.0053694	-161.081	SLV 16	-0.003351	-100.531
212	SLU 84	-0.0053605	-160.816	SLU 1	-0.003396	-101.88
213	SLU 84	-0.0053931	-161.794	SLU 1	-0.0034152	-102.455
214	SLU 84	-0.0054638	-163.913	SLU 1	-0.0034579	-103.736
215	SLU 84	-0.0055627	-166.88	SLU 1	-0.003518	-105.541
216	SLU 84	-0.0056779	-170.338	SLU 1	-0.0035884	-107.651
217	SLU 83	-0.005669	-170.07	SLV 16	-0.0033245	-99.735
220	SLU 84	-0.0054943	-164.83	SLU 1	-0.0034797	-104.392
222	SLU 84	-0.0054472	-163.417	SLU 1	-0.0034525	-103.576
223	SLU 84	-0.0054078	-162.235	SLU 1	-0.0034296	-102.887
224	SLU 84	-0.0053643	-160.93	SLU 1	-0.0034041	-102.123
225	SLU 84	-0.0053311	-159.933	SLU 1	-0.003385	-101.55
226	SLU 84	-0.0053202	-159.605	SLV 3	-0.0033492	-100.475
227	SLU 84	-0.0053383	-160.149	SLV 3	-0.0033169	-99.508
228	SLU 84	-0.0053856	-161.567	SLV 3	-0.0033005	-99.015
229	SLU 83	-0.0054553	-163.658	SLV 3	-0.0032966	-98.898
230	SLU 83	-0.0055363	-166.089	SLV 3	-0.0032997	-98.99
231	SLU 83	-0.0056216	-168.648	SLV 3	-0.0033053	-99.158
232	SLU 83	-0.0054155	-162.465	SLV 16	-0.0032657	-97.972
233	SLU 83	-0.0053155	-159.466	SLV 16	-0.0032513	-97.538
234	SLU 83	-0.0052188	-156.564	SLV 16	-0.0032418	-97.254
235	SLU 83	-0.0051541	-154.623	SLV 16	-0.0032516	-97.547
236	SLU 84	-0.0051374	-154.122	SLU 1	-0.0032546	-97.639
237	SLU 84	-0.0051741	-155.224	SLU 1	-0.0032763	-98.29
238	SLU 84	-0.005262	-157.86	SLU 1	-0.0033297	-99.89
239	SLU 84	-0.0053914	-161.742	SLU 1	-0.0034087	-102.261
240	SLU 84	-0.0055413	-166.239	SLU 1	-0.0035005	-105.015
241	SLU 83	-0.0055158	-165.475	SLV 16	-0.0032805	-98.414
243	SLU 84	-0.005364	-160.921	SLU 1	-0.0033946	-101.839
245	SLU 84	-0.0053073	-159.218	SLU 1	-0.0033614	-100.842
246	SLU 84	-0.0052589	-157.766	SLU 1	-0.0033328	-99.984
247	SLU 84	-0.0051997	-155.991	SLU 1	-0.0032977	-98.932
248	SLU 84	-0.0051537	-154.61	SLU 1	-0.0032709	-98.126
249	SLU 84	-0.0051383	-154.149	SLU 1	-0.003263	-97.89
250	SLU 83	-0.0051616	-154.848	SLV 3	-0.0032404	-97.212
251	SLU 83	-0.0052232	-156.695	SLV 3	-0.0032361	-97.083
252	SLU 83	-0.0053117	-159.351	SLV 3	-0.0032469	-97.406
253	SLU 83	-0.005403	-162.089	SLV 3	-0.0032613	-97.84
254	SLU 83	-0.0054945	-164.836	SLV 3	-0.0032758	-98.274
256	SLV 1	-0.0057661	-172.983	SLV 16	-0.0020295	-60.885
271	SLU 83	-0.0053298	-159.895	SLV 16	-0.0029733	-89.2
273	SLU 83	-0.0054454	-163.363	SLV 16	-0.0031014	-93.041
277	SLU 83	-0.0053189	-159.566	SLV 16	-0.0032028	-96.083
278	SLU 83	-0.0052302	-156.906	SLV 16	-0.0031902	-95.705
279	SLU 83	-0.0051393	-154.18	SLV 16	-0.0031738	-95.214
280	SLU 83	-0.0050179	-150.537	SLV 16	-0.0031508	-94.525
281	SLU 83	-0.0049378	-148.133	SLU 2	-0.0031277	-93.832
282	SLU 83	-0.0049138	-147.414	SLU 2	-0.0031125	-93.375
283	SLU 84	-0.0049527	-148.582	SLU 1	-0.003136	-94.079
284	SLU 84	-0.0050535	-151.604	SLU 1	-0.0031972	-95.916
285	SLU 84	-0.0052079	-156.238	SLU 1	-0.0032917	-98.752
286	SLU 84	-0.0052585	-157.755	SLU 1	-0.0033227	-99.681
287	SLU 84	-0.005366	-160.981	SLU 1	-0.0033887	-101.661
289	SLU 84	-0.0052196	-156.587	SLU 1	-0.0033013	-99.039
291	SLU 84	-0.0051597	-154.791	SLU 1	-0.0032659	-97.978
292	SLU 84	-0.0051123	-153.369	SLU 1	-0.0032378	-97.134
293	SLU 84	-0.0050361	-151.082	SLU 1	-0.0031922	-95.767
294	SLU 84	-0.0049787	-149.361	SLU 1	-0.0031584	-94.752
295	SLU 83	-0.0049591	-148.772	SLU 2	-0.0031477	-94.432
296	SLU 83	-0.0049863	-149.588	SLV 3	-0.0031629	-94.888
297	SLU 83	-0.0050593	-151.78	SLV 3	-0.0031671	-95.014
298	SLU 83	-0.0051684	-155.052	SLV 3	-0.0031889	-95.666
299	SLU 83	-0.0052508	-157.525	SLV 3	-0.0032045	-96.134
300	SLU 83	-0.0053309	-159.926	SLV 3	-0.0032161	-96.482
304	SLU 83	-0.0054178	-162.535	SLV 3	-0.0031134	-93.402
306	SLU 83	-0.0053089	-159.266	SLV 3	-0.0030078	-90.233
321	SLU 83	-0.0053729	-161.187	SLV 3	-0.0019626	-58.877
324	SLV 14	-0.0055564	-166.693	SLV 3	-0.0019741	-59.223
325	SLU 83	-0.0050095	-150.284	SLV 3	-0.001854	-55.62
326	SLU 83	-0.0045583	-136.75	SLV 3	-0.0017555	-52.665
327	SLU 83	-0.0041909	-125.728	SLV 3	-0.001685	-50.55
328	SLV 1	-0.0057271	-171.814	SLV 16	-0.0019766	-59.299
329	SLV 1	-0.0051499	-154.496	SLV 16	-0.0018631	-55.892

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
330	SLU 83	-0.0046926	-140.779	SLV 16	-0.0017651	-52.954
331	SLU 83	-0.0043098	-129.293	SLV 16	-0.00169	-50.701
332	SLU 83	-0.0040113	-120.338	SLV 16	-0.0016432	-49.296
333	SLU 83	-0.0038015	-114.046	SLV 16	-0.0016286	-48.857
334	SLU 83	-0.0036811	-110.432	SLV 16	-0.0016485	-49.456
335	SLU 83	-0.0036478	-109.434	SLV 16	-0.0017043	-51.128
336	SLU 83	-0.0036976	-110.928	SLV 16	-0.0017958	-53.873
337	SLU 83	-0.0038242	-114.725	SLV 16	-0.0019217	-57.65
338	SLU 83	-0.0040183	-120.548	SLV 16	-0.0020786	-62.358
339	SLU 83	-0.0042661	-127.984	SLV 16	-0.0022606	-67.819
340	SLU 83	-0.0045473	-136.418	SLV 16	-0.0024579	-73.736
341	SLU 83	-0.0048312	-144.936	SLV 16	-0.0026556	-79.668
342	SLU 83	-0.0050737	-152.212	SLV 16	-0.0028326	-84.977
343	SLU 83	-0.0052165	-156.494	SLV 16	-0.0029608	-88.825
344	SLU 83	-0.0052733	-158.198	SLV 16	-0.0030405	-91.214
345	SLU 83	-0.005262	-157.86	SLV 16	-0.0030869	-92.608
346	SLU 83	-0.0052017	-156.051	SLV 16	-0.0031073	-93.218
347	SLU 83	-0.0051035	-153.104	SLV 16	-0.0031043	-93.129
348	SLU 83	-0.0050225	-150.675	SLV 16	-0.0030958	-92.873
349	SLU 83	-0.0049341	-148.024	SLV 16	-0.0030801	-92.403
350	SLU 83	-0.0048138	-144.415	SLU 2	-0.0030475	-91.426
351	SLU 83	-0.0047303	-141.91	SLU 2	-0.0029955	-89.865
352	SLU 83	-0.0047046	-141.137	SLU 2	-0.0029791	-89.374
353	SLU 83	-0.0047453	-142.359	SLU 2	-0.003004	-90.119
354	SLU 84	-0.0048508	-145.523	SLU 1	-0.0030686	-92.057
355	SLU 84	-0.0050083	-150.248	SLU 1	-0.0031649	-94.948
356	SLU 84	-0.0052435	-157.305	SLU 1	-0.0033093	-99.279
357	SLU 83	-0.0039141	-117.424	SLV 3	-0.001647	-49.409
358	SLU 83	-0.0037299	-111.896	SLV 3	-0.0016442	-49.326
359	SLU 83	-0.0036369	-109.108	SLV 3	-0.0016783	-50.349
360	SLU 83	-0.0036318	-108.955	SLV 3	-0.0017496	-52.487
361	SLU 83	-0.0037091	-111.274	SLV 3	-0.0018572	-55.715
362	SLU 83	-0.003861	-115.83	SLV 3	-0.0019986	-59.959
363	SLU 83	-0.004076	-122.281	SLV 3	-0.0021691	-65.073
364	SLU 83	-0.0043376	-130.127	SLV 3	-0.0023603	-70.81
365	SLU 83	-0.0046209	-138.627	SLV 3	-0.0025594	-76.783
366	SLU 83	-0.0048899	-146.696	SLV 3	-0.0027473	-82.419
367	SLU 83	-0.005139	-154.171	SLV 3	-0.002937	-88.111
368	SLU 83	-0.0050926	-152.778	SLV 3	-0.0028968	-86.904
369	SLU 83	-0.0052683	-158.049	SLV 3	-0.0030649	-91.946
370	SLU 83	-0.005248	-157.44	SLV 3	-0.0030427	-91.28
371	SLU 83	-0.0052824	-158.473	SLV 3	-0.0031147	-93.44
372	SLU 83	-0.0052381	-157.142	SLV 3	-0.0031379	-94.136
373	SLU 83	-0.0051514	-154.541	SLV 3	-0.0031375	-94.125
374	SLU 83	-0.0050789	-152.367	SLV 4	-0.0031306	-93.919
375	SLU 83	-0.0049994	-149.983	SLV 4	-0.0031168	-93.505
376	SLU 83	-0.0048924	-146.773	SLV 4	-0.0030959	-92.877
377	SLU 83	-0.0048183	-144.549	SLU 2	-0.0030572	-91.716
378	SLU 83	-0.0047921	-143.764	SLU 2	-0.0030399	-91.197
379	SLU 83	-0.0048161	-144.484	SLU 2	-0.0030537	-91.611
380	SLU 84	-0.0048805	-146.416	SLU 1	-0.0030921	-92.764
381	SLU 84	-0.0049622	-148.866	SLU 1	-0.0031412	-94.236
382	SLU 84	-0.0050377	-151.131	SLU 1	-0.0031864	-95.591
383	SLU 84	-0.0050819	-152.456	SLU 1	-0.0032127	-96.38
386	SLU 83	-0.0051591	-154.774	SLV 16	-0.002898	-86.941
388	SLU 83	-0.0052718	-158.153	SLV 16	-0.0030244	-90.731
389	SLU 83	-0.0050512	-151.536	SLV 3	-0.0018617	-55.85
390	SLU 83	-0.0052439	-157.316	SLV 3	-0.0030412	-91.236
393	SLU 83	-0.0051389	-154.168	SLV 3	-0.0029392	-88.175
395	SLV 1	-0.0053216	-159.648	SLV 16	-0.0018927	-56.782
397	SLU 84	-0.0049708	-149.125	SLU 1	-0.0031415	-94.244
400	SLU 83	-0.0050517	-151.55	SLV 16	-0.002853	-85.591
402	SLU 83	-0.005156	-154.681	SLV 16	-0.0029744	-89.232
403	SLU 83	-0.0048026	-144.079	SLV 3	-0.0017874	-53.622
404	SLU 83	-0.0051234	-153.701	SLV 3	-0.0029924	-89.771
407	SLU 83	-0.0050294	-150.881	SLV 3	-0.0029005	-87.015
409	SLV 1	-0.0049784	-149.352	SLV 16	-0.0017918	-53.755
410	SLU 84	-0.0048971	-146.912	SLU 1	-0.0030939	-92.818
414	SLU 83	-0.0049844	-149.533	SLV 16	-0.0028258	-84.774
416	SLU 83	-0.0050806	-152.419	SLV 16	-0.0029404	-88.211
417	SLU 83	-0.0046401	-139.202	SLV 3	-0.0017429	-52.286
418	SLU 83	-0.0050401	-151.202	SLV 4	-0.0029583	-88.75
421	SLU 83	-0.004957	-148.709	SLV 3	-0.0028783	-86.348
423	SLU 83	-0.0047505	-142.514	SLV 16	-0.0017263	-51.79
424	SLU 83	-0.0047382	-142.145	SLU 2	-0.0029879	-89.637
425	SLU 84	-0.0048632	-145.896	SLU 1	-0.0030715	-92.145
429	SLU 83	-0.0049421	-148.264	SLV 15	-0.0028065	-84.196
431	SLU 83	-0.0050302	-150.907	SLV 15	-0.0029123	-87.368
432	SLU 83	-0.0045675	-137.026	SLV 3	-0.0017283	-51.848
433	SLU 83	-0.0049784	-149.352	SLV 4	-0.0029286	-87.858
436	SLU 83	-0.0049062	-147.185	SLV 4	-0.0028625	-85.876
438	SLU 83	-0.004636	-139.079	SLV 16	-0.001693	-50.789
439	SLU 84	-0.0048639	-145.917	SLU 1	-0.0030706	-92.119
443	SLU 83	-0.0049158	-147.474	SLV 13	-0.0027901	-83.703
445	SLU 83	-0.0049958	-149.874	SLV 13	-0.0028899	-86.697
446	SLU 83	-0.0045825	-137.474	SLV 3	-0.0017417	-52.251
447	SLU 83	-0.0049287	-147.861	SLV 2	-0.0029007	-87.021
450	SLU 83	-0.0048673	-146.018	SLV 4	-0.0028469	-85.407
452	SLU 83	-0.0046199	-138.597	SLV 16	-0.0016877	-50.63
453	SLU 84	-0.0048856	-146.569	SLU 1	-0.0030827	-92.48
457	SLU 83	-0.0049005	-147.014	SLV 13	-0.0027783	-83.348

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
459	SLU 83	-0.0049724	-149.172	SLV 13	-0.002873	-86.189
460	SLU 83	-0.0046756	-140.269	SLV 3	-0.0017796	-53.388
461	SLU 83	-0.0048856	-146.567	SLV 2	-0.0028733	-86.199
464	SLU 83	-0.0048349	-145.046	SLV 2	-0.0028304	-84.912
472	SLU 83	-0.0046896	-140.689	SLV 15	-0.0017053	-51.159
473	SLU 84	-0.0049078	-147.235	SLU 1	-0.0030946	-92.837
475	SLU 83	-0.0048373	-145.119	SLU 2	-0.0030362	-91.085
476	SLU 83	-0.0049417	-148.25	SLU 2	-0.0031028	-93.084
477	SLU 83	-0.0050461	-151.383	SLU 2	-0.0031719	-95.156
478	SLU 83	-0.0049842	-149.526	SLU 2	-0.0031393	-94.18
479	SLU 83	-0.0049139	-147.417	SLU 2	-0.0030973	-92.918
481	SLU 83	-0.0048933	-146.8	SLV 13	-0.0027709	-83.127
483	SLU 83	-0.0049572	-148.716	SLV 13	-0.0028608	-85.823
484	SLU 83	-0.0048302	-144.905	SLV 3	-0.0018364	-55.093
485	SLU 83	-0.0048466	-145.398	SLV 2	-0.0028451	-85.352
488	SLU 83	-0.0048067	-144.2	SLV 2	-0.0028126	-84.379
490	SLU 83	-0.0048258	-144.774	SLV 13	-0.0017388	-52.165
493	SLU 83	-0.0049114	-147.341	SLU 2	-0.0030927	-92.782
497	SLU 83	-0.0048918	-146.755	SLV 13	-0.0027674	-83.021
499	SLU 83	-0.0049477	-148.43	SLV 13	-0.0028526	-85.578
500	SLU 83	-0.0050201	-150.602	SLV 4	-0.0019035	-57.106
501	SLU 83	-0.0048116	-144.347	SLV 2	-0.0028153	-84.459
504	SLU 83	-0.0047823	-143.469	SLV 2	-0.0027932	-83.797
506	SLV 4	-0.0050125	-150.376	SLV 13	-0.0017824	-53.473
507	SLU 83	-0.0048944	-146.831	SLU 2	-0.0030786	-92.357
513	SLU 83	-0.0048923	-146.769	SLV 13	-0.0027659	-82.978
515	SLU 83	-0.0049401	-148.203	SLV 13	-0.0028466	-85.398
516	SLU 83	-0.0052075	-156.225	SLV 2	-0.0019687	-59.062
517	SLU 83	-0.0047818	-143.455	SLV 2	-0.0027841	-83.524
520	SLU 83	-0.0047633	-142.898	SLV 2	-0.0027723	-83.17
521	SLU 83	-0.0048696	-146.087	SLU 2	-0.0030591	-91.772
524	SLV 4	-0.0051971	-155.913	SLV 13	-0.0018249	-54.746
529	SLU 83	-0.0053396	-160.187	SLV 2	-0.0020152	-60.456
530	SLU 83	-0.004888	-146.641	SLV 13	-0.0027627	-82.88
532	SLU 83	-0.0049278	-147.835	SLV 13	-0.0028389	-85.166
533	SLU 83	-0.0047605	-142.815	SLV 2	-0.0027529	-82.586
536	SLU 83	-0.0047526	-142.579	SLV 2	-0.0027514	-82.542
537	SLU 83	-0.0048371	-145.112	SLU 2	-0.0030344	-91.032
539	SLV 4	-0.0054395	-163.185	SLV 13	-0.0018044	-54.132
540	SLV 4	-0.0053013	-159.039	SLV 13	-0.0018815	-56.446
541	SLU 83	-0.0052745	-158.234	SLV 13	-0.0019655	-58.965
542	SLU 84	-0.0052664	-157.992	SLV 13	-0.0020505	-61.516
543	SLU 84	-0.0052575	-157.724	SLV 13	-0.0021334	-64.002
544	SLU 84	-0.0052437	-157.31	SLV 13	-0.0022128	-66.385
545	SLU 84	-0.0052239	-156.718	SLV 13	-0.0022886	-68.659
546	SLU 84	-0.0051983	-155.95	SLV 13	-0.0023609	-70.828
547	SLU 84	-0.0051671	-155.012	SLV 13	-0.0024297	-72.891
548	SLU 84	-0.00513	-153.9	SLV 13	-0.0024943	-74.829
549	SLU 84	-0.0050868	-152.604	SLV 13	-0.0025533	-76.598
550	SLU 84	-0.0050376	-151.128	SLV 13	-0.0026044	-78.131
551	SLU 84	-0.0049842	-149.527	SLV 13	-0.0026449	-79.346
552	SLU 84	-0.0049323	-147.97	SLV 13	-0.002673	-80.19
553	SLU 83	-0.0048924	-146.771	SLV 13	-0.002692	-80.761
554	SLU 83	-0.0049031	-147.094	SLV 13	-0.0027979	-83.938
555	SLU 83	-0.0049377	-148.132	SLV 13	-0.0028756	-86.269
556	SLU 83	-0.0049605	-148.816	SLV 13	-0.0029613	-88.839
557	SLU 83	-0.0049707	-149.122	SLV 13	-0.0030507	-91.521
558	SLU 83	-0.0049651	-148.954	SLU 2	-0.0031046	-93.138
559	SLU 83	-0.0049426	-148.278	SLU 2	-0.0030897	-92.69
560	SLU 83	-0.004904	-147.121	SLU 2	-0.0030652	-91.957
561	SLU 83	-0.0048552	-145.655	SLU 2	-0.0030349	-91.046
562	SLU 83	-0.004817	-144.511	SLU 2	-0.0030112	-90.336
563	SLU 83	-0.0047917	-143.752	SLU 2	-0.0029957	-89.871
564	SLU 83	-0.0048089	-144.267	SLU 2	-0.0030089	-90.266
565	SLU 83	-0.0047131	-141.394	SLU 2	-0.0029574	-88.723
566	SLU 83	-0.0047205	-141.614	SLV 2	-0.0029308	-87.924
567	SLU 83	-0.0047359	-142.076	SLV 2	-0.0028735	-86.204
568	SLU 83	-0.0047482	-142.445	SLV 2	-0.0028166	-84.499
569	SLU 83	-0.0047528	-142.583	SLV 2	-0.0027688	-83.064
570	SLU 83	-0.0047507	-142.521	SLV 2	-0.0027399	-82.198
571	SLU 83	-0.0047546	-142.637	SLV 2	-0.0027415	-82.246
572	SLU 83	-0.0047506	-142.517	SLV 2	-0.0027438	-82.314
573	SLU 83	-0.0047722	-143.165	SLV 2	-0.0027618	-82.853
574	SLU 83	-0.0048105	-144.315	SLV 2	-0.002773	-83.191
575	SLU 84	-0.0048844	-146.533	SLV 2	-0.0027859	-83.576
576	SLU 84	-0.0049497	-148.492	SLV 2	-0.002771	-83.13
577	SLU 84	-0.0050114	-150.343	SLV 2	-0.0027299	-81.897
578	SLU 84	-0.0050656	-151.969	SLV 2	-0.0026709	-80.126
579	SLU 84	-0.0051119	-153.356	SLV 2	-0.0026009	-78.028
580	SLU 84	-0.005151	-154.531	SLV 2	-0.0025248	-75.743
581	SLU 84	-0.0051842	-155.525	SLV 2	-0.0024449	-73.346
582	SLU 84	-0.0052124	-156.373	SLV 2	-0.0023624	-70.872
583	SLU 84	-0.005238	-157.139	SLV 2	-0.002278	-68.339
584	SLU 84	-0.0052657	-157.971	SLV 2	-0.0021929	-65.788
585	SLU 84	-0.0053065	-159.195	SLV 2	-0.0021106	-63.318
586	SLU 84	-0.0053818	-161.453	SLV 2	-0.0020384	-61.153
587	SLV 15	-0.0055253	-165.758	SLV 2	-0.0019883	-59.65
589	SLV 4	-0.0053145	-159.434	SLV 13	-0.0018499	-55.496
597	SLV 4	-0.0053233	-159.698	SLV 13	-0.0018495	-55.484
611	SLU 84	-0.0048992	-146.977	SLV 13	-0.0026707	-80.122
615	SLU 83	-0.0048668	-146.003	SLV 13	-0.0027493	-82.478

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
618	SLU 83	-0.0049037	-147.11	SLV 13	-0.002824	-84.721
627	SLU 83	-0.0047451	-142.353	SLU 2	-0.0029666	-88.997
629	SLU 83	-0.0047043	-141.129	SLU 2	-0.0029421	-88.264
631	SLU 83	-0.0047186	-141.557	SLU 2	-0.0029522	-88.565
638	SLU 83	-0.0047918	-143.753	SLU 2	-0.0030016	-90.048
643	SLU 83	-0.0046316	-138.949	SLU 2	-0.0029037	-87.112
652	SLU 83	-0.0047555	-142.665	SLV 2	-0.0027281	-81.844
655	SLU 83	-0.0047515	-142.545	SLV 2	-0.0027305	-81.914
658	SLU 84	-0.0048299	-144.898	SLV 2	-0.0027784	-83.351
671	SLU 84	-0.0053538	-160.614	SLV 2	-0.0020218	-60.653
673	SLU 84	-0.0047446	-142.338	SLV 2	-0.0027558	-82.673
675	SLU 84	-0.0048145	-144.436	SLV 2	-0.002772	-83.161
677	SLV 4	-0.0054143	-162.428	SLV 13	-0.0017906	-53.717
678	SLV 4	-0.0052764	-158.293	SLV 13	-0.0018675	-56.024
679	SLU 84	-0.0052462	-157.387	SLV 13	-0.001951	-58.529
680	SLU 84	-0.0052385	-157.156	SLV 13	-0.0020355	-61.065
681	SLU 84	-0.0052299	-156.897	SLV 13	-0.0021179	-63.536
682	SLU 84	-0.0052164	-156.491	SLV 13	-0.0021967	-65.902
683	SLU 84	-0.0051968	-155.905	SLV 13	-0.0022719	-68.157
684	SLU 84	-0.0051714	-155.143	SLV 15	-0.0023435	-70.306
685	SLU 84	-0.0051402	-154.207	SLV 16	-0.0024113	-72.338
686	SLU 84	-0.0051032	-153.096	SLV 16	-0.0024747	-74.241
687	SLU 84	-0.00506	-151.8	SLV 16	-0.0025326	-75.977
688	SLU 84	-0.0050107	-150.322	SLV 16	-0.0025828	-77.484
689	SLU 84	-0.0049573	-148.719	SLV 16	-0.002623	-78.689
690	SLU 84	-0.0049053	-147.158	SLV 16	-0.0026517	-79.552
691	SLU 84	-0.0048651	-145.954	SLV 13	-0.002673	-80.191
692	SLU 84	-0.0048446	-145.338	SLV 13	-0.0026854	-80.563
693	SLU 83	-0.0048488	-145.465	SLV 13	-0.0027377	-82.132
694	SLU 83	-0.0048652	-145.957	SLV 13	-0.0027805	-83.414
695	SLU 83	-0.0048785	-146.355	SLV 13	-0.0028422	-85.265
696	SLU 83	-0.0048908	-146.723	SLV 13	-0.0029191	-87.572
697	SLU 83	-0.0048903	-146.71	SLV 13	-0.0029993	-89.98
698	SLU 84	-0.0048741	-146.222	SLU 1	-0.0030467	-91.402
699	SLU 84	-0.0048408	-145.223	SLU 1	-0.0030252	-90.755
700	SLU 84	-0.0047912	-143.737	SLU 1	-0.0029941	-89.822
701	SLU 84	-0.0047312	-141.937	SLU 1	-0.002957	-88.71
702	SLU 84	-0.0046706	-140.117	SLU 1	-0.0029202	-87.607
703	SLU 84	-0.0046296	-138.889	SLU 1	-0.002896	-86.879
704	SLU 83	-0.0046738	-140.215	SLU 2	-0.0029236	-87.707
705	SLU 83	-0.0047025	-141.075	SLU 2	-0.0029412	-88.235
706	SLU 83	-0.004724	-141.719	SLU 2	-0.0029541	-88.624
707	SLU 83	-0.0047555	-142.664	SLU 2	-0.0029728	-89.184
708	SLU 83	-0.0047601	-142.804	SLU 2	-0.002976	-89.281
709	SLU 83	-0.0047518	-142.554	SLU 2	-0.0029736	-89.209
710	SLU 83	-0.0047097	-141.292	SLU 2	-0.0029486	-88.458
711	SLU 83	-0.0046623	-139.868	SLU 2	-0.0029197	-87.59
712	SLU 83	-0.0045862	-137.586	SLU 2	-0.0028729	-86.186
713	SLU 84	-0.0045469	-136.406	SLU 1	-0.0028483	-85.448
714	SLU 84	-0.0045395	-136.186	SLU 1	-0.0028433	-85.298
715	SLU 84	-0.0045458	-136.374	SLV 2	-0.0028032	-84.096
716	SLU 84	-0.0045593	-136.779	SLV 2	-0.0027447	-82.341
717	SLU 84	-0.0045696	-137.089	SLV 2	-0.0026873	-80.619
718	SLU 84	-0.004572	-137.161	SLV 2	-0.0026392	-79.175
719	SLU 84	-0.0045677	-137.031	SLV 2	-0.00261	-78.3
720	SLU 83	-0.0045767	-137.3	SLV 2	-0.0026391	-79.173
721	SLU 84	-0.0047341	-142.024	SLV 2	-0.0027514	-82.541
722	SLU 84	-0.004811	-144.33	SLV 4	-0.0027705	-83.115
723	SLU 84	-0.0048432	-145.295	SLV 4	-0.002775	-83.251
724	SLU 84	-0.0049093	-147.28	SLV 3	-0.0027589	-82.768
725	SLU 84	-0.0049719	-149.156	SLV 3	-0.0027177	-81.53
726	SLU 84	-0.0050268	-150.804	SLV 3	-0.0026592	-79.776
727	SLU 84	-0.0050737	-152.212	SLV 3	-0.00259	-77.7
728	SLU 84	-0.0051135	-153.406	SLV 4	-0.0025145	-75.435
729	SLU 84	-0.0051472	-154.416	SLV 4	-0.002435	-73.049
730	SLU 84	-0.0051759	-155.278	SLV 4	-0.0023527	-70.58
731	SLU 84	-0.0052019	-156.056	SLV 4	-0.0022682	-68.047
732	SLU 84	-0.0052299	-156.898	SLV 4	-0.0021831	-65.492
733	SLU 84	-0.005271	-158.13	SLV 4	-0.0021006	-63.017
734	SLU 84	-0.0053465	-160.396	SLV 4	-0.0020283	-60.848
735	SLU 84	-0.0054895	-164.685	SLV 4	-0.001978	-59.339
736	SLU 84	-0.0052784	-158.351	SLV 4	-0.0019979	-59.937
739	SLU 84	-0.0047351	-142.053	SLV 2	-0.0027512	-82.537
741	SLU 84	-0.0048027	-144.082	SLV 3	-0.0027634	-82.902
742	SLU 84	-0.0050703	-152.109	SLV 4	-0.0019308	-57.924
744	SLU 84	-0.0043195	-129.585	SLU 1	-0.0026972	-80.915
746	SLU 84	-0.004313	-129.39	SLV 3	-0.0026555	-79.666
747	SLU 84	-0.0047889	-143.666	SLV 4	-0.0018405	-55.215
750	SLV 4	-0.0048203	-144.608	SLV 13	-0.0017062	-51.185
751	SLU 84	-0.0047818	-143.455	SLV 16	-0.0025721	-77.164
753	SLU 84	-0.0048564	-145.693	SLV 16	-0.0026621	-79.862
754	SLU 84	-0.0043074	-129.223	SLU 1	-0.002698	-80.939
756	SLU 84	-0.0042723	-128.17	SLU 1	-0.0026764	-80.292
757	SLU 84	-0.0048028	-144.085	SLV 3	-0.0027566	-82.697
759	SLU 84	-0.0047477	-142.431	SLV 3	-0.0027113	-81.339
760	SLU 84	-0.004257	-127.711	SLV 3	-0.002636	-79.079
762	SLU 84	-0.0042531	-127.593	SLV 3	-0.0025739	-77.218
763	SLU 84	-0.0042026	-126.077	SLV 12	-0.0026279	-78.836
765	SLU 84	-0.0041677	-125.03	SLU 1	-0.002613	-78.389
767	SLV 4	-0.0045884	-137.653	SLV 13	-0.0016411	-49.234
768	SLU 84	-0.0044811	-134.433	SLV 2	-0.0017425	-52.274

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
770	SLU 84	-0.0048351	-145.054	SLV 3	-0.0027658	-82.973
772	SLU 84	-0.0047637	-142.912	SLV 3	-0.0027133	-81.4
773	SLU 84	-0.0047795	-143.386	SLV 16	-0.0025617	-76.852
775	SLU 84	-0.0048634	-145.903	SLV 16	-0.0026561	-79.683
776	SLU 84	-0.0042208	-126.624	SLV 3	-0.0025832	-77.496
778	SLU 84	-0.0042194	-126.583	SLV 3	-0.0025238	-75.715
779	SLU 84	-0.0041323	-123.969	SLV 16	-0.0025584	-76.751
781	SLU 84	-0.0040976	-122.929	SLV 12	-0.0025476	-76.427
783	SLV 4	-0.0044001	-132.002	SLV 13	-0.0015862	-47.587
784	SLU 84	-0.0041768	-125.305	SLV 2	-0.0016461	-49.384
786	SLU 84	-0.0048664	-145.992	SLV 3	-0.0027818	-83.453
788	SLU 84	-0.0047787	-143.361	SLV 3	-0.0027221	-81.662
789	SLU 84	-0.0047699	-143.096	SLV 16	-0.0025551	-76.654
791	SLU 84	-0.0048631	-145.892	SLV 16	-0.0026539	-79.617
792	SLU 84	-0.0042028	-126.084	SLV 3	-0.002555	-76.649
794	SLU 84	-0.004204	-126.12	SLV 3	-0.0024981	-74.943
795	SLU 84	-0.0040923	-122.769	SLV 16	-0.0025155	-75.465
797	SLU 84	-0.0040578	-121.734	SLV 16	-0.0025157	-75.471
799	SLV 4	-0.0042793	-128.378	SLV 13	-0.0015481	-46.442
800	SLU 84	-0.0038925	-116.776	SLV 2	-0.0015565	-46.695
802	SLU 84	-0.0048922	-146.767	SLV 4	-0.0027991	-83.972
804	SLU 84	-0.0047881	-143.644	SLV 4	-0.0027321	-81.963
805	SLU 84	-0.0047471	-142.413	SLV 16	-0.0025452	-76.356
807	SLU 84	-0.0048498	-145.493	SLV 13	-0.0026477	-79.43
808	SLU 84	-0.0041964	-125.891	SLV 3	-0.0025431	-76.293
810	SLU 84	-0.0042002	-126.005	SLV 3	-0.0024887	-74.662
811	SLU 84	-0.0040759	-122.277	SLV 16	-0.0025005	-75.016
813	SLU 84	-0.0040415	-121.246	SLV 16	-0.0025042	-75.126
815	SLV 4	-0.0042429	-127.288	SLV 13	-0.0015317	-45.95
816	SLU 84	-0.0036345	-109.036	SLV 2	-0.0014753	-44.259
818	SLU 84	-0.0049135	-147.406	SLV 2	-0.0028114	-84.342
820	SLU 84	-0.0047929	-143.788	SLV 2	-0.0027368	-82.104
821	SLU 84	-0.0047141	-141.424	SLV 13	-0.002526	-75.779
823	SLU 84	-0.0048263	-144.79	SLV 13	-0.0026286	-78.857
824	SLU 84	-0.0041971	-125.914	SLV 3	-0.0025413	-76.239
826	SLU 84	-0.0042035	-126.105	SLV 3	-0.0024895	-74.684
827	SLU 84	-0.0040769	-122.307	SLV 16	-0.0025053	-75.158
829	SLU 84	-0.0040427	-121.281	SLV 16	-0.0025121	-75.362
831	SLV 4	-0.0043041	-129.122	SLV 13	-0.0015413	-46.239
832	SLU 84	-0.0034017	-102.05	SLV 2	-0.0014017	-42.052
834	SLU 84	-0.0049348	-148.044	SLV 2	-0.0028148	-84.444
836	SLU 84	-0.0047976	-143.929	SLV 2	-0.0027332	-81.995
837	SLU 84	-0.0046818	-140.453	SLV 13	-0.002496	-74.88
839	SLU 84	-0.0048036	-144.108	SLV 13	-0.0025995	-77.984
840	SLU 84	-0.0042032	-126.095	SLV 3	-0.0025454	-76.363
842	SLU 84	-0.0042121	-126.364	SLV 3	-0.0024963	-74.889
843	SLU 84	-0.004091	-122.73	SLV 16	-0.0025229	-75.687
845	SLU 84	-0.0040569	-121.708	SLV 16	-0.0025327	-75.981
847	SLV 4	-0.0044732	-134.195	SLV 13	-0.001581	-47.431
848	SLU 84	-0.003187	-95.61	SLV 2	-0.0013332	-39.995
850	SLU 84	-0.0049637	-148.911	SLV 2	-0.0028042	-84.125
852	SLU 84	-0.0048099	-144.296	SLV 2	-0.0027163	-81.49
853	SLU 84	-0.0046698	-140.095	SLV 13	-0.0024667	-74
855	SLU 84	-0.0048014	-144.043	SLV 13	-0.0025742	-77.225
856	SLU 84	-0.0042153	-126.459	SLV 1	-0.0025531	-76.592
858	SLU 84	-0.0042269	-126.806	SLV 3	-0.002507	-75.211
859	SLU 84	-0.0041167	-123.5	SLV 16	-0.002549	-76.471
861	SLU 84	-0.0040827	-122.481	SLV 16	-0.0025616	-76.849
863	SLV 4	-0.0047592	-142.775	SLV 13	-0.0016555	-49.666
864	SLU 84	-0.0029794	-89.382	SLV 2	-0.0012656	-37.968
866	SLU 83	-0.0050115	-150.344	SLV 2	-0.0027845	-83.534
868	SLU 84	-0.0048408	-145.224	SLV 2	-0.0026894	-80.681
869	SLV 4	-0.0052219	-156.658	SLV 13	-0.0017416	-52.249
870	SLV 4	-0.0047125	-141.376	SLV 13	-0.0016523	-49.569
871	SLU 84	-0.004282	-128.46	SLV 13	-0.0015786	-47.357
872	SLU 84	-0.0039617	-118.852	SLV 13	-0.0015285	-45.854
873	SLU 84	-0.0037258	-111.775	SLV 13	-0.0015078	-45.234
874	SLU 84	-0.0035806	-107.418	SLV 13	-0.0015202	-45.606
875	SLU 84	-0.0035273	-105.818	SLV 13	-0.0015673	-47.02
876	SLU 84	-0.0035623	-106.869	SLV 13	-0.0016488	-49.463
877	SLU 84	-0.0036776	-110.327	SLV 13	-0.0017619	-52.857
878	SLU 84	-0.0038594	-115.782	SLV 13	-0.0019015	-57.045
879	SLU 84	-0.0040878	-122.633	SLV 13	-0.0020589	-61.768
880	SLU 84	-0.0043345	-130.036	SLV 13	-0.0022215	-66.645
881	SLU 84	-0.0045615	-136.844	SLV 13	-0.0023711	-71.132
882	SLU 84	-0.0046282	-138.846	SLV 13	-0.0024166	-72.499
883	SLU 84	-0.004238	-127.139	SLV 1	-0.0025595	-76.786
885	SLU 84	-0.0042522	-127.565	SLV 1	-0.0025189	-75.567
886	SLU 84	-0.0041563	-124.689	SLV 13	-0.0025792	-77.376
888	SLU 84	-0.0041225	-123.674	SLV 13	-0.0025939	-77.818
890	SLV 4	-0.0051693	-155.079	SLV 13	-0.0017703	-53.109
891	SLU 83	-0.0050858	-152.573	SLV 2	-0.0027557	-82.671
893	SLU 83	-0.0049087	-147.26	SLV 2	-0.0026575	-79.725
894	SLU 83	-0.0048213	-144.638	SLV 2	-0.0026072	-78.217
895	SLU 84	-0.0046083	-138.25	SLV 2	-0.0024752	-74.257
896	SLU 84	-0.0043644	-130.933	SLV 2	-0.002313	-69.39
897	SLU 84	-0.0041294	-123.882	SLV 2	-0.0021444	-64.332
898	SLU 84	-0.0039298	-117.895	SLV 2	-0.0019855	-59.565
899	SLU 84	-0.0037822	-113.467	SLV 2	-0.0018461	-55.383
900	SLU 84	-0.0036953	-110.859	SLV 2	-0.0017312	-51.935
901	SLU 84	-0.0036717	-110.152	SLV 2	-0.0016421	-49.262

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
902	SLU 84	-0.0037092	-111.277	SLV 2	-0.0015774	-47.321
903	SLU 84	-0.0038009	-114.027	SLV 2	-0.0015335	-46.006
904	SLU 84	-0.003935	-118.051	SLV 2	-0.0015051	-45.154
905	SLU 84	-0.0027648	-82.945	SLV 2	-0.0011941	-35.822
906	SLV 15	-0.0041067	-123.2	SLV 2	-0.001485	-44.551
909	SLU 83	-0.0042811	-128.434	SLV 1	-0.0025686	-77.058
911	SLU 83	-0.0042979	-128.937	SLV 1	-0.0025324	-75.972
912	SLU 84	-0.0042179	-126.537	SLV 13	-0.002611	-78.331
914	SLU 84	-0.0041841	-125.524	SLV 13	-0.0026259	-78.777
915	SLU 83	-0.0051426	-154.279	SLV 2	-0.0027252	-81.756
918	SLV 4	-0.0057055	-171.164	SLV 13	-0.0019296	-57.888
931	SLU 84	-0.0048232	-144.697	SLV 13	-0.0024614	-73.841
934	SLU 84	-0.0050495	-151.485	SLV 13	-0.0026168	-78.505
948	SLU 83	-0.0052039	-156.117	SLV 2	-0.0026655	-79.964
953	SLU 84	-0.0051167	-153.501	SLV 13	-0.0026293	-78.879
954	SLU 83	-0.0043625	-130.875	SLV 1	-0.0025967	-77.901
956	SLU 83	-0.0043819	-131.457	SLV 1	-0.0025636	-76.908
957	SLU 83	-0.0043173	-129.52	SLV 13	-0.0026567	-79.701
959	SLU 83	-0.0042837	-128.51	SLV 13	-0.0026721	-80.163
960	SLU 84	-0.0053581	-160.742	SLV 13	-0.0027059	-81.177
961	SLU 84	-0.005066	-151.979	SLV 13	-0.0025982	-77.945
962	SLU 84	-0.0047681	-143.044	SLV 13	-0.0024862	-74.587
963	SLU 84	-0.0044983	-134.948	SLV 13	-0.0023884	-71.652
964	SLU 84	-0.0042793	-128.379	SLV 13	-0.0023173	-69.518
965	SLU 84	-0.0041241	-123.723	SLV 13	-0.0022801	-68.403
966	SLU 83	-0.0040375	-121.124	SLV 13	-0.0022797	-68.392
967	SLU 83	-0.0040171	-120.512	SLV 13	-0.0023148	-69.445
968	SLU 83	-0.0040537	-121.61	SLV 13	-0.00238	-71.401
969	SLU 83	-0.0041305	-123.915	SLV 13	-0.0024653	-73.96
970	SLU 83	-0.0042223	-126.67	SLV 13	-0.0025556	-76.669
971	SLU 83	-0.0042935	-128.804	SLV 13	-0.0026299	-78.897
972	SLU 83	-0.004299	-128.971	SLV 13	-0.0026617	-79.852
973	SLU 83	-0.0042349	-127.047	SLV 13	-0.0026519	-79.556
974	SLU 83	-0.0040973	-122.92	SLU 2	-0.0025864	-77.592
975	SLU 83	-0.0039361	-118.083	SLU 2	-0.0024869	-74.607
976	SLU 83	-0.0037891	-113.672	SLU 2	-0.0023961	-71.884
977	SLU 83	-0.0036817	-110.45	SLU 2	-0.0023297	-69.891
978	SLU 83	-0.0036295	-108.884	SLU 2	-0.0022972	-68.917
979	SLU 83	-0.0036397	-109.19	SLU 2	-0.002303	-69.091
980	SLU 83	-0.0037117	-111.352	SLU 2	-0.0023469	-70.407
981	SLU 83	-0.0038375	-115.124	SLV 1	-0.0024049	-72.148
982	SLU 83	-0.0039999	-119.998	SLV 1	-0.0024645	-73.936
983	SLU 83	-0.0041718	-125.155	SLV 1	-0.0025307	-75.92
984	SLU 83	-0.0043129	-129.388	SLV 1	-0.0025787	-77.362
985	SLU 83	-0.0043704	-131.111	SLV 1	-0.0025768	-77.305
986	SLU 83	-0.004354	-130.62	SLV 1	-0.0025333	-75.999
987	SLU 83	-0.004272	-128.161	SLV 2	-0.0024524	-73.572
988	SLU 83	-0.0041718	-125.155	SLV 2	-0.00236	-70.801
989	SLU 83	-0.0040907	-122.721	SLV 2	-0.0022771	-68.313
990	SLU 83	-0.004055	-121.65	SLV 2	-0.0022186	-66.558
991	SLU 83	-0.004082	-122.459	SLV 2	-0.0021944	-65.832
992	SLU 83	-0.0041811	-125.433	SLV 2	-0.00221	-66.299
993	SLU 83	-0.0043546	-130.637	SLV 2	-0.0022666	-67.999
994	SLU 83	-0.0045971	-137.912	SLV 2	-0.0023616	-70.847
995	SLU 83	-0.0048948	-146.844	SLV 2	-0.0024873	-74.62
996	SLU 83	-0.005224	-156.719	SLV 2	-0.002631	-78.931
998	SLU 84	-0.0051753	-155.26	SLV 13	-0.0026379	-79.138
1000	SLU 83	-0.0052474	-157.421	SLV 13	-0.0026539	-79.618
1012	SLU 83	-0.0044767	-134.302	SLV 13	-0.0027353	-82.059
1014	SLU 83	-0.0044431	-133.293	SLV 13	-0.0027511	-82.533
1027	SLU 83	-0.0045073	-135.22	SLV 2	-0.0026601	-79.802
1029	SLU 83	-0.0045277	-135.832	SLV 2	-0.0026279	-78.838
1040	SLU 83	-0.0053612	-160.837	SLV 2	-0.0025524	-76.572

1.4 Cedimenti fondazioni superficiali

Nodo: *nodo che interagisce col terreno.*
Ind.: *indice del nodo.*
spostamento nodale massimo: *situazione in cui si verifica lo spostamento massimo verticale nel nodo calcolato dal solutore ad elementi finiti. Lo spostamento massimo con segno è quello con valore massimo lungo l'asse Z, dove valori positivi rappresentano spostamenti verso l'alto.*
Cont.: *nome breve della condizione o combinazione di carico a cui si riferisce lo spostamento.*
uz: *spostamento verticale del nodo calcolato dal solutore ad elementi finiti. Lo spostamento è dotato di segno. [m]*
Press.: *pressione sul terreno corrispondente allo spostamento. Valori positivi indicano trazione, valori negativi indicano compressione. [kN/m²]*
spostamento nodale minimo: *situazione in cui si verifica lo spostamento minimo verticale del nodo calcolato dal solutore ad elementi finiti. Lo spostamento minimo con segno è quello con valore minimo lungo l'asse Z, dove valori negativi rappresentano spostamenti verso il basso.*
Cont.: *nome breve della condizione o combinazione di carico a cui si riferisce lo spostamento.*
uz: *spostamento verticale del nodo calcolato dal solutore ad elementi finiti. Lo spostamento è dotato di segno. [m]*
Press.: *pressione sul terreno corrispondente allo spostamento. Valori positivi indicano trazione, valori negativi indicano compressione. [kN/m²]*
Cedimento elastico: *cedimento teorico elastico massimo.*
Cont.: *nome breve della combinazione di carico in cui è stato calcolato il cedimento teorico elastico massimo.*
v.: *valore del cedimento teorico elastico massimo. [m]*
Cedimento edometrico: *cedimento teorico edometrico massimo.*
Cont.: *nome breve della combinazione di carico in cui è stato calcolato il cedimento teorico edometrico massimo.*
v.: *valore del cedimento teorico edometrico massimo. [m]*

***Cedimento di consolidazione**: cedimento teorico di consolidazione massimo.*
***Cont.**: nome breve della combinazione di carico in cui è stato calcolato il cedimento teorico di consolidazione massimo.*
***v.**: valore del cedimento teorico di consolidazione massimo. [m]*

Spostamento estremo minimo -0.0046965 al nodo di indice 256, di coordinate x = -24.4, y = -3.28, z = -0.98, nel contesto SLD 1.
Spostamento estremo massimo -0.0015978 al nodo di indice 905, di coordinate x = -0.47, y = 5.53, z = -0.98, nel contesto SLD 2.
Cedimento elastico estremo massimo 0.0023019 al nodo di indice 507, di coordinate x = -11.36, y = 0.04, z = -0.98, nel contesto SLE rara 20.

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
10	SLE RA 1	-3.2E-03	-96.808	SLE RA 21	-3.7E-03	-109.78	SLE RA 20	1.69E-03				
11	SLE RA 1	-3.2E-03	-96.302	SLE RA 21	-3.6E-03	-109.135	SLE RA 20	1.72E-03				
12	SLE RA 1	-3.2E-03	-95.749	SLE RA 21	-3.6E-03	-108.435	SLE RA 20	0.001727				
13	SLE RA 1	-3.2E-03	-95.181	SLE RA 21	-3.6E-03	-107.713	SLE RA 20	1.71E-03				
14	SLE RA 1	-3.2E-03	-94.61	SLE RA 21	-3.6E-03	-106.986	SLE RA 20	1.68E-03				
15	SLE RA 1	-3.1E-03	-94.008	SLE RA 21	-3.5E-03	-106.225	SLE RA 20	1.64E-03				
16	SLD 4	-3.1E-03	-93.121	SLE RA 21	-3.5E-03	-105.371	SLE RA 20	1.58E-03				
17	SLD 4	-3.0E-03	-91.359	SLE RA 21	-3.5E-03	-104.226	SLE RA 20	1.48E-03				
18	SLE RA 1	-3.2E-03	-96.505	SLE RA 21	-3.7E-03	-109.506	SLE RA 20	1.79E-03				
19	SLE RA 1	-3.2E-03	-96.312	SLE RA 21	-3.6E-03	-109.259	SLE RA 20	1.79E-03				
21	SLE RA 1	-3.2E-03	-95.722	SLE RA 21	-3.6E-03	-108.515	SLE RA 20	1.81E-03				
22	SLE RA 1	-3.2E-03	-95.043	SLE RA 21	-3.6E-03	-107.666	SLE RA 20	1.81E-03				
23	SLE RA 1	-3.1E-03	-94.386	SLE RA 21	-3.6E-03	-106.841	SLE RA 20	1.79E-03				
24	SLE RA 1	-3.1E-03	-93.766	SLE RA 21	-3.5E-03	-106.057	SLE RA 20	1.74E-03				
25	SLE RA 1	-3.1E-03	-93.083	SLE RA 21	-3.5E-03	-105.205	SLE RA 20	1.70E-03				
26	SLD 4	-3.0E-03	-91.438	SLE RA 21	-3.5E-03	-104.028	SLE RA 20	1.58E-03				
27	SLE RA 2	-3.2E-03	-95.951	SLE RA 20	-3.6E-03	-108.932	SLE RA 20	1.84E-03				
28	SLE RA 1	-3.2E-03	-95.655	SLE RA 21	-3.6E-03	-108.561	SLE RA 20	1.83E-03				
30	SLE RA 1	-3.2E-03	-94.947	SLE RA 21	-3.6E-03	-107.693	SLE RA 20	1.85E-03				
31	SLE RA 1	-3.1E-03	-94.144	SLE RA 21	-3.6E-03	-106.715	SLE RA 20	1.85E-03				
32	SLE RA 1	-3.1E-03	-93.469	SLE RA 21	-3.5E-03	-105.884	SLE RA 20	1.84E-03				
33	SLE RA 1	-3.1E-03	-92.952	SLE RA 21	-3.5E-03	-105.231	SLE RA 20	1.80E-03				
34	SLE RA 1	-3.1E-03	-92.435	SLE RA 21	-3.5E-03	-104.58	SLE RA 20	0.001738				
35	SLD 4	-3.0E-03	-91.244	SLE RA 21	-3.5E-03	-103.533	SLE RA 20	1.65E-03				
37	SLE RA 2	-3.2E-03	-95.346	SLE RA 20	-3.6E-03	-108.319	SLE RA 20	1.83E-03				
38	SLE RA 2	-3.2E-03	-94.923	SLE RA 20	-3.6E-03	-107.794	SLE RA 20	1.84E-03				
40	SLE RA 2	-3.1E-03	-94.128	SLE RA 20	-3.6E-03	-106.832	SLE RA 20	1.86E-03				
41	SLE RA 2	-3.1E-03	-93.262	SLE RA 20	-3.5E-03	-105.79	SLE RA 20	1.86E-03				
42	SLE RA 1	-3.1E-03	-92.585	SLE RA 21	-3.5E-03	-104.968	SLE RA 20	1.84E-03				
43	SLE RA 1	-3.1E-03	-92.12	SLE RA 21	-3.5E-03	-104.39	SLE RA 20	1.81E-03				
44	SLE RA 1	-3.1E-03	-91.674	SLE RA 21	-3.5E-03	-103.833	SLE RA 20	1.75E-03				
45	SLD 2	-3.0E-03	-90.805	SLE RA 21	-3.4E-03	-102.823	SLE RA 20	1.68E-03				
46	SLE RA 2	-3.2E-03	-94.789	SLE RA 20	-3.6E-03	-107.765	SLE RA 20	0.001787				
47	SLE RA 2	-3.1E-03	-94.245	SLE RA 20	-0.00357	-107.101	SLE RA 20	1.80E-03				
49	SLE RA 2	-3.1E-03	-93.477	SLE RA 20	-3.5E-03	-106.183	SLE RA 20	0.001819				
50	SLE RA 2	-3.1E-03	-92.672	SLE RA 20	-3.5E-03	-105.223	SLE RA 20	1.82E-03				
51	SLE RA 2	-3.1E-03	-92.006	SLE RA 20	-3.5E-03	-104.423	SLE RA 20	1.81E-03				
52	SLE RA 2	-3.0E-03	-91.487	SLE RA 20	-3.5E-03	-103.788	SLE RA 20	1.77E-03				
53	SLE RA 2	-3.0E-03	-90.966	SLE RA 20	-3.4E-03	-103.15	SLE RA 20	1.73E-03				
54	SLE RA 1	-3.0E-03	-90.059	SLE RA 21	-3.4E-03	-102.065	SLE RA 20	1.66E-03				
55	SLE RA 2	-3.1E-03	-94.225	SLE RA 20	-3.6E-03	-107.213	SLE RA 20	0.001692				
56	SLE RA 2	-3.1E-03	-93.604	SLE RA 20	-3.5E-03	-106.461	SLE RA 20	1.72E-03				
57	SLE RA 2	-3.1E-03	-92.954	SLE RA 20	-3.5E-03	-105.688	SLE RA 20	1.74E-03				
58	SLE RA 2	-3.1E-03	-92.261	SLE RA 20	-3.5E-03	-104.867	SLE RA 20	1.74E-03				
59	SLE RA 2	-3.1E-03	-91.594	SLE RA 20	-3.5E-03	-104.076	SLE RA 20	1.73E-03				
60	SLE RA 2	-3.0E-03	-90.952	SLE RA 20	-3.4E-03	-103.312	SLE RA 20	1.70E-03				
61	SLE RA 2	-3.0E-03	-90.274	SLE RA 20	-3.4E-03	-102.502	SLE RA 20	1.66E-03				
62	SLE RA 2	-3.0E-03	-89.273	SLE RA 20	-3.4E-03	-101.309	SLE RA 20	1.60E-03				
63	SLE RA 2	-3.1E-03	-93.911	SLE RA 20	-3.6E-03	-106.908	SLE RA 20	1.62E-03				
64	SLE RA 2	-3.1E-03	-93.293	SLE RA 20	-3.5E-03	-106.161	SLE RA 20	1.68E-03				
65	SLE RA 2	-3.1E-03	-92.684	SLE RA 20	-3.5E-03	-105.439	SLE RA 20	1.70E-03				
66	SLE RA 2	-3.1E-03	-92.009	SLE RA 20	-3.5E-03	-104.644	SLE RA 20	1.68E-03				
67	SLE RA 2	-3.0E-03	-91.32	SLE RA 20	-3.5E-03	-103.833	SLE RA 20	1.67E-03				
68	SLE RA 2	-3.0E-03	-90.621	SLE RA 20	-3.4E-03	-103.008	SLE RA 20	1.64E-03				
69	SLE RA 2	-3.0E-03	-89.878	SLE RA 20	-3.4E-03	-102.126	SLE RA 20	1.62E-03				
70	SLE RA 2	-3.0E-03	-88.853	SLE RA 20	-3.4E-03	-100.908	SLE RA 20	1.54E-03				
128	SLD 16	-3.8E-03	-112.751	SLE RA 21	-4.3E-03	-129.293	SLE RA 20	3.10E-04				
129	SLD 16	-3.8E-03	-113.262	SLE RA 21	-4.3E-03	-128.989	SLE RA 20	3.50E-04				
130	SLD 16	-3.8E-03	-114.103	SLE RA 21	-4.3E-03	-129.084	SLE RA 21	3.83E-04				
131	SLE RA 1	-3.8E-03	-114.512	SLE RA 21	-4.3E-03	-129.568	SLE RA 21	0.000412				
132	SLE RA 1	-3.8E-03	-115.197	SLE RA 21	-4.3E-03	-130.395	SLE RA 21	4.36E-04				
133	SLE RA 1	-3.9E-03	-116.09	SLE RA 21	-4.4E-03	-131.461	SLE RA 21	4.52E-04				
134	SLE RA 1	-3.9E-03	-116.708	SLE RA 21	-4.4E-03	-132.2	SLE RA 21	4.64E-04				
135	SLD 16	-3.8E-03	-113.055	SLE RA 21	-4.4E-03	-132.353	SLE RA 20	0.000108				
136	SLD 16	-3.8E-03	-112.674	SLE RA 21	-4.4E-03	-130.971	SLE RA 20	0.000195				
137	SLD 16	-3.8E-03	-112.567	SLE RA 21	-0.00433	-129.899	SLE RA 20	2.64E-04				
151	SLE RA 1	-3.8E-03	-113.291	SLE RA 21	-4.3E-03	-128.058	SLE RA 21	6.64E-04				
153	SLE RA 1	-3.8E-03	-112.915	SLE RA 21	-4.3E-03	-127.56	SLE RA 21	6.00E-04				
155	SLE RA 1	-3.8E-03	-112.68	SLE RA 21	-4.2E-03	-127.246	SLE RA 21	5.63E-04				
157	SLE RA 1	-3.7E-03	-112.441	SLE RA 21	-4.2E-03	-126.93	SLE RA 21	5.32E-04				
159	SLE RA 1	-3.7E-03	-112.266	SLE RA 21	-4.2E-03	-126.687	SLE RA 21	4.94E-04				
161	SLD 3	-3.7E-03	-111.744	SLE RA 21	-4.2E-03	-126.612	SLE RA 21	4.49E-04				
163	SLD 3	-3.7E-03	-111.233	SLE RA 21	-4.2E-03	-126.779	SLE RA 21	3.94E-04				
165	SLD 3	-3.7E-03	-110.942	SLE RA 21	-4.2E-03	-127.23	SLE RA 20	3.35E-04				
166	SLD 3	-3.7E-03	-110.888	SLE RA 21	-4.3E-03	-127.896	SLE RA 20	2.80E-04				
167	SLD 3	-3.7E-03	-111.083	SLE RA 21	-4.3E-03	-128.974	SLE RA 20	2.02E-04				
168	SLD 3	-3.7E-03	-111.51	SLE RA 21	-4.3E-03	-130.315	SLE RA 20	1.06E-04				
177	SLE RA 1	-3.8E-03	-113.278	SLE RA 21	-4.3E-03	-128.348	SLE RA 21	0.000712				
178	SLE RA 1	-3.8E-03	-112.824	SLE RA 21	-4.3E-03	-127.827	SLE RA 21	7.41E-04				
179	SLE RA 1	-3.7E-03	-112.196	SLE RA 21	-4.2E-03	-127.085	SLE RA 21	7.66E-04				
180	SLE RA 1	-3.7E-03	-111.583	SLE RA 21	-4.2E-03	-126.349	SLE RA 21	7.92E-04				
181	SLE RA 1	-3.7E-03	-111.096	SLE RA 21	-4.2E-03	-125.748	SLE RA 21	8.30E-04				

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
182	SLE RA 1	-3.7E-03	-110.769	SLE RA 21	-4.2E-03	-125.327	SLE RA 21	8.17E-04				
183	SLE RA 1	-3.7E-03	-110.555	SLE RA 21	-4.2E-03	-125.036	SLE RA 21	8.36E-04				
184	SLE RA 1	-3.7E-03	-110.31	SLE RA 21	-4.2E-03	-124.705	SLE RA 21	8.39E-04				
185	SLD 16	-3.7E-03	-110.087	SLE RA 21	-4.2E-03	-127.346	SLE RA 20	3.96E-04				
186	SLD 16	-0.00365	-109.5	SLE RA 21	-4.2E-03	-125.849	SLE RA 20	4.71E-04				
187	SLD 16	-3.6E-03	-109.216	SLE RA 21	-4.2E-03	-124.696	SLE RA 20	5.38E-04				
188	SLD 16	-3.6E-03	-109.366	SLE RA 21	-4.1E-03	-124.049	SLE RA 20	5.92E-04				
189	SLE RA 1	-3.7E-03	-109.652	SLE RA 21	-4.1E-03	-124.014	SLE RA 20	6.36E-04				
190	SLE RA 1	-3.7E-03	-110.145	SLE RA 21	-4.2E-03	-124.622	SLE RA 21	0.000671				
191	SLE RA 1	-3.7E-03	-111.134	SLE RA 21	-4.2E-03	-125.8	SLE RA 21	6.95E-04				
192	SLE RA 1	-3.7E-03	-112.432	SLE RA 21	-4.2E-03	-127.332	SLE RA 21	7.08E-04				
193	SLE RA 1	-3.8E-03	-113.788	SLE RA 21	-4.3E-03	-128.928	SLE RA 21	7.18E-04				
194	SLD 16	-3.7E-03	-110.816	SLE RA 20	-4.3E-03	-129.009	SLE RA 20	0.000299				
196	SLE RA 1	-3.7E-03	-110.441	SLE RA 21	-4.2E-03	-124.912	SLE RA 21	8.52E-04				
198	SLE RA 1	-3.7E-03	-109.855	SLE RA 21	-4.1E-03	-124.174	SLE RA 21	8.86E-04				
199	SLE RA 1	-3.6E-03	-109.378	SLE RA 21	-4.1E-03	-123.58	SLE RA 21	8.35E-04				
200	SLE RA 1	-3.6E-03	-108.875	SLE RA 21	-4.1E-03	-122.954	SLE RA 21	8.03E-04				
201	SLE RA 1	-3.6E-03	-108.505	SLE RA 21	-4.1E-03	-122.481	SLE RA 21	7.64E-04				
202	SLD 3	-3.6E-03	-108.345	SLE RA 21	-4.1E-03	-122.329	SLE RA 21	7.16E-04				
203	SLD 3	-3.6E-03	-107.996	SLE RA 21	-4.1E-03	-122.61	SLE RA 21	6.58E-04				
204	SLD 3	-3.6E-03	-108.02	SLE RA 21	-4.1E-03	-123.348	SLE RA 20	5.91E-04				
205	SLD 3	-3.6E-03	-108.381	SLE RA 21	-4.1E-03	-124.49	SLE RA 20	5.12E-04				
206	SLD 3	-3.6E-03	-108.988	SLE RA 21	-4.2E-03	-125.922	SLE RA 20	4.14E-04				
207	SLD 3	-3.7E-03	-109.717	SLE RA 20	-4.2E-03	-127.498	SLE RA 20	2.96E-04				
208	SLD 16	-3.6E-03	-107.572	SLE RA 20	-4.1E-03	-123.78	SLE RA 20	5.87E-04				
209	SLD 16	-3.6E-03	-106.546	SLE RA 20	-4.1E-03	-121.855	SLE RA 20	6.71E-04				
210	SLD 16	-3.5E-03	-105.785	SLE RA 21	-4.0E-03	-120.224	SLE RA 20	7.38E-04				
211	SLE RA 1	-3.5E-03	-105.44	SLE RA 21	-4.0E-03	-119.199	SLE RA 20	7.93E-04				
212	SLE RA 1	-3.5E-03	-105.234	SLE RA 21	-4.0E-03	-119.006	SLE RA 20	8.39E-04				
213	SLE RA 1	-3.5E-03	-105.823	SLE RA 21	-4.0E-03	-119.727	SLE RA 21	8.75E-04				
214	SLE RA 1	-3.6E-03	-107.144	SLE RA 21	-4.0E-03	-121.289	SLE RA 21	9.04E-04				
215	SLE RA 1	-3.6E-03	-109.01	SLE RA 21	-4.1E-03	-123.475	SLE RA 21	9.14E-04				
216	SLE RA 1	-3.7E-03	-111.193	SLE RA 21	-4.2E-03	-126.023	SLE RA 21	8.99E-04				
217	SLD 16	-3.6E-03	-108.691	SLE RA 20	-4.2E-03	-125.811	SLE RA 20	4.81E-04				
220	SLE RA 1	-3.6E-03	-107.789	SLE RA 21	-4.1E-03	-121.994	SLE RA 21	1.05E-03				
222	SLE RA 1	-3.6E-03	-106.945	SLE RA 21	-4.0E-03	-120.958	SLE RA 21	0.001086				
223	SLE RA 1	-3.5E-03	-106.233	SLE RA 21	-4.0E-03	-120.09	SLE RA 21	1.06E-03				
224	SLE RA 1	-3.5E-03	-105.444	SLE RA 21	-4.0E-03	-119.132	SLE RA 21	1.03E-03				
225	SLE RA 1	-3.5E-03	-104.856	SLE RA 21	-3.9E-03	-118.399	SLE RA 21	9.90E-04				
226	SLE RA 1	-3.5E-03	-104.697	SLE RA 21	-3.9E-03	-118.159	SLE RA 21	9.37E-04				
227	SLD 3	-3.5E-03	-104.862	SLE RA 21	-4.0E-03	-118.561	SLE RA 20	8.73E-04				
228	SLD 3	-3.5E-03	-105.214	SLE RA 21	-4.0E-03	-119.606	SLE RA 20	8.01E-04				
229	SLD 3	-3.5E-03	-105.982	SLE RA 20	-4.0E-03	-121.146	SLE RA 20	7.20E-04				
230	SLD 3	-3.6E-03	-106.966	SLE RA 20	-4.1E-03	-122.936	SLE RA 20	6.22E-04				
231	SLD 3	-3.6E-03	-108.03	SLE RA 20	-4.2E-03	-124.819	SLE RA 20	5.02E-04				
232	SLD 16	-3.5E-03	-104.993	SLE RA 20	-4.0E-03	-120.185	SLE RA 20	7.51E-04				
233	SLD 16	-3.5E-03	-103.649	SLE RA 20	-3.9E-03	-117.978	SLE RA 20	8.23E-04				
234	SLD 16	-3.4E-03	-102.405	SLE RA 20	-3.9E-03	-115.843	SLE RA 20	8.86E-04				
235	SLE RA 2	-3.4E-03	-101.217	SLE RA 20	-3.8E-03	-114.416	SLE RA 20	9.45E-04				
236	SLE RA 1	-3.4E-03	-100.861	SLE RA 21	-3.8E-03	-114.049	SLE RA 20	9.97E-04				
237	SLE RA 1	-3.4E-03	-101.526	SLE RA 21	-3.8E-03	-114.862	SLE RA 20	0.001041				
238	SLE RA 1	-3.4E-03	-103.177	SLE RA 21	-3.9E-03	-116.805	SLE RA 21	1.05E-03				
239	SLE RA 1	-3.5E-03	-105.629	SLE RA 21	-4.0E-03	-119.666	SLE RA 21	1.06E-03				
240	SLE RA 1	-3.6E-03	-108.479	SLE RA 21	-4.1E-03	-122.98	SLE RA 21	1.07E-03				
241	SLD 16	-3.5E-03	-106.342	SLE RA 20	-0.00408	-122.4	SLE RA 20	6.62E-04				
243	SLE RA 1	-3.5E-03	-105.157	SLE RA 21	-4.0E-03	-119.09	SLE RA 21	1.22E-03				
245	SLE RA 1	-3.5E-03	-104.127	SLE RA 21	-3.9E-03	-117.839	SLE RA 21	1.25E-03				
246	SLE RA 1	-3.4E-03	-103.24	SLE RA 21	-3.9E-03	-116.772	SLE RA 21	0.001233				
247	SLE RA 1	-3.4E-03	-102.154	SLE RA 21	-3.8E-03	-115.466	SLE RA 21	1.21E-03				
248	SLE RA 1	-3.4E-03	-101.325	SLE RA 21	-3.8E-03	-114.451	SLE RA 21	1.17E-03				
249	SLE RA 1	-3.4E-03	-101.088	SLE RA 21	-3.8E-03	-114.113	SLE RA 21	1.12E-03				
250	SLE RA 2	-3.4E-03	-101.591	SLE RA 20	-3.8E-03	-114.628	SLE RA 20	1.05E-03				
251	SLD 3	-3.4E-03	-102.487	SLE RA 20	-3.9E-03	-115.989	SLE RA 20	9.75E-04				
252	SLD 3	-3.5E-03	-103.661	SLE RA 20	-3.9E-03	-117.946	SLE RA 20	8.90E-04				
253	SLD 3	-3.5E-03	-104.911	SLE RA 20	-4.0E-03	-119.962	SLE RA 20	7.96E-04				
254	SLD 3	-3.5E-03	-106.162	SLE RA 20	-4.1E-03	-121.985	SLE RA 20	6.91E-04				
256	SLD 16	-3.1E-03	-92.974	SLD 1	-4.7E-03	-140.895	SLE RA 20	8.28E-05				
271	SLD 16	-3.3E-03	-100.249	SLE RA 20	-3.9E-03	-118.233	SLE RA 20	5.48E-04				
273	SLD 16	-3.4E-03	-103.218	SLE RA 20	-4.0E-03	-120.791	SLE RA 20	6.70E-04				
277	SLD 16	-3.4E-03	-103.054	SLE RA 20	-3.9E-03	-118.019	SLE RA 20	8.41E-04				
278	SLD 16	-3.4E-03	-101.867	SLE RA 20	-3.9E-03	-116.062	SLE RA 20	0.000902				
279	SLD 16	-3.4E-03	-100.605	SLE RA 20	-3.8E-03	-114.056	SLE RA 20	0.000954				
280	SLE RA 2	-3.3E-03	-98.528	SLE RA 20	-3.7E-03	-111.375	SLE RA 20	1.02E-03				
281	SLE RA 2	-3.2E-03	-96.957	SLE RA 20	-3.7E-03	-109.608	SLE RA 20	1.05E-03				
282	SLE RA 2	-3.2E-03	-96.467	SLE RA 20	-3.6E-03	-109.081	SLE RA 20	1.10E-03				
283	SLE RA 1	-3.2E-03	-97.182	SLE RA 21	-3.7E-03	-109.944	SLE RA 20	1.14E-03				
284	SLE RA 1	-3.3E-03	-99.078	SLE RA 21	-3.7E-03	-112.172	SLE RA 20	1.17E-03				
285	SLE RA 1	-3.4E-03	-102.01	SLE RA 21	-3.9E-03	-115.588	SLE RA 21	1.20E-03				
286	SLE RA 1	-3.4E-03	-102.972	SLE RA 21	-3.9E-03	-116.706	SLE RA 21	1.20E-03				
287	SLE RA 1	-3.5E-03	-105.021	SLE RA 21	-4.0E-03	-119.083	SLE RA 21	1.20E-03				
289	SLE RA 1	-3.4E-03	-102.268	SLE RA 21	-3.9E-03	-115.875	SLE RA 21	1.37E-03				
291	SLE RA 1	-3.4E-03	-101.174	SLE RA 21	-3.8E-03	-114.554	SLE RA 21	1.41E-03				
292	SLE RA 1	-3.3E-03	-100.302	SLE RA 21	-3.8E-03	-113.508	SLE RA 21	1.40E-03				
293	SLE RA 1	-3.3E-03	-98.89	SLE RA 21	-3.7E-03	-111.824	SLE RA 21	1.38E-03				
294	SLE RA 1	-3.3E-03	-97.846	SLE RA 21	-3.7E-03	-110.557	SLE RA 21	0.00131				
295	SLE RA 2	-3.3E-03	-97.526	SLE RA 20	-3.7E-03	-110.124	SLE RA 20	1.25E-03				
296	SLE RA 2	-3.3E-03	-98.098	SLE RA 20	-3.7E-03	-110.725	SLE RA 20	1.18E-03				
297	SLE RA 2	-3.3E-03	-99.555	SLE RA 20	-3.7E-03	-112.34	SLE RA 20	1.13E-03				
298	SLD 3	-3.4E-03	-101.238	SLE RA 20	-3.8E-03	-114.75	SLE RA 20	0.001042				
299	SLD 3	-3.4E-03	-102.399	SLE RA 20	-3.9E-03	-116.571	SLE RA 20	9.72E-04				
300	SLD 3	-3.4E-03	-103.478	SLE RA 20	-3.9E-03	-118.338	SLE RA 20	8.90E-04				

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
304	SLD 3	-3.4E-03	-103.162	SLE RA 20	-4.0E-03	-120.231	SLE RA 20	6.14E-04				
306	SLD 3	-3.4E-03	-100.549	SLE RA 20	-3.9E-03	-117.813	SLE RA 20	4.84E-04				
321	SLD 3	-2.9E-03	-88.023	SLD 14	-4.4E-03	-131.561	SLE RA 20	1.05E-04				
324	SLD 3	-3.0E-03	-89.986	SLD 14	-4.5E-03	-135.93	SLE RA 20	1.08E-04				
325	SLD 3	-2.7E-03	-82.414	SLD 14	-4.1E-03	-122.435	SLE RA 20	8.63E-05				
326	SLD 3	-2.5E-03	-75.918	SLD 14	-3.7E-03	-110.654	SLE RA 20	0.000081				
327	SLD 3	-2.4E-03	-70.751	SLD 14	-3.4E-03	-100.93	SLE RA 20	1.06E-04				
328	SLD 16	-3.1E-03	-91.509	SLD 1	-4.7E-03	-139.604	SLE RA 20	1.08E-04				
329	SLD 16	-2.8E-03	-84.119	SLD 1	-4.2E-03	-126.269	SLE RA 20	8.07E-05				
330	SLD 16	-2.6E-03	-77.563	SLD 1	-3.8E-03	-114.316	SLE RA 20	7.52E-05				
331	SLD 16	-2.4E-03	-72.158	SLD 1	-3.5E-03	-104.205	SLE RA 20	9.91E-05				
332	SLD 16	-2.3E-03	-68.091	SLD 1	-3.2E-03	-96.165	SLE RA 20	0.000083				
333	SLD 16	-2.2E-03	-65.464	SLD 1	-3.0E-03	-90.271	SLE RA 20	7.32E-05				
334	SLD 16	-2.1E-03	-64.312	SLD 1	-2.9E-03	-86.507	SLE RA 20	6.78E-05				
335	SLD 16	-2.2E-03	-64.627	SLD 1	-2.8E-03	-84.797	SLE RA 20	6.67E-05				
336	SLD 16	-2.2E-03	-66.361	SLD 1	-2.8E-03	-85.022	SLE RA 20	6.95E-05				
337	SLD 16	-2.3E-03	-69.422	SLD 1	-2.9E-03	-87.019	SLE RA 20	1.03E-04				
338	SLD 16	-2.5E-03	-73.662	SLD 1	-3.0E-03	-90.563	SLE RA 20	1.72E-04				
339	SLD 16	-2.6E-03	-78.845	SLD 1	-3.2E-03	-95.335	SLE RA 20	2.74E-04				
340	SLD 16	-2.8E-03	-84.609	SLE RA 20	-3.4E-03	-100.91	SLE RA 20	3.90E-04				
341	SLD 16	-3.0E-03	-90.412	SLE RA 20	-3.6E-03	-107.188	SLE RA 20	4.78E-04				
342	SLD 16	-3.2E-03	-95.472	SLE RA 20	-3.8E-03	-112.552	SLE RA 20	6.08E-04				
343	SLD 16	-3.3E-03	-98.758	SLE RA 20	-3.9E-03	-115.709	SLE RA 20	7.16E-04				
344	SLD 16	-3.3E-03	-100.431	SLE RA 20	-3.9E-03	-116.968	SLE RA 20	0.00079				
345	SLD 16	-3.4E-03	-100.895	SLE RA 20	-3.9E-03	-116.724	SLE RA 20	8.47E-04				
346	SLD 16	-3.3E-03	-100.46	SLE RA 20	-3.8E-03	-115.397	SLE RA 20	9.33E-04				
347	SLD 16	-3.3E-03	-99.287	SLE RA 20	-3.8E-03	-113.232	SLE RA 20	9.46E-04				
348	SLD 16	-3.3E-03	-98.241	SLE RA 20	-3.7E-03	-111.445	SLE RA 20	9.82E-04				
349	SLE RA 2	-3.2E-03	-96.853	SLE RA 20	-3.6E-03	-109.495	SLE RA 20	1.02E-03				
350	SLE RA 2	-3.2E-03	-94.511	SLE RA 20	-3.6E-03	-106.841	SLE RA 20	1.07E-03				
351	SLE RA 2	-3.1E-03	-92.873	SLE RA 20	-3.5E-03	-104.998	SLE RA 20	1.12E-03				
352	SLE RA 2	-3.1E-03	-92.346	SLE RA 20	-3.5E-03	-104.432	SLE RA 20	1.18E-03				
353	SLE RA 2	-3.1E-03	-93.1	SLE RA 20	-3.5E-03	-105.336	SLE RA 20	0.001226				
354	SLE RA 1	-3.2E-03	-95.096	SLE RA 21	-3.6E-03	-107.669	SLE RA 20	1.27E-03				
355	SLE RA 1	-3.3E-03	-98.084	SLE RA 21	-3.7E-03	-111.152	SLE RA 21	1.29E-03				
356	SLE RA 1	-3.4E-03	-102.566	SLE RA 21	-3.9E-03	-116.354	SLE RA 21	1.30E-03				
357	SLD 3	-2.2E-03	-67.049	SLD 14	-3.1E-03	-93.404	SLE RA 20	0.000085				
358	SLD 3	-2.2E-03	-64.871	SLD 14	-2.9E-03	-88.097	SLE RA 20	7.36E-05				
359	SLD 3	-2.1E-03	-64.222	SLD 14	-2.8E-03	-84.952	SLE RA 20	6.78E-05				
360	SLD 3	-2.2E-03	-65.066	SLD 14	-2.8E-03	-83.865	SLE RA 20	6.68E-05				
361	SLD 3	-2.2E-03	-67.329	SLD 14	-2.8E-03	-84.688	SLE RA 20	6.98E-05				
362	SLD 3	-2.4E-03	-70.888	SLD 14	-2.9E-03	-87.229	SLE RA 20	9.59E-05				
363	SLD 3	-2.5E-03	-75.551	SLD 14	-3.0E-03	-91.221	SLE RA 20	1.56E-04				
364	SLD 3	-2.7E-03	-81.018	SLE RA 20	-3.2E-03	-96.303	SLE RA 20	2.48E-04				
365	SLD 3	-2.9E-03	-86.839	SLE RA 20	-3.4E-03	-102.57	SLE RA 20	3.53E-04				
366	SLD 3	-3.1E-03	-92.352	SLE RA 20	-3.6E-03	-108.522	SLE RA 20	4.87E-04				
367	SLD 3	-3.3E-03	-97.662	SLE RA 20	-3.8E-03	-114.039	SLE RA 20	6.17E-04				
368	SLD 3	-3.2E-03	-96.61	SLE RA 20	-3.8E-03	-113.01	SLE RA 20	5.71E-04				
369	SLD 3	-3.4E-03	-100.794	SLE RA 20	-3.9E-03	-116.908	SLE RA 20	7.72E-04				
370	SLD 3	-3.3E-03	-100.275	SLE RA 20	-3.9E-03	-116.457	SLE RA 20	0.000746				
371	SLD 3	-3.4E-03	-101.597	SLE RA 20	-3.9E-03	-117.228	SLE RA 20	8.56E-04				
372	SLD 3	-3.4E-03	-101.381	SLE RA 20	-3.9E-03	-116.254	SLE RA 20	9.71E-04				
373	SLD 3	-3.3E-03	-100.369	SLE RA 20	-3.8E-03	-114.342	SLE RA 20	1.01E-03				
374	SLD 4	-3.3E-03	-99.439	SLE RA 20	-3.8E-03	-112.743	SLE RA 20	1.07E-03				
375	SLD 4	-3.3E-03	-98.336	SLE RA 20	-3.7E-03	-110.989	SLE RA 20	1.13E-03				
376	SLE RA 2	-3.2E-03	-96.231	SLE RA 20	-3.6E-03	-108.625	SLE RA 20	1.22E-03				
377	SLE RA 2	-3.2E-03	-94.752	SLE RA 20	-3.6E-03	-106.987	SLE RA 20	1.30E-03				
378	SLE RA 2	-3.1E-03	-94.197	SLE RA 20	-3.5E-03	-106.409	SLE RA 20	1.37E-03				
379	SLE RA 2	-3.2E-03	-94.609	SLE RA 20	-3.6E-03	-106.939	SLE RA 21	1.43E-03				
380	SLE RA 1	-3.2E-03	-95.793	SLE RA 21	-3.6E-03	-108.363	SLE RA 21	1.48E-03				
381	SLE RA 1	-3.2E-03	-97.312	SLE RA 21	-3.7E-03	-110.168	SLE RA 21	1.51E-03				
382	SLE RA 1	-3.3E-03	-98.711	SLE RA 21	-3.7E-03	-111.836	SLE RA 21	0.001509				
383	SLE RA 1	-3.3E-03	-99.524	SLE RA 21	-3.8E-03	-112.811	SLE RA 21	1.49E-03				
386	SLD 16	-3.2E-03	-97.292	SLE RA 20	-3.8E-03	-114.438	SLE RA 20	6.70E-04				
388	SLD 16	-3.3E-03	-100.204	SLE RA 20	-3.9E-03	-116.93	SLE RA 20	0.000785				
389	SLD 3	-2.8E-03	-82.996	SLD 14	-4.1E-03	-123.54	SLE RA 20	8.69E-05				
390	SLD 3	-3.3E-03	-100.206	SLE RA 20	-3.9E-03	-116.363	SLE RA 20	7.62E-04				
393	SLD 3	-3.3E-03	-97.686	SLE RA 20	-3.8E-03	-114.035	SLE RA 20	6.34E-04				
395	SLD 16	-2.9E-03	-86.23	SLD 1	-0.00434	-130.2	SLE RA 20	8.15E-05				
397	SLE RA 1	-3.2E-03	-97.32	SLE RA 21	-3.7E-03	-110.342	SLE RA 21	1.60E-03				
400	SLD 16	-3.2E-03	-95.452	SLE RA 20	-3.7E-03	-112.04	SLE RA 20	7.95E-04				
402	SLD 16	-3.3E-03	-98.204	SLE RA 20	-3.8E-03	-114.349	SLE RA 20	9.03E-04				
403	SLD 3	-2.6E-03	-79.157	SLD 14	-3.9E-03	-117.29	SLE RA 20	0.000088				
404	SLD 3	-3.3E-03	-98.165	SLE RA 20	-3.8E-03	-113.677	SLE RA 20	8.98E-04				
407	SLD 3	-3.2E-03	-95.903	SLE RA 20	-3.7E-03	-111.591	SLE RA 20	7.65E-04				
409	SLD 16	-2.7E-03	-81.124	SLD 1	-4.1E-03	-121.984	SLE RA 20	1.21E-04				
410	SLE RA 1	-3.2E-03	-95.851	SLE RA 21	-3.6E-03	-108.7	SLE RA 21	1.74E-03				
414	SLD 16	-3.1E-03	-94.303	SLE RA 20	-3.7E-03	-110.531	SLE RA 20	8.89E-04				
416	SLD 16	-3.2E-03	-96.87	SLE RA 20	-3.8E-03	-112.659	SLE RA 20	9.97E-04				
417	SLD 3	-2.6E-03	-76.694	SLD 14	-3.8E-03	-113.137	SLE RA 20	1.25E-04				
418	SLD 4	-3.2E-03	-96.742	SLE RA 20	-3.7E-03	-111.813	SLE RA 20	1.01E-03				
421	SLD 3	-3.2E-03	-94.759	SLE RA 20	-3.7E-03	-109.968	SLE RA 20	0.000877				
423	SLD 16	-2.6E-03	-77.719	SLD 1	-3.9E-03	-116.423	SLE RA 20	8.57E-05				
424	SLE RA 2	-3.1E-03	-92.622	SLE RA 20	-3.5E-03	-105.124	SLE RA 20	0.001466				
425	SLE RA 1	-3.2E-03	-95.163	SLE RA 21	-3.6E-03	-107.941	SLE RA 21	0.001864				
429	SLD 15	-3.1E-03	-93.539	SLE RA 20	-3.7E-03	-109.573	SLE RA 20	1.00E-03				
431	SLD 15	-3.2E-03	-95.896	SLE RA 20	-3.7E-03	-111.52	SLE RA 20	1.10E-03				
432	SLD 3	-2.5E-03	-75.656	SLD 14	-3.7E-03	-111.198	SLE RA 20	1.23E-04				
433	SLD 4	-3.2E-03	-95.62	SLE RA 20	-3.7E-03	-110.427	SLE RA 20	1.13E-03				
436	SLD 4	-3.1E-03	-93.945	SLE RA 20	-3.6E-03	-108.823	SLE RA 20	1.00E-03				
438	SLD 16	-2.5E-03	-75.948	SLD 1	-3.8E-03	-113.498	SLE RA 20	7.39E-05				

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
439	SLE RA 1	-3.2E-03	-95.147	SLE RA 21	-3.6E-03	-107.946	SLE RA 21	2.00E-03				
443	SLD 13	-3.1E-03	-92.99	SLE RA 20	-3.6E-03	-108.967	SLE RA 20	0.001079				
445	SLD 13	-3.2E-03	-95.177	SLE RA 20	-3.7E-03	-110.734	SLE RA 20	1.17E-03				
446	SLD 3	-2.5E-03	-75.989	SLD 14	-3.7E-03	-111.424	SLE RA 20	1.41E-04				
447	SLD 2	-3.2E-03	-94.657	SLE RA 20	-3.6E-03	-109.305	SLE RA 20	1.21E-03				
450	SLD 4	-3.1E-03	-93.265	SLE RA 20	-3.6E-03	-107.94	SLE RA 20	1.09E-03				
452	SLD 16	-2.5E-03	-75.673	SLD 1	-3.8E-03	-113.052	SLE RA 20	7.19E-05				
453	SLE RA 1	-3.2E-03	-95.535	SLE RA 21	-3.6E-03	-108.414	SLE RA 21	2.12E-03				
457	SLD 13	-3.1E-03	-92.624	SLE RA 20	-3.6E-03	-108.602	SLE RA 20	1.15E-03				
459	SLD 13	-3.2E-03	-94.651	SLE RA 20	-3.7E-03	-110.19	SLE RA 20	0.001235				
460	SLD 3	-2.6E-03	-77.54	SLD 14	-3.8E-03	-113.591	SLE RA 20	0.000168				
461	SLD 2	-3.1E-03	-93.773	SLE RA 20	-3.6E-03	-108.328	SLE RA 20	1.29E-03				
464	SLD 2	-3.1E-03	-92.646	SLE RA 20	-3.6E-03	-107.201	SLE RA 20	0.001166				
472	SLD 15	-2.6E-03	-76.684	SLD 2	-3.8E-03	-114.785	SLE RA 20	8.35E-05				
473	SLE RA 1	-3.2E-03	-95.925	SLE RA 21	-3.6E-03	-108.888	SLE RA 20	2.23E-03				
475	SLE RA 2	-3.1E-03	-94.219	SLE RA 20	-3.6E-03	-107.228	SLE RA 20	1.62E-03				
476	SLE RA 2	-3.2E-03	-96.244	SLE RA 20	-3.7E-03	-109.568	SLE RA 20	1.67E-03				
477	SLE RA 2	-3.3E-03	-98.315	SLE RA 20	-3.7E-03	-111.931	SLE RA 20	1.78E-03				
478	SLE RA 2	-3.2E-03	-97.272	SLE RA 20	-3.7E-03	-110.598	SLE RA 20	0.001872				
479	SLE RA 2	-3.2E-03	-96.02	SLE RA 20	-3.6E-03	-109.014	SLE RA 20	2.26E-03				
481	SLD 13	-3.1E-03	-92.407	SLE RA 20	-3.6E-03	-108.417	SLE RA 20	1.23E-03				
483	SLD 13	-3.1E-03	-94.278	SLE RA 20	-3.7E-03	-109.826	SLE RA 20	1.31E-03				
484	SLD 3	-2.7E-03	-80.043	SLD 14	-3.9E-03	-117.287	SLE RA 20	2.05E-04				
485	SLD 2	-3.1E-03	-92.923	SLE RA 20	-3.6E-03	-107.441	SLE RA 20	1.36E-03				
488	SLD 2	-3.1E-03	-92.056	SLE RA 20	-3.6E-03	-106.552	SLE RA 20	1.25E-03				
490	SLD 13	-2.6E-03	-78.665	SLD 4	-3.9E-03	-118.228	SLE RA 20	1.20E-04				
493	SLE RA 2	-3.2E-03	-95.909	SLE RA 20	-3.6E-03	-108.934	SLE RA 20	2.30E-03				
497	SLD 13	-3.1E-03	-92.303	SLE RA 20	-3.6E-03	-108.357	SLE RA 20	1.28E-03				
499	SLD 13	-3.1E-03	-94.02	SLE RA 20	-3.7E-03	-109.587	SLE RA 20	1.35E-03				
500	SLD 4	-2.8E-03	-83.088	SLD 13	-4.1E-03	-121.873	SLE RA 20	2.60E-04				
501	SLD 2	-3.1E-03	-92.096	SLE RA 20	-3.6E-03	-106.639	SLE RA 20	0.001396				
504	SLD 2	-3.0E-03	-91.485	SLE RA 20	-3.5E-03	-105.987	SLE RA 20	1.29E-03				
506	SLD 13	-2.7E-03	-81.215	SLD 4	-4.1E-03	-122.635	SLE RA 20	1.72E-04				
507	SLE RA 2	-3.2E-03	-95.506	SLE RA 20	-3.6E-03	-108.529	SLE RA 20	2.30E-03				
513	SLD 13	-3.1E-03	-92.249	SLE RA 20	-3.6E-03	-108.339	SLE RA 20	1.34E-03				
515	SLD 13	-3.1E-03	-93.814	SLE RA 20	-3.6E-03	-109.391	SLE RA 20	1.40E-03				
516	SLD 2	-2.9E-03	-86.082	SLD 15	-4.2E-03	-126.416	SLE RA 20	2.77E-04				
517	SLD 2	-3.0E-03	-91.309	SLE RA 20	-3.5E-03	-105.953	SLE RA 20	1.44E-03				
520	SLD 2	-3.0E-03	-90.955	SLE RA 20	-3.5E-03	-105.539	SLE RA 20	1.35E-03				
521	SLE RA 2	-3.2E-03	-94.941	SLE RA 20	-3.6E-03	-107.946	SLE RA 20	0.002234				
524	SLD 13	-2.8E-03	-83.708	SLD 4	-4.2E-03	-126.951	SLE RA 20	1.95E-04				
529	SLD 2	-2.9E-03	-88.198	SLD 15	-4.3E-03	-129.609	SLE RA 20	3.14E-04				
530	SLD 13	-3.1E-03	-92.122	SLE RA 20	-3.6E-03	-108.218	SLE RA 20	1.38E-03				
532	SLD 13	-3.1E-03	-93.537	SLE RA 20	-3.6E-03	-109.092	SLE RA 20	1.42E-03				
533	SLD 2	-3.0E-03	-90.616	SLE RA 20	-3.5E-03	-105.453	SLE RA 20	1.45E-03				
536	SLD 2	-3.0E-03	-90.518	SLE RA 20	-3.5E-03	-105.275	SLE RA 20	0.001377				
537	SLE RA 2	-3.1E-03	-94.22	SLE RA 20	-3.6E-03	-107.19	SLE RA 20	2.13E-03				
539	SLD 13	-2.8E-03	-85.352	SLD 4	-4.4E-03	-131.965	SLE RA 20	0.000171				
540	SLD 13	-2.9E-03	-85.817	SLD 4	-4.3E-03	-129.668	SLE RA 20	2.31E-04				
541	SLD 13	-2.9E-03	-86.662	SLD 4	-4.3E-03	-128.014	SLE RA 20	2.98E-04				
542	SLD 13	-2.9E-03	-87.623	SLD 4	-0.00422	-126.599	SLE RA 20	3.48E-04				
543	SLD 13	-3.0E-03	-88.546	SLD 4	-4.2E-03	-125.188	SLE RA 20	4.30E-04				
544	SLD 13	-3.0E-03	-89.37	SLD 4	-4.1E-03	-123.686	SLE RA 20	4.78E-04				
545	SLD 13	-3.0E-03	-90.081	SLD 4	-4.1E-03	-122.064	SLE RA 20	5.27E-04				
546	SLD 13	-3.0E-03	-90.682	SLD 4	-4.0E-03	-120.324	SLE RA 20	5.80E-04				
547	SLD 13	-3.0E-03	-91.174	SLD 4	-3.9E-03	-118.472	SLE RA 20	6.50E-04				
548	SLD 13	-3.1E-03	-91.548	SLD 4	-3.9E-03	-116.514	SLE RA 20	7.39E-04				
549	SLD 13	-3.1E-03	-91.784	SLD 4	-3.8E-03	-114.461	SLE RA 20	8.37E-04				
550	SLD 13	-3.1E-03	-91.854	SLD 4	-3.7E-03	-112.348	SLE RA 20	9.07E-04				
551	SLD 13	-3.1E-03	-91.744	SLE RA 21	-3.7E-03	-110.332	SLE RA 20	1.01E-03				
552	SLD 13	-3.0E-03	-91.495	SLE RA 21	-3.6E-03	-109.183	SLE RA 20	1.12E-03				
553	SLD 13	-3.0E-03	-91.269	SLE RA 20	-3.6E-03	-108.298	SLE RA 20	1.22E-03				
554	SLD 13	-3.1E-03	-92.727	SLE RA 20	-3.6E-03	-108.54	SLE RA 20	1.41E-03				
555	SLD 13	-3.1E-03	-94.098	SLE RA 20	-3.6E-03	-109.296	SLE RA 20	1.43E-03				
556	SLD 13	-3.2E-03	-95.436	SLE RA 20	-3.7E-03	-109.791	SLE RA 20	0.001427				
557	SLD 13	-3.2E-03	-96.678	SLE RA 20	-3.7E-03	-110.007	SLE RA 20	1.42E-03				
558	SLE RA 2	-3.2E-03	-96.61	SLE RA 20	-3.7E-03	-109.877	SLE RA 20	1.45E-03				
559	SLE RA 2	-3.2E-03	-96.142	SLE RA 20	-3.6E-03	-109.376	SLE RA 20	1.46E-03				
560	SLE RA 2	-3.2E-03	-95.375	SLE RA 20	-3.6E-03	-108.524	SLE RA 20	1.49E-03				
561	SLE RA 2	-3.1E-03	-94.418	SLE RA 20	-3.6E-03	-107.449	SLE RA 20	1.49E-03				
562	SLE RA 2	-3.1E-03	-93.667	SLE RA 20	-3.6E-03	-106.614	SLE RA 20	1.53E-03				
563	SLE RA 2	-3.1E-03	-93.167	SLE RA 20	-3.5E-03	-106.066	SLE RA 20	1.56E-03				
564	SLE RA 2	-3.1E-03	-93.499	SLE RA 20	-3.6E-03	-106.502	SLE RA 20	0.001609				
565	SLE RA 2	-3.1E-03	-91.926	SLE RA 20	-3.5E-03	-104.392	SLE RA 20	2.24E-03				
566	SLE RA 2	-3.1E-03	-92.062	SLE RA 20	-3.5E-03	-104.544	SLE RA 20	0.00209				
567	SLD 2	-3.1E-03	-91.772	SLE RA 20	-3.5E-03	-104.878	SLE RA 20	1.93E-03				
568	SLD 2	-3.0E-03	-91.189	SLE RA 20	-3.5E-03	-105.149	SLE RA 20	1.79E-03				
569	SLD 2	-3.0E-03	-90.642	SLE RA 20	-3.5E-03	-105.253	SLE RA 20	0.001651				
570	SLD 2	-3.0E-03	-90.27	SLE RA 20	-3.5E-03	-105.215	SLE RA 20	1.57E-03				
571	SLD 2	-3.0E-03	-90.384	SLE RA 20	-3.5E-03	-105.31	SLE RA 20	1.45E-03				
572	SLD 2	-3.0E-03	-90.38	SLE RA 20	-3.5E-03	-105.219	SLE RA 20	1.38E-03				
573	SLD 2	-3.0E-03	-90.87	SLE RA 20	-3.5E-03	-105.689	SLE RA 20	1.26E-03				
574	SLD 2	-3.0E-03	-91.464	SLE RA 20	-3.6E-03	-106.538	SLE RA 20	1.20E-03				
575	SLD 2	-3.1E-03	-92.492	SLE RA 21	-3.6E-03	-108.174	SLE RA 20	1.08E-03				
576	SLD 2	-3.1E-03	-93.066	SLE RA 21	-3.7E-03	-109.621	SLE RA 20	0.000971				
577	SLD 2	-3.1E-03	-93.265	SLE RA 21	-3.7E-03	-110.991	SLE RA 20	9.01E-04				
578	SLD 2	-3.1E-03	-93.153	SLD 15	-3.8E-03	-112.608	SLE RA 20	8.05E-04				
579	SLD 2	-3.1E-03	-92.814	SLD 15	-3.8E-03	-114.894	SLE RA 20	7.20E-04				
580	SLD 2	-3.1E-03	-92.318	SLD 15	-3.9E-03	-117.066	SLE RA 20	6.45E-04				
581	SLD 2	-3.1E-03	-91.708	SLD 15	-4.0E-03	-119.122	SLE RA 20	5.94E-04				
582	SLD 2	-3.0E-03	-91.012	SLD 15	-4.0E-03	-121.079	SLE RA 20	5.59E-04				

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
583	SLD 2	-3.0E-03	-90.262	SLD 15	-4.1E-03	-122.99	SLE RA 20	5.26E-04				
584	SLD 2	-3.0E-03	-89.532	SLD 15	-4.2E-03	-124.978	SLE RA 20	4.45E-04				
585	SLD 2	-3.0E-03	-88.99	SLD 15	-4.2E-03	-127.312	SLE RA 20	3.99E-04				
586	SLD 2	-3.0E-03	-88.977	SLD 15	-4.4E-03	-130.512	SLE RA 20	3.29E-04				
587	SLD 2	-3.0E-03	-90.03	SLD 15	-4.5E-03	-135.378	SLE RA 20	2.79E-04				
589	SLD 13	-2.8E-03	-85.252	SLD 4	-4.3E-03	-129.677	SLE RA 20	2.16E-04				
597	SLD 13	-2.8E-03	-85.32	SLD 4	-4.3E-03	-129.861	SLE RA 20	2.16E-04				
611	SLD 13	-3.0E-03	-91.078	SLE RA 21	-3.6E-03	-108.445	SLE RA 20	1.17E-03				
615	SLD 13	-3.1E-03	-91.682	SLE RA 20	-3.6E-03	-107.726	SLE RA 20	1.37E-03				
618	SLD 13	-3.1E-03	-93.044	SLE RA 20	-3.6E-03	-108.536	SLE RA 20	1.40E-03				
627	SLE RA 2	-3.1E-03	-92.282	SLE RA 20	-3.5E-03	-105.017	SLE RA 20	1.51E-03				
629	SLE RA 2	-3.0E-03	-91.496	SLE RA 20	-3.5E-03	-104.134	SLE RA 20	1.54E-03				
631	SLE RA 2	-3.1E-03	-91.767	SLE RA 20	-3.5E-03	-104.479	SLE RA 20	1.56E-03				
638	SLE RA 2	-3.1E-03	-93.248	SLE RA 20	-3.5E-03	-106.148	SLE RA 20	1.99E-03				
643	SLE RA 2	-3.0E-03	-90.265	SLE RA 20	-3.4E-03	-102.571	SLE RA 20	2.17E-03				
652	SLD 2	-3.0E-03	-90.195	SLE RA 20	-3.5E-03	-105.313	SLE RA 20	1.42E-03				
655	SLD 2	-3.0E-03	-90.192	SLE RA 20	-3.5E-03	-105.222	SLE RA 20	0.001363				
658	SLD 2	-3.1E-03	-91.761	SLE RA 21	-3.6E-03	-106.965	SLE RA 20	1.15E-03				
671	SLD 2	-2.9E-03	-88.442	SLD 15	-4.3E-03	-129.922	SLE RA 20	3.23E-04				
673	SLD 2	-3.0E-03	-90.475	SLE RA 21	-3.5E-03	-105.075	SLE RA 20	1.25E-03				
675	SLD 2	-0.00305	-91.5	SLE RA 21	-3.6E-03	-106.623	SLE RA 20	1.14E-03				
677	SLD 13	-2.8E-03	-84.842	SLD 4	-4.4E-03	-131.303	SLE RA 20	1.99E-04				
678	SLD 13	-2.8E-03	-85.305	SLD 4	-4.3E-03	-129.012	SLE RA 20	2.26E-04				
679	SLD 13	-2.9E-03	-86.148	SLD 4	-4.2E-03	-127.373	SLE RA 20	0.000294				
680	SLD 13	-2.9E-03	-87.106	SLD 4	-4.2E-03	-125.972	SLE RA 20	3.45E-04				
681	SLD 13	-2.9E-03	-88.025	SLD 4	-4.2E-03	-124.576	SLE RA 20	4.30E-04				
682	SLD 13	-3.0E-03	-88.844	SLD 4	-4.1E-03	-123.088	SLE RA 20	4.81E-04				
683	SLD 13	-3.0E-03	-89.549	SLD 4	-4.0E-03	-121.479	SLE RA 20	5.32E-04				
684	SLD 15	-3.0E-03	-90.143	SLD 2	-4.0E-03	-119.751	SLE RA 20	5.87E-04				
685	SLD 16	-3.0E-03	-90.622	SLD 1	-3.9E-03	-117.914	SLE RA 20	6.60E-04				
686	SLD 16	-3.0E-03	-90.982	SLD 1	-3.9E-03	-115.971	SLE RA 20	0.000753				
687	SLD 16	-3.0E-03	-91.203	SLD 1	-3.8E-03	-113.931	SLE RA 20	8.53E-04				
688	SLD 16	-3.0E-03	-91.26	SLD 1	-3.7E-03	-111.825	SLE RA 20	9.25E-04				
689	SLD 16	-3.0E-03	-91.145	SLD 1	-3.7E-03	-109.74	SLE RA 20	1.03E-03				
690	SLD 16	-3.0E-03	-90.904	SLE RA 21	-3.6E-03	-108.574	SLE RA 20	1.13E-03				
691	SLD 13	-3.0E-03	-90.707	SLE RA 21	-3.6E-03	-107.686	SLE RA 20	1.22E-03				
692	SLD 13	-3.0E-03	-90.624	SLE RA 21	-3.6E-03	-107.232	SLE RA 20	1.27E-03				
693	SLD 13	-3.0E-03	-91.315	SLE RA 20	-3.6E-03	-107.317	SLE RA 20	1.34E-03				
694	SLD 13	-3.1E-03	-92.04	SLE RA 20	-3.6E-03	-107.675	SLE RA 20	1.36E-03				
695	SLD 13	-3.1E-03	-92.967	SLE RA 20	-3.6E-03	-107.962	SLE RA 20	1.37E-03				
696	SLD 13	-3.1E-03	-94.074	SLE RA 20	-3.6E-03	-108.224	SLE RA 20	1.36E-03				
697	SLD 13	-3.2E-03	-95.081	SLE RA 20	-3.6E-03	-108.207	SLE RA 20	1.39E-03				
698	SLE RA 1	-3.2E-03	-94.827	SLE RA 21	-3.6E-03	-107.842	SLE RA 20	0.001391				
699	SLE RA 1	-3.1E-03	-94.154	SLE RA 21	-3.6E-03	-107.103	SLE RA 20	1.41E-03				
700	SLE RA 1	-3.1E-03	-93.18	SLE RA 21	-3.5E-03	-106.011	SLE RA 20	1.41E-03				
701	SLE RA 1	-3.1E-03	-92.014	SLE RA 21	-3.5E-03	-104.691	SLE RA 20	1.44E-03				
702	SLE RA 1	-3.0E-03	-90.848	SLE RA 21	-3.4E-03	-103.363	SLE RA 20	1.48E-03				
703	SLE RA 1	-3.0E-03	-90.066	SLE RA 21	-3.4E-03	-102.477	SLE RA 20	1.50E-03				
704	SLE RA 2	-3.0E-03	-90.897	SLE RA 20	-3.4E-03	-103.475	SLE RA 20	1.51E-03				
705	SLE RA 2	-3.0E-03	-91.437	SLE RA 20	-3.5E-03	-104.114	SLE RA 20	0.001502				
706	SLE RA 2	-3.1E-03	-91.834	SLE RA 20	-3.5E-03	-104.593	SLE RA 20	1.50E-03				
707	SLE RA 2	-3.1E-03	-92.404	SLE RA 20	-3.5E-03	-105.297	SLE RA 20	1.55E-03				
708	SLE RA 2	-3.1E-03	-92.5	SLE RA 20	-3.5E-03	-105.406	SLE RA 20	1.61E-03				
709	SLE RA 2	-3.1E-03	-92.414	SLE RA 20	-3.5E-03	-105.235	SLE RA 20	1.90E-03				
710	SLE RA 2	-3.1E-03	-91.64	SLE RA 20	-3.5E-03	-104.303	SLE RA 20	2.02E-03				
711	SLE RA 2	-3.0E-03	-90.747	SLE RA 20	-3.4E-03	-103.249	SLE RA 20	2.08E-03				
712	SLE RA 2	-3.0E-03	-89.307	SLE RA 20	-3.4E-03	-101.554	SLE RA 20	2.12E-03				
713	SLE RA 1	-3.0E-03	-88.561	SLE RA 21	-3.4E-03	-100.67	SLE RA 20	2.06E-03				
714	SLE RA 1	-2.9E-03	-88.417	SLE RA 21	-0.00335	-100.501	SLE RA 20	2.00E-03				
715	SLE RA 1	-3.0E-03	-88.529	SLE RA 21	-3.4E-03	-100.629	SLE RA 20	1.89E-03				
716	SLD 2	-2.9E-03	-88.018	SLE RA 21	-3.4E-03	-100.922	SLE RA 20	1.77E-03				
717	SLD 2	-2.9E-03	-87.405	SLE RA 21	-3.4E-03	-101.148	SLE RA 20	1.66E-03				
718	SLD 2	-2.9E-03	-86.83	SLE RA 21	-3.4E-03	-101.205	SLE RA 20	1.54E-03				
719	SLD 2	-2.9E-03	-86.428	SLE RA 21	-3.4E-03	-101.116	SLE RA 20	1.47E-03				
720	SLD 2	-2.9E-03	-86.979	SLE RA 20	-3.4E-03	-101.342	SLE RA 20	1.38E-03				
721	SLD 2	-3.0E-03	-90.297	SLE RA 21	-3.5E-03	-104.843	SLE RA 20	0.001244				
722	SLD 4	-3.0E-03	-91.438	SLE RA 21	-3.6E-03	-106.544	SLE RA 20	1.14E-03				
723	SLD 4	-3.1E-03	-91.871	SLE RA 21	-3.6E-03	-107.255	SLE RA 20	1.09E-03				
724	SLD 3	-3.1E-03	-92.438	SLE RA 21	-3.6E-03	-108.722	SLE RA 20	9.84E-04				
725	SLD 3	-3.1E-03	-92.644	SLE RA 21	-3.7E-03	-110.11	SLE RA 20	9.15E-04				
726	SLD 3	-3.1E-03	-92.548	SLD 14	-3.7E-03	-111.618	SLE RA 20	0.000816				
727	SLD 3	-3.1E-03	-92.227	SLD 14	-3.8E-03	-113.915	SLE RA 20	7.27E-04				
728	SLD 4	-3.1E-03	-91.746	SLD 13	-3.9E-03	-116.098	SLE RA 20	6.48E-04				
729	SLD 4	-3.0E-03	-91.147	SLD 13	-3.9E-03	-118.165	SLE RA 21	5.95E-04				
730	SLD 4	-3.0E-03	-90.459	SLD 13	-4.0E-03	-120.135	SLE RA 21	5.57E-04				
731	SLD 4	-3.0E-03	-89.714	SLD 13	-4.1E-03	-122.058	SLE RA 21	0.000522				
732	SLD 4	-3.0E-03	-88.987	SLD 13	-4.1E-03	-124.058	SLE RA 20	4.38E-04				
733	SLD 4	-2.9E-03	-88.446	SLD 13	-4.2E-03	-126.403	SLE RA 21	3.91E-04				
734	SLD 4	-2.9E-03	-88.435	SLD 13	-4.3E-03	-129.613	SLE RA 21	3.21E-04				
735	SLD 4	-3.0E-03	-89.486	SLD 13	-4.5E-03	-134.485	SLE RA 21	2.73E-04				
736	SLD 4	-2.9E-03	-87.261	SLD 13	-4.3E-03	-128.047	SLE RA 21	3.00E-04				
739	SLD 2	-3.0E-03	-90.307	SLE RA 21	-3.5E-03	-104.863	SLE RA 20	1.22E-03				
741	SLD 3	-3.0E-03	-91.251	SLE RA 21	-3.5E-03	-106.36	SLE RA 20	1.13E-03				
742	SLD 4	-2.8E-03	-83.997	SLD 13	-4.1E-03	-122.916	SLE RA 21	2.48E-04				
744	SLE RA 1	-2.8E-03	-83.928	SLE RA 21	-3.2E-03	-95.571	SLE RA 21	1.51E-03				
746	SLE RA 1	-2.8E-03	-83.815	SLE RA 21	-3.2E-03	-95.421	SLE RA 21	1.49E-03				
747	SLD 4	-2.7E-03	-79.59	SLD 13	-3.9E-03	-115.974	SLE RA 21	0.000216				
750	SLD 13	-2.6E-03	-77.936	SLD 4	-3.9E-03	-117.857	SLE RA 21	1.55E-04				
751	SLD 16	-2.9E-03	-88.453	SLE RA 21	-3.5E-03	-105.838	SLE RA 21	9.96E-04				
753	SLD 16	-3.0E-03	-90.449	SLE RA 21	-3.6E-03	-107.476	SLE RA 21	1.07E-03				
754	SLE RA 1	-2.8E-03	-83.938	SLE RA 21	-3.2E-03	-95.341	SLE RA 21	1.21E-03				

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
756	SLE RA 1	-2.8E-03	-83.256	SLE RA 21	-3.2E-03	-94.571	SLE RA 21	0.001222				
757	SLD 3	-3.0E-03	-91.152	SLE RA 21	-3.5E-03	-106.354	SLE RA 21	1.05E-03				
759	SLD 3	-3.0E-03	-89.949	SLE RA 21	-3.5E-03	-105.145	SLE RA 21	0.000968				
760	SLE RA 1	-2.8E-03	-82.675	SLE RA 21	-3.1E-03	-94.168	SLE RA 21	1.29E-03				
762	SLD 3	-2.7E-03	-82.184	SLE RA 21	-3.1E-03	-94.075	SLE RA 21	1.28E-03				
763	SLE RA 1	-2.7E-03	-81.964	SLE RA 21	-3.1E-03	-93.025	SLE RA 21	1.08E-03				
765	SLE RA 1	-2.7E-03	-81.285	SLE RA 21	-3.1E-03	-92.26	SLE RA 21	0.001085				
767	SLD 13	-2.5E-03	-74.552	SLD 4	-3.7E-03	-112.335	SLE RA 21	1.05E-04				
768	SLD 2	-2.5E-03	-74.781	SLD 15	-3.6E-03	-108.377	SLE RA 21	1.55E-04				
770	SLD 3	-3.1E-03	-91.647	SLE RA 21	-3.6E-03	-107.067	SLE RA 21	0.000933				
772	SLD 3	-3.0E-03	-90.166	SLE RA 21	-3.5E-03	-105.5	SLE RA 21	8.63E-04				
773	SLD 16	-2.9E-03	-88.297	SLE RA 21	-3.5E-03	-105.785	SLE RA 21	8.94E-04				
775	SLD 16	-3.0E-03	-90.456	SLE RA 21	-3.6E-03	-107.627	SLE RA 21	9.58E-04				
776	SLD 3	-2.7E-03	-81.93	SLE RA 21	-3.1E-03	-93.355	SLE RA 21	1.13E-03				
778	SLD 3	-2.7E-03	-81.15	SLE RA 21	-3.1E-03	-93.319	SLE RA 21	1.12E-03				
779	SLE RA 1	-2.7E-03	-80.657	SLE RA 21	-3.0E-03	-91.476	SLE RA 21	9.51E-04				
781	SLE RA 1	-2.7E-03	-79.982	SLE RA 21	-3.0E-03	-90.715	SLE RA 21	9.50E-04				
783	SLD 13	-2.4E-03	-71.758	SLD 4	-3.6E-03	-107.831	SLE RA 21	0.000069				
784	SLD 2	-2.3E-03	-70.035	SLD 15	-3.4E-03	-100.858	SLE RA 21	1.03E-04				
786	SLD 3	-3.1E-03	-92.222	SLE RA 21	-3.6E-03	-107.758	SLE RA 21	8.50E-04				
788	SLD 3	-3.0E-03	-90.46	SLE RA 21	-3.5E-03	-105.831	SLE RA 21	7.94E-04				
789	SLD 16	-2.9E-03	-88.11	SLE RA 21	-3.5E-03	-105.57	SLE RA 21	8.22E-04				
791	SLD 16	-3.0E-03	-90.433	SLE RA 21	-3.6E-03	-107.618	SLE RA 21	8.75E-04				
792	SLD 3	-2.7E-03	-81.371	SLE RA 21	-3.1E-03	-92.954	SLE RA 21	9.56E-04				
794	SLD 3	-2.7E-03	-80.654	SLE RA 21	-3.1E-03	-92.975	SLE RA 21	0.000956				
795	SLD 16	-2.7E-03	-79.827	SLE RA 21	-3.0E-03	-90.595	SLE RA 21	8.51E-04				
797	SLE RA 1	-2.6E-03	-79.261	SLE RA 21	-3.0E-03	-89.838	SLE RA 21	8.49E-04				
799	SLD 13	-2.3E-03	-69.903	SLD 4	-3.5E-03	-104.916	SLE RA 21	6.07E-05				
800	SLD 2	-2.2E-03	-65.604	SLD 15	-3.1E-03	-93.829	SLE RA 21	7.75E-05				
802	SLD 4	-3.1E-03	-92.754	SLE RA 21	-3.6E-03	-108.33	SLE RA 21	7.45E-04				
804	SLD 4	-3.0E-03	-90.71	SLE RA 21	-3.5E-03	-106.041	SLE RA 21	6.94E-04				
805	SLD 16	-2.9E-03	-87.737	SLE RA 21	-3.5E-03	-105.07	SLE RA 21	7.19E-04				
807	SLD 13	-3.0E-03	-90.215	SLE RA 21	-3.6E-03	-107.326	SLE RA 21	7.67E-04				
808	SLD 3	-2.7E-03	-81.169	SLE RA 21	-3.1E-03	-92.817	SLE RA 21	8.11E-04				
810	SLD 3	-2.7E-03	-80.515	SLE RA 21	-3.1E-03	-92.896	SLE RA 21	8.13E-04				
811	SLD 16	-2.6E-03	-79.464	SLE RA 21	-3.0E-03	-90.237	SLE RA 21	0.000735				
813	SLE RA 1	-2.6E-03	-78.996	SLE RA 21	-3.0E-03	-89.483	SLE RA 21	0.000729				
815	SLD 13	-2.3E-03	-69.241	SLD 4	-3.5E-03	-103.998	SLE RA 21	6.02E-05				
816	SLD 2	-2.1E-03	-61.586	SLD 15	-2.9E-03	-87.448	SLE RA 21	6.72E-05				
818	SLD 2	-3.1E-03	-93.173	SLE RA 21	-3.6E-03	-108.803	SLE RA 21	0.000647				
820	SLD 2	-3.0E-03	-90.842	SLE RA 21	-3.5E-03	-106.151	SLE RA 21	6.00E-04				
821	SLD 13	-2.9E-03	-87.132	SLE RA 21	-3.5E-03	-104.347	SLE RA 21	6.26E-04				
823	SLD 13	-3.0E-03	-89.719	SLE RA 21	-3.6E-03	-106.813	SLE RA 21	0.000669				
824	SLD 3	-2.7E-03	-81.19	SLE RA 21	-3.1E-03	-92.845	SLE RA 21	6.85E-04				
826	SLD 3	-2.7E-03	-80.599	SLE RA 21	-3.1E-03	-92.982	SLE RA 21	6.90E-04				
827	SLD 16	-2.7E-03	-79.552	SLE RA 21	-3.0E-03	-90.265	SLE RA 21	6.35E-04				
829	SLE RA 1	-2.6E-03	-79.071	SLE RA 21	-3.0E-03	-89.513	SLE RA 21	6.27E-04				
831	SLD 13	-2.3E-03	-69.972	SLD 4	-3.5E-03	-105.39	SLE RA 21	6.75E-05				
832	SLD 2	-1.9E-03	-57.955	SLD 15	-2.7E-03	-81.691	SLE RA 21	6.08E-05				
834	SLD 2	-3.1E-03	-93.477	SLE RA 21	-3.6E-03	-109.277	SLE RA 21	5.53E-04				
836	SLD 2	-3.0E-03	-90.866	SLE RA 21	-3.5E-03	-106.259	SLE RA 21	5.11E-04				
837	SLD 13	-2.9E-03	-86.402	SLE RA 21	-3.5E-03	-103.643	SLE RA 21	5.04E-04				
839	SLD 13	-3.0E-03	-89.109	SLE RA 21	-3.5E-03	-106.322	SLE RA 21	5.36E-04				
840	SLD 3	-2.7E-03	-81.355	SLE RA 21	-3.1E-03	-92.995	SLE RA 21	5.78E-04				
842	SLD 3	-2.7E-03	-80.829	SLE RA 21	-3.1E-03	-93.189	SLE RA 21	5.84E-04				
843	SLD 16	-2.7E-03	-79.957	SLE RA 21	-3.0E-03	-90.583	SLE RA 21	0.000543				
845	SLE RA 1	-2.6E-03	-79.402	SLE RA 21	-3.0E-03	-89.834	SLE RA 21	5.33E-04				
847	SLD 13	-2.4E-03	-72.274	SLD 4	-3.6E-03	-109.352	SLE RA 21	9.06E-05				
848	SLD 2	-1.8E-03	-54.596	SLD 15	-2.5E-03	-76.391	SLE RA 21	6.08E-05				
850	SLD 2	-3.1E-03	-93.688	SLE RA 21	-3.7E-03	-109.921	SLE RA 21	4.70E-04				
852	SLD 2	-3.0E-03	-90.807	SLE RA 21	-3.6E-03	-106.537	SLE RA 21	4.50E-04				
853	SLD 13	-2.9E-03	-85.926	SLD 4	-3.5E-03	-103.723	SLE RA 21	4.32E-04				
855	SLD 13	-3.0E-03	-88.796	SLE RA 21	-3.5E-03	-106.291	SLE RA 21	0.000455				
856	SLD 1	-2.7E-03	-81.642	SLE RA 21	-3.1E-03	-93.282	SLE RA 21	4.86E-04				
858	SLD 3	-2.7E-03	-81.187	SLE RA 21	-3.1E-03	-93.534	SLE RA 21	4.94E-04				
859	SLD 16	-2.7E-03	-80.607	SLE RA 21	-3.0E-03	-91.159	SLE RA 21	4.65E-04				
861	SLE RA 1	-2.7E-03	-79.961	SLE RA 21	-3.0E-03	-90.412	SLE RA 21	4.56E-04				
863	SLD 13	-2.5E-03	-76.325	SLD 4	-3.9E-03	-116.116	SLE RA 21	0.000071				
864	SLD 2	-1.7E-03	-51.331	SLD 15	-2.4E-03	-71.282	SLE RA 21	2.93E-05				
866	SLD 2	-3.1E-03	-94.004	SLE RA 20	-3.7E-03	-110.985	SLE RA 21	4.00E-04				
868	SLD 2	-3.0E-03	-90.837	SLE RA 21	-3.6E-03	-107.229	SLE RA 21	3.36E-04				
869	SLD 13	-2.7E-03	-82.142	SLD 4	-4.2E-03	-126.765	SLE RA 21	1.04E-04				
870	SLD 13	-2.5E-03	-75.855	SLD 4	-3.8E-03	-115.091	SLE RA 21	7.03E-05				
871	SLD 13	-2.3E-03	-70.36	SLD 4	-3.5E-03	-104.696	SLE RA 21	0.000066				
872	SLD 13	-0.0022	-65.999	SLD 4	-3.2E-03	-96.068	SLE RA 21	9.03E-05				
873	SLD 13	-2.1E-03	-62.99	SLD 4	-3.0E-03	-89.491	SLE RA 21	7.52E-05				
874	SLD 13	-2.0E-03	-61.451	SLD 4	-2.8E-03	-85.099	SLE RA 21	6.77E-05				
875	SLD 13	-2.0E-03	-61.417	SLD 4	-2.8E-03	-82.905	SLE RA 21	6.55E-05				
876	SLD 13	-2.1E-03	-62.843	SLD 4	-2.8E-03	-82.814	SLE RA 21	0.000071				
877	SLD 13	-2.2E-03	-65.601	SLD 4	-2.8E-03	-84.621	SLE RA 21	1.05E-04				
878	SLD 13	-2.3E-03	-69.466	SLD 4	-2.9E-03	-88.003	SLE RA 21	0.000156				
879	SLD 13	-2.5E-03	-74.095	SLD 4	-3.1E-03	-92.492	SLE RA 21	2.27E-04				
880	SLD 13	-2.6E-03	-79.002	SLD 4	-3.2E-03	-97.444	SLE RA 21	3.01E-04				
881	SLD 13	-2.8E-03	-83.513	SLD 4	-3.4E-03	-101.992	SLE RA 21	3.23E-04				
882	SLD 13	-2.8E-03	-84.859	SLD 4	-3.4E-03	-103.306	SLE RA 21	3.40E-04				
883	SLD 1	-2.7E-03	-82.038	SLE RA 21	-3.1E-03	-93.804	SLE RA 21	3.67E-04				
885	SLD 1	-2.7E-03	-81.684	SLE RA 21	-3.1E-03	-94.115	SLE RA 21	3.74E-04				
886	SLE RA 1	-2.7E-03	-81.458	SLE RA 21	-3.1E-03	-92.044	SLE RA 21	3.55E-04				
888	SLE RA 1	-2.7E-03	-80.796	SLE RA 21	-3.0E-03	-91.299	SLE RA 21	3.43E-04				
890	SLD 13	-2.7E-03	-82.304	SLD 4	-4.2E-03	-125.885	SLE RA 21	7.14E-05				
891	SLD 2	-3.2E-03	-94.516	SLE RA 20	-3.8E-03	-112.637	SLE RA 21	3.23E-04				

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
893	SLD 2	-3.0E-03	-91.236	SLE RA 20	-3.6E-03	-108.739	SLE RA 21	2.60E-04				
894	SLD 2	-3.0E-03	-89.594	SLE RA 20	-3.6E-03	-106.815	SLE RA 21	0.000238				
895	SLD 2	-2.8E-03	-85.466	SLD 15	-3.4E-03	-102.217	SLE RA 21	2.15E-04				
896	SLD 2	-2.7E-03	-80.594	SLD 15	-3.2E-03	-97.335	SLE RA 21	1.54E-04				
897	SLD 2	-2.5E-03	-75.742	SLD 15	-3.1E-03	-92.791	SLE RA 21	1.08E-04				
898	SLD 2	-2.4E-03	-71.425	SLD 15	-3.0E-03	-89.143	SLE RA 21	7.91E-05				
899	SLD 2	-2.3E-03	-67.957	SLD 15	-2.9E-03	-86.74	SLE RA 21	7.15E-05				
900	SLD 2	-2.2E-03	-65.502	SLD 15	-2.9E-03	-85.768	SLE RA 21	6.76E-05				
901	SLD 2	-2.1E-03	-64.11	SLD 15	-2.9E-03	-86.289	SLE RA 21	6.73E-05				
902	SLD 2	-2.1E-03	-63.737	SLD 15	-2.9E-03	-88.254	SLE RA 21	7.13E-05				
903	SLD 2	-2.1E-03	-64.256	SLD 15	-3.1E-03	-91.512	SLE RA 21	8.29E-05				
904	SLD 2	-2.2E-03	-65.463	SLD 15	-3.2E-03	-95.796	SLE RA 21	4.36E-05				
905	SLD 2	-1.6E-03	-47.933	SLD 15	-2.2E-03	-66.022	SLE RA 21	2.32E-05				
906	SLD 2	-2.2E-03	-67.064	SLD 15	-3.4E-03	-100.686	SLE RA 21	4.02E-05				
909	SLD 1	-2.8E-03	-82.7	SLE RA 20	-3.2E-03	-94.78	SLE RA 21	2.90E-04				
911	SLD 1	-2.7E-03	-82.435	SLE RA 20	-3.2E-03	-95.148	SLE RA 21	2.98E-04				
912	SLD 13	-2.8E-03	-82.609	SLE RA 21	-3.1E-03	-93.416	SLE RA 21	2.88E-04				
914	SLE RA 1	-2.7E-03	-82.059	SLE RA 21	-3.1E-03	-92.672	SLE RA 21	2.77E-04				
915	SLD 2	-0.00316	-94.8	SLD 15	-3.8E-03	-114.293	SLE RA 21	2.27E-04				
918	SLD 13	-3.0E-03	-90.318	SLD 4	-4.6E-03	-138.734	SLE RA 21	4.46E-05				
931	SLD 13	-2.9E-03	-87.741	SLD 4	-3.6E-03	-108.492	SLE RA 21	2.22E-04				
934	SLD 13	-3.1E-03	-92.312	SLD 4	-3.8E-03	-112.93	SLE RA 21	2.53E-04				
948	SLD 2	-3.2E-03	-94.763	SLD 15	-3.9E-03	-116.874	SLE RA 20	1.69E-04				
953	SLD 13	-3.1E-03	-93.269	SLD 4	-3.8E-03	-114.76	SLE RA 21	2.00E-04				
954	SLD 1	-2.8E-03	-84.045	SLE RA 20	-3.2E-03	-96.598	SLE RA 20	2.11E-04				
956	SLD 1	-2.8E-03	-83.849	SLE RA 20	-3.2E-03	-97.026	SLE RA 20	2.18E-04				
957	SLD 13	-2.8E-03	-84.357	SLE RA 20	-3.2E-03	-95.622	SLE RA 21	2.12E-04				
959	SLE RA 2	-2.8E-03	-84.042	SLE RA 20	-3.2E-03	-94.88	SLE RA 21	2.03E-04				
960	SLD 13	-3.2E-03	-97.037	SLD 4	-4.0E-03	-120.728	SLE RA 21	2.23E-04				
961	SLD 13	-3.1E-03	-92.297	SLD 4	-3.8E-03	-113.732	SLE RA 21	1.77E-04				
962	SLD 13	-2.9E-03	-87.434	SLD 4	-3.6E-03	-106.621	SLE RA 21	1.68E-04				
963	SLD 13	-2.8E-03	-83.072	SLD 4	-3.3E-03	-100.127	SLE RA 21	1.86E-04				
964	SLD 13	-2.7E-03	-79.636	SLE RA 21	-3.2E-03	-94.83	SLE RA 21	1.57E-04				
965	SLD 13	-2.6E-03	-77.367	SLE RA 21	-3.0E-03	-91.399	SLE RA 21	1.39E-04				
966	SLD 13	-2.5E-03	-76.357	SLE RA 20	-3.0E-03	-89.481	SLE RA 21	1.32E-04				
967	SLD 13	-2.6E-03	-76.563	SLE RA 20	-3.0E-03	-89.024	SLE RA 21	1.37E-04				
968	SLD 13	-2.6E-03	-77.808	SLE RA 20	-3.0E-03	-89.824	SLE RA 21	1.54E-04				
969	SLD 13	-2.7E-03	-79.776	SLE RA 20	-3.1E-03	-91.513	SLE RA 21	1.83E-04				
970	SLD 13	-2.7E-03	-81.98	SLE RA 20	-3.1E-03	-93.533	SLE RA 21	1.81E-04				
971	SLD 13	-2.8E-03	-83.743	SLE RA 20	-3.2E-03	-95.098	SLE RA 21	2.00E-04				
972	SLD 13	-2.8E-03	-84.212	SLE RA 20	-3.2E-03	-95.22	SLE RA 21	2.03E-04				
973	SLE RA 2	-2.8E-03	-83.106	SLE RA 20	-3.1E-03	-93.806	SLE RA 21	1.85E-04				
974	SLE RA 2	-2.7E-03	-80.451	SLE RA 20	-3.0E-03	-90.772	SLE RA 21	1.49E-04				
975	SLE RA 2	-2.6E-03	-77.341	SLE RA 20	-2.9E-03	-87.217	SLE RA 20	1.34E-04				
976	SLE RA 2	-2.5E-03	-74.503	SLE RA 20	-2.8E-03	-83.974	SLE RA 20	9.76E-05				
977	SLE RA 2	-2.4E-03	-72.427	SLE RA 20	-2.7E-03	-81.605	SLE RA 20	7.28E-05				
978	SLE RA 2	-2.4E-03	-71.412	SLE RA 20	-2.7E-03	-80.453	SLE RA 20	6.74E-05				
979	SLE RA 2	-2.4E-03	-71.595	SLE RA 20	-2.7E-03	-80.676	SLE RA 20	6.78E-05				
980	SLE RA 2	-2.4E-03	-72.968	SLE RA 20	-2.7E-03	-82.263	SLE RA 20	7.51E-05				
981	SLE RA 2	-2.5E-03	-75.372	SLE RA 20	-2.8E-03	-85.032	SLE RA 20	1.01E-04				
982	SLD 1	-2.6E-03	-78.199	SLE RA 20	-3.0E-03	-88.612	SLE RA 20	1.39E-04				
983	SLD 1	-2.7E-03	-81.016	SLE RA 20	-0.00308	-92.4	SLE RA 20	1.55E-04				
984	SLD 1	-2.8E-03	-83.251	SLE RA 20	-3.2E-03	-95.509	SLE RA 20	1.92E-04				
985	SLD 1	-2.8E-03	-83.889	SLE RA 20	-3.2E-03	-96.775	SLE RA 20	2.09E-04				
986	SLD 1	-2.8E-03	-83.15	SLE RA 20	-3.2E-03	-96.414	SLE RA 20	2.04E-04				
987	SLD 2	-2.7E-03	-81.182	SLE RA 20	-3.2E-03	-94.612	SLE RA 20	1.81E-04				
988	SLD 2	-2.6E-03	-78.861	SLE RA 20	-3.1E-03	-92.41	SLE RA 20	1.79E-04				
989	SLD 2	-2.6E-03	-76.882	SLE RA 20	-3.0E-03	-90.63	SLE RA 20	1.47E-04				
990	SLD 2	-2.5E-03	-75.739	SLE RA 20	-3.0E-03	-89.853	SLE RA 20	1.26E-04				
991	SLD 2	-2.5E-03	-75.757	SLD 15	-3.0E-03	-90.584	SLE RA 20	1.20E-04				
992	SLD 2	-2.6E-03	-77.113	SLD 15	-3.1E-03	-93.268	SLE RA 20	1.25E-04				
993	SLD 2	-2.7E-03	-79.851	SLD 15	-3.3E-03	-97.555	SLE RA 20	1.40E-04				
994	SLD 2	-2.8E-03	-83.872	SLD 15	-3.4E-03	-103.328	SLE RA 20	1.63E-04				
995	SLD 2	-3.0E-03	-88.922	SLD 15	-3.7E-03	-110.286	SLE RA 20	1.43E-04				
996	SLD 2	-3.2E-03	-94.563	SLD 15	-3.9E-03	-117.916	SLE RA 20	1.99E-04				
998	SLD 13	-3.1E-03	-94.074	SLD 4	-3.9E-03	-116.386	SLE RA 21	1.57E-04				
1000	SLD 13	-3.2E-03	-95.127	SLD 4	-3.9E-03	-118.298	SLE RA 21	1.30E-04				
1012	SLD 13	-2.9E-03	-87.218	SLE RA 20	-3.3E-03	-99.152	SLE RA 20	1.72E-04				
1014	SLD 13	-2.9E-03	-87.03	SLE RA 20	-3.3E-03	-98.41	SLE RA 20	1.66E-04				
1027	SLD 2	-2.9E-03	-86.572	SLE RA 20	-3.3E-03	-99.817	SLE RA 20	1.72E-04				
1029	SLD 2	-0.00288	-86.4	SLE RA 20	-3.3E-03	-100.267	SLE RA 20	1.76E-04				
1040	SLD 2	-3.2E-03	-95.168	SLD 15	-4.1E-03	-122.936	SLE RA 20	7.48E-05				

1.5 Baricentri delle rigidezze

Quota: *quota alla quale è stato valutato il baricentro delle rigidezze. esprimibile come livello, falda, piano orizzontale alla Z specificata. [m]*
Posizione: *posizione in pianta del baricentro delle rigidezze.*
X: *coordinata X. [m]*
Y: *coordinata Y. [m]*
Baricentro masse: *posizione in pianta del baricentro delle masse.*
X: *coordinata X. [m]*
Y: *coordinata Y. [m]*
Distanza: *distanza in pianta tra il baricentro delle rigidezze e il baricentro delle masse.*
X: *coordinata X. [m]*
Y: *coordinata Y. [m]*

Quota	Posizione		Baricentro masse		Distanza	
	X	Y	X	Y	X	Y
Rialzato	-12.203	1.008	-12.371	1.251	0.167	-0.244
Primo	-12.264	1.043	-12.399	1.218	0.134	-0.175
Secondo	-12.386	1.128	-12.388	1.237	0.002	-0.109
Terzo	-12.489	1.238	-12.381	1.226	-0.108	0.012
Sottotetto	-12.464	1.407	-12.377	1.58	-0.088	-0.173

1.6 Risposta modale

Modo: *identificativo del modo di vibrare.*
Periodo: *periodo. [s]*
Massa X: *massa partecipante in direzione globale X. Il valore è adimensionale.*
Massa Y: *massa partecipante in direzione globale Y. Il valore è adimensionale.*
Massa Z: *massa partecipante in direzione globale Z. Il valore è adimensionale.*
Massa rot. X: *massa rotazionale partecipante attorno la direzione globale X. Il valore è adimensionale.*
Massa rot. Y: *massa rotazionale partecipante attorno la direzione globale Y. Il valore è adimensionale.*
Massa rot. Z: *massa rotazionale partecipante attorno la direzione globale Z. Il valore è adimensionale.*
Massa sX: *massa partecipante in direzione Sisma X. Il valore è adimensionale.*
Massa sY: *massa partecipante in direzione Sisma Y. Il valore è adimensionale.*

Totale masse partecipanti:

Traslazione X: 0.996463
Traslazione Y: 0.938253
Traslazione Z: 0
Rotazione X: 0.689606
Rotazione Y: 0.945916
Rotazione Z: 0.646912

Modo	Periodo	Massa X	Massa Y	Massa Z	Massa rot. X	Massa rot. Y	Massa rot. Z	Massa sX	Massa sY
1	1.231182266	0.000001556	0.000000001	0	0.000000002	0.000000043	0.000000337	0.000001556	0.000000001
2	1.116860649	0.000006619	0.000000009	0	0	0.000001242	0.000000819	0.000006619	0.000000009
3	0.890920291	0.000120091	0.000000001	0	0.000000059	0.00001338	0.000013602	0.000120091	0.000000001
4	0.827992323	0.000290443	0.000000067	0	0.000000001	0.000073335	0.000025092	0.000290443	0.000000067
5	0.771787626	0.000069127	0.000000005	0	0.000000001	0.000008628	0.00000856	0.000069127	0.000000005
6	0.759082315	0.000090308	0.000000024	0	0.000000035	0.000001536	0.000009976	0.000090308	0.000000024
7	0.741055297	0.000015844	0.000000026	0	0.000000107	0.000094938	0.000000953	0.000015844	0.000000026
8	0.73883354	0.000068779	0.000000027	0	0.000000017	0.000011695	0.00000548	0.000068779	0.000000027
9	0.718619946	0.000005053	0.000000065	0	0.000000405	0.000022153	0.00000014	0.000005053	0.000000065
10	0.706831445	0.001240644	0.000000001	0	0.000000085	0.003260076	0.000102011	0.001240644	0.000000001
11	0.693506216	0.000363476	0.000000188	0	0.000001147	0.000067291	0.000038089	0.000363476	0.000000188
12	0.652720146	0.002168737	0.000000817	0	0.000006839	0.004543951	0.000141707	0.002168737	0.000000817
13	0.639784865	0.004114343	0.000000565	0	0.000011254	0.006286155	0.000315937	0.004114343	0.000000565
14	0.622930384	0.004835832	0.000000181	0	0.000007983	0.003228934	0.000410923	0.004835832	0.000000181
15	0.601460664	0.000429941	0.000013078	0	0.000038447	0.000296424	0.000050003	0.000429941	0.000013078
16	0.580140971	0.006358094	0.000000032	0	0.000002265	0.008302779	0.000151143	0.006358094	0.000000032
17	0.546097065	0.013162712	0.000025245	0	0.000021106	0.015242142	0.000365934	0.013162712	0.000025245
18	0.532351874	0.006629038	0.000223696	0	0.000172365	0.006900005	0.000012624	0.006629038	0.000223696
19	0.512635281	0.016500104	0.000080281	0	0.000061509	0.012245263	0.000105454	0.016500104	0.000080281
20	0.494276677	0.001269493	0.000206767	0	0.000327654	0.000537753	0.00011568	0.001269493	0.000206767
21	0.445985525	0.000621627	0.002700721	0	0.001716513	0.000770762	0.002003701	0.000621627	0.002700721
22	0.437589085	0.000821381	0.003062764	0	0.001712316	0.001311697	0.002364054	0.000821381	0.003062764
23	0.403247137	0.000078107	0.004106415	0	0.004097395	0.0001502	0.002158524	0.000078107	0.004106415
24	0.351659685	0.024531357	0.000078105	0	0.000134418	0.018203845	0.000082336	0.024531357	0.000078105
25	0.322234464	0.005227921	0.066950824	0	0.071425475	0.004731737	0.041062596	0.005227921	0.066950824
26	0.307844402	0.280026324	0.00379922	0	0.003325253	0.283694666	0.00012446	0.280026324	0.00379922
27	0.288274727	0.00796608	0.082043045	0	0.055207618	0.008565714	0.065616912	0.00796608	0.082043045
28	0.259863985	0.170824185	0.002877725	0	0.002015489	0.170039294	0.000772534	0.170824185	0.002877725
29	0.233538241	0.010157698	0.050820413	0	0.045724667	0.009865006	0.041793403	0.010157698	0.050820413
30	0.221588121	0.336930556	0.000455048	0	0.000467081	0.350371224	0.000705683	0.336930556	0.000455048
31	0.172972441	0.000090749	0.152034264	0	0.025035909	0.000057627	0.112306871	0.000090749	0.152034264
32	0.135045949	0.016015093	0.004946187	0	0.001258784	0.0000049	0.001929826	0.016015093	0.004946187
33	0.122809994	0.000158348	0.478711915	0	0.23531217	0.000021914	0.329775878	0.000158348	0.478711915
34	0.080773888	0.085256486	0.000122842	0	0.000114209	0.036971629	0.000013027	0.085256486	0.000122842
35	0.05137097	0.000016918	0.084992361	0	0.241407789	0.000017888	0.044327261	0.000016918	0.084992361

1.7 Equilibrio globale forze

Contributo: *Nome attribuito al sistema risultante.*
Fx: *Componente X di forza del sistema risultante. [kN]*
Fy: *Componente Y di forza del sistema risultante. [kN]*
Fz: *Componente Z di forza del sistema risultante. [kN]*
Mx: *Componente di momento attorno l'asse X del sistema risultante. [kN*m]*
My: *Componente di momento attorno l'asse Y del sistema risultante. [kN*m]*
Mz: *Componente di momento attorno l'asse Z del sistema risultante. [kN*m]*

Bilancio in condizione di carico: Pesi strutturali

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	-0.4884	6.70998	-14349.91867	-13901.7024	-177511.5374	-80.5817
Reazioni	0.4884	-6.70998	14349.91867	13919.8931	177515.3571	80.5817

Contributo	Fx	Fy	Fz	Mx	My	Mz
P-Delta	0	0	0	0	0	0
Totale	0	0	0	18.1907	3.8197	0

Bilancio in condizione di carico: Permanenti portati

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	-3046.7598	-3917.3354	-37806.9581	0
Reazioni	0	0	3046.7598	3917.3311	37806.4062	0
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-0.0043	-0.5519	0

Bilancio in condizione di carico: Variabile A

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	-2128.54589	-2333.3205	-26390.4623	0
Reazioni	0	0	2128.54589	2333.0476	26390.5665	0
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-0.2729	0.1043	0

Bilancio in condizione di carico: Neve

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	-342.02169	-389.759	-4246.912	0
Reazioni	0	0	342.02169	392.078	4245.7979	0
P-Delta	0	0	0	0	0	0
Totale	0	0	0	2.319	-1.114	0

Bilancio in condizione di carico: Variabile H

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	-261.90811	-353.5018	-3250.8244	0
Reazioni	0	0	261.90811	353.8398	3250.1443	0
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0.338	-0.68	0

Bilancio in condizione di carico: Vento

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	-44.33027	0	397.2432	0	547.7637
Reazioni	0	44.33027	0	-397.3266	-0.0486	-547.7637
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-0.0833	-0.0486	0

Bilancio in condizione di carico: Sisma X SLV

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	5924.80373	0	0	0	64971.6848	-6532.6528
Reazioni	-5924.80373	0	0	-19.8147	-64948.0534	6532.6528
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-19.8147	23.6313	0

Bilancio in condizione di carico: Sisma Y SLV

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	5305.89028	0	-58184.6499	0	-65838.0932
Reazioni	0	-5305.89028	0	58182.1689	1.695	65838.0932
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-2.481	1.695	0

Bilancio in condizione di carico: Eccentricità Y per sisma X SLV

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	0	0	0	-2934.91
Reazioni	0	0	0	0.6171	-0.7493	2934.91
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0.6171	-0.7493	0

Bilancio in condizione di carico: Eccentricità X per sisma Y SLV

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	0	0	0	1229.3779
Reazioni	0	0	0	-0.2585	0.3139	-1229.3779
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-0.2585	0.3139	0

Bilancio in condizione di carico: Sisma X SLD

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	2533.40058	0	0	0	27781.3936	-2793.3122
Reazioni	-2533.40058	0	0	-8.4726	-27771.289	2793.3122
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-8.4726	10.1046	0

Bilancio in condizione di carico: Sisma Y SLD

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	2347.21667	0	-25739.6917	0	-29125.4176
Reazioni	0	-2347.21667	0	25738.5942	0.7498	29125.4176
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-1.0975	0.7498	0

Bilancio in condizione di carico: Eccentricità Y per sisma X SLD

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	0	0	0	-1254.945
Reazioni	0	0	0	0.2639	-0.3204	1254.945
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0.2639	-0.3204	0

Bilancio in condizione di carico: Eccentricità X per sisma Y SLD

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	0	0	0	543.8515
Reazioni	0	0	0	-0.1144	0.1388	-543.8515
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-0.1144	0.1388	0

Bilancio in condizione di carico: Rig Ux

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0.01	0	0	0	0.1564	-0.0158
Reazioni	-0.01	0	0	-0.0001	-0.1564	0.0158
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-0.0001	0	0

Bilancio in condizione di carico: Rig Uy

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0.01	0	-0.1564	0	-0.1238
Reazioni	0	-0.01	0	0.1564	0	0.1238
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Rig Rz

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	0	0	0	0.0001
Reazioni	0	0	0	0	0	-0.0001
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

1.8 Risposta di spettro

Spettro: condizione elementare corrispondente allo spettro.
N.b.: nome breve della condizione elementare.
Fx: componente della forza lungo l'asse X. [kN]
Fy: componente della forza lungo l'asse Y. [kN]
Fz: componente della forza lungo l'asse Z. [kN]
*Mx: componente della coppia attorno all'asse X. [kN*m]*
*My: componente della coppia attorno all'asse Y. [kN*m]*
*Mz: componente della coppia attorno all'asse Z. [kN*m]*
Max X: massima reazione lungo l'asse X.
Valore: valore massimo della reazione. [kN]
Angolo: angolo d'ingresso del sisma che provoca il valore massimo della reazione. [deg]
Max Y: massima reazione lungo l'asse Y.
Valore: valore massimo della reazione. [kN]
Angolo: angolo d'ingresso del sisma che provoca il valore massimo della reazione. [deg]
Max Z: massima reazione lungo l'asse Z.
Valore: valore massimo della reazione. [kN]
Angolo: angolo d'ingresso del sisma che provoca il valore massimo della reazione. [deg]

Spettro	Fx	Fy	Fz	Mx	My	Mz	Max X		Max Y		Max Z	
N.b.							Valore	Angolo	Valore	Angolo	Valore	Angolo
SLV X	3980.7814	163.5228	0	1.300E03	3.697E04	4.429E03	3980.7814	179	3494.9668	89	0	0
SLV Y	163.5228	3494.9036	0	2.332E04	1.441E03	4.341E04	3980.7814	179	3494.9668	89	0	0
X SLD	1701.6868	70.2161	0	5.570E02	1.580E04	1.892E03	1701.6868	0	1534.2213	89	0	0
Y SLD	70.2161	1534.1976	0	1.022E04	6.166E02	1.905E04	1701.6868	0	1534.2213	89	0	0

1.9 Annotazioni solutore

Informazioni: informazioni fornite dal solutore al termine del calcolo del modello.

Informazioni

1.10 Statistiche soluzione

Tipo di equazioni	Lineari
Tecnica di soluzione	Intel MKL PARDISO
Numero equazioni	100773
Elemento min. diagonale	804.31753918
Elemento max diagonale	134678955782245
Rapporto max/min	167445006755.532
Elementi non nulli	4348880

SIDEL
INGEGNERIA

TABULATI DI CALCOLO – VERIFICHE
CIVICO 37
STATO DI PROGETTO

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1 Verifiche

1.1 Verifica regolarità strutturale

Le unità di misura elencate nel capitolo sono in [m, daN] ove non espressamente specificato.

Livello:
Descr: *descrizione livello.*
Quota: *quota livello. [m]*
Q: *quota livello. [m]*
Qinf: *quota livello precedente. [m]*
Comb: *combinazione.*
A1: *a1 (Distribuzione masse).*
A1n: *a1 numeratore (distanza tra centro massa vs. centro rigidezza [se presente] o centro dell'ingombro del piano). [m]*
A1d: *a1 denominatore (ingombro del piano nella medesima direzione [x o y globale]). [m]*
A1r: *a1 rapporto (distanza centro massa/rigidezza su ingombro del piano).*
A2: *a2 (Distribuzione rigidezze).*
A2n: *a2 numeratore (rigidezza max [x o y globale]).*
A2d: *a2 denominatore (rigidezza min [x o y globale]).*
A2r: *a2 rapporto (rigidezza max/min).*
A3: *a3 (Forma compatta).*
A3n: *a3 numeratore (area convessa). [m²]*
A3d: *a3 denominatore (area piano). [m²]*
A3r: *a3 rapporto (area convessa/area piano).*
B: *b (Rapporto lati).*
Bn: *b numeratore (lato max [x o y globale]). [m]*
Bd: *b denominatore (lato min [x o y globale]). [m]*
Br: *b rapporto (lato max/min).*
C: *c (Rapporto rigidezze piano).*
Cn: *c numeratore (rigidezza elementi verticali).*
Cd: *c denominatore (rigidezza piano).*
Cr: *c rapporto (rigidezza elementi verticali/rigidezza piano).*
E1: *e1 (Variazione masse).*
E1n: *e1 numeratore (massa max). [daN]*
E1d: *e1 denominatore (massa min). [daN]*
E1r: *e1 rapporto (massa max/min).*
E2: *e2 (Riduzione rigidezze).*
E2n: *e2 numeratore (rigidezza relativa alla traslazione KUmax). [daN/m]*
E2d: *e2 denominatore (rigidezza relativa alla traslazione KUmin). [daN/m]*
E2r: *e2 rapporto (variazione massima in decremento Kmax/Kmin).*
E3: *e3 (Incremento rigidezze).*
E3n: *e3 numeratore (rigidezza relativa alla traslazione KUmax). [daN/m]*
E3d: *e3 denominatore (rigidezza relativa alla traslazione KUmin). [daN/m]*
E3r: *e3 rapporto (variazione massima in incremento Kmax/Kmin).*
F: *f (Rapporto Capacità/Domanda).*
Fn: *f numeratore (rapporto capacità/domanda massimo [c/d max]). [daN]*
Fd: *f denominatore (rapporto capacità/domanda minimo [c/d min]). [daN]*
Fr: *f rapporto (variazione massima [rapporto (c/d max)/(c/d min)]).*
G1: *g1 (Rastremazione di piano).*
G1n: *g1 numeratore (L1). [m]*
G1d: *g1 denominatore (L2). [m]*
G1r: *g1 rapporto (L1/L2).*
G2: *g2 (Rastremazione totale).*
G2n: *g2 numeratore (L0). [m]*
G2d: *g2 denominatore (Li). [m]*
G2r: *g2 rapporto (L0/Li).*
Capacità/Domanda in X:
VrdX: *taglio resistente complessivo in direzione X. [daN]*
VedX: *taglio agente complessivo in direzione X). [daN]*
|Rd/Ed|: *|Rd/Ed| (rapporto capacità/domanda in termini di resistenza a taglio).*
Capacità/Domanda in Y:
VrdY: *taglio resistente complessivo in direzione Y. [daN]*
VedY: *taglio agente complessivo in direzione Y). [daN]*

Verifica regolarità strutturale

Controllo regolarità edificio secondo D.M. 17-01-18 (N.T.C.) §7.2.1 - §C7.2.1

Avvertenze

La seguente procedura valuta la regolarità della costruzione secondo quanto indicato nelle NTC 2018 §7.2.1.

Tali valutazioni sono a carattere puramente informativo e vengono condotte sulla base del modello e delle verifiche presenti alla sua generazione, con le limitazioni indicate nella manualistica.
In ogni caso l'impostazione di regolarità della costruzione, in pianta ed elevazione, va indicata nelle preferenze di analisi dall'utente utilizzatore del software.

Sintesi dei risultati

Orizzontamenti considerati nella valutazione
Livelli di fondazione o di struttura scatolare non dissipativa: Fondazione ascensore(L1), Fondazione(L2),
Livelli di elevazione considerati: Rialzato(L4), Primo(L5), Secondo(L6), Terzo(L7), Sottotetto(L8),

Regolarità in pianta - NO
L'edificio risulta NON regolare in pianta, in base alle condizioni indicate in NTC 2018 §7.2.1
Ok - Criterio A1 (Distribuzione masse) rispettato, con rapporto massimo 0,02 (limite=0,2) al livello Rialzato
N.V. - Criterio A2 (Distribuzione rigidezze) non valutabile al livello Rialzato
No - Criterio A3 (Forma compatta) NON rispettato, con rapporto massimo 2801458.2/2536828.3=1.1 (limite=1,05) al livello Rialzato
Ok - Criterio B (Rapporto lati) rispettato, con rapporto massimo 2,13 (limite=4) al livello Secondo
Ok - Criterio C (Rapporto rigidezze piano) rispettato, con rapporto massimo 0 (limite=0,1) al livello Rialzato

Regolarità in altezza - NO
L'edificio risulta NON regolare in altezza, in base alle condizioni indicate in NTC 2018 §7.2.1
Ok - Criterio D (Altezza elementi sismoresistenti) rispettato, con rapporto massimo 1 (limite=1,01)
No - Criterio E1 (Variazione masse) NON rispettato, con rapporto massimo 184905.4/141511.4=1.3 (limite=1,25) tra il livello Sottotetto ed il precedente
N.V. - Criterio E2 (Riduzione rigidezze) non valutabile tra il livello Primo ed il precedente
N.V. - Criterio E3 (Incremento rigidezze) non valutabile tra il livello Primo ed il precedente
No - Criterio F (Rapporto Capacità/Domanda) NON rispettato, con rapporto massimo > 999 (limite=1) tra il livello Terzo ed il precedente
Ok - Criterio G1 (Rastremazione di piano) rispettato, con rapporto massimo 0,01 (limite=0,1) tra il livello Primo ed il precedente
Ok - Criterio G2 (Rastremazione totale) rispettato, con rapporto massimo 0,01 (limite=0,3) tra il livello Secondo ed il precedente

Valori per piano

Verifiche di regolarità in pianta

Livello		A1			A2			A3			B			C		
Descr	Quota	A1n	A1d	A1r	A2n	A2d	A2r	A3n	A3d	A3r	Bn	Bd	Br	Cn	Cd	Cr
Rialzato	2	0.24	11.81	0.02				280.1458	253.6828	1.1	24.98	11.81	2.12	0	+∞	0
Primo	5.44	0.17	11.64	0.02				273.4594	254.3379	1.08	24.78	11.64	2.13	0	+∞	0
Secondo	8.96	0.11	11.64	0.01				273.4594	258.4795	1.06	24.78	11.64	2.13	0	+∞	0
Terzo	12.48	0.11	24.78	0				273.4594	254.3379	1.08	24.78	11.64	2.13	0	+∞	0
Sottotetto	15.64	0.17	11.7	0.01				275.3597	259.0881	1.06	24.89	11.69	2.13	0	+∞	0

Verifiche di regolarità in elevazione

Rapporto di regolarità per la condizione D (Altezza elementi sismoresistenti): 16.62/16.62=0.01.

Livello			E1			E2			E3			F			G1			G2		
Descr	Q	Qinf	E1n	E1d	E1r	E2n	E2d	E2r	E3n	E3d	E3r	Fn	Fd	Fr	G1n	G1d	G1r	G2n	G2d	G2r
Primo	5.44	2	171728	141391	1.21							92.6	50.1	1.85	0.13	11.81	0.01	0.13	11.81	0.01
Secondo	8.96	5.44	141511	141391	1							4200.7	9.3	452.91	0	11.64	0	0.13	11.81	0.01
Terzo	12.48	8.96	141511	141511	1							4200.7	4.2	1009.57	0	11.64	0	0.13	11.81	0.01
Sottotetto	15.64	12.48	184905	141511	1.31							262.6	70.7	3.71	0.05	24.78	0	0	0.01	0

Dettaglio delle resistenze di piano a taglio (per valutazione punto F)

Livello			Capacità/Domanda in X			Capacità/Domanda in Y		
Descr	Q	Comb	VrdX	VedX	|Rd/Ed|	VrdY	VedY	|Rd/Ed|
Rialzato	2	SLD 1	1216629	-121414	10	996967	-19367	51.5
Rialzato	2	SLD 2	1216548	-121431	10	997340	-19366	51.5
Rialzato	2	SLD 3	1216561	-118959	10.2	998448	20056	49.8
Rialzato	2	SLD 4	1216488	-118975	10.2	998817	20058	49.8
Rialzato	2	SLD 5	1217861	-40776	29.9	980396	-65523	15
Rialzato	2	SLD 6	1217879	-40787	29.9	980398	-65523	15
Rialzato	2	SLD 7	1217464	-32591	37.4	999314	65888	15.2
Rialzato	2	SLD 8	1217397	-32602	37.3	999327	65889	15.2
Rialzato	2	SLD 9	1217860	30800	39.5	980838	-65663	14.9
Rialzato	2	SLD 10	1217878	30789	39.6	980840	-65662	14.9
Rialzato	2	SLD 11	1217511	38985	31.2	998162	65748	15.2
Rialzato	2	SLD 12	1217508	38974	31.2	998527	65749	15.2
Rialzato	2	SLD 13	1217378	117173	10.4	981105	-19832	49.5
Rialzato	2	SLD 14	1217524	117156	10.4	981108	-19831	49.5
Rialzato	2	SLD 15	1217852	119629	10.2	980892	19592	50.1
Rialzato	2	SLD 16	1217880	119612	10.2	980896	19593	50.1
Rialzato	2	SLV 1	1206217	-282818	4.3	998304	-43981	22.7
Rialzato	2	SLV 2	1206087	-282858	4.3	998943	-43978	22.7
Rialzato	2	SLV 3	1206651	-277100	4.4	999586	45401	22
Rialzato	2	SLV 4	1206547	-277140	4.4	999327	45404	22
Rialzato	2	SLV 5	1216585	-94142	12.9	980562	-148679	6.6
Rialzato	2	SLV 6	1216330	-94167	12.9	980568	-148677	6.6
Rialzato	2	SLV 7	1198030	-75082	16	998812	149262	6.7
Rialzato	2	SLV 8	1198165	-75107	16	998844	149264	6.7
Rialzato	2	SLV 9	1214801	73305	16.6	978361	-149038	6.6
Rialzato	2	SLV 10	1215048	73280	16.6	978927	-149036	6.6
Rialzato	2	SLV 11	1204340	92365	13	998578	148903	6.7
Rialzato	2	SLV 12	1204462	92340	13	998609	148905	6.7
Rialzato	2	SLV 13	1212072	275337	4.4	974790	-45178	21.6
Rialzato	2	SLV 14	1212332	275298	4.4	976077	-45175	21.6
Rialzato	2	SLV 15	1211445	281055	4.3	979576	44204	22.2
Rialzato	2	SLV 16	1211590	281016	4.3	980392	44207	22.2
Primo	5.44	SLD 1	924703	-94072	9.8	633740	-7632	83
Primo	5.44	SLD 2	924709	-94089	9.8	633755	-7631	83.1

Livello			Capacità/Domanda in X			Capacità/Domanda in Y		
Descr	Q	Comb	VrdX	VedX	|Rd/Ed|	VrdY	VedY	|Rd/Ed|
Primo	5.44	SLD 3	924318	-93877	9.8	621408	9689	64.1
Primo	5.44	SLD 4	924325	-93894	9.8	621423	9690	64.1
Primo	5.44	SLD 5	925202	-29104	31.8	633912	-28885	21.9
Primo	5.44	SLD 6	925202	-29115	31.8	633921	-28884	21.9
Primo	5.44	SLD 7	923478	-28456	32.5	620730	28850	21.5
Primo	5.44	SLD 8	923482	-28467	32.4	620740	28851	21.5
Primo	5.44	SLD 9	925202	26780	34.5	633693	-29782	21.3
Primo	5.44	SLD 10	925202	26769	34.6	633702	-29781	21.3
Primo	5.44	SLD 11	923406	27428	33.7	620511	27954	22.2
Primo	5.44	SLD 12	923411	27417	33.7	620521	27955	22.2
Primo	5.44	SLD 13	924730	92207	10	633010	-10620	59.6
Primo	5.44	SLD 14	918913	92191	10	633025	-10619	59.6
Primo	5.44	SLD 15	918256	92402	9.9	620678	6700	92.6
Primo	5.44	SLD 16	918263	92385	9.9	620693	6701	92.6
Primo	5.44	SLV 1	911571	-218712	4.2	634454	-16343	38.8
Primo	5.44	SLV 2	895510	-218751	4.1	634489	-16340	38.8
Primo	5.44	SLV 3	910348	-218282	4.2	621653	22847	27.2
Primo	5.44	SLV 4	910361	-218321	4.2	621689	22850	27.2
Primo	5.44	SLV 5	912526	-66849	13.7	632462	-64667	9.8
Primo	5.44	SLV 6	912526	-66874	13.6	632178	-64665	9.8
Primo	5.44	SLV 7	910784	-65416	13.9	611293	65966	9.3
Primo	5.44	SLV 8	910795	-65441	13.9	611852	65968	9.3
Primo	5.44	SLV 9	918879	63754	14.4	630637	-66898	9.4
Primo	5.44	SLV 10	918879	63729	14.4	630959	-66896	9.4
Primo	5.44	SLV 11	904795	65188	13.9	611620	63735	9.6
Primo	5.44	SLV 12	910493	65163	14	611845	63737	9.6
Primo	5.44	SLV 13	910798	216634	4.2	632744	-23780	26.6
Primo	5.44	SLV 14	912314	216595	4.2	632780	-23777	26.6
Primo	5.44	SLV 15	917676	217064	4.2	619944	15410	40.2
Primo	5.44	SLV 16	911976	217025	4.2	619979	15412	40.2
Secondo	8.96	SLD 1	912710	-66538	13.7	584673	-228	2567.7
Secondo	8.96	SLD 2	912724	-66555	13.7	584673	-226	2581.7
Secondo	8.96	SLD 3	912116	-67024	13.6	584115	-125	4666.6
Secondo	8.96	SLD 4	912130	-67041	13.6	584115	-124	4713.2
Secondo	8.96	SLD 5	906499	-19812	45.8	580606	-550	1056.3
Secondo	8.96	SLD 6	906509	-19823	45.7	581913	-549	1060.2
Secondo	8.96	SLD 7	910993	-21431	42.5	581160	-208	2795.6
Secondo	8.96	SLD 8	911003	-21442	42.5	580013	-207	2800.9
Secondo	8.96	SLD 9	912603	19756	46.2	581989	-723	804.7
Secondo	8.96	SLD 10	912613	19745	46.2	583136	-722	807.1
Secondo	8.96	SLD 11	910623	18137	50.2	584251	-382	1531.4
Secondo	8.96	SLD 12	910633	18126	50.2	584021	-381	1534.1
Secondo	8.96	SLD 13	905108	65355	13.8	585884	-806	726.5
Secondo	8.96	SLD 14	905122	65338	13.9	585884	-805	727.6
Secondo	8.96	SLD 15	904514	64869	13.9	585326	-704	831.6
Secondo	8.96	SLD 16	904528	64852	13.9	585326	-703	833
Secondo	8.96	SLV 1	876458	-154279	5.7	567002	165	3432.7
Secondo	8.96	SLV 2	870162	-154318	5.6	584221	168	3476.3
Secondo	8.96	SLV 3	871957	-155398	5.6	542085	247	2192.2
Secondo	8.96	SLV 4	872214	-155437	5.6	542089	250	2167
Secondo	8.96	SLV 5	885311	-45171	19.6	546501	-401	1362.6
Secondo	8.96	SLV 6	885324	-45196	19.6	543443	-399	1361.2
Secondo	8.96	SLV 7	898322	-48899	18.4	527578	-127	4140.9
Secondo	8.96	SLV 8	898344	-48924	18.4	527473	-126	4200.7
Secondo	8.96	SLV 9	900636	47238	19.1	551999	-805	685.9
Secondo	8.96	SLV 10	900657	47213	19.1	553658	-803	689.5
Secondo	8.96	SLV 11	891086	43510	20.5	540034	-531	1016.8
Secondo	8.96	SLV 12	891107	43485	20.5	539894	-529	1020.1
Secondo	8.96	SLV 13	896510	153751	5.8	587047	-1181	497.3
Secondo	8.96	SLV 14	903026	153712	5.9	587048	-1178	498.5
Secondo	8.96	SLV 15	902903	152633	5.9	585778	-1098	533.3
Secondo	8.96	SLV 16	902796	152593	5.9	585778	-1096	534.7
Terzo	12.48	SLD 1	865800	-35830	24.2	547382	17411	31.4
Terzo	12.48	SLD 2	872284	-35847	24.3	547391	17412	31.4
Terzo	12.48	SLD 3	871782	-36364	24	547044	-15504	35.3
Terzo	12.48	SLD 4	871792	-36381	24	547054	-15503	35.3
Terzo	12.48	SLD 5	865994	-10525	82.3	526720	54819	9.6
Terzo	12.48	SLD 6	866000	-10536	82.2	524640	54820	9.6
Terzo	12.48	SLD 7	870829	-12307	70.8	540772	-54899	9.9
Terzo	12.48	SLD 8	870835	-12318	70.7	543330	-54898	9.9
Terzo	12.48	SLD 9	865667	10632	81.4	519422	53968	9.6
Terzo	12.48	SLD 10	865673	10621	81.5	519423	53968	9.6
Terzo	12.48	SLD 11	870502	8850	98.4	538112	-55750	9.7
Terzo	12.48	SLD 12	870508	8839	98.5	518394	-55749	9.3
Terzo	12.48	SLD 13	871184	34695	25.1	543898	14573	37.3
Terzo	12.48	SLD 14	871194	34678	25.1	546745	14574	37.5
Terzo	12.48	SLD 15	870693	34161	25.5	546773	-18343	29.8
Terzo	12.48	SLD 16	870702	34144	25.5	546768	-18341	29.8
Terzo	12.48	SLV 1	865913	-82300	10.5	548737	40424	13.6
Terzo	12.48	SLV 2	868974	-82339	10.6	548759	40427	13.6
Terzo	12.48	SLV 3	867609	-83524	10.4	547969	-34566	15.9
Terzo	12.48	SLV 4	870545	-83563	10.4	547990	-34563	15.9
Terzo	12.48	SLV 5	850739	-23417	36.3	520080	125536	4.1
Terzo	12.48	SLV 6	850753	-23442	36.3	520082	125538	4.1
Terzo	12.48	SLV 7	858349	-27497	31.2	517735	-124431	4.2
Terzo	12.48	SLV 8	858364	-27522	31.2	517737	-124429	4.2
Terzo	12.48	SLV 9	863405	25836	33.4	515722	123499	4.2
Terzo	12.48	SLV 10	856915	25811	33.2	515724	123500	4.2
Terzo	12.48	SLV 11	845270	21756	38.9	504888	-126468	4

Livello			Capacità/Domanda in X			Capacità/Domanda in Y		
Descr	Q	Comb	VrdX	VedX	|Rd/Ed|	VrdY	VedY	|Rd/Ed|
Terzo	12.48	SLV 12	851653	21731	39.2	504890	-126466	4
Terzo	12.48	SLV 13	867782	81877	10.6	548022	33633	16.3
Terzo	12.48	SLV 14	868002	81838	10.6	548474	33636	16.3
Terzo	12.48	SLV 15	858399	80653	10.6	534983	-41357	12.9
Terzo	12.48	SLV 16	858528	80614	10.6	534973	-41354	12.9
Sottotetto	15.64	SLD 1	695833	12736	54.6	485871	22561	21.5
Sottotetto	15.64	SLD 2	695677	12719	54.7	484470	22561	21.5
Sottotetto	15.64	SLD 3	694909	12427	55.9	509488	-21013	24.2
Sottotetto	15.64	SLD 4	694744	12409	56	518298	-21012	24.7
Sottotetto	15.64	SLD 5	693412	3697	187.6	476281	72636	6.6
Sottotetto	15.64	SLD 6	693318	3686	188.1	476280	72636	6.6
Sottotetto	15.64	SLD 7	696943	2665	261.5	493494	-72609	6.8
Sottotetto	15.64	SLD 8	696827	2654	262.6	493658	-72609	6.8
Sottotetto	15.64	SLD 9	702069	-4358	161.1	497387	71984	6.9
Sottotetto	15.64	SLD 10	696256	-4369	159.3	484276	71984	6.7
Sottotetto	15.64	SLD 11	700222	-5390	129.9	476557	-73261	6.5
Sottotetto	15.64	SLD 12	700107	-5401	129.6	476762	-73261	6.5
Sottotetto	15.64	SLD 13	710116	-14114	50.3	480765	20387	23.6
Sottotetto	15.64	SLD 14	696039	-14131	49.3	481110	20388	23.6
Sottotetto	15.64	SLD 15	695972	-14423	48.3	486290	-23186	21
Sottotetto	15.64	SLD 16	695966	-14441	48.2	486738	-23186	21
Sottotetto	15.64	SLV 1	694896	31108	22.3	489269	52036	9.4
Sottotetto	15.64	SLV 2	694896	31067	22.4	487092	52037	9.4
Sottotetto	15.64	SLV 3	680826	30399	22.4	494776	-47521	10.4
Sottotetto	15.64	SLV 4	681872	30358	22.5	493981	-47520	10.4
Sottotetto	15.64	SLV 5	713125	9818	72.6	464906	166387	2.8
Sottotetto	15.64	SLV 6	712931	9792	72.8	464903	166387	2.8
Sottotetto	15.64	SLV 7	660387	7455	88.6	446643	-165470	2.7
Sottotetto	15.64	SLV 8	660387	7428	88.9	459517	-165469	2.8
Sottotetto	15.64	SLV 9	709746	-9133	77.7	464781	164844	2.8
Sottotetto	15.64	SLV 10	716211	-9159	78.2	464778	164845	2.8
Sottotetto	15.64	SLV 11	687452	-11496	59.8	445873	-167012	2.7
Sottotetto	15.64	SLV 12	686858	-11523	59.6	443376	-167012	2.7
Sottotetto	15.64	SLV 13	716136	-32062	22.3	475398	46895	10.1
Sottotetto	15.64	SLV 14	709901	-32103	22.1	476823	46896	10.2
Sottotetto	15.64	SLV 15	716637	-32771	21.9	475205	-52662	9
Sottotetto	15.64	SLV 16	702551	-32812	21.4	471496	-52661	9

1.2 Verifiche travate C.A.

Le unità di misura elencate nel capitolo sono in [m, daN, deg] ove non espressamente specificato.

N°: *indice progressivo della sezione.*
Descrizione: *descrizione della sezione.*
Tipo: *tipo di sezione.*
Base: *base della sezione. [m]*
Altezza: *altezza della sezione. [m]*
Copriferro sup.: *distanza del bordo della staffa dalla superficie superiore del getto. [m]*
Copriferro inf.: *distanza del bordo della staffa dalla superficie inferiore del getto. [m]*
Copriferro lat.: *distanza del bordo della staffa dalle superfici laterali del getto. [m]*
x: *distanza da asse appoggio sinistro. [m]*
d: *altezza utile. [m]*
Af: *area di armatura inferiore per unità di lunghezza. [m]*
M: *momento flettente. [daN*m/m]*
Comb: *combinazione.*
x/d: *rapporto tra posizione asse neutro e altezza utile.*
Mult: *momento ultimo. [daN*m/m]*
V: *sforzo di taglio. [daN/m]*
Vult: *sforzo di taglio ultimo. [daN/m]*
Verifica: *stato di verifica.*
Rara: *famiglia di combinazione di verifica.*
σ c: *tensione di compressione nel calcestruzzo. [daN/m²]*
σ c limite: *tensione di compressione limite nel calcestruzzo. [daN/m²]*
σ f: *tensione di trazione nell'acciaio. [daN/m²]*
σ f limite: *tensione di trazione limite nell'acciaio. [daN/m²]*
Quasi permanente: *famiglia di combinazione di verifica.*
Size X: *misura dell'impronta al suolo lungo X. [m]*
Size Y: *misura dell'impronta al suolo lungo Y. [m]*
Comb.: *combinazione.*
Sis.: *indicazione combinazione sismica.*
Cnd: *indicazione condizione di carico (BT breve termine o LT lungo termine).*
Fx: *componente orizzontale del carico lungo x. [daN]*
Fy: *componente orizzontale del carico lungo y. [daN]*
Fz: *componente verticale del carico. [daN]*
IncX: *inclinazione del carico lungo x. [deg]*
IncY: *inclinazione del carico lungo y. [deg]*

Phi: angolo di attrito di progetto. [deg]
Ad: adesione di progetto. [daN/m²]
RPl: resistenza passiva laterale unitaria di progetto. [daN/m]
γR: coefficiente parziale sulla resistenza di progetto.
Rd: resistenza di progetto. [daN]
Ed: azione di progetto. [daN]
Rd/Ed: coefficiente di sicurezza allo scorrimento.
Aste: numero delle aste del tratto in verifica.
Size X: misura dell'impronta al suolo lungo la direzione X locale. [m]
Size Y: misura dell'impronta al suolo lungo la direzione Y locale. [m]
Type: indicazione del tipo di combinazione statica o sismica.
Cond: indicazione della condizione di carico (BT breve termine o LT lungo termine).
Rd/Ed: coefficiente di sicurezza alla capacità portante.
*Mx: momento risultante agente attorno x. [daN*m]*
*My: momento risultante agente attorno y. [daN*m]*
Inc.x: inclinazione del carico lungo x. [deg]
Inc.y: inclinazione del carico lungo y. [deg]
Ecc.x: eccentricità del carico lungo x. [m]
Ecc.y: eccentricità del carico lungo y. [m]
B': larghezza efficace. [m]
L': lunghezza efficace. [m]
qd: sovraccarico di progetto. [daN/m²]
γs: peso specifico di progetto del suolo. [daN/m³]
Fi: angolo di attrito di progetto. [deg]
Coes: coesione di progetto. [daN/m²]
Amax: accelerazione normalizzata max al suolo.
N:
Nq: fattore di capacità portante per il termine di sovraccarico.
Nc: fattore di capacità portante per il termine coesivo.
Ng: fattore di capacità portante per il termine attritivo.
S:
Sq: fattore correttivo di capacità portante per forma (shape), per il termine di sovraccarico.
Sc: fattore correttivo di capacità portante per forma (shape), per il termine coesivo.
Sg: fattore correttivo di capacità portante per forma (shape), per il termine attritivo.
D:
Dq: fattore correttivo di capacità portante per approfondimento (deep), per il termine di sovraccarico.
Dc: fattore correttivo di capacità portante per approfondimento (deep), per il termine coesivo.
Dg: fattore correttivo di capacità portante per approfondimento (deep), per il termine attritivo.
I:
Iq: fattore correttivo di capacità portante per inclinazione del carico, per il termine di sovraccarico.
Ic: fattore correttivo di capacità portante per inclinazione del carico, per il termine coesivo.
Ig: fattore correttivo di capacità portante per inclinazione del carico, per il termine attritivo.
B:
Bq: fattore correttivo di capacità portante per inclinazione della base, per il termine di sovraccarico.
Bc: fattore correttivo di capacità portante per inclinazione della base, per il termine coesivo.
Bg: fattore correttivo di capacità portante per inclinazione della base, per il termine attritivo.
G:
Gq: fattore correttivo di capacità portante per inclinazione del pendio, per il termine di sovraccarico.
Gc: fattore correttivo di capacità portante per inclinazione del pendio, per il termine coesivo.
Gg: fattore correttivo di capacità portante per inclinazione del pendio, per il termine attritivo.
P:
Pq: fattore correttivo di capacità portante per punzonamento, per il termine di sovraccarico.
Pc: fattore correttivo di capacità portante per punzonamento, per il termine coesivo.
Pg: fattore correttivo di capacità portante per punzonamento, per il termine attritivo.
E:
Eq: fattore correttivo di capacità portante per sisma (earthquake), per il termine di sovraccarico.
Ec: fattore correttivo di capacità portante per sisma (earthquake), per il termine coesivo.
Eg: fattore correttivo di capacità portante per sisma (earthquake), per il termine attritivo.
Tipo: tipologia di cedimento considerato (E = elastico, D = edometrico, Z = consolidazione primaria).
Assoluto: cedimento assoluto massimo.
Sa adm: cedimento assoluto ammissibile. [m]
Sa: cedimento assoluto massimo. [m]
Nodo: nodo dove avviene il cedimento assoluto massimo.
Differenziale: cedimento differenziale massimo.
Sd adm: cedimento differenziale ammissibile. [m]
Sd: cedimento differenziale massimo. [m]
Nodo I: nodo dove avviene il cedimento differenziale massimo.
Nodo j: nodo dove avviene il cedimento differenziale massimo.
Relativo: cedimento relativo massimo.
Sr adm: cedimento relativo ammissibile. [m]
Sr: cedimento relativo massimo. [m]
Nodo: nodo dove avviene il cedimento relativo massimo.
Rapp. inflessione: rapporto di inflessione (cedimento relativo max su lunghezza complessiva tratta).

***RI adm**: rapporto di inflessione ammissibile.*
***RI**: rapporto di inflessione (cedimento relativo max su lunghezza complessiva tratta).*
***Rotazione rigida**: rotazione rigida valutata tra primo ed ultimo punto.*
***RR adm**: rotazione rigida ammissibile. [deg]*
***RR**: rotazione rigida massima (tra primo ed ultimo punto). [deg]*
***Rotazione assoluta**: rotazione assoluta dei singoli tratti.*
***R Adm**: rotazione assoluta ammissibile. [deg]*
***R Max**: rotazione assoluta massima. [deg]*
***Nodo I**: dal nodo.*
***Nodo J**: al nodo.*
***Distorsione angolare positiva**: distorsione angolare positiva (concavità verso l'alto).*
***D+ adm**: distorsione angolare ammissibile. [deg]*
***D+**: distorsione angolare massima positiva (concavità verso l'alto). [deg]*
***Nodo**: nodo dove avviene la distorsione angolare massima positiva (concavità verso l'alto).*
***Distorsione angolare negativa**: distorsione angolare negativa (concavità verso il basso).*
***D- adm**: distorsione angolare ammissibile. [deg]*
***D-**: distorsione angolare massima negativa (concavità verso il basso). [deg]*
***Nodo**: nodo dove avviene la distorsione angolare massima negativa (concavità verso il basso).*
***A sup.**: area efficace di armatura longitudinale superiore. [m²]*
***C.b. sup.**: distanza dal bordo del baricentro dell'armatura longitudinale superiore. [m]*
***A inf.**: area efficace di armatura longitudinale inferiore. [m²]*
***C.b. inf.**: distanza dal bordo del baricentro dell'armatura longitudinale inferiore. [m]*
***M+ela**: momento flettente desunto dal solutore che tende le fibre inferiori. [daN*m]*
***M+des**: momento flettente di progetto che tende le fibre inferiori. [daN*m]*
***M+ult**: momento ultimo per trazione delle fibre inferiori. [daN*m]*
***coeff**: coefficiente di sicurezza.*
***M-ela**: momento flettente desunto dal solutore che tende le fibre superiori. [daN*m]*
***M-des**: momento flettente di progetto che tende le fibre superiori. [daN*m]*
***M-ult**: momento ultimo per trazione delle fibre superiori. [daN*m]*
***A st**: area di staffe per unità di lunghezza. [m²]*
***A sl**: area di armatura longitudinale tesa per valutazione resistenza taglio in assenza di armature a taglio. [m²]*
***A sag**: area equivalente di barre piegate per unità di lunghezza. [m²]*
***Vela**: taglio elastico. [daN]*
***Vdes**: taglio di progetto. [daN]*
***Vrd**: resistenza a taglio della sezione senza armature. [daN]*
***Vrcd**: sforzo di taglio che produce il cedimento delle bielle. [daN]*
***Vrsd**: resistenza a taglio per la presenza delle armature. [daN]*
***Vult**: taglio ultimo. [daN]*
***cotgϑ**: cotg dell'angolo di inclinazione dei puntoni in calcestruzzo.*
***Frequente**: famiglia di combinazione di verifica.*
***Bordo**: bordo interessato dalla fessura.*
***Rara**: famiglia di combinazione per verifica inferiore.*
***Dmax**: distanza massima tra le fessure. [m]*
***Esm**: dilatazione media delle barre di armatura.*
***Wd**: valore di calcolo di apertura delle fessure. [m]*
***Frequente**: famiglia di combinazione per verifica inferiore.*
***Quasi permanente**: famiglia di combinazione per verifica inferiore.*

CORDOLO 1

Geometria

Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

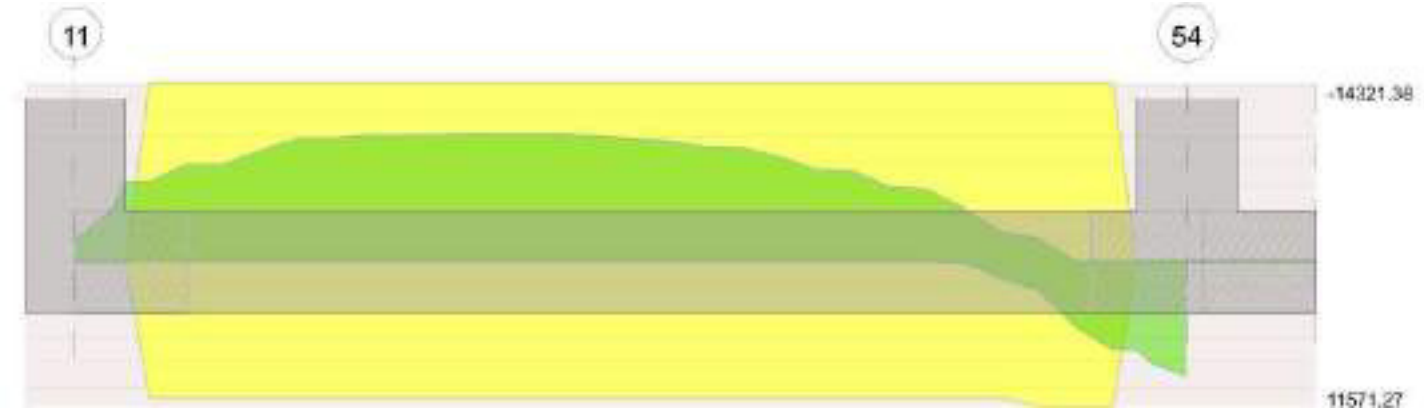
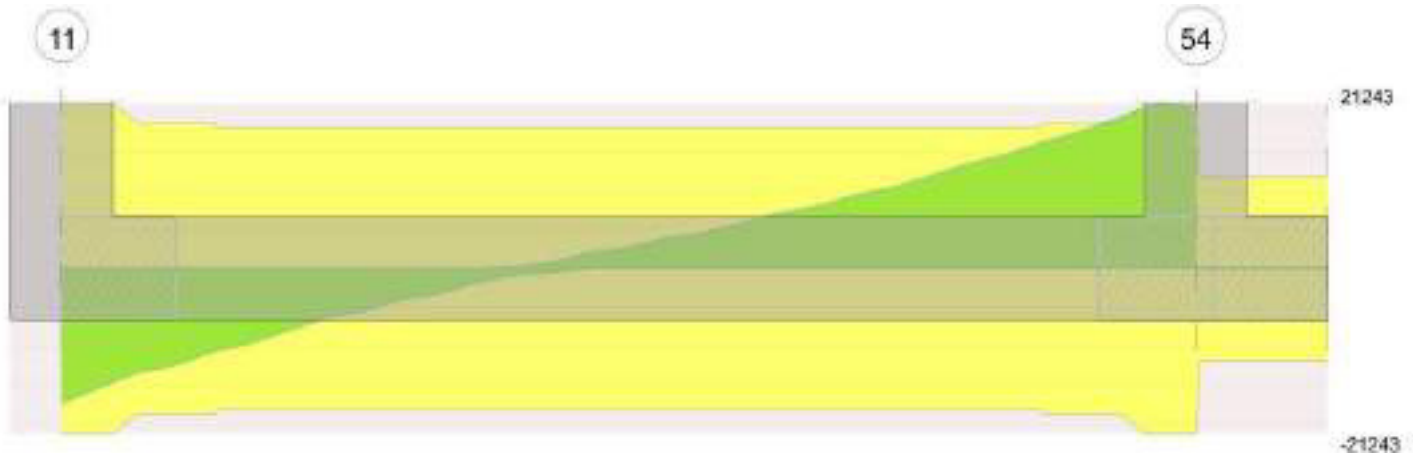


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 1 tra i fili 11 - 54, sezione R 70x45, aste 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
2.48	0.001018	0.052	0.000763	0.052							-9853.75	SLU 83	-10032.74	-15057.39	0.129	1.5	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
2.48	0.001018	0.052	0.000763	0.052							-9655.71	SLV 4	-9796.03	-14321.38	0.232	1.46	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
2.48	0.001018	0.052	0.000763	0.052							-7915.38	SLD 4	-8045.08	-14321.38	0.232	1.78	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0	0	-17331	SLU 84	-17331	-11837	-100005	-21243	-21243	1	1.23	Si
0.23	0.0000134	0	0	-14628	SLU 84	-14628	-11837	-100005	-21243	-21243	1	1.45	Si
2.48	0.0000129	0.001018	0	2307	SLU 84	2307	11926	88449	18150	18150	1	7.87	Si
4.74	0.0000134	0	0	20591	SLU 84	20591	11837	100005	21243	21243	1	1.03	Si
4.96	0.0000134	0	0	20845	SLU 84	20845	11837	100005	21243	21243	1	1.02	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0	0	-16972	SLV 4	-16972	-11837	-100005	-21243	-21243	1	1.25	Si
0.23	0.0000134	0	0	-14184	SLV 4	-14184	-11837	-100005	-21243	-21243	1	1.5	Si
2.48	0.0000129	0.001018	0	2698	SLV 1	2698	11926	88449	18150	18150	1	6.73	Si
4.63	0.0000134	0	0	17617	SLV 3	17617	10870	88449	18788	18788	1	1.07	Si
4.74	0.0000134	0	0	18564	SLV 3	18564	11837	100005	21243	21243	1	1.14	Si
4.96	0.0000134	0	0	18648	SLV 4	18648	11837	100005	21243	21243	1	1.14	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0	0	-13927	SLD 4	-13927	-11837	-100005	-21243	-21243	1	1.53	Si
0.23	0.0000134	0	0	-11693	SLD 4	-11693	-11837	-100005	-21243	-21243	1	1.82	Si
2.48	0.0000129	0.001018	0	2042	SLD 1	2042	11926	88449	18150	18150	1	8.89	Si
4.63	0.0000134	0	0	14999	SLD 3	14999	10870	88449	18788	18788	1	1.25	Si
4.74	0.0000134	0	0	15838	SLD 3	15838	11837	100005	21243	21243	1	1.34	Si
4.96	0.0000134	0	0	15967	SLD 4	15967	11837	100005	21243	21243	1	1.33	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-1018.38	21	-1018.38	-43106	1494000	0	36000000	-932.84	2	-932.84	-39485	1120500			Si
0.23	-3571.46	21	-4623.7	-195712	1494000	0	36000000	-3263.64	2	-4224.16	-178800	1120500			Si
2.48	-7254.32	20	-7386.64	481193	1494000	20120821	36000000	-6616.49	2	-6738.31	438958	1120500			Si
4.74	5141.05	21	5141.05	217611	1494000	0	36000000	4687.64	2	4687.64	198419	1120500			Si

Verifica di apertura delle fessure

x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
2.48	superiore	0.388	0.00059	0.000227	21	0.388	0.00055	0.000213	6	0.388	0.00053	0.000208	2	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.19	0.9	SLU 50	ST	LT	907	170	-43692	1	0	19	0	0	1.1	13290	923	14.4	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
522,523,524,525,526,527,528,529,530,531,532,533,534	5.19	0.9	SLU 83	ST	BT	2.3	170771	53470	3.19	Si
522,523,524,525,526,527,528,529,530,531,532,533,534	5.19	0.9	SLV 8	SIS	LT	2.3	99702	41296	2.41	Si

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
522,523,524,525,526,527,528,529,530,531,532,533,534	5.19	0.9	SLD 8	SIS	LT	2.3	144553	38568	3.75	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	164	-53470	-2761.52	-797.67	0	0	-0.01	-0.05	0.8	5.16	1084	2060	0	14430	
0	6050	-41296	-4805.2	-3163.94	0	8	-0.08	-0.12	0.67	5.03	1084	2060	37	0	0.07
0	2725	-38568	-3152.05	-1700.9	0	4	-0.04	-0.08	0.74	5.1	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.03	0	0	0.24	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.1	1.1	0.95	1.15	1.24	1	0.74	0.74	0.63	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.11	1.11	0.94	1.15	1.24	1	0.87	0.87	0.81	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

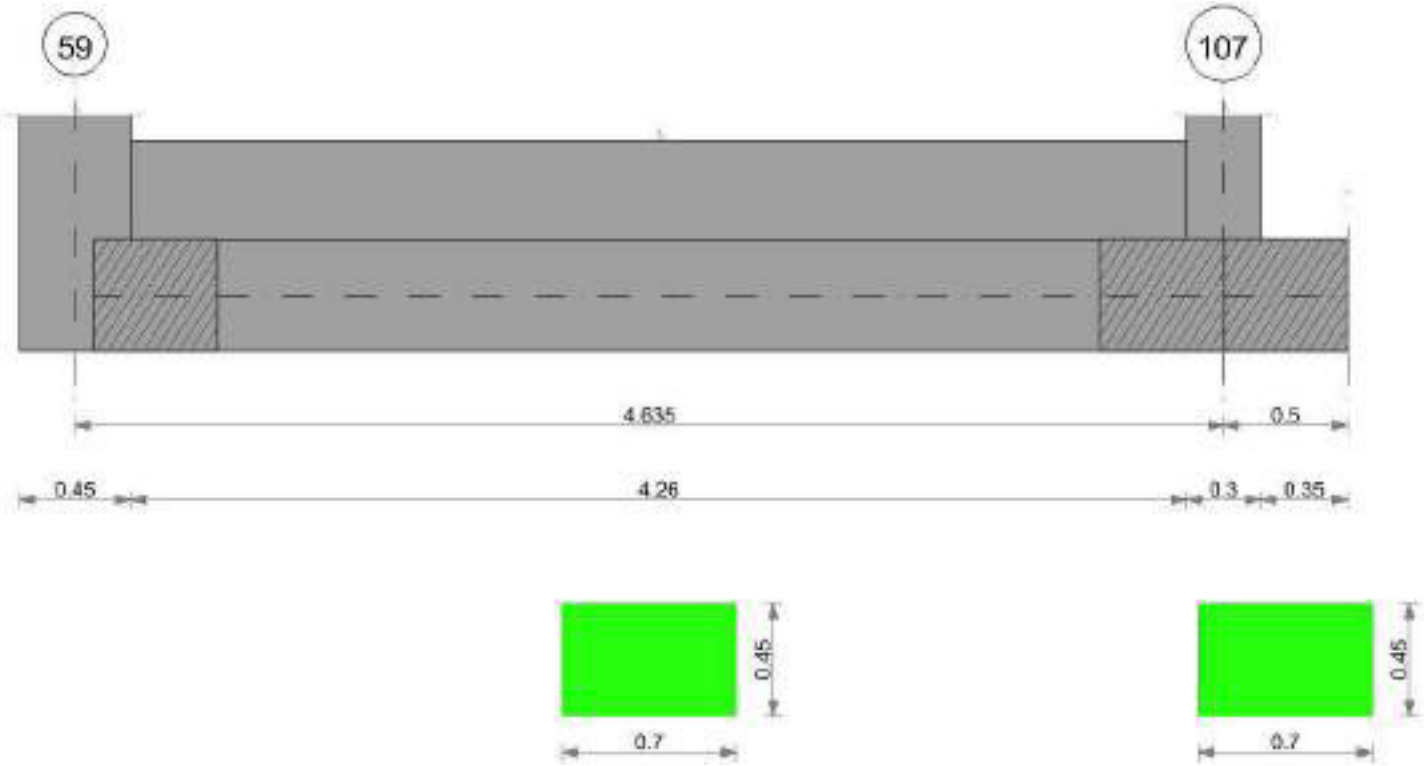
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	882	SLE RA 21	0.05	0	882	869	SLE RA 21	0.05	0	882	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	882	SLE RA 1	0.05	0	882	882	SLE RA 1	0.05	0	882	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	882	SLE RA 1	0.05	0	882	882	SLE RA 1	0.05	0	882	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0	882	869	SLE RA 21	0.19	0	882	SLE RA 1	0.1	0	882	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	882	869	SLE RA 1	0.19	0	882	SLE RA 1	0.1	0	882	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	882	869	SLE RA 1	0.19	0	882	SLE RA 1	0.1	0	882	SLE RA 1	Si

CORDOLO 2

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

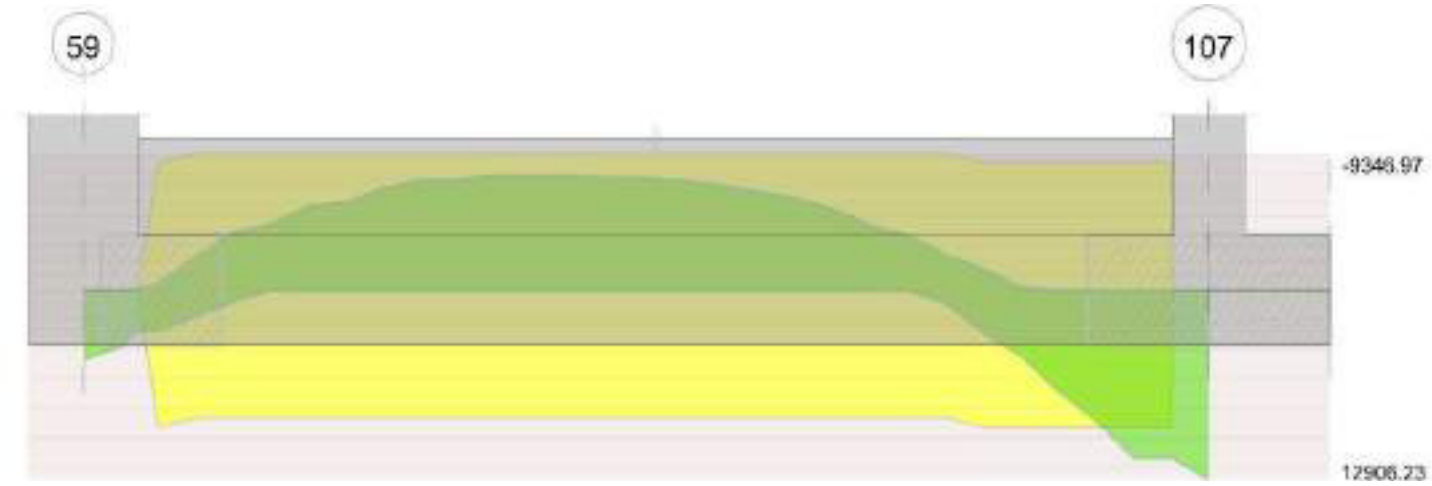
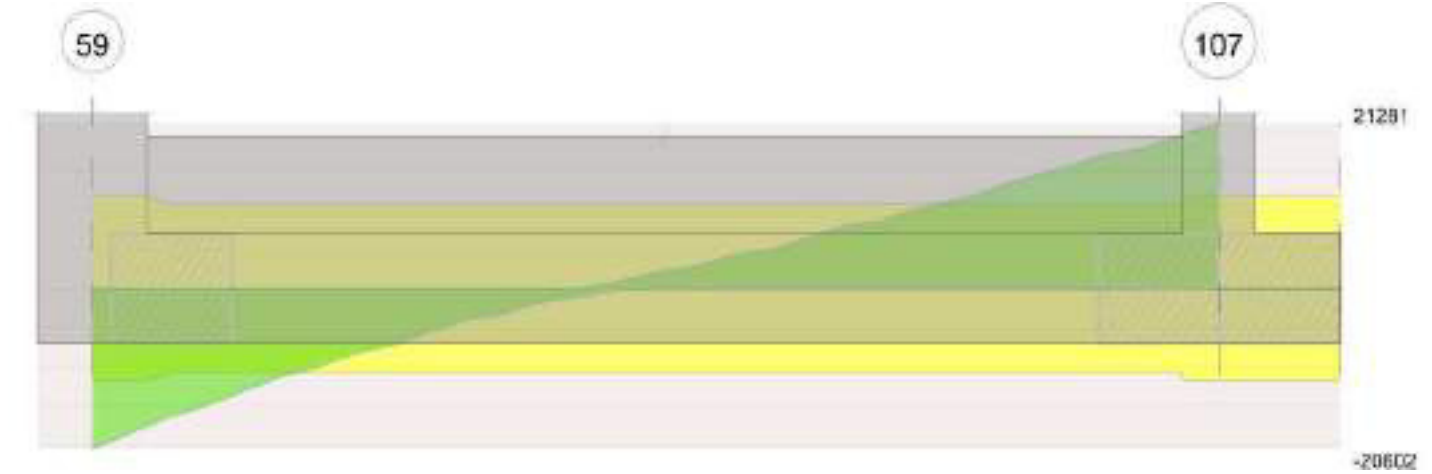


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 59 - 107, sezione R 70x45, aste 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	2415	SLU 84	0.029	5426	8402	SLU 84	15877	Si
0.23	0.41	0.0003	2332	SLU 84	0.029	5426	8113	SLU 84	15877	Si
2.32	0.41	0.0003	1761	SLU 83	0.029	5426	6124	SLU 83	15877	Si
4.48	0.41	0.0003	1894	SLU 83	0.029	5426	6589	SLU 83	15877	Si
4.63	0.41	0.0003	1890	SLU 83	0.029	5426	6575	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	1810	SLD 4	0.098	6064	6295	SLD 4	15877	Si
0.23	0.41	0.0003	1743	SLD 4	0.098	6064	6064	SLD 4	15877	Si
2.32	0.41	0.0003	1273	SLD 4	0.098	6064	4428	SLD 4	15877	Si
4.48	0.41	0.0003	1319	SLD 4	0.098	6064	4588	SLD 4	15877	Si
4.63	0.41	0.0003	1314	SLD 4	0.098	6064	4570	SLD 4	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000341	1775	SLE RA 21	50259	1494000	623210	36000000	1614	SLE QP 2	45690	1120500	Si
0.23	0.41	0.00000341	1714	SLE RA 21	48528	1494000	601752	36000000	1558	SLE QP 2	44115	1120500	Si
2.32	0.41	0.00000341	1293	SLE RA 20	36611	1494000	453977	36000000	1175	SLE QP 2	33252	1120500	Si
4.48	0.41	0.00000341	1391	SLE RA 20	39379	1494000	488303	36000000	1263	SLE QP 2	35745	1120500	Si
4.63	0.41	0.00000341	1388	SLE RA 20	39297	1494000	487280	36000000	1260	SLE QP 2	35669	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.86	0.9	SLU 26	ST	LT	462	-173	-40310	1	0	19	0	0	1.1	12262	494	24.84	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
545,546,547,548,549,550,551,552,553,554,555,556	4.86	0.9	SLU 83	ST	BT	2.3	165085	55962	2.95	Si
545,546,547,548,549,550,551,552,553,554,555,556	4.86	0.9	SLV 8	SIS	LT	2.3	110803	41019	2.7	Si
545,546,547,548,549,550,551,552,553,554,555,556	4.86	0.9	SLD 4	SIS	BT	2.3	156415	40842	3.83	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-140	-55962	-1717.94	-3998.82	0	0	-0.07	-0.03	0.84	4.72	1084	2060	0	14430	
0	4948	-41019	-3618.45	-4757.23	0	7	-0.12	-0.09	0.72	4.63	1084	2060	37	0	0.07
0	572	-40842	-1590.56	-5968.3	0	1	-0.15	-0.04	0.82	4.57	1084	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.24	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.12	1.12	0.94	1.15	1.24	1	0.79	0.78	0.69	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.04	0	0	0.24	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	960	SLE RA 21	0.05	0	960	972	SLE RA 13	0.05	0	972	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	972	SLE RA 1	0.05	0	972	972	SLE RA 1	0.05	0	972	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	972	SLE RA 1	0.05	0	972	972	SLE RA 1	0.05	0	972	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 13	0.19	0	972	960	SLE RA 13	0.19	0	972	SLE RA 1	0.1	0	972	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	972	960	SLE RA 1	0.19	0	972	SLE RA 1	0.1	0	972	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	972	960	SLE RA 1	0.19	0	972	SLE RA 1	0.1	0	972	SLE RA 1	Si

CORDOLO 3

Geometria

Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

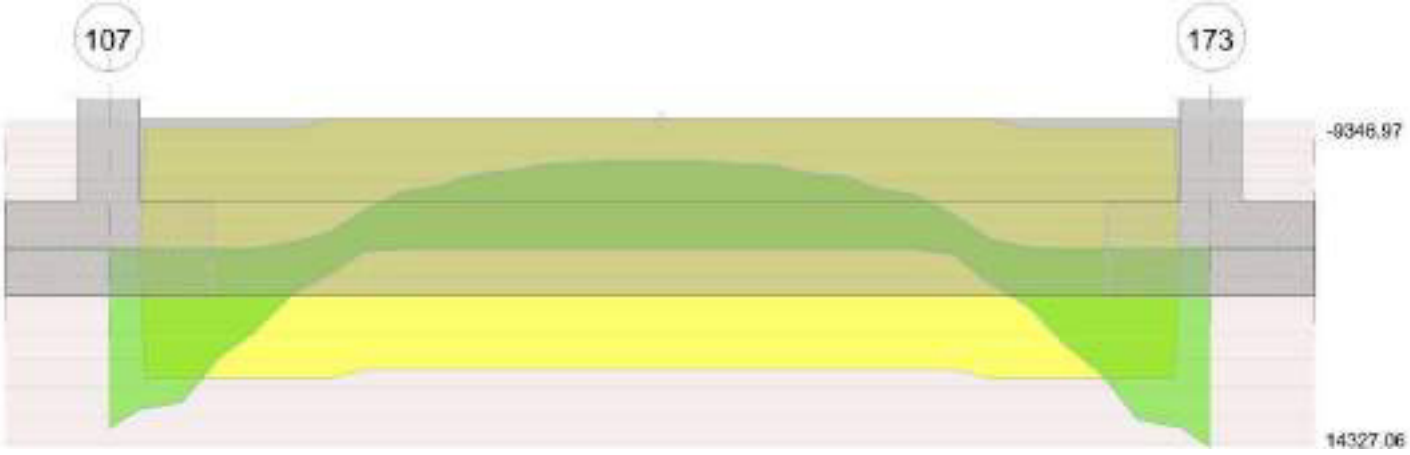
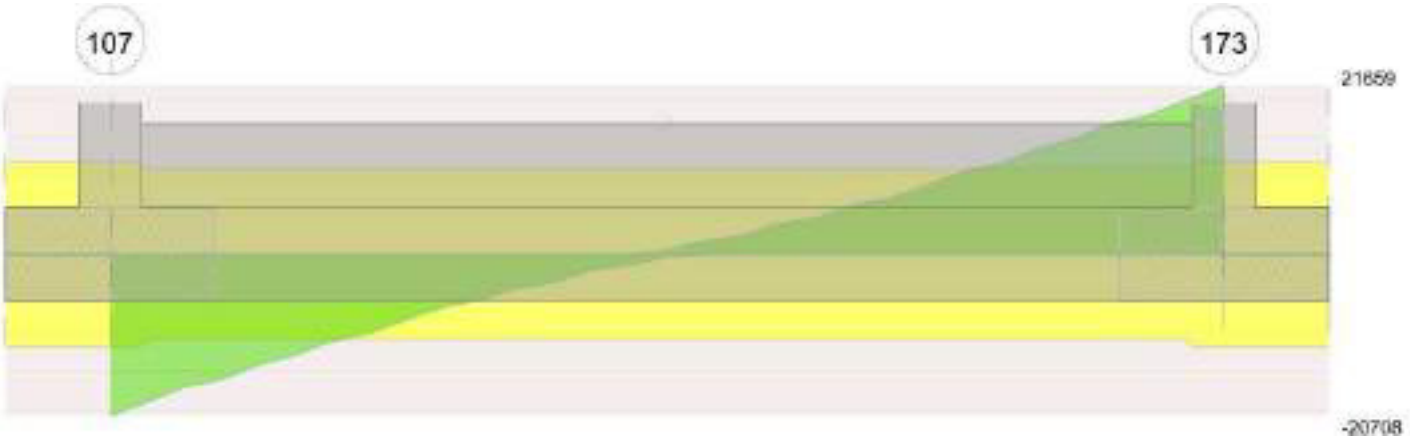


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 107 - 173, sezione R 70x45, aste 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	1890	SLU 83	0.023	4058	6575	SLU 83	15877	Si
0.15	0.41	0.0003	1884	SLU 83	0.023	4058	6554	SLU 83	15877	Si
2.67	0.41	0.0003	1557	SLU 83	0.023	4058	5415	SLU 83	15877	Si
5.18	0.41	0.0003	1921	SLU 83	0.023	4058	6683	SLU 83	15877	Si
5.33	0.41	0.0003	1926	SLU 83	0.023	4058	6698	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	1314	SLD 4	0.085	4549	4570	SLD 4	15877	Si
0.15	0.41	0.0003	1307	SLD 4	0.085	4549	4547	SLD 4	15877	Si
2.67	0.41	0.0003	1064	SLD 12	0.085	4549	3699	SLD 12	15877	Si
5.18	0.41	0.0003	1358	SLD 16	0.085	4549	4723	SLD 16	15877	Si
5.33	0.41	0.0003	1364	SLD 16	0.085	4549	4744	SLD 16	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000255	1388	SLE RA 20	39747	1494000	492859	36000000	1260	SLE QP 2	36078	1120500	Si
0.15	0.41	0.00000255	1384	SLE RA 20	39619	1494000	491279	36000000	1256	SLE QP 2	35961	1120500	Si
2.67	0.41	0.00000255	1143	SLE RA 20	32727	1494000	405812	36000000	1036	SLE QP 2	29678	1120500	Si
5.18	0.41	0.00000255	1411	SLE RA 20	40394	1494000	500889	36000000	1279	SLE QP 2	36635	1120500	Si
5.33	0.41	0.00000255	1414	SLE RA 20	40482	1494000	501982	36000000	1282	SLE QP 2	36716	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.33	0.9	SLU 23	ST	LT	-113	-564	-41712	0	-1	19	0	0	1.1	12688	576	22.05	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
566,567,568,569,570,571,572,573,574,575,576,577,578	5.33	0.9	SLU 83	ST	BT	2.3	183962	58431	3.15	Si
566,567,568,569,570,571,572,573,574,575,576,577,578	5.33	0.9	SLV 7	SIS	LT	2.3	118579	41013	2.89	Si
566,567,568,569,570,571,572,573,574,575,576,577,578	5.33	0.9	SLD 12	SIS	BT	2.3	168615	40535	4.16	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-656	-58431	-1913.42	558.42	0	-1	0.01	-0.03	0.83	5.31	1084	2060	0	14430	
0	5226	-41013	-3919.83	-2152.72	0	7	-0.05	-0.1	0.71	5.23	1084	2060	37	0	0.07
0	1968	-40535	-2423	1701.84	0	3	0.04	-0.06	0.78	5.25	1084	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.03	0	0	0.24	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.1	1.1	0.95	1.15	1.24	1	0.77	0.77	0.68	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.03	0	0	0.24	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

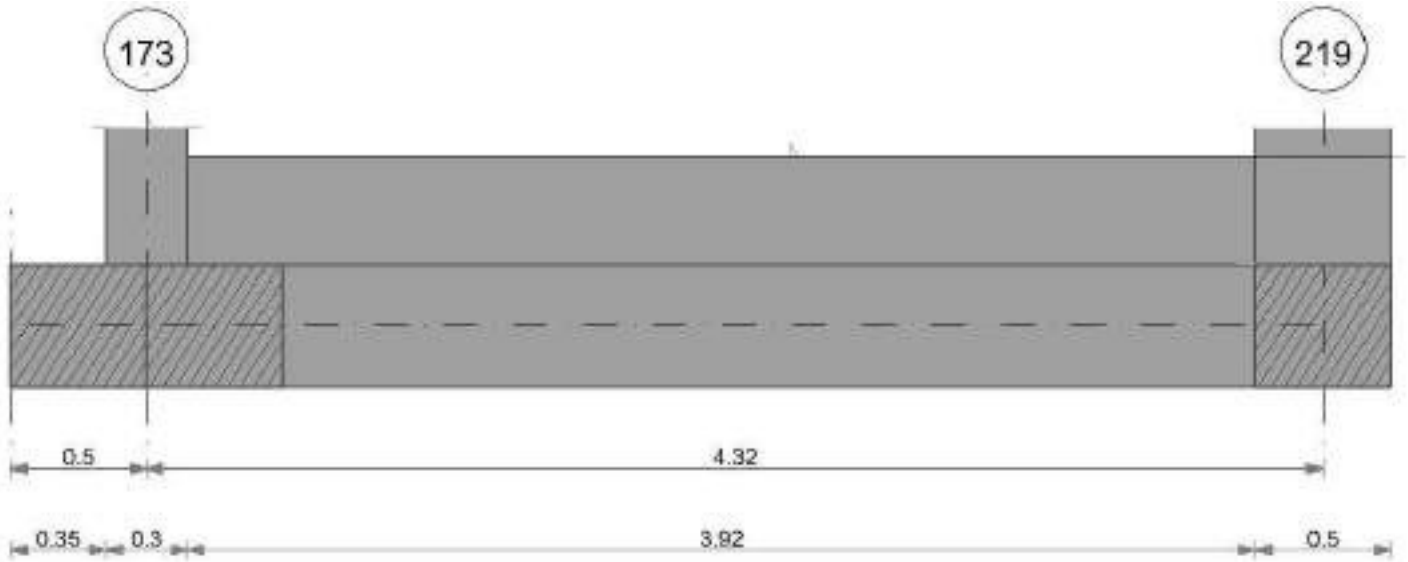
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	985	SLE RA 20	0.05	0	985	972	SLE RA 18	0.05	0	985	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	985	SLE RA 1	0.05	0	985	985	SLE RA 1	0.05	0	985	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	985	SLE RA 1	0.05	0	985	985	SLE RA 1	0.05	0	985	SLE RA 1	0.0033	0	SLE RA 1	Si

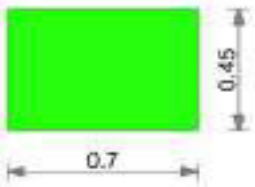
Verifiche geotecniche - Rotazioni assolute e differenziali

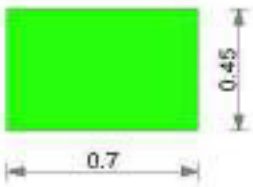
Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 18	0.19	0	985	972	SLE RA 18	0.19	0	985	SLE RA 1	0.1	0	985	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	985	972	SLE RA 1	0.19	0	985	SLE RA 1	0.1	0	985	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	985	972	SLE RA 1	0.19	0	985	SLE RA 1	0.1	0	985	SLE RA 1	Si

CORDOLO 4

Geometria







Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

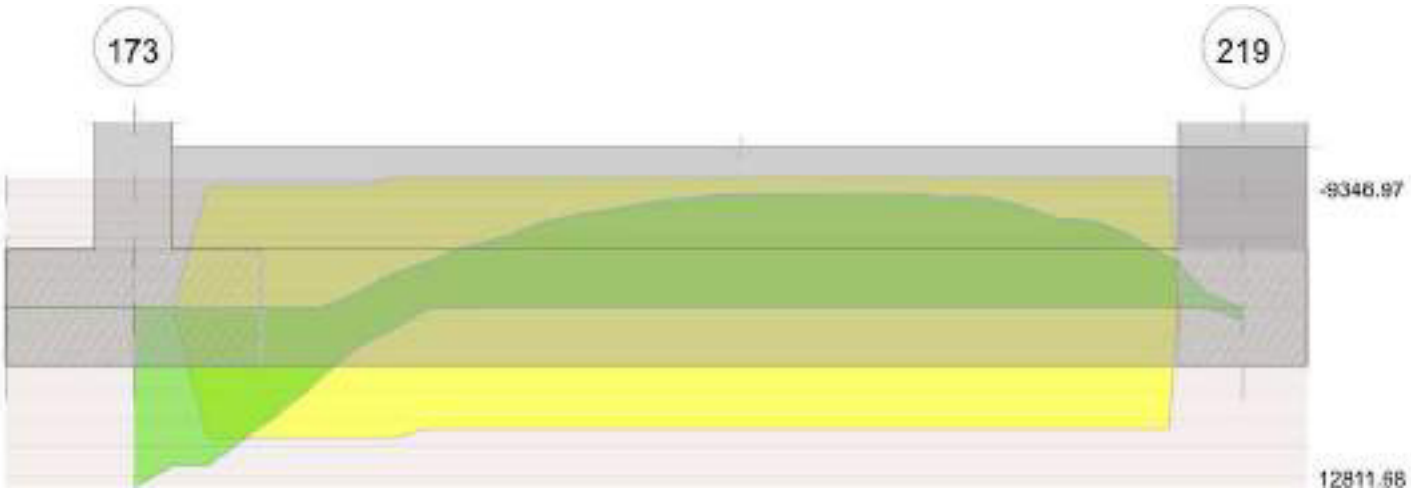
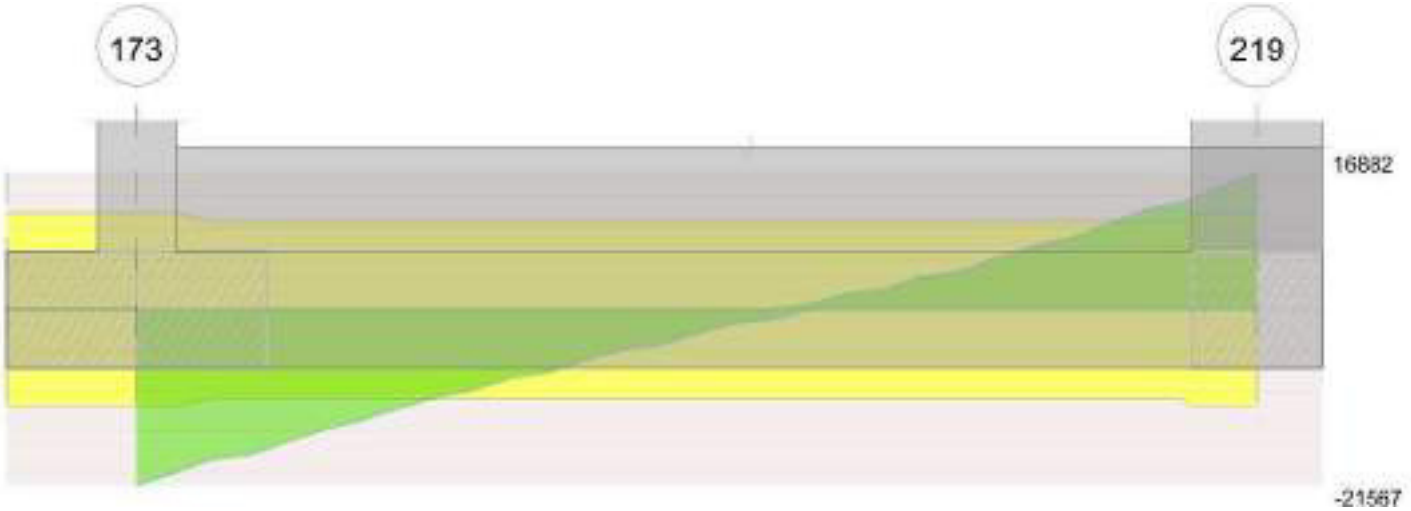


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 173 - 219, sezione R 70x45, aste 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1926	SLU 83	0.02	3335	6698	SLU 83	15877	Si
0.15	0.41	0.0002	1928	SLU 83	0.02	3335	6705	SLU 83	15877	Si
2.16	0.41	0.0002	1772	SLU 83	0.02	3335	6162	SLU 83	15877	Si
4.07	0.41	0.0002	2244	SLU 83	0.02	3335	7805	SLU 83	15877	Si
4.32	0.41	0.0002	2349	SLU 83	0.02	3335	8170	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1364	SLD 16	0.077	3746	4744	SLD 16	15877	Si
0.15	0.41	0.0002	1368	SLD 16	0.077	3746	4758	SLD 16	15877	Si
2.16	0.41	0.0002	1299	SLD 15	0.077	3746	4519	SLD 15	15877	Si
4.07	0.41	0.0002	1682	SLD 15	0.077	3746	5851	SLD 15	15877	Si
4.32	0.41	0.0002	1763	SLD 15	0.077	3746	6133	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000209	1414	SLE RA 20	40728	1494000	505027	36000000	1282	SLE QP 2	36939	1120500	Si
0.15	0.41	0.00000209	1415	SLE RA 20	40770	1494000	505552	36000000	1284	SLE QP 2	36979	1120500	Si
2.16	0.41	0.00000209	1301	SLE RA 20	37486	1494000	464825	36000000	1181	SLE QP 2	34031	1120500	Si
4.07	0.41	0.00000209	1650	SLE RA 20	47518	1494000	589226	36000000	1500	SLE QP 2	43203	1120500	Si
4.32	0.41	0.00000209	1727	SLE RA 20	49745	1494000	616844	36000000	1570	SLE QP 2	45235	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.57	0.9	SLU 5	ST	LT	-538	-137	-33339	-1	0	19	0	0	1.1	10141	556	18.25	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
579,580,581,582,583,584,585,586,587,588,589	4.57	0.9	SLU 83	ST	BT	2.3	156948	52048	3.02	Si
579,580,581,582,583,584,585,586,587,588,589	4.57	0.9	SLV 11	SIS	LT	2.3	106485	38534	2.76	Si
579,580,581,582,583,584,585,586,587,588,589	4.57	0.9	SLD 15	SIS	BT	2.3	148496	38380	3.87	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-165	-52048	-1619.91	2249.72	0	0	0.04	-0.03	0.84	4.48	1084	2060	0	14430	
0	4487	-38534	-3382.76	3654.74	0	7	0.09	-0.09	0.72	4.38	1084	2060	37	0	0.07
0	487	-38380	-1561.94	4257.41	0	1	0.11	-0.04	0.82	4.35	1084	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.24	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.12	1.13	0.93	1.15	1.24	1	0.79	0.79	0.7	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.04	0	0	0.24	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

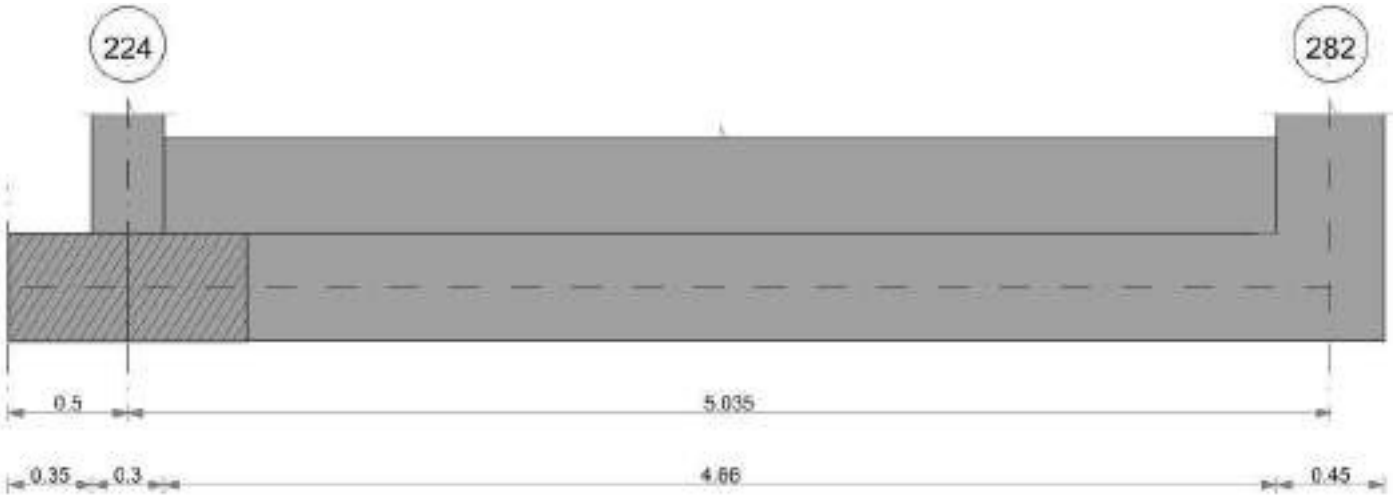
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	985	SLE RA 20	0.05	0	985	996	SLE RA 20	0.05	0	996	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	996	SLE RA 1	0.05	0	996	996	SLE RA 1	0.05	0	996	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	996	SLE RA 1	0.05	0	996	996	SLE RA 1	0.05	0	996	SLE RA 1	0.0033	0	SLE RA 1	Si

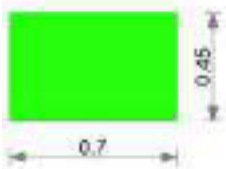
Verifiche geotecniche - Rotazioni assolute e differenziali

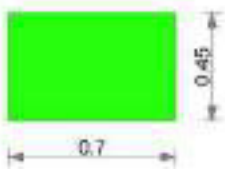
Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 20	0.19	0	996	985	SLE RA 20	0.19	0	996	SLE RA 1	0.1	0	996	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	996	985	SLE RA 1	0.19	0	996	SLE RA 1	0.1	0	996	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	996	985	SLE RA 1	0.19	0	996	SLE RA 1	0.1	0	996	SLE RA 1	Si

CORDOLO 5

Geometria







Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

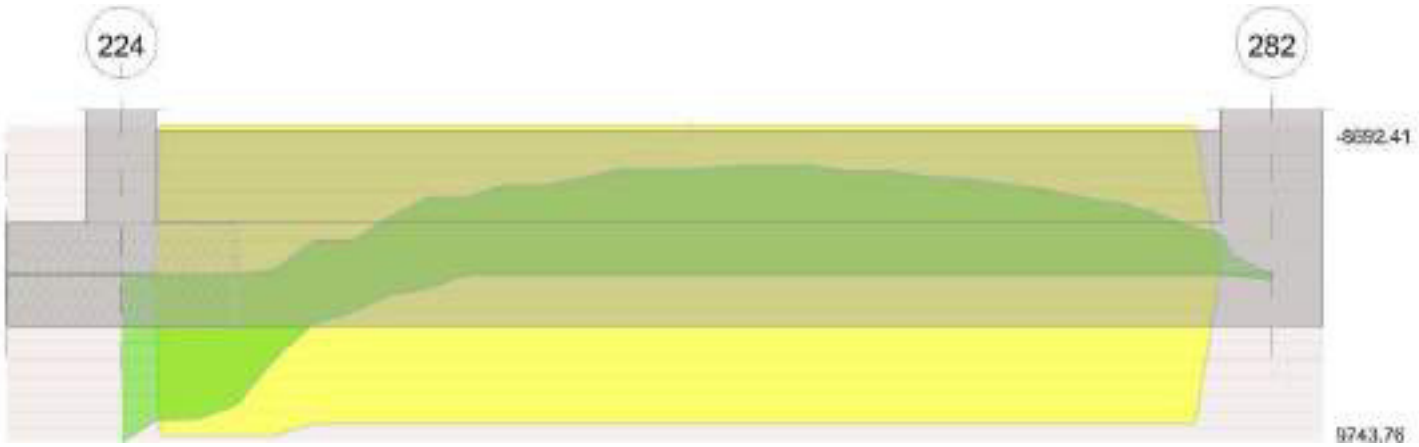
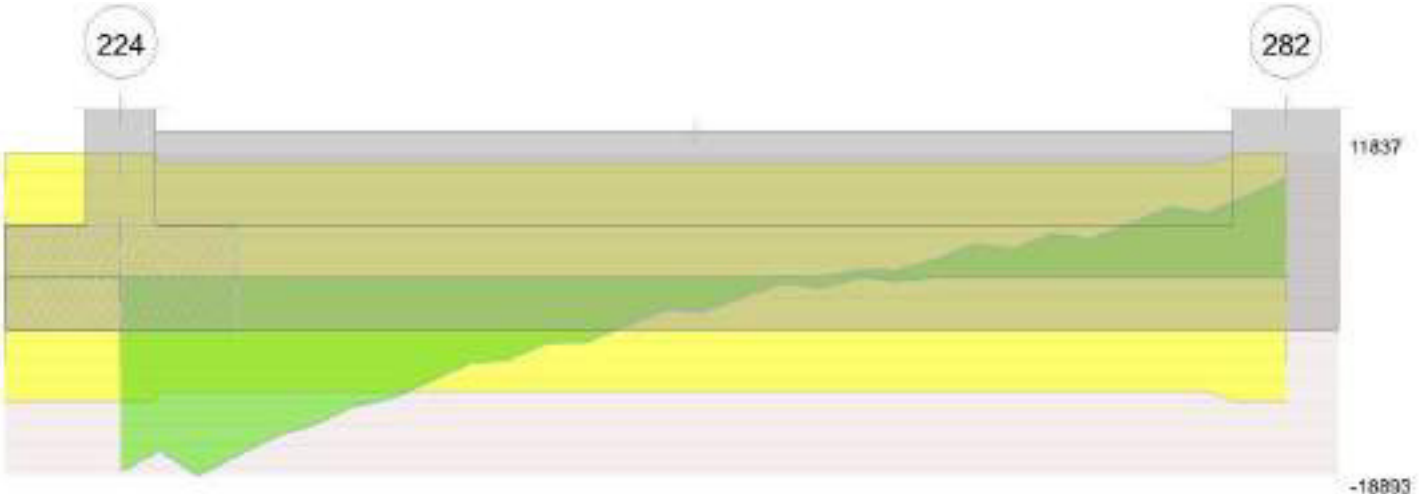


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 224 - 282, sezione R 70x45, aste 620, 619, 618, 617, 616, 615, 614, 613, 612, 611, 610, 609

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2193	SLU 83	0.017	2747	7627	SLU 83	15877	Si
0.15	0.41	0.0002	2167	SLU 83	0.017	2747	7537	SLU 83	15877	Si
2.52	0.41	0.0002	1622	SLU 84	0.017	2747	5641	SLU 84	15877	Si
4.81	0.41	0.0002	1789	SLV 15	0.085	2672	6223	SLV 15	15877	Si
5.04	0.41	0.0002	1851	SLV 15	0.085	2672	6437	SLV 15	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1607	SLD 15	0.07	3092	5588	SLD 15	15877	Si
0.15	0.41	0.0002	1589	SLD 15	0.07	3092	5525	SLD 15	15877	Si
2.52	0.41	0.0002	1242	SLD 15	0.07	3092	4321	SLD 15	15877	Si
4.81	0.41	0.0002	1436	SLD 15	0.07	3092	4995	SLD 15	15877	Si
5.04	0.41	0.0002	1478	SLD 15	0.07	3092	5143	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000172	1612	SLE RA 20	46655	1494000	578520	36000000	1464	SLE QP 2	42395	1120500	Si
0.15	0.41	0.00000172	1593	SLE RA 20	46110	1494000	571760	36000000	1447	SLE QP 2	41901	1120500	Si
2.52	0.41	0.00000172	1193	SLE RA 21	34523	1494000	428079	36000000	1085	SLE QP 2	31397	1120500	Si
4.81	0.41	0.00000172	1286	SLE RA 21	37230	1494000	461652	36000000	1172	SLE QP 2	33937	1120500	Si
5.04	0.41	0.00000172	1317	SLE RA 21	38119	1494000	472674	36000000	1201	SLE QP 2	34756	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.26	0.9	SLU 5	ST	LT	-940	-401	-34765	-2	-1	19	0	0	1.1	10575	1022	10.34	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
620,619,618,617,616,615,614,613,612,611,610,609	5.26	0.9	SLU 83	ST	BT	2.3	156338	53813	2.91	Si

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
620,619,618,617,616,615,614,613,612,611,610,609	5.26	0.9	SLV 7	SIS	LT	2.3	83173	35393	2.35	Si
620,619,618,617,616,615,614,613,612,611,610,609	5.26	0.9	SLD 11	SIS	LT	2.3	138599	38809	3.57	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-584	-53813	-4102.94	-5745.68	0	-1	-0.11	-0.08	0.75	5.05	1084	2060	0	14430	
0	5494	-35393	-5204.61	-5940.28	0	9	-0.17	-0.15	0.61	4.92	1084	2060	37	0	0.07
0	2006	-38809	-4051	-2740.85	0	3	-0.07	-0.1	0.69	5.12	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.03	0	0	0.24	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.09	1.09	0.95	1.15	1.24	1	0.73	0.72	0.61	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.1	1.1	0.95	1.15	1.24	1	0.9	0.9	0.86	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

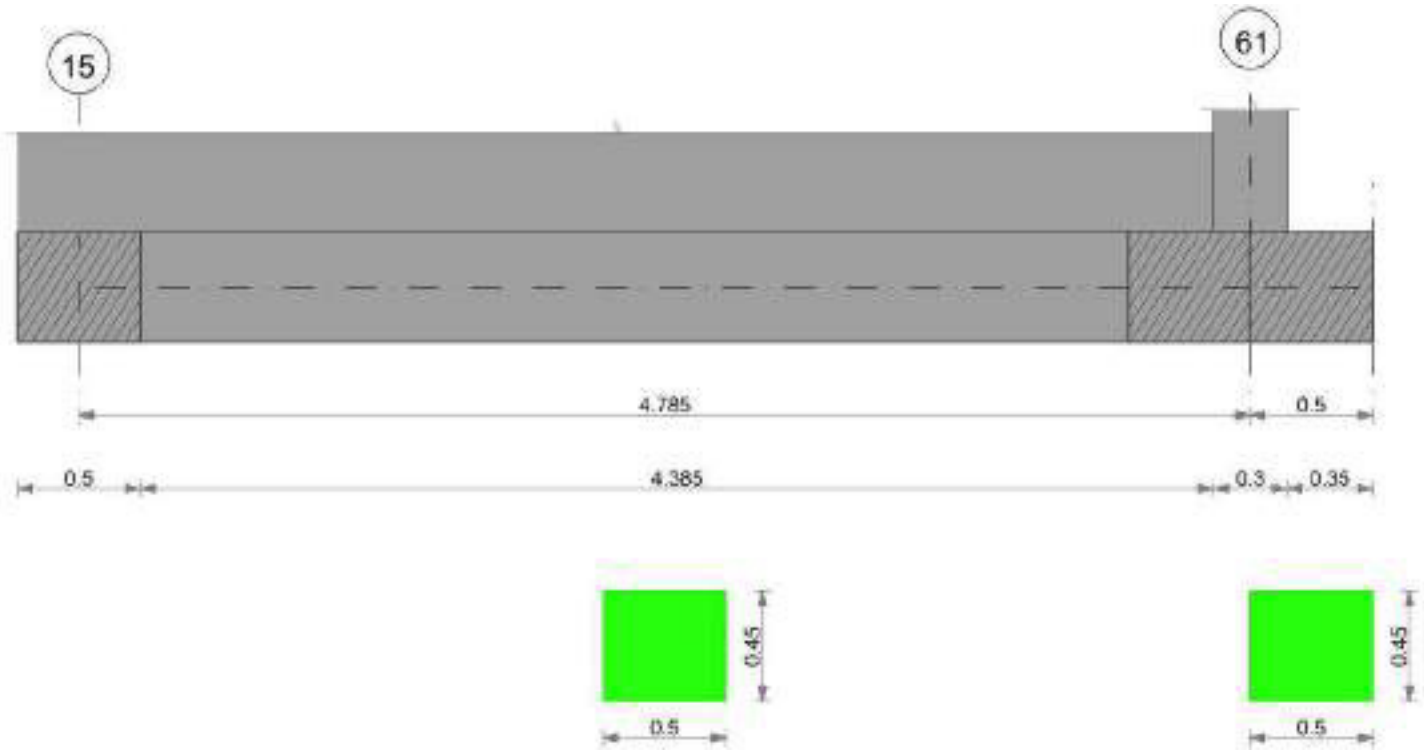
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	893	SLE RA 21	0.05	0	893	906	SLE RA 21	0.05	0	906	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	906	SLE RA 1	0.05	0	906	906	SLE RA 1	0.05	0	906	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	906	SLE RA 1	0.05	0	906	906	SLE RA 1	0.05	0	906	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0	906	893	SLE RA 21	0.19	0	906	SLE RA 1	0.1	0	906	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	906	893	SLE RA 1	0.19	0	906	SLE RA 1	0.1	0	906	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	906	893	SLE RA 1	0.19	0	906	SLE RA 1	0.1	0	906	SLE RA 1	Si

CORDOLO 6

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

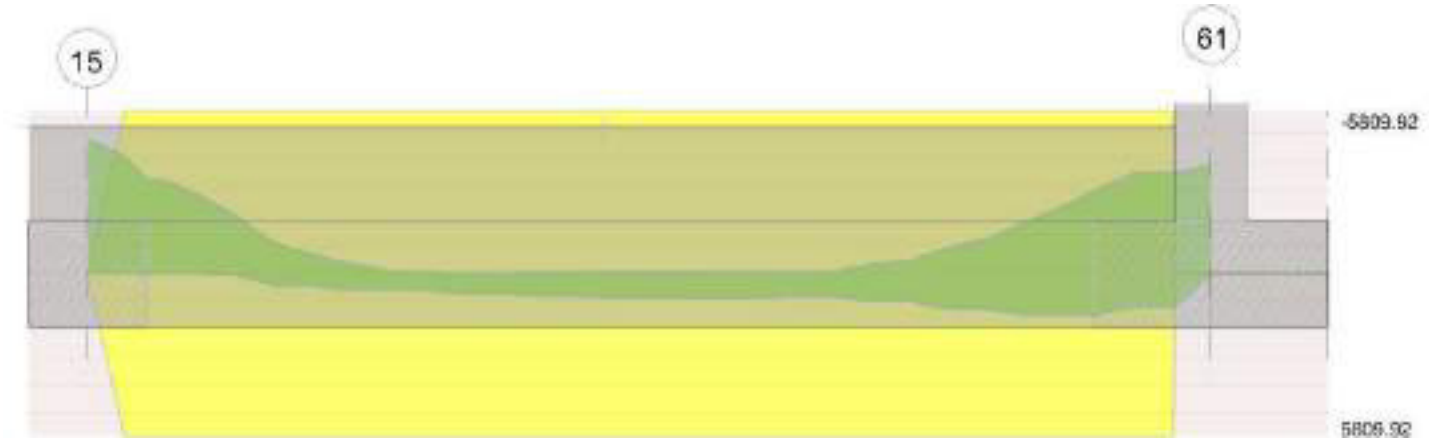
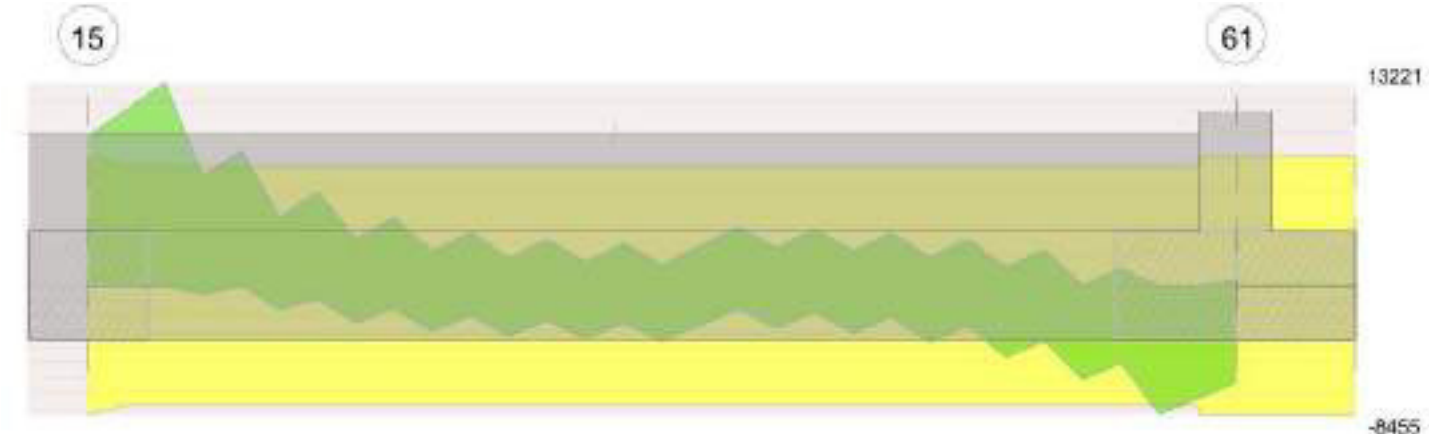


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 15 - 61, sezione R 50x45, aste 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1063	SLV 4	0.085	2637	5669	SLV 4	15877	Si
0.25	0.41	0.0002	1041	SLV 4	0.085	2637	5551	SLV 4	15877	Si
2.39	0.41	0.0002	988	SLU 84	0.017	2711	5269	SLU 84	15877	Si
4.63	0.41	0.0002	926	SLU 84	0.017	2711	4940	SLU 84	15877	Si
4.78	0.41	0.0002	923	SLU 84	0.017	2711	4925	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	844	SLD 4	0.07	3051	4502	SLD 4	15877	Si
0.25	0.41	0.0002	832	SLD 4	0.07	3051	4436	SLD 4	15877	Si
2.39	0.41	0.0002	763	SLD 2	0.07	3051	4067	SLD 2	15877	Si
4.63	0.41	0.0002	673	SLD 3	0.07	3051	3587	SLD 3	15877	Si
4.78	0.41	0.0002	669	SLD 4	0.07	3051	3568	SLD 4	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.0000017	748	SLE RA 21	21651	1494000	268475	36000000	681	SLE QP 2	19714	1120500	Si
0.25	0.41	0.0000017	742	SLE RA 21	21495	1494000	266540	36000000	676	SLE QP 2	19564	1120500	Si
2.39	0.41	0.0000017	726	SLE RA 21	21022	1494000	260668	36000000	659	SLE QP 2	19074	1120500	Si
4.63	0.41	0.0000017	680	SLE RA 21	19697	1494000	244246	36000000	616	SLE QP 2	17834	1120500	Si
4.78	0.41	0.0000017	678	SLE RA 21	19635	1494000	243477	36000000	614	SLE QP 2	17777	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.03	0.7	SLU 50	ST	LT	377	143	-44744	0	0	19	0	0	1.1	13610	403	33.75	Si
5.03	0.7	SLV 16	SIS	LT	7287	2216	-25536	16	5	19	0	0	1.1	7768	7616	1.02	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
347,348,349,350,351,352,353,354,355,356,357,358,359,360	5.03	0.7	SLU 83	ST	BT	2.3	152100	55373	2.75	Si
347,348,349,350,351,352,353,354,355,356,357,358,359,360	5.03	0.7	SLV 8	SIS	LT	2.3	87717	41242	2.13	Si
347,348,349,350,351,352,353,354,355,356,357,358,359,360	5.03	0.7	SLD 8	SIS	LT	2.3	122079	39146	3.12	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	118	-55373	-29.34	-1674.86	0	0	-0.03	0	0.7	4.97	1084	2060	0	14430	
0	5066	-41242	-2240	-4414.14	0	7	-0.11	-0.05	0.59	4.82	1084	2060	37	0	0.07
0	2278	-39146	-998.3	-2579.83	0	3	-0.07	-0.03	0.65	4.9	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.03	0	0	0.31	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.09	1.09	0.95	1.19	1.31	1	0.78	0.78	0.68	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.1	1.1	0.95	1.19	1.31	1	0.89	0.89	0.84	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

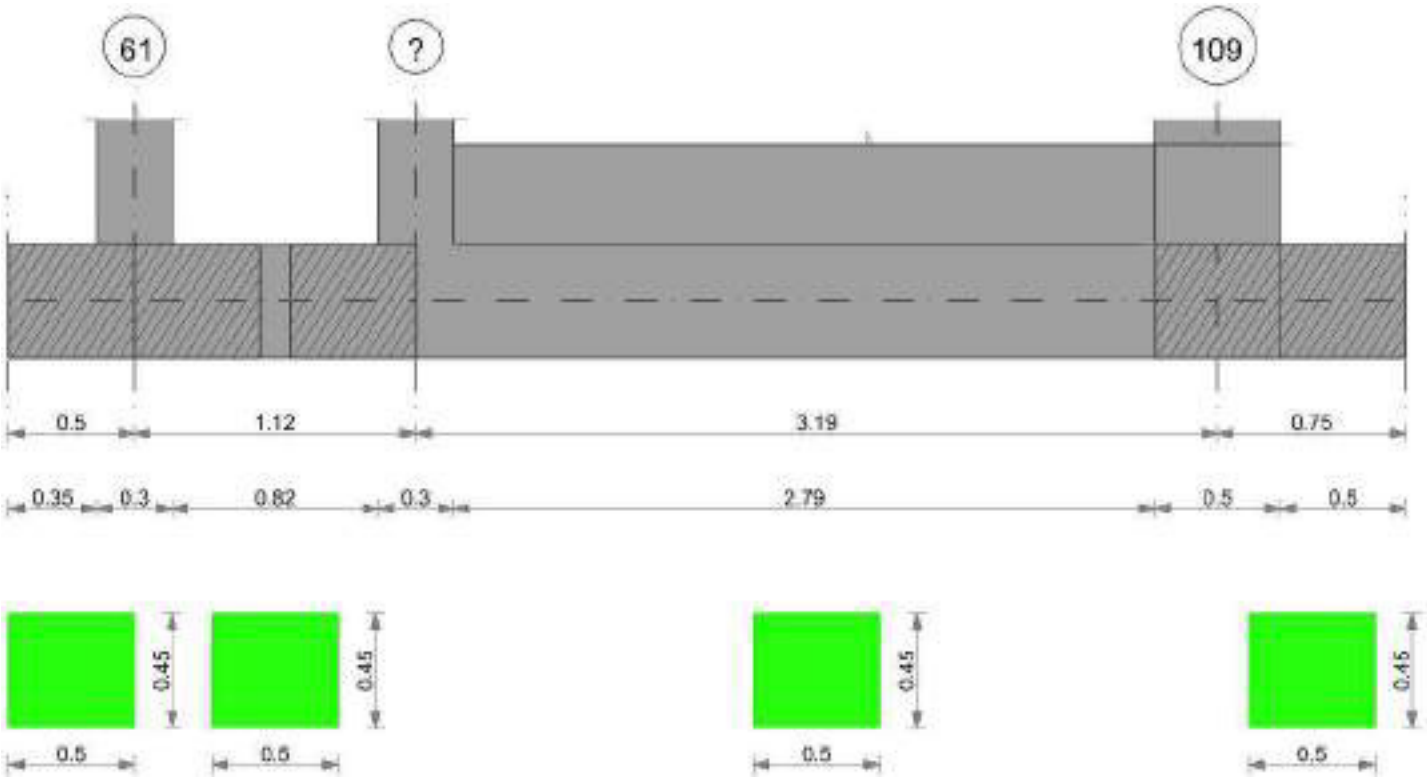
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	691	SLE RA 20	0.05	0.001	691	677	SLE RA 20	0.05	0	691	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	691	SLE RA 1	0.05	0	691	691	SLE RA 1	0.05	0	691	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	691	SLE RA 1	0.05	0	691	691	SLE RA 1	0.05	0	691	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.01	691	677	SLE RA 20	0.19	0	691	SLE RA 1	0.1	0	691	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	691	677	SLE RA 1	0.19	0	691	SLE RA 1	0.1	0	691	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	691	677	SLE RA 1	0.19	0	691	SLE RA 1	0.1	0	691	SLE RA 1	Si

CORDOLO 7

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

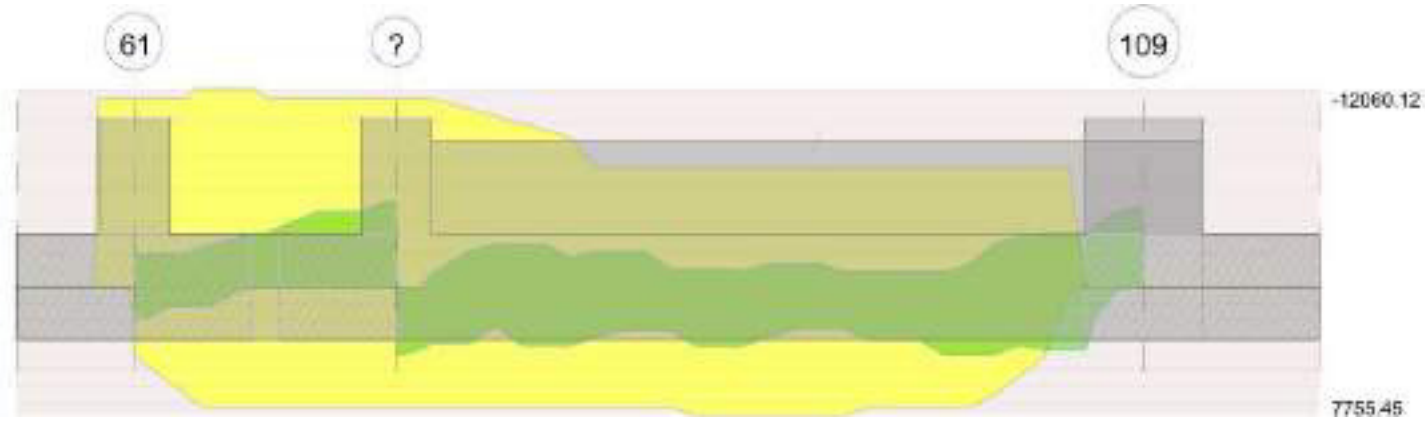
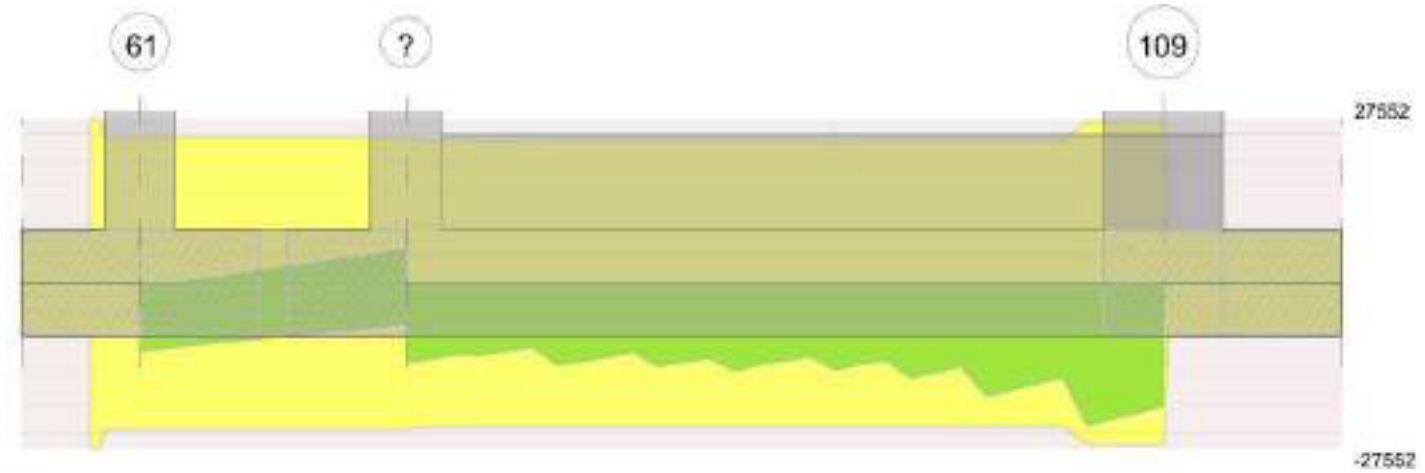


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 61 - ?, sezione R 50x45, asta 535

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000823	0.052	0.000283	0.052	352.65	SLU 51	182.14	4685.49	0.108	25.73							Si
0.15	0.000823	0.052	0.0004	0.052							-764.78	SLU 81	-1761.22	-12061.17	0.137	6.85	Si
0.56	0.000823	0.052	0.000509	0.052							-2785.54	SLU 84	-3373.19	-12059.84	0.137	3.58	Si
0.97	0.000823	0.052	0.000509	0.052							-3860.14	SLU 84	-3860.14	-12059.84	0.137	3.12	Si
1.12	0.000823	0.052	0.000509	0.052							-4014.4	SLU 84	-4000.64	-12059.84	0.137	3.01	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000823	0.052	0.000283	0.052	2384.35	SLV 13	1916.43	4127.78	0.15	2.15	-1977.54	SLV 4	-1977.54	-11479.46	0.252	5.8	Si
0.15	0.000823	0.052	0.0004	0.052	1122.73	SLV 13	1122.73	5753.79	0.174	5.12	-2048.67	SLV 4	-2051.3	-11484.22	0.249	5.6	Si
0.56	0.000823	0.052	0.000509	0.052							-2207.73	SLV 9	-3244.29	-11488.1	0.247	3.54	Si
0.97	0.000823	0.052	0.000509	0.052							-4613.56	SLV 13	-4613.56	-11488.1	0.247	2.49	Si
1.12	0.000823	0.052	0.000509	0.052	13.37	SLV 4	13.37	7261.11	0.193	543.05	-5424.11	SLV 13	-5161.38	-11488.1	0.247	2.23	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000823	0.052	0.000283	0.052	1139.23	SLD 13	786.97	4127.78	0.15	5.25	-732.42	SLD 4	-732.42	-11479.46	0.252	15.67	Si
0.15	0.000823	0.052	0.0004	0.052	217.25	SLD 13	217.25	5753.79	0.174	26.48	-1143.19	SLD 4	-1516.73	-11484.22	0.249	7.57	Si
0.56	0.000823	0.052	0.000509	0.052							-2000.77	SLD 9	-2676.6	-11488.1	0.247	4.29	Si
0.97	0.000823	0.052	0.000509	0.052							-3458.98	SLD 13	-3458.98	-11488.1	0.247	3.32	Si
1.12	0.000823	0.052	0.000509	0.052							-3871.41	SLD 13	-3751.29	-11488.1	0.247	3.06	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000174	0.0004	0	-8986	SLU 84	-8986	-7764	-63178	-24368	-24368	1	2.71	Si
0.15	0.0000174	0.000823	0	-7882	SLU 84	-7882	-8875	-63117	-24344	-24344	1	3.09	Si
0.56	0.0000174	0.000823	0	-4875	SLU 84	-4875	-8875	-63117	-24344	-24344	1	4.99	Si
0.97	0.0000174	0.000823	0	-1904	SLU 80	-1904	-8875	-63117	-24344	-24344	1	12.79	Si
1.12	0.0000174	0.000823	0	-959	SLU 51	-959	-8875	-63117	-24344	-24344	1	25.38	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000174	0.0004	0	-11181	SLV 13	-11181	-7764	-63178	-24368	-24368	1	2.18	Si
0.15	0.0000174	0.0004	0	-10583	SLV 13	-10583	-7764	-63178	-24368	-24368	1	2.3	Si

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0.56	0.0000174	0.000823	0	2263	SLV 4	2263	8875	63117	24344	24344	1	10.76	Si
0.56	0.0000174	0.000823	0	-8947	SLV 13	-8947	-8875	-63117	-24344	-24344	1	2.72	Si
0.97	0.0000174	0.000823	0	4629	SLV 4	4629	8875	63117	24344	24344	1	5.26	Si
0.97	0.0000174	0.000823	0	-7304	SLV 13	-7304	-8875	-63117	-24344	-24344	1	3.33	Si
1.12	0.0000174	0.000509	0	5492	SLV 4	5492	7764	63178	24368	24368	1	4.44	Si
1.12	0.0000174	0.000823	0	-6698	SLV 13	-6698	-8875	-63117	-24344	-24344	1	3.63	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000174	0.0004	0	-8274	SLD 13	-8274	-7764	-63178	-24368	-24368	1	2.95	Si
0.15	0.0000174	0.0004	0	-7596	SLD 13	-7596	-7764	-63178	-24368	-24368	1	3.21	Si
0.56	0.0000174	0.000823	0	-5747	SLD 13	-5747	-8875	-63117	-24344	-24344	1	4.24	Si
0.97	0.0000174	0.000823	0	1222	SLD 4	1222	8875	63117	24344	24344	1	19.92	Si
0.97	0.0000174	0.000823	0	-3898	SLD 13	-3898	-8875	-63117	-24344	-24344	1	6.25	Si
1.12	0.0000174	0.000823	0	2012	SLD 4	2012	8875	63117	24344	24344	1	12.1	Si
1.12	0.0000174	0.000823	0	-3218	SLD 13	-3218	-8875	-63117	-24344	-24344	1	7.57	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	246.49	9	114.14	5841	1494000	92232	36000000	216.85	1	61.66	3155	1120500			Si
0.15	-546.33	18	-1285.65	67994	1494000	979961	36000000	-462.97	2	-1147.47	60686	1120500			Si
0.56	-2046.41	21	-2484.4	129188	1494000	1881658	36000000	-1847.04	2	-2251.55	117080	1120500			Si
0.97	-2850.01	21	-2850.01	148200	1494000	2158567	36000000	-2592.24	2	-2592.24	134796	1120500			Si
1.12	-2968.35	21	-2956.48	153736	1494000	2239209	36000000	-2705.37	2	-2692.57	140013	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 61 - ?, sezione R 50x45, asta 535

Campata 3 tra i fili ? - 109, sezione R 50x45, aste 536, 537, 538, 539, 540, 541, 542, 543, 544

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0009	920	SLU 83	0.073	13570	4906	SLU 83	46651	Si
0.15	0.41	0.0009	922	SLU 83	0.072	13292	4919	SLU 83	45666	Si
1.59	0.41	0.0009	927	SLU 84	0.072	13292	4942	SLU 84	45666	Si
2.94	0.41	0.0009	890	SLU 84	0.072	13292	4746	SLU 84	45666	Si
3.19	0.41	0.0009	882	SLU 84	0.072	13292	4706	SLU 84	45666	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0009	660	SLD 4	0.155	15077	3517	SLD 4	53649	Si
0.15	0.41	0.0009	659	SLD 4	0.154	14769	3517	SLD 4	52516	Si
1.59	0.41	0.0009	636	SLD 4	0.154	14769	3394	SLD 4	52516	Si
2.94	0.41	0.0009	599	SLD 16	0.154	14769	3195	SLD 16	52516	Si
3.19	0.41	0.0009	596	SLD 16	0.154	14769	3178	SLD 16	52516	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000869	675	SLE RA 20	17889	1494000	221819	36000000	611	SLE QP 2	16187	1120500	Si
0.15	0.41	0.00000851	677	SLE RA 20	17974	1494000	222873	36000000	613	SLE QP 2	16263	1120500	Si
1.59	0.41	0.00000851	680	SLE RA 21	18055	1494000	223881	36000000	615	SLE QP 2	16318	1120500	Si
2.94	0.41	0.00000851	653	SLE RA 21	17336	1494000	214971	36000000	590	SLE QP 2	15654	1120500	Si
3.19	0.41	0.00000851	648	SLE RA 21	17191	1494000	213169	36000000	585	SLE QP 2	15522	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.31	0.7	SLU 50	ST	LT	185	84	-35934	0	0	19	0	0	1.1	10930	203	53.77	Si
4.31	0.7	SLV 13	SIS	LT	5977	-1411	-27530	12	-3	19	0	0	1.1	8374	6141	1.36	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
535,536,537,538,539,540,541,542,543,544	4.31	0.7	SLU 84	ST	BT	2.3	131479	44750	2.94	Si
535,536,537,538,539,540,541,542,543,544	4.31	0.7	SLV 8	SIS	LT	2.3	77695	31543	2.46	Si
535,536,537,538,539,540,541,542,543,544	4.31	0.7	SLD 8	SIS	LT	2.3	108328	30818	3.52	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	3	-44750	66.06	-328.29	0	0	-0.01	0	0.7	4.3	1084	2060	0	14430	
0	3854	-31543	-1657.34	-1783.3	0	7	-0.06	-0.05	0.59	4.2	1084	2060	37	0	0.07
0	1711	-30818	-710.38	-901.46	0	3	-0.03	-0.02	0.65	4.25	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.03	0	0	0.31	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.11	1.11	0.94	1.19	1.31	1	0.78	0.78	0.69	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.12	1.12	0.94	1.19	1.31	1	0.9	0.9	0.85	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

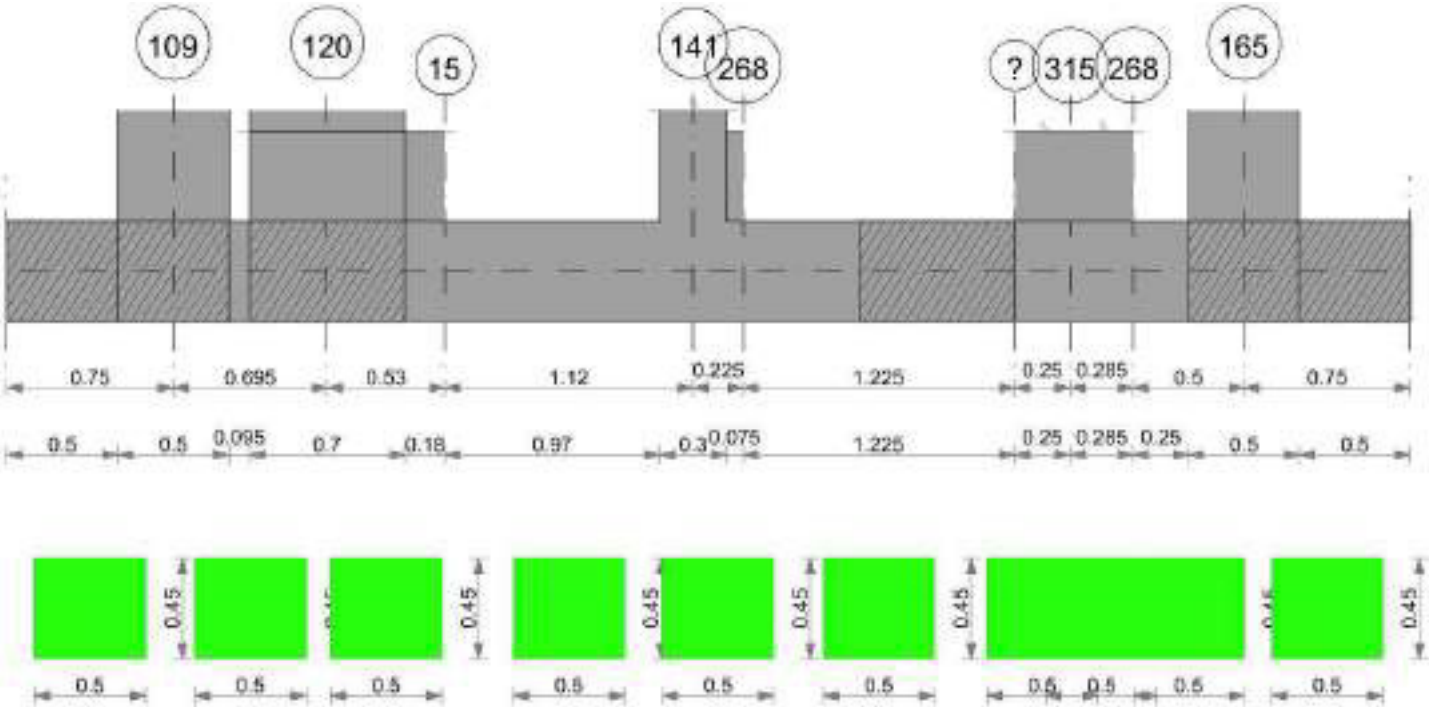
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	702	SLE RA 20	0.05	0	702	691	SLE RA 21	0.05	0	693	SLE RA 10	0.0033	0	SLE RA 1	Si
D	0.05	0	702	SLE RA 1	0.05	0	702	702	SLE RA 1	0.05	0	693	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	702	SLE RA 1	0.05	0	702	702	SLE RA 1	0.05	0	693	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0.01	693	691	SLE RA 20	0.19	0.01	693	SLE RA 10	0.1	0	702	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	702	693	SLE RA 1	0.19	0	702	SLE RA 1	0.1	0	693	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	702	693	SLE RA 1	0.19	0	702	SLE RA 1	0.1	0	693	SLE RA 1	Si

CORDOLO 8

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

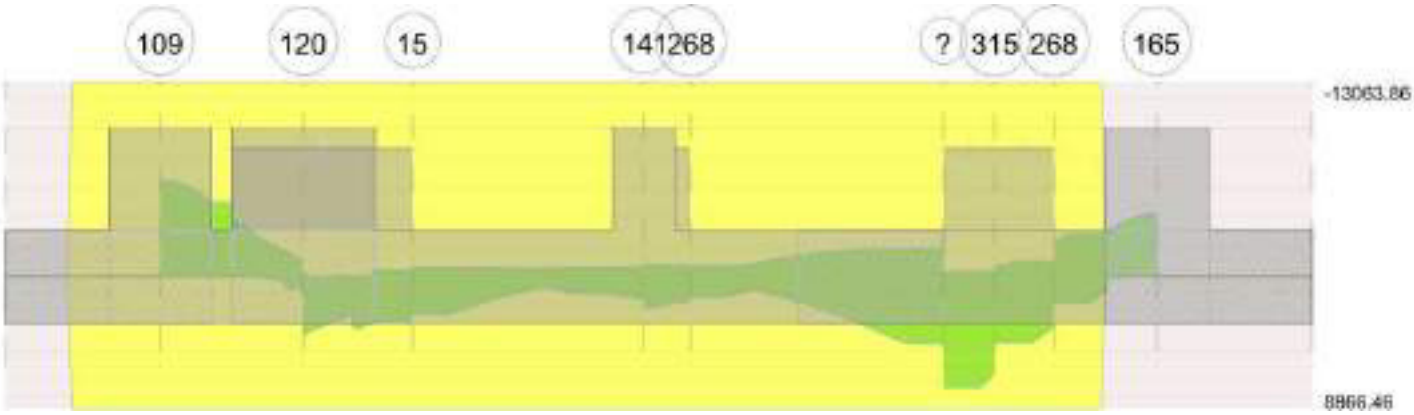
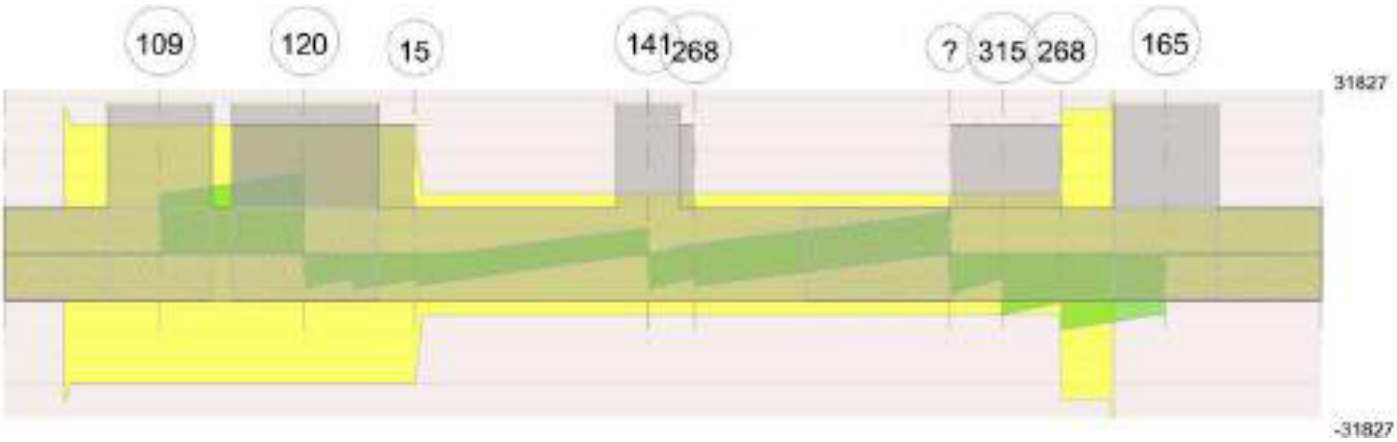


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 109 - 120, sezione R 50x45, asta 557

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053							-7411.38	SLU 83	-6300.55	-13662.92	0.147	2.17	Si
0.25	0.000942	0.053	0.000628	0.053							-4909.47	SLU 83	-4909.47	-13662.92	0.147	2.78	Si
0.35	0.000942	0.053	0.000628	0.053							-3811.86	SLU 83	-4909.47	-13662.92	0.147	2.78	Si
0.35	0.000942	0.053	0.000628	0.053							-3782.11	SLU 83	-3782.01	-13662.92	0.147	3.61	Si
0.7	0.000942	0.053	0.000628	0.053	934.53	SLU 83	934.53	9390.61	0.127	10.05							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053							-7925.45	SLV 8	-6467.3	-13063.86	0.261	2.02	Si
0.25	0.000942	0.053	0.000628	0.053							-4989.89	SLV 8	-4989.89	-13063.86	0.261	2.62	Si
0.35	0.000942	0.053	0.000628	0.053							-3993.52	SLV 4	-4989.89	-13063.86	0.261	2.62	Si
0.35	0.000942	0.053	0.000628	0.053							-3970.33	SLV 4	-3970.33	-13063.86	0.261	3.29	Si
0.7	0.000942	0.053	0.000628	0.053	2288.81	SLV 16	1050.65	8866.46	0.211	8.44	-1082.11	SLV 1	-1082.11	-13063.86	0.261	12.07	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053							-6228.67	SLD 8	-5182.43	-13063.86	0.261	2.52	Si
0.25	0.000942	0.053	0.000628	0.053							-4016.03	SLD 8	-4016.03	-13063.86	0.261	3.25	Si
0.35	0.000942	0.053	0.000628	0.053							-3161.88	SLD 4	-4016.03	-13063.86	0.261	3.25	Si
0.35	0.000942	0.053	0.000628	0.053							-3140.7	SLD 4	-3140.7	-13063.86	0.261	4.16	Si
0.7	0.000942	0.053	0.000628	0.053	1324.11	SLD 16	972.15	8866.46	0.211	9.12	-117.4	SLD 1	-117.4	-13063.86	0.261	111.27	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000179	0.000942	0	8883	SLU 83	8883	9278	63019	25025	25025	1	2.82	Si
0.25	0.0000179	0.000942	0	11129	SLU 83	11129	9278	63019	25025	25025	1	2.25	Si
0.35	0.0000179	0.000942	0	11983	SLU 83	11983	9278	63019	25025	25025	1	2.09	Si
0.35	0.0000179	0.000942	0	12005	SLU 83	12005	9278	63019	25025	25025	1	2.08	Si
0.7	0.0000179	0.000628	0	15146	SLU 83	15146	8105	63019	25025	25025	1	1.65	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000179	0.000942	0	11383	SLV 12	11383	9278	63019	25025	25025	1	2.2	Si
0.25	0.0000179	0.000942	0	12900	SLV 12	12900	9278	63019	25025	25025	1	1.94	Si
0.35	0.0000179	0.000942	0	13480	SLV 12	13480	9278	63019	25025	25025	1	1.86	Si
0.35	0.0000179	0.000942	0	13495	SLV 12	13495	9278	63019	25025	25025	1	1.85	Si
0.7	0.0000179	0.000628	0	15643	SLV 12	15643	8105	63019	25025	25025	1	1.6	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000179	0.000942	0	8266	SLD 12	8266	9278	63019	25025	25025	1	3.03	Si
0.25	0.0000179	0.000942	0	9772	SLD 12	9772	9278	63019	25025	25025	1	2.56	Si
0.35	0.0000179	0.000942	0	10345	SLD 12	10345	9278	63019	25025	25025	1	2.42	Si
0.35	0.0000179	0.000942	0	10361	SLD 12	10361	9278	63019	25025	25025	1	2.42	Si
0.7	0.0000179	0.000628	0	12477	SLD 12	12477	8105	63019	25025	25025	1	2.01	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-5444.36	20	-4630.01	235311	1494000	3428820	36000000	-4912.27	2	-4180.24	212452	1120500			Si
0.25	-3609.59	20	-3609.59	183450	1494000	2673130	36000000	-3261.49	2	-3261.49	165759	1120500			Si
0.35	-2804.36	20	-3609.59	183450	1494000	2673130	36000000	-2536.34	2	-3261.49	165759	1120500			Si
0.35	-2782.53	20	-2782.46	141413	1494000	2060590	36000000	-2516.67	2	-2516.61	127902	1120500			Si
0.7	678.91	20	678.91	33518	1494000	517562	36000000	603.35	2	603.35	29788	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Campata 4 tra i fili 15 - 141, sezione R 50x45, asta 560

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	1461.15	SLU 83	1461.15	9390.61	0.127	6.43							Si
0.56	0.000942	0.053	0.000628	0.053	92.96	SLU 62	290.01	9390.61	0.127	32.38	10.41	SLU 23	-5.53	-13662.92	0.147	2472.11	Si
0.97	0.000942	0.053	0.000628	0.053	439.43	SLU 83	439.43	9390.61	0.127	21.37							Si
1.12	0.000942	0.053	0.000628	0.053	863.14	SLU 83	639.02	9390.61	0.127	14.7							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	2487.54	SLV 16	2487.54	8866.46	0.211	3.56	-526.51	SLV 1	-596.1	-13063.86	0.261	21.92	Si
0.56	0.000942	0.053	0.000628	0.053	621.76	SLV 12	884.02	8866.46	0.211	10.03	-549.38	SLV 5	-560.23	-13063.86	0.261	23.32	Si
0.97	0.000942	0.053	0.000628	0.053	1141.44	SLV 4	1141.44	8866.46	0.211	7.77	-618.95	SLV 13	-618.95	-13063.86	0.261	21.11	Si
1.12	0.000942	0.053	0.000628	0.053	1705.14	SLV 3	1446.89	8866.46	0.211	6.13	-630.19	SLV 14	-630.19	-13063.86	0.261	20.73	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	1626.07	SLD 16	1626.07	8866.46	0.211	5.45							Si
0.56	0.000942	0.053	0.000628	0.053	290.59	SLD 12	482.58	8866.46	0.211	18.37	-218.21	SLD 5	-229.61	-13063.86	0.261	56.9	Si
0.97	0.000942	0.053	0.000628	0.053	638.68	SLD 4	638.68	8866.46	0.211	13.88	-116.19	SLD 13	-202.74	-13063.86	0.261	64.44	Si
1.12	0.000942	0.053	0.000628	0.053	1037.8	SLD 3	843.38	8866.46	0.211	10.51							Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000179	0.000628	0	-5086	SLU 83	-5086	-8105	-63019	-25025	-25025	1	4.92	Si
0.04	0.0000084	0.000628	0	-4789	SLU 83	-4789	-8105	-63019	-11771	-11771	1	2.46	Si
0.56	0.0000084	0.000628	0	-619	SLU 83	-619	-8105	-63019	-11771	-11771	1	19.01	Si
0.97	0.0000084	0.000628	0	2661	SLU 83	2661	8105	63019	11771	11771	1	4.42	Si
1.12	0.0000084	0.000628	0	3863	SLU 83	3863	8105	63019	11771	11771	1	3.05	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000179	0.000628	0	-6045	SLV 16	-6045	-8105	-63019	-25025	-25025	1	4.14	Si
0.04	0.0000084	0.000628	0	-5835	SLV 16	-5835	-8105	-63019	-11771	-11771	1	2.02	Si
0.56	0.0000084	0.000942	0	1997	SLV 1	1997	9278	63019	11771	11771	1	5.89	Si
0.56	0.0000084	0.000628	0	-2914	SLV 16	-2914	-8105	-63019	-11771	-11771	1	4.04	Si
0.97	0.0000084	0.000628	0	4100	SLV 3	4100	8105	63019	11771	11771	1	2.87	Si
0.97	0.0000084	0.000942	0	-647	SLV 14	-647	-9278	-63019	-11771	-11771	1	18.18	Si
1.12	0.0000084	0.000628	0	4879	SLV 3	4879	8105	63019	11771	11771	1	2.41	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000179	0.000628	0	-4551	SLD 16	-4551	-8105	-63019	-25025	-25025	1	5.5	Si
0.04	0.0000084	0.000628	0	-4348	SLD 16	-4348	-8105	-63019	-11771	-11771	1	2.71	Si
0.56	0.0000084	0.000942	0	591	SLD 1	591	9278	63019	11771	11771	1	19.9	Si
0.56	0.0000084	0.000628	0	-1508	SLD 16	-1508	-8105	-63019	-11771	-11771	1	7.8	Si
0.97	0.0000084	0.000628	0	2741	SLD 3	2741	8105	63019	11771	11771	1	4.29	Si
1.12	0.0000084	0.000628	0	3532	SLD 3	3532	8105	63019	11771	11771	1	3.33	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	1084.69	20	1084.69	53552	1494000	826908	36000000	980.52	2	980.52	48409	1120500			Si
0.56	58.18	20	213.1	10521	1494000	162460	36000000	36.19	2	181.19	8946	1120500			Si
0.97	318.69	20	318.69	15734	1494000	242951	36000000	261.24	2	261.24	12898	1120500			Si
1.12	628.14	20	464.23	22919	1494000	353900	36000000	537.47	2	390.73	19291	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Campata 6 tra i fili 268 - ?, sezione R 50x45, asta 562

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	541.11	SLU 83	541.11	9390.61	0.127	17.35							Si
0.61	0.000942	0.053	0.000628	0.053	110.01	SLU 58	394.88	9390.61	0.127	23.78	0.21	SLU 23	-70.36	-13662.92	0.147	194.19	Si
1.06	0.000942	0.053	0.000628	0.053	1192.47	SLU 83	1909.95	9390.61	0.127	4.92							Si
1.23	0.000942	0.053	0.000628	0.053	1909.95	SLU 83	1909.95	9390.61	0.127	4.92							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	1363.33	SLV 16	1363.33	8866.46	0.211	6.5	-712.87	SLV 1	-712.87	-13063.86	0.261	18.33	Si
0.61	0.000942	0.053	0.000628	0.053	1297.06	SLV 3	2064.43	8866.46	0.211	4.29	-1214.88	SLV 14	-1565.16	-13063.86	0.261	8.35	Si
1.06	0.000942	0.053	0.000628	0.053	3488.31	SLV 3	4499.17	8866.46	0.211	1.97	-1861.9	SLV 14	-1900.44	-13063.86	0.261	6.87	Si
1.23	0.000942	0.053	0.000628	0.053	4499.17	SLV 3	4499.17	8866.46	0.211	1.97	-1899.97	SLV 14	-1900.44	-13063.86	0.261	6.87	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	769.03	SLD 16	769.03	8866.46	0.211	11.53	-118.57	SLD 1	-192.04	-13063.86	0.261	68.03	Si

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.61	0.000942	0.053	0.000628	0.053	580.17	SLD 3	1028.07	8866.46	0.211	8.62	-497.99	SLD 14	-533.31	-13063.86	0.261	24.5	Si
1.06	0.000942	0.053	0.000628	0.053	1960.03	SLD 3	2671	8866.46	0.211	3.32	-333.62	SLD 14	-495.39	-13063.86	0.261	26.37	Si
1.23	0.000942	0.053	0.000628	0.053	2671	SLD 3	2671	8866.46	0.211	3.32	-71.8	SLD 14	-351.83	-13063.86	0.261	37.13	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000084	0.000628	0	-3265	SLU 84	-3265	-8105	-63019	-11771	-11771	1	3.6	Si
0.61	0.0000084	0.000628	0	1369	SLU 83	1369	8105	63019	11771	11771	1	8.6	Si
1.23	0.0000084	0.000628	0	5998	SLU 83	5998	8105	63019	11771	11771	1	1.96	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000084	0.000942	0	1836	SLV 3	1836	9278	63019	11771	11771	1	6.41	Si
0	0.0000084	0.000628	0	-6059	SLV 14	-6059	-8105	-63019	-11771	-11771	1	1.94	Si
0.61	0.0000084	0.000628	0	4911	SLV 3	4911	8105	63019	11771	11771	1	2.4	Si
0.61	0.0000084	0.000942	0	-2962	SLV 14	-2962	-9278	-63019	-11771	-11771	1	3.97	Si
1.23	0.0000084	0.000628	0	8031	SLV 3	8031	8105	63019	11771	11771	1	1.47	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000084	0.000628	0	-3800	SLD 14	-3800	-8105	-63019	-11771	-11771	1	3.1	Si
0.61	0.0000084	0.000628	0	2659	SLD 3	2659	8105	63019	11771	11771	1	4.43	Si
0.61	0.0000084	0.000942	0	-710	SLD 14	-710	-9278	-63019	-11771	-11771	1	16.58	Si
1.23	0.0000084	0.000628	0	5759	SLD 3	5759	8105	63019	11771	11771	1	2.04	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	391.44	20	391.44	19326	1494000	298414	36000000	325.23	2	325.23	16057	1120500			Si
0.61	59.68	16	282.03	13924	1494000	215006	36000000	41.09	2	249.63	12325	1120500			Si
1.23	1427.13	20	1427.13	70459	1494000	1087968	36000000	1299.6	2	1299.6	64162	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Campata 9 tra i fili 268 - 165, sezione R 50x45, asta 565

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	746.67	SLU 83	746.67	9390.61	0.127	12.58	486.56	SLU 2	-1686.41	-13662.92	0.147	8.1	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	1749.76	SLV 3	1749.76	8866.46	0.211	5.07	-720.36	SLV 14	-2218.46	-13063.86	0.261	5.89	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	1044.79	SLD 3	1044.79	8866.46	0.211	8.49	-15.39	SLD 14	-1581.98	-13063.86	0.261	8.26	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000201	0	0	-14428	SLU 83	-14428	-7751	-63019	-28078	-28078	1	1.95	Si
0.25	0.0000201	0	0	-12174	SLU 83	-12174	-8455	-71432	-31827	-31827	1	2.61	Si
0.25	0.0000201	0	0	-12172	SLU 83	-12172	-8455	-71432	-31827	-31827	1	2.61	Si
0.27	0	0	0	-12024	SLU 83	-12024	-8455	-71432	0	-8455	1	0.7	Si
0.5	0	0	0	-9940	SLU 83	-9940	-8455	-71432	0	-8455	1	0.85	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000201	0	0	-14563	SLV 11	-14563	-7751	-63019	-28078	-28078	1	1.93	Si
0.25	0.0000201	0	0	-13014	SLV 11	-13014	-8455	-71432	-31827	-31827	1	2.45	Si
0.25	0.0000201	0	0	-13013	SLV 11	-13013	-8455	-71432	-31827	-31827	1	2.45	Si
0.27	0	0	0	-12912	SLV 11	-12912	-8455	-71432	0	-8455	1	0.65	Si
0.5	0	0	0	-11492	SLV 11	-11492	-8455	-71432	0	-8455	1	0.74	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000201	0	0	-11786	SLD 11	-11786	-7751	-63019	-28078	-28078	1	2.38	Si
0.25	0.0000201	0	0	-10263	SLD 11	-10263	-8455	-71432	-31827	-31827	1	3.1	Si
0.25	0.0000201	0	0	-10262	SLD 11	-10262	-8455	-71432	-31827	-31827	1	3.1	Si
0.27	0	0	0	-10162	SLD 11	-10162	-8455	-71432	0	-8455	1	0.83	Si
0.5	0	0	0	-8758	SLD 11	-8758	-8455	-71432	0	-8455	1	0.97	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	561.71	20	561.71	27732	1494000	428219	36000000	514.7	2	514.7	25411	1120500			Si
0.25	-1894.65	20	-1895.95	-112352	1494000	0	36000000	-1703.21	2	-1704.38	-101000	1120500			Si
0.25	-1895.95	20	-1895.95	-112352	1494000	0	36000000	-1704.38	2	-1704.38	-101000	1120500			Si
0.5	-3938.21	20	-3019.83	-178953	1494000	0	36000000	-3546.95	2	-2718.81	-161114	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 109 - 120, sezione R 50x45, asta 557

Campata 3 tra i fili 120 - 15, sezione R 50x45, aste 558, 559

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0009	883	SLU 83	0.075	13958	4710	SLU 83	48030	Si
0.26	0.41	0.0009	890	SLU 83	0.075	13958	4745	SLU 83	48030	Si
0.35	0.41	0.0009	891	SLU 83	0.075	13958	4753	SLU 83	48030	Si
0.53	0.41	0.0009	894	SLU 83	0.075	13958	4766	SLU 83	48030	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0009	602	SLD 16	0.158	15508	3212	SLD 16	55234	Si
0.26	0.41	0.0009	607	SLD 16	0.158	15508	3238	SLD 16	55234	Si
0.35	0.41	0.0009	608	SLD 16	0.158	15508	3244	SLD 16	55234	Si
0.53	0.41	0.0009	610	SLD 16	0.158	15508	3251	SLD 16	55234	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000895	648	SLE RA 20	17119	1494000	212281	36000000	585	SLE QP 2	15452	1120500	Si
0.26	0.41	0.00000895	653	SLE RA 20	17248	1494000	213879	36000000	590	SLE QP 2	15567	1120500	Si
0.35	0.41	0.00000895	654	SLE RA 20	17279	1494000	214255	36000000	591	SLE QP 2	15594	1120500	Si
0.53	0.41	0.00000895	656	SLE RA 20	17327	1494000	214857	36000000	592	SLE QP 2	15636	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 15 - 141, sezione R 50x45, asta 560

Campata 5 tra i fili 141 - 268, sezione R 50x45, asta 561

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	900	SLU 83	0.036	6674	4801	SLU 83	22591	Si
0.11	0.41	0.0004	901	SLU 83	0.036	6674	4806	SLU 83	22591	Si
0.15	0.41	0.0004	901	SLU 83	0.036	6674	4806	SLU 83	22591	Si
0.22	0.41	0.0004	901	SLU 83	0.036	6674	4807	SLU 83	22591	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	614	SLD 12	0.109	7446	3273	SLD 12	25980	Si
0.11	0.41	0.0004	614	SLD 11	0.109	7446	3276	SLD 11	25980	Si
0.15	0.41	0.0004	614	SLD 11	0.109	7446	3277	SLD 11	25980	Si
0.22	0.41	0.0004	614	SLD 11	0.109	7446	3277	SLD 11	25980	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000421	661	SLE RA 20	18527	1494000	229739	36000000	597	SLE QP 2	16715	1120500	Si
0.11	0.41	0.00000421	662	SLE RA 20	18544	1494000	229940	36000000	597	SLE QP 2	16730	1120500	Si
0.15	0.41	0.00000421	662	SLE RA 20	18546	1494000	229974	36000000	597	SLE QP 2	16733	1120500	Si
0.22	0.41	0.00000421	662	SLE RA 20	18549	1494000	230004	36000000	597	SLE QP 2	16735	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 6 tra i fili 268 - ?, sezione R 50x45, asta 562

Campata 7 tra i fili ? - 315, sezione R 50x45, asta 563

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	900	SLU 83	0.036	6674	4797	SLU 83	22591	Si
0.12	0.41	0.0004	897	SLU 83	0.036	6674	4784	SLU 83	22591	Si
0.25	0.41	0.0004	891	SLU 83	0.036	6674	4750	SLU 83	22591	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	611	SLD 11	0.109	7446	3261	SLD 11	25980	Si
0.12	0.41	0.0004	609	SLD 11	0.109	7446	3248	SLD 11	25980	Si
0.25	0.41	0.0004	603	SLD 11	0.109	7446	3218	SLD 11	25980	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000421	661	SLE RA 20	18515	1494000	229587	36000000	597	SLE QP 2	16713	1120500	Si
0.12	0.41	0.00000421	659	SLE RA 20	18464	1494000	228952	36000000	595	SLE QP 2	16669	1120500	Si
0.25	0.41	0.00000421	654	SLE RA 20	18331	1494000	227310	36000000	591	SLE QP 2	16551	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 8 tra i fili 315 - 268, sezione R 50x45, asta 564

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	891	SLU 83	0.036	6674	4750	SLU 83	22591	Si
0.14	0.41	0.0004	886	SLU 83	0.036	6674	4725	SLU 83	22591	Si
0.28	0.41	0.001	881	SLU 83	0.085	15602	4697	SLU 83	53891	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	603	SLD 11	0.109	7446	3218	SLD 11	25980	Si
0.14	0.41	0.0004	599	SLD 11	0.109	7446	3197	SLD 11	25980	Si
0.28	0.41	0.001	595	SLD 11	0.167	17333	3174	SLD 11	61974	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000421	654	SLE RA 20	18331	1494000	227310	36000000	591	SLE QP 2	16551	1120500	Si
0.14	0.41	0.00000421	651	SLE RA 20	18234	1494000	226103	36000000	588	SLE QP 2	16465	1120500	Si
0.28	0.41	0.00001004	647	SLE RA 20	16853	1494000	208983	36000000	584	SLE QP 2	15219	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 9 tra i fili 268 - 165, sezione R 50x45, asta 565

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.83	0.7	SLU 50	ST	LT	-85	166	-39323	0	0	19	0	0	1.1	11961	186	64.19	Si
4.83	0.7	SLV 3	SIS	LT	-6607	1470	-32471	-12	3	19	0	0	1.1	9877	6768	1.46	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
557,558,559,560,561,562,563,564,565	4.83	0.7	SLU 84	ST	BT	2.3	144875	48876	2.96	Si
557,558,559,560,561,562,563,564,565	4.83	0.7	SLV 9	SIS	LT	2.3	80655	32080	2.51	Si
557,558,559,560,561,562,563,564,565	4.83	0.7	SLD 9	SIS	LT	2.3	117299	32621	3.6	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	78	-48876	356.57	4.87	0	0	0	0.01	0.69	4.83	1084	2060	0	14430	
0	-4153	-32080	2147.32	616.74	0	-7	0.02	0.07	0.57	4.79	1084	2060	37	0	0.07
0	-1769	-32621	1064.08	270.86	0	-3	0.01	0.03	0.63	4.81	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.03	0	0	0.31	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.09	1.09	0.95	1.19	1.31	1	0.77	0.76	0.67	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.1	1.1	0.95	1.19	1.31	1	0.9	0.9	0.85	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

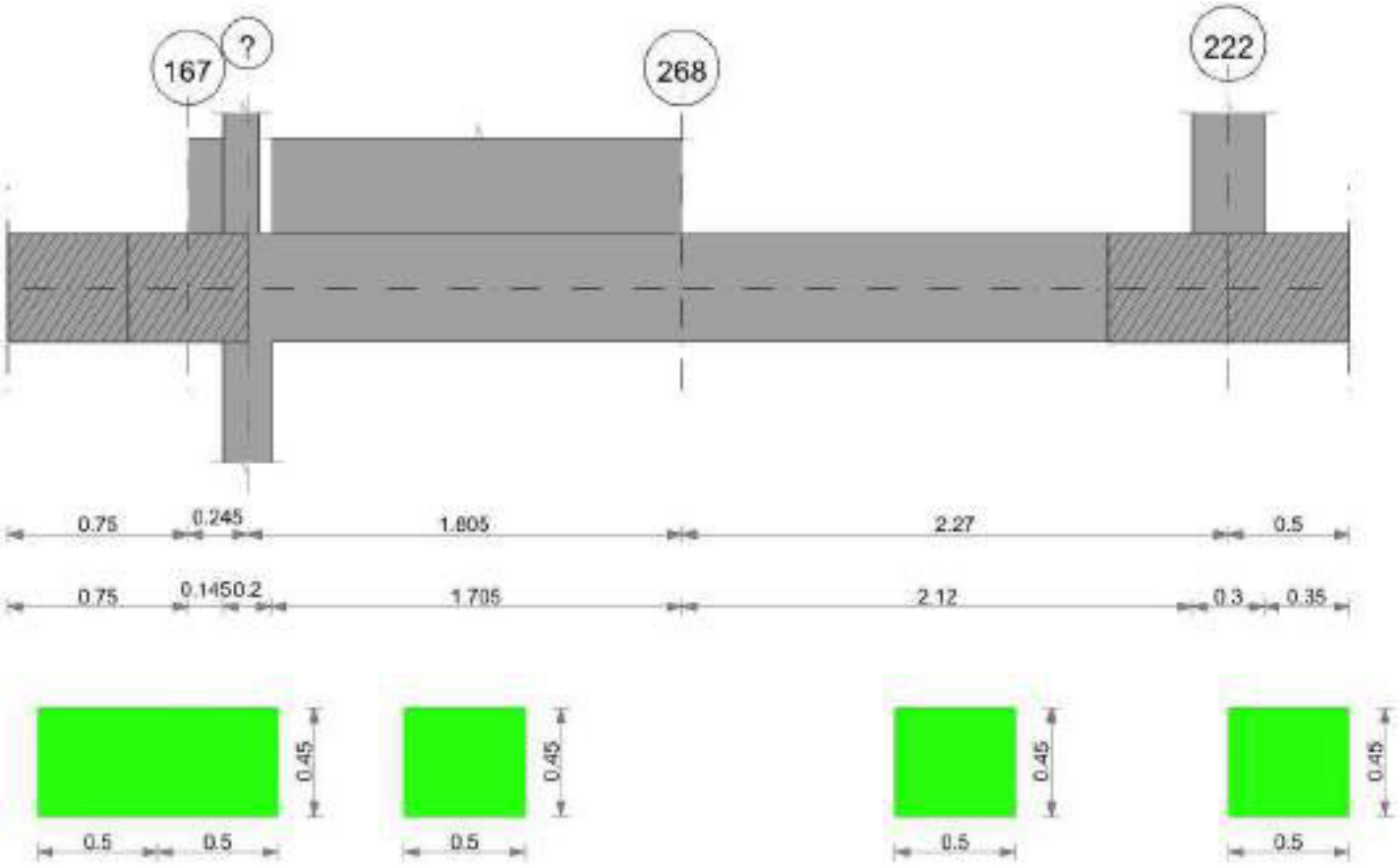
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	712	SLE RA 20	0.05	0.001	712	706	SLE RA 21	0.05	0	707	SLE RA 21	0.0033	0	SLE RA 21	Si
D	0.05	0	712	SLE RA 1	0.05	0	712	712	SLE RA 1	0.05	0	711	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	712	SLE RA 1	0.05	0	712	712	SLE RA 1	0.05	0	711	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.02	709	708	SLE RA 20	0.19	0	711	SLE RA 20	0.1	0.01	708	SLE RA 21	Si
D	0.19	0	SLE RA 1	0.19	0	712	711	SLE RA 1	0.19	0	712	SLE RA 1	0.1	0	711	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	712	711	SLE RA 1	0.19	0	712	SLE RA 1	0.1	0	711	SLE RA 1	Si

CORDOLO 9

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

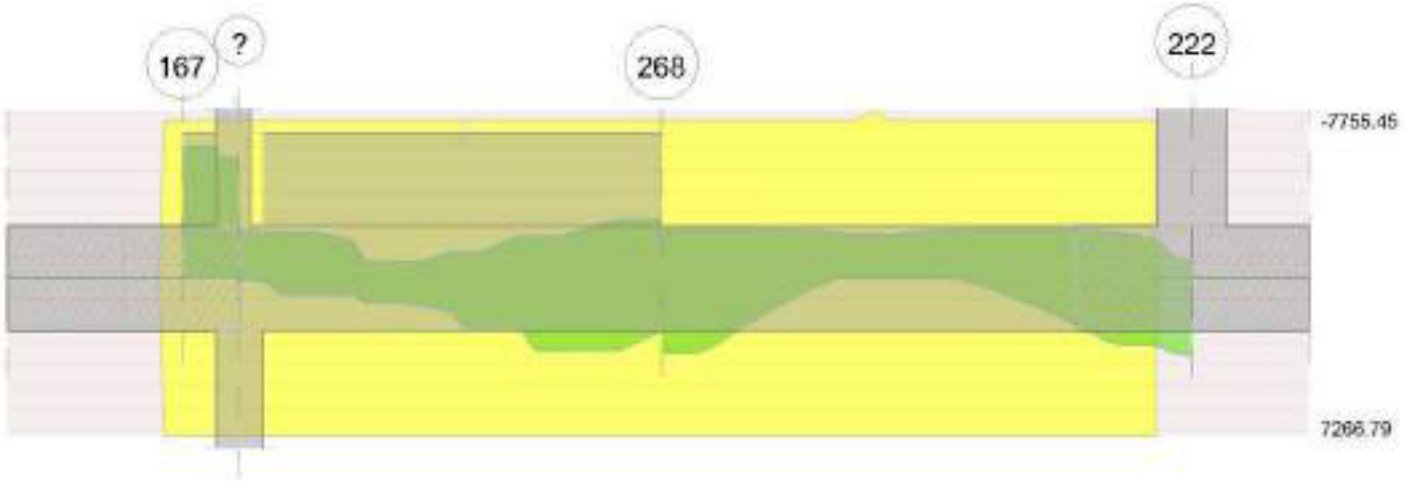


Diagramma verifica stato limite ultimo taglio

Output campate

Campata 4 tra i fili 268 - 222, sezione R 50x45, aste 596, 597

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	1035.01	SLU 83	1035.01	7755.45	0.113	7.49	579.64	SLU 2	-91.99	-7755.45	0.113	84.31	Si
1.14	0.000509	0.052	0.000509	0.052							-2067.49	SLU 84	-2067.49	-7755.45	0.113	3.75	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	3471.24	SLV 15	3471.24	7266.79	0.197	2.09	-2162.38	SLV 2	-2273.1	-7266.79	0.197	3.2	Si
1.14	0.000509	0.052	0.000509	0.052							-1923.19	SLV 14	-2187.58	-7266.79	0.197	3.32	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	1859.73	SLD 15	1859.73	7266.79	0.197	3.91	-550.86	SLD 2	-1000.56	-7266.79	0.197	7.26	Si
1.14	0.000509	0.052	0.000509	0.052							-1603.66	SLD 14	-1675.72	-7266.79	0.197	4.34	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000085	0.000509	0	-7410	SLU 84	-7410	-7764	-63178	-11880	-11880	1	1.6	Si
1.14	0.0000085	0.000509	0	23	SLU 48	23	7764	63178	11880	11880	1	524.94	Si
1.14	0.0000085	0.000509	0	-130	SLU 40	-130	-7764	-63178	-11880	-11880	1	91.39	Si
2.12	0.0000085	0	0	7792	SLU 83	7792	8455	71432	13432	13432	1	1.72	Si
2.27	0	0	0	9018	SLU 83	9018	8455	71432	0	8455	1	0.94	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000085	0.000509	0	-8752	SLV 13	-8752	-7764	-63178	-11880	-11880	1	1.36	Si
1.14	0.0000085	0.000509	0	2282	SLV 2	2282	7764	63178	11880	11880	1	5.21	Si
1.14	0.0000085	0.000509	0	-2341	SLV 15	-2341	-7764	-63178	-11880	-11880	1	5.07	Si
2.12	0.0000085	0	0	6792	SLV 4	6792	8455	71432	13432	13432	1	1.98	Si
2.27	0	0	0	7494	SLV 4	7494	8455	71432	0	8455	1	1.13	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000085	0.000509	0	-6544	SLD 13	-6544	-7764	-63178	-11880	-11880	1	1.82	Si
1.14	0.0000085	0.000509	0	959	SLD 2	959	7764	63178	11880	11880	1	12.39	Si
1.14	0.0000085	0.000509	0	-1018	SLD 15	-1018	-7764	-63178	-11880	-11880	1	11.67	Si
2.12	0.0000085	0	0	5914	SLD 4	5914	8455	71432	13432	13432	1	2.27	Si
2.27	0	0	0	6684	SLD 4	6684	8455	71432	0	8455	1	1.26	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	750.26	20	750.26	39684	1494000	595254	36000000	654.43	2	654.43	34615	1120500			Si
1.14	-1517.16	21	-1517.16	80248	1494000	1203717	36000000	-1363.22	2	-1367.06	72308	1120500			Si
2.12	966	14	966	57245	1494000	0	36000000	917.08	2	917.08	54346	1120500			Si
2.27	1785.71	20	1390.7	82412	1494000	0	36000000	1672.69	2	1311.48	77717	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 167 - ?, sezione R 50x45, asta 590

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	856	SLU 84	0.036	6718	4567	SLU 84	22744	Si

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0.12	0.41	0.0004	855	SLU 84	0.036	6718	4560	SLU 84	22744	Si
0.15	0.41	0.0004	855	SLU 84	0.036	6718	4559	SLU 84	22744	Si
0.25	0.41	0.0004	855	SLU 84	0.036	6718	4559	SLU 84	22744	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	583	SLD 15	0.109	7495	3109	SLD 15	26155	Si
0.12	0.41	0.0004	584	SLD 15	0.109	7495	3112	SLD 15	26155	Si
0.15	0.41	0.0004	584	SLD 15	0.109	7495	3114	SLD 15	26155	Si
0.25	0.41	0.0004	585	SLD 15	0.109	7495	3121	SLD 15	26155	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000424	629	SLE RA 21	17609	1494000	218355	36000000	568	SLE QP 2	15906	1120500	Si
0.12	0.41	0.00000424	628	SLE RA 21	17581	1494000	217999	36000000	567	SLE QP 2	15881	1120500	Si
0.15	0.41	0.00000424	628	SLE RA 21	17578	1494000	217969	36000000	567	SLE QP 2	15879	1120500	Si
0.25	0.41	0.00000424	628	SLE RA 21	17576	1494000	217941	36000000	567	SLE QP 2	15877	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 3 tra i fili ? - 268, sezione R 50x45, aste 591, 592, 593, 594, 595

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	855	SLU 84	0.036	6718	4559	SLU 84	22744	Si
0.1	0.41	0.0004	855	SLU 84	0.036	6718	4559	SLU 84	22744	Si
0.9	0.41	0.0004	860	SLU 84	0.036	6718	4587	SLU 84	22744	Si
1.8	0.41	0.0004	861	SLU 84	0.036	6718	4590	SLU 84	22744	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	585	SLD 15	0.109	7495	3121	SLD 15	26155	Si
0.1	0.41	0.0004	587	SLD 15	0.109	7495	3128	SLD 15	26155	Si
0.9	0.41	0.0004	603	SLD 15	0.109	7495	3217	SLD 15	26155	Si
1.8	0.41	0.0004	614	SLD 15	0.109	7495	3275	SLD 15	26155	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000424	628	SLE RA 21	17576	1494000	217941	36000000	567	SLE QP 2	15877	1120500	Si
0.1	0.41	0.00000424	628	SLE RA 21	17576	1494000	217948	36000000	567	SLE QP 2	15877	1120500	Si
0.9	0.41	0.00000424	631	SLE RA 21	17684	1494000	219285	36000000	570	SLE QP 2	15977	1120500	Si
1.8	0.41	0.00000424	632	SLE RA 21	17697	1494000	219444	36000000	571	SLE QP 2	16000	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 268 - 222, sezione R 50x45, aste 596, 597

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	γR	Rd	Ed	Rd/Ed	Verifica
4.32	0.7	SLU 50	ST	LT	-312	40	-32347	-1	0	19	0	0	1.1	9839	314	31.3	Si
4.32	0.7	SLV 3	SIS	LT	-5689	1076	-24150	-13	3	19	0	0	1.1	7346	5790	1.27	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
590,591,592,593,594,595,596,597	4.32	0.7	SLU 84	ST	BT	2.3	130234	40162	3.24	Si
590,591,592,593,594,595,596,597	4.32	0.7	SLV 10	SIS	LT	2.3	76151	27703	2.75	Si
590,591,592,593,594,595,596,597	4.32	0.7	SLD 10	SIS	LT	2.3	106531	27421	3.88	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-31	-40162	227.62	225.78	0	0	0.01	0.01	0.69	4.31	1084	2060	0	14430	
0	-3406	-27703	1600.32	1281.7	0	-7	0.05	0.06	0.58	4.23	1084	2060	37	0	0.07
0	-1491	-27421	782.41	650.43	0	-3	0.02	0.03	0.64	4.27	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.03	0	0	0.31	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.1	1.11	0.94	1.19	1.31	1	0.78	0.78	0.69	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.11	1.12	0.94	1.19	1.31	1	0.9	0.9	0.85	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	713	SLE RA 20	0.05	0.001	713	721	SLE RA 21	0.05	0	719	SLE RA 19	0.0033	0	SLE RA 19	Si
D	0.05	0	721	SLE RA 1	0.05	0	721	721	SLE RA 1	0.05	0	719	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	721	SLE RA 1	0.05	0	721	721	SLE RA 1	0.05	0	719	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.02	719	714	SLE RA 21	0.19	0	714	SLE RA 21	0.1	0.01	719	SLE RA 19	Si
D	0.19	0	SLE RA 1	0.19	0	721	719	SLE RA 1	0.19	0	721	SLE RA 1	0.1	0	719	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	721	719	SLE RA 1	0.19	0	721	SLE RA 1	0.1	0	719	SLE RA 1	Si

CORDOLO 10

Geometria

Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

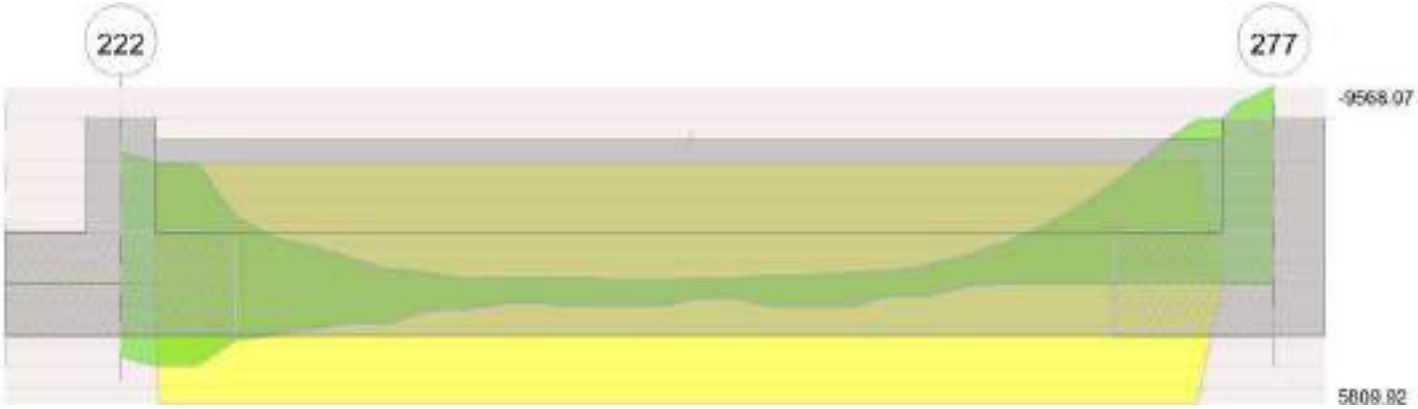
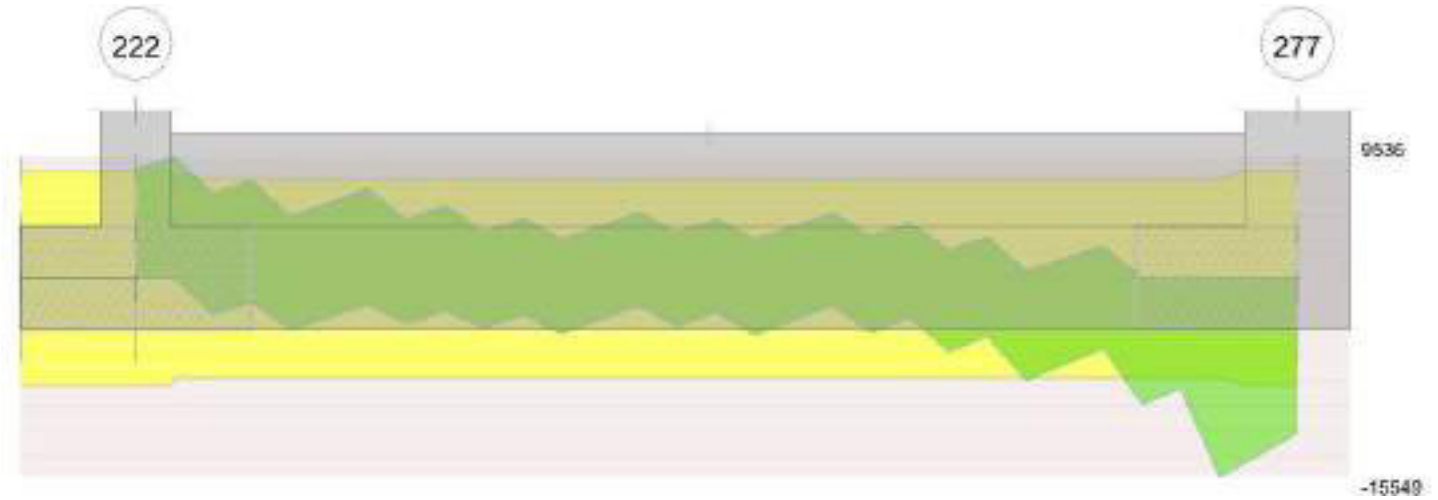


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 222 - 277, sezione R 50x45, aste 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	912	SLU 84	0.017	2681	4864	SLU 84	15877	Si
0.15	0.41	0.0002	917	SLU 84	0.017	2681	4889	SLU 84	15877	Si
2.52	0.41	0.0002	981	SLU 84	0.017	2681	5233	SLU 84	15877	Si
4.81	0.41	0.0002	1047	SLV 13	0.084	2609	5585	SLV 13	15877	Si
5.04	0.41	0.0002	1078	SLV 13	0.084	2609	5752	SLV 13	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	651	SLD 13	0.069	3019	3473	SLD 13	15877	Si
0.15	0.41	0.0002	655	SLD 13	0.069	3019	3495	SLD 13	15877	Si
2.52	0.41	0.0002	748	SLD 13	0.069	3019	3989	SLD 13	15877	Si
4.81	0.41	0.0002	846	SLD 13	0.069	3019	4510	SLD 13	15877	Si
5.04	0.41	0.0002	866	SLD 13	0.069	3019	4621	SLD 13	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000168	670	SLE RA 21	19408	1494000	240654	36000000	608	SLE QP 2	17597	1120500	Si
0.15	0.41	0.00000168	673	SLE RA 21	19508	1494000	241898	36000000	611	SLE QP 2	17689	1120500	Si
2.52	0.41	0.00000168	721	SLE RA 21	20896	1494000	259107	36000000	655	SLE QP 2	18986	1120500	Si
4.81	0.41	0.00000168	763	SLE RA 21	22095	1494000	273979	36000000	695	SLE QP 2	20138	1120500	Si
5.04	0.41	0.00000168	777	SLE RA 21	22503	1494000	279031	36000000	708	SLE QP 2	20516	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.26	0.7	SLU 5	ST	LT	-409	-280	-33765	-1	0	19	0	0	1.1	10270	495	20.73	Si
5.26	0.7	SLV 3	SIS	LT	-6811	1665	-25349	-15	4	19	0	0	1.1	7711	7012	1.1	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
632,633,634,635,636,637,638,639,640,641,642,643,644	5.26	0.7	SLU 84	ST	BT	2.3	156452	52668	2.97	Si
632,633,634,635,636,637,638,639,640,641,642,643,644	5.26	0.7	SLV 10	SIS	LT	2.3	89060	39432	2.26	Si
632,633,634,635,636,637,638,639,640,641,642,643,644	5.26	0.7	SLD 10	SIS	LT	2.3	124102	37361	3.32	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-444	-52668	230.08	1897	0	0	0.04	0	0.69	5.19	1084	2060	0	14430	
0	-5066	-39432	2277.59	3931.97	0	-7	0.1	0.06	0.58	5.06	1084	2060	37	0	0.07
0	-2364	-37361	1074.33	2455.27	0	-4	0.07	0.03	0.64	5.13	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.03	0	0	0.31	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.09	1.09	0.95	1.19	1.31	1	0.77	0.76	0.67	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.09	1.1	0.95	1.19	1.31	1	0.88	0.88	0.83	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

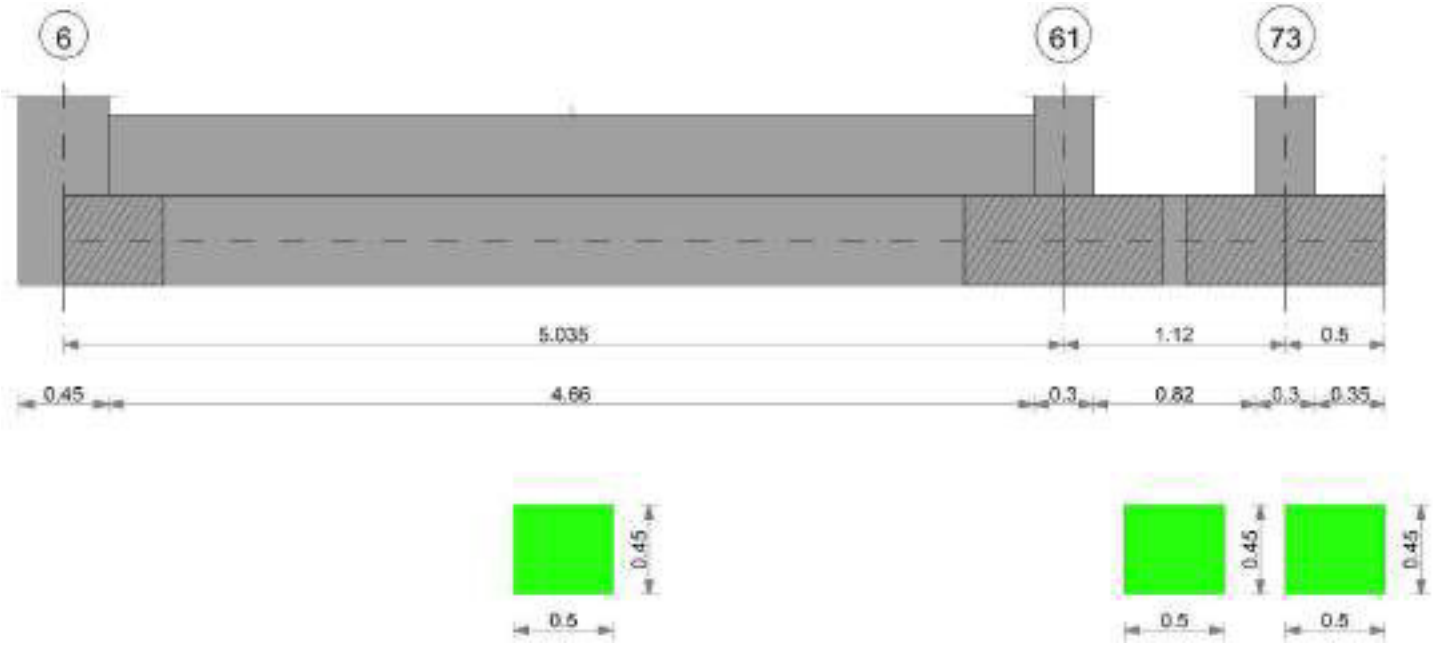
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	722	SLE RA 20	0.05	0.001	722	735	SLE RA 20	0.05	0	735	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	735	SLE RA 1	0.05	0	735	735	SLE RA 1	0.05	0	735	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	735	SLE RA 1	0.05	0	735	735	SLE RA 1	0.05	0	735	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.01	735	722	SLE RA 20	0.19	0	735	SLE RA 1	0.1	0	735	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	735	722	SLE RA 1	0.19	0	735	SLE RA 1	0.1	0	735	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	735	722	SLE RA 1	0.19	0	735	SLE RA 1	0.1	0	735	SLE RA 1	Si

CORDOLO 11

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

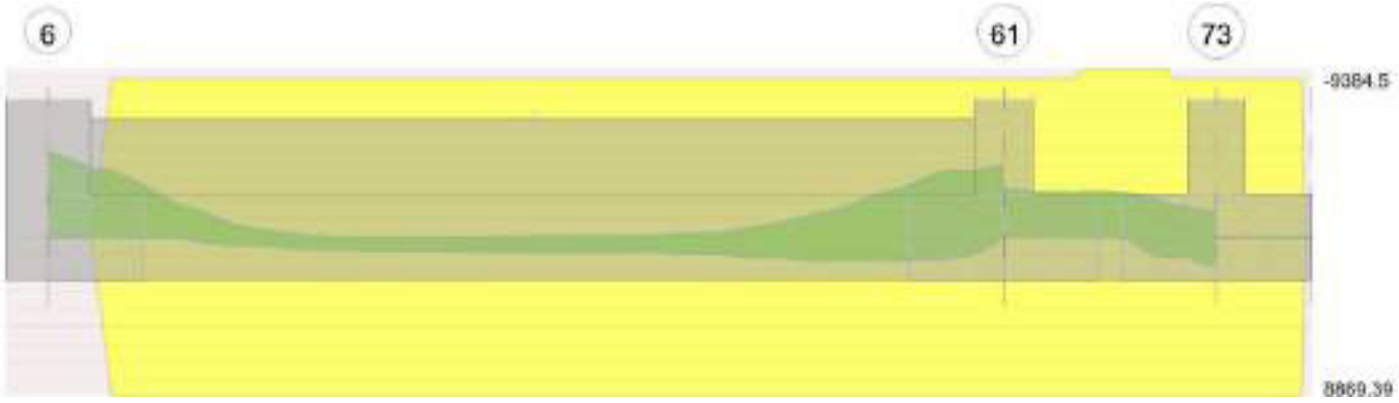
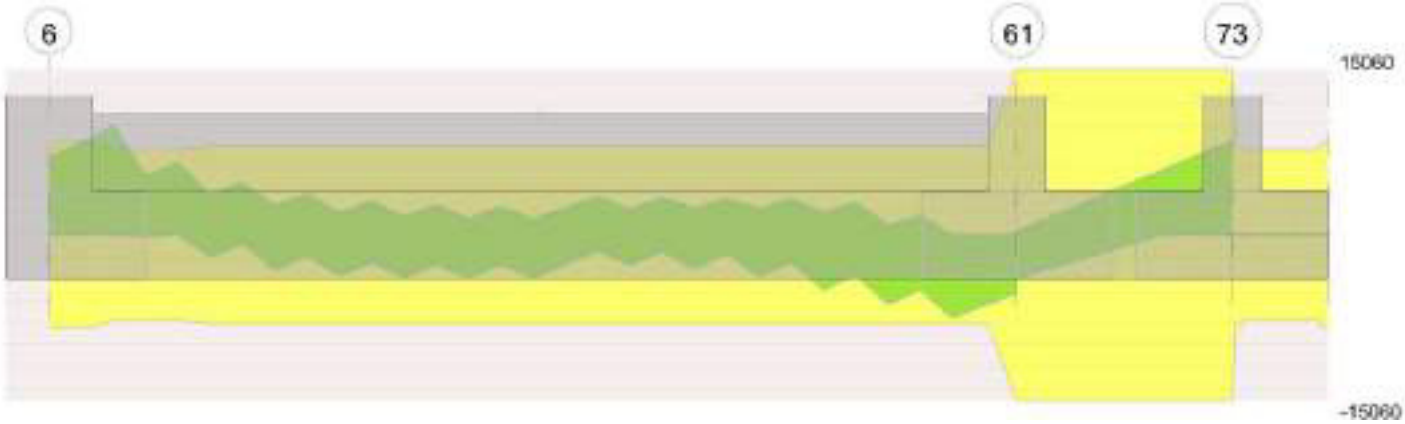


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 61 - 73, sezione R 50x45, asta 736

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000628	0.053							-2127.55	SLU 83	-2127.55	-9384.5	0.124	4.41	Si
0.15	0.000628	0.053	0.000628	0.053							-2462.42	SLU 83	-2583.19	-9384.5	0.124	3.63	Si
0.19	0.000628	0.053	0.000628	0.053							-2511.82	SLU 83	-2583.19	-9384.5	0.124	3.63	Si
0.56	0.000628	0.053	0.000628	0.053							-2288.97	SLU 84	-2558.35	-9384.5	0.124	3.67	Si
0.97	0.000628	0.053	0.000628	0.053							-531.72	SLU 82	-1487.11	-9384.5	0.124	6.31	Si
1.12	0.000628	0.053	0.000628	0.053	700.45	SLU 48	208.68	9384.5	0.124	44.97							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000628	0.053							-2701.27	SLV 3	-2679.57	-8869.39	0.216	3.31	Si
0.15	0.000628	0.053	0.000628	0.053							-2570.71	SLV 3	-2570.71	-8869.39	0.216	3.45	Si
0.56	0.000628	0.053	0.000628	0.053							-1783.29	SLV 9	-2065.5	-8869.39	0.216	4.29	Si
0.97	0.000628	0.053	0.000628	0.053	1102.33	SLV 3	1102.33	8869.39	0.216	8.05	-1645.83	SLV 14	-1779.4	-8869.39	0.216	4.98	Si
1.12	0.000628	0.053	0.000628	0.053	2305.28	SLV 3	1663.66	8869.39	0.216	5.33	-1401.59	SLV 14	-1401.59	-8869.39	0.216	6.33	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000628	0.053							-2011.25	SLD 3	-2011.25	-8869.39	0.216	4.41	Si
0.15	0.000628	0.053	0.000628	0.053							-2071.06	SLD 3	-2070.99	-8869.39	0.216	4.28	Si
0.15	0.000628	0.053	0.000628	0.053							-2070.91	SLD 3	-2070.91	-8869.39	0.216	4.28	Si
0.56	0.000628	0.053	0.000628	0.053							-1631.57	SLD 9	-1871.86	-8869.39	0.216	4.74	Si
0.97	0.000628	0.053	0.000628	0.053	314.27	SLD 3	314.27	8869.39	0.216	28.22	-857.77	SLD 14	-1301.05	-8869.39	0.216	6.82	Si
1.12	0.000628	0.053	0.000628	0.053	1242.59	SLD 3	740.72	8869.39	0.216	11.97	-338.91	SLD 14	-338.91	-8869.39	0.216	26.17	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000108	0.000628	0	-2973	SLU 82	-2973	-8105	-63019	-15060	-15060	1	5.06	Si
0.15	0.0000108	0.000628	0	-1554	SLU 82	-1554	-8105	-63019	-15060	-15060	1	9.69	Si
0.56	0.0000108	0.000628	0	2411	SLU 77	2411	8105	63019	15060	15060	1	6.25	Si
0.97	0.0000108	0.000628	0	6279	SLU 83	6279	8105	63019	15060	15060	1	2.4	Si
1.12	0.0000108	0.000628	0	7712	SLU 83	7712	8105	63019	15060	15060	1	1.95	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000108	0.000628	0	345	SLV 3	345	8105	63019	15060	15060	1	43.61	Si
0	0.0000108	0.000628	0	-3982	SLV 14	-3982	-8105	-63019	-15060	-15060	1	3.78	Si
0.15	0.0000108	0.000628	0	1451	SLV 3	1451	8105	63019	15060	15060	1	10.38	Si
0.15	0.0000108	0.000628	0	-3178	SLV 14	-3178	-8105	-63019	-15060	-15060	1	4.74	Si
0.56	0.0000108	0.000628	0	4470	SLV 3	4470	8105	63019	15060	15060	1	3.37	Si
0.56	0.0000108	0.000628	0	-991	SLV 14	-991	-8105	-63019	-15060	-15060	1	15.2	Si
0.97	0.0000108	0.000628	0	7484	SLV 3	7484	8105	63019	15060	15060	1	2.01	Si
1.12	0.0000108	0.000628	0	8586	SLV 3	8586	8105	63019	15060	15060	1	1.75	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000108	0.000628	0	-2740	SLD 14	-2740	-8105	-63019	-15060	-15060	1	5.5	Si
0.15	0.0000108	0.000628	0	123	SLD 3	123	8105	63019	15060	15060	1	122.03	Si
0.15	0.0000108	0.000628	0	-1850	SLD 14	-1850	-8105	-63019	-15060	-15060	1	8.14	Si
0.56	0.0000108	0.000628	0	2905	SLD 3	2905	8105	63019	15060	15060	1	5.18	Si
0.97	0.0000108	0.000628	0	5686	SLD 3	5686	8105	63019	15060	15060	1	2.65	Si
1.12	0.0000108	0.000628	0	6705	SLD 3	6705	8105	63019	15060	15060	1	2.25	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-1598.97	20	-1598.97	82619	1494000	1239292	36000000	-1497.65	2	-1497.65	77384	1120500			Si
0.15	-1835.69	20	-1915.04	98951	1494000	1484267	36000000	-1698.67	2	-1756.85	90777	1120500			Si
0.56	-1681.81	21	-1891.49	97734	1494000	1466015	36000000	-1518.93	2	-1727.69	89271	1120500			Si
0.97	-362.09	19	-1077.07	55653	1494000	834788	36000000	-271.75	2	-945.9	48875	1120500			Si

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
1.12	499.46	6	103.1	5327	1494000	79909	36000000	466.9	1	81.27	4200	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 6 - 61, sezione R 50x45, aste 750, 749, 748, 747, 746, 745, 744, 743, 742, 741, 740, 739, 738, 737

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1068	SLV 4	0.085	2672	5698	SLV 4	15877	Si
0.23	0.41	0.0002	1049	SLV 4	0.085	2672	5595	SLV 4	15877	Si
2.52	0.41	0.0002	994	SLU 84	0.017	2747	5299	SLU 84	15877	Si
4.89	0.41	0.0002	932	SLU 83	0.017	2747	4970	SLU 83	15877	Si
5.04	0.41	0.0005	929	SLU 83	0.045	8504	4955	SLU 83	28904	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	849	SLD 4	0.07	3092	4527	SLD 4	15877	Si
0.23	0.41	0.0002	838	SLD 4	0.07	3092	4469	SLD 4	15877	Si
2.52	0.41	0.0002	767	SLD 4	0.07	3092	4088	SLD 4	15877	Si
4.89	0.41	0.0002	676	SLD 4	0.07	3092	3607	SLD 4	15877	Si
5.04	0.41	0.0005	673	SLD 4	0.123	9470	3590	SLD 4	33239	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000172	752	SLE RA 20	21775	1494000	270014	36000000	685	SLE QP 2	19827	1120500	Si
0.23	0.41	0.00000172	747	SLE RA 20	21637	1494000	268293	36000000	680	SLE QP 2	19694	1120500	Si
2.52	0.41	0.00000172	730	SLE RA 21	21138	1494000	262110	36000000	663	SLE QP 2	19181	1120500	Si
4.89	0.41	0.00000172	684	SLE RA 20	19812	1494000	245670	36000000	620	SLE QP 2	17941	1120500	Si
5.04	0.41	0.00000539	682	SLE RA 20	18832	1494000	233520	36000000	618	SLE QP 2	17052	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 2 tra i fili 61 - 73, sezione R 50x45, asta 736

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
6.38	0.7	SLU 50	ST	LT	440	198	-54487	0	0	19	0	0	1.1	16574	483	34.34	Si
6.38	0.7	SLV 13	SIS	LT	8840	-1706	-32141	15	-3	19	0	0	1.1	9777	9003	1.09	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
750,749,748,747,746,745,744,743,742,741,740,739,738,737,736	6.38	0.7	SLU 83	ST	BT	2.3	191165	67450	2.83	Si
750,749,748,747,746,745,744,743,742,741,740,739,738,737,736	6.38	0.7	SLV 8	SIS	LT	2.3	111689	50856	2.2	Si
750,749,748,747,746,745,744,743,742,741,740,739,738,737,736	6.38	0.7	SLD 8	SIS	LT	2.3	153771	47947	3.21	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	168	-67450	-46.12	-3283.83	0	0	-0.05	0	0.7	6.28	1084	2060	0	14430	
0	6113	-50856	-2701.97	-6449.37	0	7	-0.13	-0.05	0.59	6.13	1084	2060	37	0	0.07
0	2758	-47947	-1208.27	-4092.9	0	3	-0.09	-0.03	0.65	6.21	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.02	0	0	0.31	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.07	1.07	0.96	1.19	1.31	1	0.78	0.78	0.69	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.08	1.08	0.96	1.19	1.31	1	0.89	0.89	0.84	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

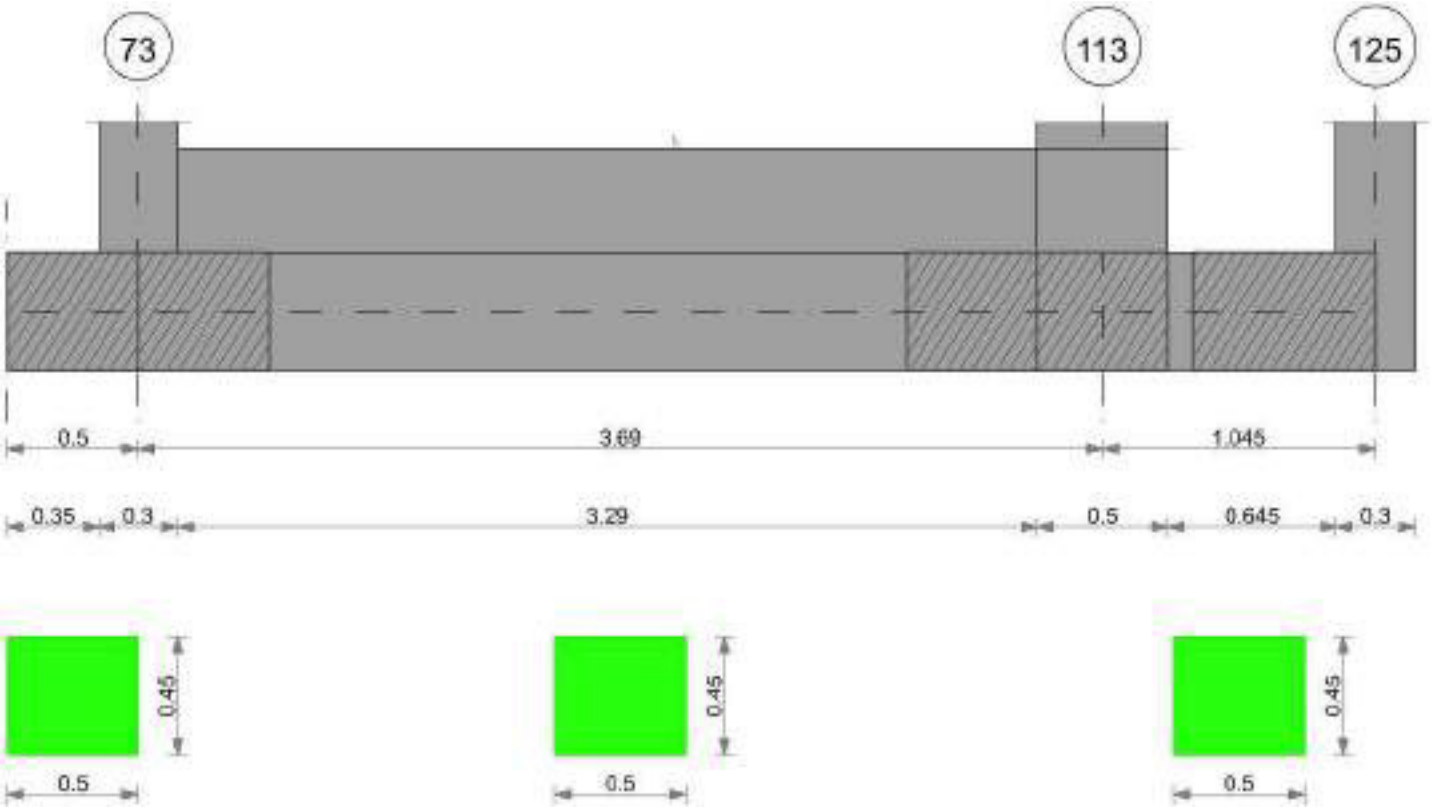
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	Rl adm	Rl	Comb.	
E	0.05	0.001	554	SLE RA 20	0.05	0.001	554	539	SLE RA 20	0.05	0	553	SLE RA 21	0.0033	0	SLE RA 1	Si
D	0.05	0	554	SLE RA 1	0.05	0	554	554	SLE RA 1	0.05	0	553	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	554	SLE RA 1	0.05	0	554	554	SLE RA 1	0.05	0	553	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.01	553	539	SLE RA 20	0.19	0	553	SLE RA 21	0.1	0	554	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	554	553	SLE RA 1	0.19	0	554	SLE RA 1	0.1	0	553	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	554	553	SLE RA 1	0.19	0	554	SLE RA 1	0.1	0	553	SLE RA 1	Si

CORDOLO 12

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

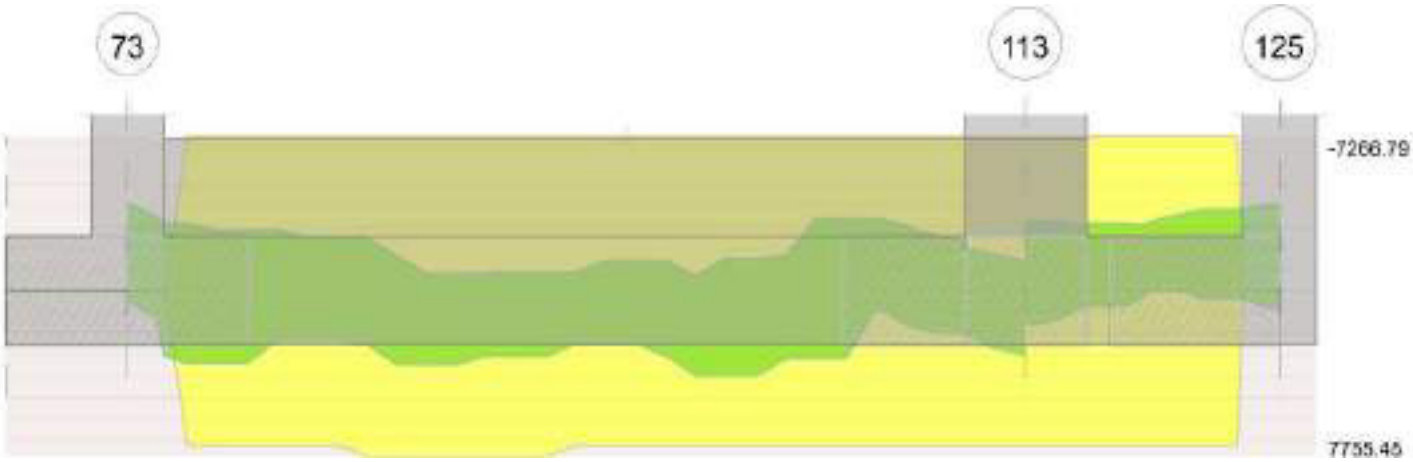


Diagramma verifica stato limite ultimo taglio

Output campate

Campata 3 tra i fili 113 - 125, sezione R 50x45, asta 715

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052							-284	SLU 51	-284	-7755.45	0.113	27.31	Si
0.25	0.000509	0.052	0.000509	0.052							-1831	SLU 84	-2575.27	-7755.45	0.113	3.01	Si
0.52	0.000509	0.052	0.000509	0.052							-2807.94	SLU 83	-2956.45	-7755.45	0.113	2.62	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	3317.24	SLV 16	1575.31	7266.79	0.197	4.61	-3571.53	SLV 1	-3299.89	-7266.79	0.197	2.2	Si
0.25	0.000509	0.052	0.000509	0.052	700.93	SLV 14	700.93	7266.79	0.197	10.37	-3172.92	SLV 3	-3172.92	-7266.79	0.197	2.29	Si
0.52	0.000509	0.052	0.000509	0.052							-2691.86	SLV 8	-3254.81	-7266.79	0.197	2.23	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	1343.72	SLD 16	554.91	7266.79	0.197	13.1	-1598.01	SLD 1	-1598.01	-7266.79	0.197	4.55	Si
0.25	0.000509	0.052	0.000509	0.052							-2063.01	SLD 3	-2173.96	-7266.79	0.197	3.34	Si
0.52	0.000509	0.052	0.000509	0.052							-2226.27	SLD 8	-2517.83	-7266.79	0.197	2.89	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000086	0.000509	0	-7244	SLU 83	-7244	-7764	-63178	-11986	-11986	1	1.65	Si
0.25	0.0000086	0.000509	0	-4572	SLU 83	-4572	-7764	-63178	-11986	-11986	1	2.62	Si
0.52	0.0000086	0	0	-1670	SLU 83	-1670	-7764	-63178	-11986	-11986	1	7.18	Si
0.9	0.0000086	0	0	2377	SLU 63	2377	8455	71432	13552	13552	1	5.7	Si
1.05	0	0	0	3931	SLU 84	3931	8455	71432	0	8455	1	2.15	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000086	0.000509	0	755	SLV 1	755	7764	63178	11986	11986	1	15.88	Si
0	0.0000086	0.000509	0	-10267	SLV 16	-10267	-7764	-63178	-11986	-11986	1	1.17	Si
0.25	0.0000086	0.000509	0	2416	SLV 1	2416	7764	63178	11986	11986	1	4.96	Si
0.25	0.0000086	0.000509	0	-8367	SLV 16	-8367	-7764	-63178	-11986	-11986	1	1.43	Si
0.52	0.0000086	0	0	4219	SLV 1	4219	7764	63178	11986	11986	1	2.84	Si
0.52	0.0000086	0	0	-6302	SLV 16	-6302	-7764	-63178	-11986	-11986	1	1.9	Si
0.9	0.0000086	0	0	6694	SLV 1	6694	8455	71432	13552	13552	1	2.02	Si
0.9	0.0000086	0	0	-3482	SLV 16	-3482	-8455	-71432	-13552	-13552	1	3.89	Si
1.05	0	0	0	7697	SLV 1	7697	8455	71432	0	8455	1	1.1	Si
1.05	0	0	0	-2340	SLV 16	-2340	-8455	-71432	0	-8455	1	3.61	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000086	0.000509	0	-7110	SLD 16	-7110	-7764	-63178	-11986	-11986	1	1.69	Si
0.25	0.0000086	0.000509	0	-5278	SLD 16	-5278	-7764	-63178	-11986	-11986	1	2.27	Si
0.52	0.0000086	0	0	1204	SLD 1	1204	7764	63178	11986	11986	1	9.95	Si
0.52	0.0000086	0	0	-3287	SLD 16	-3287	-7764	-63178	-11986	-11986	1	3.65	Si
0.9	0.0000086	0	0	3778	SLD 1	3778	8455	71432	13552	13552	1	3.59	Si
0.9	0.0000086	0	0	-565	SLD 16	-565	-8455	-71432	-13552	-13552	1	23.97	Si
1.05	0	0	0	4821	SLD 1	4821	8455	71432	0	8455	1	1.75	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-143.89	9	-143.89	7611	1494000	114160	36000000	-127.51	1	-127.51	6744	1120500			Si
0.25	-1362.65	21	-1898.16	100400	1494000	1506002	36000000	-1236	2	-1717.66	90853	1120500			Si
0.52	-2063.1	20	-2163.02	114410	1494000	1716143	36000000	-1865.11	2	-1952.68	103284	1120500			Si
0.9	-1937.94	20	-2153.57	-127619	1494000	0	36000000	-1743.85	2	-1942.98	-115139	1120500			Si
1.05	-1535.27	20	-1535.27	-90979	1494000	0	36000000	-1375.93	2	-1375.93	-81537	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 73 - 113, sezione R 50x45, aste 724, 723, 722, 721, 720, 719, 718, 717, 716

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	931	SLU 83	0.036	6777	4968	SLU 83	22946	Si
0.15	0.41	0.0004	934	SLU 83	0.036	6777	4980	SLU 83	22946	Si
1.84	0.41	0.0004	943	SLU 83	0.036	6777	5028	SLU 83	22946	Si
3.44	0.41	0.0004	911	SLU 83	0.036	6777	4860	SLU 83	22946	Si
3.69	0.41	0.0004	908	SLU 83	0.036	6777	4842	SLU 83	22946	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	665	SLD 4	0.11	7560	3549	SLD 4	26388	Si
0.15	0.41	0.0004	666	SLD 4	0.11	7560	3550	SLD 4	26388	Si
1.84	0.41	0.0004	641	SLD 4	0.11	7560	3420	SLD 4	26388	Si
3.44	0.41	0.0004	621	SLD 16	0.11	7560	3310	SLD 16	26388	Si
3.69	0.41	0.0004	620	SLD 16	0.11	7560	3308	SLD 16	26388	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000428	684	SLE RA 20	19150	1494000	237456	36000000	619	SLE QP 2	17333	1120500	Si
0.15	0.41	0.00000428	686	SLE RA 20	19197	1494000	238046	36000000	621	SLE QP 2	17374	1120500	Si
1.84	0.41	0.00000428	692	SLE RA 20	19378	1494000	240283	36000000	626	SLE QP 2	17514	1120500	Si
3.44	0.41	0.00000428	669	SLE RA 20	18731	1494000	232268	36000000	604	SLE QP 2	16913	1120500	Si
3.69	0.41	0.00000428	667	SLE RA 20	18663	1494000	231418	36000000	602	SLE QP 2	16849	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 3 tra i fili 113 - 125, sezione R 50x45, asta 715

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.89	0.7	SLU 23	ST	LT	99	-92	-35099	0	0	19	0	0	1.1	10676	136	78.72	Si
4.89	0.7	SLV 13	SIS	LT	6570	-1557	-32585	11	-3	19	0	0	1.1	9912	6752	1.47	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
724,723,722,721,720,719,718,717,716,715	4.89	0.7	SLU 84	ST	BT	2.3	147824	49604	2.98	Si
724,723,722,721,720,719,718,717,716,715	4.89	0.7	SLV 8	SIS	LT	2.3	88100	34759	2.53	Si
724,723,722,721,720,719,718,717,716,715	4.89	0.7	SLD 8	SIS	LT	2.3	122715	34076	3.6	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-75	-49604	90.69	-882.5	0	0	-0.02	0	0.7	4.85	1084	2060	0	14430	
0	4166	-34759	-1801.95	-2426.2	0	7	-0.07	-0.05	0.6	4.75	1084	2060	37	0	0.07
0	1820	-34076	-765.09	-1385.87	0	3	-0.04	-0.02	0.66	4.8	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.03	0	0	0.31	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.09	1.1	0.95	1.19	1.31	1	0.79	0.78	0.69	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.1	1.11	0.95	1.19	1.31	1	0.9	0.9	0.85	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

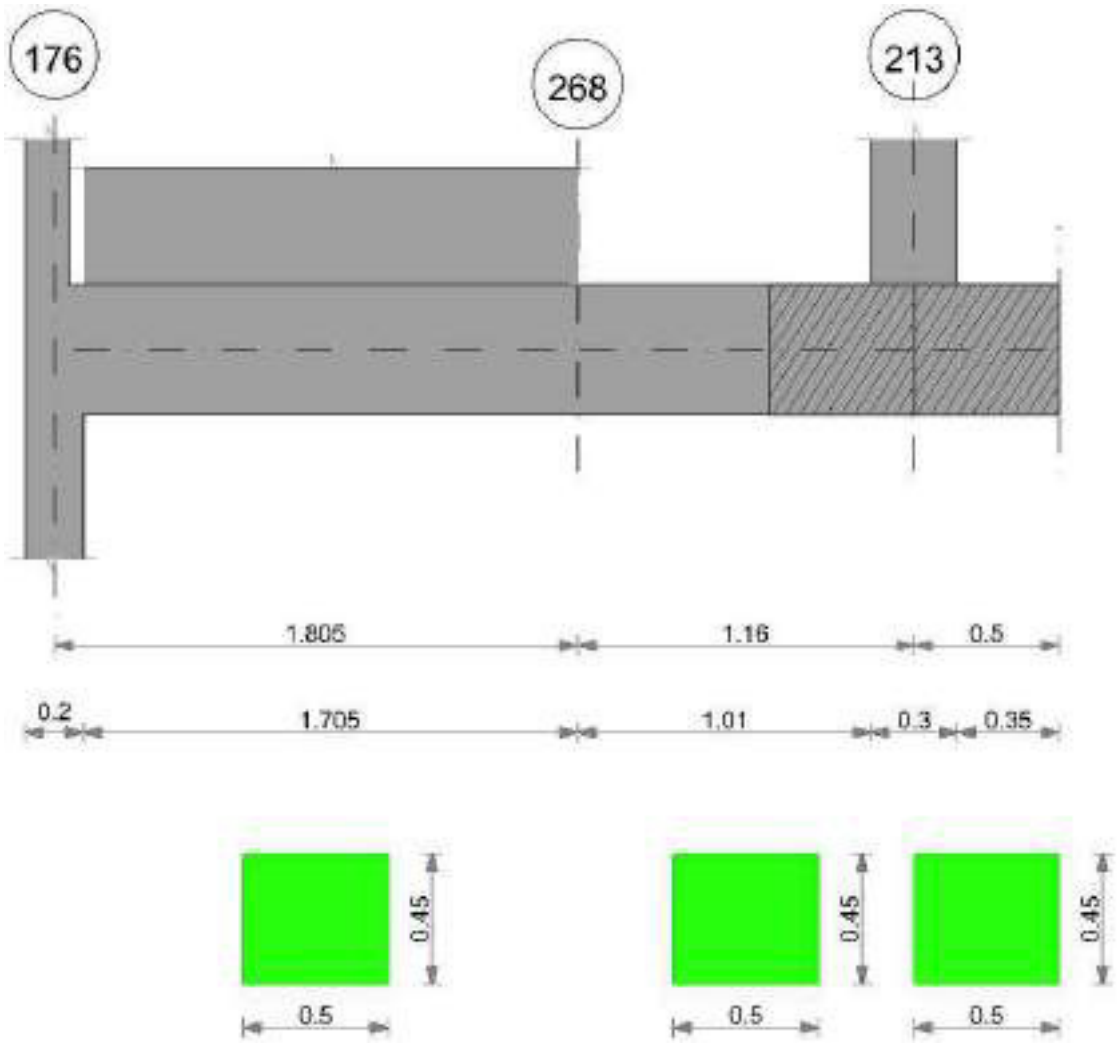
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	564	SLE RA 20	0.05	0	564	554	SLE RA 21	0.05	0	563	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	564	SLE RA 1	0.05	0	564	564	SLE RA 1	0.05	0	563	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	564	SLE RA 1	0.05	0	564	564	SLE RA 1	0.05	0	563	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0	563	554	SLE RA 21	0.19	0	563	SLE RA 21	0.1	0	563	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	564	563	SLE RA 1	0.19	0	564	SLE RA 1	0.1	0	563	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	564	563	SLE RA 1	0.19	0	564	SLE RA 1	0.1	0	563	SLE RA 1	Si

CORDOLO 13

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

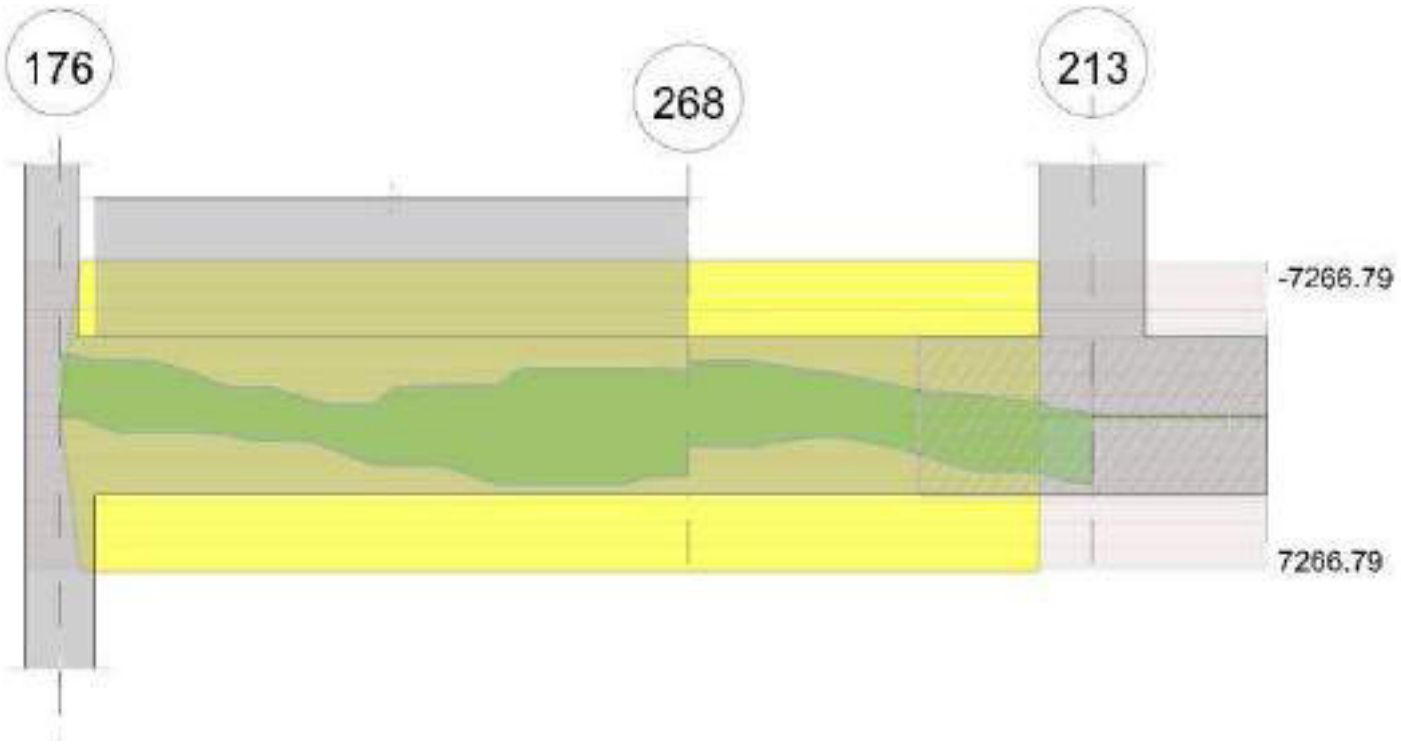
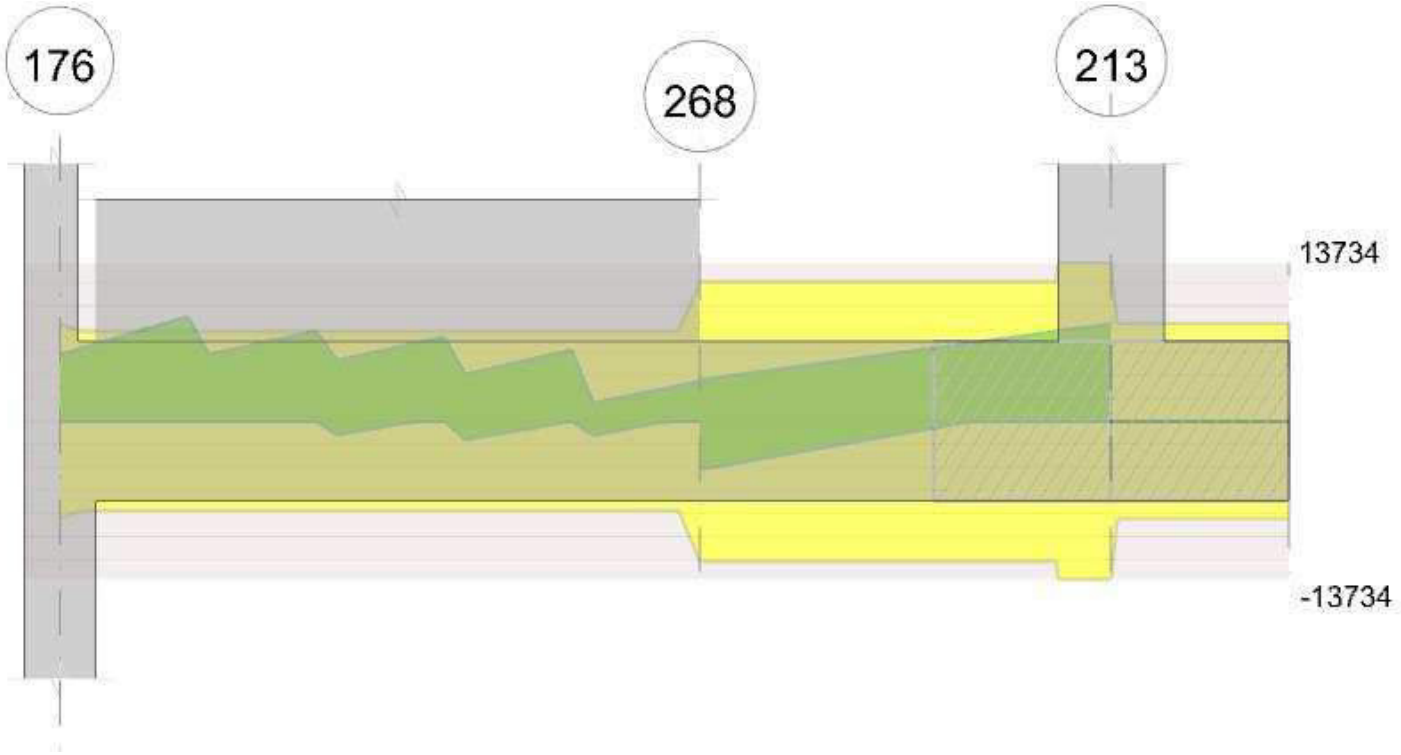


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 268 - 213, sezione R 50x45, asta 656

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052							-849.49	SLU 84	-874.81	-7755.45	0.113	8.87	Si
0.58	0.000509	0.052	0.000509	0.052	-35.75	SLU 50	474.34	7755.45	0.113	16.35	-221.65	SLU 40	-611.97	-7755.45	0.113	12.67	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	1407.73	SLV 16	1407.73	7266.79	0.197	5.16	-2578.3	SLV 1	-2578.3	-7266.79	0.197	2.82	Si
0.58	0.000509	0.052	0.000509	0.052	877.28	SLV 11	1419.26	7266.79	0.197	5.12	-1059.54	SLV 6	-1468.01	-7266.79	0.197	4.95	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	265.9	SLD 16	265.9	7266.79	0.197	27.33	-1436.46	SLD 1	-1436.46	-7266.79	0.197	5.06	Si
0.58	0.000509	0.052	0.000509	0.052	333.04	SLD 11	803.72	7266.79	0.197	9.04	-515.3	SLD 6	-846.44	-7266.79	0.197	8.59	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000087	0.000509	0	-718	SLU 82	-718	-7764	-63178	-12147	-12147	1	16.91	Si
0.58	0.0000087	0.000509	0	3519	SLU 83	3519	7764	63178	12147	12147	1	3.45	Si
1.01	0.0000087	0	0	6639	SLU 83	6639	8455	71432	13734	13734	1	2.07	Si
1.16	0.0000087	0	0	7728	SLU 83	7728	8455	71432	13734	13734	1	1.78	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000087	0.000509	0	3570	SLV 3	3570	7764	63178	12147	12147	1	3.4	Si
0	0.0000087	0.000509	0	-4209	SLV 14	-4209	-7764	-63178	-12147	-12147	1	2.89	Si
0.58	0.0000087	0.000509	0	6000	SLV 3	6000	7764	63178	12147	12147	1	2.02	Si
0.58	0.0000087	0.000509	0	-1015	SLV 14	-1015	-7764	-63178	-12147	-12147	1	11.97	Si
1.01	0.0000087	0	0	7787	SLV 3	7787	7764	63178	12147	12147	1	1.56	Si
1.01	0.0000087	0	0	7807	SLV 3	7807	8455	71432	13734	13734	1	1.76	Si
1.16	0.0000087	0	0	8438	SLV 3	8438	8455	71432	13734	13734	1	1.63	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000087	0.000509	0	1347	SLD 3	1347	7764	63178	12147	12147	1	9.02	Si
0	0.0000087	0.000509	0	-1986	SLD 14	-1986	-7764	-63178	-12147	-12147	1	6.12	Si
0.58	0.0000087	0.000509	0	3997	SLD 3	3997	7764	63178	12147	12147	1	3.04	Si
1.01	0.0000087	0	0	5943	SLD 3	5943	7764	63178	12147	12147	1	2.04	Si
1.01	0.0000087	0	0	5965	SLD 3	5965	8455	71432	13734	13734	1	2.3	Si
1.16	0.0000087	0	0	6652	SLD 3	6652	8455	71432	13734	13734	1	2.06	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-624.64	21	-641.12	33911	1494000	508668	36000000	-585.28	2	-593.3	31382	1120500			Si
0.58	-142.7	19	-438.71	23205	1494000	348076	36000000	-91.13	2	-380.17	20109	1120500			Si
1.01	1148.68	16	1148.68	68070	1494000	0	36000000	1101.82	2	1101.82	65293	1120500			Si
1.16	1764.73	14	1512.06	89603	1494000	0	36000000	1683.25	2	1445.32	85649	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 176 - 268, sezione R 50x45, aste 661, 660, 659, 658, 657

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	891	SLU 83	0.018	2949	4754	SLU 83	15877	Si
0.1	0.41	0.0002	891	SLU 83	0.018	2949	4754	SLU 83	15877	Si
0.9	0.41	0.0002	898	SLU 83	0.018	2949	4787	SLU 83	15877	Si
1.8	0.41	0.0004	899	SLU 83	0.037	6867	4796	SLU 83	23256	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	610	SLD 15	0.073	3317	3255	SLD 15	15877	Si
0.1	0.41	0.0002	612	SLD 15	0.073	3317	3262	SLD 15	15877	Si
0.9	0.41	0.0002	629	SLD 15	0.073	3317	3354	SLD 15	15877	Si
1.8	0.41	0.0004	641	SLD 15	0.111	7660	3417	SLD 15	26744	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000185	655	SLE RA 20	18927	1494000	234692	36000000	592	SLE QP 2	17120	1120500	Si
0.1	0.41	0.00000185	655	SLE RA 20	18928	1494000	234702	36000000	592	SLE QP 2	17121	1120500	Si
0.9	0.41	0.00000185	659	SLE RA 20	19056	1494000	236299	36000000	597	SLE QP 2	17239	1120500	Si
1.8	0.41	0.00000433	661	SLE RA 20	18482	1494000	229171	36000000	598	SLE QP 2	16731	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 2 tra i fili 268 - 213, sezione R 50x45, asta 656

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
3.06	0.7	SLU 50	ST	LT	-162	24	-22376	0	0	19	0	0	1.1	6806	164	41.5	Si
3.06	0.7	SLV 2	SIS	LT	-3705	-747	-16568	-13	-3	19	0	0	1.1	5040	3780	1.33	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
661,660,659,658,657,656	3.06	0.7	SLU 84	ST	BT	2.3	94284	27733	3.4	Si
661,660,659,658,657,656	3.06	0.7	SLV 11	SIS	LT	2.3	59521	20148	2.95	Si
661,660,659,658,657,656	3.06	0.7	SLD 11	SIS	LT	2.3	80441	19387	4.15	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-21	-27733	75.9	-29.47	0	0	0	0	0.69	3.06	1084	2060	0	14430	
0	2291	-20148	-959.16	542.91	0	6	0.03	-0.05	0.6	3.01	1084	2060	37	0	0.07
0	1008	-19387	-395.68	223.94	0	3	0.01	-0.02	0.66	3.04	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.31	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.15	1.15	0.92	1.19	1.31	1	0.8	0.8	0.71	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.16	1.17	0.91	1.19	1.31	1	0.91	0.91	0.86	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

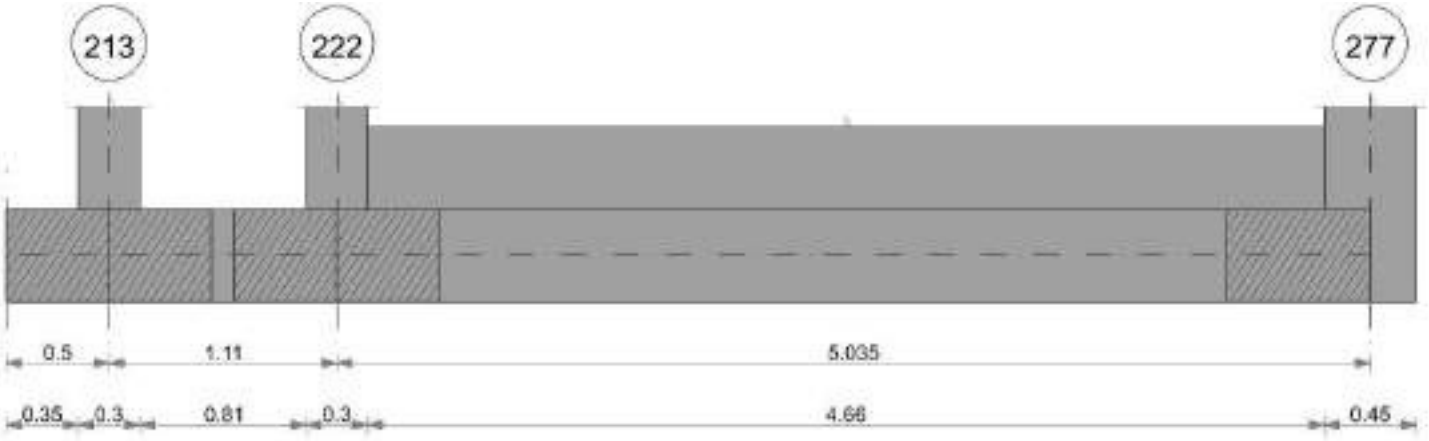
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	565	SLE RA 20	0.05	0.001	565	571	SLE RA 21	0.05	0	570	SLE RA 21	0.0033	0	SLE RA 21	Si
D	0.05	0	571	SLE RA 1	0.05	0	571	571	SLE RA 1	0.05	0	570	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	571	SLE RA 1	0.05	0	571	571	SLE RA 1	0.05	0	570	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 21	0.19	0.02	570	565	SLE RA 21	0.19	0	571	SLE RA 1	0.1	0.01	570	SLE RA 21	Si
D	0.19	0	SLE RA 1	0.19	0	571	570	SLE RA 1	0.19	0	571	SLE RA 1	0.1	0	570	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	571	570	SLE RA 1	0.19	0	571	SLE RA 1	0.1	0	570	SLE RA 1	Si

CORDOLO 14

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

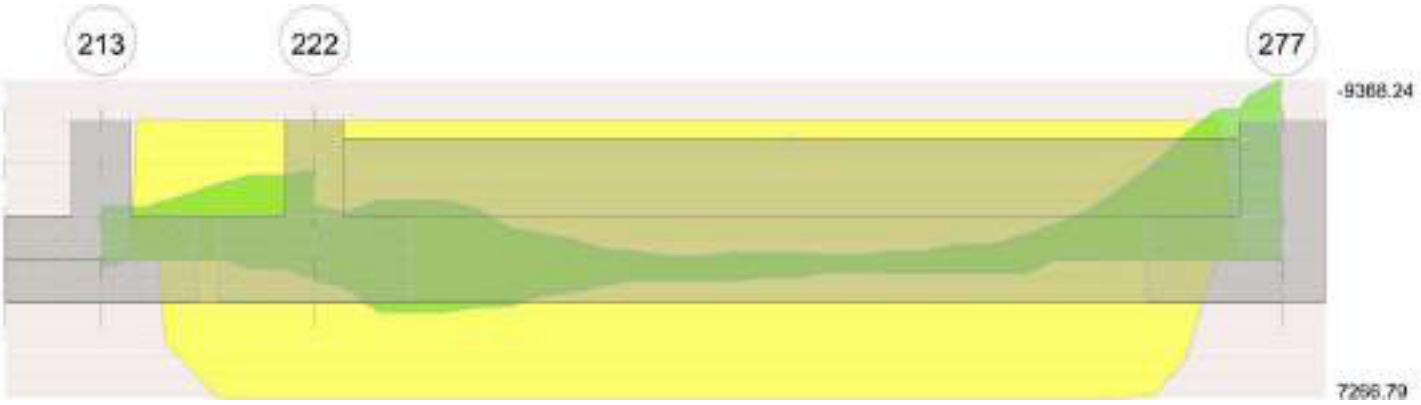
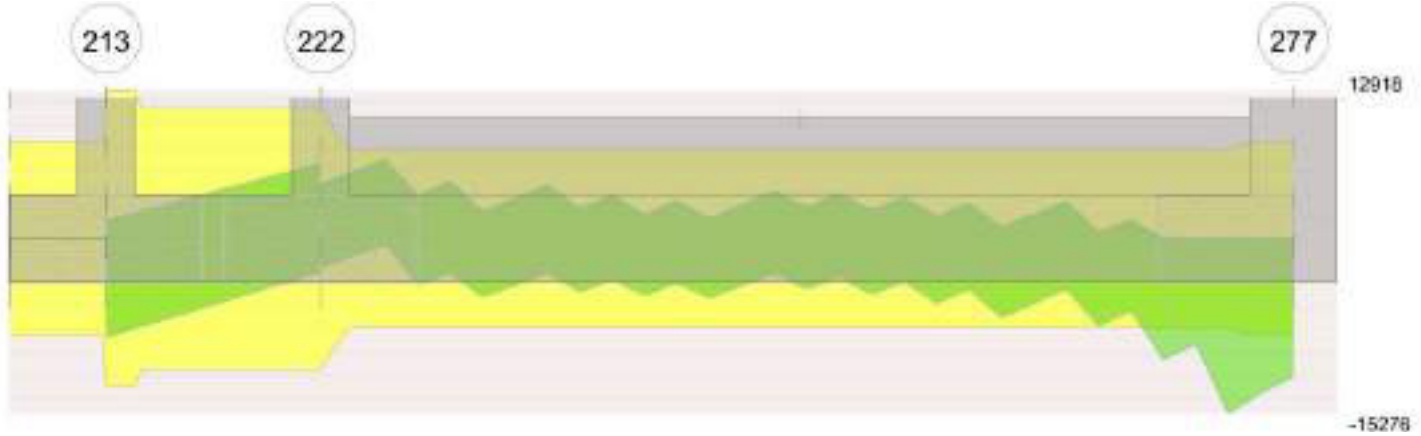


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 213 - 222, sezione R 50x45, asta 452

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.56	0.000509	0.052	0.000469	0.052							-2908.98	SLU 84	-2966.69	-7752.71	0.113	2.61	Si
0.96	0.000509	0.052	0.000509	0.052							-2779.2	SLU 83	-2948.78	-7755.45	0.113	2.63	Si
1.11	0.000509	0.052	0.000509	0.052							-2499.06	SLU 83	-2499.06	-7755.45	0.113	3.1	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.56	0.000509	0.052	0.000469	0.052							-3130.12	SLV 15	-3724.22	-7267.41	0.198	1.95	Si
0.96	0.000509	0.052	0.000509	0.052	515.95	SLV 2	515.95	7266.79	0.197	14.08	-4344.89	SLV 15	-4344.89	-7266.79	0.197	1.67	Si
1.11	0.000509	0.052	0.000509	0.052	1156.29	SLV 2	910.77	7266.79	0.197	7.98	-4644.88	SLV 15	-4574.53	-7266.79	0.197	1.59	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.56	0.000509	0.052	0.000469	0.052							-2456.38	SLD 15	-2745.82	-7267.41	0.198	2.65	Si
0.96	0.000509	0.052	0.000509	0.052							-2958.34	SLD 15	-2958.34	-7266.79	0.197	2.46	Si
1.11	0.000509	0.052	0.000509	0.052							-2990.9	SLD 15	-2990.9	-7266.79	0.197	2.43	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000082	0	0	-5027	SLU 83	-5027	-8455	-71432	-12918	-12918	1	2.57	Si
0.15	0.0000082	0	0	-3953	SLU 83	-3953	-8455	-71432	-12918	-12918	1	3.27	Si
0.56	0.0000082	0	0	-1211	SLU 48	-1211	-7764	-63178	-11425	-11425	1	9.44	Si
0.96	0.0000082	0.000509	0	1904	SLU 84	1904	7764	63178	11425	11425	1	6	Si
1.11	0.0000082	0.000509	0	2991	SLU 84	2991	7764	63178	11425	11425	1	3.82	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000082	0	0	1573	SLV 6	1573	8455	71432	12918	12918	1	8.21	Si
0	0.0000082	0	0	-8601	SLV 11	-8601	-8455	-71432	-12918	-12918	1	1.5	Si
0.15	0.0000082	0	0	2241	SLV 6	2241	8455	71432	12918	12918	1	5.76	Si
0.15	0.0000082	0	0	-7830	SLV 11	-7830	-8455	-71432	-12918	-12918	1	1.65	Si
0.19	0.0000082	0	0	2397	SLV 6	2397	7764	63178	11425	11425	1	4.77	Si
0.19	0.0000082	0	0	-7650	SLV 11	-7650	-7764	-63178	-11425	-11425	1	1.49	Si
0.56	0.0000082	0	0	4052	SLV 6	4052	7764	63178	11425	11425	1	2.82	Si
0.56	0.0000082	0	0	-5755	SLV 11	-5755	-7764	-63178	-11425	-11425	1	1.99	Si
0.96	0.0000082	0.000469	0	5885	SLV 6	5885	7764	63178	11425	11425	1	1.94	Si
0.96	0.0000082	0.000509	0	-3683	SLV 11	-3683	-7764	-63178	-11425	-11425	1	3.1	Si

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
1.11	0.0000082	0.000509	0	6571	SLV 6	6571	7764	63178	11425	11425	1	1.74	Si
1.11	0.0000082	0.000509	0	-2913	SLV 11	-2913	-7764	-63178	-11425	-11425	1	3.92	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000082	0	0	-5737	SLD 11	-5737	-8455	-71432	-12918	-12918	1	2.25	Si
0.15	0.0000082	0	0	-4996	SLD 11	-4996	-8455	-71432	-12918	-12918	1	2.59	Si
0.56	0.0000082	0	0	1293	SLD 6	1293	7764	63178	11425	11425	1	8.84	Si
0.56	0.0000082	0	0	-2996	SLD 11	-2996	-7764	-63178	-11425	-11425	1	3.81	Si
0.96	0.0000082	0.000509	0	3194	SLD 6	3194	7764	63178	11425	11425	1	3.58	Si
0.96	0.0000082	0.000509	0	-991	SLD 11	-991	-7764	-63178	-11425	-11425	1	11.53	Si
1.11	0.0000082	0.000509	0	3903	SLD 6	3903	7764	63178	11425	11425	1	2.93	Si
1.11	0.0000082	0.000509	0	-245	SLD 11	-245	-7764	-63178	-11425	-11425	1	46.58	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-1175.9	21	-1175.9	-69683	1494000	0	36000000	-1014.41	2	-1014.41	-60113	1120500			Si
0.15	-1563.07	21	-1905.71	-112931	1494000	0	36000000	-1380.96	2	-1709.85	-101325	1120500			Si
0.56	-2149.7	21	-2198.28	116994	1494000	1748161	36000000	-1953.41	2	-2011.49	107053	1120500			Si
0.96	-2070.72	20	-2188.23	115743	1494000	1736146	36000000	-1914.47	2	-2007.22	106169	1120500			Si
1.11	-1870.67	20	-1870.67	98946	1494000	1484192	36000000	-1744.3	2	-1744.3	92262	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 213 - 222, sezione R 50x45, asta 452

Campata 3 tra i fili 222 - 277, sezione R 50x45, aste 451, 450, 449, 448, 447, 446, 445, 444, 443, 442, 441, 440, 439

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	912	SLU 83	0.034	6464	4863	SLU 83	21873	Si
0.15	0.41	0.0002	917	SLU 83	0.017	2747	4890	SLU 83	15877	Si
2.52	0.41	0.0002	987	SLU 84	0.017	2747	5262	SLU 84	15877	Si
4.81	0.41	0.0002	1054	SLV 15	0.085	2672	5619	SLV 15	15877	Si
5.04	0.41	0.0002	1086	SLV 15	0.085	2672	5794	SLV 15	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	651	SLD 15	0.107	7214	3472	SLD 15	25154	Si
0.15	0.41	0.0002	655	SLD 15	0.07	3092	3494	SLD 15	15877	Si
2.52	0.41	0.0002	750	SLD 15	0.07	3092	4000	SLD 15	15877	Si
4.81	0.41	0.0002	851	SLD 15	0.07	3092	4538	SLD 15	15877	Si
5.04	0.41	0.0002	873	SLD 15	0.07	3092	4655	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000408	670	SLE RA 20	18804	1494000	233173	36000000	607	SLE QP 2	17050	1120500	Si
0.15	0.41	0.00000172	674	SLE RA 20	19501	1494000	241807	36000000	611	SLE QP 2	17683	1120500	Si
2.52	0.41	0.00000172	726	SLE RA 21	21003	1494000	260435	36000000	659	SLE QP 2	19082	1120500	Si
4.81	0.41	0.00000172	768	SLE RA 21	22224	1494000	275573	36000000	700	SLE QP 2	20256	1120500	Si
5.04	0.41	0.00000172	782	SLE RA 21	22649	1494000	280848	36000000	713	SLE QP 2	20651	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
6.37	0.7	SLU 5	ST	LT	-547	-269	-41284	-1	0	19	0	0	1.1	12558	610	20.6	Si
6.37	0.7	SLV 2	SIS	LT	-8357	-2045	-32082	-15	-4	19	0	0	1.1	9759	8603	1.13	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
452,451,450,449,448,447,446,445,444,443,442,441,440,439	6.37	0.7	SLU 84	ST	BT	2.3	188333	64445	2.92	Si
452,451,450,449,448,447,446,445,444,443,442,441,440,439	6.37	0.7	SLV 10	SIS	LT	2.3	106181	46432	2.29	Si
452,451,450,449,448,447,446,445,444,443,442,441,440,439	6.37	0.7	SLD 10	SIS	LT	2.3	149797	44928	3.33	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-432	-64445	229.22	3915.83	0	0	0.06	0	0.69	6.25	1084	2060	0	14430	
0	-5988	-46432	2691.61	6365.1	0	-7	0.14	0.06	0.58	6.1	1084	2060	37	0	0.07
0	-2758	-44928	1253.13	4302.19	0	-4	0.1	0.03	0.64	6.18	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.02	0	0	0.31	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.07	1.07	0.96	1.19	1.31	1	0.77	0.76	0.67	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.08	1.08	0.96	1.19	1.31	1	0.89	0.88	0.83	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

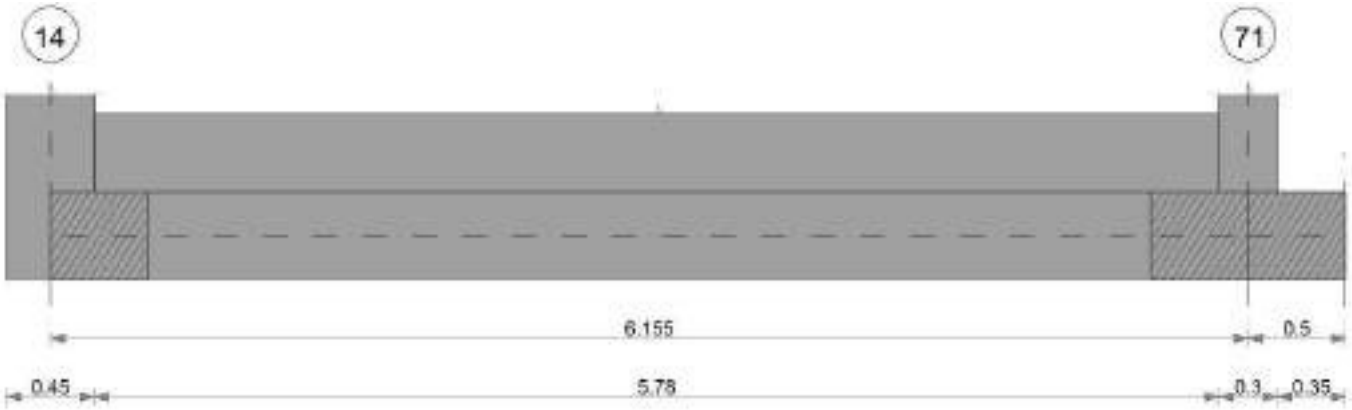
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	Rl adm	Rl	Comb.	
E	0.05	0.001	572	SLE RA 20	0.05	0.001	572	587	SLE RA 20	0.05	0	574	SLE FR 6	0.0033	0	SLE FR 6	Si
D	0.05	0	587	SLE RA 1	0.05	0	587	587	SLE RA 1	0.05	0	574	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	587	SLE RA 1	0.05	0	587	587	SLE RA 1	0.05	0	574	SLE RA 1	0.0033	0	SLE RA 1	Si

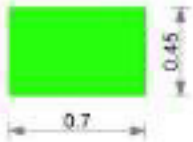
Verifiche geotecniche - Rotazioni assolute e differenziali

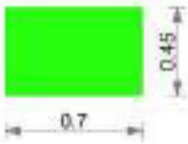
Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.01	574	572	SLE RA 20	0.19	0	587	SLE RA 1	0.1	0	574	SLE FR 6	Si
D	0.19	0	SLE RA 1	0.19	0	587	574	SLE RA 1	0.19	0	587	SLE RA 1	0.1	0	574	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	587	574	SLE RA 1	0.19	0	587	SLE RA 1	0.1	0	574	SLE RA 1	Si

CORDOLO 15

Geometria







Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

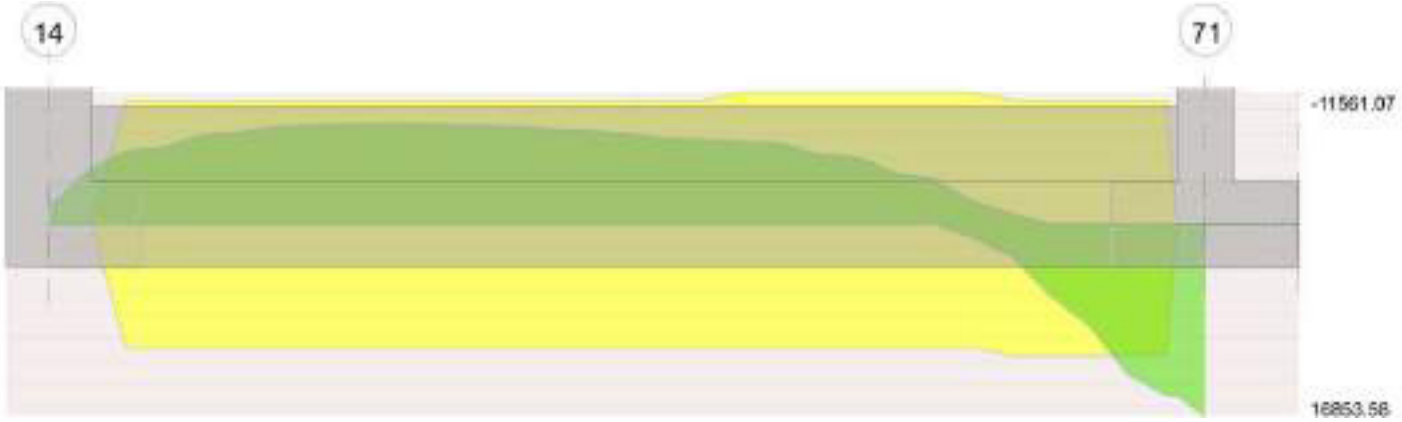


Diagramma verifica stato limite ultimo taglio

Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 14 - 71, sezione R 70x45, aste 776, 775, 774, 773, 772, 771, 770, 769, 768, 767, 766, 765, 764, 763, 762

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	2654	SLV 1	0.119	5189	9232	SLV 1	15877	Si
0.23	0.41	0.0003	2495	SLV 1	0.119	5189	8677	SLV 1	15877	Si
3.08	0.41	0.0003	1575	SLU 83	0.029	5386	5477	SLU 83	15877	Si
6.01	0.41	0.0003	2327	SLU 83	0.029	5386	8093	SLU 83	15877	Si
6.16	0.41	0.0003	2345	SLU 83	0.029	5386	8157	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	2122	SLD 1	0.098	6020	7380	SLD 1	15877	Si
0.23	0.41	0.0003	1999	SLD 1	0.098	6020	6952	SLD 1	15877	Si
3.08	0.41	0.0003	1214	SLD 1	0.098	6020	4222	SLD 1	15877	Si
6.01	0.41	0.0003	1683	SLD 1	0.098	6020	5853	SLD 1	15877	Si
6.16	0.41	0.0003	1692	SLD 1	0.098	6020	5886	SLD 1	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000339	1890	SLE RA 20	53528	1494000	663749	36000000	1724	SLE QP 2	48830	1120500	Si
0.23	0.41	0.00000339	1786	SLE RA 20	50569	1494000	627049	36000000	1629	SLE QP 2	46121	1120500	Si
3.08	0.41	0.00000339	1159	SLE RA 20	32821	1494000	406981	36000000	1054	SLE QP 2	29843	1120500	Si
6.01	0.41	0.00000339	1713	SLE RA 20	48513	1494000	601567	36000000	1557	SLE QP 2	44091	1120500	Si
6.16	0.41	0.00000339	1727	SLE RA 20	48901	1494000	606375	36000000	1569	SLE QP 2	44442	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
6.38	0.9	SLU 24	ST	LT	728	72	-53538	1	0	19	0	0	1.1	16285	732	22.25	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
776,775,774,773,772,771,770,769,768,767,766,765,764,763,762	6.38	0.9	SLU 83	ST	BT	2.3	199441	73814	2.7	Si
776,775,774,773,772,771,770,769,768,767,766,765,764,763,762	6.38	0.9	SLV 5	SIS	LT	2.3	119036	56524	2.11	Si
776,775,774,773,772,771,770,769,768,767,766,765,764,763,762	6.38	0.9	SLD 5	SIS	LT	2.3	171086	53052	3.22	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	98	-73814	5189.01	1166.23	0	0	0.02	0.07	0.76	6.35	1084	2060	0	14430	
0	-7291	-56524	7541.61	-3891.95	0	-7	-0.07	0.13	0.63	6.24	1084	2060	37	0	0.07
0	-3132	-53052	5248.94	-1266.63	0	-3	-0.02	0.1	0.7	6.33	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.02	0	0	0.24	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.08	1.08	0.96	1.15	1.24	1	0.77	0.76	0.67	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.08	1.09	0.96	1.15	1.24	1	0.89	0.89	0.84	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

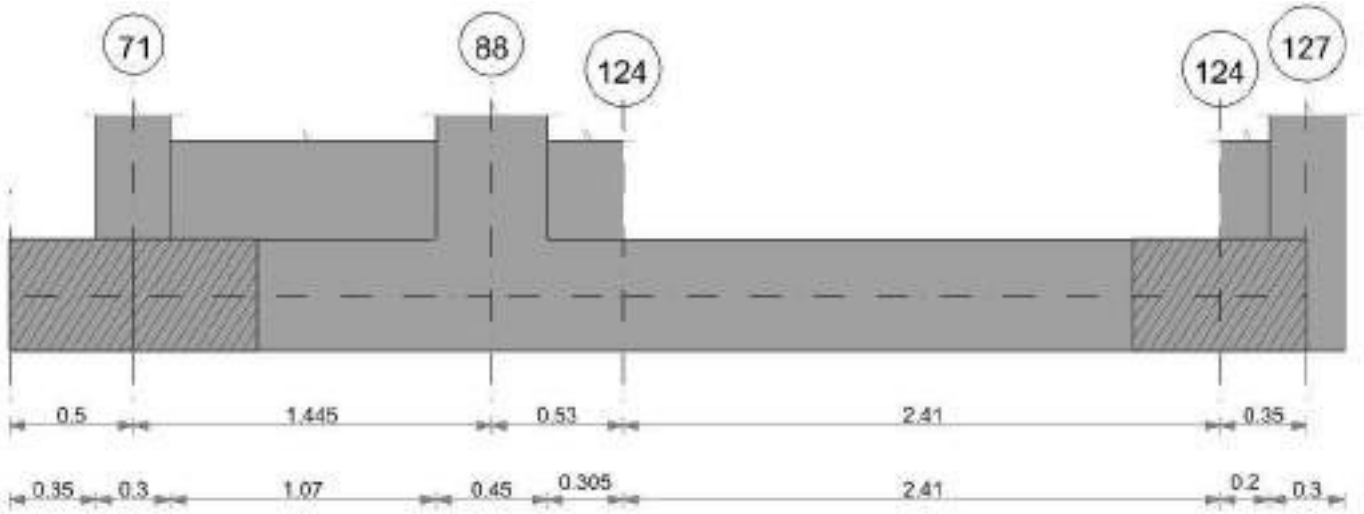
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	343	SLE RA 20	0.05	0.001	343	328	SLE RA 20	0.05	0	343	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	343	SLE RA 1	0.05	0	343	343	SLE RA 1	0.05	0	343	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	343	SLE RA 1	0.05	0	343	343	SLE RA 1	0.05	0	343	SLE RA 1	0.0033	0	SLE RA 1	Si

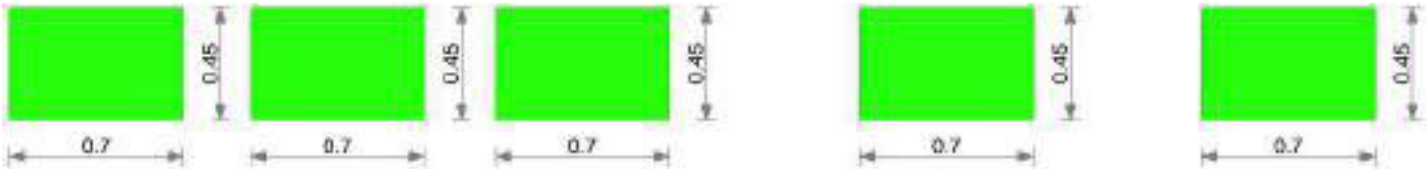
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.01	343	328	SLE RA 20	0.19	0	343	SLE RA 1	0.1	0	343	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	343	328	SLE RA 1	0.19	0	343	SLE RA 1	0.1	0	343	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	343	328	SLE RA 1	0.19	0	343	SLE RA 1	0.1	0	343	SLE RA 1	Si

CORDOLO 16

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

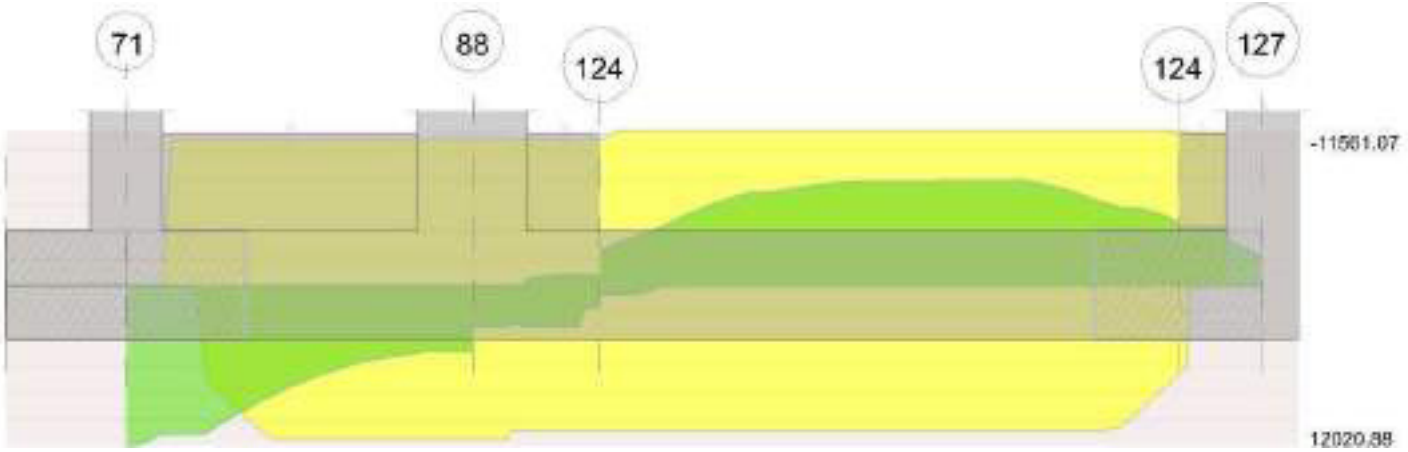


Diagramma verifica stato limite ultimo taglio

Output campate

Campata 4 tra i fili 124 - 124, sezione R 70x45, aste 705, 704, 703, 702, 701, 700

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000763	0.052							-662.67	SLU 84	-2482.09	-11561.07	0.116	4.66	Si
1.21	0.000763	0.052	0.000763	0.052							-7732.99	SLU 83	-7757.76	-11561.07	0.116	1.49	Si
1.77	0.000763	0.052	0.000763	0.052							-7111.39	SLU 84	-7824.43	-11561.07	0.116	1.48	Si
2.41	0.000763	0.052	0.000465	0.052							-3028.3	SLU 83	-4708.72	-11541.17	0.112	2.45	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000763	0.052	684.15	SLV 16	684.15	10870.29	0.203	15.89	-1518.86	SLV 1	-2532.87	-10870.29	0.203	4.29	Si
1.21	0.000763	0.052	0.000763	0.052							-5314.53	SLV 5	-5771.94	-10870.29	0.203	1.88	Si
1.29	0.000763	0.052	0.000763	0.052							-5771.94	SLV 1	-5771.94	-10870.29	0.203	1.88	Si
2.41	0.000763	0.052	0.000465	0.052							-3059.44	SLV 15	-3710.35	-10874.01	0.207	2.93	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000763	0.052	54.99	SLD 16	54.99	10870.29	0.203	197.68	-889.7	SLD 1	-2024.12	-10870.29	0.203	5.37	Si
1.21	0.000763	0.052	0.000763	0.052							-5235.73	SLD 5	-5436.53	-10870.29	0.203	2	Si
1.69	0.000763	0.052	0.000763	0.052							-5146.75	SLD 5	-5444.59	-10870.29	0.203	2	Si
2.41	0.000763	0.052	0.000465	0.052							-2475.34	SLD 15	-3393.89	-10874.01	0.207	3.2	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.000011	0.000763	0	-11720	SLU 83	-11720	-10870	-88449	-15418	-15418	1	1.32	Si
1.21	0.000011	0.000763	0	-1144	SLU 83	-1144	-10870	-88449	-15418	-15418	1	13.48	Si
2.41	0.000011	0.000763	0	10922	SLU 84	10922	10870	88449	15418	15418	1	1.41	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.000011	0.000763	0	-9128	SLV 13	-9128	-10870	-88449	-15418	-15418	1	1.69	Si
1.21	0.000011	0.000763	0	1693	SLV 2	1693	10870	88449	15418	15418	1	9.11	Si
1.21	0.000011	0.000763	0	-3287	SLV 15	-3287	-10870	-88449	-15418	-15418	1	4.69	Si
2.41	0.000011	0.000763	0	10006	SLV 1	10006	10870	88449	15418	15418	1	1.54	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.000011	0.000763	0	-8409	SLD 13	-8409	-10870	-88449	-15418	-15418	1	1.83	Si
1.21	0.000011	0.000763	0	269	SLD 2	269	10870	88449	15418	15418	1	57.25	Si
1.21	0.000011	0.000763	0	-1863	SLD 15	-1863	-10870	-88449	-15418	-15418	1	8.28	Si
2.41	0.000011	0.000763	0	8445	SLD 1	8445	10870	88449	15418	15418	1	1.83	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-486.84	21	-1826.82	68493	1494000	1027402	36000000	-417.36	2	-1641.82	61557	1120500			Si
1.21	-5695.68	20	-5716.04	214313	1494000	3214702	36000000	-5175.46	2	-5184.41	194381	1120500			Si
2.41	-2227.26	20	-3467.44	134394	1494000	1974663	36000000	-2037.82	2	-3157.33	122374	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 71 - 88, sezione R 70x45, aste 711, 710, 709, 708

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	2345	SLU 83	0.031	5824	8157	SLU 83	15877	Si
0.15	0.41	0.0004	2361	SLU 83	0.031	5824	8214	SLU 83	15877	Si

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0.72	0.41	0.0004	2368	SLU 83	0.031	5824	8236	SLU 83	15877	Si
1.22	0.41	0.0004	2321	SLU 83	0.031	5824	8075	SLU 83	15877	Si
1.45	0.41	0.0004	2289	SLU 83	0.031	5824	7963	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1692	SLD 1	0.102	6505	5886	SLD 1	16509	Si
0.15	0.41	0.0004	1700	SLD 1	0.102	6505	5912	SLD 1	16509	Si
0.72	0.41	0.0004	1687	SLD 1	0.102	6505	5867	SLD 1	16509	Si
1.22	0.41	0.0004	1637	SLD 1	0.102	6505	5695	SLD 1	16509	Si
1.45	0.41	0.0004	1607	SLD 1	0.102	6505	5591	SLD 1	16509	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000367	1727	SLE RA 20	48724	1494000	604173	36000000	1569	SLE QP 2	44280	1120500	Si
0.15	0.41	0.00000367	1739	SLE RA 20	49061	1494000	608360	36000000	1580	SLE QP 2	44586	1120500	Si
0.72	0.41	0.00000367	1744	SLE RA 20	49197	1494000	610047	36000000	1584	SLE QP 2	44702	1120500	Si
1.22	0.41	0.00000367	1710	SLE RA 20	48237	1494000	598136	36000000	1553	SLE QP 2	43821	1120500	Si
1.45	0.41	0.00000367	1686	SLE RA 20	47568	1494000	589846	36000000	1531	SLE QP 2	43209	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 3 tra i fili 88 - 124, sezione R 70x45, aste 707, 706

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	2289	SLU 83	0.031	5824	7963	SLU 83	15877	Si
0.23	0.41	0.0004	2255	SLU 83	0.031	5824	7845	SLU 83	15877	Si
0.26	0.41	0.0004	2249	SLU 83	0.031	5824	7823	SLU 83	15877	Si
0.53	0.41	0.0004	2205	SLU 83	0.031	5824	7670	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1607	SLD 1	0.102	6505	5591	SLD 1	16509	Si
0.23	0.41	0.0004	1576	SLD 1	0.102	6505	5483	SLD 1	16509	Si
0.26	0.41	0.0004	1571	SLD 1	0.102	6505	5463	SLD 1	16509	Si
0.53	0.41	0.0004	1532	SLD 1	0.102	6505	5328	SLD 1	16509	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000367	1686	SLE RA 20	47568	1494000	589846	36000000	1531	SLE QP 2	43209	1120500	Si
0.23	0.41	0.00000367	1661	SLE RA 20	46868	1494000	581160	36000000	1509	SLE QP 2	42567	1120500	Si
0.26	0.41	0.00000367	1656	SLE RA 20	46735	1494000	579515	36000000	1504	SLE QP 2	42446	1120500	Si
0.53	0.41	0.00000367	1624	SLE RA 20	45825	1494000	568234	36000000	1475	SLE QP 2	41612	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 124 - 124, sezione R 70x45, aste 705, 704, 703, 702, 701, 700

Campata 5 tra i fili 124 - 127, sezione R 70x45, asta 699

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	2242	SLU 84	0.031	5824	7798	SLU 84	15877	Si
0.18	0.41	0.0004	2298	SLU 84	0.031	5824	7992	SLU 84	15877	Si
0.2	0.41	0.0004	2306	SLU 84	0.031	5824	8021	SLU 84	15877	Si
0.35	0.41	0.0004	2359	SLU 84	0.031	5824	8204	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1509	SLD 9	0.102	6505	5249	SLD 9	16509	Si
0.18	0.41	0.0004	1550	SLD 13	0.102	6505	5391	SLD 13	16509	Si
0.2	0.41	0.0004	1556	SLD 13	0.102	6505	5414	SLD 13	16509	Si
0.35	0.41	0.0004	1597	SLD 13	0.102	6505	5555	SLD 13	16509	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000367	1652	SLE RA 21	46598	1494000	577820	36000000	1496	SLE QP 2	42223	1120500	Si
0.18	0.41	0.00000367	1693	SLE RA 21	47757	1494000	592182	36000000	1533	SLE QP 2	43265	1120500	Si
0.2	0.41	0.00000367	1699	SLE RA 21	47932	1494000	594361	36000000	1539	SLE QP 2	43423	1120500	Si
0.35	0.41	0.00000367	1738	SLE RA 21	49025	1494000	607906	36000000	1574	SLE QP 2	44407	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche - Cedimenti assoluti e differenziali

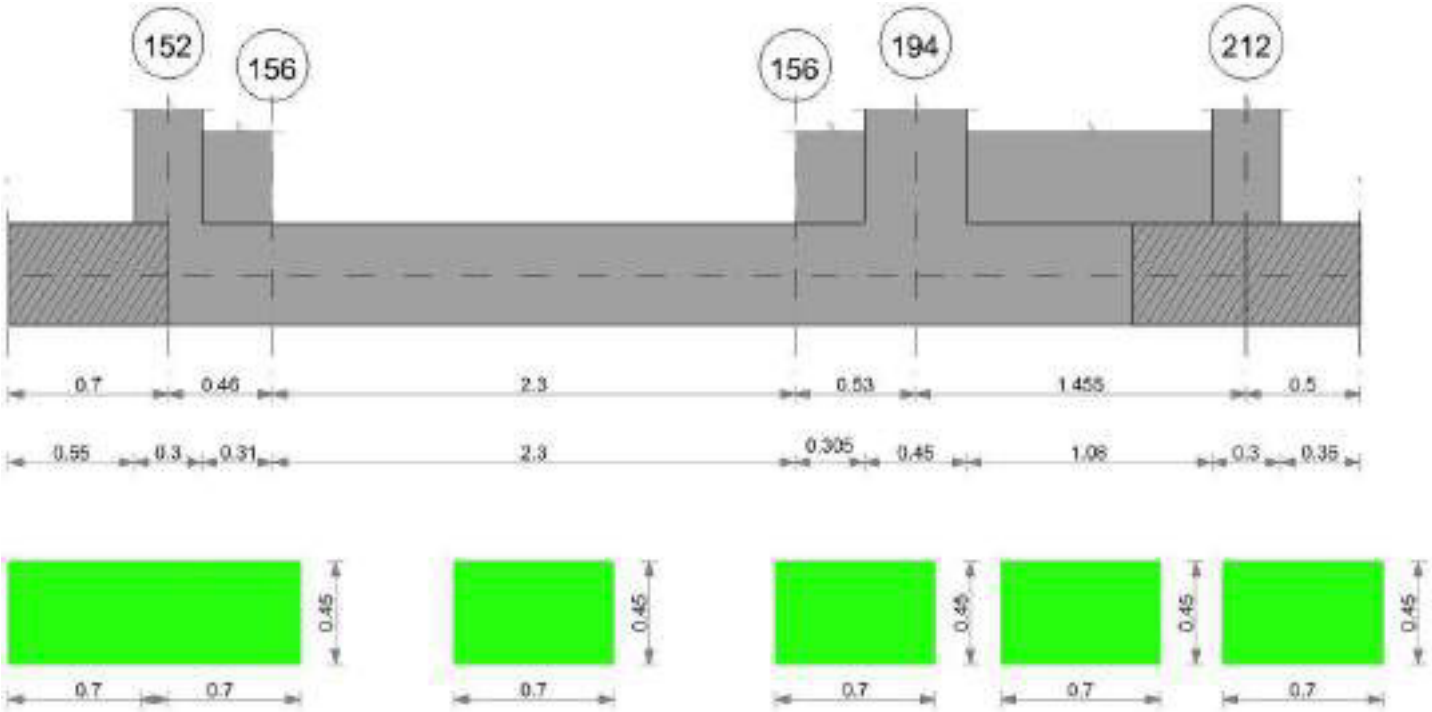
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	356	SLE RA 21	0.05	0.001	356	343	SLE RA 21	0.05	0	349	SLE RA 20	0.0033	0	SLE RA 1	Si
D	0.05	0	356	SLE RA 1	0.05	0	356	356	SLE RA 1	0.05	0	355	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	356	SLE RA 1	0.05	0	356	356	SLE RA 1	0.05	0	355	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	347	343	SLE RA 21	0.19	0.01	355	SLE RA 21	0.1	0	356	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	356	355	SLE RA 1	0.19	0	356	SLE RA 1	0.1	0	355	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	356	355	SLE RA 1	0.19	0	356	SLE RA 1	0.1	0	355	SLE RA 1	Si

CORDOLO 17

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

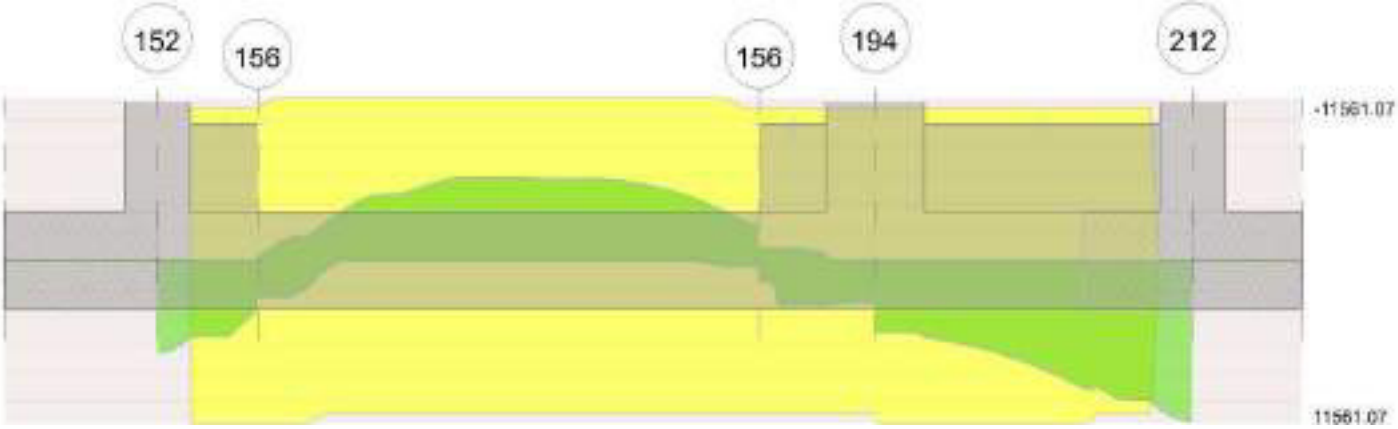
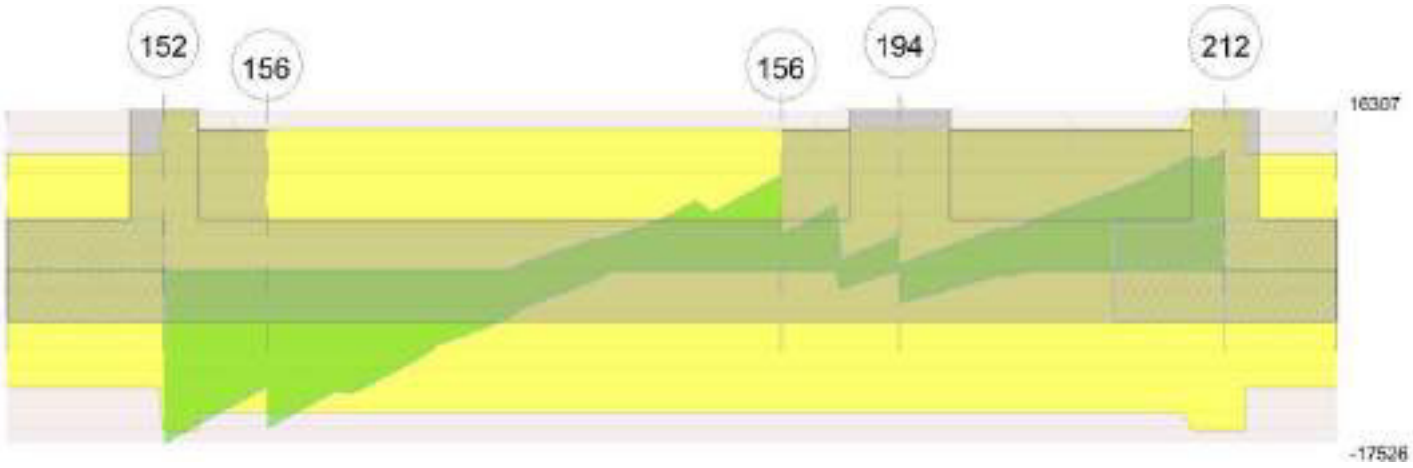


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 3 tra i fili 156 - 156, sezione R 70x45, aste 673, 672, 671, 670, 669, 668

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000763	0.052	2596.13	SLU 84	2596.13	11561.07	0.116	4.45	1597.46	SLU 1	-107.14	-11561.07	0.116	107.9	Si
1.07	0.000763	0.052	0.000763	0.052							-5900.96	SLU 84	-5900.96	-11561.07	0.116	1.96	Si
1.15	0.000763	0.052	0.000763	0.052							-5625.66	SLU 83	-5900.96	-11561.07	0.116	1.96	Si
2.3	0.000763	0.052	0.000763	0.052							-916.8	SLU 84	-2440.68	-11561.07	0.116	4.74	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000763	0.052	2264.92	SLV 10	2264.92	10870.29	0.203	4.8	1176.72	SLV 7	-260.7	-10870.29	0.203	41.7	Si
1.07	0.000763	0.052	0.000763	0.052							-4847.63	SLV 14	-4847.63	-10870.29	0.203	2.24	Si
1.15	0.000763	0.052	0.000763	0.052							-4108.06	SLV 13	-4847.63	-10870.29	0.203	2.24	Si
2.3	0.000763	0.052	0.000763	0.052	471.63	SLV 3	471.63	10870.29	0.203	23.05	-1621.34	SLV 14	-2523.3	-10870.29	0.203	4.31	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000763	0.052	1958.38	SLD 10	1958.38	10870.29	0.203	5.55	1483.26	SLD 7	-151.28	-10870.29	0.203	71.86	Si
1.07	0.000763	0.052	0.000763	0.052							-4335.34	SLD 14	-4335.34	-10870.29	0.203	2.51	Si
1.15	0.000763	0.052	0.000763	0.052							-3917.53	SLD 13	-4335.34	-10870.29	0.203	2.51	Si
2.3	0.000763	0.052	0.000763	0.052							-1024.09	SLD 14	-2000.56	-10870.29	0.203	5.43	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
1.15	0.0000103	0.000763	0	-2228	SLU 84	-2228	-10870	-88449	-14422	-14422	1	6.47	Si
2.3	0.0000103	0.000763	0	9665	SLU 83	9665	10870	88449	14422	14422	1	1.49	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000103	0.000763	0	-13455	SLV 14	-13455	-10870	-88449	-14422	-14422	1	1.07	Si
1.15	0.0000103	0.000763	0	799	SLV 3	799	10870	88449	14422	14422	1	18.05	Si
1.15	0.0000103	0.000763	0	-3660	SLV 14	-3660	-10870	-88449	-14422	-14422	1	3.94	Si
2.3	0.0000103	0.000763	0	7243	SLV 4	7243	10870	88449	14422	14422	1	1.99	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000103	0.000763	0	-11902	SLD 14	-11902	-10870	-88449	-14422	-14422	1	1.21	Si
1.15	0.0000103	0.000763	0	-2387	SLD 14	-2387	-10870	-88449	-14422	-14422	1	6.04	Si
2.3	0.0000103	0.000763	0	6838	SLD 4	6838	10870	88449	14422	14422	1	2.11	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	1919.24	21	1919.24	71959	1494000	1079379	36000000	1720.82	2	1720.82	64519	1120500			Si
1.15	-4143.42	20	-4349.14	163064	1494000	2445958	36000000	-3774.97	2	-3950.92	148133	1120500			Si
2.3	-671.6	21	-1794.38	67277	1494000	1009157	36000000	-574.86	2	-1607.54	60272	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 152 - 156, sezione R 70x45, asta 674

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	2257	SLU 84	0.029	5452	7849	SLU 84	15877	Si
0.15	0.41	0.0003	2247	SLU 84	0.029	5452	7816	SLU 84	15877	Si
0.23	0.41	0.0003	2241	SLU 84	0.029	5452	7794	SLU 84	15877	Si
0.46	0.41	0.0003	2219	SLU 84	0.029	5452	7719	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	1525	SLD 9	0.099	6093	5304	SLD 9	15877	Si
0.15	0.41	0.0003	1519	SLD 9	0.099	6093	5282	SLD 9	15877	Si
0.23	0.41	0.0003	1514	SLD 9	0.099	6093	5268	SLD 9	15877	Si
0.46	0.41	0.0003	1500	SLD 9	0.099	6093	5217	SLD 9	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000343	1663	SLE RA 21	47062	1494000	583573	36000000	1507	SLE QP 2	42655	1120500	Si
0.15	0.41	0.00000343	1656	SLE RA 21	46866	1494000	581138	36000000	1501	SLE QP 2	42483	1120500	Si
0.23	0.41	0.00000343	1651	SLE RA 21	46735	1494000	579513	36000000	1497	SLE QP 2	42367	1120500	Si
0.46	0.41	0.00000343	1635	SLE RA 21	46281	1494000	573890	36000000	1483	SLE QP 2	41965	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 3 tra i fili 156 - 156, sezione R 70x45, aste 673, 672, 671, 670, 669, 668

Campata 4 tra i fili 156 - 194, sezione R 70x45, aste 667, 666

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	2238	SLU 83	0.029	5452	7783	SLU 83	15877	Si
0.26	0.41	0.0003	2277	SLU 83	0.029	5452	7920	SLU 83	15877	Si
0.3	0.41	0.0003	2283	SLU 83	0.029	5452	7940	SLU 83	15877	Si
0.53	0.41	0.0003	2313	SLU 83	0.029	5452	8045	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	1559	SLD 13	0.099	6093	5422	SLD 13	15877	Si
0.26	0.41	0.0003	1594	SLD 13	0.099	6093	5545	SLD 13	15877	Si
0.3	0.41	0.0003	1599	SLD 13	0.099	6093	5563	SLD 13	15877	Si
0.53	0.41	0.0003	1627	SLD 14	0.099	6093	5661	SLD 14	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000343	1649	SLE RA 20	46663	1494000	578626	36000000	1499	SLE QP 2	42433	1120500	Si
0.26	0.41	0.00000343	1678	SLE RA 20	47484	1494000	588799	36000000	1526	SLE QP 2	43189	1120500	Si
0.3	0.41	0.00000343	1682	SLE RA 20	47604	1494000	590284	36000000	1530	SLE QP 2	43299	1120500	Si
0.53	0.41	0.00000343	1704	SLE RA 20	48232	1494000	598073	36000000	1550	SLE QP 2	43877	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 5 tra i fili 194 - 212, sezione R 70x45, aste 665, 664, 663, 662

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	2313	SLU 83	0.029	5452	8045	SLU 83	15877	Si
0.23	0.41	0.0003	2337	SLU 83	0.029	5452	8129	SLU 83	15877	Si
0.73	0.41	0.0003	2373	SLU 83	0.029	5452	8254	SLU 83	15877	Si
1.3	0.41	0.0003	2371	SLU 83	0.029	5452	8249	SLU 83	15877	Si
1.45	0.41	0.0003	2361	SLU 83	0.029	5452	8211	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	1627	SLD 14	0.099	6093	5661	SLD 14	15877	Si
0.23	0.41	0.0003	1650	SLD 14	0.099	6093	5739	SLD 14	15877	Si
0.73	0.41	0.0003	1688	SLD 14	0.099	6093	5872	SLD 14	15877	Si
1.3	0.41	0.0003	1699	SLD 14	0.099	6093	5910	SLD 14	15877	Si
1.45	0.41	0.0003	1694	SLD 14	0.099	6093	5892	SLD 14	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000343	1704	SLE RA 20	48232	1494000	598073	36000000	1550	SLE QP 2	43877	1120500	Si
0.23	0.41	0.00000343	1722	SLE RA 20	48733	1494000	604288	36000000	1567	SLE QP 2	44338	1120500	Si
0.73	0.41	0.00000343	1748	SLE RA 20	49483	1494000	613585	36000000	1591	SLE QP 2	45029	1120500	Si
1.3	0.41	0.00000343	1747	SLE RA 20	49446	1494000	613132	36000000	1590	SLE QP 2	45000	1120500	Si
1.45	0.41	0.00000343	1739	SLE RA 20	49220	1494000	610325	36000000	1583	SLE QP 2	44795	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche - Cedimenti assoluti e differenziali

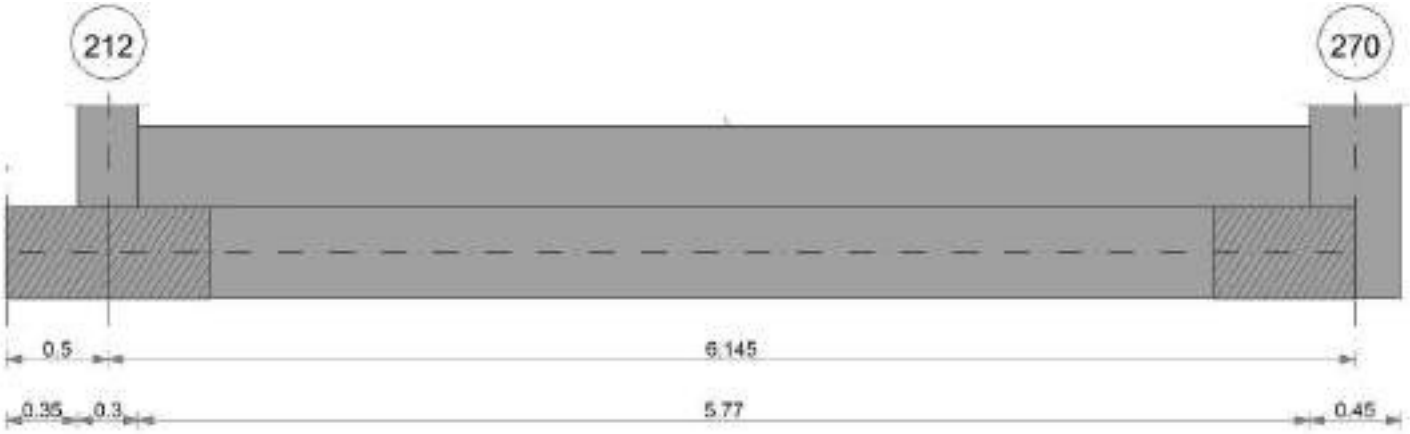
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	382	SLE RA 21	0.05	0.001	382	370	SLE RA 21	0.05	0	375	SLE RA 20	0.0033	0	SLE FR 6	Si
D	0.05	0	370	SLE RA 1	0.05	0	370	370	SLE RA 1	0.05	0	373	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	370	SLE RA 1	0.05	0	370	370	SLE RA 1	0.05	0	373	SLE RA 1	0.0033	0	SLE RA 1	Si

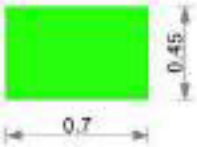
Verifiche geotecniche - Rotazioni assolute e differenziali

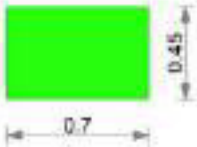
Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	370	373	SLE RA 21	0.19	0.01	381	SLE RA 21	0.1	0	373	SLE FR 6	Si
D	0.19	0	SLE RA 1	0.19	0	370	373	SLE RA 1	0.19	0	370	SLE RA 1	0.1	0	373	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	370	373	SLE RA 1	0.19	0	370	SLE RA 1	0.1	0	373	SLE RA 1	Si

CORDOLO 18

Geometria







Caratteristiche dei materiali

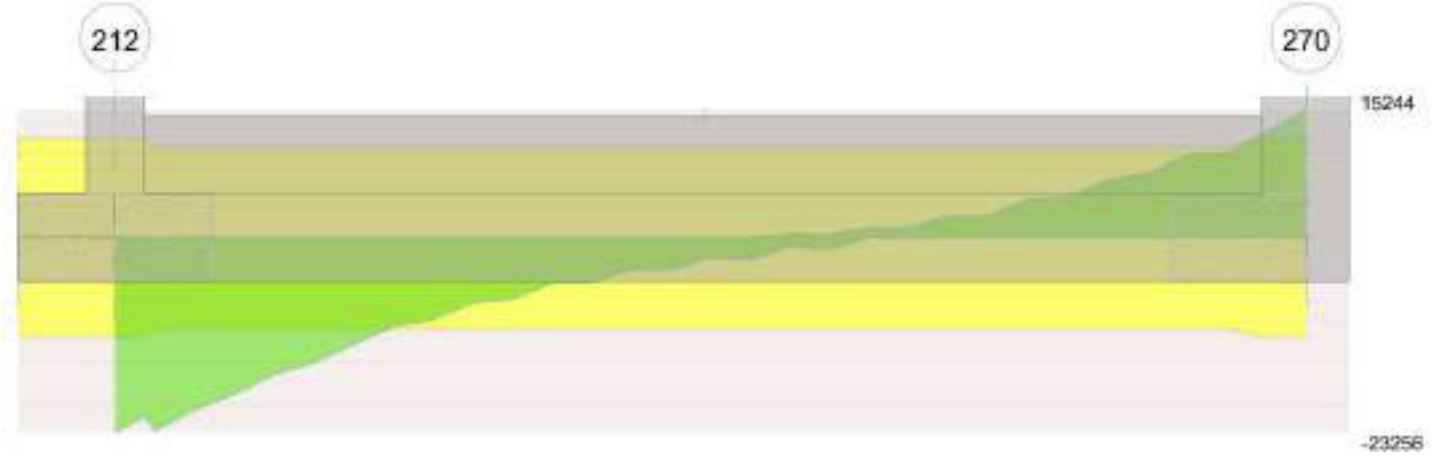
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 212 - 270, sezione R 70x45, aste 305, 304, 303, 302, 301, 300, 299, 298, 297, 296, 295, 294, 293, 292, 291

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2307	SLU 83	0.017	2772	8023	SLU 83	15877	Si
0.15	0.41	0.0002	2286	SLU 83	0.017	2772	7953	SLU 83	15877	Si
3.07	0.41	0.0002	1563	SLU 83	0.017	2772	5439	SLU 83	15877	Si
5.92	0.41	0.0002	2413	SLV 14	0.086	2696	8395	SLV 14	15877	Si
6.15	0.41	0.0002	2569	SLV 14	0.086	2696	8937	SLV 14	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1664	SLD 14	0.071	3120	5790	SLD 14	15877	Si
0.15	0.41	0.0002	1653	SLD 14	0.071	3120	5749	SLD 14	15877	Si
3.07	0.41	0.0002	1200	SLD 14	0.071	3120	4176	SLD 14	15877	Si
5.92	0.41	0.0002	1940	SLD 14	0.071	3120	6749	SLD 14	15877	Si
6.15	0.41	0.0002	2061	SLD 14	0.071	3120	7168	SLD 14	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000174	1699	SLE RA 20	49176	1494000	609777	36000000	1546	SLE QP 2	44758	1120500	Si
0.15	0.41	0.00000174	1684	SLE RA 20	48742	1494000	604405	36000000	1533	SLE QP 2	44364	1120500	Si
3.07	0.41	0.00000174	1151	SLE RA 20	33316	1494000	413117	36000000	1048	SLE QP 2	30324	1120500	Si
5.92	0.41	0.00000174	1739	SLE RA 20	50338	1494000	624185	36000000	1587	SLE QP 2	45930	1120500	Si
6.15	0.41	0.00000174	1842	SLE RA 20	53312	1494000	661072	36000000	1681	SLE QP 2	48652	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
6.37	0.9	SLU 31	ST	LT	-423	-507	-55247	0	-1	19	0	0	1.1	16805	660	25.45	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
305,304,303,302,301,300,299,298,297,296,295,294,293,292,291	6.37	0.9	SLU 84	ST	BT	2.3	196919	69761	2.82	Si
305,304,303,302,301,300,299,298,297,296,295,294,293,292,291	6.37	0.9	SLV 10	SIS	LT	2.3	113816	53437	2.13	Si
305,304,303,302,301,300,299,298,297,296,295,294,293,292,291	6.37	0.9	SLD 10	SIS	LT	2.3	164595	50201	3.28	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-558	-69761	5132.45	-1199.21	0	0	-0.02	0.07	0.75	6.34	1084	2060	0	14430	
0	-7440	-53437	7344.23	3343.44	0	-8	0.06	0.14	0.63	6.24	1084	2060	37	0	0.07
0	-3438	-50201	5145.89	1000.9	0	-4	0.02	0.1	0.69	6.33	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.02	0	0	0.24	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.08	1.08	0.96	1.15	1.24	1	0.75	0.75	0.65	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.08	1.08	0.96	1.15	1.24	1	0.87	0.87	0.81	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	367	SLE RA 20	0.05	0.001	367	324	SLE RA 20	0.05	0	324	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	324	SLE RA 1	0.05	0	324	324	SLE RA 1	0.05	0	324	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	324	SLE RA 1	0.05	0	324	324	SLE RA 1	0.05	0	324	SLE RA 1	0.0033	0	SLE RA 1	Si

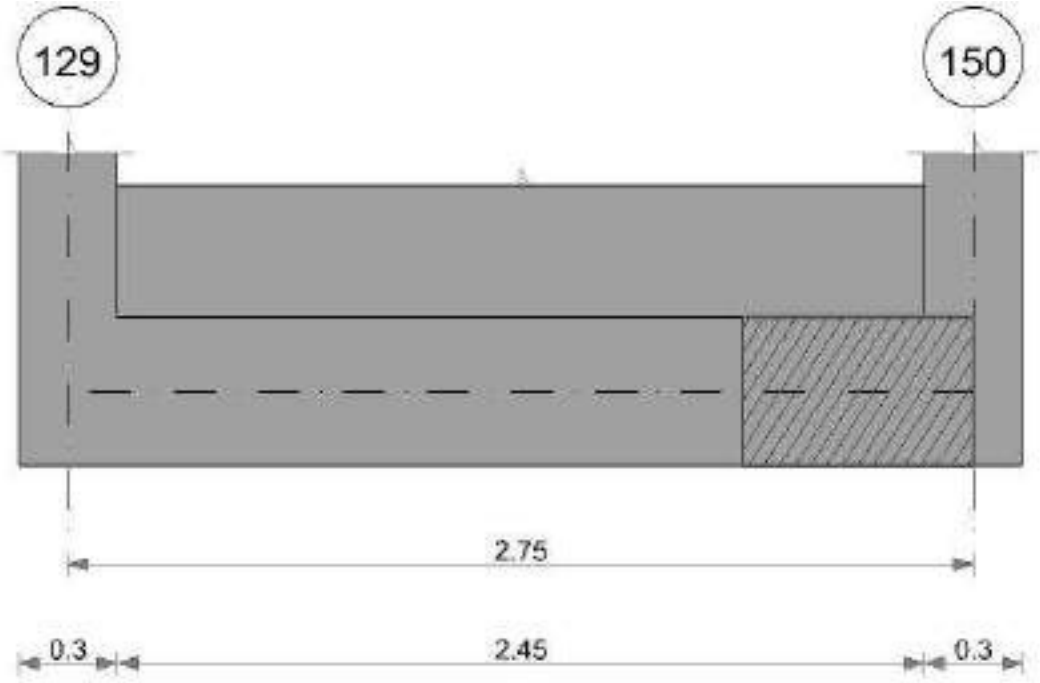
Verifiche geotecniche - Rotazioni assolute e differenziali

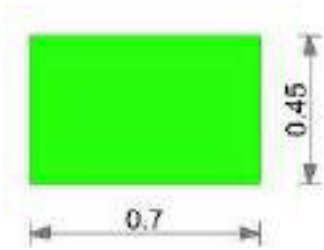
Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 20	0.19	0	324	367	SLE RA 20	0.19	0	324	SLE RA 1	0.1	0	324	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	324	367	SLE RA 1	0.19	0	324	SLE RA 1	0.1	0	324	SLE RA 1	Si

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
Z	0.19	0	SLE RA 1	0.19	0	324	367	SLE RA 1	0.19	0	324	SLE RA 1	0.1	0	324	SLE RA 1	Si

CORDOLO 19

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

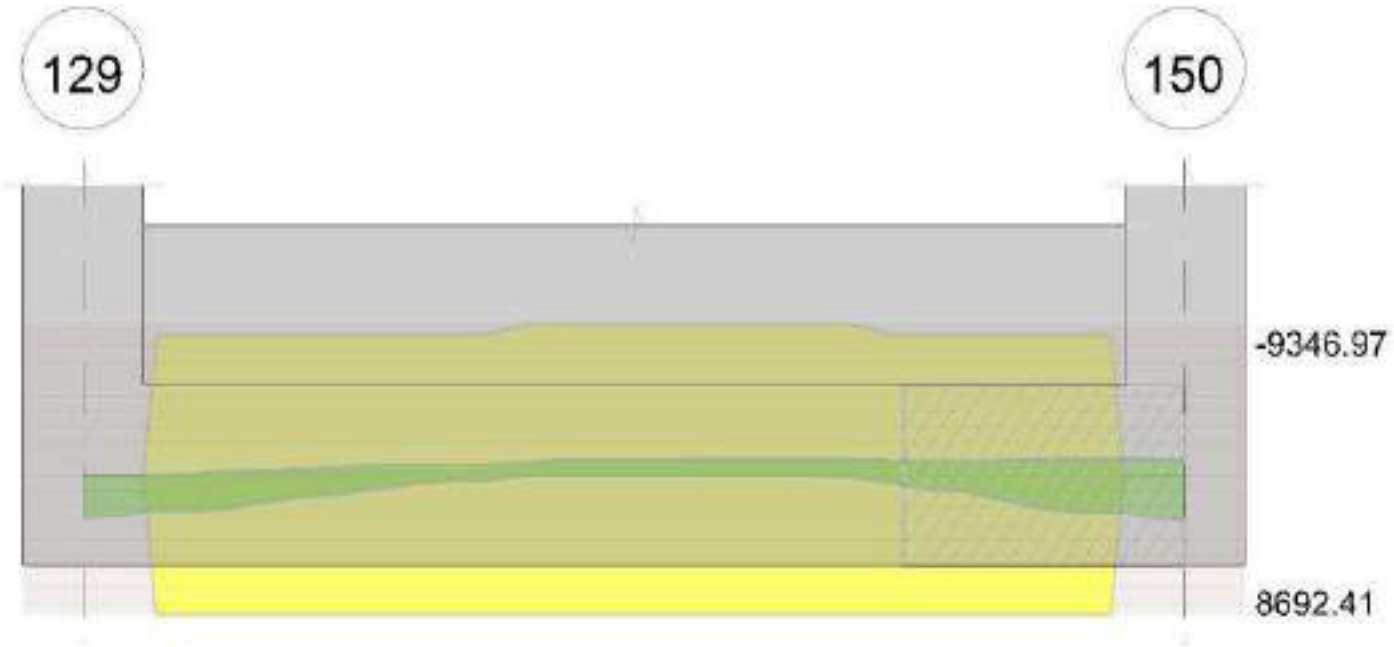
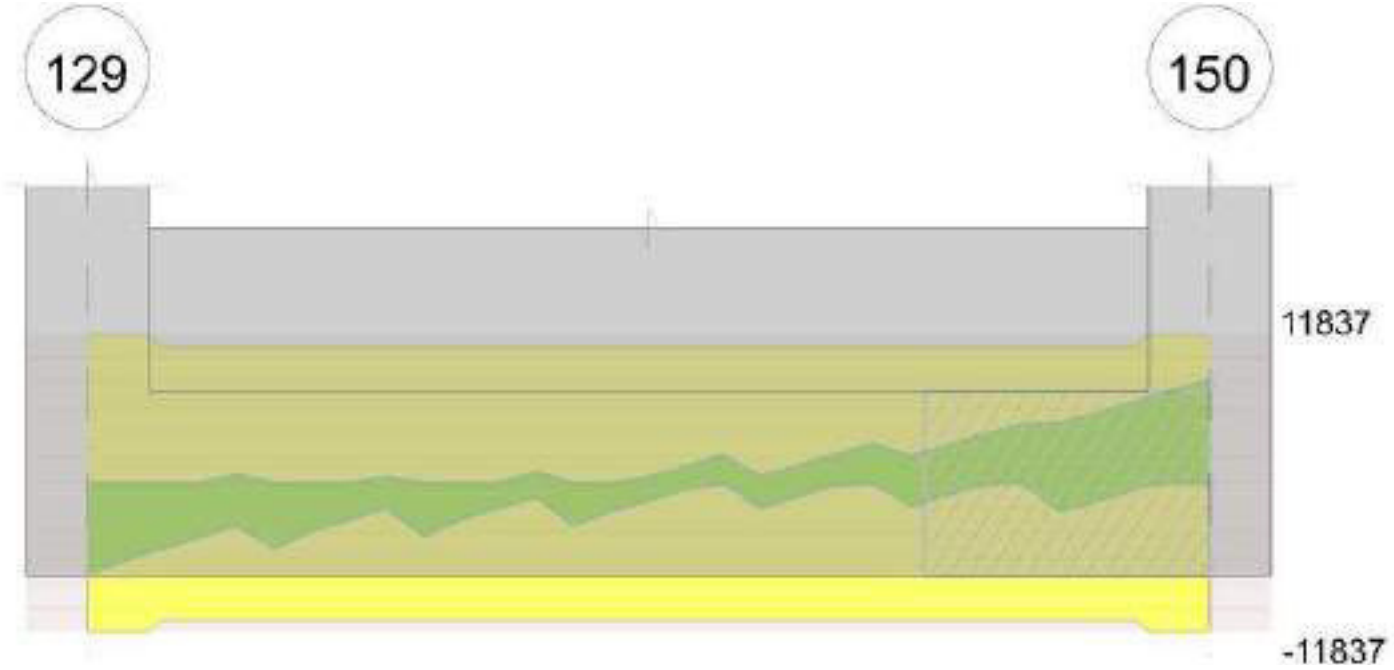


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 129 - 150, sezione R 70x45, aste 692, 693, 694, 695, 696, 697, 698

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	1792	SLU 84	0.029	5501	7545	SLU 84	15877	Si
0.15	0.41	0.0003	1789	SLU 84	0.029	5501	7534	SLU 84	15877	Si
1.38	0.41	0.0003	1756	SLU 84	0.029	5501	7394	SLU 84	15877	Si
2.6	0.41	0.0003	1738	SLU 84	0.029	5501	7317	SLU 84	15877	Si
2.75	0.41	0.0003	1736	SLU 84	0.029	5501	7307	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	1232	SLD 5	0.099	6147	5186	SLD 5	18020	Si
0.15	0.41	0.0003	1230	SLD 5	0.099	6147	5178	SLD 5	18020	Si
1.38	0.41	0.0003	1208	SLD 9	0.099	6147	5086	SLD 9	18020	Si
2.6	0.41	0.0003	1200	SLD 10	0.099	6147	5051	SLD 10	18020	Si
2.75	0.41	0.0003	1199	SLD 10	0.099	6147	5047	SLD 10	18020	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000346	1321	SLE RA 21	37373	1494000	463427	36000000	1199	SLE QP 2	33915	1120500	Si
0.15	0.41	0.00000346	1319	SLE RA 21	37322	1494000	462796	36000000	1197	SLE QP 2	33869	1120500	Si
1.38	0.41	0.00000346	1295	SLE RA 21	36632	1494000	454238	36000000	1176	SLE QP 2	33257	1120500	Si
2.6	0.41	0.00000346	1282	SLE RA 21	36257	1494000	449584	36000000	1164	SLE QP 2	32944	1120500	Si
2.75	0.41	0.00000346	1280	SLE RA 21	36211	1494000	449011	36000000	1163	SLE QP 2	32907	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
3.05	0.9	SLU 50	ST	LT	6	86	-35270	0	0	19	0	0	1.1	10728	86	124.13	Si
3.05	0.9	SLV 4	SIS	LT	-6065	1108	-28632	-12	2	19	0	0	1.1	8709	6165	1.41	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
692,693,694,695,696,697,698	3.05	0.9	SLU 84	ST	BT	2.3	114696	43120	2.66	Si
692,693,694,695,696,697,698	3.05	0.9	SLV 9	SIS	LT	2.3	89119	30934	2.88	Si
692,693,694,695,696,697,698	3.05	0.9	SLD 6	SIS	BT	2.3	107567	29971	3.59	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-21	-43120	238.78	-298.68	0	0	-0.01	0.01	0.89	3.04	1084	2060	0	14430	
0	-3097	-30934	1611.43	823.81	0	-6	0.03	0.05	0.8	3	1084	2060	37	0	0.07
0	-1300	-29971	770.01	-518.97	0	-2	-0.02	0.03	0.85	3.02	1084	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.06	0	0	0.24	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.2	1.2	0.89	1.15	1.24	1	0.83	0.82	0.75	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.06	0	0	0.24	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

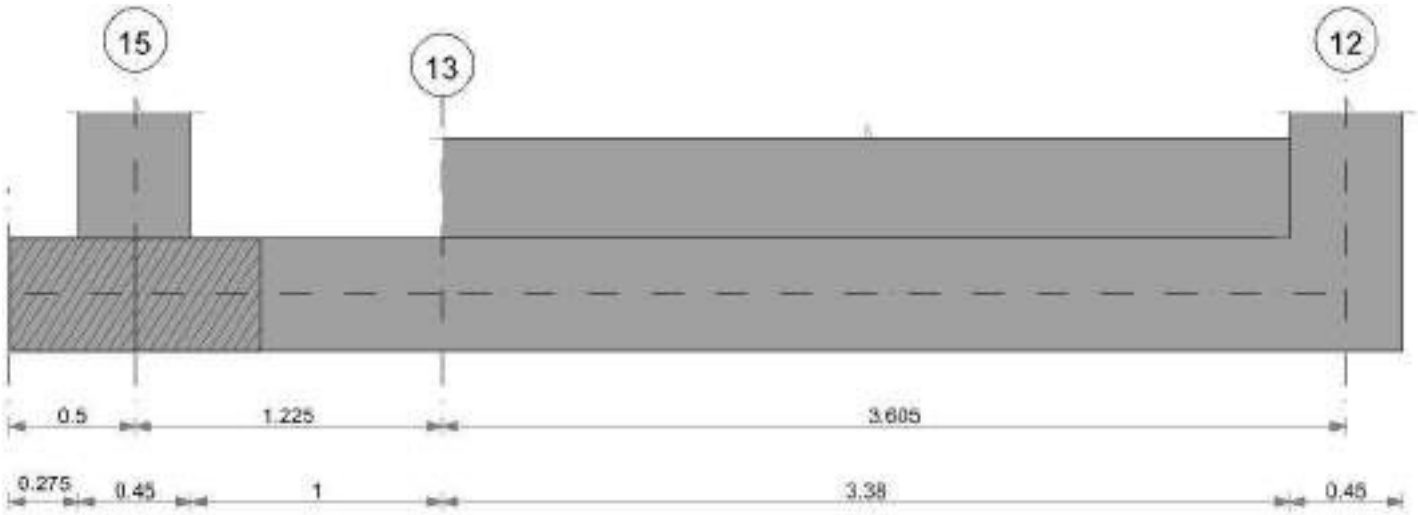
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	184	SLE RA 21	0.05	0	184	177	SLE RA 21	0.05	0	184	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	184	SLE RA 1	0.05	0	184	184	SLE RA 1	0.05	0	184	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	184	SLE RA 1	0.05	0	184	184	SLE RA 1	0.05	0	184	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0	184	177	SLE RA 21	0.19	0	184	SLE RA 1	0.1	0	184	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	184	177	SLE RA 1	0.19	0	184	SLE RA 1	0.1	0	184	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	184	177	SLE RA 1	0.19	0	184	SLE RA 1	0.1	0	184	SLE RA 1	Si

CORDOLO 20

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

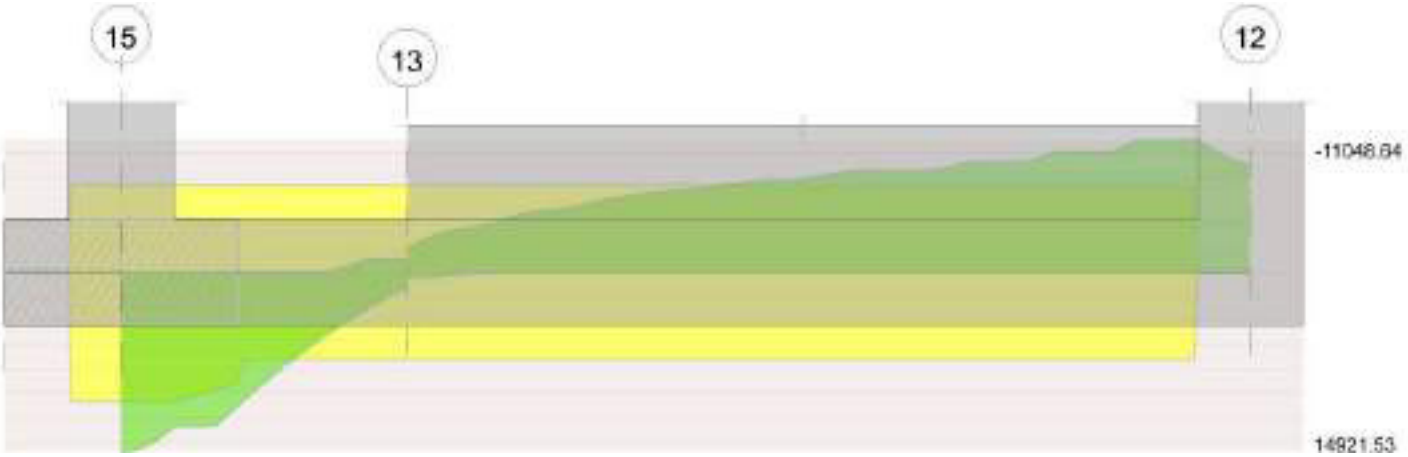
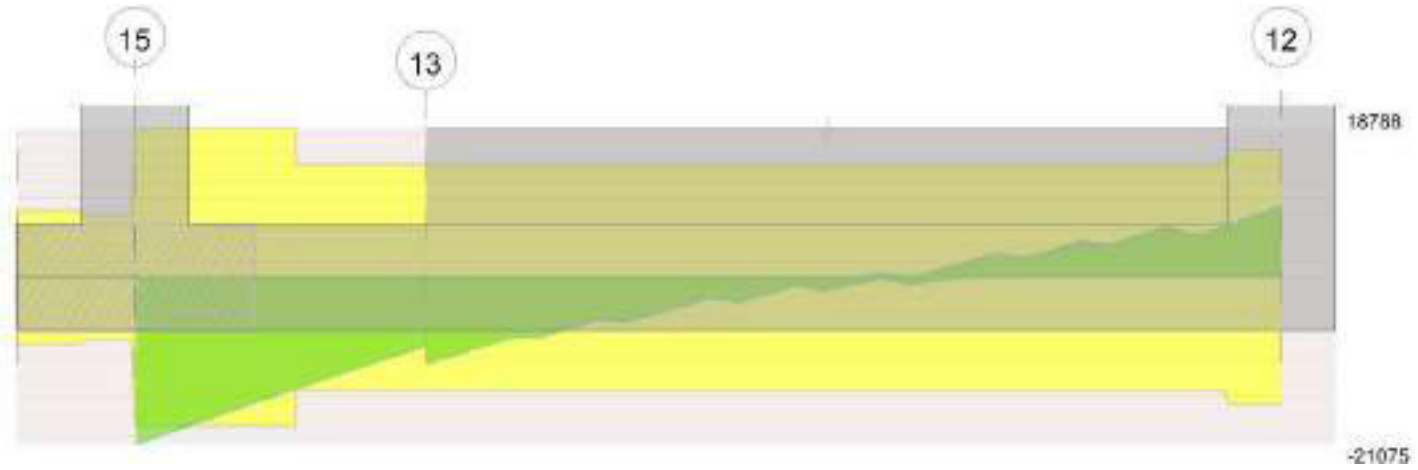


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 15 - 13, sezione R 50x45, asta 290

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
1.23	0.000509	0.052	0.000509	0.052	-340.43	SLU 2	932.2	7755.45	0.113	8.32	-558.23	SLU 83	-558.23	-7755.45	0.113	13.89	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
1.23	0.000509	0.052	0.000509	0.052	277.5	SLV 9	1206.36	7266.79	0.197	6.02	-1025.18	SLV 8	-1025.18	-7266.79	0.197	7.09	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.23	0.000509	0.052	0.000763	0.052	9970.86	SLD 4	9970.86	10716.86	0.238	1.07							Si
0.61	0.000509	0.052	0.000509	0.052	4946.39	SLD 2	7114.84	7266.79	0.197	1.02							Si
1.23	0.000509	0.052	0.000509	0.052	-88.28	SLD 9	870.02	7266.79	0.197	8.35	-659.39	SLD 8	-659.39	-7266.79	0.197	11.02	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0.000692	0	-19659	SLU 84	-19659	-8381	-63178	-18788	-18788	1	0.96	Si
0.23	0.0000134	0.000509	0	-17331	SLU 84	-17331	-7764	-63178	-18788	-18788	1	1.08	Si
0.61	0.0000134	0.000509	0	-13377	SLU 84	-13377	-7764	-63178	-18788	-18788	1	1.4	Si
1.23	0.0000102	0.000509	0	-7429	SLU 84	-7429	-7764	-63178	-14244	-14244	1	1.92	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0.000692	0	-21075	SLV 4	-21075	-8381	-63178	-18788	-18788	1	0.89	Si
0.23	0.0000134	0.000509	0	-18701	SLV 4	-18701	-7764	-63178	-18788	-18788	1	1	Si
0.61	0.0000134	0.000509	0	-14677	SLV 4	-14677	-7764	-63178	-18788	-18788	1	1.28	Si
1.23	0.0000102	0.000509	0	-8675	SLV 4	-8675	-7764	-63178	-14244	-14244	1	1.64	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0.000692	0	-16551	SLD 4	-16551	-8381	-63178	-18788	-18788	1	1.14	Si
0.23	0.0000134	0.000509	0	-14640	SLD 4	-14640	-7764	-63178	-18788	-18788	1	1.28	Si
0.61	0.0000134	0.000509	0	-11398	SLD 4	-11398	-7764	-63178	-18788	-18788	1	1.65	Si
1.23	0.0000102	0.000509	0	-6542	SLD 4	-6542	-7764	-63178	-14244	-14244	1	2.18	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0.23	8632.3	21	8632.3	776663	1494000	31406146	36000000	7846.71	2	7846.71	705982	1120500			Si
0.61	4257.34	21	6144.91	649847	1494000	33073724	36000000	3865.67	2	5582.88	590409	1120500			Si
1.23	-410.94	20	-410.94	21736	1494000	326041	36000000	-373.84	2	-373.84	19774	1120500			Si

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 15 - 13, sezione R 50x45, asta 290

Campata 3 tra i fili 13 - 12, sezione R 50x45, aste 289, 288, 287, 286, 285, 284, 283, 282, 281

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	938	SLV 4	0.145	7698	5001	SLV 4	27269	Si
1.8	0.41	0.0005	820	SLV 4	0.145	7698	4371	SLV 4	27269	Si
3.38	0.41	0.0005	1058	SLV 4	0.145	7698	5642	SLV 4	27269	Si
3.6	0.41	0.0005	1124	SLV 4	0.145	7698	5997	SLV 4	27269	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	750	SLD 4	0.12	8948	3998	SLD 4	31359	Si
1.8	0.41	0.0005	655	SLD 4	0.12	8948	3493	SLD 4	31359	Si
3.38	0.41	0.0005	843	SLD 4	0.12	8948	4497	SLD 4	31359	Si

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
3.6	0.41	0.0005	896	SLD 4	0.12	8948	4781	SLD 4	31359	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000508	669	SLE RA 21	18544	1494000	229939	36000000	609	SLE QP 2	16879	1120500	Si
1.8	0.41	0.00000508	584	SLE RA 21	16182	1494000	200658	36000000	532	SLE QP 2	14738	1120500	Si
3.38	0.41	0.00000508	749	SLE RA 21	20753	1494000	257340	36000000	683	SLE QP 2	18919	1120500	Si
3.6	0.41	0.00000508	796	SLE RA 21	22066	1494000	273618	36000000	726	SLE QP 2	20119	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.05	0.7	SLU 50	ST	LT	88	-621	-39936	0	-1	19	0	0	1.1	12148	627	19.38	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
290,289,288,287,286,285,284,283,282,281	5.05	0.7	SLU 84	ST	LT	2.3	132566	48911	2.71	Si
290,289,288,287,286,285,284,283,282,281	5.05	0.7	SLV 16	SIS	LT	2.3	22016	18274	1.2	Si
290,289,288,287,286,285,284,283,282,281	5.05	0.7	SLD 1	SIS	LT	2.3	97295	39833	2.44	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-693	-48911	-1870.43	-1053.22	0	-1	-0.02	-0.04	0.62	5.01	1084	2060	37	0	
0	-7563	-18274	2747.82	797.92	0	-22	0.04	0.15	0.4	4.97	1084	2060	37	0	0.07
0	2525	-39833	-2964.42	-1278.94	0	4	-0.03	-0.07	0.55	4.99	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
43	56	66	1.09	1.1	0.95	1.19	1.31	1	0.97	0.97	0.96	1	1	1	1	1	1	1	1	1	1	1	1
43	56	66	1.06	1.06	0.97	1.19	1.31	1	0.36	0.34	0.21	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.08	1.09	0.96	1.19	1.31	1	0.88	0.88	0.83	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

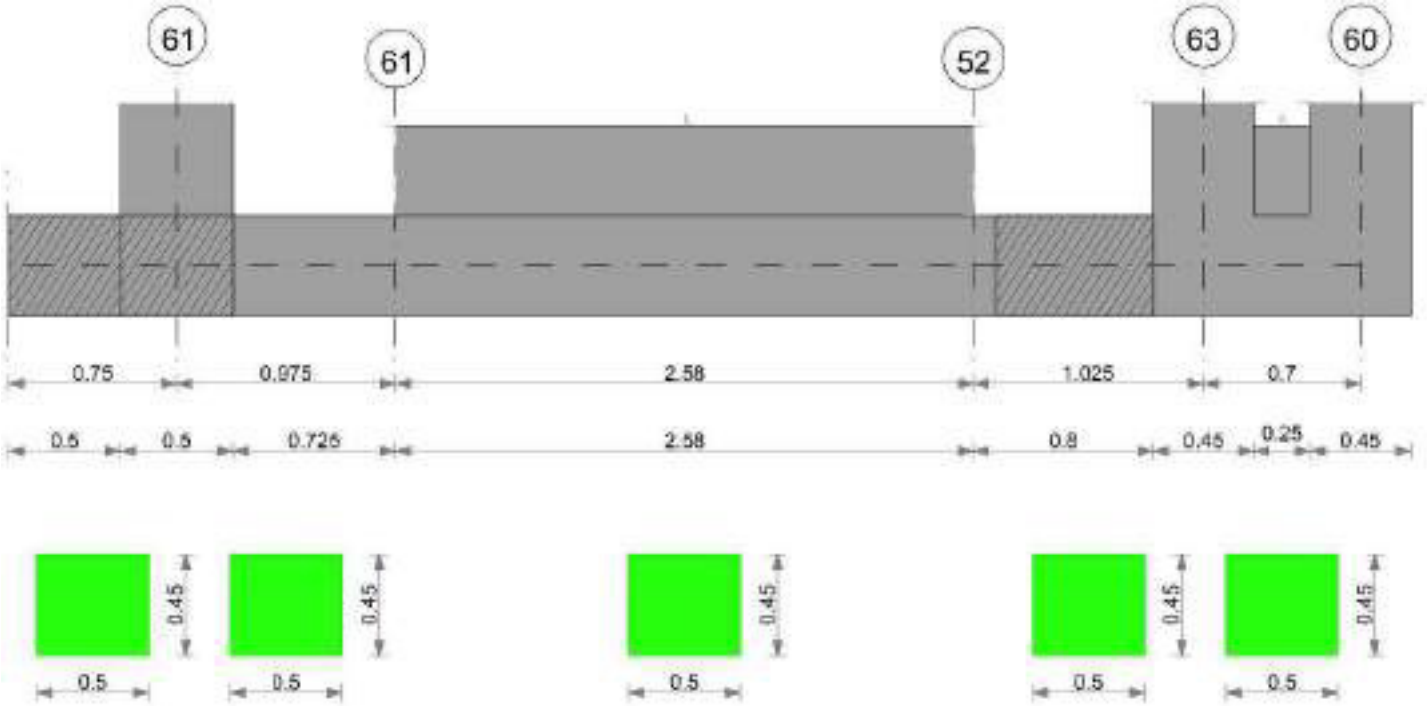
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	597	SLE RA 20	0.05	0	597	918	SLE RA 20	0.05	0	750	SLE QP 2	0.0033	0	SLE QP 2	Si
D	0.05	0	597	SLE RA 1	0.05	0	597	597	SLE RA 1	0.05	0	750	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	597	SLE RA 1	0.05	0	597	597	SLE RA 1	0.05	0	750	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 20	0.19	0	597	750	SLE RA 20	0.19	0	597	SLE RA 1	0.1	0	750	SLE QP 2	Si
D	0.19	0	SLE RA 1	0.19	0	597	750	SLE RA 1	0.19	0	597	SLE RA 1	0.1	0	750	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	597	750	SLE RA 1	0.19	0	597	SLE RA 1	0.1	0	750	SLE RA 1	Si

CORDOLO 21

Geometria



Caratteristiche dei materiali

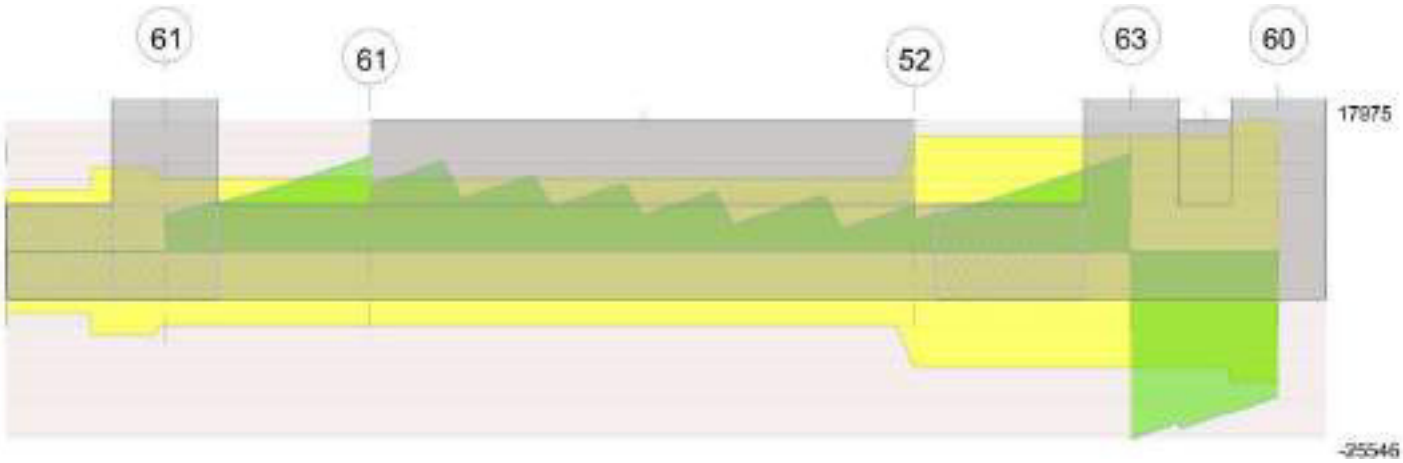
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 61 - 61, sezione R 50x45, asta 379

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000509	0.052							-4571.06	SLU 84	-4087.85	-9373.94	0.122	2.29	Si
0.25	0.000628	0.053	0.000509	0.052							-3311.76	SLU 83	-3311.76	-9373.94	0.122	2.83	Si
0.49	0.000628	0.053	0.000509	0.052	-996.06	SLU 2	101.37	7773.51	0.117	76.68	-1574.69	SLU 83	-2936.48	-9373.94	0.122	3.19	Si
0.81	0.000628	0.053	0.000509	0.052	1674.38	SLU 84	3671.41	7773.51	0.117	2.12	1002.5	SLU 1	-248.26	-9373.94	0.122	37.76	Si
0.98	0.000628	0.053	0.000509	0.052	3671.41	SLU 84	3671.41	7773.51	0.117	2.12							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000509	0.052							-4193.46	SLV 1	-3640.74	-8872.37	0.218	2.44	Si
0.25	0.000628	0.053	0.000509	0.052							-2840.08	SLV 1	-2840.08	-8872.37	0.218	3.12	Si
0.49	0.000628	0.053	0.000509	0.052	-690.3	SLV 9	811.36	7263.39	0.196	8.95	-1454.96	SLV 8	-2473	-8872.37	0.218	3.59	Si
0.81	0.000628	0.053	0.000509	0.052	2253.32	SLV 5	4040.91	7263.39	0.196	1.8	-55.62	SLV 12	-860.81	-8872.37	0.218	10.31	Si
0.98	0.000628	0.053	0.000509	0.052	4040.91	SLV 5	4040.91	7263.39	0.196	1.8	828.4	SLV 12	-138.89	-8872.37	0.218	63.88	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000509	0.052							-3555.32	SLD 1	-3133.69	-8872.37	0.218	2.83	Si
0.25	0.000628	0.053	0.000509	0.052							-2493.85	SLD 1	-2493.85	-8872.37	0.218	3.56	Si
0.49	0.000628	0.053	0.000509	0.052	-904.86	SLD 9	381.46	7263.39	0.196	19.04	-1240.39	SLD 8	-2192.96	-8872.37	0.218	4.05	Si
0.81	0.000628	0.053	0.000509	0.052	1604.43	SLD 5	3137.2	7263.39	0.196	2.32	593.28	SLD 12	-480.08	-8872.37	0.218	18.48	Si
0.98	0.000628	0.053	0.000509	0.052	3137.2	SLD 5	3137.2	7263.39	0.196	2.32							Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000072	0.000628	0	3856	SLU 84	3856	8105	63019	10078	10078	1	2.61	Si
0.25	0.0000072	0.000628	0	6214	SLU 84	6214	8105	63019	10078	10078	1	1.62	Si
0.49	0.0000072	0.000628	0	8451	SLU 84	8451	8105	63019	10078	10078	1	1.19	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000072	0.000628	0	5100	SLV 5	5100	8105	63019	10078	10078	1	1.98	Si
0.25	0.0000072	0.000628	0	6739	SLV 5	6739	8105	63019	10078	10078	1	1.5	Si
0.49	0.0000072	0.000628	0	8311	SLV 5	8311	8105	63019	10078	10078	1	1.21	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000072	0.000628	0	3684	SLD 5	3684	8105	63019	10078	10078	1	2.74	Si
0.25	0.0000072	0.000628	0	5286	SLD 5	5286	8105	63019	10078	10078	1	1.91	Si
0.49	0.0000072	0.000628	0	6814	SLD 5	6814	8105	63019	10078	10078	1	1.48	Si
0.98	0.0000072	0.000509	0	10040	SLD 1	10040	7764	63178	10104	10104	1	1.01	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-3368.91	21	-3013.53	158414	1494000	2350149	36000000	-3082.69	2	-2758.36	145001	1120500			Si
0.25	-2442.75	20	-2442.75	128410	1494000	1905016	36000000	-2238.02	2	-2238.02	117647	1120500			Si
0.49	-1165.1	20	-2166.72	113899	1494000	1689747	36000000	-1072.63	2	-1986.1	104405	1120500			Si
0.98	2692.41	21	2692.41	139981	1494000	2123002	36000000	2434.66	2	2434.66	126580	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Campata 4 tra i fili 52 - 63, sezione R 50x45, asta 372

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.001137	0.053	0.000509	0.052							-7038.2	SLU 84	-7038.2	-16326.36	0.165	2.32	Si
0.07	0.001137	0.053	0.000509	0.052							-6766.91	SLU 84	-7038.2	-16326.36	0.165	2.32	Si
0.51	0.001137	0.053	0.000509	0.052							-3934.5	SLU 84	-5302.39	-16326.36	0.165	3.08	Si

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.8	0.001137	0.053	0.000509	0.052							-1102.48	SLU 83	-2963.61	-16326.36	0.165	5.51	Si
1.02	0.001137	0.053	0.000509	0.052	1675.22	SLU 84	167.13	7785.55	0.121	46.58							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.001137	0.053	0.000509	0.052							-6858.18	SLV 1	-6858.18	-15592.05	0.288	2.27	Si
0.07	0.001137	0.053	0.000509	0.052							-6549	SLV 1	-6858.18	-15592.05	0.288	2.27	Si
0.51	0.001137	0.053	0.000509	0.052							-3686.71	SLV 3	-5017.42	-15592.05	0.288	3.11	Si
0.8	0.001137	0.053	0.000509	0.052							-1285.6	SLV 4	-2841.42	-15592.05	0.288	5.49	Si
1.02	0.001137	0.053	0.000509	0.052	1981.96	SLV 5	760.06	7255.57	0.189	9.55							Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.001137	0.053	0.000509	0.052							-5649.6	SLD 1	-5649.6	-15592.05	0.288	2.76	Si
0.07	0.001137	0.053	0.000509	0.052							-5411.37	SLD 1	-5649.6	-15592.05	0.288	2.76	Si
0.51	0.001137	0.053	0.000509	0.052							-3088.68	SLD 3	-4187.33	-15592.05	0.288	3.72	Si
0.8	0.001137	0.053	0.000509	0.052							-971.81	SLD 8	-2352.64	-15592.05	0.288	6.63	Si
1.02	0.001137	0.053	0.000509	0.052	1506.52	SLD 5	400.07	7255.57	0.189	18.14							Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000113	0.001137	0	3651	SLU 84	3651	9883	63090	15875	15875	1	4.35	Si
0.51	0.0000113	0.001137	0	8477	SLU 84	8477	9883	63090	15875	15875	1	1.87	Si
0.8	0.0000113	0.001137	0	11241	SLU 84	11241	9883	63090	15875	15875	1	1.41	Si
1.02	0.0000113	0.000509	0	13444	SLU 84	13444	7764	63178	15897	15897	1	1.18	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000113	0.001137	0	4448	SLV 5	4448	9883	63090	15875	15875	1	3.57	Si
0.51	0.0000113	0.001137	0	8215	SLV 1	8215	9883	63090	15875	15875	1	1.93	Si
0.8	0.0000113	0.001137	0	10491	SLV 1	10491	9883	63090	15875	15875	1	1.51	Si
1.02	0.0000113	0.000509	0	12320	SLV 1	12320	7764	63178	15897	15897	1	1.29	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000113	0.001137	0	3344	SLD 5	3344	9883	63090	15875	15875	1	4.75	Si
0.51	0.0000113	0.001137	0	6791	SLD 1	6791	9883	63090	15875	15875	1	2.34	Si
0.8	0.0000113	0.001137	0	8825	SLD 1	8825	9883	63090	15875	15875	1	1.8	Si
1.02	0.0000113	0.000509	0	10452	SLD 1	10452	7764	63178	15897	15897	1	1.52	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-5186.05	21	-5186.05	265479	1494000	3758823	36000000	-4741.98	2	-4741.98	242746	1120500			Si
0.51	-2896.52	21	-3904.99	199900	1494000	2830317	36000000	-2642.19	2	-3565.67	182530	1120500			Si
0.8	-809.47	20	-2180.94	111644	1494000	1580734	36000000	-731.92	2	-1987.16	101725	1120500			Si
1.02	1236.58	21	125.56	6067	1494000	96415	36000000	1136.4	2	119.79	5788	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 61 - 61, sezione R 50x45, asta 379

Campata 3 tra i fili 61 - 52, sezione R 50x45, aste 378, 377, 376, 375, 374, 373

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1327	SLU 84	0.03	5726	5898	SLU 84	16982	Si
1.29	0.41	0.0004	1325	SLU 84	0.03	5726	5889	SLU 84	16982	Si
2.58	0.41	0.0006	1310	SLU 84	0.048	8946	5824	SLU 84	26720	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	962	SLD 1	0.101	6396	4275	SLD 1	19529	Si
1.29	0.41	0.0004	962	SLD 4	0.101	6396	4277	SLD 4	19529	Si
2.58	0.41	0.0006	960	SLD 4	0.126	9959	4267	SLD 4	30728	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.0000036	974	SLE RA 21	27513	1494000	341156	36000000	882	SLE QP 2	24904	1120500	Si
1.29	0.41	0.0000036	973	SLE RA 21	27470	1494000	340622	36000000	881	SLE QP 2	24877	1120500	Si
2.58	0.41	0.00000567	962	SLE RA 21	26461	1494000	328121	36000000	873	SLE QP 2	23995	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 52 - 63, sezione R 50x45, asta 372

Campata 5 tra i fili 63 - 60, sezione R 50x45, aste 371, 370, 369

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1386	SLU 84	0.048	8946	6159	SLU 84	26720	Si
0.23	0.41	0.0006	1405	SLU 84	0.048	8946	6247	SLU 84	26720	Si

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0.35	0.41	0.0006	1415	SLU 84	0.048	8946	6289	SLU 84	26720	Si
0.48	0.41	0.0006	1425	SLU 84	0.048	8946	6332	SLU 84	26720	Si
0.7	0.41	0.0006	1446	SLU 83	0.048	8946	6426	SLU 83	26720	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1030	SLD 4	0.126	9959	4576	SLD 4	30728	Si
0.23	0.41	0.0006	1047	SLD 4	0.126	9959	4655	SLD 4	30728	Si
0.35	0.41	0.0006	1056	SLD 4	0.126	9959	4694	SLD 4	30728	Si
0.48	0.41	0.0006	1065	SLD 4	0.126	9959	4734	SLD 4	30728	Si
0.7	0.41	0.0006	1084	SLD 4	0.126	9959	4817	SLD 4	30728	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000567	1018	SLE RA 21	28000	1494000	347205	36000000	925	SLE QP 2	25439	1120500	Si
0.23	0.41	0.00000567	1033	SLE RA 21	28403	1494000	352201	36000000	939	SLE QP 2	25815	1120500	Si
0.35	0.41	0.00000567	1040	SLE RA 21	28596	1494000	354593	36000000	945	SLE QP 2	25995	1120500	Si
0.48	0.41	0.00000567	1047	SLE RA 21	28793	1494000	357032	36000000	952	SLE QP 2	26179	1120500	Si
0.7	0.41	0.00000567	1063	SLE RA 20	29224	1494000	362381	36000000	967	SLE QP 2	26579	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.51	0.7	SLU 50	ST	LT	168	-551	-44723	0	-1	19	0	0	1.1	13604	576	23.6	Si
5.51	0.7	SLV 16	SIS	LT	1388	-8532	-30398	3	-16	19	0	0	1.1	9246	8644	1.07	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
379,378,377,376,375,374,373,372,371,370,369	5.51	0.7	SLU 83	ST	BT	2.3	163555	55490	2.95	Si
379,378,377,376,375,374,373,372,371,370,369	5.51	0.7	SLV 16	SIS	LT	2.3	42875	30398	1.41	Si
379,378,377,376,375,374,373,372,371,370,369	5.51	0.7	SLD 16	SIS	LT	2.3	104500	34541	3.03	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-627	-55490	335.2	1242.92	0	-1	0.02	0.01	0.69	5.46	1084	2060	0	14430	
0	-8532	-30398	3913.64	510.48	0	-16	0.02	0.13	0.44	5.47	1084	2060	37	0	0.07
0	-3903	-34541	1807.92	754.42	0	-6	0.02	0.05	0.6	5.46	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.03	0	0	0.31	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.06	1.06	0.97	1.19	1.31	1	0.53	0.52	0.38	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.08	1.08	0.96	1.19	1.31	1	0.8	0.79	0.71	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

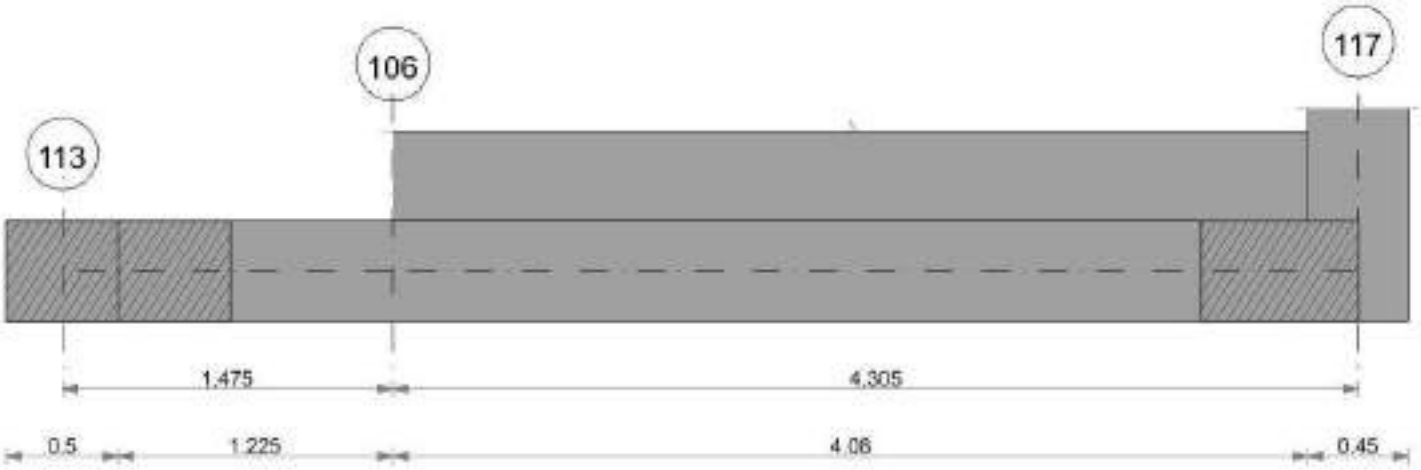
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	692	SLE RA 20	0.05	0.001	692	1000	SLE RA 20	0.05	0	855	SLE RA 1	0.0033	0	SLE RA 6	Si
D	0.05	0	692	SLE RA 1	0.05	0	692	692	SLE RA 1	0.05	0	753	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	692	SLE RA 1	0.05	0	692	692	SLE RA 1	0.05	0	753	SLE RA 1	0.0033	0	SLE RA 1	Si

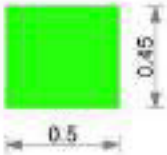
Verifiche geotecniche - Rotazioni assolute e differenziali

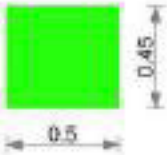
Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.01	753	855	SLE RA 20	0.19	0	753	SLE RA 21	0.1	0	855	SLE RA 6	Si
D	0.19	0	SLE RA 1	0.19	0	692	753	SLE RA 1	0.19	0	692	SLE RA 1	0.1	0	753	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	692	753	SLE RA 1	0.19	0	692	SLE RA 1	0.1	0	753	SLE RA 1	Si

CORDOLO 22

Geometria







Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

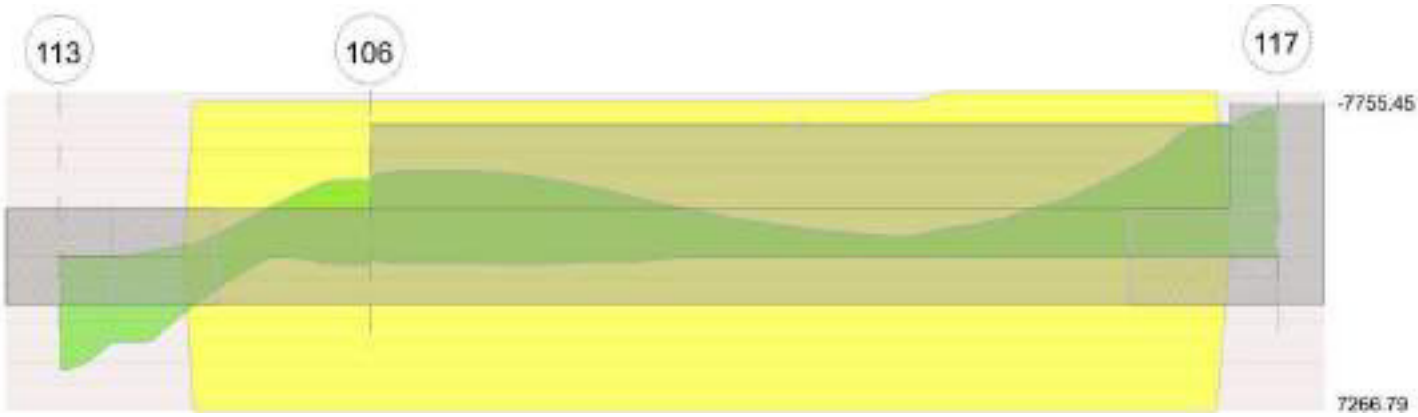
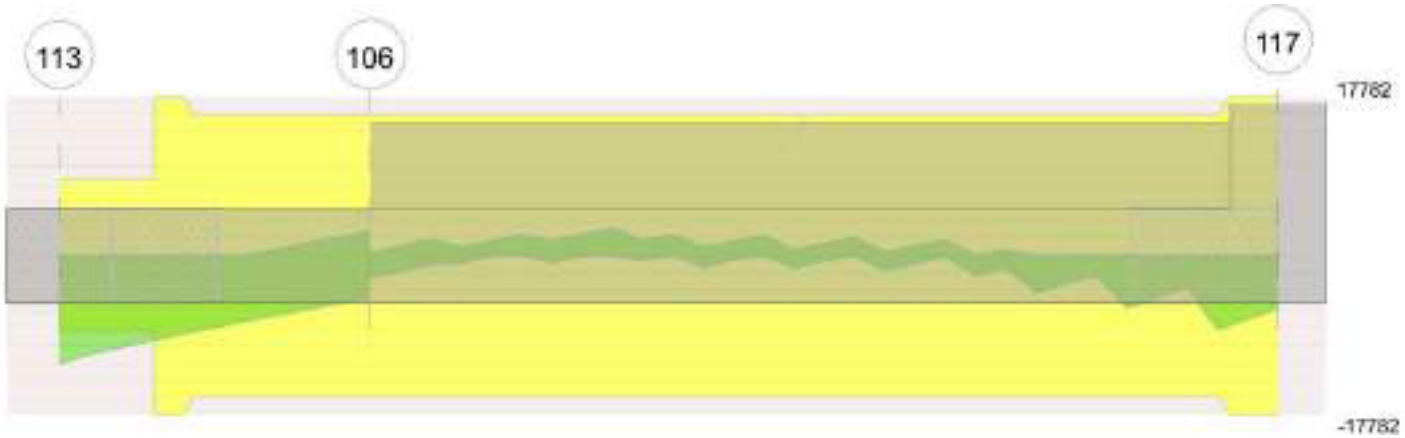


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 1 tra i fili 113 - 106, sezione R 50x45, asta 403

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.74	0.000509	0.052	0.000509	0.052	74.31	SLU 41	1148.75	7755.45	0.113	6.75	-25	SLU 44	-829.9	-7755.45	0.113	9.35	Si
1.47	0.000509	0.052	0.000509	0.052							-2399.04	SLU 83	-2399.04	-7755.45	0.113	3.23	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.74	0.000509	0.052	0.000509	0.052	469.76	SLV 15	1577.94	7266.79	0.197	4.61	-455.03	SLV 2	-967.9	-7266.79	0.197	7.51	Si
1.47	0.000509	0.052	0.000509	0.052	385.32	SLV 5	385.32	7266.79	0.197	18.86	-3615.5	SLV 12	-3615.5	-7266.79	0.197	2.01	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.74	0.000509	0.052	0.000509	0.052	203.39	SLD 15	1088.74	7266.79	0.197	6.67	-188.66	SLD 2	-751.42	-7266.79	0.197	9.67	Si
1.47	0.000509	0.052	0.000509	0.052							-2488.17	SLD 12	-2488.17	-7266.79	0.197	2.92	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0	0	-12105	SLU 83	-12105	-8455	-71432	0	-8455	1	0.7	Si
0.74	0.0000112	0	0	-6631	SLU 83	-6631	-7764	-63178	-15727	-15727	1	2.37	Si
1.47	0.0000112	0.000509	0	-1449	SLU 83	-1449	-7764	-63178	-15727	-15727	1	10.85	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0	0	-11735	SLV 12	-11735	-8455	-71432	0	-8455	1	0.72	Si
0.74	0.0000112	0	0	-8035	SLV 12	-8035	-7764	-63178	-15727	-15727	1	1.96	Si
1.47	0.0000112	0.000509	0	2812	SLV 5	2812	7764	63178	15727	15727	1	5.59	Si
1.47	0.0000112	0.000509	0	-4688	SLV 12	-4688	-7764	-63178	-15727	-15727	1	3.35	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0	0	-9649	SLD 12	-9649	-8455	-71432	0	-8455	1	0.88	Si
0.25	0	0	0	-8378	SLD 12	-8378	-8455	-71432	0	-8455	1	1.01	Si
0.74	0.0000112	0	0	-5979	SLD 12	-5979	-7764	-63178	-15727	-15727	1	2.63	Si
1.47	0.0000112	0.000509	0	695	SLD 5	695	7764	63178	15727	15727	1	22.62	Si
1.47	0.0000112	0.000509	0	-2571	SLD 12	-2571	-7764	-63178	-15727	-15727	1	6.12	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	4249.66	20	3484.82	206508	1494000	0	36000000	3804.52	2	3114.46	184560	1120500			Si
0.25	2544.32	20	2544.32	150774	1494000	0	36000000	2266.74	2	2266.74	134325	1120500			Si
0.74	34.8	20	836.09	44224	1494000	663357	36000000	7.36	2	728.06	38510	1120500			Si
0.74	-3.58	2	-621.83	32891	1494000	493365	36000000	-3.53	1	-582.24	30797	1120500			Si
1.47	-1780.54	20	-1780.54	94179	1494000	1412685	36000000	-1615.09	2	-1615.09	85428	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 113 - 106, sezione R 50x45, asta 403

Campata 2 tra i fili 106 - 117, sezione R 50x45, aste 402, 401, 400, 399, 398, 397, 396, 395, 394, 393, 392

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1150	SLU 84	0.047	8852	5110	SLU 84	26434	Si
2.15	0.41	0.0006	1082	SLU 84	0.047	8852	4807	SLU 84	26434	Si
4.08	0.41	0.0006	1171	SLU 83	0.047	8852	5205	SLU 83	26434	Si
4.31	0.41	0.0006	1202	SLU 83	0.047	8852	5340	SLU 83	26434	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	782	SLD 5	0.126	9855	3476	SLD 5	30399	Si
2.15	0.41	0.0006	746	SLD 1	0.126	9855	3316	SLD 1	30399	Si
4.08	0.41	0.0006	813	SLD 4	0.126	9855	3612	SLD 4	30399	Si
4.31	0.41	0.0006	836	SLD 4	0.126	9855	3714	SLD 4	30399	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000561	844	SLE RA 21	23216	1494000	287881	36000000	762	SLE QP 2	20963	1120500	Si
2.15	0.41	0.00000561	794	SLE RA 21	21842	1494000	270844	36000000	718	SLE QP 2	19766	1120500	Si
4.08	0.41	0.00000561	860	SLE RA 20	23670	1494000	293507	36000000	781	SLE QP 2	21488	1120500	Si
4.31	0.41	0.00000561	882	SLE RA 20	24286	1494000	301143	36000000	801	SLE QP 2	22056	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
6.25	0.7	SLU 23	ST	LT	-399	-76	-35818	-1	0	19	0	0	1.1	10895	406	26.85	Si
6.25	0.7	SLV 14	SIS	LT	-1904	-8405	-32963	-3	-14	19	0	0	1.1	10027	8618	1.16	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
403,402,401,400,399,398,397,396,395,394,393,392	6.25	0.7	SLU 84	ST	BT	2.3	188507	50345	3.74	Si
403,402,401,400,399,398,397,396,395,394,393,392	6.25	0.7	SLV 14	SIS	LT	2.3	54930	32963	1.67	Si
403,402,401,400,399,398,397,396,395,394,393,392	6.25	0.7	SLD 14	SIS	LT	2.3	120375	33675	3.57	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-88	-50345	7.38	-1841.17	0	0	-0.04	0	0.7	6.18	1084	2060	0	14430	
0	-8405	-32963	3794.64	-3788.58	0	-14	-0.11	0.12	0.47	6.03	1084	2060	37	0	0.07
0	-3632	-33675	1627.28	-2266.07	0	-6	-0.07	0.05	0.6	6.12	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.02	0	0	0.31	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.06	1.06	0.97	1.19	1.31	1	0.57	0.56	0.42	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.07	1.08	0.96	1.19	1.31	1	0.8	0.8	0.72	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

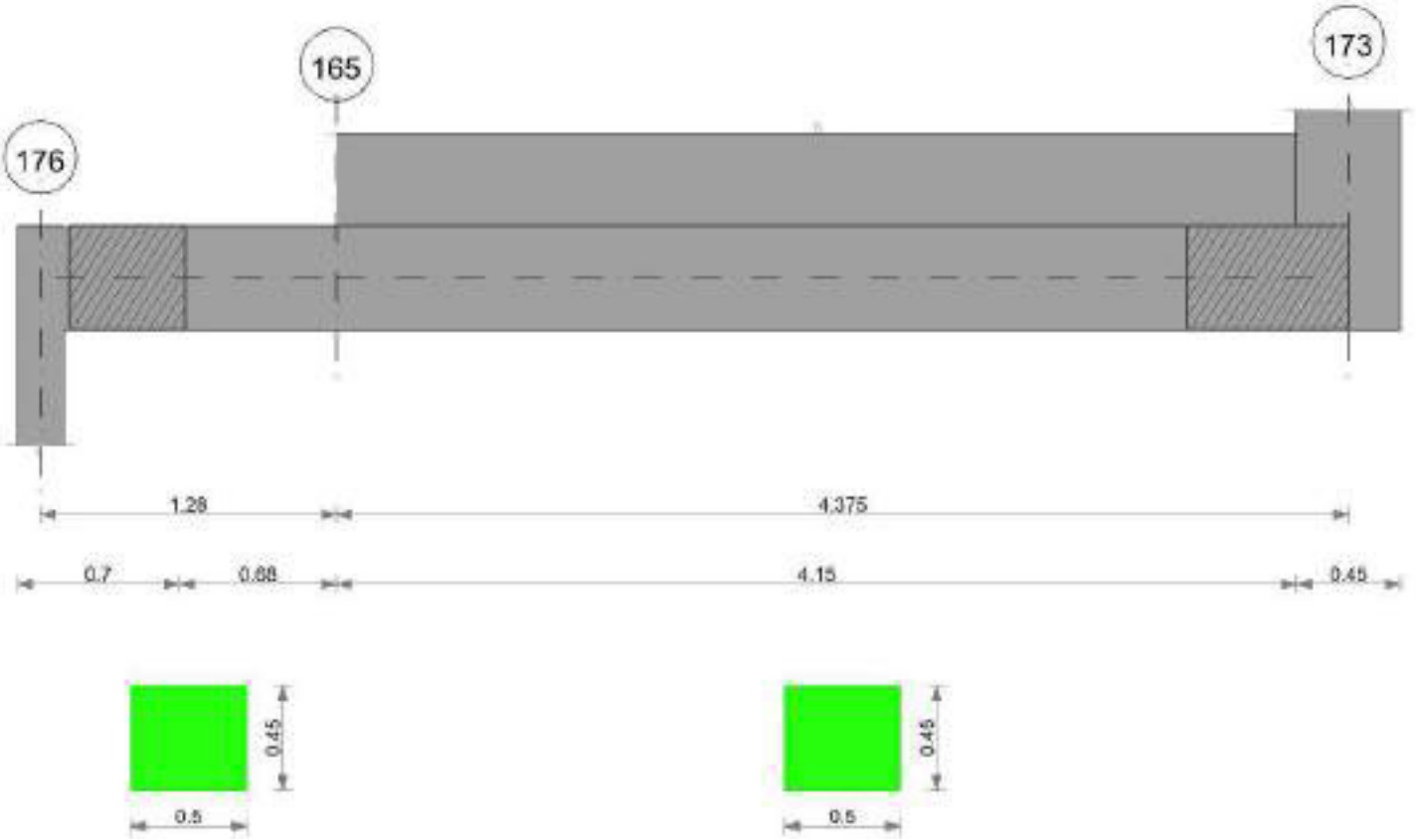
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	629	SLE RA 20	0.05	0.001	629	1014	SLE RA 20	0.05	0	756	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	629	SLE RA 1	0.05	0	629	629	SLE RA 1	0.05	0	756	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	629	SLE RA 1	0.05	0	629	629	SLE RA 1	0.05	0	756	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.02	629	756	SLE RA 20	0.19	0	629	SLE RA 1	0.1	0	756	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	629	756	SLE RA 1	0.19	0	629	SLE RA 1	0.1	0	756	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	629	756	SLE RA 1	0.19	0	629	SLE RA 1	0.1	0	756	SLE RA 1	Si

CORDOLO 23

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

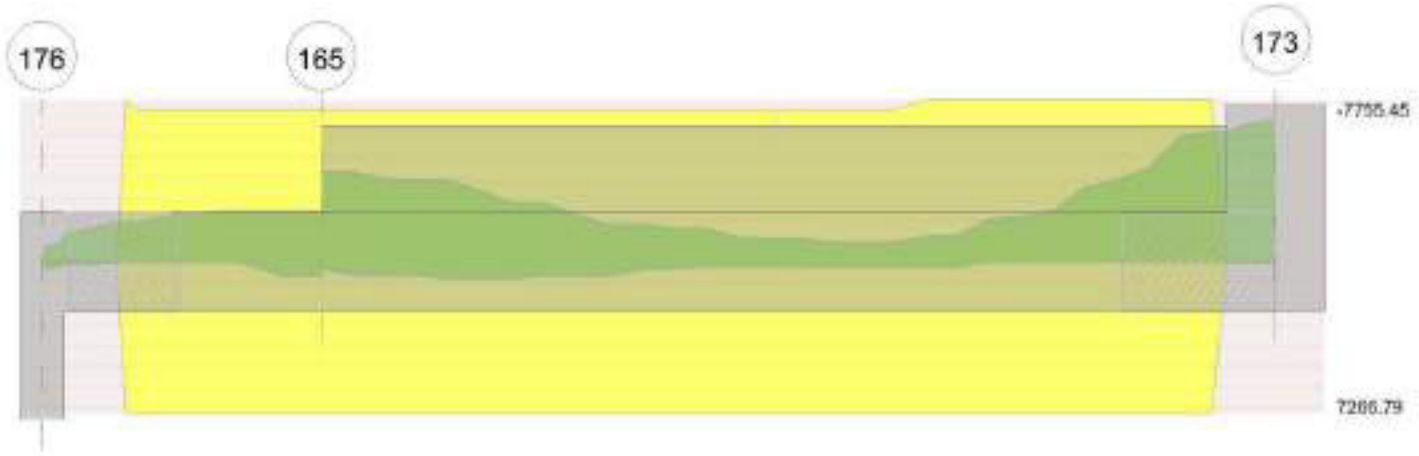
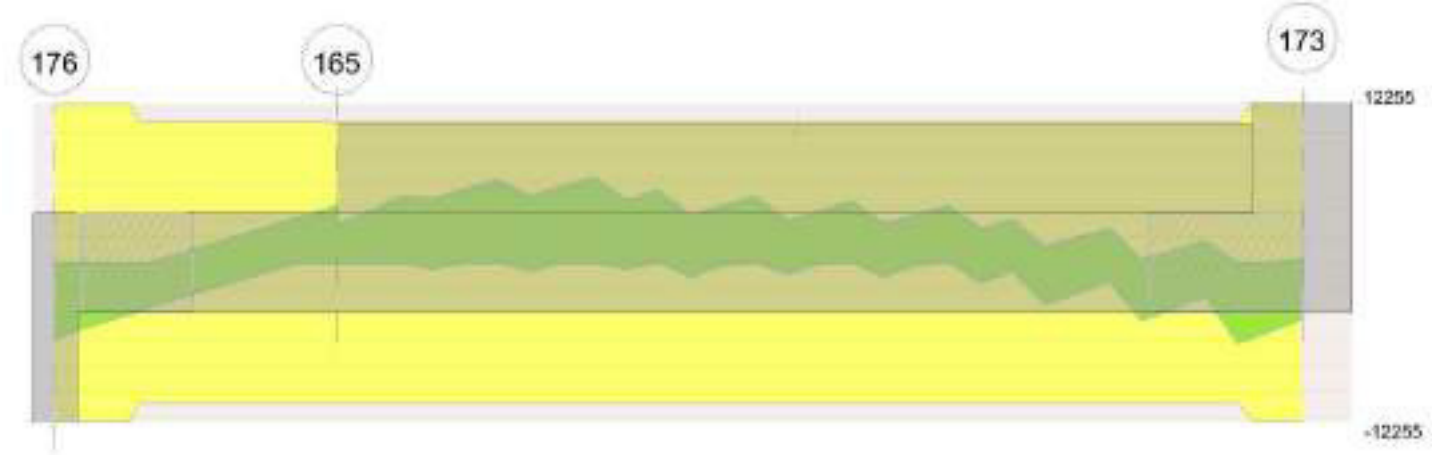


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 1 tra i fili 176 - 165, sezione R 50x45, asta 415

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.64	0.000509	0.052	0.000509	0.052							-2010.87	SLU 83	-2059.54	-7755.45	0.113	3.77	Si
1.28	0.000509	0.052	0.000509	0.052							-1128.49	SLU 74	-1654.61	-7755.45	0.113	4.69	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.64	0.000509	0.052	0.000509	0.052							-1950.14	SLV 11	-2231.1	-7266.79	0.197	3.26	Si
1.28	0.000509	0.052	0.000509	0.052	688.91	SLV 6	688.91	7266.79	0.197	10.55	-2337.06	SLV 11	-2404.29	-7266.79	0.197	3.02	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.64	0.000509	0.052	0.000509	0.052							-1636.42	SLD 11	-1775.9	-7266.79	0.197	4.09	Si
1.28	0.000509	0.052	0.000509	0.052							-1484.49	SLD 11	-1709.81	-7266.79	0.197	4.25	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000077	0	0	-5996	SLU 83	-5996	-8455	-71432	-12255	-12255	1	2.04	Si
0.1	0.0000077	0	0	-5188	SLU 83	-5188	-8455	-71432	-12255	-12255	1	2.36	Si
0.64	0.0000077	0	0	-925	SLU 81	-925	-7764	-63178	-10839	-10839	1	11.72	Si
1.28	0.0000077	0.000509	0	3976	SLU 84	3976	7764	63178	10839	10839	1	2.73	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000077	0	0	-5850	SLV 11	-5850	-8455	-71432	-12255	-12255	1	2.09	Si
0.1	0.0000077	0	0	-5291	SLV 11	-5291	-8455	-71432	-12255	-12255	1	2.32	Si
0.64	0.0000077	0	0	1081	SLV 6	1081	7764	63178	10839	10839	1	10.03	Si
0.64	0.0000077	0	0	-2389	SLV 11	-2389	-7764	-63178	-10839	-10839	1	4.54	Si
1.28	0.0000077	0.000509	0	4392	SLV 6	4392	7764	63178	10839	10839	1	2.47	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000077	0	0	-4826	SLD 11	-4826	-8455	-71432	-12255	-12255	1	2.54	Si
0.1	0.0000077	0	0	-4278	SLD 11	-4278	-8455	-71432	-12255	-12255	1	2.86	Si
0.64	0.0000077	0	0	99	SLD 6	99	7764	63178	10839	10839	1	109.07	Si
0.64	0.0000077	0	0	-1407	SLD 11	-1407	-7764	-63178	-10839	-10839	1	7.7	Si
1.28	0.0000077	0.000509	0	3376	SLD 6	3376	7764	63178	10839	10839	1	3.21	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-58.09	9	-58.09	-3442	1494000	0	36000000	-47.6	1	-47.6	-2821	1120500			Si
0.1	-406.17	21	-937.69	-55567	1494000	0	36000000	-381.82	2	-871.05	-51618	1120500			Si
0.64	-1495.49	20	-1531.26	80994	1494000	1214904	36000000	-1390.54	2	-1427.92	75528	1120500			Si
1.28	-846.56	11	-1233.62	65250	1494000	978756	36000000	-824.07	2	-1171.24	61951	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 176 - 165, sezione R 50x45, asta 415

Campata 2 tra i fili 165 - 173, sezione R 50x45, aste 414, 413, 412, 411, 410, 409, 408, 407, 406, 405, 404

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1162	SLU 84	0.033	6137	5164	SLU 84	18218	Si
2.19	0.41	0.0004	1130	SLU 84	0.033	6137	5022	SLU 84	18218	Si

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
4.15	0.41	0.0004	1200	SLU 83	0.033	6137	5331	SLU 83	18218	Si
4.38	0.41	0.0004	1227	SLU 83	0.033	6137	5454	SLU 83	18218	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	801	SLD 14	0.105	6852	3558	SLD 14	20951	Si
2.19	0.41	0.0004	793	SLD 14	0.105	6852	3524	SLD 14	20951	Si
4.15	0.41	0.0004	854	SLD 15	0.105	6852	3794	SLD 15	20951	Si
4.38	0.41	0.0004	876	SLD 15	0.105	6852	3891	SLD 15	20951	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000387	852	SLE RA 21	23984	1494000	297400	36000000	768	SLE QP 2	21623	1120500	Si
2.19	0.41	0.00000387	828	SLE RA 21	23314	1494000	289092	36000000	748	SLE QP 2	21050	1120500	Si
4.15	0.41	0.00000387	881	SLE RA 20	24788	1494000	307371	36000000	799	SLE QP 2	22491	1120500	Si
4.38	0.41	0.00000387	901	SLE RA 20	25365	1494000	314521	36000000	818	SLE QP 2	23027	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.98	0.7	SLU 23	ST	LT	-350	264	-36427	-1	0	19	0	0	1.1	11080	439	25.27	Si
5.98	0.7	SLV 1	SIS	LT	-1159	8596	-31580	-2	15	19	0	0	1.1	9606	8674	1.11	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
415,414,413,412,411,410,409,408,407,406,405,404	5.98	0.7	SLU 84	ST	BT	2.3	179655	51299	3.5	Si
415,414,413,412,411,410,409,408,407,406,405,404	5.98	0.7	SLV 1	SIS	LT	2.3	48067	31580	1.52	Si
415,414,413,412,411,410,409,408,407,406,405,404	5.98	0.7	SLD 1	SIS	LT	2.3	112367	33396	3.36	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	372	-51299	-166.42	-793.28	0	0	-0.02	0	0.69	5.95	1084	2060	0	14430	
0	8596	-31580	-3913.81	-2359.51	0	15	-0.07	-0.12	0.45	5.83	1084	2060	37	0	0.07
0	3820	-33396	-1737.99	-1269.67	0	7	-0.04	-0.05	0.6	5.9	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.02	0	0	0.31	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.06	1.06	0.97	1.19	1.31	1	0.54	0.53	0.39	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.08	1.08	0.96	1.19	1.31	1	0.79	0.79	0.7	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

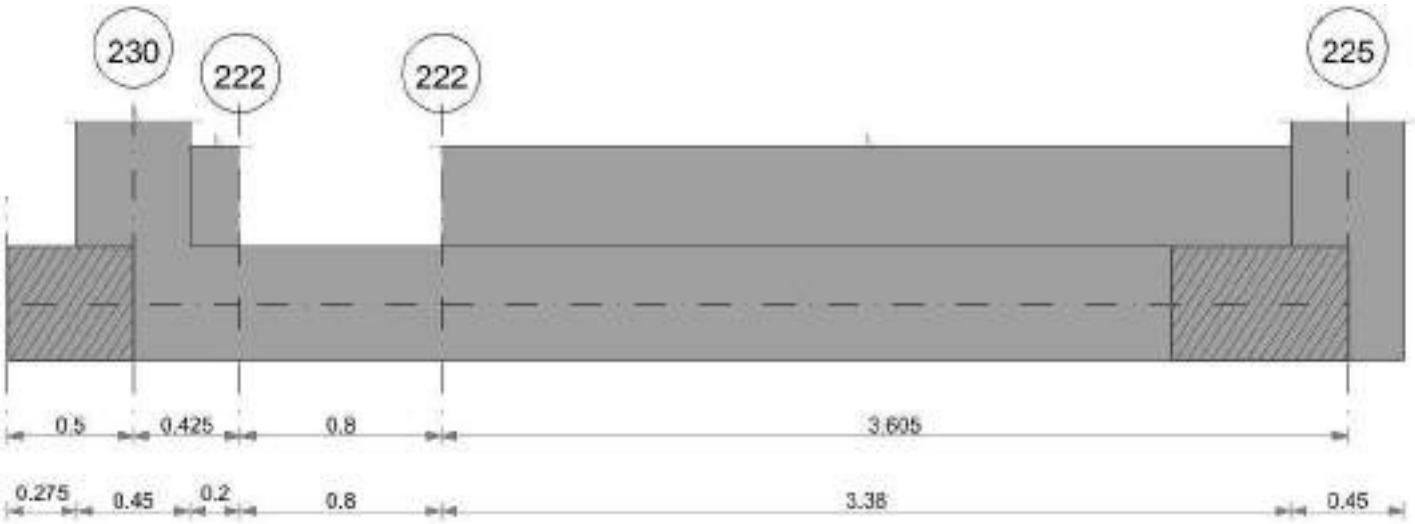
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	643	SLE RA 20	0.05	0.002	643	1029	SLE RA 20	0.05	0	746	SLE FR 3	0.0033	0	SLE FR 3	Si
D	0.05	0	643	SLE RA 1	0.05	0	643	643	SLE RA 1	0.05	0	746	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	643	SLE RA 1	0.05	0	643	643	SLE RA 1	0.05	0	746	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 20	0.19	0.03	643	746	SLE RA 20	0.19	0	643	SLE RA 1	0.1	0.02	746	SLE FR 3	Si
D	0.19	0	SLE RA 1	0.19	0	643	746	SLE RA 1	0.19	0	643	SLE RA 1	0.1	0	746	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	643	746	SLE RA 1	0.19	0	643	SLE RA 1	0.1	0	746	SLE RA 1	Si

CORDOLO 24

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

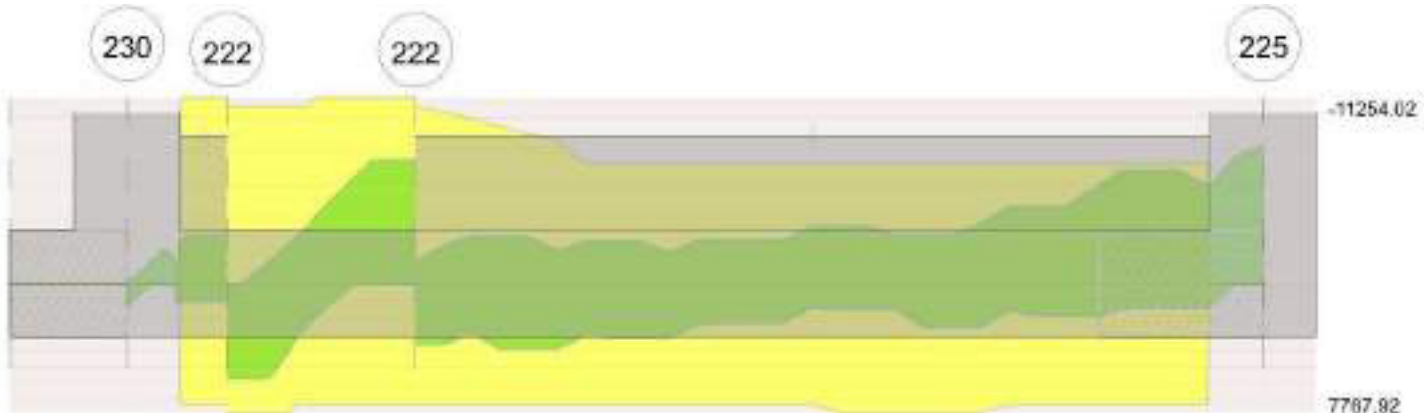
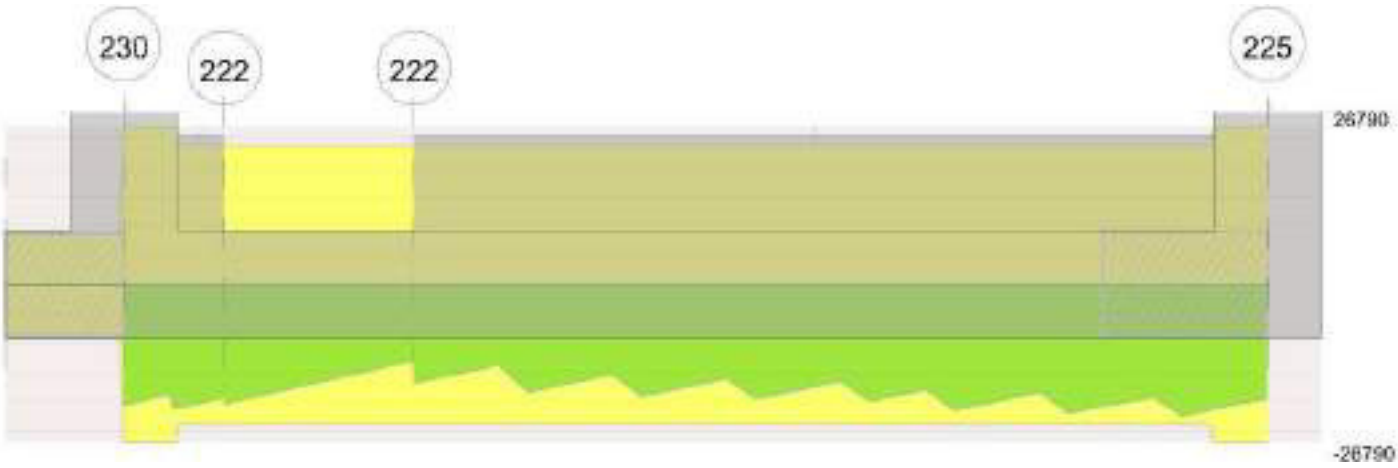


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 3 tra i fili 222 - 222, sezione R 50x45, asta 461

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000509	0.052	5724.34	SLU 84	5724.34	7767.92	0.117	1.36							Si
0.08	0.000763	0.052	0.000509	0.052	4133.2	SLU 84	5724.34	7767.92	0.117	1.36							Si
0.4	0.000763	0.052	0.000509	0.052	-1022.48	SLU 2	1485.01	7767.92	0.117	5.23	-1640	SLU 83	-4459.76	-11254.02	0.132	2.52	Si
0.8	0.000763	0.052	0.000509	0.052							-7515.77	SLU 83	-7515.77	-11254.02	0.132	1.5	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000509	0.052	5210.7	SLV 14	5210.7	7262.8	0.194	1.39							Si
0.08	0.000763	0.052	0.000509	0.052	3843.72	SLV 14	5210.7	7262.8	0.194	1.39	1640.39	SLV 3	-223.16	-10716.86	0.238	48.02	Si
0.4	0.000763	0.052	0.000509	0.052	-308.59	SLV 6	1729.6	7262.8	0.194	4.2	-1912.06	SLV 11	-4183.4	-10716.86	0.238	2.56	Si
0.8	0.000763	0.052	0.000509	0.052							-6867.24	SLV 15	-6867.24	-10716.86	0.238	1.56	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000509	0.052	4406.23	SLD 14	4406.23	7262.8	0.194	1.65							Si
0.08	0.000763	0.052	0.000509	0.052	3213.79	SLD 14	4406.23	7262.8	0.194	1.65							Si
0.4	0.000763	0.052	0.000509	0.052	-757.74	SLD 6	1303.87	7262.8	0.194	5.57	-1462.91	SLD 11	-3512.52	-10716.86	0.238	3.05	Si
0.8	0.000763	0.052	0.000509	0.052							-5819.59	SLD 15	-5819.59	-10716.86	0.238	1.84	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000169	0.000509	0	-20267	SLU 83	-20267	-7764	-63178	-23694	-23694	1	1.17	Si
0.4	0.0000169	0.000763	0	-16540	SLU 83	-16540	-8659	-63178	-23694	-23694	1	1.43	Si
0.8	0.0000169	0.000763	0	-12842	SLU 83	-12842	-8659	-63178	-23694	-23694	1	1.85	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000169	0.000509	0	-17724	SLV 15	-17724	-7764	-63178	-23694	-23694	1	1.34	Si
0.4	0.0000169	0.000763	0	-14843	SLV 15	-14843	-8659	-63178	-23694	-23694	1	1.6	Si
0.8	0.0000169	0.000763	0	-11993	SLV 15	-11993	-8659	-63178	-23694	-23694	1	1.98	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000169	0.000509	0	-15327	SLD 15	-15327	-7764	-63178	-23694	-23694	1	1.55	Si
0.4	0.0000169	0.000763	0	-12668	SLD 15	-12668	-8659	-63178	-23694	-23694	1	1.87	Si
0.8	0.0000169	0.000763	0	-10032	SLD 15	-10032	-8659	-63178	-23694	-23694	1	2.36	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	4199.06	21	4199.06	213781	1494000	3284767	36000000	3805.05	2	3805.05	193721	1120500			Si
0.4	-1210.25	20	-3280.96	171105	1494000	2505582	36000000	-1110.33	2	-2992.67	156070	1120500			Si
0.8	-5524.6	20	-5524.6	497058	1494000	20099662	36000000	-5031.95	2	-5031.95	452733	1120500			Si

Verifica di apertura delle fessure

x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
0.8	superiore	0.375	0.00059	0.000219	20	0.375	0.00055	0.000205	6	0.375	0.00053	0.0002	2	Si

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 230 - 222, sezione R 50x45, aste 463, 462

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0008	1319	SLU 84	0.071	13206	5862	SLU 84	39824	Si
0.21	0.41	0.0008	1314	SLU 84	0.071	13206	5841	SLU 84	39824	Si

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0.23	0.41	0.0008	1314	SLU 84	0.071	13206	5841	SLU 84	39824	Si
0.43	0.41	0.0008	1311	SLU 84	0.071	13206	5826	SLU 84	39824	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0008	942	SLD 15	0.153	14673	4188	SLD 15	45798	Si
0.21	0.41	0.0008	939	SLD 15	0.153	14673	4172	SLD 15	45798	Si
0.23	0.41	0.0008	938	SLD 13	0.153	14673	4168	SLD 13	45798	Si
0.43	0.41	0.0008	936	SLD 14	0.153	14673	4161	SLD 14	45798	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000845	969	SLE RA 21	25741	1494000	319188	36000000	879	SLE QP 2	23341	1120500	Si
0.21	0.41	0.00000845	966	SLE RA 21	25649	1494000	318045	36000000	876	SLE QP 2	23256	1120500	Si
0.23	0.41	0.00000845	965	SLE RA 21	25644	1494000	317992	36000000	875	SLE QP 2	23252	1120500	Si
0.43	0.41	0.00000845	963	SLE RA 21	25578	1494000	317170	36000000	873	SLE QP 2	23191	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 3 tra i fili 222 - 222, sezione R 50x45, asta 461

Campata 4 tra i fili 222 - 225, sezione R 50x45, aste 460, 459, 458, 457, 456, 455, 454, 453

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0008	1294	SLU 84	0.071	13206	5751	SLU 84	39824	Si
1.8	0.41	0.0008	1308	SLU 84	0.071	13206	5812	SLU 84	39824	Si
3.38	0.41	0.0008	1331	SLU 83	0.071	13206	5916	SLU 83	39824	Si
3.6	0.41	0.0008	1343	SLU 83	0.071	13206	5969	SLU 83	39824	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0008	927	SLD 14	0.153	14673	4121	SLD 14	45798	Si
1.8	0.41	0.0008	938	SLD 15	0.153	14673	4168	SLD 15	45798	Si
3.38	0.41	0.0008	970	SLD 15	0.153	14673	4312	SLD 15	45798	Si
3.6	0.41	0.0008	984	SLD 15	0.153	14673	4374	SLD 15	45798	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000845	951	SLE RA 21	25251	1494000	313117	36000000	862	SLE QP 2	22896	1120500	Si
1.8	0.41	0.00000845	961	SLE RA 21	25522	1494000	316472	36000000	872	SLE QP 2	23158	1120500	Si
3.38	0.41	0.00000845	978	SLE RA 20	25984	1494000	322200	36000000	889	SLE QP 2	23606	1120500	Si
3.6	0.41	0.00000845	987	SLE RA 20	26218	1494000	325104	36000000	897	SLE QP 2	23824	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.05	0.7	SLU 50	ST	LT	60	622	-37429	0	1	19	0	0	1.1	11385	625	18.21	Si
5.05	0.7	SLV 3	SIS	LT	1355	6948	-26677	3	15	19	0	0	1.1	8114	7079	1.15	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
463,462,461,460,459,458,457,456,455,454,453	5.05	0.7	SLU 83	ST	BT	2.3	150228	46259	3.25	Si
463,462,461,460,459,458,457,456,455,454,453	5.05	0.7	SLV 3	SIS	LT	2.3	44439	26677	1.67	Si
463,462,461,460,459,458,457,456,455,454,453	5.05	0.7	SLD 3	SIS	LT	2.3	97599	29398	3.32	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	716	-46259	-382.68	237.16	0	1	0.01	-0.01	0.68	5.04	1084	2060	0	14430	
0	6948	-26677	-3170.49	601.72	0	15	0.02	-0.12	0.46	5.01	1084	2060	37	0	0.07
0	3258	-29398	-1507.87	374.72	0	6	0.01	-0.05	0.6	5.03	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.03	0	0	0.31	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.07	1.07	0.96	1.19	1.31	1	0.56	0.55	0.41	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.09	1.09	0.95	1.19	1.31	1	0.8	0.8	0.71	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

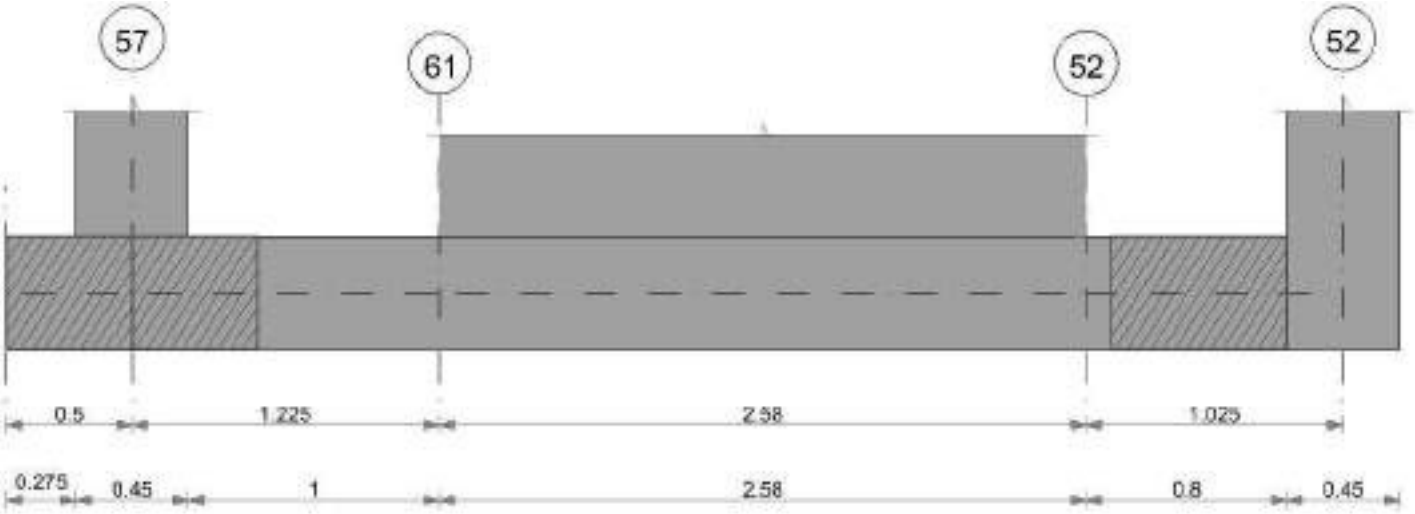
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	Rl adm	Rl	Comb.	
E	0.05	0.001	658	SLE RA 20	0.05	0.001	658	893	SLE RA 20	0.05	0	759	SLE RA 21	0.0033	0	SLE RA 1	Si
D	0.05	0	658	SLE RA 1	0.05	0	658	658	SLE RA 1	0.05	0	741	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	658	SLE RA 1	0.05	0	658	658	SLE RA 1	0.05	0	741	SLE RA 1	0.0033	0	SLE RA 1	Si

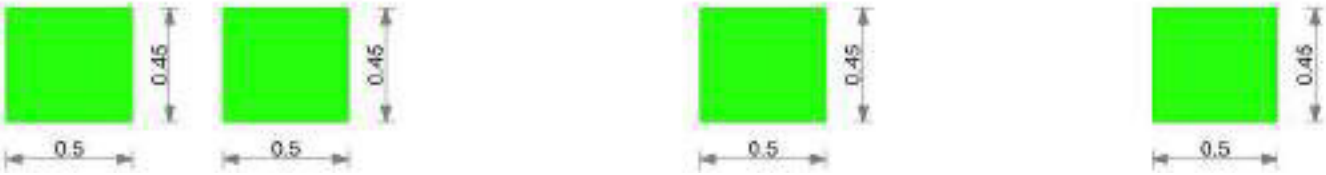
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.01	759	893	SLE RA 21	0.19	0.01	741	SLE RA 21	0.1	0	759	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	658	741	SLE RA 1	0.19	0	658	SLE RA 1	0.1	0	741	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	658	741	SLE RA 1	0.19	0	658	SLE RA 1	0.1	0	741	SLE RA 1	Si

CORDOLO 25

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio

Output campate

Campata 2 tra i fili 57 - 61, sezione R 50x45, asta 368

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	6761.37	SLU 83	5082.98	13658.02	0.143	2.69							Si
0.23	0.000942	0.053	0.000942	0.053	3644.16	SLU 84	3644.16	13658.02	0.143	3.75							Si
0.61	0.000942	0.053	0.000942	0.053	-391.81	SLU 2	1181.71	13658.02	0.143	11.56	-601.59	SLU 83	-2078.83	-13658.02	0.143	6.57	Si
1.23	0.000942	0.053	0.000942	0.053							-4429.91	SLU 83	-4429.91	-13658.02	0.143	3.08	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	5957.94	SLV 4	4526.69	13077.02	0.254	2.89							Si
0.23	0.000942	0.053	0.000942	0.053	3280.97	SLV 4	3280.97	13077.02	0.254	3.99							Si
0.61	0.000942	0.053	0.000942	0.053	-132.2	SLV 5	1158.22	13077.02	0.254	11.29	-704.34	SLV 12	-2022.46	-13077.02	0.254	6.47	Si
1.1	0.000942	0.053	0.000942	0.053							-3947.62	SLV 8	-4537.96	-13077.02	0.254	2.88	Si
1.23	0.000942	0.053	0.000942	0.053							-4537.96	SLV 8	-4537.96	-13077.02	0.254	2.88	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	5117.87	SLD 4	3864.78	13077.02	0.254	3.38							Si
0.23	0.000942	0.053	0.000942	0.053	2782.64	SLD 4	2782.64	13077.02	0.254	4.7							Si
0.61	0.000942	0.053	0.000942	0.053	-293.11	SLD 5	934.21	13077.02	0.254	14	-543.43	SLD 12	-1674.07	-13077.02	0.254	7.81	Si
1.23	0.000942	0.053	0.000942	0.053							-3651.75	SLD 8	-3651.75	-13077.02	0.254	3.58	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0.000942	0	-14938	SLU 83	-14938	-9278	-63019	-18741	-18741	1	1.25	Si
0.23	0.0000134	0.000942	0	-12791	SLU 83	-12791	-9278	-63019	-18741	-18741	1	1.47	Si
0.61	0.0000134	0.000942	0	-9119	SLU 83	-9119	-9278	-63019	-18741	-18741	1	2.06	Si
1.23	0.0000101	0.000942	0	-3393	SLU 83	-3393	-9278	-63019	-14132	-14132	1	4.16	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0.000942	0	-12800	SLV 4	-12800	-9278	-63019	-18741	-18741	1	1.46	Si
0.23	0.0000134	0.000942	0	-11073	SLV 4	-11073	-9278	-63019	-18741	-18741	1	1.69	Si
0.61	0.0000134	0.000942	0	-8450	SLV 8	-8450	-9278	-63019	-18741	-18741	1	2.22	Si
1.23	0.0000101	0.000942	0	-4459	SLV 8	-4459	-9278	-63019	-14132	-14132	1	3.17	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0.000942	0	-11179	SLD 4	-11179	-9278	-63019	-18741	-18741	1	1.68	Si
0.23	0.0000134	0.000942	0	-9622	SLD 8	-9622	-9278	-63019	-18741	-18741	1	1.95	Si
0.61	0.0000134	0.000942	0	-7106	SLD 8	-7106	-9278	-63019	-18741	-18741	1	2.64	Si
1.23	0.0000101	0.000942	0	-3211	SLD 8	-3211	-9278	-63019	-14132	-14132	1	4.4	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	4957.67	20	3724.93	180887	1494000	2713299	36000000	4487.62	2	3368.72	163589	1120500			Si
0.23	2668.36	21	2668.36	129579	1494000	1943678	36000000	2409.8	2	2409.8	117022	1120500			Si
0.61	-448.63	20	-1532.55	74422	1494000	1116335	36000000	-418.27	2	-1401.32	68050	1120500			Si
1.23	-3255.68	20	-3255.68	158099	1494000	2371487	36000000	-2962.61	2	-2962.61	143868	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Campata 4 tra i fili 52 - 52, sezione R 50x45, asta 361

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	1084.68	SLU 83	1084.68	13658.02	0.143	12.59	582.85	SLU 2	-1283.57	-13658.02	0.143	10.64	Si
0.51	0.000942	0.053	0.000942	0.053							-4925.6	SLU 84	-6455.8	-13658.02	0.143	2.12	Si
0.8	0.000942	0.053	0.000942	0.053							-7245.18	SLU 83	-7245.18	-13658.02	0.143	1.89	Si

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
1.02	0.000942	0.053	0.000942	0.053							-8530.58	SLU 83	-8004.91	-13658.02	0.143	1.71	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	1656.58	SLV 12	1656.58	13077.02	0.254	7.89	-306.85	SLV 5	-1754.68	-13077.02	0.254	7.45	Si
0.51	0.000942	0.053	0.000942	0.053							-4547.69	SLV 3	-5860.17	-13077.02	0.254	2.23	Si
0.8	0.000942	0.053	0.000942	0.053							-6554.58	SLV 4	-6554.58	-13077.02	0.254	2	Si
1.02	0.000942	0.053	0.000942	0.053							-7702.66	SLV 4	-7231.86	-13077.02	0.254	1.81	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	1102.83	SLD 12	1102.83	13077.02	0.254	11.86	246.89	SLD 5	-1263.02	-13077.02	0.254	10.35	Si
0.51	0.000942	0.053	0.000942	0.053							-3835.29	SLD 3	-4974.22	-13077.02	0.254	2.63	Si
0.8	0.000942	0.053	0.000942	0.053							-5568.26	SLD 4	-5568.26	-13077.02	0.254	2.35	Si
1.02	0.000942	0.053	0.000942	0.053							-6540.31	SLD 4	-6143.25	-13077.02	0.254	2.13	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0.000942	0	-14054	SLU 83	-14054	-9278	-63019	-14132	-14132	1	1.01	Si
0.51	0.0000101	0.000942	0	-9393	SLU 83	-9393	-9278	-63019	-14132	-14132	1	1.5	Si
0.8	0.0000101	0.000942	0	-6753	SLU 83	-6753	-9278	-63019	-14132	-14132	1	2.09	Si
1.02	0.0000101	0.000942	0	-4657	SLU 83	-4657	-9278	-63019	-14132	-14132	1	3.03	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0.000942	0	-12070	SLV 4	-12070	-9278	-63019	-14132	-14132	1	1.17	Si
0.51	0.0000101	0.000942	0	-8373	SLV 8	-8373	-9278	-63019	-14132	-14132	1	1.69	Si
0.8	0.0000101	0.000942	0	-6483	SLV 8	-6483	-9278	-63019	-14132	-14132	1	2.18	Si
1.02	0.0000101	0.000942	0	-4986	SLV 8	-4986	-9278	-63019	-14132	-14132	1	2.83	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0.000942	0	-10499	SLD 4	-10499	-9278	-63019	-14132	-14132	1	1.35	Si
0.51	0.0000101	0.000942	0	-7142	SLD 8	-7142	-9278	-63019	-14132	-14132	1	1.98	Si
0.8	0.0000101	0.000942	0	-5321	SLD 8	-5321	-9278	-63019	-14132	-14132	1	2.66	Si
1.02	0.0000101	0.000942	0	-3875	SLD 8	-3875	-9278	-63019	-14132	-14132	1	3.65	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	779.61	20	779.61	37859	1494000	567879	36000000	674.86	2	674.86	32772	1120500			Si
0.51	-3624.46	21	-4744.14	230380	1494000	3455706	36000000	-3303.52	2	-4312.58	209424	1120500			Si
0.8	-5321.12	20	-5321.12	418885	1494000	15850634	36000000	-4831.19	2	-4831.19	380317	1120500			Si
1.02	-6258.93	20	-5876.15	462578	1494000	17503964	36000000	-5670.9	2	-5329.55	419549	1120500			Si

Verifica di apertura delle fessure

x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
0.8	superiore	0.349	0.00046	0.000161	20	0.349	0.00043	0.00015	6	0.349	0.00042	0.000146	2	Si
1.02	superiore	0.349	0.00051	0.000178	20	0.349	0.00048	0.000166	6	0.349	0.00046	0.000161	2	Si

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 57 - 61, sezione R 50x45, asta 368

Campata 3 tra i fili 61 - 52, sezione R 50x45, aste 367, 366, 365, 364, 363, 362

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1304	SLU 84	0.043	7989	5797	SLU 84	23812	Si
1.29	0.41	0.0005	1294	SLU 84	0.043	7989	5750	SLU 84	23812	Si
2.58	0.41	0.0005	1270	SLU 84	0.043	7989	5646	SLU 84	23812	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	952	SLD 1	0.119	8901	4233	SLD 1	27383	Si
1.29	0.41	0.0005	946	SLD 1	0.119	8901	4206	SLD 1	27383	Si
2.58	0.41	0.0005	936	SLD 4	0.119	8901	4161	SLD 4	27383	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000505	958	SLE RA 21	26543	1494000	329134	36000000	867	SLE QP 2	24031	1120500	Si
1.29	0.41	0.00000505	950	SLE RA 21	26327	1494000	326461	36000000	860	SLE QP 2	23846	1120500	Si
2.58	0.41	0.00000505	933	SLE RA 21	25858	1494000	320640	36000000	846	SLE QP 2	23452	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 52 - 52, sezione R 50x45, asta 361

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.05	0.7	SLU 50	ST	LT	190	-477	-39833	0	-1	19	0	0	1.1	12116	513	23.61	Si

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.05	0.7	SLV 16	SIS	LT	1851	-7581	-26794	4	-16	19	0	0	1.1	8150	7804	1.04	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
368,367,366,365,364,363,362,361	5.05	0.7	SLU 84	ST	BT	2.3	150717	49400	3.05	Si
368,367,366,365,364,363,362,361	5.05	0.7	SLV 16	SIS	LT	2.3	39069	26794	1.46	Si
368,367,366,365,364,363,362,361	5.05	0.7	SLD 16	SIS	LT	2.3	96602	30637	3.15	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-534	-49400	318.07	-660.24	0	-1	-0.01	0.01	0.69	5.03	1084	2060	0	14430	
0	-7581	-26794	3493.78	120.54	0	-16	0	0.13	0.44	5.05	1084	2060	37	0	0.07
0	-3461	-30637	1621.79	-156.39	0	-6	-0.01	0.05	0.59	5.04	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.03	0	0	0.31	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.07	1.07	0.97	1.19	1.31	1	0.53	0.52	0.38	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.09	1.09	0.95	1.19	1.31	1	0.8	0.79	0.71	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

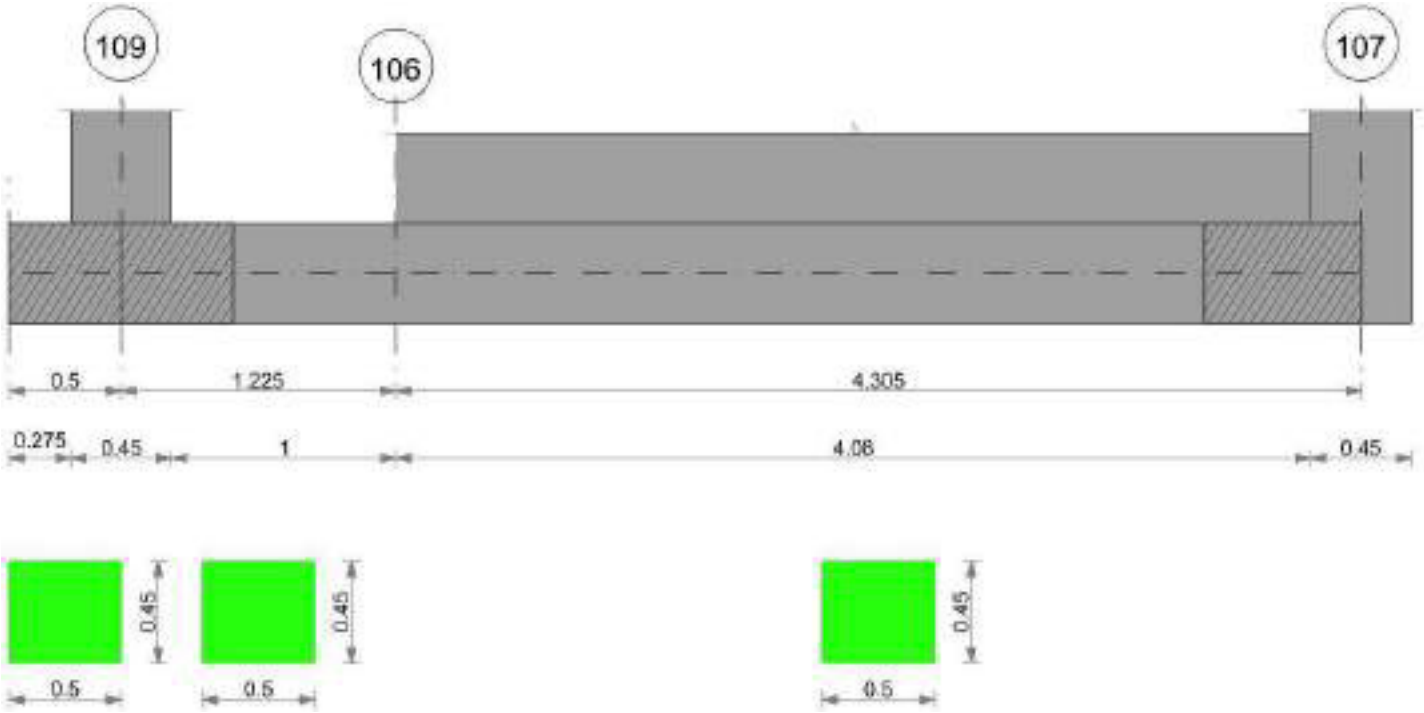
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	611	SLE RA 20	0.05	0.001	611	931	SLE RA 20	0.05	0	751	SLE RA 21	0.0033	0	SLE FR 5	Si
D	0.05	0	611	SLE RA 1	0.05	0	611	611	SLE RA 1	0.05	0	751	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	611	SLE RA 1	0.05	0	611	611	SLE RA 1	0.05	0	751	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.01	751	853	SLE RA 20	0.19	0	751	SLE RA 21	0.1	0	853	SLE FR 5	Si
D	0.19	0	SLE RA 1	0.19	0	611	751	SLE RA 1	0.19	0	611	SLE RA 1	0.1	0	751	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	611	751	SLE RA 1	0.19	0	611	SLE RA 1	0.1	0	751	SLE RA 1	Si

CORDOLO 26

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

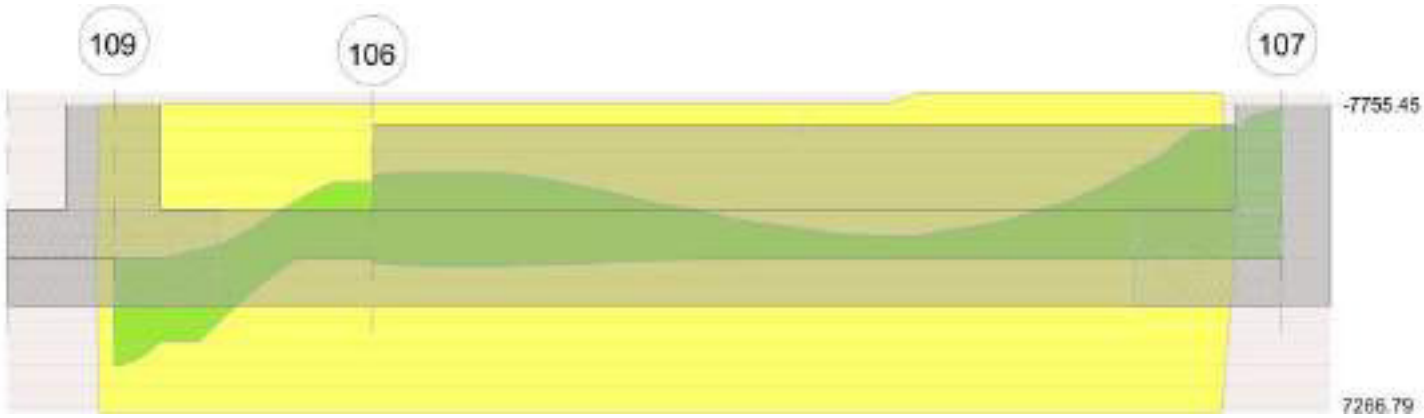
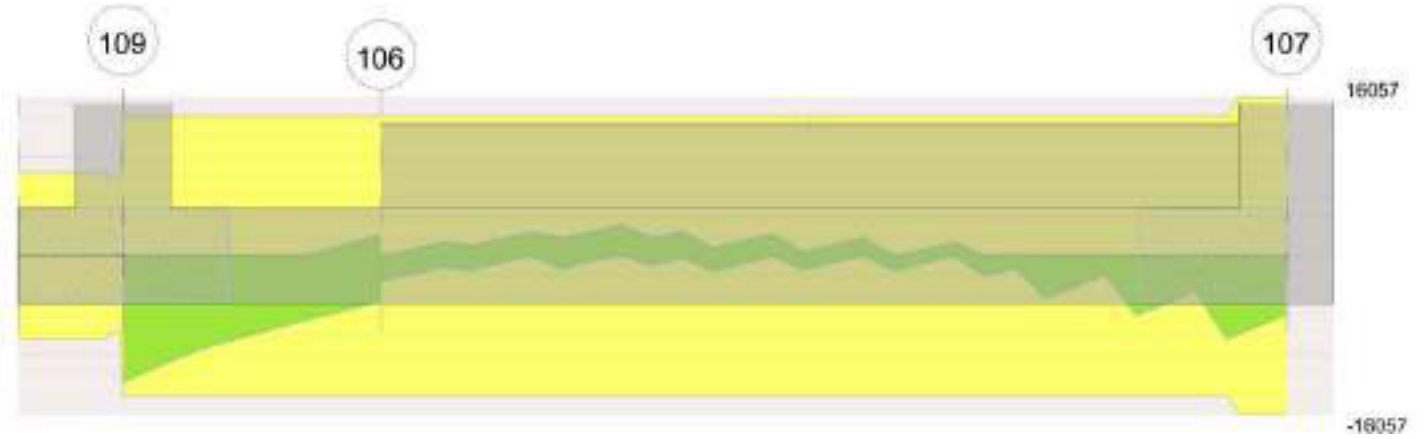


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 109 - 106, sezione R 50x45, asta 391

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	6199.34	SLU 83	4766.48	7755.45	0.113	1.63							Si
0.23	0.000509	0.052	0.000509	0.052	3563	SLU 83	3563	7755.45	0.113	2.18							Si
0.61	0.000509	0.052	0.000509	0.052	104.58	SLU 42	1533.72	7755.45	0.113	5.06	-11.99	SLU 43	-1065.7	-7755.45	0.113	7.28	Si
1.22	0.000509	0.052	0.000509	0.052							-2724.01	SLU 83	-2724.01	-7755.45	0.113	2.85	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	6316.23	SLV 16	5031.59	7266.79	0.197	1.44							Si
0.23	0.000509	0.052	0.000509	0.052	3903.24	SLV 16	3903.24	7266.79	0.197	1.86							Si
0.61	0.000509	0.052	0.000509	0.052	502.35	SLV 15	1955.36	7266.79	0.197	3.72	-451.84	SLV 2	-1146.18	-7266.79	0.197	6.34	Si
1.22	0.000509	0.052	0.000509	0.052							-3589.27	SLV 12	-3589.27	-7266.79	0.197	2.02	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	5026.74	SLD 12	3927.73	7266.79	0.197	1.85							Si
0.23	0.000509	0.052	0.000509	0.052	2990.84	SLD 16	2990.84	7266.79	0.197	2.43							Si
0.61	0.000509	0.052	0.000509	0.052	227.75	SLD 15	1392.35	7266.79	0.197	5.22	-177.25	SLD 2	-914.59	-7266.79	0.197	7.95	Si
1.22	0.000509	0.052	0.000509	0.052							-2588.18	SLD 12	-2588.18	-7266.79	0.197	2.81	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0.000509	0	-12759	SLU 83	-12759	-7764	-63178	-14201	-14201	1	1.11	Si
0.23	0.0000101	0.000509	0	-10698	SLU 83	-10698	-7764	-63178	-14201	-14201	1	1.33	Si
0.61	0.0000101	0.000509	0	-7234	SLU 83	-7234	-7764	-63178	-14201	-14201	1	1.96	Si
1.22	0.0000101	0.000509	0	-2005	SLU 83	-2005	-7764	-63178	-14201	-14201	1	7.08	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0.000509	0	-11719	SLV 12	-11719	-7764	-63178	-14201	-14201	1	1.21	Si
0.23	0.0000101	0.000509	0	-10312	SLV 12	-10312	-7764	-63178	-14201	-14201	1	1.38	Si
0.61	0.0000101	0.000509	0	-7991	SLV 12	-7991	-7764	-63178	-14201	-14201	1	1.78	Si
1.22	0.0000101	0.000509	0	2067	SLV 5	2067	7764	63178	14201	14201	1	6.87	Si
1.22	0.0000101	0.000509	0	-4617	SLV 12	-4617	-7764	-63178	-14201	-14201	1	3.08	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0.000509	0	-9869	SLD 12	-9869	-7764	-63178	-14201	-14201	1	1.44	Si
0.23	0.0000101	0.000509	0	-8481	SLD 12	-8481	-7764	-63178	-14201	-14201	1	1.67	Si
0.61	0.0000101	0.000509	0	-6168	SLD 12	-6168	-7764	-63178	-14201	-14201	1	2.3	Si
1.22	0.0000101	0.000509	0	181	SLD 5	181	7764	63178	14201	14201	1	78.48	Si
1.22	0.0000101	0.000509	0	-2730	SLD 12	-2730	-7764	-63178	-14201	-14201	1	5.2	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	4527.81	20	3477.63	183944	1494000	2759157	36000000	4058.31	2	3110.44	164522	1120500			Si
0.23	2596.08	20	2596.08	137316	1494000	2059737	36000000	2315.38	2	2315.38	122468	1120500			Si
0.61	54.61	21	1110.16	58720	1494000	880805	36000000	25.25	2	975.86	51617	1120500			Si
1.22	-1997.56	20	-1997.56	105658	1494000	1584869	36000000	-1813	2	-1813	95896	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 109 - 106, sezione R 50x45, asta 391

Campata 3 tra i fili 106 - 107, sezione R 50x45, aste 390, 389, 388, 387, 386, 385, 384, 383, 382, 381, 380

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1160	SLU 84	0.043	8008	5157	SLU 84	23869	Si
2.15	0.41	0.0005	1092	SLU 84	0.043	8008	4853	SLU 84	23869	Si
4.08	0.41	0.0005	1181	SLU 83	0.043	8008	5251	SLU 83	23869	Si
4.31	0.41	0.0005	1212	SLU 83	0.043	8008	5385	SLU 83	23869	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	790	SLD 5	0.119	8922	3512	SLD 5	27449	Si
2.15	0.41	0.0005	757	SLD 1	0.119	8922	3365	SLD 1	27449	Si
4.08	0.41	0.0005	825	SLD 4	0.119	8922	3665	SLD 4	27449	Si
4.31	0.41	0.0005	848	SLD 4	0.119	8922	3767	SLD 4	27449	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000507	851	SLE RA 21	23594	1494000	292561	36000000	769	SLE QP 2	21307	1120500	Si
2.15	0.41	0.00000507	801	SLE RA 21	22205	1494000	275339	36000000	725	SLE QP 2	20097	1120500	Si
4.08	0.41	0.00000507	868	SLE RA 20	24043	1494000	298130	36000000	788	SLE QP 2	21829	1120500	Si
4.31	0.41	0.00000507	890	SLE RA 20	24663	1494000	305820	36000000	808	SLE QP 2	22400	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.75	0.7	SLU 23	ST	LT	-386	-76	-36030	-1	0	19	0	0	1.1	10959	394	27.84	Si
5.75	0.7	SLV 16	SIS	LT	1522	-8421	-32322	3	-15	19	0	0	1.1	9832	8557	1.15	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
391,390,389,388,387,386,385,384,383,382,381,380	5.75	0.7	SLU 84	ST	BT	2.3	173499	50639	3.43	Si
391,390,389,388,387,386,385,384,383,382,381,380	5.75	0.7	SLV 14	SIS	LT	2.3	50337	32781	1.54	Si
391,390,389,388,387,386,385,384,383,382,381,380	5.75	0.7	SLD 14	SIS	LT	2.3	111075	33704	3.3	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-88	-50639	7.38	-1861.38	0	0	-0.04	0	0.7	5.68	1084	2060	0	14430	
0	-8405	-32781	3794.64	-3520.59	0	-14	-0.11	0.12	0.47	5.54	1084	2060	37	0	0.07
0	-3632	-33704	1627.28	-2161.93	0	-6	-0.06	0.05	0.6	5.63	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.02	0	0	0.31	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.06	1.07	0.97	1.19	1.31	1	0.57	0.56	0.42	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.08	1.08	0.96	1.19	1.31	1	0.8	0.8	0.72	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

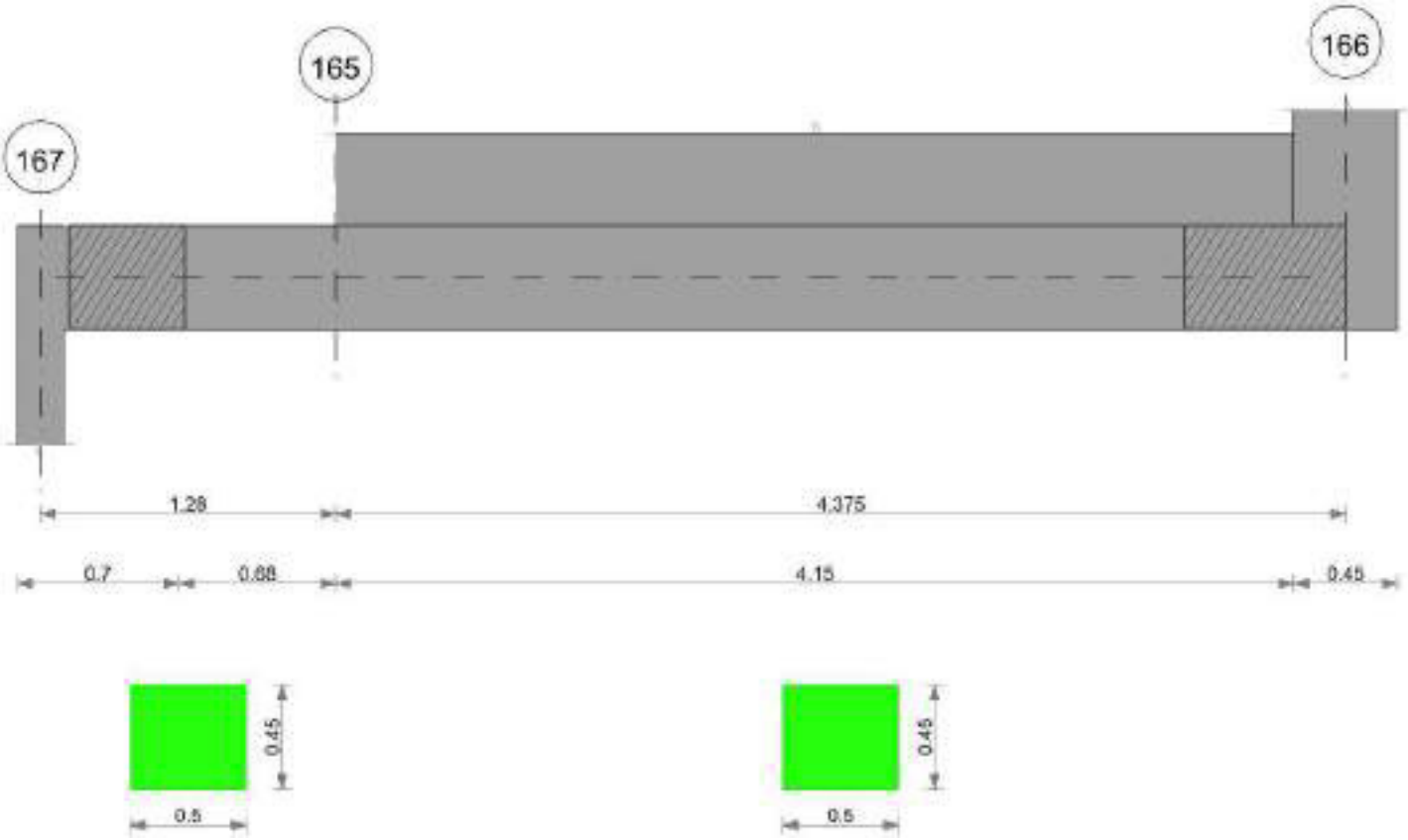
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	Rl adm	Rl	Comb.	
E	0.05	0.002	627	SLE RA 20	0.05	0.001	627	1012	SLE RA 20	0.05	0	754	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	627	SLE RA 1	0.05	0	627	627	SLE RA 1	0.05	0	754	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	627	SLE RA 1	0.05	0	627	627	SLE RA 1	0.05	0	754	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.01	627	754	SLE RA 20	0.19	0	627	SLE RA 1	0.1	0	754	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	627	754	SLE RA 1	0.19	0	627	SLE RA 1	0.1	0	754	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	627	754	SLE RA 1	0.19	0	627	SLE RA 1	0.1	0	754	SLE RA 1	Si

CORDOLO 27

Geometria



Caratteristiche dei materiali

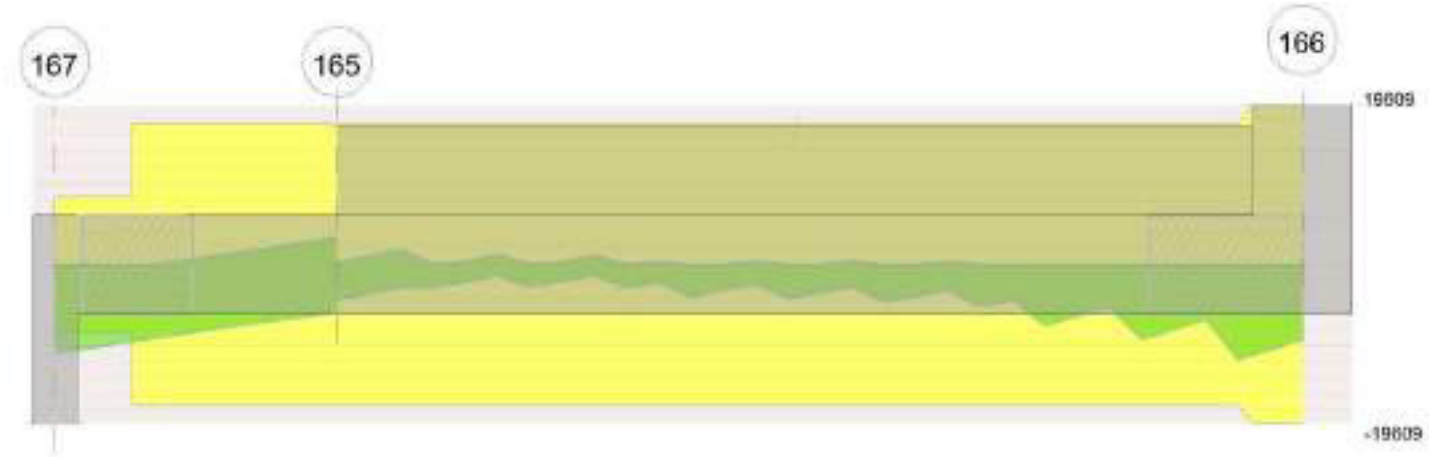
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Campata 1 tra i fili 167 - 165, sezione R 50x45, asta 427

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.64	0.000763	0.052	0.000509	0.052							-2101.36	SLU 83	-2754.13	-11254.02	0.132	4.09	Si
1.28	0.000763	0.052	0.000509	0.052							-3806.75	SLU 83	-3806.75	-11254.02	0.132	2.96	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.64	0.000763	0.052	0.000509	0.052							-2134.6	SLV 11	-3007.06	-10716.86	0.238	3.56	Si
1.28	0.000763	0.052	0.000509	0.052							-5141.08	SLV 7	-5141.08	-10716.86	0.238	2.08	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.64	0.000763	0.052	0.000509	0.052							-1760.3	SLD 11	-2389.85	-10716.86	0.238	4.48	Si
1.28	0.000763	0.052	0.000509	0.052							-3725.61	SLD 7	-3725.61	-10716.86	0.238	2.88	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0	0	-9645	SLU 83	-9645	-8455	-71432	0	-8455	1	0.88	Si
0.64	0.0000124	0	0	-5690	SLU 83	-5690	-7764	-63178	-17343	-17343	1	3.05	Si
1.28	0.0000124	0.000763	0	-1913	SLU 56	-1913	-8659	-63178	-17343	-17343	1	9.06	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0	0	-10990	SLV 7	-10990	-8455	-71432	0	-8455	1	0.77	Si
0.64	0.0000124	0	0	708	SLV 10	708	7764	63178	17343	17343	1	24.5	Si
0.64	0.0000124	0	0	-8359	SLV 7	-8359	-7764	-63178	-17343	-17343	1	2.07	Si
1.28	0.0000124	0.000763	0	3341	SLV 10	3341	8659	63178	17343	17343	1	5.19	Si
1.28	0.0000124	0.000763	0	-5903	SLV 7	-5903	-8659	-63178	-17343	-17343	1	2.94	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0	0	-8442	SLD 7	-8442	-8455	-71432	0	-8455	1	1	Si
0.1	0	0	0	-8022	SLD 7	-8022	-8455	-71432	0	-8455	1	1.05	Si
0.64	0.0000124	0	0	-5809	SLD 7	-5809	-7764	-63178	-17343	-17343	1	2.99	Si
1.28	0.0000124	0.000763	0	741	SLD 10	741	8659	63178	17343	17343	1	23.41	Si
1.28	0.0000124	0.000763	0	-3302	SLD 7	-3302	-8659	-63178	-17343	-17343	1	5.25	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	1001.38	20	847.6	50228	1494000	0	36000000	855.37	2	716.11	42436	1120500			Si
0.1	513.95	20	513.95	30456	1494000	0	36000000	414	2	414	24533	1120500			Si
0.64	-1565	20	-2050.4	106930	1494000	1565835	36000000	-1468.07	2	-1907.39	99472	1120500			Si
1.28	-2838.5	20	-2838.5	148030	1494000	2167687	36000000	-2620.47	2	-2620.47	136660	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 167 - 165, sezione R 50x45, asta 427

Campata 2 tra i fili 165 - 166, sezione R 50x45, aste 426, 425, 424, 423, 422, 421, 420, 419, 418, 417, 416

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1164	SLU 84	0.052	9742	5173	SLU 84	29149	Si
2.19	0.41	0.0006	1128	SLU 84	0.052	9742	5011	SLU 84	29149	Si
4.15	0.41	0.0006	1193	SLU 83	0.052	9742	5304	SLU 83	29149	Si

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
4.38	0.41	0.0006	1221	SLU 83	0.052	9742	5427	SLU 83	29149	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	794	SLD 14	0.132	10839	3528	SLD 14	33522	Si
2.19	0.41	0.0006	784	SLD 14	0.132	10839	3484	SLD 14	33522	Si
4.15	0.41	0.0006	844	SLD 16	0.132	10839	3749	SLD 16	33522	Si
4.38	0.41	0.0006	865	SLD 15	0.132	10839	3846	SLD 15	33522	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000619	854	SLE RA 21	23324	1494000	289221	36000000	770	SLE QP 2	21024	1120500	Si
2.19	0.41	0.00000619	827	SLE RA 21	22586	1494000	280072	36000000	746	SLE QP 2	20390	1120500	Si
4.15	0.41	0.00000619	876	SLE RA 20	23941	1494000	296869	36000000	795	SLE QP 2	21719	1120500	Si
4.38	0.41	0.00000619	897	SLE RA 20	24499	1494000	303784	36000000	814	SLE QP 2	22238	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	γR	Rd	Ed	Rd/Ed	Verifica
5.98	0.7	SLU 23	ST	LT	-353	254	-34691	-1	0	19	0	0	1.1	10552	434	24.29	Si
5.98	0.7	SLV 1	SIS	LT	-1300	8260	-30557	-2	15	19	0	0	1.1	9295	8361	1.11	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
427,426,425,424,423,422,421,420,419,418,417,416	5.98	0.7	SLU 84	ST	BT	2.3	179850	48861	3.68	Si
427,426,425,424,423,422,421,420,419,418,417,416	5.98	0.7	SLV 1	SIS	LT	2.3	48657	30557	1.59	Si
427,426,425,424,423,422,421,420,419,418,417,416	5.98	0.7	SLD 1	SIS	LT	2.3	112367	32016	3.51	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	358	-48861	-159.02	-600.68	0	0	-0.01	0	0.69	5.96	1084	2060	0	14430	
0	8260	-30557	-3760.02	-2154.62	0	15	-0.07	-0.12	0.45	5.84	1084	2060	37	0	0.07
0	3671	-32016	-1669.25	-1108.5	0	7	-0.03	-0.05	0.6	5.91	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.02	0	0	0.31	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.06	1.06	0.97	1.19	1.31	1	0.54	0.53	0.4	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.08	1.08	0.96	1.19	1.31	1	0.79	0.79	0.7	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

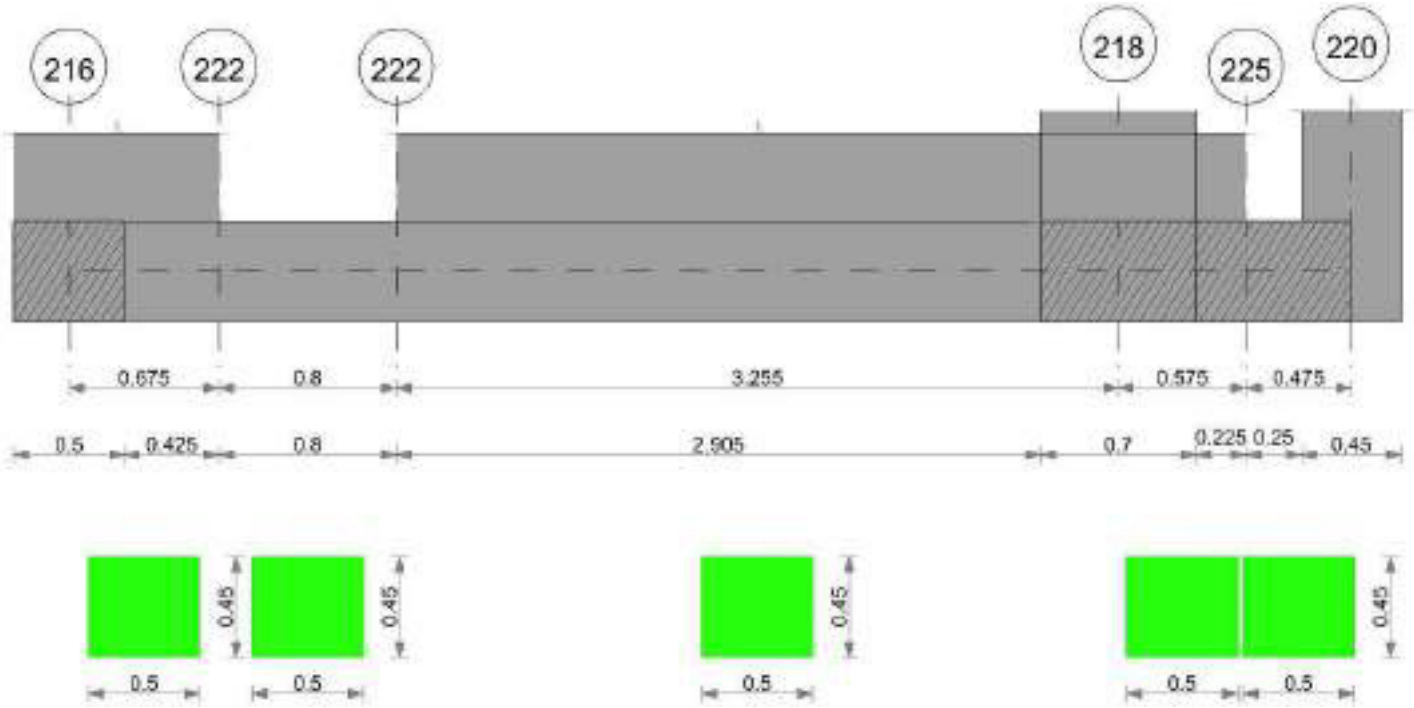
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	712	SLE RA 20	0.05	0.002	712	1027	SLE RA 20	0.05	0	744	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	712	SLE RA 1	0.05	0	712	712	SLE RA 1	0.05	0	744	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	712	SLE RA 1	0.05	0	712	712	SLE RA 1	0.05	0	744	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 20	0.19	0.04	712	744	SLE RA 20	0.19	0	712	SLE RA 1	0.1	0.02	744	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	712	744	SLE RA 1	0.19	0	712	SLE RA 1	0.1	0	744	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	712	744	SLE RA 1	0.19	0	712	SLE RA 1	0.1	0	744	SLE RA 1	Si

CORDOLO 28

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

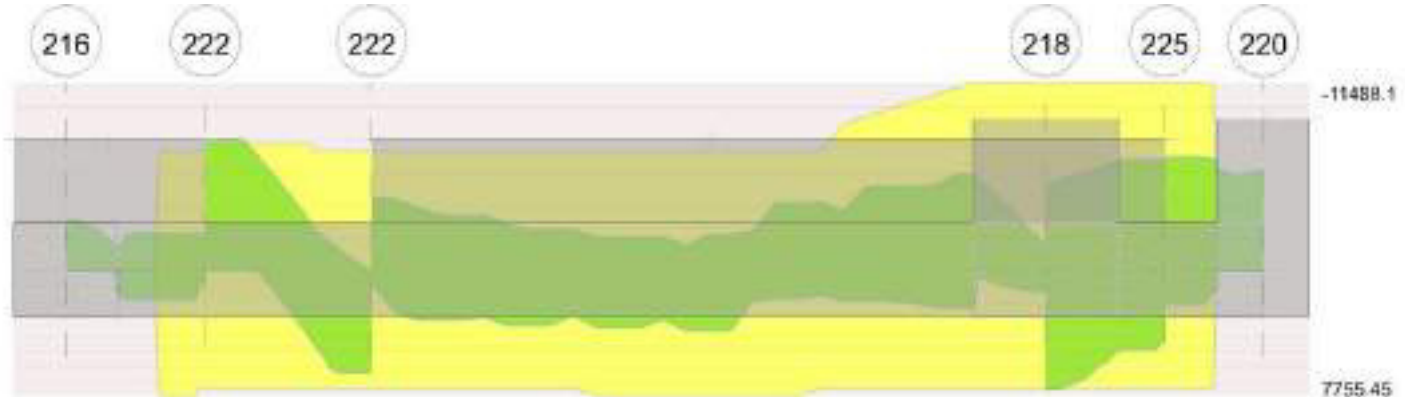
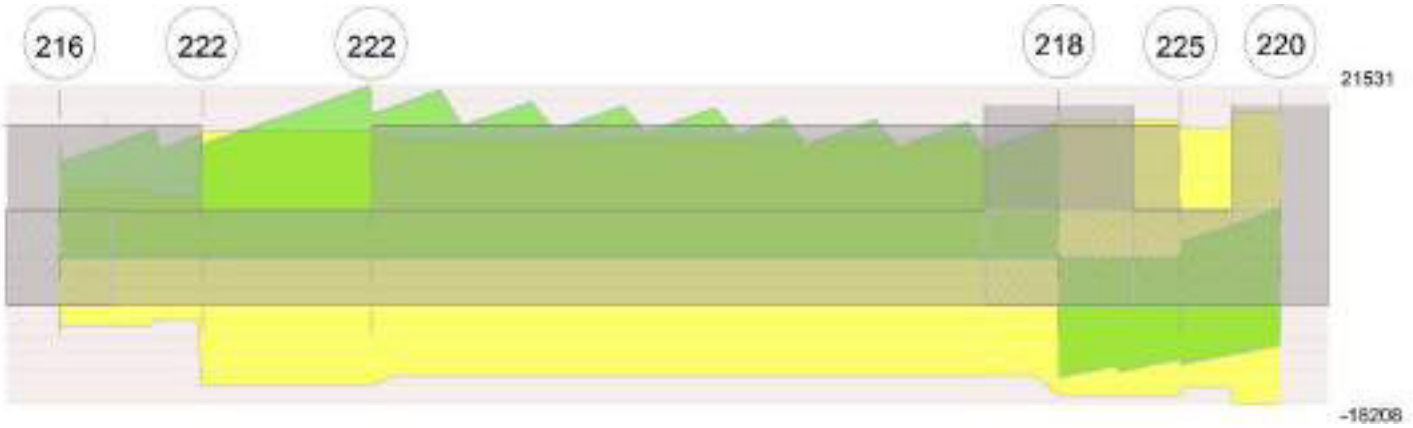


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 222 - 222, sezione R 50x45, asta 317

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.4	0.000509	0.052	0.000509	0.052	-1022.19	SLU 2	1713.25	7755.45	0.113	4.53	-1639.66	SLU 83	-4684.39	-7755.45	0.113	1.66	Si
0.8	0.000509	0.052	0.000509	0.052	6232.11	SLU 84	6232.11	7755.45	0.113	1.24							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052							-7251.65	SLV 14	-7251.65	-7266.79	0.197	1	Si
0.05	0.000509	0.052	0.000509	0.052							-6513.62	SLV 16	-7251.65	-7266.79	0.197	1	Si
0.4	0.000509	0.052	0.000509	0.052	-307.98	SLV 6	2456.29	7266.79	0.197	2.96	-1912.13	SLV 11	-4175.23	-7266.79	0.197	1.74	Si
0.8	0.000509	0.052	0.000509	0.052	6304.08	SLV 10	6304.08	7266.79	0.197	1.15							Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052							-6180.83	SLD 14	-6180.83	-7266.79	0.197	1.18	Si
0.05	0.000509	0.052	0.000509	0.052							-5571.77	SLD 16	-6180.83	-7266.79	0.197	1.18	Si
0.4	0.000509	0.052	0.000509	0.052	-757.31	SLD 6	1712.39	7266.79	0.197	4.24	-1462.79	SLD 11	-3588.94	-7266.79	0.197	2.02	Si
0.8	0.000509	0.052	0.000509	0.052	5095.65	SLD 10	5095.65	7266.79	0.197	1.43							Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000113	0.000509	0	14115	SLU 84	14115	7764	63178	15852	15852	1	1.12	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000113	0.000509	0	13923	SLV 14	13923	7764	63178	15852	15852	1	1.14	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000113	0.000509	0	11365	SLD 14	11365	7764	63178	15852	15852	1	1.39	Si
0.4	0.0000113	0.000509	0	13994	SLD 14	13994	7764	63178	15852	15852	1	1.13	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-5899.14	21	-5899.14	623855	1494000	31750908	36000000	-5384.75	2	-5384.75	569457	1120500			Si
0.4	-1209.98	20	-3448.64	182410	1494000	2736154	36000000	-1110.05	2	-3150.59	166645	1120500			Si
0.8	4577.48	21	4577.48	242119	1494000	3631784	36000000	4156.76	2	4156.76	219865	1120500			Si

Campata 5 tra i fili 225 - 220, sezione R 50x45, asta 306

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000823	0.052	0.000509	0.052							-3551.24	SLU 84	-4911.75	-12059.84	0.137	2.46	Si
0.24	0.000823	0.052	0.000509	0.052							-5280.52	SLU 84	-5355.24	-12059.84	0.137	2.25	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000823	0.052	0.000509	0.052	2130.33	SLV 3	2130.33	7261.11	0.193	3.41	-6915.14	SLV 14	-6915.14	-11488.1	0.247	1.66	Si
0.24	0.000823	0.052	0.000509	0.052	-862.76	SLV 3	1371.93	7261.11	0.193	5.29	-6227.12	SLV 14	-6790.4	-11488.1	0.247	1.69	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000823	0.052	0.000509	0.052							-4327.53	SLD 14	-4641.68	-11488.1	0.247	2.47	Si
0.24	0.000823	0.052	0.000509	0.052							-4691.8	SLD 14	-4699.15	-11488.1	0.247	2.44	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000122	0	0	-8507	SLU 83	-8507	-7759	-63117	-17138	-17138	1	2.01	Si
0.02	0.0000115	0	0	-8345	SLU 83	-8345	-7759	-63117	-16088	-16088	1	1.93	Si
0.24	0.0000115	0	0	-6069	SLU 83	-6069	-7759	-63117	-16088	-16088	1	2.65	Si
0.25	0.0000115	0	0	-5940	SLU 83	-5940	-8455	-71432	-18208	-18208	1	3.07	Si
0.48	0.0000115	0	0	-3592	SLU 83	-3592	-8455	-71432	-18208	-18208	1	5.07	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000122	0	0	1941	SLV 14	1941	7759	63117	17138	17138	1	8.83	Si
0	0.0000122	0	0	-13279	SLV 3	-13279	-7764	-63178	-17154	-17154	1	1.29	Si
0.02	0.0000115	0	0	2076	SLV 14	2076	7759	63117	16088	16088	1	7.75	Si
0.02	0.0000115	0	0	-13197	SLV 3	-13197	-7764	-63178	-16104	-16104	1	1.22	Si
0.24	0.0000115	0	0	3999	SLV 14	3999	7759	63117	16088	16088	1	4.02	Si
0.24	0.0000115	0	0	-12064	SLV 3	-12064	-7759	-63117	-16088	-16088	1	1.33	Si
0.25	0.0000115	0	0	4109	SLV 14	4109	8455	71432	18208	18208	1	4.43	Si
0.25	0.0000115	0	0	-12001	SLV 3	-12001	-8455	-71432	-18208	-18208	1	1.52	Si
0.48	0.0000115	0	0	6141	SLV 14	6141	8455	71432	18208	18208	1	2.96	Si
0.48	0.0000115	0	0	-10879	SLV 3	-10879	-8455	-71432	-18208	-18208	1	1.67	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000122	0	0	-8928	SLD 3	-8928	-7759	-63117	-17138	-17138	1	1.92	Si
0.02	0.0000115	0	0	-8831	SLD 3	-8831	-7759	-63117	-16088	-16088	1	1.82	Si
0.24	0.0000115	0	0	-7471	SLD 3	-7471	-7759	-63117	-16088	-16088	1	2.15	Si
0.25	0.0000115	0	0	-7395	SLD 3	-7395	-8455	-71432	-18208	-18208	1	2.46	Si
0.48	0.0000115	0	0	1274	SLD 14	1274	8455	71432	18208	18208	1	14.29	Si
0.48	0.0000115	0	0	-6012	SLD 3	-6012	-8455	-71432	-18208	-18208	1	3.03	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-2614.53	21	-3614.86	187972	1494000	2737858	36000000	-2392.4	2	-3299.42	171569	1120500			Si
0.24	-3885.94	21	-3940.87	204924	1494000	2984774	36000000	-3544.94	2	-3594.66	186921	1120500			Si
0.25	-3940.87	21	-3940.87	-233533	1494000	0	36000000	-3594.66	2	-3594.66	-213017	1120500			Si

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 216 - 222, sezione R 50x45, aste 319, 318

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1301	SLU 83	0.02	3468	5784	SLU 83	15877	Si
0.25	0.41	0.0002	1296	SLU 84	0.02	3468	5761	SLU 84	15877	Si
0.34	0.41	0.0002	1295	SLU 84	0.02	3468	5756	SLU 84	15877	Si
0.68	0.41	0.0006	1290	SLU 84	0.048	8921	5734	SLU 84	26644	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	928	SLD 15	0.079	3893	4123	SLD 15	15877	Si
0.25	0.41	0.0002	923	SLD 15	0.079	3893	4102	SLD 15	15877	Si
0.34	0.41	0.0002	922	SLD 15	0.079	3893	4097	SLD 15	15877	Si
0.68	0.41	0.0006	918	SLD 15	0.126	9932	4080	SLD 15	30641	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000217	956	SLE RA 20	27514	1494000	341179	36000000	867	SLE QP 2	24944	1120500	Si
0.25	0.41	0.00000217	952	SLE RA 21	27403	1494000	339800	36000000	863	SLE QP 2	24842	1120500	Si
0.34	0.41	0.00000217	951	SLE RA 21	27376	1494000	339462	36000000	862	SLE QP 2	24817	1120500	Si
0.68	0.41	0.00000565	948	SLE RA 21	26069	1494000	323258	36000000	859	SLE QP 2	23631	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 2 tra i fili 222 - 222, sezione R 50x45, asta 317

Campata 3 tra i fili 222 - 218, sezione R 50x45, aste 316, 315, 314, 313, 312, 311, 310, 309

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1311	SLU 84	0.048	8921	5826	SLU 84	26644	Si
1.63	0.41	0.0005	1344	SLU 84	0.044	8295	5975	SLU 84	24739	Si
2.91	0.41	0.0005	1377	SLU 83	0.044	8295	6118	SLU 83	24739	Si
3.26	0.41	0.0006	1397	SLU 83	0.052	9638	6208	SLU 83	28832	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	937	SLD 14	0.126	9932	4164	SLD 14	30641	Si
1.63	0.41	0.0005	963	SLD 15	0.122	9239	4279	SLD 15	28449	Si
2.91	0.41	0.0005	999	SLD 15	0.122	9239	4441	SLD 15	28449	Si
3.26	0.41	0.0006	1022	SLD 15	0.131	10725	4543	SLD 15	33157	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000565	963	SLE RA 21	26484	1494000	328405	36000000	873	SLE QP 2	24010	1120500	Si
1.63	0.41	0.00000525	988	SLE RA 21	27306	1494000	338599	36000000	896	SLE QP 2	24774	1120500	Si
2.91	0.41	0.00000525	1012	SLE RA 20	27968	1494000	346799	36000000	919	SLE QP 2	25400	1120500	Si
3.26	0.41	0.00000612	1027	SLE RA 20	28069	1494000	348050	36000000	933	SLE QP 2	25502	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 218 - 225, sezione R 50x45, aste 308, 307

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1397	SLU 83	0.052	9638	6208	SLU 83	28832	Si
0.29	0.41	0.0006	1414	SLU 83	0.052	9638	6284	SLU 83	28832	Si
0.35	0.41	0.0006	1418	SLU 83	0.052	9638	6301	SLU 83	28832	Si
0.57	0.41	0.0006	1433	SLU 83	0.052	9638	6367	SLU 83	28832	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1022	SLD 15	0.131	10725	4543	SLD 15	33157	Si
0.29	0.41	0.0006	1043	SLD 15	0.131	10725	4637	SLD 15	33157	Si
0.35	0.41	0.0006	1048	SLD 15	0.131	10725	4660	SLD 15	33157	Si
0.57	0.41	0.0006	1069	SLD 15	0.131	10725	4753	SLD 15	33157	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000612	1027	SLE RA 20	28069	1494000	348050	36000000	933	SLE QP 2	25502	1120500	Si
0.29	0.41	0.00000612	1039	SLE RA 20	28419	1494000	352392	36000000	945	SLE QP 2	25829	1120500	Si
0.35	0.41	0.00000612	1042	SLE RA 20	28494	1494000	353328	36000000	947	SLE QP 2	25899	1120500	Si
0.57	0.41	0.00000612	1053	SLE RA 20	28796	1494000	357068	36000000	958	SLE QP 2	26181	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 5 tra i fili 225 - 220, sezione R 50x45, asta 306

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	γR	Rd	Ed	Rd/Ed	Verifica
6.26	0.7	SLU 50	ST	LT	25	825	-49511	0	1	19	0	0	1.1	15060	826	18.24	Si
6.26	0.7	SLV 1	SIS	LT	-1507	9182	-34811	-2	15	19	0	0	1.1	10589	9305	1.14	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
319,318,317,316,315,314,313,312,311,310,309,308,307,306	6.26	0.7	SLU 83	ST	BT	2.3	182853	61255	2.99	Si
319,318,317,316,315,314,313,312,311,310,309,308,307,306	6.26	0.7	SLV 1	SIS	LT	2.3	53663	34811	1.54	Si
319,318,317,316,315,314,313,312,311,310,309,308,307,306	6.26	0.7	SLD 3	SIS	LT	2.3	118920	38746	3.07	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	956	-61255	-475.68	3037.12	0	1	0.05	-0.01	0.68	6.16	1084	2060	0	14430	
0	9182	-34811	-4143.22	-1186.64	0	15	-0.03	-0.12	0.46	6.19	1084	2060	37	0	0.07
0	4322	-38746	-1968.67	1497.05	0	6	0.04	-0.05	0.6	6.18	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.02	0	0	0.31	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.06	1.06	0.97	1.19	1.31	1	0.55	0.54	0.41	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.07	1.07	0.96	1.19	1.31	1	0.8	0.79	0.71	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

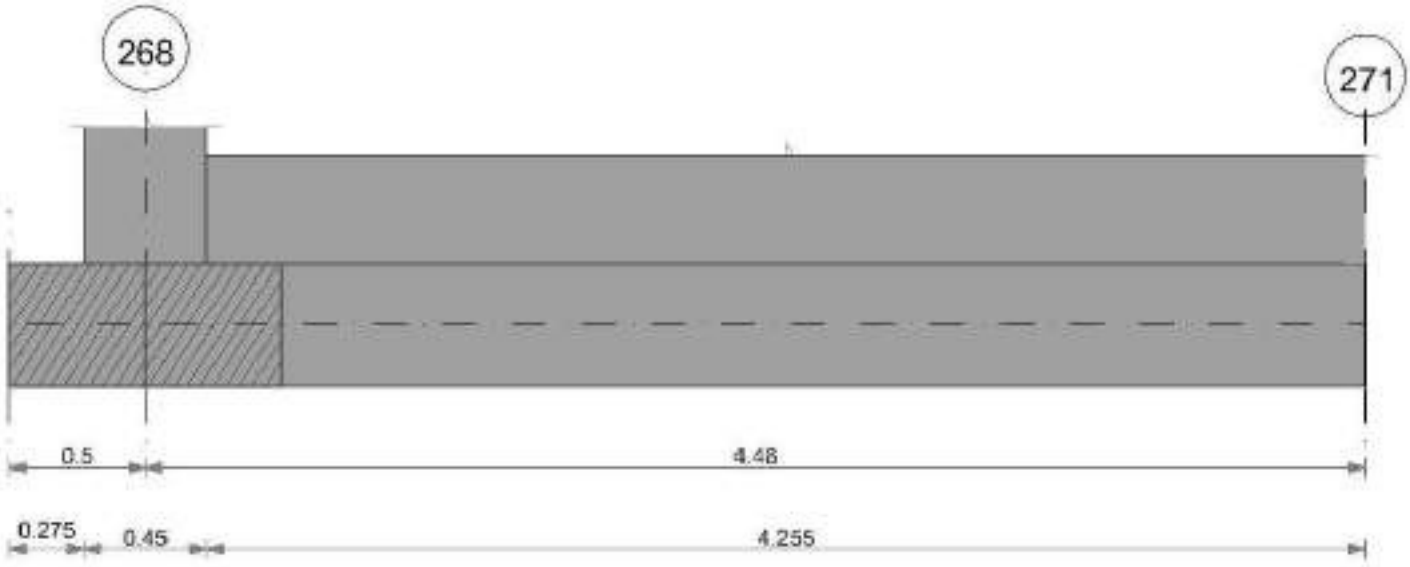
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	573	SLE RA 20	0.05	0.001	573	1040	SLE RA 20	0.05	0	739	SLE RA 21	0.0033	0	SLE RA 2	Si
D	0.05	0	573	SLE RA 1	0.05	0	573	573	SLE RA 1	0.05	0	739	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	573	SLE RA 1	0.05	0	573	573	SLE RA 1	0.05	0	739	SLE RA 1	0.0033	0	SLE RA 1	Si

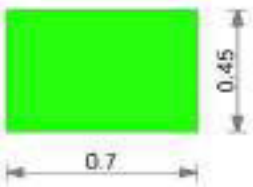
Verifiche geotecniche - Rotazioni assolute e differenziali

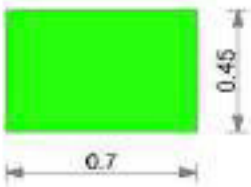
Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.02	891	948	SLE RA 21	0.19	0.01	739	SLE RA 21	0.1	0.01	948	SLE RA 2	Si
D	0.19	0	SLE RA 1	0.19	0	573	739	SLE RA 1	0.19	0	573	SLE RA 1	0.1	0	739	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	573	739	SLE RA 1	0.19	0	573	SLE RA 1	0.1	0	739	SLE RA 1	Si

CORDOLO 29

Geometria







Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

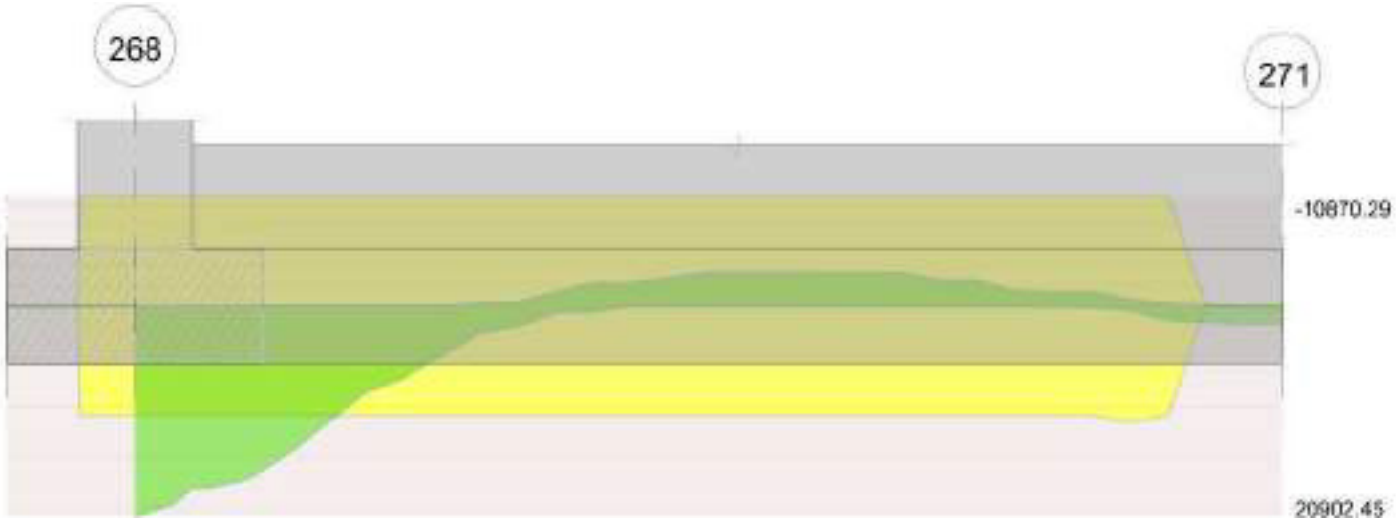
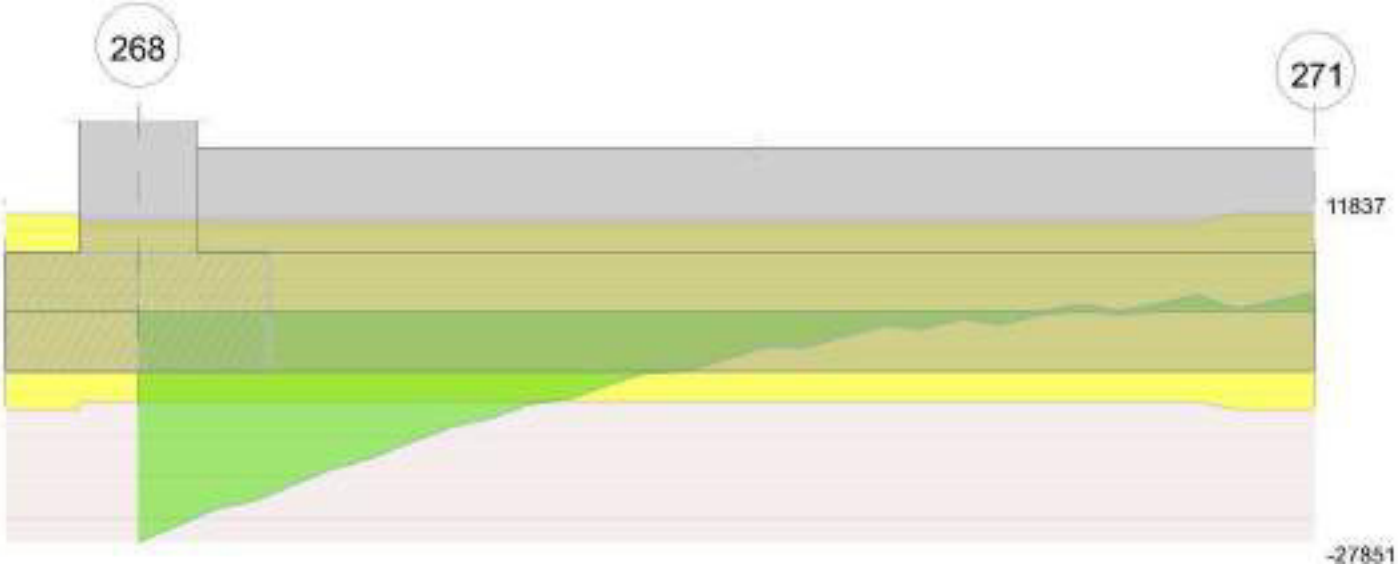


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 268 - 271, sezione R 70x45, aste 608, 607, 606, 605, 604, 603, 602, 601, 600, 599, 598

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2421	SLV 15	0.085	2655	8422	SLV 15	15877	Si
0.23	0.41	0.0002	2409	SLV 13	0.085	2655	8379	SLV 13	15877	Si
2.24	0.41	0.0002	1749	SLV 15	0.085	2655	6114	SLU 84	15877	Si
4.48	0.41	0.0002	1106	SLV 15	0.085	2655	3928	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1962	SLD 15	0.07	3073	6824	SLD 15	15877	Si
0.23	0.41	0.0002	1952	SLD 13	0.07	3073	6790	SLD 13	15877	Si
2.24	0.41	0.0002	1422	SLD 15	0.07	3073	4946	SLD 15	15877	Si
4.48	0.41	0.0002	905	SLD 15	0.07	3073	3149	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000171	1777	SLE RA 21	51439	1494000	637843	36000000	1619	SLE QP 2	46873	1120500	Si
0.23	0.41	0.00000171	1768	SLE RA 21	51192	1494000	634785	36000000	1611	SLE QP 2	46647	1120500	Si
2.24	0.41	0.00000171	1294	SLE RA 21	37452	1494000	464403	36000000	1178	SLE QP 2	34112	1120500	Si
4.48	0.41	0.00000171	831	SLE RA 21	24052	1494000	298244	36000000	756	SLE QP 2	21887	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.48	0.9	SLU 34	ST	LT	-920	673	-40619	-1	1	19	0	0	1.1	12355	1140	10.84	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
608,607,606,605,604,603,602,601,600,599,598	4.48	0.9	SLU 84	ST	BT	2.3	122544	50758	2.41	Si
608,607,606,605,604,603,602,601,600,599,598	4.48	0.9	SLV 14	SIS	LT	2.3	73635	48596	1.52	Si
608,607,606,605,604,603,602,601,600,599,598	4.48	0.9	SLD 14	SIS	LT	2.3	103950	40660	2.56	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	845	-50758	3942.29	-13299.91	0	1	-0.26	0.08	0.74	3.96	1084	2060	0	14430	
0	-5731	-48596	7041.93	-14912.1	0	-7	-0.31	0.14	0.61	3.87	1084	2060	37	0	0.07
0	-2113	-40660	4529.03	-11485.7	0	-3	-0.28	0.11	0.68	3.92	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.24	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.12	1.12	0.94	1.15	1.24	1	0.79	0.79	0.7	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.13	1.13	0.93	1.15	1.24	1	0.91	0.9	0.86	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

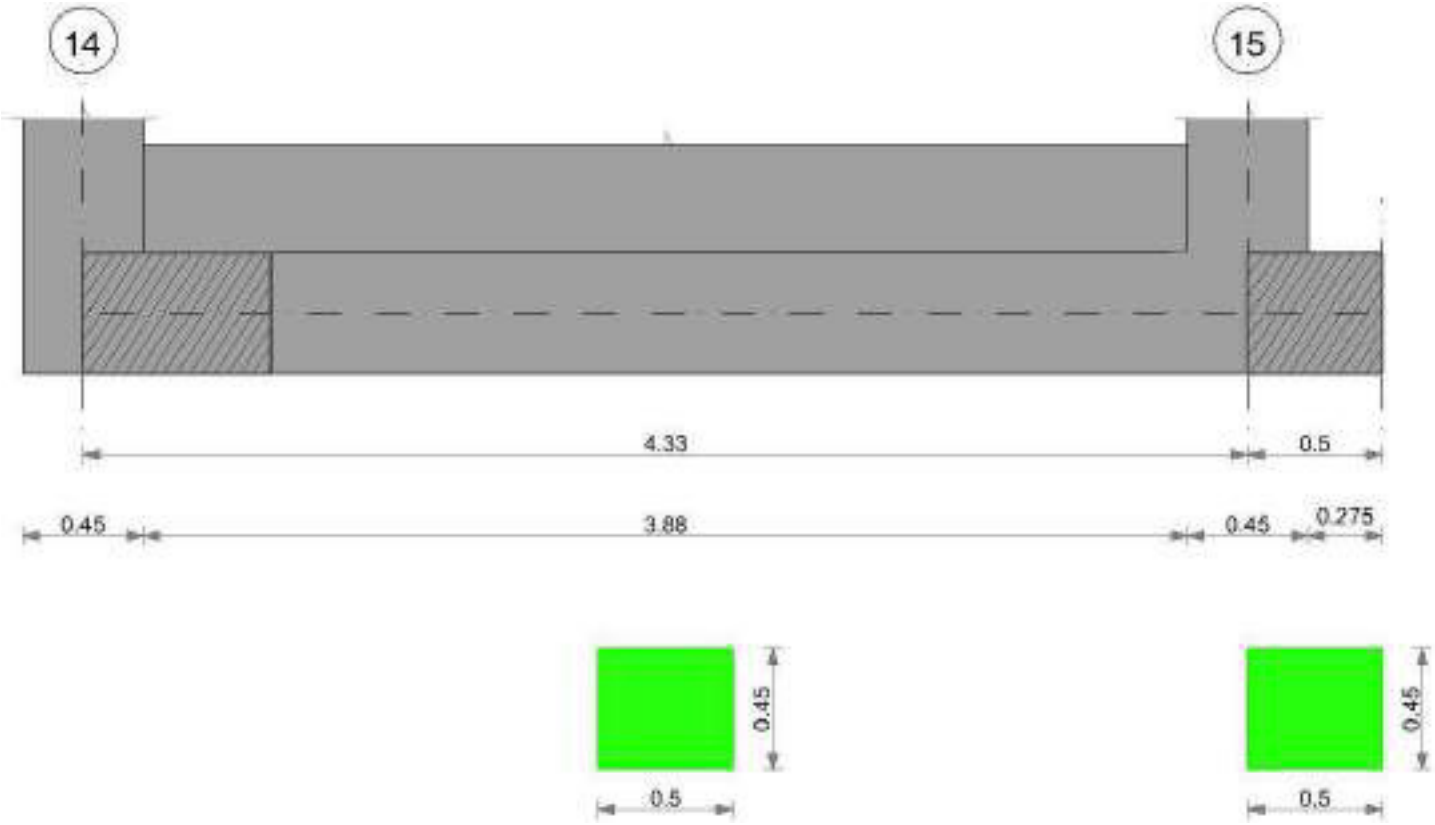
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	671	SLE RA 20	0.05	0	671	905	SLE RA 20	0.05	0	671	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	671	SLE RA 1	0.05	0	671	671	SLE RA 1	0.05	0	671	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	671	SLE RA 1	0.05	0	671	671	SLE RA 1	0.05	0	671	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 20	0.19	0	671	905	SLE RA 20	0.19	0	671	SLE RA 1	0.1	0	671	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	671	905	SLE RA 1	0.19	0	671	SLE RA 1	0.1	0	671	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	671	905	SLE RA 1	0.19	0	671	SLE RA 1	0.1	0	671	SLE RA 1	Si

CORDOLO 30

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

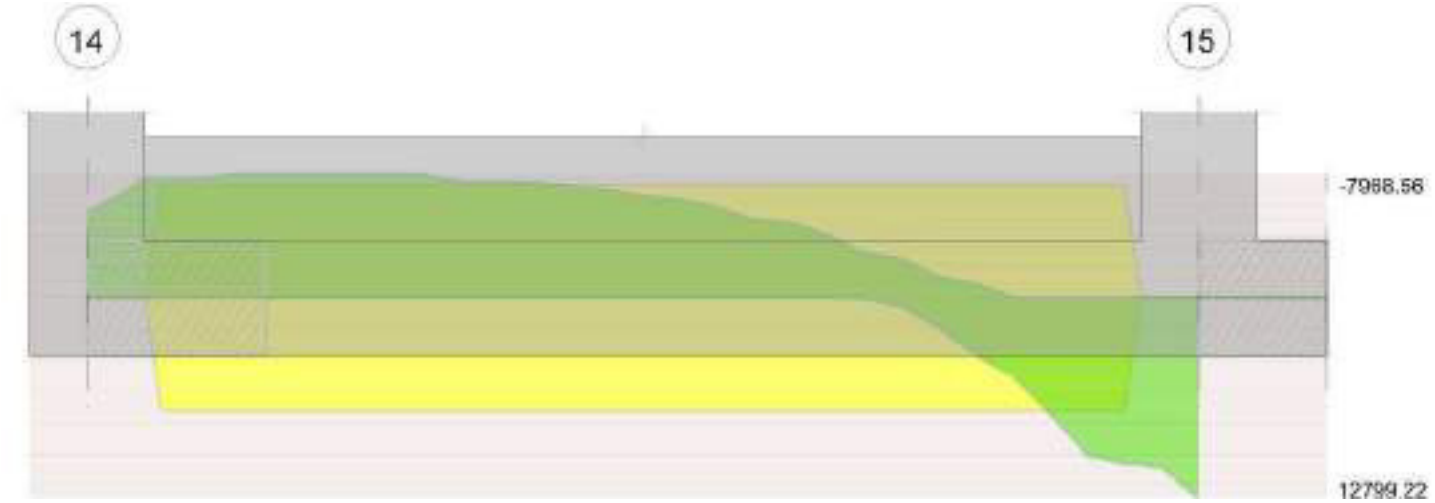


Diagramma verifica stato limite ultimo taglio

Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 14 - 15, sezione R 50x45, aste 787, 786, 785, 784, 783, 782, 781, 780, 779, 778, 777

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1137	SLV 1	0.087	2741	6065	SLV 1	15877	Si
0.23	0.41	0.0002	1084	SLV 1	0.087	2741	5781	SLV 1	15877	Si
2.17	0.41	0.0002	894	SLV 1	0.087	2741	4767	SLV 1	15877	Si
4.11	0.41	0.0002	1041	SLV 4	0.087	2741	5551	SLV 4	15877	Si
4.33	0.41	0.0002	1044	SLV 4	0.087	2741	5567	SLV 4	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	912	SLD 1	0.071	3173	4862	SLD 1	15877	Si
0.23	0.41	0.0002	869	SLD 1	0.071	3173	4634	SLD 1	15877	Si
2.17	0.41	0.0002	717	SLD 1	0.071	3173	3826	SLD 1	15877	Si
4.11	0.41	0.0002	832	SLD 4	0.071	3173	4436	SLD 4	15877	Si
4.33	0.41	0.0002	834	SLD 4	0.071	3173	4448	SLD 4	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000177	815	SLE RA 20	23566	1494000	292215	36000000	743	SLE QP 2	21499	1120500	Si
0.23	0.41	0.00000177	776	SLE RA 20	22462	1494000	278533	36000000	708	SLE QP 2	20489	1120500	Si
2.17	0.41	0.00000177	643	SLE RA 20	18603	1494000	230672	36000000	586	SLE QP 2	16942	1120500	Si
4.11	0.41	0.00000177	743	SLE RA 20	21482	1494000	266375	36000000	676	SLE QP 2	19553	1120500	Si
4.33	0.41	0.00000177	744	SLE RA 21	21531	1494000	266990	36000000	677	SLE QP 2	19598	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.56	0.7	SLU 43	ST	LT	100	-308	-37018	0	0	19	0	0	1.1	11260	324	34.78	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
787,786,785,784,783,782,781,780,779,778,777	4.56	0.7	SLU 83	ST	BT	2.3	127490	46109	2.76	Si
787,786,785,784,783,782,781,780,779,778,777	4.56	0.7	SLV 13	SIS	LT	2.3	23562	17312	1.36	Si
787,786,785,784,783,782,781,780,779,778,777	4.56	0.7	SLD 4	SIS	LT	2.3	93790	37505	2.5	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-336	-46109	-1351.27	-106.55	0	0	0	-0.03	0.64	4.55	1084	2060	0	14430	
0	-6534	-17312	2478.85	-1123.6	0	-21	-0.06	0.14	0.41	4.43	1084	2060	37	0	0.07
0	2436	-37505	-2350.04	346.94	0	4	0.01	-0.06	0.57	4.54	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.03	0	0	0.31	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.07	1.07	0.96	1.19	1.31	1	0.4	0.39	0.25	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.1	1.1	0.95	1.19	1.31	1	0.88	0.88	0.82	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

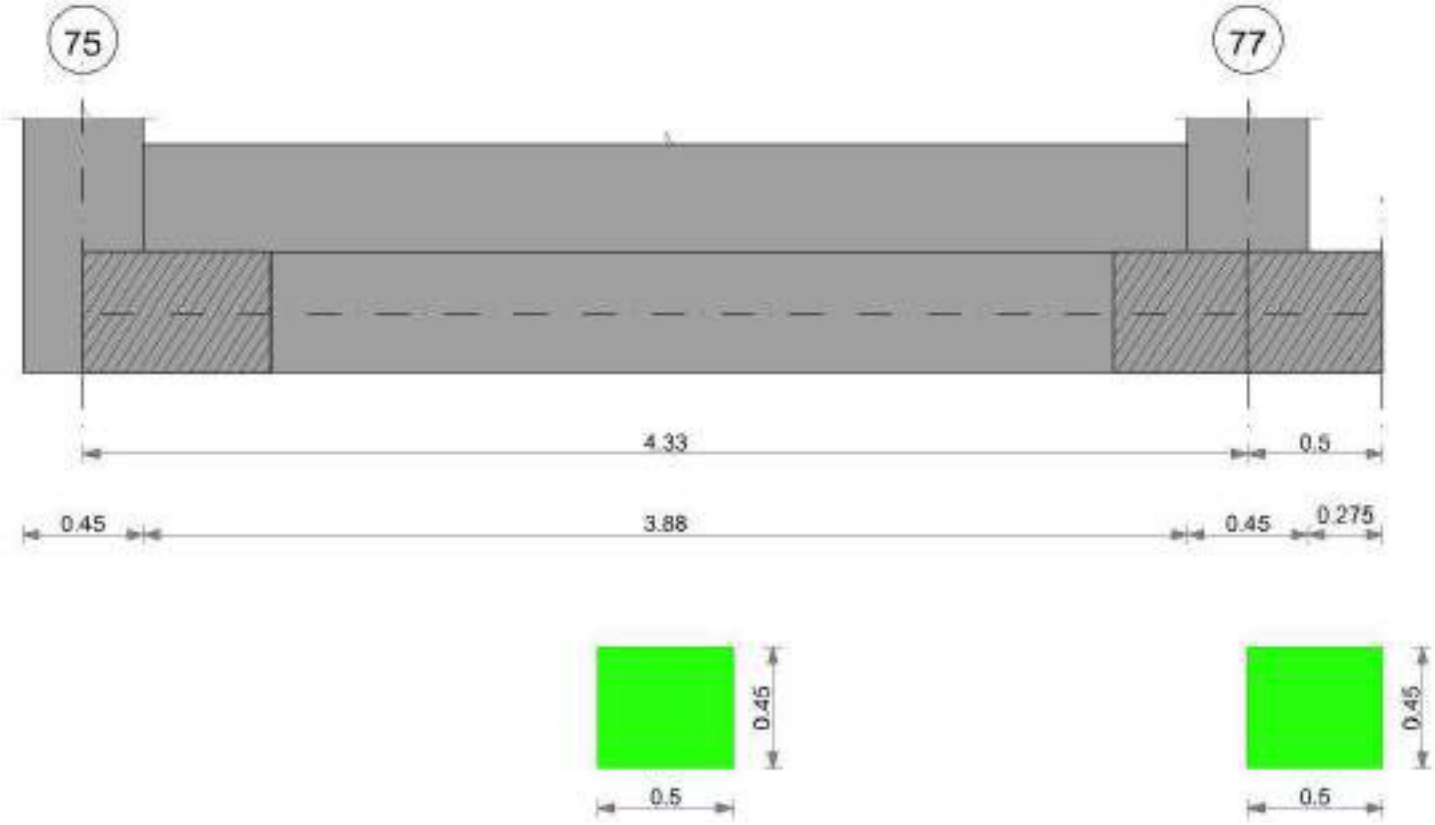
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	Rl adm	Rl	Comb.	
E	0.05	0	597	SLE RA 20	0.05	0	597	256	SLE RA 21	0.05	0	597	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	597	SLE RA 1	0.05	0	597	597	SLE RA 1	0.05	0	597	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	597	SLE RA 1	0.05	0	597	597	SLE RA 1	0.05	0	597	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0	597	256	SLE RA 21	0.19	0	597	SLE RA 1	0.1	0	597	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	597	256	SLE RA 1	0.19	0	597	SLE RA 1	0.1	0	597	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	597	256	SLE RA 1	0.19	0	597	SLE RA 1	0.1	0	597	SLE RA 1	Si

CORDOLO 31

Geometria



Caratteristiche dei materiali

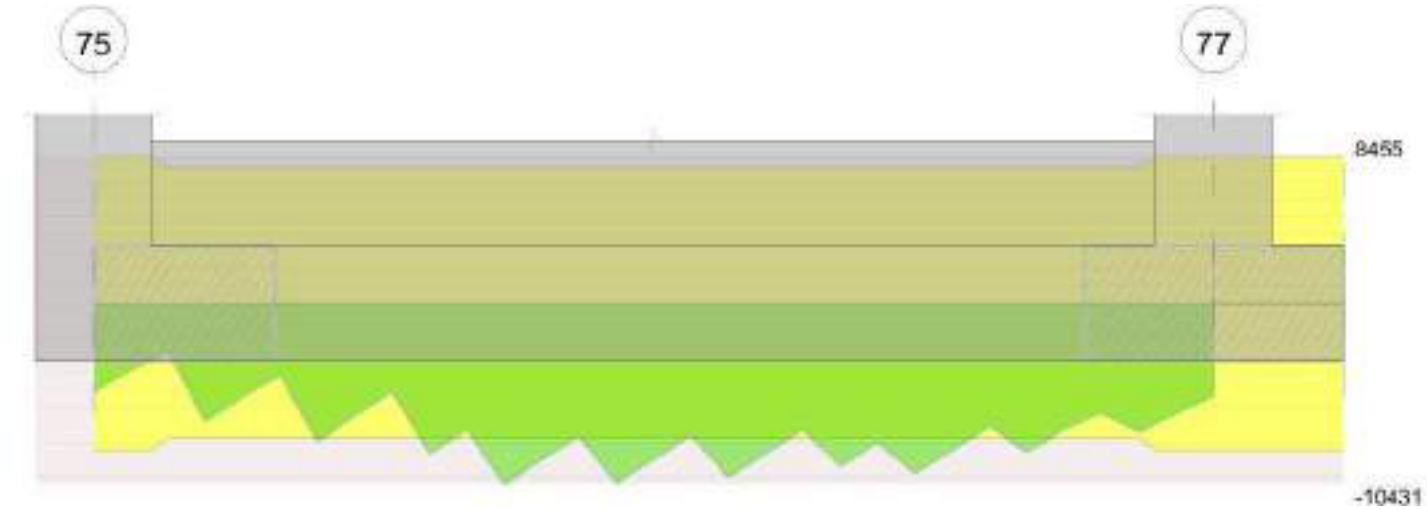
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 75 - 77, sezione R 50x45, aste 735, 734, 733, 732, 731, 730, 729, 728, 727, 726, 725

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1506	SLU 83	0.018	2820	6693	SLU 83	15877	Si
0.23	0.41	0.0002	1473	SLU 83	0.018	2820	6549	SLU 83	15877	Si
2.17	0.41	0.0002	1365	SLU 83	0.018	2820	6069	SLU 83	15877	Si
4.11	0.41	0.0002	1346	SLU 83	0.018	2820	5983	SLU 83	15877	Si
4.33	0.41	0.0002	1341	SLU 83	0.018	2820	5962	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1085	SLD 1	0.071	3173	4823	SLD 1	15877	Si
0.23	0.41	0.0002	1060	SLD 1	0.071	3173	4711	SLD 1	15877	Si
2.17	0.41	0.0002	975	SLD 4	0.071	3173	4334	SLD 4	15877	Si
4.11	0.41	0.0002	958	SLD 4	0.071	3173	4258	SLD 4	15877	Si
4.33	0.41	0.0002	954	SLD 4	0.071	3173	4242	SLD 4	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000177	1109	SLE RA 20	32088	1494000	397892	36000000	1008	SLE QP 2	29169	1120500	Si
0.23	0.41	0.00000177	1085	SLE RA 20	31391	1494000	389247	36000000	986	SLE QP 2	28530	1120500	Si
2.17	0.41	0.00000177	1004	SLE RA 20	29054	1494000	360274	36000000	911	SLE QP 2	26356	1120500	Si
4.11	0.41	0.00000177	989	SLE RA 20	28603	1494000	354678	36000000	895	SLE QP 2	25885	1120500	Si
4.33	0.41	0.00000177	985	SLE RA 20	28498	1494000	353375	36000000	891	SLE QP 2	25785	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.56	0.7	SLU 50	ST	LT	322	-265	-37986	0	0	19	0	0	1.1	11555	417	27.68	Si
4.56	0.7	SLV 13	SIS	LT	-1290	-6611	-27314	-3	-14	19	0	0	1.1	8308	6735	1.23	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
735,734,733,732,731,730,729,728,727,726,725	4.56	0.7	SLU 83	ST	BT	2.3	136482	46865	2.91	Si
735,734,733,732,731,730,729,728,727,726,725	4.56	0.7	SLV 13	SIS	LT	2.3	43754	27314	1.6	Si
735,734,733,732,731,730,729,728,727,726,725	4.56	0.7	SLD 13	SIS	LT	2.3	92340	29893	3.09	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-288	-46865	185.59	-1192.6	0	0	-0.03	0	0.69	4.5	1084	2060	0	14430	
0	-6611	-27314	3045.68	-1451.42	0	-14	-0.05	0.11	0.48	4.45	1084	2060	37	0	0.07
0	-2949	-29893	1378.58	-1121.82	0	-6	-0.04	0.05	0.61	4.48	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.03	0	0	0.31	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.08	1.08	0.96	1.19	1.31	1	0.59	0.58	0.45	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.1	1.1	0.95	1.19	1.31	1	0.82	0.82	0.74	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

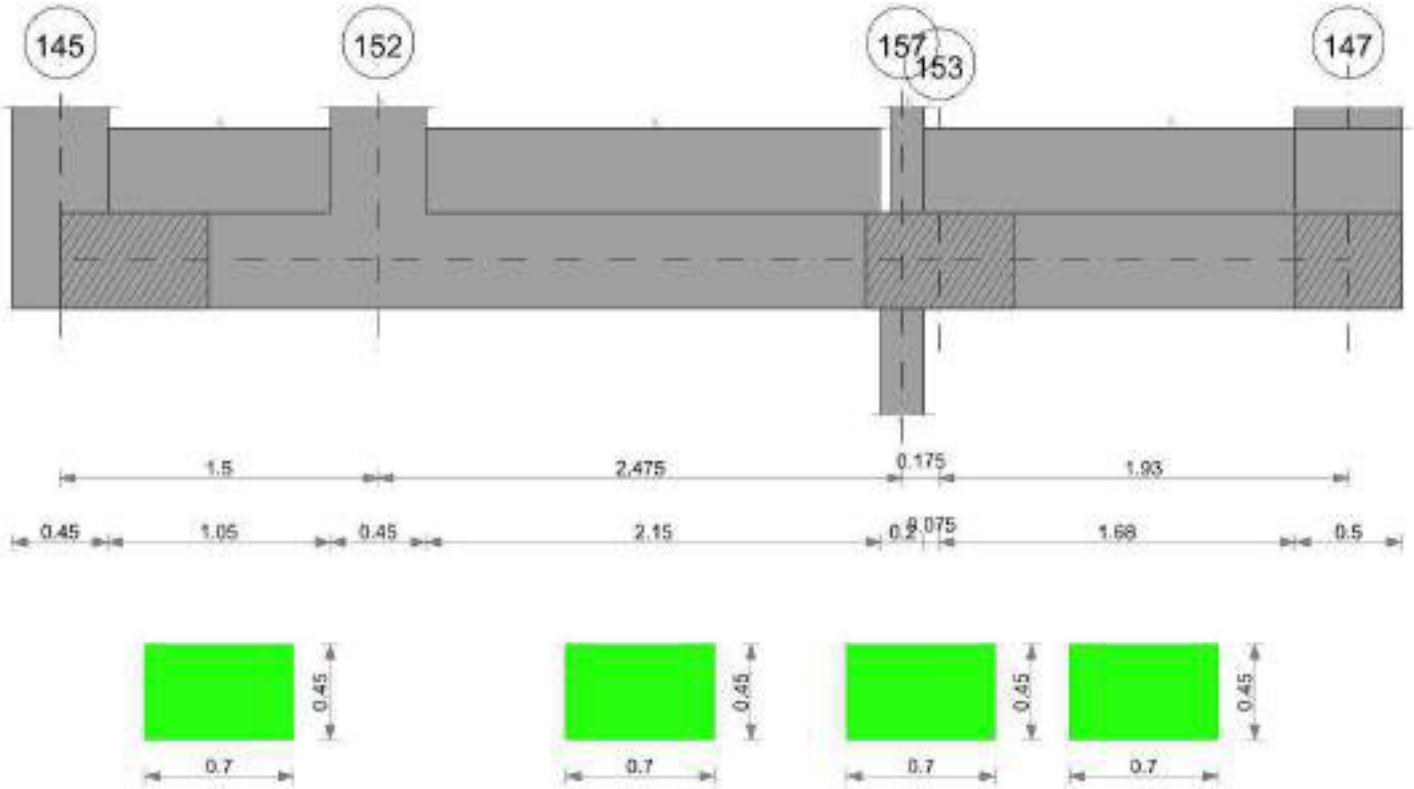
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	Rl adm	Rl	Comb.	
E	0.05	0.001	618	SLE RA 20	0.05	0.001	618	273	SLE RA 21	0.05	0	618	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	618	SLE RA 1	0.05	0	618	618	SLE RA 1	0.05	0	618	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	618	SLE RA 1	0.05	0	618	618	SLE RA 1	0.05	0	618	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	618	273	SLE RA 21	0.19	0	618	SLE RA 1	0.1	0	618	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	618	273	SLE RA 1	0.19	0	618	SLE RA 1	0.1	0	618	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	618	273	SLE RA 1	0.19	0	618	SLE RA 1	0.1	0	618	SLE RA 1	Si

CORDOLO 32

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

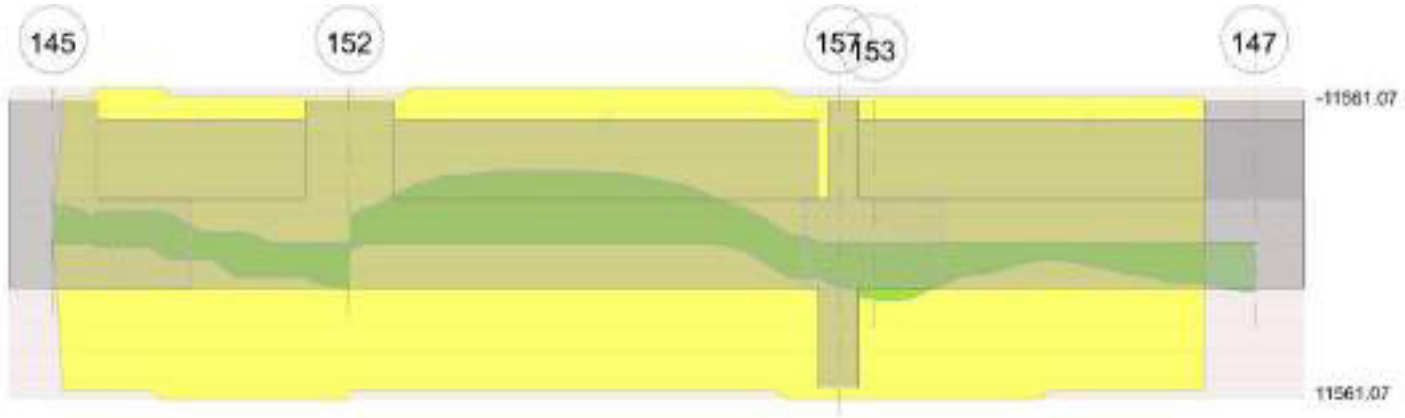
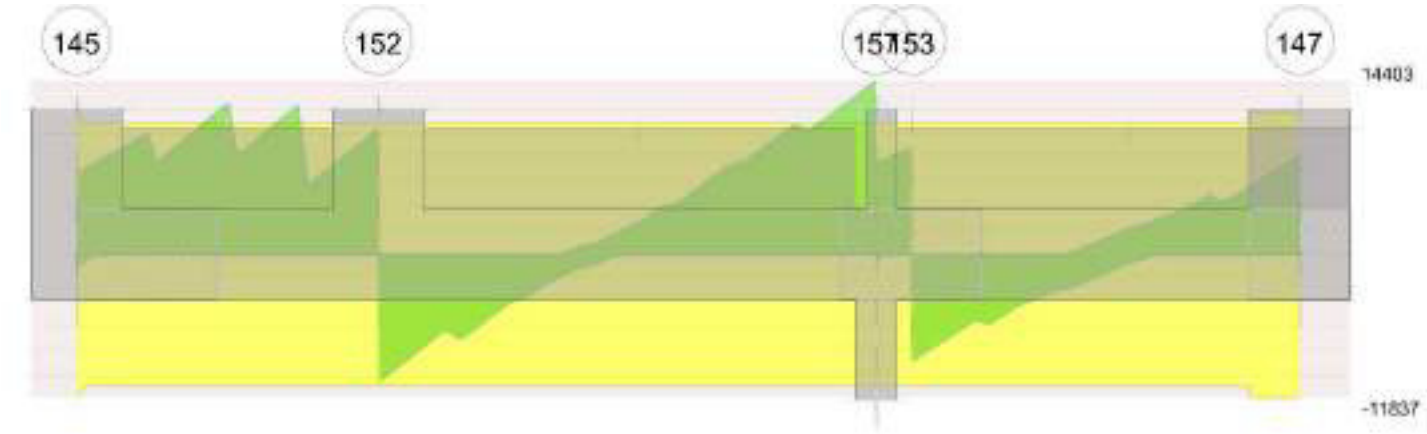


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 145 - 152, sezione R 70x45, aste 691, 690, 689, 688

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	3345	SLU 84	0.043	8001	10294	SLU 84	17990	Si
0.23	0.41	0.0005	3291	SLU 84	0.043	8001	10126	SLU 84	17990	Si
0.75	0.41	0.0005	3173	SLU 84	0.043	8001	9763	SLU 84	17990	Si
1.28	0.41	0.0005	3055	SLU 84	0.043	8001	9401	SLU 84	17990	Si
1.5	0.41	0.0005	2999	SLU 84	0.043	8001	9228	SLU 84	17990	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	2319	SLD 10	0.119	8913	7137	SLD 10	20689	Si
0.23	0.41	0.0005	2275	SLD 10	0.119	8913	6999	SLD 10	20689	Si
0.75	0.41	0.0005	2177	SLD 10	0.119	8913	6697	SLD 10	20689	Si
1.28	0.41	0.0005	2081	SLD 10	0.119	8913	6402	SLD 10	20689	Si
1.5	0.41	0.0005	2036	SLD 10	0.119	8913	6265	SLD 10	20689	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000506	2468	SLE RA 21	68383	1494000	847951	36000000	2243	SLE QP 2	62163	1120500	Si
0.23	0.41	0.00000506	2427	SLE RA 21	67262	1494000	834051	36000000	2206	SLE QP 2	61120	1120500	Si
0.75	0.41	0.00000506	2339	SLE RA 21	64833	1494000	803930	36000000	2124	SLE QP 2	58855	1120500	Si
1.28	0.41	0.00000506	2252	SLE RA 21	62407	1494000	773852	36000000	2042	SLE QP 2	56600	1120500	Si
1.5	0.41	0.00000506	2210	SLE RA 21	61250	1494000	759505	36000000	2004	SLE QP 2	55530	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 2 tra i fili 152 - 157, sezione R 70x45, aste 687, 686, 685, 684, 683, 682, 681

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	2999	SLU 84	0.043	8001	9228	SLU 84	17990	Si
0.23	0.41	0.0005	2942	SLU 84	0.043	8001	9052	SLU 84	17990	Si
1.24	0.41	0.0005	2781	SLU 84	0.043	8001	8556	SLU 84	17990	Si
2.37	0.41	0.0005	2798	SLU 84	0.043	8001	8610	SLU 84	17990	Si
2.47	0.41	0.0005	2801	SLU 84	0.043	8001	8620	SLU 84	17990	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	2036	SLD 10	0.119	8913	6265	SLD 10	20689	Si
0.23	0.41	0.0005	1992	SLD 5	0.119	8913	6129	SLD 5	20689	Si
1.24	0.41	0.0005	1867	SLD 5	0.119	8913	5743	SLD 5	20689	Si
2.37	0.41	0.0005	1877	SLD 7	0.119	8913	5776	SLD 7	20689	Si
2.47	0.41	0.0005	1880	SLD 7	0.119	8913	5786	SLD 7	20689	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000506	2210	SLE RA 21	61250	1494000	759505	36000000	2004	SLE QP 2	55530	1120500	Si
0.23	0.41	0.00000506	2168	SLE RA 21	60080	1494000	744987	36000000	1965	SLE QP 2	54448	1120500	Si
1.24	0.41	0.00000506	2048	SLE RA 21	56765	1494000	703888	36000000	1854	SLE QP 2	51393	1120500	Si
2.37	0.41	0.00000506	2060	SLE RA 21	57099	1494000	708026	36000000	1865	SLE QP 2	51675	1120500	Si
2.47	0.41	0.00000506	2063	SLE RA 21	57160	1494000	708788	36000000	1867	SLE QP 2	51728	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 3 tra i fili 157 - 153, sezione R 70x45, asta 680

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	2801	SLU 84	0.043	8001	8620	SLU 84	17990	Si
0.09	0.41	0.0005	2804	SLU 83	0.043	8001	8626	SLU 83	17990	Si
0.1	0.41	0.0005	2804	SLU 83	0.043	8001	8627	SLU 83	17990	Si

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0.17	0.41	0.0005	2805	SLU 83	0.043	8001	8631	SLU 83	17990	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1880	SLD 7	0.119	8913	5786	SLD 7	20689	Si
0.09	0.41	0.0005	1883	SLD 7	0.119	8913	5793	SLD 7	20689	Si
0.1	0.41	0.0005	1883	SLD 7	0.119	8913	5794	SLD 7	20689	Si
0.17	0.41	0.0005	1885	SLD 7	0.119	8913	5799	SLD 7	20689	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000506	2063	SLE RA 21	57160	1494000	708788	36000000	1867	SLE QP 2	51728	1120500	Si
0.09	0.41	0.00000506	2064	SLE RA 20	57203	1494000	709320	36000000	1868	SLE QP 2	51765	1120500	Si
0.1	0.41	0.00000506	2064	SLE RA 20	57209	1494000	709387	36000000	1868	SLE QP 2	51769	1120500	Si
0.17	0.41	0.00000506	2065	SLE RA 20	57234	1494000	709700	36000000	1869	SLE QP 2	51790	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 153 - 147, sezione R 70x45, aste 679, 678, 677, 676, 675

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	2805	SLU 83	0.043	8001	8631	SLU 83	17990	Si
0.96	0.41	0.0005	2785	SLU 83	0.043	8001	8571	SLU 83	17990	Si
1.68	0.41	0.0005	2747	SLU 83	0.043	8001	8454	SLU 83	17990	Si
1.93	0.41	0.0005	2728	SLU 83	0.043	8001	8393	SLU 83	17990	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1885	SLD 7	0.119	8913	5799	SLD 7	20689	Si
0.96	0.41	0.0005	1883	SLD 7	0.119	8913	5793	SLD 7	20689	Si
1.68	0.41	0.0005	1864	SLD 7	0.119	8913	5736	SLD 7	20689	Si
1.93	0.41	0.0005	1853	SLD 11	0.119	8913	5702	SLD 11	20689	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000506	2065	SLE RA 20	57234	1494000	709700	36000000	1869	SLE QP 2	51790	1120500	Si
0.96	0.41	0.00000506	2049	SLE RA 20	56790	1494000	704196	36000000	1853	SLE QP 2	51345	1120500	Si
1.68	0.41	0.00000506	2020	SLE RA 20	55972	1494000	694054	36000000	1824	SLE QP 2	50560	1120500	Si
1.93	0.41	0.00000506	2005	SLE RA 20	55556	1494000	688900	36000000	1810	SLE QP 2	50167	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche - Cedimenti assoluti e differenziali

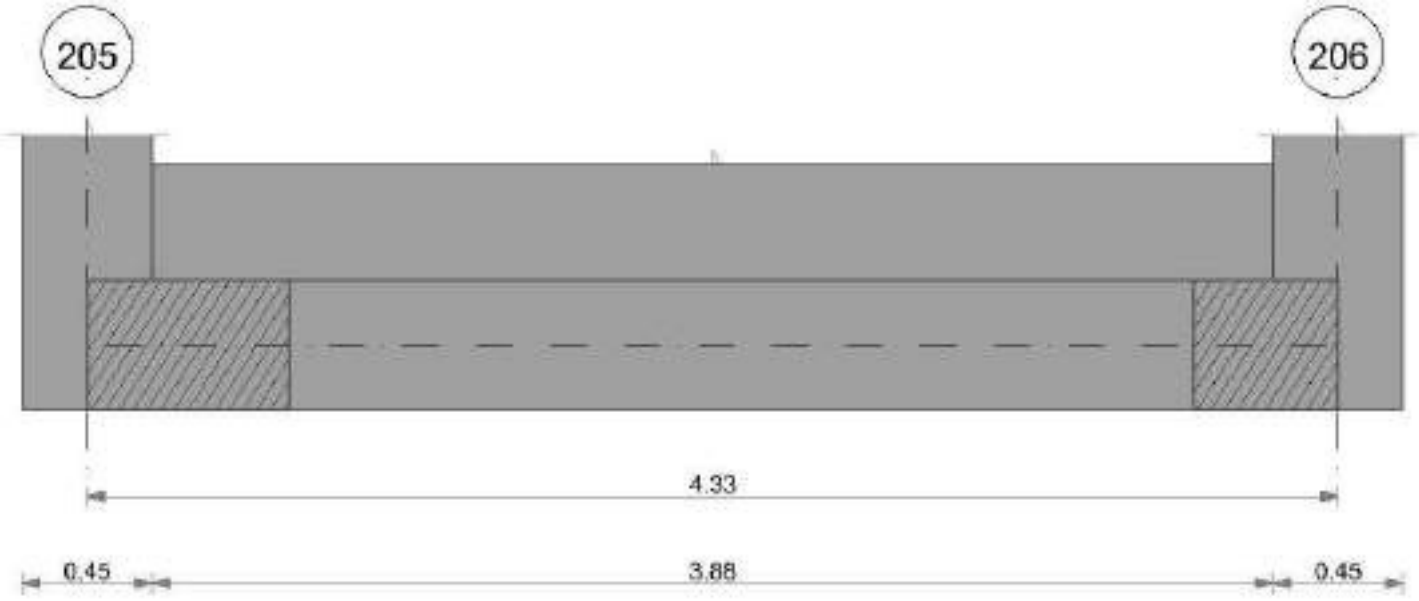
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	479	SLE RA 20	0.05	0.002	479	151	SLE RA 20	0.05	0.001	473	SLE RA 20	0.0033	0	SLE RA 1	Si
D	0.05	0	638	SLE RA 1	0.05	0	638	638	SLE RA 1	0.05	0	479	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	638	SLE RA 1	0.05	0	638	638	SLE RA 1	0.05	0	479	SLE RA 1	0.0033	0	SLE RA 1	Si

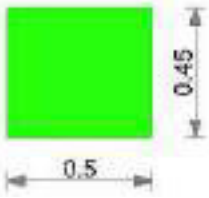
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.03	289	151	SLE RA 20	0.19	0.02	479	SLE RA 20	0.1	0	638	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	638	479	SLE RA 1	0.19	0	638	SLE RA 1	0.1	0	479	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	638	479	SLE RA 1	0.19	0	638	SLE RA 1	0.1	0	479	SLE RA 1	Si

CORDOLO 33

Geometria





Caratteristiche dei materiali

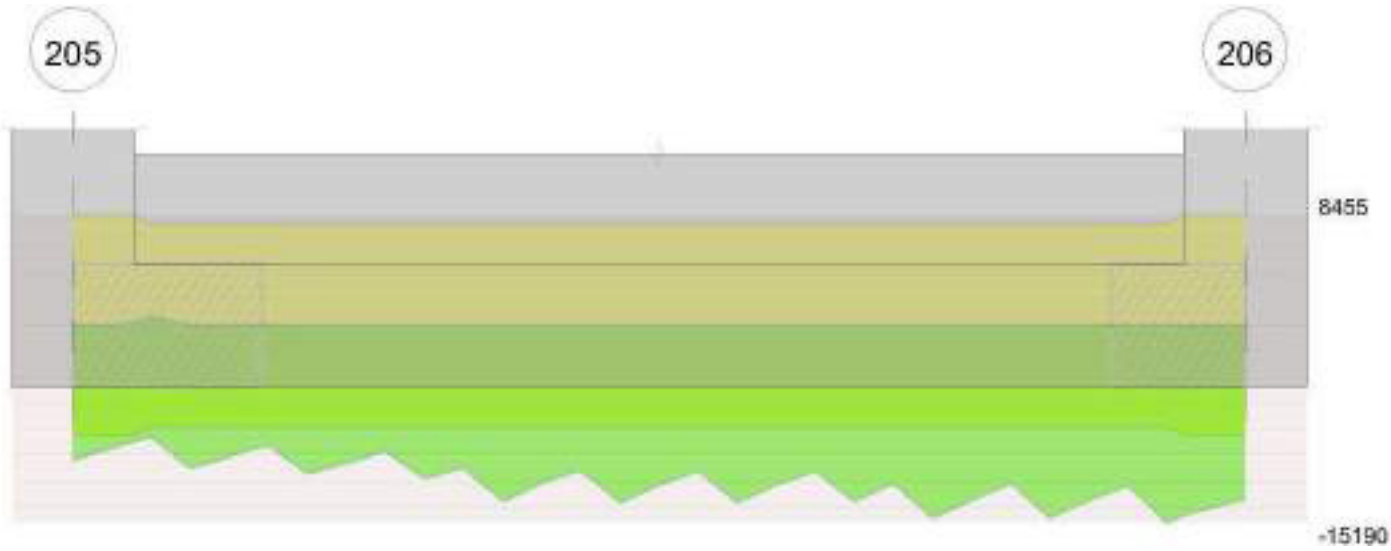
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 205 - 206, sezione R 50x45, aste 438, 437, 436, 435, 434, 433, 432, 431, 430, 429, 428

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1498	SLU 83	0.017	2687	6656	SLU 83	15877	Si
0.23	0.41	0.0002	1465	SLU 83	0.017	2687	6512	SLU 83	15877	Si
2.16	0.41	0.0002	1343	SLU 83	0.017	2687	5966	SLU 83	15877	Si
4.1	0.41	0.0002	1297	SLU 83	0.017	2687	5764	SLU 83	15877	Si
4.33	0.41	0.0002	1297	SLU 83	0.017	2687	5763	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1078	SLD 14	0.07	3025	4793	SLD 14	15877	Si
0.23	0.41	0.0002	1053	SLD 14	0.07	3025	4679	SLD 14	15877	Si
2.16	0.41	0.0002	955	SLD 15	0.07	3025	4245	SLD 15	15877	Si
4.1	0.41	0.0002	926	SLD 15	0.07	3025	4113	SLD 15	15877	Si
4.33	0.41	0.0002	926	SLD 15	0.07	3025	4117	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000168	1103	SLE RA 20	31961	1494000	396315	36000000	1005	SLE QP 2	29096	1120500	Si
0.23	0.41	0.00000168	1080	SLE RA 20	31267	1494000	387705	36000000	983	SLE QP 2	28459	1120500	Si
2.16	0.41	0.00000168	988	SLE RA 20	28616	1494000	354834	36000000	898	SLE QP 2	26000	1120500	Si
4.1	0.41	0.00000168	953	SLE RA 20	27607	1494000	342325	36000000	864	SLE QP 2	25014	1120500	Si
4.33	0.41	0.00000168	953	SLE RA 20	27599	1494000	342224	36000000	863	SLE QP 2	24999	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.78	0.7	SLU 50	ST	LT	279	279	-37526	0	0	19	0	0	1.1	11414	394	28.97	Si
4.78	0.7	SLV 2	SIS	LT	-1285	6581	-27215	-3	14	19	0	0	1.1	8278	6705	1.23	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
438,437,436,435,434,433,432,431,430,429,428	4.78	0.7	SLU 83	ST	BT	2.3	142258	46114	3.08	Si
438,437,436,435,434,433,432,431,430,429,428	4.78	0.7	SLV 2	SIS	LT	2.3	45930	27215	1.69	Si
438,437,436,435,434,433,432,431,430,429,428	4.78	0.7	SLD 2	SIS	LT	2.3	96117	29600	3.25	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	331	-46114	-190.26	-1788.73	0	0	-0.04	0	0.69	4.7	1084	2060	0	14430	
0	6581	-27215	-2997.89	-1839.9	0	14	-0.07	-0.11	0.48	4.64	1084	2060	37	0	0.07
0	2947	-29600	-1357.3	-1516.08	0	6	-0.05	-0.05	0.61	4.68	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.03	0	0	0.31	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.08	1.08	0.96	1.19	1.31	1	0.59	0.58	0.45	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.1	1.1	0.95	1.19	1.31	1	0.82	0.82	0.74	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

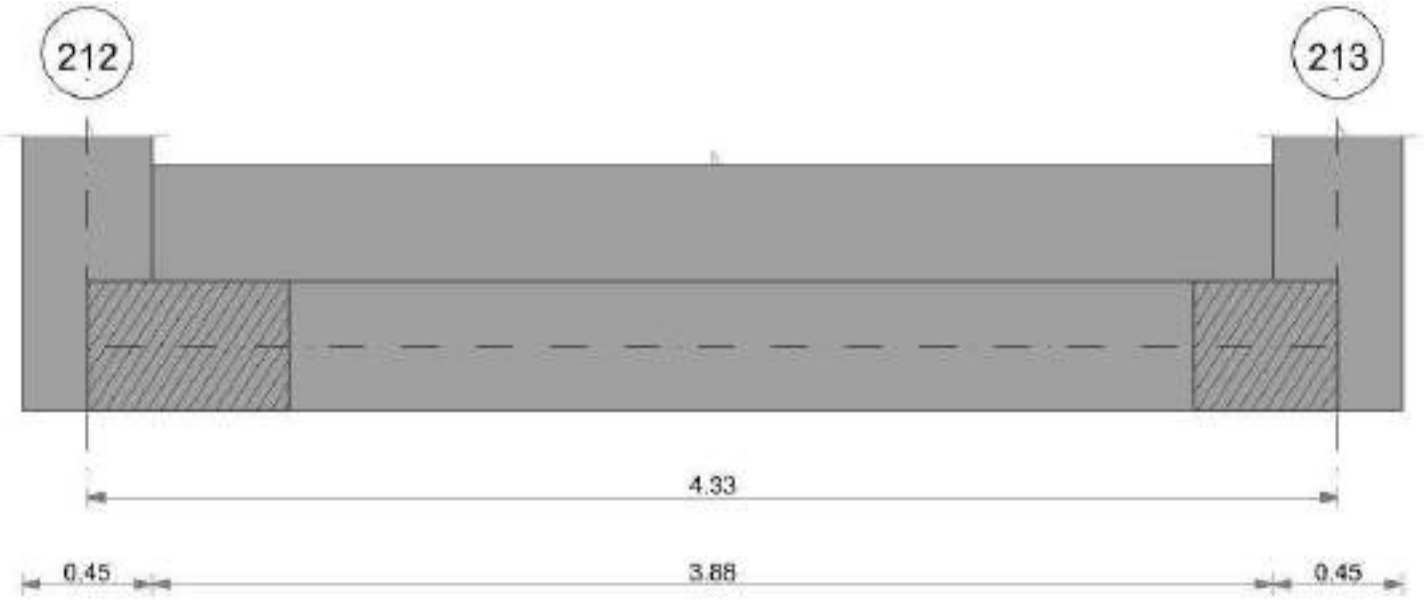
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	Rl adm	Rl	Comb.	
E	0.05	0.001	652	SLE RA 20	0.05	0.001	652	304	SLE RA 21	0.05	0	652	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	652	SLE RA 1	0.05	0	652	652	SLE RA 1	0.05	0	652	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	652	SLE RA 1	0.05	0	652	652	SLE RA 1	0.05	0	652	SLE RA 1	0.0033	0	SLE RA 1	Si

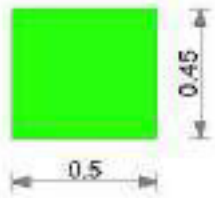
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	652	304	SLE RA 21	0.19	0	652	SLE RA 1	0.1	0	652	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	652	304	SLE RA 1	0.19	0	652	SLE RA 1	0.1	0	652	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	652	304	SLE RA 1	0.19	0	652	SLE RA 1	0.1	0	652	SLE RA 1	Si

CORDOLO 34

Geometria





Caratteristiche dei materiali

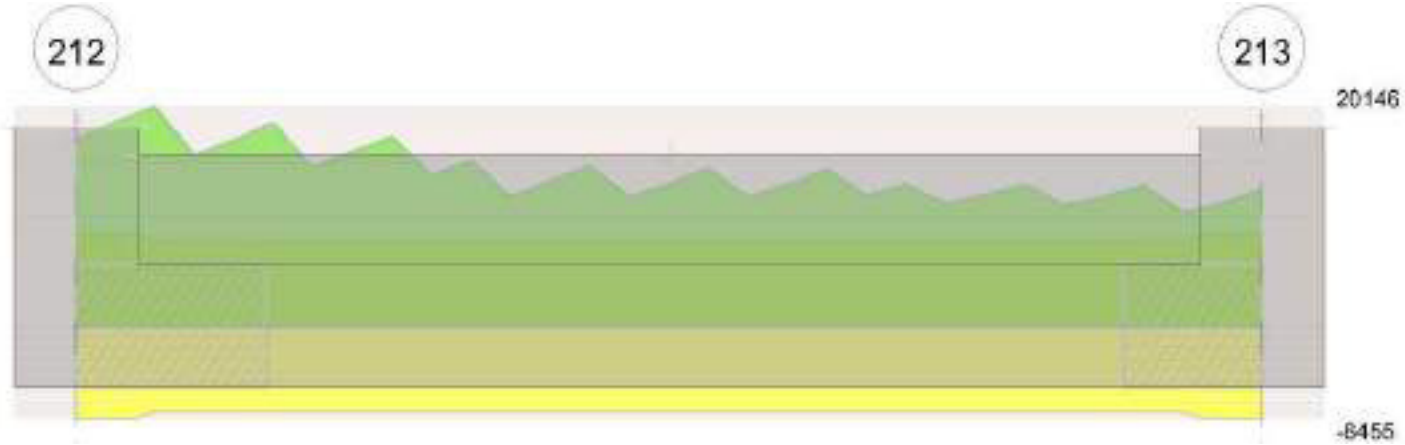
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 212 - 213, sezione R 50x45, aste 655, 654, 653, 652, 651, 650, 649, 648, 647, 646, 645

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1463	SLU 83	0.017	2687	6507	SLU 83	15877	Si
0.23	0.41	0.0002	1432	SLU 83	0.017	2687	6365	SLU 83	15877	Si
2.16	0.41	0.0002	1324	SLU 83	0.017	2687	5887	SLU 83	15877	Si
4.1	0.41	0.0002	1294	SLU 83	0.017	2687	5752	SLU 83	15877	Si
4.33	0.41	0.0002	1294	SLU 83	0.017	2687	5753	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1060	SLD 14	0.07	3025	4711	SLD 14	15877	Si
0.23	0.41	0.0002	1034	SLD 14	0.07	3025	4599	SLD 14	15877	Si
2.16	0.41	0.0002	944	SLD 13	0.07	3025	4198	SLD 13	15877	Si
4.1	0.41	0.0002	923	SLD 15	0.07	3025	4103	SLD 15	15877	Si
4.33	0.41	0.0002	924	SLD 15	0.07	3025	4108	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000168	1078	SLE RA 20	31229	1494000	387239	36000000	982	SLE QP 2	28431	1120500	Si
0.23	0.41	0.00000168	1055	SLE RA 20	30543	1494000	378731	36000000	960	SLE QP 2	27802	1120500	Si
2.16	0.41	0.00000168	974	SLE RA 20	28217	1494000	349885	36000000	885	SLE QP 2	25641	1120500	Si
4.1	0.41	0.00000168	950	SLE RA 20	27527	1494000	341332	36000000	861	SLE QP 2	24948	1120500	Si
4.33	0.41	0.00000168	950	SLE RA 20	27526	1494000	341326	36000000	861	SLE QP 2	24940	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.78	0.7	SLU 50	ST	LT	283	279	-37118	0	0	19	0	0	1.1	11291	397	28.46	Si
4.78	0.7	SLV 2	SIS	LT	-1413	6581	-26785	-3	14	19	0	0	1.1	8147	6731	1.21	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
655,654,653,652,651,650,649,648,647,646,645	4.78	0.7	SLU 83	ST	BT	2.3	142707	45602	3.13	Si

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
655,654,653,652,651,650,649,648,647,646,645	4.78	0.7	SLV 2	SIS	LT	2.3	45154	26785	1.69	Si
655,654,653,652,651,650,649,648,647,646,645	4.78	0.7	SLD 2	SIS	LT	2.3	95888	29221	3.28	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	331	-45602	-190.26	-1408.57	0	0	-0.03	0	0.69	4.72	1084	2060	0	14430	
0	6581	-26785	-2997.89	-1533.71	0	14	-0.06	-0.11	0.48	4.67	1084	2060	37	0	0.07
0	2947	-29221	-1357.3	-1237.58	0	6	-0.04	-0.05	0.61	4.7	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.03	0	0	0.31	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.08	1.08	0.96	1.19	1.31	1	0.58	0.57	0.44	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.1	1.1	0.95	1.19	1.31	1	0.82	0.81	0.74	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

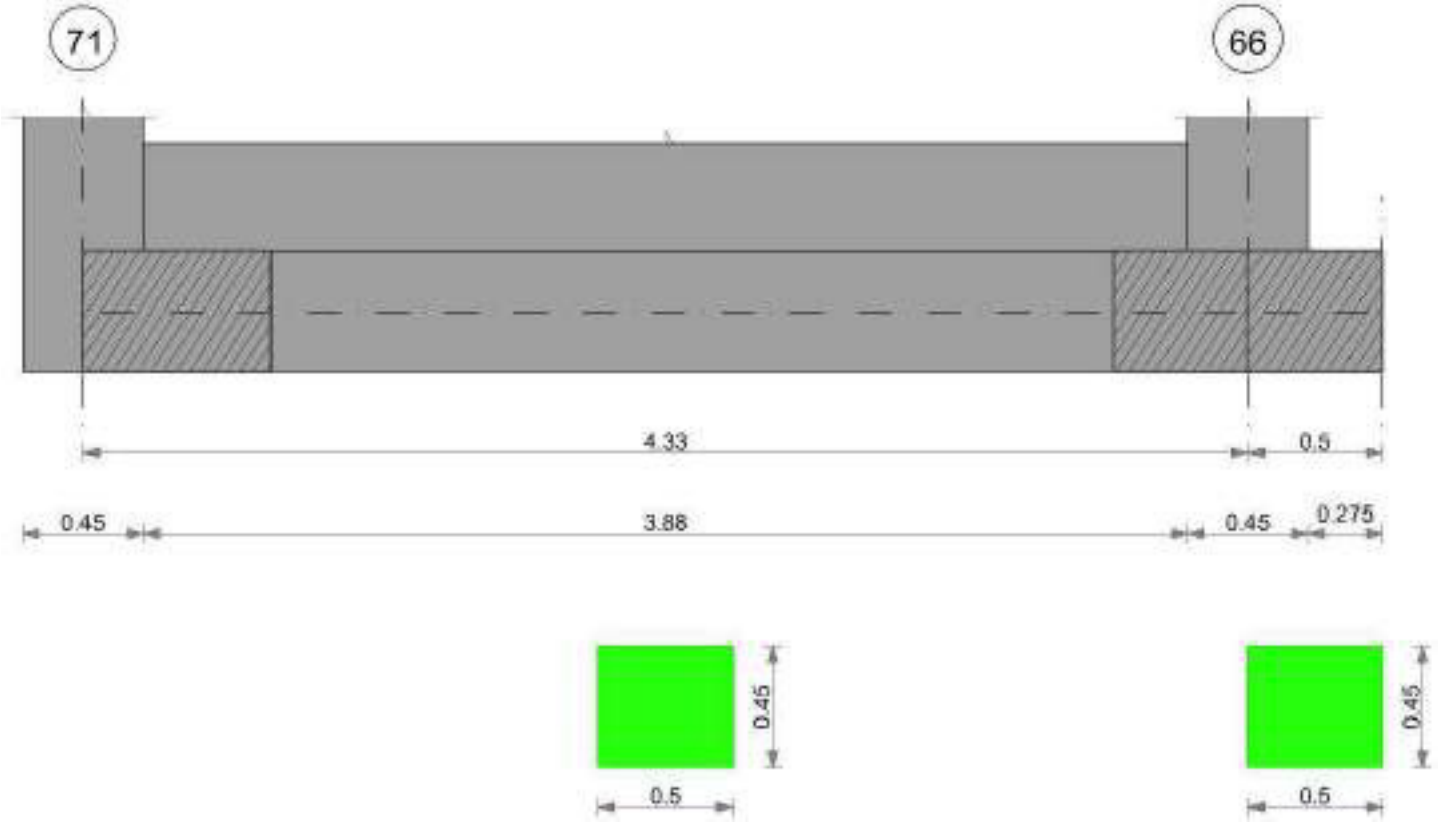
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	655	SLE RA 20	0.05	0.001	655	306	SLE RA 21	0.05	0	655	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	655	SLE RA 1	0.05	0	655	655	SLE RA 1	0.05	0	655	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	655	SLE RA 1	0.05	0	655	655	SLE RA 1	0.05	0	655	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	655	306	SLE RA 21	0.19	0	655	SLE RA 1	0.1	0	655	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	655	306	SLE RA 1	0.19	0	655	SLE RA 1	0.1	0	655	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	655	306	SLE RA 1	0.19	0	655	SLE RA 1	0.1	0	655	SLE RA 1	Si

CORDOLO 35

Geometria



Caratteristiche dei materiali

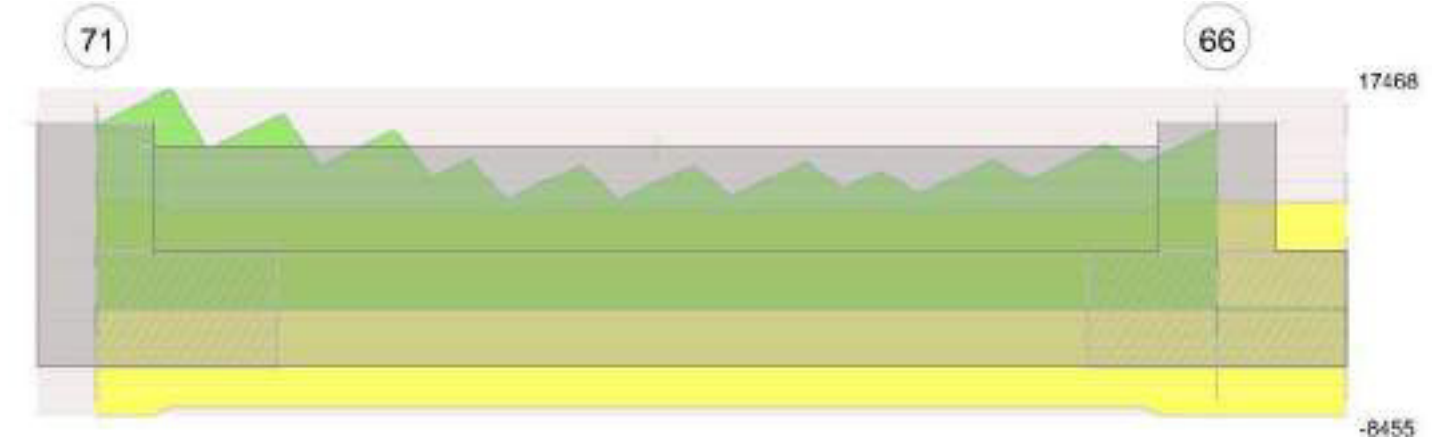
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 71 - 66, sezione R 50x45, aste 761, 760, 759, 758, 757, 756, 755, 754, 753, 752, 751

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1471	SLU 83	0.018	2820	6537	SLU 83	15877	Si
0.23	0.41	0.0002	1439	SLU 83	0.018	2820	6394	SLU 83	15877	Si
2.17	0.41	0.0002	1342	SLU 83	0.018	2820	5966	SLU 83	15877	Si
4.11	0.41	0.0002	1335	SLU 83	0.018	2820	5932	SLU 83	15877	Si
4.33	0.41	0.0002	1330	SLU 83	0.018	2820	5912	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1068	SLD 1	0.071	3173	4749	SLD 1	15877	Si
0.23	0.41	0.0002	1043	SLD 1	0.071	3173	4637	SLD 1	15877	Si
2.17	0.41	0.0002	966	SLD 4	0.071	3173	4293	SLD 4	15877	Si
4.11	0.41	0.0002	957	SLD 4	0.071	3173	4254	SLD 4	15877	Si
4.33	0.41	0.0002	954	SLD 4	0.071	3173	4239	SLD 4	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000177	1083	SLE RA 20	31339	1494000	388597	36000000	985	SLE QP 2	28491	1120500	Si
0.23	0.41	0.00000177	1059	SLE RA 20	30648	1494000	380038	36000000	963	SLE QP 2	27858	1120500	Si
2.17	0.41	0.00000177	987	SLE RA 20	28563	1494000	354181	36000000	896	SLE QP 2	25916	1120500	Si
4.11	0.41	0.00000177	980	SLE RA 20	28359	1494000	351653	36000000	887	SLE QP 2	25671	1120500	Si
4.33	0.41	0.00000177	977	SLE RA 20	28261	1494000	350434	36000000	884	SLE QP 2	25578	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.56	0.7	SLU 50	ST	LT	291	-265	-37448	0	0	19	0	0	1.1	11391	394	28.94	Si
4.56	0.7	SLV 13	SIS	LT	-1402	-6611	-26435	-3	-14	19	0	0	1.1	8041	6758	1.19	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
761,760,759,758,757,756,755,754,753,752,751	4.56	0.7	SLU 83	ST	BT	2.3	136777	46173	2.96	Si
761,760,759,758,757,756,755,754,753,752,751	4.56	0.7	SLV 13	SIS	LT	2.3	41898	26435	1.58	Si

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
761,760,759,758,757,756,755,754,753,752,751	4.56	0.7	SLD 13	SIS	LT	2.3	91588	29257	3.13	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-288	-46173	185.59	-926.65	0	0	-0.02	0	0.69	4.51	1084	2060	0	14430	
0	-6611	-26435	3045.68	-1337.02	0	-14	-0.05	0.12	0.47	4.45	1084	2060	37	0	0.07
0	-2949	-29257	1378.58	-969.14	0	-6	-0.03	0.05	0.61	4.49	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.03	0	0	0.31	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.08	1.08	0.96	1.19	1.31	1	0.58	0.57	0.43	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.1	1.1	0.95	1.19	1.31	1	0.82	0.81	0.74	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

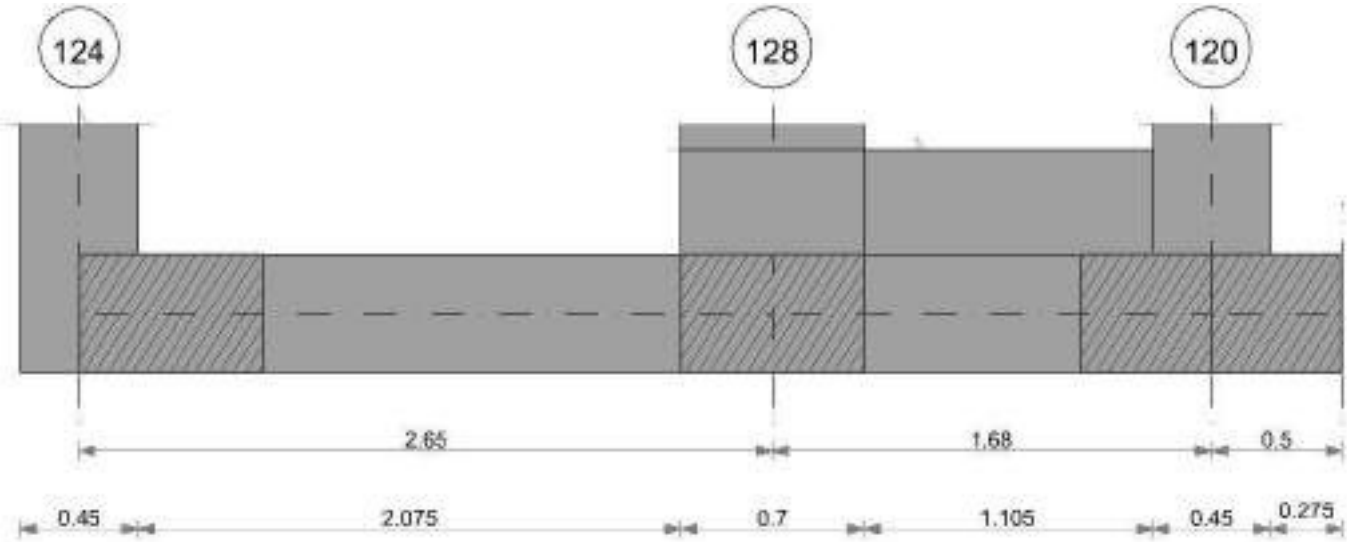
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	615	SLE RA 20	0.05	0.001	615	271	SLE RA 21	0.05	0	615	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	615	SLE RA 1	0.05	0	615	615	SLE RA 1	0.05	0	615	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	615	SLE RA 1	0.05	0	615	615	SLE RA 1	0.05	0	615	SLE RA 1	0.0033	0	SLE RA 1	Si

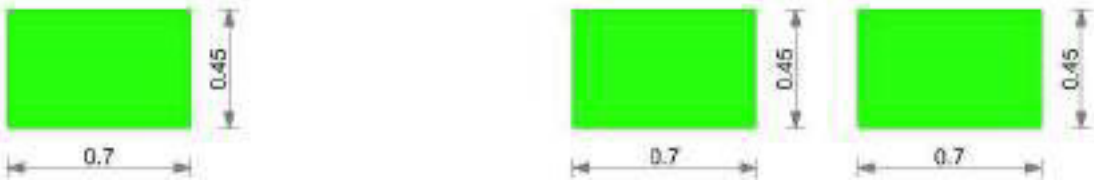
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	615	271	SLE RA 21	0.19	0	615	SLE RA 1	0.1	0	615	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	615	271	SLE RA 1	0.19	0	615	SLE RA 1	0.1	0	615	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	615	271	SLE RA 1	0.19	0	615	SLE RA 1	0.1	0	615	SLE RA 1	Si

CORDOLO 36

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

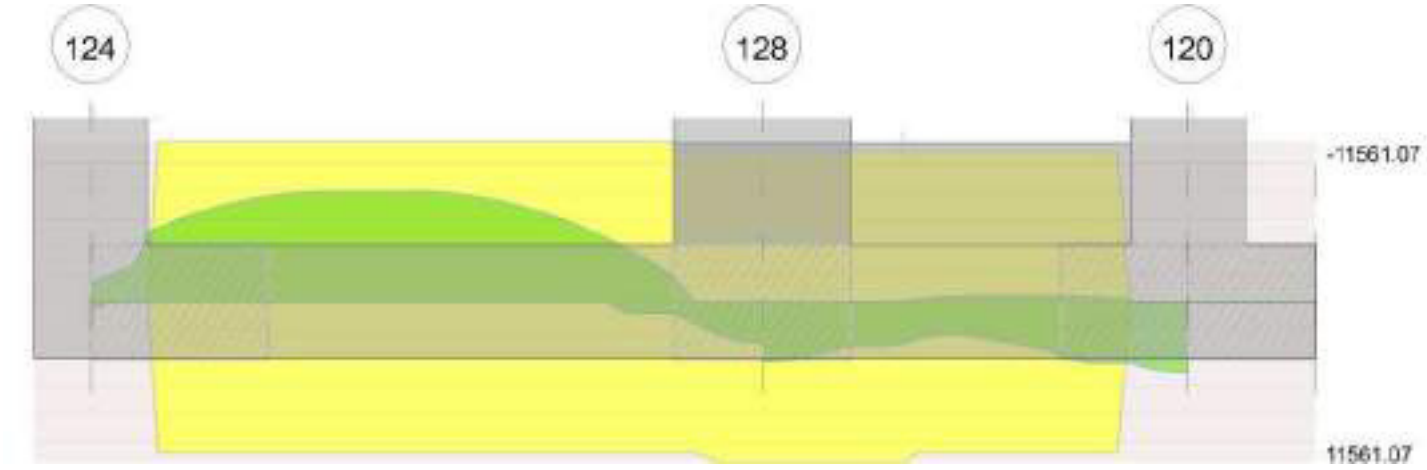
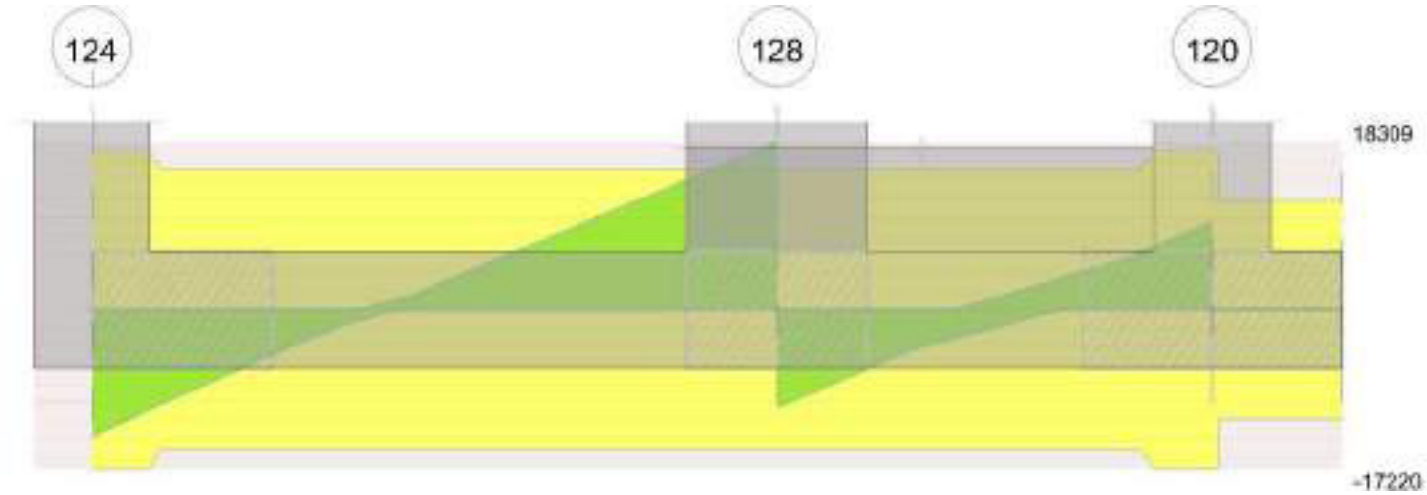


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 1 tra i fili 124 - 128, sezione R 70x45, aste 714, 713

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
1.33	0.000763	0.052	0.000763	0.052							-7631.34	SLU 84	-7911.54	-11561.07	0.116	1.46	Si
2.3	0.000763	0.052	0.000763	0.052	547.55	SLU 62	547.55	11561.07	0.116	21.11	255.68	SLU 25	-1825.08	-11561.07	0.116	6.33	Si
2.65	0.000763	0.052	0.000763	0.052	6193.13	SLU 83	2991.04	11561.07	0.116	3.87							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
1.33	0.000763	0.052	0.000763	0.052							-5587.28	SLV 5	-5815.74	-10870.29	0.203	1.87	Si
2.3	0.000763	0.052	0.000763	0.052	812.41	SLV 8	812.41	10870.29	0.203	13.38	-185.05	SLV 9	-1721.68	-10870.29	0.203	6.31	Si
2.65	0.000763	0.052	0.000763	0.052	4663.85	SLV 8	2690.94	10870.29	0.203	4.04							Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
1.33	0.000763	0.052	0.000763	0.052							-5319.91	SLD 5	-5522.99	-10870.29	0.203	1.97	Si
2.3	0.000763	0.052	0.000763	0.052	531.68	SLD 8	531.68	10870.29	0.203	20.45	95.68	SLD 9	-1455.16	-10870.29	0.203	7.47	Si
2.65	0.000763	0.052	0.000763	0.052	4342.9	SLD 8	2639.37	10870.29	0.203	4.12							Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000109	0	0	-13703	SLU 84	-13703	-11837	-100005	-17220	-17220	1	1.26	Si
0.23	0.0000109	0	0	-10778	SLU 83	-10778	-11837	-100005	-17220	-17220	1	1.6	Si
1.33	0.0000109	0.000763	0	2627	SLU 84	2627	10870	88449	15230	15230	1	5.8	Si
2.3	0.0000109	0.000763	0	14116	SLU 84	14116	10870	88449	15230	15230	1	1.08	Si
2.65	0.0000109	0.000763	0	18309	SLU 83	18309	10870	88449	15230	15230	1	0.83	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000109	0	0	-9854	SLV 13	-9854	-11837	-100005	-17220	-17220	1	1.75	Si
0.23	0.0000109	0	0	-7886	SLV 13	-7886	-11837	-100005	-17220	-17220	1	2.18	Si
1.33	0.0000109	0.000763	0	2241	SLV 2	2241	10870	88449	15230	15230	1	6.8	Si
2.3	0.0000109	0.000763	0	9753	SLV 4	9753	10870	88449	15230	15230	1	1.56	Si
2.65	0.0000109	0.000763	0	12546	SLV 16	12546	10870	88449	15230	15230	1	1.21	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000109	0	0	-9478	SLD 13	-9478	-11837	-100005	-17220	-17220	1	1.82	Si
0.23	0.0000109	0	0	-7514	SLD 13	-7514	-11837	-100005	-17220	-17220	1	2.29	Si
1.33	0.0000109	0.000763	0	1952	SLD 2	1952	10870	88449	15230	15230	1	7.8	Si
2.3	0.0000109	0.000763	0	9555	SLD 4	9555	10870	88449	15230	15230	1	1.59	Si
2.65	0.0000109	0.000763	0	12351	SLD 16	12351	10870	88449	15230	15230	1	1.23	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-375.93	19	-375.93	-15913	1494000	0	36000000	-312.25	2	-312.25	-13217	1120500			Si
0.23	-2400.97	21	-3667.37	-155233	1494000	0	36000000	-2159.09	2	-3313.4	-140250	1120500			Si
1.33	-5621.61	21	-5828.95	218547	1494000	3278200	36000000	-5110.87	2	-5294.39	198504	1120500			Si
2.3	389.89	20	389.89	14618	1494000	219272	36000000	313.68	2	313.68	11761	1120500			Si
2.65	4570.51	20	2210.69	82886	1494000	1243294	36000000	4094.32	2	1959.9	73483	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 124 - 128, sezione R 70x45, aste 714, 713

Campata 2 tra i fili 128 - 120, sezione R 70x45, asta 712

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	2757	SLU 83	0.031	5754	8482	SLU 83	15877	Si
0.35	0.41	0.0004	2763	SLU 83	0.031	5754	8500	SLU 83	15877	Si
0.84	0.41	0.0004	2747	SLU 83	0.031	5754	8453	SLU 83	15877	Si
1.45	0.41	0.0004	2706	SLU 83	0.031	5754	8326	SLU 83	15877	Si
1.68	0.41	0.0004	2681	SLU 83	0.031	5754	8251	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1874	SLD 16	0.101	6427	5767	SLD 16	15877	Si
0.35	0.41	0.0004	1882	SLD 16	0.101	6427	5791	SLD 16	15877	Si
0.84	0.41	0.0004	1876	SLD 16	0.101	6427	5773	SLD 16	15877	Si
1.45	0.41	0.0004	1849	SLD 16	0.101	6427	5690	SLD 16	15877	Si
1.68	0.41	0.0004	1831	SLD 16	0.101	6427	5634	SLD 16	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000362	2028	SLE RA 20	57242	1494000	709795	36000000	1831	SLE QP 2	51695	1120500	Si
0.35	0.41	0.00000362	2031	SLE RA 20	57349	1494000	711129	36000000	1834	SLE QP 2	51781	1120500	Si
0.84	0.41	0.00000362	2019	SLE RA 20	57008	1494000	706897	36000000	1823	SLE QP 2	51462	1120500	Si
1.45	0.41	0.00000362	1988	SLE RA 20	56120	1494000	695889	36000000	1794	SLE QP 2	50656	1120500	Si
1.68	0.41	0.00000362	1969	SLE RA 20	55602	1494000	689465	36000000	1778	SLE QP 2	50187	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.56	0.9	SLU 50	ST	LT	166	-216	-46928	0	0	19	0	0	1.1	14274	273	52.37	Si
4.56	0.9	SLV 4	SIS	LT	1880	7742	-38174	3	11	19	0	0	1.1	11612	7967	1.46	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
714,713,712	4.56	0.9	SLU 84	ST	BT	2.3	168390	57871	2.91	Si
714,713,712	4.56	0.9	SLV 13	SIS	LT	2.3	84915	40268	2.11	Si
714,713,712	4.56	0.9	SLD 13	SIS	LT	2.3	141667	39667	3.57	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-249	-57871	292.64	-919.13	0	0	-0.02	0.01	0.89	4.52	1084	2060	0	14430	
0	-8103	-40268	3775.26	-1147.63	0	-11	-0.03	0.09	0.71	4.5	1084	2060	37	0	0.07
0	-3568	-39667	1730.03	-889.45	0	-5	-0.02	0.04	0.81	4.51	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.24	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.12	1.12	0.94	1.15	1.24	1	0.66	0.65	0.53	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.14	1.14	0.93	1.15	1.24	1	0.84	0.84	0.76	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

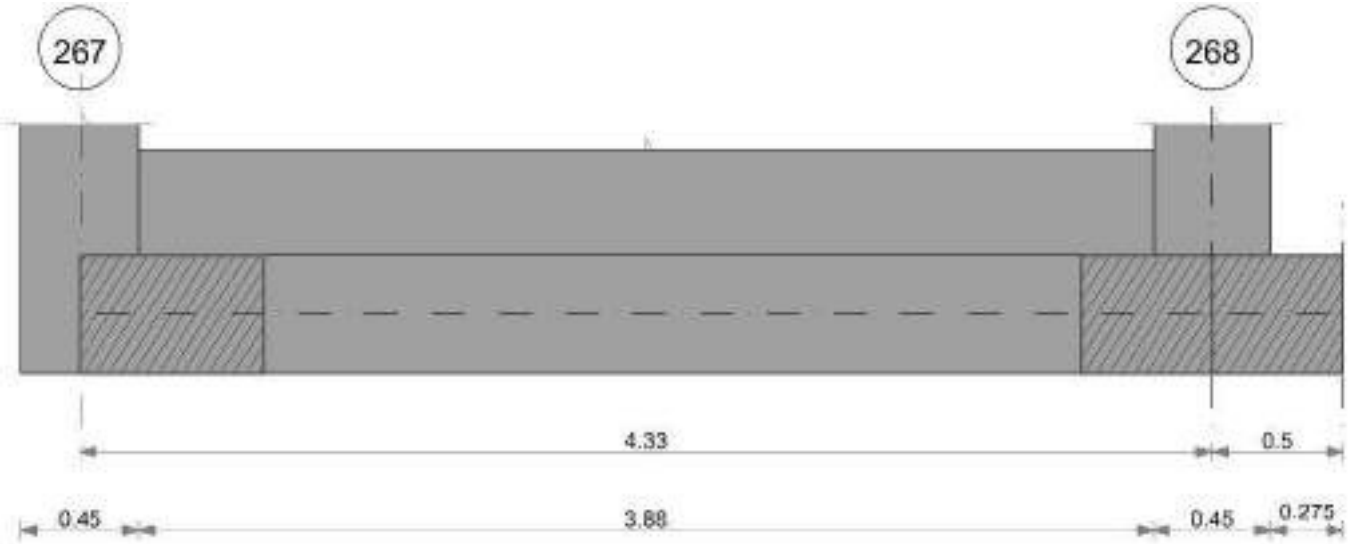
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	475	SLE RA 20	0.05	0	475	286	SLE RA 20	0.05	0	475	SLE RA 20	0.0033	0	SLE RA 1	Si
D	0.05	0	631	SLE RA 1	0.05	0	631	631	SLE RA 1	0.05	0	475	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	631	SLE RA 1	0.05	0	631	631	SLE RA 1	0.05	0	475	SLE RA 1	0.0033	0	SLE RA 1	Si

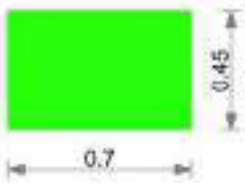
Verifiche geotecniche - Rotazioni assolute e differenziali

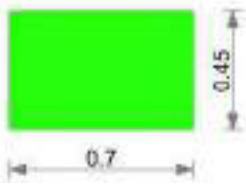
Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 20	0.19	0.01	475	286	SLE RA 20	0.19	0.01	475	SLE RA 20	0.1	0	631	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	631	475	SLE RA 1	0.19	0	631	SLE RA 1	0.1	0	475	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	631	475	SLE RA 1	0.19	0	631	SLE RA 1	0.1	0	475	SLE RA 1	Si

CORDOLO 37

Geometria







Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

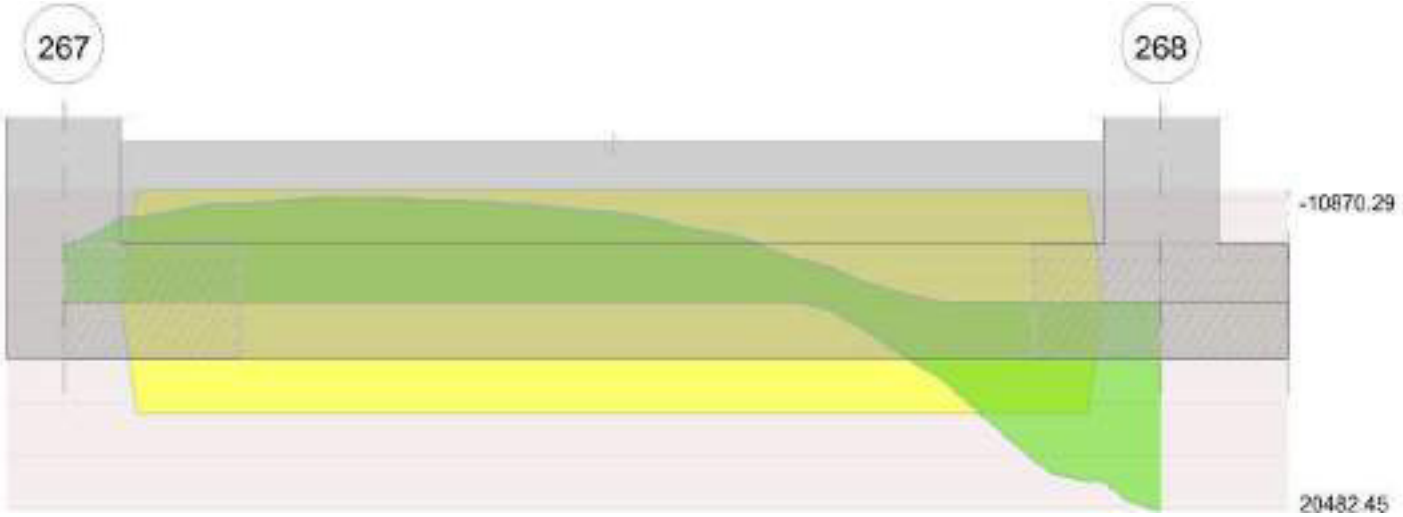
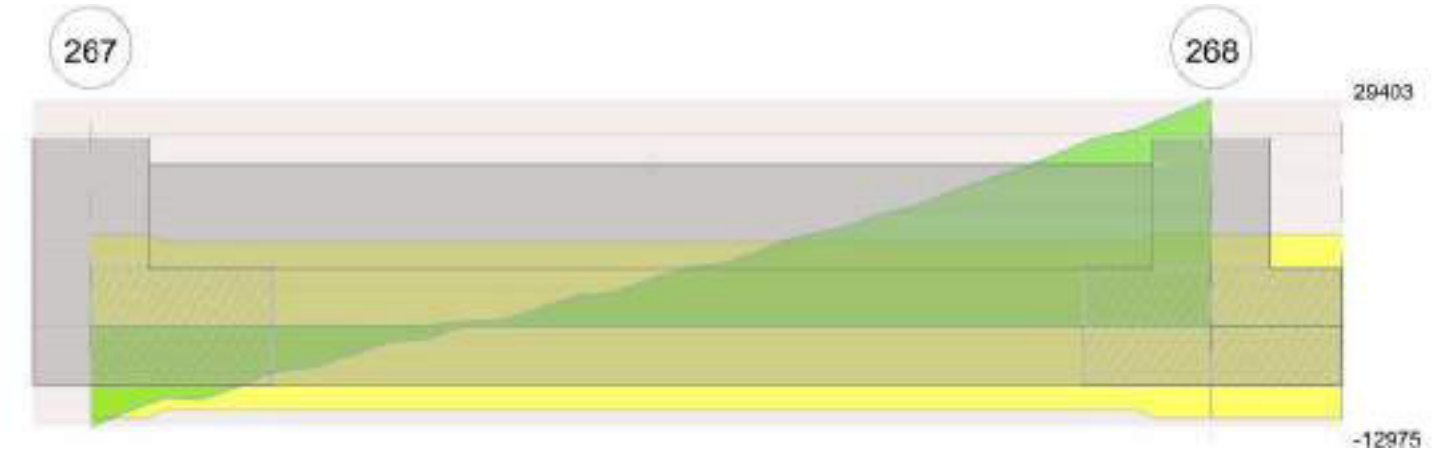


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 267 - 268, sezione R 70x45, aste 631, 630, 629, 628, 627, 626, 625, 624, 623, 622, 621

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2470	SLV 14	0.087	2741	8592	SLV 14	15877	Si
0.23	0.41	0.0002	2371	SLV 14	0.087	2741	8250	SLV 14	15877	Si
2.16	0.41	0.0002	2065	SLV 14	0.087	2741	7182	SLV 14	15877	Si
4.1	0.41	0.0002	2426	SLV 15	0.087	2741	8438	SLV 15	15877	Si
4.33	0.41	0.0002	2421	SLV 15	0.087	2741	8422	SLV 15	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1988	SLD 14	0.071	3173	6916	SLD 14	15877	Si
0.23	0.41	0.0002	1909	SLD 14	0.071	3173	6643	SLD 14	15877	Si
2.16	0.41	0.0002	1670	SLD 14	0.071	3173	5809	SLD 14	15877	Si
4.1	0.41	0.0002	1966	SLD 15	0.071	3173	6837	SLD 15	15877	Si
4.33	0.41	0.0002	1962	SLD 15	0.071	3173	6824	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000177	1784	SLE RA 20	51626	1494000	640158	36000000	1628	SLE QP 2	47110	1120500	Si
0.23	0.41	0.00000177	1714	SLE RA 20	49600	1494000	615046	36000000	1564	SLE QP 2	45255	1120500	Si
2.16	0.41	0.00000177	1509	SLE RA 20	43651	1494000	541274	36000000	1375	SLE QP 2	39787	1120500	Si
4.1	0.41	0.00000177	1780	SLE RA 21	51490	1494000	638479	36000000	1622	SLE QP 2	46922	1120500	Si
4.33	0.41	0.00000177	1777	SLE RA 21	51400	1494000	637363	36000000	1619	SLE QP 2	46838	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	γR	Rd	Ed	Rd/Ed	Verifica
4.55	0.9	SLU 31	ST	LT	-824	454	-46620	-1	1	19	0	0	1.1	14181	941	15.07	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
631,630,629,628,627,626,625,624,623,622,621	4.55	0.9	SLU 83	ST	BT	2.3	156730	58782	2.67	Si
631,630,629,628,627,626,625,624,623,622,621	4.55	0.9	SLV 15	SIS	LT	2.3	97745	57226	1.71	Si
631,630,629,628,627,626,625,624,623,622,621	4.55	0.9	SLD 15	SIS	LT	2.3	136924	47447	2.89	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	575	-58782	1942.06	1361.03	0	1	0.02	0.03	0.83	4.51	1084	2060	0	14430	
0	-7754	-57226	5809.19	2357.56	0	-8	0.04	0.1	0.7	4.47	1084	2060	37	0	0.07
0	-3082	-47447	3230.67	1532.87	0	-4	0.03	0.07	0.76	4.49	1084	2060	37	0	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.24	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.12	1.12	0.94	1.15	1.24	1	0.76	0.76	0.66	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
43	56	66	1.13	1.13	0.93	1.15	1.24	1	0.88	0.88	0.83	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99

Verifiche geotecniche - Cedimenti assoluti e differenziali

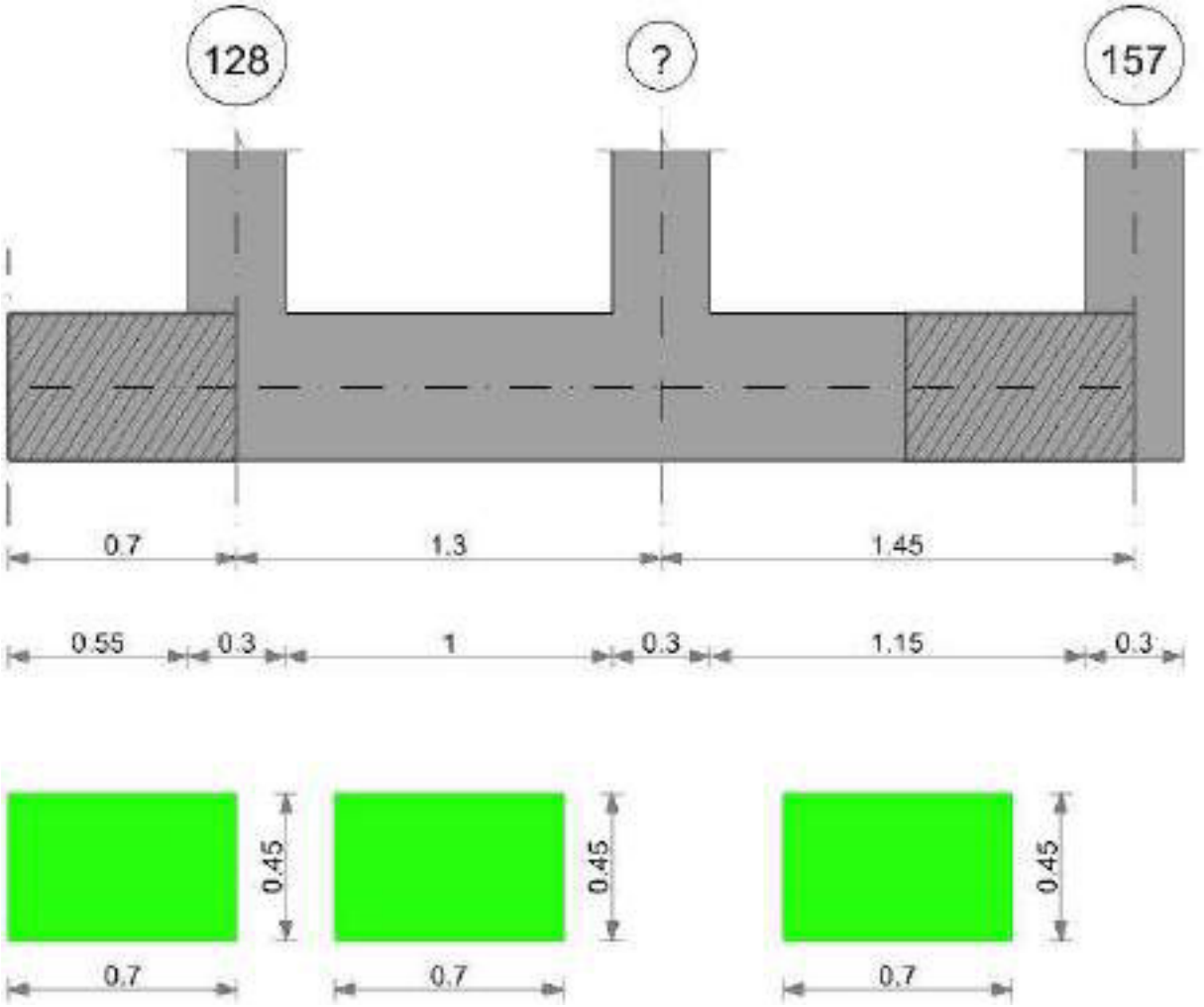
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	671	SLE RA 20	0.05	0	671	321	SLE RA 21	0.05	0	671	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	671	SLE RA 1	0.05	0	671	671	SLE RA 1	0.05	0	671	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	671	SLE RA 1	0.05	0	671	671	SLE RA 1	0.05	0	671	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0	671	321	SLE RA 21	0.19	0	671	SLE RA 1	0.1	0	671	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	671	321	SLE RA 1	0.19	0	671	SLE RA 1	0.1	0	671	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	671	321	SLE RA 1	0.19	0	671	SLE RA 1	0.1	0	671	SLE RA 1	Si

CORDOLO 38

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

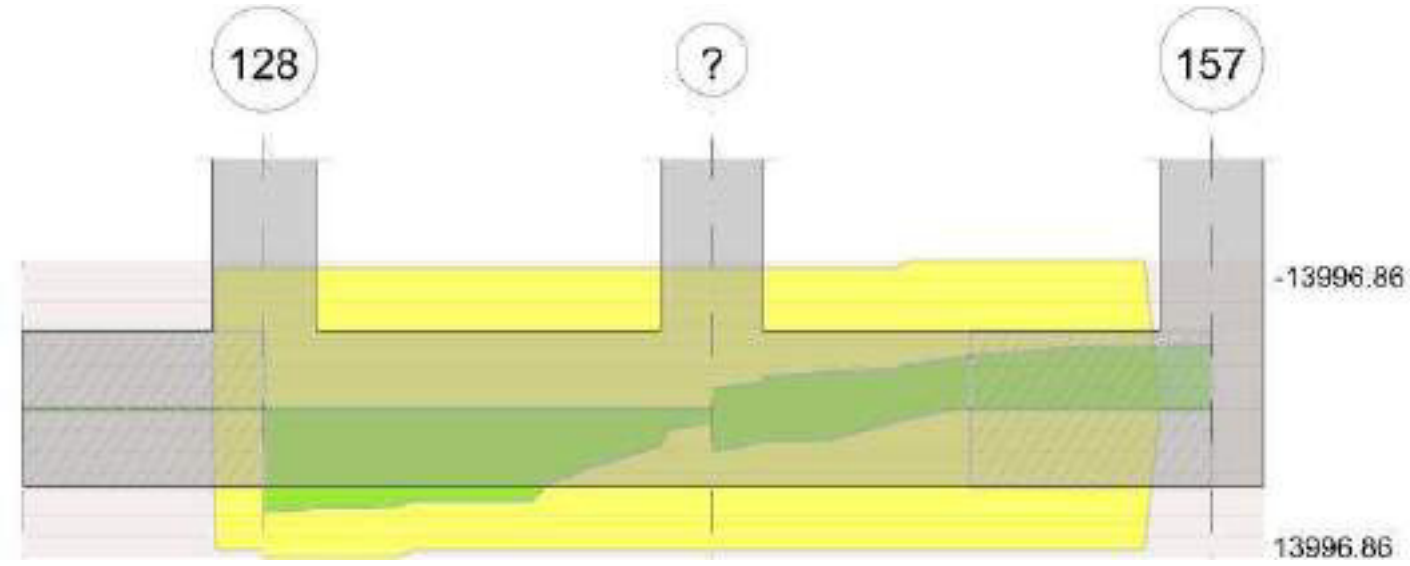
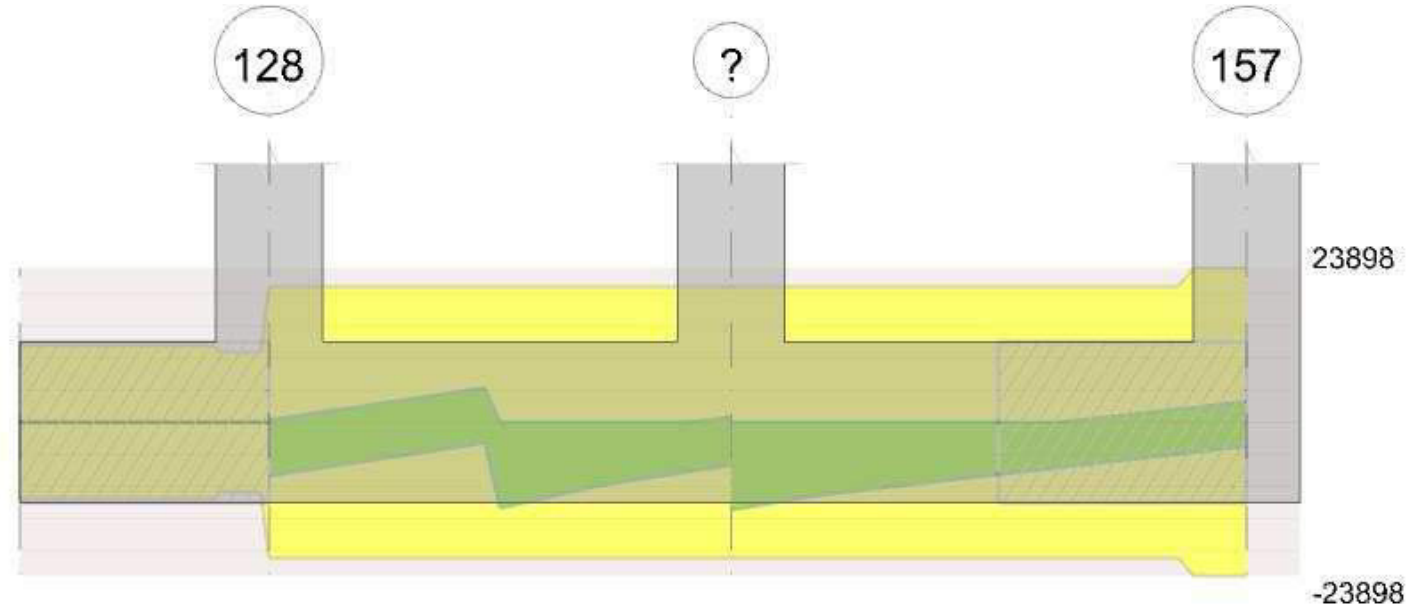


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 128 - ?, sezione R 70x45, aste 468, 469

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	10025.03	SLU 84	9592.64	13996.86	0.128	1.46							Si
0.15	0.000942	0.053	0.000942	0.053	9299.45	SLU 84	9299.45	13996.86	0.128	1.51							Si
0.65	0.000942	0.053	0.000942	0.053	6917.1	SLU 83	8823.86	13996.86	0.128	1.59							Si
1.15	0.000942	0.053	0.000942	0.053	1996.58	SLU 60	3299.35	13996.86	0.128	4.24							Si
1.3	0.000942	0.053	0.000942	0.053	1262.85	SLU 43	1262.85	13996.86	0.128	11.08							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	7132.35	SLV 2	7033.96	13265.61	0.222	1.89							Si
0.15	0.000942	0.053	0.000942	0.053	7150.72	SLV 4	7540.34	13265.61	0.222	1.76							Si
0.43	0.000942	0.053	0.000942	0.053	7891.57	SLV 4	8683.47	13265.61	0.222	1.53							Si
0.65	0.000942	0.053	0.000942	0.053	6944.41	SLV 15	8683.47	13265.61	0.222	1.53							Si
1.15	0.000942	0.053	0.000942	0.053	2054.41	SLV 11	3476.49	13265.61	0.222	3.82							Si
1.3	0.000942	0.053	0.000942	0.053	1373.48	SLV 7	1373.48	13265.61	0.222	9.66							Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	6872.55	SLD 2	6658.38	13265.61	0.222	1.99							Si
0.15	0.000942	0.053	0.000942	0.053	6590.05	SLD 4	6590.05	13265.61	0.222	2.01							Si
0.43	0.000942	0.053	0.000942	0.053	6651.69	SLD 4	7024.02	13265.61	0.222	1.89							Si

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.65	0.000942	0.053	0.000942	0.053	5531.76	SLD 15	7024.02	13265.61	0.222	1.89							Si
1.15	0.000942	0.053	0.000942	0.053	1647.93	SLD 11	2759.9	13265.61	0.222	4.81							Si
1.3	0.000942	0.053	0.000942	0.053	1049.54	SLD 7	1049.54	13265.61	0.222	12.64							Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000151	0.000942	0	-5895	SLU 78	-5895	-11611	-88226	-21083	-21083	1	3.58	Si
0.15	0.0000151	0.000942	0	-4092	SLU 78	-4092	-11611	-88226	-21083	-21083	1	5.15	Si
0.65	0.0000151	0.000942	0	-13382	SLU 83	-13382	-11611	-88226	-21083	-21083	1	1.58	Si
1.15	0.0000151	0.000942	0	-7103	SLU 83	-7103	-11611	-88226	-21083	-21083	1	2.97	Si
1.3	0.0000151	0.000942	0	-5234	SLU 83	-5234	-11611	-88226	-21083	-21083	1	4.03	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000151	0.000942	0	345	SLV 4	345	11611	88226	21083	21083	1	61.19	Si
0	0.0000151	0.000942	0	-8353	SLV 13	-8353	-11611	-88226	-21083	-21083	1	2.52	Si
0.15	0.0000151	0.000942	0	1557	SLV 4	1557	11611	88226	21083	21083	1	13.54	Si
0.15	0.0000151	0.000942	0	-7088	SLV 13	-7088	-11611	-88226	-21083	-21083	1	2.97	Si
0.65	0.0000151	0.000942	0	-12294	SLV 15	-12294	-11611	-88226	-21083	-21083	1	1.71	Si
1.15	0.0000151	0.000942	0	-7955	SLV 15	-7955	-11611	-88226	-21083	-21083	1	2.65	Si
1.3	0.0000151	0.000942	0	802	SLV 2	802	11611	88226	21083	21083	1	26.29	Si
1.3	0.0000151	0.000942	0	-6666	SLV 15	-6666	-11611	-88226	-21083	-21083	1	3.16	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000151	0.000942	0	-5870	SLD 13	-5870	-11611	-88226	-21083	-21083	1	3.59	Si
0.15	0.0000151	0.000942	0	-4620	SLD 13	-4620	-11611	-88226	-21083	-21083	1	4.56	Si
0.65	0.0000151	0.000942	0	-10054	SLD 15	-10054	-11611	-88226	-21083	-21083	1	2.1	Si
1.15	0.0000151	0.000942	0	-5797	SLD 15	-5797	-11611	-88226	-21083	-21083	1	3.64	Si
1.3	0.0000151	0.000942	0	-4531	SLD 15	-4531	-11611	-88226	-21083	-21083	1	4.65	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	7390.21	21	7074.45	469649	1494000	20825744	36000000	6678.91	2	6378.63	423456	1120500			Si
0.15	6861.23	21	6861.23	250935	1494000	3764028	36000000	6171.21	2	6171.21	225699	1120500			Si
0.65	5104.18	20	6527.5	238730	1494000	3580947	36000000	4469.36	2	5778.79	211347	1120500			Si
1.15	1419.49	18	2474.4	90496	1494000	1357440	36000000	1332.16	2	2219.29	81166	1120500			Si
1.3	812.73	1	812.73	29724	1494000	445860	36000000	812.73	1	812.73	29724	1120500			Si

Verifica di apertura delle fessure

x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
0	inferiore	0.442	0.00061	0.000268	21	0.442	0.00056	0.000249	6	0.442	0.00055	0.000242	2	Si

Campata 3 tra i fili ? - 157, sezione R 70x45, asta 470

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	1873.02	SLU 60	1352.78	13996.86	0.128	10.35							Si
0.15	0.000942	0.053	0.000942	0.053	596.05	SLU 43	596.05	13996.86	0.128	23.48	-103.88	SLU 36	-1403.53	-13996.86	0.128	9.97	Si
0.72	0.000942	0.053	0.000942	0.053							-4017.44	SLU 84	-4837.69	-13996.86	0.128	2.89	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	4398.85	SLV 15	3881.27	13265.61	0.222	3.42	-1852.16	SLV 2	-1852.16	-13265.61	0.222	7.16	Si
0.15	0.000942	0.053	0.000942	0.053	2982.65	SLV 15	2982.65	13265.61	0.222	4.45	-2444.23	SLV 2	-3017.55	-13265.61	0.222	4.4	Si
0.72	0.000942	0.053	0.000942	0.053							-3768.02	SLV 2	-3889.11	-13265.61	0.222	3.41	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	2612.01	SLD 15	2174.63	13265.61	0.222	6.1	-65.32	SLD 2	-65.32	-13265.61	0.222	203.08	Si
0.15	0.000942	0.053	0.000942	0.053	1431.51	SLD 15	1431.51	13265.61	0.222	9.27	-893.09	SLD 2	-1745.51	-13265.61	0.222	7.6	Si
0.72	0.000942	0.053	0.000942	0.053							-3096.28	SLD 2	-3475.4	-13265.61	0.222	3.82	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000151	0.000942	0	-13653	SLU 83	-13653	-11611	-88226	-21083	-21083	1	1.54	Si
0.15	0.0000151	0.000942	0	-12240	SLU 83	-12240	-11611	-88226	-21083	-21083	1	1.72	Si
0.72	0.0000151	0.000942	0	-6869	SLU 83	-6869	-11611	-88226	-21083	-21083	1	3.07	Si
1.3	0.0000151	0	0	-1753	SLU 60	-1753	-11837	-100005	-23898	-23898	1	13.63	Si
1.45	0.0000151	0	0	111	SLU 36	111	11837	100005	23898	23898	1	214.71	Si
1.45	0.0000151	0	0	-591	SLU 43	-591	-11837	-100005	-23898	-23898	1	40.43	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000151	0.000942	0	-12955	SLV 15	-12955	-11611	-88226	-21083	-21083	1	1.63	Si
0.15	0.0000151	0.000942	0	-11982	SLV 15	-11982	-11611	-88226	-21083	-21083	1	1.76	Si
0.72	0.0000151	0.000942	0	-8299	SLV 15	-8299	-11611	-88226	-21083	-21083	1	2.54	Si
1.3	0.0000151	0	0	2289	SLV 2	2289	11837	100005	23898	23898	1	10.44	Si
1.3	0.0000151	0	0	-4689	SLV 15	-4689	-11837	-100005	-23898	-23898	1	5.1	Si
1.45	0.0000151	0	0	3217	SLV 2	3217	11837	100005	23898	23898	1	7.43	Si
1.45	0.0000151	0	0	-3756	SLV 15	-3756	-11837	-100005	-23898	-23898	1	6.36	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000151	0.000942	0	-10865	SLD 15	-10865	-11611	-88226	-21083	-21083	1	1.94	Si

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0.15	0.0000151	0.000942	0	-9908	SLD 15	-9908	-11611	-88226	-21083	-21083	1	2.13	Si
0.72	0.0000151	0.000942	0	-6277	SLD 15	-6277	-11611	-88226	-21083	-21083	1	3.36	Si
1.3	0.0000151	0	0	292	SLD 2	292	11837	100005	23898	23898	1	81.72	Si
1.3	0.0000151	0	0	-2693	SLD 15	-2693	-11837	-100005	-23898	-23898	1	8.87	Si
1.45	0.0000151	0	0	1222	SLD 2	1222	11837	100005	23898	23898	1	19.55	Si
1.45	0.0000151	0	0	-1761	SLD 15	-1761	-11837	-100005	-23898	-23898	1	13.57	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	1309.61	18	899.28	32889	1494000	493339	36000000	1273.34	2	895.98	32768	1120500			Si
0.15	290.89	1	290.89	10639	1494000	159581	36000000	290.89	1	290.89	10639	1120500			Si
0.72	-2912.28	21	-3528.52	129048	1494000	1935724	36000000	-2591.86	2	-3163.94	115715	1120500			Si
1.3	-4299.67	21	-4299.67	-181997	1494000	0	36000000	-3892.26	2	-3892.26	-164752	1120500			Si
1.45	-4380.39	21	-4380.39	-185413	1494000	0	36000000	-3976.38	2	-3976.38	-168312	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
2.9	0.9	SLU 50	ST	LT	-9	182	-26874	0	0	19	0	0	1.1	8174	182	44.94	Si
2.9	0.9	SLV 4	SIS	LT	-4178	1067	-22192	-11	3	19	0	0	1.1	6750	4312	1.57	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
468,469,470	2.9	0.9	SLU 84	ST	BT	2.3	109931	33090	3.32	Si
468,469,470	2.9	0.9	SLV 8	SIS	LT	2.3	78752	22919	3.44	Si
468,469,470	2.9	0.9	SLD 8	SIS	BT	2.3	103091	22652	4.55	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	140	-33090	98.63	-190.89	0	0	-0.01	0	0.89	2.89	1084	2060	0	14430	
0	2890	-22919	-1235.55	-796.94	0	7	-0.03	-0.05	0.79	2.83	1084	2060	37	0	0.07
0	1337	-22652	-514.08	-407.58	0	3	-0.02	-0.02	0.85	2.86	1084	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Nγ	Sq	Sc	Sγ	Dq	Dc	Dγ	Iq	Ic	Iγ	Bq	Bc	Bγ	Gq	Gc	Gγ	Pq	Pc	Pγ	Eq	Ec	Eγ
1	5	0	0	0.06	0	0	0.24	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.21	1.22	0.89	1.15	1.24	1	0.79	0.78	0.69	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.06	0	0	0.24	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

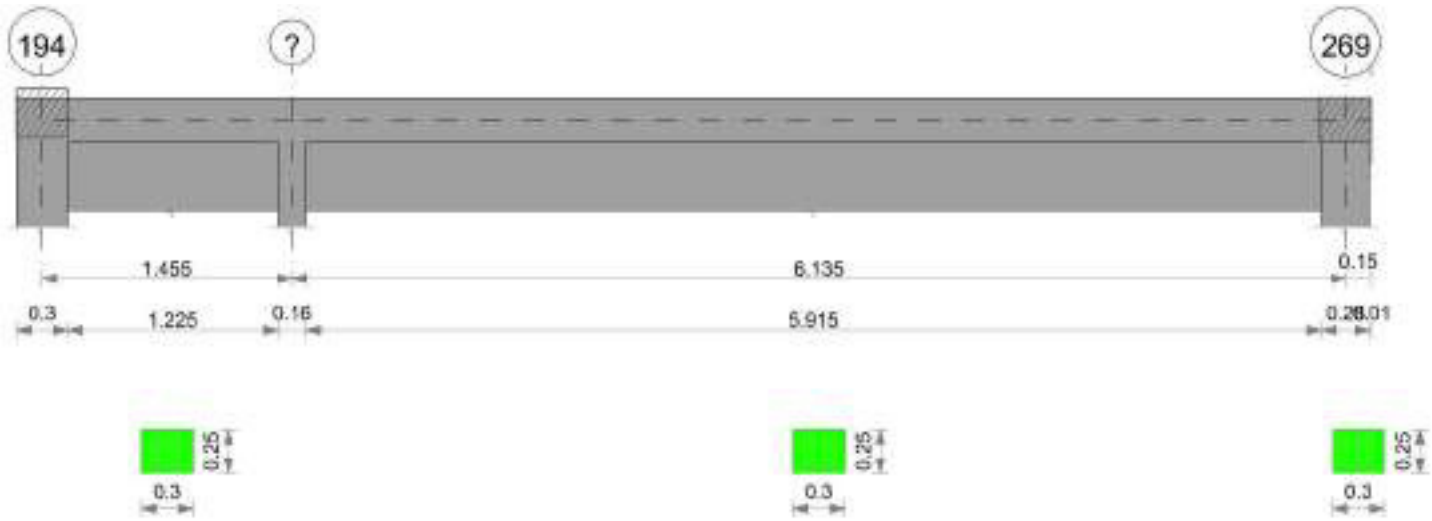
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	479	SLE RA 20	0.05	0.001	479	476	SLE RA 21	0.05	0	478	SLE RA 20	0.0033	0	SLE RA 20	Si
D	0.05	0	479	SLE RA 1	0.05	0	479	479	SLE RA 1	0.05	0	478	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	479	SLE RA 1	0.05	0	479	479	SLE RA 1	0.05	0	478	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.02	479	478	SLE RA 21	0.19	0	479	SLE RA 1	0.1	0.01	478	SLE RA 20	Si
D	0.19	0	SLE RA 1	0.19	0	479	478	SLE RA 1	0.19	0	479	SLE RA 1	0.1	0	478	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	479	478	SLE RA 1	0.19	0	479	SLE RA 1	0.1	0	478	SLE RA 1	Si

CORDOLO SOTTOTETTO 1

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000

Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

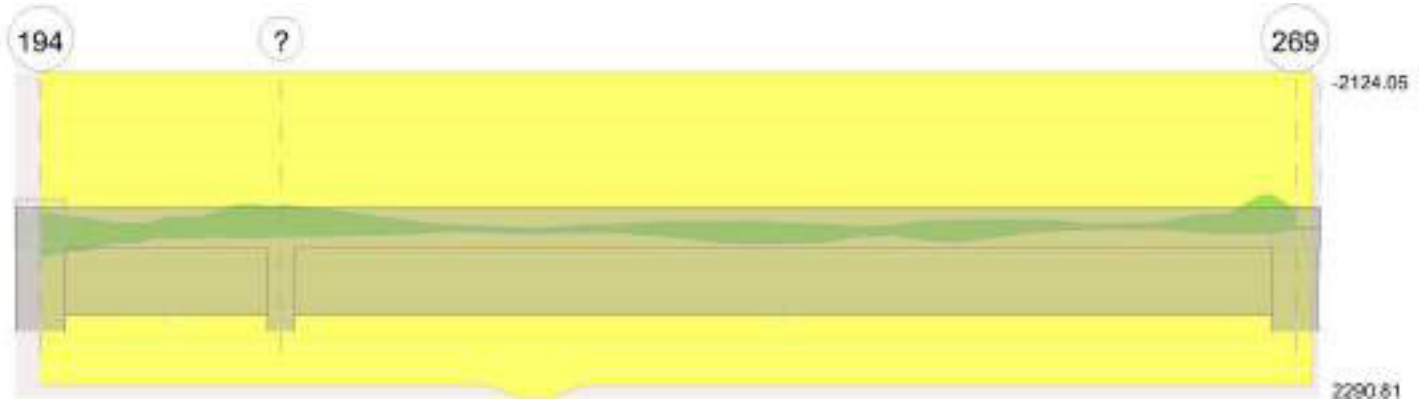


Diagramma verifica stato limite ultimo taglio

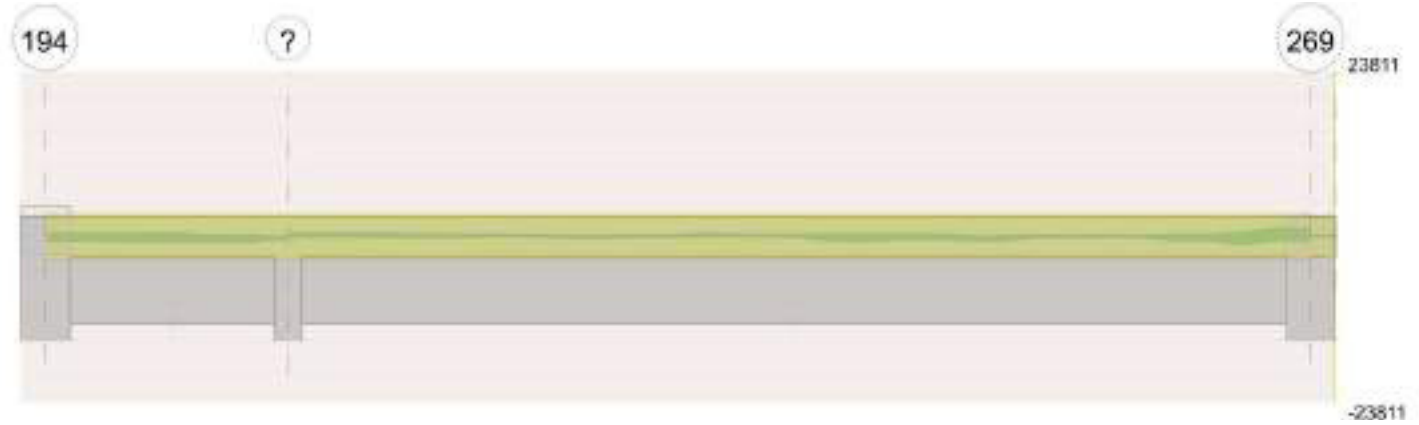
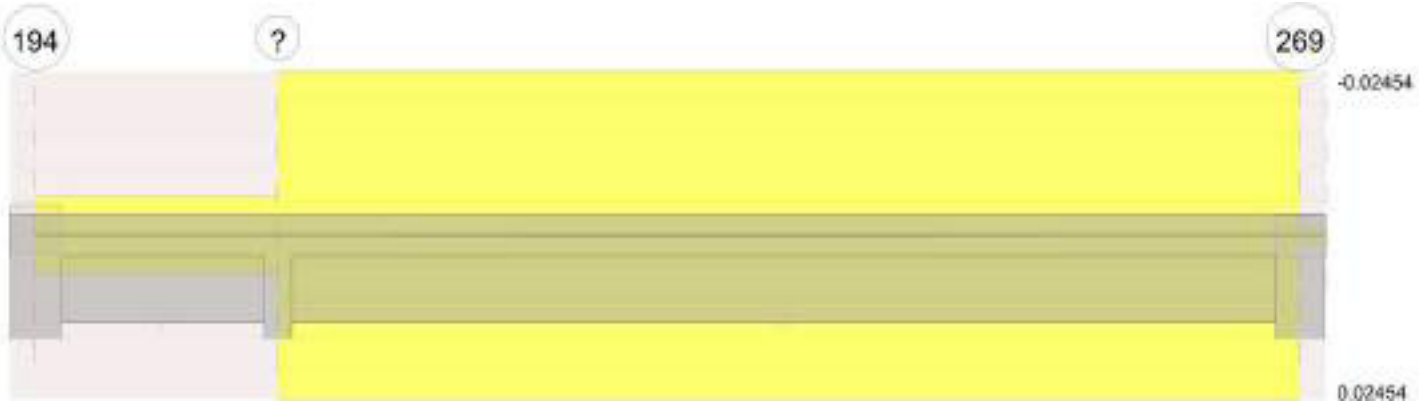


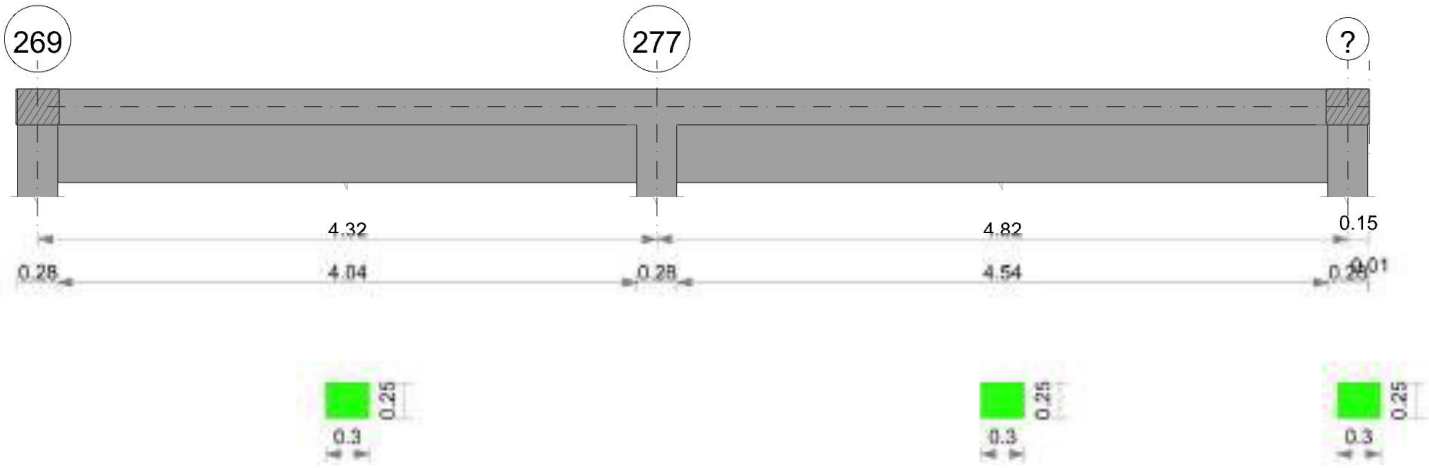
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 2

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

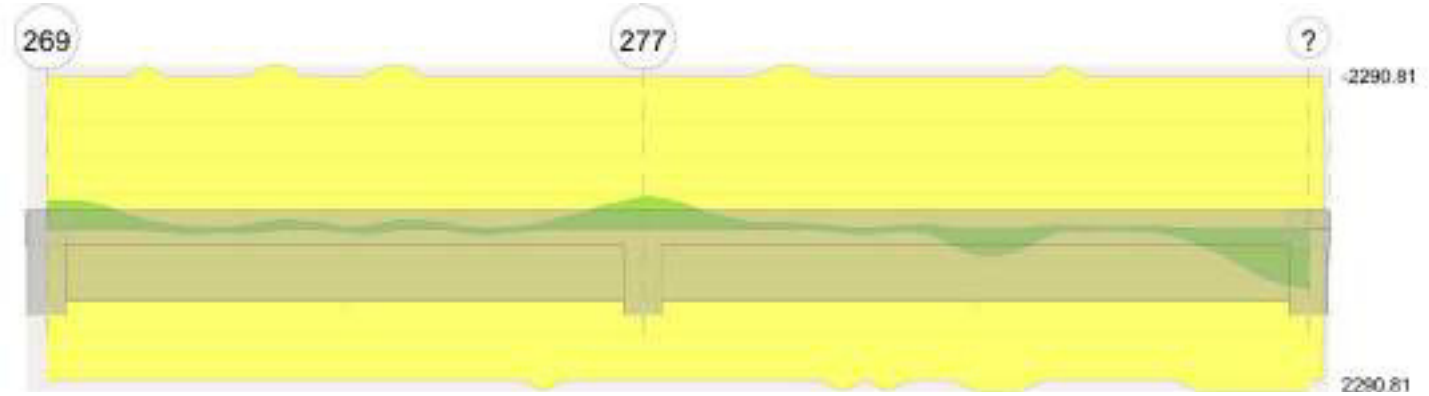


Diagramma verifica stato limite ultimo taglio

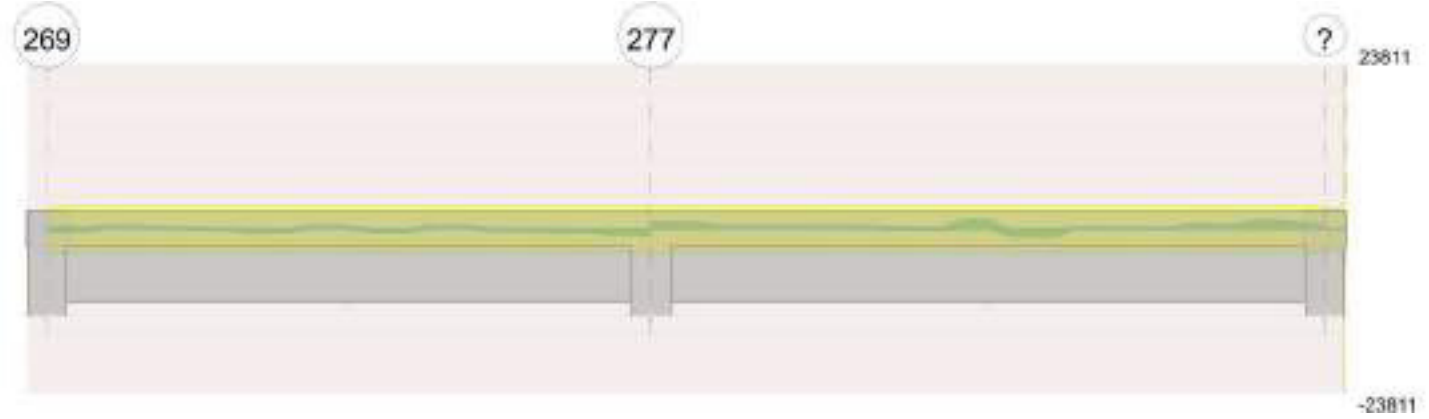
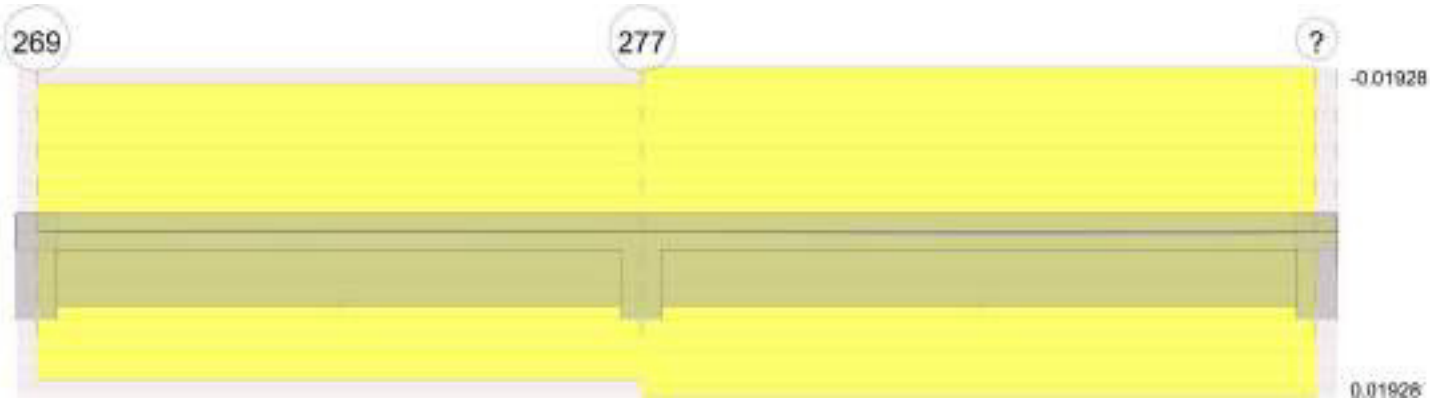


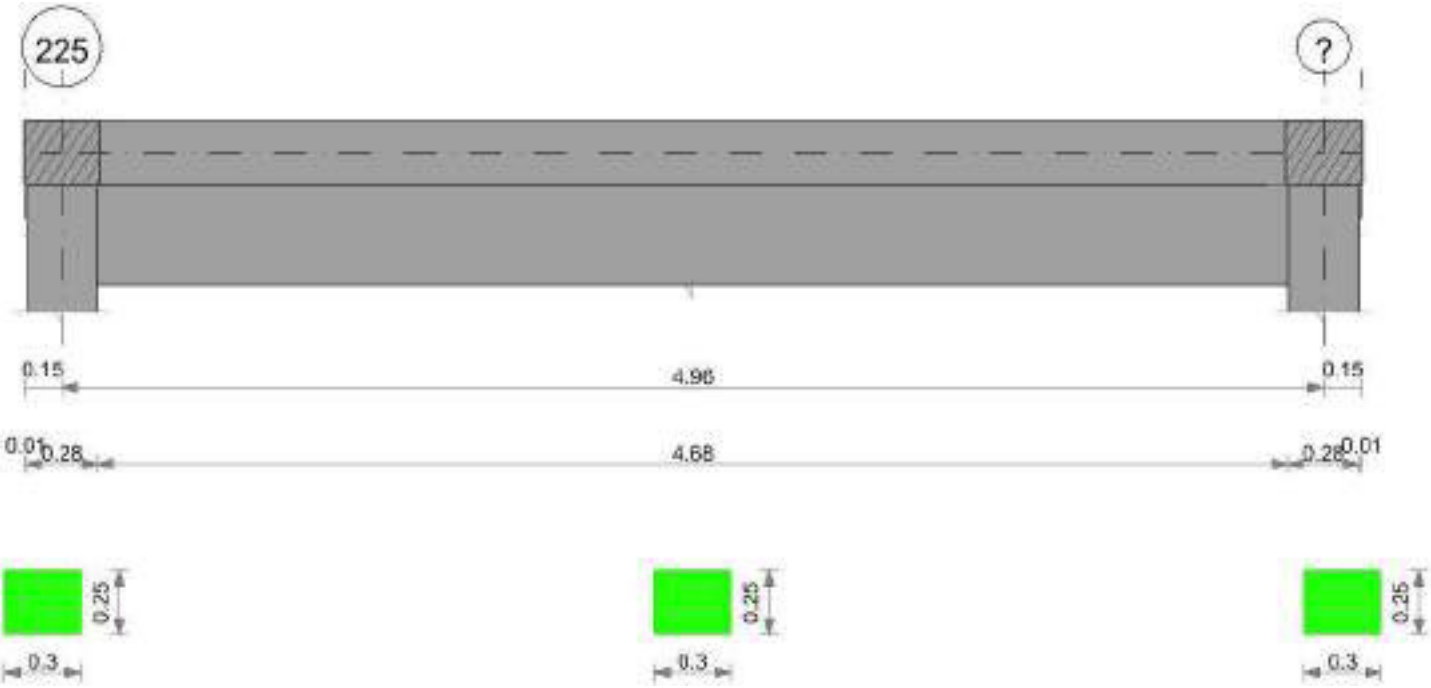
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 3

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

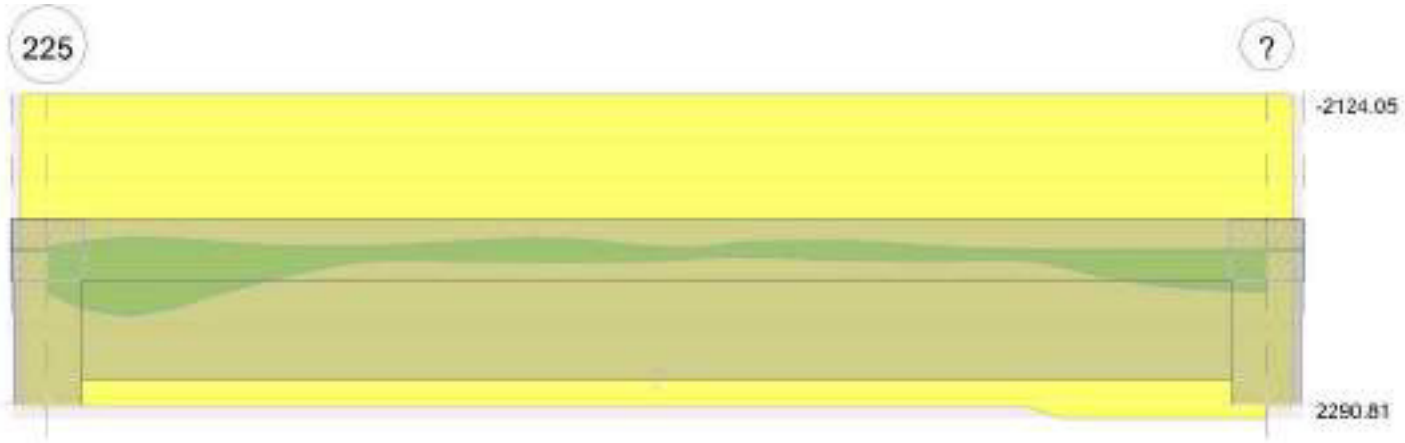


Diagramma verifica stato limite ultimo taglio

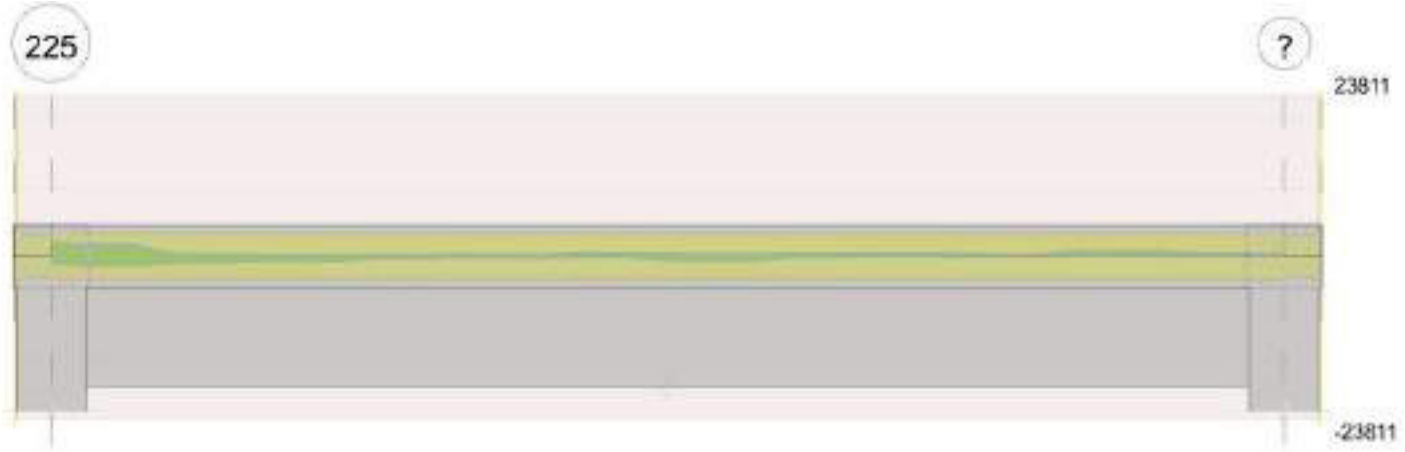
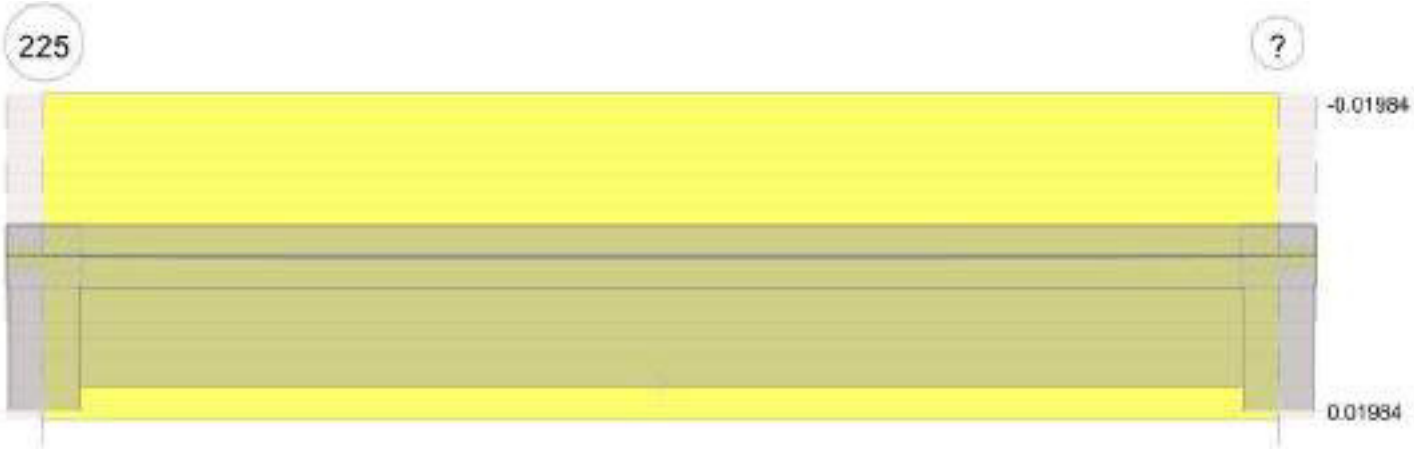


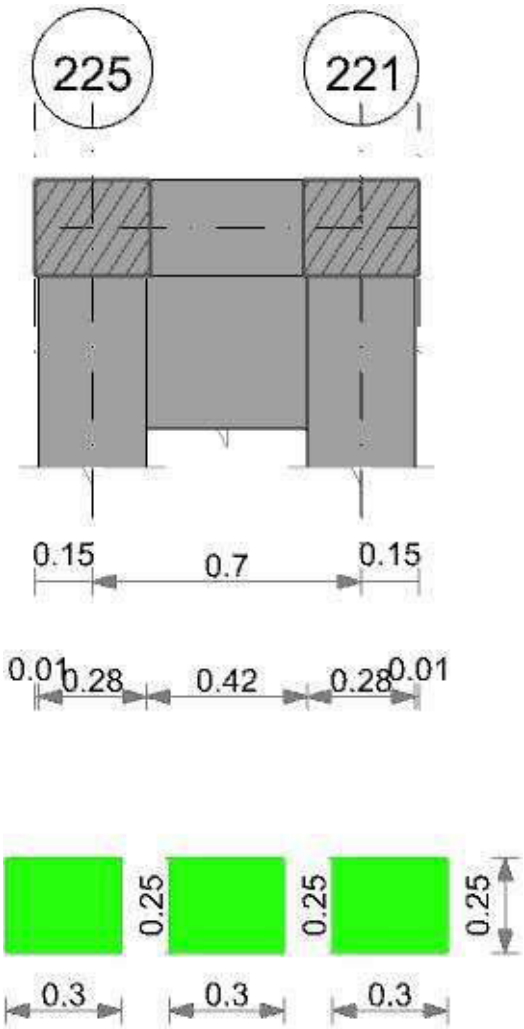
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 4

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

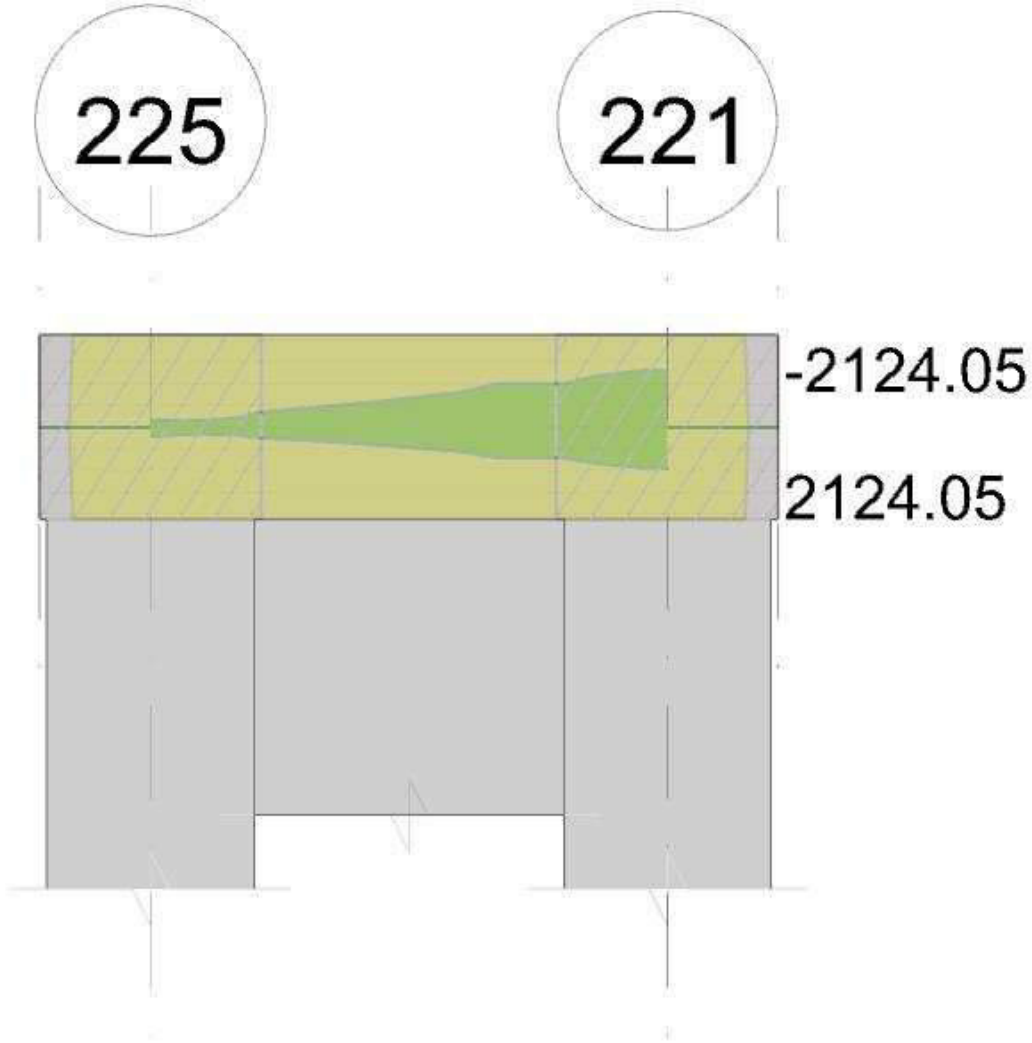
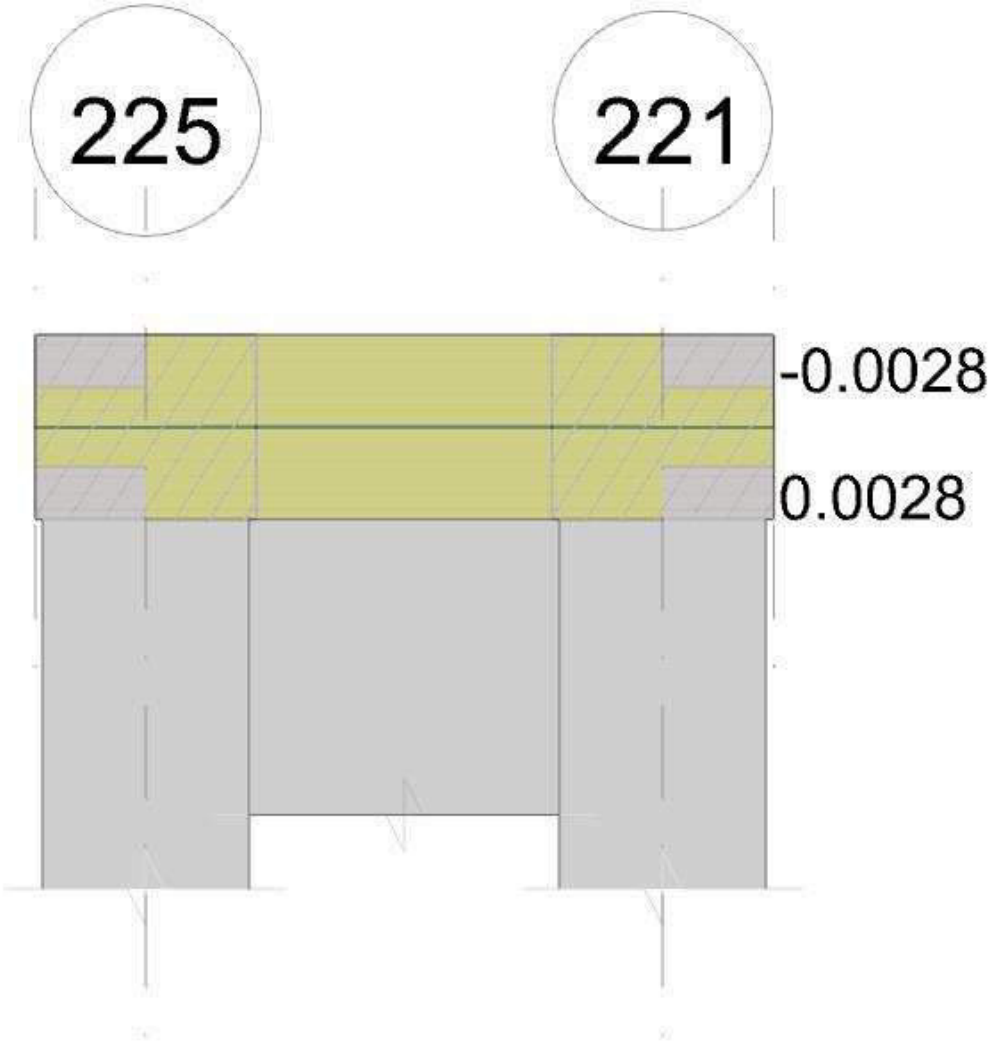


Diagramma verifica stato limite ultimo taglio

Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 5

Geometria

Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

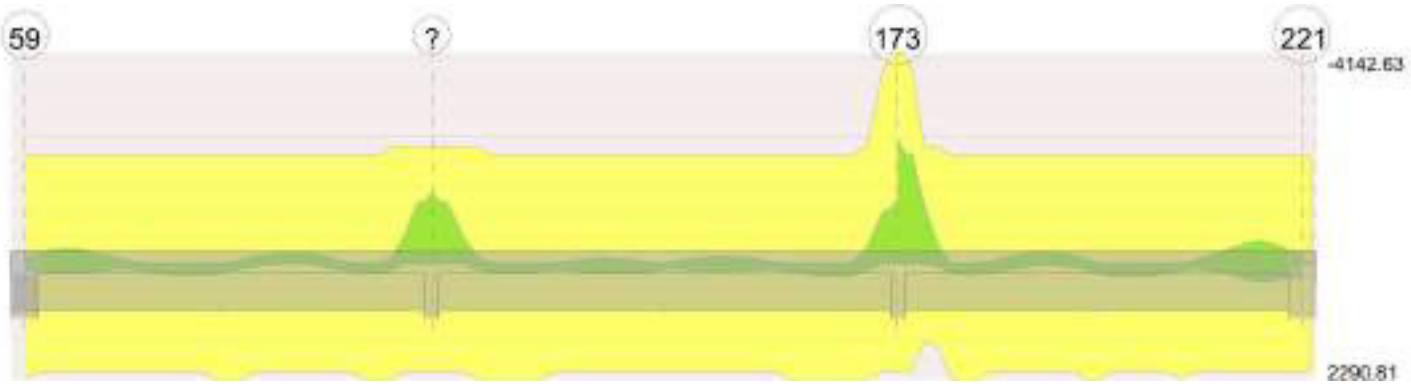


Diagramma verifica stato limite ultimo taglio

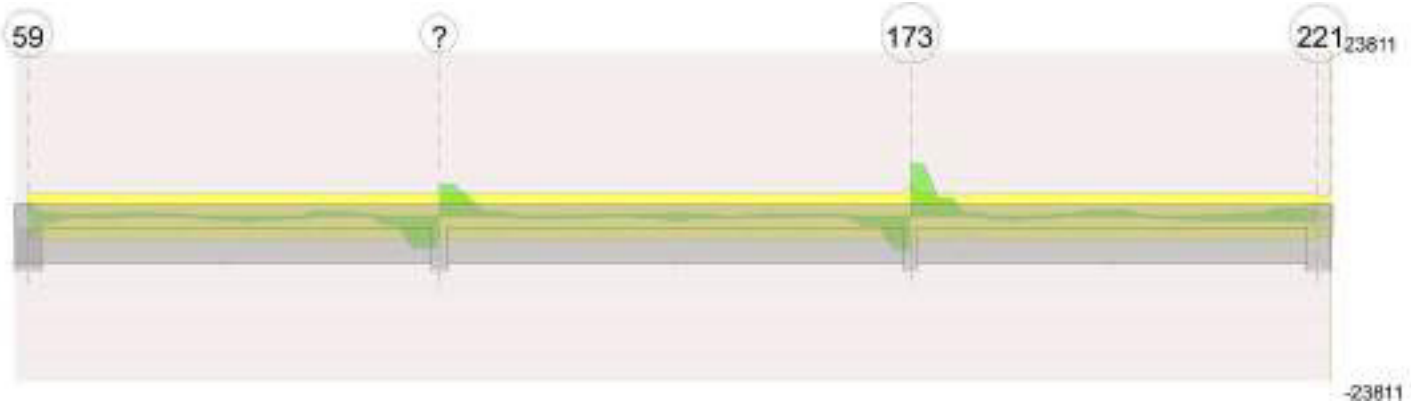
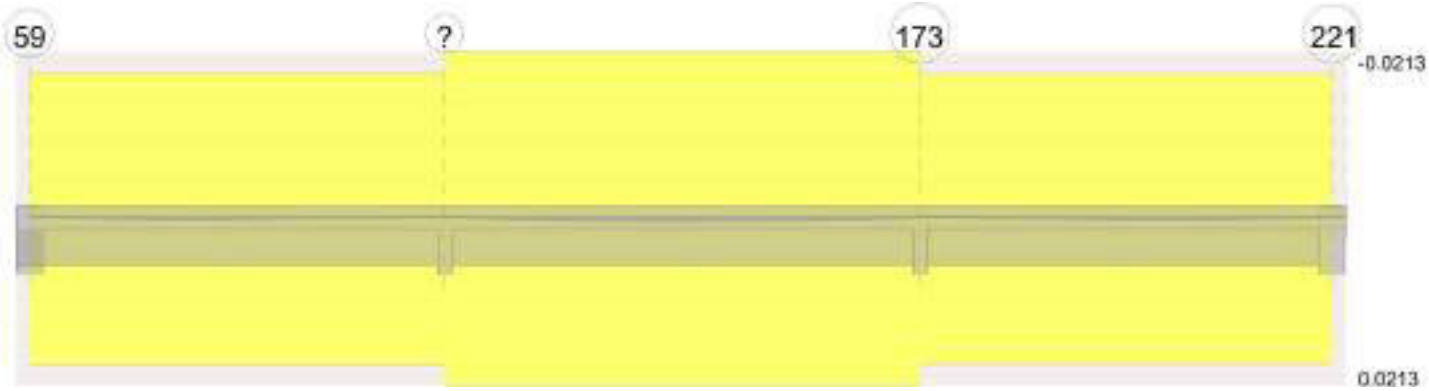


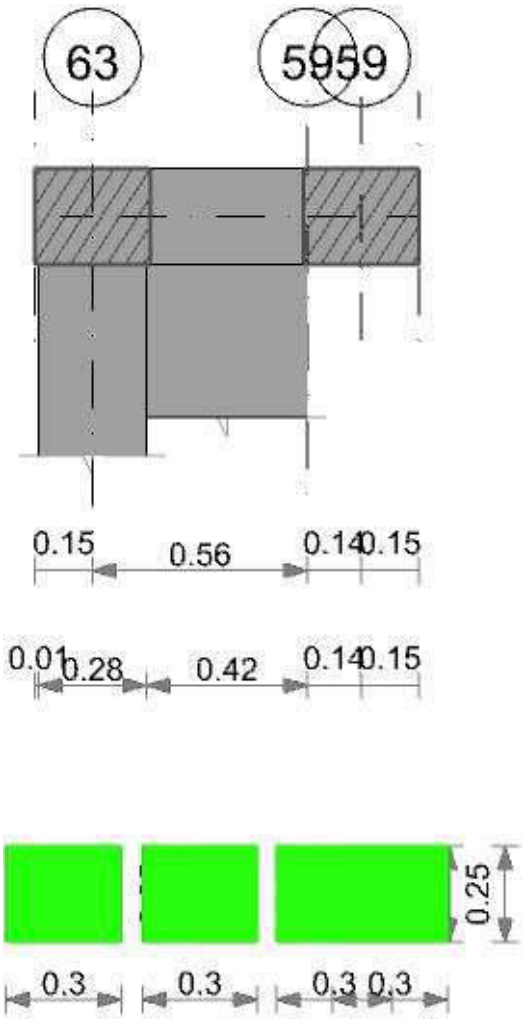
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 6

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

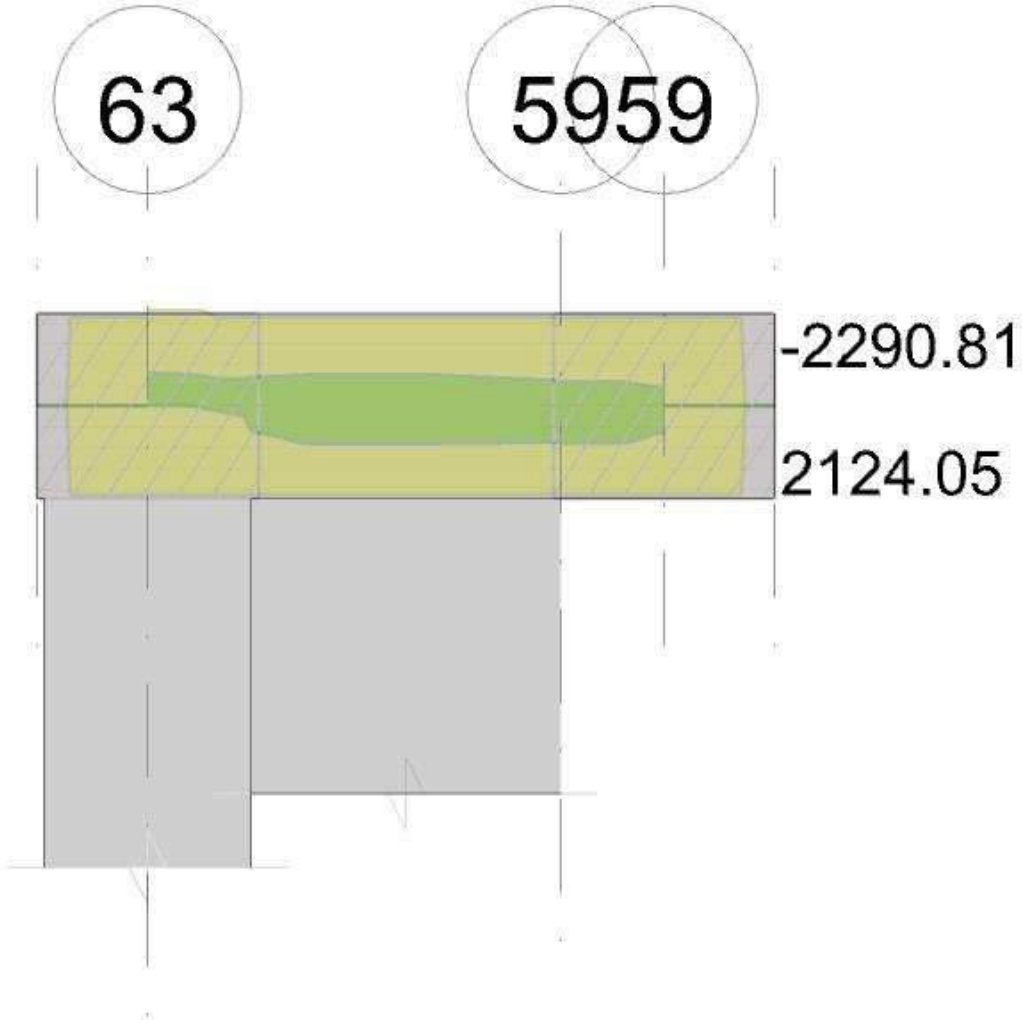


Diagramma verifica stato limite ultimo taglio

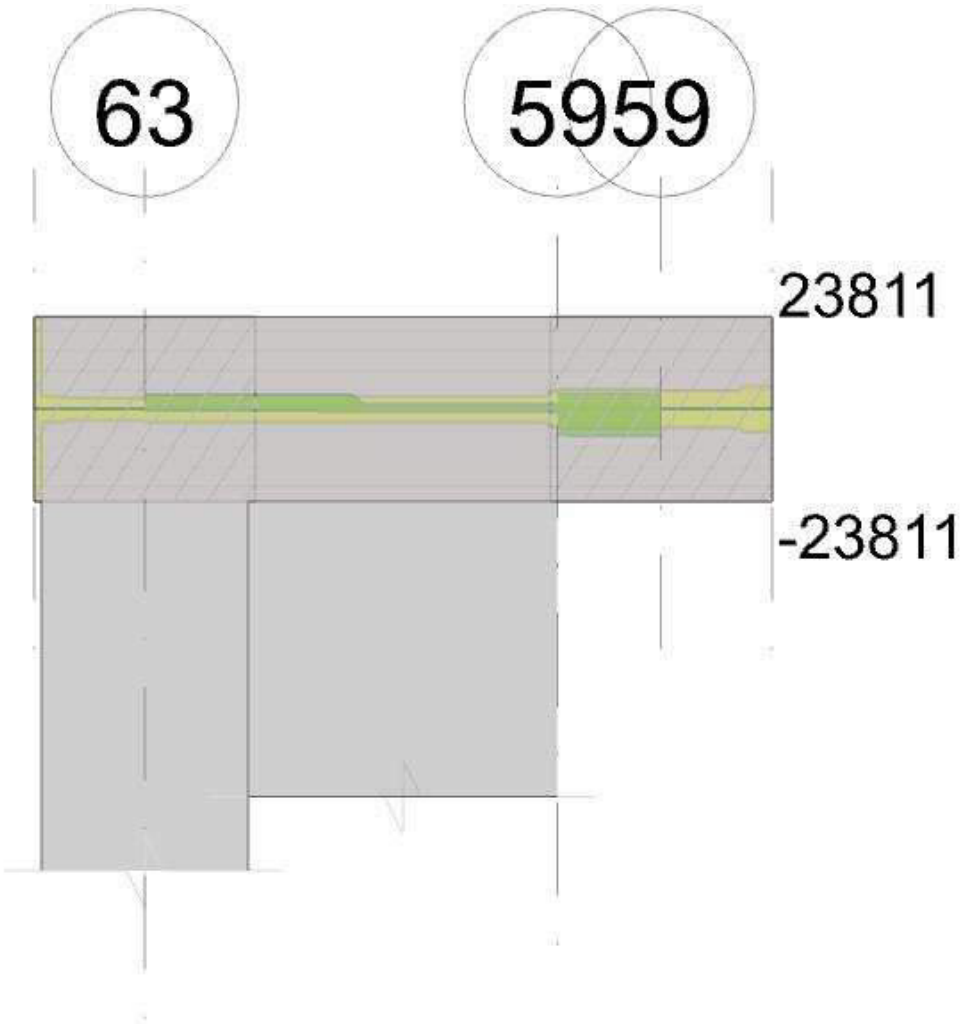
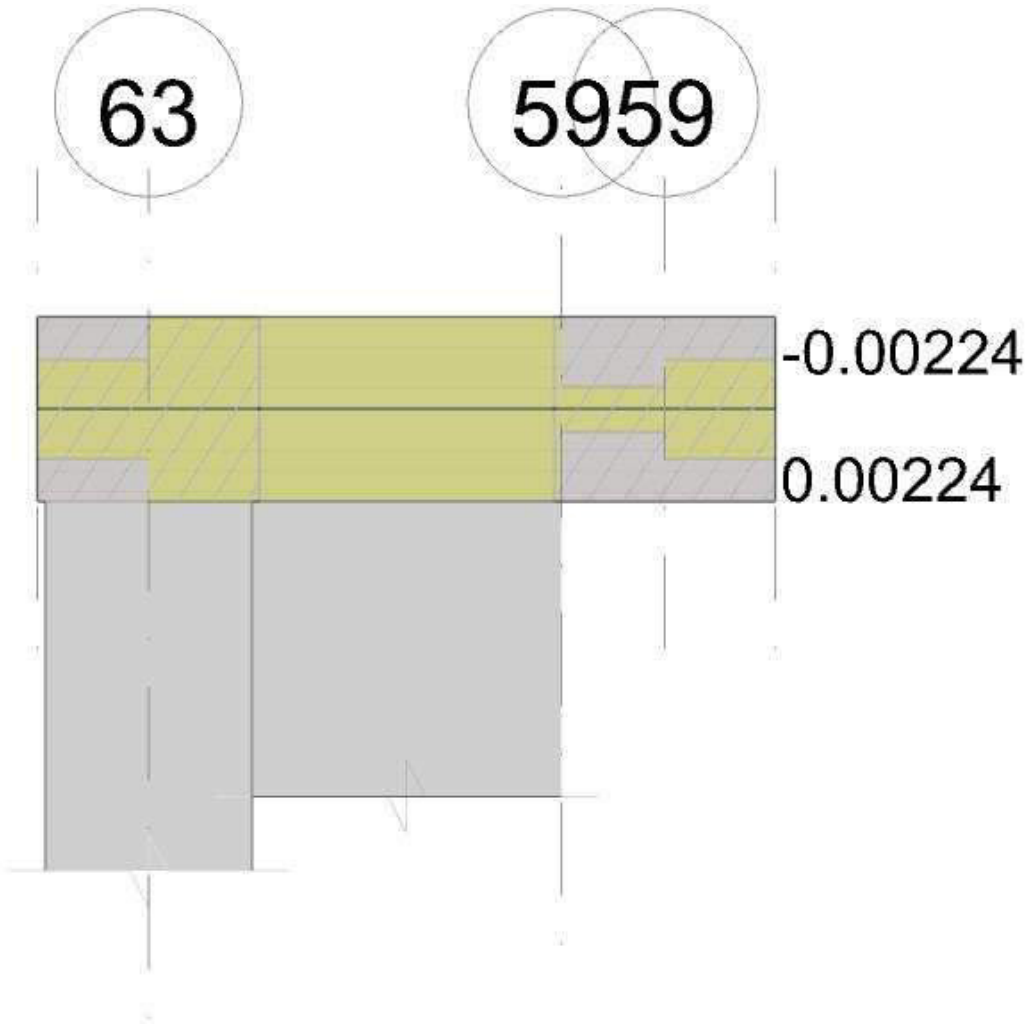


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 3 tra i fili 59 - 59, sezione R 30x25, asta 927

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	336.79	SLU 72	336.79	2290.81	0.221	6.8							Si
0.07	0.000308	0.05	0.000308	0.05	246.12	SLU 72	336.79	2290.81	0.221	6.8	51.17	SLU 18	-70.23	-2290.81	0.221	32.62	Si
0.14	0.000308	0.05	0.000308	0.05	176.26	SLU 29	271.56	2290.81	0.221	8.44	-70.23	SLU 61	-70.23	-2290.81	0.221	32.62	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	894.64	SLV 9	894.64	2124.05	0.281	2.37	-574.36	SLV 8	-574.36	-2124.05	0.281	3.7	Si
0.07	0.000308	0.05	0.000308	0.05	507.4	SLV 9	894.64	2124.05	0.281	2.37	-368.7	SLV 8	-574.36	-2124.05	0.281	3.7	Si
0.14	0.000308	0.05	0.000308	0.05	321.87	SLV 12	605.25	2124.05	0.281	3.51	-366.59	SLV 5	-415.65	-2124.05	0.281	5.11	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	480.19	SLD 9	480.19	2124.05	0.281	4.42	-159.91	SLD 8	-159.91	-2124.05	0.281	13.28	Si
0.07	0.000308	0.05	0.000308	0.05	258.51	SLD 9	480.19	2124.05	0.281	4.42	-119.81	SLD 8	-169.58	-2124.05	0.281	12.53	Si
0.14	0.000308	0.05	0.000308	0.05	124.87	SLD 12	316.06	2124.05	0.281	6.72	-169.58	SLD 5	-169.58	-2124.05	0.281	12.53	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000072	0.000308	0	-1871	SLU 61	-1871	-3366	-19049	-5058	-5058	1	2.7	Si
0.07	0.0000072	0.000308	0	-1888	SLU 61	-1888	-3366	-19049	-5058	-5058	1	2.68	Si
0.14	0.0000072	0.000308	0	-1905	SLU 61	-1905	-3366	-19049	-5058	-5058	1	2.66	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000072	0.000308	0	4113	SLV 8	4113	3366	19049	5058	5058	1	1.23	Si
0	0.0000072	0.000308	0	-6694	SLV 9	-6694	-3366	-19049	-5058	-5058	1	0.76	Si
0.07	0.0000072	0.000308	0	4100	SLV 8	4100	3366	19049	5058	5058	1	1.23	Si
0.07	0.0000072	0.000308	0	-6707	SLV 9	-6707	-3366	-19049	-5058	-5058	1	0.75	Si
0.14	0.0000072	0.000308	0	4087	SLV 8	4087	3366	19049	5058	5058	1	1.24	Si
0.14	0.0000072	0.000308	0	-6720	SLV 9	-6720	-3366	-19049	-5058	-5058	1	0.75	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000072	0.000308	0	1071	SLD 8	1071	3366	19049	5058	5058	1	4.72	Si
0	0.0000072	0.000308	0	-3652	SLD 9	-3652	-3366	-19049	-5058	-5058	1	1.38	Si
0.07	0.0000072	0.000308	0	1058	SLD 8	1058	3366	19049	5058	5058	1	4.78	Si
0.07	0.0000072	0.000308	0	-3665	SLD 9	-3665	-3366	-19049	-5058	-5058	1	1.38	Si
0.14	0.0000072	0.000308	0	1045	SLD 8	1045	3366	19049	5058	5058	1	4.84	Si
0.14	0.0000072	0.000308	0	-3678	SLD 9	-3678	-3366	-19049	-5058	-5058	1	1.37	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	241.89	9	241.89	68318	1494000	1024767	36000000	161.21	1	161.21	45532	1120500			Si
0.07	168.04	9	241.89	68318	1494000	1024767	36000000	71.79	1	161.21	45532	1120500			Si
0.14	93.58	8	188.75	53311	1494000	799660	36000000								Si
0.14	-31.55	19	-31.55	8912	1494000	133675	36000000	-22.36	2	-22.36	6315	1120500			Si

Verifica di apertura delle fessure

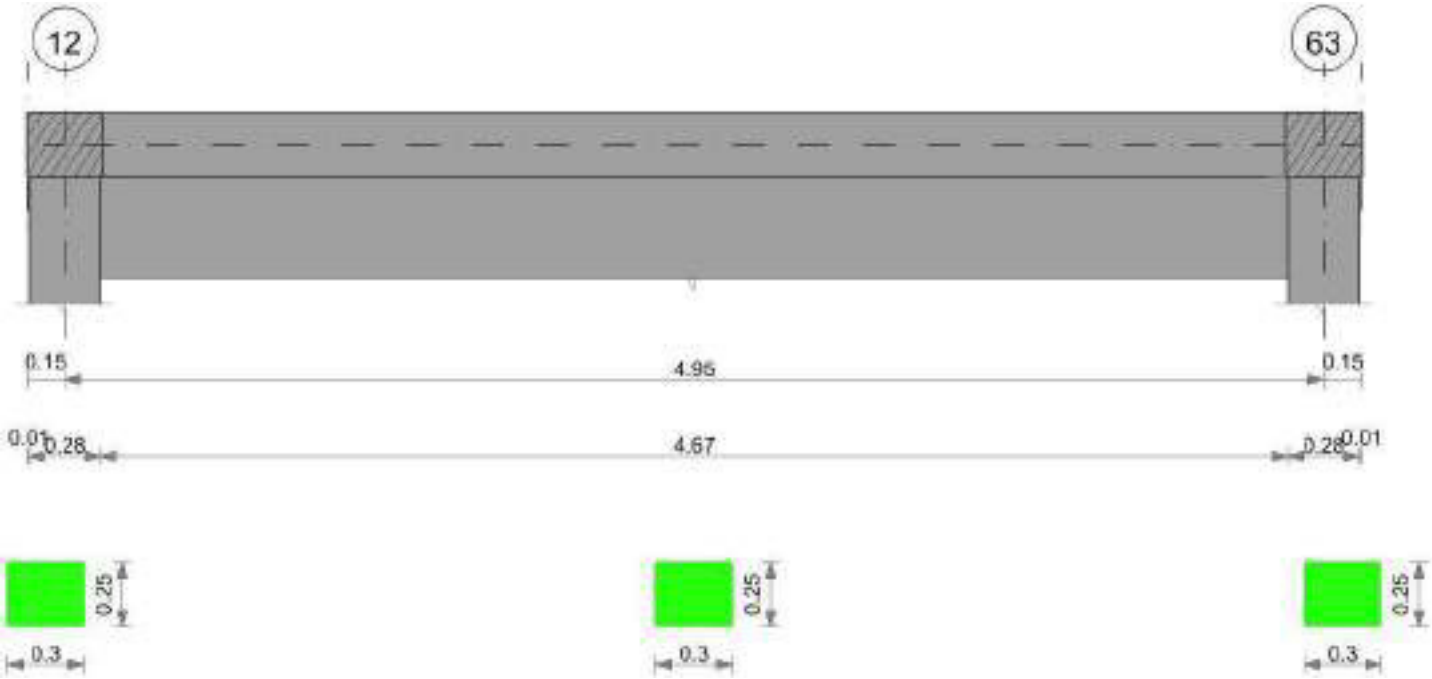
La campata non presenta apertura delle fessure

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.06	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si
0.07	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si

CORDOLO SOTTOTETTO 7

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

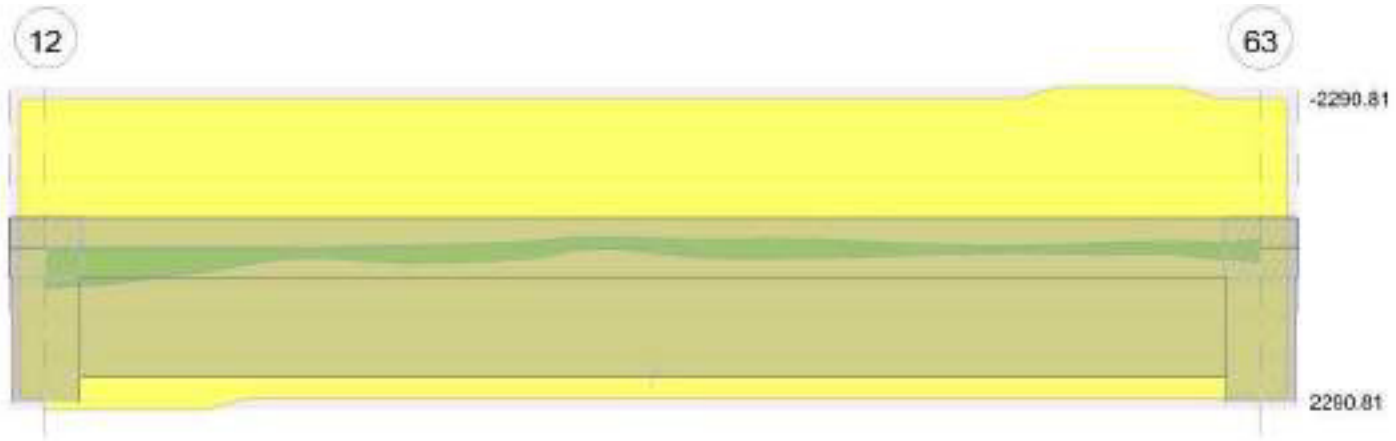


Diagramma verifica stato limite ultimo taglio

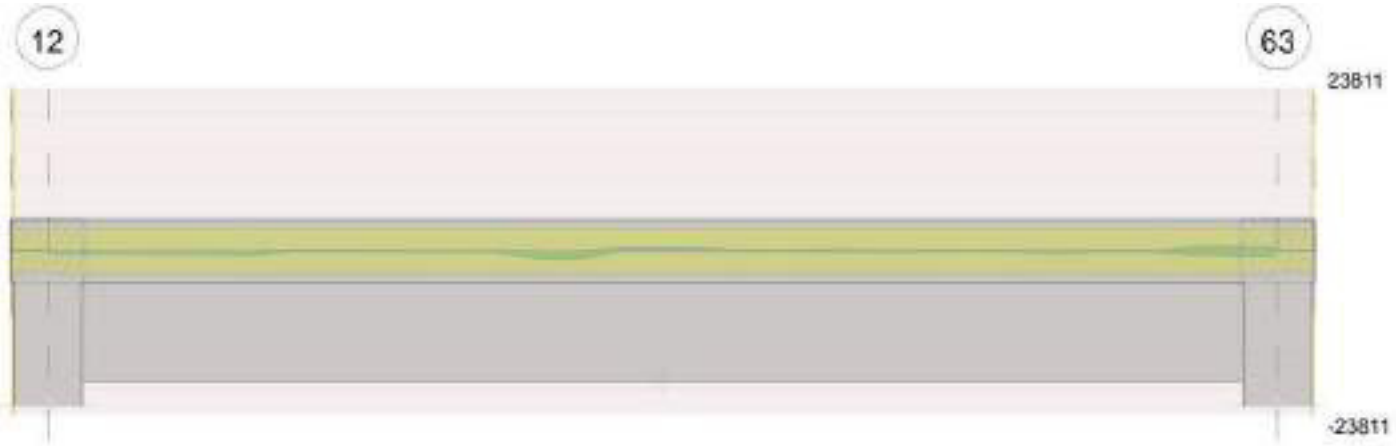
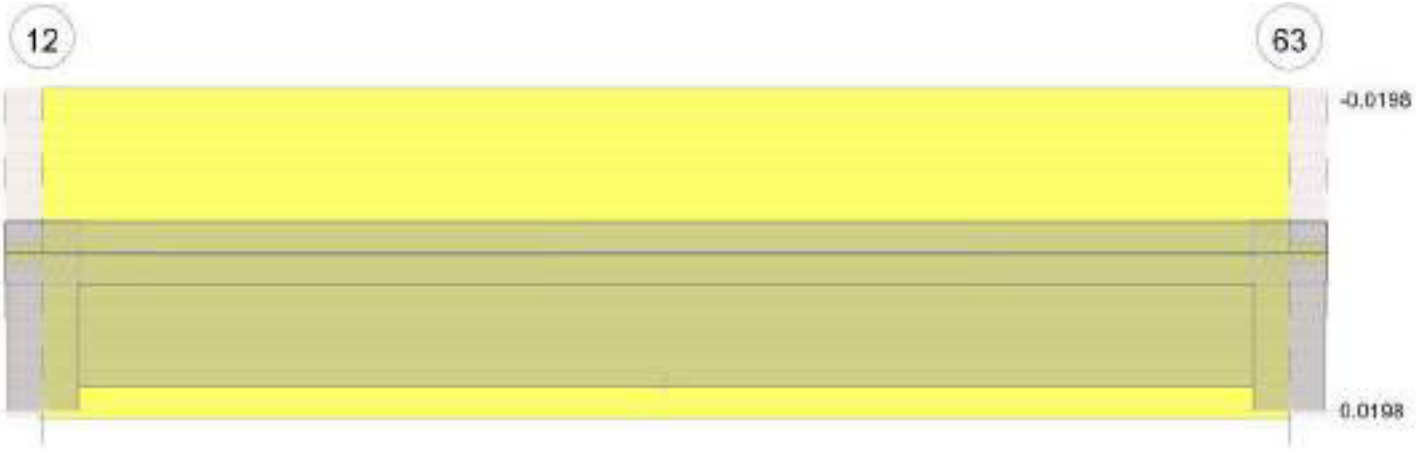


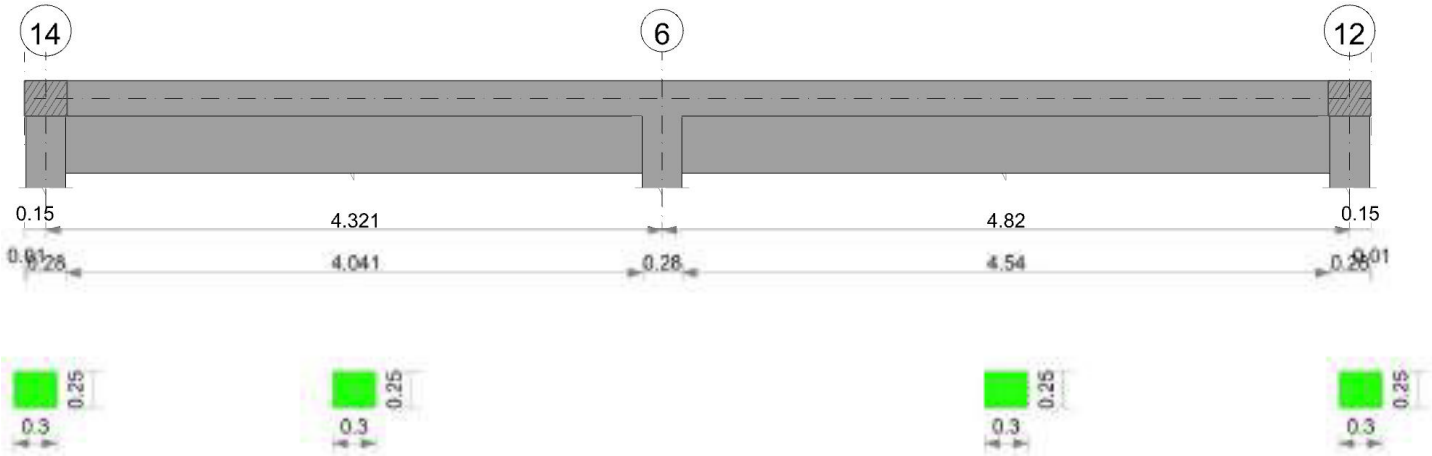
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 8

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

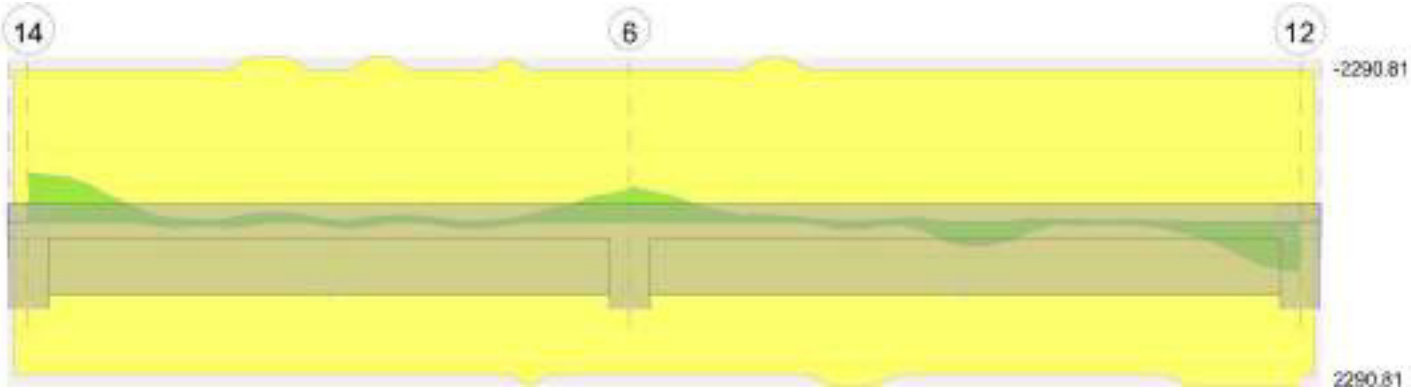


Diagramma verifica stato limite ultimo taglio

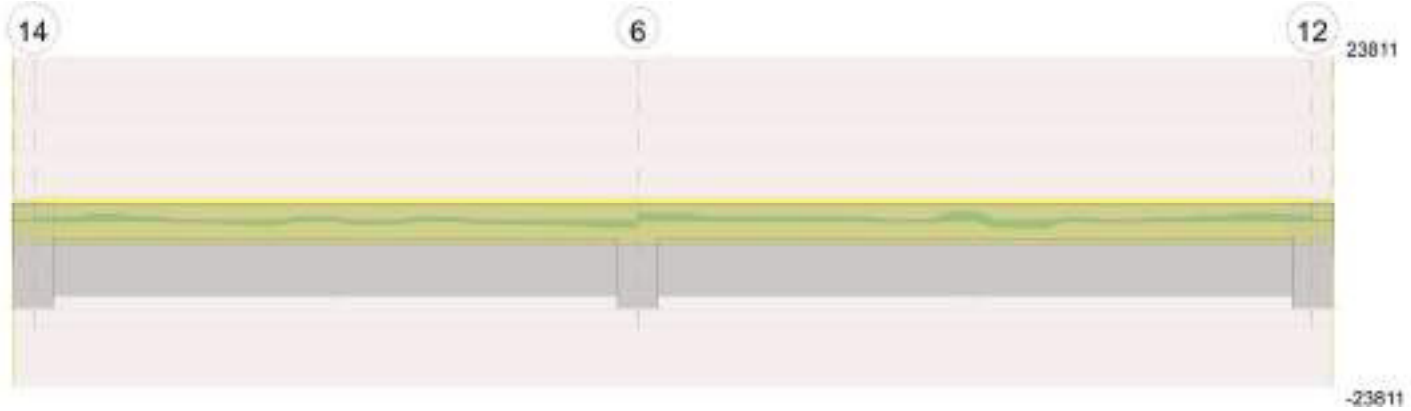
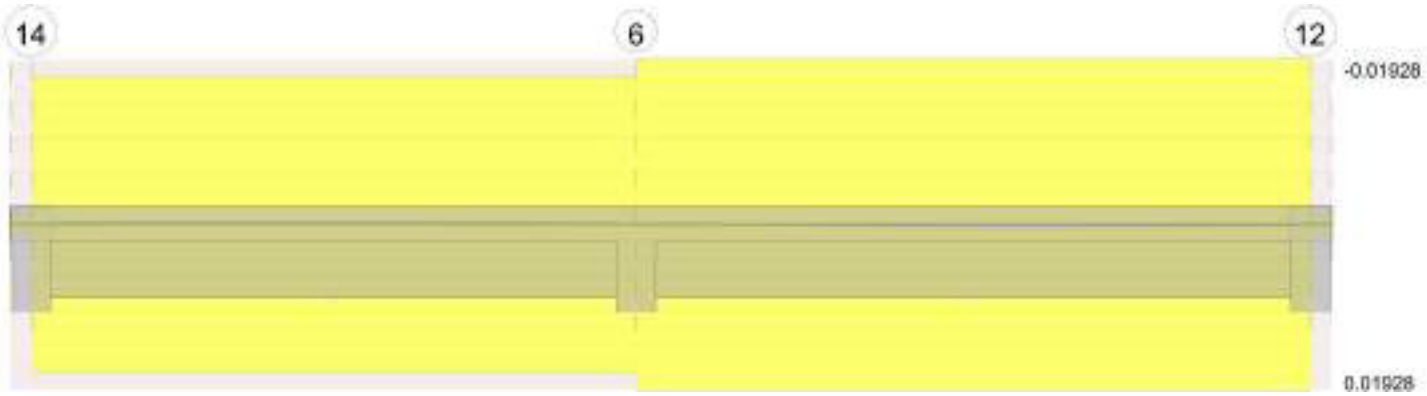


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 9

Geometria

Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

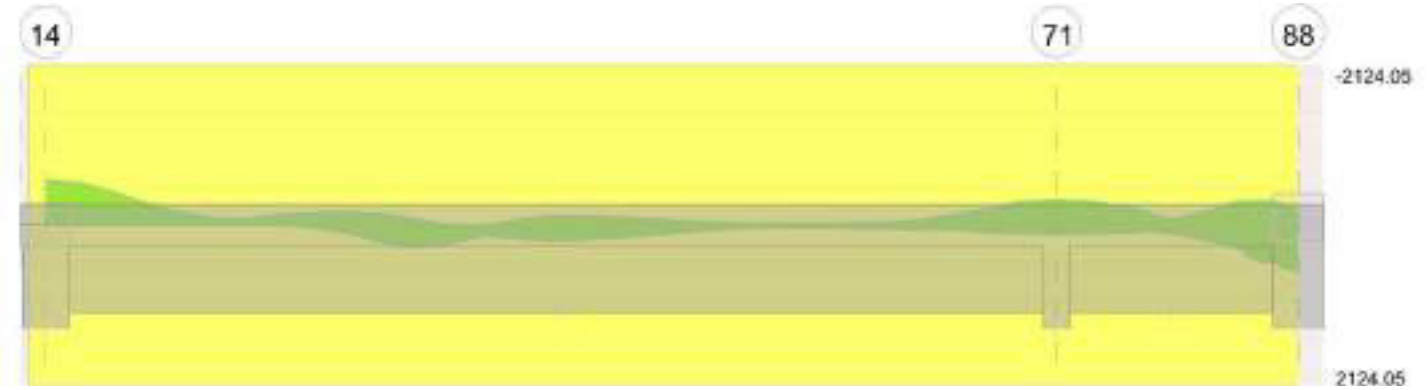


Diagramma verifica stato limite ultimo taglio

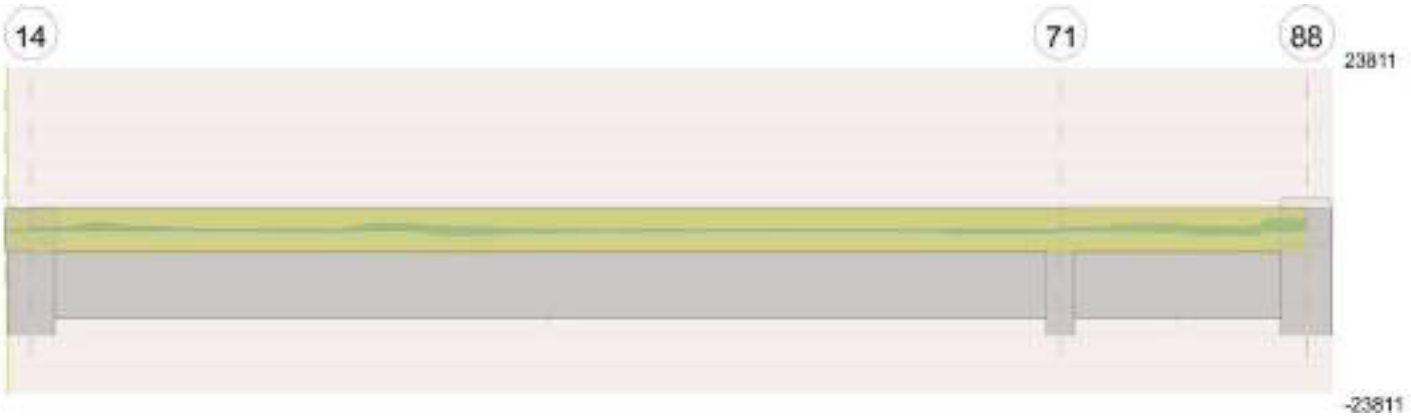
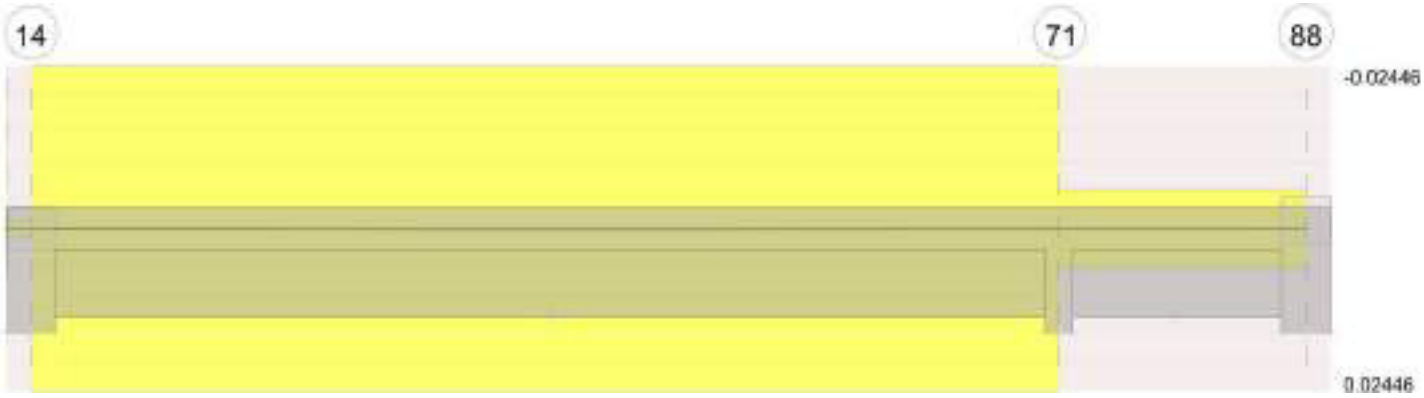


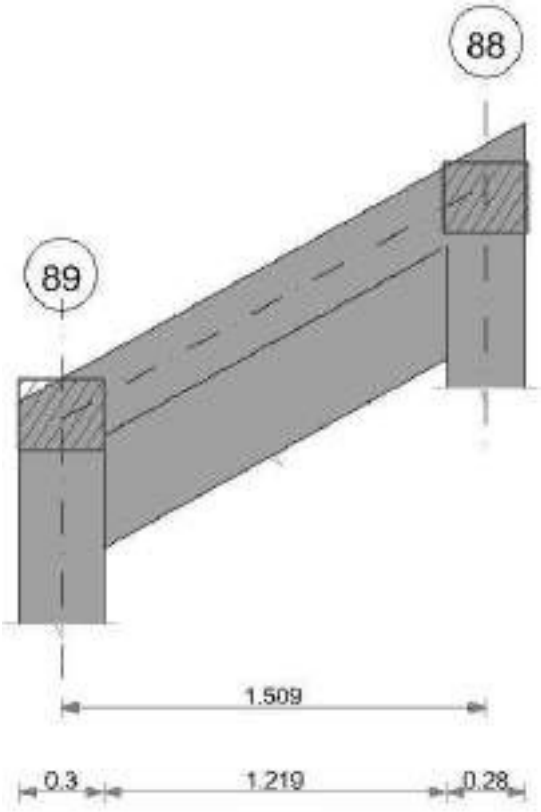
Diagramma verifica stato limite esercizio quasi permanente freccia

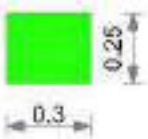


Output campate

CORDOLO SOTTOTETTO 10

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

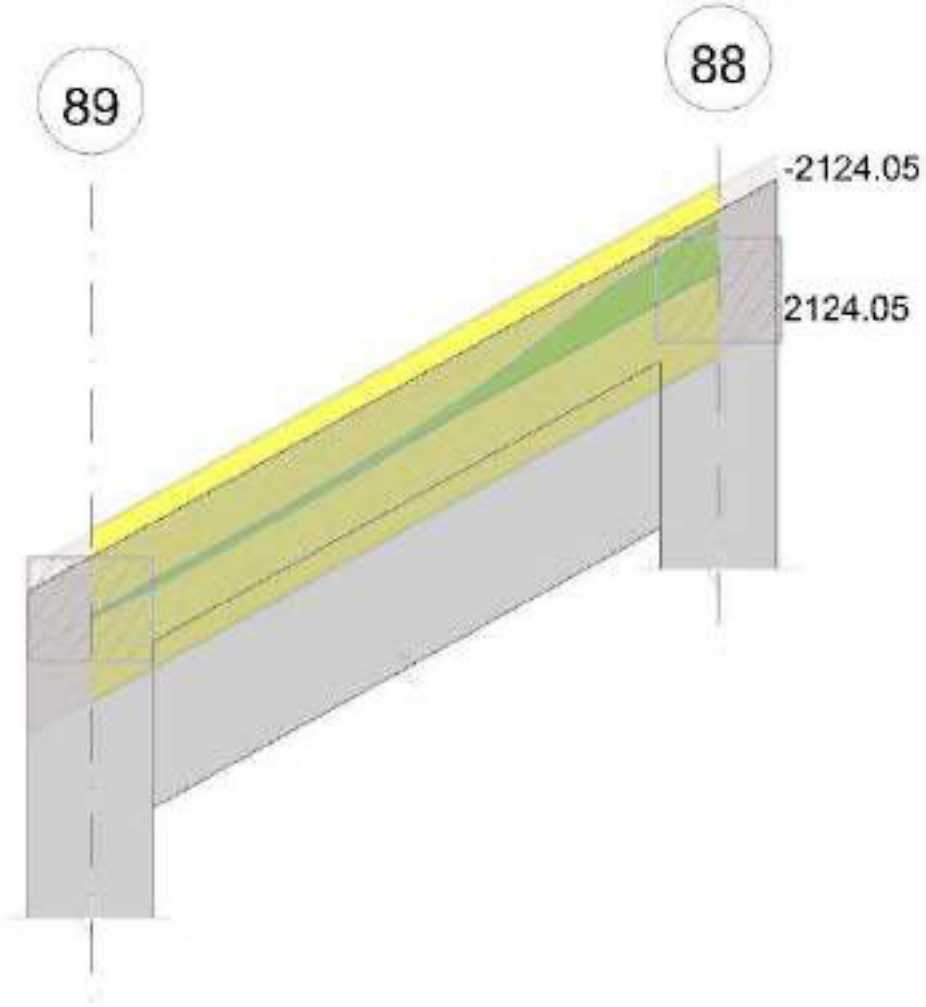


Diagramma verifica stato limite ultimo taglio

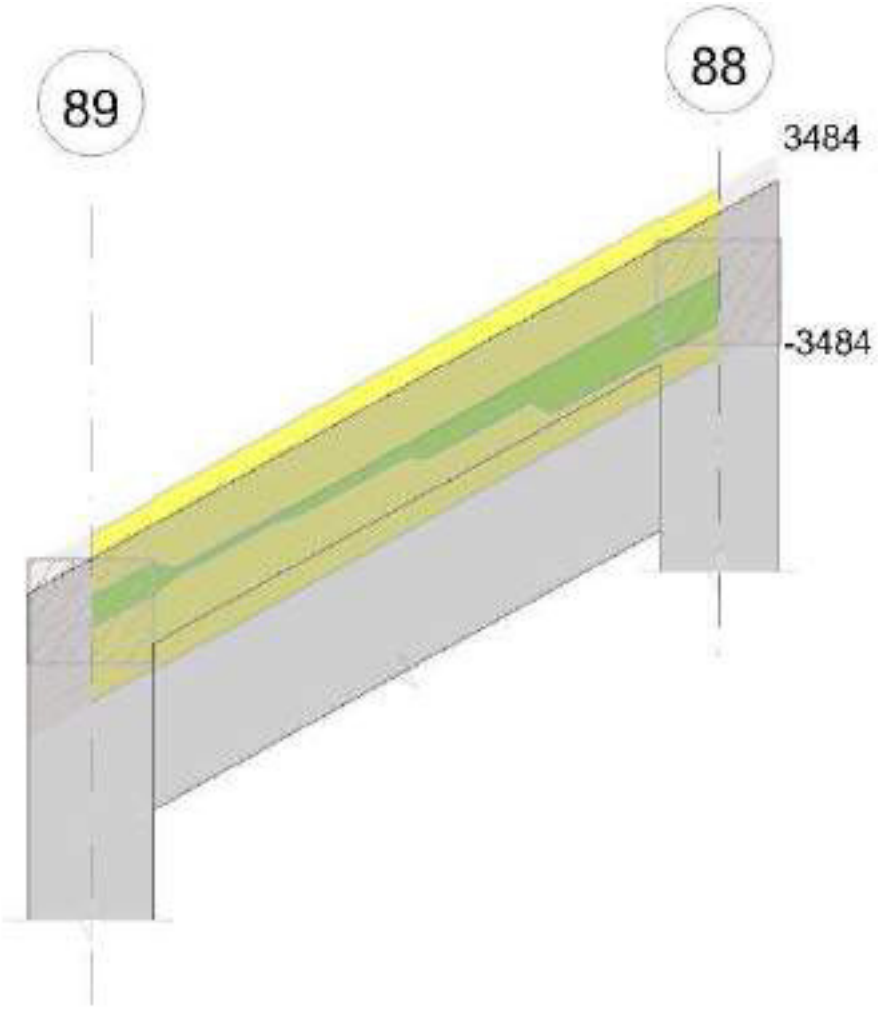
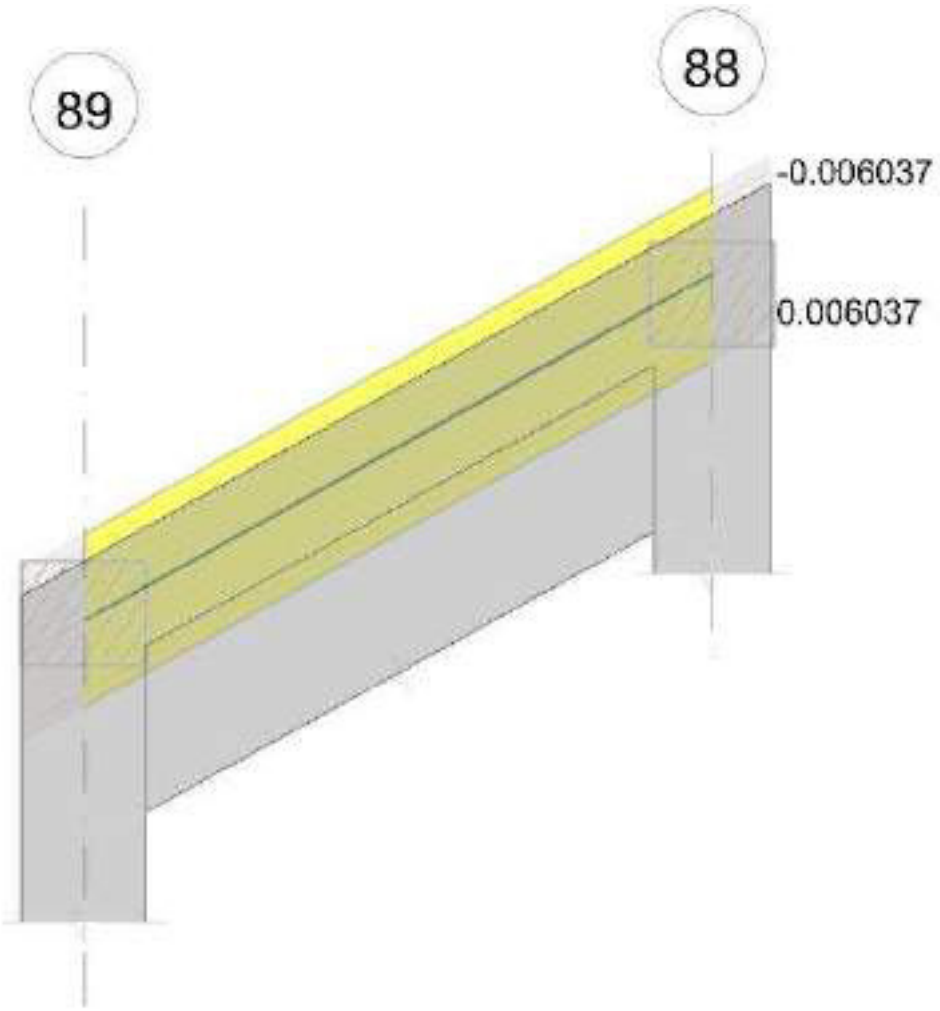


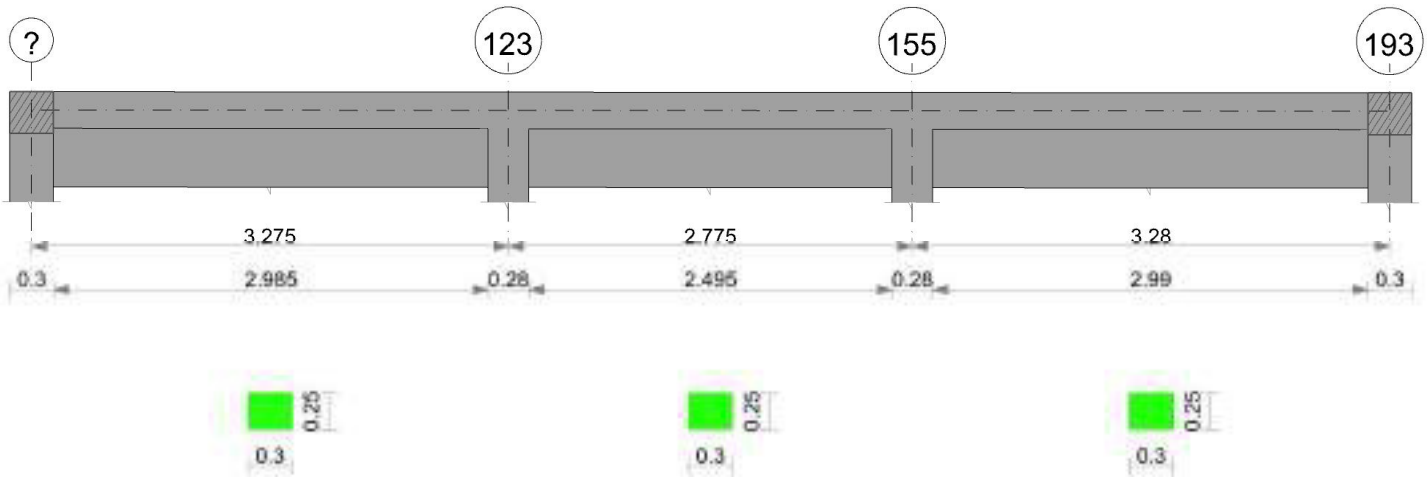
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 11

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

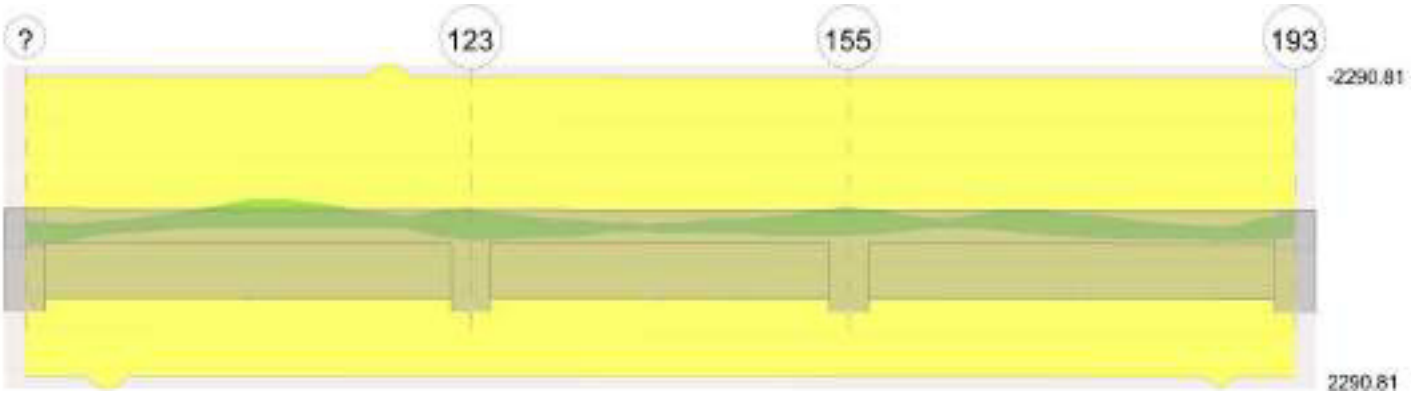


Diagramma verifica stato limite ultimo taglio

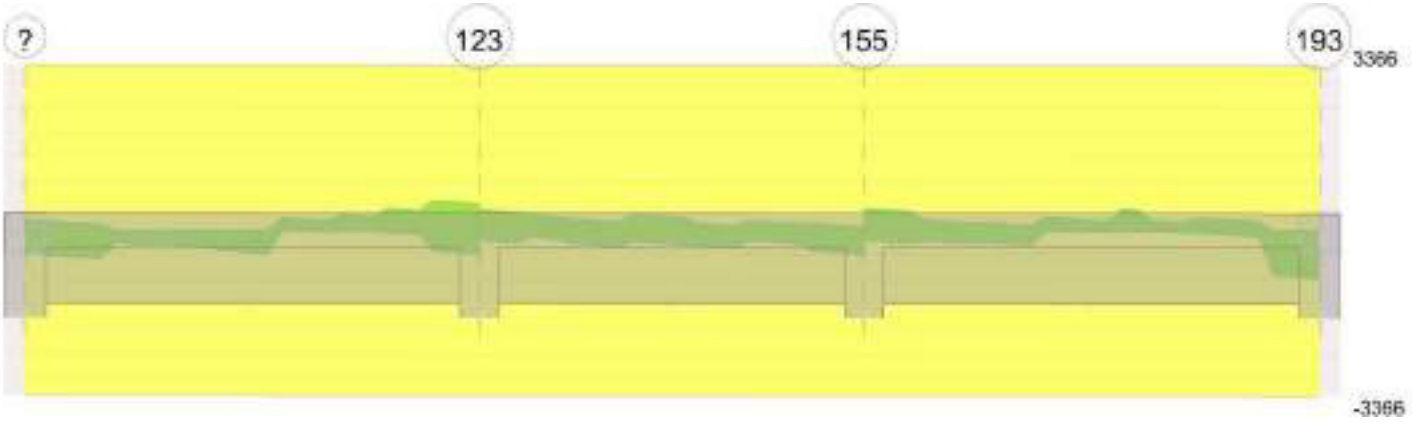
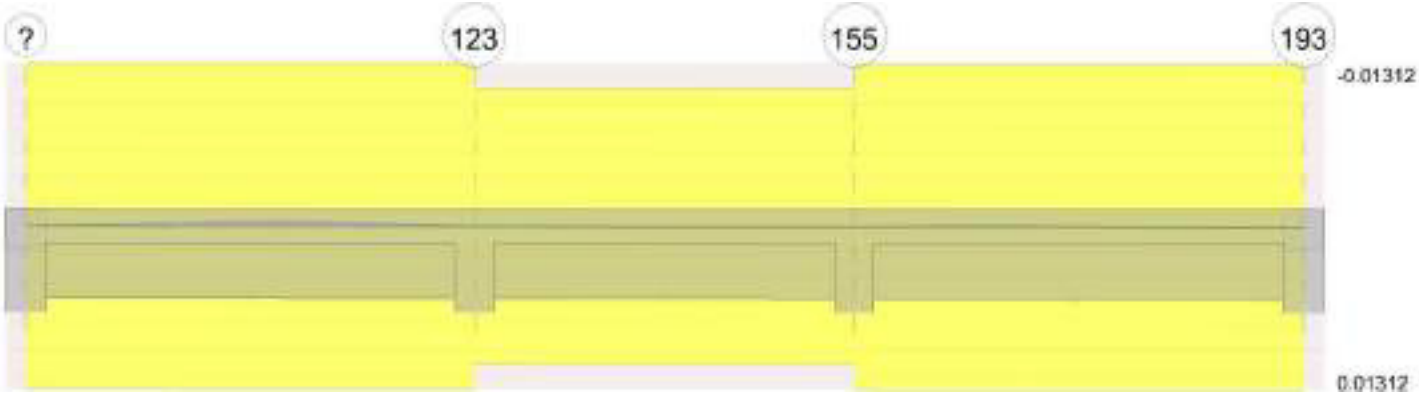


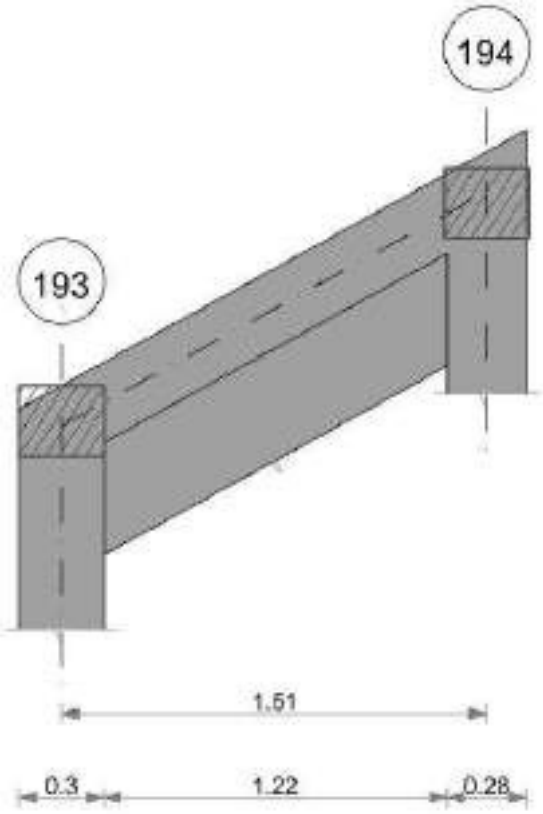
Diagramma verifica stato limite esercizio quasi permanente freccia

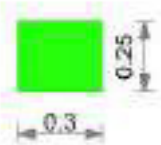


Output campate

CORDOLO SOTTOTETTO 12

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

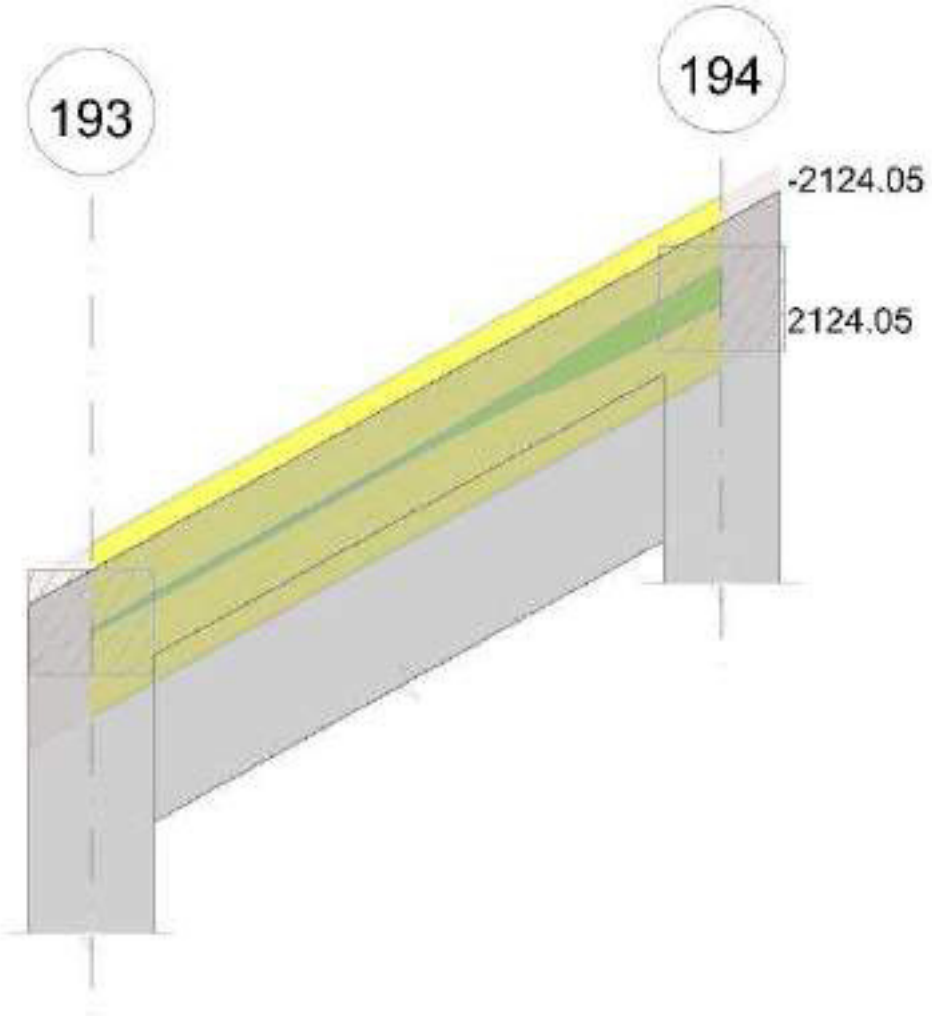


Diagramma verifica stato limite ultimo taglio

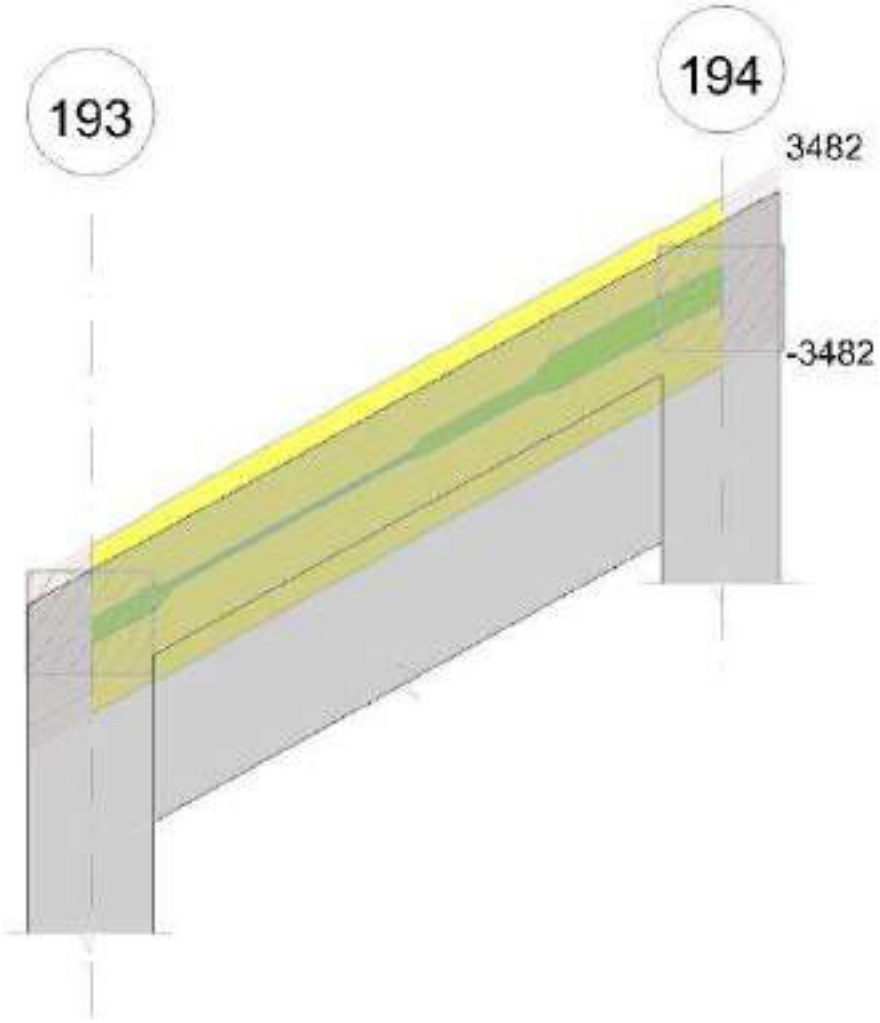
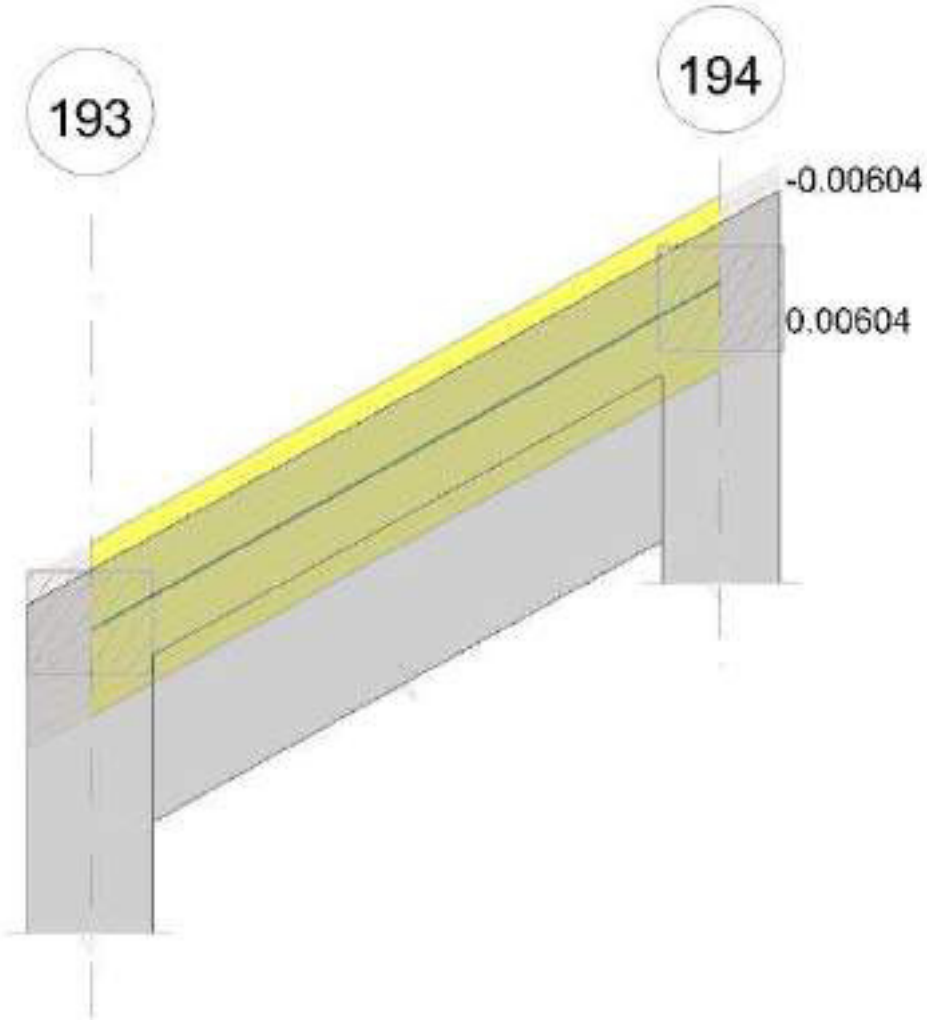


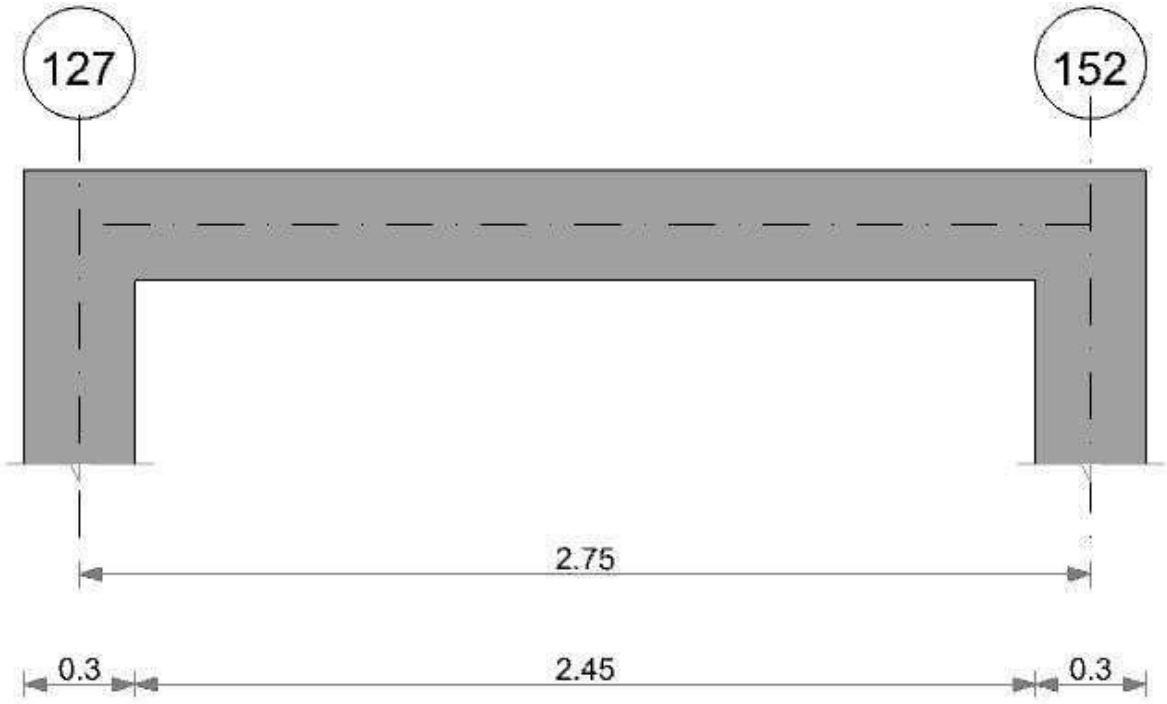
Diagramma verifica stato limite esercizio quasi permanente freccia

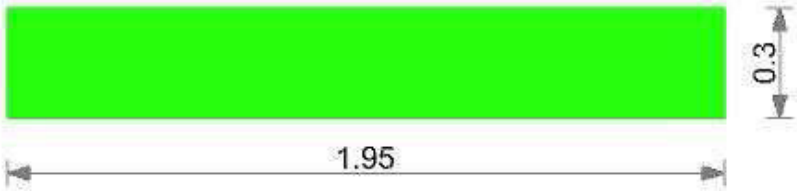


Output campate

PIANEROTTOLO

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 195x30	Rettangolare	1.95	0.3	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

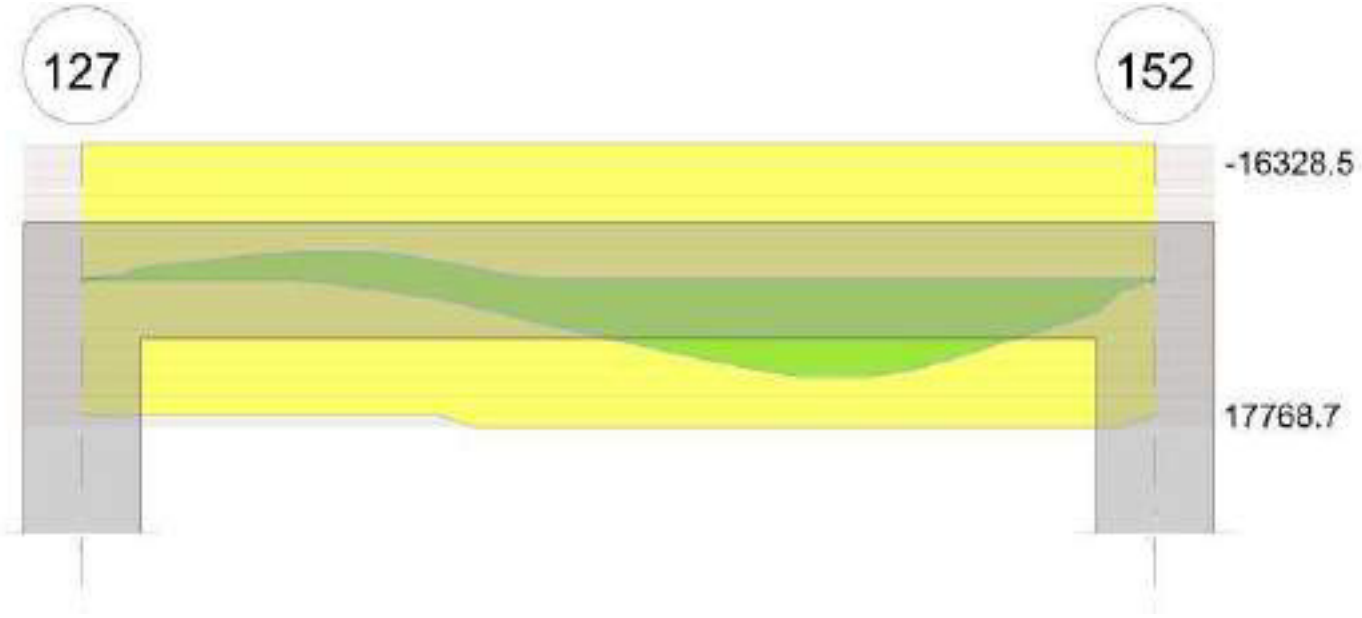


Diagramma verifica stato limite ultimo taglio

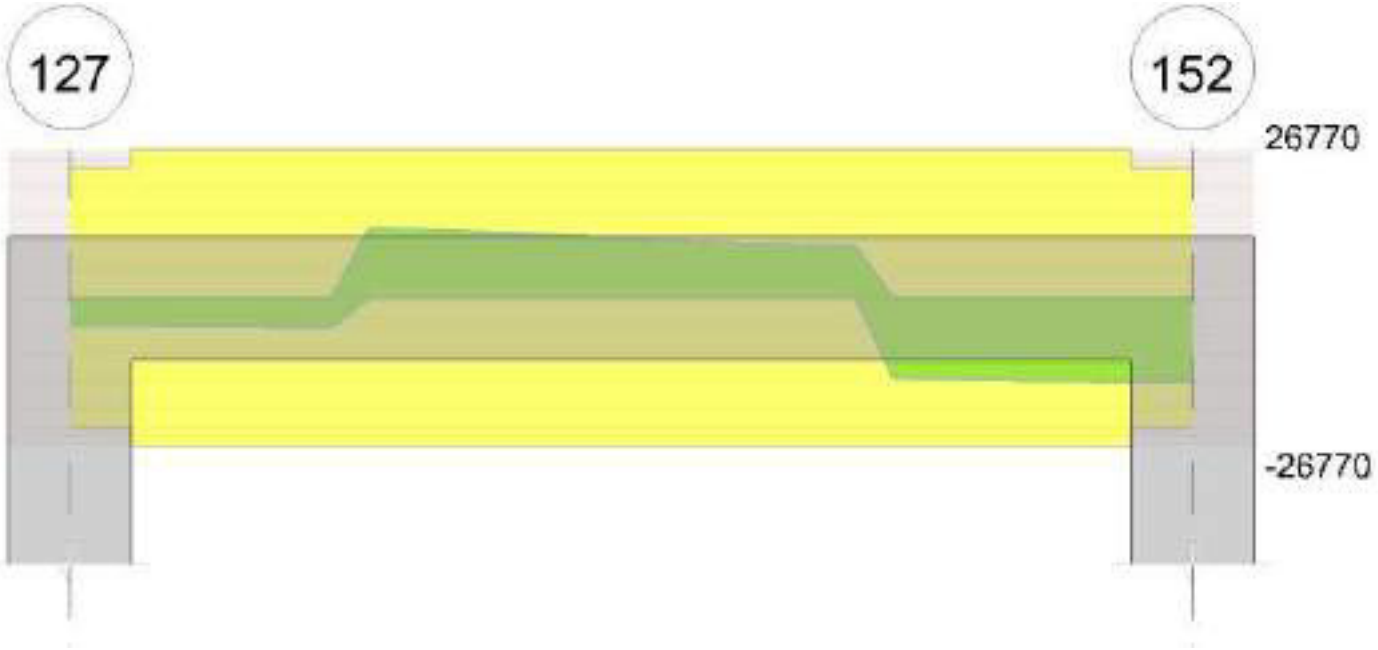
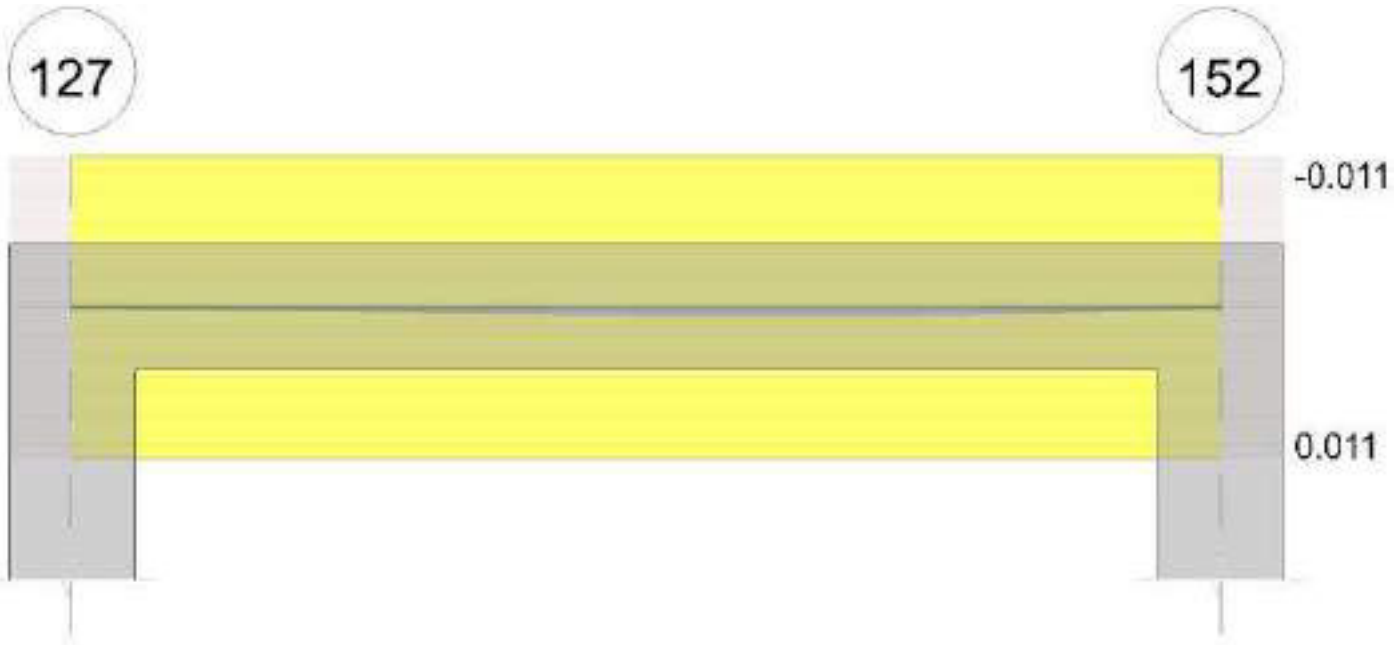


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 1 tra i fili 127 - 152, sezione R 195x30, aste 829, 830, 831

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.001885	0.053	0.001885	0.053							-20.43	SLU 83	-20.43	-17768.7	0.181	869.71	Si
0.15	0.001885	0.053	0.001885	0.053							-561.46	SLU 69	-973.18	-17768.7	0.181	18.26	Si
1.38	0.001885	0.053	0.001885	0.053	6089.39	SLU 82	7266.68	17768.7	0.181	2.45							Si
1.83	0.001885	0.053	0.001885	0.053	10702.41	SLU 82	11566.51	17768.7	0.181	1.54							Si
2.6	0.001885	0.053	0.001885	0.053	2234.58	SLU 82	3913.99	17768.7	0.181	4.54							Si
2.75	0.001885	0.053	0.001885	0.053							-20.03	SLU 83	-20.03	-17768.7	0.181	887.01	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.001885	0.053	0.001885	0.053	12.38	SLV 16	12.38	16328.5	0.247	1319.4	-37.93	SLV 1	-37.93	-16328.5	0.247	430.45	Si
0.15	0.001885	0.053	0.001885	0.053							-770.71	SLV 12	-1343.4	-16328.5	0.247	12.15	Si
1.38	0.001885	0.053	0.001885	0.053	4250.87	SLV 5	4786.87	16328.5	0.247	3.41							Si
1.83	0.001885	0.053	0.001885	0.053	7092.57	SLV 13	7662.74	16328.5	0.247	2.13							Si
2.6	0.001885	0.053	0.001885	0.053	1427.16	SLV 13	2501.26	16328.5	0.247	6.53							Si
2.75	0.001885	0.053	0.001885	0.053							-24.69	SLV 14	-24.69	-16328.5	0.247	661.4	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.001885	0.053	0.001885	0.053							-23.54	SLD 1	-23.54	-16328.5	0.247	693.65	Si
0.15	0.001885	0.053	0.001885	0.053							-560.97	SLD 12	-975.31	-16328.5	0.247	16.74	Si
1.38	0.001885	0.053	0.001885	0.053	3767.02	SLD 5	4407.97	16328.5	0.247	3.7							Si
1.83	0.001885	0.053	0.001885	0.053	6599.34	SLD 13	7148.63	16328.5	0.247	2.28							Si
2.6	0.001885	0.053	0.001885	0.053	1358.47	SLD 13	2380.39	16328.5	0.247	6.86							Si
2.75	0.001885	0.053	0.001885	0.053							-17.63	SLD 14	-17.63	-16328.5	0.247	926.21	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.001885	0	-3629	SLU 69	-3629	-23454	-152912	0	-23454	1	6.46	Si
0.15	0.0000308	0.001885	0	-3651	SLU 69	-3651	-23454	-152912	-26770	-26770	1	7.33	Si
1.38	0.0000308	0.001885	0	10713	SLU 83	10713	23454	152912	26770	26770	1	2.5	Si
2.6	0.0000308	0.001885	0	-15014	SLU 82	-15014	-23454	-152912	-26770	-26770	1	1.78	Si
2.75	0	0.001885	0	-15039	SLU 82	-15039	-23454	-152912	0	-23454	1	1.56	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.001885	0	-5076	SLV 12	-5076	-23454	-152912	0	-23454	1	4.62	Si
0.15	0.0000308	0.001885	0	-5095	SLV 12	-5095	-23454	-152912	-26770	-26770	1	5.25	Si
1.38	0.0000308	0.001885	0	7853	SLV 12	7853	23454	152912	26770	26770	1	3.41	Si
2.6	0.0000308	0.001885	0	-9603	SLV 13	-9603	-23454	-152912	-26770	-26770	1	2.79	Si
2.75	0	0.001885	0	-9617	SLV 13	-9617	-23454	-152912	0	-23454	1	2.44	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.001885	0	-3661	SLD 12	-3661	-23454	-152912	0	-23454	1	6.41	Si
0.15	0.0000308	0.001885	0	-3680	SLD 12	-3680	-23454	-152912	-26770	-26770	1	7.27	Si
1.38	0.0000308	0.001885	0	7120	SLD 12	7120	23454	152912	26770	26770	1	3.76	Si
2.6	0.0000308	0.001885	0	-9136	SLD 13	-9136	-23454	-152912	-26770	-26770	1	2.93	Si

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
2.75	0	0.001885	0	-9150	SLD 13	-9150	-23454	-152912	0	-23454	1	2.56	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-14.92	20	-14.92	455	1494000	6824	36000000	-12.78	2	-12.78	390	1120500			Si
0.15	-416.18	6	-721.3	21993	1494000	329893	36000000	-397.62	1	-688.94	21006	1120500			Si
1.38	4395.01	19	5253.36	160177	1494000	2402661	36000000	3392.6	2	4114.61	125456	1120500			Si
2.6	1621.02	19	2839.4	86575	1494000	1298620	36000000	1307.16	2	2290.11	69827	1120500			Si
2.75	-14.62	20	-14.62	446	1494000	6686	36000000	-12.35	2	-12.35	376	1120500			Si

Verifica di apertura delle fessure

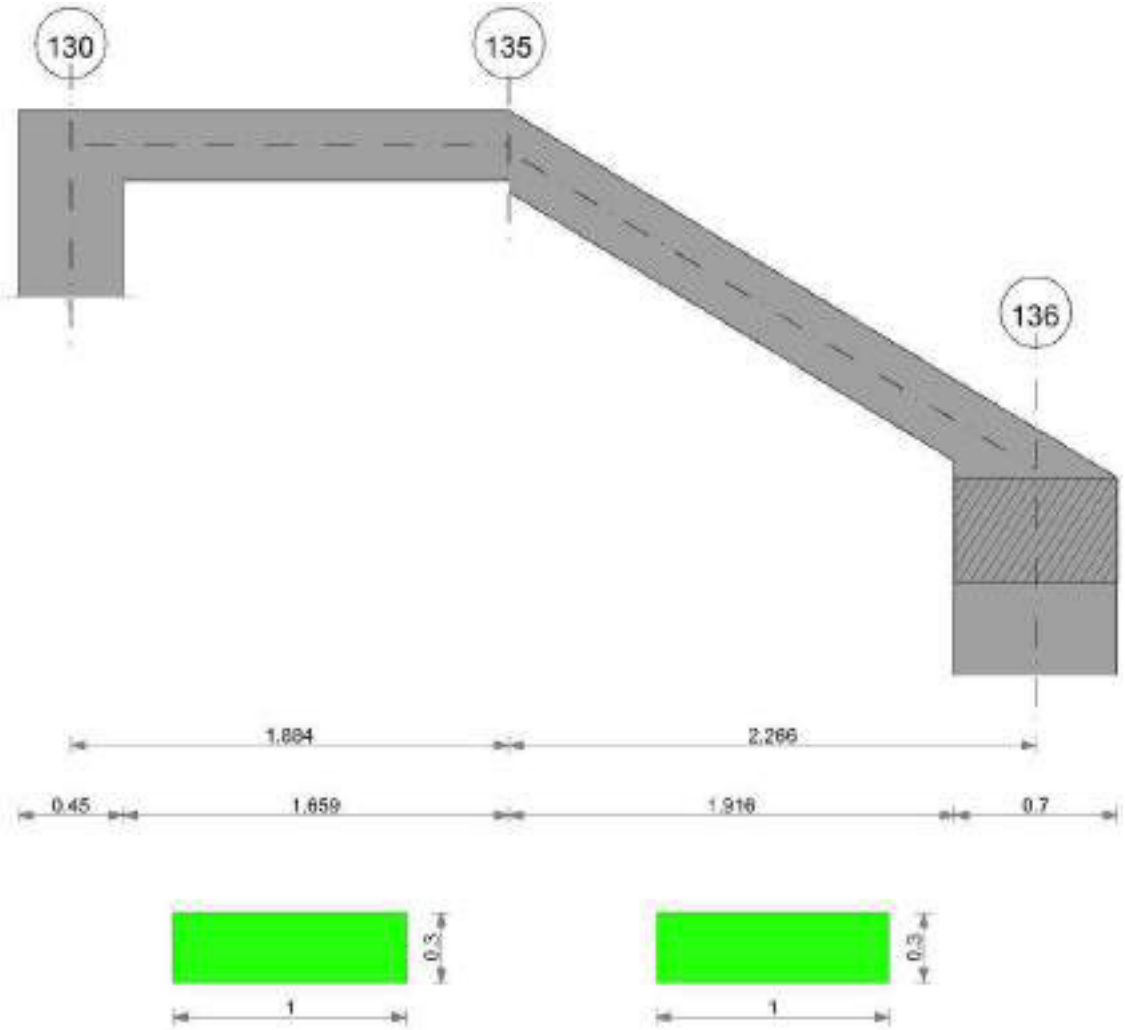
x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
1.83	inferiore	0.387	0.00059	0.000226	19	0.387	0.0005	0.000195	6	0.387	0.00047	0.000182	2	Si

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.15	0.00002	0.00001	0.00002	0.00001	0.00002	0.00001	0.00002	0.00001	0.00002	0.00001	0.00004	2	0.00004	2	9999	Si
1.38	0.00025	0.00017	0.00024	0.00015	0.00021	0.00017	0.0002	0.00016	0.00019	0.00017	0.00049	2	0.00043	2	5591	Si
1.74	0.00028	0.00019	0.00025	0.00017	0.00023	0.00019	0.00021	0.00017	0.00022	0.00019	0.00054	2	0.00047	2	5099	Si
2.6	0.00006	0.00004	0.00006	0.00004	0.00005	0.00004	0.00005	0.00004	0.00005	0.00004	0.00012	2	0.00011	2	9999	Si

RAMPA 1

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 100x30	Rettangolare	1	0.3	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

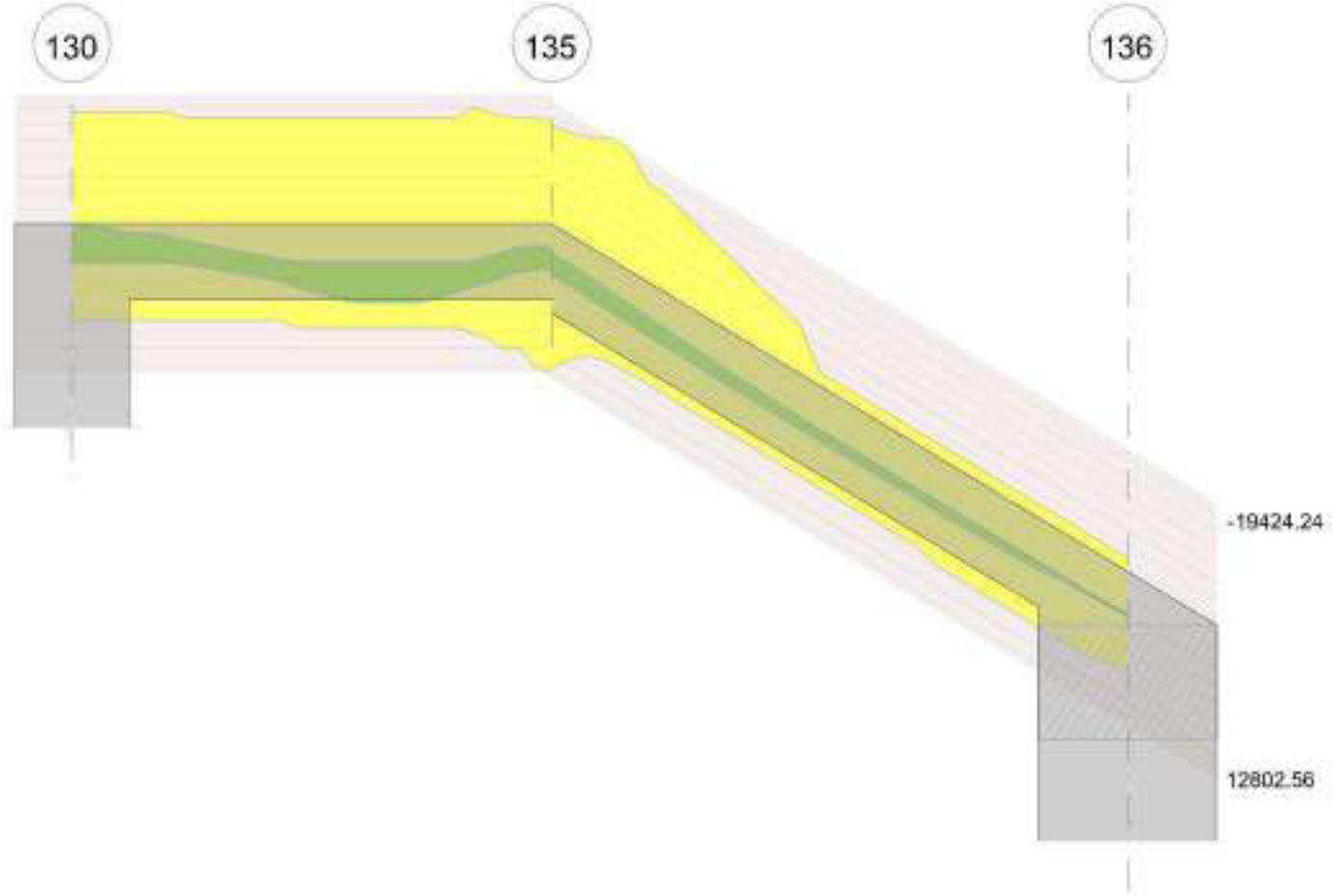


Diagramma verifica stato limite ultimo taglio

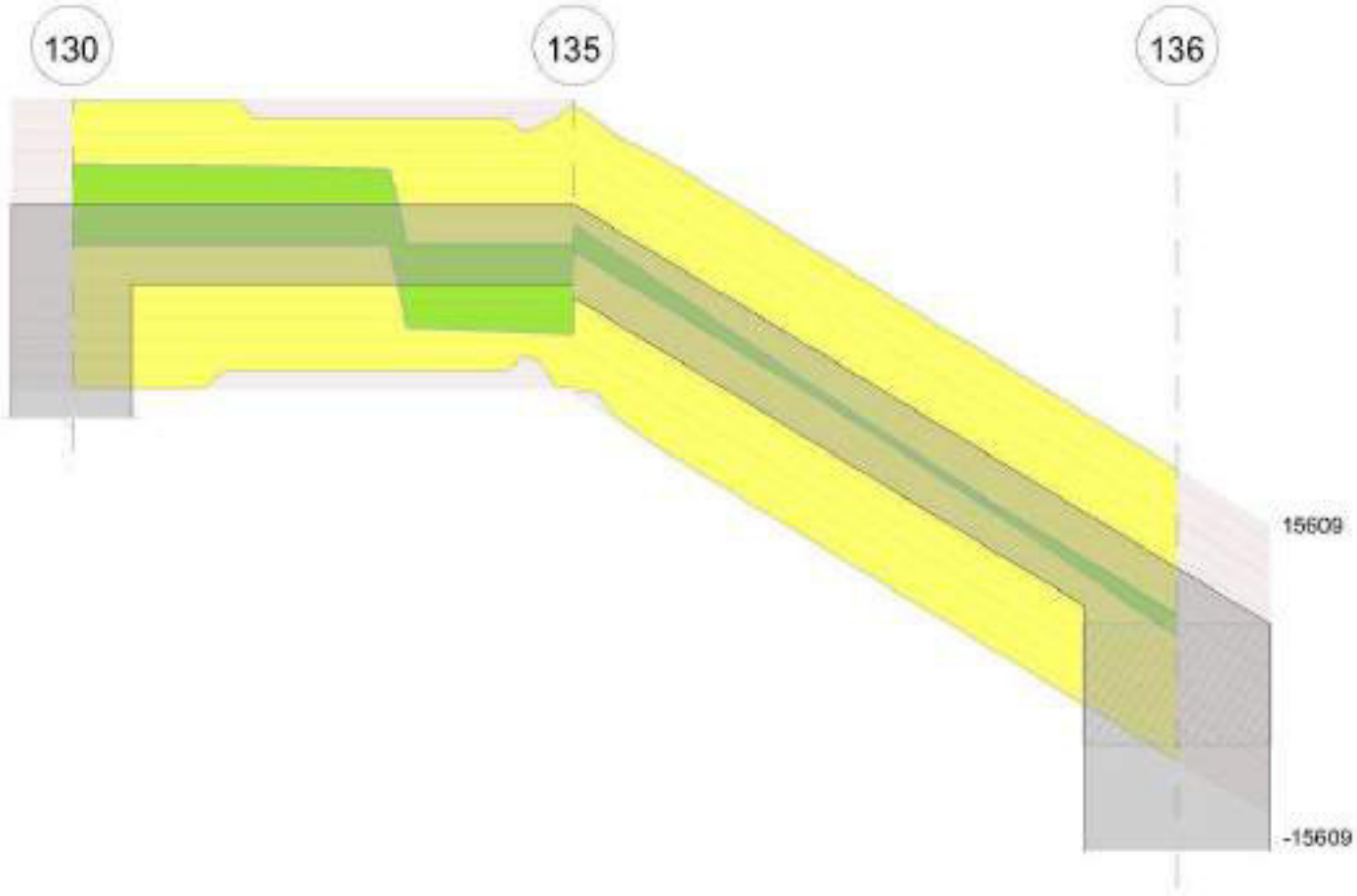
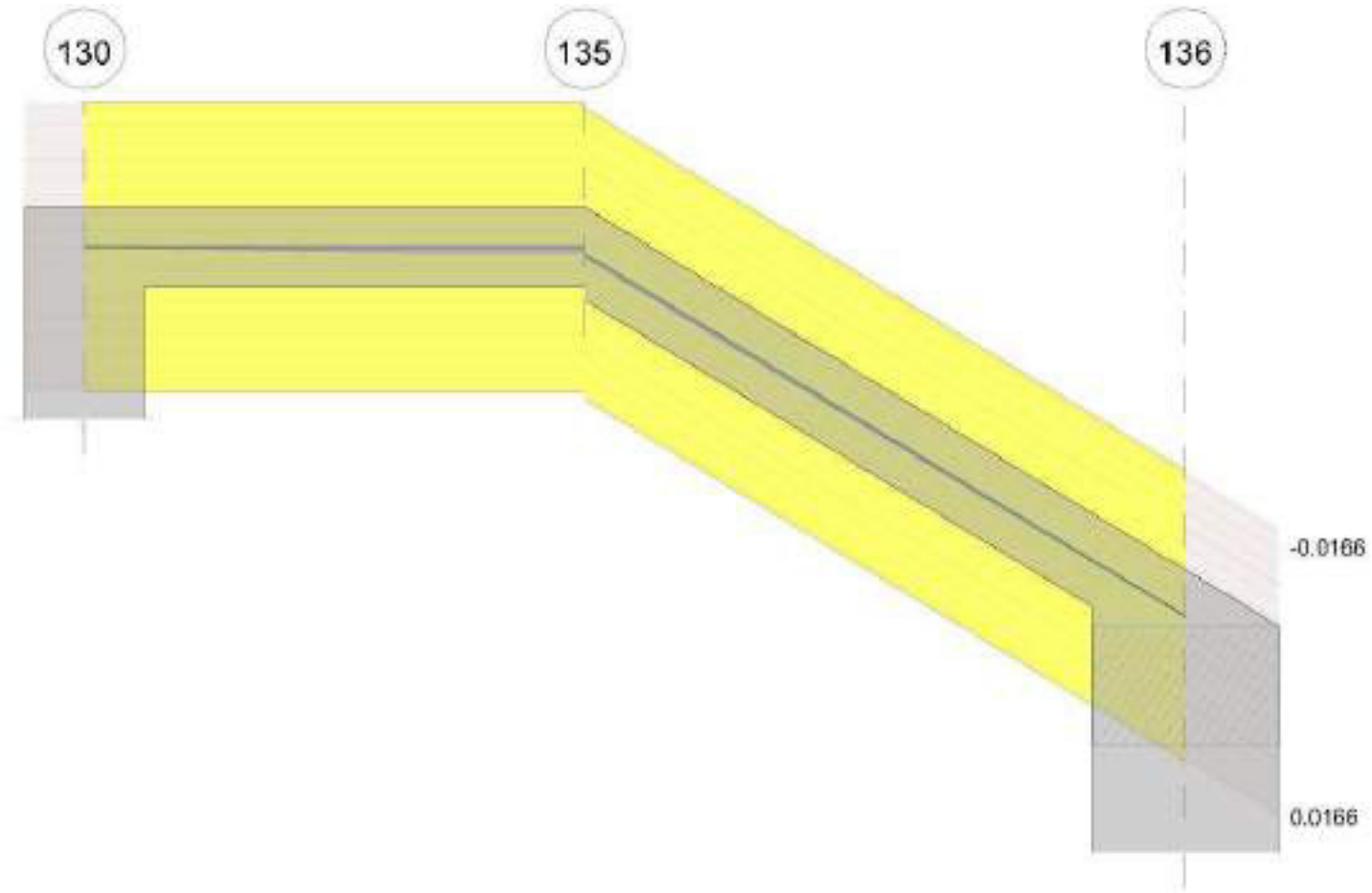


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 1 tra i fili 130 - 135, sezione R 100x30, aste 828, 827

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.00202	0.053	0.000763	0.052							-5213	SLU 84	-4299.18	-17347.7	0.251	4.04	Si
0.23	0.00202	0.053	0.000763	0.052							-3345.75	SLU 84	-3345.75	-17347.7	0.251	5.18	Si
0.94	0.00202	0.053	0.000763	0.052	2518.37	SLU 83	3410.15	7609.85	0.185	2.23							Si
1.19	0.00202	0.053	0.000763	0.052	4505.73	SLU 83	4695.43	7609.85	0.185	1.62							Si
1.88	0.00202	0.061	0.001527	0.031	-633.73	SLU 2	99.05	14906.93	0.219	150.5	-969.2	SLU 83	-969.2	-17763.3	0.2	18.33	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.00202	0.053	0.000763	0.052							-4513.86	SLV 13	-3840.09	-16672.82	0.346	4.34	Si
0.23	0.00202	0.053	0.000763	0.052							-3137.09	SLV 13	-3137.09	-16672.82	0.346	5.31	Si
0.94	0.00202	0.053	0.000763	0.052	2232.51	SLV 8	2822.04	6723.99	0.221	2.38							Si
1.19	0.00202	0.053	0.000763	0.052	3598.34	SLV 12	3702.29	6723.99	0.221	1.82							Si
1.88	0.00202	0.061	0.001527	0.031	428.81	SLV 9	762.14	12802.56	0.284	16.8	-1786.96	SLV 8	-1786.96	-16487.65	0.325	9.23	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.00202	0.053	0.000763	0.052							-3803.89	SLD 13	-3190.4	-16672.82	0.346	5.23	Si
0.23	0.00202	0.053	0.000763	0.052							-2550.21	SLD 13	-2550.21	-16672.82	0.346	6.54	Si
0.94	0.00202	0.053	0.000763	0.052	1845.71	SLD 8	2417.37	6723.99	0.221	2.78							Si
1.19	0.00202	0.053	0.000763	0.052	3142.3	SLD 12	3253.52	6723.99	0.221	2.07							Si
1.88	0.00202	0.061	0.001527	0.031	-193.4	SLD 9	321.68	12802.56	0.284	39.8	-1164.74	SLD 8	-1164.74	-16487.65	0.325	14.16	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.00202	0	8495	SLU 83	8495	15388	78536	0	15388	1	1.81	Si
0.23	0.0000154	0.00202	0	8477	SLU 83	8477	15388	78536	13459	15388	1	1.82	Si
0.94	0.0000154	0.000763	0	8181	SLU 83	8181	11326	78734	13493	13493	1	1.65	Si
1.7	0.0000154	0.000763	0	-9356	SLU 83	-9356	-10567	-69605	-11928	-11928	1	1.27	Si
1.88	0.0000179	0.00202	0	-9595	SLU 83	-9595	-15150	-75733	-15014	-15150	1	1.58	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.00202	0	6567	SLV 15	6567	15388	78536	0	15388	1	2.34	Si

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0.23	0.0000154	0.00202	0	6557	SLV 15	6557	15388	78536	13459	15388	1	2.35	Si
0.94	0.0000154	0.000763	0	6387	SLV 15	6387	11326	78734	13493	13493	1	2.11	Si
1.63	0.0000154	0.000763	0	-8881	SLV 8	-8881	-11326	-78734	-13493	-13493	1	1.52	Si
1.88	0.0000179	0.00202	0	-9060	SLV 8	-9060	-15150	-75733	-15014	-15150	1	1.67	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.00202	0	5836	SLD 15	5836	15388	78536	0	15388	1	2.64	Si
0.23	0.0000154	0.00202	0	5826	SLD 15	5826	15388	78536	13459	15388	1	2.64	Si
0.94	0.0000154	0.000763	0	5657	SLD 15	5657	11326	78734	13493	13493	1	2.39	Si
1.7	0.0000154	0.000763	0	-7231	SLD 8	-7231	-10567	-69605	-11928	-11928	1	1.65	Si
1.88	0.0000179	0.00202	0	-7368	SLD 8	-7368	-15150	-75733	-15014	-15150	1	2.06	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-3808.6	21	-3142.08	185069	1494000	2584821	36000000	-3273.04	2	-2704.14	159274	1120500			Si
0.23	-2446.66	21	-2446.66	144108	1494000	2012733	36000000	-2110.44	2	-2110.44	124305	1120500			Si
0.94	1831.19	20	2481.99	136120	1494000	2192837	36000000	1543.44	2	2100.53	115200	1120500			Si
1.88	-719.43	20	-719.43	38230	1494000	574270	36000000	-679.07	2	-679.07	36085	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.23	0.00004	0.00002	0.00003	0.00002	0.00003	0.00002	0.00002	0.00002	0.00003	0.00002	0.00006	2	0.00005	2	9999	Si
0.94	0.00021	0.00015	0.00019	0.00013	0.00018	0.00015	0.00016	0.00013	0.00017	0.00015	0.0004	2	0.00036	2	9999	Si
1.51	0.00027	0.00019	0.00024	0.00017	0.00023	0.00019	0.00021	0.00017	0.00022	0.00019	0.00052	2	0.00046	2	8003	Si
1.88	0.00026	0.00018	0.00024	0.00016	0.00022	0.00018	0.0002	0.00016	0.0002	0.00018	0.0005	2	0.00044	2	8377	Si

Campata 2 tra i fili 135 - 136, sezione R 100x30, asta 826

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.00202	0.053	0.001458	0.059							-969.2	SLU 83	-969.2	-17368.39	0.256	17.92	Si
1.13	0.000763	0.052	0.000763	0.052	1234.49	SLU 82	1255.54	7490.06	0.163	5.97							Si
1.21	0.000763	0.052	0.000763	0.052	1253.82	SLU 82	1257.36	7490.06	0.163	5.96							Si
1.92	0.000763	0.052	0.000763	0.052	666.23	SLU 82	852.41	7490.06	0.163	8.79							Si
2.27	0.000763	0.052	0.000763	0.052							-134.34	SLU 82	-134.34	-7490.06	0.163	55.75	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.00202	0.053	0.001458	0.059	428.82	SLV 9	601.08	11539.23	0.288	19.2	-1786.96	SLV 8	-1786.96	-16624.67	0.34	9.3	Si
0.91	0.001359	0.052	0.000763	0.052	1225	SLV 9	1228.86	6728.22	0.222	5.48	-22.49	SLV 8	-166.81	-11541.61	0.288	69.19	Si
1.13	0.000763	0.052	0.000763	0.052	1207.73	SLV 9	1225.88	6732.7	0.223	5.49							Si
1.92	0.000763	0.052	0.000763	0.052	482.24	SLV 9	649.42	6732.7	0.223	10.37							Si
2.27	0.000763	0.052	0.000763	0.052	33.39	SLV 12	33.39	6732.7	0.223	201.62	-182.8	SLV 5	-182.8	-6732.7	0.223	36.83	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.00202	0.053	0.001458	0.059	-193.4	SLD 9	12.48	11539.23	0.288	924.68	-1164.74	SLD 8	-1164.74	-16624.67	0.34	14.27	Si
1.13	0.000763	0.052	0.000763	0.052	925.36	SLD 9	925.36	6732.7	0.223	7.28							Si
1.21	0.000763	0.052	0.000763	0.052	923.02	SLD 9	925.36	6732.7	0.223	7.28							Si
1.92	0.000763	0.052	0.000763	0.052	433.78	SLD 9	567.76	6732.7	0.223	11.86							Si
2.27	0.000763	0.052	0.000763	0.052							-122.04	SLD 5	-122.04	-6732.7	0.223	55.17	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000179	0.00202	0	2928	SLU 83	2928	15388	78536	15570	15570	1	5.32	Si
1.13	0.0000179	0.000763	0	312	SLU 77	312	11326	78734	15609	15609	1	50.01	Si
1.92	0.0000179	0.000763	0	-1510	SLU 82	-1510	-11326	-78734	-15609	-15609	1	10.34	Si
2.27	0.0000179	0.000763	0	-2319	SLU 82	-2319	-11326	-78734	-15609	-15609	1	6.73	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000179	0.00202	0	2264	SLV 8	2264	15388	78536	15570	15570	1	6.88	Si
1.13	0.0000179	0.000763	0	669	SLV 8	669	11326	78734	15609	15609	1	23.33	Si
1.13	0.0000179	0.000763	0	-224	SLV 9	-224	-11326	-78734	-15609	-15609	1	69.83	Si
1.92	0.0000179	0.000763	0	-1326	SLV 9	-1326	-11326	-78734	-15609	-15609	1	11.77	Si
2.27	0.0000179	0.000763	0	-1818	SLV 9	-1818	-11326	-78734	-15609	-15609	1	8.58	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000179	0.00202	0	2013	SLD 8	2013	15388	78536	15570	15570	1	7.73	Si
1.13	0.0000179	0.000763	0	418	SLD 8	418	11326	78734	15609	15609	1	37.31	Si
1.92	0.0000179	0.000763	0	-1075	SLD 9	-1075	-11326	-78734	-15609	-15609	1	14.52	Si
2.27	0.0000179	0.000763	0	-1568	SLD 9	-1568	-11326	-78734	-15609	-15609	1	9.96	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-719.43	20	-719.43	40428	1494000	584864	36000000	-679.07	2	-679.07	38160	1120500			Si
1.13	894.28	19	910.37	55286	1494000	829296	36000000	704.97	2	723.07	43912	1120500			Si
1.92	484.89	19	619.97	37651	1494000	564758	36000000	396.05	2	504.09	30613	1120500			Si

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
2.27	-96.78	19	-96.78	5877	1494000	88157	36000000	-74.71	2	-74.71	4537	1120500			Si

Verifica di apertura delle fessure

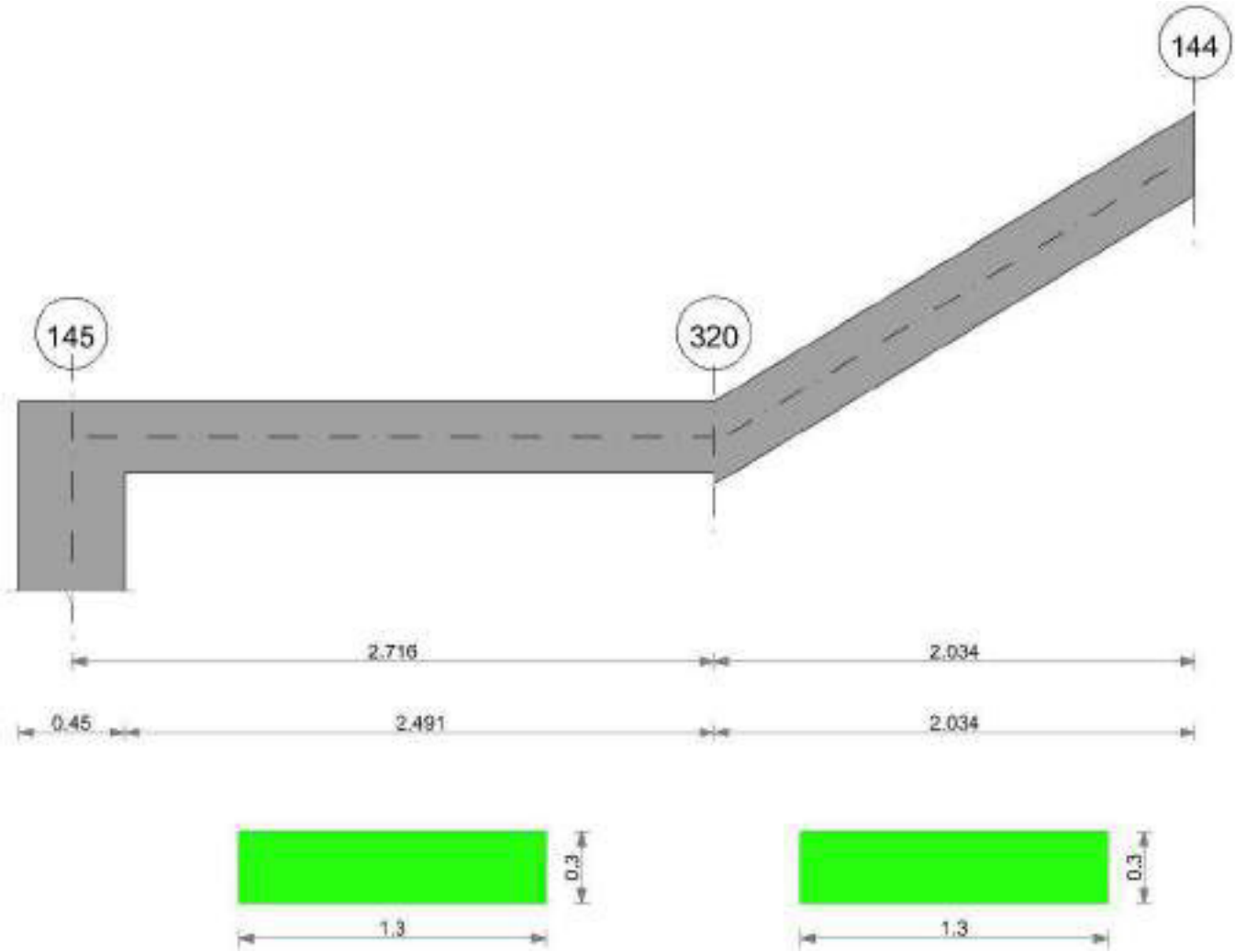
La campata non presenta apertura delle fessure

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0	0.00026	0.00018	0.0002	0.00014	0.00022	0.00018	0.00017	0.00014	0.0002	0.00018	0.00042	2	0.00037	2	9783	Si
1.13	0.00021	0.00014	0.00017	0.00011	0.00017	0.00014	0.00014	0.00012	0.00016	0.00014	0.00036	2	0.00032	2	9999	Si
1.92	0.00008	0.00005	0.00007	0.00004	0.00007	0.00005	0.00006	0.00005	0.00006	0.00005	0.00014	2	0.00012	2	9999	Si

RAMPA 2

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 130x30	Rettangolare	1.3	0.3	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

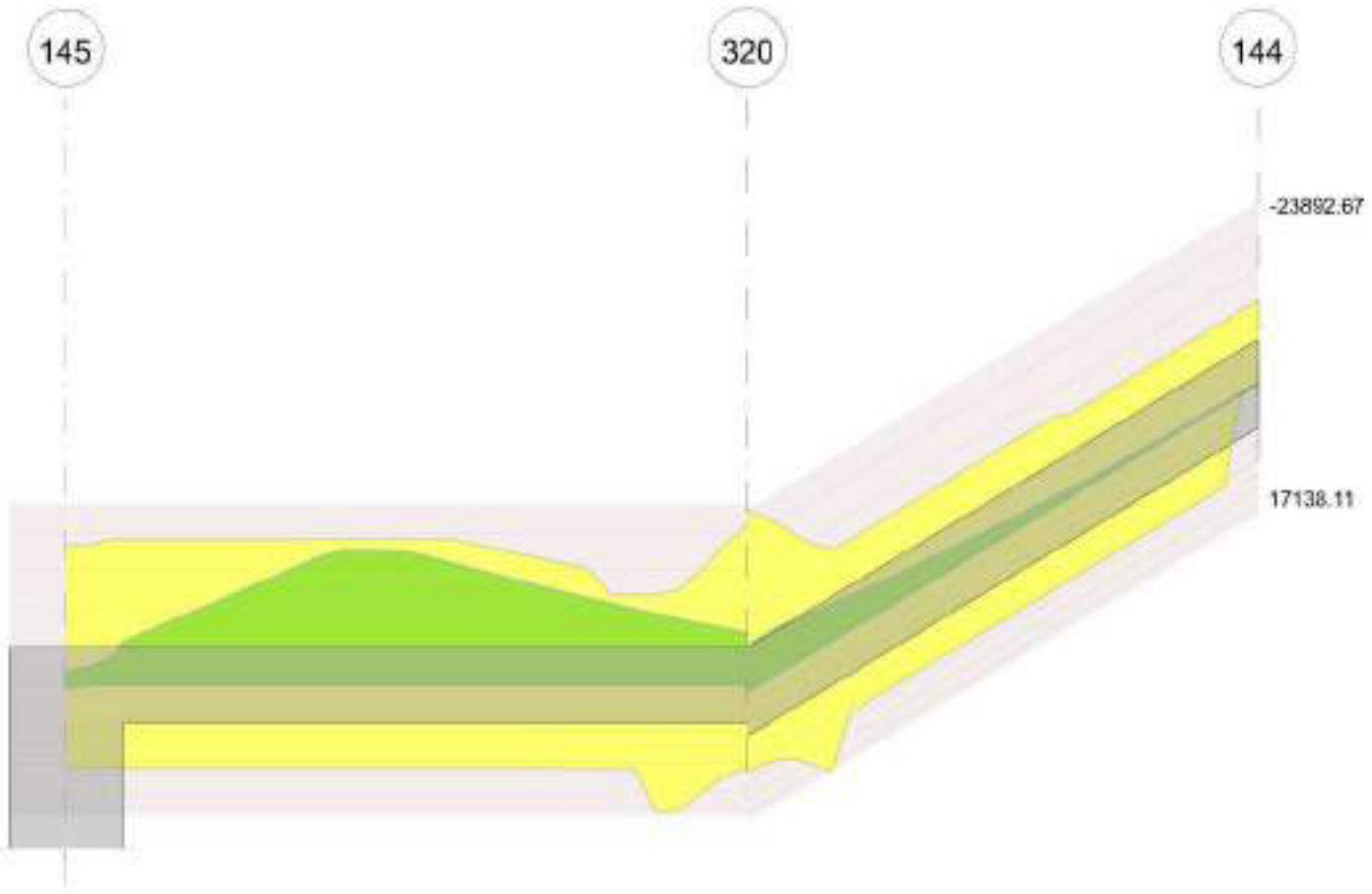


Diagramma verifica stato limite ultimo taglio

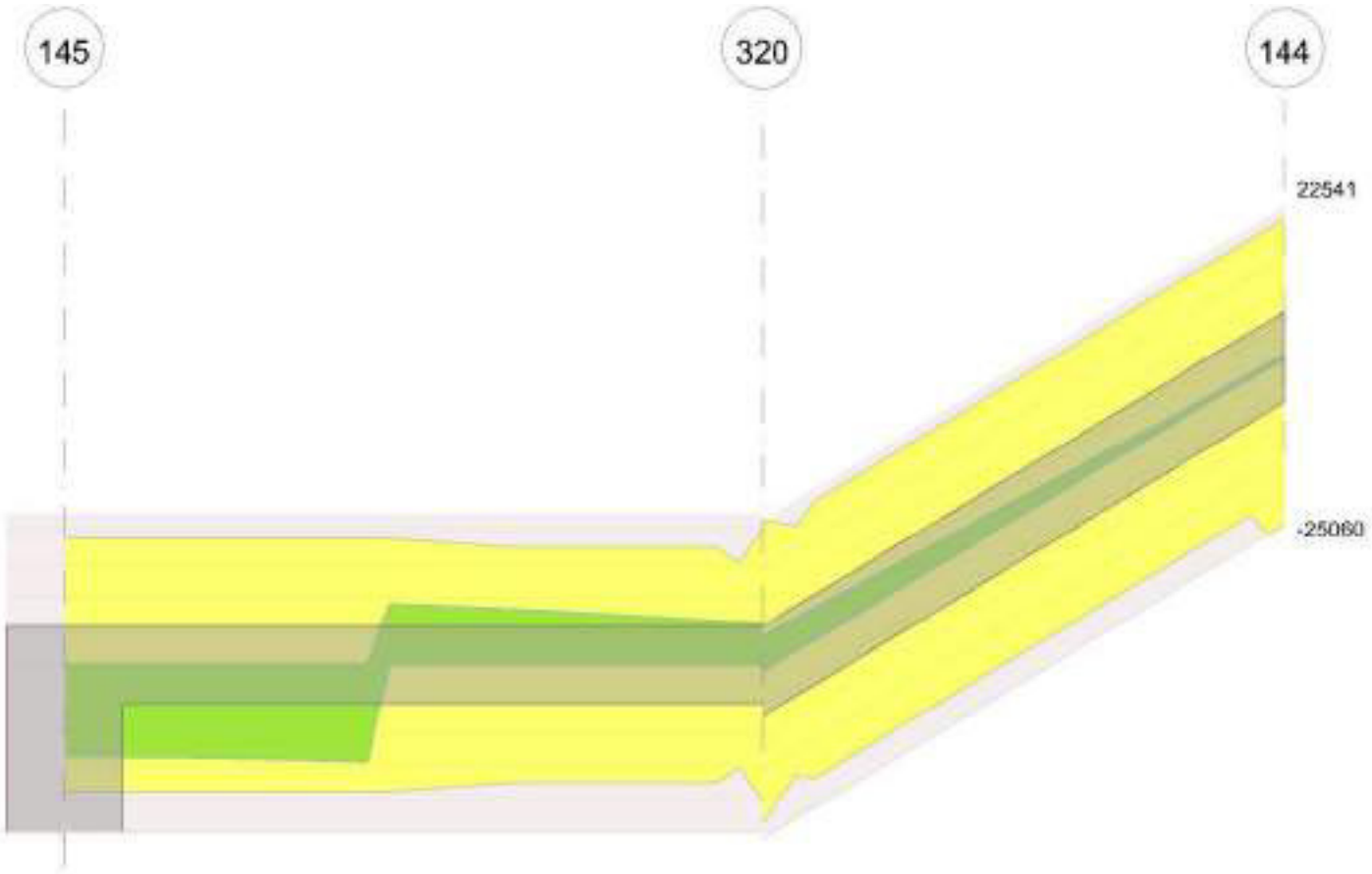
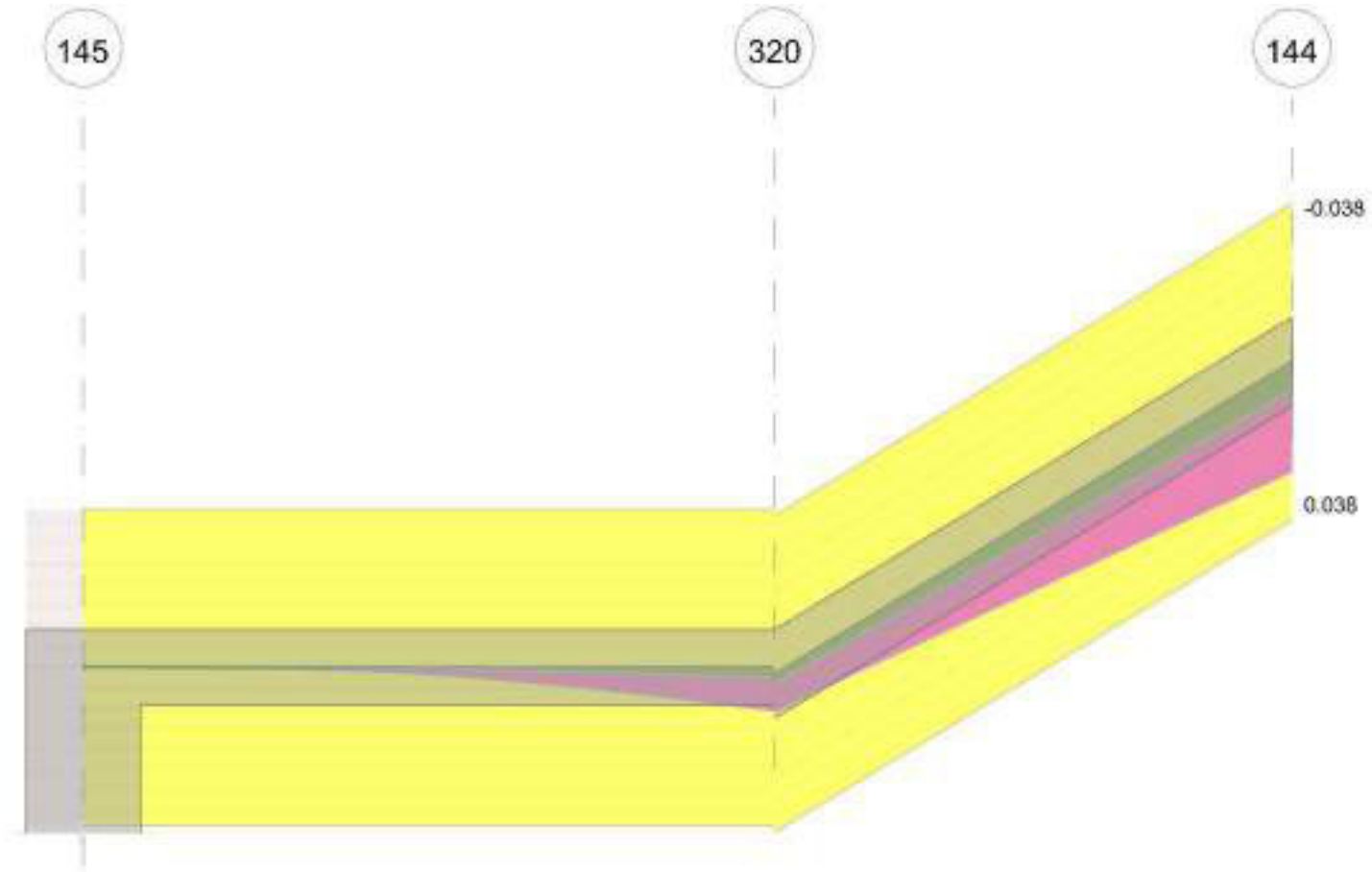


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 1 tra i fili 145 - 320, sezione R 130x30, aste 832, 833

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.002199	0.053	0.001257	0.053							-1032.82	SLU 78	-1032.82	-19204.84	0.225	18.59	Si
0.23	0.002199	0.053	0.001257	0.053							-4150.07	SLU 84	-5710.3	-19204.84	0.225	3.36	Si
1.09	0.002199	0.053	0.001257	0.053							-16336.07	SLU 84	-17656.17	-19204.84	0.225	1.09	Si
1.36	0.002199	0.053	0.001257	0.053							-16642.46	SLU 83	-17514.05	-19204.84	0.225	1.1	Si
2.72	0.002513	0.057	0.001257	0.053							-6119.28	SLU 81	-6834.85	-21194.29	0.247	3.1	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.002199	0.053	0.001257	0.053	360.12	SLV 15	360.12	10864.86	0.244	30.17	-1795.65	SLV 2	-1795.65	-18404.51	0.316	10.25	Si
0.23	0.002199	0.053	0.001257	0.053							-3418.99	SLV 2	-4235.49	-18404.51	0.316	4.35	Si
1.36	0.002199	0.053	0.001257	0.053							-10952.67	SLV 7	-11454.36	-18404.51	0.316	1.61	Si
2.17	0.001257	0.053	0.001257	0.053							-6864.01	SLV 7	-7381.13	-10885.66	0.247	1.47	Si
2.72	0.002513	0.057	0.001257	0.053							-4595.79	SLV 7	-5033.15	-19904.39	0.338	3.95	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.002199	0.053	0.001257	0.053							-1180	SLD 2	-1180	-18404.51	0.316	15.6	Si
0.23	0.002199	0.053	0.001257	0.053							-2948.69	SLD 2	-3834.36	-18404.51	0.316	4.8	Si
1.36	0.002199	0.053	0.001257	0.053							-10478.19	SLD 7	-10991.34	-18404.51	0.316	1.67	Si
2.17	0.001257	0.053	0.001257	0.053							-6389.5	SLD 7	-6906.63	-10885.66	0.247	1.58	Si
2.72	0.002513	0.057	0.001257	0.053							-4121.27	SLD 7	-4558.64	-19904.39	0.338	4.37	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.002199	0	-13681	SLU 81	-13681	-18843	-101941	0	-18843	1	1.38	Si
0.23	0.0000202	0.002199	0	-13709	SLU 81	-13709	-18843	-101941	-17556	-18843	1	1.37	Si
1.18	0.0000202	0.002199	0	-14434	SLU 81	-14434	-18843	-101941	-17556	-18843	1	1.31	Si
1.36	0.0000202	0.002111	0	8936	SLU 83	8936	18587	101941	17556	18587	1	2.08	Si
2.72	0.0000237	0.001257	0	6142	SLU 83	6142	15515	100106	20262	20262	1	3.3	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.001257	0	-9492	SLV 11	-9492	-15636	-101941	0	-15636	1	1.65	Si
0.23	0.0000202	0.002199	0	-9508	SLV 11	-9508	-18843	-101941	-17556	-18843	1	1.98	Si
1.36	0.0000202	0.002111	0	5355	SLV 3	5355	18587	101941	17556	18587	1	3.47	Si

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
2.72	0.0000237	0.001257	0	3761	SLV 3	3761	15515	100106	20262	20262	1	5.39	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.002199	0	-8778	SLD 11	-8778	-18843	-101941	0	-18843	1	2.15	Si
0.23	0.0000202	0.002199	0	-8793	SLD 11	-8793	-18843	-101941	-17556	-18843	1	2.14	Si
1.18	0.0000202	0.002199	0	-9207	SLD 11	-9207	-18843	-101941	-17556	-18843	1	2.05	Si
1.36	0.0000202	0.002111	0	5355	SLD 3	5355	18587	101941	17556	18587	1	3.47	Si
2.72	0.0000237	0.001257	0	3760	SLD 3	3760	15515	100106	20262	20262	1	5.39	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-762.71	15	-762.71	34260	1494000	493064	36000000	-717.76	2	-717.76	32241	1120500			Si
0.23	-3033.8	21	-4170.26	187322	1494000	2695911	36000000	-2596.68	2	-3534.76	158777	1120500			Si
1.36	-12132.79	20	-12766.36	945718	1494000	26904305	36000000	-10103.21	2	-10625.06	787093	1120500			Si
2.72	-4468.91	18	-4991.31	224354	1494000	3202472	36000000	-3746.25	2	-4183.63	188050	1120500			Si

Verifica di apertura delle fessure

x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
1.36	superiore	0.29	0.00088	0.000255	20	0.29	0.00086	0.000251	6	0.29	0.0008	0.000233	2	Si
2.17	superiore	0.417	0.00082	0.000341	18	0.417	0.00073	0.000306	6	0.417	0.00068	0.000285	2	Si

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.23	0	-0.00001	0	0	0	-0.00001	0	0	0	-0.00001	0.00001	2	0.00001	2	9999	Si
1.36	0.00053	0.00035	0.00079	0.00048	0.00044	0.00035	0.00062	0.00048	0.00041	0.00036	0.00159	2	0.00137	2	5991	Si
2.72	0.00306	0.00223	0.00544	0.00309	0.00265	0.00224	0.00418	0.00309	0.00249	0.00224	0.01034	2	0.00889	2	919	Si

Campata 2 tra i fili 320 - 144, sezione R 130x30, asta 834

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.002513	0.03	0.001257	0.066							-6119.28	SLU 81	-6119.28	-23892.67	0.247	3.9	Si
0.34	0.001257	0.053	0.002045	0.053							-4249.5	SLU 81	-4831.34	-11905.46	0.19	2.46	Si
1.02	0.001257	0.053	0.001257	0.053							-1529.82	SLU 81	-1886.97	-11845.8	0.181	6.28	Si
2.03	0.001257	0.053	0	0							0	SLU 81	-20.11	-11486.6	0.136	571.31	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.002513	0.03	0.001257	0.066							-4595.86	SLV 7	-4595.86	-20630.56	0.323	4.49	Si
1.02	0.001257	0.053	0.001257	0.053							-1361.28	SLV 7	-1626.73	-10885.66	0.247	6.69	Si
1.97	0.001257	0.053	0	0	24.03	SLV 10	44.75	0	0	0	-32.35	SLV 7	-105.2	-10920.51	0.252	103.81	Si
2.03	0.001257	0.053	0	0	1.31	SLV 14	34.35	0	0	0	-1.31	SLV 3	-58.97	-10920.51	0.252	185.2	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.002513	0.03	0.001257	0.066							-4121.3	SLD 7	-4121.3	-20630.56	0.323	5.01	Si
1.02	0.001257	0.053	0.001257	0.053							-1124.05	SLD 7	-1363.36	-10885.66	0.247	7.98	Si
1.97	0.001257	0.053	0	0	8.28	SLD 10	8.29	0	0	0	-16.61	SLD 7	-63.33	-10920.51	0.252	172.45	Si
2.03	0.001257	0.053	0	0	0.55	SLD 1	8.29	0	0	0	-0.55	SLD 16	-32.91	-10920.51	0.252	331.84	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000237	0.001257	0	5259	SLU 81	5259	16246	111367	22541	22541	1	4.29	Si
0.14	0.0000237	0.001257	0	4909	SLU 81	4909	14942	91653	18551	18551	1	3.78	Si
1.02	0.0000237	0.001257	0	2630	SLU 81	2630	15636	101941	20633	20633	1	7.85	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000237	0.001257	0	3585	SLV 7	3585	16246	111367	22541	22541	1	6.29	Si
0.14	0.0000237	0.001257	0	3370	SLV 7	3370	14942	91653	18551	18551	1	5.5	Si
1.02	0.0000237	0.001257	0	1975	SLV 7	1975	15636	101941	20633	20633	1	10.45	Si
2.03	0.0000237	0.001257	0	365	SLV 7	365	15636	101941	20633	20633	1	56.5	Si
2.03	0.0000237	0	0	-365	SLV 9	-365	-16676	-123815	-25060	-25060	1	68.63	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000237	0.001257	0	3381	SLD 7	3381	16246	111367	22541	22541	1	6.67	Si
0.14	0.0000237	0.001257	0	3166	SLD 7	3166	14942	91653	18551	18551	1	5.86	Si
1.02	0.0000237	0.001257	0	1771	SLD 7	1771	15636	101941	20633	20633	1	11.65	Si
2.03	0.0000237	0.001257	0	161	SLD 7	161	15636	101941	20633	20633	1	128	Si
2.03	0.0000237	0	0	-161	SLD 9	-161	-16676	-123815	-25060	-25060	1	155.47	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-4468.91	18	-4468.91	194402	1494000	2671071	36000000	-3746.25	2	-3746.25	162966	1120500			Si
1.02	-1117.23	18	-1378.05	63026	1494000	945392	36000000	-936.56	2	-1155.21	52834	1120500			Si
2.03	0	18	-14.68	733	1494000	10359	36000000	0	2	-12.31	614	1120500			Si

Verifica di apertura delle fessure

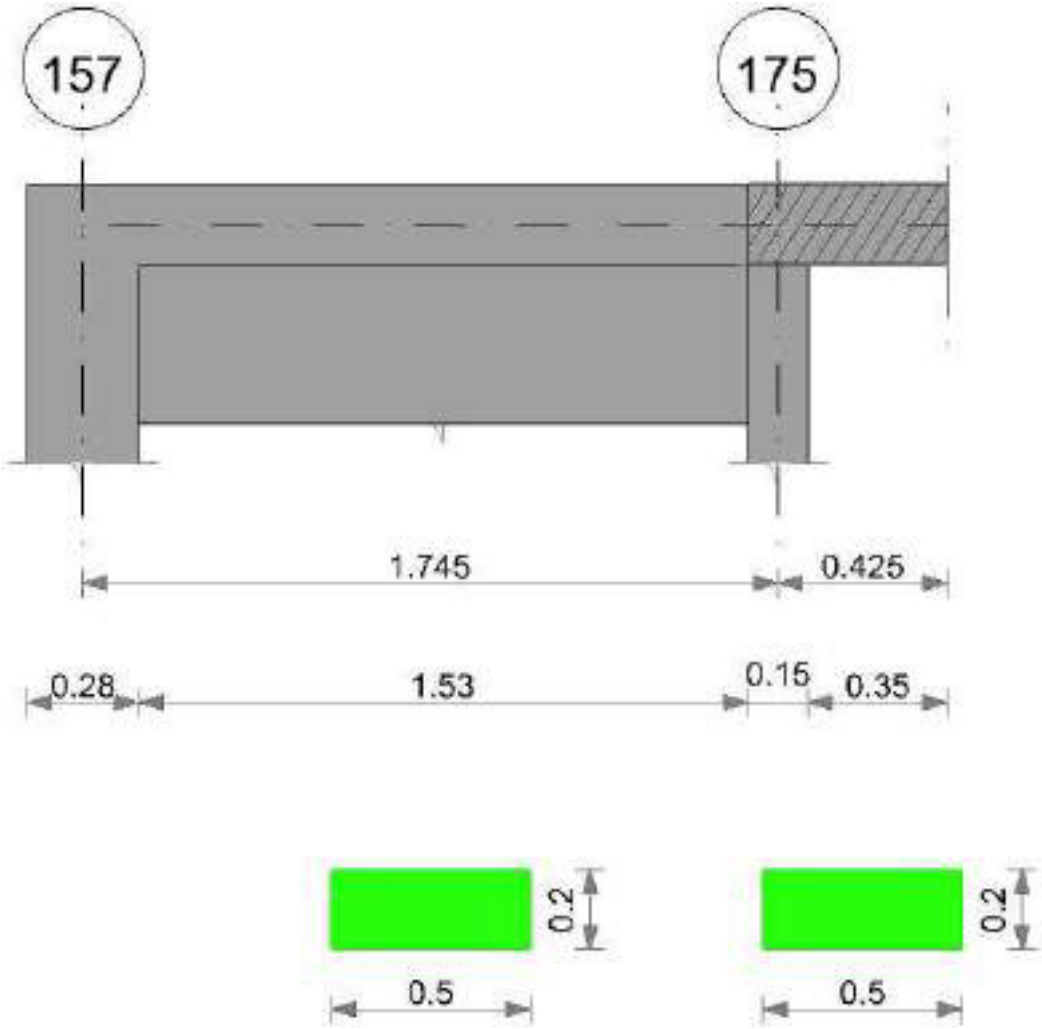
La campata non presenta apertura delle fessure

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0	0.00306	0.00223	0.00466	0.00264	0.00265	0.00224	0.00358	0.00264	0.00249	0.00224	0.00885	2	0.00761	2	1073	Si
1.02	0.0056	0.00413	0.00905	0.00516	0.00487	0.00415	0.00697	0.00516	0.00458	0.00415	0.0174	2	0.01491	2	546	Si
2.03	0.00829	0.00616	0.0136	0.00781	0.00723	0.00617	0.0105	0.00781	0.00681	0.00618	0.02633	2	0.02256	2	361	Si

Trave a "Primo" 157-179

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

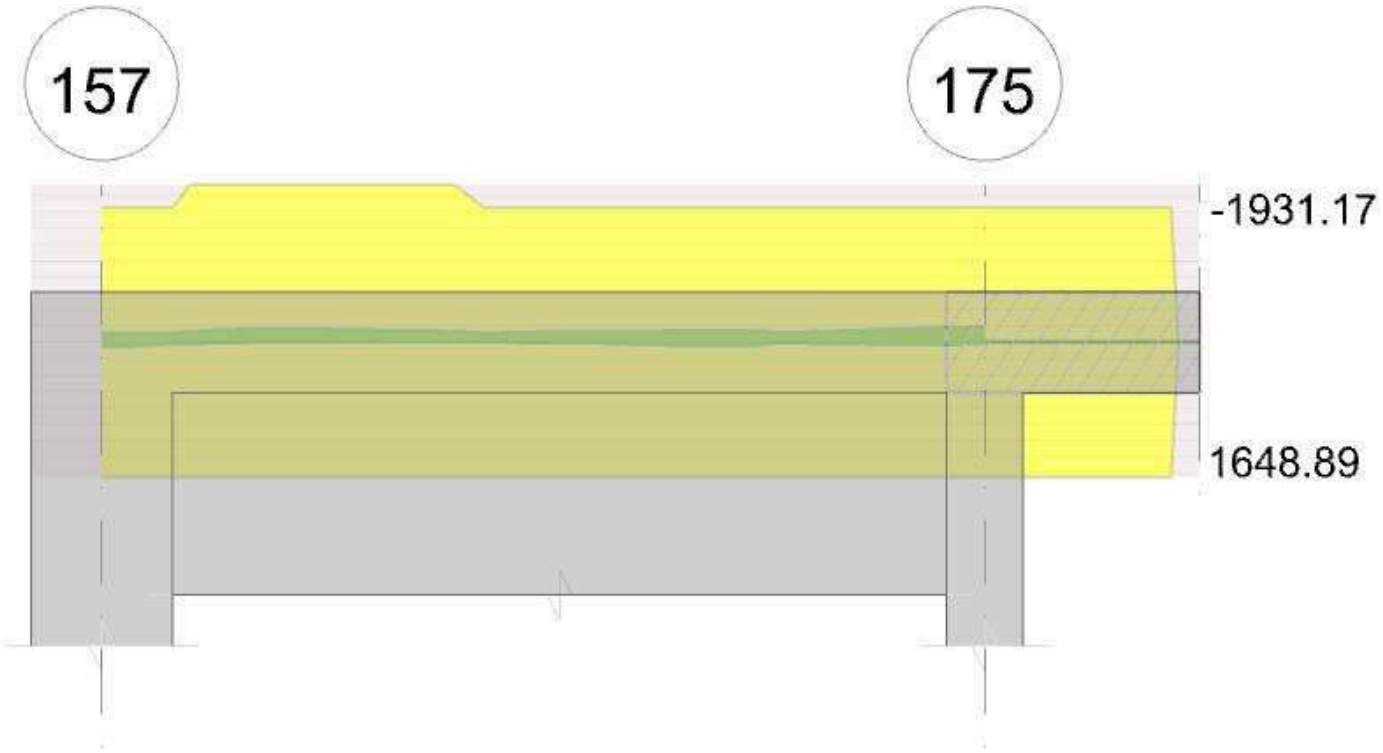
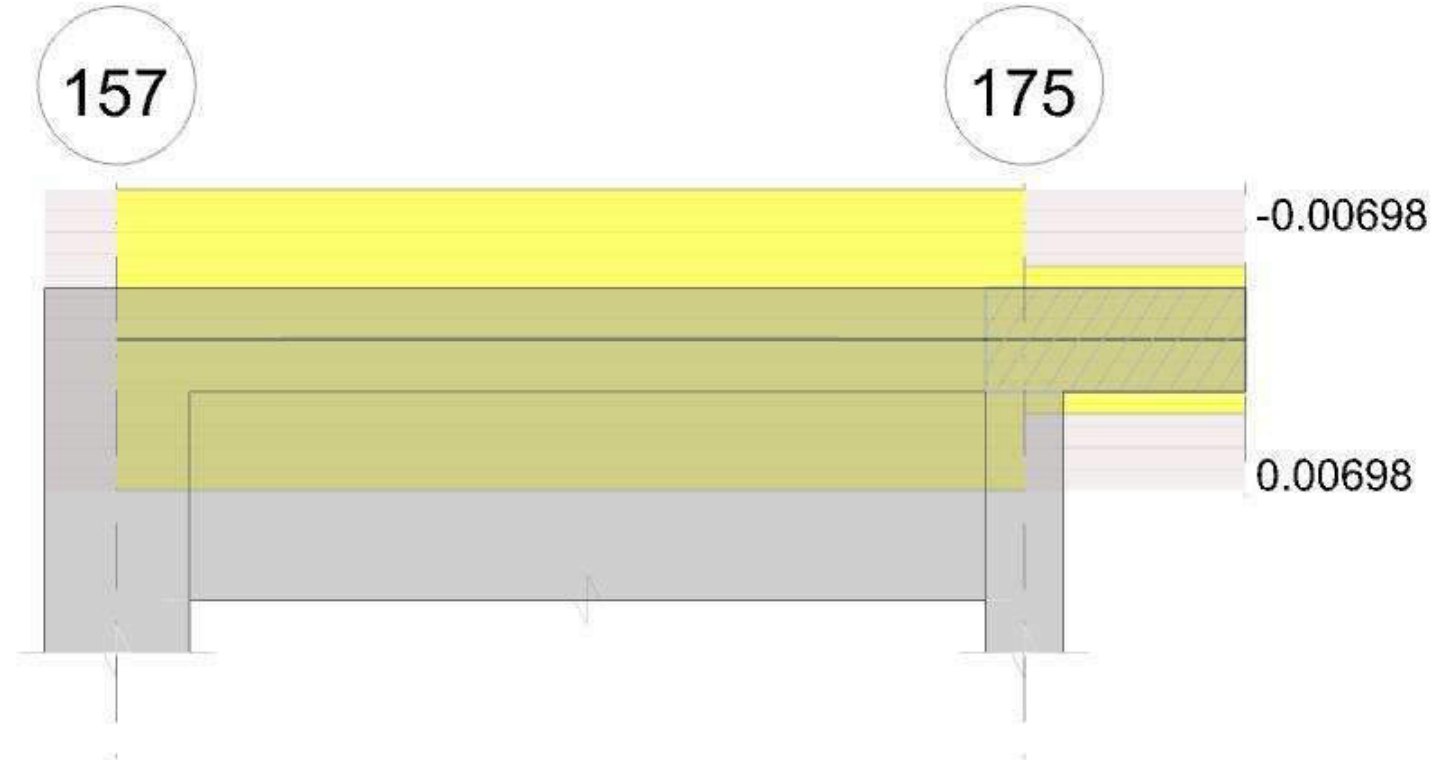


Diagramma verifica stato limite ultimo taglio

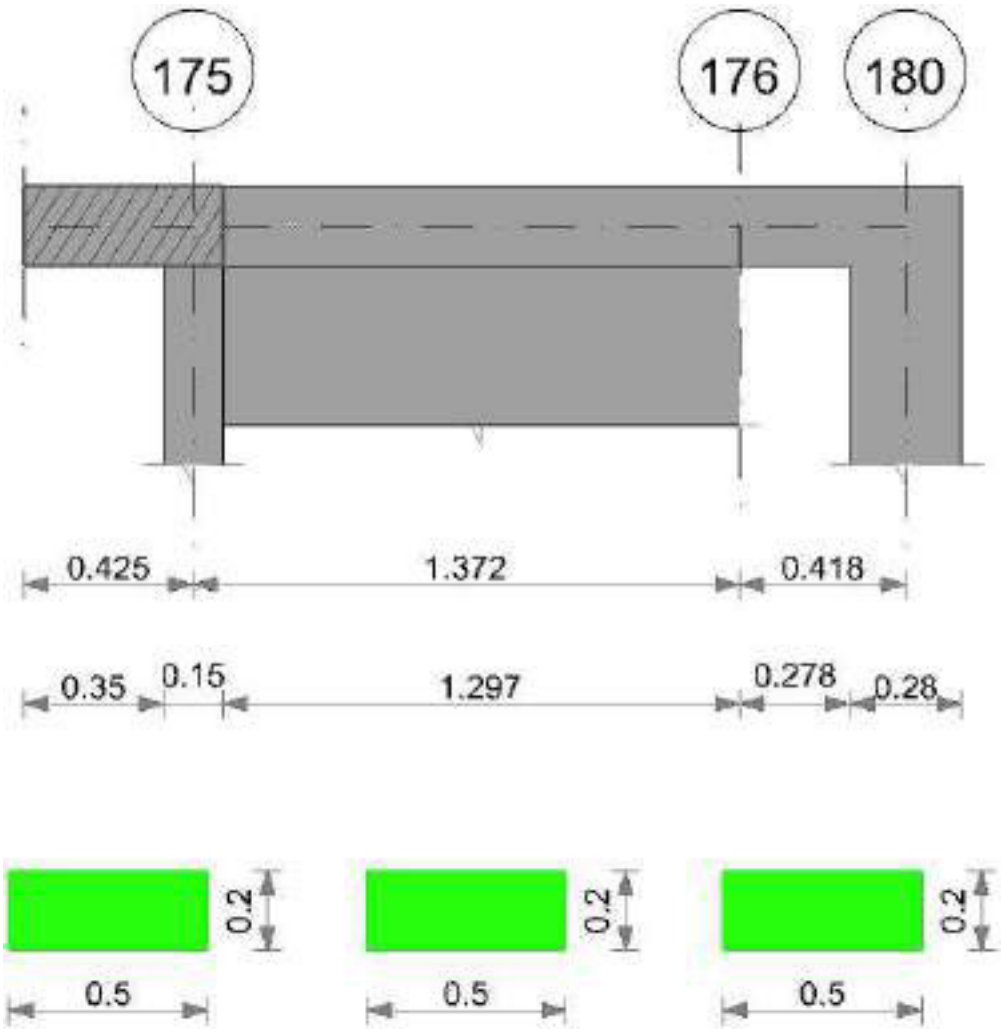
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Trave a "Primo" 179-176

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

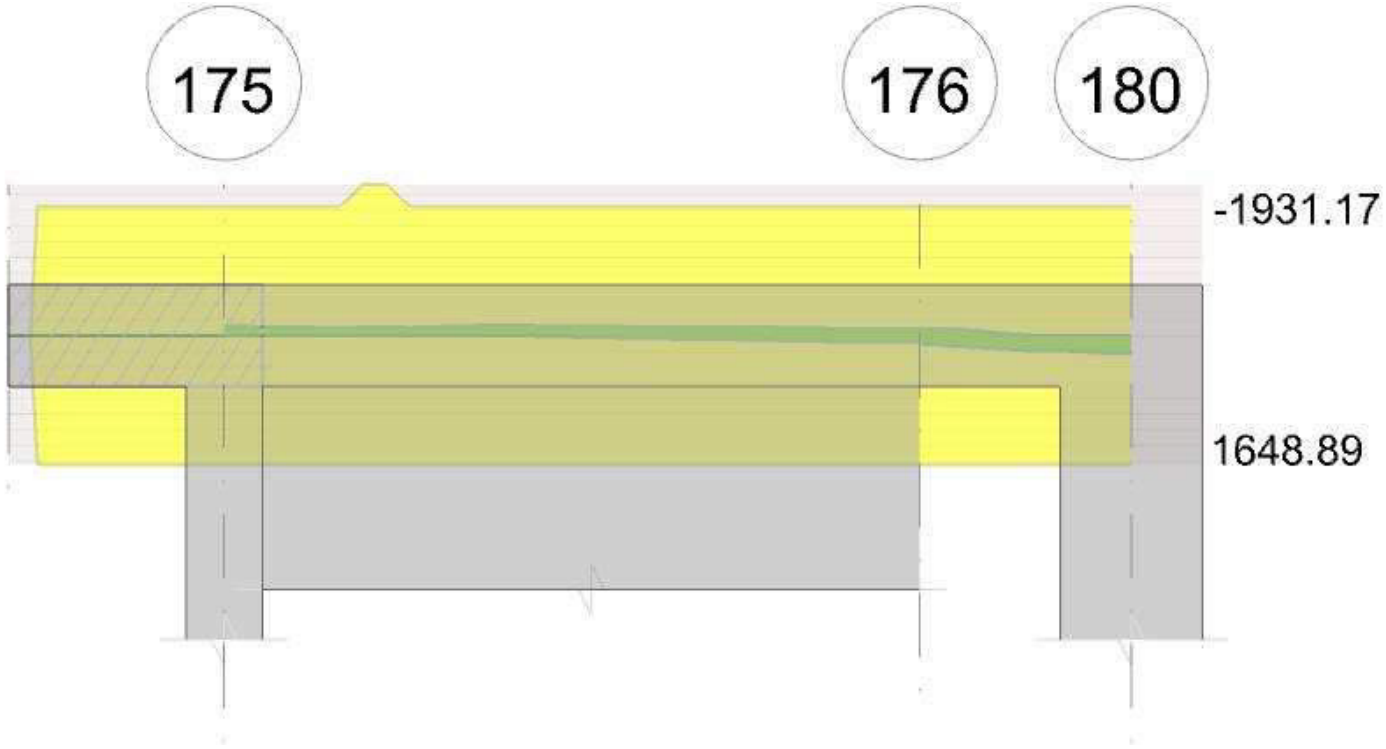
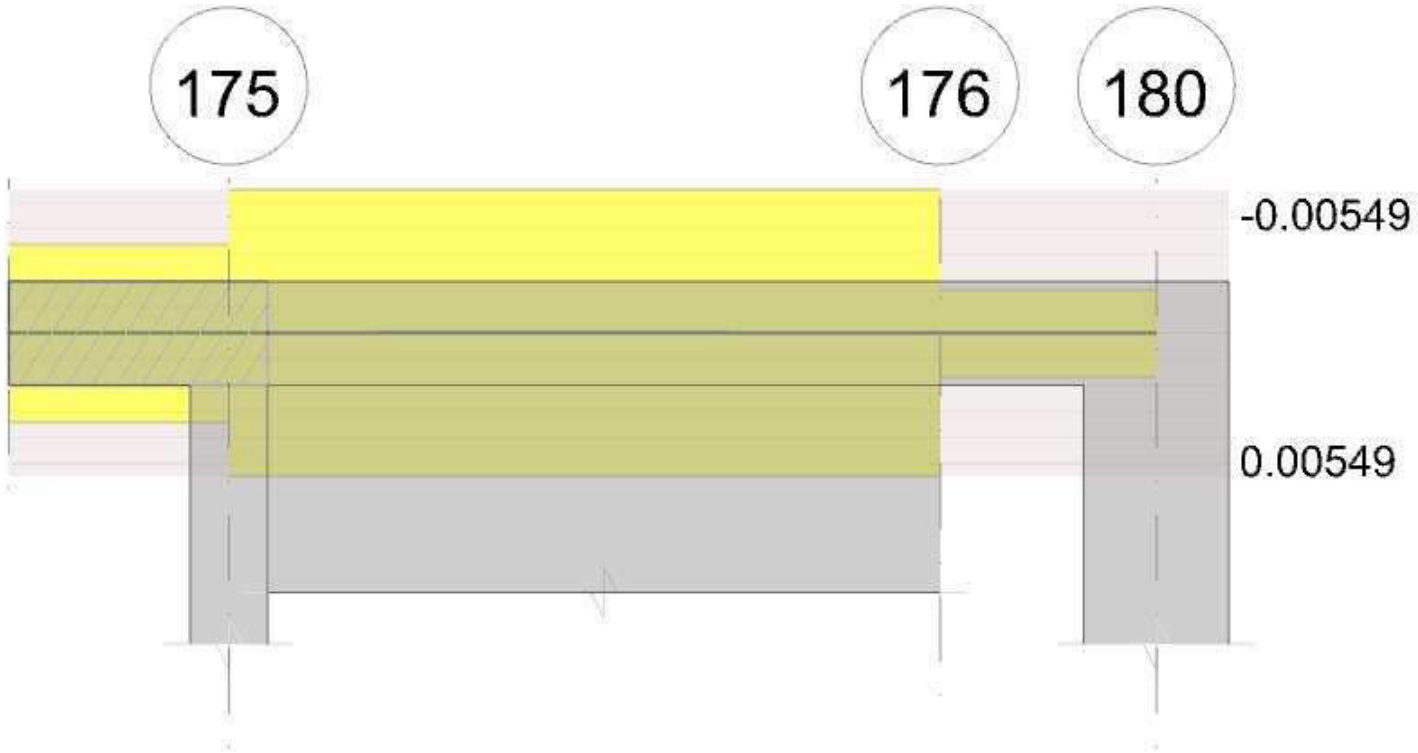


Diagramma verifica stato limite ultimo taglio

Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 3 tra i fili 176 - 180, sezione R 50x20, aste 472, 471

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	12.77	SLU 49	49.01	1931.17	0.242	39.4	-44.31	SLU 39	-44.31	-1931.17	0.242	43.59	Si
0.21	0.000308	0.05	0.000308	0.05	128.37	SLU 78	174.73	1931.17	0.242	11.05							Si
0.28	0.000308	0.05	0.000308	0.05	175.89	SLU 78	175.89	1931.17	0.242	10.98							Si
0.42	0.000308	0.05	0.000308	0.05	271.64	SLU 84	224.71	1931.17	0.242	8.59							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	74.89	SLV 9	102.41	1648.89	0.269	16.1	-91.55	SLV 8	-91.55	-1648.89	0.269	18.01	Si
0.21	0.000308	0.05	0.000308	0.05	159.14	SLV 5	185.95	1648.89	0.269	8.87	22.21	SLV 12	-12.32	-1648.89	0.269	133.88	Si
0.28	0.000308	0.05	0.000308	0.05	186.64	SLV 5	186.64	1648.89	0.269	8.83							Si
0.42	0.000308	0.05	0.000308	0.05	243.69	SLV 6	225.64	1648.89	0.269	7.31							Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	27.27	SLD 9	57.93	1648.89	0.269	28.47	-43.93	SLD 8	-43.93	-1648.89	0.269	37.54	Si
0.21	0.000308	0.05	0.000308	0.05	120.01	SLD 5	148.37	1648.89	0.269	11.11							Si
0.28	0.000308	0.05	0.000308	0.05	149.09	SLD 5	149.09	1648.89	0.269	11.06							Si
0.42	0.000308	0.05	0.000308	0.05	206.69	SLD 6	183.05	1648.89	0.269	9.01							Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000109	0.000308	0	806	SLU 84	806	3906	23811	5741	5741	1	7.12	Si
0.21	0.0000109	0.000308	0	738	SLU 84	738	3906	23811	5741	5741	1	7.78	Si
0.28	0.0000109	0.000308	0	716	SLU 84	716	3906	23811	5741	5741	1	8.02	Si
0.29	0	0.000308	0	711	SLU 84	711	3906	23811	0	3906	1	5.49	Si
0.42	0	0.000308	0	670	SLU 84	670	3906	23811	0	3906	1	5.83	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000109	0.000308	0	634	SLV 2	634	3906	23811	5741	5741	1	9.05	Si
0.21	0.0000109	0.000308	0	582	SLV 2	582	3906	23811	5741	5741	1	9.87	Si
0.28	0.0000109	0.000308	0	563	SLV 2	563	3906	23811	5741	5741	1	10.19	Si
0.29	0	0.000308	0	560	SLV 2	560	3906	23811	0	3906	1	6.98	Si
0.42	0	0.000308	0	528	SLV 2	528	3906	23811	0	3906	1	7.39	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000109	0.000308	0	558	SLD 2	558	3906	23811	5741	5741	1	10.3	Si
0.21	0.0000109	0.000308	0	505	SLD 2	505	3906	23811	5741	5741	1	11.36	Si
0.28	0.0000109	0.000308	0	488	SLD 2	488	3906	23811	5741	5741	1	11.77	Si
0.29	0	0.000308	0	484	SLD 2	484	3906	23811	0	3906	1	8.07	Si
0.42	0	0.000308	0	453	SLD 2	453	3906	23811	0	3906	1	8.63	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-21.96	18	-21.96	6162	1494000	92426	36000000	-8.33	2	-8.33	2336	1120500			Si
0.21	96.71	15	129.9	36447	1494000	546699	36000000	90.67	2	120.16	33712	1120500			Si
0.28	130.73	15	130.73	36679	1494000	550191	36000000	120.89	2	120.89	33918	1120500			Si
0.42	198.86	21	165.6	46460	1494000	696902	36000000	178.78	2	151.06	42383	1120500			Si

Verifica di apertura delle fessure

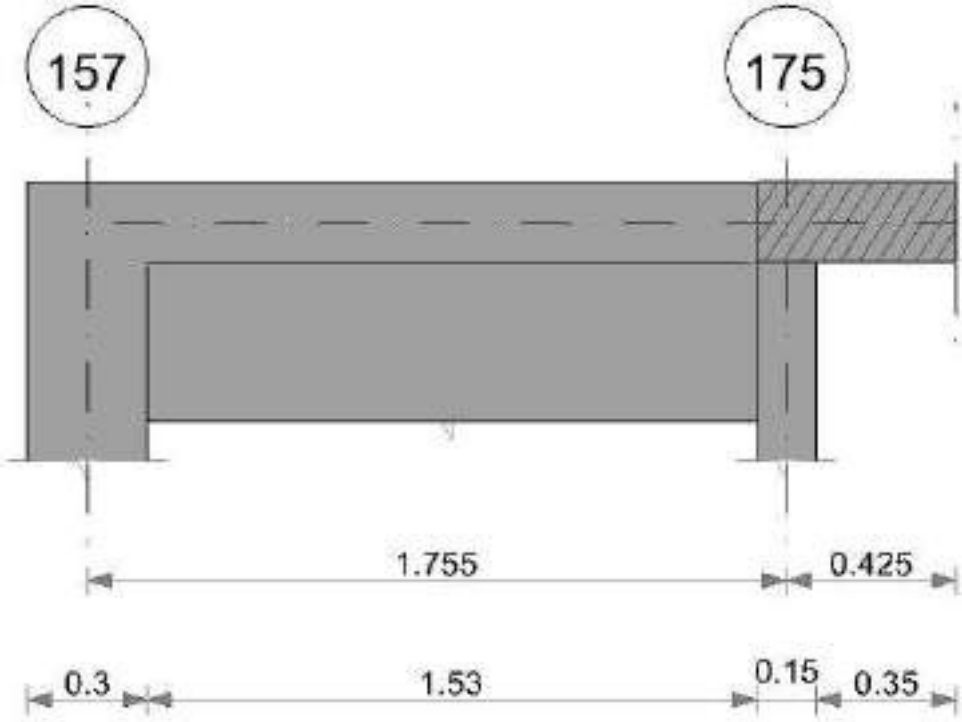
La campata non presenta apertura delle fessure

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.21	0	0	0	0	0	0	0	0	0	0	0.00001	2	0.00001	2	9999	Si
0.24	0	0	0	0	0	0	0	0	0	0	0.00001	2	0.00001	2	9999	Si
0.28	0	0	0	0	0	0	0	0	0	0	0.00001	2	0.00001	2	9999	Si

Trave a "Rialzato" 157-179

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

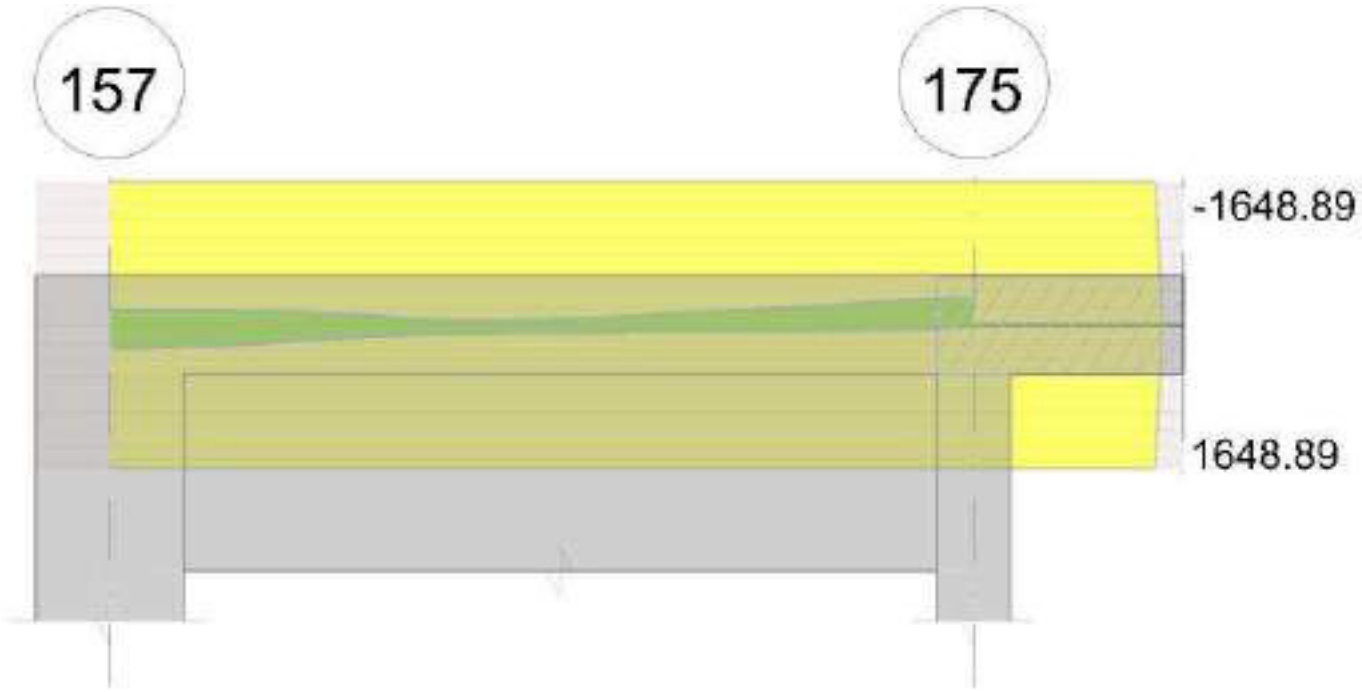


Diagramma verifica stato limite ultimo taglio

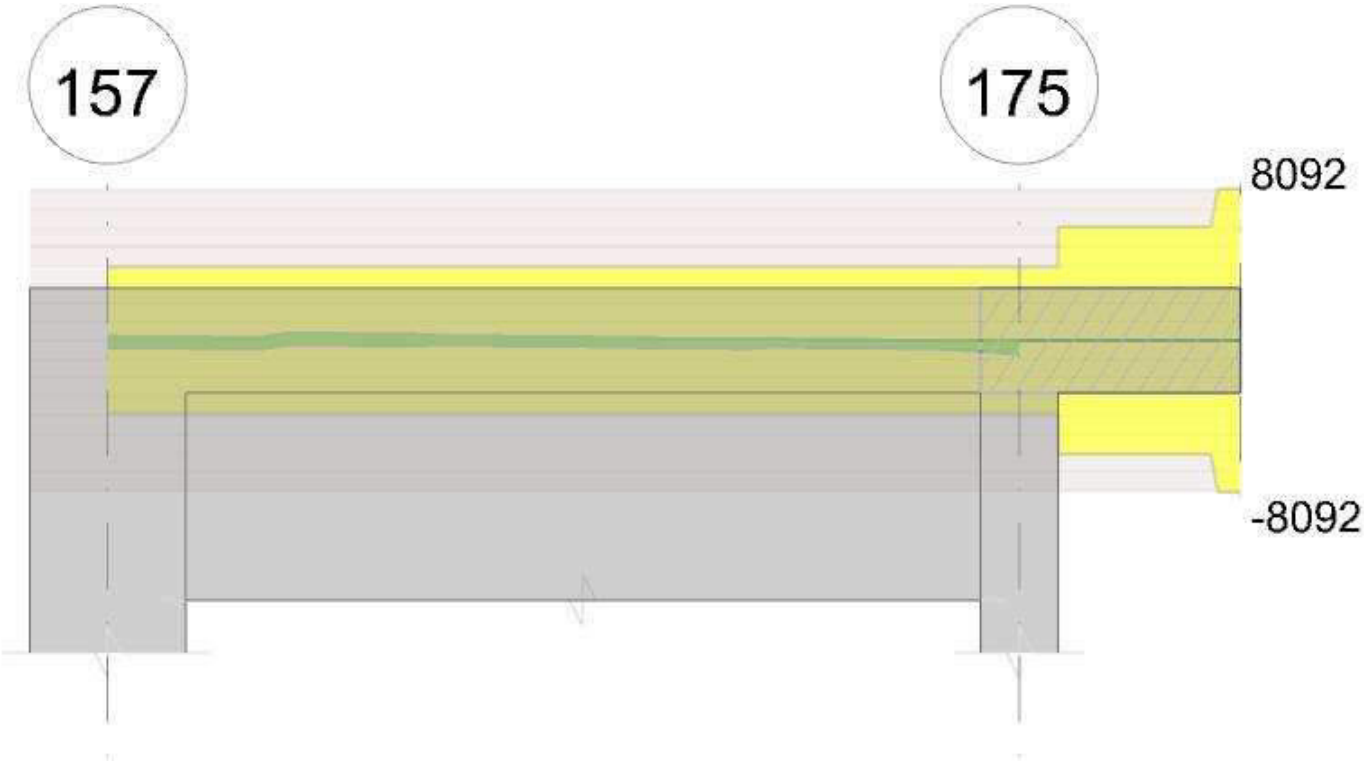
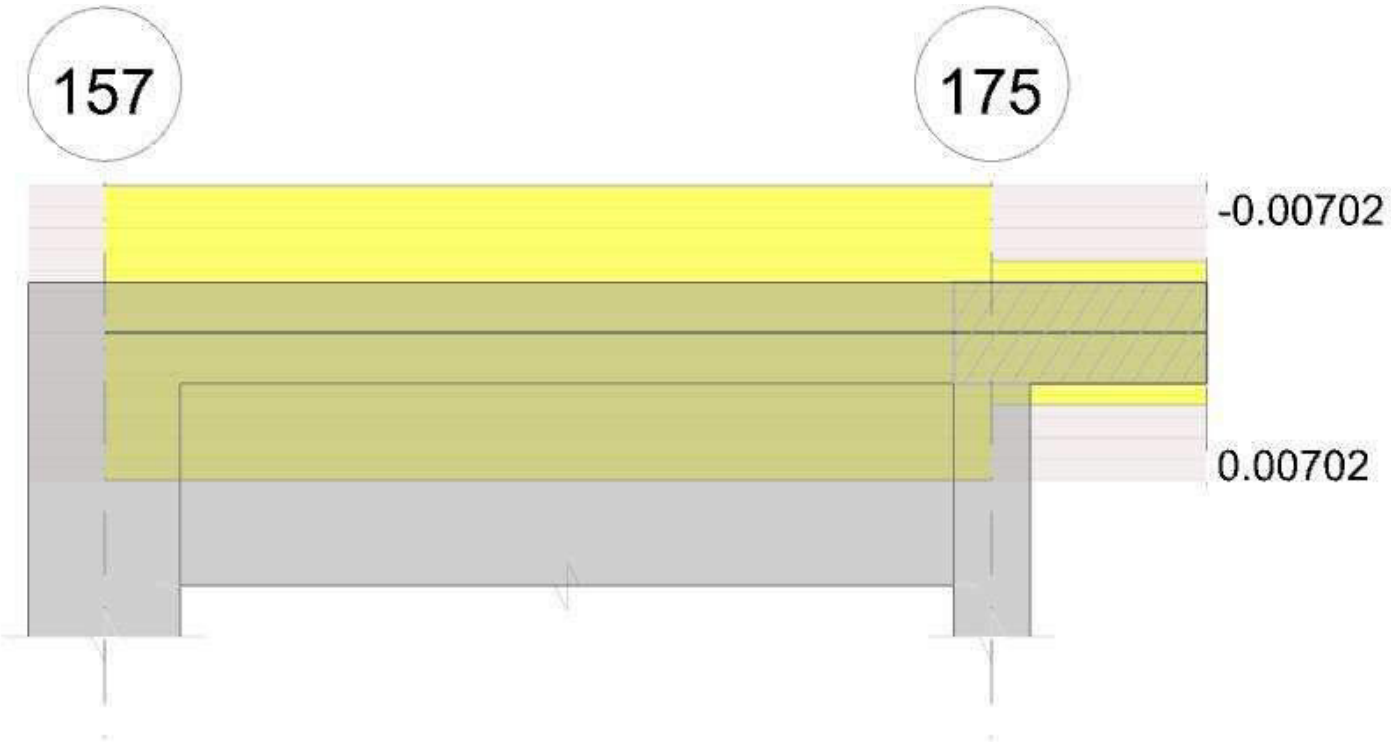


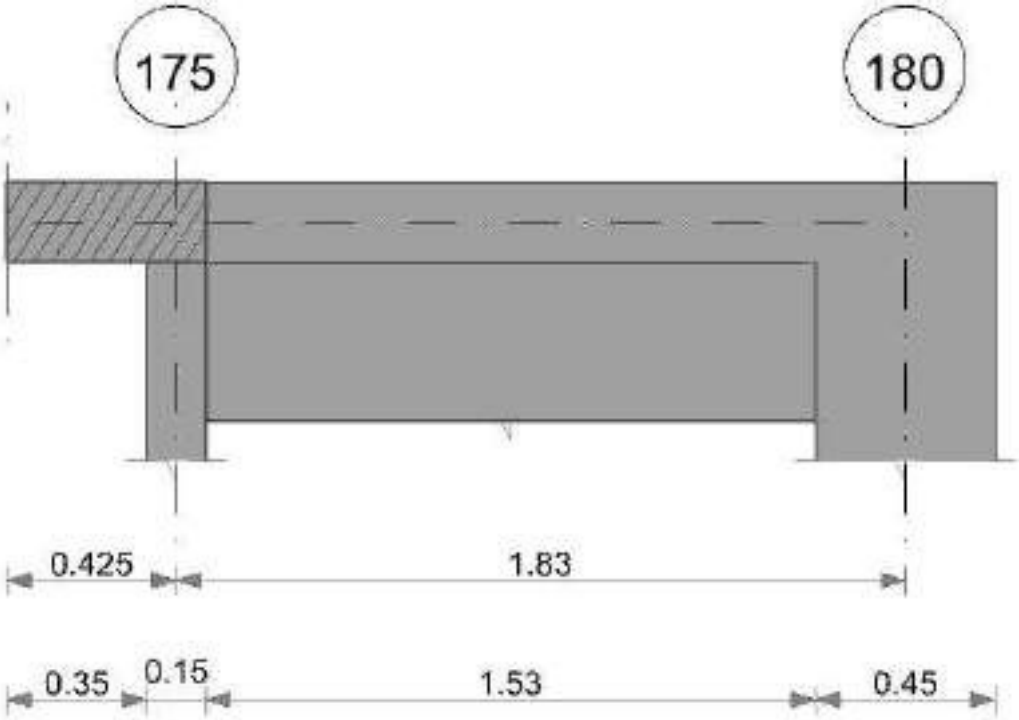
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Trave a "Rialzato" 179-176

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

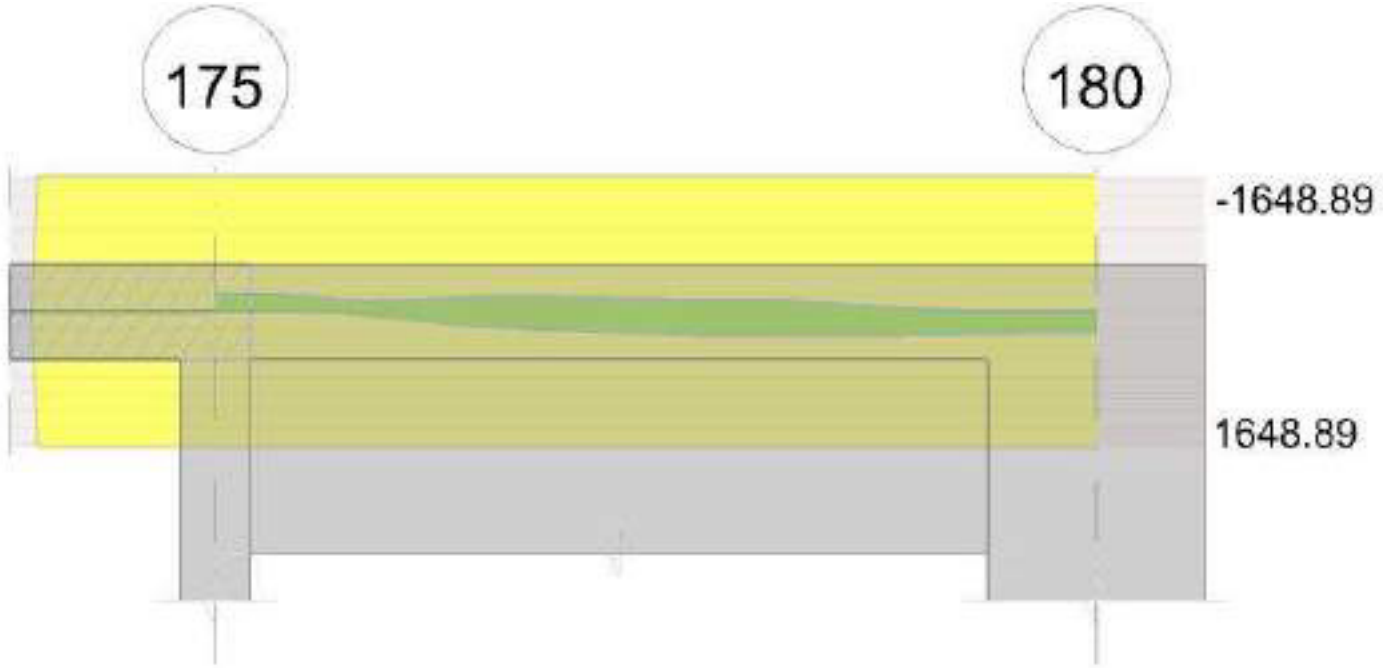


Diagramma verifica stato limite ultimo taglio

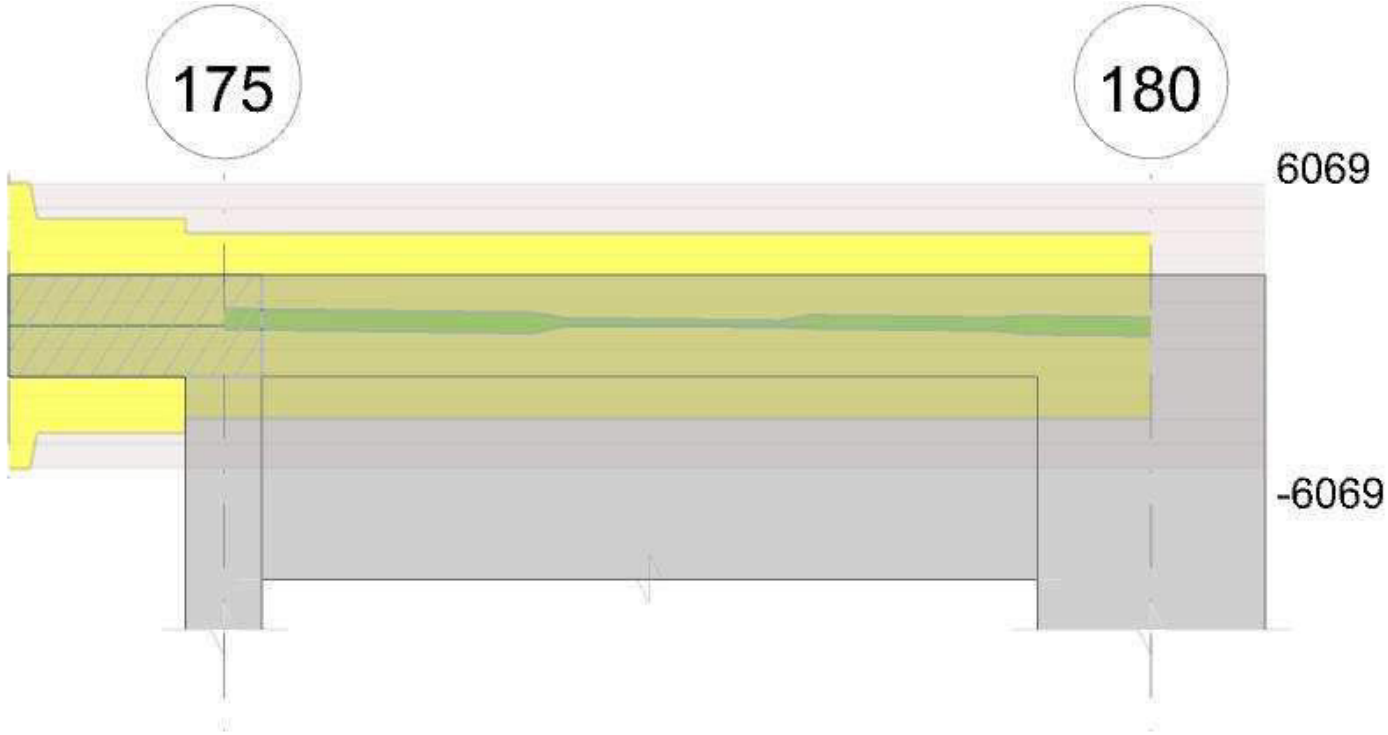
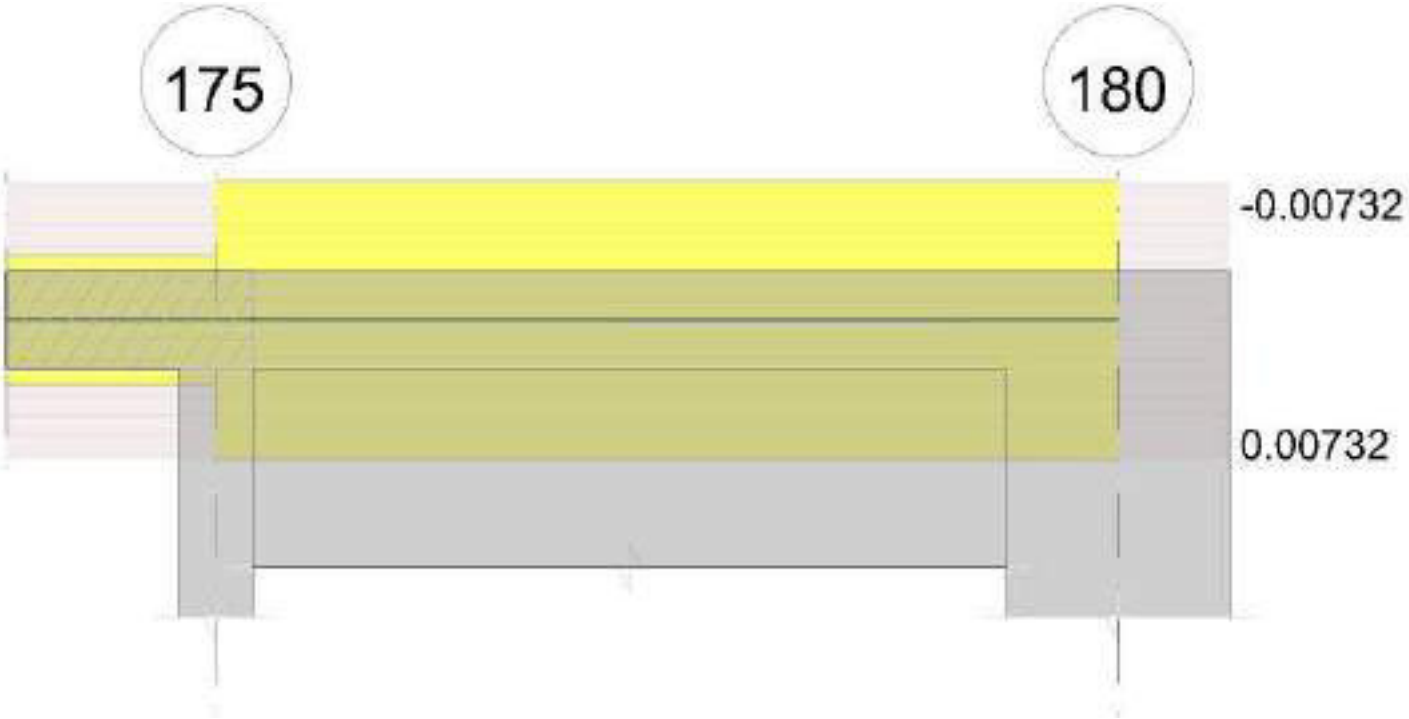


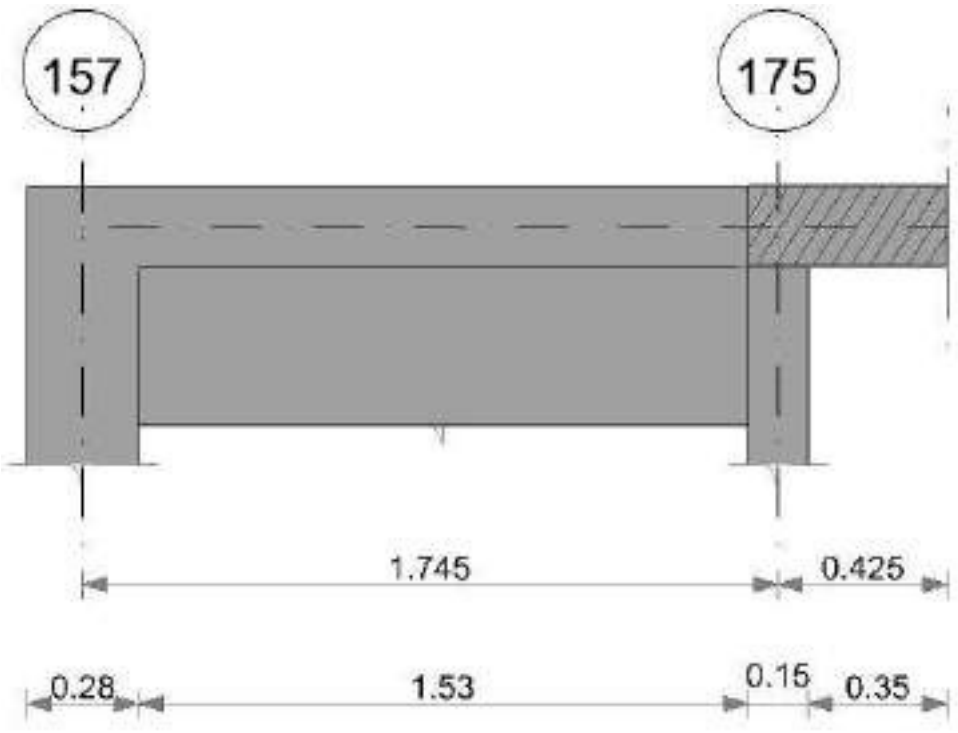
Diagramma verifica stato limite esercizio quasi permanente freccia

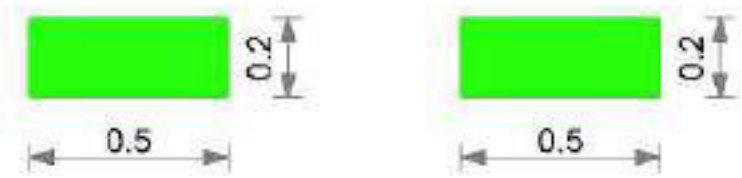


Output campate

Trave a "Secondo" 157-179

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

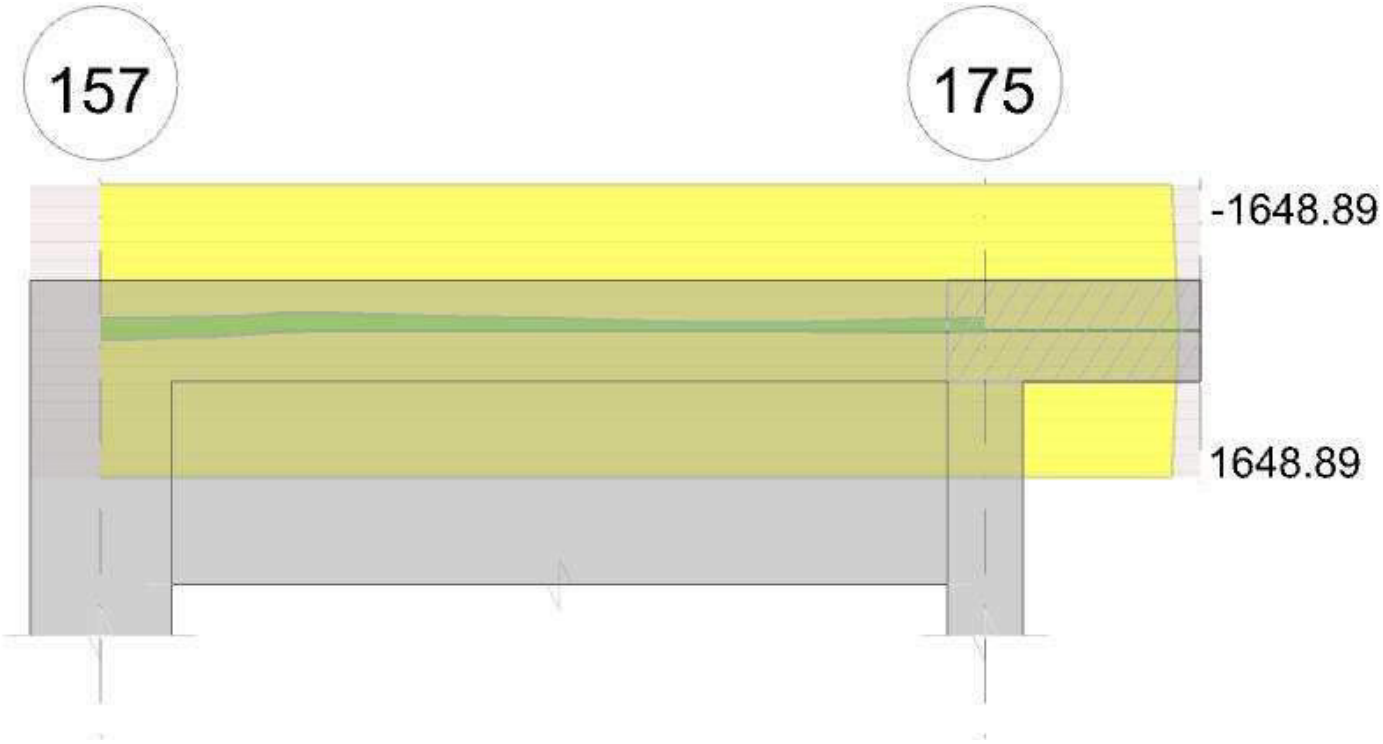


Diagramma verifica stato limite ultimo taglio

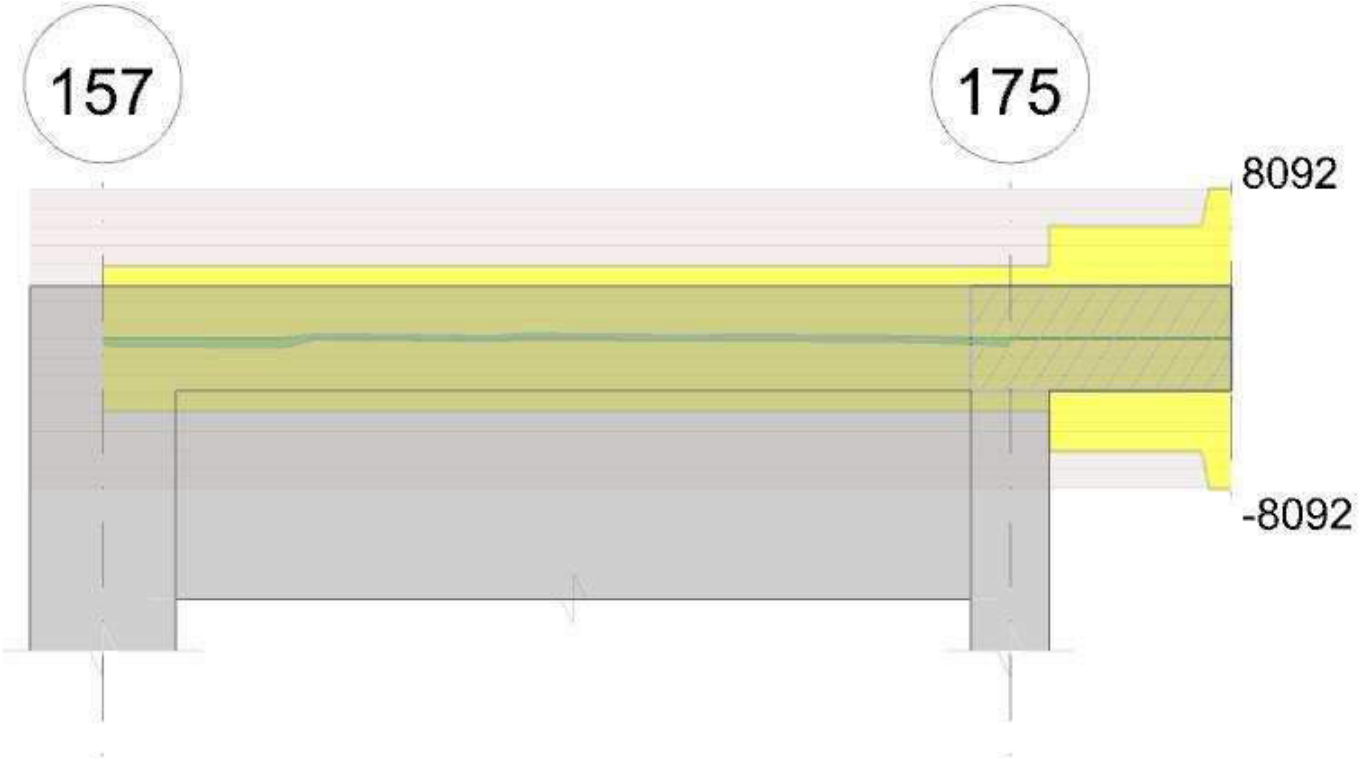
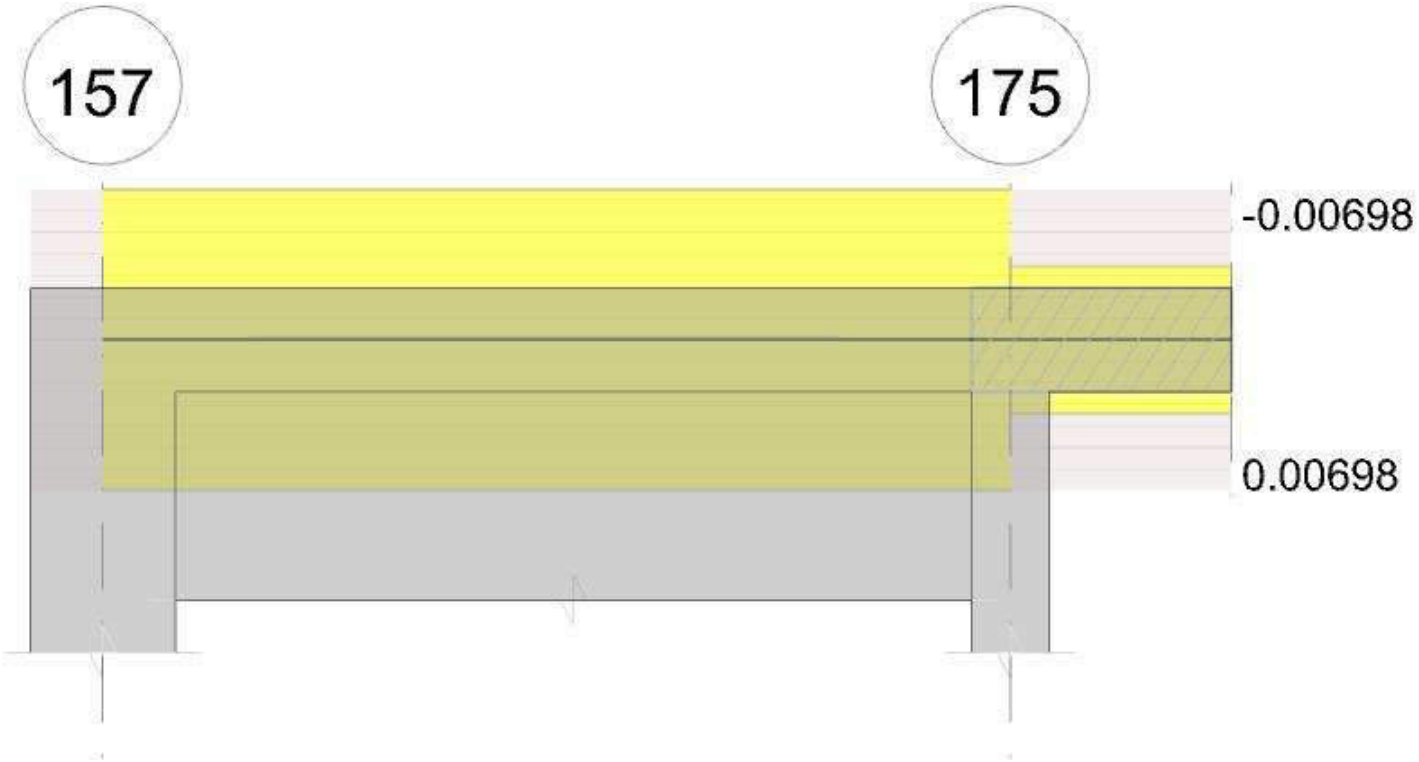


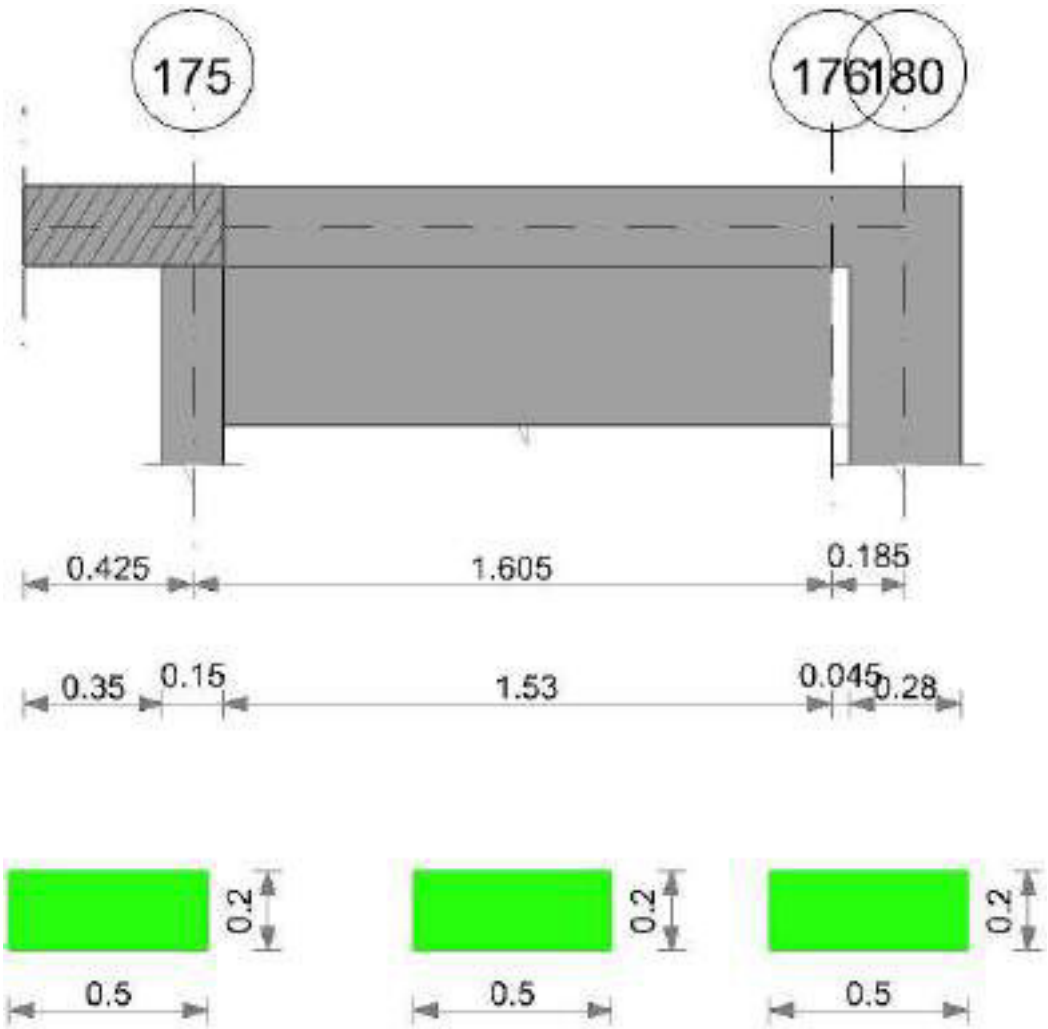
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Trave a "Secondo" 179-176

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

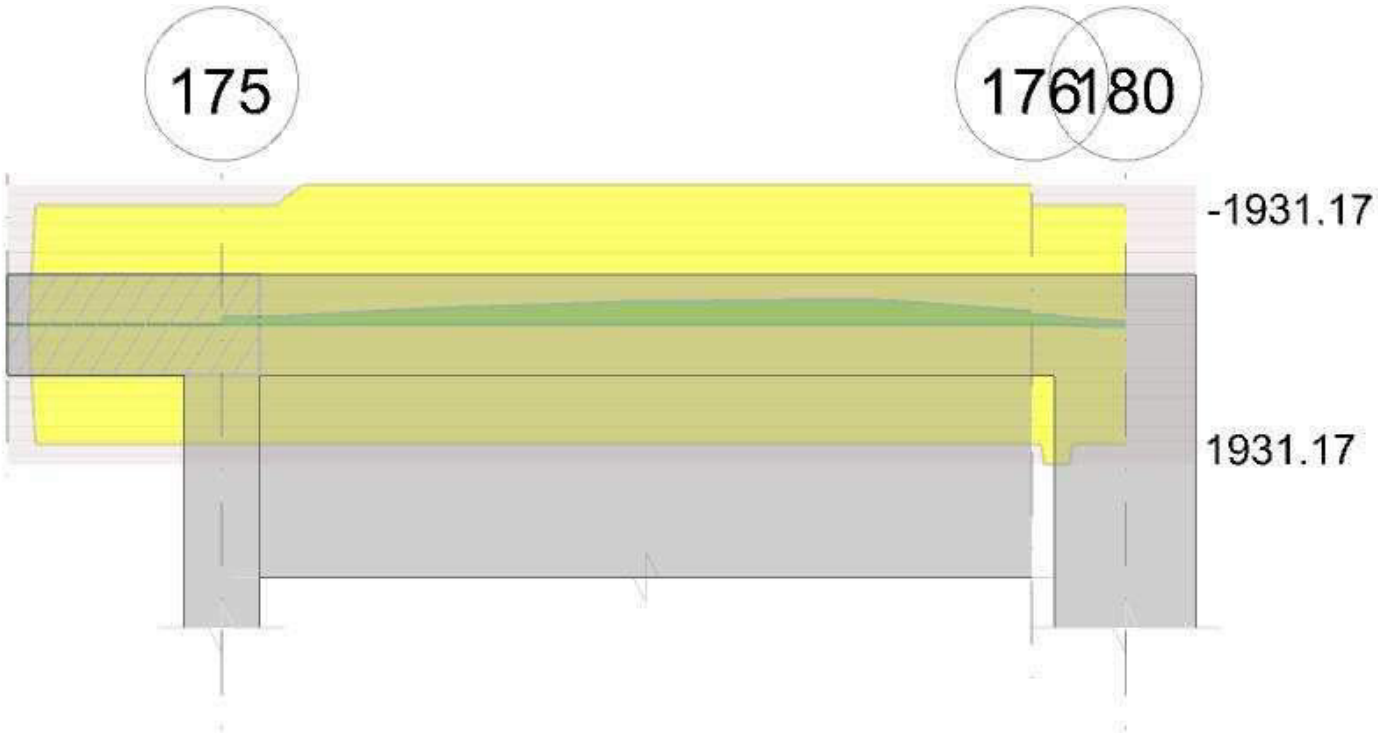


Diagramma verifica stato limite ultimo taglio

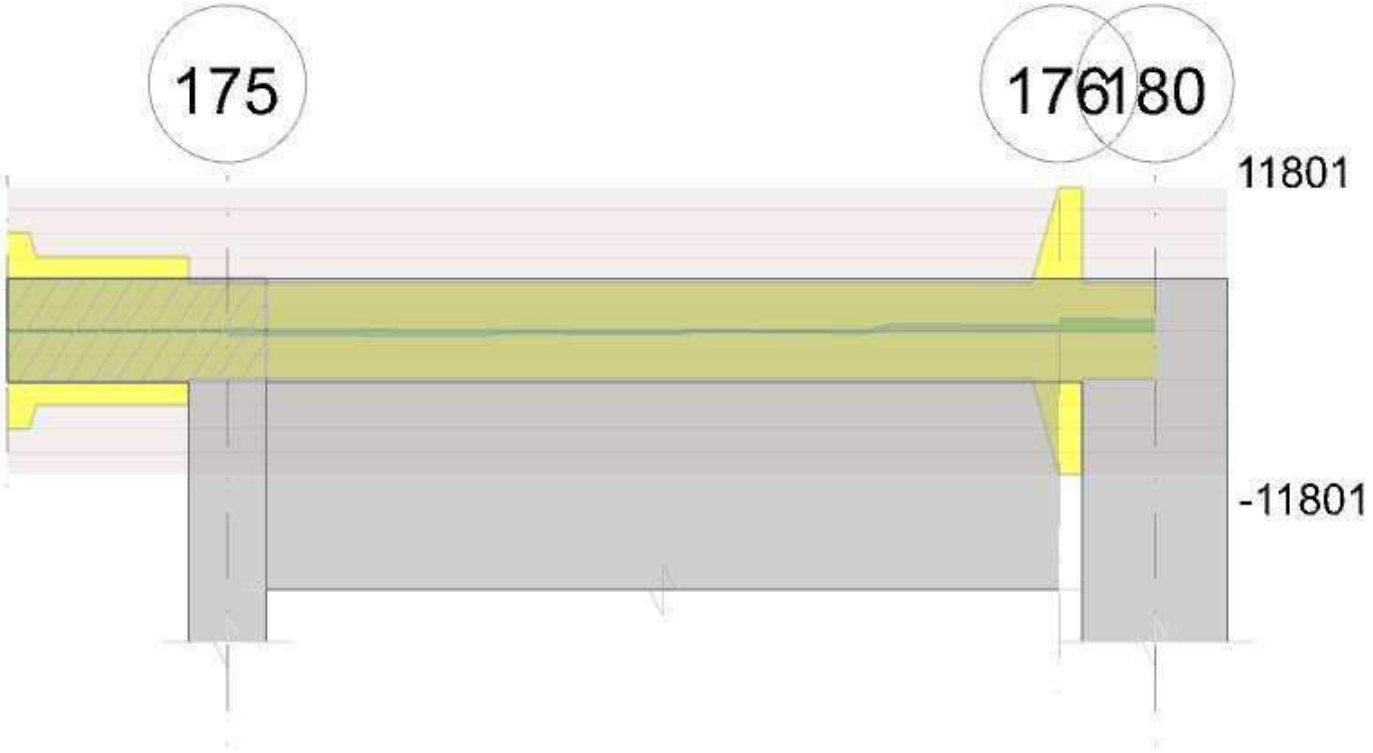
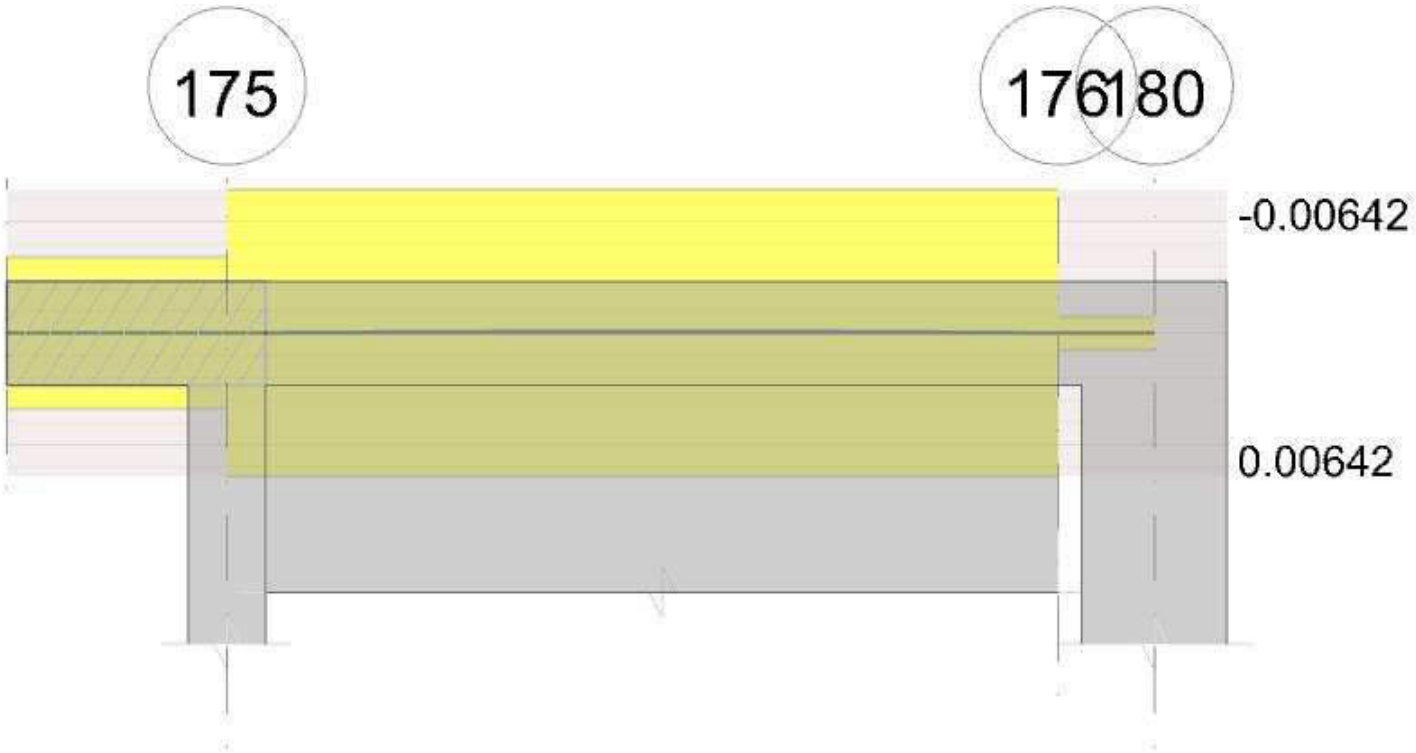


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 3 tra i fili 176 - 180, sezione R 50x20, asta 476

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-154.43	SLU 84	-154.43	-1931.17	0.242	12.5	Si
0.01	0.000308	0.05	0.000308	0.05							-148.55	SLU 84	-154.43	-1931.17	0.242	12.5	Si
0.05	0.000308	0.05	0.000308	0.05	-54.42	SLU 1	0.23	1931.17	0.242	8376.15	-111.76	SLU 84	-154.43	-1931.17	0.242	12.5	Si
0.09	0.000308	0.05	0.000308	0.05							-67.42	SLU 84	-67.42	-1931.17	0.242	28.64	Si
0.19	0.000308	0.05	0.000308	0.05	16.82	SLU 83	16.82	1931.17	0.242	114.82							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-139.02	SLV 8	-139.02	-1648.89	0.269	11.86	Si
0.01	0.000308	0.05	0.000308	0.05							-135.47	SLV 8	-139.02	-1648.89	0.269	11.86	Si
0.05	0.000308	0.05	0.000308	0.05							-113.68	SLV 8	-139.02	-1648.89	0.269	11.86	Si
0.09	0.000308	0.05	0.000308	0.05	9.94	SLV 9	8.01	1648.89	0.269	205.88	-88.31	SLV 8	-88.31	-1648.89	0.269	18.67	Si
0.19	0.000308	0.05	0.000308	0.05	63.76	SLV 9	27.47	1648.89	0.269	60.02	-43.27	SLV 8	-43.27	-1648.89	0.269	38.11	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-111.4	SLD 8	-111.4	-1648.89	0.269	14.8	Si
0.01	0.000308	0.05	0.000308	0.05							-107.88	SLD 8	-111.4	-1648.89	0.269	14.8	Si
0.05	0.000308	0.05	0.000308	0.05							-86.06	SLD 8	-111.4	-1648.89	0.269	14.8	Si
0.09	0.000308	0.05	0.000308	0.05							-60.21	SLD 8	-60.21	-1648.89	0.269	27.39	Si
0.19	0.000308	0.05	0.000308	0.05	33.16	SLD 9	13.89	1648.89	0.269	118.68	-12.67	SLD 8	-12.67	-1648.89	0.269	130.13	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000223	0.000308	0	956	SLU 84	956	3906	23811	11801	11801	1	12.35	Si
0.05	0.0000223	0.000308	0	941	SLU 84	941	3906	23811	11801	11801	1	12.54	Si
0.05	0	0.000308	0	940	SLU 84	940	3906	23811	0	3906	1	4.16	Si
0.09	0	0.000308	0	926	SLU 84	926	3906	23811	0	3906	1	4.22	Si
0.19	0	0.000308	0	896	SLU 84	896	3906	23811	0	3906	1	4.36	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000223	0.000308	0	731	SLV 2	731	3906	23811	11801	11801	1	16.14	Si
0.05	0.0000223	0.000308	0	720	SLV 2	720	3906	23811	11801	11801	1	16.39	Si
0.05	0	0.000308	0	719	SLV 2	719	3906	23811	0	3906	1	5.43	Si
0.09	0	0.000308	0	708	SLV 2	708	3906	23811	0	3906	1	5.52	Si
0.19	0	0.000308	0	685	SLV 2	685	3906	23811	0	3906	1	5.7	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000223	0.000308	0	638	SLD 2	638	3906	23811	11801	11801	1	18.48	Si
0.05	0.0000223	0.000308	0	627	SLD 2	627	3906	23811	11801	11801	1	18.82	Si
0.05	0	0.000308	0	626	SLD 2	626	3906	23811	0	3906	1	6.24	Si

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0.09	0	0.000308	0	615	SLD 2	615	3906	23811	0	3906	1	6.35	Si
0.19	0	0.000308	0	592	SLD 2	592	3906	23811	0	3906	1	6.6	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-109.14	21	-109.14	30620	1494000	459304	36000000	-90.75	2	-90.75	25461	1120500			Si
0.05	-78.87	21	-109.14	30620	1494000	459304	36000000	-65.4	2	-90.75	25461	1120500			Si
0.09	-47.47	21	-47.47	13318	1494000	199768	36000000	-39.18	2	-39.18	10994	1120500			Si
0.19	12.06	20	12.06	3385	1494000	50775	36000000	10.24	2	10.24	2874	1120500			Si

Verifica di apertura delle fessure

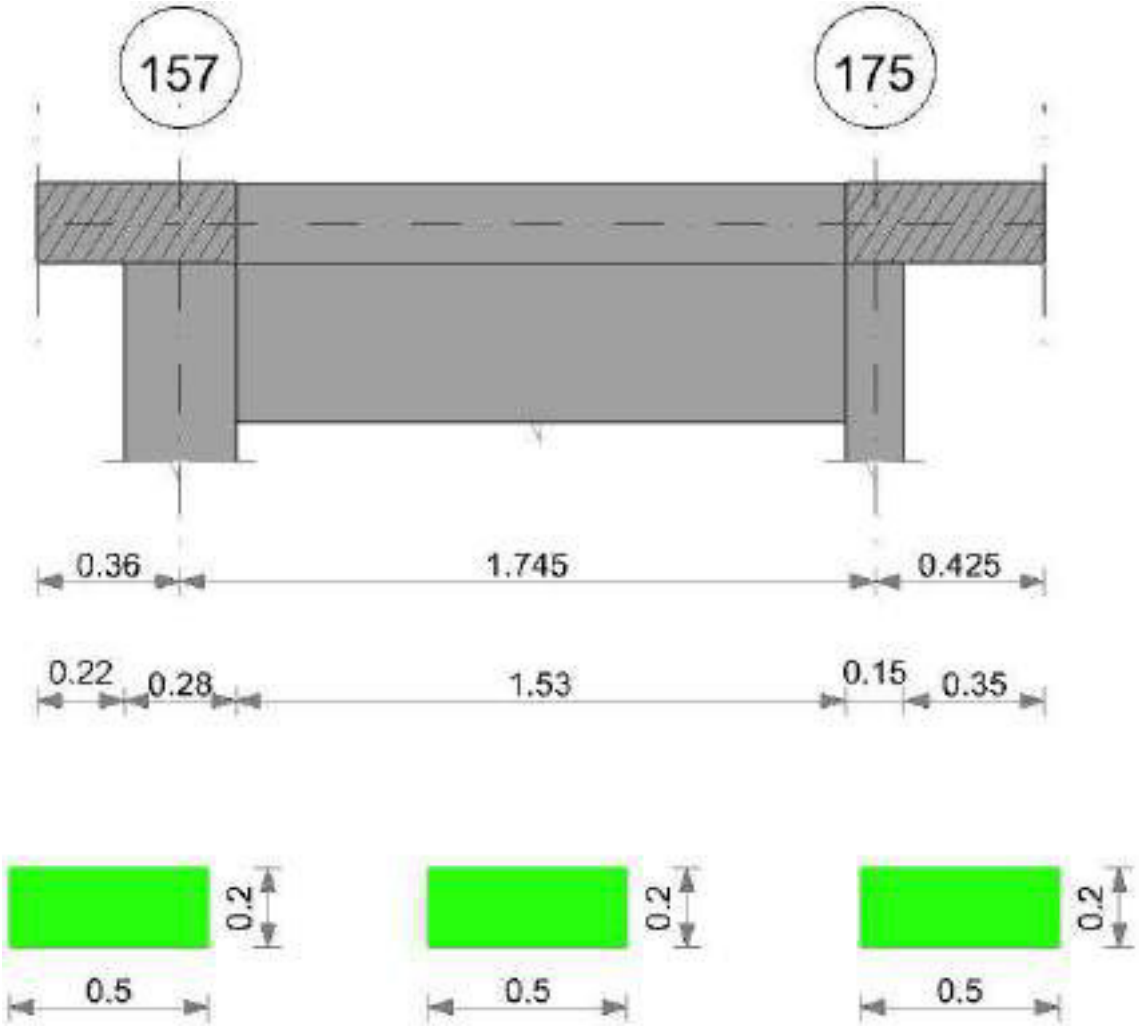
La campata non presenta apertura delle fessure

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.05	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si
0.07	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si
0.09	0	0	0	0	0	0	0	0	0	0	0	2	0	2	9999	Si

Trave a "Sottotetto" 146-179

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

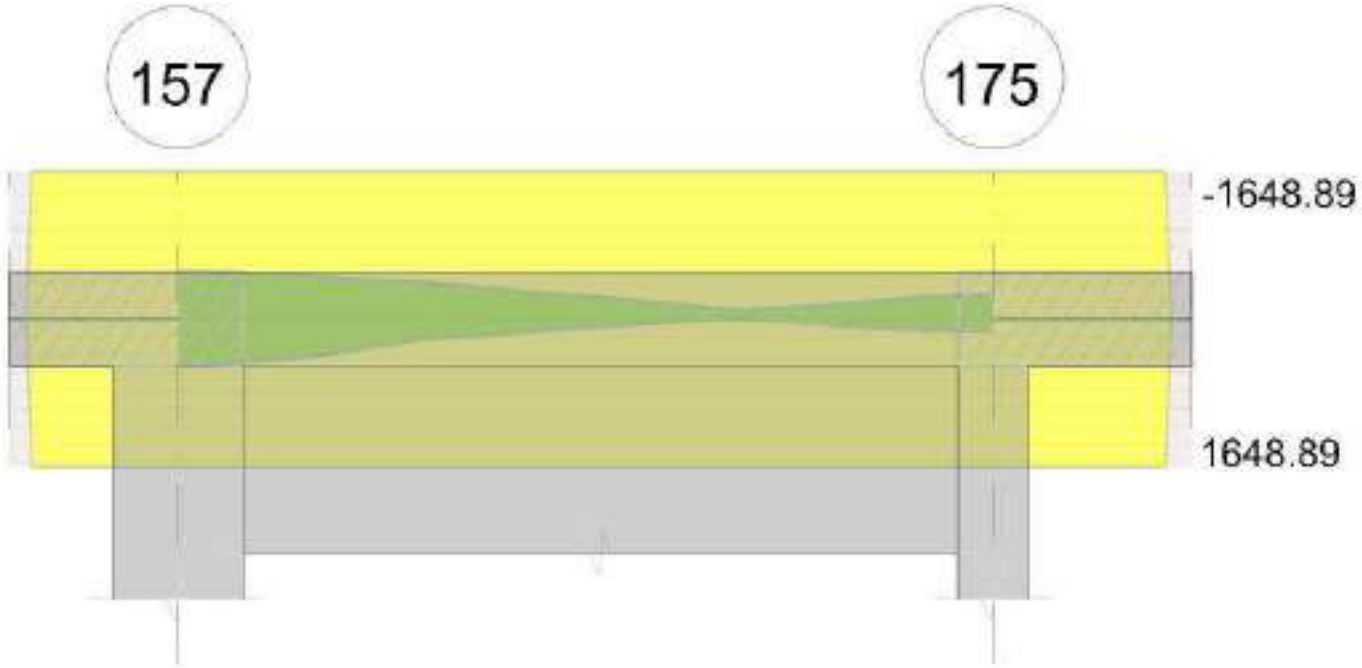


Diagramma verifica stato limite ultimo taglio

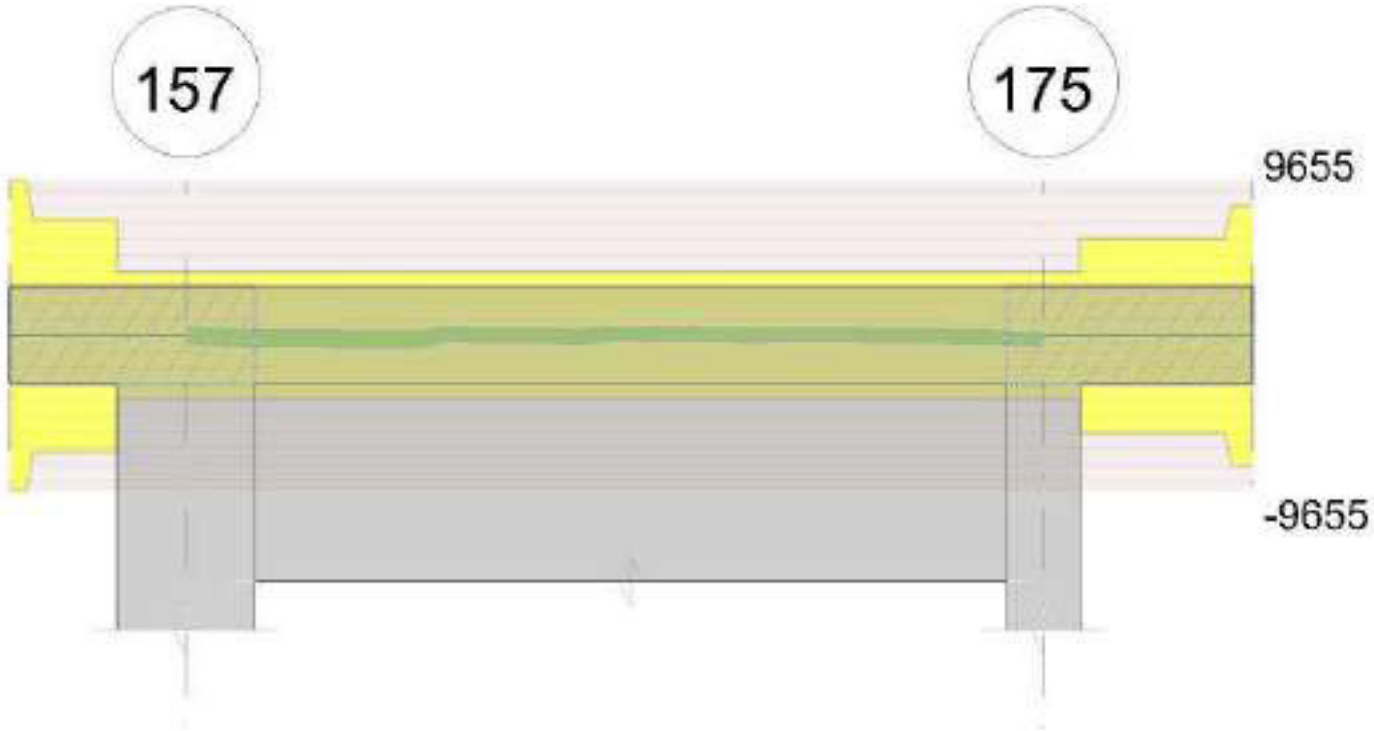
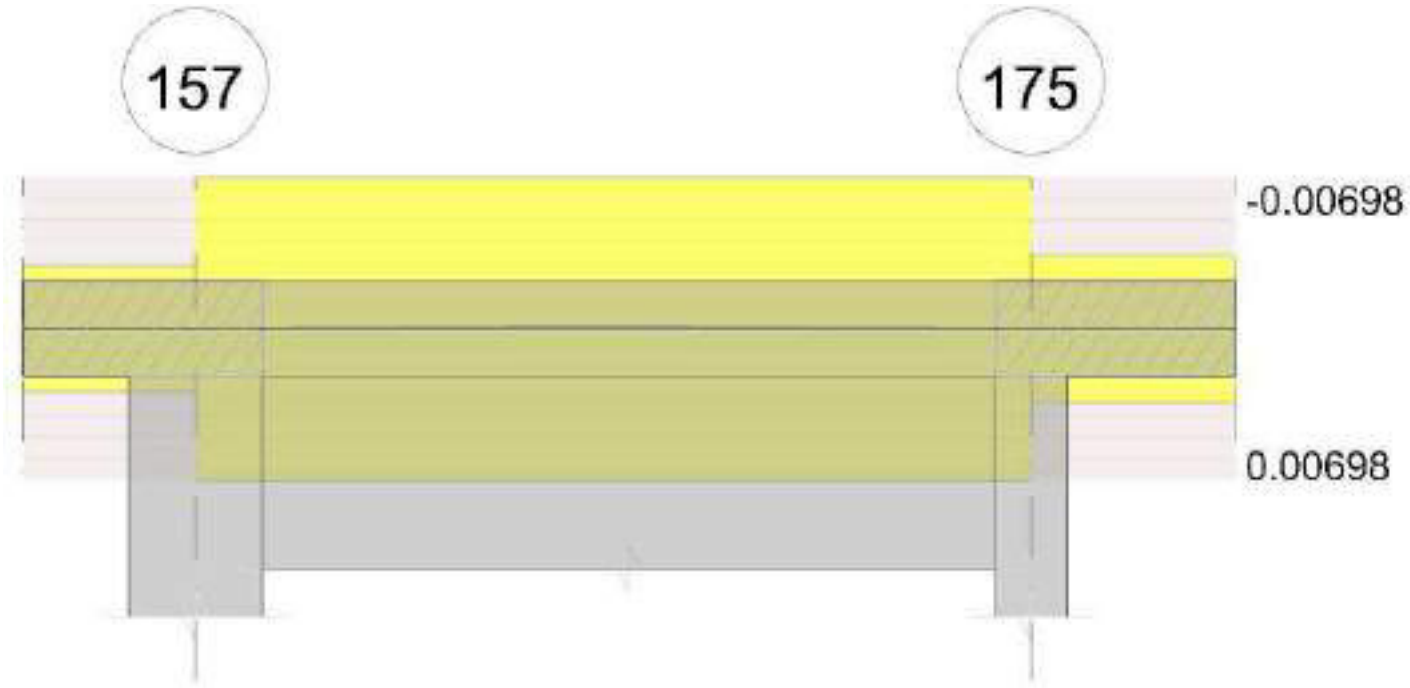


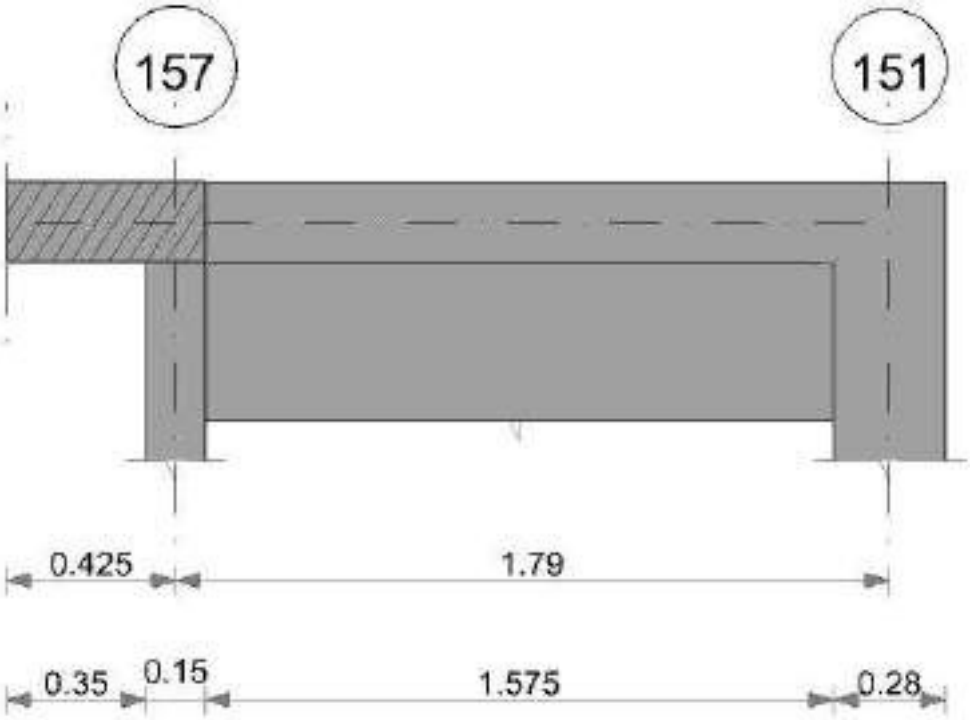
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Trave a "Sottotetto" 154-151

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

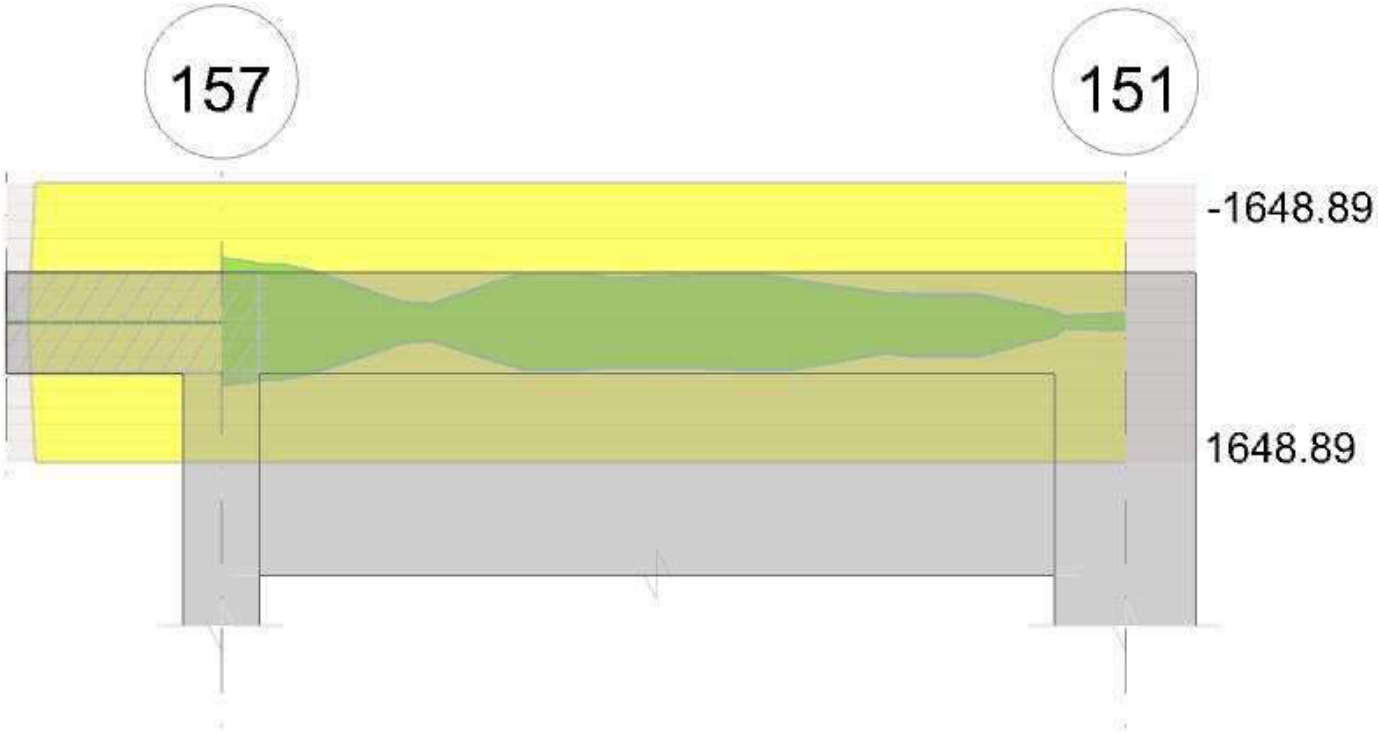


Diagramma verifica stato limite ultimo taglio

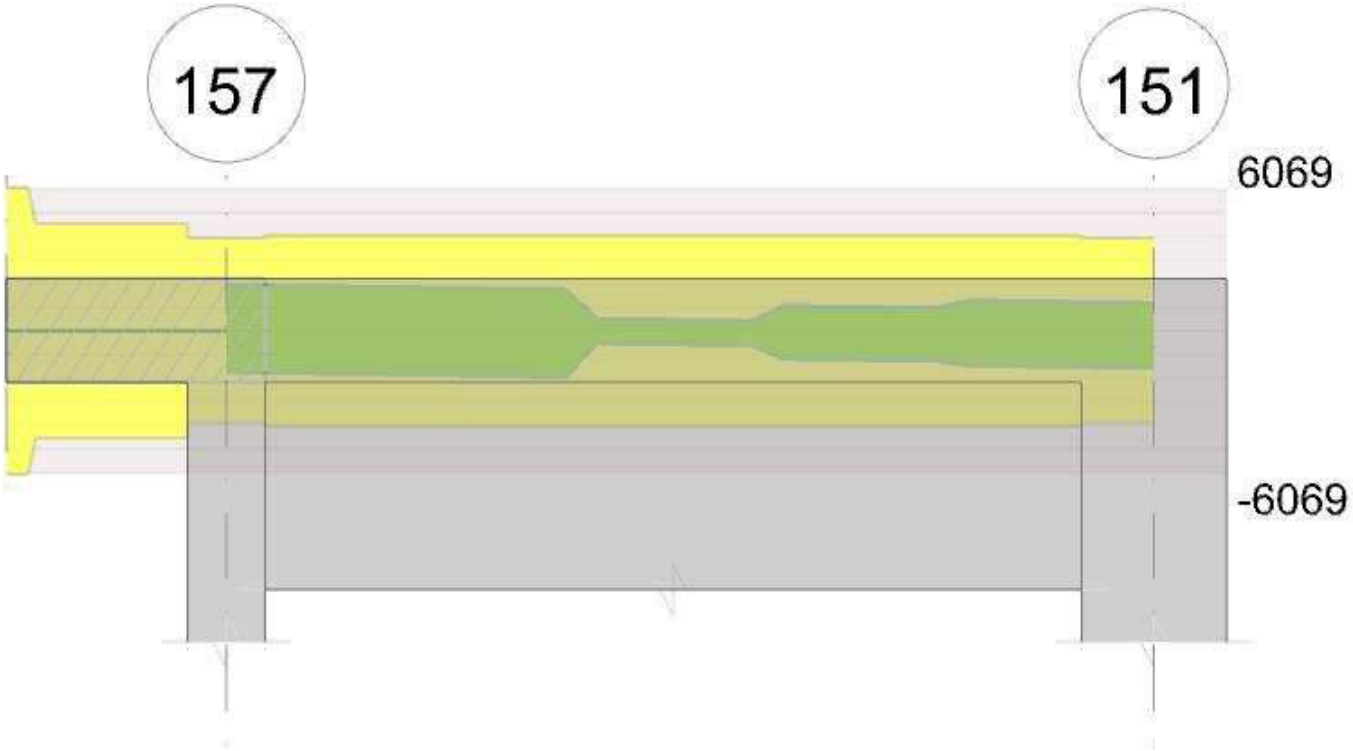
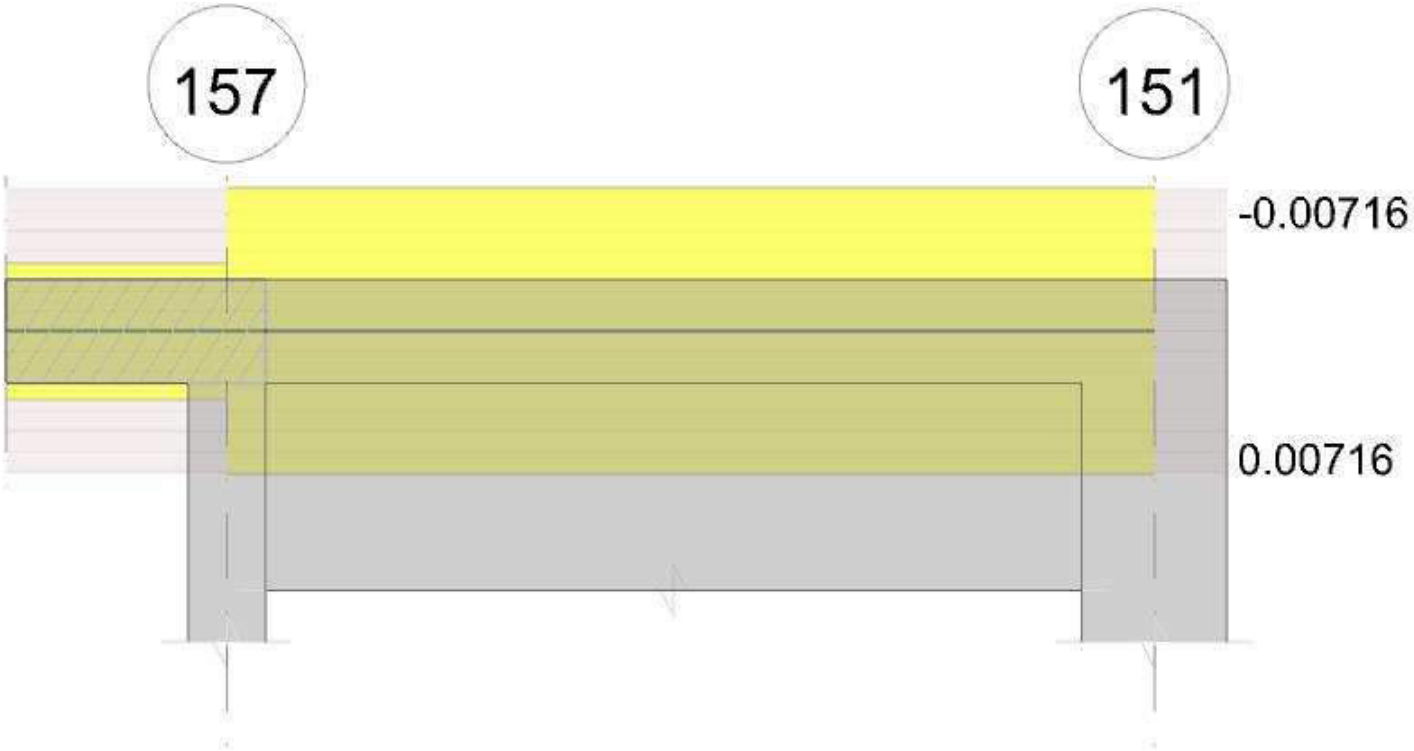


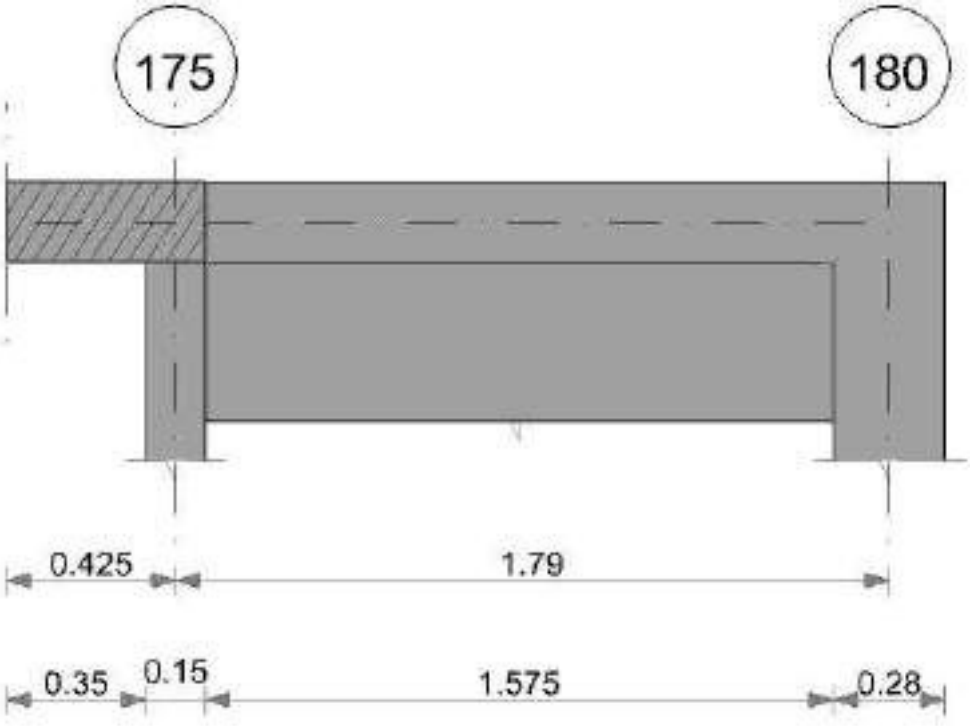
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Trave a "Sottotetto" 179-176

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

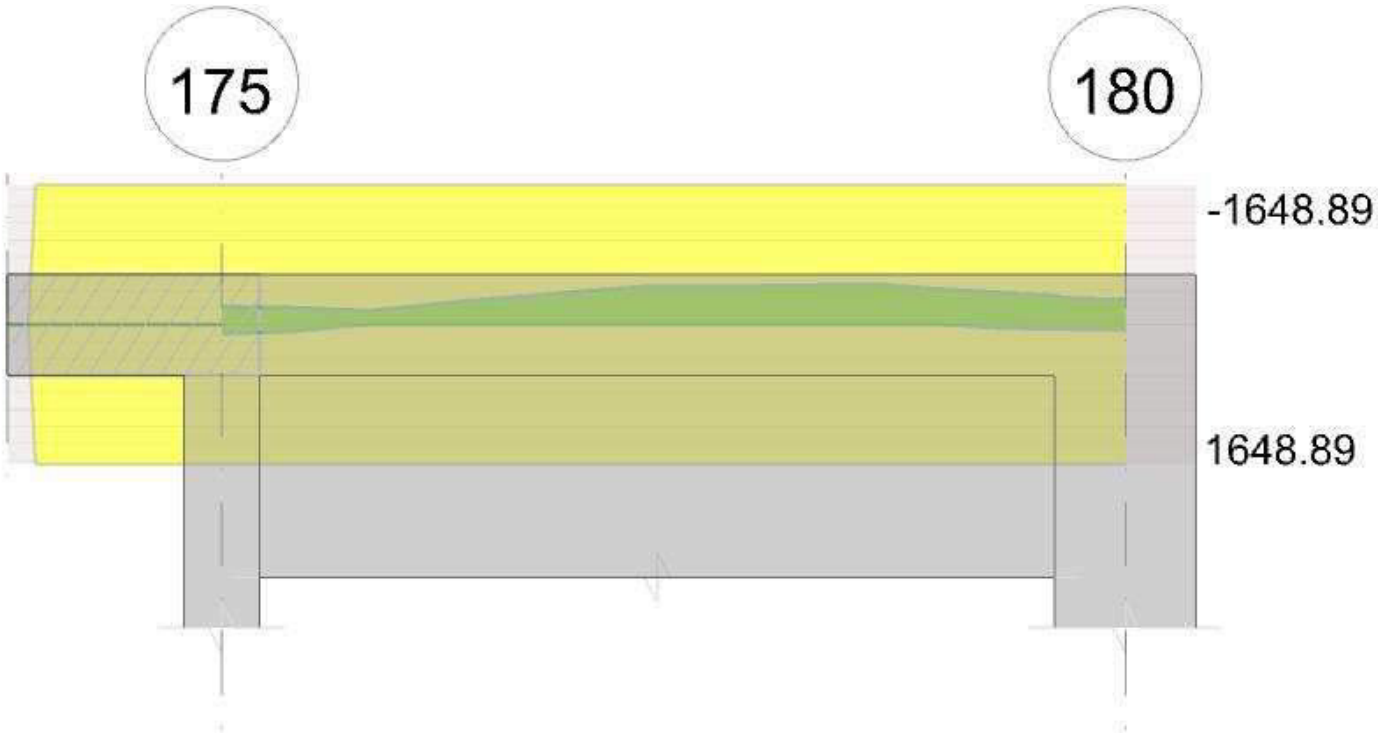


Diagramma verifica stato limite ultimo taglio

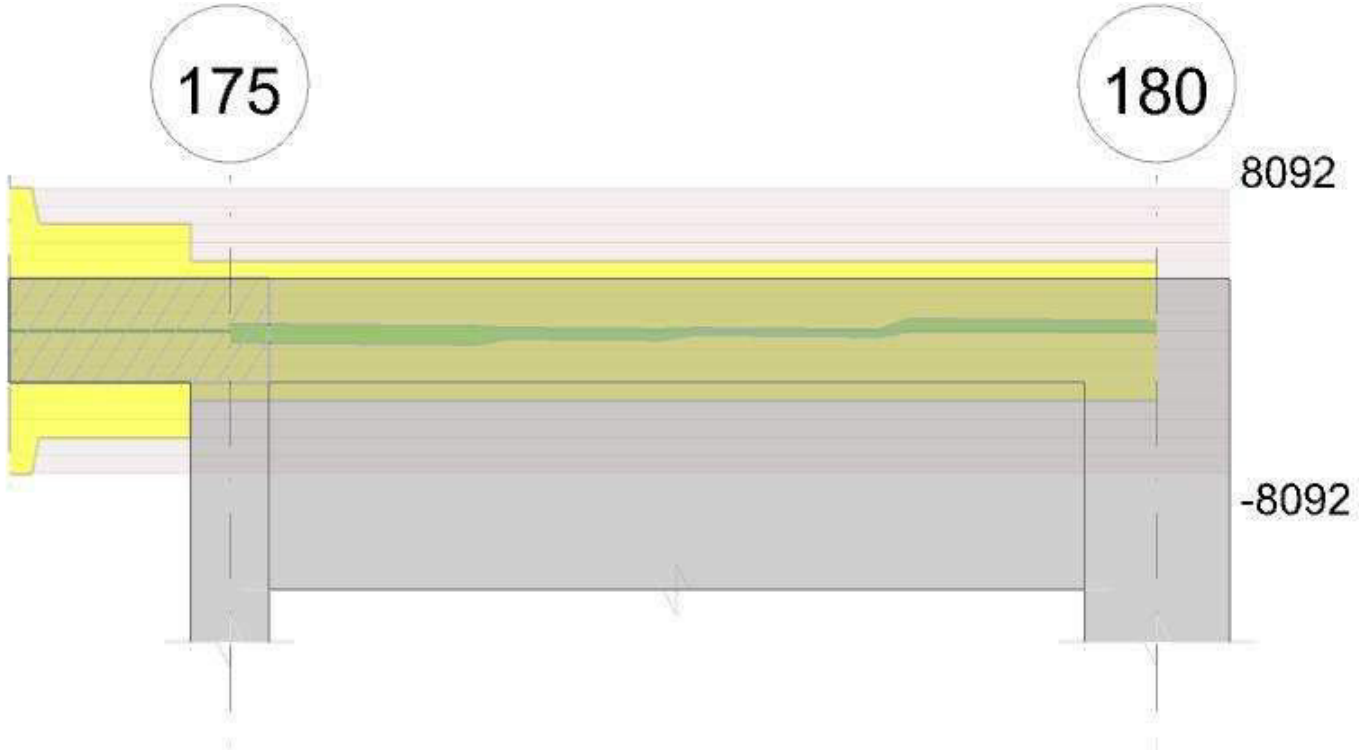
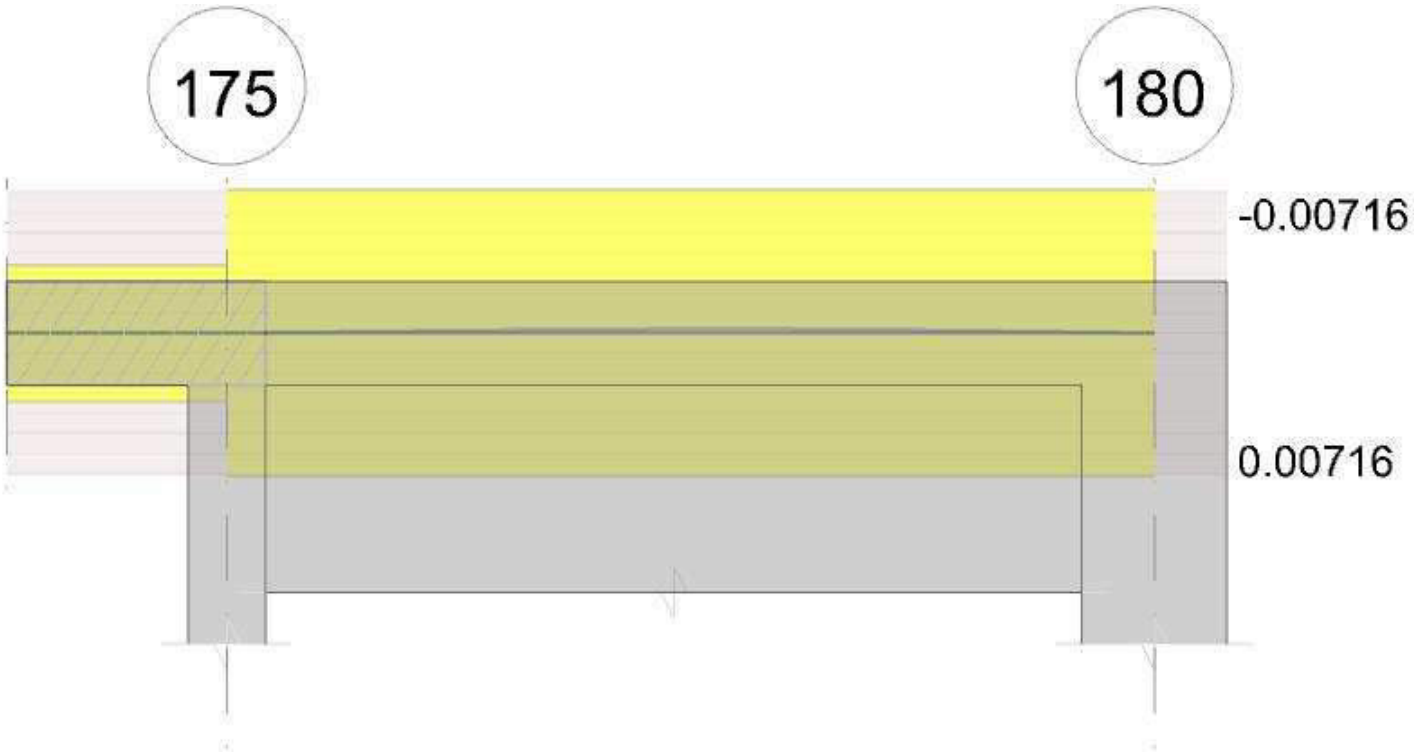


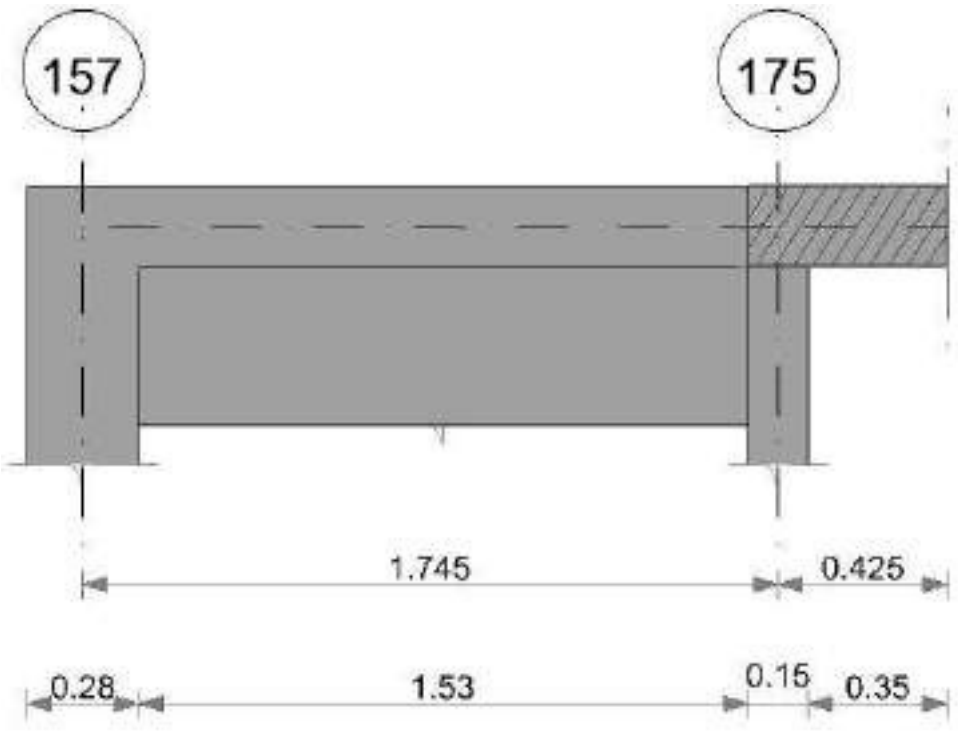
Diagramma verifica stato limite esercizio quasi permanente freccia

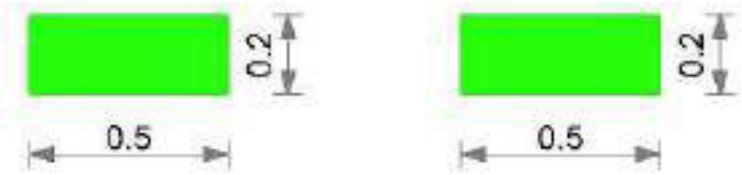


Output campate

Trave a "Terzo" 157-179

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

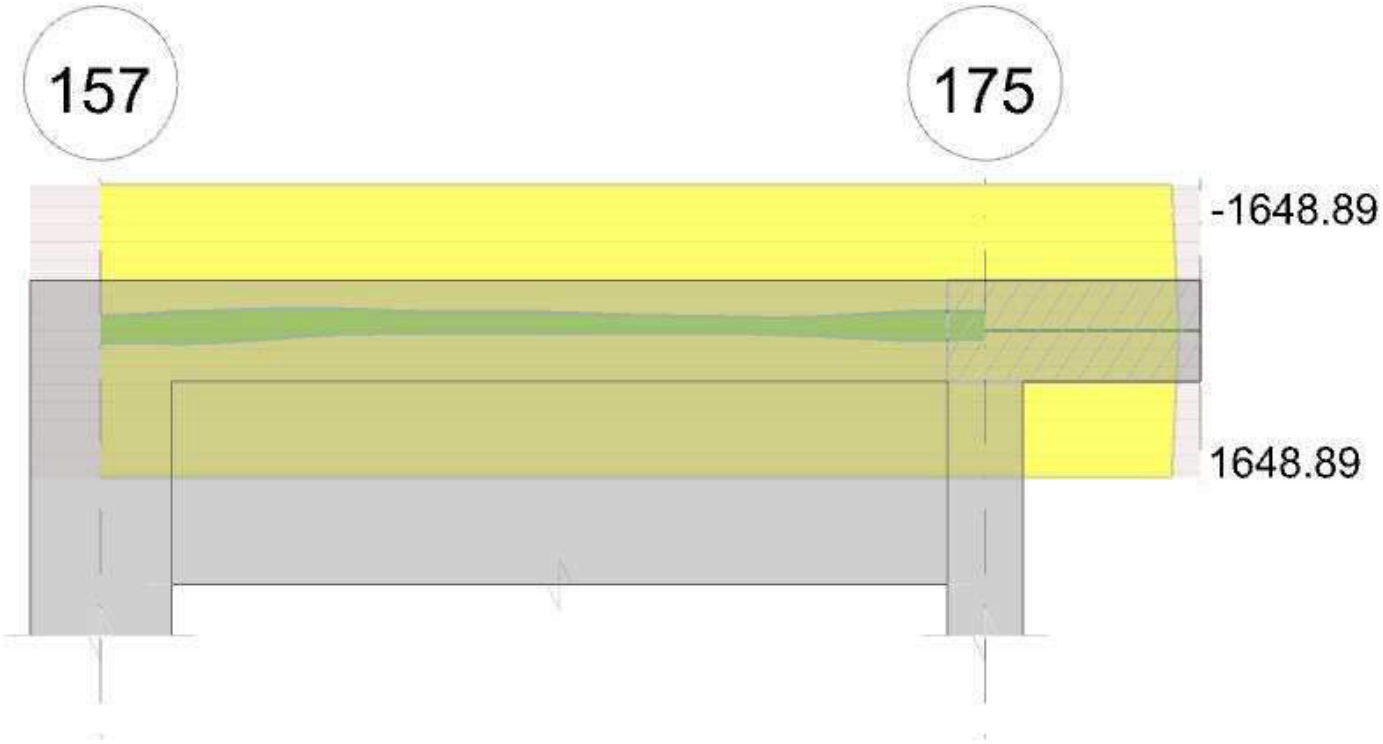
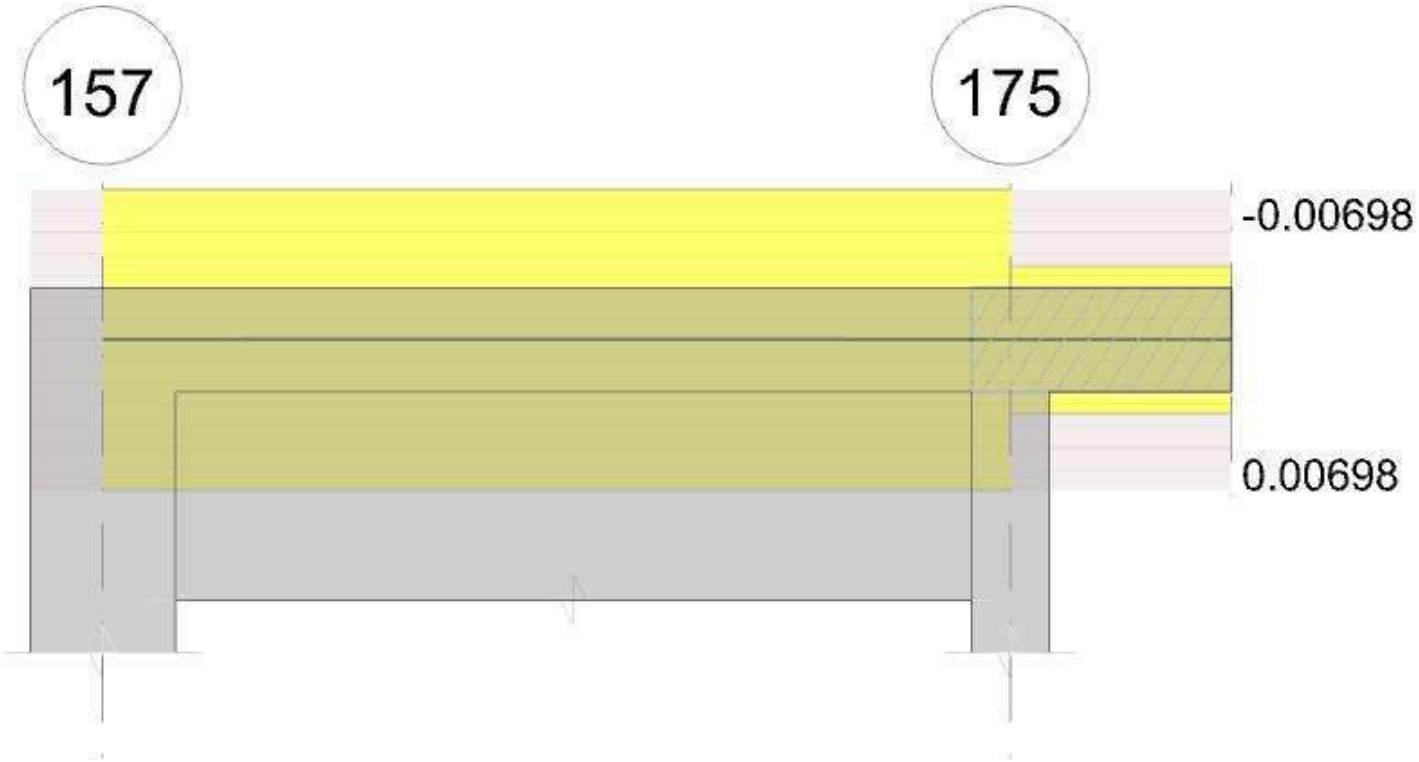


Diagramma verifica stato limite ultimo taglio

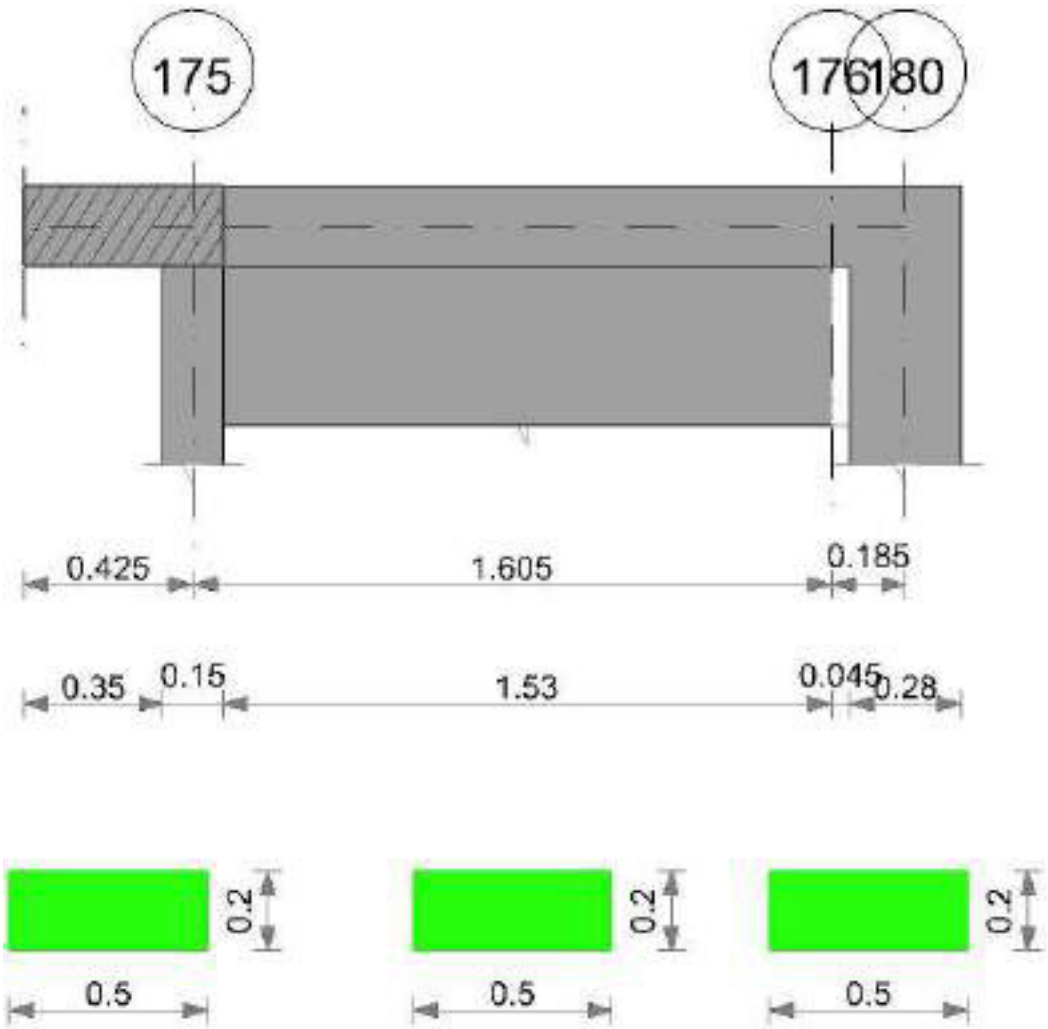
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Trave a "Terzo" 179-176

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

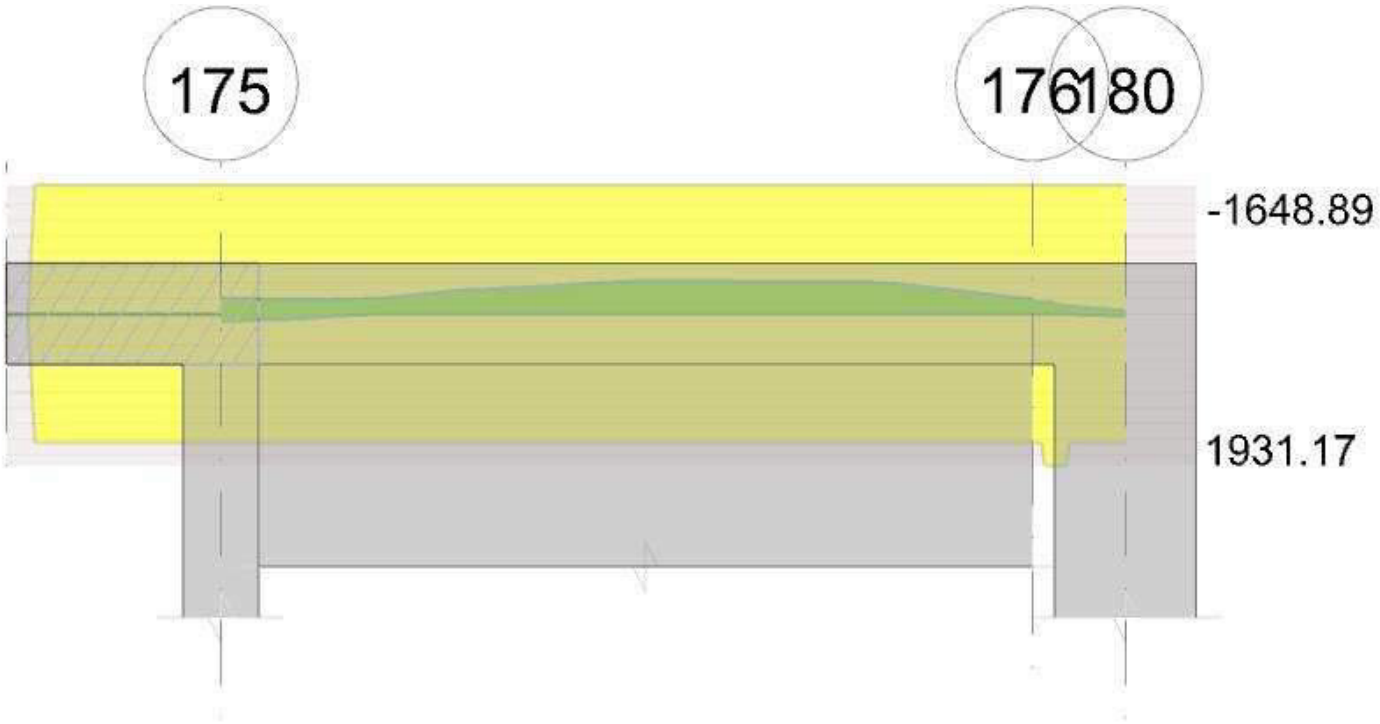


Diagramma verifica stato limite ultimo taglio

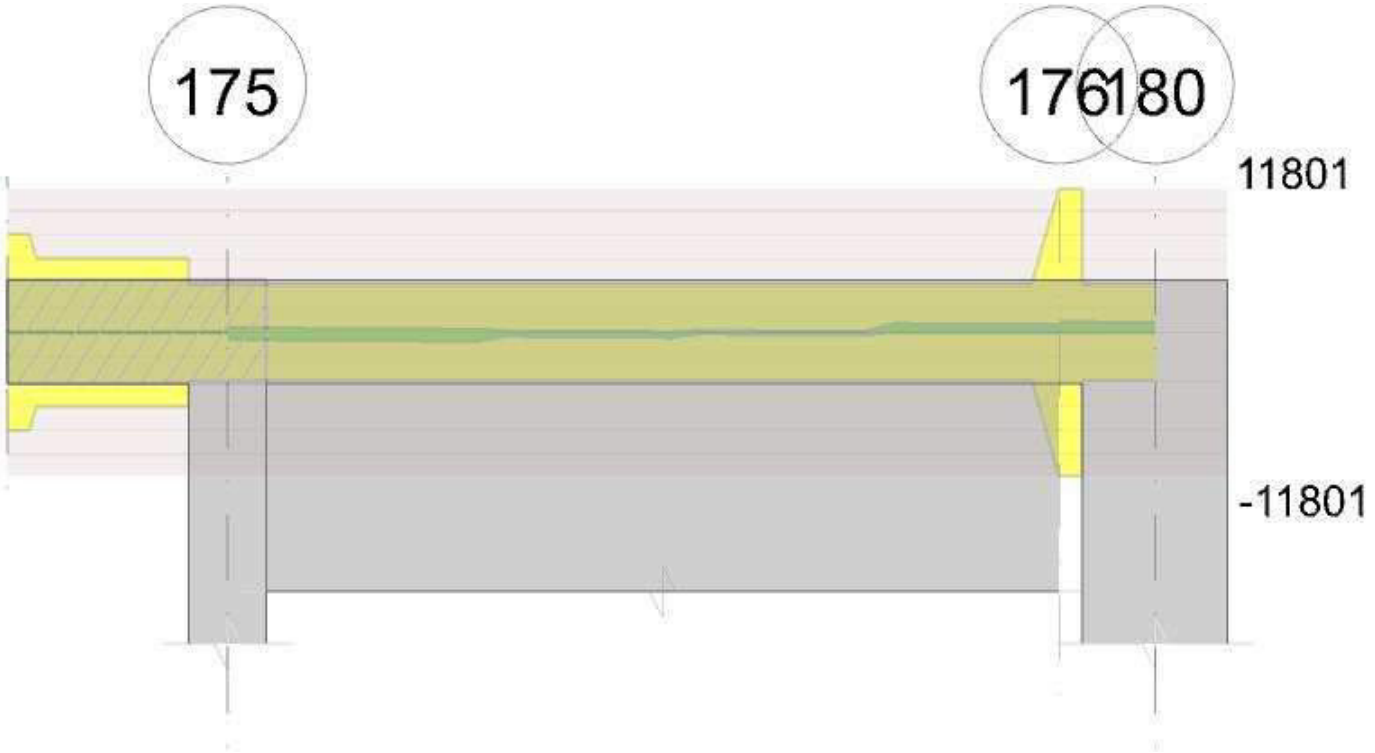
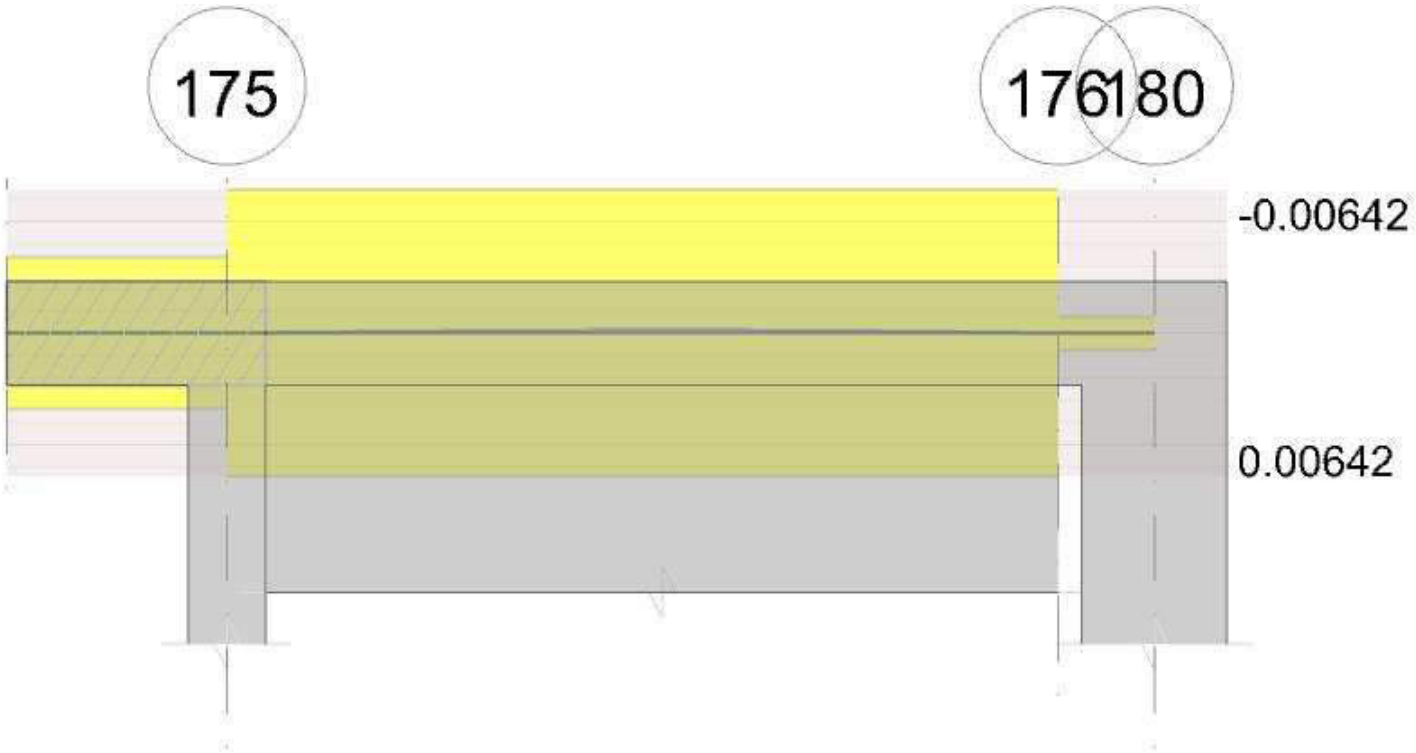


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 3 tra i fili 176 - 180, sezione R 50x20, asta 481

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-146.41	SLU 84	-146.41	-1931.17	0.242	13.19	Si
0.05	0.000308	0.05	0.000308	0.05	-53.93	SLU 1	0.23	1931.17	0.242	8376.15	-107.67	SLU 84	-146.41	-1931.17	0.242	13.19	Si
0.09	0.000308	0.05	0.000308	0.05							-67.5	SLU 84	-67.5	-1931.17	0.242	28.61	Si
0.19	0.000308	0.05	0.000308	0.05	8.65	SLU 83	8.65	1931.17	0.242	223.19							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-150.29	SLV 3	-150.29	-1648.89	0.269	10.97	Si
0.05	0.000308	0.05	0.000308	0.05							-118.49	SLV 7	-150.29	-1648.89	0.269	10.97	Si
0.09	0.000308	0.05	0.000308	0.05	10.16	SLV 10	9.29	1648.89	0.269	177.46	-90.45	SLV 7	-90.45	-1648.89	0.269	18.23	Si
0.19	0.000308	0.05	0.000308	0.05	53.15	SLV 10	23.82	1648.89	0.269	69.21	-43.89	SLV 7	-43.89	-1648.89	0.269	37.57	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-114.08	SLD 3	-114.08	-1648.89	0.269	14.45	Si
0.05	0.000308	0.05	0.000308	0.05							-87.28	SLD 7	-114.08	-1648.89	0.269	14.45	Si
0.09	0.000308	0.05	0.000308	0.05							-61.66	SLD 7	-61.66	-1648.89	0.269	26.74	Si
0.19	0.000308	0.05	0.000308	0.05	25.38	SLD 10	15.88	1648.89	0.269	103.84	-16.12	SLD 7	-16.12	-1648.89	0.269	102.31	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000223	0.000308	0	868	SLU 84	868	3906	23811	11801	11801	1	13.59	Si
0.05	0.0000223	0.000308	0	853	SLU 84	853	3906	23811	11801	11801	1	13.83	Si
0.05	0	0.000308	0	852	SLU 84	852	3906	23811	0	3906	1	4.58	Si
0.09	0	0.000308	0	838	SLU 84	838	3906	23811	0	3906	1	4.66	Si
0.19	0	0.000308	0	808	SLU 84	808	3906	23811	0	3906	1	4.83	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000223	0.000308	0	851	SLV 2	851	3906	23811	11801	11801	1	13.86	Si
0.05	0.0000223	0.000308	0	840	SLV 2	840	3906	23811	11801	11801	1	14.05	Si
0.05	0	0.000308	0	839	SLV 2	839	3906	23811	0	3906	1	4.66	Si
0.09	0	0.000308	0	828	SLV 2	828	3906	23811	0	3906	1	4.72	Si
0.19	0	0.000308	0	805	SLV 2	805	3906	23811	0	3906	1	4.85	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000223	0.000308	0	661	SLD 2	661	3906	23811	11801	11801	1	17.86	Si
0.05	0.0000223	0.000308	0	650	SLD 2	650	3906	23811	11801	11801	1	18.16	Si
0.05	0	0.000308	0	649	SLD 2	649	3906	23811	0	3906	1	6.02	Si
0.09	0	0.000308	0	638	SLD 2	638	3906	23811	0	3906	1	6.12	Si
0.19	0	0.000308	0	615	SLD 2	615	3906	23811	0	3906	1	6.36	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-103.83	21	-103.83	29132	1494000	436973	36000000	-87.07	2	-87.07	24429	1120500			Si
0.05	-76.33	21	-103.83	29132	1494000	436973	36000000	-63.98	2	-87.07	24429	1120500			Si
0.09	-47.84	21	-47.84	13423	1494000	201351	36000000	-40.15	2	-40.15	11264	1120500			Si
0.19	6.02	20	6.02	1688	1494000	25324	36000000	4.63	2	4.63	1300	1120500			Si

Verifica di apertura delle fessure

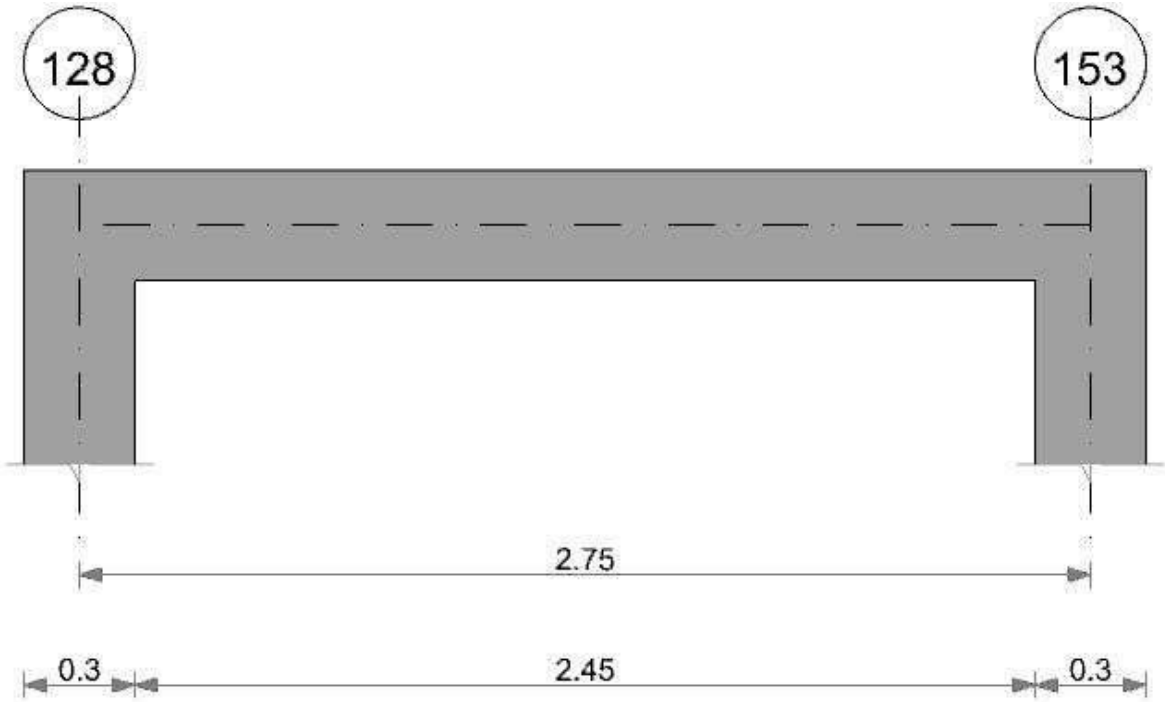
La campata non presenta apertura delle fessure

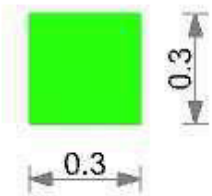
Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.05	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si
0.07	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si
0.09	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si

TRAVE PIANO RIALZATO

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x30	Rettangolare	0.3	0.3	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

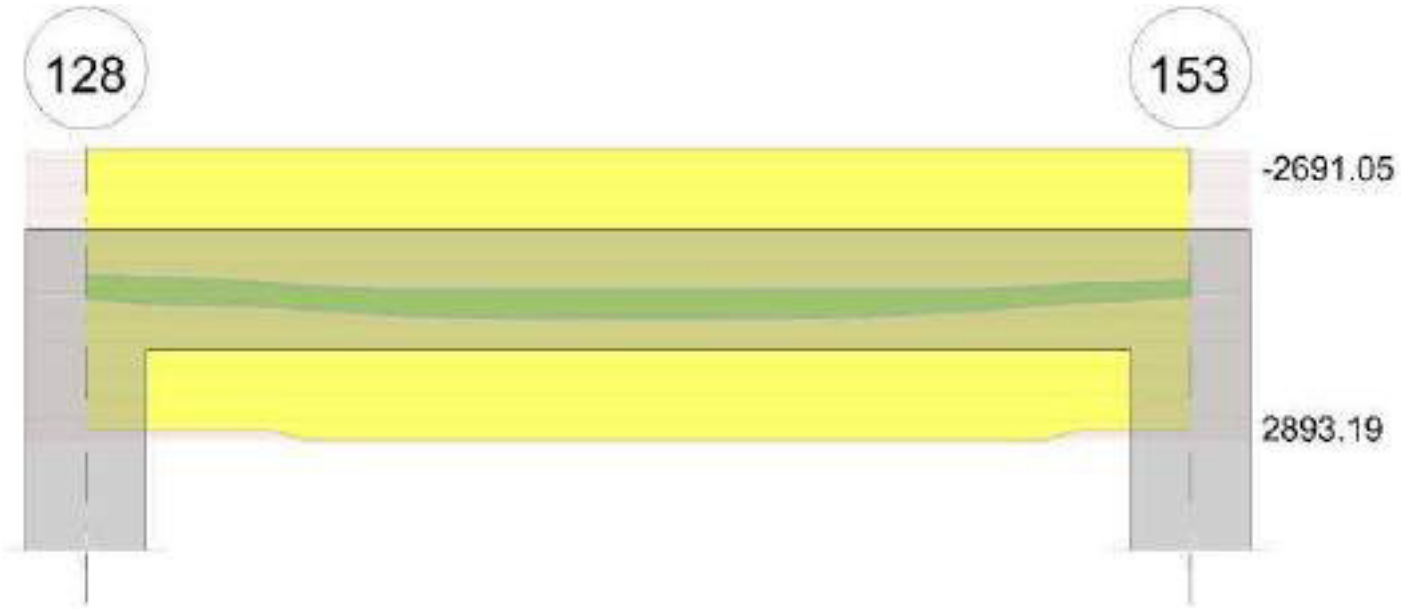


Diagramma verifica stato limite ultimo taglio

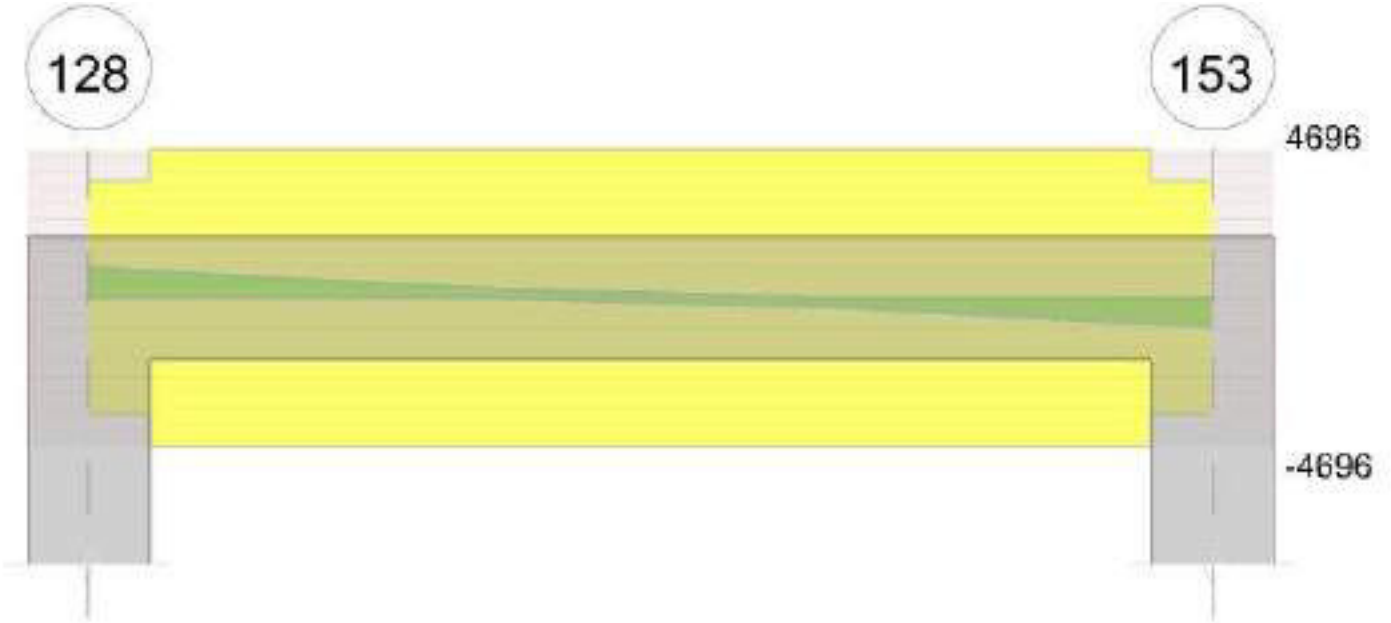
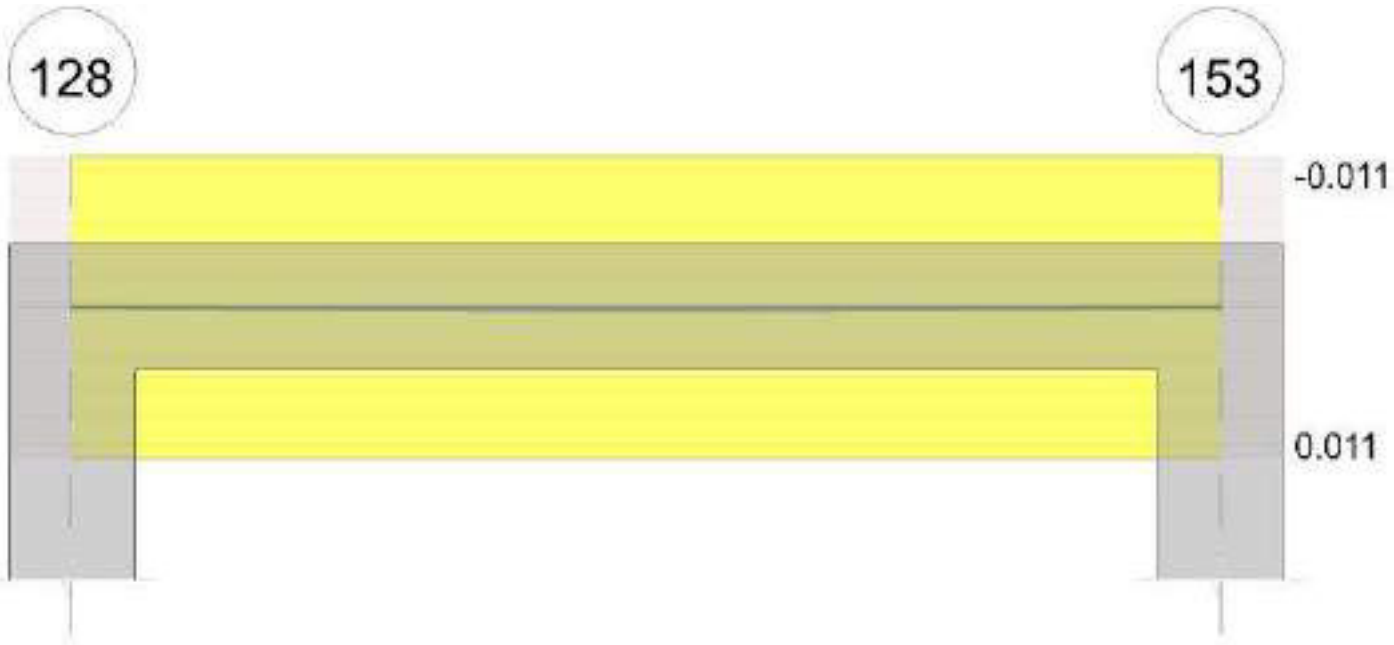


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 1 tra i fili 128 - 153, sezione R 30x30, asta 788

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-105.35	SLU 83	-45.57	-2893.19	0.177	63.49	Si
0.15	0.000308	0.05	0.000308	0.05	32.62	SLU 19	121.81	2893.19	0.177	23.75	-7.61	SLU 69	-7.61	-2893.19	0.177	379.95	Si
1.28	0.000308	0.05	0.000308	0.05	556.92	SLU 82	561.16	2893.19	0.177	5.16							Si
1.38	0.000308	0.05	0.000308	0.05	561.16	SLU 82	561.16	2893.19	0.177	5.16							Si
2.6	0.000308	0.05	0.000308	0.05	67.51	SLU 82	155.43	2893.19	0.177	18.61							Si
2.75	0.000308	0.05	0.000308	0.05							-63.15	SLU 83	-12.31	-2893.19	0.177	234.97	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	177.22	SLV 13	177.22	2691.05	0.25	15.19	-312.26	SLV 4	-263.01	-2691.05	0.25	10.23	Si
0.15	0.000308	0.05	0.000308	0.05	226.9	SLV 13	259.2	2691.05	0.25	10.38	-219.36	SLV 4	-219.36	-2691.05	0.25	12.27	Si
0.92	0.000308	0.05	0.000308	0.05	358.24	SLV 14	360.19	2691.05	0.25	7.47							Si
1.38	0.000308	0.05	0.000308	0.05	341.78	SLV 14	351.22	2691.05	0.25	7.66							Si
2.6	0.000308	0.05	0.000308	0.05	170.53	SLV 2	201.05	2691.05	0.25	13.38	-114.91	SLV 15	-114.91	-2691.05	0.25	23.42	Si
2.75	0.000308	0.05	0.000308	0.05	123.36	SLV 2	123.36	2691.05	0.25	21.81	-204.44	SLV 15	-158.18	-2691.05	0.25	17.01	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	37.13	SLD 13	37.13	2691.05	0.25	72.48	-172.17	SLD 4	-129.65	-2691.05	0.25	20.76	Si
0.15	0.000308	0.05	0.000308	0.05	99.18	SLD 13	140.7	2691.05	0.25	19.13	-91.64	SLD 4	-91.64	-2691.05	0.25	29.37	Si
1.28	0.000308	0.05	0.000308	0.05	312.02	SLD 14	312.02	2691.05	0.25	8.62							Si
1.38	0.000308	0.05	0.000308	0.05	309.94	SLD 14	312.02	2691.05	0.25	8.62							Si
2.6	0.000308	0.05	0.000308	0.05	88.84	SLD 2	128.34	2691.05	0.25	20.97	-33.22	SLD 15	-33.22	-2691.05	0.25	81	Si
2.75	0.000308	0.05	0.000308	0.05	29.55	SLD 2	29.55	2691.05	0.25	91.06	-110.63	SLD 15	-70.23	-2691.05	0.25	38.32	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.000308	0	953	SLU 84	953	3700	23811	0	3700	1	3.88	Si
0.15	0.0000053	0.000308	0	850	SLU 84	850	3700	23811	4696	4696	1	5.52	Si
1.38	0.0000053	0.000308	0	15	SLU 84	15	3700	23811	4696	4696	1	306.03	Si
2.6	0.0000053	0.000308	0	-820	SLU 81	-820	-3700	-23811	-4696	-4696	1	5.73	Si
2.75	0	0.000308	0	-922	SLU 81	-922	-3700	-23811	0	-3700	1	4.01	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.000308	0	651	SLV 2	651	3700	23811	0	3700	1	5.69	Si
0.15	0.0000053	0.000308	0	597	SLV 2	597	3700	23811	4696	4696	1	7.87	Si
1.38	0.0000053	0.000308	0	156	SLV 2	156	3700	23811	4696	4696	1	30.16	Si
1.38	0.0000053	0.000308	0	-136	SLV 15	-136	-3700	-23811	-4696	-4696	1	34.5	Si
2.6	0.0000053	0.000308	0	-577	SLV 15	-577	-3700	-23811	-4696	-4696	1	8.14	Si
2.75	0	0.000308	0	-631	SLV 15	-631	-3700	-23811	0	-3700	1	5.86	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.000308	0	567	SLD 2	567	3700	23811	0	3700	1	6.53	Si
0.15	0.0000053	0.000308	0	513	SLD 2	513	3700	23811	4696	4696	1	9.15	Si
1.38	0.0000053	0.000308	0	72	SLD 2	72	3700	23811	4696	4696	1	65.04	Si

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
1.38	0.0000053	0.000308	0	-53	SLD 15	-53	-3700	-23811	-4696	-4696	1	89.31	Si
2.6	0.0000053	0.000308	0	-493	SLD 15	-493	-3700	-23811	-4696	-4696	1	9.52	Si
2.75	0	0.000308	0	-547	SLD 15	-547	-3700	-23811	0	-3700	1	6.76	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-77.36	20	-33.79	6605	1494000	99082	36000000	-67.52	2	-31.92	6240	1120500			Si
0.15	20.28	19	85.93	16798	1494000	251971	36000000	3.77	2	52.17	10198	1120500			Si
0.15	-5.14	6	-5.14	1005	1494000	15072	36000000	-3.29	1	-3.29	644	1120500			Si
1.38	402.04	19	402.04	78590	1494000	1178844	36000000	286.14	2	286.14	55933	1120500			Si
2.6	47.48	19	110.65	21630	1494000	324443	36000000	27.81	2	74.01	14467	1120500			Si
2.75	-46.38	20	-8.93	1745	1494000	26174	36000000	-40.54	2	-7.85	1535	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.15	0.00002	0.00001	0.00002	0.00001	0.00002	0.00001	0.00002	0.00001	0.00002	0.00001	0.00004	2	0.00003	2	9999	Si
1.38	0.00015	0.00009	0.00014	0.00008	0.00012	0.00009	0.00011	0.00008	0.0001	0.00009	0.00026	2	0.00021	2	9999	Si
2.6	0.00002	0.00001	0.00002	0.00001	0.00002	0.00001	0.00002	0.00001	0.00002	0.00001	0.00004	2	0.00004	2	9999	Si

1.3 Verifiche pareti C.A.

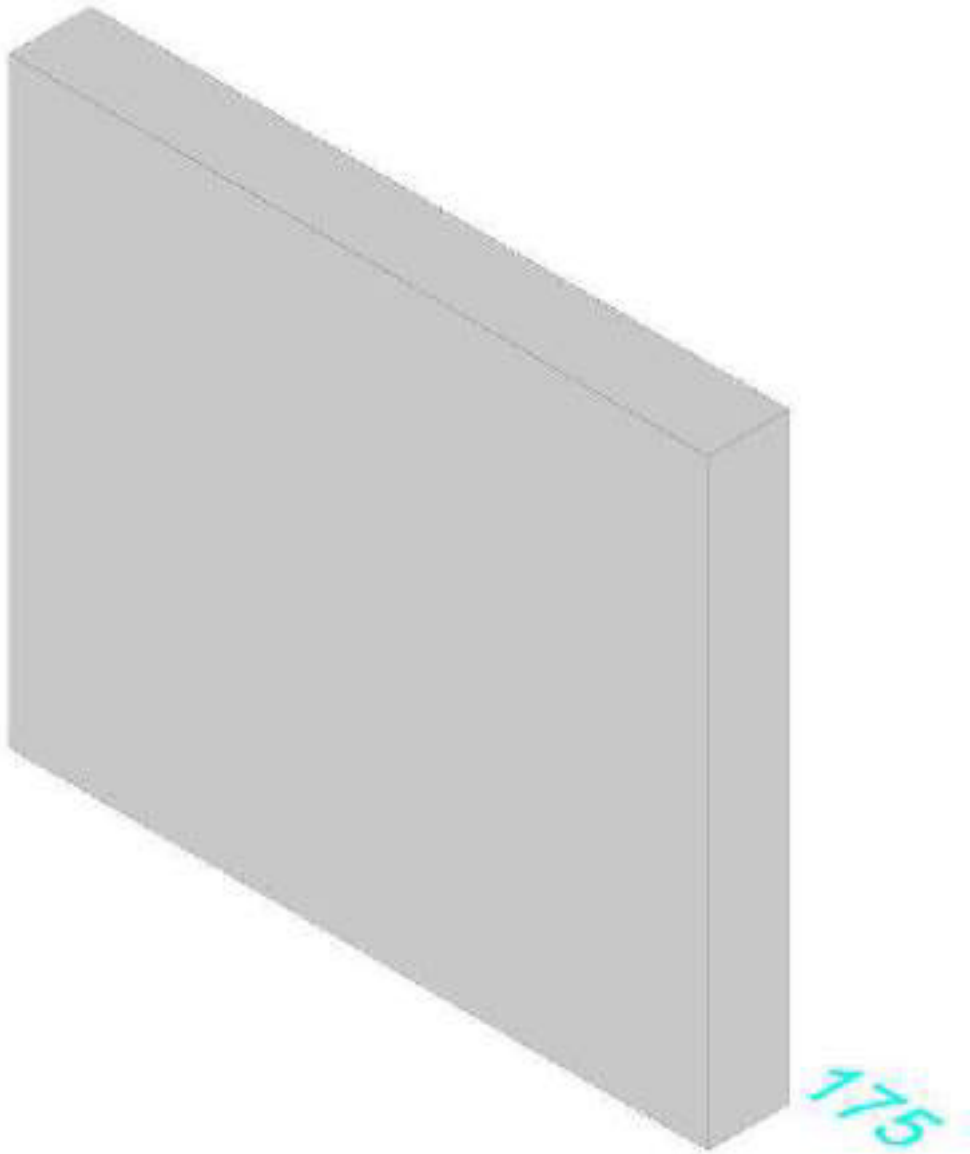
Le unità di misura elencate nel capitolo sono in [m, daN] ove non espressamente specificato.

Descrizione breve: *nome sintetico assegnato al livello.*
Descrizione: *nome assegnato al livello.*
Quota: *quota superiore espressa nel sistema di riferimento assoluto. [m]*
Spessore: *spessore del livello. [m]*
Descrizione: *descrizione della sezione di verifica.*
Dir.: *direzione della sezione di verifica.*
Base: *base della sezione. [m]*
Altezza: *altezza della sezione. [m]*
As,sup: *area di acciaio efficace superiore. [m²]*
As,inf: *area di acciaio efficace inferiore. [m²]*
c,sup: *copriferro medio superiore. [m]*
c,inf: *copriferro medio inferiore. [m]*
Comb.: *combinazione di verifica.*
MEd: *momento agente. [daN*m]*
NEd: *sforzo normale agente, positivo se di trazione. [daN]*
MRd: *momento resistente. [daN*m]*
NRd: *sforzo normale resistente, positivo se di trazione. [daN]*
c.s.: *coefficiente di sicurezza.*
Verifica: *stato di verifica.*
d: *altezza utile. [m]*
bw: *minima larghezza anima. [m]*
Armatura a taglio: *necessità di armatura a taglio.*
Asw/s: *rapporto tra l'area dell'armatura trasversale e l'interasse tra due armature consecutive.*
VEd: *taglio agente. [daN]*
Vrd,c: *resistenza di calcolo a taglio per elementi privi di armature trasversali. [daN]*
Vrcd: *valore resistente di calcolo a taglio compressione del calcestruzzo d'anima. [daN]*
Vrsd: *valore resistente di calcolo a taglio trazione dell'armatura trasversale. [daN]*
VRd: *resistenza a taglio. [daN]*
cotg(ϑ): *cotangente dell'angolo dei puntoni rispetto all'asse.*
Asl: *area armatura longitudinale. [m²]*
Sezione fessurata: *sezione fessurata.*
σc: *tensione del calcestruzzo. [daN/m²]*
σc limite: *tensione limite del calcestruzzo. [daN/m²]*
Es/Ec: *coefficiente di omogenizzazione.*
σf: *tensione dell'armatura. [daN/m²]*
σf limite: *tensione limite dell'armatura. [daN/m²]*

Parete Fondazione ascensore - Fondazione

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Livelli significativi

Descrizione breve	Descrizione	Quota	Spessore
L1	Fondazione ascensore	-2.47	0
L2	Fondazione	-0.98	0

Verifiche nei nodi

Sezioni rettangolari

Descrizione	Dir.	Base	Altezza	As,sup	As,inf	c,sup	c,inf
92 Prosp.A	Verticale	1	0.2	0.000765	0.000765	0.036	0.036
470 Prosp.A	Verticale	0.5	0.2	0.00019	0.000262	0.036	0.036
115 Prosp.A	Verticale	0.8725	0.2	0.000254	0.000349	0.036	0.036
466 Prosp.A	Verticale	0.5	0.2	0.000386	0.000386	0.036	0.036
111 Prosp.A	Verticale	0.8725	0.2	0.000694	0.000694	0.036	0.036
25 Prosp.A	Orizzontale	0.6	0.2	0.000679	0.000679	0.0489	0.0489
111 Prosp.A	Orizzontale	0.706	0.2	0.000792	0.000792	0.0488	0.0488
24 Prosp.A	Orizzontale	0.956	0.2	0.001131	0.001131	0.0485	0.0485
92 Prosp.A	Orizzontale	0.706	0.2	0.000792	0.000792	0.0488	0.0488
93 Prosp.A	Orizzontale	1	0.2	0.001131	0.001131	0.048	0.048
112 Prosp.A	Orizzontale	1	0.2	0.001131	0.001131	0.048	0.048
75 Prosp.A	Orizzontale	1	0.2	0.001654	0.001654	0.048	0.048

Verifiche a flessione SLU D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per le combinazioni SLV, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
92 Prosp.A	Verticale	SLV 2	-119.48	3404	-1356.69	38651	11.3548	Si
470 Prosp.A	Verticale	SLV 2	49.2	450	644.73	5897	13.1036	Si
115 Prosp.A	Verticale	SLV 2	67.44	556	902.8	7447	13.3871	Si

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
466 Prosp.A	Verticale	SLV 4	-43.42	1535	-592.03	20926	13.6339	Si
115 Prosp.A	Verticale	SLV 11	-168.84	-346	-2429.58	-4983	14.39	Si

Verifiche a flessione SLD Resistenza D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
466 Prosp.A	Verticale	SLD 2	-29.81	1101	-574.02	21207	19.2533	Si
111 Prosp.A	Verticale	SLD 2	-53.28	1889	-1063.45	37700	19.9605	Si
115 Prosp.A	Verticale	SLD 11	-110.86	-150	-2286.24	-3100	20.6223	Si
92 Prosp.A	Verticale	SLD 2	-53.87	1932	-1162.19	41690	21.5757	Si
470 Prosp.A	Verticale	SLD 11	-67.59	-70	-1638.58	-1686	24.243	Si

Verifiche a taglio SLU D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
466 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLV 6	697	-2357	-130.75	4759	18254	0	4759	2.5	0.0003856	6.8255	Si
111 Prosp.A	Verticale	0.164	0.873	Non necessaria	0	SLV 6	732	-2178	-140.07	8147	31606	0	8147	2.5	0.0006941	11.1318	Si
25 Prosp.A	Orizzontale	0.151	0.6	Non necessaria	0	SLU 84	-430	-6126	161.61	6464	20571	0	6464	2.5	0.0006786	15.0169	Si
92 Prosp.A	Verticale	0.164	1	Non necessaria	0	SLV 6	-540	1688	-74.29	8913	35908	0	8913	2.5	0.0007647	16.5133	Si
77 Prosp.A	Orizzontale	0.151	0.6	Non necessaria	0	SLU 84	-430	-6411	-2.02	7331	20604	0	7331	2.5	0.001018	17.0324	Si

Verifiche a taglio SLD Resistenza D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
466 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLD 6	393	-2794	40.4	4813	18309	0	4813	2.5	0.0003856	12.2573	Si
111 Prosp.A	Verticale	0.164	0.873	Non necessaria	0	SLD 6	-415	1214	-43.36	7879	31329	0	7879	2.5	0.0006941	18.9958	Si
25 Prosp.A	Orizzontale	0.151	0.6	Non necessaria	0	SLD 3	-302	-3935	111.41	6215	20314	0	6215	2.5	0.0006786	20.5856	Si
92 Prosp.A	Verticale	0.164	1	Non necessaria	0	SLD 6	-415	1218	-43.51	8913	35908	0	8913	2.5	0.0007647	21.4956	Si
77 Prosp.A	Orizzontale	0.151	0.6	Non necessaria	0	SLD 3	-302	-4169	-5.76	7077	20341	0	7077	2.5	0.001018	23.4396	Si

Verifiche SLE tensione calcestruzzo D.M. 17-01-18 §4.1.2.2.5.1

Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σc	σc limite	Es/Ec	c.s.	Verifica
25 Prosp.A	Orizzontale	SLE QP 2	110.02	-4139	No	-53762	1120500	15	20.8419	Si
111 Prosp.A	Orizzontale	SLE QP 2	-66.23	-5947	No	-48476	1120500	15	23.1144	Si
24 Prosp.A	Orizzontale	SLE QP 2	121.62	-7095	No	-48236	1120500	15	23.2295	Si
92 Prosp.A	Orizzontale	SLE QP 2	45.15	-6233	No	-46257	1120500	15	24.2233	Si
466 Prosp.A	Verticale	SLE QP 2	61.02	-3131	No	-44094	1120500	15	25.4119	Si

Verifiche SLE tensione acciaio D.M. 17-01-18 §4.1.2.2.5.2

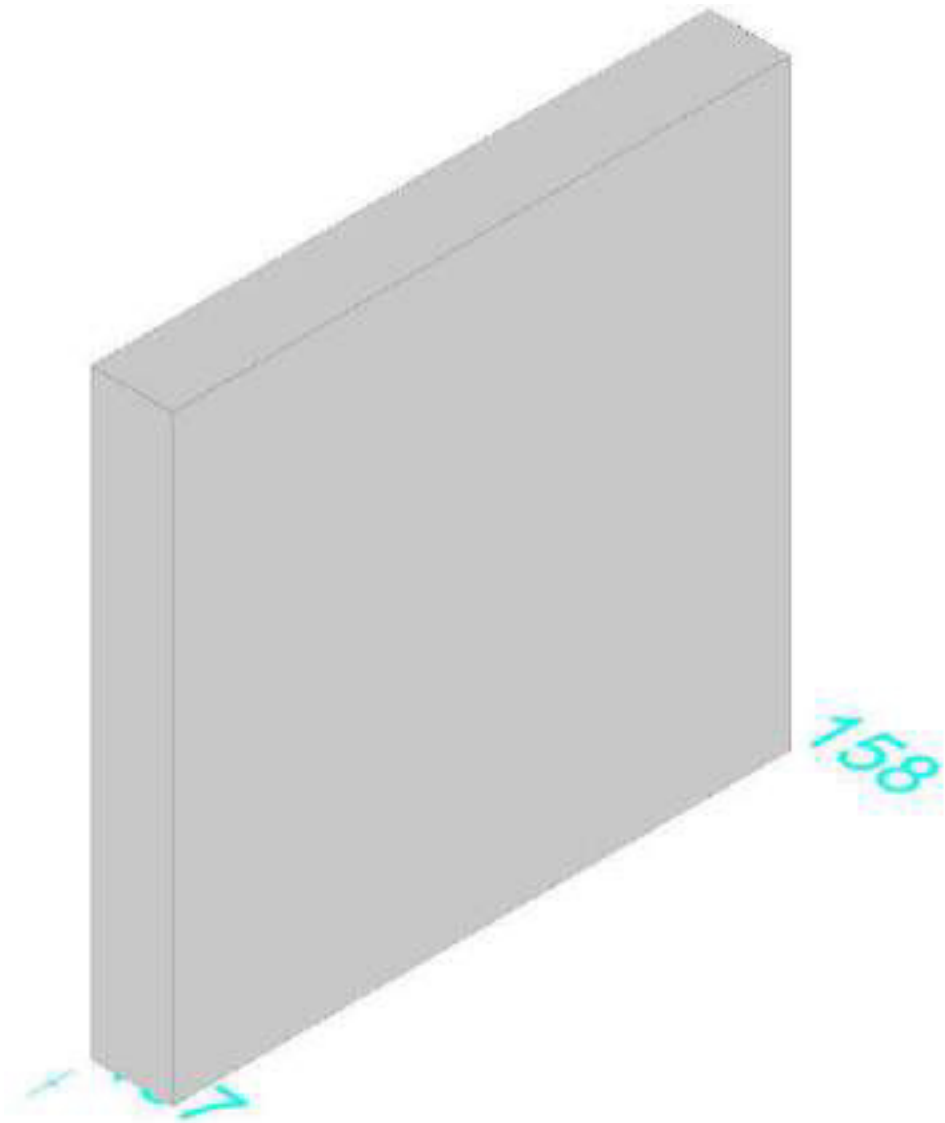
Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σf	σf limite	Es/Ec	c.s.	Verifica
92 Prosp.A	Orizzontale	SLE RA 2	45.26	-5763	No	-457854	36000000	15	78.6277	Si
93 Prosp.A	Orizzontale	SLE RA 2	50.72	-7871	No	-452521	36000000	15	79.5543	Si
111 Prosp.A	Orizzontale	SLE RA 2	-65.07	-5661	No	-419620	36000000	15	85.792	Si
112 Prosp.A	Orizzontale	SLE RA 1	-67.42	-7601	No	-418070	36000000	15	86.11	Si
75 Prosp.A	Orizzontale	SLE RA 1	51.44	-7742	No	-415121	36000000	15	86.7217	Si

Verifiche generali

Parete Fondazione ascensore - Fondazione

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Livelli significativi

Descrizione breve	Descrizione	Quota	Spessore
L1	Fondazione ascensore	-2.47	0
L2	Fondazione	-0.98	0

Verifiche nei nodi

Sezioni rettangolari

Descrizione	Dir.	Base	Altezza	As,sup	As,inf	c,sup	c,inf
509 Prosp.A	Verticale	0.5	0.2	0.000565	0.000565	0.036	0.036
118 Prosp.A	Verticale	0.8725	0.2	0.001018	0.001018	0.036	0.036
525 Prosp.A	Verticale	0.5	0.2	0.000549	0.000549	0.036	0.036
116 Prosp.A	Orizzontale	0.8325	0.2	0.001018	0.001018	0.0486	0.0486
101 Prosp.A	Verticale	1	0.2	0.001089	0.001089	0.036	0.036
491 Prosp.A	Verticale	0.5	0.2	0.000549	0.000549	0.036	0.036
48 Prosp.A	Orizzontale	0.8325	0.2	0.001018	0.001018	0.0486	0.0486
39 Prosp.A	Orizzontale	1	0.2	0.001131	0.001131	0.048	0.048
29 Prosp.A	Orizzontale	0.8325	0.2	0.001018	0.001018	0.0486	0.0486
80 Prosp.A	Orizzontale	1	0.2	0.001697	0.001697	0.048	0.048
78 Prosp.A	Orizzontale	0.8325	0.2	0.001527	0.001527	0.0486	0.0486

Verifiche a flessione SLU D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per le combinazioni SLV, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
509 Prosp.A	Verticale	SLV 4	-37.94	5106	-294.67	39651	7.7661	Si
118 Prosp.A	Verticale	SLV 4	-57.07	5196	-746.86	67990	13.0859	Si
509 Prosp.A	Verticale	SLV 2	11.12	3050	152.6	41871	13.7261	Si
525 Prosp.A	Verticale	SLV 3	16.26	2496	254.18	39014	15.6293	Si
116 Prosp.A	Orizzontale	SLV 2	286.8	340	4663.94	5523	16.2619	Si

Verifiche a flessione SLD Resistenza D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
509 Prosp.A	Verticale	SLD 2	-14.42	3925	-153.73	41853	10.6621	Si
509 Prosp.A	Verticale	SLD 2	10.97	2321	194.8	41212	17.7575	Si
118 Prosp.A	Verticale	SLD 2	-24.17	3148	-546.11	71127	22.5911	Si
101 Prosp.A	Verticale	SLD 7	49.47	2507	1285.86	65163	25.992	Si
116 Prosp.A	Orizzontale	SLD 2	194.66	-408	5760.03	-12083	29.5897	Si

Verifiche a taglio SLU D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
116 Prosp.A	Orizzontale	0.151	0.832	Non necessaria	0	SLV 2	1584	-5094	-133.36	8805	28197	0	8805	2.5	0.0010179	5.5576	Si
118 Prosp.A	Orizzontale	0.152	1	Non necessaria	0	SLV 2	-1424	-132	283.9	9668	33296	0	9668	2.5	0.001131	6.7908	Si
491 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLV 2	-753	-760	70.34	5122	18051	0	5122	2.5	0.0005493	6.8056	Si
116 Prosp.A	Verticale	0.164	0.872	Non necessaria	0	SLV 2	-885	-382	59.53	8912	31378	0	8912	2.5	0.0009887	10.0712	Si
97 Prosp.A	Orizzontale	0.151	0.832	Non necessaria	0	SLV 2	727	-4518	-56.43	8739	28130	0	8739	2.5	0.0010179	12.0244	Si

Verifiche a taglio SLD Resistenza D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
116 Prosp.A	Orizzontale	0.151	0.832	Non necessaria	0	SLD 2	923	-4354	-67.62	8721	28110	0	8721	2.5	0.0010179	9.4487	Si
118 Prosp.A	Orizzontale	0.152	1	Non necessaria	0	SLD 2	-834	-476	182.58	9707	33336	0	9707	2.5	0.001131	11.6366	Si
491 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLD 2	-449	-2046	28.72	5280	18214	0	5280	2.5	0.0005493	11.7637	Si
525 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLD 3	319	-3151	11.11	5416	18355	0	5416	2.5	0.0005493	16.971	Si
116 Prosp.A	Verticale	0.164	0.872	Non necessaria	0	SLD 2	-530	-1734	14	9079	31550	0	9079	2.5	0.0009887	17.1136	Si

Verifiche SLE tensione calcestruzzo D.M. 17-01-18 §4.1.2.2.5.1

Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σc	σc limite	Es/Ec	c.s.	Verifica
116 Prosp.A	Orizzontale	SLE QP 2	133.26	-5531	No	-49032	1120500	15	22.8525	Si
491 Prosp.A	Verticale	SLE QP 2	52.97	-3487	No	-43154	1120500	15	25.9649	Si
48 Prosp.A	Orizzontale	SLE QP 2	-61.07	-6410	No	-42136	1120500	15	26.5927	Si
39 Prosp.A	Orizzontale	SLE QP 2	-75.55	-7520	No	-42110	1120500	15	26.609	Si
29 Prosp.A	Orizzontale	SLE QP 2	-92.31	-5428	No	-42068	1120500	15	26.6353	Si

Verifiche SLE tensione acciaio D.M. 17-01-18 §4.1.2.2.5.2

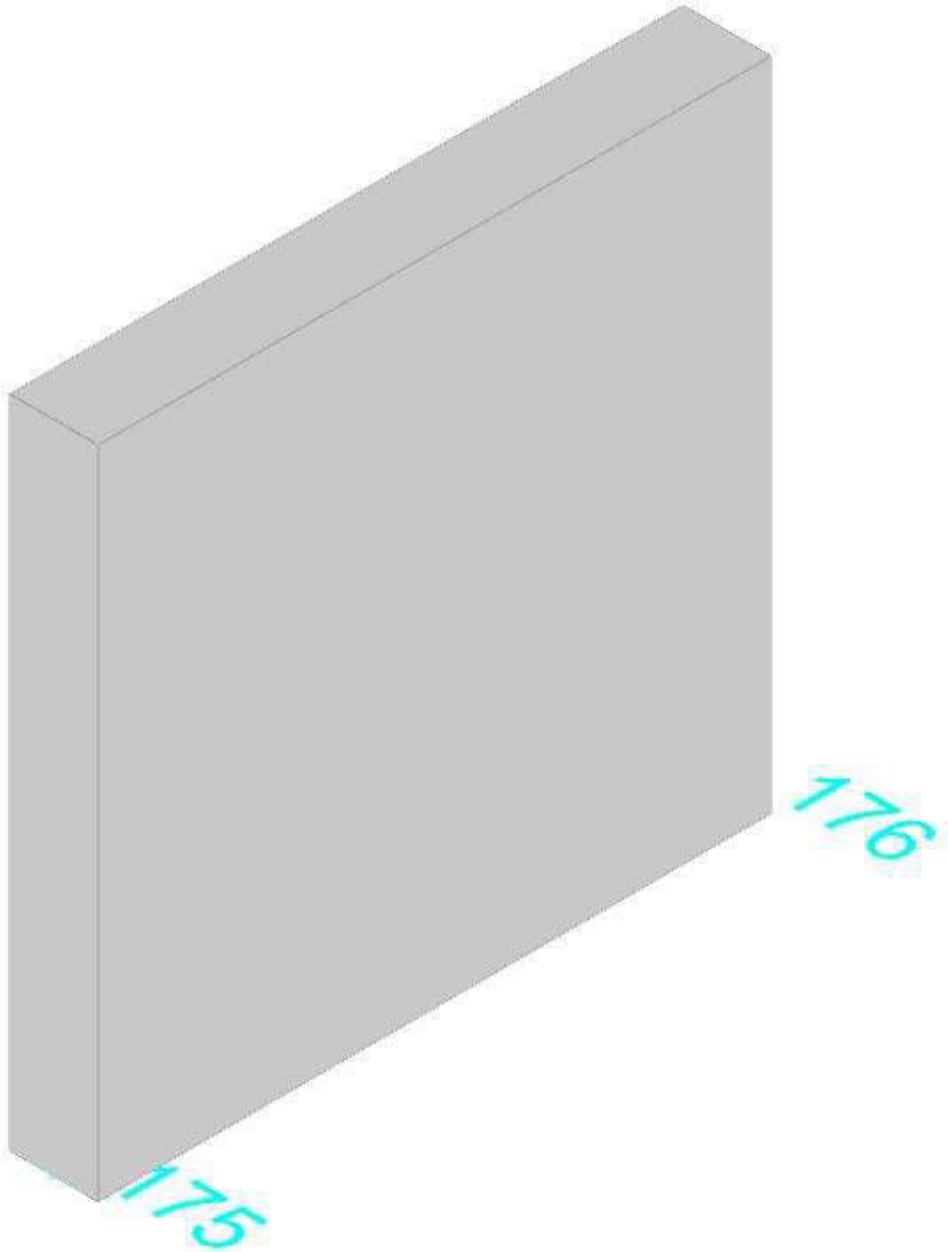
Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σf	σf limite	Es/Ec	c.s.	Verifica
48 Prosp.A	Orizzontale	SLE RA 2	-60.96	-6160	No	-394168	36000000	15	91.3316	Si
39 Prosp.A	Orizzontale	SLE RA 2	-74.81	-7226	No	-386428	36000000	15	93.161	Si
80 Prosp.A	Orizzontale	SLE RA 2	-49.07	-6416	No	-336014	36000000	15	107.1383	Si
78 Prosp.A	Orizzontale	SLE RA 2	-27.38	-4590	No	-292701	36000000	15	122.9925	Si
29 Prosp.A	Orizzontale	SLE RA 2	-89.51	-5218	No	-287422	36000000	15	125.2513	Si

Verifiche generali

Parete Fondazione ascensore - Fondazione

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Livelli significativi

Descrizione breve	Descrizione	Quota	Spessore
L1	Fondazione ascensore	-2.47	0
L2	Fondazione	-0.98	0

Verifiche nei nodi

Sezioni rettangolari

Descrizione	Dir.	Base	Altezza	As,sup	As,inf	c,sup	c,inf
102 Prosp.A	Verticale	1	0.2	0.001089	0.001089	0.036	0.036
526 Prosp.A	Verticale	0.5	0.2	0.000549	0.000549	0.036	0.036
121 Prosp.A	Orizzontale	0.8325	0.2	0.001018	0.001018	0.0486	0.0486
102 Prosp.A	Orizzontale	0.8325	0.2	0.001018	0.001018	0.0486	0.0486
53 Prosp.A	Orizzontale	0.8325	0.2	0.001018	0.001018	0.0486	0.0486
44 Prosp.A	Orizzontale	1	0.2	0.001131	0.001131	0.048	0.048
100 Prosp.A	Orizzontale	1	0.2	0.001131	0.001131	0.048	0.048

Verifiche a flessione SLU D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per le combinazioni SLV, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
102 Prosp.A	Verticale	SLV 7	69.65	4086	1147.53	67324	16.4755	Si
526 Prosp.A	Verticale	SLV 12	-3.12	2107	-62.18	42014	19.942	Si
526 Prosp.A	Verticale	SLV 11	85.73	-6397	1937.92	-144607	22.6054	Si

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
121 Prosp.A	Orizzontale	SLU 83	103.09	-11032	2500.69	-267605	24.2575	Si
102 Prosp.A	Orizzontale	SLU 84	63.37	-10270	1651.23	-267605	26.0582	Si

Verifiche a flessione SLD Resistenza D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
102 Prosp.A	Verticale	SLD 7	52.16	2577	1311.07	64769	25.1338	Si
526 Prosp.A	Verticale	SLD 8	56.9	-6055	1454.2	-154764	25.5584	Si
526 Prosp.A	Verticale	SLD 11	-4.06	1610	-104.38	41354	25.6896	Si
121 Prosp.A	Orizzontale	SLD 12	94.66	-7682	3005.95	-243962	31.7565	Si
53 Prosp.A	Orizzontale	SLD 3	-121.99	-6757	-3998.63	-221485	32.7792	Si

Verifiche a taglio SLU D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
526 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLV 11	410	-2453	63.85	5330	18266	0	5330	2.5	0.0005493	12.988	Si
121 Prosp.A	Verticale	0.164	0.873	Non necessaria	0	SLV 11	634	-1401	93.29	9038	31508	0	9038	2.5	0.0009887	14.253	Si
121 Prosp.A	Orizzontale	0.151	0.832	Non necessaria	0	SLV 16	-621	-5733	172.64	8877	28272	0	8877	2.5	0.0010179	14.2877	Si
102 Prosp.A	Verticale	0.164	1	Non necessaria	0	SLV 11	605	3845	64.64	10028	35908	0	10028	2.5	0.0010894	16.5764	Si
119 Prosp.A	Orizzontale	0.152	1	Non necessaria	0	SLU 83	-467	-7669	58.68	10527	34185	0	10527	2.5	0.001131	22.5214	Si

Verifiche a taglio SLD Resistenza D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
526 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLD 11	340	-3911	53.1	5509	18451	0	5509	2.5	0.0005493	16.2188	Si
121 Prosp.A	Verticale	0.164	0.873	Non necessaria	0	SLD 11	507	-3210	72.72	9260	31738	0	9260	2.5	0.0009887	18.2549	Si
121 Prosp.A	Orizzontale	0.151	0.832	Non necessaria	0	SLD 16	-419	-5208	91.48	8818	28211	0	8818	2.5	0.0010179	21.0446	Si
102 Prosp.A	Verticale	0.164	1	Non necessaria	0	SLD 11	476	2471	39.51	10028	35908	0	10028	2.5	0.0010894	21.0812	Si
119 Prosp.A	Orizzontale	0.152	1	Non necessaria	0	SLD 16	-360	-5305	47.15	10258	33906	0	10258	2.5	0.001131	28.4642	Si

Verifiche SLE tensione calcestruzzo D.M. 17-01-18 §4.1.2.2.5.1

Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σc	σc limite	Es/Ec	c.s.	Verifica
121 Prosp.A	Orizzontale	SLE QP 2	74.63	-7395	No	-49269	1120500	15	22.7424	Si
526 Prosp.A	Verticale	SLE QP 2	38.86	-4516	No	-48464	1120500	15	23.12	Si
53 Prosp.A	Orizzontale	SLE QP 2	-84.88	-6155	No	-44586	1120500	15	25.131	Si
102 Prosp.A	Orizzontale	SLE QP 2	47.09	-6829	No	-42067	1120500	15	26.6363	Si
526 Prosp.A	Verticale	SLE RA 20	42.67	-5035	No	-53872	1494000	15	27.7322	Si

Verifiche SLE tensione acciaio D.M. 17-01-18 §4.1.2.2.5.2

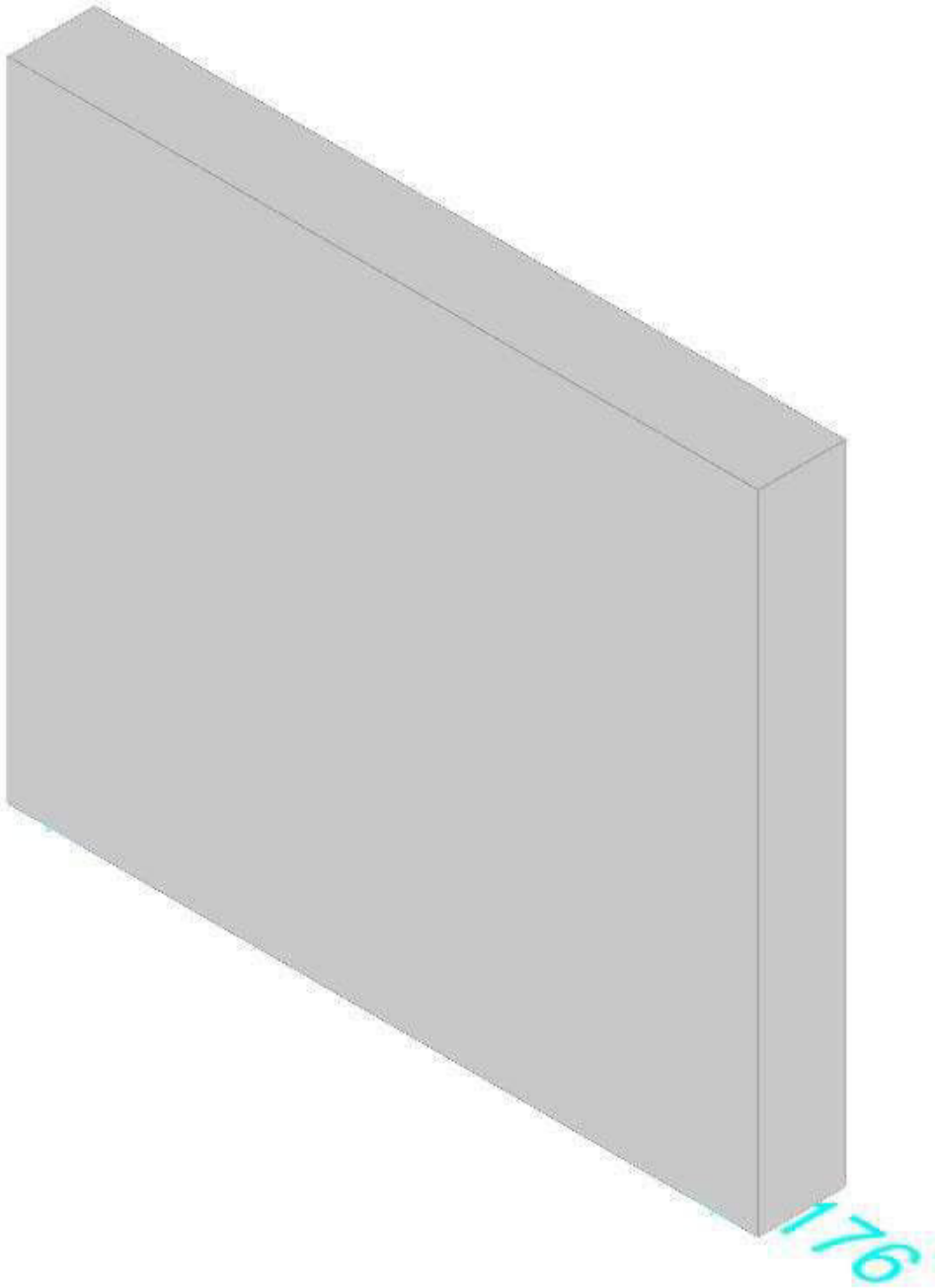
Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σf	σf limite	Es/Ec	c.s.	Verifica
102 Prosp.A	Orizzontale	SLE RA 2	39.4	-6410	No	-439670	36000000	15	81.8795	Si
121 Prosp.A	Orizzontale	SLE RA 1	75.04	-6625	No	-412266	36000000	15	87.3222	Si
53 Prosp.A	Orizzontale	SLE RA 2	-82.58	-5924	No	-349683	36000000	15	102.9505	Si
44 Prosp.A	Orizzontale	SLE RA 1	-83.36	-6463	No	-328667	36000000	15	109.5334	Si
100 Prosp.A	Orizzontale	SLE RA 2	37.76	-5635	No	-322524	36000000	15	111.6196	Si

Verifiche generali

Parete Fondazione ascensore - Fondazione

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Livelli significativi

Descrizione breve	Descrizione	Quota	Spessore
L1	Fondazione ascensore	-2.47	0
L2	Fondazione	-0.98	0

Verifiche nei nodi

Sezioni rettangolari

Descrizione	Dir.	Base	Altezza	As,sup	As,inf	c,sup	c,inf
595 Prosp.A	Verticale	0.5	0.2	0.00019	0.000262	0.036	0.036
127 Prosp.A	Verticale	0.8725	0.2	0.000254	0.000349	0.036	0.036
594 Prosp.A	Verticale	0.5	0.2	0.000462	0.000462	0.036	0.036
108 Prosp.A	Verticale	1	0.2	0.000317	0.000436	0.036	0.036
122 Prosp.A	Orizzontale	0.6	0.2	0.000679	0.000679	0.0489	0.0489
123 Prosp.A	Orizzontale	0.9087	0.2	0.001018	0.001018	0.0486	0.0486
124 Prosp.A	Orizzontale	1	0.2	0.001131	0.001131	0.048	0.048
590 Prosp.A	Verticale	0.5	0.2	0.00019	0.000339	0.036	0.036
591 Prosp.A	Verticale	0.5	0.2	0.000565	0.000565	0.036	0.036
593 Prosp.A	Verticale	0.5	0.2	0.000565	0.000565	0.036	0.036

Verifiche a flessione SLU D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per le combinazioni SLV, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
595 Prosp.A	Verticale	SLV 16	123.56	6795	210.82	11594	1.7062	Si
127 Prosp.A	Verticale	SLV 16	123.56	6795	281.09	15459	2.2749	Si
594 Prosp.A	Verticale	SLV 14	-352.11	3447	-1491.13	14597	4.2348	Si
127 Prosp.A	Verticale	SLV 7	-461.18	-251	-2136.78	-1161	4.6333	Si
108 Prosp.A	Verticale	SLV 7	-538.5	-240	-2636.79	-1176	4.8965	Si

Verifiche a flessione SLD Resistenza D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
595 Prosp.A	Verticale	SLD 16	89.21	3691	261.19	10807	2.928	Si
127 Prosp.A	Verticale	SLD 16	89.21	3691	348.26	14409	3.904	Si
127 Prosp.A	Verticale	SLD 7	-324.62	-299	-2204.3	-2033	6.7903	Si
108 Prosp.A	Verticale	SLD 7	-380.37	-388	-2762.52	-2818	7.2628	Si
594 Prosp.A	Verticale	SLD 16	-125.1	2378	-1055.54	20062	8.4378	Si

Verifiche a taglio SLU D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
127 Prosp.A	Orizzontale	0.151	0.6	Non necessaria	0	SLV 7	5949	-4655	-92.95	6297	20398	0	6297	2.5	0.0006786	1.0586	Si
122 Prosp.A	Orizzontale	0.151	0.6	Non necessaria	0	SLV 7	5170	174	381.15	5769	19853	0	5769	2.5	0.0006786	1.116	Si
595 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLV 16	2858	7616	97.53	4051	17954	0	4051	2.5	0.0001902	1.4171	Si
594 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLV 16	3341	5493	-224.25	4748	17954	0	4748	2.5	0.0004623	1.4208	Si
126 Prosp.A	Orizzontale	0.151	0.852	Non necessaria	0	SLV 7	5949	-4655	-92.95	8886	28809	0	8886	2.5	0.0010179	1.4939	Si

Verifiche a taglio SLD Resistenza D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
127 Prosp.A	Orizzontale	0.151	0.6	Non necessaria	0	SLD 7	3723	-3820	-45.21	6202	20301	0	6202	2.5	0.0006786	1.6662	Si
122 Prosp.A	Orizzontale	0.151	0.6	Non necessaria	0	SLD 7	3527	-1998	291.54	5996	20087	0	5996	2.5	0.0006786	1.6998	Si
594 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLD 16	2319	2685	-118.3	4748	17954	0	4748	2.5	0.0004623	2.0468	Si
595 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLD 16	1946	4145	68.84	4051	17954	0	4051	2.5	0.0001902	2.082	Si
126 Prosp.A	Orizzontale	0.151	0.852	Non necessaria	0	SLD 7	3723	-3820	-45.21	8791	28710	0	8791	2.5	0.0010179	2.3617	Si

Verifiche SLE tensione calcestruzzo D.M. 17-01-18 §4.1.2.2.5.1

Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σc	σc limite	Es/Ec	c.s.	Verifica
122 Prosp.A	Orizzontale	SLE QP 2	220.69	-3669	No	-74826	1120500	15	14.9748	Si
123 Prosp.A	Orizzontale	SLE QP 2	356.54	-3830	No	-69973	1120500	15	16.0134	Si
122 Prosp.A	Orizzontale	SLE RA 20	234.5	-4055	No	-80623	1494000	15	18.5307	Si
124 Prosp.A	Orizzontale	SLE QP 2	369.9	-2639	No	-60052	1120500	15	18.6587	Si
590 Prosp.A	Verticale	SLE QP 2	169.45	-1487	No	-58965	1120500	15	19.0026	Si

Verifiche SLE tensione acciaio D.M. 17-01-18 §4.1.2.2.5.2

Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σf	σf limite	Es/Ec	c.s.	Verifica
591 Prosp.A	Verticale	SLE RA 20	206.12	68	No	499977	36000000	15	72.0033	Si
595 Prosp.A	Verticale	SLE RA 3	65.69	1456	No	383394	36000000	15	93.8982	Si
108 Prosp.A	Verticale	SLE RA 20	-273.03	-571	No	324456	36000000	15	110.9551	Si
127 Prosp.A	Verticale	SLE RA 20	-232.37	-423	No	323527	36000000	15	111.2735	Si
593 Prosp.A	Verticale	SLE RA 20	95.35	429	No	282233	36000000	15	127.554	Si

Verifiche generali

1.4 Verifiche piastre C.A.

Le unità di misura elencate nel capitolo sono in [m, daN, deg] ove non espressamente specificato.

Nodo: *indice del nodo di verifica.*
Dir.: *direzione della sezione di verifica.*
B: *base della sezione rettangolare di verifica. [m]*
H: *altezza della sezione rettangolare di verifica. [m]*
A. sup.: *area barre armatura superiori. [m²]*
C. sup.: *distanza media delle barre superiori dal bordo superiore della sezione. [m]*
A. inf.: *area barre armatura inferiori. [m²]*
C. inf.: *distanza media delle barre inferiori dal bordo inferiore della sezione. [m]*
Comb.: *combinazione di verifica.*
M: *momento flettente. [daN*m]*
N: *sforzo normale. [daN]*
Mu: *momento flettente ultimo. [daN*m]*
Nu: *sforzo normale ultimo. [daN]*
c.s.: *coefficiente di sicurezza.*

Verifica: stato di verifica.
σc: tensione nel calcestruzzo. [daN/m²]
σlim: tensione limite. [daN/m²]
Es/Ec: coefficiente di omogenizzazione.
σf: tensione nell'acciaio d'armatura. [daN/m²]
Comb.: combinazione.
Fh: componente orizzontale del carico. [daN]
Fv: componente verticale del carico. [daN]
Cnd: resistenza valutata a breve o lungo termine (BT - LT).
Ad: adesione di progetto. [daN/m²]
Phi: angolo di attrito di progetto. [deg]
RPl: resistenza passiva laterale unitaria di progetto. [daN/m²]
γR: coefficiente parziale sulla resistenza di progetto.
Rd: resistenza alla traslazione di progetto. [daN]
Ed: azione di progetto. [daN]
Rd/Ed: coefficiente di sicurezza allo scorrimento.
ID: indice della verifica di capacità portante.
Fx: componente lungo x del carico. [daN]
Fy: componente lungo y del carico. [daN]
Fz: componente verticale del carico. [daN]
*Mx: componente lungo x del momento. [daN*m]*
*My: componente lungo y del momento. [daN*m]*
ix: inclinazione del carico in x. [deg]
iy: inclinazione del carico in y. [deg]
ex: eccentricità del carico in x. [m]
ey: eccentricità del carico in y. [m]
B': larghezza efficace. [m]
L': lunghezza efficace. [m]
C: coesione di progetto. [daN/m²]
Qs: sovraccarico laterale da piano di posa. [daN/m²]
Rd: resistenza alla rottura del complesso di progetto. [daN]
Ed: azione di progetto (sforzo normale al piano di posa). [daN]
Rd/Ed: coefficiente di sicurezza alla capacità portante.
N:
Nq: fattore di capacità portante per il termine di sovraccarico.
Nc: fattore di capacità portante per il termine coesivo.
Ng: fattore di capacità portante per il termine attritivo.
S:
Sq: fattore correttivo di capacità portante per forma (shape), per il termine di sovraccarico.
Sc: fattore correttivo di capacità portante per forma (shape), per il termine coesivo.
Sg: fattore correttivo di capacità portante per forma (shape), per il termine attritivo.
D:
Dq: fattore correttivo di capacità portante per approfondimento (deep), per il termine di sovraccarico.
Dc: fattore correttivo di capacità portante per approfondimento (deep), per il termine coesivo.
Dg: fattore correttivo di capacità portante per approfondimento (deep), per il termine attritivo.
I:
Iq: fattore correttivo di capacità portante per inclinazione del carico, per il termine di sovraccarico.
Ic: fattore correttivo di capacità portante per inclinazione del carico, per il termine coesivo.
Ig: fattore correttivo di capacità portante per inclinazione del carico, per il termine attritivo.
B:
Bq: fattore correttivo di capacità portante per inclinazione della base, per il termine di sovraccarico.
Bc: fattore correttivo di capacità portante per inclinazione della base, per il termine coesivo.
Bg: fattore correttivo di capacità portante per inclinazione della base, per il termine attritivo.
G:
Gq: fattore correttivo di capacità portante per inclinazione del pendio, per il termine di sovraccarico.
Gc: fattore correttivo di capacità portante per inclinazione del pendio, per il termine coesivo.
Gg: fattore correttivo di capacità portante per inclinazione del pendio, per il termine attritivo.
P:
Pq: fattore correttivo di capacità portante per punzonamento, per il termine di sovraccarico.
Pc: fattore correttivo di capacità portante per punzonamento, per il termine coesivo.
Pg: fattore correttivo di capacità portante per punzonamento, per il termine attritivo.
E:
Eq: fattore correttivo di capacità portante per sisma (earthquake), per il termine di sovraccarico.
Ec: fattore correttivo di capacità portante per sisma (earthquake), per il termine coesivo.
Eg: fattore correttivo di capacità portante per sisma (earthquake), per il termine attritivo.

platea 1

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Geometria

Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Sistema di riferimento e direzioni di armatura

Le coordinate citate nel seguito sono espresse in un sistema di riferimento cartesiano con origine in (-17.053; -4.784; -0.98), direzione dell'asse X = (0.01; 0; 0), direzione dell'asse Y = (0; 0.01; 0).
Le direzioni X/Y di armatura e le sezioni X/Y di verifica sono individuate dagli assi del sistema di riferimento.

Verifiche nei nodi

Verifiche SLU flessione nei nodi

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per le combinazioni SLV, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	Mu	Nu	c.s.	Verifica
239	Y	0.875	0.45	0.000495	0.036	0.001429	0.045	SLU 84	-7738.71	0	-8169.14	0	1.0556	Si
277	X	0.5	0.45	0.000622	0.048	0.000441	0.048	SLU 83	6180.4	0	6723.14	0	1.0878	Si
287	X	0.5	0.45	0.000622	0.048	0.000441	0.048	SLU 84	5268.8	0	6711.74	0	1.2739	Si
278	X	0.765	0.45	0.000885	0.048	0.00067	0.048	SLU 83	7929.84	0	10219.65	0	1.2888	Si

Verifiche SLD Resistenza flessione nei nodi

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	Mu	Nu	c.s.	Verifica
285	Y	0.5	0.45	0.000283	0.036	0.000866	0.045	SLD 13	-3413.84	0	-4126.95	0	1.2089	Si
239	Y	0.875	0.45	0.000495	0.036	0.001429	0.045	SLD 5	-5425.02	0	-7241.65	0	1.3349	Si
277	X	0.5	0.45	0.000622	0.048	0.000441	0.048	SLD 12	4405.43	0	6254.21	0	1.4197	Si
216	Y	1	0.45	0.000565	0.036	0.000961	0.046	SLD 1	-5825.51	0	-8546.27	0	1.467	Si
278	X	0.765	0.45	0.000885	0.048	0.00067	0.048	SLD 12	5675.09	0	9611.9	0	1.6937	Si

Verifiche SLE tensione calcestruzzo nei nodi

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	σc	σlim	Es/Ec	Verifica
277	X	0.5	0.45	0.000622	0.048	0.000441	0.048	SLE QP 2	4160.2	0	-215981	1120500	15	Si
238	Y	0.875	0.45	0.00106	0.049	0.00106	0.049	SLE QP 2	-6456.61	0	-190232	1120500	15	Si
283	Y	0.5	0.45	0.000622	0.049	0.000622	0.049	SLE QP 2	-3668.27	0	-188568	1120500	15	Si
287	X	0.5	0.45	0.000622	0.048	0.000441	0.048	SLE QP 2	3532.58	0	-183397	1120500	15	Si
278	X	0.765	0.45	0.000885	0.048	0.00067	0.048	SLE QP 2	5339.25	0	-182447	1120500	15	Si

Verifiche SLE tensione acciaio nei nodi

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	σf	σlim	Es/Ec	Verifica
277	X	0.5	0.45	0.000622	0.048	0.000441	0.048	SLE RA 20	4559.65	0	2850010	36000000	15	Si
238	Y	0.875	0.45	0.00106	0.049	0.00106	0.049	SLE RA 21	-7125.03	0	2645070	36000000	15	Si
283	Y	0.5	0.45	0.000622	0.049	0.000622	0.049	SLE RA 21	-4055.53	0	2626787	36000000	15	Si
284	Y	0.5	0.45	0.000622	0.049	0.000622	0.049	SLE RA 21	-3762.77	0	2437166	36000000	15	Si
287	X	0.5	0.45	0.000622	0.048	0.000441	0.048	SLE RA 21	3884.92	0	2428272	36000000	15	Si

Verifiche SLE fessurazione nei nodi

La piastra non presenta nodi con apertura delle fessure.

Verifiche geotecniche

Dati geometrici dell'impronta di calcolo

Forma dell'impronta di calcolo: rettangolare di area equivalente
Centro impronta, nel sistema globale: -15.5; -4; -1.4
Lato minore B dell'impronta: 1.5
Lato maggiore L dell'impronta: 3.1
Area dell'impronta rettangolare di calcolo: 4.7

Verifica di scorrimento sul piano di posa

Coefficiente di sicurezza minimo per scorrimento 1.33

Comb.	Fh	Fv	Cnd	Ad	Phi	RPl	γR	Rd	Ed	Rd/Ed	Verifica
SLU 50	592	-62917	LT	0	19	0	1.1	19138	592	32.35	Si
SLV 13	11457	-49976	LT	0	19	0	1.1	15202	11457	1.33	Si

Verifica di capacità portante sul piano di posa

Profondità massima del bulbo di rottura considerato: 1.5 m
Profondità massima del bulbo di rottura considerato (per condizione non drenata): 0.75 m
Peso specifico efficace del terreno di progetto γs: 2060 daN/m3
Accelerazione normalizzata massima attesa al suolo Amax per verifiche in SLD: 0.03
Accelerazione normalizzata massima attesa al suolo Amax per verifiche in SLV: 0.073

Coefficiente di sicurezza minimo per portanza 2.34

ID	Comb.	Fx	Fy	Fz	Mx	My	ix	iy	ex	ey	B'	L'	Cnd	C	Phi	Qs	γR	Rd	Ed	Rd/Ed	Verifica
1	SLU 84	315	419	-77342	1369.74	71.55	0	0	0	0.02	1.46	3.14	BT	14430	0	878	2.3	181278	77342	2.34	Si
2	SLV 13	11258	-2124	-49976	1863.47	6816.96	13	-2	0.14	0.04	1.43	2.87	LT	0	37	878	2.3	139541	49976	2.79	Si
3	SLD 2	-4368	-82	-54086	1253.15	-2804.11	-5	0	-0.05	0.02	1.45	3.04	BT	14430	0	878	2.3	172256	54086	3.18	Si

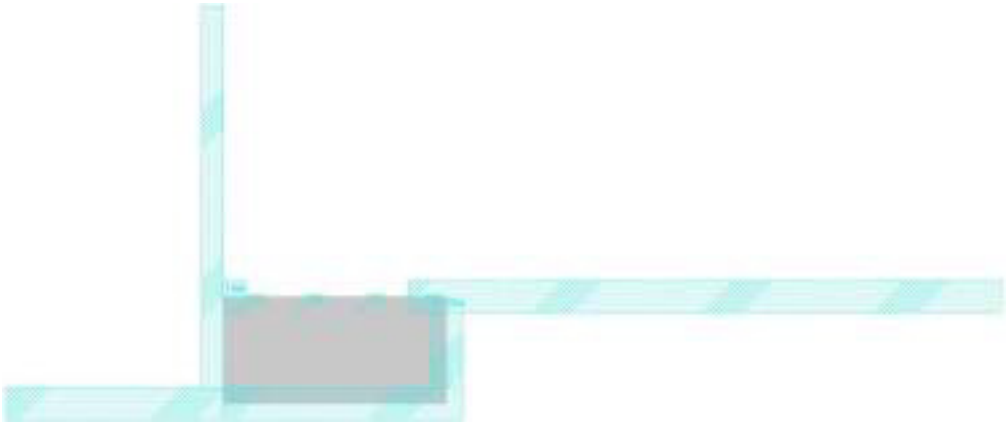
Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

ID	N			S			D			I			B			G			P			E		
	Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	1	5	0	0	0.09	0	0	0.12	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
2	43	56	66	1.37	1.38	0.8	1.07	1.12	1	0.7	0.7	0.54	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
3	1	5	0	0	0.1	0	0	0.12	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0

Platea 2

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Sistema di riferimento e direzioni di armatura

Le coordinate citate nel seguito sono espresse in un sistema di riferimento cartesiano con origine in (-10.863; -4.784; -0.98), direzione dell'asse X = (0.01; 0; 0), direzione dell'asse Y = (0; 0.01; 0).
Le direzioni X/Y di armatura e le sezioni X/Y di verifica sono individuate dagli assi del sistema di riferimento.

Verifiche nei nodi

Verifiche SLU flessione nei nodi

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per le combinazioni SLV, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	Mu	Nu	c.s.	Verifica
300	X	0.5	0.45	0.000622	0.048	0.00052	0.048	SLU 83	5343.39	0	7838.32	0	1.4669	Si
291	Y	0.5	0.45	0.000283	0.036	0.000283	0.036	SLU 84	2774.93	0	4455.82	0	1.6057	Si
245	Y	0.875	0.45	0.000495	0.036	0.000495	0.036	SLU 84	4871.62	0	7834.44	0	1.6082	Si
299	X	0.765	0.45	0.000885	0.048	0.000749	0.048	SLU 83	6712.72	0	11335.94	0	1.6887	Si
222	Y	1	0.45	0.000565	0.036	0.000565	0.036	SLU 84	5160.15	0	9018.93	0	1.7478	Si

Verifiche SLD Resistenza flessione nei nodi

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	Mu	Nu	c.s.	Verifica
300	X	0.5	0.45	0.000622	0.048	0.00052	0.048	SLD 7	3910.24	0	7305.76	0	1.8684	Si
291	Y	0.5	0.45	0.000283	0.036	0.000283	0.036	SLD 3	2132.07	0	4108.61	0	1.9271	Si
245	Y	0.875	0.45	0.000495	0.036	0.000495	0.036	SLD 4	3656.84	0	7209.27	0	1.9714	Si
222	Y	1	0.45	0.000565	0.036	0.000565	0.036	SLD 2	3998.6	0	8566.94	0	2.1425	Si
299	X	0.765	0.45	0.000885	0.048	0.000749	0.048	SLD 3	4946.86	0	10723.36	0	2.1677	Si

Verifiche SLE tensione calcestruzzo nei nodi

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	σc	σlim	Es/Ec	Verifica
300	X	0.5	0.45	0.000622	0.048	0.00052	0.048	SLE QP 2	3616.18	0	-186830	1120500	15	Si
299	X	0.765	0.45	0.000885	0.048	0.000749	0.048	SLE QP 2	4544.98	0	-154813	1120500	15	Si
300	X	0.5	0.45	0.000622	0.048	0.00052	0.048	SLE RA 20	3945.8	0	-203860	1494000	15	Si

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	σc	σlim	Es/Ec	Verifica
294	Y	0.5	0.45	0.000622	0.049	0.000622	0.049	SLE QP 2	-2754.05	0	-141572	1120500	15	Si
295	Y	0.5	0.45	0.000622	0.049	0.000622	0.049	SLE QP 2	-2645.44	0	-135990	1120500	15	Si

Verifiche SLE tensione acciaio nei nodi

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	σf	σlim	Es/Ec	Verifica
300	X	0.5	0.45	0.000622	0.048	0.00052	0.048	SLE RA 20	3945.8	0	2432785	36000000	15	Si
299	X	0.765	0.45	0.000885	0.048	0.000749	0.048	SLE RA 20	4956.74	0	2012023	36000000	15	Si
294	Y	0.5	0.45	0.000622	0.049	0.000622	0.049	SLE RA 21	-3046.22	0	1973053	36000000	15	Si
295	Y	0.5	0.45	0.000622	0.049	0.000622	0.049	SLE RA 21	-2929.69	0	1897576	36000000	15	Si
296	Y	0.5	0.45	0.000622	0.049	0.000622	0.049	SLE RA 20	-2898.13	0	1877135	36000000	15	Si

Verifiche SLE fessurazione nei nodi

La piastra non presenta nodi con apertura delle fessure.

Verifiche geotecniche

Dati geometrici dell'impronta di calcolo

Forma dell'impronta di calcolo: rettangolare di area equivalente
Centro impronta, nel sistema globale: -9.3; -4; -1.4
Lato minore B dell'impronta: 1.5
Lato maggiore L dell'impronta: 3.1
Area dell'impronta rettangolare di calcolo: 4.7

Verifica di scorrimento sul piano di posa

Coefficiente di sicurezza minimo per scorrimento 1.28

Comb.	Fh	Fv	Cnd	Ad	Phi	RPl	γR	Rd	Ed	Rd/Ed	Verifica
SLU 50	595	-62336	LT	0	19	0	1.1	18961	595	31.85	Si
SLV 4	11373	-47713	LT	0	19	0	1.1	14513	11373	1.28	Si

Verifica di capacità portante sul piano di posa

Profondità massima del bulbo di rottura considerato: 1.5 m
Profondità massima del bulbo di rottura considerato (per condizione non drenata): 0.75 m
Peso specifico efficace del terreno di progetto γs: 2060 daN/m3
Accelerazione normalizzata massima attesa al suolo Amax per verifiche in SLD: 0.03
Accelerazione normalizzata massima attesa al suolo Amax per verifiche in SLV: 0.073

Coefficiente di sicurezza minimo per portanza 2.38

ID	Comb.	Fx	Fy	Fz	Mx	My	ix	iy	ex	ey	B'	L'	Cnd	C	Phi	Qs	γR	Rd	Ed	Rd/Ed	Verifica
1	SLU 84	-195	463	-76397	1101.87	543.05	0	0	0.01	0.01	1.47	3.13	BT	14430	0	878	2.3	181508	76397	2.38	Si
2	SLV 13	11006	-597	-56130	1505.86	6894.67	11	-1	0.12	0.03	1.45	2.89	LT	0	37	878	2.3	156067	56130	2.78	Si
3	SLD 13	4626	-43	-53729	1062.86	3176.09	5	0	0.06	0.02	1.46	3.02	BT	14430	0	878	2.3	172224	53729	3.21	Si

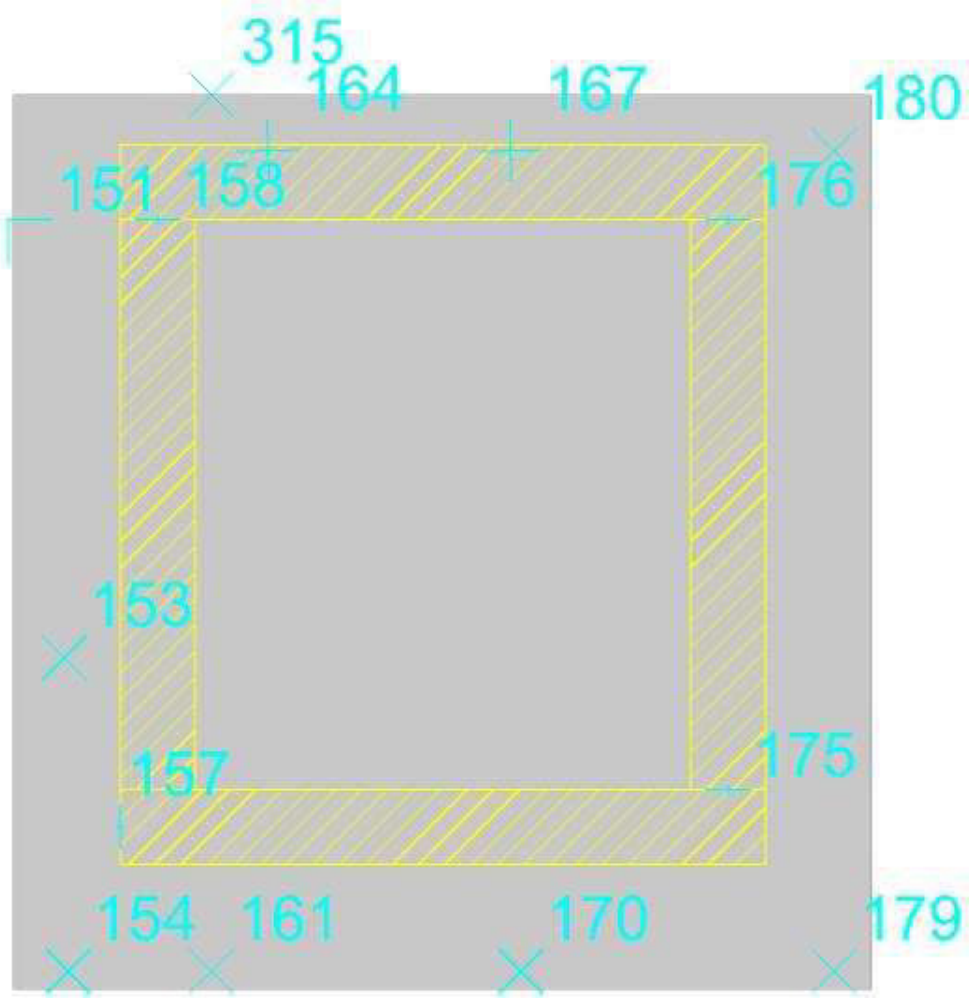
Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

ID	N			S			D			I			B			G			P			E		
	Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	1	5	0	0	0.09	0	0	0.12	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
2	43	56	66	1.38	1.39	0.8	1.07	1.12	1	0.75	0.74	0.6	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
3	1	5	0	0	0.1	0	0	0.12	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0

Platea a "Fondazione ascensore"

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Sistema di riferimento e direzioni di armatura

Le coordinate citate nel seguito sono espresse in un sistema di riferimento cartesiano con origine in (-11.148; -1.244; -2.47), direzione dell'asse X = (0.01; 0; 0), direzione dell'asse Y = (0; 0.01; 0).
Le direzioni X/Y di armatura e le sezioni X/Y di verifica sono individuate dagli assi del sistema di riferimento.

Verifiche nei nodi

Verifiche SLU flessione nei nodi

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per le combinazioni SLV, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	Mu	Nu	c.s.	Verifica
24	X	1	0.3	0.000959	0.048	0.001128	0.048	SLU 84	1674.62	0	10392.81	0	6.2061	Si
23	X	1	0.3	0.000959	0.048	0.001128	0.048	SLU 84	1647.87	0	10428.89	0	6.3287	Si
22	X	1	0.3	0.000959	0.048	0.001128	0.048	SLU 83	1531.24	0	10464.29	0	6.8339	Si
44	Y	1	0.3	0.000914	0.045	0.001064	0.047	SLU 83	1426.88	0	10159.84	0	7.1203	Si
25	X	0.885	0.3	0.000894	0.048	0.001063	0.048	SLU 84	1293.52	0	9739.27	0	7.5293	Si

Verifiche SLD Resistenza flessione nei nodi

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	Mu	Nu	c.s.	Verifica
24	X	1	0.3	0.000959	0.048	0.001128	0.048	SLD 13	1160.28	0	9427.01	0	8.1248	Si
23	X	1	0.3	0.000959	0.048	0.001128	0.048	SLD 13	1124.79	0	9623.83	0	8.5561	Si
44	Y	1	0.3	0.000914	0.045	0.001064	0.047	SLD 3	990.6	0	8838.33	0	8.9222	Si
22	X	1	0.3	0.000959	0.048	0.001128	0.048	SLD 11	1065.8	0	9811.29	0	9.2055	Si
53	Y	1	0.3	0.000914	0.045	0.001064	0.047	SLD 7	928.26	0	8734.03	0	9.409	Si

Verifiche SLE tensione calcestruzzo nei nodi

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	σc	σlim	Es/Ec	Verifica
24	X	1	0.3	0.000959	0.048	0.001128	0.048	SLE QP 2	1125.12	0	-65866	1120500	15	Si
23	X	1	0.3	0.000959	0.048	0.001128	0.048	SLE QP 2	1101.96	0	-64510	1120500	15	Si
22	X	1	0.3	0.000959	0.048	0.001128	0.048	SLE QP 2	1029.44	0	-60264	1120500	15	Si
25	X	0.885	0.3	0.000894	0.048	0.001063	0.048	SLE QP 2	873.86	0	-57410	1120500	15	Si
44	Y	1	0.3	0.000914	0.045	0.001064	0.047	SLE QP 2	956.71	0	-55996	1120500	15	Si

Verifiche SLE tensione acciaio nei nodi

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	σf	σlim	Es/Ec	Verifica
24	X	1	0.3	0.000959	0.048	0.001128	0.048	SLE RA 21	1235.01	0	728025	36000000	15	Si
23	X	1	0.3	0.000959	0.048	0.001128	0.048	SLE RA 21	1213.92	0	715596	36000000	15	Si
44	Y	1	0.3	0.000914	0.045	0.001064	0.047	SLE RA 20	1051.52	0	695016	36000000	15	Si
22	X	1	0.3	0.000959	0.048	0.001128	0.048	SLE RA 20	1129.85	0	666034	36000000	15	Si
53	Y	1	0.3	0.000914	0.045	0.001064	0.047	SLE RA 20	973.2	0	643254	36000000	15	Si

Verifiche SLE fessurazione nei nodi

La piastra non presenta nodi con apertura delle fessure.

Verifiche geotecniche

Dati geometrici dell'impronta di calcolo

Forma dell'impronta di calcolo: rettangolare di area equivalente
Centro impronta, nel sistema globale: -10; 0; -2.8
Lato minore B dell'impronta: 2.3
Lato maggiore L dell'impronta: 2.4
Area dell'impronta rettangolare di calcolo: 5.5

Verifica di scorrimento sul piano di posa

Coefficiente di sicurezza minimo per scorrimento 1.72

Comb.	Fh	Fv	Cnd	Ad	Phi	RPl	γR	Rd	Ed	Rd/Ed	Verifica
SLU 50	1137	-63630	LT	0	19	0	1.1	19355	1137	17.03	Si
SLV 15	9768	-55222	LT	0	19	0	1.1	16797	9768	1.72	Si

Verifica di capacità portante sul piano di posa

Profondità massima del bulbo di rottura considerato: 2.31 m
Profondità massima del bulbo di rottura considerato (per condizione non drenata): 1.15 m
Peso specifico efficace del terreno di progetto γs: 2060 daN/m3
Accelerazione normalizzata massima attesa al suolo Amax per verifiche in SLD: 0.03
Accelerazione normalizzata massima attesa al suolo Amax per verifiche in SLV: 0.073

Coefficiente di sicurezza minimo per portanza 2.78

ID	Comb.	Fx	Fy	Fz	Mx	My	ix	iy	ex	ey	B'	L'	Cnd	C	Phi	Qs	γR	Rd	Ed	Rd/Ed	Verifica
1	SLU 84	895	670	-78961	378.51	-587.94	1	0	-0.01	0	2.29	2.39	BT	14430	0	585	2.3	219744	78961	2.78	Si
2	SLV 15	9474	2378	-55222	-346.01	3269.26	10	2	0.06	-0.01	2.18	2.39	LT	0	37	585	2.3	197310	55222	3.57	Si
3	SLD 13	4189	-44	-54081	679.37	1191.32	4	0	0.02	0.01	2.26	2.37	BT	14430	0	585	2.3	213282	54081	3.94	Si

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

ID	N			S			D			I			B			G			P			E		
	Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	1	5	0	0	0.19	0	0	0.05	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
2	43	56	66	1.69	1.71	0.63	1.03	1.05	1	0.74	0.74	0.61	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
3	1	5	0	0	0.19	0	0	0.05	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0

1.5 Verifiche aste in legno

Le unità di misura elencate nel capitolo sono in [m] ove non espressamente specificato.

Descrizione: *descrizione della sezione.*
Tipo: *tipo di sezione.*
Base: *base della sezione. [m]*
Altezza: *altezza della sezione. [m]*
Area: *area inerziale nel sistema geometrico centrato nel baricentro. [m²]*
Jx: *momento d'inerzia attorno all'asse orizzontale baricentrico di definizione della sezione. [m4]*
Jy: *momento d'inerzia attorno all'asse verticale baricentrico di definizione della sezione. [m4]*
Wx: *modulo di resistenza elastico minimo relativo all'asse x. [m³]*
Wy: *modulo di resistenza elastico minimo relativo all'asse y. [m³]*

Asta 19: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.301

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
0.7*111832/1057535+336059/1057535=0.39 <= 1 (formula 4.4.5b) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -305.377; My = 458.833

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.301
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(83965^2+805^2) = 83968 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -2047.1; Ty = -19.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.301
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.27+0.34+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -2047.1; Ty = -19.6; Mt = -102.743

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.301
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
76632 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -154.243

Asta 20: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.224

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
108414/1057535+0.7*79578/1057535=0.16 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -296.043; My = -108.651

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.224
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(3716^2+20337^2) = 20674 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 90.6; Ty = -495.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.224
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 90.6; Ty = -495.8; Mt = 9.059

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.224
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
12762 <= 345172 Comb: SLV, 8; Durata minima del carico nella combinazione: istantaneo
Mt = 25.687

Asta 21: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.616

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(428^2+21517^2) = 21521 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 10.4; Ty = 524.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.616
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(11627/1324138)^2+132244/1410046+0.7*47114/1410046=0.12 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -361.113; My = -64.326; N = -595.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.616
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Tx = 79.9; Ty = -101.7; Mt = 11.721

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.616
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
5823 <= 345172 Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Mt = 11.721

Asta 22: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno

Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(4089^2+5279^2) = 6678 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 99.7; Ty = -128.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(11502/1324138)^2+131143/1410046+0.7*48592/1410046=0.12 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -358.107; My = -66.345; N = -588.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 99.7; Ty = -128.7; Mt = 24.769

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
12306 <= 188276 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 24.769

Asta 23: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.004

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.004
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1837^2+37925^2) = 37970 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 44.8; Ty = -924.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.004
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(10681/1324138)^2+216683/1410046+0.7*26744/1410046=0.17 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 591.689; My = 36.514; N = -546.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.004
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1

0.24+0+0.03 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 0.4; Ty = -580.6; Mt = 92.108

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.004
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
45761 <= 188276 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 92.108

Asta 24: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.676

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(10758^2+25290^2) = 27483 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 262.3; Ty = 616.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(5519/1324138)^2+222442/1410046+0.7*73312/1410046=0.19 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 607.414; My = -100.095; N = -282.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.2+0.01+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 261.2; Ty = 260.1; Mt = -77.397

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.676
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
38453 <= 188276 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -77.397

Asta 25: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
6233/846028+74703/1057535+0.7*28419/1057535=0.1 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 203.989; My = 38.802; N = 319.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(212^2+6619^2) = 6622 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 5.2; Ty = 161.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -9.9; Ty = 211.3; Mt = 21.381

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
10623 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 21.381

Asta 26: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.724

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
9860/846028+26048/1057535+0.7*23512/1057535=0.05 <= 1 [4.4.6a] Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mx = 71.129; My = 32.102; N = 504.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2423^2+9439^2) = 9745 <= 193103 Comb: SLU, 61; Durata minima del carico nella combinazione: media
Tx = -59.1; Ty = 230.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.6; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -59.6; Ty = 142.7; Mt = 15.653

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.724
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
7777 <= 188276 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 15.653

Asta 27: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.668

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.668
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
9028/846028+0.7*82003/1057535+127509/1057535=0.19 <= 1 [4.4.6b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 223.923; My = -174.092; N = 462.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.668
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(14107^2+17456^2) = 22444 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -343.9; Ty = -425.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.668
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.27+0.01+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -343.9; Ty = -425.6; Mt = 101.123

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.668
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
50241 <= 188276 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 101.123

Asta 28: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.287

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.287
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
18054/846028+71167/1057535+0.7*7294/1057535=0.09 <= 1 [4.4.6a] Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mx = -194.333; My = 9.959; N = 924.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(7733^2+17109^2) = 18775 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 188.5; Ty = 417.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.57+0+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 188.5; Ty = 417.1; Mt = -217.077

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.287
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
107850 <= 188276 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -217.077

Asta 29: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
17658/846028+66375/1057535+0.7*1430/1057535=0.08 <= 1 [4.4.6a] Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mx = -181.248; My = 1.952; N = 904.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(955^2+3343^2) = 3477 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 23.3; Ty = 81.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -8.4; Ty = -38.8; Mt = -12.547

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
6234 <= 188276 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -12.547

Asta 30: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
13436/846028+60921/1057535+0.7*13476/1057535=0.08 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -166.355; My = -18.4; N = 687.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(2916^2+6858^2) = 7452 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 71.1; Ty = -167.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 101.8; Ty = -194.7; Mt = 27.257

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
13542 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 27.257

Asta 31: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
13525/846028+62727/1057535+0.7*16050/1057535=0.09 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -171.286; My = -21.913; N = 692.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(3323^2+6982^2) = 7732 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -81; Ty = 170.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -123.5; Ty = 178.6; Mt = -26.114

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
12974 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -26.114

Asta 32: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
13802/846028+91525/1057535+0.7*12284/1057535=0.11 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -249.923; My = 16.772; N = 706.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d

Sqrt(916^2+4178^2) = 4277 <= 144828 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = 22.3; Ty = 101.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.1+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 21.7; Ty = 95.3; Mt = 38.422

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
19089 <= 188276 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 38.422

Asta 33: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.834

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
14671/846028+97170/1057535+0.7*83474/1057535=0.16 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 265.338; My = -113.969; N = 751.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(5542^2+13388^2) = 14490 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 135.1; Ty = 326.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.01 <= 1 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = 133.9; Ty = 298.3; Mt = -23.686

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.834
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
11768 <= 188276 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -23.686

Asta 34: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.835

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.835
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
9022/846028+52940/1057535+0.7*22378/1057535=0.08 <= 1 [4.4.6a] Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mx = 144.562; My = 30.554; N = 461.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1312^2+6770^2) = 6896 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 32; Ty = 165.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.835
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 50.8; Ty = -41.7; Mt = -10.608

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.835
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
5270 <= 188276 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -10.608

Asta 35: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
8081/846028+58894/1057535+0.7*36703/1057535=0.09 <= 1 [4.4.6a] Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mx = 160.819; My = 50.112; N = 413.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(552^2+4444^2) = 4478 <= 193103 Comb: SLU, 38; Durata minima del carico nella combinazione: media
Tx = 13.5; Ty = -108.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -1.2; Ty = -101.9; Mt = -35.443

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
17609 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -35.443

Asta 36: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.58

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
5003/846028+67409/1057535+0.7*42464/1057535=0.1 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 184.072; My = 57.977; N = 256.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(4430^2+21757^2) = 22204 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -108; Ty = 530.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0.02 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -108; Ty = 530.5; Mt = -33.584

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.58
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
24803 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -49.923

Asta 37: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.26

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
8716/1128037+63699/1410046+0.7*3458/1410046=0.05 <= 1 [4.4.6a] Comb: SLU, 60; Durata minima del carico nella combinazione: media
Mx = -173.94; My = -4.721; N = 446.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.26
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5347^2+19517^2) = 20236 <= 193103 Comb: SLU, 60; Durata minima del carico nella combinazione: media
Tx = -130.4; Ty = -475.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.26
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.13+0+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -134.7; Ty = -263.8; Mt = -51.032

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.26
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
34620 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -69.682

Asta 38: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1200^2+9580^2) = 9655 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -29.3; Ty = 233.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(8831/1324138)^2+89192/1410046+0.7*27816/1410046=0.08 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = -243.555; My = -37.978; N = -452.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -25.2; Ty = 206.5; Mt = -31.969

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
15883 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -31.969

Asta 39: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
0.7*40776/1057535+64447/1057535=0.09 <= 1 (formula 4.4.5b) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -111.345; My = -87.991

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2068^2+6556^2) = 6874 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -50.4; Ty = -159.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -92.9; Ty = 40.1; Mt = -15.47

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
7686 <= 188276 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente

Mt = -15.47

Asta 40: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.425

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
5256/846028+0.7*48043/1057535+94801/1057535=0.13 <= 1 [4.4.6b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -131.189; My = -129.435; N = 269.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.425
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(26450^2+13064^2) = 29500 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 644.9; Ty = -318.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.425
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0.02+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 644; Ty = -319.4; Mt = 40.811

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.425
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
20276 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 40.811

Asta 41: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.415

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.415
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
5275/846028+0.7*97753/1057535+200898/1057535=0.26 <= 1 [4.4.6b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -266.93; My = 274.293; N = 270.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(19742^2+9201^2) = 21781 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 481.3; Ty = 224.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0.02+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 645.5; Ty = 256.5; Mt = 36.61

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.415
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
18189 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 36.61

Asta 42: Trave in legno a falda Falda 6 fili 167-225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.287

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
15890/870720+132244/1088400+0.7*30545/1088400=0.16 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -203.126; My = 31.278; N = 610.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.287
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(47^2+6622^2) = 6623 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 0.9; Ty = -121.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.287
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 0.9; Ty = -121.1; Mt = 8.141

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.287
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6

τ,tor,d <= Ksh * fv,d
5738 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 8.141

Asta 43: Trave in legno a falda Falda 6 fili 167-225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.295

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.295
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
17053/870720+288010/1088400+0.7*59856/1088400=0.32 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 442.384; My = -61.293; N = 654.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.295
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(4986^2+23214^2) = 23743 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -91.2; Ty = -424.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.295
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.03 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -91.2; Ty = -424.5; Mt = 15.946

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.295
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
15623 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 22.168

Asta 44: Trave in legno a falda Falda 6 fili 167-225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.523

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.523
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
9431/870720+632728/1088400+0.7*9619/1088400=0.6 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 971.87; My = -9.85; N = 362.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.523
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(15806^2+59728^2) = 61784 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 289; Ty = -1092.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.523
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.25+0+0.1 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 92.2; Ty = -823.4; Mt = -62.903

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.523
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
44331 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -62.903

Asta 45: Trave in legno a falda Falda 6 fili 167-225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.772

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
39483/870720+382529/1088400+0.7*72436/1088400=0.44 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 587.564; My = -74.174; N = 1516.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1364^2+49828^2) = 49847 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -24.9; Ty = 911.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.32+0+0.05 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 12.6; Ty = 607.6; Mt = 81.365

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.772

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
57342 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 81.365

Asta 46: Trave in legno a falda Falda 6 fili 167-225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.295

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
36322/870720+162523/1088400+0.7*73003/1088400=0.24 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 249.635; My = -74.755; N = 1394.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3595^2+23169^2) = 23446 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 65.7; Ty = 423.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 48.9; Ty = 312.3; Mt = -5.46

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.295
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
3848 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -5.46

Asta 47: Trave in legno a falda Falda 6 fili 167-225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.295

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.295
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
37526/870720+179467/1088400+0.7*72496/1088400=0.25 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -275.661; My = 74.236; N = 1441

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(2109^2+9703^2) = 9930 <= 144828 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = 38.6; Ty = 177.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 45.9; Ty = 175.7; Mt = -16.172

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.295
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
11397 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -16.172

Asta 48: Trave in legno a falda Falda 6 fili 167-225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.764

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
41776/870720+145319/1088400+0.7*77625/1088400=0.23 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -223.21; My = 79.488; N = 1604.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.764
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1069^2+33129^2) = 33146 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 19.5; Ty = -605.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.764
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.29+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Tx = -28.1; Ty = -535.6; Mt = -96.888

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.764
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
68282 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -96.888

Asta 49: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.989

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.989
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
6786/870720+348667/1088400+0.7*64968/1088400=0.37 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 535.552; My = 66.528; N = 260.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.989
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(10307^2+56191^2) = 57128 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 188.5; Ty = -1027.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.989
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.17+0.01+0.15 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 188.5; Ty = -1027.5; Mt = 43.921

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.989
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
30954 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 43.921

Asta 50: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.123

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200

Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.123
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
13813/870720+294908/1088400+0.7*132110/1088400=0.37 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 452.979; My = 135.28; N = 530.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(7079^2+10119^2) = 12349 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 129.4; Ty = 185

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 110.7; Ty = 114.2; Mt = 17.296

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.123
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
12189 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 17.296

Asta 51: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.274

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
615301/1451200+0.7*150237/1451200=0.5 <= 1 (formula 4.4.5a) Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 945.103; My = 153.843

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1209^2+31081^2) = 31105 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 22.1; Ty = -568.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71

τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 18; Ty = -561.8; Mt = -18.424

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
12984 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -18.424

Asta 52: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.353

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.353
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(97081^2+49180^2) = 108828 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -1775.2; Ty = -899.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.353
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(51112/1324138)^2+813909/1451200+0.7*361613/1451200=0.74 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 1250.164; My = -370.292; N = -1962.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.353
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.34+0.45+0.12 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -1775.2; Ty = -899.3; Mt = -85.216

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.353
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
104649 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -148.49

Asta 53: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.154

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080

Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.154
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
0.7*98357/1088400+294155/1088400=0.33 <= 1 (formula 4.4.5b) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 151.077; My = -301.215

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(17856^2+4573^2) = 18433 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -326.5; Ty = 83.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0.01+0 <= 1 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = -308.3; Ty = 78.9; Mt = 3.571

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.154
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
7521 <= 325259 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Mt = 10.672

Asta 54: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.767

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
34770/870720+0.7*126886/1088400+301508/1088400=0.4 <= 1 [4.4.6b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 194.897; My = -308.744; N = 1335.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(32934^2+54434^2) = 63622 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 602.2; Ty = 995.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.14+0.03+0.08 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 602.2; Ty = 995.4; Mt = 47.368

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.767
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
33383 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 47.368

Asta 55: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.233

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.233
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
17638/1160960+284363/1451200+0.7*85003/1451200=0.25 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -436.781; My = 87.043; N = 677.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3107^2+19160^2) = 19410 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -56.8; Ty = 350.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -56.8; Ty = 350.3; Mt = 28.197

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.233
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
19872 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 28.197

Asta 56: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.041

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.041
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
16889/1160960+313595/1451200+0.7*63105/1451200=0.26 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -481.683; My = -64.619; N = 648.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5658^2+10805^2) = 12196 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -103.5; Ty = 197.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -103.5; Ty = 197.6; Mt = -22.733

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.041
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
16021 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -22.733

Asta 57: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.274

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
19355/1160960+291215/1451200+0.7*52955/1451200=0.24 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -447.306; My = -54.225; N = 743.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(500^2+20432^2) = 20438 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 9.1; Ty = -373.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 10.3; Ty = -372.8; Mt = 0.574

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3253 <= 325259 Comb: SLV, 11; Durata minima del carico nella combinazione: istantaneo
Mt = -4.616

Asta 58: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.016

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.016
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
15377/1160960+222483/1451200+0.7*70011/1451200=0.2 <= 1 [4.4.6a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 341.734; My = 71.691; N = 590.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.016
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5462^2+51009^2) = 51301 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 99.9; Ty = -932.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.016
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.07 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 99.9; Ty = -932.7; Mt = 10.745

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.016
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7697 <= 236552 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = 10.922

Asta 59: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.826

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
52830/1160960+0.7*60353/1451200+254956/1451200=0.25 <= 1 [4.4.6b] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 92.702; My = -261.075; N = 2028.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(24138^2+3411^2) = 24378 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 441.4; Ty = 62.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.826
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0.01+0 <= 1 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = 244.3; Ty = -77.4; Mt = 6.075

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.826
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4281 <= 177414 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 6.075

Asta 60: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.468

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.468
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
61076/870720+0.7*26371/1088400+119810/1088400=0.2 <= 1 [4.4.6b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 40.506; My = 122.685; N = 2345.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d

Sqrt(16770^2+1848^2) = 16871 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 306.7; Ty = 33.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.19+0.01+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 306.7; Ty = 33.8; Mt = -47.804

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.468
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
33690 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -47.804

Asta 61: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.785

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
45130/870720+82496/1088400+0.7*72388/1088400=0.17 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 126.714; My = 74.125; N = 1733

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(6656^2+1621^2) = 6851 <= 144828 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = -121.7; Ty = 29.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -115.1; Ty = 33.2; Mt = 17.032

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.785
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
12003 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 17.032

Asta 62: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.503

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.503
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
26802/870720+0.7*112469/1088400+253835/1088400=0.34 <= 1 [4.4.6b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 172.752; My = 259.927; N = 1029.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.503
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(40129^2+8666^2) = 41054 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 733.8; Ty = -158.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.503
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0.08+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 733.8; Ty = -158.5; Mt = -10.452

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.503
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
8307 <= 177414 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -11.787

Asta 63: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.816

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.816
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(30760^2+17364^2) = 35322 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -562.5; Ty = -317.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.816
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)

(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(23878/993103)^2+280304/1088400+0.7*275147/1088400=0.44 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 430.546; My = -281.751; N = -916.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.816
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0.05+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -562.5; Ty = -317.5; Mt = -5.08

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.816
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6438 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -9.135

Asta 65: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.715

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(18061^2+12860^2) = 22172 <= 265517 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = -330.3; Ty = 235.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(191705/993103)^2+0.7*13930/1088400+150917/1088400=0.18 <= 1 [4.4.7b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -21.397; My = 154.539; N = -7361.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -48.3; Ty = 156.6; Mt = -26.595

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.715
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
18743 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -26.595

Asta 66: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.573

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.573
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(10497^2+3862^2) = 11185 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -192; Ty = -70.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(193465/993103)^2+83215/1088400+0.7*32015/1088400=0.13 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -127.818; My = 32.783; N = -7429.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.573
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 12; Durata minima del carico nella combinazione: istantaneo
Tx = 58.5; Ty = -11.5; Mt = -6.368

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.573
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4488 <= 325259 Comb: SLV, 12; Durata minima del carico nella combinazione: istantaneo
Mt = -6.368

Asta 67: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.68

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.68
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6863^2+7173^2) = 9928 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 125.5; Ty = -131.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.34
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(188964/993103)^2+63935/1088400+0.7*22929/1088400=0.11 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -98.204; My = 23.479; N = -7256.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.68
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = 96.1; Ty = -162.5; Mt = -10.146

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.68
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
7154 <= 325259 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mt = -10.151

Asta 68: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.86

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.86
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3696^2+10128^2) = 10781 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -67.6; Ty = -185.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(179976/993103)^2+59575/1088400+0.7*14316/1088400=0.1 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -91.507; My = 14.66; N = -6911.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.86
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -65.9; Ty = -183.5; Mt = -0.388

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.86
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
766 <= 325259 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo

Mt = -1.087

Asta 69: Trave in legno a falda Falda 3 fili 52-109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.05

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
113079/870720+144486/1088400+0.7*33823/1088400=0.28 <= 1 [4.4.6a] Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mx = -221.93; My = -34.635; N = 4342.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3000^2+32767^2) = 32904 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -54.9; Ty = 599.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.19+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -24; Ty = 546.1; Mt = 64.65

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.05
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
45562 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 64.65

Asta 70: Trave in legno a falda Falda 3 fili 52-109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.324

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
119416/870720+151906/1088400+0.7*35160/1088400=0.3 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -233.328; My = 36.004; N = 4585.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.324
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(764^2+9172^2) = 9204 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -14; Ty = -167.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.324
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -14; Ty = -167.7; Mt = 7.932

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.324
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
5590 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 7.932

Asta 71: Trave in legno a falda Falda 3 fili 52-109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.279

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.279
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
117409/870720+133289/1088400+0.7*91948/1088400=0.32 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 204.732; My = -94.155; N = 4508.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.279
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4933^2+20303^2) = 20893 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -90.2; Ty = -371.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.279
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -90.1; Ty = -371.2; Mt = -4.448

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.279
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8

τ,tor,d <= Ksh * fv,d
3135 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -4.448

Asta 72: Trave in legno a falda Falda 3 fili 52-109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.37

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
5204/870720+435654/1088400+0.7*59396/1088400=0.44 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 669.165; My = -60.822; N = 199.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(3919^2+21981^2) = 22328 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 71.7; Ty = 401.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 45.9; Ty = 503.7; Mt = -29.892

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.37
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
21066 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -29.892

Asta 73: Trave in legno a falda Falda 3 fili 52-109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.324

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.324
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
6274/870720+58587/1088400+0.7*46660/1088400=0.09 <= 1 [4.4.6a] Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mx = -89.989; My = 47.78; N = 240.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(1907^2+10490^2) = 10662 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 34.9; Ty = 191.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 34.9; Ty = 191.8; Mt = -13.608

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.324
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
9590 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -13.608

Asta 74: Trave in legno a falda Falda 3 fili 52-109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.142

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
49503/1088400+0.7*28675/1088400=0.06 <= 1 (formula 4.4.5a) Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mx = -76.036; My = 29.363

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.142
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(1872^2+4827^2) = 5177 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -34.2; Ty = -88.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.142
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0 <= 1 Comb: SLU, 82; Durata minima del carico nella combinazione: media
Tx = -37.5; Ty = -96.3; Mt = 1.538

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.142

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1084 <= 236552 Comb: SLU, 82; Durata minima del carico nella combinazione: media
Mt = 1.538

Asta 75: Trave in legno a falda Falda 5 fili 230-248

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.612

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.612
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2296^2+45741^2) = 45798 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 27.6; Ty = -548.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.612
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(8908/993103)^2+480088/1092414+0.7*91284/1092414=0.5 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 362.947; My = 53.675; N = -224.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.612
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.06 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 27.6; Ty = -548.9; Mt = 8.026

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.612
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
7972 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 6.262

Asta 76: Trave in legno a falda Falda 2 fili 51-29

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.578

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.578
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1924^2+47582^2) = 47621 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -23.1; Ty = -571

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.578
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(22540/993103)^2+508163/1092414+0.7*82774/1092414=0.52 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 384.171; My = -48.671; N = -568

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.578
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.06 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -23.1; Ty = -571; Mt = -6.561

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.578
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
6656 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -5.229

Asta 77: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.386

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(16313^2+76871^2) = 78583 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -298.3; Ty = 1405.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(12700/1324138)^2+406872/1451200+0.7*115036/1451200=0.34 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 624.955; My = 117.797; N = -487.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0.01+0.16 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Tx = -298.3; Ty = 1405.6; Mt = -17.667

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.386
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
11609 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -16.473

Asta 78: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.829

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(11314^2+36327^2) = 38048 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -206.9; Ty = 664.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.829
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(12212/1324138)^2+308090/1451200+0.7*144032/1451200=0.28 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -473.226; My = -147.489; N = -468.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.04 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -206.9; Ty = 664.3; Mt = 0.404

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.829
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2060 <= 177414 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 2.923

Asta 79: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200

Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(2353^2+4756^2) = 5306 <= 144828 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = 43; Ty = -87

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(12574/1324138)^2+311246/1451200+0.7*145593/1451200=0.28 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -478.074; My = -149.087; N = -482.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 45.7; Ty = -83.5; Mt = 2.084

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
1469 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 2.084

Asta 80: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(18969^2+48654^2) = 52221 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 346.9; Ty = -889.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(12793/1324138)^2+290732/1451200+0.7*129863/1451200=0.26 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -446.564; My = -132.979; N = -491.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71

τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0.01+0.06 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 346.9; Ty = -889.7; Mt = 9.362

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
5171 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 7.337

Asta 81: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.416

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.416
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4624^2+128381^2) = 128464 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -84.6; Ty = -2347.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.416
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(13098/1324138)^2+810636/1451200+0.7*128649/1451200=0.62 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 1245.137; My = 131.737; N = -503

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.416
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.3+0+0.44 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -84.6; Ty = -2347.5; Mt = 100.066

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.416
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
62514 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 88.704

Asta 82: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.424

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080

Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6241^2+116816^2) = 116983 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 114.1; Ty = 2136.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(12217/1324138)^2+793050/1451200+0.7*117800/1451200=0.6 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 1218.125; My = 120.627; N = -469.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.3+0+0.32 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 155.4; Ty = 1507.2; Mt = -75.287

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.424
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
53058 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -75.287

Asta 83: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
156455/1088400+0.7*112962/1088400=0.22 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 240.316; My = 115.673

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(14109^2+33535^2) = 36382 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -258; Ty = 613.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0.01+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -258; Ty = 613.2; Mt = -2.939

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2498 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -3.545

Asta 84: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(9056^2+20532^2) = 22441 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 165.6; Ty = -375.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(12778/1324138)^2+118599/1451200+0.7*69415/1451200=0.12 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -182.168; My = -71.081; N = -490.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 165.6; Ty = -375.5; Mt = 6.173

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4350 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 6.173

Asta 85: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.505

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.505
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2535^2+82696^2) = 82735 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 46.4; Ty = -1512.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.505
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(13073/1324138)^2+579644/1451200+0.7*85877/1451200=0.44 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 890.333; My = 87.938; N = -502

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.505
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.26+0+0.15 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -24.8; Ty = -1030.8; Mt = 66.284

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.505
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
46714 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 66.284

Asta 86: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.335

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(20119^2+118566^2) = 120260 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 367.9; Ty = 2168.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(13591/1324138)^2+593673/1451200+0.7*91507/1451200=0.45 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 911.881; My = 93.703; N = -521.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.4+0.02+0.32 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 368.8; Ty = 1504.3; Mt = -101.615

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.335
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
71614 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -101.615

Asta 87: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(27141^2+36006^2) = 45089 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -496.3; Ty = 658.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(14481/1324138)^2+225354/1451200+0.7*195143/1451200=0.25 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -346.143; My = -199.827; N = -556.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0.02+0.03 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -379.2; Ty = 444.7; Mt = -9.607

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
6771 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -9.607

Asta 88: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
0.7*101636/1088400+248709/1088400=0.29 <= 1 (formula 4.4.5b) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -156.113; My = -254.678

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(12989^2+6777^2) = 14650 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -237.5; Ty = -123.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0.01+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -237.5; Ty = -123.9; Mt = 3.28

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3250 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 4.612

Asta 89: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.626

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(57697^2+16972^2) = 60141 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 1055; Ty = -310.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1

(9487/993103)^2+0.7*51918/1088400+259231/1088400=0.27 <= 1 [4.4.7b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -79.745; My = 265.452; N = -364.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0.09+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 784.3; Ty = -142.8; Mt = 8.123

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
6367 <= 177414 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 9.035

Asta 90: Trave in legno a falda Falda 1 fili 126-154

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.641

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(11612^2+70159^2) = 71113 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -212.3; Ty = 1282.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(14934/1324138)^2+361799/1451200+0.7*90889/1451200=0.29 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 555.723; My = 93.07; N = -573.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.1+0+0.13 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -212.3; Ty = 1282.9; Mt = 35.024

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.641
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
24834 <= 236552 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = 35.237

Asta 91: Trave in legno a falda Falda 1 fili 126-154

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4146^2+19921^2) = 20348 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -75.8; Ty = 364.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(11166/1324138)^2+369208/1451200+0.7*118960/1451200=0.31 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -567.104; My = -121.815; N = -428.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -75.2; Ty = 355; Mt = 2.612

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1841 <= 236552 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = 2.612

Asta 92: Trave in legno a falda Falda 1 fili 126-154

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(8018^2+34294^2) = 35219 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 146.6; Ty = -627.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)

(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(11329/1324138)^2+372259/1451200+0.7*112906/1451200=0.31 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -571.789; My = -115.615; N = -435

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 146.6; Ty = -627.1; Mt = -6.003

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4307 <= 236552 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -6.111

Asta 93: Trave in legno a falda Falda 1 fili 126-154

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.454

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.454
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(9643^2+86613^2) = 87148 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 176.3; Ty = -1583.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.454
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(13276/1324138)^2+416104/1451200+0.7*120487/1451200=0.34 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 639.135; My = 123.379; N = -509.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.454
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.12+0+0.2 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 176.3; Ty = -1583.8; Mt = -39.592

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.454
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
28615 <= 236552 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -40.603

Asta 94: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.882

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(18457^2+30694^2) = 35816 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -337.5; Ty = 561.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.882
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(15872/1324138)^2+208784/1451200+0.7*194178/1451200=0.24 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -320.691; My = -198.839; N = -609.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0.01+0.02 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -199.9; Ty = 344.3; Mt = -6.807

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.882
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
5036 <= 177414 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -7.146

Asta 95: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(12363^2+2104^2) = 12541 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 226.1; Ty = 38.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(10707/1324138)^2+0.7*194920/1451200+244622/1451200=0.26 <= 1 [4.4.7b] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -299.396; My = -250.493; N = -411.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0.01+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 255.3; Ty = 70.7; Mt = -5.21

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3672 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -5.21

Asta 96: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(19292^2+45974^2) = 49857 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 352.8; Ty = -840.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(8760/1324138)^2+244239/1451200+0.7*181218/1451200=0.26 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 375.151; My = 185.568; N = -336.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0.01+0.06 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 352.8; Ty = -840.7; Mt = 13.732

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
8591 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente

Mt = 12.191

Asta 97: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.224

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.224
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(27184^2+120194^2) = 123230 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -497.1; Ty = -2197.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.224
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(9370/1324138)^2+548899/1451200+0.7*95936/1451200=0.42 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 843.109; My = 98.239; N = -359.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.224
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.59+0.03+0.32 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -487.7; Ty = -1497.5; Mt = 147.936

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.224
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
104258 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 147.936

Asta 98: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.616

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d

Sqrt(4077^2+70683^2) = 70801 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -74.6; Ty = 1292.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(8772/1324138)^2+537669/1451200+0.7*90337/1451200=0.41 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 825.86; My = 92.505; N = -336.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.25+0+0.1 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 6.5; Ty = 857.5; Mt = -61.806

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.616
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
43558 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -61.806

Asta 99: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5336^2+14320^2) = 15281 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -97.6; Ty = 261.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(8911/1324138)^2+114189/1451200+0.7*40317/1451200=0.1 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -175.394; My = -41.284; N = -342.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -97.6; Ty = 261.8; Mt = -6.368

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6

τ,tor,d <= Ksh * fv,d
3380 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -4.796

Asta 100: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(10358^2+39824^2) = 41149 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 189.4; Ty = -728.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(9489/1324138)^2+274772/1451200+0.7*129021/1451200=0.25 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 422.05; My = 132.117; N = -364.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.04 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 189.4; Ty = -728.2; Mt = -4.12

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2905 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -4.122

Asta 101: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.313

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.313
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(11828^2+137581^2) = 138089 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -216.3; Ty = -2515.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.313
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(9778/1324138)^2+775824/1451200+0.7*99326/1451200=0.58 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 1191.666; My = 101.71; N = -375.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.313
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.51+0.01+0.46 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -253.8; Ty = -1793.1; Mt = 128.407

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.313
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
90495 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 128.407

Asta 102: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.527

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(937^2+111531^2) = 111535 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 17.1; Ty = 2039.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(10385/1324138)^2+792979/1451200+0.7*109498/1451200=0.6 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 1218.015; My = 112.126; N = -398.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.22+0+0.33 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 17.1; Ty = 2039.4; Mt = -75.32

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.527

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
47305 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -67.123

Asta 103: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(14169^2+40954^2) = 43336 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -259.1; Ty = 748.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(10651/1324138)^2+290928/1451200+0.7*112742/1451200=0.25 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -446.865; My = -115.448; N = -409

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0.01+0.04 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -259.1; Ty = 748.9; Mt = -6.899

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
3834 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -5.44

Asta 104: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(1818^2+3225^2) = 3701 <= 144828 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = -33.2; Ty = 59

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(10938/1324138)^2+285462/1451200+0.7*101996/1451200=0.25 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -438.47; My = -104.444; N = -420

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -31.9; Ty = 41.4; Mt = -2.852

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2010 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -2.852

Asta 105: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.039

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.039
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(12720^2+40796^2) = 42733 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 232.6; Ty = -746

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.039
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(14778/1324138)^2+261328/1451200+0.7*125155/1451200=0.24 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 401.4; My = 128.159; N = -567.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.039
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.04 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Tx = 232.6; Ty = -746; Mt = 2.423

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.039
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1775 <= 236552 Comb: SLU, 37; Durata minima del carico nella combinazione: media
Mt = 2.518

Asta 106: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.108

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
450354/1088400+0.7*135727/1088400=0.5 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -691.744; My = 138.984

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.108
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(9504^2+50547^2) = 51433 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -173.8; Ty = -924.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.108
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0.12 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -173.8; Ty = -924.3; Mt = -23.18

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.108
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
16336 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -23.18

Asta 107: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.327

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200

Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.327
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
297108/1088400+0.7*80409/1088400=0.32 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 456.358; My = -82.339

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.327
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2702^2+17139^2) = 17351 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -49.4; Ty = -313.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.327
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -49.4; Ty = -313.4; Mt = -16.046

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.327
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
9024 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -12.804

Asta 108: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.28

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3986^2+36370^2) = 36587 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -72.9; Ty = -665

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(14823/1324138)^2+748454/1451200+0.7*158843/1451200=0.59 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 1149.626; My = -162.655; N = -569.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71

τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.04 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -72.8; Ty = -665; Mt = 25.596

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
18039 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 25.596

Asta 109: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.156

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.156
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(23584^2+67634^2) = 71628 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 431.3; Ty = -1236.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.156
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(30265/1324138)^2+739427/1451200+0.7*95840/1451200=0.56 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 1135.76; My = -98.14; N = -1162.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.156
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.59+0.01+0.12 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 431.3; Ty = -1236.7; Mt = 197.533

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.156
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
139212 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 197.533

Asta 110: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.194

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080

Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
22042/1160960+152868/1451200+0.7*74573/1451200=0.16 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 234.805; My = 76.363; N = 846.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(492^2+29387^2) = 29391 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 9; Ty = 537.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.14+0+0.02 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 75.4; Ty = 325.7; Mt = -35.974

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.194
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
25353 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -35.974

Asta 111: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.929

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.929
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
29377/1160960+234078/1451200+0.7*2389/1451200=0.19 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -359.544; My = -2.446; N = 1128.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5006^2+33928^2) = 34295 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -91.5; Ty = 620.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.03 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -80; Ty = 618.4; Mt = -26.1

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.929
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
18394 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = -26.1

Asta 112: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.282

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.026
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
20227/1160960+263267/1451200+0.7*45014/1451200=0.22 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -404.379; My = 46.095; N = 776.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1181^2+9534^2) = 9607 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 21.6; Ty = 174.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 21.6; Ty = 174.3; Mt = 11.021

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.282
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7767 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 11.021

Asta 113: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.28

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
20178/1160960+240421/1451200+0.7*45671/1451200=0.21 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -369.287; My = 46.767; N = 774.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1301^2+22601^2) = 22639 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -23.8; Ty = -413.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -25.6; Ty = -412.7; Mt = -3.354

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2364 <= 236552 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -3.354

Asta 114: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.562

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.562
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
22104/1160960+153415/1451200+0.7*65928/1451200=0.16 <= 1 [4.4.6a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 235.645; My = -67.51; N = 848.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.562
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(7449^2+21409^2) = 22668 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -136.2; Ty = -391.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.562
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -136.2; Ty = -391.5; Mt = -7.985

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.562
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
7914 <= 325259 Comb: SLV, 11; Durata minima del carico nella combinazione: istantaneo
Mt = -11.23

Asta 115: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.614

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(7353^2+10998^2) = 13230 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 134.5; Ty = 201.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.614
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(156589/993103)^2+62219/1088400+0.7*21984/1088400=0.1 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -95.568; My = 22.512; N = -6013

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 134.5; Ty = 201.1; Mt = 2.197

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.614
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1548 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 2.197

Asta 116: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.001

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6348^2+5601^2) = 8466 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -116.1; Ty = 102.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(171593/993103)^2+55517/1088400+0.7*47497/1088400=0.11 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -85.274; My = 48.637; N = -6589.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.001
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Tx = -31.1; Ty = -84.7; Mt = -7.026

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.001
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4952 <= 325259 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mt = -7.026

Asta 117: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.24

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(24082^2+4326^2) = 24467 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 440.4; Ty = 79.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1

(181399/993103)^2+59941/1088400+0.7*40591/1088400=0.11 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -92.069; My = -41.565; N = -6965.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0.02+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 440.4; Ty = 79.1; Mt = -9.164

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.24
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6458 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -9.164

Asta 118: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.143

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.143
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(8804^2+4644^2) = 9954 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 161; Ty = -84.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.143
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(183000/993103)^2+0.7*14424/1088400+199176/1088400=0.23 <= 1 [4.4.7b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -22.155; My = 203.956; N = -7027.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.143
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Tx = 179.2; Ty = -147.4; Mt = 6.686

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.143
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4712 <= 325259 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Mt = 6.686

Asta 120: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.868

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
0.7*221683/1088400+325323/1088400=0.44 <= 1 (formula 4.4.5b) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 340.505; My = -333.131

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(31726^2+15945^2) = 35508 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 580.1; Ty = 291.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0.05+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 580.1; Ty = 291.6; Mt = 5.509

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.868
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
3882 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 5.509

Asta 121: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.28

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
74355/870720+0.7*62371/1088400+156562/1088400=0.27 <= 1 [4.4.6b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 95.802; My = 160.319; N = 2855.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(8358^2+5360^2) = 9929 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -152.8; Ty = -98

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -152.8; Ty = -98; Mt = 2.512

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
1770 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 2.512

Asta 122: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.279

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.279
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
106540/1160960+218709/1451200+0.7*166544/1451200=0.32 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 335.936; My = -170.541; N = 4091.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.279
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(13318^2+18704^2) = 22961 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -243.5; Ty = -342

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.279
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -243.3; Ty = -342; Mt = 11.794

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.279
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8312 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 11.794

Asta 123: Trave in legno a falda Falda 5 fili 267-272

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.24

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.24
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
28700/1602207+0.7*35033/2002759+44636/2002759=0.05 <= 1 [4.4.6b] Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Mx = 26.485; My = 26.246; N = 723.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.24
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(5681^2+5397^2) = 7836 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 68.2; Ty = -64.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.24
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 68.2; Ty = -64.8; Mt = 2.108

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.24
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2684 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 2.108

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.136
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.24/0=177993.1 > 300 Comb: SLE rara, 15

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.12
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.24/0=807291.9 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.136
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite

0.24/0=117940.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,000 = 0,500
Variabile H = 0,000 + 1,000 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 124: Trave in legno a falda Falda 5 fili 261-273

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.234

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.234
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(27054/1820690)^2+330507/2002759+0.7*73300/2002759=0.19 <= 1 [4.4.7a] Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mx = -249.863; My = -43.1; N = -681.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(3824^2+20721^2) = 21071 <= 265517 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = -45.9; Ty = 248.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = -48.6; Ty = 228.9; Mt = -3.819

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.234
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2858 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -2.245

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.658
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.234/0.0001=22669.4 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.617
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0

Luce/Uinst,var > limite
1.234/0=46596.9 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.658
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0001
Ufin = 0.0001
Luce/Ufin > limite
1.234/0.0001=17280.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Asta 125: Trave in legno a falda Falda 5 fili 255-274

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.335

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 2.335
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
146187/1602207+584249/2002759+0.7*20340/2002759=0.39 <= 1 [4.4.6a] Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Mx = -441.692; My = -11.96; N = 3683.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2952^2+25946^2) = 26113 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 35.4; Ty = 311.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 35.4; Ty = 311.3; Mt = -1.459

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.335
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2821 <= 316724 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mt = -2.216

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.401
Kdef = 0
Uinst tot in x = -0.0004
Uinst tot in y = -0.0005
Uinst tot = 0.0005
Luce/Uinst,tot > limite

2.335/0.0005=4819.7 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.323
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
2.335/0.0002=10768.4 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.012
Kdef = 0.6
Ufin in x = -0.0007
Ufin in y = -0.0005
Ufin = 0.0007
Luce/Ufin > limite
2.335/0.0007=3507.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Neve = 0,500 + 0,000 = 0,500
Vento = 0,600 + 0,000 = 0,600

Asta 126: Trave in legno a falda Falda 5 fili 244-246

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.686

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.686
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
107715/873931+189273/1092414+0.7*184166/1092414=0.41 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 143.09; My = 108.289; N = 2714.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.686
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(22805^2+24848^2) = 33726 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 273.7; Ty = -298.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.686
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0.02+0.03 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 273.7; Ty = -298.2; Mt = 8.906

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.686
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
11338 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente

Mt = 8.906

Asta 127: Trave in legno a falda Falda 5 fili 238-247

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.643

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.643
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
32963/873931+316216/1092414+0.7*166952/1092414=0.43 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 239.059; My = 98.167; N = 830.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.643
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(11420^2+37984^2) = 39663 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 137; Ty = -455.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.643
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.03 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 109.6; Ty = -312.5; Mt = 8.709

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.643
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
11087 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 8.709

Asta 128: Trave in legno a falda Falda 5 fili 233-249

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.678

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.678
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d

Sqrt(13021^2+35616^2) = 37922 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 156.3; Ty = -427.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.678
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(12513/993103)^2+576807/1092414+0.7*228334/1092414=0.67 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 436.066; My = 134.26; N = -315.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.678
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.06 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 145.9; Ty = -581.2; Mt = 11.499

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.678
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
14639 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 11.499

Asta 129: Trave in legno a falda Falda 5 fili 239-250

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.827

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.827
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(23807^2+48466^2) = 53998 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 285.7; Ty = -581.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.827
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(29060/993103)^2+448377/1092414+0.7*236505/1092414=0.56 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 338.973; My = 139.065; N = -732.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.827
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0.03+0.11 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 285.7; Ty = -581.6; Mt = -3.754

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.827
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6

τ,tor,d <= Ksh * fv,d
5159 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -4.053

Asta 130: Trave in legno a falda Falda 5 fili 251-280

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.166

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(81330^2+27342^2) = 85803 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -976; Ty = 328.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(326382/993103)^2+0.7*274815/1092414+353350/1092414=0.61 <= 1 [4.4.7b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 207.76; My = 207.77; N = -8224.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.25+0.32+0.04 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -976; Ty = 328.1; Mt = 34.28

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.166
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
58533 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 45.977

Asta 131: Trave in legno a falda Falda 5 fili 251-280

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.441

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.441
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4332^2+24073^2) = 24460 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -52; Ty = -288.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.441
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(364169/993103)^2+250289/1092414+0.7*109129/1092414=0.43 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 189.219; My = -64.168; N = -9177

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.441
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -52; Ty = -288.9; Mt = 8.562

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.441
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
9173 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 7.205

Asta 132: Trave in legno a falda Falda 5 fili 256-281

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(27057/1820690)^2+516209/2002759+0.7*49474/2002759=0.28 <= 1 [4.4.7a] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 390.254; My = -29.091; N = -681.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4493^2+19812^2) = 20315 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -53.9; Ty = -237.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -53.9; Ty = -237.7; Mt = -1.752

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.642

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4470 <= 316724 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mt = -3.511

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.04
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.642/0.0001=14894.9 > 300 Comb: SLE rara, 20

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.821
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
1.642/0.0001=18965.2 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.04
Kdef = 0.6
Ufin in x = -0.0002
Ufin in y = -0.0001
Ufin = 0.0002
Luce/Ufin > limite
1.642/0.0002=9650.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Neve = 0,500 + 0,000 = 0,500

Asta 133: Trave in legno a falda Falda 5 fili 262-282

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.746

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.746
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
7554/1602207+223394/2002759+0.7*73727/2002759=0.14 <= 1 [4.4.6a] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 168.886; My = -43.351; N = 190.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.746
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(14577^2+10229^2) = 17808 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -174.9; Ty = -122.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.746

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0.01+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -174.9; Ty = -122.7; Mt = -4.576

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.746
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4398 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -3.454

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.473
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.746/0=21526.8 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.348
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.746/0=108702.4 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.473
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = 0
Ufin = 0.0001
Luce/Ufin > limite
0.746/0.0001=14345.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 134: Trave in legno a falda Falda 3 fili 32-307

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.882

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(20155^2+11983^2) = 23449 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -368.6; Ty = 219.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(52677/993103)^2+0.7*163588/1088400+289600/1088400=0.37 <= 1 [4.4.7b] Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mx = -251.271; My = 296.551; N = -2022.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0.02+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -368.6; Ty = 219.1; Mt = 19.764

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.882
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
13929 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 19.764

Asta 135: Trave in legno a falda Falda 3 fili 32-307

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(13065^2+13011^2) = 18438 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 238.9; Ty = 237.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(81627/1324138)^2+398071/1451200+0.7*208481/1451200=0.38 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -611.437; My = 213.485; N = -3134.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0.01+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 269; Ty = 196.8; Mt = 29.388

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
20711 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 29.388

Asta 136: Trave in legno a falda Falda 3 fili 32-307

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6556^2+4558^2) = 7985 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -119.9; Ty = 83.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(82951/1324138)^2+408356/1451200+0.7*194424/1451200=0.38 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -627.234; My = 199.09; N = -3185.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -119.9; Ty = 83.4; Mt = 29.877

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
21058 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 29.88

Asta 137: Trave in legno a falda Falda 3 fili 32-307

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(1138^2+5307^2) = 5428 <= 144828 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = 20.8; Ty = -97

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(82383/1324138)^2+438856/1451200+0.7*143321/1451200=0.38 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -674.082; My = 146.761; N = -3163.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -87.2; Ty = -78; Mt = 4.671

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3292 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 4.671

Asta 138: Trave in legno a falda Falda 3 fili 32-307

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2989^2+26281^2) = 26451 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -54.7; Ty = -480.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(82809/1324138)^2+404464/1451200+0.7*81379/1451200=0.32 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -621.257; My = 83.332; N = -3179.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -54.7; Ty = -480.6; Mt = 14.43

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
10169 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media

Mt = 14.43

Asta 139: Trave in legno a falda Falda 3 fili 32-307

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.833

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.833
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(10871^2+41251^2) = 42659 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -198.8; Ty = -754.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.833
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(83698/1324138)^2+239835/1451200+0.7*152577/1451200=0.24 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 368.387; My = -156.239; N = -3214

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.833
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.05 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -198.8; Ty = -754.3; Mt = 2.352

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.833
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
1600 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 2.27

Asta 140: Trave in legno a falda Falda 3 fili 32-307

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.513

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.513
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d

Sqrt(54991^2+115674^2) = 128080 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 1005.6; Ty = -2115.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.513
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(6117/1324138)^2+694235/1451200+0.7*291783/1451200=0.62 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 1066.345; My = 298.786; N = -234.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.513
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.27+0.08+0.36 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 1005.6; Ty = -2115.2; Mt = -90.283

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.513
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
49104 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -69.675

Asta 141: Trave in legno a falda Falda 2 fili 32-26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.774

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
298125/870720+479292/1088400+0.7*113242/1088400=0.86 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -736.193; My = 115.96; N = 11448

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.774
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(17371^2+58719^2) = 61235 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -317.6; Ty = -1073.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.774
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0.01+0.16 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -317.6; Ty = -1073.7; Mt = 6.425

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.774
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8

τ,tor,d <= Ksh * fv,d
13785 <= 236552 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = 19.56

Asta 145: Trave in legno a falda Falda 2 fili 32-26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.338

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.338
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
32846/870720+126730/1088400+0.7*53815/1088400=0.19 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -194.657; My = 55.106; N = 1261.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(10543^2+27426^2) = 29382 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -192.8; Ty = 501.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0.01 <= 1 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = -195.4; Ty = 549.5; Mt = -32.923

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.338
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
23203 <= 325259 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mt = -32.923

Asta 146: Trave in legno a falda Falda 2 fili 32-26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.841

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(12035^2+47959^2) = 49446 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -220.1; Ty = 877

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(222017/993103)^2+228395/1088400+0.7*115134/1088400=0.33 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 350.814; My = 117.897; N = -8525.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.06 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -220.1; Ty = 877; Mt = 3.756

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.841
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4313 <= 325259 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mt = 6.121

Asta 147: Trave in legno a falda Falda 2 fili 32-26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(541^2+4979^2) = 5009 <= 144828 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = 9.9; Ty = 91.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(216904/993103)^2+148265/1088400+0.7*27761/1088400=0.2 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -227.735; My = 28.427; N = -8329.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 18.7; Ty = 79.1; Mt = 9.115

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
6424 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 9.115

Asta 148: Trave in legno a falda Falda 2 fili 32-26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.522

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.522
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(44487^2+61954^2) = 76272 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -813.5; Ty = -1132.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.522
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(206212/993103)^2+0.7*226104/1088400+336871/1088400=0.5 <= 1 [4.4.7b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 347.296; My = -344.956; N = -7918.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.522
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0.09+0.18 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -813.5; Ty = -1132.9; Mt = -7.031

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.522
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
12834 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = -18.211

Asta 149: Trave in legno a falda Falda 6 fili 191-251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.44

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3293^2+52371^2) = 52474 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -60.2; Ty = 957.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(35142/1324138)^2+644256/1451200+0.7*4124/1451200=0.45 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 989.577; My = -4.223; N = -1349.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.1+0+0.07 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -60.4; Ty = 957.5; Mt = 34.217

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.44
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
19339 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 27.44

Asta 150: Trave in legno a falda Falda 6 fili 191-251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(11780^2+23377^2) = 26178 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 215.4; Ty = 427.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(36711/1324138)^2+450769/1451200+0.7*123208/1451200=0.37 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -692.381; My = 126.165; N = -1409.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Tx = 215.7; Ty = 427.3; Mt = -21.257

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
14981 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -21.257

Asta 151: Trave in legno a falda Falda 6 fili 191-251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(16989^2+2202^2) = 17132 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 310.7; Ty = -40.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(37886/1324138)^2+451291/1451200+0.7*307177/1451200=0.46 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -693.183; My = 314.549; N = -1454.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0.01+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 310.7; Ty = -40.3; Mt = -23.539

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
16590 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -23.54

Asta 152: Trave in legno a falda Falda 6 fili 191-251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200

Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(14462^2+5421^2) = 15445 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -264.4; Ty = -99.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(38788/1324138)^2+454691/1451200+0.7*284361/1451200=0.45 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -698.405; My = 291.185; N = -1489.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0.01+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -264.4; Ty = -99.1; Mt = -17.608

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
12409 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -17.608

Asta 153: Trave in legno a falda Falda 6 fili 191-251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(8207^2+23766^2) = 25143 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -150.1; Ty = -434.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(38546/1324138)^2+385988/1451200+0.7*110089/1451200=0.32 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -592.878; My = 112.731; N = -1480.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71

τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -148.2; Ty = -430.6; Mt = -27.905

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
16777 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -23.805

Asta 154: Trave in legno a falda Falda 6 fili 191-251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.626

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(47998^2+28347^2) = 55743 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 877.7; Ty = -518.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(23702/993103)^2+0.7*14232/1088400+517948/1088400=0.49 <= 1 [4.4.7b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 21.86; My = 530.378; N = -910.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0.11+0.04 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 877.7; Ty = -518.3; Mt = -21.092

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
14865 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -21.092

Asta 155: Trave in legno a falda Falda 5 fili 251-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.772

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080

Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
301634/870720+430413/1088400+0.7*228183/1088400=0.89 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -661.114; My = -233.659; N = 11582.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.772
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(25627^2+54978^2) = 60657 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 468.6; Ty = -1005.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.772
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0.03+0.14 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 468.6; Ty = -1005.3; Mt = 0.309

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.772
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
10539 <= 236552 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = -14.955

Asta 159: Trave in legno a falda Falda 5 fili 251-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.339

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.339
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
34864/870720+111249/1088400+0.7*62247/1088400=0.18 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -170.879; My = -63.741; N = 1338.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(11839^2+26836^2) = 29332 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 216.5; Ty = 490.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0.01 <= 1 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = 184.1; Ty = 533; Mt = 39.274

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.339
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
27678 <= 325259 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = 39.274

Asta 160: Trave in legno a falda Falda 5 fili 251-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.839

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(12315^2+51305^2) = 52762 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 225.2; Ty = 938.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(272014/1324138)^2+331670/1451200+0.7*139480/1451200=0.34 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 509.445; My = -142.828; N = -10445.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.07 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 225.2; Ty = 938.2; Mt = -1.564

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.839
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
5772 <= 325259 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = 8.191

Asta 161: Trave in legno a falda Falda 5 fili 251-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(4660^2+7613^2) = 8926 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -85.2; Ty = 139.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(210197/993103)^2+174848/1088400+0.7*62719/1088400=0.25 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -268.566; My = -64.224; N = -8071.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -85.2; Ty = 139.2; Mt = -7.659

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
5397 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -7.659

Asta 162: Trave in legno a falda Falda 5 fili 251-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.525

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.525
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(55359^2+57032^2) = 79481 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 1012.3; Ty = -1042.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.525
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(200875/993103)^2+0.7*174311/1088400+417119/1088400=0.54 <= 1 [4.4.7b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 267.742; My = 427.13; N = -7713.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.525
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0.15+0.16 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 1012.3; Ty = -1042.9; Mt = 4.281

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.525
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
11570 <= 236552 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = 16.417

Asta 163: Trave in legno a falda Falda 1 fili 230-229

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.517

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.517
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1550^2+37059^2) = 37091 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 18.6; Ty = -444.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.517
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(98670/993103)^2+488343/1092414+0.7*17838/1092414=0.47 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 369.188; My = 10.489; N = -2486.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.517
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.04 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 18.6; Ty = -444.7; Mt = -5.699

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.517
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
5603 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -4.401

Asta 164: Trave in legno a falda Falda 1 fili 216-215

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.517

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.517
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(244^2+35515^2) = 35516 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -2.9; Ty = -426.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.517
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(25462/993103)^2+516219/1092414+0.7*2242/1092414=0.47 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 390.262; My = 1.318; N = -641.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.517
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -2.9; Ty = -426.2; Mt = -1.052

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.517
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1339 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -1.052

Asta 165: Trave in legno a falda Falda 1 fili 206-211

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(445^2+40010^2) = 40012 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 5.3; Ty = -480.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1

(5701/993103)^2+515986/1092414+0.7*8975/1092414=0.48 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 390.086; My = 5.278; N = -143.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.04 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 5.3; Ty = -480.1; Mt = -0.139

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
653 <= 316724 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mt = -0.513

Asta 166: Trave in legno a falda Falda 1 fili 200-199

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(23^2+46750^2) = 46750 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -0.3; Ty = -561

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(16275/993103)^2+619770/1092414+0.7*6999/1092414=0.57 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 468.546; My = -4.115; N = -410.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.06 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -0.3; Ty = -561; Mt = 1.421

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
1498 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 1.177

Asta 167: Trave in legno a falda Falda 1 fili 189-188

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(838^2+47918^2) = 47925 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 10.1; Ty = -575

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(15890/993103)^2+535223/1092414+0.7*20882/1092414=0.5 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 404.629; My = 12.279; N = -400.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.06 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 10.1; Ty = -575; Mt = 8.237

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
7924 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 6.224

Asta 168: Trave in legno a falda Falda 1 fili 180-179

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
10962/873931+303042/1092414+0.7*8501/1092414=0.3 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -229.1; My = 4.999; N = 276.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(322^2+39769^2) = 39771 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -3.9; Ty = -477.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.04 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -3.8; Ty = -477.2; Mt = 6.995

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
7134 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 5.604

Asta 169: Trave in legno a falda Falda 1 fili 167-170

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
27847/873931+225845/1092414+0.7*2006/1092414=0.24 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -170.738; My = -1.18; N = 701.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(496^2+33738^2) = 33741 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 6; Ty = -404.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 6; Ty = -404.8; Mt = 1.823

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2849 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 2.238

Asta 170: Trave in legno a falda Falda 1 fili 315-161

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.517

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
27251/873931+323413/1092414+0.7*54472/1092414=0.36 <= 1 [4.4.6a] Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mx = -244.5; My = -32.03; N = 686.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2405^2+32566^2) = 32655 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 28.9; Ty = -390.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 28.9; Ty = -390.8; Mt = -0.609

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1231 <= 230345 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = -0.967

Asta 171: Trave in legno a falda Falda 1 fili 147-146

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1942^2+29770^2) = 29833 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 23.3; Ty = -357.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(31485/1324138)^2+350257/1456552+0.7*47533/1456552=0.26 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 264.794; My = 27.95; N = -793.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 23.3; Ty = -357.2; Mt = 3.2

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4073 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 3.2

Asta 172: Trave in legno a falda Falda 1 fili 141-140

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(495^2+35138^2) = 35141 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 5.9; Ty = -421.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(37306/1324138)^2+388388/1456552+0.7*12021/1456552=0.27 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 293.621; My = 7.068; N = -940.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 5.9; Ty = -421.7; Mt = 0.705

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
898 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Mt = 0.705

Asta 173: Trave in legno a falda Falda 1 fili 132-131

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(724^2+29868^2) = 29876 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -8.7; Ty = -358.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(27691/1324138)^2+345126/1456552+0.7*15718/1456552=0.24 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 260.915; My = -9.242; N = -697.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -8.7; Ty = -358.4; Mt = -2.924

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3722 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -2.924

Asta 174: Trave in legno a falda Falda 1 fili 120-119

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.894

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
22641/873931+230524/1092414+0.7*32035/1092414=0.26 <= 1 [4.4.6a] Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mx = -174.276; My = 18.836; N = 570.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.894
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(937^2+25581^2) = 25598 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -11.2; Ty = -307

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.894
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -11.2; Ty = -307; Mt = 0.988

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.894
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4029 <= 316724 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mt = 3.165

Asta 175: Trave in legno a falda Falda 1 fili 120-119

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.311

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
13065/873931+76587/1092414+0.7*5539/1092414=0.09 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 57.9; My = -3.257; N = 329.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1683^2+20646^2) = 20715 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -20.2; Ty = -247.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -20.2; Ty = -247.8; Mt = -8.593

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8

τ,tor,d <= Ksh * fv,d
10940 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -8.593

Asta 176: Trave in legno a falda Falda 1 fili 120-119

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.311

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
9537/1602207+81807/2002759+0.7*27464/2002759=0.06 <= 1 [4.4.6a] Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = -61.846; My = 16.149; N = 240.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(7551^2+33587^2) = 34425 <= 265517 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = -90.6; Ty = -403

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.02 <= 1 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = -90.6; Ty = -403; Mt = -10.862

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
13828 <= 316724 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mt = -10.862

Asta 177: Trave in legno a falda Falda 1 fili 113-112

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.252
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
20506/873931+154827/1092414+0.7*13734/1092414=0.17 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -117.049; My = -8.075; N = 516.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(415^2+32698^2) = 32701 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 5; Ty = -392.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 5; Ty = -392.4; Mt = -1.387

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2551 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -2.004

Asta 178: Trave in legno a falda Falda 1 fili 101-100

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
252126/1092414+0.7*12651/1092414=0.24 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 190.608; My = 7.439

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(536^2+35047^2) = 35052 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 6.4; Ty = -420.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 6.4; Ty = -420.5; Mt = -5.774

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.515

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
5970 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -4.689

Asta 179: Trave in legno a falda Falda 1 fili 93-92

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
8748/873931+471084/1092414+0.7*15151/1092414=0.45 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 356.139; My = -8.909; N = 220.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(750^2+43954^2) = 43961 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -9; Ty = -527.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.05 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -9; Ty = -527.5; Mt = -7.501

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
7222 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -5.673

Asta 180: Trave in legno a falda Falda 1 fili 85-84

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
59394/873931+855701/1092414+0.7*32859/1092414=0.87 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -646.91; My = -19.321; N = 1496.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1702^2+65662^2) = 65684 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 20.4; Ty = -787.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.12 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 20.4; Ty = -787.9; Mt = -1.904

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2101 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -1.65

Asta 181: Trave in legno a falda Falda 1 fili 77-76

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
12645/873931+477583/1092414+0.7*22593/1092414=0.47 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 361.053; My = 13.285; N = 318.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1181^2+39485^2) = 39503 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 14.2; Ty = -473.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.04 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media

Tx = 14.2; Ty = -473.8; Mt = -1.13

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
1273 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -1

Asta 182: Trave in legno a falda Falda 1 fili 66-65

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
491474/1092414+0.7*1434/1092414=0.45 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 371.554; My = 0.843

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(278^2+35055^2) = 35056 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 3.3; Ty = -420.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 3.3; Ty = -420.7; Mt = -0.418

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
987 <= 316724 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mt = -0.776

Asta 183: Trave in legno a falda Falda 1 fili 57-56

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200

Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2085^2+31589^2) = 31657 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 25; Ty = -379.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(36763/993103)^2+497416/1092414+0.7*37256/1092414=0.48 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 376.046; My = 21.907; N = -926.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 25; Ty = -379.1; Mt = 5.249

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6682 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 5.249

Asta 184: Trave in legno a falda Falda 1 fili 264-263

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.37

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.37
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(21956/993103)^2+0.7*41133/1092414+117751/1092414=0.13 <= 1 [4.4.7b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -31.096; My = 69.238; N = -553.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(21912^2+5263^2) = 22535 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 262.9; Ty = 63.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71

τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0.02+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 262.9; Ty = 63.2; Mt = 3.228

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.37
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4110 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 3.228

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.234
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.37/0=51094 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.185
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.37/0=334628.5 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.234
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.37/0=33015.3 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Asta 185: Trave in legno a falda Falda 1 fili 258-257

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.284

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.284
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(21150/1820690)^2+149273/2002759+0.7*91881/2002759=0.11 <= 1 [4.4.7a] Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mx = -112.85; My = 54.026; N = -533

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3222^2+10930^2) = 11395 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 38.7; Ty = 131.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 41.8; Ty = 59.5; Mt = 2.146

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.284
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2732 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 2.146

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.685
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.284/0.0001=13956.3 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.685
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
1.284/0.0001=23160.5 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.685
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0001
Ufin = 0.0001
Luce/Ufin > limite
1.284/0.0001=11267.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 186: Trave in legno a falda Falda 1 fili 255-252

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.197

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(86766/993103)^2+0.7*50904/1092414+158447/1092414=0.19 <= 1 [4.4.7b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 38.484; My = -93.167; N = -2186.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6033^2+19970^2) = 20861 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 72.4; Ty = 239.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 72.4; Ty = 239.6; Mt = 3.045

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.197
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
3761 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 2.954

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.172
Kdef = 0
Uinst tot in x = -0.0002
Uinst tot in y = -0.0004
Uinst tot = 0.0004
Luce/Uinst,tot > limite
2.197/0.0004=5883.6 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.172
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
2.197/0.0002=8993.1 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.172
Kdef = 0.6
Ufin in x = -0.0004
Ufin in y = -0.0005
Ufin = 0.0005
Luce/Ufin > limite
2.197/0.0005=4872.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 187: Trave in legno a falda Falda 1 fili 244-241

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.692

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080

Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.692
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
34557/873931+234261/1092414+0.7*150591/1092414=0.35 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 177.101; My = 88.547; N = 870.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.692
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(19738^2+25980^2) = 32627 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 236.9; Ty = -311.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.692
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0.02+0.03 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 236.9; Ty = -311.8; Mt = -5.676

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.692
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
7226 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -5.676

Asta 188: Trave in legno a falda Falda 1 fili 238-235

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.569

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.569
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
19502/873931+333287/1092414+0.7*159934/1092414=0.43 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 251.965; My = 94.041; N = 491.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.569
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(12379^2+36627^2) = 38662 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 148.5; Ty = -439.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.569

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0.01+0.03 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 126.2; Ty = -308.9; Mt = -7.709

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.569
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
9815 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -7.709

Asta 189: Trave in legno a falda Falda 1 fili 229-228

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1186^2+37781^2) = 37800 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -14.2; Ty = 453.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(73008/1324138)^2+486906/1456552+0.7*32993/1456552=0.35 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 368.101; My = 19.4; N = -1839.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.04 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -14.2; Ty = 453.4; Mt = 5.058

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4919 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 3.864

Asta 190: Trave in legno a falda Falda 1 fili 215-214

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(543^2+41847^2) = 41850 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -6.5; Ty = 502.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(5781/993103)^2+434076/1092414+0.7*2474/1092414=0.4 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 328.162; My = 1.455; N = -145.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.05 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -6.5; Ty = 502.2; Mt = -0.115

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
759 <= 316724 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = 0.597

Asta 191: Trave in legno a falda Falda 1 fili 211-205

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
505760/1092414+0.7*6472/1092414=0.47 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 382.355; My = 3.806

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(572^2+46605^2) = 46609 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -6.9; Ty = 559.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.06 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -6.9; Ty = 559.3; Mt = 0.245

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
840 <= 316724 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = 0.66

Asta 192: Trave in legno a falda Falda 1 fili 199-198

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
16652/873931+524894/1092414+0.7*24684/1092414=0.52 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 396.82; My = 14.514; N = 419.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1174^2+48732^2) = 48746 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -14.1; Ty = 584.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.06 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -14.1; Ty = 584.8; Mt = -0.674

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
978 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -0.768

Asta 193: Trave in legno a falda Falda 1 fili 84-83

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
92768/873931+566128/1092414+0.7*17807/1092414=0.64 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 427.993; My = -10.471; N = 2337.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(486^2+47970^2) = 47972 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 5.8; Ty = 575.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.06 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 5.8; Ty = 575.6; Mt = 1.114

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
1406 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 1.104

Asta 194: Trave in legno a falda Falda 1 fili 76-75

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
17732/873931+474445/1092414+0.7*3025/1092414=0.46 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 358.68; My = 1.779; N = 446.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d

Sqrt(179^2+41674^2) = 41674 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -2.2; Ty = 500.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.05 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -2.2; Ty = 500.1; Mt = -0.321

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
944 <= 316724 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mt = -0.741

Asta 195: Trave in legno a falda Falda 1 fili 65-64

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
13119/873931+416072/1092414+0.7*16768/1092414=0.41 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 314.55; My = 9.859; N = 330.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(507^2+38273^2) = 38277 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -6.1; Ty = 459.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.04 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -6.1; Ty = 459.3; Mt = 0.384

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
594 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = 0.467

Asta 196: Trave in legno a falda Falda 1 fili 56-55

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
6740/873931+317837/1092414+0.7*5456/1092414=0.3 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 240.285; My = -3.208; N = 169.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(233^2+32871^2) = 32872 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 2.8; Ty = 394.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 2.8; Ty = 394.5; Mt = -4.211

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5361 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -4.211

Asta 197: Trave in legno a falda Falda 1 fili 46-45

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
325932/1092414+0.7*21382/1092414=0.31 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 246.405; My = 12.572

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(679^2+33497^2) = 33504 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -8.2; Ty = 402

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -8.2; Ty = 402; Mt = -4.771

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4752 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -3.732

Asta 198: Trave in legno a falda Falda 1 fili 38-37

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
31350/873931+256890/1092414+0.7*24421/1092414=0.29 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 194.209; My = -14.359; N = 790

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1144^2+30814^2) = 30835 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 13.7; Ty = 369.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 13.7; Ty = 369.8; Mt = -0.876

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
1618 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -1.271

Asta 199: Trave in legno a falda Falda 1 fili 241-240

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
227820/1092414+0.7*99668/1092414=0.27 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 172.232; My = 58.605

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4140^2+29817^2) = 30103 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -49.7; Ty = 357.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -49.7; Ty = 357.8; Mt = 0.321

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
975 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 0.766

Asta 200: Trave in legno a falda Falda 1 fili 235-234

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
24810/873931+316135/1092414+0.7*2597/1092414=0.32 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 238.998; My = -1.527; N = 625.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(409^2+33884^2) = 33886 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -4.9; Ty = 406.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -4.9; Ty = 406.6; Mt = 4.579

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4782 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 3.756

Asta 201: Trave in legno a falda Falda 1 fili 26-33

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(203032/1324138)^2+307679/1456552+0.7*25065/1456552=0.25 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 232.605; My = 14.738; N = -5116.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1938^2+26618^2) = 26688 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 23.3; Ty = -319.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 22.2; Ty = -316.1; Mt = 0.144

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1550 <= 316724 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Mt = -1.217

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.371
Kdef = 0
Uinst tot in x = -0.0002
Uinst tot in y = 0.0004
Uinst tot = 0.0004
Luce/Uinst,tot > limite
2.419/0.0004=5411.4 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.21
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
2.419/0.0002=11136.1 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.371
Kdef = 0.6
Ufin in x = -0.0003
Ufin in y = 0.0007
Ufin = 0.0007
Luce/Ufin > limite
2.419/0.0007=3520.8 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Asta 202: Trave in legno a falda Falda 1 fili 47-46

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.911

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.911
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6979^2+34386^2) = 35087 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -83.7; Ty = -412.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.911
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(8478/993103)^2+345439/1092414+0.7*93601/1092414=0.38 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 261.152; My = -55.038; N = -213.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.911
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media

Tx = -83.7; Ty = -412.6; Mt = 6.607

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.911
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8411 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 6.607

Asta 203: Trave in legno a falda Falda 1 fili 39-38

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.981

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.981
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
40644/873931+262373/1092414+0.7*124627/1092414=0.37 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 198.354; My = -73.281; N = 1024.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.981
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(14072^2+21291^2) = 25521 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -168.9; Ty = -255.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.981
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0.01+0.02 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -168.9; Ty = -255.5; Mt = 4.726

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.981
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
6017 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 4.726

Asta 204: Trave in legno a falda Falda 1 fili 23-22

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.54

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200

Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.54
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
27554/1602207+196928/2002759+0.7*84868/2002759=0.15 <= 1 [4.4.6a] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 148.877; My = -49.903; N = 694.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.54
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3822^2+14237^2) = 14741 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -45.9; Ty = -170.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -43.8; Ty = 65; Mt = -3.513

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.54
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4472 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -3.513

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.821
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.54/0.0001=18551.7 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.77
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
1.54/0.0001=22486.5 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.821
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0001
Ufin = 0.0001
Luce/Ufin > limite
1.54/0.0001=16743.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 205: Trave in legno a falda Falda 1 fili 17-16

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.609

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.609
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(14199/993103)^2+0.7*22052/1092414+104390/1092414=0.11 <= 1 [4.4.7b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 16.672; My = -61.382; N = -357.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.609
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(12908^2+4831^2) = 13783 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -154.9; Ty = -58

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.609
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0.01+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -154.9; Ty = -58; Mt = -2.722

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.609
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
3465 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -2.722

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.406
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.609/0=41523.3 > 300 Comb: SLE rara, 19

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.284
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.609/0=163212.8 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.406
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.609/0=26864.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600

Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Vento = 0,600 + 0,000 = 0,600

Asta 206: Trave in legno a falda Falda 2 fili 19-11

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.652

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.652
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
13019/1602207+188756/2002759+0.7*112963/2002759=0.14 <= 1 [4.4.6a] Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mx = -142.7; My = 66.422; N = 328.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.652
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(18008^2+8430^2) = 19883 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 216.1; Ty = -101.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.652
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0.01+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 171.2; Ty = -48.4; Mt = 3.496

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.652
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4451 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 3.496

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.435
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.652/0=33269.6 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.435
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.652/0=160591.2 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.457

Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.652/0=22313 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Asta 207: Trave in legno a falda Falda 2 fili 21-10

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.591

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.591
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(22934/1820690)^2+557426/2002759+0.7*27647/2002759=0.29 <= 1 [4.4.7a] Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mx = 421.414; My = 16.257; N = -577.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.591
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(740^2+24620^2) = 24631 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 8.9; Ty = -295.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.591
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Tx = 12.3; Ty = -342.8; Mt = -2.457

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.591
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3128 <= 316724 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Mt = -2.457

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.008
Kdef = 0
Uinst tot in x = 0.0002
Uinst tot in y = 0.0002
Uinst tot = 0.0002
Luce/Uinst,tot > limite
1.591/0.0002=8859.7 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.796
Kdef = 0

Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
1.591/0=59141.3 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.008
Kdef = 0.6
Ufin in x = 0.0003
Ufin in y = 0.0003
Ufin = 0.0003
Luce/Ufin > limite
1.591/0.0003=5724.2 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Asta 208: Trave in legno a falda Falda 2 fili 32-9

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.504

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(337285/993103)^2+743049/1092414+0.7*161635/1092414=0.9 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 561.745; My = 95.041; N = -8499.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6821^2+40762^2) = 41329 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 81.8; Ty = -489.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.04 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 81.8; Ty = -489.1; Mt = -10.452

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
10417 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -8.183

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.502
Kdef = 0

Uinst tot in x = -0.0002
Uinst tot in y = 0.0019
Uinst tot = 0.0019
Luce/Uinst,tot > limite
2.504/0.0019=1321.5 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.502
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
2.504/0.0002=11750.3 > 300 Comb: SLE rara, 18

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.502
Kdef = 0.6
Ufin in x = -0.0003
Ufin in y = 0.0029
Ufin = 0.0029
Luce/Ufin > limite
2.504/0.0029=851.1 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Asta 209: Trave in legno a falda Falda 2 fili 36-31

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.814

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.814
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(19196^2+41706^2) = 45912 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -230.4; Ty = -500.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.814
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(38433/993103)^2+429382/1092414+0.7*205694/1092414=0.53 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 324.612; My = -120.948; N = -968.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.814
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0.02+0.08 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -230.4; Ty = -500.5; Mt = 2.287

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.814

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
3588 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 2.818

Asta 210: Trave in legno a falda Falda 2 fili 44-30

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.696

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.696
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(10771^2+47708^2) = 48909 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -129.3; Ty = -572.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.696
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(8120/993103)^2+599160/1092414+0.7*192468/1092414=0.67 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 452.965; My = -113.171; N = -204.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.696
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0.06 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -129.3; Ty = -572.5; Mt = -12.668

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.696
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
16127 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -12.668

Asta 211: Trave in legno a falda Falda 2 fili 31-8

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.504

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(10118^2+31005^2) = 32614 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 121.4; Ty = 372.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(60890/993103)^2+408678/1092414+0.7*244287/1092414=0.53 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 308.961; My = -143.641; N = -1534.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 121.4; Ty = 372.1; Mt = -12.278

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
13250 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -10.408

Asta 212: Trave in legno a falda Falda 2 fili 30-7

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.504

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
44339/873931+565586/1092414+0.7*209855/1092414=0.7 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 427.583; My = -123.395; N = 1117.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(9243^2+44699^2) = 45645 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 110.9; Ty = 536.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.05 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Tx = 110.9; Ty = 536.4; Mt = -5.354

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
5774 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -4.535

Asta 213: Trave in legno a falda Falda 2 fili 43-28

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.592

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.592
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
25800/873931+341522/1092414+0.7*153564/1092414=0.44 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 258.19; My = -90.296; N = 650.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.592
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(10385^2+35675^2) = 37156 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -124.6; Ty = -428.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.592
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.03 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -103.2; Ty = -291.1; Mt = -6.3

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.592
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
8021 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -6.3

Asta 214: Trave in legno a falda Falda 2 fili 35-27

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.616

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200

Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.616
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
89865/873931+275467/1092414+0.7*171351/1092414=0.46 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 208.253; My = -100.755; N = 2264.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.616
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(25087^2+29555^2) = 38767 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -301; Ty = -354.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.616
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0.03+0.04 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -301; Ty = -354.7; Mt = -9.902

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.616
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
12606 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -9.902

Asta 215: Trave in legno a falda Falda 2 fili 28-5

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.504

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
31018/873931+331171/1092414+0.7*205074/1092414=0.47 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 250.365; My = -120.584; N = 781.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(8650^2+36953^2) = 37952 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 103.8; Ty = 443.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71

τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.04 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 103.8; Ty = 443.4; Mt = 4.244

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4475 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 3.515

Asta 216: Trave in legno a falda Falda 2 fili 27-4

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.504

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
140995/873931+296835/1092414+0.7*258883/1092414=0.6 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 224.407; My = -152.223; N = 3553.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(10143^2+40936^2) = 42174 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 121.7; Ty = 491.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.04 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 121.5; Ty = 491.2; Mt = 2.339

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2780 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 2.184

Asta 217: Trave in legno a falda Falda 2 fili 25-3

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.144

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080

Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 2.144
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
148250/873931+342072/1092414+0.7*26655/1092414=0.5 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -258.606; My = 15.673; N = 3735.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1619^2+32069^2) = 32110 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -19.4; Ty = 384.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -19.4; Ty = 384.8; Mt = -1.45

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.144
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3870 <= 316724 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mt = -3.04

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.215
Kdef = 0
Uinst tot in x = 0.0003
Uinst tot in y = -0.001
Uinst tot = 0.001
Luce/Uinst,tot > limite
2.144/0.001=2196.8 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.143
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
2.144/0.0002=8624 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.286
Kdef = 0.6
Ufin in x = 0.0005
Ufin in y = -0.0014
Ufin = 0.0014
Luce/Ufin > limite
2.144/0.0014=1501.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Asta 218: Trave in legno a falda Falda 2 fili 20-2

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.167

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.167
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(15487/1820690)^2+330604/2002759+0.7*90123/2002759=0.2 <= 1 [4.4.7a] Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = -249.937; My = 52.992; N = -390.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(4587^2+20891^2) = 21389 <= 265517 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = 55; Ty = 250.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = 51; Ty = 235; Mt = 3.639

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.167
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4633 <= 316724 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = 3.639

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.7
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = 0
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.167/0.0001=20772.2 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.545
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
1.167/0=68600.3 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.7
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0001
Ufin = 0.0001
Luce/Ufin > limite
1.167/0.0001=13402.5 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi

Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Asta 219: Trave in legno a falda Falda 5 fili 248-277

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.607

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
451247/1092414+0.7*180014/1092414=0.53 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 341.143; My = 105.848

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(7802^2+44335^2) = 45016 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -93.6; Ty = 532

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.05 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -93.6; Ty = 532; Mt = -3.452

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.607
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
3472 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -2.727

Asta 220: Trave in legno a falda Falda 5 fili 246-275

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.607

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
171339/873931+0.7*208331/1092414+251370/1092414=0.56 <= 1 [4.4.6b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 157.498; My = 147.806; N = 4317.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(9570^2+33906^2) = 35231 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -114.8; Ty = 406.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -114.7; Ty = 406.8; Mt = -2.512

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.607
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2983 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -2.343

Asta 221: Trave in legno a falda Falda 5 fili 247-276

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.607

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
32978/873931+303222/1092414+0.7*188386/1092414=0.44 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 229.236; My = 110.771; N = 831

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(7679^2+35867^2) = 36680 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -92.1; Ty = 430.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -92.1; Ty = 430.4; Mt = -4.546

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.607
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4686 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -3.681

Asta 222: Trave in legno a falda Falda 5 fili 249-278

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.607

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
42437/873931+535113/1092414+0.7*186959/1092414=0.66 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 404.546; My = 109.932; N = 1069.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(8028^2+43883^2) = 44611 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -96.3; Ty = 526.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.05 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -96.3; Ty = 526.6; Mt = 5.274

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.607
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
5619 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 4.414

Asta 223: Trave in legno a falda Falda 5 fili 250-279

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.607

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno

Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(9124^2+37414^2) = 38510 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -109.5; Ty = 449

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(57826/993103)^2+426196/1092414+0.7*231774/1092414=0.54 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 322.204; My = 136.283; N = -1457.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0.04 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -109.5; Ty = 449; Mt = 12.164

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.607
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
13080 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 10.274

Asta 224: Trave in legno a falda Falda 2 fili 29-6

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.499

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(8719^2+46139^2) = 46956 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 104.6; Ty = 553.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(10795/993103)^2+486319/1092414+0.7*193698/1092414=0.57 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 367.657; My = -113.894; N = -272

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1

0.02+0+0.06 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 104.6; Ty = 553.7; Mt = 3.189

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.499
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
3243 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 2.547

Asta 225: Trave in legno a falda Falda 6 fili 230-231

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.719

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
98770/1165241+478242/1456552+0.7*50295/1456552=0.44 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 361.551; My = 29.574; N = 2489

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1848^2+36708^2) = 36754 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -22.2; Ty = 440.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.04 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -23.3; Ty = 440.4; Mt = 3.607

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.719
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
5070 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 3.983

Asta 226: Trave in legno a falda Falda 6 fili 265-266

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.416

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.416
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
16155/873931+0.7*19782/1092414+152574/1092414=0.17 <= 1 [4.4.6b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -14.956; My = 89.714; N = 407.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(25104^2+1357^2) = 25141 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 301.2; Ty = 16.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0.03+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 301.2; Ty = 16.3; Mt = 4.109

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.416
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
5231 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 4.109

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.264
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.416/0=31970.1 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.25
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.416/0=149018.1 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.264
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.416/0=21510.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Asta 227: Trave in legno a falda Falda 6 fili 259-260

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.409

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.409
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(47772/1820690)^2+241317/2002759+0.7*114167/2002759=0.16 <= 1 [4.4.7a] Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mx = 182.436; My = 67.13; N = -1203.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.409
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6811^2+19252^2) = 20421 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 81.7; Ty = -231

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.409
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 81.7; Ty = -231; Mt = 3.065

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.409
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
3329 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 2.615

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.939
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.409/0.0001=16015.4 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.657
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
1.409/0=46021.6 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.939
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0001
Ufin = 0.0001
Luce/Ufin > limite
1.409/0.0001=10743.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600

Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Asta 228: Trave in legno a falda Falda 6 fili 253-254

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.528

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.253
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
83605/873931+284950/1092414+0.7*140115/1092414=0.45 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -215.422; My = -82.388; N = 2106.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.528
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5705^2+28139^2) = 28711 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 68.5; Ty = -337.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.528
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 68.5; Ty = -337.7; Mt = 7.343

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.528
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
7119 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 5.592

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.264
Kdef = 0
Uinst tot in x = -0.0003
Uinst tot in y = -0.0021
Uinst tot = 0.0021
Luce/Uinst,tot > limite
2.528/0.0021=1188 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.18
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
2.528/0.0004=5883.7 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.264

Kdef = 0.6
Ufin in x = -0.0005
Ufin in y = -0.0032
Ufin = 0.0032
Luce/Ufin > limite
2.528/0.0032=795 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Asta 229: Trave in legno a falda Falda 6 fili 216-217

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.719

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.994
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
307715/1456552+0.7*48834/1456552=0.23 <= 1 (formula 4.4.5a) Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -232.633; My = -28.715

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3726^2+32234^2) = 32448 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -44.7; Ty = 386.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -49.5; Ty = 373.8; Mt = 9.169

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.719
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
11673 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 9.169

Asta 230: Trave in legno a falda Falda 6 fili 206-207

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.72

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080

Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(445^2+29730^2) = 29734 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -5.3; Ty = 356.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.451
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(9308/1324138)^2+309037/1456552+0.7*5273/1456552=0.21 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -233.632; My = 3.1; N = -234.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -5.2; Ty = 330.6; Mt = 12.936

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.72
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
16472 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 12.938

Asta 231: Trave in legno a falda Falda 6 fili 200-201

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.973

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
290806/1092414+0.7*36967/1092414=0.29 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -219.849; My = -21.737

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.973
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1972^2+32995^2) = 33054 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 23.7; Ty = -395.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.973

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 23.7; Ty = -395.9; Mt = 14.303

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.973
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
18209 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 14.303

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.288
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.002
Uinst tot = 0.002
Luce/Uinst,tot > limite
2.973/0.002=1506.7 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.585
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0007
Uinst var = 0.0007
Luce/Uinst,var > limite
2.973/0.0007=4423.5 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.288
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = -0.0028
Ufin = 0.0028
Luce/Ufin > limite
2.973/0.0028=1064.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 232: Trave in legno a falda Falda 6 fili 189-190

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.987

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(12842/993103)^2+416635/1092414+0.7*61557/1092414=0.42 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -314.976; My = -36.196; N = -323.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.987
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(3002^2+24892^2) = 25072 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 36; Ty = -298.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.987
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 34.6; Ty = -392.9; Mt = 7.384

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.987
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
9401 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 7.384

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.795
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0008
Uinst tot = 0.0008
Luce/Uinst,tot > limite
1.987/0.0008=2424.3 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.994
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
1.987/0.0002=12231.3 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.795
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0012
Ufin = 0.0012
Luce/Ufin > limite
1.987/0.0012=1610.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 233: Trave in legno a falda Falda 6 fili 180-181

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.002

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
326182/1092414+0.7*38450/1092414=0.32 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -246.594; My = -22.609

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.002
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(3735^2+22311^2) = 22621 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 44.8; Ty = -267.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.002
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 44.8; Ty = -267.7; Mt = -0.852

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.002
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
1414 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -1.11

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.434
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0002
Uinst tot = 0.0002
Luce/Uinst,tot > limite
1.002/0.0002=5051.4 > 300 Comb: SLE rara, 19

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.434
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
1.002/0=41575.5 > 300 Comb: SLE rara, 19

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.434
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0003
Ufin = 0.0003
Luce/Ufin > limite
1.002/0.0003=3261.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Vento = 0,600 + 0,000 = 0,600

Asta 234: Trave in legno a falda Falda 6 fili 231-232

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.793
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
64866/1165241+369736/1456552+0.7*1885/1456552=0.31 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -279.521; My = -1.109; N = 1634.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1000^2+34214^2) = 34228 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 12; Ty = -410.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 12.2; Ty = -408.1; Mt = -2.185

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
3505 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -2.753

Asta 235: Trave in legno a falda Falda 6 fili 236-237

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.705
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
447045/1456552+0.7*22842/1456552=0.32 <= 1 (formula 4.4.5a) Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -337.966; My = -13.431

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d

Sqrt(1691^2+35360^2) = 35400 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 20.3; Ty = -424.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.03 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 20.3; Ty = -423.5; Mt = 3.962

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5220 <= 230345 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = 4.1

Asta 236: Trave in legno a falda Falda 6 fili 242-243

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.616
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
63006/873931+355337/1092414+0.7*15182/1092414=0.41 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -268.635; My = 8.927; N = 1587.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(645^2+34871^2) = 34877 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 7.7; Ty = -418.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 7.7; Ty = -418.5; Mt = 7.242

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
9220 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 7.242

Asta 237: Trave in legno a falda Falda 6 fili 217-218

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.224

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.519
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
5621/1165241+234112/1456552+0.7*16906/1456552=0.17 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -176.989; My = 9.941; N = 141.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.224
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(531^2+27684^2) = 27689 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -6.4; Ty = -332.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.224
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -6.4; Ty = -332.2; Mt = 1.602

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.224
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2173 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = 1.707

Asta 238: Trave in legno a falda Falda 6 fili 207-208

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.239

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
137886/1456552+0.7*74113/1456552=0.13 <= 1 (formula 4.4.5a) Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -104.242; My = -43.578

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.239
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4154^2+17207^2) = 17701 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 49.8; Ty = -206.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.239
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 71.8; Ty = -81.3; Mt = 5.054

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.239
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
6434 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 5.054

Asta 239: Trave in legno a falda Falda 4 fili 219-220

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.424

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.424
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
7029/1602207+161559/2002759+0.7*59730/2002759=0.11 <= 1 [4.4.6a] Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Mx = 122.138; My = 35.121; N = 177.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.424
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(5255^2+22122^2) = 22737 <= 265517 Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Tx = 63.1; Ty = -265.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.424
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = 17.1; Ty = -32.6; Mt = -3.136

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.424
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
3992 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -3.136

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.226
Kdef = 0

Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.424/0=308463.6 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.24
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.424/0=184337.7 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.254
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.424/0=224950.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Vento = 0,600 + 0,000 = 0,600

Asta 240: Trave in legno a falda Falda 4 fili 209-210

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.39

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.39
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
214512/2002759+0.7*22121/2002759=0.11 <= 1 (formula 4.4.5a) Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Mx = 162.171; My = 13.007

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.39
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(182^2+15092^2) = 15093 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 2.2; Ty = -181.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.39
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 3.3; Ty = -180.8; Mt = -4.984

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.39
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.6
τ,tor,d <= Ksh * fv,d
5244 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -4.119

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.695
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.39/0.0001=10889.5 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.649
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
1.39/0.0001=22403.8 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.695
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0002
Ufin = 0.0002
Luce/Ufin > limite
1.39/0.0002=8300.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Asta 241: Trave in legno a falda Falda 4 fili 202-203

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.358

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.101
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
10385/1165241+214293/1456552+0.7*3660/1456552=0.16 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -162.005; My = -2.152; N = 261.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.358
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(696^2+23420^2) = 23431 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 8.4; Ty = -281

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.358
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 9.3; Ty = -279.4; Mt = -4.24

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.358
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5398 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -4.24

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.179
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0009
Uinst tot = 0.0009
Luce/Uinst,tot > limite
2.358/0.0009=2615.8 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.179
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
2.358/0.0004=5276.6 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.179
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0012
Ufin = 0.0012
Luce/Ufin > limite
2.358/0.0012=2004.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Asta 242: Trave in legno a falda Falda 4 fili 191-319

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.964

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
34369/1165241+346221/1456552+0.7*100175/1456552=0.32 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 261.743; My = 58.903; N = 866.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(7892^2+33754^2) = 34664 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -94.7; Ty = 405

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -94.7; Ty = 405; Mt = -0.309

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.964
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1231 <= 316724 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Mt = -0.967

Asta 243: Trave in legno a falda Falda 3 fili 101-102

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.617

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
185748/1092414+0.7*29918/1092414=0.19 <= 1 (formula 4.4.5a) Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mx = -140.426; My = 17.592

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.617
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(3854^2+17249^2) = 17674 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -46.3; Ty = -207

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.617
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = -50.2; Ty = -202.7; Mt = 1.898

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.617
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2417 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 1.898

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.268
Kdef = 0

Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.617/0=12714.9 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.247
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.617/0=62471.1 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.268
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0001
Ufin = 0.0001
Luce/Ufin > limite
0.617/0.0001=8247.9 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Asta 244: Trave in legno a falda Falda 3 fili 93-94

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
216093/1092414+0.7*68103/1092414=0.24 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -163.366; My = 40.044

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(4015^2+13245^2) = 13840 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -48.2; Ty = -158.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -41.9; Ty = -203.4; Mt = -5.154

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.642

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6562 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -5.154

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.766
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0004
Uinst tot = 0.0004
Luce/Uinst,tot > limite
1.642/0.0004=3931.8 > 300 Comb: SLE rara, 15

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.93
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
1.642/0.0001=26974.1 > 300 Comb: SLE rara, 15

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.711
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0006
Ufin = 0.0006
Luce/Ufin > limite
1.642/0.0006=2557 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Neve = 0,500 + 0,000 = 0,500
Vento = 0,600 + 0,000 = 0,600

Asta 246: Trave in legno a falda Falda 3 fili 85-82

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.378

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.378
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
73263/873931+584177/1092414+0.7*11069/1092414=0.63 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 441.638; My = 6.509; N = 1846.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.378
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(10706^2+11997^2) = 16079 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -128.5; Ty = -144

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.378
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.01 <= 1 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = -112; Ty = -153; Mt = 10.376

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.378
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
13209 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 10.376

Asta 247: Trave in legno a falda Falda 3 fili 85-82

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.977

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
85888/873931+421774/1092414+0.7*162666/1092414=0.59 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 318.861; My = 95.648; N = 2164.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(9868^2+49424^2) = 50399 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -118.4; Ty = 593.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.32+0+0.05 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -97.8; Ty = 385.4; Mt = 43.622

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.977
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
55534 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 43.622

Asta 248: Trave in legno a falda Falda 3 fili 77-78

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.725

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.635
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
11213/1165241+288558/1456552+0.7*10975/1456552=0.21 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -218.15; My = -6.453; N = 282.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1803^2+31861^2) = 31912 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -21.6; Ty = 382.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -28.6; Ty = 360.3; Mt = -11.667

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.725
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
14853 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -11.667

Asta 249: Trave in legno a falda Falda 3 fili 66-67

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.726

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.817
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
327675/1456552+0.7*4364/1456552=0.23 <= 1 (formula 4.4.5a) Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -247.722; My = -2.566

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d

Sqrt(268^2+33311^2) = 33312 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 3.2; Ty = 399.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -3.4; Ty = 385.2; Mt = -9.017

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.726
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
11483 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -9.02

Asta 250: Trave in legno a falda Falda 3 fili 57-58

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.726

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 2.272
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
63047/1165241+396179/1456552+0.7*34295/1456552=0.34 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -299.511; My = 20.165; N = 1588.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2499^2+35501^2) = 35589 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 30; Ty = 426

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 30.8; Ty = 422.9; Mt = -3.665

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.726
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4510 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -3.542

Asta 251: Trave in legno a falda Falda 4 fili 95-308

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.133

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
102824/873931+0.7*148572/1092414+274176/1092414=0.46 <= 1 [4.4.6b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 112.321; My = -161.216; N = 2591.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(20804^2+26188^2) = 33446 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 249.7; Ty = 314.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0.01+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 249.7; Ty = 314.3; Mt = -6.128

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.133
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7802 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -6.129

Asta 252: Trave in legno a falda Falda 4 fili 86-87

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.535

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.267
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
44170/1165241+262119/1456552+0.7*23381/1456552=0.23 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -198.162; My = 13.748; N = 1113.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2686^2+23794^2) = 23945 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -32.2; Ty = 285.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -32.3; Ty = 285.5; Mt = 5.007

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.535
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6374 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 5.007

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.352
Kdef = 0
Uinst tot in x = 0.0002
Uinst tot in y = -0.0013
Uinst tot = 0.0013
Luce/Uinst,tot > limite
2.535/0.0013=1999.2 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.267
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0006
Uinst var = 0.0006
Luce/Uinst,var > limite
2.535/0.0006=4304.2 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.352
Kdef = 0.6
Ufin in x = 0.0003
Ufin in y = -0.0017
Ufin = 0.0017
Luce/Ufin > limite
2.535/0.0017=1506.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 253: Trave in legno a falda Falda 4 fili 80-81

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.577

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.577
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
216521/2002759+0.7*31697/2002759=0.12 <= 1 (formula 4.4.5a) Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Mx = 163.69; My = -18.638

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.577
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(16^2+17664^2) = 17664 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -0.2; Ty = -212

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.577
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -1.5; Ty = -211.6; Mt = 6.316

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.577
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8041 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 6.316

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.789
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0002
Uinst tot = 0.0002
Luce/Uinst,tot > limite
1.577/0.0002=7184.4 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.736
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
1.577/0.0001=14293.8 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.789
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0003
Ufin = 0.0003
Luce/Ufin > limite
1.577/0.0003=5520.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 254: Trave in legno a falda Falda 4 fili 69-70

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.619

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.619
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
237756/2002759+0.7*62311/2002759=0.14 <= 1 (formula 4.4.5a) Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Mx = 179.744; My = -36.639

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.619
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(6039^2+24033^2) = 24780 <= 265517 Comb: SLV, 9; Durata minima del carico nella combinazione: istantaneo
Tx = -72.5; Ty = -288.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.619
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -7.7; Ty = -57.7; Mt = 3.891

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.619
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4954 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 3.891

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.206
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.619/0=168195.3 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.372
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.619/0=141633.7 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.206
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.619/0=113223.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 255: Trave in legno a falda Falda 3 fili 48-49

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.076

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.869
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
15179/1165241+333660/1456552+0.7*37340/1456552=0.26 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -252.247; My = -21.956; N = 382.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3735^2+28951^2) = 29191 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -44.8; Ty = 347.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -44.9; Ty = 347.4; Mt = -10.051

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.076
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
11287 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -8.866

Asta 256: Trave in legno a falda Falda 3 fili 40-41

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.063

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5055^2+31419^2) = 31823 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -60.7; Ty = 377

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.063
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(16271/1324138)^2+422037/1456552+0.7*57000/1456552=0.32 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -319.06; My = -33.516; N = -410

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -38.8; Ty = 200.4; Mt = -10.546

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.063
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
13426 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -10.546

Asta 257: Trave in legno a falda Falda 3 fili 32-34

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.673
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
193724/873931+422450/1092414+0.7*1862/1092414=0.61 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -319.372; My = 1.095; N = 4881.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1173^2+25088^2) = 25116 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -14.1; Ty = -301.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -14.3; Ty = -287.5; Mt = -9.887

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
12586 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Mt = -9.887

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.321
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0031
Uinst tot = 0.0031
Luce/Uinst,tot > limite
2.642/0.0031=851.3 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.233
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0006
Uinst var = 0.0006
Luce/Uinst,var > limite
2.642/0.0006=4311.7 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.321
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0046
Ufin = 0.0046
Luce/Ufin > limite
2.642/0.0046=568.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Asta 258: Trave in legno a falda Falda 3 fili 21-24

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.639

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(16694/993103)^2+0.7*66767/1092414+154303/1092414=0.18 <= 1 [4.4.7b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -50.476; My = 90.73; N = -420.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.639
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(9820^2+18539^2) = 20979 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -117.8; Ty = -222.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.639
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Tx = -117.8; Ty = -222.5; Mt = -6.079

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.639
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
6367 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -5.001

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.765
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0003
Uinst tot = 0.0003
Luce/Uinst,tot > limite
1.639/0.0003=6095.6 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.765
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
1.639/0.0001=23244.7 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.765
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = -0.0004
Ufin = 0.0004
Luce/Ufin > limite
1.639/0.0004=4188.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Asta 259: Trave in legno a falda Falda 3 fili 19-18

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.692

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.692
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
0.7*9890/1092414+116313/1092414=0.11 <= 1 (formula 4.4.5b) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -7.477; My = -68.392

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.692
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(15382^2+8416^2) = 17533 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Tx = -184.6; Ty = -101

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.692
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0.01+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -146.2; Ty = -46.4; Mt = -3.918

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.692
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4988 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -3.918

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.461
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.692/0=28356.2 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.461
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.692/0=140531.2 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.461
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.692/0=18975.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Asta 260: Trave in legno a falda Falda 3 fili 49-50

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.793
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
409807/1456552+0.7*11342/1456552=0.29 <= 1 (formula 4.4.5a) Comb: SLU, 79; Durata minima del carico nella combinazione: media

Mx = -309.814; My = -6.669

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(496^2+36193^2) = 36196 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 6; Ty = -434.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.03 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 1.8; Ty = -424.3; Mt = -2.755

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3507 <= 230345 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = -2.755

Asta 261: Trave in legno a falda Falda 3 fili 78-79

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.965

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
104052/1456552+0.7*13766/1456552=0.08 <= 1 (formula 4.4.5a) Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = -78.663; My = -8.094

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.965
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1651^2+13976^2) = 14073 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 19.8; Ty = -167.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.965
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 19.8; Ty = -167.7; Mt = 1.093

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.965
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1392 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media

Mt = 1.093

Asta 262: Trave in legno a falda Falda 3 fili 67-68

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.989

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.398
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
213049/1456552+0.7*19005/1456552=0.16 <= 1 (formula 4.4.5a) Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = -161.065; My = -11.175

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.989
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1246^2+24832^2) = 24863 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 15; Ty = -298

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.989
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 21; Ty = -293.7; Mt = -0.231

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.989
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
972 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 0.763

Asta 263: Trave in legno a falda Falda 3 fili 58-52

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
52703/1165241+777301/1456552+0.7*14238/1456552=0.59 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 587.639; My = 8.372; N = 1328.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(769^2+51570^2) = 51576 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 9.2; Ty = -618.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.07 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 9.2; Ty = -618.8; Mt = 3.808

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4620 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 3.629

Asta 264: Trave in legno a falda Falda 3 fili 41-42

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.44
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
31580/873931+322759/1092414+0.7*39571/1092414=0.36 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -244.006; My = -23.268; N = 795.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(805^2+35772^2) = 35781 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 9.7; Ty = -429.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 9.7; Ty = -429.3; Mt = -7.013

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8

τ,tor,d <= Ksh * fv,d
8928 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -7.013

Asta 265: Trave in legno a falda Falda 1 fili 92-91

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
34159/873931+389511/1092414+0.7*26069/1092414=0.41 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 294.47; My = 15.328; N = 860.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1072^2+38278^2) = 38293 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -12.9; Ty = 459.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.04 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -12.9; Ty = 459.3; Mt = 8.043

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
7821 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 6.144

Asta 266: Trave in legno a falda Falda 1 fili 100-99

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
7948/873931+248692/1092414+0.7*4955/1092414=0.24 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 188.011; My = 2.913; N = 200.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(320^2+30537^2) = 30539 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -3.8; Ty = 366.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -3.9; Ty = 366.4; Mt = 6.891

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
7503 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 5.894

Asta 267: Trave in legno a falda Falda 1 fili 112-111

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
14340/1165241+217166/1456552+0.7*15871/1456552=0.17 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 164.177; My = 9.332; N = 361.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(643^2+26407^2) = 26414 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -7.7; Ty = 316.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -7.7; Ty = 316.9; Mt = 2.499

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4084 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 3.208

Asta 268: Trave in legno a falda Falda 1 fili 119-124

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.292

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
28321/1602207+108829/2002759+0.7*48411/2002759=0.09 <= 1 [4.4.6a] Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = 82.275; My = 28.466; N = 713.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(14222^2+30914^2) = 34029 <= 265517 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = -170.7; Ty = 371

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 2.1; Ty = 246.6; Mt = 7.683

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.292
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
9781 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 7.683

Asta 269: Trave in legno a falda Falda 1 fili 119-124

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.128

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
10216/1165241+116037/1456552+0.7*9046/1456552=0.09 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 87.724; My = 5.319; N = 257.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(272^2+20897^2) = 20898 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -3.3; Ty = 250.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -3.3; Ty = 250.7; Mt = 2.085

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.128
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4496 <= 316724 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mt = 3.532

Asta 270: Trave in legno a falda Falda 1 fili 131-130

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 4.143

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(288^2+41702^2) = 41703 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -3.5; Ty = 500.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(14464/1324138)^2+389220/1456552+0.7*11940/1456552=0.27 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 294.25; My = 7.021; N = -364.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.05 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Tx = -3.5; Ty = 500.4; Mt = 2.113

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 4.143
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2689 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 2.113

Asta 271: Trave in legno a falda Falda 1 fili 140-139

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 4.143

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(45^2+43549^2) = 43549 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 0.5; Ty = 522.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(26703/1324138)^2+399229/1456552+0.7*1070/1456552=0.28 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 301.817; My = -0.629; N = -672.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.05 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 0.5; Ty = 522.6; Mt = -0.398

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 4.143
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
506 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -0.398

Asta 272: Trave in legno a falda Falda 1 fili 146-145

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 4.143

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200

Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(440^2+40534^2) = 40536 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 5.3; Ty = 486.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(14356/1324138)^2+394649/1456552+0.7*18895/1456552=0.28 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 298.355; My = -11.11; N = -361.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.04 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 5.3; Ty = 486.4; Mt = -2.227

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 4.143
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2835 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -2.227

Asta 273: Trave in legno a falda Falda 1 fili 161-160

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
22522/873931+145826/1092414+0.7*263/1092414=0.16 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 110.245; My = 0.155; N = 567.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(166^2+24617^2) = 24618 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -2; Ty = 295.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71

τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -2; Ty = 295.4; Mt = -0.703

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
1934 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -1.519

Asta 274: Trave in legno a falda Falda 1 fili 170-169

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
25353/873931+168777/1092414+0.7*10305/1092414=0.19 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 127.595; My = 6.059; N = 638.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(516^2+26082^2) = 26087 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -6.2; Ty = 313

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -6.2; Ty = 313; Mt = -2.829

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4179 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -3.283

Asta 275: Trave in legno a falda Falda 1 fili 188-187

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080

Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
16544/873931+427585/1092414+0.7*7816/1092414=0.42 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 323.254; My = -4.596; N = 416.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(27^2+40442^2) = 40442 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -0.3; Ty = 485.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.04 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -0.3; Ty = 485.3; Mt = -8.123

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
7807 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -6.133

Asta 276: Trave in legno a falda Falda 1 fili 179-178

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
8571/873931+288114/1092414+0.7*17841/1092414=0.28 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 217.814; My = 10.49; N = 216

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(951^2+32224^2) = 32238 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -11.4; Ty = 386.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -11.5; Ty = 386.6; Mt = -7.653

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
7991 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -6.277

Asta 320: Trave in legno a falda Falda 6 fili 236-233

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.778

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.778
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2040^2+26300^2) = 26379 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 24.5; Ty = -315.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.059
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(8591/1324138)^2+335397/1456552+0.7*38422/1456552=0.25 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -253.56; My = -22.592; N = -216.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.778
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 24.3; Ty = -114.4; Mt = 11.567

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.778
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
14726 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 11.567

Asta 321: Trave in legno a falda Falda 6 fili 242-239

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.832

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
25136/873931+327439/1092414+0.7*36388/1092414=0.35 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -247.544; My = 21.396; N = 633.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.832
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4101^2+36416^2) = 36646 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -49.2; Ty = -437

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.832
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.02 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -63.6; Ty = -233.3; Mt = 11.205

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.832
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
14548 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 11.427

Asta 322: Trave in legno a falda Falda 4 fili 147-314

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 3.677

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 3.677
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(102^2+44517^2) = 44517 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 1.2; Ty = -534.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 3.677
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(26060/1324138)^2+604219/1456552+0.7*4743/1456552=0.42 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 456.79; My = 2.789; N = -656.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 3.677
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.05 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 1.2; Ty = -534.2; Mt = 1.355

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 3.677
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1725 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 1.355

Asta 323: Trave in legno a falda Falda 4 fili 315-316

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 3.677

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 3.677
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
505826/1456552+0.7*5903/1456552=0.35 <= 1 (formula 4.4.5a) Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 382.405; My = -3.471

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 3.677
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(250^2+38705^2) = 38705 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -3; Ty = -464.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 3.677
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.04 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -3; Ty = -464.5; Mt = 0.214

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 3.677
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
622 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 0.489

Asta 324: Trave in legno a falda Falda 4 fili 141-313

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 3.241

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 3.241
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(0^2+50955^2) = 50955 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 0; Ty = -611.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 3.241
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(47145/1324138)^2+867677/1456552+0.7*74/1456552=0.6 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 655.964; My = 0.043; N = -1188.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 3.241
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.07 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 0; Ty = -611.5; Mt = 0.095

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 3.241
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1865 <= 316724 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mt = 1.465

Asta 325: Trave in legno a falda Falda 4 fili 141-313

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
18876/1165241+555408/1456552+0.7*80/1456552=0.4 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 419.889; My = 0.047; N = 475.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d

Sqrt(66^2+46333^2) = 46333 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -0.8; Ty = 556

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.06 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -0.8; Ty = 556; Mt = 0.068

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1824 <= 316724 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mt = 1.433

Asta 326: Trave in legno a falda Falda 4 fili 141-313

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(11404^2+6681^2) = 13217 <= 265517 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Tx = -136.8; Ty = -80.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(8570/993103)^2+150271/1092414+0.7*581/1092414=0.14 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 113.605; My = -0.341; N = -216

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0 <= 1 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = -137; Ty = -79.7; Mt = -15.709

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
19999 <= 316724 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = -15.709

Asta 327: Trave in legno a falda Falda 4 fili 132-312

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 3.678

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 3.678
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(129^2+44779^2) = 44779 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -1.5; Ty = -537.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 3.678
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(23817/1324138)^2+610064/1456552+0.7*5612/1456552=0.42 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 461.208; My = -3.3; N = -600.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 3.678
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.05 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -1.5; Ty = -537.3; Mt = -1.218

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 3.678
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1551 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -1.218

Asta 328: Trave in legno a falda Falda 4 fili 120-311

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 3.678

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 3.678
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(556^2+42591^2) = 42595 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 6.7; Ty = -511.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 3.678
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)

(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(8431/1324138)^2+570501/1456552+0.7*19105/1456552=0.4 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 431.299; My = 11.234; N = -212.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 3.678
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.05 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 6.7; Ty = -511.1; Mt = -0.077

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 3.678
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
428 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -0.336

Asta 494: Trave in legno a falda Falda 1 fili 91-90

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.724

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
15036/873931+166718/1092414+0.7*14403/1092414=0.18 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -126.039; My = -8.469; N = 378.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.724
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1029^2+18722^2) = 18751 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 12.4; Ty = -224.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.724
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 11.3; Ty = -151.8; Mt = 1.419

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.724
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
1807 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 1.419

Asta 495: Trave in legno a falda Falda 1 fili 99-98

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.724

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.057
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
81071/1092414+0.7*13177/1092414=0.08 <= 1 (formula 4.4.5a) Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mx = -61.289; My = -7.748

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(921^2+18444^2) = 18467 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 11.1; Ty = 221.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 13.2; Ty = 213.3; Mt = 1.264

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.724
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
1522 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 1.195

Asta 496: Trave in legno a falda Falda 1 fili 111-110

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.724

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(616^2+21642^2) = 21651 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 7.4; Ty = 259.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(9342/1324138)^2+120342/1456552+0.7*9146/1456552=0.09 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 90.978; My = -5.378; N = -235.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 10.9; Ty = 254.9; Mt = 0.734

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.724
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
934 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 0.734

Asta 497: Trave in legno a falda Falda 1 fili 124-123

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.551

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.551
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
31952/1602207+0.7*24709/2002759+56550/2002759=0.06 <= 1 [4.4.6b] Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mx = 18.68; My = -33.251; N = 805.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(13651^2+9027^2) = 16366 <= 265517 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = 163.8; Ty = 108.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Tx = 121.1; Ty = 144; Mt = 4.423

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.551
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
5631 <= 316724 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo

Mt = 4.423

Asta 498: Trave in legno a falda Falda 1 fili 124-123

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.391

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.391
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
34306/1602207+24060/2002759+0.7*18851/2002759=0.04 <= 1 [4.4.6a] Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mx = 18.19; My = -11.084; N = 864.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(5988^2+4494^2) = 7486 <= 265517 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = 71.9; Ty = 53.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = 71.9; Ty = 53.9; Mt = 2.197

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.391
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2797 <= 316724 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = 2.197

Asta 499: Trave in legno a falda Falda 1 fili 124-123

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.391

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.391
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
30151/1602207+0.7*16207/2002759+34918/2002759=0.04 <= 1 [4.4.6b] Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mx = 12.253; My = -20.532; N = 759.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(12075^2+5010^2) = 13073 <= 265517 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Tx = 144.9; Ty = 60.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = 127.1; Ty = 81.2; Mt = 2.698

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.391
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3434 <= 316724 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = 2.698

Asta 500: Trave in legno a falda Falda 1 fili 124-123

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.391

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
6454/1602207+0.7*54167/2002759+73822/2002759=0.06 <= 1 [4.4.6b] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = -40.95; My = -43.407; N = 162.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.391
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(20102^2+13362^2) = 24138 <= 265517 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Tx = 241.2; Ty = -160.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.391
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = 202; Ty = -111.3; Mt = 4.967

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.391
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1

τ,tor,d <= Ksh * fv,d
6817 <= 316724 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mt = -5.355

Asta 501: Trave in legno a falda Falda 1 fili 160-159

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.725

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
11384/1165241+104984/1456552+0.7*14064/1456552=0.09 <= 1 [4.4.6a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 79.368; My = -8.27; N = 286.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1166^2+16416^2) = 16457 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 14; Ty = 197

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 14; Ty = 197; Mt = -0.024

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.725
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
607 <= 316724 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = 0.477

Asta 502: Trave in legno a falda Falda 1 fili 169-168

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.725

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(403^2+20264^2) = 20268 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 4.8; Ty = 243.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(5852/1324138)^2+119941/1456552+0.7*7471/1456552=0.09 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 90.675; My = -4.393; N = -147.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 6.1; Ty = 240.7; Mt = -0.141

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.725
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
747 <= 316724 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mt = -0.586

Asta 503: Trave in legno a falda Falda 1 fili 187-186

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.725

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
202956/1092414+0.7*9978/1092414=0.19 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -153.435; My = -5.867

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.725
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(711^2+19200^2) = 19213 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 8.5; Ty = -230.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.725
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 8.5; Ty = -230.3; Mt = 0.109

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.725

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1199 <= 316724 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Mt = -0.942

Asta 504: Trave in legno a falda Falda 1 fili 178-177

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.725

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
96556/1092414+0.7*8212/1092414=0.09 <= 1 (formula 4.4.5a) Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mx = -72.996; My = -4.829

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(363^2+17923^2) = 17927 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 4.4; Ty = 215.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 4.4; Ty = 215.1; Mt = -0.167

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.725
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1204 <= 316724 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Mt = -0.946

Asta 505: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.922

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
205335/870720+99325/1088400+0.7*6419/1088400=0.33 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 152.563; My = 6.574; N = 7884.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(302^2+8776^2) = 8781 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -5.5; Ty = 160.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -5.5; Ty = 160.5; Mt = -1.509

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.922
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1653 <= 325259 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = -2.345

Asta 506: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.265

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.265
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
220333/870720+0.7*32247/1088400+123968/1088400=0.39 <= 1 [4.4.6b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 49.531; My = -126.943; N = 8460.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(6381^2+2012^2) = 6691 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -116.7; Ty = 36.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente

Tx = -116.7; Ty = 36.8; Mt = -8.147

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.265
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
5742 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -8.147

Asta 507: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.308

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.308
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
189708/870720+300105/1088400+0.7*277951/1088400=0.67 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -460.961; My = 284.622; N = 7284.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(20217^2+20741^2) = 28964 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 369.7; Ty = 379.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.14+0.02+0.02 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 369.7; Ty = 379.3; Mt = -36.254

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.308
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
34680 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -49.208

Asta 508: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.095

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200

Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.095
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(12815^2+17175^2) = 21429 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -234.3; Ty = -314.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(40065/993103)^2+0.7*120678/1088400+207688/1088400=0.27 <= 1 [4.4.7b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -185.362; My = 212.673; N = -1538.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.095
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0.01+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -234.3; Ty = -314.1; Mt = -13.391

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.095
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
9437 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -13.391

Asta 509: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.26

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(23692^2+20851^2) = 31561 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 433.2; Ty = 381.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(61267/993103)^2+0.7*76618/1088400+117040/1088400=0.16 <= 1 [4.4.7b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 117.685; My = -119.849; N = -2352.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71

τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.12+0+0.01 <= 1 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = -27.6; Ty = 219.4; Mt = 31.225

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.26
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
22006 <= 177414 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 31.225

Asta 510: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.958

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.958
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(8621^2+2023^2) = 8855 <= 144828 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = 157.6; Ty = -37

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(47342/993103)^2+0.7*8531/1088400+110914/1088400=0.11 <= 1 [4.4.7b] Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mx = 13.103; My = -113.575; N = -1817.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.958
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0 <= 1 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = 157.6; Ty = -37; Mt = -15.235

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.958
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
10737 <= 177414 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -15.235

Asta 511: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.358

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080

Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(15582^2+17029^2) = 23082 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 284.9; Ty = 311.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.358
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(58820/993103)^2+0.7*65684/1088400+81997/1088400=0.12 <= 1 [4.4.7b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -100.89; My = -83.965; N = -2258.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.25+0+0 <= 1 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = -8.8; Ty = 182.5; Mt = 62.052

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.358
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
43731 <= 177414 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 62.052

Asta 512: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.854

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.854
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(27054^2+8088^2) = 28237 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 494.7; Ty = -147.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.854
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(40487/993103)^2+0.7*3081/1088400+278701/1088400=0.26 <= 1 [4.4.7b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -4.733; My = 285.39; N = -1554.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.854

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.24+0.02+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 494.1; Ty = -247.4; Mt = 81.691

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.854
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
57572 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 81.691

Asta 513: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.643

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
247262/870720+132571/1088400+0.7*6618/1088400=0.41 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 203.628; My = -6.777; N = 9494.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(336^2+12911^2) = 12916 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -6.1; Ty = 236.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -6.1; Ty = 236.1; Mt = -2.91

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.643
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
1551 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -2.201

Asta 514: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.36

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
261126/870720+71268/1088400+0.7*26974/1088400=0.38 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 109.467; My = 27.621; N = 10027.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(2083^2+12750^2) = 12919 <= 265517 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Tx = 38.1; Ty = 233.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -30.3; Ty = 76.1; Mt = 9.597

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.36
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
6764 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 9.597

Asta 515: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.94

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
267171/870720+40349/1088400+0.7*7207/1088400=0.35 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 61.976; My = -7.38; N = 10259.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2870^2+6427^2) = 7039 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -52.5; Ty = 117.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = -49.3; Ty = 58.1; Mt = -11.09

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.94
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
7816 <= 325259 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mt = -11.09

Asta 516: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.288

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.288
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
249675/870720+0.7*48545/1088400+184611/1088400=0.49 <= 1 [4.4.6b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -74.565; My = 189.042; N = 9587.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(48042^2+15146^2) = 50373 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 878.5; Ty = 277

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0.06+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 634.4; Ty = 230.6; Mt = 23.57

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.288
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
16611 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 23.57

Asta 517: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.109

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.109
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
227291/870720+382089/1088400+0.7*44582/1088400=0.64 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -586.889; My = -45.652; N = 8728

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(10695^2+27340^2) = 29357 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -195.6; Ty = 499.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.14+0.01+0.04 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -195.6; Ty = 499.9; Mt = 34.825

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.109
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
24543 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 34.825

Asta 518: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.17

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.17
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
237875/870720+465343/1088400+0.7*250302/1088400=0.86 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -714.767; My = -256.31; N = 9134.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d

Sqrt(67569^2+10707^2) = 68412 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -1235.6; Ty = 195.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.3+0.22+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -1235.6; Ty = 195.8; Mt = 74.595

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.17
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
75420 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 107.016

Asta 519: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.178

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.178
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(19650^2+7514^2) = 21038 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 359.3; Ty = -137.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(88426/993103)^2+0.7*3386/1088400+316230/1088400=0.3 <= 1 [4.4.7b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -5.201; My = -323.819; N = -3395.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.178
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0.02+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 359.3; Ty = -137.4; Mt = 9.26

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.178
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
6526 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 9.26

Asta 520: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.195

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(7532^2+11111^2) = 13424 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -137.7; Ty = 203.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(94232/993103)^2+0.7*67510/1088400+109614/1088400=0.15 <= 1 [4.4.7b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 103.695; My = 112.245; N = -3618.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -137.7; Ty = 203.2; Mt = 6.522

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.195
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4597 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 6.522

Asta 521: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.251

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(15432^2+5820^2) = 16493 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -282.2; Ty = 106.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.251
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)

(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(90859/993103)^2+0.7*85831/1088400+195120/1088400=0.24 <= 1 [4.4.7b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -131.836; My = -199.803; N = -3489

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.17+0.01+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -282.2; Ty = 106.4; Mt = -43.114

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.251
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
30385 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -43.114

Asta 789: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.994

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
0.7*29334/1088400+36081/1088400=0.05 <= 1 (formula 4.4.5b) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 45.057; My = 36.947

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1851^2+5142^2) = 5465 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 33.8; Ty = 94

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 29; Ty = 88.9; Mt = -7.426

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.994
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5234 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -7.426

Asta 790: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
5352/870720+0.7*39383/1088400+126340/1088400=0.15 <= 1 [4.4.6b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 60.493; My = 129.373; N = 205.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(16307^2+901^2) = 16332 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -298.2; Ty = 16.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0.01+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -341.6; Ty = -9.8; Mt = 26.744

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
18850 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 26.747

Asta 791: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
8464/1160960+443850/1451200+0.7*72552/1451200=0.35 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 681.753; My = -74.293; N = 325

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2013^2+43251^2) = 43298 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 36.8; Ty = -790.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.05 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 36.9; Ty = -790.8; Mt = -11.657

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
8895 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -12.622

Asta 792: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
12532/1160960+406950/1451200+0.7*46358/1451200=0.31 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 625.076; My = -47.47; N = 481.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3869^2+58021^2) = 58150 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 70.7; Ty = 1061

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.12+0+0.09 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 70.7; Ty = 1061; Mt = 41.481

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
29234 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 41.481

Asta 793: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
12429/1160960+183163/1451200+0.7*23777/1451200=0.15 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -281.338; My = 24.347; N = 477.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(1449^2+4350^2) = 4585 <= 265517 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = -26.5; Ty = 79.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -11; Ty = 48; Mt = 1.982

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1397 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 1.982

Asta 794: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1

12457/1160960+370104/1451200+0.7*60118/1451200=0.29 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 568.479; My = -61.561; N = 478.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5285^2+56132^2) = 56380 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -96.6; Ty = -1026.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.14+0+0.08 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -96.6; Ty = -1026.4; Mt = -45.448

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
32029 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -45.448

Asta 795: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
12596/1160960+369106/1451200+0.7*60816/1451200=0.29 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 566.947; My = -62.276; N = 483.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5386^2+56397^2) = 56653 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 98.5; Ty = 1031.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.13+0+0.09 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 98.5; Ty = 1031.3; Mt = 45.267

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d

31902 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 45.267

Asta 796: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
12611/1160960+164022/1451200+0.7*66823/1451200=0.16 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -251.938; My = 68.427; N = 484.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(3035^2+6755^2) = 7405 <= 265517 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = 55.5; Ty = -123.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 53.2; Ty = -50.9; Mt = -4.538

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3198 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -4.538

Asta 797: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.836

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.836
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)

St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
12639/1160960+317150/1451200+0.7*90371/1451200=0.27 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 487.142; My = -92.54; N = 485.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.836
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(10108^2+49045^2) = 50075 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -184.8; Ty = -896.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.836
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.12+0+0.06 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -184.8; Ty = -896.8; Mt = -41.909

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.836
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
29535 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -41.909

Asta 798: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.844

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
406755/1451200+0.7*149322/1451200=0.35 <= 1 (formula 4.4.5a) Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 624.776; My = -152.905

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(8137^2+35831^2) = 36743 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 148.8; Ty = 655.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 148.8; Ty = 655.2; Mt = 11.942

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.844
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.6
τ,tor,d <= Ksh * fv,d
9434 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 13.386

Asta 799: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
63143/1088400+0.7*50210/1088400=0.09 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 96.988; My = -51.415

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(6051^2+1889^2) = 6339 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 110.7; Ty = 34.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 107.5; Ty = 26.7; Mt = -22.874

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
16120 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -22.874

Asta 800: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.839

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
42089/1088400+0.7*10156/1088400=0.05 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 64.649; My = 10.399

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(577^2+3267^2) = 3317 <= 144828 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = 10.6; Ty = 59.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -9.9; Ty = 24.1; Mt = 12.277

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.839
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8652 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 12.277

Asta 801: Trave in legno a falda Falda 4 fili 182-318

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.93

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.93
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(322^2+22671^2) = 22673 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -3.9; Ty = -272

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.93
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(6339/1324138)^2+234645/1456552+0.7*10011/1456552=0.17 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 177.392; My = -5.887; N = -159.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.93
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -3.9; Ty = -272; Mt = 13.741

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.93
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
17493 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 13.741

Asta 802: Trave in legno a falda Falda 4 fili 171-317

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.467

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 2.467
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
8880/873931+484120/1092414+0.7*15248/1092414=0.46 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 365.995; My = 8.966; N = 223.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.467
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(660^2+40609^2) = 40614 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 7.9; Ty = -487.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.467
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.04 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 7.9; Ty = -487.3; Mt = 2.558

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.467
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3257 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 2.558

Asta 803: Trave in legno a falda Falda 4 fili 171-317

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno

Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
31316/873931+315240/1092414+0.7*21501/1092414=0.34 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 238.322; My = 12.642; N = 789.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1534^2+34848^2) = 34882 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -18.4; Ty = 418.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.1+0+0.03 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -15.2; Ty = 302.5; Mt = 13.797

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
17564 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 13.797

Asta 804: Trave in legno a falda Falda 4 fili 171-317

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
6976/873931+116046/1092414+0.7*18633/1092414=0.13 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 87.731; My = -10.956; N = 175.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(14206^2+6925^2) = 15804 <= 265517 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Tx = -170.5; Ty = -83.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1

0.29+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -63.9; Ty = -70.8; Mt = 38.801

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
49397 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 38.801

Asta 805: Trave in legno a falda Falda 4 fili 114-310

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.612

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 2.612
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
594424/1456552+0.7*2991/1456552=0.41 <= 1 (formula 4.4.5a) Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 449.384; My = -1.759

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.612
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(192^2+37920^2) = 37921 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -2.3; Ty = -455

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.612
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.04 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -2.3; Ty = -455; Mt = -6.376

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.612
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8117 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -6.376

Asta 806: Trave in legno a falda Falda 4 fili 114-310

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
34318/1165241+386528/1456552+0.7*5230/1456552=0.3 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 292.215; My = -3.075; N = 864.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(197^2+31098^2) = 31098 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 2.4; Ty = 373.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.02 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 1.9; Ty = 260; Mt = -7.932

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
10099 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -7.932

Asta 807: Trave in legno a falda Falda 4 fili 114-310

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
5751/873931+115407/1092414+0.7*5064/1092414=0.12 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 87.247; My = 2.978; N = 144.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(1635^2+6964^2) = 7153 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 19.6; Ty = -83.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.12+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 19.6; Ty = -83.6; Mt = -16.255

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
20694 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -16.255

Asta 808: Trave in legno a falda Falda 4 fili 103-309

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.091

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 2.091
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
209059/1456552+0.7*13076/1456552=0.15 <= 1 (formula 4.4.5a) Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 158.049; My = 7.689

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.091
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(409^2+23295^2) = 23298 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 4.9; Ty = -279.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.091
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 5.1; Ty = -279.5; Mt = -14.225

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.091
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
18110 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -14.225

Asta 809: Trave in legno a falda Falda 4 fili 319-192

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.101
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
22472/1165241+233326/1456552+0.7*3073/1456552=0.18 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -176.394; My = 1.807; N = 566.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(97^2+24586^2) = 24586 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 1.2; Ty = -295

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 1.9; Ty = -289.7; Mt = -3.79

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4825 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -3.79

Asta 810: Trave in legno a falda Falda 4 fili 308-96

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.337
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
89073/1165241+289775/1456552+0.7*2339/1456552=0.28 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -219.07; My = -1.376; N = 2244.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(101^2+26040^2) = 26040 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -1.2; Ty = 312.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -1.2; Ty = 312.5; Mt = 4.057

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5165 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 4.057

Asta 811: Trave in legno a falda Falda 4 fili 314-149

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(51^2+37000^2) = 37000 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 0.6; Ty = 444

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(11148/1324138)^2+538340/1456552+0.7*3337/1456552=0.37 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 406.985; My = -1.962; N = -280.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.04 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 0.6; Ty = 444; Mt = -1.473

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1876 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -1.473

Asta 812: Trave in legno a falda Falda 4 fili 316-163

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
8104/1165241+456394/1456552+0.7*6599/1456552=0.32 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 345.034; My = 3.88; N = 204.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(339^2+32514^2) = 32516 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -4.1; Ty = 390.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -4.1; Ty = 390.2; Mt = 0.995

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1283 <= 230345 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = 1.008

Asta 813: Trave in legno a falda Falda 4 fili 313-143

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
34502/873931+99258/1092414+0.7*1375/1092414=0.13 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -75.039; My = 0.808; N = 869.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d

Sqrt(171^2+13755^2) = 13756 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -2.1; Ty = -165.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.22+0+0 <= 1 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Tx = -148.6; Ty = -117.7; Mt = 54.953

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
69959 <= 316724 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mt = 54.953

Asta 814: Trave in legno a falda Falda 4 fili 313-143

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
243121/1092414+0.7*448/1092414=0.22 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 183.8; My = 0.263

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(25^2+29853^2) = 29853 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -0.3; Ty = -358.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.04 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -0.3; Ty = -358.2; Mt = -0.046

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3008 <= 316724 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mt = -2.362

Asta 815: Trave in legno a falda Falda 4 fili 313-143

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.923

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
25337/1602207+276474/2002759+0.7*16057/2002759=0.16 <= 1 [4.4.6a] Comb: SLV, 11; Durata minima del carico nella combinazione: istantaneo
Mx = -209.015; My = -9.442; N = 638.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(45^2+25482^2) = 25482 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -0.5; Ty = 305.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Tx = -17.4; Ty = 155.5; Mt = -6.849

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
8719 <= 316724 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Mt = -6.849

Asta 816: Trave in legno a falda Falda 4 fili 312-134

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(105^2+37489^2) = 37489 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -1.3; Ty = 449.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)

(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(10499/1324138)^2+547327/1456552+0.7*4900/1456552=0.38 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 413.78; My = 2.881; N = -264.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.04 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -1.3; Ty = 449.9; Mt = 1.383

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1761 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 1.383

Asta 817: Trave in legno a falda Falda 4 fili 311-122

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
518264/1456552+0.7*21614/1456552=0.37 <= 1 (formula 4.4.5a) Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 391.808; My = -12.709

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(774^2+36196^2) = 36204 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 9.3; Ty = 434.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.04 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 9.3; Ty = 434.4; Mt = -0.95

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1223 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -0.96

Asta 818: Trave in legno a falda Falda 4 fili 318-184

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
8433/1602207+271594/2002759+0.7*13446/2002759=0.15 <= 1 [4.4.6a] Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Mx = 205.325; My = 7.906; N = 212.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(244^2+25414^2) = 25415 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -2.9; Ty = 305

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -3; Ty = 304.6; Mt = -3.052

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3885 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -3.052

Asta 819: Trave in legno a falda Falda 4 fili 317-166

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
45400/873931+98465/1092414+0.7*18286/1092414=0.15 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -74.44; My = -10.752; N = 1144.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(2291^2+8366^2) = 8674 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 27.5; Ty = -100.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.27+0+0 <= 1 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = 131.1; Ty = -81.7; Mt = -66.367

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
84490 <= 316724 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mt = -66.367

Asta 820: Trave in legno a falda Falda 4 fili 317-166

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
57211/873931+47875/1092414+0.7*4624/1092414=0.11 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -36.194; My = -2.719; N = 1441.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2129^2+8544^2) = 8806 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 25.5; Ty = -102.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 25.4; Ty = -74; Mt = -6.519

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
8300 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -6.519

Asta 822: Trave in legno a falda Falda 4 fili 310-117

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
38295/873931+88200/1092414+0.7*5451/1092414=0.13 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -66.68; My = 3.205; N = 965

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(823^2+11872^2) = 11901 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -9.9; Ty = -142.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -9.9; Ty = -142.5; Mt = 11.732

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
14936 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 11.732

Asta 823: Trave in legno a falda Falda 4 fili 310-117

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1

27839/873931+156575/1092414+0.7*2779/1092414=0.18 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 118.371; My = -1.634; N = 701.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(740^2+22015^2) = 22027 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -8.9; Ty = -264.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -8.9; Ty = -264.2; Mt = 3.056

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
3891 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 3.056

Asta 824: Trave in legno a falda Falda 4 fili 310-117

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.923

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
150769/873931+374655/1092414+0.7*7330/1092414=0.52 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 283.239; My = 4.31; N = 3799.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(362^2+35760^2) = 35762 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 4.3; Ty = -429.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 4.3; Ty = -429.1; Mt = -0.927

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d

1184 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -0.93

Asta 825: Trave in legno a falda Falda 4 fili 309-105

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
28021/1602207+301650/2002759+0.7*10578/2002759=0.17 <= 1 [4.4.6a] Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Mx = 228.048; My = 6.22; N = 706.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(462^2+24310^2) = 24315 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 5.5; Ty = -291.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 5.5; Ty = -291.7; Mt = 3.83

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4877 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 3.831

1.6 Verifiche superelementi in legno

Le unità di misura elencate nel capitolo sono in [m] ove non espressamente specificato.

Descrizione: *descrizione della sezione.*
Tipo: *tipo di sezione.*
Base: *base della sezione. [m]*
Altezza: *altezza della sezione. [m]*
Area: *area inerziale nel sistema geometrico centrato nel baricentro. [m²]*
Jx: *momento d'inerzia attorno all'asse orizzontale baricentrico di definizione della sezione. [m4]*
Jy: *momento d'inerzia attorno all'asse verticale baricentrico di definizione della sezione. [m4]*
Wx: *modulo di resistenza elastico minimo relativo all'asse x. [m³]*
Wy: *modulo di resistenza elastico minimo relativo all'asse y. [m³]*

Superelemento in legno a "Falda 1" 26-(-618; -120)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 8.641 composto da:
asta 94: Trave in legno a falda Falda 1 fili 26-126 (L = 0.882)
asta 95: Trave in legno a falda Falda 1 fili 26-126 (L = 0.84)
asta 96: Trave in legno a falda Falda 1 fili 26-126 (L = 0.84)
asta 97: Trave in legno a falda Falda 1 fili 26-126 (L = 0.224)
asta 98: Trave in legno a falda Falda 1 fili 26-126 (L = 0.616)
asta 99: Trave in legno a falda Falda 1 fili 26-126 (L = 0.84)
asta 100: Trave in legno a falda Falda 1 fili 26-126 (L = 0.84)
asta 101: Trave in legno a falda Falda 1 fili 26-126 (L = 0.313)
asta 102: Trave in legno a falda Falda 1 fili 26-126 (L = 0.527)
asta 103: Trave in legno a falda Falda 1 fili 26-126 (L = 0.84)
asta 104: Trave in legno a falda Falda 1 fili 26-126 (L = 0.84)
asta 105: Trave in legno a falda Falda 1 fili 26-126 (L = 1.039)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 5.395
Kdef = 0
Uinst tot in x = 0.002
Uinst tot in y = 0.0041
Uinst tot = 0.0041
Luce/Uinst,tot > limite
8.641/0.0041=2092 > 300 Comb: SLE rara, 21

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 5.395
Kdef = 0
Uinst var in x = 0.0002
Uinst var in y = 0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
8.641/0.0005=16539.9 > 300 Comb: SLE rara, 21

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 5.575
Kdef = 0.6
Ufin in x = 0.0031
Ufin in y = 0.0065
Ufin = 0.0065
Luce/Ufin > limite
8.641/0.0065=1337.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Neve = 0,500 + 0,000 = 0,500
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 39-(-2154; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.4 composto da:
asta 203: Trave in legno a falda Falda 1 fili 39-38 (L = 0.981)
asta 198: Trave in legno a falda Falda 1 fili 38-37 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0

Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.223
Kdef = 0
Uinst tot in x = -0.0003
Uinst tot in y = 0.0014
Uinst tot = 0.0014
Luce/Uinst,tot > limite
3.4/0.0014=2435.2 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.029
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = -0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
3.4/0.0005=6253.1 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.255
Kdef = 0.6
Ufin in x = -0.0005
Ufin in y = 0.0022
Ufin = 0.0022
Luce/Ufin > limite
3.4/0.0022=1550.9 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Superelemento in legno a "Falda 1" 47-(-2070; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.33 composto da:
asta 202: Trave in legno a falda Falda 1 fili 47-46 (L = 1.911)
asta 197: Trave in legno a falda Falda 1 fili 46-45 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.992
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = 0.0032
Uinst tot = 0.0032
Luce/Uinst,tot > limite
4.33/0.0032=1355.1 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.959
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite

4.33/0.0005=8249.9 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.055
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = 0.005
Ufin = 0.005
Luce/Ufin > limite
4.33/0.005=869.3 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Superelemento in legno a "Falda 1" 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 15.41 composto da:
asta 19: Trave in legno a falda Falda 1 fili 51-230 (L = 0.301)
asta 20: Trave in legno a falda Falda 1 fili 51-230 (L = 0.224)
asta 21: Trave in legno a falda Falda 1 fili 51-230 (L = 0.616)
asta 22: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 23: Trave in legno a falda Falda 1 fili 51-230 (L = 1.004)
asta 24: Trave in legno a falda Falda 1 fili 51-230 (L = 0.676)
asta 25: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 26: Trave in legno a falda Falda 1 fili 51-230 (L = 0.724)
asta 27: Trave in legno a falda Falda 1 fili 51-230 (L = 0.668)
asta 28: Trave in legno a falda Falda 1 fili 51-230 (L = 0.287)
asta 29: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 30: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 31: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 32: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 33: Trave in legno a falda Falda 1 fili 51-230 (L = 0.834)
asta 34: Trave in legno a falda Falda 1 fili 51-230 (L = 0.835)
asta 35: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 36: Trave in legno a falda Falda 1 fili 51-230 (L = 0.58)
asta 37: Trave in legno a falda Falda 1 fili 51-230 (L = 0.26)
asta 38: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 39: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 40: Trave in legno a falda Falda 1 fili 51-230 (L = 0.425)
asta 41: Trave in legno a falda Falda 1 fili 51-230 (L = 0.415)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.188
Kdef = 0
Uinst tot in x = -0.0006
Uinst tot in y = 0.0007
Uinst tot = 0.0007
Luce/Uinst,tot > limite
15.41/0.0007=21253.6 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 13.73
Kdef = 0
Uinst var in x = -0.0002
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite

15.41/0.0002=68349.4 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.265
Kdef = 0.6
Ufin in x = -0.0009
Ufin in y = 0.0011
Ufin = 0.0011
Luce/Ufin > limite
15.41/0.0011=13577.3 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Superelemento in legno a "Falda 1" 57-(-1986; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 183: Trave in legno a falda Falda 1 fili 57-56 (L = 2.516)
asta 196: Trave in legno a falda Falda 1 fili 56-55 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.347
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = 0.0052
Uinst tot = 0.0052
Luce/Uinst,tot > limite
4.935/0.0052=951.8 > 300 Comb: SLE rara, 20

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.347
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0.0006
Uinst var = 0.0006
Luce/Uinst,var > limite
4.935/0.0006=8203.8 > 300 Comb: SLE rara, 20

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.347
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = 0.008
Ufin = 0.008
Luce/Ufin > limite
4.935/0.008=613.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Neve = 0,500 + 0,000 = 0,500

Superelemento in legno a "Falda 1" 66-(-1902; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 182: Trave in legno a falda Falda 1 fili 66-65 (L = 2.516)
asta 195: Trave in legno a falda Falda 1 fili 65-64 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.431
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = 0.0055
Uinst tot = 0.0055
Luce/Uinst,tot > limite
4.935/0.0055=899.7 > 300 Comb: SLE rara, 21

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.347
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0.0007
Uinst var = 0.0007
Luce/Uinst,var > limite
4.935/0.0007=7495.1 > 300 Comb: SLE rara, 21

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.599
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = 0.0085
Ufin = 0.0085
Luce/Ufin > limite
4.935/0.0085=581 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Neve = 0,500 + 0,000 = 0,500
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 77-(-1818; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 181: Trave in legno a falda Falda 1 fili 77-76 (L = 2.516)
asta 194: Trave in legno a falda Falda 1 fili 76-75 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.516
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = 0.0052

Uinst tot = 0.0052
Luce/Uinst,tot > limite
4.935/0.0052=941.8 > 300 Comb: SLE rara, 21

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.515
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0.0006
Uinst var = 0.0006
Luce/Uinst,var > limite
4.935/0.0006=8048.3 > 300 Comb: SLE rara, 21

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.599
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = 0.0081
Ufin = 0.0081
Luce/Ufin > limite
4.935/0.0081=606.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Neve = 0,500 + 0,000 = 0,500
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 85-(-1734; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 180: Trave in legno a falda Falda 1 fili 85-84 (L = 2.516)
asta 193: Trave in legno a falda Falda 1 fili 84-83 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.516
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = 0.0051
Uinst tot = 0.0051
Luce/Uinst,tot > limite
4.935/0.0051=960.9 > 300 Comb: SLE rara, 21

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.516
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0.0006
Uinst var = 0.0006
Luce/Uinst,var > limite
4.935/0.0006=7925 > 300 Comb: SLE rara, 21

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.599
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = 0.008
Ufin = 0.008
Luce/Ufin > limite
4.935/0.008=618.5 > 200

Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Neve = 0,500 + 0,000 = 0,500
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 93-(-1650; -468)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 179: Trave in legno a falda Falda 1 fili 93-92 (L = 2.516)
asta 265: Trave in legno a falda Falda 1 fili 92-91 (L = 2.419)
asta 494: Trave in legno a falda Falda 1 fili 91-90 (L = 1.724)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.516
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = 0.0038
Uinst tot = 0.0038
Luce/Uinst,tot > limite
6.659/0.0038=1750 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.516
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
6.659/0.0004=15028.4 > 300 Comb: SLE rara, 18

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.599
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = 0.0059
Ufin = 0.0059
Luce/Ufin > limite
6.659/0.0059=1122.2 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Superelemento in legno a "Falda 1" 101-(-1566; -468)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 178: Trave in legno a falda Falda 1 fili 101-100 (L = 2.516)
asta 266: Trave in legno a falda Falda 1 fili 100-99 (L = 2.419)
asta 495: Trave in legno a falda Falda 1 fili 99-98 (L = 1.724)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.516
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = 0.0017
Uinst tot = 0.0017
Luce/Uinst,tot > limite
6.659/0.0017=3902.8 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.677
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
6.659/0.0005=12110 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.599
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = 0.0027
Ufin = 0.0027
Luce/Ufin > limite
6.659/0.0027=2511.6 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Superelemento in legno a "Falda 1" 113-(-1482; -468)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 177: Trave in legno a falda Falda 1 fili 113-112 (L = 2.516)
asta 267: Trave in legno a falda Falda 1 fili 112-111 (L = 2.419)
asta 496: Trave in legno a falda Falda 1 fili 111-110 (L = 1.724)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.09
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0008
Uinst tot = 0.0008
Luce/Uinst,tot > limite
6.659/0.0008=8092 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.677
Kdef = 0

Uinst var in x = 0
Uinst var in y = -0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
6.659/0.0005=13095.8 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.006
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0011
Ufin = 0.0011
Luce/Ufin > limite
6.659/0.0011=6300.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 119-(-1398; -357)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 2.419 composto da:
asta 268: Trave in legno a falda Falda 1 fili 119-124 (L = 0.292)
asta 269: Trave in legno a falda Falda 1 fili 119-124 (L = 2.128)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.356
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0002
Uinst tot = 0.0002
Luce/Uinst,tot > limite
2.419/0.0002=11019.1 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.285
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
2.419/0.0001=17908.4 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.365
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0003
Ufin = 0.0003
Luce/Ufin > limite
2.419/0.0003=8957.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 120-119

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 2.516 composto da:
asta 174: Trave in legno a falda Falda 1 fili 120-119 (L = 1.894)
asta 175: Trave in legno a falda Falda 1 fili 120-119 (L = 0.311)
asta 176: Trave in legno a falda Falda 1 fili 120-119 (L = 0.311)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.821
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0005
Uinst tot = 0.0005
Luce/Uinst,tot > limite
2.516/0.0005=4619.4 > 300 Comb: SLE rara, 19

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.821
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
2.516/0.0001=35531.7 > 300 Comb: SLE rara, 19

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.821
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0008
Ufin = 0.0008
Luce/Ufin > limite
2.516/0.0008=2989.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 126-(-871; -120)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 2.775 composto da:
asta 90: Trave in legno a falda Falda 1 fili 126-154 (L = 0.641)
asta 91: Trave in legno a falda Falda 1 fili 126-154 (L = 0.84)
asta 92: Trave in legno a falda Falda 1 fili 126-154 (L = 0.84)
asta 93: Trave in legno a falda Falda 1 fili 126-154 (L = 0.454)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.453
Kdef = 0
Uinst tot in x = -0.0005
Uinst tot in y = -0.0014
Uinst tot = 0.0014
Luce/Uinst,tot > limite
2.775/0.0014=1947.9 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.481
Kdef = 0
Uinst var in x = -0.0002
Uinst var in y = -0.0006
Uinst var = 0.0006
Luce/Uinst,var > limite
2.775/0.0006=4826.7 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.53
Kdef = 0.6
Ufin in x = -0.0007
Ufin in y = -0.0019
Ufin = 0.0019
Luce/Ufin > limite
2.775/0.0019=1424.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 132-(-1314; -482)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 173: Trave in legno a falda Falda 1 fili 132-131 (L = 2.516)
asta 270: Trave in legno a falda Falda 1 fili 131-130 (L = 4.143)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 4.587
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0042
Uinst tot = 0.0042
Luce/Uinst,tot > limite
6.659/0.0042=1576.4 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 4.587
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0023
Uinst var = 0.0023
Luce/Uinst,var > limite
6.659/0.0023=2834.4 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 4.671
Kdef = 0.6

Ufin in x = 0.0001
Ufin in y = -0.0054
Ufin = 0.0054
Luce/Ufin > limite
6.659/0.0054=1243 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 141-(-1230; -482)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 172: Trave in legno a falda Falda 1 fili 141-140 (L = 2.516)
asta 271: Trave in legno a falda Falda 1 fili 140-139 (L = 4.143)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 4.587
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0049
Uinst tot = 0.0049
Luce/Uinst,tot > limite
6.659/0.0049=1356.7 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 4.587
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0027
Uinst var = 0.0027
Luce/Uinst,var > limite
6.659/0.0027=2434.7 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 4.671
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0062
Ufin = 0.0062
Luce/Ufin > limite
6.659/0.0062=1070.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 147-(-1146; -482)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 171: Trave in legno a falda Falda 1 fili 147-146 (L = 2.516)
asta 272: Trave in legno a falda Falda 1 fili 146-145 (L = 4.143)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 4.588
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0037
Uinst tot = 0.0037
Luce/Uinst,tot > limite
6.659/0.0037=1798.5 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 4.588
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0021
Uinst var = 0.0021
Luce/Uinst,var > limite
6.659/0.0021=3157.7 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 4.671
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0047
Ufin = 0.0047
Luce/Ufin > limite
6.659/0.0047=1427.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 8.561 composto da:
asta 77: Trave in legno a falda Falda 1 fili 154-245 (L = 0.386)
asta 78: Trave in legno a falda Falda 1 fili 154-245 (L = 0.829)
asta 79: Trave in legno a falda Falda 1 fili 154-245 (L = 0.84)
asta 80: Trave in legno a falda Falda 1 fili 154-245 (L = 0.84)
asta 81: Trave in legno a falda Falda 1 fili 154-245 (L = 0.416)
asta 82: Trave in legno a falda Falda 1 fili 154-245 (L = 0.424)
asta 83: Trave in legno a falda Falda 1 fili 154-245 (L = 0.84)
asta 84: Trave in legno a falda Falda 1 fili 154-245 (L = 0.84)
asta 85: Trave in legno a falda Falda 1 fili 154-245 (L = 0.505)
asta 86: Trave in legno a falda Falda 1 fili 154-245 (L = 0.335)
asta 87: Trave in legno a falda Falda 1 fili 154-245 (L = 0.84)
asta 88: Trave in legno a falda Falda 1 fili 154-245 (L = 0.84)
asta 89: Trave in legno a falda Falda 1 fili 154-245 (L = 0.626)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.396
Kdef = 0
Uinst tot in x = 0.0019
Uinst tot in y = 0.0041
Uinst tot = 0.0041
Luce/Uinst,tot > limite
8.561/0.0041=2076.6 > 300 Comb: SLE rara, 21

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.367
Kdef = 0
Uinst var in x = 0.0002
Uinst var in y = 0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
8.561/0.0005=16471.1 > 300 Comb: SLE rara, 21

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.506
Kdef = 0.6
Ufin in x = 0.0029
Ufin in y = 0.0063
Ufin = 0.0063
Luce/Ufin > limite
8.561/0.0063=1354.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Neve = 0,500 + 0,000 = 0,500
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 167-(-979; -468)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 169: Trave in legno a falda Falda 1 fili 167-170 (L = 2.516)
asta 274: Trave in legno a falda Falda 1 fili 170-169 (L = 2.419)
asta 502: Trave in legno a falda Falda 1 fili 169-168 (L = 1.725)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.09
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0011
Uinst tot = 0.0011
Luce/Uinst,tot > limite
6.659/0.0011=6303 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.677
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0006
Uinst var = 0.0006
Luce/Uinst,var > limite
6.659/0.0006=11407.7 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.006
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0014
Ufin = 0.0014
Luce/Ufin > limite
6.659/0.0014=4773.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 180-(-895; -468)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 168: Trave in legno a falda Falda 1 fili 180-179 (L = 2.516)
asta 276: Trave in legno a falda Falda 1 fili 179-178 (L = 2.419)
asta 504: Trave in legno a falda Falda 1 fili 178-177 (L = 1.725)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.597
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = 0.0019
Uinst tot = 0.0019
Luce/Uinst,tot > limite
6.659/0.0019=3586.6 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.677
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0006
Uinst var = 0.0006
Luce/Uinst,var > limite
6.659/0.0006=11351.7 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.681
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = 0.0029
Ufin = 0.0029
Luce/Ufin > limite
6.659/0.0029=2315.9 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Superelemento in legno a "Falda 1" 189-(-811; -468)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 167: Trave in legno a falda Falda 1 fili 189-188 (L = 2.516)
asta 275: Trave in legno a falda Falda 1 fili 188-187 (L = 2.419)
asta 503: Trave in legno a falda Falda 1 fili 187-186 (L = 1.725)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.516
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = 0.0041
Uinst tot = 0.0041
Luce/Uinst,tot > limite
6.659/0.0041=1621 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.516
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
6.659/0.0005=14183.3 > 300 Comb: SLE rara, 18

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.6
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = 0.0064
Ufin = 0.0064
Luce/Ufin > limite
6.659/0.0064=1042.4 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Superelemento in legno a "Falda 1" 200-(-727; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 166: Trave in legno a falda Falda 1 fili 200-199 (L = 2.516)
asta 192: Trave in legno a falda Falda 1 fili 199-198 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.433
Kdef = 0
Uinst tot in x = 0.0001

Uinst tot in y = 0.0055
Uinst tot = 0.0055
Luce/Uinst,tot > limite
4.935/0.0055=905.1 > 300 Comb: SLE rara, 21

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.516
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0.0007
Uinst var = 0.0007
Luce/Uinst,var > limite
4.935/0.0007=7419.2 > 300 Comb: SLE rara, 21

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.6
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = 0.0084
Ufin = 0.0084
Luce/Ufin > limite
4.935/0.0084=584.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Neve = 0,500 + 0,000 = 0,500
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 206-(-643; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 165: Trave in legno a falda Falda 1 fili 206-211 (L = 2.516)
asta 191: Trave in legno a falda Falda 1 fili 211-205 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.516
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = 0.0053
Uinst tot = 0.0053
Luce/Uinst,tot > limite
4.935/0.0053=930.7 > 300 Comb: SLE rara, 21

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.433
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0.0006
Uinst var = 0.0006
Luce/Uinst,var > limite
4.935/0.0006=7994.3 > 300 Comb: SLE rara, 21

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.6
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = 0.0082
Ufin = 0.0082
Luce/Ufin > limite

4.935/0.0082=599.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Neve = 0,500 + 0,000 = 0,500
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 216-(-559; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 164: Trave in legno a falda Falda 1 fili 216-215 (L = 2.517)
asta 190: Trave in legno a falda Falda 1 fili 215-214 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.433
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = 0.0054
Uinst tot = 0.0054
Luce/Uinst,tot > limite
4.935/0.0054=911.7 > 300 Comb: SLE rara, 21

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.349
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0.0006
Uinst var = 0.0006
Luce/Uinst,var > limite
4.935/0.0006=7719.4 > 300 Comb: SLE rara, 21

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.433
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = 0.0084
Ufin = 0.0084
Luce/Ufin > limite
4.935/0.0084=588.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Neve = 0,500 + 0,000 = 0,500
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 230-(-475; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 163: Trave in legno a falda Falda 1 fili 230-229 (L = 2.517)
asta 189: Trave in legno a falda Falda 1 fili 229-228 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.433
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = 0.0047
Uinst tot = 0.0047
Luce/Uinst,tot > limite
4.935/0.0047=1054.3 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.433
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
4.935/0.0005=9435.9 > 300 Comb: SLE rara, 18

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.601
Kdef = 0.6
Ufin in x = -0.0002
Ufin in y = 0.0073
Ufin = 0.0073
Luce/Ufin > limite
4.935/0.0073=678.2 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Superelemento in legno a "Falda 1" 238-(-391; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.988 composto da:
asta 188: Trave in legno a falda Falda 1 fili 238-235 (L = 1.569)
asta 200: Trave in legno a falda Falda 1 fili 235-234 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.731
Kdef = 0
Uinst tot in x = 0.0004
Uinst tot in y = 0.0024
Uinst tot = 0.0024
Luce/Uinst,tot > limite
3.988/0.0024=1641.4 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.618
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0005

Uinst var = 0.0005
Luce/Uinst,var > limite
3.988/0.0005=7665.5 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.783
Kdef = 0.6
Ufin in x = 0.0006
Ufin in y = 0.0038
Ufin = 0.0038
Luce/Ufin > limite
3.988/0.0038=1049.7 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Superelemento in legno a "Falda 1" 244-(-307; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.111 composto da:
asta 187: Trave in legno a falda Falda 1 fili 244-241 (L = 0.692)
asta 199: Trave in legno a falda Falda 1 fili 241-240 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.095
Kdef = 0
Uinst tot in x = 0.0006
Uinst tot in y = 0.0009
Uinst tot = 0.0009
Luce/Uinst,tot > limite
3.111/0.0009=3367.6 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.821
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
3.111/0.0005=6512 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.038
Kdef = 0.6
Ufin in x = 0.001
Ufin in y = 0.0015
Ufin = 0.0015
Luce/Ufin > limite
3.111/0.0015=2141.7 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Superelemento in legno a "Falda 1" 315-(-1062; -468)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.66 composto da:
asta 170: Trave in legno a falda Falda 1 fili 315-161 (L = 2.517)
asta 273: Trave in legno a falda Falda 1 fili 161-160 (L = 2.419)
asta 501: Trave in legno a falda Falda 1 fili 160-159 (L = 1.725)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.09
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0012
Uinst tot = 0.0012
Luce/Uinst,tot > limite
6.66/0.0012=5663.8 > 300 Comb: SLE rara, 15

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.565
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
6.66/0.0003=25939.6 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.09
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0018
Ufin = 0.0018
Luce/Ufin > limite
6.66/0.0018=3722.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,000 = 0,500
Variabile H = 0,000 + 1,000 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" (-1398; -318)-(-1398; -585)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 1.724 composto da:
asta 497: Trave in legno a falda Falda 1 fili 124-123 (L = 0.551)
asta 498: Trave in legno a falda Falda 1 fili 124-123 (L = 0.391)
asta 499: Trave in legno a falda Falda 1 fili 124-123 (L = 0.391)
asta 500: Trave in legno a falda Falda 1 fili 124-123 (L = 0.391)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno

Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.981
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
1.724/0=72359.3 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.968
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
1.724/0=85300 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.012
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
1.724/0=61540.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 2" 32-26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.656 composto da:
asta 141: Trave in legno a falda Falda 2 fili 32-26 (L = 0.774)
asta 142: Trave in legno a falda Falda 2 fili 32-26 (L = 0.84)
asta 143: Trave in legno a falda Falda 2 fili 32-26 (L = 0.163)
asta 144: Trave in legno a falda Falda 2 fili 32-26 (L = 0.338)
asta 145: Trave in legno a falda Falda 2 fili 32-26 (L = 0.338)
asta 146: Trave in legno a falda Falda 2 fili 32-26 (L = 0.841)
asta 147: Trave in legno a falda Falda 2 fili 32-26 (L = 0.84)
asta 148: Trave in legno a falda Falda 2 fili 32-26 (L = 0.522)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.776
Kdef = 0
Uinst tot in x = 0.0023
Uinst tot in y = 0.0052
Uinst tot = 0.0052
Luce/Uinst,tot > limite
4.656/0.0052=897.8 > 300 Comb: SLE rara, 14

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.776
Kdef = 0
Uinst var in x = 0.0003
Uinst var in y = 0.0007
Uinst var = 0.0007

Luce/Uinst,var > limite
4.656/0.0007=6507.4 > 300 Comb: SLE rara, 14

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.83
Kdef = 0.6
Ufin in x = 0.0036
Ufin in y = 0.0079
Ufin = 0.0079
Luce/Ufin > limite
4.656/0.0079=590.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,000 = 0,500
Variabile H = 0,000 + 1,000 = 1,000

Superelemento in legno a "Falda 2" 35-(-2463; -67)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.12 composto da:
asta 214: Trave in legno a falda Falda 2 fili 35-27 (L = 0.616)
asta 216: Trave in legno a falda Falda 2 fili 27-4 (L = 2.504)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.033
Kdef = 0
Uinst tot in x = -0.0011
Uinst tot in y = -0.0007
Uinst tot = 0.0011
Luce/Uinst,tot > limite
3.12/0.0011=2797.2 > 300 Comb: SLE rara, 20

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.951
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = -0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
3.12/0.0004=8270.8 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.054
Kdef = 0.6
Ufin in x = -0.0017
Ufin in y = -0.001
Ufin = 0.0017
Luce/Ufin > limite
3.12/0.0017=1794 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Neve = 0,500 + 0,000 = 0,500

Superelemento in legno a "Falda 2" 36-(-2463; 269)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.317 composto da:
asta 209: Trave in legno a falda Falda 2 fili 36-31 (L = 0.814)
asta 211: Trave in legno a falda Falda 2 fili 31-8 (L = 2.504)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.398
Kdef = 0
Uinst tot in x = -0.0013
Uinst tot in y = 0.0028
Uinst tot = 0.0028
Luce/Uinst,tot > limite
3.317/0.0028=1167 > 300 Comb: SLE rara, 20

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.064
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = 0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
3.317/0.0003=9727.9 > 300 Comb: SLE rara, 20

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.425
Kdef = 0.6
Ufin in x = -0.002
Ufin in y = 0.0044
Ufin = 0.0044
Luce/Ufin > limite
3.317/0.0044=755.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Neve = 0,500 + 0,000 = 0,500

Superelemento in legno a "Falda 2" 43-(-2463; 17)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.096 composto da:
asta 213: Trave in legno a falda Falda 2 fili 43-28 (L = 1.592)
asta 215: Trave in legno a falda Falda 2 fili 28-5 (L = 2.504)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.676
Kdef = 0
Uinst tot in x = -0.0016
Uinst tot in y = 0.0024
Uinst tot = 0.0024

Luce/Uinst,tot > limite
4.096/0.0024=1709.3 > 300 Comb: SLE rara, 19

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.761
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = -0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
4.096/0.0004=10666.9 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.729
Kdef = 0.6
Ufin in x = -0.0025
Ufin in y = 0.0037
Ufin = 0.0037
Luce/Ufin > limite
4.096/0.0037=1094.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 2" 44-(-2463; 185)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.199 composto da:
asta 210: Trave in legno a falda Falda 2 fili 44-30 (L = 1.696)
asta 212: Trave in legno a falda Falda 2 fili 30-7 (L = 2.504)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.779
Kdef = 0
Uinst tot in x = -0.0017
Uinst tot in y = 0.0054
Uinst tot = 0.0054
Luce/Uinst,tot > limite
4.199/0.0054=784.6 > 300 Comb: SLE rara, 20

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.696
Kdef = 0
Uinst var in x = -0.0002
Uinst var in y = 0.0007
Uinst var = 0.0007
Luce/Uinst,var > limite
4.199/0.0007=6227.3 > 300 Comb: SLE rara, 20

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.836
Kdef = 0.6
Ufin in x = -0.0027
Ufin in y = 0.0082
Ufin = 0.0082
Luce/Ufin > limite
4.199/0.0082=509.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600

Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Neve = 0,500 + 0,000 = 0,500

Superelemento in legno a "Falda 2" 51-(-2464; 101)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 5.077 composto da:
asta 76: Trave in legno a falda Falda 2 fili 51-29 (L = 2.578)
asta 224: Trave in legno a falda Falda 2 fili 29-6 (L = 2.499)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.578
Kdef = 0
Uinst tot in x = -0.0019
Uinst tot in y = 0.0046
Uinst tot = 0.0046
Luce/Uinst,tot > limite
5.077/0.0046=1106.4 > 300 Comb: SLE rara, 21

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.578
Kdef = 0
Uinst var in x = -0.0002
Uinst var in y = 0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
5.077/0.0005=9496 > 300 Comb: SLE rara, 21

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.578
Kdef = 0.6
Ufin in x = -0.003
Ufin in y = 0.0071
Ufin = 0.0071
Luce/Ufin > limite
5.077/0.0071=714.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Neve = 0,500 + 0,000 = 0,500
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 2" 51-(-2854; -716)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.698 composto da:
asta 59: Trave in legno a falda Falda 2 fili 51-14 (L = 0.826)
asta 60: Trave in legno a falda Falda 2 fili 51-14 (L = 0.468)
asta 61: Trave in legno a falda Falda 2 fili 51-14 (L = 0.785)
asta 62: Trave in legno a falda Falda 2 fili 51-14 (L = 0.503)
asta 63: Trave in legno a falda Falda 2 fili 51-14 (L = 0.816)
asta 64: Trave in legno a falda Falda 2 fili 51-14 (L = 0.472)
asta 65: Trave in legno a falda Falda 2 fili 51-14 (L = 0.715)
asta 66: Trave in legno a falda Falda 2 fili 51-14 (L = 0.573)
asta 67: Trave in legno a falda Falda 2 fili 51-14 (L = 0.68)
asta 68: Trave in legno a falda Falda 2 fili 51-14 (L = 0.86)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.098
Kdef = 0
Uinst tot in x = -0.001
Uinst tot in y = 0.0027
Uinst tot = 0.0027
Luce/Uinst,tot > limite
6.698/0.0027=2514.7 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.098
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = 0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
6.698/0.0003=21168.2 > 300 Comb: SLE rara, 18

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.185
Kdef = 0.6
Ufin in x = -0.0016
Ufin in y = 0.0041
Ufin = 0.0041
Luce/Ufin > limite
6.698/0.0041=1619.7 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Superelemento in legno a "Falda 3" 32-(-1176; 346)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 5.588 composto da:
asta 134: Trave in legno a falda Falda 3 fili 32-307 (L = 0.882)
asta 135: Trave in legno a falda Falda 3 fili 32-307 (L = 0.84)
asta 136: Trave in legno a falda Falda 3 fili 32-307 (L = 0.84)
asta 137: Trave in legno a falda Falda 3 fili 32-307 (L = 0.84)
asta 138: Trave in legno a falda Falda 3 fili 32-307 (L = 0.84)
asta 139: Trave in legno a falda Falda 3 fili 32-307 (L = 0.833)
asta 140: Trave in legno a falda Falda 3 fili 32-307 (L = 0.513)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.618
Kdef = 0
Uinst tot in x = 0.0026
Uinst tot in y = -0.0069

Uinst tot = 0.0069
Luce/Uinst,tot > limite
5.588/0.0069=807.1 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.814
Kdef = 0
Uinst var in x = 0.0011
Uinst var in y = -0.0025
Uinst var = 0.0025
Luce/Uinst,var > limite
5.588/0.0025=2235.1 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.675
Kdef = 0.6
Ufin in x = 0.0035
Ufin in y = -0.0098
Ufin = 0.0098
Luce/Ufin > limite
5.588/0.0098=569 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 3" 40-(-2154; 583)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.705 composto da:
asta 256: Trave in legno a falda Falda 3 fili 40-41 (L = 1.063)
asta 264: Trave in legno a falda Falda 3 fili 41-42 (L = 2.642)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.856
Kdef = 0
Uinst tot in x = -0.0003
Uinst tot in y = -0.0051
Uinst tot = 0.0051
Luce/Uinst,tot > limite
3.705/0.0051=725.2 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.856
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0016
Uinst var = 0.0016
Luce/Uinst,var > limite
3.705/0.0016=2345 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.891
Kdef = 0.6
Ufin in x = -0.0005
Ufin in y = -0.0073
Ufin = 0.0073
Luce/Ufin > limite
3.705/0.0073=507.5 > 200

Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 3" 48-(-2070; 583)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.718 composto da:
asta 255: Trave in legno a falda Falda 3 fili 48-49 (L = 2.076)
asta 260: Trave in legno a falda Falda 3 fili 49-50 (L = 2.642)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.429
Kdef = 0
Uinst tot in x = -0.0002
Uinst tot in y = -0.0063
Uinst tot = 0.0063
Luce/Uinst,tot > limite
4.718/0.0063=753.4 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.517
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0024
Uinst var = 0.0024
Luce/Uinst,var > limite
4.718/0.0024=1986.9 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.498
Kdef = 0.6
Ufin in x = -0.0004
Ufin in y = -0.0087
Ufin = 0.0087
Luce/Ufin > limite
4.718/0.0087=544.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 3" 57-(-1986; 583)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 5.368 composto da:
asta 250: Trave in legno a falda Falda 3 fili 57-58 (L = 2.726)
asta 263: Trave in legno a falda Falda 3 fili 58-52 (L = 2.642)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.453
Kdef = 0
Uinst tot in x = -0.0002
Uinst tot in y = -0.0064
Uinst tot = 0.0064
Luce/Uinst,tot > limite
5.368/0.0064=845.2 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.544
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0028
Uinst var = 0.0028
Luce/Uinst,var > limite
5.368/0.0028=1941.8 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.453
Kdef = 0.6
Ufin in x = -0.0003
Ufin in y = -0.0085
Ufin = 0.0085
Luce/Ufin > limite
5.368/0.0085=628.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 3" 66-68

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.715 composto da:
asta 249: Trave in legno a falda Falda 3 fili 66-67 (L = 2.726)
asta 262: Trave in legno a falda Falda 3 fili 67-68 (L = 1.989)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.18
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0045
Uinst tot = 0.0045
Luce/Uinst,tot > limite
4.715/0.0045=1058.1 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.362
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0022
Uinst var = 0.0022
Luce/Uinst,var > limite
4.715/0.0022=2161.5 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.09
Kdef = 0.6
Ufin in x = -0.0002
Ufin in y = -0.0059
Ufin = 0.0059
Luce/Ufin > limite
4.715/0.0059=805.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 3" 77-79

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.691 composto da:
asta 248: Trave in legno a falda Falda 3 fili 77-78 (L = 2.725)
asta 261: Trave in legno a falda Falda 3 fili 78-79 (L = 0.965)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.635
Kdef = 0
Uinst tot in x = -0.0002
Uinst tot in y = -0.0025
Uinst tot = 0.0025
Luce/Uinst,tot > limite
3.691/0.0025=1494.6 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.908
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = -0.0012
Uinst var = 0.0012
Luce/Uinst,var > limite
3.691/0.0012=3048.7 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.635
Kdef = 0.6
Ufin in x = -0.0003
Ufin in y = -0.0033
Ufin = 0.0033
Luce/Ufin > limite
3.691/0.0033=1134 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 3" 85-(-1734; 413)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 2.719 composto da:
asta 245: Trave in legno a falda Falda 3 fili 85-82 (L = 0.364)
asta 246: Trave in legno a falda Falda 3 fili 85-82 (L = 0.378)
asta 247: Trave in legno a falda Falda 3 fili 85-82 (L = 1.977)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.742
Kdef = 0
Uinst tot in x = 0.0003
Uinst tot in y = 0.0019
Uinst tot = 0.0019
Luce/Uinst,tot > limite
2.719/0.0019=1438.2 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.796
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
2.719/0.0003=8641.6 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.754
Kdef = 0.6
Ufin in x = 0.0004
Ufin in y = 0.0029
Ufin = 0.0029
Luce/Ufin > limite
2.719/0.0029=936.5 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Superelemento in legno a "Falda 3" (-1961; 589)-(-1083; -370)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 7.49 composto da:
asta 69: Trave in legno a falda Falda 3 fili 52-109 (L = 1.05)
asta 70: Trave in legno a falda Falda 3 fili 52-109 (L = 1.324)
asta 71: Trave in legno a falda Falda 3 fili 52-109 (L = 1.279)
asta 72: Trave in legno a falda Falda 3 fili 52-109 (L = 1.37)
asta 73: Trave in legno a falda Falda 3 fili 52-109 (L = 1.324)
asta 74: Trave in legno a falda Falda 3 fili 52-109 (L = 1.142)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 4.019
Kdef = 0
Uinst tot in x = -0.0006
Uinst tot in y = 0.0039
Uinst tot = 0.0039
Luce/Uinst,tot > limite
7.49/0.0039=1928.7 > 300 Comb: SLE rara, 19

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.374
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = -0.0009
Uinst var = 0.0009
Luce/Uinst,var > limite
7.49/0.0009=8132.4 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 4.141
Kdef = 0.6
Ufin in x = -0.0009
Ufin in y = 0.006
Ufin = 0.006
Luce/Ufin > limite
7.49/0.006=1247 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 3" (-2458; 579)-(-1616; -330)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 7.021 composto da:
asta 505: Trave in legno a falda Falda 3 fili 12-51 (L = 0.922)
asta 506: Trave in legno a falda Falda 3 fili 12-51 (L = 1.265)
asta 507: Trave in legno a falda Falda 3 fili 12-51 (L = 1.308)
asta 508: Trave in legno a falda Falda 3 fili 12-51 (L = 1.095)
asta 509: Trave in legno a falda Falda 3 fili 12-51 (L = 0.26)
asta 510: Trave in legno a falda Falda 3 fili 12-51 (L = 0.958)
asta 511: Trave in legno a falda Falda 3 fili 12-51 (L = 0.358)
asta 512: Trave in legno a falda Falda 3 fili 12-51 (L = 0.854)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.409
Kdef = 0
Uinst tot in x = 0.001
Uinst tot in y = -0.0024
Uinst tot = 0.0024
Luce/Uinst,tot > limite
7.021/0.0024=2959.5 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.897
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0005
Uinst var = 0.0005

Luce/Uinst,var > limite
7.021/0.0005=13072 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.437
Kdef = 0.6
Ufin in x = 0.0015
Ufin in y = -0.0035
Ufin = 0.0035
Luce/Ufin > limite
7.021/0.0035=1990.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 4" 95-96

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.492 composto da:
asta 251: Trave in legno a falda Falda 4 fili 95-308 (L = 1.133)
asta 810: Trave in legno a falda Falda 4 fili 308-96 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.077
Kdef = 0
Uinst tot in x = 0.0002
Uinst tot in y = -0.0019
Uinst tot = 0.0019
Luce/Uinst,tot > limite
3.492/0.0019=1865 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.998
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0009
Uinst var = 0.0009
Luce/Uinst,var > limite
3.492/0.0009=3684.3 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.193
Kdef = 0.6
Ufin in x = 0.0003
Ufin in y = -0.0023
Ufin = 0.0023
Luce/Ufin > limite
3.492/0.0023=1493.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" 103-105

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.45 composto da:
asta 808: Trave in legno a falda Falda 4 fili 103-309 (L = 2.091)
asta 825: Trave in legno a falda Falda 4 fili 309-105 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.091
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = 0.0011
Uinst tot = 0.0011
Luce/Uinst,tot > limite
4.45/0.0011=3936 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.113
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
4.45/0.0004=10197 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.16
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = 0.0019
Ufin = 0.0019
Luce/Ufin > limite
4.45/0.0019=2347.7 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Superelemento in legno a "Falda 4" 114-310

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.048 composto da:
asta 805: Trave in legno a falda Falda 4 fili 114-310 (L = 2.612)
asta 806: Trave in legno a falda Falda 4 fili 114-310 (L = 0.218)
asta 807: Trave in legno a falda Falda 4 fili 114-310 (L = 0.218)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.828
Kdef = 0
Uinst tot in x = 0

Uinst tot in y = 0.0018
Uinst tot = 0.0018
Luce/Uinst,tot > limite
3.048/0.0018=1670.7 > 300 Comb: SLE rara, 19

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.132
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
3.048/0.0003=9293.2 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.828
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0.0028
Ufin = 0.0028
Luce/Ufin > limite
3.048/0.0028=1079.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" 118-(-2445; 1167)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 8.223 composto da:
asta 49: Trave in legno a falda Falda 4 fili 118-60 (L = 0.989)
asta 50: Trave in legno a falda Falda 4 fili 118-60 (L = 1.123)
asta 51: Trave in legno a falda Falda 4 fili 118-60 (L = 1.274)
asta 52: Trave in legno a falda Falda 4 fili 118-60 (L = 0.353)
asta 53: Trave in legno a falda Falda 4 fili 118-60 (L = 0.154)
asta 54: Trave in legno a falda Falda 4 fili 118-60 (L = 0.767)
asta 55: Trave in legno a falda Falda 4 fili 118-60 (L = 0.233)
asta 56: Trave in legno a falda Falda 4 fili 118-60 (L = 1.041)
asta 57: Trave in legno a falda Falda 4 fili 118-60 (L = 1.274)
asta 58: Trave in legno a falda Falda 4 fili 118-60 (L = 1.016)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.749
Kdef = 0
Uinst tot in x = 0.0019
Uinst tot in y = 0.0066
Uinst tot = 0.0066
Luce/Uinst,tot > limite
8.223/0.0066=1244.5 > 300 Comb: SLE rara, 21

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 5.795
Kdef = 0
Uinst var in x = -0.0003
Uinst var in y = -0.0009
Uinst var = 0.0009
Luce/Uinst,var > limite
8.223/0.0009=8839 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.819
Kdef = 0.6
Ufin in x = 0.003
Ufin in y = 0.0102
Ufin = 0.0102
Luce/Ufin > limite
8.223/0.0102=806.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Neve = 0,500 + 0,000 = 0,500
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" 171-317

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 2.904 composto da:
asta 802: Trave in legno a falda Falda 4 fili 171-317 (L = 2.467)
asta 803: Trave in legno a falda Falda 4 fili 171-317 (L = 0.218)
asta 804: Trave in legno a falda Falda 4 fili 171-317 (L = 0.218)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.727
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0.0018
Uinst tot = 0.0018
Luce/Uinst,tot > limite
2.904/0.0018=1574.1 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.069
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
2.904/0.0003=11472.8 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.727
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = 0.0029
Ufin = 0.0029
Luce/Ufin > limite
2.904/0.0029=1016.5 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Superelemento in legno a "Falda 4" 182-184

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.29 composto da:
asta 801: Trave in legno a falda Falda 4 fili 182-318 (L = 1.93)
asta 818: Trave in legno a falda Falda 4 fili 318-184 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.93
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = 0.0012
Uinst tot = 0.0012
Luce/Uinst,tot > limite
4.29/0.0012=3596.8 > 300 Comb: SLE rara, 19

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.031
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
4.29/0.0004=10966.7 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.995
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = 0.002
Ufin = 0.002
Luce/Ufin > limite
4.29/0.002=2159.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" 191-192

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.323 composto da:
asta 242: Trave in legno a falda Falda 4 fili 191-319 (L = 0.964)
asta 809: Trave in legno a falda Falda 4 fili 319-192 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.908
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0015
Uinst tot = 0.0015

Luce/Uinst,tot > limite
3.323/0.0015=2262.5 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.829
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0008
Uinst var = 0.0008
Luce/Uinst,var > limite
3.323/0.0008=4209.2 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.94
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0018
Ufin = 0.0018
Luce/Ufin > limite
3.323/0.0018=1853.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" 287-(214; 439)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 10.232 composto da:
asta 789: Trave in legno a falda Falda 4 fili 287-202 (L = 0.994)
asta 790: Trave in legno a falda Falda 4 fili 287-202 (L = 0.84)
asta 791: Trave in legno a falda Falda 4 fili 287-202 (L = 0.84)
asta 792: Trave in legno a falda Falda 4 fili 287-202 (L = 0.84)
asta 793: Trave in legno a falda Falda 4 fili 287-202 (L = 0.84)
asta 794: Trave in legno a falda Falda 4 fili 287-202 (L = 0.84)
asta 795: Trave in legno a falda Falda 4 fili 287-202 (L = 0.84)
asta 796: Trave in legno a falda Falda 4 fili 287-202 (L = 0.84)
asta 797: Trave in legno a falda Falda 4 fili 287-202 (L = 0.836)
asta 798: Trave in legno a falda Falda 4 fili 287-202 (L = 0.844)
asta 799: Trave in legno a falda Falda 4 fili 287-202 (L = 0.84)
asta 800: Trave in legno a falda Falda 4 fili 287-202 (L = 0.839)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.674
Kdef = 0
Uinst tot in x = -0.0013
Uinst tot in y = 0.003
Uinst tot = 0.003
Luce/Uinst,tot > limite
10.232/0.003=3401.8 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.674
Kdef = 0
Uinst var in x = -0.0004
Uinst var in y = 0.0008
Uinst var = 0.0008
Luce/Uinst,var > limite
10.232/0.0008=12388.6 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.735
Kdef = 0.6
Ufin in x = -0.0019
Ufin in y = 0.0044
Ufin = 0.0044
Luce/Ufin > limite
10.232/0.0044=2351.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" 310-(-1482; 695)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 2.359 composto da:
asta 822: Trave in legno a falda Falda 4 fili 310-117 (L = 0.218)
asta 823: Trave in legno a falda Falda 4 fili 310-117 (L = 0.218)
asta 824: Trave in legno a falda Falda 4 fili 310-117 (L = 1.923)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.718
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0.0004
Uinst tot = 0.0004
Luce/Uinst,tot > limite
2.359/0.0004=6427.5 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.462
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
2.359/0.0001=21182 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.733
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0.0006
Ufin = 0.0006
Luce/Ufin > limite
2.359/0.0006=3869.4 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Superelemento in legno a "Falda 4" 313-(-1230; 695)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 2.359 composto da:
asta 813: Trave in legno a falda Falda 4 fili 313-143 (L = 0.218)
asta 814: Trave in legno a falda Falda 4 fili 313-143 (L = 0.218)
asta 815: Trave in legno a falda Falda 4 fili 313-143 (L = 1.923)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.526
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0003
Uinst tot = 0.0003
Luce/Uinst,tot > limite
2.359/0.0003=6799.6 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.462
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
2.359/0.0001=18355.5 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.541
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0004
Ufin = 0.0004
Luce/Ufin > limite
2.359/0.0004=5451 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 4" 317-(-978; 695)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 2.359 composto da:
asta 819: Trave in legno a falda Falda 4 fili 317-166 (L = 0.218)
asta 820: Trave in legno a falda Falda 4 fili 317-166 (L = 0.218)
asta 821: Trave in legno a falda Falda 4 fili 317-166 (L = 1.923)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.718
Kdef = 0
Uinst tot in x = 0

Uinst tot in y = 0.0015
Uinst tot = 0.0015
Luce/Uinst,tot > limite
2.359/0.0015=1526.5 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.718
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
2.359/0.0002=11797.9 > 300 Comb: SLE rara, 18

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.733
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0.0024
Ufin = 0.0024
Luce/Ufin > limite
2.359/0.0024=968.5 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Superelemento in legno a "Falda 4" (-1060; 86)-(-32; 1171)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 8.118 composto da:
asta 106: Trave in legno a falda Falda 4 fili 164-221 (L = 1.108)
asta 107: Trave in legno a falda Falda 4 fili 164-221 (L = 1.327)
asta 108: Trave in legno a falda Falda 4 fili 164-221 (L = 1.28)
asta 109: Trave in legno a falda Falda 4 fili 164-221 (L = 0.156)
asta 110: Trave in legno a falda Falda 4 fili 164-221 (L = 0.194)
asta 111: Trave in legno a falda Falda 4 fili 164-221 (L = 0.929)
asta 112: Trave in legno a falda Falda 4 fili 164-221 (L = 1.282)
asta 113: Trave in legno a falda Falda 4 fili 164-221 (L = 1.28)
asta 114: Trave in legno a falda Falda 4 fili 164-221 (L = 0.562)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.032
Kdef = 0
Uinst tot in x = -0.0019
Uinst tot in y = 0.0067
Uinst tot = 0.0067
Luce/Uinst,tot > limite
8.118/0.0067=1209.7 > 300 Comb: SLE rara, 21

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.203
Kdef = 0
Uinst var in x = -0.0002
Uinst var in y = 0.0009
Uinst var = 0.0009
Luce/Uinst,var > limite
8.118/0.0009=9335.6 > 300 Comb: SLE rara, 21

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.113
Kdef = 0.6
Ufin in x = -0.003
Ufin in y = 0.0103
Ufin = 0.0103
Luce/Ufin > limite
8.118/0.0103=784.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Neve = 0,500 + 0,000 = 0,500
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" (-1062; 88)-163

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.036 composto da:
asta 323: Trave in legno a falda Falda 4 fili 315-316 (L = 3.677)
asta 812: Trave in legno a falda Falda 4 fili 316-163 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.432
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0.0049
Uinst tot = 0.0049
Luce/Uinst,tot > limite
6.036/0.0049=1219.7 > 300 Comb: SLE rara, 19

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.961
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.001
Uinst var = 0.001
Luce/Uinst,var > limite
6.036/0.001=5807 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.432
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = 0.0077
Ufin = 0.0077
Luce/Ufin > limite
6.036/0.0077=787.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" (-1146; 88)-149

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.036 composto da:
asta 322: Trave in legno a falda Falda 4 fili 147-314 (L = 3.677)
asta 811: Trave in legno a falda Falda 4 fili 314-149 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.554
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0.005
Uinst tot = 0.005
Luce/Uinst,tot > limite
6.036/0.005=1200.1 > 300 Comb: SLE rara, 19

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.838
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0011
Uinst var = 0.0011
Luce/Uinst,var > limite
6.036/0.0011=5289.2 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.554
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0.0078
Ufin = 0.0078
Luce/Ufin > limite
6.036/0.0078=774.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" (-1230; 88)-313

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.677 composto da:
asta 324: Trave in legno a falda Falda 4 fili 141-313 (L = 3.241)
asta 325: Trave in legno a falda Falda 4 fili 141-313 (L = 0.218)
asta 326: Trave in legno a falda Falda 4 fili 141-313 (L = 0.218)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.485
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0.0025

Uinst tot = 0.0025
Luce/Uinst,tot > limite
3.677/0.0025=1496.9 > 300 Comb: SLE rara, 19

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.513
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0006
Uinst var = 0.0006
Luce/Uinst,var > limite
3.677/0.0006=6525.2 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.485
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0.0038
Ufin = 0.0038
Luce/Ufin > limite
3.677/0.0038=967.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" (-1314; 88)-134

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.037 composto da:
asta 327: Trave in legno a falda Falda 4 fili 132-312 (L = 3.678)
asta 816: Trave in legno a falda Falda 4 fili 312-134 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.555
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0.0051
Uinst tot = 0.0051
Luce/Uinst,tot > limite
6.037/0.0051=1192.4 > 300 Comb: SLE rara, 19

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.839
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0011
Uinst var = 0.0011
Luce/Uinst,var > limite
6.037/0.0011=5330.6 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.555
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0.0078
Ufin = 0.0078
Luce/Ufin > limite
6.037/0.0078=769.2 > 200
Coefficienti combinatori impiegati:

Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" (-1398; 88)-122

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.038 composto da:
asta 328: Trave in legno a falda Falda 4 fili 120-311 (L = 3.678)
asta 817: Trave in legno a falda Falda 4 fili 311-122 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.555
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0.005
Uinst tot = 0.005
Luce/Uinst,tot > limite
6.038/0.005=1213.1 > 300 Comb: SLE rara, 19

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.962
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0011
Uinst var = 0.0011
Luce/Uinst,var > limite
6.038/0.0011=5507.9 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.555
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = 0.0077
Ufin = 0.0077
Luce/Ufin > limite
6.038/0.0077=783 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 5" 230-(-13; 101)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 5.219 composto da:
asta 75: Trave in legno a falda Falda 5 fili 230-248 (L = 2.612)
asta 219: Trave in legno a falda Falda 5 fili 248-277 (L = 2.607)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200

Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.612
Kdef = 0
Uinst tot in x = 0.002
Uinst tot in y = 0.0044
Uinst tot = 0.0044
Luce/Uinst,tot > limite
5.219/0.0044=1178.6 > 300 Comb: SLE rara, 21

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.612
Kdef = 0
Uinst var in x = 0.0002
Uinst var in y = 0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
5.219/0.0005=10207.6 > 300 Comb: SLE rara, 21

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.612
Kdef = 0.6
Ufin in x = 0.0031
Ufin in y = 0.0069
Ufin = 0.0069
Luce/Ufin > limite
5.219/0.0069=760.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Neve = 0,500 + 0,000 = 0,500
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 5" 233-(-13; 185)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.285 composto da:
asta 128: Trave in legno a falda Falda 5 fili 233-249 (L = 1.678)
asta 222: Trave in legno a falda Falda 5 fili 249-278 (L = 2.607)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.765
Kdef = 0
Uinst tot in x = 0.0018
Uinst tot in y = 0.0052
Uinst tot = 0.0052
Luce/Uinst,tot > limite
4.285/0.0052=831.4 > 300 Comb: SLE rara, 21

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.678
Kdef = 0
Uinst var in x = 0.0002
Uinst var in y = 0.0006
Uinst var = 0.0006
Luce/Uinst,var > limite
4.285/0.0006=6725.6 > 300 Comb: SLE rara, 21

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.907
Kdef = 0.6
Ufin in x = 0.0027
Ufin in y = 0.008
Ufin = 0.008
Luce/Ufin > limite
4.285/0.008=538.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Neve = 0,500 + 0,000 = 0,500
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 5" 238-(-13; 17)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.25 composto da:
asta 127: Trave in legno a falda Falda 5 fili 238-247 (L = 1.643)
asta 221: Trave in legno a falda Falda 5 fili 247-276 (L = 2.607)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.817
Kdef = 0
Uinst tot in x = 0.0016
Uinst tot in y = 0.0022
Uinst tot = 0.0022
Luce/Uinst,tot > limite
4.25/0.0022=1913 > 300 Comb: SLE rara, 19

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.947
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
4.25/0.0005=8073.8 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.872
Kdef = 0.6
Ufin in x = 0.0025
Ufin in y = 0.0035
Ufin = 0.0035
Luce/Ufin > limite
4.25/0.0035=1225 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 5" 239-(-13; 269)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.434 composto da:
asta 129: Trave in legno a falda Falda 5 fili 239-250 (L = 0.827)
asta 223: Trave in legno a falda Falda 5 fili 250-279 (L = 2.607)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.349
Kdef = 0
Uinst tot in x = 0.0013
Uinst tot in y = 0.0026
Uinst tot = 0.0026
Luce/Uinst,tot > limite
3.434/0.0026=1329.3 > 300 Comb: SLE rara, 19

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.914
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = 0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
3.434/0.0003=11627.6 > 300 Comb: SLE rara, 21

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.376
Kdef = 0.6
Ufin in x = 0.0021
Ufin in y = 0.004
Ufin = 0.004
Luce/Ufin > limite
3.434/0.004=858.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 5" 251-(-244; -533)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.657 composto da:
asta 155: Trave in legno a falda Falda 5 fili 251-245 (L = 0.772)
asta 156: Trave in legno a falda Falda 5 fili 251-245 (L = 0.84)
asta 157: Trave in legno a falda Falda 5 fili 251-245 (L = 0.164)
asta 158: Trave in legno a falda Falda 5 fili 251-245 (L = 0.339)
asta 159: Trave in legno a falda Falda 5 fili 251-245 (L = 0.339)
asta 160: Trave in legno a falda Falda 5 fili 251-245 (L = 0.839)
asta 161: Trave in legno a falda Falda 5 fili 251-245 (L = 0.84)
asta 162: Trave in legno a falda Falda 5 fili 251-245 (L = 0.525)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.776
Kdef = 0
Uinst tot in x = -0.0025
Uinst tot in y = 0.0054
Uinst tot = 0.0054
Luce/Uinst,tot > limite
4.657/0.0054=864.4 > 300 Comb: SLE rara, 15

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.776
Kdef = 0
Uinst var in x = -0.0004
Uinst var in y = 0.0008
Uinst var = 0.0008
Luce/Uinst,var > limite
4.657/0.0008=6075.8 > 300 Comb: SLE rara, 15

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.829
Kdef = 0.6
Ufin in x = -0.0038
Ufin in y = 0.0082
Ufin = 0.0082
Luce/Ufin > limite
4.657/0.0082=569.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,000 = 0,500
Variabile H = 0,000 + 1,000 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 5" 267-(-866; 474)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.832 composto da:
asta 115: Trave in legno a falda Falda 5 fili 269-230 (L = 0.614)
asta 116: Trave in legno a falda Falda 5 fili 269-230 (L = 1.001)
asta 117: Trave in legno a falda Falda 5 fili 269-230 (L = 0.24)
asta 118: Trave in legno a falda Falda 5 fili 269-230 (L = 1.143)
asta 119: Trave in legno a falda Falda 5 fili 269-230 (L = 0.406)
asta 120: Trave in legno a falda Falda 5 fili 269-230 (L = 0.868)
asta 121: Trave in legno a falda Falda 5 fili 269-230 (L = 1.28)
asta 122: Trave in legno a falda Falda 5 fili 269-230 (L = 1.279)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.693
Kdef = 0
Uinst tot in x = -0.0012
Uinst tot in y = 0.0023
Uinst tot = 0.0023
Luce/Uinst,tot > limite
6.832/0.0023=3019.4 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.693
Kdef = 0
Uinst var in x = -0.0001

Uinst var in y = 0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
6.832/0.0003=24886.4 > 300 Comb: SLE rara, 18

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.807
Kdef = 0.6
Ufin in x = -0.0019
Ufin in y = 0.0035
Ufin = 0.0035
Luce/Ufin > limite
6.832/0.0035=1955.6 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Superelemento in legno a "Falda 5" (-252; 353)-280

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 2.607 composto da:
asta 130: Trave in legno a falda Falda 5 fili 251-280 (L = 0.166)
asta 131: Trave in legno a falda Falda 5 fili 251-280 (L = 2.441)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.55
Kdef = 0
Uinst tot in x = -0.0002
Uinst tot in y = 0.0006
Uinst tot = 0.0006
Luce/Uinst,tot > limite
2.607/0.0006=4262.2 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.712
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
2.607/0.0001=23463.8 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.555
Kdef = 0.6
Ufin in x = -0.0004
Ufin in y = 0.0009
Ufin = 0.0009
Luce/Ufin > limite
2.607/0.0009=2772.7 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Superelemento in legno a "Falda 5" (-311; -67)-(-13; -67)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.293 composto da:
asta 126: Trave in legno a falda Falda 5 fili 244-246 (L = 0.686)
asta 220: Trave in legno a falda Falda 5 fili 246-275 (L = 2.607)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.12
Kdef = 0
Uinst tot in x = 0.0013
Uinst tot in y = 0.0004
Uinst tot = 0.0013
Luce/Uinst,tot > limite
3.293/0.0013=2626.4 > 300 Comb: SLE rara, 20

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.989
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
3.293/0.0005=6305.5 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.143
Kdef = 0.6
Ufin in x = 0.0019
Ufin in y = 0.0007
Ufin = 0.0019
Luce/Ufin > limite
3.293/0.0019=1692.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Neve = 0,500 + 0,000 = 0,500

Superelemento in legno a "Falda 6" 167-(-86; 1042)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 7.232 composto da:
asta 42: Trave in legno a falda Falda 6 fili 167-225 (L = 1.287)
asta 43: Trave in legno a falda Falda 6 fili 167-225 (L = 1.295)
asta 44: Trave in legno a falda Falda 6 fili 167-225 (L = 0.523)
asta 45: Trave in legno a falda Falda 6 fili 167-225 (L = 0.772)
asta 46: Trave in legno a falda Falda 6 fili 167-225 (L = 1.295)
asta 47: Trave in legno a falda Falda 6 fili 167-225 (L = 1.295)
asta 48: Trave in legno a falda Falda 6 fili 167-225 (L = 0.764)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno

Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.105
Kdef = 0
Uinst tot in x = -0.0014
Uinst tot in y = 0.0056
Uinst tot = 0.0056
Luce/Uinst,tot > limite
7.232/0.0056=1294.3 > 300 Comb: SLE rara, 19

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 5.043
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = -0.0008
Uinst var = 0.0008
Luce/Uinst,var > limite
7.232/0.0008=9558.4 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.209
Kdef = 0.6
Ufin in x = -0.0021
Ufin in y = 0.0087
Ufin = 0.0087
Luce/Ufin > limite
7.232/0.0087=834.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 6" 206-208

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.958 composto da:
asta 230: Trave in legno a falda Falda 6 fili 206-207 (L = 2.72)
asta 238: Trave in legno a falda Falda 6 fili 207-208 (L = 1.239)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.722
Kdef = 0
Uinst tot in x = -0.0002
Uinst tot in y = -0.003
Uinst tot = 0.003
Luce/Uinst,tot > limite
3.958/0.003=1339.2 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.994
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0014
Uinst var = 0.0014
Luce/Uinst,var > limite
3.958/0.0014=2836.1 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.632

Kdef = 0.6
Ufin in x = -0.0004
Ufin in y = -0.0039
Ufin = 0.0039
Luce/Ufin > limite
3.958/0.0039=1007.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 6" 216-218

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.944 composto da:
asta 229: Trave in legno a falda Falda 6 fili 216-217 (L = 2.719)
asta 237: Trave in legno a falda Falda 6 fili 217-218 (L = 2.224)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.266
Kdef = 0
Uinst tot in x = -0.0004
Uinst tot in y = -0.0048
Uinst tot = 0.0048
Luce/Uinst,tot > limite
4.944/0.0048=1039.7 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.447
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = -0.0023
Uinst var = 0.0023
Luce/Uinst,var > limite
4.944/0.0023=2136.9 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.175
Kdef = 0.6
Ufin in x = -0.0005
Ufin in y = -0.0062
Ufin = 0.0062
Luce/Ufin > limite
4.944/0.0062=791.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 6" 230-(-475; 583)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 5.361 composto da:
asta 225: Trave in legno a falda Falda 6 fili 230-231 (L = 2.719)

asta 234: Trave in legno a falda Falda 6 fili 231-232 (L = 2.642)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.983
Kdef = 0
Uinst tot in x = -0.0004
Uinst tot in y = -0.0063
Uinst tot = 0.0063
Luce/Uinst,tot > limite
5.361/0.0063=844.9 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.983
Kdef = 0
Uinst var in x = -0.0002
Uinst var in y = -0.0027
Uinst var = 0.0027
Luce/Uinst,var > limite
5.361/0.0027=1994.3 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.074
Kdef = 0.6
Ufin in x = -0.0005
Ufin in y = -0.0086
Ufin = 0.0086
Luce/Ufin > limite
5.361/0.0086=625.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 6" 233-236

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.42 composto da:
asta 320: Trave in legno a falda Falda 6 fili 236-233 (L = 1.778)
asta 235: Trave in legno a falda Falda 6 fili 236-237 (L = 2.642)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.307
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0061
Uinst tot = 0.0061
Luce/Uinst,tot > limite
4.42/0.0061=727.3 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.395
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = -0.0022
Uinst var = 0.0022
Luce/Uinst,var > limite
4.42/0.0022=2033.2 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.366
Kdef = 0.6
Ufin in x = -0.0009
Ufin in y = -0.0085
Ufin = 0.0085
Luce/Ufin > limite
4.42/0.0085=521.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 6" 239-242

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.474 composto da:
asta 321: Trave in legno a falda Falda 6 fili 242-239 (L = 0.832)
asta 236: Trave in legno a falda Falda 6 fili 242-243 (L = 2.642)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.712
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0048
Uinst tot = 0.0048
Luce/Uinst,tot > limite
3.474/0.0048=725.2 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.712
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = -0.0013
Uinst var = 0.0013
Luce/Uinst,var > limite
3.474/0.0013=2666.2 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.74
Kdef = 0.6
Ufin in x = -0.001
Ufin in y = -0.007
Ufin = 0.007
Luce/Ufin > limite
3.474/0.007=499.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880

Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 6" (-17; 585)-(-858; -305)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 7.134 composto da:
asta 513: Trave in legno a falda Falda 6 fili 271-230 (L = 0.643)
asta 514: Trave in legno a falda Falda 6 fili 271-230 (L = 0.36)
asta 515: Trave in legno a falda Falda 6 fili 271-230 (L = 0.94)
asta 516: Trave in legno a falda Falda 6 fili 271-230 (L = 0.288)
asta 517: Trave in legno a falda Falda 6 fili 271-230 (L = 1.109)
asta 518: Trave in legno a falda Falda 6 fili 271-230 (L = 0.17)
asta 519: Trave in legno a falda Falda 6 fili 271-230 (L = 1.178)
asta 520: Trave in legno a falda Falda 6 fili 271-230 (L = 1.195)
asta 521: Trave in legno a falda Falda 6 fili 271-230 (L = 1.251)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.229
Kdef = 0
Uinst tot in x = -0.0007
Uinst tot in y = -0.0028
Uinst tot = 0.0028
Luce/Uinst,tot > limite
7.134/0.0028=2555.1 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.824
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0006
Uinst var = 0.0006
Luce/Uinst,var > limite
7.134/0.0006=12431 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.303
Kdef = 0.6
Ufin in x = -0.0011
Ufin in y = -0.0042
Ufin = 0.0042
Luce/Ufin > limite
7.134/0.0042=1703.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 6" (-772; 346)-251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 5.426 composto da:
asta 149: Trave in legno a falda Falda 6 fili 191-251 (L = 1.44)
asta 150: Trave in legno a falda Falda 6 fili 191-251 (L = 0.84)
asta 151: Trave in legno a falda Falda 6 fili 191-251 (L = 0.84)
asta 152: Trave in legno a falda Falda 6 fili 191-251 (L = 0.84)
asta 153: Trave in legno a falda Falda 6 fili 191-251 (L = 0.84)
asta 154: Trave in legno a falda Falda 6 fili 191-251 (L = 0.626)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.868
Kdef = 0
Uinst tot in x = 0.003
Uinst tot in y = -0.0066
Uinst tot = 0.0066
Luce/Uinst,tot > limite
5.426/0.0066=826.7 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.672
Kdef = 0
Uinst var in x = 0.0012
Uinst var in y = -0.0024
Uinst var = 0.0024
Luce/Uinst,var > limite
5.426/0.0024=2262.8 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3
Kdef = 0.6
Ufin in x = 0.004
Ufin in y = -0.009
Ufin = 0.009
Luce/Ufin > limite
5.426/0.009=604.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

1.7 Verifica sismica globale

Le unità di misura elencate nel capitolo sono in [m] ove non espressamente specificato.

Desc.: *descrizione.*
Stato limite: *(muratura) V=Taglio; PF=Pressoflessione; PFFP=Pressoflessione fuori piano; R=Ribaltamento.*
Molt.: *moltiplicatore minimo della azione sismica che produce lo stato limite.*
Comb.: *combinazione.*
PGA: *accelerazione al suolo.*
iPGA (ζE): *indicatore di rischio sismico in termini di PGA ovvero rapporto tra l'azione sismica massima sopportabile dall'elemento e l'azione sismica massima che si utilizzerebbe nel progetto nuovo (§C8.3).*
TR: *tempo di ritorno.*
(TR/TRrif)^.41: *indicatore di rischio sismico in termini di periodo di ritorno.*
fa: *fattore di accelerazione.*
Stato limite: *(muratura) V=Taglio; PF=Presso flessione; PFFP=Pressoflessione fuori piano; R=Ribaltamento.*
Coeff.s.: *coefficiente minimo prodotto dallo stato limite.*
Verifica: *stato di verifica.*
Trave: *titolo della trave.*
Pressoflessione: *dati della verifica a pressoflessione.*
Coeff.s.: *coefficiente di sicurezza a flessione.*
iTR: *indicatore di rischio sismico in termini di tempo di ritorno.*
campata: *campata di riferimento.*
dist.: *ascissa relativa all'inizio della campata. [m]*
Taglio: *dati della verifica a taglio.*
Coeff.s.: *coefficiente di sicurezza a taglio.*
Maschio: *maschio.*

***Stato limite**: (maschio muratura) V=Taglio; PF=Presso flessione; PFFP=Presso flessione fuori piano; R=Ribaltamento.*
***Trave**: trave di collegamento in muratura.*
***Stato limite**: (trave muratura) V=Taglio; F=Flessione.*
***S. L.**: stato limite di riferimento.*
***TR,C**: periodo di ritorno di capacità.*
***PGA,C**: accelerazione di aggancio di capacità.*
***TR,Rif**: periodo di ritorno di riferimento.*
***PGA,Rif**: accelerazione di aggancio di riferimento.*
***Tipo rottura**: tipo di rottura che fornisce il valore minimo degli elementi considerati.*
***PAM**: perdita media annua attesa.*
***Classe PAM**: classe di rischio PAM.*
***IS-V**: indice di sicurezza.*
***Classe IS-V**: classe di rischio IS-V.*
***λ,SLR**: frequenza media annua di superamento in Stato Limite di Ricostruzione.*
***λ,SLC**: frequenza media annua di superamento in Stato Limite di Collasso.*
***λ,SLV**: frequenza media annua di superamento in Stato Limite di salvaguardia della Vita.*
***λ,SLD**: frequenza media annua di superamento in Stato Limite di Danno.*
***λ,SLO**: frequenza media annua di superamento in Stato Limite di Operatività.*
***λ,SLID**: frequenza media annua di superamento in Stato Limite di Inizio Danno.*

Verifica di elementi dotati di indicatori di rischio sismico mediante analisi con fattore q

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.) § C8.7.1

Accelerazioni e tempi di ritorno

Accelerazione di aggancio SLO (ag/g_SLO*S*ST) PGA,SLOrif = 0.081
Accelerazione di aggancio SLD (ag/g_SLD*S*ST) PGA,SLDrif = 0.101
Accelerazione di aggancio SLV (ag/g_SLV*S*ST) PGA,SLVrif = 0.244
Tr,SLOrif = 30 anni
Tr,SLDrif = 50 anni
Tr,SLVrif = 475 anni

Moltiplicatori minimi delle condizioni sismiche

(Il valore di ζE corrisponde al valore di I.R. PGA secondo quanto riportato nella Circolare 7 21-01-19 §C8.3)

Indicatori minimi riferiti al solo materiale muratura

Desc.	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	fa
Maschio 281	PF	0.121	SLV 15	0.0261	0.1068	2	0.1062	0.1039
Maschio 200	V	0.694	SLV 9	0.1634	0.6689	168	0.653	0.6684
Maschio 275	PFFP	0.236	SLV 9	0.0513	0.2098	10	0.2054	0.2041
Maschio 273	R	0.487	SLV 12	0.1117	0.4571	68	0.4507	0.4557
Trave di accoppiamento 18	PF	0.309	SLV 1	0.0727	0.2976	24	0.2941	0.2947
Trave di accoppiamento 22	V	0.119	SLV 1	0.0261	0.1068	2	0.1062	0.1039

Coefficienti di sicurezza riferiti al solo materiale muratura

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 1	PF SLU	3.631	SLU 83	Si
Maschio 1	V SLU	4.996	SLU 83	Si
Maschio 1	PF	2.42	SLV 13	Si
Maschio 1	V	2.994	SLV 8	Si
Maschio 1	PFFP	9.836	SLV 16	Si
Maschio 1	R	2.399	SLV 8	Si
Maschio 2	PF SLU	2	SLU 43	Si
Maschio 2	V SLU	8.064	SLU 84	Si
Maschio 2	PF	0.643	SLV 13	No
Maschio 2	V	3.048	SLV 5	Si
Maschio 2	PFFP	2.422	SLV 13	Si
Maschio 2	R	3.161	SLV 6	Si
Maschio 3	PF SLU	7.679	SLU 48	Si
Maschio 3	V SLU	6.615	SLU 78	Si
Maschio 3	PF	3.105	SLV 12	Si
Maschio 3	V	4.864	SLV 16	Si
Maschio 3	PFFP	8.9	SLV 16	Si
Maschio 3	R	2.015	SLV 5	Si
Maschio 4	PF SLU	3.181	SLU 49	Si
Maschio 4	V SLU	2.908	SLU 84	Si
Maschio 4	PF	1.67	SLV 12	Si
Maschio 4	V	2.299	SLV 16	Si
Maschio 4	PFFP	13.575	SLV 16	Si
Maschio 4	R	1.918	SLV 5	Si
Maschio 7	PF SLU	7.845	SLU 51	Si
Maschio 7	V SLU	7.416	SLU 78	Si
Maschio 7	PF	2.96	SLV 5	Si
Maschio 7	V	3.313	SLV 5	Si
Maschio 7	PFFP	35.883	SLV 16	Si
Maschio 7	R	1.218	SLV 5	Si
Maschio 9	PF SLU	9.813	SLU 81	Si
Maschio 9	V SLU	15.257	SLU 68	Si
Maschio 9	PF	3.298	SLV 15	Si
Maschio 9	V	5.07	SLV 13	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 9	PFFP	10.064	SLV 13	Si
Maschio 9	R	2.386	SLV 8	Si
Maschio 10	PF SLU	2.979	SLU 76	Si
Maschio 10	V SLU	2.353	SLU 83	Si
Maschio 10	PF	2.041	SLV 13	Si
Maschio 10	V	1.721	SLV 15	Si
Maschio 10	PFFP	15.021	SLV 9	Si
Maschio 10	R	1.874	SLV 8	Si
Maschio 11	PF SLU	2.223	SLU 84	Si
Maschio 11	V SLU	4.724	SLU 84	Si
Maschio 11	PF	1.691	SLV 13	Si
Maschio 11	V	2.236	SLV 4	Si
Maschio 11	PFFP	36.974	SLV 13	Si
Maschio 11	R	1.857	SLV 8	Si
Maschio 13	PF SLU	5.143	SLU 84	Si
Maschio 13	V SLU	10.702	SLU 50	Si
Maschio 13	PF	3.374	SLV 9	Si
Maschio 13	V	3.496	SLV 12	Si
Maschio 13	PFFP	24.706	SLV 13	Si
Maschio 13	R	1.727	SLV 5	Si
Maschio 14	PF SLU	4.012	SLU 84	Si
Maschio 14	V SLU	2.376	SLU 84	Si
Maschio 14	PF	1.434	SLV 12	Si
Maschio 14	V	2.057	SLV 16	Si
Maschio 14	PFFP	7.508	SLV 12	Si
Maschio 14	R	1.825	SLV 5	Si
Maschio 15	PF SLU	1.908	SLU 83	Si
Maschio 15	V SLU	2.605	SLU 84	Si
Maschio 15	PF	2.342	SLV 8	Si
Maschio 15	V	1.307	SLV 4	Si
Maschio 15	PFFP	14.435	SLV 13	Si
Maschio 15	R	4.797	SLV 7	Si
Maschio 16	PF SLU	3.02	SLU 83	Si
Maschio 16	V SLU	4.903	SLU 84	Si
Maschio 16	PF	2.132	SLV 4	Si
Maschio 16	V	2.17	SLV 4	Si
Maschio 16	PFFP	7.947	SLV 13	Si
Maschio 16	R	2.784	SLV 8	Si
Maschio 17	PF SLU	2.902	SLU 49	Si
Maschio 17	V SLU	2.852	SLU 84	Si
Maschio 17	PF	2.018	SLV 12	Si
Maschio 17	V	2.856	SLV 5	Si
Maschio 17	PFFP	21.011	SLV 16	Si
Maschio 17	R	2.317	SLV 6	Si
Maschio 18	PF SLU	4.022	SLU 77	Si
Maschio 18	V SLU	4.702	SLU 83	Si
Maschio 18	PF	3.231	SLV 8	Si
Maschio 18	V	3.49	SLV 8	Si
Maschio 18	PFFP	26.029	SLV 2	Si
Maschio 18	R	1.364	SLV 10	Si
Maschio 19	PF SLU	25.183	SLU 77	Si
Maschio 19	V SLU	5.597	SLU 83	Si
Maschio 19	PF	4.061	SLV 14	Si
Maschio 19	V	3.24	SLV 16	Si
Maschio 19	PFFP	29.452	SLV 16	Si
Maschio 19	R	1.532	SLV 7	Si
Maschio 20	PF SLU	11.354	SLU 84	Si
Maschio 20	V SLU	105.791	SLU 71	Si
Maschio 20	PF	2.502	SLV 13	Si
Maschio 20	V	3.835	SLV 16	Si
Maschio 20	PFFP	42.941	SLV 10	Si
Maschio 20	R	1.415	SLV 5	Si
Maschio 21	PF SLU	1.215	SLU 83	Si
Maschio 21	V SLU	5.759	SLU 83	Si
Maschio 21	PF	0.914	SLV 3	No
Maschio 21	V	4.887	SLV 4	Si
Maschio 21	PFFP	50.964	SLV 1	Si
Maschio 21	R	1.379	SLV 9	Si
Maschio 23	PF SLU	7.699	SLU 83	Si
Maschio 23	V SLU	9.647	SLU 83	Si
Maschio 23	PF	1.278	SLV 16	Si
Maschio 23	V	3.027	SLV 16	Si
Maschio 23	PFFP	55.452	SLV 11	Si
Maschio 23	R	1.284	SLV 6	Si
Maschio 24	PF SLU	7.309	SLU 84	Si
Maschio 24	V SLU	13.882	SLU 84	Si
Maschio 24	PF	1.446	SLV 1	Si
Maschio 24	V	3.179	SLV 16	Si
Maschio 24	PFFP	43.296	SLV 5	Si
Maschio 24	R	1.516	SLV 10	Si
Maschio 25	PF SLU	1.857	SLU 83	Si
Maschio 25	V SLU	19.714	SLU 83	Si
Maschio 25	PF	1.128	SLV 3	Si
Maschio 25	V	7.055	SLV 15	Si
Maschio 25	PFFP	32.236	SLV 3	Si
Maschio 25	R	1.169	SLV 6	Si
Maschio 26	PF SLU	13.377	SLU 83	Si
Maschio 26	V SLU	4.258	SLU 84	Si
Maschio 26	PF	4.342	SLV 15	Si
Maschio 26	V	3.011	SLV 1	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 26	PFFP	27.754	SLV 2	Si
Maschio 26	R	1.568	SLV 11	Si
Maschio 27	PF SLU	16.451	SLU 83	Si
Maschio 27	V SLU	4.26	SLU 84	Si
Maschio 27	PF	2.826	SLV 16	Si
Maschio 27	V	1.577	SLV 16	Si
Maschio 27	PFFP	13.717	SLV 11	Si
Maschio 27	R	1.861	SLV 5	Si
Maschio 28	PF SLU	8.148	SLU 84	Si
Maschio 28	V SLU	4.813	SLU 79	Si
Maschio 28	PF	5.884	SLV 6	Si
Maschio 28	V	2.232	SLV 11	Si
Maschio 28	PFFP	24.492	SLV 10	Si
Maschio 28	R	1.213	SLV 7	Si
Maschio 30	PF SLU	14.604	SLU 84	Si
Maschio 30	V SLU	4.008	SLU 84	Si
Maschio 30	PF	3.732	SLV 1	Si
Maschio 30	V	1.681	SLV 3	Si
Maschio 30	PFFP	13.924	SLV 7	Si
Maschio 30	R	1.876	SLV 10	Si
Maschio 31	PF SLU	6.725	SLU 50	Si
Maschio 31	V SLU	2.553	SLU 84	Si
Maschio 31	PF	1.206	SLV 7	Si
Maschio 31	V	2.121	SLV 3	Si
Maschio 31	PFFP	3.843	SLV 3	Si
Maschio 31	R	2.199	SLV 10	Si
Maschio 32	PF SLU	6.3	SLU 77	Si
Maschio 32	V SLU	3.3	SLU 84	Si
Maschio 32	PF	2.807	SLV 7	Si
Maschio 32	V	3.153	SLV 10	Si
Maschio 32	PFFP	26.795	SLV 3	Si
Maschio 32	R	1.918	SLV 10	Si
Maschio 34	PF SLU	3.375	SLU 83	Si
Maschio 34	V SLU	19.93	SLU 63	Si
Maschio 34	PF	1.988	SLV 13	Si
Maschio 34	V	2.001	SLV 13	Si
Maschio 34	PFFP	11.306	SLV 2	Si
Maschio 34	R	2.57	SLV 11	Si
Maschio 35	PF SLU	1.207	SLU 83	Si
Maschio 35	V SLU	3.823	SLU 84	Si
Maschio 35	PF	1.115	SLV 11	Si
Maschio 35	V	2.501	SLV 15	Si
Maschio 35	PFFP	14.518	SLV 2	Si
Maschio 35	R	4.077	SLV 11	Si
Maschio 36	PF SLU	13.767	SLU 51	Si
Maschio 36	V SLU	7.225	SLU 79	Si
Maschio 36	PF	4.935	SLV 11	Si
Maschio 36	V	3.369	SLV 11	Si
Maschio 36	PFFP	30.498	SLV 2	Si
Maschio 36	R	1.538	SLV 9	Si
Maschio 37	PF SLU	5.507	SLU 77	Si
Maschio 37	V SLU	8.128	SLU 84	Si
Maschio 37	PF	2.898	SLV 4	Si
Maschio 37	V	5.504	SLV 13	Si
Maschio 37	PFFP	60.861	SLV 13	Si
Maschio 37	R	1.299	SLV 8	Si
Maschio 38	PF SLU	3.479	SLU 84	Si
Maschio 38	V SLU	4.972	SLU 84	Si
Maschio 38	PF	2.111	SLV 2	Si
Maschio 38	V	2.597	SLV 15	Si
Maschio 38	PFFP	34.504	SLV 2	Si
Maschio 38	R	1.713	SLV 8	Si
Maschio 39	PF SLU	3.303	SLU 68	Si
Maschio 39	V SLU	2.69	SLU 83	Si
Maschio 39	PF	2.081	SLV 2	Si
Maschio 39	V	1.806	SLV 4	Si
Maschio 39	PFFP	13.943	SLV 6	Si
Maschio 39	R	1.893	SLV 11	Si
Maschio 40	PF SLU	18.891	SLU 39	Si
Maschio 40	V SLU	52.506	SLU 68	Si
Maschio 40	PF	3.687	SLV 4	Si
Maschio 40	V	5.747	SLV 2	Si
Maschio 40	PFFP	11.149	SLV 2	Si
Maschio 40	R	2.196	SLV 11	Si
Maschio 42	PF SLU	3.966	SLU 84	Si
Maschio 42	V SLU	5.408	SLU 84	Si
Maschio 42	PF	2.374	SLV 10	Si
Maschio 42	V	3.535	SLV 10	Si
Maschio 42	PFFP	31.086	SLV 4	Si
Maschio 42	R	1.083	SLV 10	Si
Maschio 44	PF SLU	7.261	SLU 49	Si
Maschio 44	V SLU	3.14	SLU 84	Si
Maschio 44	PF	1.967	SLV 7	Si
Maschio 44	V	3.373	SLV 1	Si
Maschio 44	PFFP	13.257	SLV 7	Si
Maschio 44	R	3.034	SLV 10	Si
Maschio 45	PF SLU	5.798	SLU 81	Si
Maschio 45	V SLU	5.32	SLU 77	Si
Maschio 45	PF	2.361	SLV 3	Si
Maschio 45	V	4.876	SLV 7	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 45	PFFP	6.986	SLV 3	Si
Maschio 45	R	2.332	SLV 10	Si
Maschio 46	PF SLU	25.162	SLU 84	Si
Maschio 46	V SLU	19.906	SLU 84	Si
Maschio 46	PF	5.266	SLV 7	Si
Maschio 46	V	4.889	SLV 10	Si
Maschio 46	PFFP	10.527	SLV 3	Si
Maschio 46	R	2.475	SLV 10	Si
Maschio 47	PF SLU	38.714	SLU 39	Si
Maschio 47	V SLU	15.762	SLU 81	Si
Maschio 47	PF	2.306	SLV 12	Si
Maschio 47	V	2.111	SLV 8	Si
Maschio 47	PFFP	4.061	SLV 15	Si
Maschio 47	R	1.575	SLV 6	Si
Maschio 48	PF SLU	16.054	SLU 43	Si
Maschio 48	V SLU	40.859	SLU 43	Si
Maschio 48	PF	0	SLV 11	No
Maschio 48	V	4.027	SLV 16	Si
Maschio 48	PFFP	0	SLV 8	No
Maschio 48	R	0.817	SLV 5	No
Maschio 49	PF SLU	3.133	SLU 43	Si
Maschio 49	V SLU	2.731	SLU 84	Si
Maschio 49	PF	0.659	SLV 12	No
Maschio 49	V	1.899	SLV 14	Si
Maschio 49	PFFP	4.615	SLV 12	Si
Maschio 49	R	0.764	SLV 9	No
Maschio 50	PF SLU	11.587	SLU 45	Si
Maschio 50	V SLU	10.963	SLU 84	Si
Maschio 50	PF	0	SLV 9	No
Maschio 50	V	3.71	SLV 4	Si
Maschio 50	PFFP	0	SLV 9	No
Maschio 50	R	0.822	SLV 8	No
Maschio 51	PF SLU	3.606	SLU 76	Si
Maschio 51	V SLU	3.396	SLU 84	Si
Maschio 51	PF	2.118	SLV 9	Si
Maschio 51	V	2.469	SLV 15	Si
Maschio 51	PFFP	4.792	SLV 9	Si
Maschio 51	R	0.767	SLV 8	No
Maschio 52	PF SLU	5.836	SLU 65	Si
Maschio 52	V SLU	13.39	SLU 65	Si
Maschio 52	PF	1.037	SLV 13	Si
Maschio 52	V	2.961	SLV 13	Si
Maschio 52	PFFP	10.456	SLV 9	Si
Maschio 52	R	0.699	SLV 8	No
Maschio 54	PF SLU	14.031	SLU 51	Si
Maschio 54	V SLU	38.846	SLU 39	Si
Maschio 54	PF	4.628	SLV 9	Si
Maschio 54	V	6.979	SLV 9	Si
Maschio 54	PFFP	9.443	SLV 16	Si
Maschio 54	R	0.759	SLV 5	No
Maschio 55	PF SLU	2.207	SLU 84	Si
Maschio 55	V SLU	3.97	SLU 84	Si
Maschio 55	PF	1.576	SLV 2	Si
Maschio 55	V	2.565	SLV 2	Si
Maschio 55	PFFP	10.373	SLV 13	Si
Maschio 55	R	0.735	SLV 12	No
Maschio 56	PF SLU	13.732	SLU 50	Si
Maschio 56	V SLU	8.733	SLU 84	Si
Maschio 56	PF	3.224	SLV 13	Si
Maschio 56	V	6.229	SLV 8	Si
Maschio 56	PFFP	9.587	SLV 13	Si
Maschio 56	R	0.995	SLV 8	No
Maschio 59	PF SLU	3.755	SLU 81	Si
Maschio 59	V SLU	5.424	SLU 83	Si
Maschio 59	PF	0.879	SLV 13	No
Maschio 59	V	2.262	SLV 15	Si
Maschio 59	PFFP	7.998	SLV 5	Si
Maschio 59	R	0.904	SLV 8	No
Maschio 63	PF SLU	16.37	SLU 84	Si
Maschio 63	V SLU	2.069	SLU 60	Si
Maschio 63	PF	12.706	SLV 9	Si
Maschio 63	V	2.807	SLV 3	Si
Maschio 63	PFFP	34.966	SLV 4	Si
Maschio 63	R	2.549	SLV 12	Si
Maschio 64	PF SLU	10.04	SLU 82	Si
Maschio 64	V SLU	10.455	SLU 50	Si
Maschio 64	PF	3.832	SLV 9	Si
Maschio 64	V	4.205	SLV 8	Si
Maschio 64	PFFP	11.982	SLV 11	Si
Maschio 64	R	0.96	SLV 6	No
Maschio 66	PF SLU	5.41	SLU 51	Si
Maschio 66	V SLU	4.322	SLU 84	Si
Maschio 66	PF	0	SLV 13	No
Maschio 66	V	1.664	SLV 14	Si
Maschio 66	PFFP	6.318	SLV 12	Si
Maschio 66	R	0.823	SLV 6	No
Maschio 67	PF SLU	8.294	SLU 50	Si
Maschio 67	V SLU	10.323	SLU 84	Si
Maschio 67	PF	1.314	SLV 16	Si
Maschio 67	V	2.003	SLV 16	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 67	PFFP	7.31	SLV 12	Si
Maschio 67	R	0.689	SLV 6	No
Maschio 68	PF SLU	10.06	SLU 50	Si
Maschio 68	V SLU	11.165	SLU 84	Si
Maschio 68	PF	1.868	SLV 3	Si
Maschio 68	V	2.362	SLV 3	Si
Maschio 68	PFFP	7.505	SLV 7	Si
Maschio 68	R	0.705	SLV 10	No
Maschio 69	PF SLU	5.845	SLU 50	Si
Maschio 69	V SLU	11.9	SLU 79	Si
Maschio 69	PF	1.104	SLV 3	Si
Maschio 69	V	3.306	SLV 3	Si
Maschio 69	PFFP	4.917	SLV 7	Si
Maschio 69	R	0.811	SLV 10	No
Maschio 70	PF SLU	19.844	SLU 51	Si
Maschio 70	V SLU	9.806	SLU 50	Si
Maschio 70	PF	2.074	SLV 14	Si
Maschio 70	V	5.097	SLV 15	Si
Maschio 70	PFFP	6.031	SLV 10	Si
Maschio 70	R	1.022	SLV 8	Si
Maschio 71	PF SLU	5.656	SLU 59	Si
Maschio 71	V SLU	9.745	SLU 83	Si
Maschio 71	PF	2.445	SLV 3	Si
Maschio 71	V	2.793	SLV 4	Si
Maschio 71	PFFP	14.808	SLV 12	Si
Maschio 71	R	0.718	SLV 5	No
Maschio 72	PF SLU	8.232	SLU 82	Si
Maschio 72	V SLU	60.763	SLU 62	Si
Maschio 72	PF	1.827	SLV 13	Si
Maschio 72	V	2.844	SLV 1	Si
Maschio 72	PFFP	14.948	SLV 5	Si
Maschio 72	R	0.895	SLV 10	No
Maschio 73	PF SLU	8.588	SLU 72	Si
Maschio 73	V SLU	15.776	SLU 72	Si
Maschio 73	PF	1.101	SLV 3	Si
Maschio 73	V	2.949	SLV 4	Si
Maschio 73	PFFP	17.084	SLV 3	Si
Maschio 73	R	0.729	SLV 11	No
Maschio 74	PF SLU	17.678	SLU 43	Si
Maschio 74	V SLU	11.152	SLU 50	Si
Maschio 74	PF	2.568	SLV 2	Si
Maschio 74	V	5.379	SLV 4	Si
Maschio 74	PFFP	4.767	SLV 6	Si
Maschio 74	R	0.987	SLV 11	No
Maschio 75	PF SLU	14.425	SLU 50	Si
Maschio 75	V SLU	3.682	SLU 83	Si
Maschio 75	PF	4.51	SLV 6	Si
Maschio 75	V	2.913	SLV 15	Si
Maschio 75	PFFP	7.975	SLV 6	Si
Maschio 75	R	0.754	SLV 11	No
Maschio 76	PF SLU	20.147	SLU 51	Si
Maschio 76	V SLU	2.848	SLU 71	Si
Maschio 76	PF	5.7	SLV 10	Si
Maschio 76	V	2.48	SLV 7	Si
Maschio 76	PFFP	115.029	SLV 12	Si
Maschio 76	R	3.049	SLV 5	Si
Maschio 77	PF SLU	15.631	SLU 62	Si
Maschio 77	V SLU	4.561	SLU 71	Si
Maschio 77	PF	11.319	SLV 3	Si
Maschio 77	V	3.624	SLV 7	Si
Maschio 77	PFFP	23.383	SLV 16	Si
Maschio 77	R	1.47	SLV 9	Si
Maschio 80	PF SLU	19.316	SLU 83	Si
Maschio 80	V SLU	1.999	SLU 84	Si
Maschio 80	PF	11.66	SLV 2	Si
Maschio 80	V	2.391	SLV 14	Si
Maschio 80	PFFP	35.105	SLV 13	Si
Maschio 80	R	2.331	SLV 10	Si
Maschio 84	PF SLU	3.851	SLU 39	Si
Maschio 84	V SLU	5.528	SLU 84	Si
Maschio 84	PF	0.644	SLV 2	No
Maschio 84	V	1.898	SLV 4	Si
Maschio 84	PFFP	8.185	SLV 13	Si
Maschio 84	R	0.921	SLV 11	No
Maschio 86	PF SLU	5.232	SLU 58	Si
Maschio 86	V SLU	5.008	SLU 83	Si
Maschio 86	PF	4.355	SLV 15	Si
Maschio 86	V	4.884	SLV 11	Si
Maschio 86	PFFP	11.951	SLV 2	Si
Maschio 86	R	0.918	SLV 11	No
Maschio 88	PF SLU	3.462	SLU 83	Si
Maschio 88	V SLU	5.952	SLU 83	Si
Maschio 88	PF	1.246	SLV 2	Si
Maschio 88	V	2.336	SLV 15	Si
Maschio 88	PFFP	7.968	SLV 2	Si
Maschio 88	R	0.832	SLV 7	No
Maschio 89	PF SLU	8.871	SLU 59	Si
Maschio 89	V SLU	10.992	SLU 70	Si
Maschio 89	PF	3.849	SLV 2	Si
Maschio 89	V	4.835	SLV 6	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 89	PFFP	9.547	SLV 3	Si
Maschio 89	R	0.892	SLV 10	No
Maschio 92	PF SLU	6.667	SLU 65	Si
Maschio 92	V SLU	9.968	SLU 65	Si
Maschio 92	PF	0.715	SLV 2	No
Maschio 92	V	2.219	SLV 4	Si
Maschio 92	PFFP	9.699	SLV 6	Si
Maschio 92	R	0.844	SLV 11	No
Maschio 93	PF SLU	3.953	SLU 76	Si
Maschio 93	V SLU	3.649	SLU 84	Si
Maschio 93	PF	2.065	SLV 6	Si
Maschio 93	V	2.295	SLV 4	Si
Maschio 93	PFFP	4.707	SLV 6	Si
Maschio 93	R	0.799	SLV 7	No
Maschio 94	PF SLU	14.176	SLU 43	Si
Maschio 94	V SLU	9.289	SLU 84	Si
Maschio 94	PF	0	SLV 6	No
Maschio 94	V	3.35	SLV 15	Si
Maschio 94	PFFP	0	SLV 6	No
Maschio 94	R	0.813	SLV 11	No
Maschio 95	PF SLU	2.043	SLU 50	Si
Maschio 95	V SLU	2.565	SLU 84	Si
Maschio 95	PF	0.722	SLV 7	No
Maschio 95	V	2.553	SLV 1	Si
Maschio 95	PFFP	5.285	SLV 11	Si
Maschio 95	R	0.753	SLV 10	No
Maschio 96	PF SLU	13.487	SLU 43	Si
Maschio 96	V SLU	19.556	SLU 42	Si
Maschio 96	PF	0	SLV 7	No
Maschio 96	V	4.4	SLV 14	Si
Maschio 96	PFFP	0	SLV 7	No
Maschio 96	R	0.817	SLV 10	No
Maschio 97	PF SLU	96.871	SLU 39	Si
Maschio 97	V SLU	102.886	SLU 60	Si
Maschio 97	PF	2.58	SLV 6	Si
Maschio 97	V	4.551	SLV 11	Si
Maschio 97	PFFP	6.868	SLV 3	Si
Maschio 97	R	1.414	SLV 10	Si
Maschio 98	PF SLU	23.249	SLU 5	Si
Maschio 98	V SLU	16.411	SLU 63	Si
Maschio 98	PF	0.901	SLV 5	No
Maschio 98	V	3.523	SLV 8	Si
Maschio 98	PFFP	3.187	SLV 1	Si
Maschio 98	R	2.091	SLV 11	Si
Maschio 99	PF SLU	5.286	SLU 43	Si
Maschio 99	V SLU	25.808	SLU 43	Si
Maschio 99	PF	0	SLV 7	No
Maschio 99	V	6.28	SLV 16	Si
Maschio 99	PFFP	0	SLV 12	No
Maschio 99	R	0.769	SLV 9	No
Maschio 100	PF SLU	8.701	SLU 60	Si
Maschio 100	V SLU	5.19	SLU 84	Si
Maschio 100	PF	3.085	SLV 16	Si
Maschio 100	V	3.947	SLV 13	Si
Maschio 100	PFFP	2.168	SLV 8	Si
Maschio 100	R	0.693	SLV 9	No
Maschio 101	PF SLU	5.725	SLU 82	Si
Maschio 101	V SLU	7.289	SLU 84	Si
Maschio 101	PF	0	SLV 5	No
Maschio 101	V	3.977	SLV 2	Si
Maschio 101	PFFP	0	SLV 10	No
Maschio 101	R	0.764	SLV 8	No
Maschio 102	PF SLU	7.094	SLU 84	Si
Maschio 102	V SLU	16.639	SLU 70	Si
Maschio 102	PF	2.818	SLV 1	Si
Maschio 102	V	3.979	SLV 15	Si
Maschio 102	PFFP	2.762	SLV 5	Si
Maschio 102	R	0.802	SLV 12	No
Maschio 103	PF SLU	4.779	SLU 65	Si
Maschio 103	V SLU	10.398	SLU 83	Si
Maschio 103	PF	0.984	SLV 13	No
Maschio 103	V	3.527	SLV 2	Si
Maschio 103	PFFP	3.336	SLV 9	Si
Maschio 103	R	0.874	SLV 8	No
Maschio 105	PF SLU	22.85	SLU 51	Si
Maschio 105	V SLU	35.238	SLU 39	Si
Maschio 105	PF	4.653	SLV 9	Si
Maschio 105	V	16.05	SLV 9	Si
Maschio 105	PFFP	4.85	SLV 12	Si
Maschio 105	R	1.183	SLV 5	Si
Maschio 106	PF SLU	5.95	SLU 62	Si
Maschio 106	V SLU	10.923	SLU 62	Si
Maschio 106	PF	1.142	SLV 13	Si
Maschio 106	V	3.067	SLV 2	Si
Maschio 106	PFFP	4.98	SLV 13	Si
Maschio 106	R	0.851	SLV 12	No
Maschio 107	PF SLU	8.851	SLU 51	Si
Maschio 107	V SLU	10.429	SLU 59	Si
Maschio 107	PF	5.647	SLV 12	Si
Maschio 107	V	9.87	SLV 8	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 107	PFFP	4.099	SLV 13	Si
Maschio 107	R	1.391	SLV 6	Si
Maschio 109	PF SLU	6.637	SLU 40	Si
Maschio 109	V SLU	10.789	SLU 82	Si
Maschio 109	PF	1.884	SLV 15	Si
Maschio 109	V	2.753	SLV 15	Si
Maschio 109	PFFP	5.07	SLV 1	Si
Maschio 109	R	0.949	SLV 7	No
Maschio 112	PF SLU	5.048	SLU 83	Si
Maschio 112	V SLU	3.861	SLU 84	Si
Maschio 112	PF	5.459	SLV 8	Si
Maschio 112	V	5.579	SLV 1	Si
Maschio 112	PFFP	30.136	SLV 13	Si
Maschio 112	R	1.176	SLV 8	Si
Maschio 113	PF SLU	12.8	SLU 83	Si
Maschio 113	V SLU	5.077	SLU 83	Si
Maschio 113	PF	2.246	SLV 9	Si
Maschio 113	V	3.548	SLV 14	Si
Maschio 113	PFFP	3.054	SLV 9	Si
Maschio 113	R	0.756	SLV 8	No
Maschio 115	PF SLU	31.102	SLU 24	Si
Maschio 115	V SLU	12.232	SLU 84	Si
Maschio 115	PF	2.443	SLV 12	Si
Maschio 115	V	15.468	SLV 13	Si
Maschio 115	PFFP	6.533	SLV 11	Si
Maschio 115	R	1.507	SLV 6	Si
Maschio 117	PF SLU	1.899	SLU 51	Si
Maschio 117	V SLU	5.612	SLU 84	Si
Maschio 117	PF	0	SLV 13	No
Maschio 117	V	3.283	SLV 14	Si
Maschio 117	PFFP	0	SLV 16	No
Maschio 117	R	1.049	SLV 6	Si
Maschio 118	PF SLU	13.42	SLU 84	Si
Maschio 118	V SLU	9.357	SLU 84	Si
Maschio 118	PF	2.641	SLV 16	Si
Maschio 118	V	2.8	SLV 14	Si
Maschio 118	PFFP	7.933	SLV 15	Si
Maschio 118	R	0.773	SLV 6	No
Maschio 119	PF SLU	13.057	SLU 51	Si
Maschio 119	V SLU	10.906	SLU 84	Si
Maschio 119	PF	2.357	SLV 3	Si
Maschio 119	V	2.902	SLV 1	Si
Maschio 119	PFFP	7.463	SLV 7	Si
Maschio 119	R	0.785	SLV 9	No
Maschio 120	PF SLU	3.897	SLU 84	Si
Maschio 120	V SLU	7.098	SLU 78	Si
Maschio 120	PF	1.166	SLV 4	Si
Maschio 120	V	3.639	SLV 2	Si
Maschio 120	PFFP	3.646	SLV 8	Si
Maschio 120	R	0.869	SLV 5	No
Maschio 121	PF SLU	11.953	SLU 39	Si
Maschio 121	V SLU	16.052	SLU 51	Si
Maschio 121	PF	1.175	SLV 13	Si
Maschio 121	V	7.083	SLV 13	Si
Maschio 121	PFFP	2.132	SLV 9	Si
Maschio 121	R	2.589	SLV 12	Si
Maschio 122	PF SLU	31.508	SLU 40	Si
Maschio 122	V SLU	12.522	SLU 81	Si
Maschio 122	PF	4.761	SLV 4	Si
Maschio 122	V	3.75	SLV 2	Si
Maschio 122	PFFP	8.787	SLV 15	Si
Maschio 122	R	0.871	SLV 6	No
Maschio 124	PF SLU	6.299	SLU 81	Si
Maschio 124	V SLU	50.704	SLU 56	Si
Maschio 124	PF	1.894	SLV 15	Si
Maschio 124	V	5.021	SLV 15	Si
Maschio 124	PFFP	9.437	SLV 16	Si
Maschio 124	R	0.79	SLV 5	No
Maschio 125	PF SLU	6.223	SLU 40	Si
Maschio 125	V SLU	12.408	SLU 81	Si
Maschio 125	PF	1.444	SLV 4	Si
Maschio 125	V	4.28	SLV 15	Si
Maschio 125	PFFP	8.201	SLV 2	Si
Maschio 125	R	0.904	SLV 11	No
Maschio 126	PF SLU	12.639	SLU 43	Si
Maschio 126	V SLU	16.559	SLU 51	Si
Maschio 126	PF	1.607	SLV 2	Si
Maschio 126	V	6.224	SLV 3	Si
Maschio 126	PFFP	2.2	SLV 2	Si
Maschio 126	R	2.885	SLV 7	Si
Maschio 127	PF SLU	17.107	SLU 50	Si
Maschio 127	V SLU	7.33	SLU 79	Si
Maschio 127	PF	4.659	SLV 6	Si
Maschio 127	V	4.054	SLV 2	Si
Maschio 127	PFFP	2.837	SLV 10	Si
Maschio 127	R	0.756	SLV 11	No
Maschio 128	PF SLU	10.016	SLU 47	Si
Maschio 128	V SLU	9.419	SLU 72	Si
Maschio 128	PF	4.522	SLV 6	Si
Maschio 128	V	7.132	SLV 7	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 128	PFFP	12.995	SLV 8	Si
Maschio 128	R	1.567	SLV 9	Si
Maschio 129	PF SLU	38.91	SLU 39	Si
Maschio 129	V SLU	11.412	SLU 71	Si
Maschio 129	PF	2.883	SLV 7	Si
Maschio 129	V	14.806	SLV 15	Si
Maschio 129	PFFP	41.618	SLV 8	Si
Maschio 129	R	3.146	SLV 9	Si
Maschio 131	PF SLU	4.471	SLU 83	Si
Maschio 131	V SLU	4.534	SLU 84	Si
Maschio 131	PF	5.448	SLV 11	Si
Maschio 131	V	6.768	SLV 16	Si
Maschio 131	PFFP	27.211	SLV 14	Si
Maschio 131	R	1.203	SLV 10	Si
Maschio 134	PF SLU	7.084	SLU 40	Si
Maschio 134	V SLU	10.267	SLU 84	Si
Maschio 134	PF	1.234	SLV 2	Si
Maschio 134	V	3.03	SLV 3	Si
Maschio 134	PFFP	4.81	SLV 14	Si
Maschio 134	R	0.941	SLV 12	No
Maschio 136	PF SLU	7.33	SLU 51	Si
Maschio 136	V SLU	9.112	SLU 80	Si
Maschio 136	PF	5.335	SLV 6	Si
Maschio 136	V	8.93	SLV 11	Si
Maschio 136	PFFP	5.517	SLV 2	Si
Maschio 136	R	1.298	SLV 9	Si
Maschio 138	PF SLU	5.166	SLU 62	Si
Maschio 138	V SLU	10.291	SLU 62	Si
Maschio 138	PF	0.811	SLV 2	No
Maschio 138	V	2.193	SLV 13	Si
Maschio 138	PFFP	4.129	SLV 2	Si
Maschio 138	R	0.84	SLV 7	No
Maschio 139	PF SLU	17.295	SLU 81	Si
Maschio 139	V SLU	19.028	SLU 51	Si
Maschio 139	PF	1.608	SLV 3	Si
Maschio 139	V	11.092	SLV 1	Si
Maschio 139	PFFP	3.753	SLV 3	Si
Maschio 139	R	1.18	SLV 10	Si
Maschio 142	PF SLU	4.744	SLU 65	Si
Maschio 142	V SLU	10.858	SLU 84	Si
Maschio 142	PF	0.872	SLV 2	No
Maschio 142	V	3.428	SLV 13	Si
Maschio 142	PFFP	3.57	SLV 6	Si
Maschio 142	R	0.83	SLV 11	No
Maschio 143	PF SLU	8.147	SLU 73	Si
Maschio 143	V SLU	12.049	SLU 70	Si
Maschio 143	PF	2.5	SLV 14	Si
Maschio 143	V	3.591	SLV 4	Si
Maschio 143	PFFP	2.913	SLV 6	Si
Maschio 143	R	0.836	SLV 7	No
Maschio 144	PF SLU	6.046	SLU 40	Si
Maschio 144	V SLU	8.028	SLU 84	Si
Maschio 144	PF	0	SLV 5	No
Maschio 144	V	3.527	SLV 14	Si
Maschio 144	PFFP	0	SLV 10	No
Maschio 144	R	0.738	SLV 11	No
Maschio 145	PF SLU	6.299	SLU 44	Si
Maschio 145	V SLU	6.372	SLU 84	Si
Maschio 145	PF	1.631	SLV 3	Si
Maschio 145	V	4.098	SLV 4	Si
Maschio 145	PFFP	2.729	SLV 7	Si
Maschio 145	R	0.753	SLV 10	No
Maschio 146	PF SLU	5.589	SLU 43	Si
Maschio 146	V SLU	22.45	SLU 42	Si
Maschio 146	PF	0	SLV 7	No
Maschio 146	V	7.038	SLV 16	Si
Maschio 146	PFFP	0	SLV 12	No
Maschio 146	R	0.727	SLV 10	No
Maschio 147	PF SLU	17.635	SLU 31	Si
Maschio 147	V SLU	9.022	SLU 83	Si
Maschio 147	PF	0.915	SLV 10	No
Maschio 147	V	6.468	SLV 15	Si
Maschio 147	PFFP	1.432	SLV 10	Si
Maschio 147	R	1.163	SLV 7	Si
Maschio 148	PF SLU	10.839	SLU 43	Si
Maschio 148	V SLU	9.842	SLU 84	Si
Maschio 148	PF	0.749	SLV 7	No
Maschio 148	V	8.445	SLV 10	Si
Maschio 148	PFFP	0	SLV 7	No
Maschio 148	R	1.052	SLV 6	Si
Maschio 149	PF SLU	1.755	SLU 61	Si
Maschio 149	V SLU	25.056	SLU 52	Si
Maschio 149	PF	0	SLD 1	No
Maschio 149	V	2.558	SLV 9	Si
Maschio 149	PFFP	0	SLV 4	No
Maschio 149	R	3.641	SLV 11	Si
Maschio 150	PF SLU	5.445	SLU 43	Si
Maschio 150	V SLU	25.345	SLU 41	Si
Maschio 150	PF	0	SLV 4	No
Maschio 150	V	6.293	SLV 4	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 150	PFFP	0	SLV 12	No
Maschio 150	R	1.019	SLV 9	Si
Maschio 151	PF SLU	7.357	SLU 44	Si
Maschio 151	V SLU	10.547	SLU 84	Si
Maschio 151	PF	1.455	SLV 8	Si
Maschio 151	V	7.772	SLV 13	Si
Maschio 151	PFFP	0	SLV 7	No
Maschio 151	R	1.125	SLV 5	Si
Maschio 152	PF SLU	3.322	SLU 82	Si
Maschio 152	V SLU	5.266	SLU 84	Si
Maschio 152	PF	0	SLD 5	No
Maschio 152	V	3.755	SLV 5	Si
Maschio 152	PFFP	0	SLV 10	No
Maschio 152	R	1.023	SLV 8	Si
Maschio 153	PF SLU	8.153	SLU 82	Si
Maschio 153	V SLU	49.223	SLU 84	Si
Maschio 153	PF	2.215	SLV 1	Si
Maschio 153	V	6.503	SLV 1	Si
Maschio 153	PFFP	1.024	SLV 5	Si
Maschio 153	R	1.109	SLV 12	Si
Maschio 154	PF SLU	5.282	SLU 62	Si
Maschio 154	V SLU	11.453	SLU 83	Si
Maschio 154	PF	1.007	SLV 13	Si
Maschio 154	V	4.826	SLV 1	Si
Maschio 154	PFFP	1.366	SLV 9	Si
Maschio 154	R	1.274	SLV 8	Si
Maschio 156	PF SLU	48.78	SLU 30	Si
Maschio 156	V SLU	32.371	SLU 50	Si
Maschio 156	PF	4.457	SLV 9	Si
Maschio 156	V	6.876	SLV 12	Si
Maschio 156	PFFP	1.93	SLV 12	Si
Maschio 156	R	2.114	SLV 5	Si
Maschio 157	PF SLU	5.153	SLU 62	Si
Maschio 157	V SLU	15.317	SLU 62	Si
Maschio 157	PF	0.986	SLV 1	No
Maschio 157	V	4.088	SLV 1	Si
Maschio 157	PFFP	2.376	SLV 13	Si
Maschio 157	R	1.171	SLV 12	Si
Maschio 158	PF SLU	6.279	SLU 47	Si
Maschio 158	V SLU	11.117	SLU 51	Si
Maschio 158	PF	1.859	SLV 9	Si
Maschio 158	V	5.409	SLV 5	Si
Maschio 158	PFFP	2.059	SLV 13	Si
Maschio 158	R	2.042	SLV 6	Si
Maschio 161	PF SLU	5.083	SLU 40	Si
Maschio 161	V SLU	9.379	SLU 75	Si
Maschio 161	PF	1.492	SLV 14	Si
Maschio 161	V	3.619	SLV 16	Si
Maschio 161	PFFP	2.458	SLV 1	Si
Maschio 161	R	1.511	SLV 7	Si
Maschio 164	PF SLU	18.916	SLU 84	Si
Maschio 164	V SLU	7.077	SLU 83	Si
Maschio 164	PF	14.42	SLV 5	Si
Maschio 164	V	7.985	SLV 8	Si
Maschio 164	PFFP	25.425	SLV 4	Si
Maschio 164	R	0.921	SLV 6	No
Maschio 165	PF SLU	8.923	SLU 40	Si
Maschio 165	V SLU	5.453	SLU 83	Si
Maschio 165	PF	1.412	SLV 13	Si
Maschio 165	V	4.496	SLV 16	Si
Maschio 165	PFFP	1.087	SLV 9	Si
Maschio 165	R	1.139	SLV 8	Si
Maschio 167	PF SLU	9.53	SLU 19	Si
Maschio 167	V SLU	12.652	SLU 84	Si
Maschio 167	PF	2.659	SLV 12	Si
Maschio 167	V	6.557	SLV 12	Si
Maschio 167	PFFP	2.828	SLV 11	Si
Maschio 167	R	2.151	SLV 6	Si
Maschio 169	PF SLU	3.819	SLU 60	Si
Maschio 169	V SLU	10.102	SLU 84	Si
Maschio 169	PF	1.419	SLV 15	Si
Maschio 169	V	6.342	SLV 13	Si
Maschio 169	PFFP	1.987	SLV 11	Si
Maschio 169	R	1.118	SLV 10	Si
Maschio 170	PF SLU	8.746	SLU 60	Si
Maschio 170	V SLU	9.257	SLU 84	Si
Maschio 170	PF	1.959	SLV 15	Si
Maschio 170	V	3.042	SLV 15	Si
Maschio 170	PFFP	3.023	SLV 11	Si
Maschio 170	R	1.462	SLV 6	Si
Maschio 171	PF SLU	11.252	SLU 44	Si
Maschio 171	V SLU	12.469	SLU 84	Si
Maschio 171	PF	1.667	SLV 4	Si
Maschio 171	V	3.717	SLV 4	Si
Maschio 171	PFFP	2.807	SLV 8	Si
Maschio 171	R	1.494	SLV 5	Si
Maschio 172	PF SLU	3.628	SLU 44	Si
Maschio 172	V SLU	8.634	SLU 80	Si
Maschio 172	PF	1.239	SLV 15	Si
Maschio 172	V	3.603	SLV 2	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 172	PFFP	1.745	SLV 12	Si
Maschio 172	R	0.897	SLV 6	No
Maschio 173	PF SLU	40.998	SLU 84	Si
Maschio 173	V SLU	9.335	SLU 51	Si
Maschio 173	PF	26.086	SLV 13	Si
Maschio 173	V	7.557	SLV 13	Si
Maschio 173	PFFP	28.583	SLV 1	Si
Maschio 173	R	1.607	SLV 5	Si
Maschio 174	PF SLU	8.652	SLU 61	Si
Maschio 174	V SLU	8.744	SLU 82	Si
Maschio 174	PF	3.291	SLV 1	Si
Maschio 174	V	4.485	SLV 1	Si
Maschio 174	PFFP	4.249	SLV 15	Si
Maschio 174	R	1.228	SLV 8	Si
Maschio 176	PF SLU	4.303	SLU 82	Si
Maschio 176	V SLU	11.966	SLU 82	Si
Maschio 176	PF	1.548	SLV 14	Si
Maschio 176	V	4.011	SLV 14	Si
Maschio 176	PFFP	5.851	SLV 12	Si
Maschio 176	R	1.178	SLV 9	Si
Maschio 177	PF SLU	5.838	SLU 84	Si
Maschio 177	V SLU	5.012	SLU 84	Si
Maschio 177	PF	4.727	SLV 14	Si
Maschio 177	V	3.928	SLV 14	Si
Maschio 177	PFFP	29.324	SLV 6	Si
Maschio 177	R	1.381	SLV 11	Si
Maschio 178	PF SLU	33.203	SLU 84	Si
Maschio 178	V SLU	8.445	SLU 51	Si
Maschio 178	PF	21.119	SLV 2	Si
Maschio 178	V	9.01	SLV 2	Si
Maschio 178	PFFP	28.7	SLV 14	Si
Maschio 178	R	1.644	SLV 10	Si
Maschio 179	PF SLU	10.032	SLU 50	Si
Maschio 179	V SLU	10.96	SLU 83	Si
Maschio 179	PF	2.53	SLV 10	Si
Maschio 179	V	4.016	SLV 10	Si
Maschio 179	PFFP	0	SLV 5	No
Maschio 179	R	1.104	SLV 11	Si
Maschio 180	PF SLU	17.466	SLU 44	Si
Maschio 180	V SLU	15.825	SLU 72	Si
Maschio 180	PF	2.981	SLV 7	Si
Maschio 180	V	9.376	SLV 5	Si
Maschio 180	PFFP	6.213	SLV 8	Si
Maschio 180	R	1.934	SLV 9	Si
Maschio 181	PF SLU	14.04	SLU 51	Si
Maschio 181	V SLU	39.54	SLU 44	Si
Maschio 181	PF	2.851	SLV 7	Si
Maschio 181	V	3.728	SLV 7	Si
Maschio 181	PFFP	20.066	SLV 8	Si
Maschio 181	R	4.687	SLV 9	Si
Maschio 183	PF SLU	12.715	SLU 84	Si
Maschio 183	V SLU	11.183	SLU 83	Si
Maschio 183	PF	13.927	SLV 10	Si
Maschio 183	V	12.64	SLV 12	Si
Maschio 183	PFFP	25.533	SLV 14	Si
Maschio 183	R	0.89	SLV 10	No
Maschio 186	PF SLU	6.168	SLU 40	Si
Maschio 186	V SLU	10.983	SLU 78	Si
Maschio 186	PF	0.946	SLV 14	No
Maschio 186	V	4.14	SLV 3	Si
Maschio 186	PFFP	2.053	SLV 14	Si
Maschio 186	R	1.487	SLV 12	Si
Maschio 188	PF SLU	6.558	SLU 47	Si
Maschio 188	V SLU	11.342	SLU 59	Si
Maschio 188	PF	2.046	SLV 6	Si
Maschio 188	V	5.48	SLV 10	Si
Maschio 188	PFFP	2.335	SLV 6	Si
Maschio 188	R	1.881	SLV 9	Si
Maschio 190	PF SLU	5.186	SLU 62	Si
Maschio 190	V SLU	15.366	SLU 62	Si
Maschio 190	PF	0.592	SLV 14	No
Maschio 190	V	2.884	SLV 14	Si
Maschio 190	PFFP	2.003	SLV 2	Si
Maschio 190	R	1.134	SLV 7	Si
Maschio 191	PF SLU	13.71	SLU 50	Si
Maschio 191	V SLU	43.736	SLU 50	Si
Maschio 191	PF	1.986	SLV 7	Si
Maschio 191	V	4.989	SLV 11	Si
Maschio 191	PFFP	0.354	SLV 3	No
Maschio 191	R	1.946	SLV 6	Si
Maschio 194	PF SLU	6.448	SLU 62	Si
Maschio 194	V SLU	12.628	SLU 83	Si
Maschio 194	PF	0.577	SLV 2	No
Maschio 194	V	4.408	SLV 14	Si
Maschio 194	PFFP	1.551	SLV 6	Si
Maschio 194	R	1.211	SLV 11	Si
Maschio 195	PF SLU	8.021	SLU 61	Si
Maschio 195	V SLU	82.922	SLU 21	Si
Maschio 195	PF	1.512	SLV 10	Si
Maschio 195	V	5.855	SLV 14	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 195	PFFP	1.259	SLV 10	Si
Maschio 195	R	1.094	SLV 7	Si
Maschio 196	PF SLU	3.25	SLU 82	Si
Maschio 196	V SLU	5.743	SLU 84	Si
Maschio 196	PF	0	SLV 5	No
Maschio 196	V	3.401	SLV 14	Si
Maschio 196	PFFP	0	SLV 10	No
Maschio 196	R	1.001	SLV 11	Si
Maschio 197	PF SLU	10.365	SLU 43	Si
Maschio 197	V SLU	24.773	SLU 44	Si
Maschio 197	PF	1.976	SLV 11	Si
Maschio 197	V	10.151	SLV 2	Si
Maschio 197	PFFP	1.642	SLV 7	Si
Maschio 197	R	1.094	SLV 10	Si
Maschio 198	PF SLU	6.886	SLU 41	Si
Maschio 198	V SLU	11.609	SLU 83	Si
Maschio 198	PF	0	SLV 7	No
Maschio 198	V	5.511	SLV 11	Si
Maschio 198	PFFP	0	SLV 12	No
Maschio 198	R	0.972	SLV 10	No
Maschio 199	PF SLU	2.611	SLU 61	Si
Maschio 199	V SLU	44.114	SLU 39	Si
Maschio 199	PF	0	SLD 13	No
Maschio 199	V	1.329	SLV 7	Si
Maschio 199	PFFP	0	SLV 16	No
Maschio 199	R	3.198	SLV 6	Si
Maschio 200	PF SLU	1.405	SLU 19	Si
Maschio 200	V SLU	3.307	SLU 82	Si
Maschio 200	PF	0	SLD 1	No
Maschio 200	V	0.747	SLV 9	No
Maschio 200	PFFP	0	SLV 4	No
Maschio 200	R	6.196	SLV 5	Si
Maschio 201	PF SLU	1.048	SLU 83	Si
Maschio 201	V SLU	11.503	SLU 35	Si
Maschio 201	PF	0	SLD 1	No
Maschio 201	V	4.926	SLV 12	Si
Maschio 201	PFFP	0	SLV 12	No
Maschio 201	R	5.553	SLV 9	Si
Maschio 202	PF SLU	5.06	SLU 43	Si
Maschio 202	V SLU	11.833	SLU 49	Si
Maschio 202	PF	1.168	SLV 4	Si
Maschio 202	V	8.741	SLV 1	Si
Maschio 202	PFFP	0	SLV 11	No
Maschio 202	R	2.733	SLV 9	Si
Maschio 203	PF SLU	2.323	SLU 40	Si
Maschio 203	V SLU	4.368	SLU 78	Si
Maschio 203	PF	0	SLD 5	No
Maschio 203	V	3.073	SLV 9	Si
Maschio 203	PFFP	0	SLV 10	No
Maschio 203	R	2.49	SLV 8	Si
Maschio 204	PF SLU	23.379	SLU 16	Si
Maschio 204	V SLU	64.552	SLU 61	Si
Maschio 204	PF	3.355	SLV 13	Si
Maschio 204	V	10.962	SLV 13	Si
Maschio 204	PFFP	1.077	SLV 5	Si
Maschio 204	R	3.29	SLV 12	Si
Maschio 205	PF SLU	7.568	SLU 58	Si
Maschio 205	V SLU	15.197	SLU 58	Si
Maschio 205	PF	0	SLV 11	No
Maschio 205	V	9.667	SLV 1	Si
Maschio 205	PFFP	0	SLV 10	No
Maschio 205	R	2.025	SLV 5	Si
Maschio 208	PF SLU	5.657	SLU 29	Si
Maschio 208	V SLU	25.255	SLU 82	Si
Maschio 208	PF	1.578	SLV 8	Si
Maschio 208	V	4.03	SLV 9	Si
Maschio 208	PFFP	0.652	SLV 12	No
Maschio 208	R	6.399	SLV 9	Si
Maschio 209	PF SLU	3.251	SLU 51	Si
Maschio 209	V SLU	6.02	SLU 80	Si
Maschio 209	PF	0.647	SLV 5	No
Maschio 209	V	3.229	SLV 5	Si
Maschio 209	PFFP	0.651	SLV 9	No
Maschio 209	R	7.65	SLV 8	Si
Maschio 212	PF SLU	2.529	SLU 83	Si
Maschio 212	V SLU	1.694	SLU 83	Si
Maschio 212	PF	3.574	SLV 8	Si
Maschio 212	V	2.147	SLV 8	Si
Maschio 212	PFFP	23.801	SLV 2	Si
Maschio 212	R	0.842	SLV 5	No
Maschio 213	PF SLU	5.733	SLU 30	Si
Maschio 213	V SLU	26.615	SLU 65	Si
Maschio 213	PF	1.195	SLV 12	Si
Maschio 213	V	6.457	SLV 5	Si
Maschio 213	PFFP	0	SLV 11	No
Maschio 213	R	5.346	SLV 5	Si
Maschio 214	PF SLU	1.941	SLU 82	Si
Maschio 214	V SLU	6.771	SLU 82	Si
Maschio 214	PF	0	SLV 3	No
Maschio 214	V	6.283	SLV 9	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 214	PFFP	0	SLV 8	No
Maschio 214	R	1.318	SLV 9	Si
Maschio 215	PF SLU	25.923	SLU 84	Si
Maschio 215	V SLU	11.465	SLU 84	Si
Maschio 215	PF	28.308	SLV 13	Si
Maschio 215	V	9.904	SLV 13	Si
Maschio 215	PFFP	30.212	SLV 9	Si
Maschio 215	R	14.972	SLV 9	Si
Maschio 216	PF SLU	34.505	SLU 84	Si
Maschio 216	V SLU	20.079	SLU 80	Si
Maschio 216	PF	32.944	SLV 2	Si
Maschio 216	V	10.724	SLV 2	Si
Maschio 216	PFFP	30.277	SLV 6	Si
Maschio 216	R	11.968	SLV 11	Si
Maschio 217	PF SLU	1.843	SLU 19	Si
Maschio 217	V SLU	10.038	SLU 80	Si
Maschio 217	PF	0.45	SLV 15	No
Maschio 217	V	6.762	SLV 2	Si
Maschio 217	PFFP	0	SLV 11	No
Maschio 217	R	1.68	SLV 6	Si
Maschio 218	PF SLU	7.163	SLU 84	Si
Maschio 218	V SLU	3.846	SLU 80	Si
Maschio 218	PF	10.913	SLV 3	Si
Maschio 218	V	3.758	SLV 1	Si
Maschio 218	PFFP	23.817	SLV 1	Si
Maschio 218	R	0.516	SLV 5	No
Maschio 219	PF SLU	3.379	SLU 81	Si
Maschio 219	V SLU	6.132	SLU 82	Si
Maschio 219	PF	2.412	SLV 4	Si
Maschio 219	V	5.399	SLV 1	Si
Maschio 219	PFFP	1.988	SLV 15	Si
Maschio 219	R	2.452	SLV 7	Si
Maschio 221	PF SLU	1.754	SLU 40	Si
Maschio 221	V SLU	8.319	SLU 82	Si
Maschio 221	PF	0.972	SLV 14	No
Maschio 221	V	5.488	SLV 14	Si
Maschio 221	PFFP	2.238	SLV 12	Si
Maschio 221	R	3.988	SLV 8	Si
Maschio 222	PF SLU	3.281	SLU 84	Si
Maschio 222	V SLU	2.743	SLU 84	Si
Maschio 222	PF	3.807	SLV 14	Si
Maschio 222	V	3.403	SLV 14	Si
Maschio 222	PFFP	31.3	SLV 7	Si
Maschio 222	R	3.285	SLV 6	Si
Maschio 223	PF SLU	6.131	SLU 84	Si
Maschio 223	V SLU	3.305	SLU 80	Si
Maschio 223	PF	9.705	SLV 16	Si
Maschio 223	V	3.487	SLV 14	Si
Maschio 223	PFFP	24.218	SLV 14	Si
Maschio 223	R	0.528	SLV 10	No
Maschio 224	PF SLU	2.289	SLU 35	Si
Maschio 224	V SLU	10.029	SLU 72	Si
Maschio 224	PF	0	SLV 1	No
Maschio 224	V	3.385	SLV 10	Si
Maschio 224	PFFP	0	SLV 1	No
Maschio 224	R	3.805	SLV 12	Si
Maschio 229	PF SLU	3.522	SLU 51	Si
Maschio 229	V SLU	6.09	SLU 80	Si
Maschio 229	PF	0.808	SLV 10	No
Maschio 229	V	3.239	SLV 10	Si
Maschio 229	PFFP	0.737	SLV 6	No
Maschio 229	R	6.91	SLV 11	Si
Maschio 231	PF SLU	5.067	SLU 37	Si
Maschio 231	V SLU	34.12	SLU 82	Si
Maschio 231	PF	0.799	SLV 14	No
Maschio 231	V	3.716	SLV 6	Si
Maschio 231	PFFP	0	SLV 1	No
Maschio 231	R	4.467	SLV 7	Si
Maschio 234	PF SLU	16.911	SLU 70	Si
Maschio 234	V SLU	24.004	SLU 51	Si
Maschio 234	PF	13.799	SLV 2	Si
Maschio 234	V	14.229	SLV 2	Si
Maschio 234	PFFP	30.314	SLV 12	Si
Maschio 234	R	4.131	SLV 9	Si
Maschio 235	PF SLU	11.581	SLU 77	Si
Maschio 235	V SLU	8.375	SLU 77	Si
Maschio 235	PF	15.126	SLV 7	Si
Maschio 235	V	4.976	SLV 11	Si
Maschio 235	PFFP	30.132	SLV 4	Si
Maschio 235	R	5.364	SLV 6	Si
Maschio 236	PF SLU	1.899	SLU 60	Si
Maschio 236	V SLU	4.985	SLU 61	Si
Maschio 236	PF	0	SLV 13	No
Maschio 236	V	0.733	SLV 10	No
Maschio 236	PFFP	0	SLV 16	No
Maschio 236	R	6.198	SLV 5	Si
Maschio 238	PF SLU	2.86	SLU 40	Si
Maschio 238	V SLU	15.729	SLU 78	Si
Maschio 238	PF	0	SLV 16	No
Maschio 238	V	6.468	SLV 16	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 238	PFFP	0	SLV 12	No
Maschio 238	R	3.104	SLV 7	Si
Maschio 239	PF SLU	2.687	SLU 40	Si
Maschio 239	V SLU	8.864	SLU 78	Si
Maschio 239	PF	1.056	SLV 16	Si
Maschio 239	V	4.658	SLV 16	Si
Maschio 239	PFFP	0	SLV 1	No
Maschio 239	R	4.175	SLV 6	Si
Maschio 241	PF SLU	2.688	SLU 29	Si
Maschio 241	V SLU	13.627	SLU 77	Si
Maschio 241	PF	0	SLV 5	No
Maschio 241	V	4.897	SLV 12	Si
Maschio 241	PFFP	0	SLV 5	No
Maschio 241	R	5.927	SLV 12	Si
Maschio 242	PF SLU	7.016	SLU 61	Si
Maschio 242	V SLU	13.272	SLU 61	Si
Maschio 242	PF	0	SLD 5	No
Maschio 242	V	4.456	SLV 10	Si
Maschio 242	PFFP	0	SLV 10	No
Maschio 242	R	6.555	SLV 7	Si
Maschio 244	PF SLU	3.676	SLU 40	Si
Maschio 244	V SLU	12.601	SLU 78	Si
Maschio 244	PF	0.113	SLV 14	No
Maschio 244	V	4.355	SLV 3	Si
Maschio 244	PFFP	0	SLV 5	No
Maschio 244	R	4.42	SLV 9	Si
Maschio 246	PF SLU	2.414	SLU 19	Si
Maschio 246	V SLU	23.452	SLU 59	Si
Maschio 246	PF	0.162	SLV 10	No
Maschio 246	V	4.791	SLV 14	Si
Maschio 246	PFFP	0	SLV 1	No
Maschio 246	R	4.128	SLV 9	Si
Maschio 247	PF SLU	5.368	SLU 22	Si
Maschio 247	V SLU	15.89	SLU 56	Si
Maschio 247	PF	0	SLV 3	No
Maschio 247	V	8.121	SLV 14	Si
Maschio 247	PFFP	0	SLV 10	No
Maschio 247	R	1.865	SLV 10	Si
Maschio 248	PF SLU	5.045	SLU 19	Si
Maschio 248	V SLU	26.855	SLU 82	Si
Maschio 248	PF	1.626	SLV 6	Si
Maschio 248	V	9.833	SLV 2	Si
Maschio 248	PFFP	1.115	SLV 10	Si
Maschio 248	R	2.89	SLV 7	Si
Maschio 249	PF SLU	3.16	SLU 40	Si
Maschio 249	V SLU	4.407	SLU 78	Si
Maschio 249	PF	0	SLD 5	No
Maschio 249	V	3.044	SLV 10	Si
Maschio 249	PFFP	0	SLV 10	No
Maschio 249	R	2.385	SLV 12	Si
Maschio 273	PF SLU	6.455	SLU 38	Si
Maschio 273	V SLU	1000	SLU 1	Si
Maschio 273	PFFP	0	SLV 3	No
Maschio 273	R	0	SLV 16	No
Maschio 275	PF SLU	2.557	SLU 83	Si
Maschio 275	V SLU	6.2	SLU 83	Si
Maschio 275	PF	0	SLV 13	No
Maschio 275	V	1.763	SLV 4	Si
Maschio 275	PFFP	0	SLV 14	No
Maschio 275	R	7.795	SLV 3	Si
Maschio 276	PF SLU	2.764	SLU 84	Si
Maschio 276	V SLU	2.942	SLU 83	Si
Maschio 276	PF	0	SLV 1	No
Maschio 276	V	1.627	SLV 15	Si
Maschio 276	PFFP	0	SLV 1	No
Maschio 276	R	7.783	SLV 16	Si
Maschio 281	PF SLU	1.055	SLU 39	Si
Maschio 281	V SLU	3.971	SLU 79	Si
Maschio 281	PF	0	SLD 15	No
Maschio 281	V	4.298	SLV 11	Si
Maschio 281	PFFP	0	SLV 1	No
Maschio 281	R	6.7	SLV 2	Si

Verifica maschi in muratura

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
1	PF	1.717	SLV 13	0.362	1.483	1618	1.653	Si
	V	3.137	SLV 9	0.362	1.483	1618	1.653	Si
	PFFP	1.815	SLV 16	0.362	1.483	1618	1.653	Si
	R	1.945	SLV 4	0.362	1.483	1618	1.653	Si
2	PF	0.771	SLV 13	0.186	0.763	232	0.745	No
	V	3.631	SLV 5	0.362	1.483	1618	1.653	Si
	PFFP	1.149	SLV 13	0.278	1.138	699	1.172	Si
	R	2.18	SLV 2	0.362	1.483	1618	1.653	Si
3	PF	1.861	SLV 12	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.075	SLV 16	0.362	1.483	1618	1.653	Si
	R	1.655	SLV 5	0.362	1.483	1618	1.653	Si
4	PF	1.608	SLV 12	0.362	1.483	1618	1.653	Si
	V	3.332	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	2.309	SLV 16	0.362	1.483	1618	1.653	Si

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	R	1.597	SLV 5	0.362	1.483	1618	1.653	Si
7	PF	2.742	SLV 12	0.362	1.483	1618	1.653	Si
	V	3.164	SLV 5	0.362	1.483	1618	1.653	Si
	PFFP	3.95	SLV 16	0.362	1.483	1618	1.653	Si
	R	1.197	SLV 5	0.29	1.188	795	1.235	Si
9	PF	1.851	SLV 9	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.251	SLV 13	0.362	1.483	1618	1.653	Si
	R	1.866	SLV 8	0.362	1.483	1618	1.653	Si
10	PF	2.209	SLV 9	0.362	1.483	1618	1.653	Si
	V	1.485	SLV 13	0.354	1.448	1494	1.6	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.608	SLV 8	0.362	1.483	1618	1.653	Si
11	PF	1.939	SLV 13	0.362	1.483	1618	1.653	Si
	V	2.574	SLV 4	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.734	SLV 8	0.362	1.483	1618	1.653	Si
13	PF	3.4	SLV 13	0.362	1.483	1618	1.653	Si
	V	3.948	SLV 9	0.362	1.483	1618	1.653	Si
	PFFP	3.747	SLV 13	0.362	1.483	1618	1.653	Si
	R	1.675	SLV 5	0.362	1.483	1618	1.653	Si
14	PF	1.214	SLV 12	0.294	1.204	828	1.256	Si
	V	2.128	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	2.069	SLV 12	0.362	1.483	1618	1.653	Si
	R	1.504	SLV 5	0.362	1.483	1618	1.653	Si
15	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.444	SLV 4	0.345	1.41	1370	1.544	Si
	PFFP	3.716	SLV 13	0.362	1.483	1618	1.653	Si
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
16	PF	1.672	SLV 13	0.362	1.483	1618	1.653	Si
	V	1.666	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	2.68	SLV 13	0.362	1.483	1618	1.653	Si
	R	2.123	SLV 8	0.362	1.483	1618	1.653	Si
17	PF	2.215	SLV 12	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	2.168	SLV 6	0.362	1.483	1618	1.653	Si
18	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.343	SLV 10	0.325	1.33	1130	1.427	Si
19	PF	2.114	SLV 14	0.362	1.483	1618	1.653	Si
	V	2.989	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	2.653	SLV 16	0.362	1.483	1618	1.653	Si
	R	1.405	SLV 7	0.34	1.391	1309	1.515	Si
20	PF	2.65	SLV 13	0.362	1.483	1618	1.653	Si
	V	3.101	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.355	SLV 5	0.328	1.342	1163	1.444	Si
21	PF	0.797	SLV 3	0.193	0.789	253	0.772	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.315	SLV 9	0.318	1.303	1056	1.388	Si
23	PF	1.32	SLV 1	0.317	1.296	1038	1.378	Si
	V	3.512	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.215	SLV 6	0.294	1.205	830	1.257	Si
24	PF	1.39	SLV 1	0.332	1.361	1218	1.471	Si
	V	2.712	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.436	SLV 10	0.347	1.421	1405	1.56	Si
25	PF	1.089	SLV 3	0.265	1.083	602	1.102	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	3.342	SLV 3	0.362	1.483	1618	1.653	Si
	R	1.133	SLV 6	0.275	1.127	679	1.158	Si
26	PF	2.126	SLV 2	0.362	1.483	1618	1.653	Si
	V	2.948	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.63	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.408	SLV 11	0.341	1.394	1318	1.52	Si
27	PF	1.921	SLV 12	0.362	1.483	1618	1.653	Si
	V	1.47	SLV 16	0.35	1.434	1448	1.579	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.536	SLV 5	0.362	1.483	1618	1.653	Si
28	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.611	SLV 11	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.205	SLV 7	0.292	1.196	810	1.245	Si
30	PF	1.968	SLV 7	0.362	1.483	1618	1.653	Si
	V	1.738	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.551	SLV 10	0.362	1.483	1618	1.653	Si
31	PF	1.064	SLV 7	0.259	1.062	567	1.075	Si
	V	3.119	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.28	SLV 3	0.308	1.259	946	1.326	Si
	R	1.712	SLV 10	0.362	1.483	1618	1.653	Si
32	PF	2.921	SLV 7	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.775	SLV 10	0.362	1.483	1618	1.653	Si
34	PF	2.499	SLV 4	0.362	1.483	1618	1.653	Si

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	V	1.85	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	3.502	SLV 2	0.362	1.483	1618	1.653	Si
	R	2.111	SLV 11	0.362	1.483	1618	1.653	Si
35	PF	1.662	SLV 7	0.362	1.483	1618	1.653	Si
	V	3.254	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	3.941	SLV 2	0.362	1.483	1618	1.653	Si
	R	3.212	SLV 11	0.362	1.483	1618	1.653	Si
36	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.518	SLV 9	0.362	1.483	1618	1.653	Si
37	PF	2.451	SLV 4	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.238	SLV 8	0.3	1.228	877	1.286	Si
38	PF	1.906	SLV 2	0.362	1.483	1618	1.653	Si
	V	3.01	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.54	SLV 7	0.362	1.483	1618	1.653	Si
39	PF	2.117	SLV 6	0.362	1.483	1618	1.653	Si
	V	1.599	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	4.059	SLV 6	0.362	1.483	1618	1.653	Si
	R	1.61	SLV 11	0.362	1.483	1618	1.653	Si
40	PF	1.771	SLV 6	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.33	SLV 2	0.362	1.483	1618	1.653	Si
	R	1.751	SLV 11	0.362	1.483	1618	1.653	Si
42	PF	3.459	SLV 3	0.362	1.483	1618	1.653	Si
	V	3.772	SLV 10	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.072	SLV 10	0.261	1.069	580	1.085	Si
44	PF	1.424	SLV 7	0.344	1.409	1367	1.542	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.755	SLV 7	0.362	1.483	1618	1.653	Si
	R	2.354	SLV 10	0.362	1.483	1618	1.653	Si
45	PF	1.834	SLV 7	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.944	SLV 3	0.362	1.483	1618	1.653	Si
	R	1.781	SLV 10	0.362	1.483	1618	1.653	Si
46	PF	1.719	SLV 3	0.362	1.483	1618	1.653	Si
	V	3.997	SLV 7	0.362	1.483	1618	1.653	Si
	PFFP	1.939	SLV 3	0.362	1.483	1618	1.653	Si
	R	2.06	SLV 14	0.362	1.483	1618	1.653	Si
47	PF	1.501	SLV 15	0.357	1.463	1545	1.622	Si
	V	1.418	SLV 8	0.343	1.404	1349	1.534	Si
	PFFP	1.658	SLV 15	0.362	1.483	1618	1.653	Si
	R	1.505	SLV 6	0.362	1.483	1618	1.653	Si
48	PF	0.776	SLV 12	0.185	0.757	226	0.737	No
	V	3.639	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	0.97	SLV 12	0.236	0.967	434	0.964	No
	R	0.874	SLV 5	0.21	0.861	319	0.849	No
49	PF	0.827	SLV 12	0.198	0.81	272	0.796	No
	V	2.573	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	1.564	SLV 12	0.362	1.483	1618	1.653	Si
	R	0.816	SLV 9	0.195	0.799	262	0.784	No
50	PF	0.815	SLV 9	0.195	0.798	261	0.782	No
	V	3.243	SLV 4	0.362	1.483	1618	1.653	Si
	PFFP	0.876	SLV 9	0.211	0.864	322	0.853	No
	R	0.876	SLV 8	0.211	0.864	322	0.853	No
51	PF	1.527	SLV 9	0.362	1.483	1618	1.653	Si
	V	2.732	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1.494	SLV 9	0.361	1.478	1598	1.644	Si
	R	0.817	SLV 8	0.196	0.801	263	0.785	No
52	PF	1.028	SLV 13	0.251	1.026	513	1.032	Si
	V	3.01	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	2.615	SLV 9	0.362	1.483	1618	1.653	Si
	R	0.749	SLV 8	0.178	0.728	205	0.709	No
54	PF	2.829	SLV 12	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	3.158	SLV 16	0.362	1.483	1618	1.653	Si
	R	0.793	SLV 5	0.189	0.774	240	0.756	No
55	PF	1.585	SLV 13	0.362	1.483	1618	1.653	Si
	V	3.234	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	2.061	SLV 13	0.362	1.483	1618	1.653	Si
	R	0.785	SLV 12	0.187	0.766	234	0.748	No
56	PF	1.88	SLV 13	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.995	SLV 8	0.243	0.995	468	0.994	No
59	PF	0.9	SLV 13	0.219	0.896	354	0.886	No
	V	2.545	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	2.806	SLV 5	0.362	1.483	1618	1.653	Si
	R	0.917	SLV 8	0.222	0.908	368	0.901	No
63	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	2.386	SLV 12	0.362	1.483	1618	1.653	Si
64	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.668	SLV 8	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	R	0.962	SLV 6	0.234	0.958	423	0.954	No
66	PF	0.592	SLV 16	0.14	0.574	118	0.565	No
	V	1.875	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	1.808	SLV 12	0.362	1.483	1618	1.653	Si
	R	0.872	SLV 6	0.21	0.858	316	0.846	No
67	PF	1.254	SLV 16	0.302	1.235	892	1.295	Si
	V	1.821	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	2.298	SLV 11	0.362	1.483	1618	1.653	Si
	R	0.732	SLV 6	0.173	0.708	191	0.688	No
68	PF	1.742	SLV 7	0.362	1.483	1618	1.653	Si
	V	1.894	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.363	SLV 7	0.362	1.483	1618	1.653	Si
	R	0.747	SLV 10	0.177	0.725	202	0.704	No
69	PF	1.06	SLV 3	0.258	1.056	559	1.069	Si
	V	2.932	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	1.526	SLV 7	0.362	1.483	1618	1.653	Si
	R	0.852	SLV 9	0.205	0.837	296	0.824	No
70	PF	1.381	SLV 10	0.334	1.367	1238	1.481	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.625	SLV 10	0.362	1.483	1618	1.653	Si
	R	1.017	SLV 7	0.248	1.016	498	1.02	Si
71	PF	3.469	SLV 4	0.362	1.483	1618	1.653	Si
	V	2.598	SLV 4	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.74	SLV 5	0.175	0.718	198	0.699	No
72	PF	1.789	SLV 3	0.362	1.483	1618	1.653	Si
	V	2.334	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.901	SLV 10	0.218	0.89	349	0.881	No
73	PF	1.078	SLV 3	0.262	1.073	585	1.089	Si
	V	2.607	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	3.118	SLV 3	0.362	1.483	1618	1.653	Si
	R	0.744	SLV 11	0.176	0.722	200	0.701	No
74	PF	1.534	SLV 6	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.443	SLV 6	0.349	1.428	1428	1.57	Si
	R	0.989	SLV 11	0.241	0.988	459	0.986	No
75	PF	1.876	SLV 6	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.652	SLV 6	0.362	1.483	1618	1.653	Si
	R	0.796	SLV 11	0.19	0.778	244	0.761	No
76	PF	3.469	SLV 12	0.362	1.483	1618	1.653	Si
	V	2.479	SLV 12	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	2.492	SLV 1	0.362	1.483	1618	1.653	Si
77	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.454	SLV 9	0.351	1.439	1463	1.586	Si
80	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.908	SLV 10	0.362	1.483	1618	1.653	Si
84	PF	0.712	SLV 2	0.171	0.699	186	0.681	No
	V	2.094	SLV 4	0.362	1.483	1618	1.653	Si
	PFFP	2.837	SLV 13	0.362	1.483	1618	1.653	Si
	R	0.933	SLV 11	0.226	0.925	386	0.918	No
86	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.924	SLV 11	0.224	0.916	376	0.909	No
88	PF	1.098	SLV 2	0.267	1.091	616	1.112	Si
	V	2.06	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	1.764	SLV 2	0.362	1.483	1618	1.653	Si
	R	0.867	SLV 7	0.209	0.854	312	0.842	No
89	PF	2.759	SLV 2	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	3.376	SLV 3	0.362	1.483	1618	1.653	Si
	R	0.907	SLV 10	0.219	0.897	356	0.888	No
92	PF	0.777	SLV 2	0.188	0.77	237	0.752	No
	V	2.254	SLV 4	0.362	1.483	1618	1.653	Si
	PFFP	2.431	SLV 6	0.362	1.483	1618	1.653	Si
	R	0.874	SLV 11	0.21	0.861	319	0.849	No
93	PF	1.437	SLV 6	0.347	1.422	1409	1.562	Si
	V	2.362	SLV 4	0.362	1.483	1618	1.653	Si
	PFFP	1.507	SLV 6	0.362	1.483	1618	1.653	Si
	R	0.843	SLV 7	0.202	0.828	288	0.815	No
94	PF	0.961	SLV 6	0.234	0.956	422	0.953	No
	V	2.978	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	0.967	SLV 6	0.235	0.963	429	0.959	No
	R	0.865	SLV 11	0.208	0.852	310	0.839	No
95	PF	0.773	SLV 7	0.184	0.754	224	0.735	No
	V	3.086	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.627	SLV 11	0.362	1.483	1618	1.653	Si
	R	0.804	SLV 10	0.192	0.785	250	0.769	No
96	PF	0.819	SLV 7	0.196	0.802	264	0.786	No
	V	3.681	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	0.904	SLV 7	0.218	0.894	352	0.884	No
	R	0.874	SLV 10	0.21	0.861	319	0.849	No
97	PF	2.161	SLV 3	0.362	1.483	1618	1.653	Si

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	V	3.684	SLV 7	0.362	1.483	1618	1.653	Si
	PFFP	2.086	SLV 3	0.362	1.483	1618	1.653	Si
	R	1.354	SLV 10	0.328	1.341	1161	1.443	Si
98	PF	0.916	SLV 5	0.222	0.907	367	0.9	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.518	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.854	SLV 11	0.362	1.483	1618	1.653	Si
99	PF	0.63	SLV 12	0.147	0.602	132	0.592	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.624	SLV 8	0.146	0.596	128	0.584	No
	R	0.844	SLV 9	0.203	0.829	289	0.816	No
100	PF	1.303	SLV 8	0.315	1.291	1025	1.371	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.179	SLV 8	0.286	1.171	761	1.213	Si
	R	0.768	SLV 9	0.183	0.747	219	0.728	No
101	PF	0.642	SLV 5	0.15	0.614	138	0.602	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.603	SLV 9	0.141	0.576	119	0.567	No
	R	0.841	SLV 8	0.202	0.826	286	0.812	No
102	PF	1.543	SLV 9	0.362	1.483	1618	1.653	Si
	V	3.76	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1.333	SLV 5	0.323	1.32	1103	1.413	Si
	R	0.849	SLV 8	0.204	0.834	293	0.82	No
103	PF	0.987	SLV 13	0.241	0.986	458	0.985	No
	V	3.462	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	1.423	SLV 9	0.344	1.408	1364	1.541	Si
	R	0.904	SLV 8	0.218	0.894	352	0.884	No
105	PF	2.968	SLV 12	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.38	SLV 12	0.362	1.483	1618	1.653	Si
	R	1.149	SLV 5	0.279	1.143	707	1.177	Si
106	PF	1.071	SLV 13	0.261	1.066	575	1.081	Si
	V	2.65	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1.776	SLV 13	0.362	1.483	1618	1.653	Si
	R	0.885	SLV 12	0.213	0.873	331	0.862	No
107	PF	3.007	SLV 13	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.889	SLV 13	0.362	1.483	1618	1.653	Si
	R	1.34	SLV 6	0.324	1.327	1122	1.423	Si
109	PF	1.438	SLV 1	0.343	1.405	1353	1.536	Si
	V	3.031	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	2.111	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.956	SLV 7	0.232	0.951	415	0.946	No
112	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.161	SLV 8	0.282	1.154	729	1.192	Si
113	PF	1.235	SLV 9	0.299	1.225	870	1.282	Si
	V	3.577	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1.419	SLV 9	0.343	1.405	1352	1.536	Si
	R	0.811	SLV 8	0.194	0.794	258	0.779	No
115	PF	1.531	SLV 11	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.881	SLV 11	0.362	1.483	1618	1.653	Si
	R	1.354	SLV 6	0.328	1.341	1161	1.443	Si
117	PF	0.394	SLV 15	0.093	0.38	43	0.373	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.767	SLV 15	0.186	0.759	229	0.741	No
	R	1.036	SLV 6	0.253	1.035	526	1.043	Si
118	PF	2.242	SLV 16	0.362	1.483	1618	1.653	Si
	V	2.254	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	3.552	SLV 15	0.362	1.483	1618	1.653	Si
	R	0.803	SLV 6	0.192	0.784	249	0.767	No
119	PF	2.139	SLV 3	0.362	1.483	1618	1.653	Si
	V	2.262	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	3.295	SLV 7	0.362	1.483	1618	1.653	Si
	R	0.816	SLV 9	0.195	0.799	262	0.784	No
120	PF	1.174	SLV 4	0.284	1.161	743	1.201	Si
	V	3.674	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1.611	SLV 8	0.362	1.483	1618	1.653	Si
	R	0.9	SLV 5	0.217	0.889	348	0.88	No
121	PF	1.074	SLV 13	0.261	1.069	579	1.085	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.2	SLV 9	0.291	1.191	801	1.239	Si
	R	1.87	SLV 12	0.362	1.483	1618	1.653	Si
122	PF	3.167	SLV 16	0.362	1.483	1618	1.653	Si
	V	3.386	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.879	SLV 6	0.212	0.867	325	0.856	No
124	PF	1.591	SLV 15	0.362	1.483	1618	1.653	Si
	V	4.018	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	3.144	SLV 16	0.362	1.483	1618	1.653	Si
	R	0.808	SLV 5	0.193	0.791	254	0.774	No
125	PF	1.333	SLV 2	0.32	1.308	1070	1.395	Si
	V	3.791	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	2.98	SLV 2	0.362	1.483	1618	1.653	Si
	R	0.917	SLV 11	0.222	0.908	368	0.901	No
126	PF	1.312	SLV 2	0.315	1.289	1018	1.367	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.223	SLV 2	0.295	1.206	832	1.258	Si

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	R	2.082	SLV 7	0.362	1.483	1618	1.653	Si
127	PF	1.394	SLV 6	0.337	1.38	1276	1.5	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.356	SLV 10	0.328	1.343	1166	1.445	Si
	R	0.811	SLV 7	0.194	0.794	258	0.779	No
128	PF	2.291	SLV 8	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	3.559	SLV 8	0.362	1.483	1618	1.653	Si
	R	1.429	SLV 9	0.346	1.414	1383	1.55	Si
129	PF	1.64	SLV 8	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.148	SLV 8	0.362	1.483	1618	1.653	Si
	R	2.308	SLV 9	0.362	1.483	1618	1.653	Si
131	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.185	SLV 10	0.287	1.177	772	1.22	Si
134	PF	1.139	SLV 2	0.276	1.129	682	1.16	Si
	V	2.648	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	1.972	SLV 14	0.362	1.483	1618	1.653	Si
	R	0.951	SLV 12	0.231	0.946	409	0.941	No
136	PF	3.866	SLV 2	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.94	SLV 2	0.362	1.483	1618	1.653	Si
	R	1.266	SLV 9	0.307	1.255	936	1.321	Si
138	PF	0.905	SLV 2	0.22	0.901	360	0.893	No
	V	2.346	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1.541	SLV 2	0.362	1.483	1618	1.653	Si
	R	0.877	SLV 7	0.211	0.865	323	0.854	No
139	PF	1.22	SLV 3	0.294	1.204	826	1.255	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.728	SLV 3	0.362	1.483	1618	1.653	Si
	R	1.13	SLV 10	0.275	1.124	674	1.154	Si
142	PF	0.956	SLV 2	0.233	0.954	419	0.95	No
	V	2.927	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1.425	SLV 6	0.345	1.41	1371	1.544	Si
	R	0.869	SLV 11	0.209	0.855	314	0.844	No
143	PF	1.451	SLV 10	0.351	1.436	1453	1.582	Si
	V	3.568	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1.369	SLV 6	0.331	1.356	1203	1.464	Si
	R	0.876	SLV 7	0.211	0.863	321	0.852	No
144	PF	0.64	SLV 10	0.15	0.612	137	0.601	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.676	SLV 6	0.159	0.65	157	0.635	No
	R	0.819	SLV 11	0.196	0.802	264	0.786	No
145	PF	1.313	SLV 7	0.318	1.301	1050	1.384	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.31	SLV 7	0.317	1.298	1042	1.38	Si
	R	0.808	SLV 10	0.193	0.791	254	0.774	No
146	PF	0.622	SLV 11	0.145	0.593	127	0.582	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.635	SLV 7	0.149	0.608	135	0.597	No
	R	0.814	SLV 10	0.195	0.797	260	0.781	No
147	PF	0.973	SLV 10	0.237	0.97	437	0.966	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.106	SLV 10	0.269	1.101	634	1.126	Si
	R	1.106	SLV 7	0.269	1.101	634	1.126	Si
148	PF	0.934	SLV 7	0.227	0.927	388	0.92	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.884	SLV 7	0.213	0.872	330	0.861	No
	R	1.033	SLV 6	0.252	1.032	521	1.039	Si
149	PF	0.154	SLV 1	0.035	0.143	4	0.141	No
	V	2.661	SLV 9	0.362	1.483	1618	1.653	Si
	PFFP	0.424	SLV 2	0.1	0.41	52	0.404	No
	R	2.242	SLV 15	0.362	1.483	1618	1.653	Si
150	PF	0.451	SLV 8	0.103	0.42	55	0.413	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.487	SLV 8	0.112	0.457	68	0.451	No
	R	1.011	SLV 9	0.247	1.011	490	1.013	Si
151	PF	1.043	SLV 8	0.254	1.042	536	1.051	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.905	SLV 8	0.219	0.895	353	0.885	No
	R	1.086	SLV 5	0.264	1.082	601	1.101	Si
152	PF	0.38	SLV 5	0.086	0.351	36	0.347	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.491	SLV 9	0.112	0.46	69	0.453	No
	R	1.014	SLV 8	0.248	1.014	494	1.016	Si
153	PF	1.283	SLV 5	0.311	1.272	974	1.342	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.006	SLV 5	0.246	1.006	483	1.007	Si
	R	1.076	SLV 12	0.262	1.073	586	1.09	Si
154	PF	1.001	SLV 13	0.245	1.001	476	1.001	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.098	SLV 9	0.267	1.094	621	1.116	Si
	R	1.19	SLV 8	0.289	1.182	782	1.227	Si
156	PF	2.682	SLV 12	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.203	SLV 12	0.292	1.194	806	1.242	Si
	R	1.785	SLV 5	0.362	1.483	1618	1.653	Si
157	PF	0.99	SLV 1	0.242	0.99	462	0.989	No

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	V	3.528	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.407	SLV 13	0.336	1.377	1265	1.494	Si
	R	1.125	SLV 12	0.274	1.12	665	1.148	Si
158	PF	2.081	SLV 9	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.245	SLV 9	0.302	1.234	891	1.294	Si
	R	1.817	SLV 6	0.362	1.483	1618	1.653	Si
161	PF	1.234	SLV 1	0.297	1.216	853	1.271	Si
	V	3.932	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	1.502	SLV 1	0.358	1.463	1548	1.623	Si
	R	1.424	SLV 7	0.344	1.409	1367	1.542	Si
164	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.924	SLV 6	0.224	0.916	376	0.909	No
165	PF	1.155	SLV 9	0.281	1.148	718	1.185	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.024	SLV 9	0.25	1.023	508	1.028	Si
	R	1.096	SLV 8	0.267	1.092	617	1.113	Si
167	PF	1.447	SLV 11	0.35	1.432	1441	1.576	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.432	SLV 11	0.346	1.417	1393	1.554	Si
	R	1.72	SLV 6	0.362	1.483	1618	1.653	Si
169	PF	1.367	SLV 15	0.327	1.34	1157	1.441	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.409	SLV 11	0.341	1.395	1321	1.521	Si
	R	1.085	SLV 10	0.264	1.081	600	1.101	Si
170	PF	1.766	SLV 15	0.362	1.483	1618	1.653	Si
	V	3.211	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1.929	SLV 11	0.362	1.483	1618	1.653	Si
	R	1.342	SLV 6	0.325	1.329	1128	1.426	Si
171	PF	1.634	SLV 4	0.362	1.483	1618	1.653	Si
	V	3.134	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1.828	SLV 8	0.362	1.483	1618	1.653	Si
	R	1.355	SLV 5	0.328	1.342	1163	1.444	Si
172	PF	1.116	SLV 15	0.271	1.108	645	1.134	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.239	SLV 12	0.3	1.228	878	1.286	Si
	R	0.926	SLV 6	0.224	0.918	378	0.911	No
173	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.432	SLV 5	0.346	1.417	1393	1.554	Si
174	PF	1.934	SLV 15	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.588	SLV 15	0.362	1.483	1618	1.653	Si
	R	1.202	SLV 8	0.291	1.193	804	1.241	Si
176	PF	1.522	SLV 3	0.362	1.482	1615	1.652	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.153	SLV 9	0.28	1.146	714	1.182	Si
177	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.298	SLV 11	0.314	1.286	1012	1.364	Si
178	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.466	SLV 10	0.354	1.45	1503	1.604	Si
179	PF	1.13	SLV 6	0.275	1.124	674	1.154	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.944	SLV 6	0.229	0.937	400	0.932	No
	R	1.071	SLV 11	0.261	1.068	578	1.084	Si
180	PF	1.669	SLV 8	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.118	SLV 8	0.362	1.483	1618	1.653	Si
	R	1.653	SLV 9	0.362	1.483	1618	1.653	Si
181	PF	1.647	SLV 7	0.362	1.483	1618	1.653	Si
	V	2.077	SLV 8	0.362	1.483	1618	1.653	Si
	PFFP	2.068	SLV 8	0.362	1.483	1618	1.653	Si
	R	2.926	SLV 13	0.362	1.483	1618	1.653	Si
183	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.895	SLV 10	0.216	0.884	342	0.874	No
186	PF	0.977	SLV 14	0.238	0.975	444	0.973	No
	V	3.484	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	1.318	SLV 14	0.316	1.294	1033	1.375	Si
	R	1.382	SLV 12	0.334	1.368	1240	1.482	Si
188	PF	2.33	SLV 6	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.384	SLV 6	0.335	1.37	1247	1.485	Si
	R	1.691	SLV 9	0.362	1.483	1618	1.653	Si
190	PF	0.77	SLV 14	0.186	0.762	231	0.744	No
	V	3.073	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	1.271	SLV 2	0.306	1.251	927	1.315	Si
	R	1.096	SLV 7	0.267	1.092	617	1.113	Si
191	PF	1.489	SLV 7	0.36	1.473	1581	1.637	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.709	SLV 3	0.17	0.698	185	0.679	No

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	R	1.609	SLV 6	0.362	1.483	1618	1.653	Si
194	PF	0.902	SLV 2	0.219	0.898	357	0.89	No
	V	4.041	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	1.137	SLV 6	0.276	1.131	686	1.163	Si
	R	1.147	SLV 11	0.279	1.141	704	1.175	Si
195	PF	1.127	SLV 10	0.274	1.122	669	1.151	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.068	SLV 10	0.26	1.065	574	1.081	Si
	R	1.066	SLV 7	0.26	1.063	570	1.078	Si
196	PF	0.451	SLV 10	0.103	0.42	55	0.413	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.538	SLV 6	0.124	0.508	88	0.501	No
	R	1	SLV 11	0.244	1	475	1	Si
197	PF	1.222	SLV 11	0.296	1.212	843	1.265	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.183	SLV 7	0.287	1.175	769	1.218	Si
	R	1.065	SLV 10	0.26	1.062	569	1.077	Si
198	PF	0.477	SLV 11	0.109	0.445	64	0.44	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.517	SLV 7	0.119	0.487	80	0.482	No
	R	0.982	SLV 10	0.239	0.979	449	0.977	No
199	PF	0.244	SLV 14	0.057	0.234	13	0.229	No
	V	1.335	SLV 7	0.323	1.322	1109	1.416	Si
	PFFP	0.559	SLV 15	0.132	0.542	103	0.534	No
	R	2.236	SLV 2	0.362	1.483	1618	1.653	Si
200	PF	0.13	SLV 1	0.026	0.107	2	0.106	No
	V	0.694	SLV 9	0.163	0.669	168	0.653	No
	PFFP	0.305	SLV 2	0.071	0.292	23	0.289	No
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
201	PF	0.333	SLV 8	0.074	0.303	25	0.299	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.25	SLV 8	0.055	0.226	12	0.221	No
	R	3.472	SLV 9	0.362	1.483	1618	1.653	Si
202	PF	1.091	SLV 4	0.265	1.085	605	1.104	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.933	SLV 12	0.226	0.925	386	0.918	No
	R	1.997	SLV 9	0.362	1.483	1618	1.653	Si
203	PF	0.272	SLV 9	0.059	0.242	14	0.236	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.57	SLV 9	0.132	0.542	103	0.534	No
	R	2.168	SLV 8	0.362	1.483	1618	1.653	Si
204	PF	1.466	SLV 9	0.354	1.45	1503	1.604	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.039	SLV 5	0.253	1.037	530	1.046	Si
	R	2.393	SLV 12	0.362	1.483	1618	1.653	Si
205	PF	0.718	SLV 16	0.173	0.706	190	0.687	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.406	SLV 5	0.092	0.376	42	0.37	No
	R	1.67	SLV 5	0.362	1.483	1618	1.653	Si
208	PF	1.28	SLV 8	0.31	1.269	968	1.339	Si
	V	3.698	SLV 8	0.362	1.483	1618	1.653	Si
	PFFP	0.693	SLV 12	0.163	0.667	167	0.651	No
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
209	PF	0.753	SLV 5	0.179	0.731	207	0.711	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.741	SLV 9	0.176	0.72	199	0.7	No
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
212	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.861	SLV 5	0.207	0.848	306	0.835	No
213	PF	1.073	SLV 12	0.261	1.07	581	1.086	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.896	SLV 12	0.216	0.885	343	0.875	No
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
214	PF	0.607	SLV 8	0.141	0.578	120	0.569	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.699	SLV 8	0.165	0.674	171	0.658	No
	R	1.189	SLV 9	0.288	1.181	780	1.226	Si
215	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	3.6	SLV 9	0.362	1.483	1618	1.653	Si
216	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	3.59	SLV 11	0.362	1.483	1618	1.653	Si
217	PF	0.807	SLV 15	0.196	0.801	263	0.785	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.867	SLV 15	0.21	0.861	319	0.849	No
	R	1.411	SLV 6	0.341	1.397	1327	1.524	Si
218	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.56	SLV 5	0.13	0.532	99	0.526	No
219	PF	2.011	SLV 16	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.321	SLV 15	0.317	1.297	1040	1.379	Si
	R	2.372	SLV 7	0.362	1.483	1618	1.653	Si
221	PF	0.943	SLV 14	0.23	0.94	403	0.935	No

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.509	SLV 12	0.362	1.483	1618	1.653	Si
	R	3.139	SLV 8	0.362	1.483	1618	1.653	Si
222	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	2.645	SLV 6	0.362	1.483	1618	1.653	Si
223	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.571	SLV 9	0.132	0.542	103	0.534	No
224	PF	0.716	SLV 1	0.172	0.705	189	0.685	No
	V	3.938	SLV 10	0.362	1.483	1618	1.653	Si
	PFFP	0.919	SLV 2	0.224	0.916	376	0.909	No
	R	2.463	SLV 12	0.362	1.483	1618	1.653	Si
229	PF	0.854	SLV 10	0.205	0.84	299	0.827	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.806	SLV 6	0.193	0.789	253	0.772	No
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
231	PF	0.898	SLV 14	0.218	0.894	352	0.884	No
	V	3.845	SLV 6	0.362	1.483	1618	1.653	Si
	PFFP	0.412	SLV 3	0.097	0.395	47	0.387	No
	R	2.562	SLV 7	0.362	1.483	1618	1.653	Si
234	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	2.271	SLV 9	0.362	1.483	1618	1.653	Si
235	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	3.526	SLV 6	0.362	1.483	1618	1.653	Si
236	PF	0.273	SLV 14	0.064	0.262	18	0.261	No
	V	0.694	SLV 10	0.163	0.669	168	0.653	No
	PFFP	0.406	SLV 15	0.096	0.392	46	0.384	No
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
238	PF	0.397	SLV 16	0.094	0.384	44	0.377	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.725	SLV 16	0.175	0.715	196	0.696	No
	R	2.815	SLV 7	0.362	1.483	1618	1.653	Si
239	PF	1.054	SLV 16	0.257	1.05	549	1.061	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.885	SLV 5	0.213	0.873	331	0.862	No
	R	3.294	SLV 6	0.362	1.483	1618	1.653	Si
241	PF	0.523	SLV 5	0.12	0.493	82	0.487	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.647	SLV 9	0.152	0.621	141	0.608	No
	R	3.119	SLV 12	0.362	1.483	1618	1.653	Si
242	PF	0.197	SLV 10	0.041	0.169	6	0.167	No
	V	3.738	SLV 10	0.362	1.483	1618	1.653	Si
	PFFP	0.554	SLV 10	0.128	0.525	96	0.519	No
	R	3.167	SLV 7	0.362	1.483	1618	1.653	Si
244	PF	0.649	SLV 14	0.155	0.633	148	0.62	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.678	SLV 14	0.162	0.663	165	0.648	No
	R	2.935	SLV 9	0.362	1.483	1618	1.653	Si
246	PF	0.38	SLV 14	0.09	0.368	40	0.363	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.779	SLV 3	0.188	0.771	238	0.753	No
	R	2.809	SLV 9	0.362	1.483	1618	1.653	Si
247	PF	0.639	SLV 7	0.15	0.612	137	0.601	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.509	SLV 10	0.117	0.479	77	0.474	No
	R	1.556	SLV 10	0.362	1.483	1618	1.653	Si
248	PF	1.296	SLV 6	0.314	1.284	1006	1.36	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.059	SLV 10	0.258	1.057	560	1.07	Si
	R	2.187	SLV 7	0.362	1.483	1618	1.653	Si
249	PF	0.381	SLV 6	0.086	0.351	36	0.347	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.577	SLV 6	0.134	0.548	106	0.541	No
	R	2.092	SLV 12	0.362	1.483	1618	1.653	Si
273	PFFP	0.421	SLV 12	0.096	0.392	46	0.384	No
	R	0.487	SLV 12	0.112	0.457	68	0.451	No
275	PF	0.485	SLV 13	0.114	0.466	71	0.459	No
	V	1.603	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	0.236	SLV 9	0.051	0.21	10	0.205	No
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
276	PF	0.635	SLV 13	0.151	0.619	140	0.606	No
	V	1.408	SLV 15	0.337	1.377	1268	1.496	Si
	PFFP	0.292	SLV 6	0.064	0.262	18	0.261	No
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
281	PF	0.121	SLV 15	0.026	0.107	2	0.106	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.421	SLV 7	0.096	0.392	46	0.384	No
	R	3.336	SLV 2	0.362	1.483	1618	1.653	Si

Verifica travi di collegamento in muratura

Trave	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
2	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.845	SLV 16	0.205	0.84	299	0.827	No

Trave	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
3	F	1.611	SLV 14	0.362	1.483	1618	1.653	Si
	V	0.993	SLV 16	0.243	0.993	465	0.991	No
6	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.122	SLV 13	0.272	1.113	654	1.14	Si
7	F	1.897	SLV 13	0.362	1.483	1618	1.653	Si
	V	0.758	SLV 15	0.183	0.75	221	0.731	No
8	F	2.885	SLV 4	0.362	1.483	1618	1.653	Si
	V	0.421	SLV 4	0.099	0.407	51	0.401	No
9	F	0.938	SLV 13	0.228	0.935	397	0.929	No
	V	0.271	SLV 13	0.062	0.256	17	0.255	No
10	F	3.475	SLV 2	0.362	1.483	1618	1.653	Si
	V	1.092	SLV 4	0.265	1.085	607	1.106	Si
12	F	0.353	SLV 14	0.083	0.342	34	0.339	No
	V	0.134	SLV 14	0.031	0.127	3	0.125	No
15	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.383	SLV 14	0.09	0.368	40	0.363	No
16	F	0.562	SLV 14	0.133	0.544	104	0.536	No
	V	0.677	SLV 14	0.162	0.661	164	0.647	No
18	F	0.309	SLV 1	0.073	0.298	24	0.294	No
	V	0.432	SLV 3	0.102	0.417	54	0.41	No
20	F	3.472	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.635	SLV 3	0.151	0.619	140	0.606	No
21	F	0.974	SLV 3	0.238	0.972	441	0.97	No
	V	0.782	SLV 1	0.189	0.775	242	0.758	No
22	F	3.916	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.119	SLV 1	0.026	0.107	2	0.106	No
23	F	0.597	SLV 1	0.142	0.58	121	0.571	No
	V	0.275	SLV 1	0.064	0.262	18	0.261	No
24	F	0.486	SLV 7	0.112	0.457	68	0.451	No
	V	0.64	SLV 7	0.15	0.612	137	0.601	No
25	F	0.998	SLV 13	0.244	0.997	471	0.997	No
	V	0.316	SLV 13	0.074	0.303	25	0.299	No
26	F	2.944	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.438	SLV 15	0.103	0.42	55	0.413	No
27	F	1.712	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.377	SLV 15	0.089	0.364	39	0.359	No
28	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.264	SLV 4	0.304	1.244	913	1.307	Si
29	F	1.932	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.927	SLV 4	0.226	0.924	385	0.917	No
30	F	2.297	SLV 10	0.362	1.483	1618	1.653	Si
	V	0.416	SLV 11	0.095	0.388	45	0.381	No
31	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.957	SLV 3	0.233	0.955	420	0.951	No
32	F	1.139	SLV 3	0.276	1.129	682	1.16	Si
	V	1.095	SLV 7	0.267	1.091	616	1.112	Si
33	F	1.996	SLV 16	0.362	1.483	1618	1.653	Si
	V	1.278	SLV 16	0.307	1.257	941	1.324	Si
34	F	0.922	SLV 14	0.225	0.919	379	0.912	No
	V	1.147	SLV 14	0.278	1.136	696	1.17	Si
35	F	2.034	SLV 15	0.362	1.483	1618	1.653	Si
	V	1.518	SLV 4	0.361	1.479	1602	1.646	Si
36	F	1.161	SLV 15	0.281	1.15	720	1.186	Si
	V	1.034	SLV 15	0.252	1.032	521	1.039	Si
38	F	1.544	SLV 15	0.362	1.483	1618	1.653	Si
	V	1.574	SLV 15	0.362	1.483	1618	1.653	Si
39	F	1.727	SLV 4	0.362	1.483	1618	1.653	Si
	V	0.757	SLV 15	0.183	0.748	220	0.729	No
40	F	1.633	SLV 4	0.362	1.483	1618	1.653	Si
	V	0.817	SLV 4	0.198	0.81	272	0.796	No
41	F	4.081	SLV 4	0.362	1.483	1618	1.653	Si
	V	1.489	SLV 4	0.355	1.452	1507	1.605	Si
43	F	1.92	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.557	SLV 4	0.132	0.539	102	0.532	No
45	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
46	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.861	SLV 4	0.362	1.483	1618	1.653	Si
47	F	0.707	SLV 14	0.17	0.694	183	0.676	No
	V	0.418	SLV 14	0.098	0.403	50	0.397	No
48	F	0.405	SLV 14	0.096	0.392	46	0.384	No
	V	0.31	SLV 14	0.073	0.298	24	0.294	No
49	F	1.161	SLV 3	0.281	1.15	720	1.186	Si
	V	0.868	SLV 1	0.211	0.863	321	0.852	No
50	F	0.754	SLV 1	0.182	0.746	218	0.727	No
	V	0.657	SLV 1	0.156	0.64	152	0.627	No
51	F	1.181	SLV 1	0.285	1.168	755	1.209	Si
	V	0.727	SLV 1	0.175	0.716	197	0.697	No
52	F	0.56	SLV 1	0.132	0.542	103	0.534	No
	V	0.428	SLV 1	0.101	0.414	53	0.407	No
53	F	1.708	SLV 16	0.362	1.483	1618	1.653	Si
	V	0.274	SLV 16	0.064	0.262	18	0.261	No
54	F	0.511	SLV 14	0.12	0.493	82	0.487	No
	V	0.359	SLV 14	0.085	0.346	35	0.343	No
55	F	1.314	SLV 15	0.315	1.291	1023	1.37	Si
	V	0.423	SLV 15	0.099	0.407	51	0.401	No
56	F	1.69	SLV 3	0.362	1.483	1618	1.653	Si
	V	0.258	SLV 3	0.061	0.249	16	0.249	No
58	F	1.592	SLV 4	0.362	1.483	1618	1.653	Si
	V	0.702	SLV 4	0.168	0.689	180	0.672	No

Trave	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
60	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.152	SLV 6	0.362	1.483	1618	1.653	Si
61	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.247	SLV 3	0.057	0.234	13	0.229	No
62	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.209	SLV 14	0.362	1.483	1618	1.653	Si
63	F	1.431	SLV 15	0.342	1.398	1333	1.527	Si
	V	0.817	SLV 15	0.198	0.81	272	0.796	No
64	F	1.167	SLV 15	0.282	1.155	730	1.193	Si
	V	0.455	SLV 15	0.107	0.439	62	0.434	No
66	F	1.024	SLV 4	0.25	1.022	507	1.027	Si
	V	1.258	SLV 4	0.303	1.239	901	1.3	Si
67	F	1.76	SLV 4	0.362	1.483	1618	1.653	Si
	V	1.299	SLV 15	0.312	1.277	987	1.35	Si
68	F	0.958	SLV 4	0.234	0.956	422	0.953	No
	V	0.931	SLV 4	0.227	0.928	389	0.921	No
69	F	1.812	SLV 3	0.362	1.483	1618	1.653	Si
	V	1.777	SLV 3	0.362	1.483	1618	1.653	Si
70	F	0.969	SLV 1	0.236	0.967	435	0.965	No
	V	1.262	SLV 1	0.304	1.242	909	1.305	Si
71	F	1.972	SLV 14	0.362	1.483	1618	1.653	Si
	V	1.485	SLV 14	0.354	1.448	1494	1.6	Si
72	F	2.351	SLV 13	0.362	1.483	1618	1.653	Si
	V	1.541	SLV 13	0.362	1.483	1618	1.653	Si
73	F	2.421	SLV 15	0.362	1.483	1618	1.653	Si
	V	1.603	SLV 2	0.362	1.483	1618	1.653	Si
74	F	2.849	SLV 4	0.362	1.483	1618	1.653	Si
	V	1.426	SLV 16	0.341	1.394	1318	1.52	Si
75	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.505	SLV 16	0.119	0.487	80	0.482	No
76	F	3.015	SLV 15	0.362	1.483	1618	1.653	Si
	V	1.695	SLV 16	0.362	1.483	1618	1.653	Si
77	F	1.746	SLV 2	0.362	1.483	1618	1.653	Si
	V	1.049	SLV 2	0.255	1.046	542	1.056	Si
78	F	2.945	SLV 2	0.362	1.483	1618	1.653	Si
	V	1.164	SLV 4	0.281	1.152	725	1.189	Si
79	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.569	SLV 6	0.362	1.483	1618	1.653	Si
80	F	2.429	SLV 16	0.362	1.483	1618	1.653	Si
	V	0.868	SLV 16	0.211	0.863	321	0.852	No
82	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
83	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
84	F	1.304	SLV 14	0.313	1.281	999	1.356	Si
	V	0.716	SLV 14	0.172	0.705	189	0.685	No
85	F	1.106	SLV 14	0.268	1.098	628	1.121	Si
	V	0.658	SLV 14	0.156	0.64	152	0.627	No
86	F	1.296	SLV 1	0.311	1.274	980	1.346	Si
	V	0.87	SLV 1	0.211	0.865	323	0.854	No
87	F	1.292	SLV 14	0.31	1.27	971	1.341	Si
	V	0.787	SLV 1	0.19	0.779	245	0.762	No
88	F	1.297	SLV 1	0.311	1.275	982	1.347	Si
	V	0.776	SLV 1	0.188	0.769	236	0.751	No
89	F	1.579	SLV 2	0.362	1.483	1618	1.653	Si
	V	0.608	SLV 1	0.144	0.591	126	0.58	No
90	F	2.537	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.626	SLV 4	0.149	0.608	135	0.597	No
91	F	0.882	SLV 16	0.214	0.878	336	0.868	No
	V	0.802	SLV 14	0.194	0.794	258	0.779	No
92	F	1.194	SLV 14	0.288	1.18	778	1.224	Si
	V	1.336	SLV 14	0.32	1.311	1077	1.399	Si
93	F	2.12	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.661	SLV 15	0.157	0.644	154	0.63	No
94	F	2.273	SLV 14	0.362	1.483	1618	1.653	Si
	V	0.777	SLV 15	0.188	0.77	237	0.752	No
96	F	2.075	SLV 3	0.362	1.483	1618	1.653	Si
	V	0.745	SLV 3	0.18	0.736	211	0.717	No
98	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
99	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.606	SLV 4	0.362	1.483	1618	1.653	Si
100	F	3.928	SLV 2	0.362	1.483	1618	1.653	Si
	V	0.525	SLV 2	0.124	0.508	88	0.501	No
101	F	1.869	SLV 13	0.362	1.483	1618	1.653	Si
	V	0.891	SLV 15	0.217	0.887	345	0.877	No
102	F	2.747	SLV 15	0.362	1.483	1618	1.653	Si
	V	1.06	SLV 15	0.258	1.056	559	1.069	Si
103	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.385	SLV 3	0.091	0.372	41	0.366	No
104	F	2.828	SLV 2	0.362	1.483	1618	1.653	Si
	V	1.52	SLV 3	0.362	1.481	1609	1.649	Si
105	F	2.322	SLV 4	0.362	1.483	1618	1.653	Si
	V	1.514	SLV 15	0.36	1.475	1590	1.641	Si
106	F	2.52	SLV 13	0.362	1.483	1618	1.653	Si
	V	1.379	SLV 3	0.33	1.351	1188	1.456	Si
107	F	2.294	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.637	SLV 1	0.362	1.483	1618	1.653	Si
108	F	3.453	SLV 2	0.362	1.483	1618	1.653	Si
	V	2.174	SLV 2	0.362	1.483	1618	1.653	Si

Trave	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
109	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.99	SLV 6	0.362	1.483	1618	1.653	Si
110	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.103	SLV 13	0.362	1.483	1618	1.653	Si
111	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.562	SLV 9	0.362	1.483	1618	1.653	Si
112	F	3.383	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.138	SLV 1	0.362	1.483	1618	1.653	Si
113	F	3.944	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.754	SLV 1	0.362	1.483	1618	1.653	Si
114	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.872	SLV 3	0.212	0.867	325	0.856	No
115	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
116	F	2.792	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.41	SLV 1	0.337	1.379	1273	1.498	Si
117	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.167	SLV 1	0.362	1.483	1618	1.653	Si
118	F	3.079	SLV 5	0.362	1.483	1618	1.653	Si
	V	0.955	SLV 5	0.232	0.95	415	0.946	No
120	F	3.381	SLV 16	0.362	1.483	1618	1.653	Si
	V	1.152	SLV 16	0.279	1.141	704	1.175	Si
122	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.815	SLV 8	0.362	1.483	1618	1.653	Si
123	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
124	F	2.28	SLV 13	0.362	1.483	1618	1.653	Si
	V	1.457	SLV 13	0.348	1.422	1409	1.562	Si
125	F	3.296	SLV 13	0.362	1.483	1618	1.653	Si
	V	1.555	SLV 13	0.362	1.483	1618	1.653	Si
126	F	2	SLV 2	0.362	1.483	1618	1.653	Si
	V	1.228	SLV 13	0.296	1.211	841	1.264	Si
127	F	1.939	SLV 13	0.362	1.483	1618	1.653	Si
	V	1.481	SLV 2	0.353	1.444	1482	1.594	Si
128	F	2.13	SLV 2	0.362	1.483	1618	1.653	Si
	V	1.208	SLV 2	0.291	1.192	804	1.241	Si
129	F	1.879	SLV 2	0.362	1.483	1618	1.653	Si
	V	1.374	SLV 2	0.329	1.346	1175	1.45	Si
131	F	1.117	SLV 1	0.271	1.109	646	1.134	Si
	V	1.074	SLV 16	0.261	1.069	579	1.085	Si
132	F	1.314	SLV 14	0.315	1.291	1023	1.37	Si
	V	1.279	SLV 14	0.307	1.258	944	1.325	Si
133	F	3.277	SLV 14	0.362	1.483	1618	1.653	Si
	V	0.927	SLV 14	0.226	0.924	385	0.917	No
136	F	2.854	SLV 3	0.362	1.483	1618	1.653	Si
	V	0.993	SLV 3	0.243	0.993	465	0.991	No
138	F	2.945	SLV 10	0.362	1.483	1618	1.653	Si
	V	1.142	SLV 10	0.278	1.136	695	1.169	Si
139	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.289	SLV 2	0.067	0.275	20	0.273	No
140	F	2.299	SLV 2	0.362	1.483	1618	1.653	Si
	V	1.333	SLV 2	0.32	1.308	1070	1.395	Si
141	F	2.457	SLV 14	0.362	1.483	1618	1.653	Si
	V	1.225	SLV 14	0.295	1.208	836	1.261	Si
142	F	3.562	SLV 14	0.362	1.483	1618	1.653	Si
	V	1.754	SLV 14	0.362	1.483	1618	1.653	Si
143	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.863	SLV 16	0.209	0.857	316	0.846	No
144	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
145	F	3.094	SLV 14	0.362	1.483	1618	1.653	Si
	V	2.013	SLV 14	0.362	1.483	1618	1.653	Si
146	F	3.511	SLV 14	0.362	1.483	1618	1.653	Si
	V	2.355	SLV 3	0.362	1.483	1618	1.653	Si
147	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.395	SLV 6	0.362	1.483	1618	1.653	Si
148	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.509	SLV 6	0.362	1.483	1618	1.653	Si
149	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.406	SLV 5	0.362	1.483	1618	1.653	Si
150	F	2.271	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.146	SLV 1	0.362	1.483	1618	1.653	Si
151	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.931	SLV 9	0.362	1.483	1618	1.653	Si
152	F	2.458	SLV 13	0.362	1.483	1618	1.653	Si
	V	1.624	SLV 9	0.362	1.483	1618	1.653	Si
153	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.528	SLV 14	0.362	1.483	1618	1.653	Si
154	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
155	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.499	SLV 1	0.362	1.483	1618	1.653	Si
156	F	2.604	SLV 5	0.362	1.483	1618	1.653	Si
	V	2.612	SLV 5	0.362	1.483	1618	1.653	Si
157	F	2.43	SLV 5	0.362	1.483	1618	1.653	Si
	V	1.336	SLV 5	0.323	1.323	1111	1.417	Si
159	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
160	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.528	SLV 13	0.362	1.483	1618	1.653	Si

Trave	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
161	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
162	F	3.323	SLV 13	0.362	1.483	1618	1.653	Si
	V	2.545	SLV 15	0.362	1.483	1618	1.653	Si
163	F	3.039	SLV 13	0.362	1.483	1618	1.653	Si
	V	3.378	SLV 15	0.362	1.483	1618	1.653	Si
164	F	3.91	SLV 2	0.362	1.483	1618	1.653	Si
	V	2.07	SLV 2	0.362	1.483	1618	1.653	Si
165	F	3.514	SLV 2	0.362	1.483	1618	1.653	Si
	V	2.395	SLV 2	0.362	1.483	1618	1.653	Si
167	F	0.996	SLV 16	0.243	0.995	469	0.995	No
	V	0.924	SLV 16	0.225	0.921	381	0.914	No
168	F	1.409	SLV 14	0.337	1.378	1270	1.497	Si
	V	2.239	SLV 14	0.362	1.483	1618	1.653	Si
169	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.317	SLV 14	0.362	1.483	1618	1.653	Si
171	F	3.392	SLV 10	0.362	1.483	1618	1.653	Si
	V	1.588	SLV 10	0.362	1.483	1618	1.653	Si
172	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.867	SLV 6	0.209	0.854	312	0.842	No
173	F	0.896	SLV 2	0.218	0.892	351	0.883	No
	V	1.171	SLV 2	0.283	1.158	737	1.197	Si
174	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.924	SLV 7	0.362	1.483	1618	1.653	Si
175	F	2.651	SLV 7	0.362	1.483	1618	1.653	Si
	V	2.65	SLV 7	0.362	1.483	1618	1.653	Si
177	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.281	SLV 16	0.362	1.483	1618	1.653	Si
180	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.543	SLV 3	0.362	1.483	1618	1.653	Si
182	F	4.007	SLV 14	0.362	1.483	1618	1.653	Si
	V	1.998	SLV 14	0.362	1.483	1618	1.653	Si
183	F	2.765	SLV 10	0.362	1.483	1618	1.653	Si
	V	2.961	SLV 10	0.362	1.483	1618	1.653	Si
184	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.626	SLV 1	0.362	1.483	1618	1.653	Si
185	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
186	F	4.002	SLV 10	0.362	1.483	1618	1.653	Si
	V	2.749	SLV 6	0.362	1.483	1618	1.653	Si
187	F	2.199	SLV 6	0.362	1.483	1618	1.653	Si
	V	2.431	SLV 6	0.362	1.483	1618	1.653	Si
188	F	3.513	SLV 16	0.362	1.483	1618	1.653	Si
	V	1.889	SLV 16	0.362	1.483	1618	1.653	Si
190	F	0.966	SLV 15	0.236	0.964	431	0.961	No
	V	0.571	SLV 15	0.135	0.553	108	0.545	No
191	F	1.529	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.818	SLV 15	0.198	0.811	273	0.797	No
192	F	2.343	SLV 16	0.362	1.483	1618	1.653	Si
	V	1.149	SLV 14	0.278	1.138	699	1.172	Si

Periodi di ritorno e accelerazioni di aggancio per gli Stati Limite

S. L.	TR,C	PGA,C	TR,Rif	PGA,Rif	Tipo rottura
Stato limite di salvaguardia della vita	2	0.026	475	0.244	pressoflessione maschio muratura

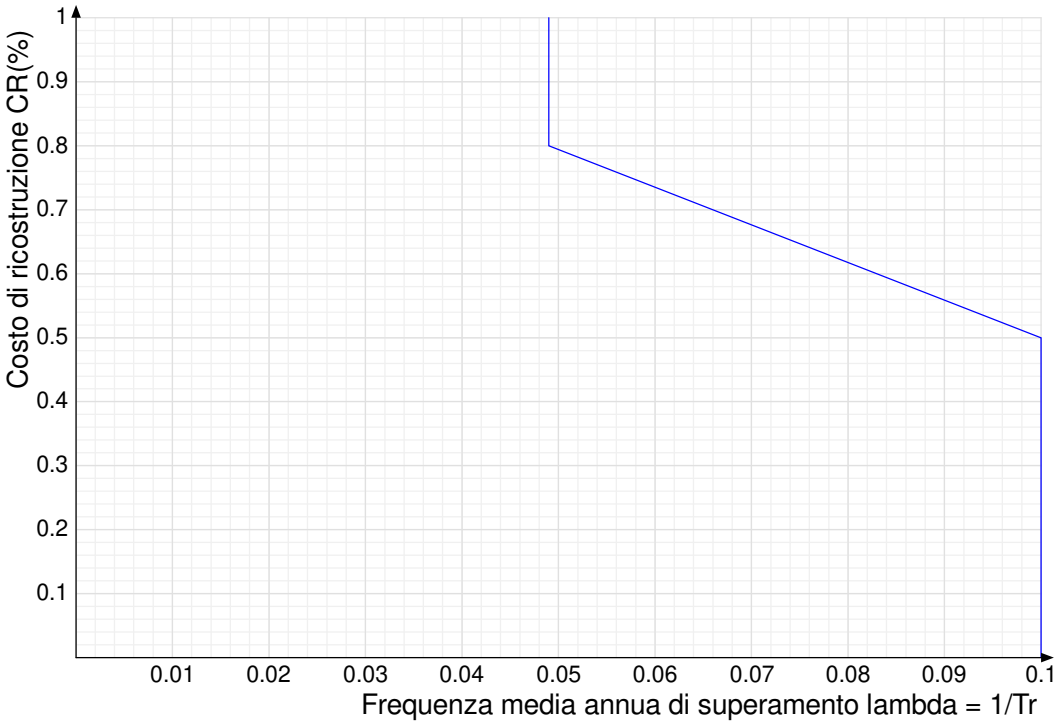
Coefficienti relativi alle Linee guida per la classificazione del rischio sismico delle costruzioni secondo il D.M. 24 09/01/2020

TR,C	TR,Rif	PAM	Classe PAM	IS-V	Classe IS-V	Tipo rottura
2	475	8.215	G	10.678	F	pressoflessione maschio muratura

Coefficienti λ relativi alle Linee guida per la classificazione del rischio sismico delle costruzioni secondo il D.M. 24 09/01/2020

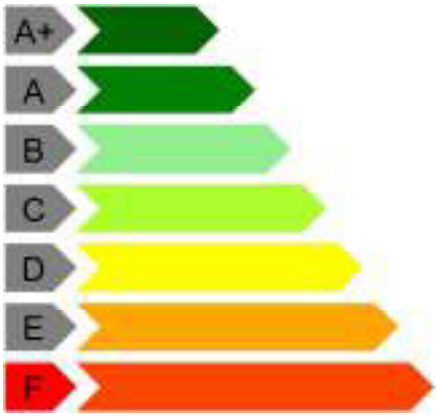
λ,SLR	λ,SLC	λ,SLV	λ,SLD	λ,SLO	λ,SLID
0.049	0.049	0.1	0.1	0.1	0.1

Andamento della curva che individua il PAM (Perdita Annuale Media Attesa)



Classe PAM

Classe IS-V



1.8 Verifiche maschi in muratura

Le unità di misura elencate nel capitolo sono in [m, daN, s] ove non espressamente specificato.

X ini.: *coordinate del punto iniziale del maschio. [m]*
Y ini.: *coordinate del punto iniziale del maschio. [m]*
X fin.: *coordinate del punto finale del maschio. [m]*
Y fin.: *coordinate del punto finale del maschio. [m]*
Quota i.: *livello o falda inferiore.*
Quota.s: *livello o falda superiore.*
l: *lunghezza del maschio. [m]*
Sp.: *spessore. [m]*
h netta: *altezza netta (a filo solai). [m]*
h ini.: *altezza nel modello al punto iniziale. [m]*
h fin.: *altezza nel modello al punto finale. [m]*
a: *distanza tra irrigidimenti laterali. [m]*
a.s.,sx: *lunghezza di appoggio del solaio di sinistra. [m]*
a.s.,dx: *lunghezza di appoggio del solaio di destra. [m]*
fb: *resistenza normalizzata a compressione verticale dei blocchi. [daN/m²]*
fk: *resistenza caratteristica a compressione della muratura utilizzata. [daN/m²]*
fvk0: *resistenza caratteristica a taglio in assenza di carichi verticali. [daN/m²]*
fmedio: *resistenza media a compressione della muratura utilizzata. [daN/m²]*
τ0: *resistenza media a taglio in assenza di azioni normali [C8.7.1.16]. [daN/m²]*
fv0: *resistenza media a taglio in assenza di azioni normali [C8.7.1.17]. [daN/m²]*
μ: *coefficiente di attrito [C8.7.1.17].*
φ: *coefficiente di ammorsamento o ingranamento secondo Circolare 7 21-01-19 §C8.7.1.3.1.1.*
fv,lim: *valore massimo della resistenza a taglio che può essere impiegata nel calcolo. [daN/m²]*
E: *modulo di elasticità longitudinale della muratura utilizzato. [daN/m²]*
G: *modulo di elasticità tangenziale della muratura utilizzato. [daN/m²]*
FC: *fattore di confidenza della muratura.*
Materiale: *descrizione del materiale.*
Fu Verticale: *carico di rottura a trazione per unità di lunghezza della maglia verticale. [daN/m]*
Fu Orizzontale: *carico di rottura a trazione per unità di lunghezza della maglia verticale. [daN/m]*
tfv: *spessore di calcolo equivalente verticale di uno strato di rinforzo.*
tfo: *spessore di calcolo equivalente orizzontale di uno strato di rinforzo.*
E: *modulo di elasticità longitudinale. [daN/m²]*
εu: *dilatazione a rottura.*
Tipo fibra: *natura della fibra.*
materiale: *materiale fibra del rinforzo.*
lato applicazione: *lato di applicazione del rinforzo.*
esposizione: *condizione di esposizione secondo CNR-DT 215 §3.2.*
ancoraggio verticale iniziale: *grado di ancoraggio iniziale dei rinforzi verticali.*
ancoraggio verticale finale: *grado di ancoraggio finale dei rinforzi verticali.*
ancoraggio orizzontale iniziale: *grado di ancoraggio iniziale dei rinforzi orizzontali.*
ancoraggio orizzontale finale: *grado di ancoraggio finale dei rinforzi orizzontali.*
strati: *numero strati del rinforzo.*
verifica taglio: *tipo di verifica a taglio.*
εlim,conv / ε,CNR DT-200: *dati relativi ai parametri per il calcolo della deformazione di progetto.*
αt: *coefficiente che tiene conto della ridotta capacità estensionale delle fibre sollecitate a tagliosecondo CNR-DT 215 §4.1.1.*
α: *coeffiicente amplificativo tensione di distacco secondo CNR-DT 215 §3.1 ovvero secondo CNR-DT 200 R1/2013 §5.3.3.*
εlim,conv: *deformazione limite convenzionale del rinforzo FRCM.*
ε,fd: *deformazione di progetto del rinforzo FRCM ovvero CRM.*
γF,d: *fattore parziali di sicurezza per stato limite di distacco secondo CNR-DT 200 R1/2013 §3.4.1.*
connettori: *presenza di connettori per la prevenzione del distacco del rinforzo.*
tipo di muratura: *tipo di muratura per stato limite di distacco di estremità secondo CNR-DT 200 R1/2013 §5.3.2.*
CRM / Fibrenet?: *dati relativi ai parametri per il calcolo secondo metodo Fibrenet? ovvero se il materiale è di tipo CRM.*
CRM: *stabilisce se il rinforzo è di tipo CRM secondo le Linee Guida del C.S.L.P. Ottobre 2019.*
intonaco: *materiale intonaco FRCM ovvero CRM.*
spessore intonaco: *spessore intonaco. [m]*
tipo blocco fibrenet: *tipo blocco muratura per verifica a tglio tipo Fibrenet.*
Comb.: *combinazione.*
Quota: *quota della sezione di verifica. [m]*
M: *momento flettente nel piano. [daN*m]*
N: *sforzo normale. [daN]*
εm: *deformazione della muratura.*
εm_: *deformazione elastica della muratura.*
εmu: *deformazione ultima della muratura.*
df: *distanza tra il lembo compresso e la fibra tesa più lontana. [m]*
M0d: *momento resistente della sezione non rinforzata. [daN*m]*
M1d: *momento resistente della sezione rinforzata. [daN*m]*
MRd: *momento resistente della sezione. [daN*m]*
c.s.: *coefficiente di sicurezza.*
incremento > 50%: *incremento resistenza superiore al 50% della resistenza non rinforzata in condizioni non sismiche.*
Verifica: *stato di verifica.*
Nmur: *aliquota di sforzo normale recepito dalla sola muratura. [daN]*
V: *taglio nel piano. [daN]*

df: distanza tra lembo compresso e baricentro dell'armatura tesa. [m]
l': lunghezza della parte compressa della parete. [m]
σN: tensione media nella zona compressa. [daN/m²]
fvd: resistenza a taglio di calcolo. [daN/m²]
Vt: resistenza a taglio della muratura non rinforzata. [daN]
Vt,f: resistenza a taglio del rinforzo (CNR DT215 4.1a). [daN]
Vt,c: resistenza a taglio per schiacciamento delle bielle (CNR DT215 4.1b). [daN]
Vt,c int.: contributo di resistenza a taglio delle bielle dell'intonaco se considerato. [daN]
Vt,R: resistenza a taglio della sezione rinforzata. [daN]
res. > 50%: incremento resistenza superiore al 50% della resistenza non rinforzata in condizioni non sismiche.
fd: resistenza a compressione di calcolo. [daN/m²]
Sa: accelerazione massima, adimensionalizzata rispetto a g, che l'elemento strutturale subisce durante il sisma.
σ0: tensione media di compressione. [daN/m²]
*M: momento flettente fuori piano. [daN*m]*
*Mc: momento di collasso per azioni perpendicolari al piano. [daN*m]*
Coeff.s.: coefficiente di sicurezza.
N top: sforzo normale in sommità. [daN]
N base: sforzo normale al piede. [daN]
V orto: taglio fuori piano. [daN]
α0: moltiplicatore secondo [C8.7.1.1].
M: massa partecipante al cinematismo. [daN/(m/s²)]*
e: frazione di massa partecipante della muratura [C8.7.1.5].*
a0: accelerazione spettrale di attivazione del meccanismo [C8.7.1.8]. [m/s²]*
aLim: accelerazione limite [C7.2.11]. [m/s²]
Stato limite: pF_SLU=Presso flessione per azioni non sismiche; V_SLU=Taglio per azioni non sismiche; PF_SLV=Presso flessione per azioni sismiche; V_SLV=Taglio per azioni sismiche; PFFP_SLV=Presso flessione fuori piano per azioni sismiche; R_SLV=Ribaltamento per azioni sismiche.
Sa: accelerazione massima adimensionalizzata rispetto a quella di gravità.
*Mu: momento flettente ultimo. [daN*m]*
V par: taglio nel piano. [daN]
σN: tensione media di compressione sulla parte reagente. [daN/m²]
Vt scorr.: taglio ultimo per verifica a scorrimento. [daN]
Vt fess.diag.: taglio ultimo per verifica a fessurazione diagonale regolare [C8.7.1.17]. [daN]
Vt,lim: taglio limite [C8.7.1.18]. [daN]
c.s.: coefficiente di sicurezza a taglio.

Maschio 1

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.653	1.271	-24.653	-3.284	L2	L4	4.555	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	-0.98	-7582.35	-43519	-0.0000415	0.0003743	0.0035	4.555	78445.53	89427.11	89427.11	11.79	No	Si
SLU 83	1.22	-27067.27	-49315	-0.0000675	0.0003743	0.0035	4.555	85774.13	98274.5	98274.5	3.63	No	Si
SLU 79	-0.98	-7379.88	-42278	-0.0000403	0.0003743	0.0035	4.555	76781.57	87467.93	87467.93	11.85	No	Si
SLU 79	1.22	-26334.87	-47908	-0.0000654	0.0003743	0.0035	4.555	84062.51	96195.54	96195.54	3.65	No	Si
SLU 81	-0.98	-7528.98	-43173	-0.0000412	0.0003743	0.0035	4.555	77984.93	88879.36	88879.36	11.8	No	Si
SLU 81	1.22	-26832.83	-48794	-0.0000667	0.0003743	0.0035	4.555	85145.03	97502.02	97502.02	3.63	No	Si
SLU 78	-0.98	-7386.74	-42518	-0.0000405	0.0003743	0.0035	4.555	77105.57	87845.21	87845.21	11.89	No	Si
SLU 78	1.22	-26365.44	-48469	-0.0000659	0.0003743	0.0035	4.555	84749.57	97021.35	97021.35	3.68	No	Si
SLU 62	-0.98	-6958.13	-39929	-0.0000379	0.0003743	0.0035	4.555	73538.68	83747.74	83747.74	12.04	No	Si
SLU 62	1.22	-24889.67	-44740	-0.0000611	0.0003743	0.0035	4.555	80050.12	91369.17	91369.17	3.67	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 74	-0.98	-7376.03	-42181	-0.0000402	0.0003743	0.0035	4.555	76649.25	87314.62	87314.62	11.84	No	Si
SLU 74	1.22	-26269.3	-47750	-0.0000652	0.0003743	0.0035	4.555	83867.35	95963.22	95963.22	3.65	No	Si
SLU 77	-0.98	-7429.4	-42527	-0.0000405	0.0003743	0.0035	4.555	77117.35	87858.96	87858.96	11.83	No	Si
SLU 77	1.22	-26503.74	-48271	-0.0000659	0.0003743	0.0035	4.555	84508.33	96729.95	96729.95	3.65	No	Si
SLU 60	-0.98	-6904.77	-39583	-0.0000375	0.0003743	0.0035	4.555	73050.97	83183.24	83183.24	12.05	No	Si
SLU 60	1.22	-24655.23	-44219	-0.0000603	0.0003743	0.0035	4.555	79368.95	90538.21	90538.21	3.67	No	Si
SLU 84	-0.98	-7539.69	-43510	-0.0000414	0.0003743	0.0035	4.555	78433.95	89413.29	89413.29	11.86	No	Si
SLU 84	1.22	-26928.97	-49513	-0.0000675	0.0003743	0.0035	4.555	86010.87	98567.72	98567.72	3.66	No	Si
SLU 82	-0.98	-7486.32	-43164	-0.0000411	0.0003743	0.0035	4.555	77973.28	88865.56	88865.56	11.87	No	Si
SLU 82	1.22	-26694.52	-48991	-0.0000668	0.0003743	0.0035	4.555	85384.01	97794.33	97794.33	3.66	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	-0.98	708.13	-24379	-0.0000189	0.0005615	0.0035	4.555		53093.04	53093.04	74.98		Si
SLV 10	1.22	-24401.26	-28620	-0.0000461	0.0005615	0.0035	4.555		66287.3	66287.3	2.72		Si
SLV 15	-0.98	-4082.16	-16049	-0.0000159	0.0005615	0.0035	4.555		40891.61	40891.61	10.02		Si
SLV 15	1.22	-12638.99	-15950	-0.0000243	0.0005615	0.0035	4.555		40689.74	40689.74	3.22		Si
SLD 9	-0.98	-2375.56	-27211	-0.0000227	0.0005615	0.0035	4.555		63482.64	63482.64	26.72		Si
SLD 9	1.22	-21340.8	-31045	-0.0000447	0.0005615	0.0035	4.555		70991.05	70991.05	3.33		Si
SLV 14	-0.98	-1615.39	-15578	-0.0000131	0.0005615	0.0035	4.555		39927.93	39927.93	24.72		Si
SLV 14	1.22	-16122.13	-16398	-0.0000287	0.0005615	0.0035	4.555		41606.85	41606.85	2.58		Si
SLD 13	-0.98	-3290.32	-23442	-0.0000207	0.0005615	0.0035	4.555		56036.84	56036.84	17.03		Si
SLD 13	1.22	-17884.77	-25825	-0.0000371	0.0005615	0.0035	4.555		60734.6	60734.6	3.4		Si
SLV 13	-0.98	-821.45	-15453	-0.0000123	0.0005615	0.0035	4.555		39671.98	39671.98	48.29		Si
SLV 13	1.22	-17200.23	-16408	-0.0000303	0.0005615	0.0035	4.555		41627.02	41627.02	2.42		Si
SLV 5	-0.98	-176.92	-32457	-0.0000245	0.0005615	0.0035	4.555		73648.98	73648.98	416.29		Si
SLV 5	1.22	-27457.95	-38643	-0.0000571	0.0005615	0.0035	4.555		85310.66	85310.66	3.11		Si
SLV 6	-0.98	-683.95	-32537	-0.0000251	0.0005615	0.0035	4.555		73799.7	73799.7	107.9		Si
SLV 6	1.22	-26769.45	-38637	-0.0000564	0.0005615	0.0035	4.555		85299.23	85299.23	3.19		Si
SLD 10	-0.98	-2596.73	-27246	-0.000023	0.0005615	0.0035	4.555		63551.9	63551.9	24.47		Si
SLD 10	1.22	-21040.47	-31042	-0.0000444	0.0005615	0.0035	4.555		70985.91	70985.91	3.37		Si
SLV 9	-0.98	1215.16	-24299	-0.0000193	0.0005615	0.0035	4.555		52933.74	52933.74	43.56		Si
SLV 9	1.22	-25089.77	-28626	-0.000047	0.0005615	0.0035	4.555		66299.82	66299.82	2.64		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	-0.98	-7379.88	-42278	-37581	-5234	4.555	4.555	-18334	9389	19245	33304	61379	11615	52549	No	10.04	Si
SLU 79	1.22	-26334.87	-47908	-42585	-10483	4.555	4.555	-20776	9715	19912	33304	61379	11615	53217	No	5.08	Si
SLU 75	-0.98	-7333.37	-42172	-37486	-5000	4.555	4.555	-18288	9383	19233	33304	61379	11615	52537	No	10.51	Si
SLU 75	1.22	-26131	-47948	-42620	-10223	4.555	4.555	-20793	9717	19917	33304	61379	11615	53221	No	5.21	Si
SLU 78	-0.98	-7386.74	-42518	-37794	-5025	4.555	4.555	-18438	9403	19274	33304	61379	11615	52578	No	10.46	Si
SLU 78	1.22	-26365.44	-48469	-43083	-10303	4.555	4.555	-21019	9747	19979	33304	61379	11615	53283	No	5.17	Si
SLU 74	-0.98	-7376.03	-42181	-37494	-5225	4.555	4.555	-18292	9383	19234	33304	61379	11615	52538	No	10.06	Si
SLU 74	1.22	-26269.3	-47750	-42445	-10449	4.555	4.555	-20707	9705	19894	33304	61379	11615	53198	No	5.09	Si
SLU 84	-0.98	-7539.69	-43510	-38676	-5112	4.555	4.555	-18869	9460	19391	33304	61379	11615	52695	No	10.31	Si
SLU 84	1.22	-26928.97	-49513	-44011	-10460	4.555	4.555	-21472	9807	20103	33304	61379	11615	53407	No	5.11	Si
SLU 83	-0.98	-7582.35	-43519	-38684	-5336	4.555	4.555	-18872	9461	19392	33304	61379	11615	52697	No	9.88	Si
SLU 83	1.22	-27067.27	-49315	-43836	-10686	4.555	4.555	-21386	9796	20079	33304	61379	11615	53383	No	5	Si
SLU 82	-0.98	-7486.32	-43164	-38368	-5087	4.555	4.555	-18719	9440	19350	33304	61379	11615	52654	No	10.35	Si
SLU 82	1.22	-26694.52	-48991	-43548	-10379	4.555	4.555	-21246	9777	20041	33304	61379	11615	53345	No	5.14	Si
SLU 80	-0.98	-7337.22	-42270	-37573	-5010	4.555	4.555	-18331	9389	19244	33304	61379	11615	52548	No	10.49	Si
SLU 80	1.22	-26196.57	-48106	-42761	-10257	4.555	4.555	-20861	9726	19936	33304	61379	11615	53240	No	5.19	Si
SLU 81	-0.98	-7528.98	-43173	-38376	-5311	4.555	4.555	-18722	9441	19351	33304	61379	11615	52656	No	9.91	Si
SLU 81	1.22	-26832.83	-48794	-43372	-10605	4.555	4.555	-21160	9766	20017	33304	61379	11615	53322	No	5.03	Si
SLU 77	-0.98	-7429.4	-42527	-37802	-5250	4.555	4.555	-18442	9403	19275	33304	61379	11615	52579	No	10.02	Si
SLU 77	1.22	-26503.74	-48271	-42908	-10530	4.555	4.555	-20933	9736	19955	33304	61379	11615	53260	No	5.06	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	-0.98	-11552.99	-34522	-30686	-19774	4.555	4.555	-14971	13411	27489	33304	92068	11615	60793		3.07	Si
SLV 8	1.22	-11565.31	-37113	-32989	-20462	4.555	4.555	-16094	13636	27949	33304	92068	11615	61254		2.99	Si
SLD 8	-0.98	-7962.26	-31610	-28097	-10797	4.555	4.555	-13708	13158	26971	33304	92068	11615	60275		5.58	Si
SLD 8	1.22	-15314.28	-34694	-30839	-13166	4.555	4.555	-15045	13426	27519	33304	92068	11615	60824		4.62	Si
SLV 3	-0.98	-8722.44	-43243	-38438	-8600	4.555	4.555	-18752	14167	29039	33304	92068	11615	62343		7.25	Si
SLV 3	1.22	-20532.94	-49341	-43859	-13427	4.555	4.555	-21397	14696	30123	33304	92068	11615	63428		4.72	Si
SLV 11	-0.98	-9653.88	-26284	-23364	-17689	4.555	4.555	-11398	12696	26024	33304	92068	11615	59329		3.35	Si
SLV 11	1.22	-9885.63	-27102	-24091	-17310	4.555	4.555	-11753	12767	26170	33304	92068	11615	59474		3.44	Si
SLD 12	-0.98	-7366.64	-28123	-24999	-10453	4.555	4.555	-12196	12856	26351	33304	92068	11615	59656		5.71	Si
SLD 12	1.22	-14303.45	-30409	-27030	-12292	4.555	4.555	-13187	13054	26758	33304	92068	11615	60062		4.89	Si
SLV 9	-0.98	1215.16	-24299	-21599	12226	4.555	4.555	-10537	12524	25671	33304	92068	11615	58976		4.82	Si
SLV 9	1.22	-25089.77	-28626	-25445	5528	4.555	4.2031	-13534	13124	24822	33304	92068	11615	58126		10.51	Si
SLV 12	-0.98	-10160.91	-26364	-23435	-18969	4.555	4.555	-11433	12703	26039	33304	92068	11615	59343		3.13	Si
SLV 12	1.22	-9197.12	-27096	-24085	-18420	4.555	4.555	-11750	12767	26169	33304	92068	11615	59473		3.23	Si
SLV 7	-0.98	-11045.96	-34442	-30615	-18494	4.555	4.555	-14936	13404	27475	33304	92068	11615	60779		3.29	Si
SLV 7	1.22	-12253.81	-37119	-32995	-19352	4.555	4.555	-16097	13636	27950	33304	92068	11615	61255		3.17	Si
SLD 7	-0.98	-7741.09	-31575	-28066	-10239	4.555	4.555	-13693	13155	26965	33304	92068	11615	60269		5.89	Si
SLD 7	1.22	-15614.61	-34696	-30841	-12682	4.555	4.555	-15046	13426	27520	33304	92068	11615	60824		4.8	Si
SLV 4	-0.98	-9516.37	-43368	-38549	-10605	4.555	4.555	-18807	14178	29061	33304	92068	11615	62366		5.88	Si
SLV 4	1.22	-19454.84	-49331	-43850	-15165	4.555	4.555	-21393	14695	30122	33304	92068	11615	63426		4.18	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.51 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	179667	0.25	7813	-16014	347.57	3418.86	9.84	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 15	179667	0.25	7832	-16054	347.57	3426.97	9.86	Si
SLV 14	179667	0.25	8041	-16482	347.57	3513.2	10.11	Si
SLV 13	179667	0.25	8061	-16522	347.57	3521.27	10.13	Si
SLV 12	179667	0.25	12982	-26610	347.57	5478.34	15.76	Si
SLV 11	179667	0.25	12995	-26636	347.57	5483.12	15.78	Si
SLV 10	179667	0.25	13743	-28170	347.57	5767.81	16.59	Si
SLV 9	179667	0.25	13755	-28195	347.57	5772.53	16.61	Si
SLV 8	179667	0.25	17638	-36154	347.57	7195.16	20.7	Si
SLV 7	179667	0.25	17651	-36180	347.57	7199.59	20.71	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-36069	-34522	-245	0.695	4537.2	0.946	10.68228	4.45299	Si
SLV 7	-35975	-34442	-242	0.697	4527.7	0.946	10.70575	4.45299	Si
SLV 6	-34422	-32537	38	0.726	4370.2	0.944	11.17557	4.45299	Si
SLV 4	-48240	-43368	68	0.558	5773.1	0.956	8.48325	3.37435	Si
SLV 5	-34328	-32457	41	0.727	4360.7	0.944	11.1994	4.45299	Si
SLV 3	-48094	-43243	72	0.559	5758.3	0.956	8.50313	3.37435	Si
SLV 2	-47746	-42772	153	0.561	5722.9	0.956	8.53013	3.37435	Si
SLV 1	-47600	-42647	157	0.562	5708	0.956	8.55034	3.37435	Si
SLV 12	-25165	-26364	-428	0.909	3433.4	0.931	14.1904	4.45299	Si
SLV 11	-25072	-26284	-426	0.912	3424	0.931	14.23377	4.45299	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.631	SLU 83	Si
V_SLU	4.996	SLU 83	Si
PF_SLV	2.42	SLV 13	Si
V_SLV	2.994	SLV 8	Si
PFFP_SLV	9.836	SLV 16	Si
R_SLV	2.399	SLV 8	Si

Maschio 2

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.653	5.876	-24.653	2.271	L2	L4	3.605	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 49	-0.98	-10791.16	-23780	-0.0000405	0.0003743	0.0035	3.605	36692.25	41748.69	41748.69	3.87	No	Si
SLU 49	1.22	-15764.75	-16860	-0.0000454	0.0003743	0.0035	3.605	27288.24	31611.44	31611.44	2.01	No	Si
SLU 51	-0.98	-10705.35	-23607	-0.0000402	0.0003743	0.0035	3.605	36469.21	41506.65	41506.65	3.88	No	Si
SLU 51	1.22	-15651.3	-16676	-0.0000451	0.0003743	0.0035	3.605	27023.09	31324.33	31324.33	2	No	Si
SLU 47	-0.98	-10608.65	-23378	-0.0000398	0.0003743	0.0035	3.605	36173.75	41187.6	41187.6	3.88	No	Si
SLU 47	1.22	-15451.76	-16415	-0.0000445	0.0003743	0.0035	3.605	26647.75	30919.94	30919.94	2	No	Si
SLU 45	-0.98	-10695.25	-23543	-0.0000401	0.0003743	0.0035	3.605	36386.94	41417.62	41417.62	3.87	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 45	1.22	-15551.71	-16580	-0.0000448	0.0003743	0.0035	3.605	26884.72	31174.98	31174.98	2	No	Si
SLU 43	-0.98	-10513.05	-23137	-0.0000393	0.0003743	0.0035	3.605	35862.03	40852.91	40852.91	3.89	No	Si
SLU 43	1.22	-15233.32	-16126	-0.0000438	0.0003743	0.0035	3.605	26229.74	30472.36	30472.36	2	No	Si
SLU 58	-0.98	-11988.76	-26102	-0.0000449	0.0003743	0.0035	3.605	39613.5	45017.91	45017.91	3.76	No	Si
SLU 58	1.22	-17104.35	-18896	-0.0000494	0.0003743	0.0035	3.605	30163.82	34672	34672	2.03	No	Si
SLU 44	-0.98	-10512.27	-23145	-0.0000394	0.0003743	0.0035	3.605	35872.83	40864.47	40864.47	3.89	No	Si
SLU 44	1.22	-15246.82	-16147	-0.0000439	0.0003743	0.0035	3.605	26259.16	30503.77	30503.77	2	No	Si
SLU 46	-0.98	-10694.78	-23548	-0.0000401	0.0003743	0.0035	3.605	36393.37	41424.58	41424.58	3.87	No	Si
SLU 46	1.22	-15559.81	-16592	-0.0000448	0.0003743	0.0035	3.605	26902.26	31193.89	31193.89	2	No	Si
SLU 48	-0.98	-10791.63	-23775	-0.0000405	0.0003743	0.0035	3.605	36685.84	41741.72	41741.72	3.87	No	Si
SLU 48	1.22	-15756.65	-16848	-0.0000454	0.0003743	0.0035	3.605	27270.77	31592.5	31592.5	2.01	No	Si
SLU 50	-0.98	-10705.82	-23602	-0.0000401	0.0003743	0.0035	3.605	36462.78	41499.69	41499.69	3.88	No	Si
SLU 50	1.22	-15643.2	-16663	-0.0000451	0.0003743	0.0035	3.605	27005.58	31305.41	31305.41	2	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	-0.98	-8092.08	-22802	-0.0000345	0.0005615	0.0035	3.605		41662.68	41662.68	5.15		Si
SLV 6	1.22	-23438.33	-18858	-0.0000792	0.0005615	0.0035	2.884		35461.91	35461.91	1.51		Si
SLV 13	-0.98	-2363.48	-11299	-0.0000143	0.0005615	0.0035	3.605		23209.81	23209.81	9.82		Si
SLV 13	1.22	-12941.54	-2577	-0.0010104	0.0005615	0.0035	2.884		8317.44	8317.44	0.64		No
SLV 14	-0.98	-2734.5	-11272	-0.0000148	0.0005615	0.0035	3.605		23165.06	23165.06	8.47		Si
SLV 14	1.22	-11989.56	-2806	-0.0008146	0.0005615	0.0035	2.884		8718	8718	0.73		No
SLD 9	-0.98	-7097.04	-18908	-0.0000291	0.0005615	0.0035	3.605		35539.05	35539.05	5.01		Si
SLD 9	1.22	-16902.65	-13125	-0.000059	0.0005615	0.0035	2.884		26188.31	26188.31	1.55		Si
SLV 15	-0.98	-4092.58	-11088	-0.0000168	0.0005615	0.0035	3.605		22858.21	22858.21	5.59		Si
SLV 15	1.22	-7052.72	-1999	-0.0003655	0.0005615	0.0035	2.884		7308.06	7308.06	1.04		Si
SLV 10	-0.98	-4657.35	-17597	-0.0000239	0.0005615	0.0035	3.605		33495.84	33495.84	7.19		Si
SLV 10	1.22	-21404.57	-11742	-0.0003535	0.0005615	0.0035	2.884		23942.2	23942.2	1.12		Si
SLV 5	-0.98	-7855.14	-22819	-0.0000341	0.0005615	0.0035	3.605		41689.91	41689.91	5.31		Si
SLV 5	1.22	-24046.29	-18712	-0.0000853	0.0005615	0.0035	2.884		35233.37	35233.37	1.47		Si
SLD 13	-0.98	-6235.15	-16202	-0.0000251	0.0005615	0.0035	3.605		31223.82	31223.82	5.01		Si
SLD 13	1.22	-12952.83	-9267	-0.0000524	0.0005615	0.0035	2.884		19806.95	19806.95	1.53		Si
SLV 16	-0.98	-4463.6	-11061	-0.0000173	0.0005615	0.0035	3.605		22813.39	22813.39	5.11		Si
SLV 16	1.22	-6100.73	-2228	-0.0002419	0.0005615	0.0035	2.884		7708.25	7708.25	1.26		Si
SLV 9	-0.98	-4420.41	-17614	-0.0000236	0.0005615	0.0035	3.605		33522.58	33522.58	7.58		Si
SLV 9	1.22	-22012.54	-11595	-0.0004512	0.0005615	0.0035	2.884		23702.06	23702.06	1.08		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	-0.98	-13320	-28726	-25534	5838	3.605	3.605	-15740	9043	14670	33304	48577	9193	47975	No	8.22	Si
SLU 78	1.22	-18636.97	-21315	-18947	3549	3.605	2.7844	-15290	8983	11256	33304	48577	9193	44560	No	12.55	Si
SLU 79	-0.98	-13234.66	-28548	-25376	5813	3.605	3.605	-15642	9030	14649	33304	48577	9193	47953	No	8.25	Si
SLU 79	1.22	-18515.42	-21118	-18772	3541	3.605	2.7772	-15187	8969	11210	33304	48577	9193	44514	No	12.57	Si
SLU 80	-0.98	-13234.19	-28553	-25380	5819	3.605	3.605	-15645	9030	14650	33304	48577	9193	47954	No	8.24	Si
SLU 80	1.22	-18523.52	-21130	-18783	3541	3.605	2.7776	-15193	8970	11212	33304	48577	9193	44517	No	12.57	Si
SLU 84	-0.98	-13687.64	-29392	-26126	5959	3.605	3.605	-16105	9092	14749	33304	48577	9193	48053	No	8.06	Si
SLU 84	1.22	-18944.79	-21819	-19395	3661	3.605	2.8027	-15554	9018	11374	33304	48577	9193	44678	No	12.2	Si
SLU 83	-0.98	-13688.11	-29387	-26122	5953	3.605	3.605	-16102	9091	14749	33304	48577	9193	48053	No	8.07	Si
SLU 83	1.22	-18936.69	-21807	-19384	3662	3.605	2.8023	-15548	9018	11372	33304	48577	9193	44676	No	12.2	Si
SLU 74	-0.98	-13224.09	-28489	-25323	5772	3.605	3.605	-15610	9026	14642	33304	48577	9193	47946	No	8.31	Si
SLU 74	1.22	-18423.93	-21034	-18697	3514	3.605	2.7798	-15111	8959	11207	33304	48577	9193	44512	No	12.67	Si
SLU 82	-0.98	-13591.26	-29159	-25920	5898	3.605	3.605	-15978	9075	14722	33304	48577	9193	48026	No	8.14	Si
SLU 82	1.22	-18739.85	-21550	-19156	3626	3.605	2.7987	-15382	8995	11329	33304	48577	9193	44634	No	12.31	Si
SLU 81	-0.98	-13591.73	-29154	-25915	5893	3.605	3.605	-15975	9074	14721	33304	48577	9193	48025	No	8.15	Si
SLU 81	1.22	-18731.75	-21538	-19145	3626	3.605	2.7984	-15375	8995	11327	33304	48577	9193	44631	No	12.31	Si
SLU 77	-0.98	-13320.47	-28721	-25530	5833	3.605	3.605	-15737	9043	14670	33304	48577	9193	47974	No	8.23	Si
SLU 77	1.22	-18628.87	-21303	-18936	3550	3.605	2.7841	-15283	8982	11253	33304	48577	9193	44558	No	12.55	Si
SLU 75	-0.98	-13223.62	-28494	-25328	5778	3.605	3.605	-15613	9026	14643	33304	48577	9193	47947	No	8.3	Si
SLU 75	1.22	-18432.03	-21046	-18708	3514	3.605	2.7802	-15118	8960	11210	33304	48577	9193	44514	No	12.67	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 5	-0.98	-8565.06	-21132	-18784	8460	3.605	3.605	-11579	12732	20655	33304	72866	9193	53960		6.38	Si
SLD 5	1.22	-17772.98	-16168	-14372	6127	2.884	2.1097	0	0	0	33304	58293	7354	33304		5.44	Si
SLV 10	-0.98	-4657.35	-17597	-15642	12755	3.605	3.605	-9642	12345	20027	33304	72866	9193	53331		4.18	Si
SLV 10	1.22	-21404.57	-11742	-10437	7100	2.884	0	0	0	0	33304	58293	7354	33304		4.69	Si
SLV 9	-0.98	-4420.41	-17614	-15657	13578	3.605	3.605	-9651	12347	20030	33304	72866	9193	53334		3.93	Si
SLV 9	1.22	-22012.54	-11595	-10307	7758	2.884	0	0	0	0	33304	58293	7354	33304		4.29	Si
SLD 6	-0.98	-8668.42	-21125	-18777	8101	3.605	3.605	-11575	12732	20654	33304	72866	9193	53958		6.66	Si
SLD 6	1.22	-17507.78	-16232	-14428	5840	2.884	2.1717	0	0	0	33304	58293	7354	33304		5.7	Si
SLV 2	-0.98	-14183.57	-28624	-25443	7108	3.605	3.605	-15684	13553	21987	33304	72866	9193	55291		7.78	Si
SLV 2	1.22	-18768.73	-26528	-23581	9162	3.605	3.285	-16064	13629	20148	33304	72866	9193	53452		5.83	Si
SLV 6	-0.98	-8092.08	-22802	-20269	13284	3.605	3.605	-12494	12915	20952	33304	72866	9193	54256		4.08	Si
SLV 6	1.22	-23438.33	-18858	-16763	10267	2.884	1.6789	0	0	0	33304	58293	7354	33304		3.24	Si
SLV 5	-0.98	-7855.14	-22819	-20284	14107	3.605	3.605	-12504	12917	20955	33304	72866	9193	54260		3.85	Si
SLV 5	1.22	-24046.29	-18712	-16633	10925	2.884	1.5523	0	0	0	33304	58293	7354	33304		3.05	Si
SLV 16	-0.98	-4463.6	-11061	-9832	-281	3.605	3.605	-6061	11629	18865	33304	72866	9193	52169		185.49	Si
SLV 16	1.22	-6100.73	-2228	-1981	-5350	2.884	0	0	0	0	33304	58293	7354	33304		6.23	Si
SLD 9	-0.98	-7097.04	-18908	-16807	8234	3.605	3.605	-10360	12489	20260	33304	72866	9193	53564		6.5	Si
SLD 9	1.22	-16902.65	-13125	-11667	4773	2.884	1.5441	0	0	0	33304	58293	7354	33304		6.98	Si
SLV 1	-0.98	-13812.56	-28651	-25467	8397	3.605	3.605	-15699	13556	21992	33304	72866	9193	55296		6.59	Si
SLV 1	1.22	-19720.72	-26299	-23377	10193	3.605	3.1579	-16587	13734	19517	33304	72866	9193	52821		5.18	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.51 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.25	1848	-2997	275.08	666.24	2.42	Si
SLV 14	179667	0.25	2024	-3283	275.08	728.87	2.65	Si
SLV 15	179667	0.25	2643	-4287	275.08	947.88	3.45	Si
SLV 16	179667	0.25	2819	-4573	275.08	1009.84	3.67	Si
SLV 9	179667	0.25	5193	-8424	275.08	1830.87	6.66	Si
SLV 10	179667	0.25	5305	-8606	275.08	1869.09	6.79	Si
SLV 11	179667	0.25	7842	-12722	275.08	2715.56	9.87	Si
SLV 12	179667	0.25	7955	-12905	275.08	2752.35	10.01	Si
SLV 5	179667	0.25	8827	-14320	275.08	3035.79	11.04	Si
SLV 6	179667	0.25	8940	-14503	275.08	3072.05	11.17	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-20151	-22802	-315	0.903	2741	0.932	14.07415	4.45299	Si
SLV 5	-20125	-22819	-316	0.903	2738.4	0.932	14.08768	4.45299	Si
SLV 2	-28326	-28624	30	0.704	3568.6	0.945	10.82668	3.37435	Si
SLV 1	-28286	-28651	28	0.705	3564.5	0.945	10.84045	3.37435	Si
SLV 4	-27148	-28412	187	0.723	3449.1	0.944	11.13085	3.37435	Si
SLV 3	-27107	-28439	185	0.724	3445	0.944	11.14557	3.37435	Si
SLV 8	-16222	-22097	209	1.066	2345.1	0.923	16.77782	4.45299	Si
SLV 7	-16196	-22115	207	1.067	2342.5	0.923	16.79987	4.45299	Si
SLV 10	-11971	-17597	-452	1.309	1919.7	0.911	20.87587	4.45299	Si
SLV 9	-11945	-17614	-454	1.31	1917.1	0.911	20.90764	4.45299	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2	SLU 43	Si
V_SLU	8.064	SLU 84	Si
PF_SLV	0.643	SLV 13	No
V_SLV	3.048	SLV 5	Si
PFFP_SLV	2.422	SLV 13	Si
R_SLV	3.161	SLV 6	Si

Maschio 3

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.763	5.876	-24.653	5.876	L2	L4	1.89	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 47	1.02	-10.52	-14167	-0.0000261	0.0003743	0.0035	1.89	11197.16	12594.19	12594.19	1196.99	No	Si
SLU 47	1.42	1393.03	-13032	-0.0000321	0.0003743	0.0035	1.89	10461.92	10839.68	10839.68	7.78	No	Si
SLU 49	1.02	3.27	-14463	-0.0000266	0.0003743	0.0035	1.89	11384.75	11847.79	11847.79	3621.89	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 49	1.42	1436.04	-13316	-0.0000329	0.0003743	0.0035	1.89	10648.29	11038.2	11038.2	7.69	No	Si
SLU 46	1.02	-1.88	-14276	-0.0000262	0.0003743	0.0035	1.89	11266.9	12672.01	12672.01	6724.56	No	Si
SLU 46	1.42	1409.25	-13138	-0.0000324	0.0003743	0.0035	1.89	10531.61	10913.63	10913.63	7.74	No	Si
SLU 6	1.02	-11.07	-11746	-0.0000215	0.0003743	0.0035	1.89	9593.95	10819.1	10819.1	977.57	No	Si
SLU 6	1.42	1127.2	-10861	-0.0000264	0.0003743	0.0035	1.89	8976.5	9338.79	9338.79	8.28	No	Si
SLU 48	1.02	4.12	-14458	-0.0000266	0.0003743	0.0035	1.89	11381.44	11844.06	11844.06	2873.14	No	Si
SLU 48	1.42	1436.95	-13311	-0.0000329	0.0003743	0.0035	1.89	10645	11034.67	11034.67	7.68	No	Si
SLU 45	1.02	-1.03	-14271	-0.0000262	0.0003743	0.0035	1.89	11263.56	12668.28	12668.28	12260.46	No	Si
SLU 45	1.42	1410.16	-13133	-0.0000324	0.0003743	0.0035	1.89	10528.3	10910.11	10910.11	7.74	No	Si
SLU 51	1.02	-4.8	-14350	-0.0000264	0.0003743	0.0035	1.89	11313.25	12723.97	12723.97	2651.67	No	Si
SLU 51	1.42	1420.42	-13207	-0.0000326	0.0003743	0.0035	1.89	10576.8	10961.76	10961.76	7.72	No	Si
SLU 43	1.02	-14.26	-13971	-0.0000257	0.0003743	0.0035	1.89	11072.47	12456.06	12456.06	873.59	No	Si
SLU 43	1.42	1367.75	-12846	-0.0000316	0.0003743	0.0035	1.89	10338.57	10709.64	10709.64	7.83	No	Si
SLU 44	1.02	-15.68	-13980	-0.0000257	0.0003743	0.0035	1.89	11078.1	12462.26	12462.26	794.93	No	Si
SLU 44	1.42	1366.24	-12854	-0.0000316	0.0003743	0.0035	1.89	10344.14	10715.49	10715.49	7.84	No	Si
SLU 50	1.02	-3.95	-14344	-0.0000264	0.0003743	0.0035	1.89	11309.92	12720.23	12720.23	3222.51	No	Si
SLU 50	1.42	1421.33	-13202	-0.0000326	0.0003743	0.0035	1.89	10573.5	10958.24	10958.24	7.71	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	1.02	2444.88	-16018	-0.0000435	0.0005615	0.0035	1.89		13700.84	13700.84	5.6		Si
SLV 1	1.42	1418.7	-16341	-0.0000381	0.0005615	0.0035	1.89		13924.46	13924.46	9.81		Si
SLV 7	1.02	-1761.72	-10933	-0.0000299	0.0005615	0.0035	1.89		10493.08	10493.08	5.96		Si
SLV 7	1.42	1300.31	-7924	-0.0000216	0.0005615	0.0035	1.89		7312.06	7312.06	5.62		Si
SLV 5	1.02	2750.68	-15651	-0.0000446	0.0005615	0.0035	1.89		13447.39	13447.39	4.89		Si
SLV 5	1.42	1061.82	-17287	-0.0000378	0.0005615	0.0035	1.89		14580.21	14580.21	13.73		Si
SLV 15	1.02	-2488.26	-8867	-0.0000302	0.0005615	0.0035	1.89		8771.72	8771.72	3.53		Si
SLV 15	1.42	715.32	-6958	-0.0000165	0.0005615	0.0035	1.89		6480.65	6480.65	9.06		Si
SLV 12	1.02	-2908.88	-9176	-0.0000332	0.0005615	0.0035	1.89		9031.41	9031.41	3.1		Si
SLV 12	1.42	1060.12	-5845	-0.0000165	0.0005615	0.0035	1.89		5513.08	5513.08	5.2		Si
SLV 6	1.02	2677.35	-15614	-0.0000441	0.0005615	0.0035	1.89		13421.85	13421.85	5.01		Si
SLV 6	1.42	1054.1	-17180	-0.0000375	0.0005615	0.0035	1.89		14506.07	14506.07	13.76		Si
SLV 11	1.02	-2835.55	-9213	-0.0000329	0.0005615	0.0035	1.89		9062.48	9062.48	3.2		Si
SLV 11	1.42	1067.83	-5952	-0.0000167	0.0005615	0.0035	1.89		5607.17	5607.17	5.25		Si
SLV 16	1.02	-2603.09	-8809	-0.0000308	0.0005615	0.0035	1.89		8722.94	8722.94	3.35		Si
SLV 16	1.42	703.24	-6791	-0.0000161	0.0005615	0.0035	1.89		6335.8	6335.8	9.01		Si
SLV 8	1.02	-1835.05	-10896	-0.0000302	0.0005615	0.0035	1.89		10462.26	10462.26	5.7		Si
SLV 8	1.42	1292.6	-7818	-0.0000214	0.0005615	0.0035	1.89		7221.15	7221.15	5.59		Si
SLV 2	1.02	2330.06	-15960	-0.0000427	0.0005615	0.0035	1.89		13660.78	13660.78	5.86		Si
SLV 2	1.42	1406.62	-16174	-0.0000377	0.0005615	0.0035	1.89		13808.91	13808.91	9.82		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	1.02	-228.19	-19105	-16982	-4466	1.89	1.89	-19967	9607	8170	33304	25468	4820	30287	No	6.78	Si
SLU 84	1.42	1398.9	-18038	-16033	-4534	1.89	1.89	-18852	9458	8044	33304	25468	4820	30287	No	6.68	Si
SLU 75	1.02	-175.67	-18318	-16282	-4436	1.89	1.89	-19144	9497	8077	33304	25468	4820	30287	No	6.83	Si
SLU 75	1.42	1419.63	-17230	-15316	-4503	1.89	1.89	-18008	9345	7948	33304	25468	4820	30287	No	6.73	Si
SLU 77	1.02	-169.67	-18499	-16444	-4511	1.89	1.89	-19334	9522	8099	33304	25468	4820	30287	No	6.71	Si
SLU 77	1.42	1447.33	-17403	-15469	-4578	1.89	1.89	-18188	9370	7969	33304	25468	4820	30287	No	6.62	Si
SLU 74	1.02	-174.82	-18312	-16278	-4436	1.89	1.89	-19139	9496	8077	33304	25468	4820	30287	No	6.83	Si
SLU 74	1.42	1420.54	-17225	-15311	-4503	1.89	1.89	-18002	9345	7948	33304	25468	4820	30287	No	6.73	Si
SLU 82	1.02	-233.35	-18918	-16816	-4391	1.89	1.89	-19772	9581	8148	33304	25468	4820	30287	No	6.9	Si
SLU 82	1.42	1372.11	-17860	-15875	-4459	1.89	1.89	-18666	9433	8023	33304	25468	4820	30287	No	6.79	Si
SLU 76	1.02	-184.31	-18208	-16185	-4408	1.89	1.89	-19030	9482	8064	33304	25468	4820	30287	No	6.87	Si
SLU 76	1.42	1403.41	-17124	-15222	-4474	1.89	1.89	-17897	9331	7936	33304	25468	4820	30287	No	6.77	Si
SLU 83	1.02	-227.34	-19099	-16977	-4465	1.89	1.89	-19961	9606	8170	33304	25468	4820	30287	No	6.78	Si
SLU 83	1.42	1399.8	-18033	-16029	-4534	1.89	1.89	-18847	9457	8043	33304	25468	4820	30287	No	6.68	Si
SLU 79	1.02	-177.74	-18386	-16343	-4482	1.89	1.89	-19216	9507	8085	33304	25468	4820	30287	No	6.76	Si
SLU 79	1.42	1431.71	-17294	-15372	-4549	1.89	1.89	-18074	9354	7956	33304	25468	4820	30287	No	6.66	Si
SLU 78	1.02	-170.52	-18504	-16448	-4511	1.89	1.89	-19340	9523	8099	33304	25468	4820	30287	No	6.71	Si
SLU 78	1.42	1446.42	-17408	-15474	-4579	1.89	1.89	-18194	9370	7969	33304	25468	4820	30287	No	6.62	Si
SLU 80	1.02	-178.59	-18391	-16348	-4482	1.89	1.89	-19221	9507	8086	33304	25468	4820	30287	No	6.76	Si
SLU 80	1.42	1430.8	-17299	-15377	-4549	1.89	1.89	-18080	9355	7956	33304	25468	4820	30287	No	6.66	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	1.02	-1761.72	-10933	-9719	-5431	1.89	1.89	-11427	12702	10803	33304	38202	4820	43021		7.92	Si
SLV 7	1.42	1300.31	-7924	-7044	-5515	1.89	1.89	-8282	12073	10268	33304	38202	4820	43021		7.8	Si
SLV 11	1.02	-2835.55	-9213	-8189	-7990	1.89	1.89	-9629	12342	10497	33304	38202	4820	43021		5.38	Si
SLV 11	1.42	1067.83	-5952	-5291	-8002	1.89	1.89	-6221	11661	9917	33304	38202	4820	43021		5.38	Si
SLV 8	1.02	-1835.05	-10896	-9686	-5760	1.89	1.89	-11388	12694	10797	33304	38202	4820	43021		7.47	Si
SLV 8	1.42	1292.6	-7818	-6949	-5843	1.89	1.89	-8171	12051	10249	33304	38202	4820	43021		7.36	Si
SLD 16	1.02	-1162.72	-10867	-9660	-5635	1.89	1.89	-11358	12688	10791	33304	38202	4820	43021		7.63	Si
SLD 16	1.42	903.83	-9519	-8461	-5630	1.89	1.89	-9949	12406	10552	33304	38202	4820	43021		7.64	Si
SLV 14	1.02	-1249.37	-10224	-9088	-6659	1.89	1.89	-10686	12554	10677	33304	38202	4820	43021		6.46	Si
SLV 14	1.42	631.69	-9599	-8533	-6585	1.89	1.89	-10032	12423	10566	33304	38202	4820	43021		6.53	Si
SLV 13	1.02	-1134.54	-10282	-9140	-6145	1.89	1.89	-10746	12566	10687	33304	38202	4820	43021		7	Si
SLV 13	1.42	643.77	-9766	-8681	-6071	1.89	1.89	-10207	12458	10596	33304	38202	4820	43021		7.09	Si
SLV 12	1.02	-2908.88	-9176	-8156	-8318	1.89	1.8839	-9590	12335	10457	33304	38202	4820	43021		5.17	Si
SLV 12	1.42	1060.12	-5845	-5196	-8330	1.89	1.89	-6109	11638	9899	33304	38202	4820	43021		5.16	Si
SLV 16	1.02	-2603.09	-8809	-7830	-8846	1.89	1.89	-9207	12258	10425	33304	38202	4820	43021		4.86	Si
SLV 16	1.42	703.24	-6791	-6036	-8772	1.89	1.89	-7097	11836	10067	33304	38202	4820	43021		4.9	Si
SLD 12	1.02	-1296.53	-11018	-9793	-5412	1.89	1.89	-11515	12720	10818	33304	38202	4820	43021		7.95	Si
SLD 12	1.42	1052.19	-9105	-8093	-5443	1.89	1.89	-9516	12320	10478	33304	38202	4820	43021		7.9	Si
SLV 15	1.02	-2488.26	-8867	-7882	-8331	1.89	1.89	-9267	12270	10436	33304	38202	4820	43021		5.16	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	1.42	715.32	-6958	-6185	-8258	1.89	1.89	-7272	11871	10096	33304	38202	4820	43021		5.21	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.51 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	179667	0.25	7305	-6213	149.56	1331.1	8.9	Si
SLV 15	179667	0.25	7399	-6293	149.56	1347.24	9.01	Si
SLV 12	179667	0.25	8155	-6936	149.56	1477.23	9.88	Si
SLV 11	179667	0.25	8215	-6987	149.56	1487.41	9.95	Si
SLV 14	179667	0.25	9167	-7797	149.56	1648.98	11.03	Si
SLV 13	179667	0.25	9261	-7876	149.56	1664.68	11.13	Si
SLV 8	179667	0.25	10731	-9127	149.56	1909.18	12.77	Si
SLV 7	179667	0.25	10790	-9177	149.56	1918.98	12.83	Si
SLV 10	179667	0.25	14362	-12215	149.56	2489.82	16.65	Si
SLV 9	179667	0.25	14421	-12265	149.56	2499.08	16.71	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-18511	-10941	-122	0.589	2242.5	0.953	8.97091	4.45299	Si
SLV 6	-18398	-10950	-118	0.592	2231	0.953	9.01842	4.45299	Si
SLV 9	-16495	-8269	-39	0.648	2037.8	0.949	9.91974	4.45299	Si
SLV 10	-16382	-8278	-36	0.652	2026.3	0.949	9.97851	4.45299	Si
SLV 1	-15949	-14363	-359	0.648	1982.3	0.948	9.92678	3.37435	Si
SLV 2	-15772	-14377	-353	0.654	1964.3	0.948	10.02208	3.37435	Si
SLV 3	-11710	-14627	-480	0.812	1552.8	0.936	12.61097	3.37435	Si
SLV 4	-11533	-14641	-474	0.822	1534.9	0.936	12.77247	3.37435	Si
SLV 13	-9231	-5457	-85	1.005	1302.5	0.926	15.7707	3.37435	Si
SLV 14	-9054	-5471	-79	1.02	1284.7	0.926	16.0203	3.37435	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.679	SLU 48	Si
V_SLU	6.615	SLU 78	Si
PF_SLV	3.105	SLV 12	Si
V_SLV	4.864	SLV 16	Si
PFFP_SLV	8.9	SLV 16	Si
R_SLV	2.015	SLV 5	Si

Maschio 4

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.618	5.876	-21.763	5.876	L2	L4	2.145	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 46	1.02	-6140.32	-20218	-0.0000625	0.0003743	0.0035	2.145	17222.9	19576.59	19576.59	3.19	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 46	1.42	-2187.96	-19193	-0.0000416	0.0003743	0.0035	2.145	16564.3	18811.07	18811.07	8.6	No	Si
SLU 47	1.02	-6093.08	-20039	-0.0000619	0.0003743	0.0035	2.145	17109.65	19442.32	19442.32	3.19	No	Si
SLU 47	1.42	-2144.4	-19014	-0.0000411	0.0003743	0.0035	2.145	16447.05	18676.09	18676.09	8.71	No	Si
SLU 51	1.02	-6159.86	-20269	-0.0000627	0.0003743	0.0035	2.145	17254.61	19614.39	19614.39	3.18	No	Si
SLU 51	1.42	-2179.03	-19243	-0.0000417	0.0003743	0.0035	2.145	16597.14	18848.38	18848.38	8.65	No	Si
SLU 70	1.02	-6811.61	-23430	-0.0000719	0.0003743	0.0035	2.145	19137.56	21893.09	21893.09	3.21	No	Si
SLU 70	1.42	-2493.92	-22388	-0.0000488	0.0003743	0.0035	2.145	18541.2	21158.07	21158.07	8.48	No	Si
SLU 43	1.02	-6014.64	-19781	-0.0000611	0.0003743	0.0035	2.145	16944.8	19248.87	19248.87	3.2	No	Si
SLU 43	1.42	-2116.51	-18756	-0.0000405	0.0003743	0.0035	2.145	16276.41	18478.75	18478.75	8.73	No	Si
SLU 49	1.02	-6210.43	-20456	-0.0000633	0.0003743	0.0035	2.145	17372.2	19755.74	19755.74	3.18	No	Si
SLU 49	1.42	-2220.66	-19431	-0.0000422	0.0003743	0.0035	2.145	16718.92	18987.53	18987.53	8.55	No	Si
SLU 50	1.02	-6154.86	-20256	-0.0000626	0.0003743	0.0035	2.145	17246.7	19604.95	19604.95	3.19	No	Si
SLU 50	1.42	-2181.91	-19231	-0.0000417	0.0003743	0.0035	2.145	16588.95	18839.07	18839.07	8.63	No	Si
SLU 44	1.02	-6022.97	-19802	-0.0000612	0.0003743	0.0035	2.145	16958.19	19264.5	19264.5	3.2	No	Si
SLU 44	1.42	-2111.7	-18777	-0.0000405	0.0003743	0.0035	2.145	16290.27	18494.77	18494.77	8.76	No	Si
SLU 48	1.02	-6205.43	-20443	-0.0000632	0.0003743	0.0035	2.145	17364.35	19746.25	19746.25	3.18	No	Si
SLU 48	1.42	-2223.54	-19418	-0.0000422	0.0003743	0.0035	2.145	16710.78	18978.2	18978.2	8.54	No	Si
SLU 45	1.02	-6135.32	-20206	-0.0000625	0.0003743	0.0035	2.145	17214.98	19567.16	19567.16	3.19	No	Si
SLU 45	1.42	-2190.84	-19180	-0.0000416	0.0003743	0.0035	2.145	16556.1	18801.76	18801.76	8.58	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 12	1.02	-6227.42	-15112	-0.0000528	0.0005615	0.0035	2.145		16126.4	16126.4	2.59		Si
SLD 12	1.42	-2015.39	-16027	-0.0000347	0.0005615	0.0035	2.145		16945.59	16945.59	8.41		Si
SLV 15	1.02	-7150.86	-12335	-0.000058	0.0005615	0.0035	1.716		13578.97	13578.97	1.9		Si
SLV 15	1.42	-651.77	-12764	-0.0000232	0.0005615	0.0035	2.145		13980.73	13980.73	21.45		Si
SLD 16	1.02	-6034.01	-15394	-0.0000522	0.0005615	0.0035	2.145		16377.89	16377.89	2.71		Si
SLD 16	1.42	-1331.54	-15119	-0.0000301	0.0005615	0.0035	2.145		16132.19	16132.19	12.12		Si
SLV 11	1.02	-7650.62	-11661	-0.0000652	0.0005615	0.0035	1.716		12949.19	12949.19	1.69		Si
SLV 11	1.42	-2255.19	-14874	-0.0000339	0.0005615	0.0035	2.145		15913.27	15913.27	7.06		Si
SLV 14	1.02	-5979.35	-15193	-0.0000516	0.0005615	0.0035	2.145		16198.27	16198.27	2.71		Si
SLV 14	1.42	-139.51	-13220	-0.0000216	0.0005615	0.0035	2.145		14407.02	14407.02	103.27		Si
SLV 8	1.02	-6852.82	-13991	-0.0000556	0.0005615	0.0035	2.145		15123.55	15123.55	2.21		Si
SLV 8	1.42	-3121.51	-17188	-0.0000417	0.0005615	0.0035	2.145		17985.89	17985.89	5.76		Si
SLV 7	1.02	-6785.23	-14054	-0.0000551	0.0005615	0.0035	2.145		15181.88	15181.88	2.24		Si
SLV 7	1.42	-3126.72	-17251	-0.0000418	0.0005615	0.0035	2.145		18040.65	18040.65	5.77		Si
SLD 11	1.02	-6197.93	-15140	-0.0000527	0.0005615	0.0035	2.145		16150.94	16150.94	2.61		Si
SLD 11	1.42	-2017.67	-16055	-0.0000348	0.0005615	0.0035	2.145		16970.26	16970.26	8.41		Si
SLV 12	1.02	-7718.22	-11598	-0.0000664	0.0005615	0.0035	1.716		12890.49	12890.49	1.67		Si
SLV 12	1.42	-2249.98	-14811	-0.0000338	0.0005615	0.0035	2.145		15857.1	15857.1	7.05		Si
SLV 16	1.02	-7256.71	-12237	-0.0000592	0.0005615	0.0035	1.716		13486.72	13486.72	1.86		Si
SLV 16	1.42	-643.61	-12666	-0.000023	0.0005615	0.0035	2.145		13888.22	13888.22	21.58		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	1.02	-7449.91	-27281	-24250	-11726	2.145	2.145	-25123	10294	9936	33304	28904	5470	34374	No	2.93	Si
SLU 82	1.42	-2736.67	-26239	-23324	-11726	2.145	2.145	-24164	10166	9813	33304	28904	5470	34374	No	2.93	Si
SLU 75	1.02	-7321.86	-26352	-23424	-11482	2.145	2.145	-24267	10180	9826	33304	28904	5470	34374	No	2.99	Si
SLU 75	1.42	-2706.07	-25310	-22498	-11482	2.145	2.145	-23308	10052	9703	33304	28904	5470	34374	No	2.99	Si
SLU 76	1.02	-7274.63	-26173	-23265	-11473	2.145	2.145	-24102	10158	9805	33304	28904	5470	34374	No	3	Si
SLU 76	1.42	-2662.51	-25131	-22339	-11473	2.145	2.145	-23143	10030	9682	33304	28904	5470	34374	No	3	Si
SLU 77	1.02	-7386.97	-26577	-23624	-11556	2.145	2.145	-24474	10208	9853	33304	28904	5470	34374	No	2.97	Si
SLU 77	1.42	-2741.65	-25535	-22698	-11556	2.145	2.145	-23515	10080	9730	33304	28904	5470	34374	No	2.97	Si
SLU 81	1.02	-7444.91	-27269	-24239	-11706	2.145	2.145	-25111	10293	9935	33304	28904	5470	34374	No	2.94	Si
SLU 81	1.42	-2739.55	-26227	-23313	-11706	2.145	2.145	-24152	10165	9811	33304	28904	5470	34374	No	2.94	Si
SLU 78	1.02	-7391.97	-26589	-23635	-11576	2.145	2.145	-24486	10209	9854	33304	28904	5470	34374	No	2.97	Si
SLU 78	1.42	-2738.77	-25548	-22709	-11576	2.145	2.145	-23527	10081	9731	33304	28904	5470	34374	No	2.97	Si
SLU 83	1.02	-7515.02	-27506	-24450	-11800	2.145	2.145	-25330	10322	9963	33304	28904	5470	34374	No	2.91	Si
SLU 83	1.42	-2772.25	-26464	-23524	-11800	2.145	2.145	-24371	10194	9840	33304	28904	5470	34374	No	2.91	Si
SLU 80	1.02	-7341.4	-26402	-23469	-11553	2.145	2.145	-24313	10186	9832	33304	28904	5470	34374	No	2.98	Si
SLU 80	1.42	-2697.13	-25360	-22543	-11553	2.145	2.145	-23354	10058	9709	33304	28904	5470	34374	No	2.98	Si
SLU 84	1.02	-7520.02	-27519	-24461	-11819	2.145	2.145	-25342	10323	9965	33304	28904	5470	34374	No	2.91	Si
SLU 84	1.42	-2769.37	-26477	-23535	-11819	2.145	2.145	-24382	10195	9841	33304	28904	5470	34374	No	2.91	Si
SLU 79	1.02	-7336.41	-26390	-23457	-11534	2.145	2.145	-24302	10185	9831	33304	28904	5470	34374	No	2.98	Si
SLU 79	1.42	-2700.02	-25348	-22531	-11534	2.145	2.145	-23343	10057	9707	33304	28904	5470	34374	No	2.98	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	1.02	-3460.34	-21452	-19068	-12285	2.145	2.145	-19755	14368	13868	33304	43356	5470	47173		3.84	Si
SLV 10	1.42	-569.64	-16659	-14808	-10473	2.145	2.145	-15341	13485	13016	33304	43356	5470	46321		4.42	Si
SLV 15	1.02	-7150.86	-12335	-10965	-14202	1.716	1.4784	0	0	0	33304	34685	4376	33304		2.35	Si
SLV 15	1.42	-651.77	-12764	-11346	-14547	2.145	2.145	-11754	12768	12324	33304	43356	5470	45628		3.14	Si
SLD 13	1.02	-5445.72	-16706	-14850	-11249	2.145	2.145	-15384	13493	13025	33304	43356	5470	46329		4.12	Si
SLD 13	1.42	-1122.2	-15405	-13693	-10945	2.145	2.145	-14186	13254	12793	33304	43356	5470	46098		4.21	Si
SLV 11	1.02	-7650.62	-11661	-10365	-8083	1.716	1.2492	0	0	0	33304	34685	4376	33304		4.12	Si
SLV 11	1.42	-2255.19	-14874	-13221	-9786	2.145	2.145	-13697	13156	12699	33304	43356	5470	46003		4.7	Si
SLV 13	1.02	-5873.5	-15292	-13593	-15408	2.145	2.0652	-14730	13363	12418	33304	43356	5470	45723		2.97	Si
SLV 13	1.42	-147.66	-13319	-11839	-14699	2.145	2.145	-12265	12870	12422	33304	43356	5470	45727		3.11	Si
SLV 9	1.02	-3392.74	-21515	-19124	-12103	2.145	2.145	-19813	14379	13880	33304	43356	5470	47184		3.9	Si
SLV 9	1.42	-574.85	-16722	-14864	-10291	2.145	2.145	-15399	13497	13028	33304	43356	5470	46332		4.5	Si
SLV 14	1.02	-5979.35	-15193	-13505	-15693	2.145	2.0368	-14838	13384	12268	33304	43356	5470	45572		2.9	Si
SLV 14	1.42	-139.51	-13220	-11751	-14984	2.145	2.145	-12174	12852	12405	33304	43356	5470	45709		3.05	Si
SLV 12	1.02	-7718.22	-11598	-10309	-8265	1.716	1.221	0	0	0	33304	34685	4376	33304		4.03	Si
SLV 12	1.42	-2249.98	-14811	-13165	-9968	2.145	2.145	-13639	13144	12688	33304	43356	5470	45992		4.61	Si
SLV 16	1.02	-7256.71	-12237	-10877	-14487	1.716	1.4384	0	0	0	33304	34685	4376	33304		2.3	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	1.42	-643.61	-12666	-11258	-14832	2.145	2.145	-11664	12749	12306	33304	43356	5470	45611		3.08	Si
SLD 14	1.02	-5491.15	-16663	-14812	-11371	2.145	2.145	-15345	13486	13017	33304	43356	5470	46321		4.07	Si
SLD 14	1.42	-1118.7	-15363	-13656	-11068	2.145	2.145	-14147	13246	12786	33304	43356	5470	46090		4.16	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.51 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	179667	0.25	11472	-11073	169.74	2304.27	13.58	Si
SLV 15	179667	0.25	11554	-11152	169.74	2319.45	13.66	Si
SLV 14	179667	0.25	12384	-11954	169.74	2471.49	14.56	Si
SLV 13	179667	0.25	12466	-12033	169.74	2486.47	14.65	Si
SLV 12	179667	0.25	15231	-14701	169.74	2977.93	17.54	Si
SLV 11	179667	0.25	15283	-14752	169.74	2987.07	17.6	Si
SLV 10	179667	0.25	18273	-17638	169.74	3493.62	20.58	Si
SLV 9	179667	0.25	18325	-17688	169.74	3502.31	20.63	Si
SLV 8	179667	0.25	19353	-18680	169.74	3670.4	21.62	Si
SLV 7	179667	0.25	19405	-18731	169.74	3678.93	21.67	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-20835	-23400	-891	0.56	2527.4	0.953	8.54156	4.45299	Si
SLV 6	-20754	-23299	-887	0.562	2519.2	0.953	8.57077	4.45299	Si
SLV 9	-19130	-19993	-830	0.601	2354.3	0.95	9.1936	4.45299	Si
SLV 10	-19049	-19891	-826	0.603	2346.1	0.95	9.22772	4.45299	Si
SLV 1	-18188	-25852	-588	0.637	2258.6	0.948	9.7555	3.37435	Si
SLV 2	-18061	-25693	-582	0.64	2245.8	0.948	9.81514	3.37435	Si
SLV 3	-14195	-24521	-266	0.789	1853.8	0.939	12.21775	3.37435	Si
SLV 4	-14068	-24363	-260	0.795	1841	0.938	12.31176	3.37435	Si
SLV 13	-12505	-14494	-385	0.861	1683	0.934	13.40549	3.37435	Si
SLV 14	-12378	-14335	-379	0.868	1670.1	0.933	13.52094	3.37435	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.181	SLU 49	Si
V_SLU	2.908	SLU 84	Si
PF_SLV	1.67	SLV 12	Si
V_SLV	2.299	SLV 16	Si
PFFP_SLV	13.575	SLV 16	Si
R_SLV	1.918	SLV 5	Si

Maschio 7

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.618	2.271	-19.618	4.851	L2	L4	2.58	0.3	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 50	-0.98	-4238.11	-53361	-0.0001279	0.0004492	0.0035	2.58	29996.54	50154.05	50154.05	11.83	No	Si
SLU 50	1.02	5863.89	-49789	-0.000128	0.0004492	0.0035	2.58	30414.44	46423.05	46423.05	7.92	No	Si
SLU 44	-0.98	-4226.77	-52368	-0.0001255	0.0004492	0.0035	2.58	30147.66	49681.03	49681.03	11.75	No	Si
SLU 44	1.02	5781.21	-48796	-0.0001253	0.0004492	0.0035	2.58	30468.78	45933.66	45933.66	7.95	No	Si
SLU 49	-0.98	-4321.57	-53800	-0.0001294	0.0004492	0.0035	2.58	29921.08	50363.39	50363.39	11.65	No	Si
SLU 49	1.02	5935.88	-50228	-0.0001295	0.0004492	0.0035	2.58	30381.81	46639.63	46639.63	7.86	No	Si
SLU 70	-0.98	-4460.7	-59936	-0.0001451	0.0004492	0.0035	2.58	28317.42	53054.03	53054.03	11.89	No	Si
SLU 70	1.02	6226.36	-56363	-0.000146	0.0004492	0.0035	2.58	29376.05	49663.05	49663.05	7.98	No	Si
SLU 51	-0.98	-4322.64	-53373	-0.0001284	0.0004492	0.0035	2.58	29994.48	50159.98	50159.98	11.6	No	Si
SLU 51	1.02	5918.49	-49801	-0.0001284	0.0004492	0.0035	2.58	30413.59	46429.18	46429.18	7.84	No	Si
SLU 48	-0.98	-4237.04	-53788	-0.0001289	0.0004492	0.0035	2.58	29923.29	50357.46	50357.46	11.89	No	Si
SLU 48	1.02	5881.28	-50216	-0.0001291	0.0004492	0.0035	2.58	30382.81	46633.5	46633.5	7.93	No	Si
SLU 47	-0.98	-4302.88	-52875	-0.0001271	0.0004492	0.0035	2.58	30073.88	49922.48	49922.48	11.6	No	Si
SLU 47	1.02	5868.05	-49302	-0.0001269	0.0004492	0.0035	2.58	30444.4	46183.46	46183.46	7.87	No	Si
SLU 68	-0.98	-4442.01	-59010	-0.0001427	0.0004492	0.0035	2.58	28625.15	52758.12	52758.12	11.88	No	Si
SLU 68	1.02	6158.53	-55438	-0.0001433	0.0004492	0.0035	2.58	29593.57	49206.89	49206.89	7.99	No	Si
SLU 72	-0.98	-4461.77	-59509	-0.0001441	0.0004492	0.0035	2.58	28462.29	52917.51	52917.51	11.86	No	Si
SLU 72	1.02	6208.97	-55936	-0.0001448	0.0004492	0.0035	2.58	29479.31	49452.6	49452.6	7.96	No	Si
SLU 46	-0.98	-4245.46	-53293	-0.0001278	0.0004492	0.0035	2.58	30007.65	50121.94	50121.94	11.81	No	Si
SLU 46	1.02	5849.04	-49721	-0.0001278	0.0004492	0.0035	2.58	30418.98	46389.83	46389.83	7.93	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	-0.98	-16292.21	-43700	-0.0001589	0.0006738	0.0035	2.58		48757.69	48757.69	2.99		Si
SLV 9	1.02	13345.92	-41057	-0.0001389	0.0006738	0.0035	2.58		43805.6	43805.6	3.28		Si
SLV 11	-0.98	10784.15	-41341	-0.0001274	0.0006738	0.0035	2.58		44060.71	44060.71	4.09		Si
SLV 11	1.02	-5029.86	-38551	-0.0000947	0.0006738	0.0035	2.58		44536.83	44536.83	8.85		Si
SLV 10	-0.98	-15576.61	-43654	-0.0001553	0.0006738	0.0035	2.58		48721.95	48721.95	3.13		Si
SLV 10	1.02	12865.47	-41011	-0.0001365	0.0006738	0.0035	2.58		43762.08	43762.08	3.4		Si
SLV 12	-0.98	11499.75	-41295	-0.0001307	0.0006738	0.0035	2.58		44026.93	44026.93	3.83		Si
SLV 12	1.02	-5510.31	-38504	-0.0000968	0.0006738	0.0035	2.58		44498.6	44498.6	8.08		Si
SLV 8	-0.98	9796.16	-47245	-0.0001553	0.0006738	0.0035	2.58		48351.29	48351.29	4.94		Si
SLV 8	1.02	-4143.6	-44393	-0.0001025	0.0006738	0.0035	2.58		49289.76	49289.76	11.9		Si
SLV 1	-0.98	-10709.04	-55780	-0.0001586	0.0006738	0.0035	2.58		57513.14	57513.14	5.37		Si
SLV 1	1.02	10011.56	-52951	-0.0001489	0.0006738	0.0035	2.58		52498.02	52498.02	5.24		Si
SLD 6	-0.98	-9399.89	-47247	-0.0001334	0.0006738	0.0035	2.58		51483.81	51483.81	5.48		Si
SLD 6	1.02	8829.64	-44514	-0.0001249	0.0006738	0.0035	2.58		46366.6	46366.6	5.25		Si
SLV 5	-0.98	-17995.79	-49650	-0.0001808	0.0006738	0.0035	2.58		53263.1	53263.1	2.96		Si
SLV 5	1.02	14712.64	-46945	-0.0001585	0.0006738	0.0035	2.58		48133.39	48133.39	3.27		Si
SLV 6	-0.98	-17280.2	-49604	-0.0001771	0.0006738	0.0035	2.58		53229.87	53229.87	3.08		Si
SLV 6	1.02	14232.18	-46899	-0.000156	0.0006738	0.0035	2.58		48099.61	48099.61	3.38		Si
SLD 5	-0.98	-9712.04	-47267	-0.000135	0.0006738	0.0035	2.58		51499.4	51499.4	5.3		Si
SLD 5	1.02	9039.22	-44534	-0.0001259	0.0006738	0.0035	2.58		46381.33	46381.33	5.13		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	-0.98	-4452.47	-67669	-49214	-5424	2.58	2.58	-63583	10833	8385	95155	27816	13158	40974	No	7.55	Si
SLU 82	1.02	6357.64	-64096	-46615	-5424	2.58	2.58	-60227	10833	8385	95155	27816	13158	40974	No	7.55	Si
SLU 78	-0.98	-4560.75	-66357	-48260	-5525	2.58	2.58	-62351	10833	8385	95155	27816	13158	40974	No	7.42	Si
SLU 78	1.02	6452	-62785	-45662	-5525	2.58	2.58	-58995	10833	8385	95155	27816	13158	40974	No	7.42	Si
SLU 73	-0.98	-4465.95	-64925	-47218	-5400	2.58	2.58	-61005	10833	8385	95155	27816	13158	40974	No	7.59	Si
SLU 73	1.02	6297.34	-61352	-44620	-5400	2.58	2.58	-57649	10833	8385	95155	27816	13158	40974	No	7.59	Si
SLU 84	-0.98	-4528.58	-68176	-49582	-5505	2.58	2.58	-64060	10833	8385	95155	27816	13158	40974	No	7.44	Si
SLU 84	1.02	6444.48	-64603	-46984	-5505	2.58	2.58	-60703	10833	8385	95155	27816	13158	40974	No	7.44	Si
SLU 79	-0.98	-4477.28	-65918	-47940	-5447	2.58	2.58	-61938	10833	8385	95155	27816	13158	40974	No	7.52	Si
SLU 79	1.02	6380.01	-62346	-45342	-5447	2.58	2.58	-58582	10833	8385	95155	27816	13158	40974	No	7.52	Si
SLU 75	-0.98	-4484.64	-65850	-47891	-5443	2.58	2.58	-61875	10833	8385	95155	27816	13158	40974	No	7.53	Si
SLU 75	1.02	6365.16	-62278	-45293	-5443	2.58	2.58	-58518	10833	8385	95155	27816	13158	40974	No	7.53	Si
SLU 83	-0.98	-4444.05	-68163	-49573	-5435	2.58	2.58	-64048	10833	8385	95155	27816	13158	40974	No	7.54	Si
SLU 83	1.02	6389.88	-64591	-46975	-5435	2.58	2.58	-60691	10833	8385	95155	27816	13158	40974	No	7.54	Si
SLU 76	-0.98	-4542.06	-65432	-47587	-5482	2.58	2.58	-61481	10833	8385	95155	27816	13158	40974	No	7.47	Si
SLU 76	1.02	6384.17	-61859	-44989	-5482	2.58	2.58	-58125	10833	8385	95155	27816	13158	40974	No	7.47	Si
SLU 80	-0.98	-4561.82	-65930	-47949	-5517	2.58	2.58	-61950	10833	8385	95155	27816	13158	40974	No	7.43	Si
SLU 80	1.02	6434.61	-62358	-45351	-5517	2.58	2.58	-58593	10833	8385	95155	27816	13158	40974	No	7.43	Si
SLU 77	-0.98	-4476.22	-66345	-48251	-5455	2.58	2.58	-62340	10833	8385	95155	27816	13158	40974	No	7.51	Si
SLU 77	1.02	6397.4	-62773	-45653	-5455	2.58	2.58	-58983	10833	8385	95155	27816	13158	40974	No	7.51	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 6	-0.98	-9399.89	-47247	-34361	-9213	2.58	2.58	-44394	16250	12577	95155	41723	13158	54881		5.96	Si
SLD 6	1.02	8829.64	-44514	-32374	-9007	2.58	2.58	-41827	16250	12577	95155	41723	13158	54881		6.09	Si
SLV 1	-0.98	-10709.04	-55780	-40567	-10844	2.58	2.58	-52412	16250	12577	95155	41723	13158	54881		5.06	Si
SLV 1	1.02	10011.56	-52951	-38510	-10041	2.58	2.58	-49754	16250	12577	95155	41723	13158	54881		5.47	Si
SLV 10	-0.98	-15576.61	-43654	-31748	-14165	2.58	2.58	-41019	16250	12577	95155	41723	13158	54881		3.87	Si
SLV 10	1.02	12865.47	-41011	-29826	-14108	2.58	2.58	-38535	16250	12577	95155	41723	13158	54881		3.89	Si
SLD 9	-0.98	-8988.04	-44732	-32532	-8707	2.58	2.58	-42031	16250	12577	95155	41723	13158	54881		6.3	Si
SLD 9	1.02	8454.38	-42030	-30568	-8675	2.58	2.58	-39493	16250	12577	95155	41723	13158	54881		6.33	Si
SLV 2	-0.98	-9588.53	-55707	-40514	-9908	2.58	2.58	-52344	16250	12577	95155	41723	13158	54881		5.54	Si
SLV 2	1.02	9259.23	-52878	-38457	-9105	2.58	2.58	-49686	16250	12577	95155	41723	13158	54881		6.03	Si
SLV 6	-0.98	-17280.2	-49604	-36076	-15970	2.58	2.58	-46609	16250	12577	95155	41723	13158	54881		3.44	Si
SLV 6	1.02	14232.18	-46899	-34108	-15481	2.58	2.58	-44067	16250	12577	95155	41723	13158	54881		3.55	Si
SLV 5	-0.98	-17995.79	-49650	-36109	-16568	2.58	2.58	-46653	16250	12577	95155	41723	13158	54881		3.31	Si
SLV 5	1.02	14712.64	-46945	-34142	-16079	2.58	2.58	-44111	16250	12577	95155	41723	13158	54881		3.41	Si
SLV 9	-0.98	-16292.21	-43700	-31782	-14763	2.58	2.58	-41062	16250	12577	95155	41723	13158	54881		3.72	Si
SLV 9	1.02	13345.92	-41057	-29860	-14706	2.58	2.58	-38578	16250	12577	95155	41723	13158	54881		3.73	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	-0.98	11499.75	-41295	-30033	8690	2.58	2.58	-38802	16250	12577	95155	41723	13158	54881		6.32	Si
SLV 12	1.02	-5510.31	-38504	-28003	8201	2.58	2.58	-36180	16250	12577	95155	41723	13158	54881		6.69	Si
SLD 5	-0.98	-9712.04	-47267	-34376	-9474	2.58	2.58	-44413	16250	12577	95155	41723	13158	54881		5.79	Si
SLD 5	1.02	9039.22	-44534	-32389	-9268	2.58	2.58	-41846	16250	12577	95155	41723	13158	54881		5.92	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 0.51 Ta 0.05 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-33159	0.25	131.25	3811.23	5607.87	4709.55	35.88	Si
SLV 15	-33232	0.25	131.25	3817.04	5618.98	4718.01	35.95	Si
SLV 14	-33897	0.25	131.25	3869.64	5716.58	4793.11	36.52	Si
SLV 13	-33970	0.25	131.25	3875.33	5727.25	4801.29	36.58	Si
SLV 12	-39073	0.25	131.25	4246.62	6472.23	5359.43	40.83	Si
SLV 11	-39119	0.25	131.25	4249.75	6478.66	5364.2	40.87	Si
SLV 10	-41534	0.25	131.25	4406.05	6812.3	5609.17	42.74	Si
SLV 9	-41581	0.25	131.25	4408.93	6818.72	5613.83	42.77	Si
SLV 8	-44869	0.25	131.25	4601.58	7255.68	5928.63	45.17	Si
SLV 7	-44915	0.25	131.25	4604.14	7261.73	5932.94	45.2	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.05 Ta = 0.0494

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-29651	-49650	-196	0.504	3343.6	0.97	7.55194	6.19867	Si
SLV 6	-29622	-49604	-196	0.505	3340.5	0.97	7.55855	6.19867	Si
SLV 7	-28398	-47292	-185	0.523	3215.9	0.969	7.84598	6.19867	Si
SLV 8	-28368	-47245	-185	0.524	3212.9	0.969	7.85317	6.19867	Si
SLV 9	-26067	-43700	302	0.558	2978.6	0.967	8.39059	6.19867	Si
SLV 10	-26037	-43654	302	0.559	2975.6	0.967	8.399	6.19867	Si
SLV 11	-24813	-41341	313	0.582	2851	0.966	8.75274	6.19867	Si
SLV 12	-24783	-41295	313	0.582	2848	0.966	8.76197	6.19867	Si
SLV 1	-33403	-55780	-773	0.44	3725.6	0.973	6.57011	3.99966	Si
SLV 2	-33356	-55707	-773	0.44	3720.8	0.973	6.57802	3.99966	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.845	SLU 51	Si
V_SLU	7.416	SLU 78	Si
PF_SLV	2.96	SLV 5	Si
V_SLV	3.313	SLV 5	Si
PFFP_SLV	35.883	SLV 16	Si
R_SLV	1.218	SLV 5	Si

Maschio 9

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.543	-3.284	-24.653	-3.284	L2	L4	2.11	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 41	1.02	-1756.96	-18100	-0.0000385	0.0003743	0.0035	2.11	15520.43	17640.26	17640.26	10.04	No	Si
SLU 41	1.42	-1123.08	-17522	-0.0000344	0.0003743	0.0035	2.11	15134.8	17191.99	17191.99	15.31	No	Si
SLU 83	1.02	-2013.8	-21042	-0.000045	0.0003743	0.0035	2.11	17366.96	19813.71	19813.71	9.84	No	Si
SLU 83	1.42	-1248.28	-20246	-0.0000398	0.0003743	0.0035	2.11	16885.87	19230.01	19230.01	15.41	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 39	1.02	-1747.25	-17898	-0.0000381	0.0003743	0.0035	2.11	15386.52	17485.51	17485.51	10.01	No	Si
SLU 39	1.42	-1127.8	-17323	-0.000034	0.0003743	0.0035	2.11	15001.11	17036.79	17036.79	15.11	No	Si
SLU 81	1.02	-2004.09	-20839	-0.0000446	0.0003743	0.0035	2.11	17246.04	19666.57	19666.57	9.81	No	Si
SLU 81	1.42	-1253.01	-20047	-0.0000395	0.0003743	0.0035	2.11	16763.96	19083.85	19083.85	15.23	No	Si
SLU 77	1.02	-1924.47	-20410	-0.0000434	0.0003743	0.0035	2.11	16986.1	19351.22	19351.22	10.06	No	Si
SLU 77	1.42	-1143.11	-19583	-0.0000381	0.0003743	0.0035	2.11	16474.74	18742.59	18742.59	16.4	No	Si
SLU 60	1.02	-1758.84	-18582	-0.0000393	0.0003743	0.0035	2.11	15835.93	18005.65	18005.65	10.24	No	Si
SLU 60	1.42	-1079.02	-17758	-0.0000346	0.0003743	0.0035	2.11	15293.24	17377.72	17377.72	16.11	No	Si
SLU 74	1.02	-1914.76	-20207	-0.000043	0.0003743	0.0035	2.11	16862.39	19201.74	19201.74	10.03	No	Si
SLU 74	1.42	-1147.84	-19385	-0.0000378	0.0003743	0.0035	2.11	16349.95	18597.67	18597.67	16.2	No	Si
SLU 32	1.02	-1657.92	-17266	-0.0000365	0.0003743	0.0035	2.11	14962.3	16992	16992	10.25	No	Si
SLU 32	1.42	-1022.63	-16661	-0.0000324	0.0003743	0.0035	2.11	14547.7	16520.56	16520.56	16.15	No	Si
SLU 62	1.02	-1768.56	-18785	-0.0000397	0.0003743	0.0035	2.11	15966.81	18157.57	18157.57	10.27	No	Si
SLU 62	1.42	-1074.29	-17956	-0.0000349	0.0003743	0.0035	2.11	15425.06	17530.03	17530.03	16.32	No	Si
SLU 79	1.02	-1913.83	-20266	-0.0000431	0.0003743	0.0035	2.11	16898.63	19245.39	19245.39	10.06	No	Si
SLU 79	1.42	-1142.27	-19442	-0.0000378	0.0003743	0.0035	2.11	16386.43	18639.88	18639.88	16.32	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	1.02	-496.98	-10775	-0.0000196	0.0005615	0.0035	2.11		11915.81	11915.81	23.98		Si
SLV 9	1.42	1866.47	-7998	-0.0000214	0.0005615	0.0035	2.11		8291.1	8291.1	4.44		Si
SLV 5	1.02	769.07	-12278	-0.0000234	0.0005615	0.0035	2.11		12315.89	12315.89	16.01		Si
SLV 5	1.42	2112.7	-10156	-0.0000261	0.0005615	0.0035	2.11		10346.71	10346.71	4.9		Si
SLV 11	1.02	-3405.09	-15010	-0.0000403	0.0005615	0.0035	2.11		15756.74	15756.74	4.63		Si
SLV 11	1.42	-3592.14	-15720	-0.0000424	0.0005615	0.0035	2.11		16380.83	16380.83	4.56		Si
SLV 12	1.02	-3328.26	-15081	-0.00004	0.0005615	0.0035	2.11		15819.28	15819.28	4.75		Si
SLV 12	1.42	-3579.55	-15880	-0.0000426	0.0005615	0.0035	2.11		16521.65	16521.65	4.62		Si
SLV 15	1.02	-3886.05	-11754	-0.000037	0.0005615	0.0035	2.11		12815.89	12815.89	3.3		Si
SLV 15	1.42	-1972.44	-10454	-0.0000259	0.0005615	0.0035	2.11		11616.98	11616.98	5.89		Si
SLV 16	1.02	-3765.75	-11866	-0.0000366	0.0005615	0.0035	2.11		12918.23	12918.23	3.43		Si
SLV 16	1.42	-1952.73	-10704	-0.0000262	0.0005615	0.0035	2.11		11849.49	11849.49	6.07		Si
SLV 10	1.02	-420.16	-10847	-0.0000194	0.0005615	0.0035	2.11		11981.91	11981.91	28.52		Si
SLV 10	1.42	1879.06	-8158	-0.0000217	0.0005615	0.0035	2.11		8444.65	8444.65	4.49		Si
SLV 14	1.02	-2893.32	-10595	-0.0000304	0.0005615	0.0035	2.11		11748.64	11748.64	4.06		Si
SLV 14	1.42	-315.15	-8387	-0.0000149	0.0005615	0.0035	2.11		9657.76	9657.76	30.65		Si
SLV 6	1.02	845.9	-12350	-0.0000238	0.0005615	0.0035	2.11		12380.95	12380.95	14.64		Si
SLV 6	1.42	2125.28	-10316	-0.0000264	0.0005615	0.0035	2.11		10497.76	10497.76	4.94		Si
SLV 13	1.02	-3013.62	-10484	-0.0000308	0.0005615	0.0035	2.11		11644.87	11644.87	3.86		Si
SLV 13	1.42	-334.86	-8137	-0.0000146	0.0005615	0.0035	2.11		9418.48	9418.48	28.13		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 47	1.02	-1084.57	-15311	-13610	-2088	2.11	2.11	-14334	8856	8408	33304	28432	5381	33813	No	16.2	Si
SLU 47	1.42	-259.88	-14332	-12740	-2122	2.11	2.11	-13417	8733	8292	33304	28432	5381	33813	No	15.93	Si
SLU 70	1.02	-1477.52	-18000	-16000	-2022	2.11	2.11	-16851	9191	8727	33304	28432	5381	33813	No	16.72	Si
SLU 70	1.42	-620.7	-17075	-15177	-2062	2.11	2.11	-15985	9076	8617	33304	28432	5381	33813	No	16.4	Si
SLU 67	1.02	-1467.81	-17798	-15820	-1976	2.11	2.11	-16661	9166	8703	33304	28432	5381	33813	No	17.12	Si
SLU 67	1.42	-625.42	-16876	-15001	-2015	2.11	2.11	-15799	9051	8594	33304	28432	5381	33813	No	16.78	Si
SLU 68	1.02	-1329.81	-17568	-15616	-2177	2.11	2.11	-16447	9137	8676	33304	28432	5381	33813	No	15.53	Si
SLU 68	1.42	-433.86	-16621	-14775	-2216	2.11	2.11	-15560	9019	8564	33304	28432	5381	33813	No	15.26	Si
SLU 73	1.02	-1576.02	-19647	-17464	-2030	2.11	2.11	-18392	9397	8922	33304	28432	5381	33813	No	16.66	Si
SLU 73	1.42	-674.93	-18760	-16675	-2072	2.11	2.11	-17562	9286	8817	33304	28432	5381	33813	No	16.32	Si
SLU 44	1.02	-1074.86	-15109	-13430	-2041	2.11	2.11	-14145	8830	8384	33304	28432	5381	33813	No	16.57	Si
SLU 44	1.42	-264.6	-14134	-12563	-2075	2.11	2.11	-13232	8709	8269	33304	28432	5381	33813	No	16.3	Si
SLU 72	1.02	-1466.88	-17857	-15873	-1991	2.11	2.11	-16717	9173	8710	33304	28432	5381	33813	No	16.99	Si
SLU 72	1.42	-619.85	-16934	-15053	-2030	2.11	2.11	-15853	9058	8601	33304	28432	5381	33813	No	16.66	Si
SLU 76	1.02	-1585.73	-19849	-17643	-2077	2.11	2.11	-18582	9422	8946	33304	28432	5381	33813	No	16.28	Si
SLU 76	1.42	-670.2	-18958	-16851	-2119	2.11	2.11	-17748	9311	8841	33304	28432	5381	33813	No	15.95	Si
SLU 65	1.02	-1320.1	-17366	-15436	-2131	2.11	2.11	-16257	9112	8652	33304	28432	5381	33813	No	15.87	Si
SLU 65	1.42	-438.59	-16423	-14598	-2169	2.11	2.11	-15375	8994	8540	33304	28432	5381	33813	No	15.59	Si
SLU 55	1.02	-1340.49	-17592	-15637	-1987	2.11	2.11	-16469	9140	8679	33304	28432	5381	33813	No	17.02	Si
SLU 55	1.42	-496.21	-16668	-14816	-2025	2.11	2.11	-15604	9025	8569	33304	28432	5381	33813	No	16.7	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	1.02	334.13	-16764	-14902	5987	2.11	2.11	-15694	13555	12871	33304	42648	5381	46175		7.71	Si
SLV 3	1.42	-1151.7	-17649	-15688	5776	2.11	2.11	-16522	13721	13028	33304	42648	5381	46333		8.02	Si
SLV 9	1.02	-496.98	-10775	-9578	-7964	2.11	2.11	-10087	12434	11806	33304	42648	5381	45111		5.66	Si
SLV 9	1.42	1866.47	-7998	-7109	-7949	2.11	2.11	-7487	11914	11312	33304	42648	5381	44617		5.61	Si
SLV 7	1.02	-2139.04	-16513	-14678	5286	2.11	2.11	-15459	13508	12826	33304	42648	5381	46131		8.73	Si
SLV 7	1.42	-3345.91	-17878	-15892	5213	2.11	2.11	-16737	13764	13069	33304	42648	5381	46373		8.9	Si
SLV 15	1.02	-3886.05	-11754	-10448	-5991	2.11	2.11	-11004	12617	11980	33304	42648	5381	45285		7.56	Si
SLV 15	1.42	-1972.44	-10454	-9292	-5832	2.11	2.11	-9786	12374	11749	33304	42648	5381	45053		7.73	Si
SLV 10	1.02	-420.16	-10847	-9641	-7570	2.11	2.11	-10154	12448	11819	33304	42648	5381	45123		5.96	Si
SLV 10	1.42	1879.06	-8158	-7251	-7555	2.11	2.11	-7637	11944	11341	33304	42648	5381	44645		5.91	Si
SLV 8	1.02	-2062.21	-16584	-14741	5681	2.11	2.11	-15525	13522	12839	33304	42648	5381	46143		8.12	Si
SLV 8	1.42	-3333.32	-18038	-16034	5606	2.11	2.11	-16887	13794	13097	33304	42648	5381	46402		8.28	Si
SLV 4	1.02	454.42	-16876	-15001	6604	2.11	2.11	-15799	13576	12891	33304	42648	5381	46195		6.99	Si
SLV 4	1.42	-1131.99	-17899	-15910	6393	2.11	2.11	-16757	13768	13073	33304	42648	5381	46377		7.25	Si
SLV 13	1.02	-3013.62	-10484	-9319	-8888	2.11	2.11	-9814	12380	11754	33304	42648	5381	45059		5.07	Si
SLV 13	1.42	-334.86	-8137	-7233	-8735	2.11	2.11	-7618	11940	11337	33304	42648	5381	44642		5.11	Si
SLV 16	1.02	-3765.75	-11866	-10547	-5374	2.11	2.11	-11108	12638	12000	33304	42648	5381	45304		8.43	Si
SLV 16	1.42	-1952.73	-10704	-9515	-5215	2.11	2.11	-10021	12421	11794	33304	42648	5381	45098		8.65	Si
SLV 14	1.02	-2893.32	-10595	-9418	-8271	2.11	2.11	-9919	12400	11774	33304	42648	5381	45079		5.45	Si
SLV 14	1.42	-315.15	-8387	-7455	-8119	2.11	2.11	-7852	11987	11382	33304	42648	5381	44686		5.5	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.51 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.25	8004	-7600	161.01	1620.3	10.06	Si
SLV 14	179667	0.25	8118	-7708	161.01	1642.15	10.2	Si
SLV 15	179667	0.25	8752	-8310	161.01	1762.61	10.95	Si
SLV 16	179667	0.25	8866	-8419	161.01	1784.22	11.08	Si
SLV 9	179667	0.25	10365	-9842	161.01	2064.15	12.82	Si
SLV 10	179667	0.25	10439	-9911	161.01	2077.63	12.9	Si
SLV 11	179667	0.25	12860	-12210	161.01	2515.95	15.63	Si
SLV 12	179667	0.25	12933	-12279	161.01	2528.91	15.71	Si
SLV 5	179667	0.25	13120	-12458	161.01	2562.17	15.91	Si
SLV 6	179667	0.25	13193	-12527	161.01	2575.09	15.99	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-15733	-12579	815	0.69	2002.9	0.943	10.62596	4.45299	Si
SLV 7	-15561	-12595	817	0.696	1985.4	0.943	10.71913	4.45299	Si
SLV 12	-13827	-9059	772	0.764	1809.8	0.938	11.83117	4.45299	Si
SLV 11	-13655	-9075	774	0.771	1792.4	0.938	11.94901	4.45299	Si
SLV 4	-15550	-18856	220	0.729	1984.3	0.943	11.23385	3.37435	Si
SLV 3	-15280	-18881	223	0.739	1956.9	0.942	11.39174	3.37435	Si
SLV 2	-13445	-20719	-332	0.808	1771.2	0.937	12.52704	3.37435	Si
SLV 6	-8718	-18791	-1027	1.054	1294.6	0.92	16.65124	4.45299	Si
SLV 1	-13175	-20744	-329	0.821	1743.9	0.936	12.73583	3.37435	Si
SLV 5	-8546	-18807	-1025	1.069	1277.3	0.919	16.9088	4.45299	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.813	SLU 81	Si
V_SLU	15.257	SLU 68	Si
PF_SLV	3.298	SLV 15	Si
V_SLV	5.07	SLV 13	Si
PFFP_SLV	10.064	SLV 13	Si
R_SLV	2.386	SLV 8	Si

Maschio 10

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.313	-3.284	-21.543	-3.284	L2	L4	3.23	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	1.02	-19350.39	-44310	-0.0000925	0.0003743	0.0035	3.23	50133.61	58424.11	58424.11	3.02	No	Si
SLU 78	1.42	-11422.52	-42840	-0.0000726	0.0003743	0.0035	3.23	49157.29	57064.99	57064.99	5	No	Si
SLU 68	1.02	-17658.97	-38274	-0.0000807	0.0003743	0.0035	3.23	45825.48	52668.89	52668.89	2.98	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 68	1.42	-10618.98	-36804	-0.0000632	0.0003743	0.0035	3.23	44655.41	51215.32	51215.32	4.82	No	Si
SLU 76	1.02	-19296.39	-43291	-0.000091	0.0003743	0.0035	3.23	49462.04	57480.45	57480.45	2.98	No	Si
SLU 76	1.42	-11604.66	-41821	-0.0000717	0.0003743	0.0035	3.23	48453.02	56133.02	56133.02	4.84	No	Si
SLU 47	1.02	-15905.5	-33432	-0.0000705	0.0003743	0.0035	3.23	41794.59	47654.07	47654.07	3	No	Si
SLU 47	1.42	-9616.52	-31961	-0.0000551	0.0003743	0.0035	3.23	40469.1	46076.92	46076.92	4.79	No	Si
SLU 73	1.02	-19127.35	-42878	-0.0000901	0.0003743	0.0035	3.23	49183.4	57100.29	57100.29	2.99	No	Si
SLU 73	1.42	-11497.65	-41408	-0.000071	0.0003743	0.0035	3.23	48161.12	55757.6	55757.6	4.85	No	Si
SLU 84	1.02	-19741.4	-45735	-0.0000954	0.0003743	0.0035	3.23	51034.15	59700.21	59700.21	3.02	No	Si
SLU 84	1.42	-11648.92	-44264	-0.000075	0.0003743	0.0035	3.23	50103.55	58381.01	58381.01	5.01	No	Si
SLU 65	1.02	-17489.94	-37861	-0.0000797	0.0003743	0.0035	3.23	45501.61	52260.99	52260.99	2.99	No	Si
SLU 65	1.42	-10511.98	-36390	-0.0000625	0.0003743	0.0035	3.23	44318.28	50788.67	50788.67	4.83	No	Si
SLU 44	1.02	-15736.47	-33019	-0.0000697	0.0003743	0.0035	3.23	41427.07	47219.36	47219.36	3	No	Si
SLU 44	1.42	-9509.52	-31548	-0.0000544	0.0003743	0.0035	3.23	40088.31	45619.02	45619.02	4.8	No	Si
SLU 52	1.02	-17373.88	-38036	-0.0000797	0.0003743	0.0035	3.23	45639.12	52433.44	52433.44	3.02	No	Si
SLU 52	1.42	-10495.19	-36565	-0.0000627	0.0003743	0.0035	3.23	44461.41	50969.73	50969.73	4.86	No	Si
SLU 55	1.02	-17542.91	-38449	-0.0000806	0.0003743	0.0035	3.23	45961.42	52841.93	52841.93	3.01	No	Si
SLU 55	1.42	-10602.2	-36978	-0.0000634	0.0003743	0.0035	3.23	44796.96	51394.04	51394.04	4.85	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	1.02	-18432.66	-30106	-0.0000702	0.0005615	0.0035	3.23		46223.19	46223.19	2.51		Si
SLV 15	1.42	-5407.93	-29462	-0.0000423	0.0005615	0.0035	3.23		45389.55	45389.55	8.39		Si
SLV 5	1.02	-13824.84	-23518	-0.0000529	0.0005615	0.0035	3.23		37564.17	37564.17	2.72		Si
SLV 5	1.42	-12611.95	-21771	-0.0000484	0.0005615	0.0035	3.23		35214.03	35214.03	2.79		Si
SLV 16	1.02	-18291.23	-30366	-0.0000702	0.0005615	0.0035	3.23		46559.42	46559.42	2.55		Si
SLV 16	1.42	-5479.11	-29721	-0.0000428	0.0005615	0.0035	3.23		45724.96	45724.96	8.35		Si
SLV 9	1.02	-17477.96	-22359	-0.0000624	0.0005615	0.0035	3.23		36003	36003	2.06		Si
SLV 9	1.42	-12340.09	-20811	-0.0000468	0.0005615	0.0035	3.23		33913.31	33913.31	2.75		Si
SLV 6	1.02	-13734.52	-23684	-0.0000528	0.0005615	0.0035	3.23		37787.92	37787.92	2.75		Si
SLV 6	1.42	-12657.41	-21937	-0.0000486	0.0005615	0.0035	3.23		35437.07	35437.07	2.8		Si
SLD 13	1.02	-16002.81	-28262	-0.0000627	0.0005615	0.0035	3.23		43844.72	43844.72	2.74		Si
SLD 13	1.42	-7874.68	-27210	-0.0000448	0.0005615	0.0035	3.23		42497.15	42497.15	5.4		Si
SLD 14	1.02	-15942.1	-28373	-0.0000627	0.0005615	0.0035	3.23		43987.77	43987.77	2.76		Si
SLD 14	1.42	-7905.23	-27322	-0.000045	0.0005615	0.0035	3.23		42639.63	42639.63	5.39		Si
SLV 13	1.02	-19970.89	-25885	-0.0000719	0.0005615	0.0035	3.23		40760.98	40760.98	2.04		Si
SLV 13	1.42	-8455.06	-24931	-0.0000434	0.0005615	0.0035	3.23		39476.47	39476.47	4.67		Si
SLV 14	1.02	-19829.46	-26144	-0.0000715	0.0005615	0.0035	3.23		41103.11	41103.11	2.07		Si
SLV 14	1.42	-8526.25	-25190	-0.0000439	0.0005615	0.0035	3.23		39828.79	39828.79	4.67		Si
SLV 10	1.02	-17387.64	-22524	-0.0000621	0.0005615	0.0035	3.23		36225.75	36225.75	2.08		Si
SLV 10	1.42	-12385.55	-20977	-0.0000471	0.0005615	0.0035	3.23		34138.92	34138.92	2.76		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	1.02	-19181.35	-43897	-39020	-19677	3.23	3.23	-26845	10524	15296	33304	43524	8236	48601	No	2.47	Si
SLU 75	1.42	-11315.51	-42427	-37713	-19677	3.23	3.23	-25946	10404	15122	33304	43524	8236	48426	No	2.46	Si
SLU 78	1.02	-19350.39	-44310	-39387	-19832	3.23	3.23	-27098	10558	15345	33304	43524	8236	48650	No	2.45	Si
SLU 78	1.42	-11422.52	-42840	-38080	-19832	3.23	3.23	-26199	10438	15171	33304	43524	8236	48475	No	2.44	Si
SLU 83	1.02	-19356.3	-46174	-41044	-20699	3.23	3.23	-28238	10710	15566	33304	43524	8236	48871	No	2.36	Si
SLU 83	1.42	-11081.66	-44704	-39737	-20699	3.23	3.23	-27339	10590	15392	33304	43524	8236	48696	No	2.35	Si
SLU 84	1.02	-19741.4	-45735	-40653	-20243	3.23	3.23	-27969	10674	15514	33304	43524	8236	48818	No	2.41	Si
SLU 84	1.42	-11648.92	-44264	-39346	-20243	3.23	3.23	-27070	10554	15340	33304	43524	8236	48644	No	2.4	Si
SLU 82	1.02	-19572.37	-45321	-40286	-20088	3.23	3.23	-27716	10640	15465	33304	43524	8236	48770	No	2.43	Si
SLU 82	1.42	-11541.92	-43851	-38979	-20088	3.23	3.23	-26817	10520	15291	33304	43524	8236	48595	No	2.42	Si
SLU 77	1.02	-18965.28	-44750	-39778	-20287	3.23	3.23	-27367	10593	15397	33304	43524	8236	48702	No	2.4	Si
SLU 77	1.42	-10855.26	-43279	-38471	-20287	3.23	3.23	-26468	10473	15223	33304	43524	8236	48527	No	2.39	Si
SLU 74	1.02	-18796.25	-44337	-39411	-20132	3.23	3.23	-27114	10560	15349	33304	43524	8236	48653	No	2.42	Si
SLU 74	1.42	-10748.26	-42866	-38103	-20132	3.23	3.23	-26215	10440	15174	33304	43524	8236	48479	No	2.41	Si
SLU 81	1.02	-19187.26	-45761	-40677	-20544	3.23	3.23	-27985	10676	15517	33304	43524	8236	48822	No	2.38	Si
SLU 81	1.42	-10974.66	-44291	-39369	-20544	3.23	3.23	-27086	10556	15343	33304	43524	8236	48647	No	2.37	Si
SLU 80	1.02	-19208.68	-43997	-39109	-19700	3.23	3.23	-26907	10532	15308	33304	43524	8236	48613	No	2.47	Si
SLU 80	1.42	-11333.49	-42527	-37802	-19700	3.23	3.23	-26007	10412	15134	33304	43524	8236	48438	No	2.46	Si
SLU 79	1.02	-18823.58	-44437	-39500	-20156	3.23	3.23	-27176	10568	15360	33304	43524	8236	48665	No	2.41	Si
SLU 79	1.42	-10766.23	-42967	-38193	-20156	3.23	3.23	-26276	10448	15186	33304	43524	8236	48490	No	2.41	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	1.02	-18432.66	-30106	-26761	-30684	3.23	3.0082	-19955	14408	19504	33304	65286	8236	52808		1.72	Si
SLV 15	1.42	-5407.93	-29462	-26188	-30707	3.23	3.23	-18017	14020	20378	33304	65286	8236	53683		1.75	Si
SLV 14	1.02	-19829.46	-26144	-23239	-26491	3.23	2.5696	-20300	14477	16740	33304	65286	8236	50044		1.89	Si
SLV 14	1.42	-8526.25	-25190	-22391	-26194	3.23	3.23	-15405	13498	19619	33304	65286	8236	52923		2.02	Si
SLD 16	1.02	-15293.61	-30211	-26855	-20958	3.23	3.23	-18476	14112	20512	33304	65286	8236	53816		2.57	Si
SLD 16	1.42	-6600.13	-29293	-26038	-20968	3.23	3.23	-17914	13999	20348	33304	65286	8236	53653		2.56	Si
SLV 13	1.02	-19970.89	-25885	-23009	-27022	3.23	2.5304	-20408	14498	16509	33304	65286	8236	49813		1.84	Si
SLV 13	1.42	-8455.06	-24931	-22161	-26726	3.23	3.23	-15246	13466	19573	33304	65286	8236	52877		1.98	Si
SLD 15	1.02	-15354.32	-30100	-26756	-21186	3.23	3.23	-18408	14098	20492	33304	65286	8236	53796		2.54	Si
SLD 15	1.42	-6569.57	-29181	-25939	-21197	3.23	3.23	-17846	13986	20328	33304	65286	8236	53633		2.53	Si
SLV 12	1.02	-12260.22	-36596	-32530	-24356	3.23	3.23	-22380	14893	21647	33304	65286	8236	54951		2.26	Si
SLV 12	1.42	-2228.43	-36080	-32071	-24847	3.23	3.23	-22065	14830	21555	33304	65286	8236	54859		2.21	Si
SLV 16	1.02	-18291.23	-30366	-26992	-30153	3.23	3.0379	-19934	14403	19690	33304	65286	8236	52995		1.76	Si
SLV 16	1.42	-5479.11	-29721	-26419	-30176	3.23	3.23	-18176	14052	20424	33304	65286	8236	53729		1.78	Si
SLD 14	1.02	-15942.1	-28373	-25221	-19366	3.23	3.1594	-17896	13996	19898	33304	65286	8236	53203		2.75	Si
SLD 14	1.42	-7905.23	-27322	-24286	-19237	3.23	3.23	-16709	13758	19998	33304	65286	8236	53302		2.77	Si
SLV 11	1.02	-12350.54	-36430	-32382	-24695	3.23	3.23	-22279	14872	21617	33304	65286	8236	54921		2.22	Si
SLV 11	1.42	-2182.97	-35914	-31924	-25187	3.23	3.23	-21963	14809	21525	33304	65286	8236	54830		2.18	Si
SLD 13	1.02	-16002.81	-28262	-25122	-19594	3.23	3.1463	-17900	13997	19817	33304	65286	8236	53121		2.71	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 13	1.42	-7874.68	-27210	-24187	-19465	3.23	3.23	-16640	13745	19978	33304	65286	8236	53282		2.74	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.51 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.25	12313	-17898	246.47	3702.26	15.02	Si
SLV 10	179667	0.25	12368	-17976	246.47	3717.14	15.08	Si
SLV 13	179667	0.25	12474	-18132	246.47	3746.36	15.2	Si
SLV 14	179667	0.25	12559	-18255	246.47	3769.6	15.29	Si
SLV 5	179667	0.25	13481	-19594	246.47	4019.54	16.31	Si
SLV 6	179667	0.25	13535	-19673	246.47	4034.15	16.37	Si
SLV 15	179667	0.25	13793	-20048	246.47	4103.38	16.65	Si
SLV 16	179667	0.25	13878	-20171	246.47	4126.14	16.74	Si
SLV 1	179667	0.25	16365	-23787	246.47	4778.57	19.39	Si
SLV 2	179667	0.25	16450	-23911	246.47	4800.39	19.48	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-32981	-20571	997	0.548	3969.1	0.955	8.34708	4.45299	Si
SLV 7	-32789	-20575	1000	0.551	3949.7	0.955	8.38479	4.45299	Si
SLV 12	-32308	-17836	1201	0.552	3900.7	0.954	8.40106	4.45299	Si
SLV 11	-32117	-17840	1205	0.554	3881.3	0.954	8.43979	4.45299	Si
SLV 4	-28338	-23327	-219	0.641	3497.6	0.95	9.80551	3.37435	Si
SLV 3	-28039	-23333	-213	0.646	3467.2	0.949	9.89338	3.37435	Si
SLV 6	-17320	-19332	-1792	0.86	2381.7	0.93	13.43531	4.45299	Si
SLV 5	-17129	-19336	-1789	0.867	2362.4	0.93	13.55612	4.45299	Si
SLV 16	-26096	-14210	462	0.675	3270	0.946	10.36129	3.37435	Si
SLV 15	-25796	-14217	468	0.681	3239.6	0.946	10.45585	3.37435	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.979	SLU 76	Si
V_SLU	2.353	SLU 83	Si
PF_SLV	2.041	SLV 13	Si
V_SLV	1.721	SLV 15	Si
PFFP_SLV	15.021	SLV 9	Si
R_SLV	1.874	SLV 8	Si

Maschio 11

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.523	-3.284	-17.313	-3.284	L2	L4	0.79	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 75	1.02	2111.95	-24385	-0.0002331	0.0003743	0.0035	0.79	3142.68	4900.16	4900.16	2.32	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 75	1.42	1549.62	-23597	-0.0001954	0.0003743	0.0035	0.79	3244.06	4910.79	4910.79	3.17	No	Si
SLU 77	1.02	2121.06	-24558	-0.0002353	0.0003743	0.0035	0.79	3118.49	4897.82	4897.82	2.31	No	Si
SLU 77	1.42	1557.07	-23772	-0.0001972	0.0003743	0.0035	0.79	3222.72	4908.42	4908.42	3.15	No	Si
SLU 83	1.02	2186.77	-25366	-0.0002473	0.0003743	0.0035	0.79	2997.46	4884.57	4884.57	2.23	No	Si
SLU 83	1.42	1589.41	-24582	-0.0002059	0.0003743	0.0035	0.79	3115.14	4897.5	4897.5	3.08	No	Si
SLU 82	1.02	2177.66	-25192	-0.000245	0.0003743	0.0035	0.79	3024.71	4887.61	4887.61	2.24	No	Si
SLU 82	1.42	1581.96	-24407	-0.0002039	0.0003743	0.0035	0.79	3139.57	4899.85	4899.85	3.1	No	Si
SLU 76	1.02	2109.06	-24302	-0.0002322	0.0003743	0.0035	0.79	3153.98	4901.27	4901.27	2.32	No	Si
SLU 76	1.42	1534.86	-23493	-0.0001937	0.0003743	0.0035	0.79	3256.4	4912.19	4912.19	3.2	No	Si
SLU 78	1.02	2131.28	-24610	-0.0002364	0.0003743	0.0035	0.79	3111.23	4897.13	4897.13	2.3	No	Si
SLU 78	1.42	1562.58	-23816	-0.0001979	0.0003743	0.0035	0.79	3217.15	4907.82	4907.82	3.14	No	Si
SLU 80	1.02	2121.57	-24493	-0.0002347	0.0003743	0.0035	0.79	3127.73	4898.7	4898.7	2.31	No	Si
SLU 80	1.42	1544.14	-23683	-0.0001958	0.0003743	0.0035	0.79	3233.64	4909.62	4909.62	3.18	No	Si
SLU 84	1.02	2196.98	-25417	-0.0002485	0.0003743	0.0035	0.79	2989.29	4883.67	4883.67	2.22	No	Si
SLU 84	1.42	1594.92	-24627	-0.0002066	0.0003743	0.0035	0.79	3108.78	4896.89	4896.89	3.07	No	Si
SLU 79	1.02	2111.36	-24441	-0.0002337	0.0003743	0.0035	0.79	3134.86	4899.39	4899.39	2.32	No	Si
SLU 79	1.42	1538.63	-23638	-0.0001951	0.0003743	0.0035	0.79	3239.07	4910.23	4910.23	3.19	No	Si
SLU 81	1.02	2167.44	-25141	-0.0002439	0.0003743	0.0035	0.79	3032.62	4888.51	4888.51	2.26	No	Si
SLU 81	1.42	1576.45	-24362	-0.0002033	0.0003743	0.0035	0.79	3145.72	4900.45	4900.45	3.11	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	1.02	2132.99	-21163	-0.0001833	0.0005615	0.0035	0.79		5855.17	5855.17	2.75		Si
SLV 4	1.42	-579.59	-17520	-0.0001017	0.0005615	0.0035	0.79		5287.6	5287.6	9.12		Si
SLV 13	1.02	756.48	-12142	-0.0000809	0.0005615	0.0035	0.79		3992.64	3992.64	5.28		Si
SLV 13	1.42	2675.56	-14476	-0.0001755	0.0005615	0.0035	0.79		4523.96	4523.96	1.69		Si
SLV 14	1.02	810.05	-12331	-0.0000838	0.0005615	0.0035	0.79		4038.47	4038.47	4.99		Si
SLV 14	1.42	2624.79	-14508	-0.0001722	0.0005615	0.0035	0.79		4531.2	4531.2	1.73		Si
SLV 16	1.02	973.66	-13397	-0.000095	0.0005615	0.0035	0.79		4283	4283	4.4		Si
SLV 16	1.42	2362.74	-15122	-0.0001592	0.0005615	0.0035	0.79		4669.35	4669.35	1.98		Si
SLV 3	1.02	2079.41	-20974	-0.0001799	0.0005615	0.0035	0.79		5825.86	5825.86	2.8		Si
SLV 3	1.42	-528.82	-17488	-0.0000996	0.0005615	0.0035	0.79		5281.35	5281.35	9.99		Si
SLV 10	1.02	1015.26	-13770	-0.0000985	0.0005615	0.0035	0.79		4366.19	4366.19	4.3		Si
SLV 10	1.42	1909.89	-14626	-0.0001365	0.0005615	0.0035	0.79		4557.59	4557.59	2.39		Si
SLV 9	1.02	981.04	-13649	-0.0000966	0.0005615	0.0035	0.79		4339.28	4339.28	4.42		Si
SLV 9	1.42	1942.31	-14605	-0.0001377	0.0005615	0.0035	0.79		4552.96	4552.96	2.34		Si
SLD 13	1.02	1150.28	-14724	-0.0001084	0.0005615	0.0035	0.79		4579.84	4579.84	3.98		Si
SLD 13	1.42	1743.88	-15351	-0.0001341	0.0005615	0.0035	0.79		4721.12	4721.12	2.71		Si
SLV 15	1.02	920.09	-13209	-0.0000921	0.0005615	0.0035	0.79		4240.91	4240.91	4.61		Si
SLV 15	1.42	2413.5	-15089	-0.0001617	0.0005615	0.0035	0.79		4662.06	4662.06	1.93		Si
SLD 14	1.02	1173.28	-14806	-0.0001097	0.0005615	0.0035	0.79		4598.07	4598.07	3.92		Si
SLD 14	1.42	1722.09	-15365	-0.0001333	0.0005615	0.0035	0.79		4724.26	4724.26	2.74		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	1.02	2196.98	-25417	-22593	2680	0.79	0.79	-63554	10833	3851	33304	10645	2015	12660	No	4.72	Si
SLU 84	1.42	1594.92	-24627	-21891	1360	0.79	0.79	-61577	10833	3851	33304	10645	2015	12660	No	9.31	Si
SLU 62	1.02	1992.14	-23069	-20505	2560	0.79	0.79	-57680	10833	3851	33304	10645	2015	12660	No	4.95	Si
SLU 62	1.42	1390.44	-22154	-19692	1323	0.79	0.79	-55393	10833	3851	33304	10645	2015	12660	No	9.57	Si
SLU 61	1.02	1983.03	-22895	-20351	2544	0.79	0.79	-57246	10833	3851	33304	10645	2015	12660	No	4.98	Si
SLU 61	1.42	1383	-21979	-19537	1322	0.79	0.79	-54955	10833	3851	33304	10645	2015	12660	No	9.58	Si
SLU 78	1.02	2131.28	-24610	-21875	2546	0.79	0.79	-61534	10833	3851	33304	10645	2015	12660	No	4.97	Si
SLU 78	1.42	1562.58	-23816	-21170	1260	0.79	0.79	-59550	10833	3851	33304	10645	2015	12660	No	10.04	Si
SLU 63	1.02	2002.36	-23120	-20551	2573	0.79	0.79	-57809	10833	3851	33304	10645	2015	12660	No	4.92	Si
SLU 63	1.42	1395.96	-22199	-19732	1332	0.79	0.79	-55505	10833	3851	33304	10645	2015	12660	No	9.5	Si
SLU 79	1.02	2111.36	-24441	-21726	2549	0.79	0.79	-61113	10833	3851	33304	10645	2015	12660	No	4.97	Si
SLU 79	1.42	1538.63	-23638	-21011	1273	0.79	0.79	-59104	10833	3851	33304	10645	2015	12660	No	9.94	Si
SLU 80	1.02	2121.57	-24493	-21771	2562	0.79	0.79	-61241	10833	3851	33304	10645	2015	12660	No	4.94	Si
SLU 80	1.42	1544.14	-23683	-21051	1282	0.79	0.79	-59216	10833	3851	33304	10645	2015	12660	No	9.87	Si
SLU 81	1.02	2167.44	-25141	-22348	2637	0.79	0.79	-62862	10833	3851	33304	10645	2015	12660	No	4.8	Si
SLU 81	1.42	1576.45	-24362	-21655	1341	0.79	0.79	-60916	10833	3851	33304	10645	2015	12660	No	9.44	Si
SLU 83	1.02	2186.77	-25366	-22548	2666	0.79	0.79	-63425	10833	3851	33304	10645	2015	12660	No	4.75	Si
SLU 83	1.42	1589.41	-24582	-21851	1352	0.79	0.79	-61465	10833	3851	33304	10645	2015	12660	No	9.37	Si
SLU 82	1.02	2177.66	-25192	-22393	2651	0.79	0.79	-62991	10833	3851	33304	10645	2015	12660	No	4.78	Si
SLU 82	1.42	1581.96	-24407	-21695	1350	0.79	0.79	-61028	10833	3851	33304	10645	2015	12660	No	9.38	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	1.02	1874.21	-19535	-17364	4338	0.79	0.79	-48845	16250	5777	33304	15968	2015	17982		4.15	Si
SLV 7	1.42	186.08	-17370	-15440	3360	0.79	0.79	-43433	16250	5777	33304	15968	2015	17982		5.35	Si
SLV 13	1.02	756.48	-12142	-10793	-4590	0.79	0.79	-30360	16250	5777	33304	15968	2015	17982		3.92	Si
SLV 13	1.42	2675.56	-14476	-12867	-4136	0.79	0.6305	-36195	16250	4611	33304	15968	2015	17982		4.35	Si
SLV 3	1.02	2079.41	-20974	-18644	7798	0.79	0.79	-52443	16250	5777	33304	15968	2015	17982		2.31	Si
SLV 3	1.42	-528.82	-17488	-15545	5627	0.79	0.79	-43726	16250	5777	33304	15968	2015	17982		3.2	Si
SLV 1	1.02	1915.8	-19907	-17695	7250	0.79	0.79	-49776	16250	5777	33304	15968	2015	17982		2.48	Si
SLV 1	1.42	-266.76	-16874	-14999	4895	0.79	0.79	-42192	16250	5777	33304	15968	2015	17982		3.67	Si
SLD 4	1.02	1739.18	-18580	-16516	4427	0.79	0.79	-46458	16250	5777	33304	15968	2015	17982		4.06	Si
SLD 4	1.42	352.09	-16645	-14796	2992	0.79	0.79	-41619	16250	5777	33304	15968	2015	17982		6.01	Si
SLV 14	1.02	810.05	-12331	-10961	-4346	0.79	0.79	-30832	16250	5777	33304	15968	2015	17982		4.14	Si
SLV 14	1.42	2624.79	-14508	-12896	-3912	0.79	0.6422	-36276	16250	4696	33304	15968	2015	17982		4.6	Si
SLV 8	1.02	1908.42	-19655	-17472	4494	0.79	0.79	-49146	16250	5777	33304	15968	2015	17982		4	Si
SLV 8	1.42	153.66	-17391	-15459	3502	0.79	0.79	-43484	16250	5777	33304	15968	2015	17982		5.13	Si
SLV 4	1.02	2132.99	-21163	-18811	8042	0.79	0.79	-52915	16250	5777	33304	15968	2015	17982		2.24	Si
SLV 4	1.42	-579.59	-17520	-15573	5850	0.79	0.79	-43807	16250	5777	33304	15968	2015	17982		3.07	Si
SLV 2	1.02	1969.37	-20096	-17863	7494	0.79	0.79	-50248	16250	5777	33304	15968	2015	17982		2.4	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	1.42	-317.53	-16906	-15028	5119	0.79	0.79	-42272	16250	5777	33304	15968	2015	17982		3.51	Si
SLD 3	1.02	1716.19	-18499	-16444	4322	0.79	0.79	-46255	16250	5777	33304	15968	2015	17982		4.16	Si
SLD 3	1.42	373.88	-16631	-14783	2896	0.79	0.79	-41584	16250	5777	33304	15968	2015	17982		6.21	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.51 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.25	36671	-13036	60.28	2228.88	36.97	Si
SLV 14	179667	0.25	36931	-13129	60.28	2239.66	37.15	Si
SLV 15	179667	0.25	38683	-13752	60.28	2310.4	38.33	Si
SLV 16	179667	0.25	38943	-13844	60.28	2320.64	38.5	Si
SLV 9	179667	0.25	39417	-14013	60.28	2339.1	38.8	Si
SLV 10	179667	0.25	39583	-14072	60.28	2345.52	38.91	Si
SLV 5	179667	0.25	43743	-15551	60.28	2496.7	41.42	Si
SLV 6	179667	0.25	43909	-15610	60.28	2502.36	41.51	Si
SLV 11	179667	0.25	46124	-16397	60.28	2575.07	42.72	Si
SLV 12	179667	0.25	46290	-16456	60.28	2580.32	42.8	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-8649	-23772	-5	0.545	1029.9	0.957	8.2696	4.45299	Si
SLV 7	-8643	-23734	-4	0.545	1029.4	0.957	8.27506	4.45299	Si
SLV 12	-8196	-24736	26	0.566	983.9	0.955	8.60274	4.45299	Si
SLV 11	-8190	-24698	27	0.566	983.3	0.955	8.60586	4.45299	Si
SLV 6	-7450	-20678	-252	0.582	908.1	0.952	8.88571	4.45299	Si
SLV 5	-7445	-20640	-251	0.583	907.6	0.952	8.89238	4.45299	Si
SLV 10	-6997	-21642	-221	0.615	862.1	0.95	9.40759	4.45299	Si
SLV 9	-6992	-21605	-220	0.615	861.6	0.95	9.41502	4.45299	Si
SLV 4	-8759	-21574	-127	0.527	1041.2	0.958	7.99319	3.37435	Si
SLV 3	-8751	-21515	-126	0.527	1040.3	0.958	8.0014	3.37435	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.223	SLU 84	Si
V_SLU	4.724	SLU 84	Si
PF_SLV	1.691	SLV 13	Si
V_SLV	2.236	SLV 4	Si
PFFP_SLV	36.974	SLV 13	Si
R_SLV	1.857	SLV 8	Si

Maschio 13

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.498	1.046	-18.498	-3.284	L2	L4	4.33	0.3	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	-0.98	26630.72	-92335	-0.0001604	0.0004492	0.0035	4.33	83612.14	138000.81	138000.81	5.18	No	Si
SLU 81	2	3616.62	-47501	-0.0000588	0.0004492	0.0035	4.33	72062.85	86187.4	86187.4	23.83	No	Si
SLU 83	-0.98	26841.89	-93054	-0.0001619	0.0004492	0.0035	4.33	83350.45	138600.04	138600.04	5.16	No	Si
SLU 83	2	3690.58	-47948	-0.0000594	0.0004492	0.0035	4.33	72448.16	86885.32	86885.32	23.54	No	Si
SLU 80	-0.98	25942.94	-90192	-0.0001557	0.0004492	0.0035	4.33	84307.83	136216.26	136216.26	5.25	No	Si
SLU 80	2	3817.68	-46501	-0.0000579	0.0004492	0.0035	4.33	71179.65	84623.44	84623.44	22.17	No	Si
SLU 78	-0.98	26112.03	-90706	-0.0001568	0.0004492	0.0035	4.33	84152.51	136643.96	136643.96	5.23	No	Si
SLU 78	2	3805.62	-46850	-0.0000583	0.0004492	0.0035	4.33	71490.98	85169.25	85169.25	22.38	No	Si
SLU 75	-0.98	25900.85	-89986	-0.0001553	0.0004492	0.0035	4.33	84368.1	136044.73	136044.73	5.25	No	Si
SLU 75	2	3731.66	-46404	-0.0000576	0.0004492	0.0035	4.33	71092.3	84471.33	84471.33	22.64	No	Si
SLU 77	-0.98	26015.26	-90766	-0.0001567	0.0004492	0.0035	4.33	84133.78	136694.22	136694.22	5.25	No	Si
SLU 77	2	3783.88	-46739	-0.0000581	0.0004492	0.0035	4.33	71392.23	84995.5	84995.5	22.46	No	Si
SLU 79	-0.98	25846.17	-90252	-0.0001556	0.0004492	0.0035	4.33	84289.95	136266.51	136266.51	5.27	No	Si
SLU 79	2	3795.95	-46390	-0.0000577	0.0004492	0.0035	4.33	71079.84	84449.69	84449.69	22.25	No	Si
SLU 76	-0.98	25796.27	-89432	-0.0001543	0.0004492	0.0035	4.33	84524.42	135583.52	135583.52	5.26	No	Si
SLU 76	2	3758.21	-46128	-0.0000574	0.0004492	0.0035	4.33	70843.97	84041.36	84041.36	22.36	No	Si
SLU 82	-0.98	26727.48	-92274	-0.0001605	0.0004492	0.0035	4.33	83633.45	137950.56	137950.56	5.16	No	Si
SLU 82	2	3638.35	-47612	-0.0000589	0.0004492	0.0035	4.33	72159.28	86361.15	86361.15	23.74	No	Si
SLU 84	-0.98	26938.65	-92994	-0.000162	0.0004492	0.0035	4.33	83372.94	138549.79	138549.79	5.14	No	Si
SLU 84	2	3712.31	-48059	-0.0000596	0.0004492	0.0035	4.33	72543.24	87059.07	87059.07	23.45	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	-0.98	30678.31	-64763	-0.000122	0.0006738	0.0035	4.33		116923.47	116923.47	3.81		Si
SLV 6	2	-7937.3	-32985	-0.0000478	0.0006738	0.0035	4.33		75305.85	75305.85	9.49		Si
SLV 14	-0.98	19934.45	-48281	-0.0000844	0.0006738	0.0035	4.33		90890.37	90890.37	4.56		Si
SLV 14	2	1678.58	-28944	-0.0000337	0.0006738	0.0035	4.33		59248.45	59248.45	35.3		Si
SLV 12	-0.98	3914.14	-60660	-0.0000733	0.0006738	0.0035	4.33		110442.02	110442.02	28.22		Si
SLV 12	2	14099.88	-30475	-0.0000545	0.0006738	0.0035	4.33		62039.56	62039.56	4.4		Si
SLD 10	-0.98	23065.87	-59997	-0.0001035	0.0006738	0.0035	4.33		109395.87	109395.87	4.74		Si
SLD 10	2	-1496.72	-31530	-0.0000363	0.0006738	0.0035	4.33		72741.26	72741.26	48.6		Si
SLV 11	-0.98	4599.82	-60549	-0.0000742	0.0006738	0.0035	4.33		110266.72	110266.72	23.97		Si
SLV 11	2	13592.98	-30476	-0.0000537	0.0006738	0.0035	4.33		62041.42	62041.42	4.56		Si
SLD 9	-0.98	23364.96	-59949	-0.000104	0.0006738	0.0035	4.33		109319.4	109319.4	4.68		Si
SLD 9	2	-1717.83	-31530	-0.0000366	0.0006738	0.0035	4.33		72742.07	72742.07	42.35		Si
SLV 10	-0.98	30027.45	-56464	-0.0001106	0.0006738	0.0035	4.33		103814.74	103814.74	3.46		Si
SLV 10	2	-6968.79	-31245	-0.0000444	0.0006738	0.0035	4.33		72221.02	72221.02	10.36		Si
SLV 13	-0.98	21008.12	-48107	-0.0000859	0.0006738	0.0035	4.33		90615.88	90615.88	4.31		Si
SLV 13	2	884.85	-28945	-0.0000325	0.0006738	0.0035	4.33		59251.35	59251.35	66.96		Si
SLV 5	-0.98	31363.99	-64652	-0.000123	0.0006738	0.0035	4.33		116748.17	116748.17	3.72		Si
SLV 5	2	-8444.2	-32986	-0.0000486	0.0006738	0.0035	4.33		75307.61	75307.61	8.92		Si
SLV 9	-0.98	30713.13	-56353	-0.0001116	0.0006738	0.0035	4.33		103639.44	103639.44	3.37		Si
SLV 9	2	-7475.69	-31246	-0.0000452	0.0006738	0.0035	4.33		72222.88	72222.88	9.66		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 58	-0.98	23315.89	-82565	-60047	-6394	4.33	4.33	-46226	10833	14073	95155	46683	22083	68766	No	10.75	Si
SLU 58	2	3733.23	-41815	-30411	-5922	4.33	4.33	-23411	10833	14073	95155	46683	22083	68766	No	11.61	Si
SLU 69	-0.98	23199.18	-82550	-60036	-6360	4.33	4.33	-46217	10833	14073	95155	46683	22083	68766	No	10.81	Si
SLU 69	2	3857.19	-42062	-30590	-5876	4.33	4.33	-23549	10833	14073	95155	46683	22083	68766	No	11.7	Si
SLU 71	-0.98	23030.09	-82037	-59663	-6402	4.33	4.33	-45930	10833	14073	95155	46683	22083	68766	No	10.74	Si
SLU 71	2	3869.26	-41712	-30336	-5925	4.33	4.33	-23354	10833	14073	95155	46683	22083	68766	No	11.61	Si
SLU 50	-0.98	20499.81	-74349	-54072	-6426	4.33	4.33	-41626	10833	14073	95155	46683	22083	68766	No	10.7	Si
SLU 50	2	3806.53	-37137	-27009	-6017	4.33	4.33	-20792	10833	14073	95155	46683	22083	68766	No	11.43	Si
SLU 56	-0.98	23484.98	-83079	-60421	-6353	4.33	4.33	-46513	10833	14073	95155	46683	22083	68766	No	10.82	Si
SLU 56	2	3721.16	-42164	-30665	-5873	4.33	4.33	-23606	10833	14073	95155	46683	22083	68766	No	11.71	Si
SLU 79	-0.98	25846.17	-90252	-65638	-6371	4.33	4.33	-50530	10833	14073	95155	46683	22083	68766	No	10.79	Si
SLU 79	2	3795.95	-46390	-33738	-5830	4.33	4.33	-25972	10833	14073	95155	46683	22083	68766	No	11.79	Si
SLU 48	-0.98	20668.9	-74863	-54446	-6384	4.33	4.33	-41914	10833	14073	95155	46683	22083	68766	No	10.77	Si
SLU 48	2	3794.47	-37487	-27263	-5968	4.33	4.33	-20988	10833	14073	95155	46683	22083	68766	No	11.52	Si
SLU 62	-0.98	24311.61	-85367	-62085	-6299	4.33	4.33	-47794	10833	14073	95155	46683	22083	68766	No	10.92	Si
SLU 62	2	3627.85	-43373	-31544	-5806	4.33	4.33	-24283	10833	14073	95155	46683	22083	68766	No	11.84	Si
SLU 77	-0.98	26015.26	-90766	-66012	-6329	4.33	4.33	-50817	10833	14073	95155	46683	22083	68766	No	10.87	Si
SLU 77	2	3783.88	-46739	-33992	-5781	4.33	4.33	-26168	10833	14073	95155	46683	22083	68766	No	11.89	Si
SLU 45	-0.98	20457.73	-74143	-53923	-6302	4.33	4.33	-41511	10833	14073	95155	46683	22083	68766	No	10.91	Si
SLU 45	2	3720.51	-37040	-26938	-5893	4.33	4.33	-20738	10833	14073	95155	46683	22083	68766	No	11.67	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 8	-0.98	11913.17	-65363	-47537	-14112	4.33	4.33	-36595	16250	21109	95155	70024	22083	92107		6.53	Si
SLD 8	2	7373.51	-31931	-23222	-13134	4.33	4.33	-17877	16075	20882	95155	70024	22083	92107		7.01	Si
SLD 12	-0.98	11610.27	-61847	-44979	-14262	4.33	4.33	-34626	16250	21109	95155	70024	22083	92107		6.46	Si
SLD 12	2	7787.11	-31212	-22699	-13282	4.33	4.33	-17475	15995	20777	95155	70024	22083	92107		6.93	Si
SLV 5	-0.98	31363.99	-64652	-47020	16758	4.33	4.33	-36197	16250	21109	95155	70024	22083	92107		5.5	Si
SLV 5	2	-8444.2	-32986	-23990	15696	4.33	4.33	-18468	16194	21036	95155	70024	22083	92107		5.87	Si
SLV 11	-0.98	4599.82	-60549	-44036	-25344	4.33	4.33	-33900	16250	21109	95155	70024	22083	92107		3.63	Si
SLV 11	2	13592.98	-30476	-22164	-23560	4.33	4.33	-17062	15912	20670	95155	70024	22083	92107		3.91	Si
SLV 7	-0.98	5250.68	-68848	-50072	-25007	4.33	4.33	-38546	16250	21109	95155	70024	22083	92107		3.68	Si
SLV 7	2	12624.47	-32216	-23430	-23211	4.33	4.33	-18037	16107	20924	95155	70024	22083	92107		3.97	Si
SLV 8	-0.98	4565	-68959	-50152	-26011	4.33	4.33	-38608	16250	21109	95155	70024	22083	92107		3.54	Si
SLV 8	2	13131.37	-32215	-23429	-24218	4.33	4.33	-18037	16107	20923	95155	70024	22083	92107		3.8	Si
SLV 10	-0.98	30027.45	-56464	-41065	15416	4.33	4.33	-31612	16250	21109	95155	70024	22083	92107		5.97	Si
SLV 10	2	-6968.79	-31245	-22723	14342	4.33	4.33	-17493	15999	20782	95155	70024	22083	92107		6.42	Si
SLV 12	-0.98	3914.14	-60660	-44116	-26348	4.33	4.33	-33962	16250	21109	95155	70024	22083	92107		3.5	Si
SLV 12	2	14099.88	-30475	-22163	-24566	4.33	4.33	-17062	15912	20670	95155	70024	22083	92107		3.75	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	-0.98	30678.31	-64763	-47101	15753	4.33	4.33	-36259	16250	21109	95155	70024	22083	92107		5.85	Si
SLV 6	2	-7937.3	-32985	-23989	14690	4.33	4.33	-18468	16194	21035	95155	70024	22083	92107		6.27	Si
SLV 9	-0.98	30713.13	-56353	-40984	16420	4.33	4.33	-31550	16250	21109	95155	70024	22083	92107		5.61	Si
SLV 9	2	-7475.69	-31246	-22724	15348	4.33	4.33	-17493	15999	20782	95155	70024	22083	92107		6	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 0.51 Ta 0.05 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 13	-35647	0.25	220.27	4546.44	6337.61	5442.03	24.71	Si
SLV 14	-35671	0.25	220.27	4548.96	6341.34	5445.15	24.72	Si
SLV 15	-35769	0.25	220.27	4559.27	6356.61	5457.94	24.78	Si
SLV 16	-35793	0.25	220.27	4561.79	6360.34	5461.06	24.79	Si
SLV 9	-43139	0.25	220.27	5298.4	7498.57	6398.48	29.05	Si
SLV 10	-43155	0.25	220.27	5299.86	7500.92	6400.39	29.06	Si
SLV 11	-43547	0.25	220.27	5337.26	7560.89	6449.08	29.28	Si
SLV 12	-43562	0.25	220.27	5338.71	7563.24	6450.98	29.29	Si
SLV 5	-49680	0.25	220.27	5897	8499.65	7198.32	32.68	Si
SLV 6	-49695	0.25	220.27	5898.33	8501.99	7200.16	32.69	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.05 Ta = 0.0494

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-32986	-64652	588	0.706	3904.1	0.959	10.70224	6.19867	Si
SLV 6	-32985	-64763	588	0.706	3904	0.959	10.70263	6.19867	Si
SLV 7	-32216	-68848	611	0.719	3825.9	0.958	10.91576	6.19867	Si
SLV 8	-32215	-68959	611	0.719	3825.8	0.958	10.91616	6.19867	Si
SLV 9	-31246	-56353	-7	0.756	3727.2	0.957	11.47554	6.19867	Si
SLV 10	-31245	-56464	-7	0.756	3727.1	0.957	11.47576	6.19867	Si
SLV 11	-30476	-60549	16	0.771	3648.9	0.956	11.72451	6.19867	Si
SLV 12	-30475	-60660	16	0.771	3648.8	0.956	11.72495	6.19867	Si
SLV 1	-34748	-75772	1291	0.657	4083.3	0.96	9.94866	3.99966	Si
SLV 2	-34747	-75946	1290	0.657	4083.2	0.96	9.9492	3.99966	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.143	SLU 84	Si
V_SLU	10.702	SLU 50	Si
PF_SLV	3.374	SLV 9	Si
V_SLV	3.496	SLV 12	Si
PFFP_SLV	24.706	SLV 13	Si
R_SLV	1.727	SLV 5	Si

Maschio 14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.693	6.576	-17.768	6.576	L2	L4	1.925	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	1.02	1232.52	-19113	-0.0000422	0.0003743	0.0035	1.925	14409.53	15513.12	15513.12	12.59	No	Si
SLU 84	1.42	-3940.46	-18206	-0.0000566	0.0003743	0.0035	1.925	13905.76	15809.47	15809.47	4.01	No	Si
SLU 75	1.02	1181.81	-18461	-0.0000406	0.0003743	0.0035	1.925	14049.44	15023.68	15023.68	12.71	No	Si
SLU 75	1.42	-3808.42	-17554	-0.0000544	0.0003743	0.0035	1.925	13532.76	15371.35	15371.35	4.04	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	1.02	1236.74	-19095	-0.0000422	0.0003743	0.0035	1.925	14399.48	15499.24	15499.24	12.53	No	Si
SLU 83	1.42	-3934.13	-18187	-0.0000565	0.0003743	0.0035	1.925	13895.34	15797.03	15797.03	4.02	No	Si
SLU 82	1.02	1214.54	-18929	-0.0000417	0.0003743	0.0035	1.925	14308.74	15374.53	15374.53	12.66	No	Si
SLU 82	1.42	-3896.55	-18022	-0.0000559	0.0003743	0.0035	1.925	13801.32	15685.29	15685.29	4.03	No	Si
SLU 77	1.02	1204.01	-18627	-0.0000411	0.0003743	0.0035	1.925	14141.88	15147.83	15147.83	12.58	No	Si
SLU 77	1.42	-3846	-17720	-0.000055	0.0003743	0.0035	1.925	13628.48	15482.37	15482.37	4.03	No	Si
SLU 80	1.02	1190.3	-18491	-0.0000407	0.0003743	0.0035	1.925	14066.18	15046.08	15046.08	12.64	No	Si
SLU 80	1.42	-3830.4	-17584	-0.0000546	0.0003743	0.0035	1.925	13550.09	15391.38	15391.38	4.02	No	Si
SLU 81	1.02	1218.75	-18910	-0.0000417	0.0003743	0.0035	1.925	14298.61	15360.67	15360.67	12.6	No	Si
SLU 81	1.42	-3890.22	-18003	-0.0000558	0.0003743	0.0035	1.925	13790.83	15672.88	15672.88	4.03	No	Si
SLU 79	1.02	1194.51	-18473	-0.0000407	0.0003743	0.0035	1.925	14055.88	15032.29	15032.29	12.58	No	Si
SLU 79	1.42	-3824.07	-17565	-0.0000546	0.0003743	0.0035	1.925	13539.42	15379.05	15379.05	4.02	No	Si
SLU 76	1.02	1169.5	-18319	-0.0000403	0.0003743	0.0035	1.925	13969.8	14917.5	14917.5	12.76	No	Si
SLU 76	1.42	-3790.71	-17412	-0.000054	0.0003743	0.0035	1.925	13450.3	15276.47	15276.47	4.03	No	Si
SLU 78	1.02	1199.8	-18645	-0.0000411	0.0003743	0.0035	1.925	14152.12	15161.65	15161.65	12.64	No	Si
SLU 78	1.42	-3852.33	-17738	-0.0000551	0.0003743	0.0035	1.925	13639.09	15494.73	15494.73	4.02	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	1.02	4245.25	-12935	-0.0000469	0.0005615	0.0035	1.925		11672.94	11672.94	2.75		Si
SLV 13	1.42	-3483.55	-12350	-0.0000414	0.0005615	0.0035	1.925		12013.84	12013.84	3.45		Si
SLV 16	1.02	4138.5	-9071	-0.000041	0.0005615	0.0035	1.925		8434.26	8434.26	2.04		Si
SLV 16	1.42	-3984.55	-8247	-0.0000393	0.0005615	0.0035	1.925		8539.56	8539.56	2.14		Si
SLV 15	1.02	3926.7	-9189	-0.0000392	0.0005615	0.0035	1.925		8536.41	8536.41	2.17		Si
SLV 15	1.42	-3993.88	-8365	-0.0000394	0.0005615	0.0035	1.925		8643.01	8643.01	2.16		Si
SLD 12	1.02	1046.82	-9692	-0.0000229	0.0005615	0.0035	1.925		8965.5	8965.5	8.56		Si
SLD 12	1.42	-3115.13	-8824	-0.0000329	0.0005615	0.0035	1.925		9038.11	9038.11	2.9		Si
SLV 8	1.02	-689.44	-6813	-0.0000157	0.0005615	0.0035	1.925		7286.48	7286.48	10.57		Si
SLV 8	1.42	-3139.76	-5720	-0.0000314	0.0005615	0.0035	1.54		6327.64	6327.64	2.02		Si
SLD 11	1.02	987.82	-9725	-0.0000226	0.0005615	0.0035	1.925		8993.43	8993.43	9.1		Si
SLD 11	1.42	-3117.73	-8857	-0.000033	0.0005615	0.0035	1.925		9066.23	9066.23	2.91		Si
SLV 14	1.02	4457.05	-12817	-0.000048	0.0005615	0.0035	1.925		11576.75	11576.75	2.6		Si
SLV 14	1.42	-3474.22	-12232	-0.0000412	0.0005615	0.0035	1.925		11915.11	11915.11	3.43		Si
SLV 12	1.02	1349.65	-5847	-0.0000176	0.0005615	0.0035	1.925		5604.5	5604.5	4.15		Si
SLV 12	1.42	-3805.23	-4751	-0.0000669	0.0005615	0.0035	1.54		5457.39	5457.39	1.43		Si
SLV 11	1.02	1214.39	-5923	-0.000017	0.0005615	0.0035	1.925		5672.1	5672.1	4.67		Si
SLV 11	1.42	-3811.19	-4826	-0.0000637	0.0005615	0.0035	1.54		5525.38	5525.38	1.45		Si
SLV 7	1.02	-824.7	-6888	-0.0000166	0.0005615	0.0035	1.925		7351.96	7351.96	8.91		Si
SLV 7	1.42	-3145.72	-5795	-0.0000314	0.0005615	0.0035	1.54		6394.69	6394.69	2.03		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	1.02	1214.54	-18929	-16826	12828	1.925	1.925	-19424	9534	8259	33304	25939	4909	30848	No	2.4	Si
SLU 82	1.42	-3896.55	-18022	-16019	12828	1.925	1.925	-18493	9410	8152	33304	25939	4909	30848	No	2.4	Si
SLU 74	1.02	1186.03	-18443	-16394	12520	1.925	1.925	-18925	9468	8201	33304	25939	4909	30848	No	2.46	Si
SLU 74	1.42	-3802.09	-17535	-15587	12520	1.925	1.925	-17994	9344	8094	33304	25939	4909	30848	No	2.46	Si
SLU 79	1.02	1194.51	-18473	-16420	12596	1.925	1.925	-18956	9472	8205	33304	25939	4909	30848	No	2.45	Si
SLU 79	1.42	-3824.07	-17565	-15614	12596	1.925	1.925	-18024	9348	8097	33304	25939	4909	30848	No	2.45	Si
SLU 83	1.02	1236.74	-19095	-16973	12977	1.925	1.925	-19594	9557	8279	33304	25939	4909	30848	No	2.38	Si
SLU 83	1.42	-3934.13	-18187	-16166	12977	1.925	1.925	-18663	9433	8171	33304	25939	4909	30848	No	2.38	Si
SLU 78	1.02	1199.8	-18645	-16574	12680	1.925	1.925	-19133	9495	8225	33304	25939	4909	30848	No	2.43	Si
SLU 78	1.42	-3852.33	-17738	-15767	12680	1.925	1.925	-18202	9371	8118	33304	25939	4909	30848	No	2.43	Si
SLU 84	1.02	1232.52	-19113	-16989	12982	1.925	1.925	-19613	9559	8281	33304	25939	4909	30848	No	2.38	Si
SLU 84	1.42	-3940.46	-18206	-16183	12982	1.925	1.925	-18682	9435	8173	33304	25939	4909	30848	No	2.38	Si
SLU 81	1.02	1218.75	-18910	-16809	12822	1.925	1.925	-19405	9532	8257	33304	25939	4909	30848	No	2.41	Si
SLU 81	1.42	-3890.22	-18003	-16003	12822	1.925	1.925	-18474	9408	8149	33304	25939	4909	30848	No	2.41	Si
SLU 75	1.02	1181.81	-18461	-16410	12525	1.925	1.925	-18944	9470	8204	33304	25939	4909	30848	No	2.46	Si
SLU 75	1.42	-3808.42	-17554	-15603	12525	1.925	1.925	-18013	9346	8096	33304	25939	4909	30848	No	2.46	Si
SLU 80	1.02	1190.3	-18491	-16437	12602	1.925	1.925	-18974	9474	8207	33304	25939	4909	30848	No	2.45	Si
SLU 80	1.42	-3830.4	-17584	-15630	12602	1.925	1.925	-18043	9350	8100	33304	25939	4909	30848	No	2.45	Si
SLU 77	1.02	1204.01	-18627	-16557	12675	1.925	1.925	-19114	9493	8223	33304	25939	4909	30848	No	2.43	Si
SLU 77	1.42	-3846	-17720	-15751	12675	1.925	1.925	-18183	9369	8116	33304	25939	4909	30848	No	2.43	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	1.02	4245.25	-12935	-11498	19384	1.925	1.9029	-13273	13071	11193	33304	38909	4909	43818		2.26	Si
SLV 13	1.42	-3483.55	-12350	-10978	19143	1.925	1.925	-12672	12951	11219	33304	38909	4909	43818		2.29	Si
SLV 11	1.02	1214.39	-5923	-5265	12290	1.925	1.925	-6077	11632	10076	33304	38909	4909	43381		3.53	Si
SLV 11	1.42	-3811.19	-4826	-4290	12639	1.54	0.5185	0	0	0	33304	31127	3927	33304		2.64	Si
SLV 15	1.02	3926.7	-9189	-8168	19687	1.925	1.6055	-9429	12302	8888	33304	38909	4909	42192		2.14	Si
SLV 15	1.42	-3993.88	-8365	-7436	19678	1.925	1.4552	-11417	12700	8317	33304	38909	4909	41621		2.12	Si
SLD 13	1.02	2263.2	-12758	-11341	13200	1.925	1.925	-13092	13035	11292	33304	38909	4909	43818		3.32	Si
SLD 13	1.42	-2996.98	-12109	-10763	13096	1.925	1.925	-12425	12902	11176	33304	38909	4909	43818		3.35	Si
SLV 16	1.02	4138.5	-9071	-8063	20193	1.925	1.5188	-9308	12278	8391	33304	38909	4909	41696		2.06	Si
SLV 16	1.42	-3984.55	-8247	-7331	20184	1.925	1.4381	-11389	12695	8215	33304	38909	4909	41520		2.06	Si
SLV 12	1.02	1349.65	-5847	-5198	12613	1.925	1.925	-6000	11617	10063	33304	38909	4909	43367		3.44	Si
SLV 12	1.42	-3805.23	-4751	-4223	12962	1.54	0.4847	0	0	0	33304	31127	3927	33304		2.57	Si
SLD 14	1.02	2354.11	-12708	-11296	13417	1.925	1.925	-13040	13025	11283	33304	38909	4909	43818		3.27	Si
SLD 14	1.42	-2992.97	-12058	-10718	13313	1.925	1.925	-12373	12891	11167	33304	38909	4909	43818		3.29	Si
SLD 16	1.02	2227.15	-11090	-9857	13545	1.925	1.925	-11379	12693	10995	33304	38909	4909	43818		3.24	Si
SLD 16	1.42	-3202.42	-10338	-9189	13542	1.925	1.925	-10608	12538	10861	33304	38909	4909	43818		3.24	Si
SLD 15	1.02	2136.23	-11140	-9902	13328	1.925	1.925	-11431	12703	11004	33304	38909	4909	43818		3.29	Si
SLD 15	1.42	-3206.42	-10389	-9234	13324	1.925	1.925	-10660	12549	10870	33304	38909	4909	43818		3.29	Si
SLV 14	1.02	4457.05	-12817	-11393	19890	1.925	1.8443	-13152	13047	10828	33304	38909	4909	43818		2.2	Si
SLV 14	1.42	-3474.22	-12232	-10873	19649	1.925	1.925	-12551	12927	11198	33304	38909	4909	43818		2.23	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.51 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.25	5885	-5098	146.89	1102.86	7.51	Si
SLV 11	179667	0.25	5911	-5120	146.89	1107.41	7.54	Si
SLV 8	179667	0.25	6261	-5424	146.89	1170.36	7.97	Si
SLV 7	179667	0.25	6287	-5446	146.89	1174.89	8	Si
SLV 16	179667	0.25	8119	-7033	146.89	1498.32	10.2	Si
SLV 15	179667	0.25	8159	-7067	146.89	1505.22	10.25	Si
SLV 4	179667	0.25	9373	-8119	146.89	1714.76	11.67	Si
SLV 3	179667	0.25	9413	-8154	146.89	1721.53	11.72	Si
SLV 14	179667	0.25	10416	-9023	146.89	1891.7	12.88	Si
SLV 13	179667	0.25	10456	-9057	146.89	1898.36	12.92	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-18747	-2585	1349	0.533	2273.2	0.953	8.12605	4.45299	Si
SLV 6	-18679	-2647	1347	0.535	2266.3	0.953	8.15103	4.45299	Si
SLV 9	-17870	-2403	1346	0.553	2184.1	0.952	8.44597	4.45299	Si
SLV 10	-17802	-2465	1344	0.555	2177.2	0.951	8.47319	4.45299	Si
SLV 1	-14646	-3479	706	0.681	1856.9	0.944	10.48825	3.37435	Si
SLV 2	-14539	-3576	704	0.685	1846.1	0.944	10.55288	3.37435	Si
SLV 13	-11721	-2873	698	0.808	1560.7	0.935	12.55671	3.37435	Si
SLV 14	-11614	-2970	695	0.814	1549.9	0.935	12.65191	3.37435	Si
SLV 3	-10236	-4079	153	0.938	1410.7	0.93	14.66312	3.37435	Si
SLV 4	-10129	-4177	150	0.946	1400	0.929	14.78892	3.37435	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.012	SLU 84	Si
V_SLU	2.376	SLU 84	Si
PF_SLV	1.434	SLV 12	Si
V_SLV	2.057	SLV 16	Si
PFFP_SLV	7.508	SLV 12	Si
R_SLV	1.825	SLV 5	Si

Maschio 15

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-17.053	-4.784	-17.053	-3.284	L2	L4	1.5	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	-0.98	9075.55	-14920	-0.0002612	0.0003743	0.0035	1.5	8760.48	17621.44	17621.44	1.94	No	Si
SLU 78	2	713.97	-6891	-0.0000223	0.0003743	0.0035	1.5	4650.3	14524.58	14524.58	20.34	No	Si
SLU 74	-0.98	8995.25	-14777	-0.0002583	0.0003743	0.0035	1.5	8699.85	17574.67	17574.67	1.95	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 74	2	695.41	-6805	-0.0000219	0.0003743	0.0035	1.5	4598.4	14484.41	14484.41	20.83	No	Si
SLU 79	-0.98	9041.61	-14842	-0.0002605	0.0003743	0.0035	1.5	8727.38	17595.89	17595.89	1.95	No	Si
SLU 79	2	683	-6835	-0.0000219	0.0003743	0.0035	1.5	4616.18	14498.18	14498.18	21.23	No	Si
SLU 75	-0.98	8997.34	-14794	-0.0002579	0.0003743	0.0035	1.5	8706.86	17580.07	17580.07	1.95	No	Si
SLU 75	2	704.47	-6825	-0.0000221	0.0003743	0.0035	1.5	4610.5	14493.78	14493.78	20.57	No	Si
SLU 82	-0.98	9228.01	-15214	-0.0002661	0.0003743	0.0035	1.5	8884.44	17717.51	17717.51	1.92	No	Si
SLU 82	2	772.83	-7034	-0.0000232	0.0003743	0.0035	1.5	4735.33	14590.35	14590.35	18.88	No	Si
SLU 77	-0.98	9073.46	-14903	-0.0002616	0.0003743	0.0035	1.5	8753.52	17616.06	17616.06	1.94	No	Si
SLU 77	2	704.91	-6871	-0.0000222	0.0003743	0.0035	1.5	4638.23	14515.24	14515.24	20.59	No	Si
SLU 83	-0.98	9304.13	-15324	-0.0002698	0.0003743	0.0035	1.5	8930.09	17753.04	17753.04	1.91	No	Si
SLU 83	2	773.27	-7080	-0.0000233	0.0003743	0.0035	1.5	4762.85	14611.61	14611.61	18.9	No	Si
SLU 81	-0.98	9225.92	-15198	-0.0002664	0.0003743	0.0035	1.5	8877.58	17712.18	17712.18	1.92	No	Si
SLU 81	2	763.77	-7014	-0.000023	0.0003743	0.0035	1.5	4723.33	14581.06	14581.06	19.09	No	Si
SLU 84	-0.98	9306.22	-15340	-0.0002695	0.0003743	0.0035	1.5	8936.9	17758.35	17758.35	1.91	No	Si
SLU 84	2	782.33	-7100	-0.0000234	0.0003743	0.0035	1.5	4774.83	14620.87	14620.87	18.69	No	Si
SLU 80	-0.98	9043.7	-14858	-0.0002602	0.0003743	0.0035	1.5	8734.36	17601.28	17601.28	1.95	No	Si
SLU 80	2	692.06	-6855	-0.000022	0.0003743	0.0035	1.5	4628.26	14507.53	14507.53	20.96	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	-0.98	7877.64	-12460	-0.0002114	0.0005615	0.0035	1.5		18782.73	18782.73	2.38		Si
SLV 3	2	-1318.56	-5011	-0.0000232	0.0005615	0.0035	1.5		14938.94	14938.94	11.33		Si
SLV 8	-0.98	7744.99	-11011	-0.000252	0.0005615	0.0035	1.5		18141.81	18141.81	2.34		Si
SLV 8	2	-923.67	-4924	-0.0000194	0.0005615	0.0035	1.5		14881.5	14881.5	16.11		Si
SLV 2	-0.98	7412.1	-12496	-0.0001767	0.0005615	0.0035	1.5		18798.25	18798.25	2.54		Si
SLV 2	2	-957.26	-4905	-0.0000197	0.0005615	0.0035	1.5		14869.45	14869.45	15.53		Si
SLV 7	-0.98	7660.93	-10968	-0.0002457	0.0005615	0.0035	1.5		18122.39	18122.39	2.37		Si
SLV 7	2	-853.68	-4924	-0.0000188	0.0005615	0.0035	1.5		14881.42	14881.42	17.43		Si
SLV 1	-0.98	7280.48	-12429	-0.0001697	0.0005615	0.0035	1.5		18769.26	18769.26	2.58		Si
SLV 1	2	-847.66	-4905	-0.0000187	0.0005615	0.0035	1.5		14869.32	14869.32	17.54		Si
SLD 8	-0.98	6930.96	-10588	-0.0001944	0.0005615	0.0035	1.5		17948.84	17948.84	2.59		Si
SLD 8	2	-201.82	-4771	-0.0000126	0.0005615	0.0035	1.5		14780.09	14780.09	73.24		Si
SLV 11	-0.98	6857.63	-9648	-0.0002231	0.0005615	0.0035	1.5		17508.96	17508.96	2.55		Si
SLV 11	2	32.67	-4743	-0.000011	0.0005615	0.0035	1.5		14748.71	14748.71	451.51		Si
SLV 12	-0.98	6941.69	-9691	-0.0002294	0.0005615	0.0035	1.5		17529.34	17529.34	2.53		Si
SLV 12	2	-37.33	-4744	-0.000011	0.0005615	0.0035	1.5		14761.57	14761.57	395.42		Si
SLD 4	-0.98	7036.5	-11237	-0.0001826	0.0005615	0.0035	1.5		18243.64	18243.64	2.59		Si
SLD 4	2	-416.56	-4808	-0.0000146	0.0005615	0.0035	1.5		14804.75	14804.75	35.54		Si
SLV 4	-0.98	8009.27	-12527	-0.00022	0.0005615	0.0035	1.5		18811.69	18811.69	2.35		Si
SLV 4	2	-1428.16	-5011	-0.0000243	0.0005615	0.0035	1.5		14939.06	14939.06	10.46		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	-0.98	9304.13	-15324	-13621	5360	1.5	0.4285	-57604	10833	2089	11894	20212	3825	13983	No	2.61	Si
SLU 83	2	773.27	-7080	-6293	5002	1.5	1.5	-9323	8188	5527	11894	20212	3825	17421	No	3.48	Si
SLU 84	-0.98	9306.22	-15340	-13636	5371	1.5	0.43	-57574	10833	2096	11894	20212	3825	13991	No	2.6	Si
SLU 84	2	782.33	-7100	-6311	5013	1.5	1.5	-9350	8191	5529	11894	20212	3825	17423	No	3.48	Si
SLU 63	-0.98	8649.71	-14158	-12585	5323	1.5	0.4172	-53796	10833	2034	11894	20212	3825	13928	No	2.62	Si
SLU 63	2	514.46	-6435	-5720	4998	1.5	1.5	-8474	8074	5450	11894	20212	3825	17345	No	3.47	Si
SLU 80	-0.98	9043.7	-14858	-13207	5295	1.5	0.424	-56090	10833	2067	11894	20212	3825	13961	No	2.64	Si
SLU 80	2	692.06	-6855	-6093	4948	1.5	1.5	-9027	8148	5500	11894	20212	3825	17394	No	3.52	Si
SLU 81	-0.98	9225.92	-15198	-13509	5306	1.5	0.4288	-57102	10833	2090	11894	20212	3825	13985	No	2.64	Si
SLU 81	2	763.77	-7014	-6234	4953	1.5	1.5	-9236	8176	5519	11894	20212	3825	17413	No	3.52	Si
SLU 62	-0.98	8647.62	-14142	-12571	5312	1.5	0.4155	-53828	10833	2026	11894	20212	3825	13920	No	2.62	Si
SLU 62	2	505.4	-6415	-5702	4987	1.5	1.5	-8448	8071	5448	11894	20212	3825	17342	No	3.48	Si
SLU 61	-0.98	8571.5	-14032	-12473	5269	1.5	0.4175	-53297	10833	2035	11894	20212	3825	13930	No	2.64	Si
SLU 61	2	504.96	-6369	-5661	4949	1.5	1.5	-8387	8063	5442	11894	20212	3825	17337	No	3.5	Si
SLU 79	-0.98	9041.61	-14842	-13193	5284	1.5	0.4224	-56121	10833	2059	11894	20212	3825	13954	No	2.64	Si
SLU 79	2	683	-6835	-6075	4936	1.5	1.5	-9000	8144	5498	11894	20212	3825	17392	No	3.52	Si
SLU 78	-0.98	9075.55	-14920	-13262	5278	1.5	0.4251	-56260	10833	2072	11894	20212	3825	13967	No	2.65	Si
SLU 78	2	713.97	-6891	-6126	4929	1.5	1.5	-9075	8154	5504	11894	20212	3825	17399	No	3.53	Si
SLU 82	-0.98	9228.01	-15214	-13524	5317	1.5	0.4304	-57072	10833	2098	11894	20212	3825	13992	No	2.63	Si
SLU 82	2	772.83	-7034	-6252	4964	1.5	1.5	-9262	8179	5521	11894	20212	3825	17416	No	3.51	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 8	-0.98	6930.96	-10588	-9412	5754	1.5	0.2863	-46058	16250	2093	11894	30319	3825	13988		2.43	Si
SLD 8	2	-201.82	-4771	-4241	5611	1.5	1.5	-6283	11673	7879	11894	30319	3825	19774		3.52	Si
SLD 2	-0.98	6775.46	-11225	-9978	6235	1.5	0.4392	-41449	16250	3212	11894	30319	3825	15106		2.42	Si
SLD 2	2	-214.7	-4763	-4234	5950	1.5	1.5	-6272	11671	7878	11894	30319	3825	19772		3.32	Si
SLD 4	-0.98	7036.5	-11237	-9988	6881	1.5	0.3714	-44727	16250	2716	11894	30319	3825	14610		2.12	Si
SLD 4	2	-416.56	-4808	-4274	6655	1.5	1.5	-6332	11683	7886	11894	30319	3825	19780		2.97	Si
SLV 3	-0.98	7877.64	-12460	-11075	10515	1.5	0.3533	-50563	16250	2583	11894	30319	3825	14478		1.38	Si
SLV 3	2	-1318.56	-5011	-4454	10310	1.5	1.4606	-6798	11776	7740	11894	30319	3825	19634		1.9	Si
SLV 7	-0.98	7660.93	-10968	-9750	8000	1.5	0.1546	-53857	16250	1131	11894	30319	3825	13025		1.63	Si
SLV 7	2	-853.68	-4924	-4376	8003	1.5	1.5	-6484	11713	7907	11894	30319	3825	19801		2.47	Si
SLD 3	-0.98	6980	-11208	-9963	6690	1.5	0.3817	-44117	16250	2791	11894	30319	3825	14685		2.2	Si
SLD 3	2	-369.52	-4808	-4274	6464	1.5	1.5	-6332	11683	7886	11894	30319	3825	19780		3.06	Si
SLV 4	-0.98	8009.27	-12527	-11135	10960	1.5	0.3319	-51980	16250	2427	11894	30319	3825	14322		1.31	Si
SLV 4	2	-1428.16	-5011	-4454	10756	1.5	1.395	-7116	11840	7432	11894	30319	3825	19327		1.8	Si
SLV 8	-0.98	7744.99	-11011	-9788	8285	1.5	0.1399	-54737	16250	1023	11894	30319	3825	12917		1.56	Si
SLV 8	2	-923.67	-4924	-4377	8288	1.5	1.5	-6484	11713	7907	11894	30319	3825	19801		2.39	Si
SLV 2	-0.98	7412.1	-12496	-11107	9481	1.5	0.4705	-44556	16250	3441	11894	30319	3825	15335		1.62	Si
SLV 2	2	-957.26	-4905	-4360	9124	1.5	1.5	-6460	11709	7903	11894	30319	3825	19798		2.17	Si
SLV 1	-0.98	7280.48	-12429	-11048	9035	1.5	0.4927	-43199	16250	3603	11894	30319	3825	15497		1.72	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	2	-847.66	-4905	-4360	8679	1.5	1.5	-6460	11709	7903	11894	30319	3825	19798		2.28	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.51 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.25	11789	-7958	114.46	1652.26	14.44	Si
SLV 14	179667	0.25	11907	-8037	114.46	1667.37	14.57	Si
SLV 15	179667	0.25	12119	-8180	114.46	1694.49	14.8	Si
SLV 16	179667	0.25	12237	-8260	114.46	1709.52	14.94	Si
SLV 9	179667	0.25	13572	-9161	114.46	1878.12	16.41	Si
SLV 10	179667	0.25	13648	-9212	114.46	1887.5	16.49	Si
SLV 11	179667	0.25	14671	-9903	114.46	2014.13	17.6	Si
SLV 12	179667	0.25	14746	-9954	114.46	2023.35	17.68	Si
SLV 5	179667	0.25	15412	-10403	114.46	2104.52	18.39	Si
SLV 6	179667	0.25	15488	-10454	114.46	2113.63	18.47	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-4924	-10968	-60	1.338	793	0.911	21.35935	4.45299	Si
SLV 8	-4924	-11011	-59	1.338	793	0.911	21.35985	4.45299	Si
SLV 12	-4744	-9691	60	1.373	775.1	0.909	21.94522	4.45299	Si
SLV 11	-4743	-9648	60	1.373	775.1	0.909	21.94653	4.45299	Si
SLV 5	-4572	-10864	-32	1.412	758.1	0.908	22.60503	4.45299	Si
SLV 6	-4572	-10907	-32	1.412	758.1	0.908	22.60553	4.45299	Si
SLV 10	-4392	-9587	87	1.442	740.3	0.906	23.12048	4.45299	Si
SLV 9	-4392	-9544	87	1.442	740.3	0.906	23.12189	4.45299	Si
SLV 3	-5011	-12460	-189	1.303	801.7	0.911	20.78323	3.37435	Si
SLV 4	-5011	-12527	-189	1.303	801.7	0.911	20.78401	3.37435	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.908	SLU 83	Si
V_SLU	2.605	SLU 84	Si
PF_SLV	2.342	SLV 8	Si
V_SLV	1.307	SLV 4	Si
PFFP_SLV	14.435	SLV 13	Si
R_SLV	4.797	SLV 7	Si

Maschio 16

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-4.784	-17.053	-4.784	L2	L4	3.29	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	-0.98	-1185.31	-23297	-0.0000268	0.0003743	0.0035	3.29	32399.81	36703.4	36703.4	30.97	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	2	-11772.8	-22443	-0.0000469	0.0003743	0.0035	3.29	31421.74	35595.59	35595.59	3.02	No	Si
SLU 84	-0.98	-1123.41	-23868	-0.0000273	0.0003743	0.0035	3.29	33045.19	37426.75	37426.75	33.32	No	Si
SLU 84	2	-12039.66	-23074	-0.0000482	0.0003743	0.0035	3.29	32146.6	36414.15	36414.15	3.02	No	Si
SLU 79	-0.98	-1166.5	-23186	-0.0000267	0.0003743	0.0035	3.29	32273.86	36559.33	36559.33	31.34	No	Si
SLU 79	2	-11680.51	-22339	-0.0000466	0.0003743	0.0035	3.29	31301.94	35461.63	35461.63	3.04	No	Si
SLU 78	-0.98	-1160.96	-23285	-0.0000268	0.0003743	0.0035	3.29	32387.01	36688.77	36688.77	31.6	No	Si
SLU 78	2	-11716.53	-22350	-0.0000467	0.0003743	0.0035	3.29	31314.46	35475.62	35475.62	3.03	No	Si
SLU 74	-0.98	-1186.34	-23094	-0.0000266	0.0003743	0.0035	3.29	32168.56	36439.18	36439.18	30.72	No	Si
SLU 74	2	-11572.03	-22174	-0.0000462	0.0003743	0.0035	3.29	31110.63	35248.5	35248.5	3.05	No	Si
SLU 75	-0.98	-1161.99	-23082	-0.0000266	0.0003743	0.0035	3.29	32155.71	36424.54	36424.54	31.35	No	Si
SLU 75	2	-11515.76	-22082	-0.0000459	0.0003743	0.0035	3.29	31002.8	35128.8	35128.8	3.05	No	Si
SLU 82	-0.98	-1124.44	-23665	-0.0000271	0.0003743	0.0035	3.29	32816.47	37170.7	37170.7	33.06	No	Si
SLU 82	2	-11838.88	-22806	-0.0000474	0.0003743	0.0035	3.29	31839.18	36065.28	36065.28	3.05	No	Si
SLU 81	-0.98	-1148.79	-23676	-0.0000272	0.0003743	0.0035	3.29	32829.18	37184.93	37184.93	32.37	No	Si
SLU 81	2	-11895.15	-22898	-0.0000477	0.0003743	0.0035	3.29	31945.54	36185.69	36185.69	3.04	No	Si
SLU 83	-0.98	-1147.76	-23879	-0.0000274	0.0003743	0.0035	3.29	33057.85	37440.91	37440.91	32.62	No	Si
SLU 83	2	-12095.92	-23167	-0.0000484	0.0003743	0.0035	3.29	32252.41	36534.82	36534.82	3.02	No	Si
SLU 80	-0.98	-1142.15	-23175	-0.0000266	0.0003743	0.0035	3.29	32261.03	36544.68	36544.68	32	No	Si
SLU 80	2	-11624.24	-22247	-0.0000464	0.0003743	0.0035	3.29	31194.45	35341.77	35341.77	3.04	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	-0.98	-152	-14598	-0.0000153	0.0005615	0.0035	3.29		25601.87	25601.87	168.44		Si
SLV 7	2	-13390.15	-21435	-0.0000483	0.0005615	0.0035	3.29		35444.53	35444.53	2.65		Si
SLV 1	-0.98	4950.57	-18078	-0.0000281	0.0005615	0.0035	3.29		28389.29	28389.29	5.73		Si
SLV 1	2	-14088.14	-18219	-0.0000481	0.0005615	0.0035	3.29		30848.95	30848.95	2.19		Si
SLV 8	-0.98	-52.38	-14568	-0.0000151	0.0005615	0.0035	3.29		25556.93	25556.93	487.93		Si
SLV 8	2	-13705.21	-21630	-0.0000492	0.0005615	0.0035	3.29		35714.1	35714.1	2.61		Si
SLD 3	-0.98	1377.04	-16446	-0.0000196	0.0005615	0.0035	3.29		26015.72	26015.72	18.89		Si
SLD 3	2	-11360.53	-17706	-0.0000403	0.0005615	0.0035	3.29		30111.85	30111.85	2.65		Si
SLV 4	-0.98	4557.37	-16873	-0.0000261	0.0005615	0.0035	3.29		26637.32	26637.32	5.84		Si
SLV 4	2	-16694.59	-21547	-0.0000574	0.0005615	0.0035	3.29		35599.98	35599.98	2.13		Si
SLD 2	-0.98	1683.81	-16930	-0.0000207	0.0005615	0.0035	3.29		26720.85	26720.85	15.87		Si
SLD 2	2	-10645.8	-16521	-0.0000377	0.0005615	0.0035	3.29		28416.45	28416.45	2.67		Si
SLV 3	-0.98	4401.39	-16919	-0.0000258	0.0005615	0.0035	3.29		26705.36	26705.36	6.07		Si
SLV 3	2	-16201.26	-21242	-0.0000557	0.0005615	0.0035	3.29		35177.18	35177.18	2.17		Si
SLD 1	-0.98	1616.85	-16950	-0.0000206	0.0005615	0.0035	3.29		26749.98	26749.98	16.54		Si
SLD 1	2	-10434.04	-16389	-0.0000371	0.0005615	0.0035	3.29		28229.17	28229.17	2.71		Si
SLD 4	-0.98	1444	-16426	-0.0000197	0.0005615	0.0035	3.29		25986.42	25986.42	18		Si
SLD 4	2	-11572.29	-17837	-0.000041	0.0005615	0.0035	3.29		30300.06	30300.06	2.62		Si
SLV 2	-0.98	5106.56	-18032	-0.0000284	0.0005615	0.0035	3.29		28321.19	28321.19	5.55		Si
SLV 2	2	-14581.47	-18525	-0.0000497	0.0005615	0.0035	3.29		31288.41	31288.41	2.15		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	-0.98	-1142.15	-23175	-20600	9112	3.29	3.29	-13914	8800	13028	33304	44333	8390	46332	No	5.08	Si
SLU 80	2	-11624.24	-22247	-19775	2889	3.29	3.29	-13357	8725	12918	33304	44333	8390	46222	No	16	Si
SLU 79	-0.98	-1166.5	-23186	-20610	9070	3.29	3.29	-13921	8801	13029	33304	44333	8390	46334	No	5.11	Si
SLU 79	2	-11680.51	-22339	-19857	2815	3.29	3.29	-13413	8733	12929	33304	44333	8390	46233	No	16.42	Si
SLU 77	-0.98	-1185.31	-23297	-20708	9089	3.29	3.29	-13987	8809	13042	33304	44333	8390	46347	No	5.1	Si
SLU 77	2	-11772.8	-22443	-19949	2800	3.29	3.29	-13475	8741	12941	33304	44333	8390	46245	No	16.52	Si
SLU 82	-0.98	-1124.44	-23665	-21035	9319	3.29	3.29	-14208	8839	13086	33304	44333	8390	46390	No	4.98	Si
SLU 82	2	-11838.88	-22806	-20272	2897	3.29	3.29	-13692	8770	12984	33304	44333	8390	46288	No	15.98	Si
SLU 78	-0.98	-1160.96	-23285	-20698	9130	3.29	3.29	-13980	8809	13041	33304	44333	8390	46345	No	5.08	Si
SLU 78	2	-11716.53	-22350	-19867	2875	3.29	3.29	-13419	8734	12930	33304	44333	8390	46234	No	16.08	Si
SLU 83	-0.98	-1147.76	-23879	-21226	9426	3.29	3.29	-14337	8856	13111	33304	44333	8390	46416	No	4.92	Si
SLU 83	2	-12095.92	-23167	-20593	2936	3.29	3.29	-13909	8799	13027	33304	44333	8390	46331	No	15.78	Si
SLU 81	-0.98	-1148.79	-23676	-21045	9278	3.29	3.29	-14215	8840	13087	33304	44333	8390	46392	No	5	Si
SLU 81	2	-11895.15	-22898	-20354	2822	3.29	3.29	-13748	8778	12995	33304	44333	8390	46299	No	16.41	Si
SLU 76	-0.98	-1126.95	-22964	-20412	8991	3.29	3.29	-13788	8783	13003	33304	44333	8390	46307	No	5.15	Si
SLU 76	2	-11385.96	-21916	-19481	2826	3.29	3.29	-13158	8699	12879	33304	44333	8390	46183	No	16.34	Si
SLU 75	-0.98	-1161.99	-23082	-20518	8982	3.29	3.29	-13859	8792	13017	33304	44333	8390	46321	No	5.16	Si
SLU 75	2	-11515.76	-22082	-19628	2761	3.29	3.29	-13258	8712	12898	33304	44333	8390	46203	No	16.73	Si
SLU 84	-0.98	-1123.41	-23868	-21216	9467	3.29	3.29	-14330	8855	13110	33304	44333	8390	46414	No	4.9	Si
SLU 84	2	-12039.66	-23074	-20510	3010	3.29	3.29	-13854	8792	13016	33304	44333	8390	46320	No	15.39	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	-0.98	4401.39	-16919	-15040	15523	3.29	3.29	-10158	12448	18430	33304	66499	8390	51734		3.33	Si
SLV 3	2	-16201.26	-21242	-18881	21695	3.29	2.6469	-15975	13612	16213	33304	66499	8390	49517		2.28	Si
SLV 15	-0.98	-6858.19	-14175	-12600	-3450	3.29	3.29	-8510	12119	17942	33304	66499	8390	51246		14.85	Si
SLV 15	2	-871.12	-11562	-10277	-18367	3.29	3.29	-6942	11805	17477	33304	66499	8390	50782		2.76	Si
SLV 13	-0.98	-6309	-15333	-13630	-4048	3.29	3.29	-9206	12258	18148	33304	66499	8390	51452		12.71	Si
SLV 13	2	1242	-8539	-7590	-19281	3.29	3.29	-5127	11442	16940	33304	66499	8390	50244		2.61	Si
SLV 16	-0.98	-6702.2	-14128	-12558	-2824	3.29	3.29	-8482	12113	17933	33304	66499	8390	51238		18.14	Si
SLV 16	2	-1364.45	-11867	-10549	-17300	3.29	3.29	-7125	11842	17532	33304	66499	8390	50836		2.94	Si
SLV 1	-0.98	4950.57	-18078	-16070	14926	3.29	3.29	-10854	12588	18636	33304	66499	8390	51940		3.48	Si
SLV 1	2	-14088.14	-18219	-16195	20781	3.29	2.6152	-13852	13187	15519	33304	66499	8390	48824		2.35	Si
SLV 4	-0.98	4557.37	-16873	-14998	16149	3.29	3.29	-10130	12443	18421	33304	66499	8390	51726		3.2	Si
SLV 4	2	-16694.59	-21547	-19153	22763	3.29	2.6107	-16433	13703	16099	33304	66499	8390	49403		2.17	Si
SLV 14	-0.98	-6153.02	-15287	-13588	-3422	3.29	3.29	-9178	12252	18140	33304	66499	8390	51444		15.03	Si
SLV 14	2	748.67	-8845	-7862	-18214	3.29	3.29	-5311	11479	16994	33304	66499	8390	50299		2.76	Si
SLD 2	-0.98	1683.81	-16930	-15049	10109	3.29	3.29	-10165	12450	18432	33304	66499	8390	51736		5.12	Si
SLD 2	2	-10645.8	-16521	-14685	10331	3.29	3.0018	-10921	12601	17021	33304	66499	8390	50326		4.87	Si
SLD 4	-0.98	1444	-16426	-14601	10373	3.29	3.29	-9862	12389	18342	33304	66499	8390	51646		4.98	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 4	2	-11572.29	-17837	-15855	10729	3.29	2.9887	-11847	12786	17196	33304	66499	8390	50500		4.71	Si
SLV 2	-0.98	5106.56	-18032	-16028	15552	3.29	3.29	-10826	12582	18628	33304	66499	8390	51932		3.34	Si
SLV 2	2	-14581.47	-18525	-16467	21849	3.29	2.5736	-14313	13279	15379	33304	66499	8390	48684		2.23	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.51 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.25	6245	-9245	251.05	1995.16	7.95	Si
SLV 14	179667	0.25	6331	-9373	251.05	2021.51	8.05	Si
SLV 15	179667	0.25	6560	-9711	251.05	2091.2	8.33	Si
SLV 16	179667	0.25	6646	-9839	251.05	2117.43	8.43	Si
SLV 9	179667	0.25	7500	-11104	251.05	2375.79	9.46	Si
SLV 10	179667	0.25	7556	-11186	251.05	2392.31	9.53	Si
SLV 11	179667	0.25	8549	-12657	251.05	2688.5	10.71	Si
SLV 12	179667	0.25	8605	-12739	251.05	2704.78	10.77	Si
SLV 5	179667	0.25	8878	-13144	251.05	2785.48	11.1	Si
SLV 6	179667	0.25	8933	-13225	251.05	2801.67	11.16	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-21630	-14568	221	0.8	2829.1	0.939	12.39534	4.45299	Si
SLV 7	-21435	-14598	225	0.806	2809.3	0.938	12.48367	4.45299	Si
SLV 12	-18726	-13745	395	0.886	2535.4	0.933	13.79849	4.45299	Si
SLV 11	-18531	-13775	399	0.892	2515.7	0.932	13.91127	4.45299	Si
SLV 4	-21547	-16873	-453	0.794	2820.7	0.938	12.29259	3.37435	Si
SLV 3	-21242	-16919	-446	0.803	2789.7	0.938	12.4394	3.37435	Si
SLV 2	-18525	-18032	-856	0.872	2515.1	0.932	13.59843	3.37435	Si
SLV 1	-18219	-18078	-849	0.884	2484.3	0.932	13.78463	3.37435	Si
SLV 6	-11556	-18431	-1121	1.213	1814.8	0.913	19.3042	4.45299	Si
SLV 5	-11361	-18461	-1116	1.228	1795.3	0.912	19.55355	4.45299	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.02	SLU 83	Si
V_SLU	4.903	SLU 84	Si
PF_SLV	2.132	SLV 4	Si
V_SLV	2.17	SLV 4	Si
PFFP_SLV	7.947	SLV 13	Si
R_SLV	2.784	SLV 8	Si

Maschio 17

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.058	2.271	-15.058	6.576	L2	L4	4.305	0.3	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 45	-0.98	24347.4	-63192	-0.000115	0.0004492	0.0035	4.305	81552.38	106523.81	106523.81	4.38	No	Si
SLU 45	2	16893.28	-24403	-0.0000532	0.0004492	0.0035	4.305	44405.27	49360.7	49360.7	2.92	No	Si
SLU 51	-0.98	24122.48	-63288	-0.0001148	0.0004492	0.0035	4.305	81593.2	106638.45	106638.45	4.42	No	Si
SLU 51	2	16951.04	-24395	-0.0000533	0.0004492	0.0035	4.305	44392.69	49345.69	49345.69	2.91	No	Si
SLU 50	-0.98	24270.86	-63229	-0.000115	0.0004492	0.0035	4.305	81567.85	106567.18	106567.18	4.39	No	Si
SLU 50	2	16927.42	-24377	-0.0000532	0.0004492	0.0035	4.305	44365.68	49313.48	49313.48	2.91	No	Si
SLU 46	-0.98	24199.01	-63252	-0.0001149	0.0004492	0.0035	4.305	81577.78	106595.07	106595.07	4.4	No	Si
SLU 46	2	16916.9	-24422	-0.0000532	0.0004492	0.0035	4.305	44432.27	49392.91	49392.91	2.92	No	Si
SLU 44	-0.98	23537.95	-62369	-0.0001125	0.0004492	0.0035	4.305	81190.16	105535.59	105535.59	4.48	No	Si
SLU 44	2	16541.98	-24060	-0.0000522	0.0004492	0.0035	4.305	43892.81	48751.3	48751.3	2.95	No	Si
SLU 43	-0.98	23785.26	-62270	-0.0001128	0.0004492	0.0035	4.305	81145.38	105416.81	105416.81	4.43	No	Si
SLU 43	2	16502.61	-24030	-0.0000521	0.0004492	0.0035	4.305	43847.52	48697.61	48697.61	2.95	No	Si
SLU 47	-0.98	23780.75	-62848	-0.0001136	0.0004492	0.0035	4.305	81403.24	106110.78	106110.78	4.46	No	Si
SLU 47	2	16754.38	-24233	-0.0000528	0.0004492	0.0035	4.305	44152.16	49059.23	49059.23	2.93	No	Si
SLU 48	-0.98	24590.2	-63672	-0.0001161	0.0004492	0.0035	4.305	81754.68	107098.99	107098.99	4.36	No	Si
SLU 48	2	17105.69	-24577	-0.0000537	0.0004492	0.0035	4.305	44662.99	49668.63	49668.63	2.9	No	Si
SLU 49	-0.98	24441.82	-63731	-0.000116	0.0004492	0.0035	4.305	81779.32	107170.26	107170.26	4.38	No	Si
SLU 49	2	17129.31	-24595	-0.0000538	0.0004492	0.0035	4.305	44689.9	49700.84	49700.84	2.9	No	Si
SLU 57	-0.98	27657.99	-71304	-0.0001324	0.0004492	0.0035	4.305	84131.41	116257.4	116257.4	4.2	No	Si
SLU 57	2	19299.45	-29594	-0.0000633	0.0004492	0.0035	4.305	51755.31	57772	57772	2.99	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	-0.98	38206.13	-50499	-0.0001179	0.0006738	0.0035	4.305		93758.03	93758.03	2.45		Si
SLV 7	2	8485.64	-22930	-0.0000377	0.0006738	0.0035	4.305		47747.73	47747.73	5.63		Si
SLV 9	-0.98	3034.91	-57756	-0.0000689	0.0006738	0.0035	4.305		105160.42	105160.42	34.65		Si
SLV 9	2	20364.46	-22081	-0.0000564	0.0006738	0.0035	4.305		46154.16	46154.16	2.27		Si
SLV 11	-0.98	41886.93	-45306	-0.0001204	0.0006738	0.0035	4.305		85596.26	85596.26	2.04		Si
SLV 11	2	7087.32	-21220	-0.0000337	0.0006738	0.0035	4.305		44519.98	44519.98	6.28		Si
SLV 12	-0.98	42324.67	-45193	-0.0001214	0.0006738	0.0035	4.305		85419.07	85419.07	2.02		Si
SLV 12	2	6963.08	-21239	-0.0000335	0.0006738	0.0035	4.305		44554.92	44554.92	6.4		Si
SLV 5	-0.98	-645.89	-62949	-0.0000711	0.0006738	0.0035	4.305		122513.95	122513.95	189.68		Si
SLV 5	2	21762.78	-23790	-0.0000605	0.0006738	0.0035	4.305		49361.61	49361.61	2.27		Si
SLV 6	-0.98	-208.15	-62837	-0.0000703	0.0006738	0.0035	4.305		122350.94	122350.94	587.79		Si
SLV 6	2	21638.54	-23809	-0.0000603	0.0006738	0.0035	4.305		49395.98	49395.98	2.28		Si
SLV 8	-0.98	38643.87	-50387	-0.0001186	0.0006738	0.0035	4.305		93580.84	93580.84	2.42		Si
SLV 8	2	8361.4	-22949	-0.0000376	0.0006738	0.0035	4.305		47782.1	47782.1	5.71		Si
SLV 10	-0.98	3472.65	-57643	-0.0000695	0.0006738	0.0035	4.305		104983.23	104983.23	30.23		Si
SLV 10	2	20240.22	-22099	-0.0000561	0.0006738	0.0035	4.305		46188.53	46188.53	2.28		Si
SLV 16	-0.98	33144.57	-43459	-0.0001009	0.0006738	0.0035	4.305		82694.33	82694.33	2.49		Si
SLV 16	2	9943.55	-19550	-0.0000362	0.0006738	0.0035	4.305		41334.78	41334.78	4.16		Si
SLV 15	-0.98	32459.15	-43635	-0.0000999	0.0006738	0.0035	4.305		82971.79	82971.79	2.56		Si
SLV 15	2	10138.09	-19522	-0.0000365	0.0006738	0.0035	4.305		41280.07	41280.07	4.07		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	-0.98	30762.29	-78539	-57119	-21539	4.305	4.305	-44227	10833	13991	95155	46413	21955	68369	No	3.17	Si
SLU 77	2	21184.23	-34312	-24954	-23541	4.305	4.305	-19322	10833	13991	95155	46413	21955	68369	No	2.9	Si
SLU 80	-0.98	30294.57	-78155	-56840	-21503	4.305	4.305	-44011	10833	13991	95155	46413	21955	68369	No	3.18	Si
SLU 80	2	21029.58	-34130	-24822	-23488	4.305	4.305	-19219	10833	13991	95155	46413	21955	68369	No	2.91	Si
SLU 78	-0.98	30613.91	-78598	-57162	-21626	4.305	4.305	-44260	10833	13991	95155	46413	21955	68369	No	3.16	Si
SLU 78	2	21207.85	-34330	-24967	-23629	4.305	4.305	-19332	10833	13991	95155	46413	21955	68369	No	2.89	Si
SLU 79	-0.98	30442.95	-78095	-56797	-21416	4.305	4.305	-43977	10833	13991	95155	46413	21955	68369	No	3.19	Si
SLU 79	2	21005.97	-34112	-24808	-23400	4.305	4.305	-19209	10833	13991	95155	46413	21955	68369	No	2.92	Si
SLU 83	-0.98	31578.51	-80862	-58808	-21829	4.305	4.305	-45535	10833	13991	95155	46413	21955	68369	No	3.13	Si
SLU 83	2	21723.62	-36080	-26240	-23885	4.305	4.305	-20318	10833	13991	95155	46413	21955	68369	No	2.86	Si
SLU 82	-0.98	31187.33	-80442	-58503	-21711	4.305	4.305	-45298	10833	13991	95155	46413	21955	68369	No	3.15	Si
SLU 82	2	21534.84	-35925	-26127	-23751	4.305	4.305	-20230	10833	13991	95155	46413	21955	68369	No	2.88	Si
SLU 84	-0.98	31430.13	-80921	-58852	-21916	4.305	4.305	-45568	10833	13991	95155	46413	21955	68369	No	3.12	Si
SLU 84	2	21747.24	-36099	-26254	-23974	4.305	4.305	-20328	10833	13991	95155	46413	21955	68369	No	2.85	Si
SLU 76	-0.98	29952.84	-77715	-56520	-21357	4.305	4.305	-43763	10833	13991	95155	46413	21955	68369	No	3.2	Si
SLU 76	2	20832.93	-33968	-24704	-23325	4.305	4.305	-19128	10833	13991	95155	46413	21955	68369	No	2.93	Si
SLU 75	-0.98	30371.11	-78119	-56813	-21421	4.305	4.305	-43990	10833	13991	95155	46413	21955	68369	No	3.19	Si
SLU 75	2	20995.45	-34156	-24841	-23407	4.305	4.305	-19234	10833	13991	95155	46413	21955	68369	No	2.92	Si
SLU 81	-0.98	31335.71	-80382	-58460	-21624	4.305	4.305	-45265	10833	13991	95155	46413	21955	68369	No	3.16	Si
SLU 81	2	21511.22	-35907	-26114	-23663	4.305	4.305	-20220	10833	13991	95155	46413	21955	68369	No	2.89	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	-0.98	8534.21	-64683	-47042	-28586	4.305	4.305	-36425	16250	20987	95155	69620	21955	91575		3.2	Si
SLV 1	2	18782.31	-25479	-18530	-30681	4.305	4.246	-14348	15370	19578	95155	69620	21955	91575		2.98	Si
SLD 5	-0.98	11451.9	-57924	-42127	-22348	4.305	4.305	-32618	16250	20987	95155	69620	21955	91575		4.1	Si
SLD 5	2	17646.18	-23054	-16766	-23270	4.305	4.1612	-12982	15096	18846	95155	69620	21955	91575		3.94	Si
SLV 10	-0.98	3472.65	-57643	-41922	-25929	4.305	4.305	-32460	16250	20987	95155	69620	21955	91575		3.53	Si
SLV 10	2	20240.22	-22099	-16072	-25630	4.305	3.7098	-12444	14989	16682	95155	69620	21955	91575		3.57	Si
SLV 3	-0.98	20189.81	-60948	-44326	-20391	4.305	4.305	-34321	16250	20987	95155	69620	21955	91575		4.49	Si
SLV 3	2	14799.17	-25221	-18342	-23270	4.305	4.305	-14202	15340	19812	95155	69620	21955	91575		3.94	Si
SLV 2	-0.98	9219.63	-64507	-46914	-28143	4.305	4.305	-36325	16250	20987	95155	69620	21955	91575		3.25	Si
SLV 2	2	18587.77	-25508	-18551	-30236	4.305	4.2714	-14364	15373	19699	95155	69620	21955	91575		3.03	Si
SLV 5	-0.98	-645.89	-62949	-45781	-31683	4.305	4.305	-35448	16250	20987	95155	69620	21955	91575		2.89	Si
SLV 5	2	21762.78	-23790	-17302	-32068	4.305	3.7132	-13397	15179	16909	95155	69620	21955	91575		2.86	Si
SLV 6	-0.98	-208.15	-62837	-45699	-31400	4.305	4.305	-35385	16250	20987	95155	69620	21955	91575		2.92	Si
SLV 6	2	21638.54	-23809	-17315	-31783	4.305	3.731	-13407	15181	16992	95155	69620	21955	91575		2.88	Si
SLV 4	-0.98	20875.24	-60772	-44198	-19949	4.305	4.305	-34222	16250	20987	95155	69620	21955	91575		4.59	Si
SLV 4	2	14604.63	-25249	-18363	-22825	4.305	4.305	-14219	15344	19816	95155	69620	21955	91575		4.01	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 6	-0.98	11642.85	-57875	-42091	-22225	4.305	4.305	-32591	16250	20987	95155	69620	21955	91575		4.12	Si
SLD 6	2	17591.98	-23062	-16772	-23146	4.305	4.169	-12986	15097	18882	95155	69620	21955	91575		3.96	Si
SLV 9	-0.98	3034.91	-57756	-42004	-26211	4.305	4.305	-32523	16250	20987	95155	69620	21955	91575		3.49	Si
SLV 9	2	20364.46	-22081	-16059	-25915	4.305	3.6907	-12434	14987	16594	95155	69620	21955	91575		3.53	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 0.51 Ta 0.05 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-29333	0.25	219	3854.67	5347.93	4601.3	21.01	Si
SLV 15	-29415	0.25	219	3863.94	5360.78	4612.36	21.06	Si
SLV 12	-30452	0.25	219	3980.12	5522.98	4751.55	21.7	Si
SLV 11	-30504	0.25	219	3985.97	5531.19	4758.58	21.73	Si
SLV 14	-31253	0.25	219	4069.01	5648.43	4858.72	22.19	Si
SLV 13	-31335	0.25	219	4078.07	5661.29	4869.68	22.24	Si
SLV 8	-33318	0.25	219	4294.29	5971.92	5133.11	23.44	Si
SLV 7	-33371	0.25	219	4299.95	5980.14	5140.05	23.47	Si
SLV 10	-36853	0.25	219	4667.31	6523.46	5595.39	25.55	Si
SLV 9	-36906	0.25	219	4672.73	6531.62	5602.18	25.58	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.05 Ta = 0.0494

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-23809	-62837	-191	0.936	2968.6	0.947	14.36317	6.19867	Si
SLV 5	-23790	-62949	-191	0.937	2966.7	0.947	14.37251	6.19867	Si
SLV 8	-22949	-50387	-213	0.964	2881.3	0.946	14.81444	6.19867	Si
SLV 7	-22930	-50499	-213	0.965	2879.5	0.946	14.82442	6.19867	Si
SLV 10	-22099	-57643	396	0.988	2795.2	0.945	15.19379	6.19867	Si
SLV 9	-22081	-57756	396	0.988	2793.3	0.945	15.20488	6.19867	Si
SLV 12	-21239	-45193	374	1.021	2708	0.943	15.73515	6.19867	Si
SLV 11	-21220	-45306	374	1.022	2706.1	0.943	15.74706	6.19867	Si
SLV 2	-25508	-64507	-883	0.861	3141	0.95	13.16444	3.99966	Si
SLV 1	-25479	-64683	-884	0.861	3138.1	0.95	13.17695	3.99966	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.902	SLU 49	Si
V_SLU	2.852	SLU 84	Si
PF_SLV	2.018	SLV 12	Si
V_SLV	2.856	SLV 5	Si
PFFP_SLV	21.011	SLV 16	Si
R_SLV	2.317	SLV 6	Si

Maschio 18

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-4.784	-13.763	1.046	L2	L4	5.83	0.3	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	-0.98	43280.29	-76493	-0.0001071	0.0003743	0.0035	5.83	127192.36	174821.08	174821.08	4.04	No	Si
SLU 80	2	-12889.59	-84289	-0.0000849	0.0003743	0.0035	5.83	129398.26	203244.49	203244.49	15.77	No	Si
SLU 78	-0.98	43551.85	-76915	-0.0001078	0.0003743	0.0035	5.83	127362.7	175507.7	175507.7	4.03	No	Si
SLU 78	2	-12897.51	-84740	-0.0000853	0.0003743	0.0035	5.83	129464.95	203943.11	203943.11	15.81	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	-0.98	43361.41	-76487	-0.0001072	0.0003743	0.0035	5.83	127189.93	174811.44	174811.44	4.03	No	Si
SLU 79	2	-12969.49	-84262	-0.0000849	0.0003743	0.0035	5.83	129394.09	203202.52	203202.52	15.67	No	Si
SLU 74	-0.98	43182.54	-76189	-0.0001067	0.0003743	0.0035	5.83	127065.77	174325.42	174325.42	4.04	No	Si
SLU 74	2	-12713.17	-83689	-0.0000841	0.0003743	0.0035	5.83	129299.15	202303.25	202303.25	15.91	No	Si
SLU 84	-0.98	44305.13	-78854	-0.0001106	0.0003743	0.0035	5.83	128070.36	178662.16	178662.16	4.03	No	Si
SLU 84	2	-13040.89	-87113	-0.0000878	0.0003743	0.0035	5.83	129706.38	207334.71	207334.71	15.9	No	Si
SLU 75	-0.98	43101.42	-76195	-0.0001066	0.0003743	0.0035	5.83	127068.26	174335.06	174335.06	4.04	No	Si
SLU 75	2	-12633.28	-83716	-0.000084	0.0003743	0.0035	5.83	129303.82	202345.22	202345.22	16.02	No	Si
SLU 83	-0.98	44386.25	-78848	-0.0001107	0.0003743	0.0035	5.83	128068.38	178652.52	178652.52	4.02	No	Si
SLU 83	2	-13120.79	-87086	-0.0000878	0.0003743	0.0035	5.83	129704.69	207296.47	207296.47	15.8	No	Si
SLU 81	-0.98	43935.82	-78127	-0.0001095	0.0003743	0.0035	5.83	127819.55	177479.88	177479.88	4.04	No	Si
SLU 81	2	-12856.55	-86062	-0.0000866	0.0003743	0.0035	5.83	129622.23	205832.96	205832.96	16.01	No	Si
SLU 77	-0.98	43632.97	-76909	-0.0001079	0.0003743	0.0035	5.83	127360.35	175498.06	175498.06	4.02	No	Si
SLU 77	2	-12977.41	-84713	-0.0000854	0.0003743	0.0035	5.83	129461.18	203904.88	203904.88	15.71	No	Si
SLU 82	-0.98	43854.7	-78133	-0.0001094	0.0003743	0.0035	5.83	127821.66	177489.52	177489.52	4.05	No	Si
SLU 82	2	-12776.66	-86089	-0.0000865	0.0003743	0.0035	5.83	129624.82	205871.2	205871.2	16.11	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	-0.98	32096.8	-45628	-0.0000645	0.0005615	0.0035	5.83		120498.42	120498.42	3.75		Si
SLV 3	2	-13994.55	-52627	-0.0000548	0.0005615	0.0035	5.83		153170.79	153170.79	10.95		Si
SLD 7	-0.98	34608.02	-51783	-0.0000721	0.0005615	0.0035	5.83		133601.38	133601.38	3.86		Si
SLD 7	2	-15404.57	-56438	-0.0000593	0.0005615	0.0035	5.83		161608.04	161608.04	10.49		Si
SLV 7	-0.98	40192.82	-50414	-0.0000758	0.0005615	0.0035	5.83		130686.63	130686.63	3.25		Si
SLV 7	2	-23726.95	-55341	-0.0000657	0.0005615	0.0035	5.83		159227.23	159227.23	6.71		Si
SLD 8	-0.98	34710.72	-51771	-0.0000722	0.0005615	0.0035	5.83		133574.76	133574.76	3.85		Si
SLD 8	2	-15539.12	-56460	-0.0000595	0.0005615	0.0035	5.83		161655.24	161655.24	10.4		Si
SLD 12	-0.98	34974.82	-53596	-0.0000741	0.0005615	0.0035	5.83		137459.93	137459.93	3.93		Si
SLD 12	2	-15294.25	-57593	-0.0000602	0.0005615	0.0035	5.83		164036.46	164036.46	10.73		Si
SLV 11	-0.98	40828.57	-54690	-0.0000802	0.0005615	0.0035	5.83		139788.79	139788.79	3.42		Si
SLV 11	2	-23155.61	-57988	-0.0000675	0.0005615	0.0035	5.83		164866.31	164866.31	7.12		Si
SLV 8	-0.98	40428.25	-50385	-0.000076	0.0005615	0.0035	5.83		130625.59	130625.59	3.23		Si
SLV 8	2	-24035.41	-55392	-0.000066	0.0005615	0.0035	5.83		159342.08	159342.08	6.63		Si
SLV 12	-0.98	41064	-54661	-0.0000804	0.0005615	0.0035	5.83		139727.75	139727.75	3.4		Si
SLV 12	2	-23464.07	-58039	-0.0000678	0.0005615	0.0035	5.83		164974.51	164974.51	7.03		Si
SLD 11	-0.98	34872.13	-53608	-0.000074	0.0005615	0.0035	5.83		137486.55	137486.55	3.94		Si
SLD 11	2	-15159.7	-57571	-0.0000601	0.0005615	0.0035	5.83		163989.26	163989.26	10.82		Si
SLV 4	-0.98	32465.44	-45583	-0.0000648	0.0005615	0.0035	5.83		120402.85	120402.85	3.71		Si
SLV 4	2	-14477.55	-52708	-0.0000553	0.0005615	0.0035	5.83		153350.62	153350.62	10.59		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	-0.98	44386.25	-78848	-57344	2076	5.83	5.83	-32787	10833	18947	95155	52373	29733	82106	No	39.55	Si
SLU 83	2	-13120.79	-87086	-63335	17461	5.83	5.83	-36212	10833	18947	95155	52373	29733	82106	No	4.7	Si
SLU 81	-0.98	43935.82	-78127	-56820	1967	5.83	5.83	-32487	10833	18947	95155	52373	29733	82106	No	41.75	Si
SLU 81	2	-12856.55	-86062	-62591	17268	5.83	5.83	-35787	10833	18947	95155	52373	29733	82106	No	4.75	Si
SLU 82	-0.98	43854.7	-78133	-56824	1835	5.83	5.83	-32490	10833	18947	95155	52373	29733	82106	No	44.73	Si
SLU 82	2	-12776.66	-86089	-62610	17096	5.83	5.83	-35798	10833	18947	95155	52373	29733	82106	No	4.8	Si
SLU 75	-0.98	43101.42	-76195	-55414	2381	5.83	5.83	-31683	10833	18947	95155	52373	29733	82106	No	34.48	Si
SLU 75	2	-12633.28	-83716	-60884	16793	5.83	5.83	-34811	10833	18947	95155	52373	29733	82106	No	4.89	Si
SLU 74	-0.98	43182.54	-76189	-55410	2513	5.83	5.83	-31681	10833	18947	95155	52373	29733	82106	No	32.68	Si
SLU 74	2	-12713.17	-83689	-60865	16965	5.83	5.83	-34800	10833	18947	95155	52373	29733	82106	No	4.84	Si
SLU 84	-0.98	44305.13	-78854	-57348	1945	5.83	5.83	-32789	10833	18947	95155	52373	29733	82106	No	42.22	Si
SLU 84	2	-13040.89	-87113	-63355	17289	5.83	5.83	-36223	10833	18947	95155	52373	29733	82106	No	4.75	Si
SLU 77	-0.98	43632.97	-76909	-55934	2622	5.83	5.83	-31981	10833	18947	95155	52373	29733	82106	No	31.31	Si
SLU 77	2	-12977.41	-84713	-61610	17157	5.83	5.83	-35226	10833	18947	95155	52373	29733	82106	No	4.79	Si
SLU 78	-0.98	43551.85	-76915	-55938	2491	5.83	5.83	-31983	10833	18947	95155	52373	29733	82106	No	32.96	Si
SLU 78	2	-12897.51	-84740	-61629	16985	5.83	5.83	-35237	10833	18947	95155	52373	29733	82106	No	4.83	Si
SLU 79	-0.98	43361.41	-76487	-55627	2656	5.83	5.83	-31805	10833	18947	95155	52373	29733	82106	No	30.91	Si
SLU 79	2	-12969.49	-84262	-61282	17169	5.83	5.83	-35038	10833	18947	95155	52373	29733	82106	No	4.78	Si
SLU 80	-0.98	43280.29	-76493	-55632	2525	5.83	5.83	-31808	10833	18947	95155	52373	29733	82106	No	32.52	Si
SLU 80	2	-12889.59	-84289	-61301	16996	5.83	5.83	-35049	10833	18947	95155	52373	29733	82106	No	4.83	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 8	-0.98	34710.72	-51771	-37652	10226	5.83	5.83	-21527	14722	25749	95155	78559	29733	108292		10.59	Si
SLD 8	2	-15539.12	-56460	-41062	20439	5.83	5.83	-23477	15112	26431	95155	78559	29733	108292		5.3	Si
SLD 11	-0.98	34872.13	-53608	-38988	8235	5.83	5.83	-22292	14875	26016	95155	78559	29733	108292		13.15	Si
SLD 11	2	-15159.7	-57571	-41869	18785	5.83	5.83	-23939	15204	26593	95155	78559	29733	108292		5.76	Si
SLD 7	-0.98	34608.02	-51783	-37661	10115	5.83	5.83	-21533	14723	25751	95155	78559	29733	108292		10.71	Si
SLD 7	2	-15404.57	-56438	-41046	20339	5.83	5.83	-23468	15110	26428	95155	78559	29733	108292		5.32	Si
SLV 11	-0.98	40828.57	-54690	-39775	15514	5.83	5.83	-22741	14965	26174	95155	78559	29733	108292		6.98	Si
SLV 11	2	-23155.61	-57988	-42173	27157	5.83	5.83	-24113	15239	26653	95155	78559	29733	108292		3.99	Si
SLV 12	-0.98	41064	-54661	-39754	15768	5.83	5.83	-22729	14963	26169	95155	78559	29733	108292		6.87	Si
SLV 12	2	-23464.07	-58039	-42210	27387	5.83	5.83	-24134	15243	26661	95155	78559	29733	108292		3.95	Si
SLD 12	-0.98	34974.82	-53596	-38979	8345	5.83	5.83	-22286	14874	26015	95155	78559	29733	108292		12.98	Si
SLD 12	2	-15294.25	-57593	-41886	18885	5.83	5.83	-23948	15206	26596	95155	78559	29733	108292		5.73	Si
SLV 8	-0.98	40428.25	-50385	-36644	20180	5.83	5.83	-20951	14607	25548	95155	78559	29733	108292		5.37	Si
SLV 8	2	-24035.41	-55392	-40285	31025	5.83	5.83	-23033	15023	26276	95155	78559	29733	108292		3.49	Si
SLV 4	-0.98	32465.44	-45583	-33151	14633	5.83	5.83	-18954	14208	24849	95155	78559	29733	108292		7.4	Si
SLV 4	2	-14477.55	-52708	-38333	23495	5.83	5.83	-21917	14800	25885	95155	78559	29733	108292		4.61	Si
SLV 3	-0.98	32096.8	-45628	-33184	14236	5.83	5.83	-18973	14211	24856	95155	78559	29733	108292		7.61	Si
SLV 3	2	-13994.55	-52627	-38274	23135	5.83	5.83	-21883	14793	25874	95155	78559	29733	108292		4.68	Si
SLV 7	-0.98	40192.82	-50414	-36665	19926	5.83	5.83	-20963	14609	25552	95155	78559	29733	108292		5.43	Si
SLV 7	2	-23726.95	-55341	-40248	30796	5.83	5.83	-23012	15019	26268	95155	78559	29733	108292		3.52	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 0.51 Ta 0.05 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	-52074	0.25	296.58	6288.28	9150.61	7719.45	26.03	Si
SLV 4	-52122	0.25	296.58	6292.66	9157.99	7725.32	26.05	Si
SLV 1	-52135	0.25	296.58	6293.85	9160	7726.92	26.05	Si
SLV 3	-52183	0.25	296.58	6298.23	9167.37	7732.8	26.07	Si
SLV 6	-57423	0.25	296.58	6761.7	9975.8	8368.75	28.22	Si
SLV 5	-57462	0.25	296.58	6765.02	9981.8	8373.41	28.23	Si
SLV 8	-57583	0.25	296.58	6775.33	10000.42	8387.87	28.28	Si
SLV 7	-57622	0.25	296.58	6778.64	10006.42	8392.53	28.3	Si
SLV 10	-62046	0.25	296.58	7145	10689.48	8917.24	30.07	Si
SLV 9	-62085	0.25	296.58	7148.12	10695.44	8921.78	30.08	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.05 Ta = 0.0494

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-59150	-55217	275	0.563	6755.9	0.967	8.45595	6.19867	Si
SLV 9	-59098	-55245	276	0.563	6750.6	0.967	8.46225	6.19867	Si
SLV 12	-58039	-54661	192	0.573	6642.9	0.967	8.61683	6.19867	Si
SLV 11	-57988	-54690	192	0.573	6637.6	0.967	8.62337	6.19867	Si
SLV 6	-56503	-50941	-820	0.576	6486.5	0.966	8.6665	6.19867	Si
SLV 5	-56451	-50969	-819	0.576	6481.2	0.966	8.67352	6.19867	Si
SLV 8	-55392	-50385	-903	0.584	6373.5	0.965	8.79686	6.19867	Si
SLV 7	-55341	-50414	-903	0.585	6368.2	0.965	8.80413	6.19867	Si
SLV 14	-61863	-60003	1523	0.523	7032.1	0.968	7.85042	3.99966	Si
SLV 13	-61783	-60048	1524	0.524	7023.9	0.968	7.85911	3.99966	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.022	SLU 77	Si
V_SLU	4.702	SLU 83	Si
PF_SLV	3.231	SLV 8	Si
V_SLV	3.49	SLV 8	Si
PFFP_SLV	26.029	SLV 2	Si
R_SLV	1.364	SLV 10	Si

Maschio 19

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.638	1.046	-24.653	1.046	L2	L4	5.015	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	-0.98	9420.83	-135431	-0.000104	0.0004492	0.0035	5.015	172804.43	237744.45	237744.45	25.24	No	Si
SLU 78	1.12	-4980.82	-101345	-0.0000735	0.0004492	0.0035	5.015	160724.93	208431.31	208431.31	41.85	No	Si
SLU 82	-0.98	9425.62	-138145	-0.0001062	0.0004492	0.0035	5.015	172858.01	240356.39	240356.39	25.5	No	Si
SLU 82	1.12	-5543.59	-103980	-0.0000759	0.0004492	0.0035	5.015	162412.45	212013.46	212013.46	38.24	No	Si
SLU 81	-0.98	9444.47	-138118	-0.0001062	0.0004492	0.0035	5.015	172858.13	240330.71	240330.71	25.45	No	Si
SLU 81	1.12	-5552.46	-103936	-0.0000759	0.0004492	0.0035	5.015	162385.09	211953.16	211953.16	38.17	No	Si
SLU 83	-0.98	9542	-139128	-0.0001071	0.0004492	0.0035	5.015	172844.36	241302.85	241302.85	25.29	No	Si
SLU 83	1.12	-5532.15	-104722	-0.0000765	0.0004492	0.0035	5.015	162864.85	213022.17	213022.17	38.51	No	Si
SLU 74	-0.98	9342.15	-134394	-0.0001031	0.0004492	0.0035	5.015	172748.61	236746.62	236746.62	25.34	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 74	1.12	-5010.01	-100514	-0.0000729	0.0004492	0.0035	5.015	160166.74	207302	207302	41.38	No	Si
SLU 77	-0.98	9439.68	-135404	-0.000104	0.0004492	0.0035	5.015	172803.24	237718.77	237718.77	25.18	No	Si
SLU 77	1.12	-4989.69	-101300	-0.0000735	0.0004492	0.0035	5.015	160695.44	208371.01	208371.01	41.76	No	Si
SLU 80	-0.98	9339.32	-134637	-0.0001033	0.0004492	0.0035	5.015	172763.43	236980.24	236980.24	25.37	No	Si
SLU 80	1.12	-4879.13	-100696	-0.0000729	0.0004492	0.0035	5.015	160290.37	207549.94	207549.94	42.54	No	Si
SLU 79	-0.98	9358.16	-134610	-0.0001033	0.0004492	0.0035	5.015	172761.86	236954.56	236954.56	25.32	No	Si
SLU 79	1.12	-4888	-100652	-0.0000729	0.0004492	0.0035	5.015	160260.36	207489.64	207489.64	42.45	No	Si
SLU 75	-0.98	9323.3	-134421	-0.0001031	0.0004492	0.0035	5.015	172750.29	236772.31	236772.31	25.4	No	Si
SLU 75	1.12	-5001.14	-100558	-0.0000729	0.0004492	0.0035	5.015	160196.86	207362.29	207362.29	41.46	No	Si
SLU 84	-0.98	9523.15	-139155	-0.0001071	0.0004492	0.0035	5.015	172843.75	241328.53	241328.53	25.34	No	Si
SLU 84	1.12	-5523.28	-104766	-0.0000765	0.0004492	0.0035	5.015	162891.58	213082.47	213082.47	38.58	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	-0.98	51512.9	-121838	-0.0001263	0.0006738	0.0035	5.015		243583.85	243583.85	4.73		Si
SLV 2	1.12	-14655.93	-93918	-0.0000743	0.0006738	0.0035	5.015		211418.02	211418.02	14.43		Si
SLV 16	-0.98	-38465.67	-64251	-0.000073	0.0006738	0.0035	5.015		156994.86	156994.86	4.08		Si
SLV 16	1.12	8785.42	-42628	-0.0000344	0.0006738	0.0035	5.015		101175.73	101175.73	11.52		Si
SLV 15	-0.98	-38356.18	-64297	-0.000073	0.0006738	0.0035	5.015		157083.22	157083.22	4.1		Si
SLV 15	1.12	8965.64	-42902	-0.0000347	0.0006738	0.0035	5.015		101762.21	101762.21	11.35		Si
SLV 3	-0.98	51723.22	-122068	-0.0001267	0.0006738	0.0035	5.015		243910.38	243910.38	4.72		Si
SLV 3	1.12	-13920.22	-94892	-0.0000744	0.0006738	0.0035	5.015		213068.34	213068.34	15.31		Si
SLV 1	-0.98	51622.39	-121885	-0.0001265	0.0006738	0.0035	5.015		243649.64	243649.64	4.72		Si
SLV 1	1.12	-14475.71	-94191	-0.0000743	0.0006738	0.0035	5.015		211880.57	211880.57	14.64		Si
SLD 3	-0.98	25880.85	-105470	-0.000092	0.0006738	0.0035	5.015		219324.79	219324.79	8.47		Si
SLD 3	1.12	-7569.71	-79731	-0.0000585	0.0006738	0.0035	5.015		186243.01	186243.01	24.6		Si
SLV 4	-0.98	51613.72	-122022	-0.0001266	0.0006738	0.0035	5.015		243844.6	243844.6	4.72		Si
SLV 4	1.12	-14100.44	-94619	-0.0000743	0.0006738	0.0035	5.015		212605.79	212605.79	15.08		Si
SLV 14	-0.98	-38566.49	-64067	-0.000073	0.0006738	0.0035	5.015		156629.44	156629.44	4.06		Si
SLV 14	1.12	8229.93	-41927	-0.0000335	0.0006738	0.0035	5.015		99669.73	99669.73	12.11		Si
SLV 13	-0.98	-38457	-64113	-0.0000729	0.0006738	0.0035	5.015		156722.71	156722.71	4.08		Si
SLV 13	1.12	8410.15	-42200	-0.0000338	0.0006738	0.0035	5.015		100256.21	100256.21	11.92		Si
SLD 1	-0.98	25838.78	-105391	-0.0000919	0.0006738	0.0035	5.015		219179.66	219179.66	8.48		Si
SLD 1	1.12	-7798.12	-79438	-0.0000585	0.0006738	0.0035	5.015		185715.94	185715.94	23.82		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	-0.98	9420.83	-135431	-108345	-18460	5.015	5.015	-48009	10833	24448	95155	81102	25577	106678	No	5.78	Si
SLU 78	1.12	-4980.82	-101345	-81076	-19050	5.015	5.015	-35926	10833	24448	95155	81102	25577	106678	No	5.6	Si
SLU 77	-0.98	9439.68	-135404	-108323	-18469	5.015	5.015	-48000	10833	24448	95155	81102	25577	106678	No	5.78	Si
SLU 77	1.12	-4989.69	-101300	-81040	-19059	5.015	5.015	-35910	10833	24448	95155	81102	25577	106678	No	5.6	Si
SLU 74	-0.98	9342.15	-134394	-107515	-18255	5.015	5.015	-47642	10833	24448	95155	81102	25577	106678	No	5.84	Si
SLU 74	1.12	-5010.01	-100514	-80411	-18839	5.015	5.015	-35631	10833	24448	95155	81102	25577	106678	No	5.66	Si
SLU 82	-0.98	9425.62	-138145	-110516	-18236	5.015	5.015	-48971	10833	24448	95155	81102	25577	106678	No	5.85	Si
SLU 82	1.12	-5543.59	-103980	-83184	-18834	5.015	5.015	-36860	10833	24448	95155	81102	25577	106678	No	5.66	Si
SLU 79	-0.98	9358.16	-134610	-107688	-18399	5.015	5.015	-47718	10833	24448	95155	81102	25577	106678	No	5.8	Si
SLU 79	1.12	-4888	-100652	-80522	-18984	5.015	5.015	-35680	10833	24448	95155	81102	25577	106678	No	5.62	Si
SLU 80	-0.98	9339.32	-134637	-107710	-18391	5.015	5.015	-47728	10833	24448	95155	81102	25577	106678	No	5.8	Si
SLU 80	1.12	-4879.13	-100696	-80557	-18976	5.015	5.015	-35696	10833	24448	95155	81102	25577	106678	No	5.62	Si
SLU 84	-0.98	9523.15	-139155	-111324	-18449	5.015	5.015	-49329	10833	24448	95155	81102	25577	106678	No	5.78	Si
SLU 84	1.12	-5523.28	-104766	-83813	-19053	5.015	5.015	-37139	10833	24448	95155	81102	25577	106678	No	5.6	Si
SLU 83	-0.98	9542	-139128	-111302	-18458	5.015	5.015	-49320	10833	24448	95155	81102	25577	106678	No	5.78	Si
SLU 83	1.12	-5532.15	-104722	-83778	-19062	5.015	5.015	-37123	10833	24448	95155	81102	25577	106678	No	5.6	Si
SLU 81	-0.98	9444.47	-138118	-110494	-18244	5.015	5.015	-48962	10833	24448	95155	81102	25577	106678	No	5.85	Si
SLU 81	1.12	-5552.46	-103936	-83148	-18842	5.015	5.015	-36844	10833	24448	95155	81102	25577	106678	No	5.66	Si
SLU 75	-0.98	9323.3	-134421	-107537	-18246	5.015	5.015	-47651	10833	24448	95155	81102	25577	106678	No	5.85	Si
SLU 75	1.12	-5001.14	-100558	-80447	-18831	5.015	5.015	-35647	10833	24448	95155	81102	25577	106678	No	5.67	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	-0.98	-38465.67	-64251	-51401	-40694	5.015	5.015	-22776	16250	36672	95155	121653	25577	131827		3.24	Si
SLV 16	1.12	8785.42	-42628	-34103	-37962	5.015	5.015	-15111	15522	35030	95155	121653	25577	130185		3.43	Si
SLV 14	-0.98	-38566.49	-64067	-51254	-38328	5.015	5.015	-22711	16250	36672	95155	121653	25577	131827		3.44	Si
SLV 14	1.12	8229.93	-41927	-33542	-37373	5.015	5.015	-14863	15473	34918	95155	121653	25577	130073		3.48	Si
SLD 16	-0.98	-12682.05	-80744	-64595	-25031	5.015	5.015	-28623	16250	36672	95155	121653	25577	131827		5.27	Si
SLD 16	1.12	2107.83	-57382	-45906	-24092	5.015	5.015	-20341	16250	36672	95155	121653	25577	131827		5.47	Si
SLV 13	-0.98	-38457	-64113	-51291	-38082	5.015	5.015	-22728	16250	36672	95155	121653	25577	131827		3.46	Si
SLV 13	1.12	8410.15	-42200	-33760	-37128	5.015	5.015	-14960	15492	34961	95155	121653	25577	130117		3.5	Si
SLV 11	-0.98	-6730.55	-84723	-67779	-25004	5.015	5.015	-30034	16250	36672	95155	121653	25577	131827		5.27	Si
SLV 11	1.12	1571.1	-61867	-49494	-21770	5.015	5.015	-21931	16250	36672	95155	121653	25577	131827		6.06	Si
SLD 15	-0.98	-12635.06	-80764	-64611	-24926	5.015	5.015	-28630	16250	36672	95155	121653	25577	131827		5.29	Si
SLD 15	1.12	2185.19	-57499	-45999	-23987	5.015	5.015	-20383	16250	36672	95155	121653	25577	131827		5.5	Si
SLD 14	-0.98	-12724.13	-80665	-64532	-24016	5.015	5.015	-28595	16250	36672	95155	121653	25577	131827		5.49	Si
SLD 14	1.12	1879.42	-57089	-45671	-23834	5.015	5.015	-20238	16250	36672	95155	121653	25577	131827		5.53	Si
SLD 13	-0.98	-12677.13	-80685	-64548	-23911	5.015	5.015	-28602	16250	36672	95155	121653	25577	131827		5.51	Si
SLD 13	1.12	1956.78	-57206	-45765	-23729	5.015	5.015	-20279	16250	36672	95155	121653	25577	131827		5.56	Si
SLV 15	-0.98	-38356.18	-64297	-51438	-40448	5.015	5.015	-22793	16250	36672	95155	121653	25577	131827		3.26	Si
SLV 15	1.12	8965.64	-42902	-34321	-37716	5.015	5.015	-15208	15542	35074	95155	121653	25577	130229		3.45	Si
SLV 12	-0.98	-6800.48	-84694	-67755	-25160	5.015	5.015	-30023	16250	36672	95155	121653	25577	131827		5.24	Si
SLV 12	1.12	1456	-61693	-49354	-21926	5.015	5.015	-21870	16250	36672	95155	121653	25577	131827		6.01	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 0.51 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-49800	0.25	382.67	9855.9	12684.73	11270.32	29.45	Si
SLV 15	-50033	0.25	382.67	9895.76	12738.38	11317.07	29.57	Si
SLV 14	-50051	0.25	382.67	9898.81	12742.5	11320.65	29.58	Si
SLV 13	-50285	0.25	382.67	9938.61	12795.91	11367.26	29.7	Si
SLV 12	-68624	0.25	382.67	12878.63	16926.62	14902.62	38.94	Si
SLV 11	-68773	0.25	382.67	12901.03	16959.57	14930.3	39.02	Si
SLV 10	-69462	0.25	382.67	13004.24	17111.8	15058.02	39.35	Si
SLV 9	-69611	0.25	382.67	13026.51	17144.76	15085.63	39.42	Si
SLV 8	-84974	0.25	382.67	15191.26	20458.16	17824.71	46.58	Si
SLV 7	-85123	0.25	382.67	15211.02	20489.28	17850.15	46.65	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-64211	-102055	2204	0.452	7484.8	0.962	6.82091	4.45299	Si
SLV 8	-64075	-102025	2206	0.452	7471	0.962	6.83183	4.45299	Si
SLV 11	-56332	-84723	2310	0.497	6683.5	0.958	7.54466	4.45299	Si
SLV 12	-56196	-84694	2312	0.498	6669.7	0.958	7.55863	4.45299	Si
SLV 5	-52051	-101442	-3694	0.505	6248.4	0.955	7.67572	4.45299	Si
SLV 6	-51916	-101412	-3692	0.506	6234.6	0.955	7.69225	4.45299	Si
SLV 9	-44173	-84111	-3587	0.574	5448.1	0.95	8.78478	4.45299	Si
SLV 10	-44037	-84081	-3585	0.575	5434.3	0.95	8.8071	4.45299	Si
SLV 1	-65538	-121885	-1755	0.451	7619.8	0.963	6.80602	3.37435	Si
SLV 2	-65326	-121838	-1751	0.452	7598.2	0.963	6.82426	3.37435	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	25.183	SLU 77	Si
V_SLU	5.597	SLU 83	Si
PF_SLV	4.061	SLV 14	Si
V_SLV	3.24	SLV 16	Si
PFFP_SLV	29.452	SLV 16	Si
R_SLV	1.532	SLV 7	Si

Maschio 20

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-14.963	1.046	-18.838	1.046	L2	L4	3.875	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	-0.98	-12483.77	-99531	-0.0001095	0.0004492	0.0035	3.875	102757.4	142747.66	142747.66	11.43	No	Si
SLU 77	1.12	-6212.7	-94139	-0.0000941	0.0004492	0.0035	3.875	101806.51	138784.43	138784.43	22.34	No	Si
SLU 79	-0.98	-12369.95	-98819	-0.0001086	0.0004492	0.0035	3.875	102662.02	142223.69	142223.69	11.5	No	Si
SLU 79	1.12	-6144.73	-93397	-0.0000932	0.0004492	0.0035	3.875	101634.26	138239.01	138239.01	22.5	No	Si
SLU 78	-0.98	-12483.93	-99514	-0.0001095	0.0004492	0.0035	3.875	102755.14	142734.62	142734.62	11.43	No	Si
SLU 78	1.12	-6162.8	-94158	-0.000094	0.0004492	0.0035	3.875	101810.78	138798.36	138798.36	22.52	No	Si
SLU 81	-0.98	-12680.55	-101738	-0.0001122	0.0004492	0.0035	3.875	102994.04	144369.27	144369.27	11.39	No	Si
SLU 81	1.12	-6415.92	-96483	-0.0000968	0.0004492	0.0035	3.875	102284.85	140507.33	140507.33	21.9	No	Si
SLU 74	-0.98	-12404.64	-98824	-0.0001086	0.0004492	0.0035	3.875	102662.85	142228.04	142228.04	11.47	No	Si
SLU 74	1.12	-6168.8	-93416	-0.0000933	0.0004492	0.0035	3.875	101638.65	138252.53	138252.53	22.41	No	Si
SLU 84	-0.98	-12759.84	-102427	-0.000113	0.0004492	0.0035	3.875	103049.82	144875.85	144875.85	11.35	No	Si
SLU 84	1.12	-6409.92	-97226	-0.0000975	0.0004492	0.0035	3.875	102415.55	141053.17	141053.17	22.01	No	Si
SLU 80	-0.98	-12370.11	-98801	-0.0001086	0.0004492	0.0035	3.875	102659.53	142210.66	142210.66	11.5	No	Si
SLU 80	1.12	-6094.83	-93416	-0.0000932	0.0004492	0.0035	3.875	101638.78	138252.94	138252.94	22.68	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	-0.98	-12759.68	-102444	-0.000113	0.0004492	0.0035	3.875	103051.14	144888.89	144888.89	11.36	No	Si
SLU 83	1.12	-6459.82	-97207	-0.0000976	0.0004492	0.0035	3.875	102412.34	141039.24	141039.24	21.83	No	Si
SLU 75	-0.98	-12404.81	-98807	-0.0001086	0.0004492	0.0035	3.875	102660.36	142215.01	142215.01	11.46	No	Si
SLU 75	1.12	-6118.89	-93435	-0.0000932	0.0004492	0.0035	3.875	101643.17	138266.46	138266.46	22.6	No	Si
SLU 82	-0.98	-12680.71	-101720	-0.0001121	0.0004492	0.0035	3.875	102992.5	144356.24	144356.24	11.38	No	Si
SLU 82	1.12	-6366.02	-96502	-0.0000967	0.0004492	0.0035	3.875	102288.31	140521.26	140521.26	22.07	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	-0.98	-46129.71	-65028	-0.0001204	0.0006738	0.0035	3.875		115674.97	115674.97	2.51		Si
SLV 14	1.12	18656.84	-59010	-0.0000757	0.0006738	0.0035	3.875		99175.85	99175.85	5.32		Si
SLV 15	-0.98	-46428.88	-67988	-0.0001235	0.0006738	0.0035	3.875		119814.57	119814.57	2.58		Si
SLV 15	1.12	12434	-61046	-0.0000689	0.0006738	0.0035	3.875		102047.32	102047.32	8.21		Si
SLV 1	-0.98	29337.94	-67817	-0.0000988	0.0006738	0.0035	3.875		111596.06	111596.06	3.8		Si
SLV 1	1.12	-20625.56	-66021	-0.0000849	0.0006738	0.0035	3.875		117064.04	117064.04	5.68		Si
SLD 14	-0.98	-24596.17	-66704	-0.000091	0.0006738	0.0035	3.875		118019.14	118019.14	4.8		Si
SLD 14	1.12	5596.76	-61570	-0.00006	0.0006738	0.0035	3.875		102785.95	102785.95	18.37		Si
SLV 3	-0.98	29048.1	-70953	-0.0001013	0.0006738	0.0035	3.875		116019.06	116019.06	3.99		Si
SLV 3	1.12	-27046.08	-67945	-0.0000957	0.0006738	0.0035	3.875		119754.96	119754.96	4.43		Si
SLV 2	-0.98	29347.27	-67993	-0.0000989	0.0006738	0.0035	3.875		111844.74	111844.74	3.81		Si
SLV 2	1.12	-20823.25	-65909	-0.000085	0.0006738	0.0035	3.875		116907.37	116907.37	5.61		Si
SLV 13	-0.98	-46139.04	-64852	-0.0001203	0.0006738	0.0035	3.875		115428.35	115428.35	2.5		Si
SLV 13	1.12	18854.52	-59122	-0.000076	0.0006738	0.0035	3.875		99333.84	99333.84	5.27		Si
SLV 16	-0.98	-46419.56	-68164	-0.0001236	0.0006738	0.0035	3.875		120061.19	120061.19	2.59		Si
SLV 16	1.12	12236.32	-60934	-0.0000686	0.0006738	0.0035	3.875		101889.34	101889.34	8.33		Si
SLD 13	-0.98	-24600.17	-66628	-0.000091	0.0006738	0.0035	3.875		117913.28	117913.28	4.79		Si
SLD 13	1.12	5681.61	-61618	-0.0000602	0.0006738	0.0035	3.875		102853.77	102853.77	18.1		Si
SLV 4	-0.98	29057.42	-71130	-0.0001015	0.0006738	0.0035	3.875		116267.74	116267.74	4		Si
SLV 4	1.12	-27243.77	-67833	-0.0000958	0.0006738	0.0035	3.875		119598.28	119598.28	4.39		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 64	-0.98	-11117.69	-87295	-69836	-771	3.875	3.875	-40049	10833	18891	95155	62666	19762	82429	No	106.9	Si
SLU 64	1.12	-5219.27	-81372	-65098	-743	3.875	3.875	-37332	10833	18891	95155	62666	19762	82429	No	110.89	Si
SLU 66	-0.98	-11310.65	-88714	-70972	-775	3.875	3.875	-40701	10833	18891	95155	62666	19762	82429	No	106.4	Si
SLU 66	1.12	-5331.14	-82838	-66270	-747	3.875	3.875	-38005	10833	18891	95155	62666	19762	82429	No	110.42	Si
SLU 72	-0.98	-11276.11	-88691	-70953	-775	3.875	3.875	-40690	10833	18891	95155	62666	19762	82429	No	106.35	Si
SLU 72	1.12	-5257.18	-82839	-66271	-747	3.875	3.875	-38005	10833	18891	95155	62666	19762	82429	No	110.4	Si
SLU 69	-0.98	-11389.77	-89421	-71537	-779	3.875	3.875	-41025	10833	18891	95155	62666	19762	82429	No	105.85	Si
SLU 69	1.12	-5375.04	-83562	-66849	-750	3.875	3.875	-38337	10833	18891	95155	62666	19762	82429	No	109.86	Si
SLU 71	-0.98	-11275.95	-88708	-70967	-779	3.875	3.875	-40698	10833	18891	95155	62666	19762	82429	No	105.79	Si
SLU 71	1.12	-5307.08	-82820	-66256	-751	3.875	3.875	-37996	10833	18891	95155	62666	19762	82429	No	109.78	Si
SLU 67	-0.98	-11310.81	-88697	-70957	-771	3.875	3.875	-40692	10833	18891	95155	62666	19762	82429	No	106.96	Si
SLU 67	1.12	-5281.24	-82857	-66286	-742	3.875	3.875	-38013	10833	18891	95155	62666	19762	82429	No	111.04	Si
SLU 29	-0.98	-9438.96	-73171	-58537	-728	3.875	3.875	-33569	10833	18891	95155	62666	19762	82429	No	113.19	Si
SLU 29	1.12	-4236.58	-68854	-55083	-705	3.875	3.875	-31589	10833	18891	95155	62666	19762	82429	No	116.94	Si
SLU 70	-0.98	-11389.94	-89404	-71523	-775	3.875	3.875	-41017	10833	18891	95155	62666	19762	82429	No	106.41	Si
SLU 70	1.12	-5325.14	-83581	-66865	-746	3.875	3.875	-38345	10833	18891	95155	62666	19762	82429	No	110.49	Si
SLU 68	-0.98	-11197.09	-87972	-70378	-768	3.875	3.875	-40360	10833	18891	95155	62666	19762	82429	No	107.29	Si
SLU 68	1.12	-5180.01	-82128	-65702	-740	3.875	3.875	-37679	10833	18891	95155	62666	19762	82429	No	111.38	Si
SLU 65	-0.98	-11117.96	-87265	-69812	-764	3.875	3.875	-40036	10833	18891	95155	62666	19762	82429	No	107.86	Si
SLU 65	1.12	-5136.11	-81404	-65123	-736	3.875	3.875	-37347	10833	18891	95155	62666	19762	82429	No	111.95	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	-0.98	-46428.88	-67988	-54390	-29542	3.875	3.7638	-32604	16250	27523	95155	93999	19762	113762		3.85	Si
SLV 15	1.12	12434	-61046	-48837	-28452	3.875	3.875	-28007	16250	28336	95155	93999	19762	113762		4	Si
SLV 2	-0.98	29347.27	-67993	-54395	28602	3.875	3.875	-31194	16250	28336	95155	93999	19762	113762		3.98	Si
SLV 2	1.12	-20823.25	-65909	-52727	27556	3.875	3.875	-30238	16250	28336	95155	93999	19762	113762		4.13	Si
SLV 3	-0.98	29048.1	-70953	-56763	28603	3.875	3.875	-32552	16250	28336	95155	93999	19762	113762		3.98	Si
SLV 3	1.12	-27046.08	-67945	-54356	27505	3.875	3.875	-31172	16250	28336	95155	93999	19762	113762		4.14	Si
SLV 13	-0.98	-46139.04	-64852	-51881	-29421	3.875	3.6781	-31811	16250	26896	95155	93999	19762	113762		3.87	Si
SLV 13	1.12	18854.52	-59122	-47297	-28281	3.875	3.875	-27124	16250	28336	95155	93999	19762	113762		4.02	Si
SLD 16	-0.98	-24712.99	-68075	-54460	-12944	3.875	3.875	-31231	16250	28336	95155	93999	19762	113762		8.79	Si
SLD 16	1.12	2827.8	-62392	-49914	-12462	3.875	3.875	-28624	16250	28336	95155	93999	19762	113762		9.13	Si
SLV 14	-0.98	-46129.71	-65028	-52022	-29542	3.875	3.6844	-31844	16250	26942	95155	93999	19762	113762		3.85	Si
SLV 14	1.12	18656.84	-59010	-47208	-28402	3.875	3.875	-27073	16250	28336	95155	93999	19762	113762		4.01	Si
SLV 16	-0.98	-46419.56	-68164	-54531	-29663	3.875	3.7695	-32639	16250	27565	95155	93999	19762	113762		3.84	Si
SLV 16	1.12	12236.32	-60934	-48747	-28573	3.875	3.875	-27955	16250	28336	95155	93999	19762	113762		3.98	Si
SLD 15	-0.98	-24716.99	-67999	-54399	-12892	3.875	3.875	-31197	16250	28336	95155	93999	19762	113762		8.82	Si
SLD 15	1.12	2912.65	-62440	-49952	-12410	3.875	3.875	-28646	16250	28336	95155	93999	19762	113762		9.17	Si
SLV 1	-0.98	29337.94	-67817	-54254	28723	3.875	3.875	-31113	16250	28336	95155	93999	19762	113762		3.96	Si
SLV 1	1.12	-20625.56	-66021	-52817	27677	3.875	3.875	-30289	16250	28336	95155	93999	19762	113762		4.11	Si
SLV 4	-0.98	29057.42	-71130	-56904	28482	3.875	3.875	-32633	16250	28336	95155	93999	19762	113762		3.99	Si
SLV 4	1.12	-27243.77	-67833	-54267	27384	3.875	3.875	-31121	16250	28336	95155	93999	19762	113762		4.15	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 0.51 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 10	-59487	0.25	295.68	10893.24	14500.81	12697.02	42.94	Si
SLV 9	-59507	0.25	295.68	10896.14	14505.35	12700.75	42.95	Si
SLV 14	-60087	0.25	295.68	10977.82	14633.51	12805.66	43.31	Si
SLV 13	-60120	0.25	295.68	10982.34	14640.62	12811.48	43.33	Si

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 6	-61360	0.25	295.68	11155.37	14904.86	13030.12	44.07	Si
SLV 5	-61381	0.25	295.68	11158.22	14909.15	13033.68	44.08	Si
SLV 16	-62481	0.25	295.68	11309.78	15138.34	13224.06	44.72	Si
SLV 15	-62513	0.25	295.68	11314.2	15145.05	13229.62	44.74	Si
SLV 2	-66332	0.25	295.68	11827.08	15940.99	13884.04	46.96	Si
SLV 1	-66364	0.25	295.68	11831.32	15947.7	13889.51	46.97	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-51236	-63152	-3002	0.417	5948.3	0.963	6.29877	4.45299	Si
SLV 6	-51107	-63264	-3002	0.418	5935.2	0.963	6.31131	4.45299	Si
SLV 9	-49325	-62262	-2949	0.431	5753.9	0.962	6.50411	4.45299	Si
SLV 10	-49195	-62375	-2948	0.431	5740.7	0.962	6.51761	4.45299	Si
SLV 7	-50557	-73606	1476	0.449	5879.3	0.963	6.78193	4.45299	Si
SLV 8	-50428	-73719	1477	0.45	5866.1	0.963	6.79561	4.45299	Si
SLV 11	-48646	-72717	1530	0.462	5684.8	0.962	6.97733	4.45299	Si
SLV 12	-48517	-72829	1530	0.463	5671.7	0.961	6.992	4.45299	Si
SLV 1	-53265	-67817	-1498	0.431	6154.7	0.964	6.50231	3.37435	Si
SLV 2	-53062	-67993	-1497	0.433	6134.1	0.964	6.522	3.37435	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	11.354	SLU 84	Si
V_SLU	105.791	SLU 71	Si
PF_SLV	2.502	SLV 13	Si
V_SLV	3.835	SLV 16	Si
PFFP_SLV	42.941	SLV 10	Si
R_SLV	1.415	SLV 5	Si

Maschio 21

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.583	1.046	-14.163	1.046	L2	L4	0.58	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	-0.98	2949.72	-21123	-0.0005493	0.0004492	0.0035	0.58	2068.35	3666.41	3666.41	1.24	No	Si
SLU 80	1.18	-925.46	-12897	-0.0001408	0.0004492	0.0035	0.58	2227.6	2903.09	2903.09	3.14	No	Si
SLU 75	-0.98	2943.87	-21114	-0.0005456	0.0004492	0.0035	0.58	2069.16	3665.87	3665.87	1.25	No	Si
SLU 75	1.18	-925	-12942	-0.0001411	0.0004492	0.0035	0.58	2230.05	2908.83	2908.83	3.14	No	Si
SLU 79	-0.98	2952.93	-21134	-0.0005515	0.0004492	0.0035	0.58	2067.29	3667.11	3667.11	1.24	No	Si
SLU 79	1.18	-925.95	-12891	-0.0001408	0.0004492	0.0035	0.58	2227.25	2902.26	2902.26	3.13	No	Si
SLU 81	-0.98	3031.8	-21742	-0.0006128	0.0004492	0.0035	0.58	2006.55	3705.02	3705.02	1.22	No	Si
SLU 81	1.18	-954.24	-13368	-0.0001465	0.0004492	0.0035	0.58	2251.7	2963.96	2963.96	3.11	No	Si
SLU 82	-0.98	3028.58	-21731	-0.0006101	0.0004492	0.0035	0.58	2007.73	3704.32	3704.32	1.22	No	Si
SLU 82	1.18	-953.75	-13375	-0.0001465	0.0004492	0.0035	0.58	2252	2964.8	2964.8	3.11	No	Si
SLU 78	-0.98	2969.22	-21276	-0.0005631	0.0004492	0.0035	0.58	2053.72	3675.96	3675.96	1.24	No	Si
SLU 78	1.18	-932.69	-13028	-0.0001423	0.0004492	0.0035	0.58	2234.69	2919.97	2919.97	3.13	No	Si
SLU 83	-0.98	3057.15	-21904	-0.0006352	0.0004492	0.0035	0.58	1989.26	3715.11	3715.11	1.22	No	Si
SLU 83	1.18	-961.94	-13455	-0.0001477	0.0004492	0.0035	0.58	2255.67	2975.11	2975.11	3.09	No	Si
SLU 77	-0.98	2972.43	-21287	-0.0005654	0.0004492	0.0035	0.58	2052.63	3676.65	3676.65	1.24	No	Si
SLU 77	1.18	-933.19	-13021	-0.0001423	0.0004492	0.0035	0.58	2234.35	2919.14	2919.14	3.13	No	Si
SLU 84	-0.98	3053.94	-21893	-0.0006324	0.0004492	0.0035	0.58	1990.47	3714.41	3714.41	1.22	No	Si
SLU 84	1.18	-961.44	-13461	-0.0001477	0.0004492	0.0035	0.58	2255.96	2975.94	2975.94	3.1	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 74	-0.98	2947.08	-21125	-0.0005477	0.0004492	0.0035	0.58	2068.11	3666.56	3666.56	1.24	No	Si
SLU 74	1.18	-925.49	-12935	-0.0001411	0.0004492	0.0035	0.58	2229.69	2907.99	2907.99	3.14	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 3	-0.98	2804.74	-14997	-0.0004005	0.0006738	0.0035	0.58		3407.01	3407.01	1.21		Si
SLD 3	1.18	-941.43	-8161	-0.0001052	0.0006738	0.0035	0.58		2214.97	2214.97	2.35		Si
SLD 1	-0.98	2691.47	-14572	-0.000373	0.0006738	0.0035	0.58		3336.69	3336.69	1.24		Si
SLD 1	1.18	-917	-8224	-0.0001036	0.0006738	0.0035	0.58		2228.61	2228.61	2.43		Si
SLV 4	-0.98	3837.72	-15643	-0.0066424	0.0006738	0.0035	0.58		3513.92	3513.92	0.92		No
SLV 4	1.18	-1351.92	-7391	-0.0001609	0.0006738	0.0035	0.464		2041.99	2041.99	1.51		Si
SLV 1	-0.98	3575.86	-14626	-0.0060002	0.0006738	0.0035	0.58		3345.58	3345.58	0.94		No
SLV 1	1.18	-1297.99	-7534	-0.000148	0.0006738	0.0035	0.464		2074.81	2074.81	1.6		Si
SLV 8	-0.98	2969.89	-16357	-0.0004214	0.0006738	0.0035	0.58		3632.14	3632.14	1.22		Si
SLV 8	1.18	-933.75	-8128	-0.0001044	0.0006738	0.0035	0.58		2207.71	2207.71	2.36		Si
SLV 2	-0.98	3577.19	-14666	-0.005931	0.0006738	0.0035	0.58		3352.28	3352.28	0.94		No
SLV 2	1.18	-1295.47	-7523	-0.0001477	0.0006738	0.0035	0.464		2072.27	2072.27	1.6		Si
SLD 4	-0.98	2805.31	-15014	-0.0004002	0.0006738	0.0035	0.58		3409.89	3409.89	1.22		Si
SLD 4	1.18	-940.35	-8157	-0.0001051	0.0006738	0.0035	0.58		2213.93	2213.93	2.35		Si
SLV 7	-0.98	2969.04	-16331	-0.0004217	0.0006738	0.0035	0.58		3627.86	3627.86	1.22		Si
SLV 7	1.18	-935.36	-8135	-0.0001046	0.0006738	0.0035	0.58		2209.26	2209.26	2.36		Si
SLV 3	-0.98	3836.38	-15603	-0.006711	0.0006738	0.0035	0.58		3507.23	3507.23	0.91		No
SLV 3	1.18	-1354.44	-7402	-0.0001613	0.0006738	0.0035	0.464		2044.54	2044.54	1.51		Si
SLD 2	-0.98	2692.04	-14590	-0.0003727	0.0006738	0.0035	0.58		3339.57	3339.57	1.24		Si
SLD 2	1.18	-915.92	-8219	-0.0001035	0.0006738	0.0035	0.58		2227.56	2227.56	2.43		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	-0.98	2972.43	-21287	-17030	2085	0.58	0.4511	-65248	10833	2199	95155	9380	2958	12338	No	5.92	Si
SLU 77	1.18	-933.19	-13021	-10417	200	0.58	0.58	-39913	10833	2828	95155	9380	2958	12338	No	61.67	Si
SLU 78	-0.98	2969.22	-21276	-17021	2082	0.58	0.4513	-65213	10833	2200	95155	9380	2958	12338	No	5.93	Si
SLU 78	1.18	-932.69	-13028	-10422	201	0.58	0.58	-39932	10833	2828	95155	9380	2958	12338	No	61.38	Si
SLU 84	-0.98	3053.94	-21893	-17514	2139	0.58	0.4515	-67104	10833	2201	95155	9380	2958	12338	No	5.77	Si
SLU 84	1.18	-961.44	-13461	-10769	204	0.58	0.58	-41260	10833	2828	95155	9380	2958	12338	No	60.55	Si
SLU 80	-0.98	2949.72	-21123	-16898	2071	0.58	0.4511	-64744	10833	2199	95155	9380	2958	12338	No	5.96	Si
SLU 80	1.18	-925.46	-12897	-10318	197	0.58	0.58	-39532	10833	2828	95155	9380	2958	12338	No	62.72	Si
SLU 75	-0.98	2943.87	-21114	-16891	2062	0.58	0.4517	-64717	10833	2202	95155	9380	2958	12338	No	5.98	Si
SLU 75	1.18	-925	-12942	-10353	200	0.58	0.58	-39668	10833	2828	95155	9380	2958	12338	No	61.72	Si
SLU 82	-0.98	3028.58	-21731	-17385	2119	0.58	0.4519	-66608	10833	2203	95155	9380	2958	12338	No	5.82	Si
SLU 82	1.18	-953.75	-13375	-10700	203	0.58	0.58	-40995	10833	2828	95155	9380	2958	12338	No	60.88	Si
SLU 81	-0.98	3031.8	-21742	-17394	2123	0.58	0.4517	-66642	10833	2202	95155	9380	2958	12338	No	5.81	Si
SLU 81	1.18	-954.24	-13368	-10695	202	0.58	0.58	-40976	10833	2828	95155	9380	2958	12338	No	61.17	Si
SLU 83	-0.98	3057.15	-21904	-17523	2142	0.58	0.4513	-67138	10833	2200	95155	9380	2958	12338	No	5.76	Si
SLU 83	1.18	-961.94	-13455	-10764	203	0.58	0.58	-41240	10833	2828	95155	9380	2958	12338	No	60.83	Si
SLU 79	-0.98	2952.93	-21134	-16907	2074	0.58	0.4508	-64778	10833	2198	95155	9380	2958	12338	No	5.95	Si
SLU 79	1.18	-925.95	-12891	-10313	196	0.58	0.58	-39512	10833	2828	95155	9380	2958	12338	No	63.03	Si
SLU 74	-0.98	2947.08	-21125	-16900	2066	0.58	0.4515	-64752	10833	2201	95155	9380	2958	12338	No	5.97	Si
SLU 74	1.18	-925.49	-12935	-10348	199	0.58	0.58	-39648	10833	2828	95155	9380	2958	12338	No	62.02	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	-0.98	3577.19	-14666	-11733	3235	0.58	0.1383	-238885	16250	1011	95155	14070	2958	17028		5.26	Si
SLV 2	1.18	-1295.47	-7523	-6018	388	0.464	0.3534	0	0	0	95155	11256	2366	13622		35.12	Si
SLV 4	-0.98	3837.72	-15643	-12514	3484	0.58	0.134	-255444	16250	980	95155	14070	2958	17028		4.89	Si
SLV 4	1.18	-1351.92	-7391	-5913	66	0.464	0.3213	0	0	0	95155	11256	2366	13622		205.42	Si
SLV 3	-0.98	3836.38	-15603	-12482	3484	0.58	0.1324	-257059	16250	968	95155	14070	2958	17028		4.89	Si
SLV 3	1.18	-1354.44	-7402	-5922	72	0.464	0.3211	0	0	0	95155	11256	2366	13622		188.88	Si
SLV 1	-0.98	3575.86	-14626	-11701	3234	0.58	0.1365	-240392	16250	998	95155	14070	2958	17028		5.27	Si
SLV 1	1.18	-1297.99	-7534	-6027	394	0.464	0.3531	0	0	0	95155	11256	2366	13622		34.61	Si
SLV 8	-0.98	2969.89	-16357	-13086	2427	0.58	0.3253	-50137	16250	2379	95155	14070	2958	17028		7.02	Si
SLV 8	1.18	-933.75	-8128	-6503	-375	0.58	0.5254	-24915	16250	3842	95155	14070	2958	17028		45.43	Si
SLD 3	-0.98	2804.74	-14997	-11998	2311	0.58	0.3089	-45968	16250	2259	95155	14070	2958	17028		7.37	Si
SLD 3	1.18	-941.43	-8161	-6529	108	0.58	0.5239	-25016	16250	3831	95155	14070	2958	17028		157.73	Si
SLD 4	-0.98	2805.31	-15014	-12012	2311	0.58	0.3095	-46021	16250	2263	95155	14070	2958	17028		7.37	Si
SLD 4	1.18	-940.35	-8157	-6525	105	0.58	0.5241	-25001	16250	3833	95155	14070	2958	17028		161.46	Si
SLV 7	-0.98	2969.04	-16331	-13065	2427	0.58	0.3246	-50058	16250	2374	95155	14070	2958	17028		7.02	Si
SLV 7	1.18	-935.36	-8135	-6508	-371	0.58	0.5251	-24936	16250	3840	95155	14070	2958	17028		45.88	Si
SLD 2	-0.98	2692.04	-14590	-11672	2202	0.58	0.3164	-44719	16250	2314	95155	14070	2958	17028		7.73	Si
SLD 2	1.18	-915.92	-8219	-6575	242	0.58	0.5357	-25192	16250	3917	95155	14070	2958	17028		70.27	Si
SLD 1	-0.98	2691.47	-14572	-11658	2202	0.58	0.3159	-44666	16250	2310	95155	14070	2958	17028		7.73	Si
SLD 1	1.18	-917	-8224	-6579	245	0.58	0.5355	-25206	16250	3916	95155	14070	2958	17028		69.55	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 0.51 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 1	-11060	0.25	44.26	1913.17	2597.86	2255.51	50.96	Si
SLV 2	-11069	0.25	44.26	1914.3	2599.7	2257	51	Si
SLV 3	-11365	0.25	44.26	1949.62	2658.29	2303.96	52.06	Si
SLV 4	-11374	0.25	44.26	1950.72	2660.13	2305.43	52.09	Si
SLV 5	-11874	0.25	44.26	2008.53	2757.74	2383.14	53.85	Si
SLV 6	-11880	0.25	44.26	2009.21	2758.85	2384.03	53.87	Si
SLV 9	-12876	0.25	44.26	2117.28	2945.86	2531.57	57.2	Si
SLV 10	-12882	0.25	44.26	2117.89	2946.97	2532.43	57.22	Si

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 7	-12891	0.25	44.26	2118.85	2948.71	2533.78	57.25	Si
SLV 8	-12897	0.25	44.26	2119.47	2949.83	2534.65	57.27	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-9178	-12718	16	0.409	1043.9	0.968	6.1402	4.45299	Si
SLV 10	-9168	-12744	16	0.409	1042.9	0.968	6.1453	4.45299	Si
SLV 5	-8555	-13076	25	0.431	980.5	0.966	6.47609	4.45299	Si
SLV 6	-8546	-13102	25	0.431	979.6	0.966	6.48189	4.45299	Si
SLV 11	-6554	-15973	-105	0.517	777	0.958	7.84701	4.45299	Si
SLV 12	-6545	-15999	-105	0.518	776	0.958	7.85587	4.45299	Si
SLV 13	-8988	-13432	-36	0.414	1024.6	0.968	6.21128	3.37435	Si
SLV 14	-8974	-13473	-36	0.414	1023.1	0.968	6.21903	3.37435	Si
SLV 7	-5932	-16331	-97	0.56	713.7	0.955	8.52451	4.45299	Si
SLV 8	-5923	-16357	-97	0.561	712.7	0.955	8.53522	4.45299	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.215	SLU 83	Si
V_SLU	5.759	SLU 83	Si
PF_SLV	0.914	SLV 3	No
V_SLV	4.887	SLV 4	Si
PFFP_SLV	50.964	SLV 1	Si
R_SLV	1.379	SLV 9	Si

Maschio 23

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-10.478	1.046	-11.238	1.046	L2	L4	0.76	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 62	-0.98	-846.75	-32748	-0.0002086	0.0004492	0.0035	0.7597	2687.35	6604.69	6604.69	7.8	No	Si
SLU 62	1.18	91.88	-15050	-0.0000711	0.0004492	0.0035	0.7597	3657.06	4443.08	4443.08	48.36	No	Si
SLU 83	-0.98	-859.65	-35750	-0.0002321	0.0004492	0.0035	0.7597	1957.8	6618.27	6618.27	7.7	No	Si
SLU 83	1.18	99.05	-16976	-0.000081	0.0004492	0.0035	0.7597	3827.81	4840.07	4840.07	48.86	No	Si
SLU 84	-0.98	-856.41	-35738	-0.0002318	0.0004492	0.0035	0.7597	1960.97	6618.22	6618.22	7.73	No	Si
SLU 84	1.18	98.98	-16992	-0.000081	0.0004492	0.0035	0.7597	3828.93	4843.32	4843.32	48.93	No	Si
SLU 63	-0.98	-843.51	-32736	-0.0002084	0.0004492	0.0035	0.7597	2689.88	6604.64	6604.64	7.83	No	Si
SLU 63	1.18	91.8	-15065	-0.0000712	0.0004492	0.0035	0.7597	3658.74	4446.33	4446.33	48.43	No	Si
SLU 81	-0.98	-845.79	-35484	-0.0002292	0.0004492	0.0035	0.7597	2028.89	6617.07	6617.07	7.82	No	Si
SLU 81	1.18	97.78	-16874	-0.0000804	0.0004492	0.0035	0.7597	3820.45	4819.02	4819.02	49.28	No	Si
SLU 77	-0.98	-841.34	-34731	-0.0002231	0.0004492	0.0035	0.7597	2223.73	6613.66	6613.66	7.86	No	Si
SLU 77	1.18	97.26	-16389	-0.000078	0.0004492	0.0035	0.7597	3782.94	4719.13	4719.13	48.52	No	Si
SLU 78	-0.98	-838.1	-34719	-0.0002229	0.0004492	0.0035	0.7597	2226.68	6613.61	6613.61	7.89	No	Si
SLU 78	1.18	97.18	-16405	-0.000078	0.0004492	0.0035	0.7597	3784.23	4722.38	4722.38	48.59	No	Si
SLU 79	-0.98	-833.97	-34495	-0.0002209	0.0004492	0.0035	0.7597	2282.57	6612.6	6612.6	7.93	No	Si
SLU 79	1.18	94.72	-16239	-0.0000771	0.0004492	0.0035	0.7597	3770.46	4688.2	4688.2	49.5	No	Si
SLU 82	-0.98	-842.55	-35473	-0.000229	0.0004492	0.0035	0.7597	2032	6617.02	6617.02	7.85	No	Si
SLU 82	1.18	97.71	-16890	-0.0000805	0.0004492	0.0035	0.7597	3821.6	4822.28	4822.28	49.35	No	Si
SLU 60	-0.98	-832.89	-32483	-0.000206	0.0004492	0.0035	0.7597	2743.95	6603.49	6603.49	7.93	No	Si
SLU 60	1.18	90.6	-14947	-0.0000706	0.0004492	0.0035	0.7597	3646.13	4422.04	4422.04	48.81	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	-0.98	4255.58	-22932	-0.0003026	0.0006738	0.0035	0.7597		6544.86	6544.86	1.54		Si
SLV 4	1.18	-1426.85	-12334	-0.0001051	0.0006738	0.0035	0.7597		4285.58	4285.58	3		Si
SLV 2	-0.98	4482.34	-21592	-0.0003269	0.0006738	0.0035	0.7597		6263.53	6263.53	1.4		Si
SLV 2	1.18	-1433.92	-13290	-0.00011	0.0006738	0.0035	0.7597		4544.84	4544.84	3.17		Si
SLV 15	-0.98	-5627.82	-25913	-0.0004569	0.0006738	0.0035	0.6078		7224.85	7224.85	1.28		Si
SLV 15	1.18	1559.9	-8639	-0.0000972	0.0006738	0.0035	0.7597		3027.88	3027.88	1.94		Si
SLV 3	-0.98	4277.68	-22968	-0.0003046	0.0006738	0.0035	0.7597		6552.33	6552.33	1.53		Si
SLV 3	1.18	-1434.88	-12314	-0.0001053	0.0006738	0.0035	0.7597		4279.92	4279.92	2.98		Si
SLV 13	-0.98	-5401.06	-24573	-0.0004321	0.0006738	0.0035	0.6078		7002.16	7002.16	1.3		Si
SLV 13	1.18	1552.83	-9595	-0.0000988	0.0006738	0.0035	0.7597		3294.77	3294.77	2.12		Si
SLV 14	-0.98	-5423.16	-24537	-0.000436	0.0006738	0.0035	0.6078		6996.24	6996.24	1.29		Si
SLV 14	1.18	1560.87	-9615	-0.0000992	0.0006738	0.0035	0.7597		3300.22	3300.22	2.11		Si
SLD 15	-0.98	-2733.56	-24678	-0.0002224	0.0006738	0.0035	0.7597		7019.67	7019.67	2.57		Si
SLD 15	1.18	702.64	-9965	-0.0000677	0.0006738	0.0035	0.7597		3394.89	3394.89	4.83		Si
SLV 1	-0.98	4504.43	-21627	-0.0003292	0.0006738	0.0035	0.7597		6271.01	6271.01	1.39		Si
SLV 1	1.18	-1441.95	-13270	-0.0001102	0.0006738	0.0035	0.7597		4539.48	4539.48	3.15		Si
SLV 16	-0.98	-5649.91	-25878	-0.0004609	0.0006738	0.0035	0.6078		7218.93	7218.93	1.28		Si
SLV 16	1.18	1567.94	-8659	-0.0000977	0.0006738	0.0035	0.7597		3034.09	3034.09	1.94		Si
SLD 16	-0.98	-2743.04	-24663	-0.0002228	0.0006738	0.0035	0.7597		7017.13	7017.13	2.56		Si
SLD 16	1.18	706.09	-9973	-0.0000679	0.0006738	0.0035	0.7597		3397.23	3397.23	4.81		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	-0.98	-845.79	-35484	-28388	-1652	0.7597	0.7597	-83036	10833	3704	95155	12286	3875	16160	No	9.78	Si
SLU 81	1.18	97.78	-16874	-13499	-113	0.7597	0.7597	-39486	10833	3704	95155	12286	3875	16160	No	142.99	Si
SLU 79	-0.98	-833.97	-34495	-27596	-1635	0.7597	0.7597	-80722	10833	3704	95155	12286	3875	16160	No	9.89	Si
SLU 79	1.18	94.72	-16239	-12991	-161	0.7597	0.7597	-38001	10833	3704	95155	12286	3875	16160	No	100.6	Si
SLU 62	-0.98	-846.75	-32748	-26198	-1631	0.7597	0.7597	-76633	10833	3704	95155	12286	3875	16160	No	9.91	Si
SLU 62	1.18	91.88	-15050	-12040	-279	0.7597	0.7597	-35217	10833	3704	95155	12286	3875	16160	No	57.85	Si
SLU 84	-0.98	-856.41	-35738	-28590	-1669	0.7597	0.7597	-83630	10833	3704	95155	12286	3875	16160	No	9.68	Si
SLU 84	1.18	98.98	-16992	-13593	-119	0.7597	0.7597	-39762	10833	3704	95155	12286	3875	16160	No	135.49	Si
SLU 82	-0.98	-842.55	-35473	-28378	-1646	0.7597	0.7597	-83009	10833	3704	95155	12286	3875	16160	No	9.82	Si
SLU 82	1.18	97.71	-16890	-13512	-105	0.7597	0.7597	-39523	10833	3704	95155	12286	3875	16160	No	153.55	Si
SLU 78	-0.98	-838.1	-34719	-27776	-1638	0.7597	0.7597	-81246	10833	3704	95155	12286	3875	16160	No	9.86	Si
SLU 78	1.18	97.18	-16405	-13124	-141	0.7597	0.7597	-38389	10833	3704	95155	12286	3875	16160	No	114.74	Si
SLU 80	-0.98	-830.73	-34484	-27587	-1629	0.7597	0.7597	-80695	10833	3704	95155	12286	3875	16160	No	9.92	Si
SLU 80	1.18	94.64	-16255	-13004	-153	0.7597	0.7597	-38038	10833	3704	95155	12286	3875	16160	No	105.71	Si
SLU 63	-0.98	-843.51	-32736	-26189	-1626	0.7597	0.7597	-76605	10833	3704	95155	12286	3875	16160	No	9.94	Si
SLU 63	1.18	91.8	-15065	-12052	-272	0.7597	0.7597	-35254	10833	3704	95155	12286	3875	16160	No	59.5	Si
SLU 77	-0.98	-841.34	-34731	-27785	-1644	0.7597	0.7597	-81274	10833	3704	95155	12286	3875	16160	No	9.83	Si
SLU 77	1.18	97.26	-16389	-13111	-149	0.7597	0.7597	-38352	10833	3704	95155	12286	3875	16160	No	108.73	Si
SLU 83	-0.98	-859.65	-35750	-28600	-1675	0.7597	0.7597	-83657	10833	3704	95155	12286	3875	16160	No	9.65	Si
SLU 83	1.18	99.05	-16976	-13581	-127	0.7597	0.7597	-39725	10833	3704	95155	12286	3875	16160	No	127.19	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 15	-0.98	-2733.56	-24678	-19743	-3168	0.7597	0.7597	-57749	16250	5555	95155	18429	3875	22303		7.04	Si
SLD 15	1.18	702.64	-9965	-7972	46	0.7597	0.7597	-23318	16250	5555	95155	18429	3875	22303		483.79	Si
SLV 15	-0.98	-5627.82	-25913	-20731	-5883	0.6078	0.488	0	0	0	95155	14743	3100	17843		3.03	Si
SLV 15	1.18	1559.9	-8639	-6911	327	0.7597	0.5979	-20216	16250	4372	95155	18429	3875	22303		68.19	Si
SLV 16	-0.98	-5649.91	-25878	-20702	-5895	0.6078	0.4846	0	0	0	95155	14743	3100	17843		3.03	Si
SLV 16	1.18	1567.94	-8659	-6927	348	0.7597	0.5963	-20262	16250	4361	95155	18429	3875	22303		64.11	Si
SLV 4	-0.98	4255.58	-22932	-18346	3223	0.7597	0.5828	-53663	16250	4262	95155	18429	3875	22303		6.92	Si
SLV 4	1.18	-1426.85	-12334	-9867	-1220	0.7597	0.7597	-28862	16250	5555	95155	18429	3875	22303		18.29	Si
SLD 16	-0.98	-2743.04	-24663	-19730	-3174	0.7597	0.7597	-57713	16250	5555	95155	18429	3875	22303		7.03	Si
SLD 16	1.18	706.09	-9973	-7978	55	0.7597	0.7597	-23338	16250	5555	95155	18429	3875	22303		405.31	Si
SLV 1	-0.98	4504.43	-21627	-17302	3614	0.7597	0.5147	-50610	16250	3764	95155	18429	3875	22303		6.17	Si
SLV 1	1.18	-1441.95	-13270	-10616	-663	0.7597	0.7597	-31053	16250	5555	95155	18429	3875	22303		33.64	Si
SLV 13	-0.98	-5401.06	-24573	-19658	-5504	0.6078	0.4802	0	0	0	95155	14743	3100	17843		3.24	Si
SLV 13	1.18	1552.83	-9595	-7676	904	0.7597	0.6541	-22454	16250	4783	95155	18429	3875	22303		24.66	Si
SLV 3	-0.98	4277.68	-22968	-18374	3236	0.7597	0.5808	-53746	16250	4247	95155	18429	3875	22303		6.89	Si
SLV 3	1.18	-1434.88	-12314	-9851	-1240	0.7597	0.7597	-28815	16250	5555	95155	18429	3875	22303		17.98	Si
SLV 14	-0.98	-5423.16	-24537	-19630	-5516	0.6078	0.4765	0	0	0	95155	14743	3100	17843		3.23	Si
SLV 14	1.18	1560.87	-9615	-7692	925	0.7597	0.6526	-22501	16250	4772	95155	18429	3875	22303		24.1	Si
SLV 2	-0.98	4482.34	-21592	-17273	3602	0.7597	0.5168	-50526	16250	3779	95155	18429	3875	22303		6.19	Si
SLV 2	1.18	-1433.92	-13290	-10632	-642	0.7597	0.7597	-31100	16250	5555	95155	18429	3875	22303		34.73	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 0.51 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 11	-16130	0.25	57.97	2695.02	3734.09	3214.55	55.45	Si
SLV 12	-16137	0.25	57.97	2695.69	3735.23	3215.46	55.47	Si
SLV 7	-16157	0.25	57.97	2697.93	3739.08	3218.5	55.52	Si
SLV 8	-16163	0.25	57.97	2698.59	3740.23	3219.41	55.54	Si
SLV 15	-16829	0.25	57.97	2769.48	3864.97	3317.23	57.22	Si
SLV 16	-16838	0.25	57.97	2770.48	3866.77	3318.62	57.25	Si
SLV 3	-16917	0.25	57.97	2778.7	3881.62	3330.16	57.45	Si
SLV 4	-16927	0.25	57.97	2779.69	3883.41	3331.55	57.47	Si
SLV 13	-17455	0.25	57.97	2833.33	3978.2	3405.77	58.75	Si
SLV 14	-17465	0.25	57.97	2834.28	3979.91	3407.1	58.77	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-12590	-21065	-205	0.381	1425.2	0.969	5.7177	4.45299	Si
SLV 5	-12580	-21088	-205	0.382	1424.2	0.969	5.72119	4.45299	Si
SLV 10	-10108	-21949	-125	0.457	1172.6	0.963	6.90243	4.45299	Si
SLV 9	-10097	-21972	-125	0.458	1171.5	0.963	6.90786	4.45299	Si
SLV 2	-13551	-21592	-269	0.357	1523.1	0.971	5.33664	3.37435	Si
SLV 1	-13535	-21627	-269	0.357	1521.5	0.971	5.34132	3.37435	Si
SLV 4	-11889	-22932	-244	0.395	1353.9	0.968	5.93229	3.37435	Si
SLV 3	-11874	-22968	-244	0.395	1352.3	0.968	5.93835	3.37435	Si
SLV 8	-7051	-25533	-122	0.604	861.9	0.952	9.23229	4.45299	Si
SLV 7	-7041	-25556	-122	0.605	860.8	0.952	9.24293	4.45299	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.699	SLU 83	Si
V_SLU	9.647	SLU 83	Si
PF_SLV	1.278	SLV 16	Si
V_SLV	3.027	SLV 16	Si
PFFP_SLV	55.452	SLV 11	Si
R_SLV	1.284	SLV 6	Si

Maschio 24

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.428	1.046	-9.398	1.046	L2	L4	1.97	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	-0.98	-642.33	-56077	-0.0001049	0.0004492	0.0035	1.9703	26648.35	38927.97	38927.97	60.6	No	Si
SLU 77	1.12	4796.84	-51157	-0.0001204	0.0004492	0.0035	1.9703	26599.08	35936.98	35936.98	7.49	No	Si
SLU 81	-0.98	-743.21	-57461	-0.0001083	0.0004492	0.0035	1.9703	26582.88	39451.26	39451.26	53.08	No	Si
SLU 81	1.12	4961.89	-52519	-0.0001243	0.0004492	0.0035	1.9703	26656.78	36448.1	36448.1	7.35	No	Si
SLU 61	-0.98	-942.35	-52061	-0.0000985	0.0004492	0.0035	1.9703	26641.15	37409.96	37409.96	39.7	No	Si
SLU 61	1.12	4607.08	-47167	-0.0001108	0.0004492	0.0035	1.9703	26235.8	34275.44	34275.44	7.44	No	Si
SLU 62	-0.98	-922.53	-52476	-0.0000992	0.0004492	0.0035	1.9703	26655.45	37566.52	37566.52	40.72	No	Si
SLU 62	1.12	4648.13	-47577	-0.0001119	0.0004492	0.0035	1.9703	26286.53	34498.95	34498.95	7.42	No	Si
SLU 84	-0.98	-721.79	-57883	-0.0001091	0.0004492	0.0035	1.9703	26555.93	39611.11	39611.11	54.88	No	Si
SLU 84	1.12	5008.36	-52938	-0.0001255	0.0004492	0.0035	1.9703	26667.73	36605.03	36605.03	7.31	No	Si
SLU 63	-0.98	-921.73	-52480	-0.0000992	0.0004492	0.0035	1.9703	26655.59	37568.17	37568.17	40.76	No	Si
SLU 63	1.12	4650.84	-47581	-0.0001119	0.0004492	0.0035	1.9703	26286.99	34501.08	34501.08	7.42	No	Si
SLU 78	-0.98	-641.53	-56081	-0.0001049	0.0004492	0.0035	1.9703	26648.2	38929.61	38929.61	60.68	No	Si
SLU 78	1.12	4799.55	-51161	-0.0001204	0.0004492	0.0035	1.9703	26599.29	35938.44	35938.44	7.49	No	Si
SLU 60	-0.98	-943.15	-52057	-0.0000985	0.0004492	0.0035	1.9703	26640.99	37408.31	37408.31	39.66	No	Si
SLU 60	1.12	4604.37	-47163	-0.0001107	0.0004492	0.0035	1.9703	26235.31	34273.31	34273.31	7.44	No	Si
SLU 82	-0.98	-742.41	-57465	-0.0001083	0.0004492	0.0035	1.9703	26582.62	39452.9	39452.9	53.14	No	Si
SLU 82	1.12	4964.6	-52523	-0.0001243	0.0004492	0.0035	1.9703	26656.9	36449.56	36449.56	7.34	No	Si
SLU 83	-0.98	-722.59	-57879	-0.0001091	0.0004492	0.0035	1.9703	26556.23	39609.47	39609.47	54.82	No	Si
SLU 83	1.12	5005.65	-52934	-0.0001255	0.0004492	0.0035	1.9703	26667.64	36603.56	36603.56	7.31	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	-0.98	19105.81	-35898	-0.0001882	0.0006738	0.0035	1.9703		29869.43	29869.43	1.56		Si
SLV 3	1.12	-9259.68	-34061	-0.0001071	0.0006738	0.0035	1.9703		30580.86	30580.86	3.3		Si
SLV 1	-0.98	20086.79	-34754	-0.0002049	0.0006738	0.0035	1.9703		29050.82	29050.82	1.45		Si
SLV 1	1.12	-9238.91	-30895	-0.0001011	0.0006738	0.0035	1.9703		28322.92	28322.92	3.07		Si
SLV 2	-0.98	19972.21	-34783	-0.0002029	0.0006738	0.0035	1.9703		29071.91	29071.91	1.46		Si
SLV 2	1.12	-9137.17	-30915	-0.0001006	0.0006738	0.0035	1.9703		28336.81	28336.81	3.1		Si
SLD 13	-0.98	-8791.75	-39062	-0.0001141	0.0006738	0.0035	1.9703		33974.97	33974.97	3.86		Si
SLD 13	1.12	8461.19	-34534	-0.0001036	0.0006738	0.0035	1.9703		28893.75	28893.75	3.41		Si
SLV 4	-0.98	18991.23	-35927	-0.0001867	0.0006738	0.0035	1.9703		29890.52	29890.52	1.57		Si
SLV 4	1.12	-9157.94	-34080	-0.0001066	0.0006738	0.0035	1.9703		30594.76	30594.76	3.34		Si
SLV 15	-0.98	-20917.12	-41467	-0.0002073	0.0006738	0.0035	1.9703		35527.86	35527.86	1.7		Si
SLV 15	1.12	15507.09	-37884	-0.0001527	0.0006738	0.0035	1.9703		31290.9	31290.9	2.02		Si
SLV 14	-0.98	-20050.72	-40353	-0.0001974	0.0006738	0.0035	1.9703		34823.51	34823.51	1.74		Si
SLV 14	1.12	15629.6	-34739	-0.0001504	0.0006738	0.0035	1.9703		29039.87	29039.87	1.86		Si
SLD 14	-0.98	-8840.93	-39074	-0.0001144	0.0006738	0.0035	1.9703		33983.48	33983.48	3.84		Si
SLD 14	1.12	8504.86	-34543	-0.0001039	0.0006738	0.0035	1.9703		28899.73	28899.73	3.4		Si
SLV 16	-0.98	-21031.7	-41497	-0.0002087	0.0006738	0.0035	1.9703		35546.48	35546.48	1.69		Si
SLV 16	1.12	15608.83	-37904	-0.0001535	0.0006738	0.0035	1.9703		31304.84	31304.84	2.01		Si
SLV 13	-0.98	-19936.14	-40323	-0.0001961	0.0006738	0.0035	1.9703		34804.88	34804.88	1.75		Si
SLV 13	1.12	15527.86	-34719	-0.0001495	0.0006738	0.0035	1.9703		29025.93	29025.93	1.87		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	-0.98	-742.41	-57465	-45972	-2783	1.9703	1.9703	-51850	10833	9605	95155	31863	10048	41912	No	15.06	Si
SLU 82	1.12	4964.6	-52523	-42019	-3006	1.9703	1.9703	-47391	10833	9605	95155	31863	10048	41912	No	13.94	Si
SLU 77	-0.98	-642.33	-56077	-44861	-2649	1.9703	1.9703	-50597	10833	9605	95155	31863	10048	41912	No	15.82	Si
SLU 77	1.12	4796.84	-51157	-40926	-2869	1.9703	1.9703	-46159	10833	9605	95155	31863	10048	41912	No	14.61	Si
SLU 60	-0.98	-943.15	-52057	-41646	-2703	1.9703	1.9703	-46971	10833	9605	95155	31863	10048	41912	No	15.51	Si
SLU 60	1.12	4604.37	-47163	-37730	-2906	1.9703	1.9703	-42555	10833	9605	95155	31863	10048	41912	No	14.42	Si
SLU 84	-0.98	-721.79	-57883	-46307	-2794	1.9703	1.9703	-52228	10833	9605	95155	31863	10048	41912	No	15	Si
SLU 84	1.12	5008.36	-52938	-42350	-3019	1.9703	1.9703	-47765	10833	9605	95155	31863	10048	41912	No	13.88	Si
SLU 62	-0.98	-922.53	-52476	-41980	-2714	1.9703	1.9703	-47348	10833	9605	95155	31863	10048	41912	No	15.44	Si
SLU 62	1.12	4648.13	-47577	-38062	-2919	1.9703	1.9703	-42929	10833	9605	95155	31863	10048	41912	No	14.36	Si
SLU 78	-0.98	-641.53	-56081	-44865	-2650	1.9703	1.9703	-50601	10833	9605	95155	31863	10048	41912	No	15.81	Si
SLU 78	1.12	4799.55	-51161	-40929	-2870	1.9703	1.9703	-46162	10833	9605	95155	31863	10048	41912	No	14.6	Si
SLU 83	-0.98	-722.59	-57879	-46303	-2793	1.9703	1.9703	-52224	10833	9605	95155	31863	10048	41912	No	15	Si
SLU 83	1.12	5005.65	-52934	-42347	-3018	1.9703	1.9703	-47762	10833	9605	95155	31863	10048	41912	No	13.89	Si
SLU 61	-0.98	-942.35	-52061	-41649	-2704	1.9703	1.9703	-46975	10833	9605	95155	31863	10048	41912	No	15.5	Si
SLU 61	1.12	4607.08	-47167	-37733	-2907	1.9703	1.9703	-42558	10833	9605	95155	31863	10048	41912	No	14.42	Si
SLU 63	-0.98	-921.73	-52480	-41984	-2715	1.9703	1.9703	-47352	10833	9605	95155	31863	10048	41912	No	15.43	Si
SLU 63	1.12	4650.84	-47581	-38065	-2920	1.9703	1.9703	-42932	10833	9605	95155	31863	10048	41912	No	14.35	Si
SLU 81	-0.98	-743.21	-57461	-45968	-2782	1.9703	1.9703	-51846	10833	9605	95155	31863	10048	41912	No	15.07	Si
SLU 81	1.12	4961.89	-52519	-42015	-3005	1.9703	1.9703	-47388	10833	9605	95155	31863	10048	41912	No	13.95	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	-0.98	-21031.7	-41497	-33197	-17987	1.9703	1.435	-52778	16250	10493	95155	47795	10048	57843		3.22	Si
SLV 16	1.12	15608.83	-37904	-30323	-18198	1.9703	1.72	-34200	16250	12578	95155	47795	10048	57843		3.18	Si
SLD 15	-0.98	-9212.57	-39555	-31644	-8660	1.9703	1.9703	-35690	16250	14408	95155	47795	10048	57843		6.68	Si
SLD 15	1.12	8449.93	-35892	-28713	-8836	1.9703	1.9703	-32385	16250	14408	95155	47795	10048	57843		6.55	Si
SLD 16	-0.98	-9261.75	-39568	-31654	-8706	1.9703	1.9703	-35702	16250	14408	95155	47795	10048	57843		6.64	Si
SLD 16	1.12	8493.6	-35900	-28720	-8882	1.9703	1.9703	-32392	16250	14408	95155	47795	10048	57843		6.51	Si
SLV 14	-0.98	-20050.72	-40353	-32282	-18177	1.9703	1.4648	-50202	16250	10711	95155	47795	10048	57843		3.18	Si
SLV 14	1.12	15629.6	-34739	-27791	-17230	1.9703	1.6057	-31344	16250	11741	95155	47795	10048	57843		3.36	Si
SLV 4	-0.98	18991.23	-35927	-28742	14515	1.9703	1.3696	-32417	16250	10015	95155	47795	10048	57843		3.99	Si
SLV 4	1.12	-9157.94	-34080	-27264	13268	1.9703	1.9703	-30750	16250	14408	95155	47795	10048	57843		4.36	Si
SLV 1	-0.98	20086.79	-34754	-27803	14432	1.9703	1.2215	-31358	16250	8932	95155	47795	10048	57843		4.01	Si
SLV 1	1.12	-9238.91	-30895	-24716	14343	1.9703	1.9703	-27877	16250	14408	95155	47795	10048	57843		4.03	Si
SLV 3	-0.98	19105.81	-35898	-28718	14622	1.9703	1.3588	-32390	16250	9936	95155	47795	10048	57843		3.96	Si
SLV 3	1.12	-9259.68	-34061	-27249	13375	1.9703	1.9703	-30733	16250	14408	95155	47795	10048	57843		4.32	Si
SLV 2	-0.98	19972.21	-34783	-27827	14325	1.9703	1.2329	-31385	16250	9015	95155	47795	10048	57843		4.04	Si
SLV 2	1.12	-9137.17	-30915	-24732	14236	1.9703	1.9703	-27894	16250	14408	95155	47795	10048	57843		4.06	Si
SLV 13	-0.98	-19936.14	-40323	-32259	-18070	1.9703	1.4722	-49904	16250	10766	95155	47795	10048	57843		3.2	Si
SLV 13	1.12	15527.86	-34719	-27775	-17123	1.9703	1.6137	-31327	16250	11800	95155	47795	10048	57843		3.38	Si
SLV 15	-0.98	-20917.12	-41467	-33174	-17880	1.9703	1.4422	-52468	16250	10546	95155	47795	10048	57843		3.24	Si
SLV 15	1.12	15507.09	-37884	-30308	-18091	1.9703	1.7275	-34183	16250	12632	95155	47795	10048	57843		3.2	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 0.51 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 5	-30519	0.25	150.34	5577.15	7441.51	6509.33	43.3	Si
SLV 6	-30532	0.25	150.34	5578.99	7444.4	6511.69	43.31	Si
SLV 9	-31511	0.25	150.34	5715.11	7652.26	6683.69	44.46	Si
SLV 10	-31524	0.25	150.34	5716.91	7654.99	6685.95	44.47	Si
SLV 1	-32110	0.25	150.34	5797.1	7777.29	6787.2	45.14	Si
SLV 2	-32130	0.25	150.34	5799.88	7781.56	6790.72	45.17	Si
SLV 3	-34468	0.25	150.34	6110.31	8269.67	7189.99	47.82	Si
SLV 4	-34488	0.25	150.34	6112.96	8273.93	7193.44	47.85	Si
SLV 13	-35415	0.25	150.34	6231.82	8466.76	7349.29	48.88	Si
SLV 14	-35436	0.25	150.34	6234.41	8470.79	7352.6	48.9	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-23670	-37063	-1599	0.446	2782.2	0.96	6.74925	4.45299	Si
SLV 9	-23651	-37045	-1598	0.446	2780.3	0.96	6.75399	4.45299	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-25114	-40877	575	0.464	2929.2	0.962	7.00467	4.45299	Si
SLV 11	-25096	-40858	576	0.464	2927.2	0.962	7.0084	4.45299	Si
SLV 6	-20638	-35393	-1551	0.497	2474	0.956	7.55399	4.45299	Si
SLV 5	-20619	-35374	-1550	0.497	2472.1	0.956	7.56007	4.45299	Si
SLV 8	-22083	-39206	623	0.51	2620.9	0.958	7.73422	4.45299	Si
SLV 7	-22064	-39187	624	0.51	2619	0.958	7.73901	4.45299	Si
SLV 14	-27717	-40353	-894	0.42	3194	0.965	6.31874	3.37435	Si
SLV 13	-27687	-40323	-892	0.42	3191	0.965	6.32471	3.37435	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.309	SLU 84	Si
V_SLU	13.882	SLU 84	Si
PF_SLV	1.446	SLV 1	Si
V_SLV	3.179	SLV 16	Si
PFFP_SLV	43.296	SLV 5	Si
R_SLV	1.516	SLV 10	Si

Maschio 25

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.988	1.046	-6.528	1.046	L2	L4	0.54	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	-0.98	-1168.5	-9514	-0.0001582	0.0004492	0.0035	0.54	1745.65	2174.91	2174.91	1.86	No	Si
SLU 82	1.12	22.7	-13472	-0.0000888	0.0004492	0.0035	0.54	1987.03	2636.37	2636.37	116.14	No	Si
SLU 77	-0.98	-1145.76	-9340	-0.0001546	0.0004492	0.0035	0.54	1728.53	2147.05	2147.05	1.87	No	Si
SLU 77	1.12	16.39	-13089	-0.0000856	0.0004492	0.0035	0.54	1976.12	2595.58	2595.58	158.34	No	Si
SLU 78	-0.98	-1144.02	-9332	-0.0001544	0.0004492	0.0035	0.54	1727.7	2145.71	2145.71	1.88	No	Si
SLU 78	1.12	14.39	-13108	-0.0000856	0.0004492	0.0035	0.54	1976.72	2597.62	2597.62	180.47	No	Si
SLU 75	-0.98	-1136.14	-9262	-0.0001531	0.0004492	0.0035	0.54	1720.68	2134.57	2134.57	1.88	No	Si
SLU 75	1.12	16.85	-13010	-0.000085	0.0004492	0.0035	0.54	1973.54	2587.18	2587.18	153.58	No	Si
SLU 79	-0.98	-1138.72	-9284	-0.0001535	0.0004492	0.0035	0.54	1722.91	2138.09	2138.09	1.88	No	Si
SLU 79	1.12	15.42	-12999	-0.0000849	0.0004492	0.0035	0.54	1973.17	2586	2586	167.71	No	Si
SLU 83	-0.98	-1178.12	-9592	-0.0001598	0.0004492	0.0035	0.54	1753.15	2187.39	2187.39	1.86	No	Si
SLU 83	1.12	22.25	-13551	-0.0000894	0.0004492	0.0035	0.54	1988.94	2644.77	2644.77	118.89	No	Si
SLU 80	-0.98	-1136.98	-9276	-0.0001533	0.0004492	0.0035	0.54	1722.07	2136.76	2136.76	1.88	No	Si
SLU 80	1.12	13.42	-13018	-0.0000848	0.0004492	0.0035	0.54	1973.81	2588.03	2588.03	192.83	No	Si
SLU 84	-0.98	-1176.38	-9583	-0.0001595	0.0004492	0.0035	0.54	1752.35	2186.05	2186.05	1.86	No	Si
SLU 84	1.12	20.25	-13570	-0.0000893	0.0004492	0.0035	0.54	1989.39	2646.81	2646.81	130.72	No	Si
SLU 81	-0.98	-1170.24	-9522	-0.0001585	0.0004492	0.0035	0.54	1746.46	2176.24	2176.24	1.86	No	Si
SLU 81	1.12	24.7	-13453	-0.0000888	0.0004492	0.0035	0.54	1986.55	2634.34	2634.34	106.66	No	Si
SLU 74	-0.98	-1137.89	-9271	-0.0001534	0.0004492	0.0035	0.54	1721.52	2135.9	2135.9	1.88	No	Si
SLU 74	1.12	18.84	-12991	-0.0000851	0.0004492	0.0035	0.54	1972.89	2585.14	2585.14	137.18	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	-0.98	425.49	-3286	-0.000051	0.0006738	0.0035	0.54		871.21	871.21	2.05		Si
SLV 1	1.12	-1573.49	-7497	-0.0003196	0.0006738	0.0035	0.432		1910.5	1910.5	1.21		Si
SLD 16	-0.98	-1310.19	-7779	-0.0001808	0.0006738	0.0035	0.432		1967.49	1967.49	1.5		Si
SLD 16	1.12	692.45	-9357	-0.000107	0.0006738	0.0035	0.54		2153.34	2153.34	3.11		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	-0.98	-2005.33	-9575	-0.0004428	0.0006738	0.0035	0.432		2322.15	2322.15	1.16		Si
SLV 16	1.12	1599.93	-10112	-0.0002192	0.0006738	0.0035	0.54		2304.49	2304.49	1.44		Si
SLV 4	-0.98	319.71	-3828	-0.0000445	0.0006738	0.0035	0.54		1000.85	1000.85	3.13		Si
SLV 4	1.12	-1453.9	-6300	-0.0004239	0.0006738	0.0035	0.432		1656.62	1656.62	1.14		Si
SLV 3	-0.98	307.08	-3901	-0.0000441	0.0006738	0.0035	0.54		1018.32	1018.32	3.32		Si
SLV 3	1.12	-1441.89	-6157	-0.0004553	0.0006738	0.0035	0.432		1626.16	1626.16	1.13		Si
SLV 15	-0.98	-2017.97	-9649	-0.000445	0.0006738	0.0035	0.432		2336.27	2336.27	1.16		Si
SLV 15	1.12	1611.94	-9970	-0.0002237	0.0006738	0.0035	0.54		2275.96	2275.96	1.41		Si
SLV 14	-0.98	-1886.92	-8960	-0.0004128	0.0006738	0.0035	0.432		2203.9	2203.9	1.17		Si
SLV 14	1.12	1468.33	-11452	-0.0001923	0.0006738	0.0035	0.54		2561.6	2561.6	1.74		Si
SLD 15	-0.98	-1315.61	-7810	-0.0001817	0.0006738	0.0035	0.432		1973.87	1973.87	1.5		Si
SLD 15	1.12	697.61	-9295	-0.000107	0.0006738	0.0035	0.54		2141.09	2141.09	3.07		Si
SLV 2	-0.98	438.12	-3213	-0.0000525	0.0006738	0.0035	0.54		853.47	853.47	1.95		Si
SLV 2	1.12	-1585.5	-7640	-0.0003124	0.0006738	0.0035	0.432		1939.37	1939.37	1.22		Si
SLV 13	-0.98	-1899.56	-9034	-0.0004147	0.0006738	0.0035	0.432		2218.01	2218.01	1.17		Si
SLV 13	1.12	1480.34	-11310	-0.0001937	0.0006738	0.0035	0.54		2539.4	2539.4	1.72		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	-0.98	-1170.24	-9522	-7618	-580	0.54	0.4413	-39522	10833	2151	95155	8733	2754	11487	No	19.81	Si
SLU 81	1.12	24.7	-13453	-10763	-547	0.54	0.54	-44290	10833	2633	95155	8733	2754	11487	No	20.98	Si
SLU 74	-0.98	-1137.89	-9271	-7416	-562	0.54	0.4418	-38397	10833	2154	95155	8733	2754	11487	No	20.44	Si
SLU 74	1.12	18.84	-12991	-10393	-530	0.54	0.54	-42769	10833	2633	95155	8733	2754	11487	No	21.68	Si
SLU 75	-0.98	-1136.14	-9262	-7410	-560	0.54	0.442	-38340	10833	2155	95155	8733	2754	11487	No	20.51	Si
SLU 75	1.12	16.85	-13010	-10408	-528	0.54	0.54	-42832	10833	2633	95155	8733	2754	11487	No	21.75	Si
SLU 83	-0.98	-1178.12	-9592	-7673	-583	0.54	0.4415	-39802	10833	2152	95155	8733	2754	11487	No	19.71	Si
SLU 83	1.12	22.25	-13551	-10841	-550	0.54	0.54	-44613	10833	2633	95155	8733	2754	11487	No	20.89	Si
SLU 80	-0.98	-1136.98	-9276	-7421	-559	0.54	0.4423	-38375	10833	2156	95155	8733	2754	11487	No	20.55	Si
SLU 80	1.12	13.42	-13018	-10415	-527	0.54	0.54	-42858	10833	2633	95155	8733	2754	11487	No	21.8	Si
SLU 78	-0.98	-1144.02	-9332	-7465	-563	0.54	0.4422	-38620	10833	2156	95155	8733	2754	11487	No	20.41	Si
SLU 78	1.12	14.39	-13108	-10487	-531	0.54	0.54	-43154	10833	2633	95155	8733	2754	11487	No	21.65	Si
SLU 84	-0.98	-1176.38	-9583	-7667	-581	0.54	0.4417	-39746	10833	2154	95155	8733	2754	11487	No	19.78	Si
SLU 84	1.12	20.25	-13570	-10856	-548	0.54	0.54	-44676	10833	2633	95155	8733	2754	11487	No	20.96	Si
SLU 82	-0.98	-1168.5	-9514	-7611	-578	0.54	0.4415	-39465	10833	2152	95155	8733	2754	11487	No	19.87	Si
SLU 82	1.12	22.7	-13472	-10778	-546	0.54	0.54	-44353	10833	2633	95155	8733	2754	11487	No	21.05	Si
SLU 77	-0.98	-1145.76	-9340	-7472	-565	0.54	0.442	-38677	10833	2155	95155	8733	2754	11487	No	20.35	Si
SLU 77	1.12	16.39	-13089	-10471	-532	0.54	0.54	-43091	10833	2633	95155	8733	2754	11487	No	21.58	Si
SLU 79	-0.98	-1138.72	-9284	-7427	-561	0.54	0.442	-38431	10833	2155	95155	8733	2754	11487	No	20.48	Si
SLU 79	1.12	15.42	-12999	-10399	-529	0.54	0.54	-42795	10833	2633	95155	8733	2754	11487	No	21.73	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	-0.98	-1886.92	-8960	-7168	-1662	0.432	0.1782	0	0	0	95155	10479	2203	12683		7.63	Si
SLV 14	1.12	1468.33	-11452	-9162	-1451	0.54	0.4254	-37704	16250	3111	95155	13099	2754	15853		10.93	Si
SLD 13	-0.98	-1263.65	-7540	-6032	-939	0.432	0.3072	0	0	0	95155	10479	2203	12683		13.51	Si
SLD 13	1.12	639.54	-9883	-7906	-835	0.54	0.54	-32536	16250	3949	95155	13099	2754	15853		18.98	Si
SLV 12	-0.98	-1331.99	-8294	-6636	-994	0.432	0.3282	0	0	0	95155	10479	2203	12683		12.76	Si
SLV 12	1.12	686.79	-7188	-5751	-876	0.54	0.5234	-23665	16250	3827	95155	13099	2754	15853		18.11	Si
SLV 13	-0.98	-1899.56	-9034	-7227	-1674	0.432	0.1792	0	0	0	95155	10479	2203	12683		7.57	Si
SLV 13	1.12	1480.34	-11310	-9048	-1463	0.54	0.4173	-37234	16250	3052	95155	13099	2754	15853		10.84	Si
SLD 16	-0.98	-1310.19	-7779	-6223	-988	0.432	0.3047	0	0	0	95155	10479	2203	12683		12.84	Si
SLD 16	1.12	692.45	-9357	-7485	-875	0.54	0.54	-30803	16250	3949	95155	13099	2754	15853		18.12	Si
SLD 14	-0.98	-1258.22	-7508	-6007	-933	0.432	0.3073	0	0	0	95155	10479	2203	12683		13.59	Si
SLD 14	1.12	634.38	-9944	-7955	-830	0.54	0.54	-32738	16250	3949	95155	13099	2754	15853		19.1	Si
SLV 15	-0.98	-2017.97	-9649	-7719	-1798	0.432	0.1826	0	0	0	95155	10479	2203	12683		7.06	Si
SLV 15	1.12	1611.94	-9970	-7976	-1564	0.54	0.3249	-32822	16250	2376	95155	13099	2754	15853		10.13	Si
SLV 11	-0.98	-1340.06	-8341	-6673	-1002	0.432	0.328	0	0	0	95155	10479	2203	12683		12.66	Si
SLV 11	1.12	694.47	-7097	-5678	-883	0.54	0.5165	-23366	16250	3777	95155	13099	2754	15853		17.95	Si
SLD 15	-0.98	-1315.61	-7810	-6248	-993	0.432	0.3047	0	0	0	95155	10479	2203	12683		12.77	Si
SLD 15	1.12	697.61	-9295	-7436	-880	0.54	0.54	-30602	16250	3949	95155	13099	2754	15853		18.01	Si
SLV 16	-0.98	-2005.33	-9575	-7660	-1785	0.432	0.1817	0	0	0	95155	10479	2203	12683		7.1	Si
SLV 16	1.12	1599.93	-10112	-8090	-1552	0.54	0.3353	-33291	16250	2452	95155	13099	2754	15853		10.21	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 0.51 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-5984	0.25	41.21	1165.5	1491.11	1328.31	32.24	Si
SLV 4	-6062	0.25	41.21	1178.29	1508.94	1343.62	32.61	Si
SLV 7	-6259	0.25	41.21	1210.31	1553.89	1382.1	33.54	Si
SLV 8	-6308	0.25	41.21	1218.35	1565.25	1391.8	33.78	Si
SLV 1	-6852	0.25	41.21	1304.58	1688.67	1496.62	36.32	Si
SLV 2	-6930	0.25	41.21	1316.69	1705.97	1511.33	36.68	Si
SLV 11	-7350	0.25	41.21	1380.9	1799.25	1590.08	38.59	Si
SLV 12	-7400	0.25	41.21	1388.39	1810.3	1599.35	38.81	Si
SLV 5	-9153	0.25	41.21	1636.24	2190.8	1913.52	46.44	Si
SLV 6	-9203	0.25	41.21	1642.83	2201.22	1922.02	46.65	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-9255	-4520	-388	0.347	1044.2	0.97	5.20519	4.45299	Si
SLV 5	-9195	-4567	-390	0.349	1038.1	0.97	5.22804	4.45299	Si
SLV 10	-8245	-6244	-299	0.388	941.4	0.967	5.83577	4.45299	Si
SLV 9	-8186	-6291	-301	0.39	935.3	0.967	5.86567	4.45299	Si
SLV 2	-9127	-3213	-429	0.347	1031.2	0.97	5.19776	3.37435	Si
SLV 1	-9034	-3286	-432	0.349	1021.7	0.97	5.23407	3.37435	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 4	-7994	-3828	-375	0.389	915.8	0.966	5.84524	3.37435	Si
SLV 3	-7900	-3901	-378	0.392	906.3	0.966	5.89376	3.37435	Si
SLV 8	-5477	-6570	-209	0.544	659.8	0.955	8.28771	4.45299	Si
SLV 7	-5417	-6617	-211	0.549	653.8	0.954	8.3567	4.45299	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.857	SLU 83	Si
V_SLU	19.714	SLU 83	Si
PF_SLV	1.128	SLV 3	Si
V_SLV	7.055	SLV 15	Si
PFFP_SLV	32.236	SLV 3	Si
R_SLV	1.169	SLV 6	Si

Maschio 26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.123	1.046	-5.088	1.046	L2	L4	4.965	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	-0.98	-18411.9	-140561	-0.0001184	0.0004492	0.0035	4.965	169278.93	247056.19	247056.19	13.42	No	Si
SLU 78	1.12	10230.19	-97207	-0.0000759	0.0004492	0.0035	4.965	155390.27	187862.06	187862.06	18.36	No	Si
SLU 83	-0.98	-18726.61	-144339	-0.0001219	0.0004492	0.0035	4.965	168870.06	250511.88	250511.88	13.38	No	Si
SLU 83	1.12	10918.42	-100509	-0.0000791	0.0004492	0.0035	4.965	157650.32	192427.45	192427.45	17.62	No	Si
SLU 82	-0.98	-18519.2	-143313	-0.0001208	0.0004492	0.0035	4.965	169006.74	249573.58	249573.58	13.48	No	Si
SLU 82	1.12	10902.89	-99795	-0.0000785	0.0004492	0.0035	4.965	157178.38	191440.19	191440.19	17.56	No	Si
SLU 81	-0.98	-18551.58	-143292	-0.0001208	0.0004492	0.0035	4.965	169009.4	249553.93	249553.93	13.45	No	Si
SLU 81	1.12	10901.39	-99767	-0.0000785	0.0004492	0.0035	4.965	157159.85	191401.8	191401.8	17.56	No	Si
SLU 74	-0.98	-18269.24	-139493	-0.0001173	0.0004492	0.0035	4.965	169347.51	246078.59	246078.59	13.47	No	Si
SLU 74	1.12	10211.67	-96438	-0.0000753	0.0004492	0.0035	4.965	154835.04	186798.01	186798.01	18.29	No	Si
SLU 80	-0.98	-18281.15	-139751	-0.0001175	0.0004492	0.0035	4.965	169332.87	246314.4	246314.4	13.47	No	Si
SLU 80	1.12	10141.81	-96604	-0.0000754	0.0004492	0.0035	4.965	154955.64	187027.4	187027.4	18.44	No	Si
SLU 84	-0.98	-18694.23	-144360	-0.0001219	0.0004492	0.0035	4.965	168866.99	250531.53	250531.53	13.4	No	Si
SLU 84	1.12	10919.91	-100536	-0.0000791	0.0004492	0.0035	4.965	157668.49	192465.84	192465.84	17.63	No	Si
SLU 75	-0.98	-18236.87	-139514	-0.0001173	0.0004492	0.0035	4.965	169346.33	246098.24	246098.24	13.49	No	Si
SLU 75	1.12	10213.16	-96465	-0.0000754	0.0004492	0.0035	4.965	154855.26	186836.4	186836.4	18.29	No	Si
SLU 77	-0.98	-18444.28	-140540	-0.0001184	0.0004492	0.0035	4.965	169280.52	247036.54	247036.54	13.39	No	Si
SLU 77	1.12	10228.69	-97179	-0.0000759	0.0004492	0.0035	4.965	155370.42	187823.67	187823.67	18.36	No	Si
SLU 79	-0.98	-18313.52	-139729	-0.0001176	0.0004492	0.0035	4.965	169334.13	246294.74	246294.74	13.45	No	Si
SLU 79	1.12	10140.31	-96576	-0.0000754	0.0004492	0.0035	4.965	154935.49	186989.01	186989.01	18.44	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 16	-0.98	-32715.96	-108908	-0.0001017	0.0006738	0.0035	4.965		233431.36	233431.36	7.14		Si
SLD 16	1.12	12342.12	-76460	-0.0000609	0.0006738	0.0035	4.965		164254.64	164254.64	13.31		Si
SLV 13	-0.98	-57340.71	-124654	-0.0001356	0.0006738	0.0035	4.965		257227.67	257227.67	4.49		Si
SLV 13	1.12	22510.19	-88922	-0.0000783	0.0006738	0.0035	4.965		186877.19	186877.19	8.3		Si
SLV 2	-0.98	33710.13	-68253	-0.000073	0.0006738	0.0035	4.965		149355.71	149355.71	4.43		Si
SLV 2	1.12	-6889.12	-40331	-0.0000318	0.0006738	0.0035	4.965		106635.81	106635.81	15.48		Si
SLV 3	-0.98	31498.16	-68823	-0.0000716	0.0006738	0.0035	4.965		150391.17	150391.17	4.77		Si
SLV 3	1.12	-9590.82	-42344	-0.0000353	0.0006738	0.0035	4.965		110851.8	110851.8	11.56		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	-0.98	-59299.9	-125197	-0.0001378	0.0006738	0.0035	4.965		258022.72	258022.72	4.35		Si
SLV 16	1.12	20150.03	-90938	-0.0000778	0.0006738	0.0035	4.965		190537.21	190537.21	9.46		Si
SLV 15	-0.98	-59426.29	-125211	-0.0001379	0.0006738	0.0035	4.965		258042.18	258042.18	4.34		Si
SLV 15	1.12	19979.26	-90937	-0.0000776	0.0006738	0.0035	4.965		190534.33	190534.33	9.54		Si
SLV 14	-0.98	-57214.32	-124640	-0.0001355	0.0006738	0.0035	4.965		257208.21	257208.21	4.5		Si
SLV 14	1.12	22680.96	-88924	-0.0000785	0.0006738	0.0035	4.965		186880.06	186880.06	8.24		Si
SLV 4	-0.98	31624.55	-68810	-0.0000717	0.0006738	0.0035	4.965		150367.01	150367.01	4.75		Si
SLV 4	1.12	-9420.05	-42346	-0.0000352	0.0006738	0.0035	4.965		110855.11	110855.11	11.77		Si
SLV 1	-0.98	33583.74	-68266	-0.0000729	0.0006738	0.0035	4.965		149379.88	149379.88	4.45		Si
SLV 1	1.12	-7059.89	-40330	-0.0000319	0.0006738	0.0035	4.965		106632.49	106632.49	15.1		Si
SLD 15	-0.98	-32770.22	-108914	-0.0001018	0.0006738	0.0035	4.965		233440.32	233440.32	7.12		Si
SLD 15	1.12	12268.82	-76459	-0.0000609	0.0006738	0.0035	4.965		164253.41	164253.41	13.39		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	-0.98	-18281.15	-139751	-111800	24053	4.965	4.965	-50039	10833	24204	95155	80293	25322	105615	No	4.39	Si
SLU 80	1.12	10141.81	-96604	-77283	24565	4.965	4.965	-34590	10833	24204	95155	80293	25322	105615	No	4.3	Si
SLU 83	-0.98	-18726.61	-144339	-115471	24270	4.965	4.965	-51682	10833	24204	95155	80293	25322	105615	No	4.35	Si
SLU 83	1.12	10918.42	-100509	-80407	24796	4.965	4.965	-35988	10833	24204	95155	80293	25322	105615	No	4.26	Si
SLU 79	-0.98	-18313.52	-139729	-111783	24045	4.965	4.965	-50032	10833	24204	95155	80293	25322	105615	No	4.39	Si
SLU 79	1.12	10140.31	-96576	-77261	24557	4.965	4.965	-34580	10833	24204	95155	80293	25322	105615	No	4.3	Si
SLU 82	-0.98	-18519.2	-143313	-114651	24010	4.965	4.965	-51315	10833	24204	95155	80293	25322	105615	No	4.4	Si
SLU 82	1.12	10902.89	-99795	-79836	24532	4.965	4.965	-35733	10833	24204	95155	80293	25322	105615	No	4.31	Si
SLU 81	-0.98	-18551.58	-143292	-114633	24003	4.965	4.965	-51307	10833	24204	95155	80293	25322	105615	No	4.4	Si
SLU 81	1.12	10901.39	-99767	-79814	24525	4.965	4.965	-35723	10833	24204	95155	80293	25322	105615	No	4.31	Si
SLU 78	-0.98	-18411.9	-140561	-112449	24191	4.965	4.965	-50330	10833	24204	95155	80293	25322	105615	No	4.37	Si
SLU 78	1.12	10230.19	-97207	-77766	24707	4.965	4.965	-34806	10833	24204	95155	80293	25322	105615	No	4.27	Si
SLU 84	-0.98	-18694.23	-144360	-115488	24277	4.965	4.965	-51690	10833	24204	95155	80293	25322	105615	No	4.35	Si
SLU 84	1.12	10919.91	-100536	-80429	24803	4.965	4.965	-35998	10833	24204	95155	80293	25322	105615	No	4.26	Si
SLU 74	-0.98	-18269.24	-139493	-111594	23917	4.965	4.965	-49947	10833	24204	95155	80293	25322	105615	No	4.42	Si
SLU 74	1.12	10211.67	-96438	-77150	24428	4.965	4.965	-34531	10833	24204	95155	80293	25322	105615	No	4.32	Si
SLU 77	-0.98	-18444.28	-140540	-112432	24184	4.965	4.965	-50322	10833	24204	95155	80293	25322	105615	No	4.37	Si
SLU 77	1.12	10228.69	-97179	-77744	24699	4.965	4.965	-34796	10833	24204	95155	80293	25322	105615	No	4.28	Si
SLU 75	-0.98	-18236.87	-139514	-111611	23925	4.965	4.965	-49955	10833	24204	95155	80293	25322	105615	No	4.41	Si
SLU 75	1.12	10213.16	-96465	-77172	24435	4.965	4.965	-34541	10833	24204	95155	80293	25322	105615	No	4.32	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	-0.98	31498.16	-68823	-55058	41202	4.965	4.965	-24643	16250	36307	95155	120440	25322	131462		3.19	Si
SLV 3	1.12	-9590.82	-42344	-33875	39351	4.965	4.965	-15162	15532	34703	95155	120440	25322	129858		3.3	Si
SLV 6	-0.98	4296.91	-87341	-69873	28858	4.965	4.965	-31273	16250	36307	95155	120440	25322	131462		4.56	Si
SLV 6	1.12	6382.31	-54988	-43990	30150	4.965	4.965	-19689	16250	36307	95155	120440	25322	131462		4.36	Si
SLD 3	-0.98	6095.27	-84792	-67833	27475	4.965	4.965	-30361	16250	36307	95155	120440	25322	131462		4.78	Si
SLD 3	1.12	-338.16	-55670	-44536	26885	4.965	4.965	-19933	16250	36307	95155	120440	25322	131462		4.89	Si
SLV 4	-0.98	31624.55	-68810	-55048	41163	4.965	4.965	-24638	16250	36307	95155	120440	25322	131462		3.19	Si
SLV 4	1.12	-9420.05	-42346	-33877	39313	4.965	4.965	-15162	15532	34703	95155	120440	25322	129859		3.3	Si
SLV 2	-0.98	33710.13	-68253	-54602	43618	4.965	4.965	-24439	16250	36307	95155	120440	25322	131462		3.01	Si
SLV 2	1.12	-6889.12	-40331	-32265	42646	4.965	4.965	-14441	15388	34381	95155	120440	25322	129536		3.04	Si
SLV 1	-0.98	33583.74	-68266	-54613	43657	4.965	4.965	-24443	16250	36307	95155	120440	25322	131462		3.01	Si
SLV 1	1.12	-7059.89	-40330	-32264	42685	4.965	4.965	-14441	15388	34381	95155	120440	25322	129536		3.03	Si
SLD 2	-0.98	7054.05	-84549	-67640	28513	4.965	4.965	-30274	16250	36307	95155	120440	25322	131462		4.61	Si
SLD 2	1.12	821.32	-54809	-43847	28298	4.965	4.965	-19625	16250	36307	95155	120440	25322	131462		4.65	Si
SLD 4	-0.98	6149.52	-84786	-67829	27458	4.965	4.965	-30359	16250	36307	95155	120440	25322	131462		4.79	Si
SLD 4	1.12	-264.86	-55671	-44537	26869	4.965	4.965	-19934	16250	36307	95155	120440	25322	131462		4.89	Si
SLV 5	-0.98	4216.19	-87349	-69879	28883	4.965	4.965	-31276	16250	36307	95155	120440	25322	131462		4.55	Si
SLV 5	1.12	6273.25	-54987	-43990	30175	4.965	4.965	-19689	16250	36307	95155	120440	25322	131462		4.36	Si
SLD 1	-0.98	6999.8	-84555	-67644	28530	4.965	4.965	-30276	16250	36307	95155	120440	25322	131462		4.61	Si
SLD 1	1.12	748.02	-54808	-43846	28315	4.965	4.965	-19625	16250	36307	95155	120440	25322	131462		4.64	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 0.51 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	-46087	0.25	378.86	9202.48	11827.42	10514.95	27.75	Si
SLV 1	-46088	0.25	378.86	9202.66	11827.67	10515.16	27.75	Si
SLV 4	-48212	0.25	378.86	9570.47	12316.35	10943.41	28.89	Si
SLV 3	-48213	0.25	378.86	9570.65	12316.6	10943.62	28.89	Si
SLV 6	-60850	0.25	378.86	11656.75	15196.01	13426.38	35.44	Si
SLV 5	-60851	0.25	378.86	11656.86	15196.17	13426.51	35.44	Si
SLV 8	-67933	0.25	378.86	12749.19	16764.62	14756.9	38.95	Si
SLV 7	-67933	0.25	378.86	12749.29	16764.77	14757.03	38.95	Si
SLV 10	-75629	0.25	378.86	13873.73	18465.58	16169.65	42.68	Si
SLV 9	-75629	0.25	378.86	13873.83	18465.73	16169.78	42.68	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-61032	-106123	2458	0.462	7151.9	0.961	6.9828	4.45299	Si
SLV 12	-60998	-106114	2459	0.462	7148.5	0.961	6.98554	4.45299	Si
SLV 7	-53019	-89206	2577	0.512	6337.1	0.956	7.7821	4.45299	Si
SLV 8	-52985	-89198	2578	0.512	6333.8	0.956	7.78569	4.45299	Si
SLV 9	-42725	-104266	-3748	0.58	5291.5	0.949	8.88882	4.45299	Si
SLV 10	-42691	-104257	-3747	0.581	5288.1	0.949	8.89475	4.45299	Si
SLV 15	-63982	-125211	148	0.478	7452	0.962	7.22516	3.37435	Si
SLV 16	-63930	-125197	149	0.479	7446.7	0.962	7.22945	3.37435	Si
SLV 13	-58490	-124654	-1714	0.488	6893.4	0.96	7.39773	3.37435	Si
SLV 14	-58438	-124640	-1712	0.489	6888.1	0.96	7.40346	3.37435	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	13.377	SLU 83	Si
V_SLU	4.258	SLU 84	Si
PF_SLV	4.342	SLV 15	Si
V_SLV	3.011	SLV 1	Si
PFFP_SLV	27.754	SLV 2	Si
R_SLV	1.568	SLV 11	Si

Maschio 27

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.768	6.576	-12.888	6.576	L2	L4	3.88	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 76	1.02	1619.23	-34565	-0.0000335	0.0003743	0.0035	3.88	54016.87	57057.03	57057.03	35.24	No	Si
SLU 76	1.42	-3934.75	-37328	-0.0000395	0.0003743	0.0035	3.88	57209.2	65049.38	65049.38	16.53	No	Si
SLU 80	1.02	1645.87	-34846	-0.0000338	0.0003743	0.0035	3.88	54349.28	57475.93	57475.93	34.92	No	Si
SLU 80	1.42	-3966.33	-37646	-0.0000398	0.0003743	0.0035	3.88	57566.92	65487.22	65487.22	16.51	No	Si
SLU 82	1.02	1614.62	-35921	-0.0000348	0.0003743	0.0035	3.88	55604.85	59083.68	59083.68	36.59	No	Si
SLU 82	1.42	-4064.41	-38761	-0.000041	0.0003743	0.0035	3.88	58799.32	66967.75	66967.75	16.48	No	Si
SLU 74	1.02	1621.06	-34865	-0.0000338	0.0003743	0.0035	3.88	54372.53	57505.34	57505.34	35.47	No	Si
SLU 74	1.42	-3960.03	-37648	-0.0000398	0.0003743	0.0035	3.88	57568.37	65489.01	65489.01	16.54	No	Si
SLU 78	1.02	1653.55	-35173	-0.0000341	0.0003743	0.0035	3.88	54733.59	57963.72	57963.72	35.05	No	Si
SLU 78	1.42	-3994.53	-38005	-0.0000402	0.0003743	0.0035	3.88	57966.59	65972.06	65972.06	16.52	No	Si
SLU 79	1.02	1642.36	-34830	-0.0000338	0.0003743	0.0035	3.88	54330.87	57452.66	57452.66	34.98	No	Si
SLU 79	1.42	-3964.58	-37623	-0.0000398	0.0003743	0.0035	3.88	57541.1	65455.5	65455.5	16.51	No	Si
SLU 84	1.02	1643.59	-36212	-0.0000351	0.0003743	0.0035	3.88	55940.9	59520.89	59520.89	36.21	No	Si
SLU 84	1.42	-4097.16	-39095	-0.0000414	0.0003743	0.0035	3.88	59163.78	67402.88	67402.88	16.45	No	Si
SLU 77	1.02	1650.04	-35157	-0.0000341	0.0003743	0.0035	3.88	54715.3	57940.41	57940.41	35.11	No	Si
SLU 77	1.42	-3992.78	-37982	-0.0000402	0.0003743	0.0035	3.88	57940.96	65941.37	65941.37	16.52	No	Si
SLU 83	1.02	1640.08	-36197	-0.0000351	0.0003743	0.0035	3.88	55922.96	59497.47	59497.47	36.28	No	Si
SLU 83	1.42	-4095.41	-39072	-0.0000414	0.0003743	0.0035	3.88	59138.69	67372.94	67372.94	16.45	No	Si
SLU 81	1.02	1611.11	-35905	-0.0000347	0.0003743	0.0035	3.88	55586.81	59060.29	59060.29	36.66	No	Si
SLU 81	1.42	-4062.66	-38737	-0.000041	0.0003743	0.0035	3.88	58774.06	66937.58	66937.58	16.48	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	1.02	13392.22	-23349	-0.000039	0.0005615	0.0035	3.88		42893.19	42893.19	3.2		Si
SLV 14	1.42	-1644.12	-25707	-0.0000249	0.0005615	0.0035	3.88		50093.36	50093.36	30.47		Si
SLD 14	1.02	6397.3	-23506	-0.0000294	0.0005615	0.0035	3.88		43157.72	43157.72	6.75		Si
SLD 14	1.42	-2264.08	-25590	-0.0000256	0.0005615	0.0035	3.88		49904.32	49904.32	22.04		Si
SLV 1	1.02	-9826.44	-28889	-0.0000391	0.0005615	0.0035	3.88		55234.02	55234.02	5.62		Si
SLV 1	1.42	-3530.25	-32676	-0.0000338	0.0005615	0.0035	3.88		61299.67	61299.67	17.36		Si
SLD 16	1.02	5878.28	-21364	-0.0000268	0.0005615	0.0035	3.88		39541.17	39541.17	6.73		Si
SLD 16	1.42	-2384.99	-22421	-0.0000229	0.0005615	0.0035	3.88		44573.65	44573.65	18.69		Si
SLV 2	1.02	-9420.67	-28910	-0.0000386	0.0005615	0.0035	3.88		55268.98	55268.98	5.87		Si
SLV 2	1.42	-3538.61	-32660	-0.0000338	0.0005615	0.0035	3.88		61274.74	61274.74	17.32		Si
SLV 15	1.02	11766.48	-18347	-0.0000321	0.0005615	0.0035	3.88		34366.62	34366.62	2.92		Si
SLV 15	1.42	-1926.99	-18353	-0.0000187	0.0005615	0.0035	3.88		37693.52	37693.52	19.56		Si
SLV 16	1.02	12172.25	-18369	-0.0000327	0.0005615	0.0035	3.88		34404.17	34404.17	2.83		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	1.42	-1935.35	-18337	-0.0000187	0.0005615	0.0035	3.88		37665.12	37665.12	19.46		Si
SLV 3	1.02	-11046.4	-23909	-0.0000362	0.0005615	0.0035	3.88		47101.14	47101.14	4.26		Si
SLV 3	1.42	-3821.47	-25306	-0.0000275	0.0005615	0.0035	3.88		49448.39	49448.39	12.94		Si
SLV 13	1.02	12986.44	-23327	-0.0000384	0.0005615	0.0035	3.88		42856.82	42856.82	3.3		Si
SLV 13	1.42	-1635.76	-25723	-0.0000249	0.0005615	0.0035	3.88		50119.41	50119.41	30.64		Si
SLV 4	1.02	-10640.63	-23931	-0.0000357	0.0005615	0.0035	3.88		47137.8	47137.8	4.43		Si
SLV 4	1.42	-3829.83	-25289	-0.0000275	0.0005615	0.0035	3.88		49422.37	49422.37	12.9		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	1.02	1611.11	-35905	-31916	11533	3.88	3.88	-18279	9382	16380	33304	52283	9894	49685	No	4.31	Si
SLU 81	1.42	-4062.66	-38737	-34433	11552	3.88	3.88	-19721	9574	16716	33304	52283	9894	50020	No	4.33	Si
SLU 82	1.02	1614.62	-35921	-31930	11542	3.88	3.88	-18287	9383	16382	33304	52283	9894	49687	No	4.31	Si
SLU 82	1.42	-4064.41	-38761	-34454	11561	3.88	3.88	-19733	9576	16719	33304	52283	9894	50023	No	4.33	Si
SLU 78	1.02	1653.55	-35173	-31264	11468	3.88	3.88	-17906	9332	16294	33304	52283	9894	49598	No	4.32	Si
SLU 78	1.42	-3994.53	-38005	-33782	11488	3.88	3.88	-19348	9524	16629	33304	52283	9894	49934	No	4.35	Si
SLU 79	1.02	1642.36	-34830	-30960	11388	3.88	3.88	-17732	9309	16253	33304	52283	9894	49557	No	4.35	Si
SLU 79	1.42	-3964.58	-37623	-33443	11407	3.88	3.88	-19154	9498	16584	33304	52283	9894	49888	No	4.37	Si
SLU 80	1.02	1645.87	-34846	-30974	11397	3.88	3.88	-17740	9310	16255	33304	52283	9894	49559	No	4.35	Si
SLU 80	1.42	-3966.33	-37646	-33463	11416	3.88	3.88	-19166	9500	16587	33304	52283	9894	49891	No	4.37	Si
SLU 84	1.02	1643.59	-36212	-32189	11671	3.88	3.88	-18436	9403	16417	33304	52283	9894	49721	No	4.26	Si
SLU 84	1.42	-4097.16	-39095	-34751	11691	3.88	3.88	-19903	9598	16758	33304	52283	9894	50063	No	4.28	Si
SLU 75	1.02	1624.57	-34881	-31005	11338	3.88	3.88	-17758	9312	16259	33304	52283	9894	49563	No	4.37	Si
SLU 75	1.42	-3961.78	-37671	-33485	11358	3.88	3.88	-19178	9502	16590	33304	52283	9894	49894	No	4.39	Si
SLU 83	1.02	1640.08	-36197	-32175	11662	3.88	3.88	-18428	9401	16415	33304	52283	9894	49719	No	4.26	Si
SLU 83	1.42	-4095.41	-39072	-34730	11682	3.88	3.88	-19891	9597	16756	33304	52283	9894	50060	No	4.29	Si
SLU 74	1.02	1621.06	-34865	-30991	11330	3.88	3.88	-17750	9311	16257	33304	52283	9894	49562	No	4.37	Si
SLU 74	1.42	-3960.03	-37648	-33465	11349	3.88	3.88	-19166	9500	16587	33304	52283	9894	49891	No	4.4	Si
SLU 77	1.02	1650.04	-35157	-31251	11459	3.88	3.88	-17898	9331	16292	33304	52283	9894	49596	No	4.33	Si
SLU 77	1.42	-3992.78	-37982	-33762	11479	3.88	3.88	-19337	9523	16627	33304	52283	9894	49931	No	4.35	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	1.02	-11046.4	-23909	-21252	-19193	3.88	3.88	-12172	12851	22438	33304	78424	9894	55742		2.9	Si
SLV 3	1.42	-3821.47	-25306	-22494	-18630	3.88	3.88	-12883	12993	22686	33304	78424	9894	55991		3.01	Si
SLD 15	1.02	5704.11	-21355	-18982	18837	3.88	3.88	-10872	12591	21984	33304	78424	9894	55288		2.94	Si
SLD 15	1.42	-2381.4	-22428	-19936	18805	3.88	3.88	-11418	12700	22175	33304	78424	9894	55479		2.95	Si
SLV 14	1.02	13392.22	-23349	-20755	34990	3.88	3.88	-11887	12794	22338	33304	78424	9894	55643		1.59	Si
SLV 14	1.42	-1644.12	-25707	-22851	34454	3.88	3.88	-13088	13034	22758	33304	78424	9894	56062		1.63	Si
SLD 13	1.02	6223.13	-23497	-20886	19026	3.88	3.88	-11962	12809	22365	33304	78424	9894	55669		2.93	Si
SLD 13	1.42	-2260.49	-25597	-22752	18805	3.88	3.88	-13031	13023	22738	33304	78424	9894	56042		2.98	Si
SLV 15	1.02	11766.48	-18347	-16309	33500	3.88	3.88	-9341	12285	21449	33304	78424	9894	54754		1.63	Si
SLV 15	1.42	-1926.99	-18353	-16314	33407	3.88	3.88	-9344	12285	21450	33304	78424	9894	54755		1.64	Si
SLV 1	1.02	-9826.44	-28889	-25679	-18760	3.88	3.88	-14707	13358	23323	33304	78424	9894	56628		3.02	Si
SLV 1	1.42	-3530.25	-32676	-29045	-18640	3.88	3.88	-16635	13744	23997	33304	78424	9894	57301		3.07	Si
SLD 16	1.02	5878.28	-21364	-18990	19290	3.88	3.88	-10876	12592	21986	33304	78424	9894	55290		2.87	Si
SLD 16	1.42	-2384.99	-22421	-19930	19259	3.88	3.88	-11415	12700	22174	33304	78424	9894	55478		2.88	Si
SLV 13	1.02	12986.44	-23327	-20735	33933	3.88	3.88	-11876	12792	22335	33304	78424	9894	55639		1.64	Si
SLV 13	1.42	-1635.76	-25723	-22865	33397	3.88	3.88	-13096	13036	22761	33304	78424	9894	56065		1.68	Si
SLV 16	1.02	12172.25	-18369	-16328	34557	3.88	3.832	-9352	12287	21188	33304	78424	9894	54492		1.58	Si
SLV 16	1.42	-1935.35	-18337	-16299	34464	3.88	3.88	-9335	12284	21447	33304	78424	9894	54752		1.59	Si
SLD 14	1.02	6397.3	-23506	-20894	19480	3.88	3.88	-11967	12810	22366	33304	78424	9894	55671		2.86	Si
SLD 14	1.42	-2264.08	-25590	-22746	19258	3.88	3.88	-13028	13022	22737	33304	78424	9894	56041		2.91	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.51 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.25	11152	-19471	296.07	4061.03	13.72	Si
SLV 12	179667	0.25	11158	-19483	296.07	4063.28	13.72	Si
SLV 15	179667	0.25	11345	-19809	296.07	4125.94	13.94	Si
SLV 16	179667	0.25	11356	-19827	296.07	4129.45	13.95	Si
SLV 7	179667	0.25	12068	-21070	296.07	4366.18	14.75	Si
SLV 8	179667	0.25	12074	-21082	296.07	4368.4	14.75	Si
SLV 13	179667	0.25	12429	-21701	296.07	4485.42	15.15	Si
SLV 14	179667	0.25	12440	-21720	296.07	4488.87	15.16	Si
SLV 3	179667	0.25	14399	-25141	296.07	5123.28	17.3	Si
SLV 4	179667	0.25	14409	-25159	296.07	5126.63	17.32	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-37375	-18796	2467	0.543	4540	0.953	8.28867	4.45299	Si
SLV 6	-37354	-18817	2466	0.544	4537.9	0.953	8.29271	4.45299	Si
SLV 9	-35407	-17595	2396	0.568	4340.1	0.951	8.68349	4.45299	Si
SLV 10	-35386	-17615	2395	0.568	4338	0.951	8.68794	4.45299	Si
SLV 1	-29842	-21224	1516	0.673	3775.4	0.945	10.35577	3.37435	Si
SLV 2	-29809	-21256	1514	0.674	3772.1	0.945	10.36557	3.37435	Si
SLV 13	-23282	-17218	1279	0.822	3111.1	0.935	12.7753	3.37435	Si
SLV 14	-23249	-17250	1277	0.823	3107.8	0.935	12.79045	3.37435	Si
SLV 3	-21412	-22108	629	0.9	2922.2	0.931	14.04518	3.37435	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 4	-21379	-22140	628	0.901	2918.9	0.931	14.06312	3.37435	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	16.451	SLU 83	Si
V_SLU	4.26	SLU 84	Si
PF_SLV	2.826	SLV 16	Si
V_SLV	1.577	SLV 16	Si
PFFP_SLV	13.717	SLV 11	Si
R_SLV	1.861	SLV 5	Si

Maschio 28

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-4.784	-11.013	1.046	L2	L4	5.83	0.3	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	-0.98	-3936.14	-96245	-0.0000983	0.0003743	0.0035	5.83	128915.6	179709.41	179709.41	45.66	No	Si
SLU 78	2	20393.91	-98387	-0.0001197	0.0003743	0.0035	5.83	128334.74	175767.17	175767.17	8.62	No	Si
SLU 61	-0.98	-4231.62	-90156	-0.0000916	0.0003743	0.0035	5.83	129746.18	174301.43	174301.43	41.19	No	Si
SLU 61	2	20745.38	-91446	-0.0001116	0.0003743	0.0035	5.83	129671.57	171652.35	171652.35	8.27	No	Si
SLU 60	-0.98	-4134.51	-90164	-0.0000915	0.0003743	0.0035	5.83	129745.88	174309.33	174309.33	42.16	No	Si
SLU 60	2	20670.42	-91460	-0.0001115	0.0003743	0.0035	5.83	129670.44	171662.43	171662.43	8.3	No	Si
SLU 62	-0.98	-4057.58	-91049	-0.0000925	0.0003743	0.0035	5.83	129700.3	175171.46	175171.46	43.17	No	Si
SLU 62	2	20760.16	-92657	-0.000113	0.0003743	0.0035	5.83	129551.89	172450.18	172450.18	8.31	No	Si
SLU 81	-0.98	-4422.31	-98100	-0.0001011	0.0003743	0.0035	5.83	128421.33	180686.5	180686.5	40.86	No	Si
SLU 81	2	21562.77	-99777	-0.0001228	0.0003743	0.0035	5.83	127877.36	176444.83	176444.83	8.18	No	Si
SLU 76	-0.98	-4100.8	-94872	-0.0000969	0.0003743	0.0035	5.83	129208.86	178936.14	178936.14	43.63	No	Si
SLU 76	2	20277.35	-96601	-0.0001174	0.0003743	0.0035	5.83	128829.42	174811.68	174811.68	8.62	No	Si
SLU 63	-0.98	-4154.69	-91041	-0.0000926	0.0003743	0.0035	5.83	129700.84	175163.48	175163.48	42.16	No	Si
SLU 63	2	20835.12	-92643	-0.0001131	0.0003743	0.0035	5.83	129553.58	172441.77	172441.77	8.28	No	Si
SLU 84	-0.98	-4442.49	-98977	-0.0001021	0.0003743	0.0035	5.83	128148.48	181121.33	181121.33	40.77	No	Si
SLU 84	2	21727.47	-100960	-0.0001245	0.0003743	0.0035	5.83	127438.38	177027.59	177027.59	8.15	No	Si
SLU 82	-0.98	-4519.42	-98091	-0.0001012	0.0003743	0.0035	5.83	128423.75	180682.38	180682.38	39.98	No	Si
SLU 82	2	21637.73	-99763	-0.0001229	0.0003743	0.0035	5.83	127882.37	176437.85	176437.85	8.15	No	Si
SLU 83	-0.98	-4345.38	-98985	-0.000102	0.0003743	0.0035	5.83	128145.82	181125.29	181125.29	41.68	No	Si
SLU 83	2	21652.51	-100974	-0.0001245	0.0003743	0.0035	5.83	127432.81	177034.65	177034.65	8.18	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	-0.98	-17196.17	-65522	-0.000075	0.0005615	0.0035	5.83		165722.12	165722.12	9.64		Si
SLV 6	2	26635.84	-66000	-0.0000846	0.0005615	0.0035	5.83		156720.51	156720.51	5.88		Si
SLD 6	-0.98	-8967.39	-65740	-0.0000673	0.0005615	0.0035	5.83		166134.67	166134.67	18.53		Si
SLD 6	2	19289.31	-66354	-0.0000778	0.0005615	0.0035	5.83		157328.12	157328.12	8.16		Si
SLV 5	-0.98	-16920.4	-65524	-0.0000748	0.0005615	0.0035	5.83		165724.3	165724.3	9.79		Si
SLV 5	2	26481.55	-66149	-0.0000846	0.0005615	0.0035	5.83		156976.22	156976.22	5.93		Si
SLV 2	-0.98	-14807.13	-70526	-0.0000776	0.0005615	0.0035	5.83		174889.86	174889.86	11.81		Si
SLV 2	2	19382.55	-67546	-0.0000791	0.0005615	0.0035	5.83		159382.58	159382.58	8.22		Si
SLD 9	-0.98	-6682.96	-64413	-0.0000639	0.0005615	0.0035	5.83		163621	163621	24.48		Si
SLD 9	2	18710.54	-66086	-0.000077	0.0005615	0.0035	5.83		156868.23	156868.23	8.38		Si
SLD 10	-0.98	-6803.26	-64413	-0.000064	0.0005615	0.0035	5.83		163620.05	163620.05	24.05		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 10	2	18777.84	-66021	-0.000077	0.0005615	0.0035	5.83		156756.7	156756.7	8.35		Si
SLV 1	-0.98	-14375.32	-70527	-0.0000772	0.0005615	0.0035	5.83		174893.02	174893.02	12.17		Si
SLV 1	2	19140.95	-67780	-0.0000791	0.0005615	0.0035	5.83		159784.7	159784.7	8.35		Si
SLD 5	-0.98	-8847.1	-65740	-0.0000672	0.0005615	0.0035	5.83		166135.62	166135.62	18.78		Si
SLD 5	2	19222.01	-66419	-0.0000778	0.0005615	0.0035	5.83		157439.76	157439.76	8.19		Si
SLV 9	-0.98	-11858.91	-62417	-0.0000669	0.0005615	0.0035	5.83		159862.31	159862.31	13.48		Si
SLV 9	2	25286.08	-65377	-0.0000827	0.0005615	0.0035	5.83		155650.32	155650.32	6.16		Si
SLV 10	-0.98	-12134.69	-62415	-0.0000671	0.0005615	0.0035	5.83		159860.16	159860.16	13.17		Si
SLV 10	2	25440.37	-65228	-0.0000827	0.0005615	0.0035	5.83		155395.14	155395.14	6.11		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	-0.98	-3839.03	-96253	-81055	6125	5.83	5.83	-46344	10833	18947	33304	52373	14866	52252	No	8.53	Si
SLU 77	2	20318.96	-98401	-82864	10825	5.83	5.83	-47378	10833	18947	33304	52373	14866	52252	No	4.83	Si
SLU 80	-0.98	-3959.13	-95762	-80642	6016	5.83	5.83	-46107	10833	18947	33304	52373	14866	52252	No	8.69	Si
SLU 80	2	20317.12	-97808	-82364	10682	5.83	5.83	-47092	10833	18947	33304	52373	14866	52252	No	4.89	Si
SLU 83	-0.98	-4345.38	-98985	-83356	5743	5.83	5.83	-47659	10833	18947	33304	52373	14866	52252	No	9.1	Si
SLU 83	2	21652.51	-100974	-85031	10710	5.83	5.83	-48617	10833	18947	33304	52373	14866	52252	No	4.88	Si
SLU 71	-0.98	-2913.69	-86205	-72594	6790	5.83	5.83	-41506	10833	18947	33304	52373	14866	52252	No	7.7	Si
SLU 71	2	16741.94	-87673	-73830	10822	5.83	5.83	-42212	10833	18947	33304	52373	14866	52252	No	4.83	Si
SLU 74	-0.98	-3915.96	-95368	-80310	5976	5.83	5.83	-45917	10833	18947	33304	52373	14866	52252	No	8.74	Si
SLU 74	2	20229.22	-97204	-81856	10662	5.83	5.83	-46802	10833	18947	33304	52373	14866	52252	No	4.9	Si
SLU 69	-0.98	-2890.7	-86688	-73000	6753	5.83	5.83	-41738	10833	18947	33304	52373	14866	52252	No	7.74	Si
SLU 69	2	16818.73	-88252	-74317	10790	5.83	5.83	-42491	10833	18947	33304	52373	14866	52252	No	4.84	Si
SLU 78	-0.98	-3936.14	-96245	-81048	5979	5.83	5.83	-46340	10833	18947	33304	52373	14866	52252	No	8.74	Si
SLU 78	2	20393.91	-98387	-82852	10650	5.83	5.83	-47371	10833	18947	33304	52373	14866	52252	No	4.91	Si
SLU 72	-0.98	-3010.8	-86197	-72587	6645	5.83	5.83	-41502	10833	18947	33304	52373	14866	52252	No	7.86	Si
SLU 72	2	16816.9	-87658	-73818	10647	5.83	5.83	-42206	10833	18947	33304	52373	14866	52252	No	4.91	Si
SLU 79	-0.98	-3862.02	-95770	-80649	6161	5.83	5.83	-46111	10833	18947	33304	52373	14866	52252	No	8.48	Si
SLU 79	2	20242.16	-97822	-82376	10857	5.83	5.83	-47099	10833	18947	33304	52373	14866	52252	No	4.81	Si
SLU 58	-0.98	-3574.22	-87835	-73966	6267	5.83	5.83	-42291	10833	18947	33304	52373	14866	52252	No	8.34	Si
SLU 58	2	19349.81	-89504	-75372	10658	5.83	5.83	-43094	10833	18947	33304	52373	14866	52252	No	4.9	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	-0.98	12061.46	-66356	-55878	26628	5.83	5.83	-31949	16250	28421	33304	78559	14866	61726		2.32	Si
SLV 11	2	452.75	-67341	-56708	27650	5.83	5.83	-32423	16250	28421	33304	78559	14866	61726		2.23	Si
SLV 7	-0.98	6999.97	-69463	-58495	24257	5.83	5.83	-33445	16250	28421	33304	78559	14866	61726		2.54	Si
SLV 7	2	1648.22	-68113	-57358	25356	5.83	5.83	-32795	16250	28421	33304	78559	14866	61726		2.43	Si
SLV 5	-0.98	-16920.4	-65524	-55178	-16762	5.83	5.83	-31548	16250	28421	33304	78559	14866	61726		3.68	Si
SLV 5	2	26481.55	-66149	-55704	-11445	5.83	5.83	-31849	16250	28421	33304	78559	14866	61726		5.39	Si
SLD 11	-0.98	3832.68	-66139	-55696	14399	5.83	5.83	-31844	16250	28421	33304	78559	14866	61726		4.29	Si
SLD 11	2	7799.27	-66987	-56410	16646	5.83	5.83	-32253	16250	28421	33304	78559	14866	61726		3.71	Si
SLV 16	-0.98	9240.61	-61351	-51664	14796	5.83	5.83	-29539	16250	28421	33304	78559	14866	61726		4.17	Si
SLV 16	2	7947.64	-65561	-55210	17290	5.83	5.83	-31566	16250	28421	33304	78559	14866	61726		3.57	Si
SLV 15	-0.98	9672.42	-61353	-51665	15093	5.83	5.83	-29540	16250	28421	33304	78559	14866	61726		4.09	Si
SLV 15	2	7706.04	-65794	-55406	17480	5.83	5.83	-31679	16250	28421	33304	78559	14866	61726		3.53	Si
SLV 12	-0.98	11785.69	-66355	-55878	26439	5.83	5.83	-31948	16250	28421	33304	78559	14866	61726		2.33	Si
SLV 12	2	607.04	-67192	-56583	27528	5.83	5.83	-32351	16250	28421	33304	78559	14866	61726		2.24	Si
SLV 6	-0.98	-17196.17	-65522	-55177	-16952	5.83	5.83	-31548	16250	28421	33304	78559	14866	61726		3.64	Si
SLV 6	2	26635.84	-66000	-55579	-11567	5.83	5.83	-31778	16250	28421	33304	78559	14866	61726		5.34	Si
SLD 12	-0.98	3712.39	-66138	-55695	14316	5.83	5.83	-31844	16250	28421	33304	78559	14866	61726		4.31	Si
SLD 12	2	7866.58	-66922	-56356	16593	5.83	5.83	-32222	16250	28421	33304	78559	14866	61726		3.72	Si
SLV 8	-0.98	6724.2	-69462	-58494	24067	5.83	5.83	-33444	16250	28421	33304	78559	14866	61726		2.56	Si
SLV 8	2	1802.51	-67964	-57233	25234	5.83	5.83	-32723	16250	28421	33304	78559	14866	61726		2.45	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.51 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 10	179667	0.25	36329	-63539	296.58	7263.64	24.49	Si
SLV 14	179667	0.25	36331	-63543	296.58	7263.92	24.49	Si
SLV 9	179667	0.25	36339	-63558	296.58	7265.09	24.5	Si
SLV 13	179667	0.25	36347	-63572	296.58	7266.19	24.5	Si
SLV 6	179667	0.25	36709	-64203	296.58	7315.6	24.67	Si
SLV 16	179667	0.25	36715	-64214	296.58	7316.48	24.67	Si
SLV 5	179667	0.25	36719	-64222	296.58	7317.04	24.67	Si
SLV 15	179667	0.25	36731	-64243	296.58	7318.73	24.68	Si
SLV 2	179667	0.25	37596	-65756	296.58	7435.2	25.07	Si
SLV 12	179667	0.25	37609	-65778	296.58	7436.85	25.08	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.05 Ta = 0.0494

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-68113	-69463	-98	0.502	7668.4	0.971	7.51618	6.19867	Si
SLV 11	-67341	-66356	427	0.502	7589.8	0.97	7.52242	6.19867	Si
SLV 8	-67964	-69462	-98	0.503	7653.3	0.971	7.53028	6.19867	Si
SLV 12	-67192	-66355	426	0.503	7574.7	0.97	7.53703	6.19867	Si
SLV 9	-65377	-62417	520	0.514	7389.8	0.97	7.69813	6.19867	Si
SLV 10	-65228	-62415	519	0.515	7374.7	0.97	7.71355	6.19867	Si
SLV 5	-66149	-65524	-4	0.516	7468.4	0.97	7.72924	6.19867	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-66000	-65522	-5	0.517	7453.3	0.97	7.74421	6.19867	Si
SLV 3	-68369	-71709	-677	0.493	7694.5	0.971	7.37315	3.99966	Si
SLV 4	-68136	-71707	-678	0.494	7670.7	0.971	7.39471	3.99966	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.148	SLU 84	Si
V_SLU	4.813	SLU 79	Si
PF_SLV	5.884	SLV 6	Si
V_SLV	2.232	SLV 11	Si
PFFP_SLV	24.492	SLV 10	Si
R_SLV	1.213	SLV 7	Si

Maschio 30

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.888	6.576	-8.008	6.576	L2	L4	3.88	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	1.02	-1460.68	-35759	-0.0000344	0.0003743	0.0035	3.88	55417.09	62909.33	62909.33	43.07	No	Si
SLU 79	1.42	4258.1	-38030	-0.0000406	0.0003743	0.0035	3.88	57993.77	62258.96	62258.96	14.62	No	Si
SLU 76	1.02	-1439.54	-35478	-0.0000341	0.0003743	0.0035	3.88	55090.65	62529.36	62529.36	43.44	No	Si
SLU 76	1.42	4225.7	-37724	-0.0000403	0.0003743	0.0035	3.88	57653.43	61796.59	61796.59	14.62	No	Si
SLU 78	1.02	-1460.15	-36111	-0.0000347	0.0003743	0.0035	3.88	55824.05	63387.7	63387.7	43.41	No	Si
SLU 78	1.42	4297.49	-38420	-0.0000411	0.0003743	0.0035	3.88	58425.61	62850.67	62850.67	14.62	No	Si
SLU 80	1.02	-1462.67	-35778	-0.0000344	0.0003743	0.0035	3.88	55439.07	62935.06	62935.06	43.03	No	Si
SLU 80	1.42	4261.7	-38056	-0.0000406	0.0003743	0.0035	3.88	58022.96	62298.78	62298.78	14.62	No	Si
SLU 63	1.02	-1418.99	-33229	-0.0000319	0.0003743	0.0035	3.88	52414.57	59463.01	59463.01	41.91	No	Si
SLU 63	1.42	3978.54	-35319	-0.0000376	0.0003743	0.0035	3.88	54905.48	58183.11	58183.11	14.62	No	Si
SLU 83	1.02	-1457.05	-37157	-0.0000357	0.0003743	0.0035	3.88	57017.21	64815.89	64815.89	44.48	No	Si
SLU 83	1.42	4406.2	-39485	-0.0000422	0.0003743	0.0035	3.88	59586.3	64368.54	64368.54	14.61	No	Si
SLU 84	1.02	-1459.04	-37176	-0.0000357	0.0003743	0.0035	3.88	57038.62	64841.86	64841.86	44.44	No	Si
SLU 84	1.42	4409.8	-39511	-0.0000423	0.0003743	0.0035	3.88	59614.65	64401.72	64401.72	14.6	No	Si
SLU 62	1.02	-1417.01	-33211	-0.0000319	0.0003743	0.0035	3.88	52391.53	59436.39	59436.39	41.95	No	Si
SLU 62	1.42	3974.94	-35293	-0.0000376	0.0003743	0.0035	3.88	54874.72	58143.8	58143.8	14.63	No	Si
SLU 59	1.02	-1422.63	-31831	-0.0000306	0.0003743	0.0035	3.88	50694.55	57453.84	57453.84	40.39	No	Si
SLU 59	1.42	3830.44	-33864	-0.000036	0.0003743	0.0035	3.88	53180.6	56015.16	56015.16	14.62	No	Si
SLU 58	1.02	-1420.64	-31812	-0.0000306	0.0003743	0.0035	3.88	50670.94	57426.41	57426.41	40.42	No	Si
SLU 58	1.42	3826.84	-33837	-0.000036	0.0003743	0.0035	3.88	53149	55976.12	55976.12	14.63	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	1.02	-12892.64	-25364	-0.0000401	0.0005615	0.0035	3.88		49541.71	49541.71	3.84		Si
SLV 2	1.42	1652.65	-27441	-0.0000265	0.0005615	0.0035	3.88		49665.49	49665.49	30.05		Si
SLV 15	1.02	10785.29	-23093	-0.0000351	0.0005615	0.0035	3.88		42461.59	42461.59	3.94		Si
SLV 15	1.42	4169.76	-24074	-0.0000269	0.0005615	0.0035	3.88		44105.31	44105.31	10.58		Si
SLV 1	1.02	-13274.27	-25362	-0.0000407	0.0005615	0.0035	3.88		49539.04	49539.04	3.73		Si
SLV 1	1.42	1656.64	-27397	-0.0000264	0.0005615	0.0035	3.88		49592.86	49592.86	29.94		Si
SLV 12	1.02	7524.32	-16903	-0.000025	0.0005615	0.0035	3.88		31850.26	31850.26	4.23		Si
SLV 12	1.42	5414.76	-15367	-0.0000207	0.0005615	0.0035	3.88		29152.08	29152.08	5.38		Si
SLV 8	1.02	1265.24	-16202	-0.0000159	0.0005615	0.0035	3.88		30621.43	30621.43	24.2		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	1.42	5081.72	-14404	-0.0000194	0.0005615	0.0035	3.88		27451.48	27451.48	5.4		Si
SLV 3	1.02	-10078.32	-20756	-0.000032	0.0005615	0.0035	3.88		41758.21	41758.21	4.14		Si
SLV 3	1.42	3059.63	-20865	-0.0000225	0.0005615	0.0035	3.88		38688.77	38688.77	12.64		Si
SLV 4	1.02	-9696.68	-20758	-0.0000315	0.0005615	0.0035	3.88		41761.02	41761.02	4.31		Si
SLV 4	1.42	3055.63	-20909	-0.0000225	0.0005615	0.0035	3.88		38764.96	38764.96	12.69		Si
SLV 16	1.02	11166.92	-23095	-0.0000356	0.0005615	0.0035	3.88		42464.4	42464.4	3.8		Si
SLV 16	1.42	4165.76	-24119	-0.0000269	0.0005615	0.0035	3.88		44179.65	44179.65	10.61		Si
SLV 11	1.02	7280.6	-16902	-0.0000247	0.0005615	0.0035	3.88		31848.39	31848.39	4.37		Si
SLV 11	1.42	5417.31	-15338	-0.0000207	0.0005615	0.0035	3.88		29101.7	29101.7	5.37		Si
SLV 7	1.02	1021.52	-16201	-0.0000155	0.0005615	0.0035	3.88		30619.56	30619.56	29.97		Si
SLV 7	1.42	5084.27	-14375	-0.0000194	0.0005615	0.0035	3.88		27401.24	27401.24	5.39		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	1.02	-1435.69	-35799	-31821	-12032	3.88	3.88	-18225	9374	16368	33304	52283	9894	49672	No	4.13	Si
SLU 75	1.42	4259.1	-38071	-33840	-12012	3.88	3.88	-19382	9529	16637	33304	52283	9894	49941	No	4.16	Si
SLU 78	1.02	-1460.15	-36111	-32099	-12169	3.88	3.88	-18384	9396	16405	33304	52283	9894	49709	No	4.08	Si
SLU 78	1.42	4297.49	-38420	-34151	-12148	3.88	3.88	-19560	9552	16678	33304	52283	9894	49983	No	4.11	Si
SLU 79	1.02	-1460.68	-35759	-31786	-12093	3.88	3.88	-18205	9372	16363	33304	52283	9894	49667	No	4.11	Si
SLU 79	1.42	4258.1	-38030	-33804	-12072	3.88	3.88	-19361	9526	16632	33304	52283	9894	49937	No	4.14	Si
SLU 74	1.02	-1433.7	-35780	-31804	-12023	3.88	3.88	-18215	9373	16366	33304	52283	9894	49670	No	4.13	Si
SLU 74	1.42	4255.5	-38044	-33817	-12002	3.88	3.88	-19368	9527	16634	33304	52283	9894	49938	No	4.16	Si
SLU 81	1.02	-1432.59	-36845	-32751	-12286	3.88	3.88	-18758	9445	16492	33304	52283	9894	49796	No	4.05	Si
SLU 81	1.42	4367.8	-39136	-34787	-12265	3.88	3.88	-19924	9601	16763	33304	52283	9894	50068	No	4.08	Si
SLU 83	1.02	-1457.05	-37157	-33029	-12423	3.88	3.88	-18917	9467	16529	33304	52283	9894	49833	No	4.01	Si
SLU 83	1.42	4406.2	-39485	-35098	-12402	3.88	3.88	-20102	9625	16805	33304	52283	9894	50109	No	4.04	Si
SLU 82	1.02	-1434.58	-36864	-32768	-12296	3.88	3.88	-18767	9447	16494	33304	52283	9894	49798	No	4.05	Si
SLU 82	1.42	4371.4	-39162	-34811	-12275	3.88	3.88	-19937	9603	16766	33304	52283	9894	50071	No	4.08	Si
SLU 80	1.02	-1462.67	-35778	-31802	-12103	3.88	3.88	-18214	9373	16365	33304	52283	9894	49670	No	4.1	Si
SLU 80	1.42	4261.7	-38056	-33827	-12082	3.88	3.88	-19374	9528	16635	33304	52283	9894	49940	No	4.13	Si
SLU 77	1.02	-1458.16	-36092	-32082	-12159	3.88	3.88	-18374	9394	16403	33304	52283	9894	49707	No	4.09	Si
SLU 77	1.42	4293.89	-38394	-34128	-12138	3.88	3.88	-19546	9551	16675	33304	52283	9894	49980	No	4.12	Si
SLU 84	1.02	-1459.04	-37176	-33045	-12433	3.88	3.88	-18926	9468	16531	33304	52283	9894	49835	No	4.01	Si
SLU 84	1.42	4409.8	-39511	-35121	-12412	3.88	3.88	-20115	9626	16808	33304	52283	9894	50112	No	4.04	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 1	1.02	-6278.56	-24725	-21978	-18866	3.88	3.88	-12588	12934	22583	33304	78424	9894	55887		2.96	Si
SLD 1	1.42	2373.06	-26473	-23531	-18718	3.88	3.88	-13477	13112	22894	33304	78424	9894	56198		3	Si
SLV 4	1.02	-9696.68	-20758	-18451	-31832	3.88	3.88	-10568	12530	21878	33304	78424	9894	55182		1.73	Si
SLV 4	1.42	3055.63	-20909	-18586	-31471	3.88	3.88	-10645	12546	21905	33304	78424	9894	55209		1.75	Si
SLD 4	1.02	-4750.13	-22743	-20216	-18376	3.88	3.88	-11578	12732	22231	33304	78424	9894	55535		3.02	Si
SLD 4	1.42	2968.17	-23682	-21051	-18213	3.88	3.88	-12056	12828	22398	33304	78424	9894	55702		3.06	Si
SLV 16	1.02	11166.92	-23095	-20529	16295	3.88	3.88	-11758	12768	22293	33304	78424	9894	55598		3.41	Si
SLV 16	1.42	4165.76	-24119	-21439	16000	3.88	3.88	-12279	12872	22475	33304	78424	9894	55780		3.49	Si
SLV 2	1.02	-12892.64	-25364	-22546	-31979	3.88	3.88	-12913	12999	22697	33304	78424	9894	56001		1.75	Si
SLV 2	1.42	1652.65	-27441	-24392	-31654	3.88	3.88	-13970	13211	23066	33304	78424	9894	56370		1.78	Si
SLV 3	1.02	-10078.32	-20756	-18450	-32819	3.88	3.88	-10567	12530	21877	33304	78424	9894	55182		1.68	Si
SLV 3	1.42	3059.63	-20865	-18546	-32459	3.88	3.88	-10622	12541	21897	33304	78424	9894	55201		1.7	Si
SLD 3	1.02	-4913.94	-22742	-20215	-18800	3.88	3.88	-11578	12732	22231	33304	78424	9894	55535		2.95	Si
SLD 3	1.42	2969.89	-23663	-21034	-18637	3.88	3.88	-12047	12826	22394	33304	78424	9894	55699		2.99	Si
SLV 1	1.02	-13274.27	-25362	-22544	-32967	3.88	3.88	-12912	12999	22696	33304	78424	9894	56001		1.7	Si
SLV 1	1.42	1656.64	-27397	-24353	-32642	3.88	3.88	-13948	13206	23058	33304	78424	9894	56362		1.73	Si
SLV 7	1.02	1021.52	-16201	-14401	-15624	3.88	3.88	-8248	12066	21068	33304	78424	9894	54372		3.48	Si
SLV 7	1.42	5084.27	-14375	-12778	-15451	3.88	3.88	-7318	11880	20743	33304	78424	9894	54047		3.5	Si
SLD 2	1.02	-6114.74	-24726	-21978	-18442	3.88	3.88	-12588	12934	22583	33304	78424	9894	55888		3.03	Si
SLD 2	1.42	2371.34	-26492	-23548	-18294	3.88	3.88	-13487	13114	22897	33304	78424	9894	56202		3.07	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.51 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.25	11335	-19791	296.07	4122.38	13.92	Si
SLV 8	179667	0.25	11340	-19800	296.07	4124.28	13.93	Si
SLV 3	179667	0.25	11900	-20777	296.07	4310.58	14.56	Si
SLV 4	179667	0.25	11909	-20793	296.07	4313.54	14.57	Si
SLV 11	179667	0.25	11960	-20883	296.07	4330.62	14.63	Si
SLV 12	179667	0.25	11966	-20893	296.07	4332.51	14.63	Si
SLV 1	179667	0.25	13011	-22717	296.07	4675.92	15.79	Si
SLV 2	179667	0.25	13020	-22733	296.07	4678.83	15.8	Si
SLV 15	179667	0.25	13985	-24418	296.07	4990.85	16.86	Si
SLV 16	179667	0.25	13994	-24433	296.07	4993.72	16.87	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.

Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:

- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-37097	-20145	2425	0.548	4511.8	0.953	8.35397	4.45299	Si
SLV 9	-37067	-20145	2423	0.548	4508.7	0.953	8.3598	4.45299	Si
SLV 6	-36499	-18544	2461	0.554	4451	0.952	8.45033	4.45299	Si
SLV 5	-36469	-18543	2460	0.554	4448	0.952	8.45632	4.45299	Si
SLV 14	-27963	-22321	1357	0.712	3584.9	0.942	10.98919	3.37435	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 13	-27916	-22321	1355	0.713	3580.1	0.942	11.00492	3.37435	Si
SLV 2	-25968	-16982	1477	0.75	3382.9	0.939	11.60378	3.37435	Si
SLV 1	-25922	-16982	1475	0.751	3378.1	0.939	11.62155	3.37435	Si
SLV 16	-19528	-22584	477	0.971	2732.2	0.928	15.20643	3.37435	Si
SLV 15	-19481	-22584	475	0.972	2727.4	0.928	15.23642	3.37435	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	14.604	SLU 84	Si
V_SLU	4.008	SLU 84	Si
PF_SLV	3.732	SLV 1	Si
V_SLV	1.681	SLV 3	Si
PFFP_SLV	13.924	SLV 7	Si
R_SLV	1.876	SLV 10	Si

Maschio 31

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.008	6.576	-4.858	6.576	L2	L4	2.15	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 44	1.02	-2102.61	-13518	-0.0000313	0.0003743	0.0035	2.15	12537.52	14278.26	14278.26	6.79	No	Si
SLU 44	1.42	1427	-11774	-0.0000253	0.0003743	0.0035	2.15	11144.35	11540.09	11540.09	8.09	No	Si
SLU 48	1.02	-2174.97	-13992	-0.0000324	0.0003743	0.0035	2.15	12904.91	14672.3	14672.3	6.75	No	Si
SLU 48	1.42	1474.16	-12221	-0.0000262	0.0003743	0.0035	2.15	11507.22	11894.19	11894.19	8.07	No	Si
SLU 47	1.02	-2132.11	-13684	-0.0000317	0.0003743	0.0035	2.15	12666.43	14415.65	14415.65	6.76	No	Si
SLU 47	1.42	1445.64	-11929	-0.0000256	0.0003743	0.0035	2.15	11270.65	11662.69	11662.69	8.07	No	Si
SLU 46	1.02	-2146.08	-13843	-0.0000321	0.0003743	0.0035	2.15	12789.57	14547.77	14547.77	6.78	No	Si
SLU 46	1.42	1457.64	-12081	-0.0000259	0.0003743	0.0035	2.15	11394.64	11783.71	11783.71	8.08	No	Si
SLU 51	1.02	-2161.2	-13839	-0.0000321	0.0003743	0.0035	2.15	12786.43	14544.4	14544.4	6.73	No	Si
SLU 51	1.42	1462.87	-12073	-0.0000259	0.0003743	0.0035	2.15	11387.94	11777.16	11777.16	8.05	No	Si
SLU 43	1.02	-2101.61	-13491	-0.0000312	0.0003743	0.0035	2.15	12516.56	14256.02	14256.02	6.78	No	Si
SLU 43	1.42	1423.46	-11748	-0.0000252	0.0003743	0.0035	2.15	11122.95	11519.4	11519.4	8.09	No	Si
SLU 45	1.02	-2145.47	-13826	-0.000032	0.0003743	0.0035	2.15	12777.11	14534.37	14534.37	6.77	No	Si
SLU 45	1.42	1455.52	-12066	-0.0000259	0.0003743	0.0035	2.15	11381.91	11771.26	11771.26	8.09	No	Si
SLU 50	1.02	-2160.6	-13822	-0.0000321	0.0003743	0.0035	2.15	12773.98	14531	14531	6.73	No	Si
SLU 50	1.42	1460.75	-12058	-0.0000259	0.0003743	0.0035	2.15	11375.21	11764.71	11764.71	8.05	No	Si
SLU 49	1.02	-2175.57	-14008	-0.0000325	0.0003743	0.0035	2.15	12917.3	14685.73	14685.73	6.75	No	Si
SLU 49	1.42	1476.29	-12236	-0.0000263	0.0003743	0.0035	2.15	11519.9	11906.66	11906.66	8.07	No	Si
SLU 71	1.02	-2345.51	-15755	-0.0000363	0.0003743	0.0035	2.15	14227.81	16148.68	16148.68	6.88	No	Si
SLU 71	1.42	1663.2	-13888	-0.0000299	0.0003743	0.0035	2.15	12824.68	13230.5	13230.5	7.95	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	1.02	-4035.68	-6639	-0.0000323	0.0005615	0.0035	1.72		8136.86	8136.86	2.02		Si
SLV 4	1.42	1440.39	-4335	-0.0000131	0.0005615	0.0035	2.15		4790.39	4790.39	3.33		Si
SLD 7	1.02	-1494.7	-9012	-0.0000208	0.0005615	0.0035	2.15		10451.78	10451.78	6.99		Si
SLD 7	1.42	1987.59	-7383	-0.0000204	0.0005615	0.0035	2.15		7857.11	7857.11	3.95		Si
SLV 2	1.02	-4955.62	-10140	-0.0000395	0.0005615	0.0035	2.15		11544.55	11544.55	2.33		Si
SLV 2	1.42	356.29	-7968	-0.0000141	0.0005615	0.0035	2.15		8435.13	8435.13	23.67		Si
SLV 1	1.02	-5064.44	-10087	-0.0000403	0.0005615	0.0035	2.15		11494.35	11494.35	2.27		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	1.42	365.67	-7895	-0.000014	0.0005615	0.0035	2.15		8363.5	8363.5	22.87		Si
SLV 11	1.02	564.45	-7241	-0.0000139	0.0005615	0.0035	2.15		7715.68	7715.68	13.67		Si
SLV 11	1.42	3188.12	-5833	-0.000025	0.0005615	0.0035	2.15		6309.46	6309.46	1.98		Si
SLV 3	1.02	-4144.49	-6586	-0.0000336	0.0005615	0.0035	1.72		8084.47	8084.47	1.95		Si
SLV 3	1.42	1449.76	-4261	-0.000013	0.0005615	0.0035	2.15		4715.38	4715.38	3.25		Si
SLV 8	1.02	-1034.98	-5092	-0.0000125	0.0005615	0.0035	2.15		6586.01	6586.01	6.36		Si
SLV 8	1.42	2962.77	-3204	-0.0000491	0.0005615	0.0035	2.15		3627.74	3627.74	1.22		Si
SLD 1	1.02	-3173.96	-11193	-0.0000318	0.0005615	0.0035	2.15		12542.83	12542.83	3.95		Si
SLD 1	1.42	886.99	-9439	-0.0000188	0.0005615	0.0035	2.15		9870.22	9870.22	11.13		Si
SLV 7	1.02	-1104.48	-5058	-0.0000127	0.0005615	0.0035	2.15		6551.98	6551.98	5.93		Si
SLV 7	1.42	2968.76	-3157	-0.0000541	0.0005615	0.0035	2.15		3579.04	3579.04	1.21		Si
SLV 12	1.02	633.95	-7275	-0.0000142	0.0005615	0.0035	2.15		7749.11	7749.11	12.22		Si
SLV 12	1.42	3182.13	-5879	-0.0000249	0.0005615	0.0035	2.15		6356.66	6356.66	2		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	1.02	-2521.5	-17721	-15752	-13111	2.15	2.15	-16281	9115	8819	33304	28971	5483	34454	No	2.63	Si
SLU 79	1.42	1881.68	-15749	-13999	-13113	2.15	2.15	-14469	8874	8585	33304	28971	5483	34454	No	2.63	Si
SLU 83	1.02	-2567.44	-18397	-16353	-13485	2.15	2.15	-16903	9198	8899	33304	28971	5483	34454	No	2.56	Si
SLU 83	1.42	1956.66	-16392	-14571	-13486	2.15	2.15	-15060	8952	8661	33304	28971	5483	34454	No	2.55	Si
SLU 78	1.02	-2536.47	-17907	-15917	-13203	2.15	2.15	-16452	9138	8841	33304	28971	5483	34454	No	2.61	Si
SLU 78	1.42	1897.21	-15928	-14158	-13204	2.15	2.15	-14634	8896	8606	33304	28971	5483	34454	No	2.61	Si
SLU 77	1.02	-2535.87	-17890	-15903	-13195	2.15	2.15	-16437	9136	8839	33304	28971	5483	34454	No	2.61	Si
SLU 77	1.42	1895.09	-15912	-14144	-13197	2.15	2.15	-14619	8894	8605	33304	28971	5483	34454	No	2.61	Si
SLU 84	1.02	-2568.04	-18414	-16368	-13492	2.15	2.15	-16917	9200	8901	33304	28971	5483	34454	No	2.55	Si
SLU 84	1.42	1958.78	-16408	-14585	-13494	2.15	2.15	-15074	8954	8663	33304	28971	5483	34454	No	2.55	Si
SLU 81	1.02	-2537.94	-18232	-16206	-13341	2.15	2.15	-16750	9178	8880	33304	28971	5483	34454	No	2.58	Si
SLU 81	1.42	1938.01	-16237	-14433	-13343	2.15	2.15	-14918	8933	8643	33304	28971	5483	34454	No	2.58	Si
SLU 75	1.02	-2506.98	-17741	-15770	-13060	2.15	2.15	-16299	9118	8821	33304	28971	5483	34454	No	2.64	Si
SLU 75	1.42	1878.57	-15773	-14020	-13061	2.15	2.15	-14491	8877	8588	33304	28971	5483	34454	No	2.64	Si
SLU 82	1.02	-2538.54	-18248	-16220	-13349	2.15	2.15	-16765	9180	8881	33304	28971	5483	34454	No	2.58	Si
SLU 82	1.42	1940.14	-16253	-14447	-13351	2.15	2.15	-14932	8935	8645	33304	28971	5483	34454	No	2.58	Si
SLU 74	1.02	-2506.38	-17725	-15755	-13052	2.15	2.15	-16285	9116	8819	33304	28971	5483	34454	No	2.64	Si
SLU 74	1.42	1876.44	-15757	-14006	-13053	2.15	2.15	-14477	8875	8586	33304	28971	5483	34454	No	2.64	Si
SLU 80	1.02	-2522.1	-17737	-15766	-13119	2.15	2.15	-16296	9117	8821	33304	28971	5483	34454	No	2.63	Si
SLU 80	1.42	1883.8	-15765	-14013	-13121	2.15	2.15	-14484	8876	8587	33304	28971	5483	34454	No	2.63	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 2	1.02	-3127.26	-11216	-9970	-12210	2.15	2.15	-10305	12478	12072	33304	43457	5483	45376		3.72	Si
SLD 2	1.42	882.96	-9470	-8418	-12179	2.15	2.15	-8701	12157	11762	33304	43457	5483	45066		3.7	Si
SLD 4	1.02	-2739.96	-9706	-8627	-11733	2.15	2.15	-8917	12200	11804	33304	43457	5483	45108		3.84	Si
SLD 4	1.42	1341.36	-7904	-7026	-11591	2.15	2.15	-7262	11869	11483	33304	43457	5483	44788		3.86	Si
SLV 6	1.02	-4101.47	-16762	-14899	-12872	2.15	2.15	-15400	13497	13058	33304	43457	5483	46362		3.6	Si
SLV 6	1.42	-650.87	-15316	-13614	-13244	2.15	2.15	-14072	13231	12801	33304	43457	5483	46105		3.48	Si
SLV 2	1.02	-4955.62	-10140	-9013	-16469	2.15	1.7588	-11450	12707	10057	33304	43457	5483	43361		2.63	Si
SLV 2	1.42	356.29	-7968	-7083	-16397	2.15	2.15	-7321	11881	11495	33304	43457	5483	44799		2.73	Si
SLV 4	1.02	-4035.68	-6639	-5901	-15367	1.72	1.4013	0	0	0	33304	34766	4386	33304		2.17	Si
SLV 4	1.42	1440.39	-4335	-3853	-15035	2.15	2.15	-3982	11213	10849	33304	43457	5483	44153		2.94	Si
SLV 1	1.02	-5064.44	-10087	-8966	-16806	2.15	1.7188	-11656	12748	9860	33304	43457	5483	43164		2.57	Si
SLV 1	1.42	365.67	-7895	-7018	-16736	2.15	2.15	-7254	11867	11482	33304	43457	5483	44786		2.68	Si
SLD 1	1.02	-3173.96	-11193	-9950	-12355	2.15	2.15	-10284	12473	12068	33304	43457	5483	45372		3.67	Si
SLD 1	1.42	886.99	-9439	-8390	-12324	2.15	2.15	-8672	12151	11756	33304	43457	5483	45060		3.66	Si
SLV 3	1.02	-4144.49	-6586	-5854	-15704	1.72	1.3371	0	0	0	33304	34766	4386	33304		2.12	Si
SLV 3	1.42	1449.76	-4261	-3788	-15374	2.15	2.15	-3915	11200	10836	33304	43457	5483	44140		2.87	Si
SLD 3	1.02	-2786.67	-9683	-8607	-11878	2.15	2.15	-8896	12196	11800	33304	43457	5483	45104		3.8	Si
SLD 3	1.42	1345.38	-7873	-6998	-11737	2.15	2.15	-7233	11863	11478	33304	43457	5483	44782		3.82	Si
SLV 5	1.02	-4170.96	-16728	-14869	-13088	2.15	2.15	-15369	13490	13052	33304	43457	5483	46356		3.54	Si
SLV 5	1.42	-644.88	-15269	-13573	-13461	2.15	2.15	-14029	13222	12793	33304	43457	5483	46097		3.42	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.51 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.25	2953	-2857	164.06	630.5	3.84	Si
SLV 4	179667	0.25	3106	-3005	164.06	662.42	4.04	Si
SLV 7	179667	0.25	3872	-3746	164.06	821.43	5.01	Si
SLV 8	179667	0.25	3969	-3840	164.06	841.56	5.13	Si
SLV 1	179667	0.25	5594	-5412	164.06	1173.06	7.15	Si
SLV 2	179667	0.25	5746	-5560	164.06	1203.82	7.34	Si
SLV 11	179667	0.25	7275	-7039	164.06	1508.23	9.19	Si
SLV 12	179667	0.25	7372	-7133	164.06	1527.42	9.31	Si
SLV 5	179667	0.25	12672	-12260	164.06	2529.64	15.42	Si
SLV 6	179667	0.25	12769	-12354	164.06	2547.32	15.53	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-17907	-15695	731	0.638	2231.1	0.948	9.79202	4.45299	Si
SLV 9	-17892	-15477	732	0.639	2229.6	0.948	9.79734	4.45299	Si
SLV 6	-16192	-9592	760	0.688	2057.2	0.944	10.59851	4.45299	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-16178	-9374	762	0.689	2055.7	0.944	10.60499	4.45299	Si
SLV 14	-14811	-21579	384	0.759	1917.2	0.94	11.72341	3.37435	Si
SLV 13	-14788	-21237	386	0.759	1914.8	0.94	11.73592	3.37435	Si
SLV 16	-10438	-20465	116	1.008	1475.4	0.926	15.82073	3.37435	Si
SLV 15	-10415	-20123	119	1.01	1473.1	0.926	15.8451	3.37435	Si
SLV 2	-9095	-1234	482	1.084	1340.4	0.921	17.11643	3.37435	Si
SLV 1	-9072	-892	484	1.086	1338.1	0.92	17.1463	3.37435	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.725	SLU 50	Si
V_SLU	2.553	SLU 84	Si
PF_SLV	1.206	SLV 7	Si
V_SLV	2.121	SLV 3	Si
PFFP_SLV	3.843	SLV 3	Si
R_SLV	2.199	SLV 10	Si

Maschio 32

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.728	2.201	-9.728	6.576	L2	L4	4.375	0.3	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	-0.98	21498.2	-87924	-0.0001416	0.0004492	0.0035	4.375	86886.19	136375.63	136375.63	6.34	No	Si
SLU 78	1.22	4551.67	-47853	-0.00006	0.0004492	0.0035	4.375	73443.85	87761.22	87761.22	19.28	No	Si
SLU 77	-0.98	21639.74	-87875	-0.0001418	0.0004492	0.0035	4.375	86896.53	136334.37	136334.37	6.3	No	Si
SLU 77	1.22	4556.35	-47825	-0.00006	0.0004492	0.0035	4.375	73419.08	87716.93	87716.93	19.25	No	Si
SLU 84	-0.98	21848.16	-90673	-0.0001462	0.0004492	0.0035	4.375	86202.71	138685.36	138685.36	6.35	No	Si
SLU 84	1.22	4365.19	-49973	-0.0000622	0.0004492	0.0035	4.375	75252.3	91105.07	91105.07	20.87	No	Si
SLU 82	-0.98	21661.11	-90140	-0.0001451	0.0004492	0.0035	4.375	86351.36	138237.49	138237.49	6.38	No	Si
SLU 82	1.22	4270.69	-49709	-0.0000617	0.0004492	0.0035	4.375	75033.61	90688.34	90688.34	21.24	No	Si
SLU 75	-0.98	21311.15	-87391	-0.0001405	0.0004492	0.0035	4.375	86994.86	135927.76	135927.76	6.38	No	Si
SLU 75	1.22	4457.17	-47589	-0.0000595	0.0004492	0.0035	4.375	73209.89	87344.49	87344.49	19.6	No	Si
SLU 81	-0.98	21802.65	-90091	-0.0001453	0.0004492	0.0035	4.375	86364.66	138196.23	138196.23	6.34	No	Si
SLU 81	1.22	4275.37	-49681	-0.0000617	0.0004492	0.0035	4.375	75010.26	90644.06	90644.06	21.2	No	Si
SLU 74	-0.98	21452.69	-87341	-0.0001407	0.0004492	0.0035	4.375	87004.47	135886.51	135886.51	6.33	No	Si
SLU 74	1.22	4461.85	-47561	-0.0000595	0.0004492	0.0035	4.375	73184.91	87300.21	87300.21	19.57	No	Si
SLU 83	-0.98	21989.7	-90624	-0.0001464	0.0004492	0.0035	4.375	86216.73	138644.1	138644.1	6.3	No	Si
SLU 83	1.22	4369.88	-49945	-0.0000622	0.0004492	0.0035	4.375	75229.16	91060.78	91060.78	20.84	No	Si
SLU 79	-0.98	21412.79	-87356	-0.0001406	0.0004492	0.0035	4.375	87001.54	135899.11	135899.11	6.35	No	Si
SLU 79	1.22	4453.37	-47549	-0.0000595	0.0004492	0.0035	4.375	73173.68	87280.3	87280.3	19.6	No	Si
SLU 80	-0.98	21271.25	-87406	-0.0001404	0.0004492	0.0035	4.375	86991.9	135940.37	135940.37	6.39	No	Si
SLU 80	1.22	4448.68	-47577	-0.0000595	0.0004492	0.0035	4.375	73198.66	87324.58	87324.58	19.63	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	-0.98	23413.48	-49279	-0.0000898	0.0006738	0.0035	4.375		93599.63	93599.63	4		Si
SLV 3	1.22	5817.05	-28556	-0.0000391	0.0006738	0.0035	4.375		59234.58	59234.58	10.18		Si
SLD 12	-0.98	22960.54	-59144	-0.0001008	0.0006738	0.0035	4.375		109322.91	109322.91	4.76		Si
SLD 12	1.22	3267.59	-31639	-0.0000387	0.0006738	0.0035	4.375		64900.69	64900.69	19.86		Si
SLD 11	-0.98	23127.54	-59085	-0.000101	0.0006738	0.0035	4.375		109229.21	109229.21	4.72		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 11	1.22	3272.58	-31621	-0.0000387	0.0006738	0.0035	4.375		64866.41	64866.41	19.82		Si
SLD 7	-0.98	23742.51	-56735	-0.0000992	0.0006738	0.0035	4.375		105483.09	105483.09	4.44		Si
SLD 7	1.22	3838.69	-30874	-0.0000387	0.0006738	0.0035	4.375		63501.49	63501.49	16.54		Si
SLD 8	-0.98	23575.51	-56794	-0.000099	0.0006738	0.0035	4.375		105576.78	105576.78	4.48		Si
SLD 8	1.22	3833.69	-30893	-0.0000387	0.0006738	0.0035	4.375		63536.37	63536.37	16.57		Si
SLV 7	-0.98	34991.35	-52173	-0.0001116	0.0006738	0.0035	4.375		98211.61	98211.61	2.81		Si
SLV 7	1.22	4757.11	-29604	-0.0000387	0.0006738	0.0035	4.375		61162.28	61162.28	12.86		Si
SLV 12	-0.98	33157.72	-57884	-0.0001156	0.0006738	0.0035	4.375		107314.67	107314.67	3.24		Si
SLV 12	1.22	3339.46	-31379	-0.0000385	0.0006738	0.0035	4.375		64428.81	64428.81	19.29		Si
SLV 8	-0.98	34608.49	-52308	-0.0001111	0.0006738	0.0035	4.375		98426.41	98426.41	2.84		Si
SLV 8	1.22	4745.65	-29647	-0.0000387	0.0006738	0.0035	4.375		61242.24	61242.24	12.9		Si
SLV 4	-0.98	22813.98	-49490	-0.0000891	0.0006738	0.0035	4.375		93935.97	93935.97	4.12		Si
SLV 4	1.22	5799.12	-28624	-0.0000392	0.0006738	0.0035	4.375		59359.79	59359.79	10.24		Si
SLV 11	-0.98	33540.58	-57749	-0.0001161	0.0006738	0.0035	4.375		107099.88	107099.88	3.19		Si
SLV 11	1.22	3350.91	-31335	-0.0000385	0.0006738	0.0035	4.375		64349.25	64349.25	19.2		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	-0.98	21271.25	-87406	-63568	-14535	4.375	4.375	-48432	10833	14219	95155	47168	22312	69480	No	4.78	Si
SLU 80	1.22	4448.68	-47577	-34601	-20853	4.375	4.375	-26363	10833	14219	95155	47168	22312	69480	No	3.33	Si
SLU 77	-0.98	21639.74	-87875	-63909	-14535	4.375	4.375	-48692	10833	14219	95155	47168	22312	69480	No	4.78	Si
SLU 77	1.22	4556.35	-47825	-34782	-20941	4.375	4.375	-26501	10833	14219	95155	47168	22312	69480	No	3.32	Si
SLU 83	-0.98	21989.7	-90624	-65908	-14413	4.375	4.375	-50216	10833	14219	95155	47168	22312	69480	No	4.82	Si
SLU 83	1.22	4369.88	-49945	-36324	-20964	4.375	4.375	-27675	10833	14219	95155	47168	22312	69480	No	3.31	Si
SLU 78	-0.98	21498.2	-87924	-63944	-14651	4.375	4.375	-48720	10833	14219	95155	47168	22312	69480	No	4.74	Si
SLU 78	1.22	4551.67	-47853	-34802	-21030	4.375	4.375	-26516	10833	14219	95155	47168	22312	69480	No	3.3	Si
SLU 82	-0.98	21661.11	-90140	-65556	-14369	4.375	4.375	-49948	10833	14219	95155	47168	22312	69480	No	4.84	Si
SLU 82	1.22	4270.69	-49709	-36152	-20835	4.375	4.375	-27544	10833	14219	95155	47168	22312	69480	No	3.33	Si
SLU 81	-0.98	21802.65	-90091	-65521	-14253	4.375	4.375	-49920	10833	14219	95155	47168	22312	69480	No	4.87	Si
SLU 81	1.22	4275.37	-49681	-36132	-20747	4.375	4.375	-27529	10833	14219	95155	47168	22312	69480	No	3.35	Si
SLU 79	-0.98	21412.79	-87356	-63532	-14419	4.375	4.375	-48405	10833	14219	95155	47168	22312	69480	No	4.82	Si
SLU 79	1.22	4453.37	-47549	-34581	-20765	4.375	4.375	-26347	10833	14219	95155	47168	22312	69480	No	3.35	Si
SLU 74	-0.98	21452.69	-87341	-63521	-14375	4.375	4.375	-48397	10833	14219	95155	47168	22312	69480	No	4.83	Si
SLU 74	1.22	4461.85	-47561	-34590	-20724	4.375	4.375	-26354	10833	14219	95155	47168	22312	69480	No	3.35	Si
SLU 75	-0.98	21311.15	-87391	-63557	-14491	4.375	4.375	-48424	10833	14219	95155	47168	22312	69480	No	4.79	Si
SLU 75	1.22	4457.17	-47589	-34610	-20812	4.375	4.375	-26370	10833	14219	95155	47168	22312	69480	No	3.34	Si
SLU 84	-0.98	21848.16	-90673	-65944	-14529	4.375	4.375	-50243	10833	14219	95155	47168	22312	69480	No	4.78	Si
SLU 84	1.22	4365.19	-49973	-36344	-21053	4.375	4.375	-27691	10833	14219	95155	47168	22312	69480	No	3.3	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 14	-0.98	11291.55	-64897	-47198	-15613	4.375	4.375	-35960	16250	21328	95155	70752	22312	93064		5.96	Si
SLD 14	1.22	2165.18	-33349	-24254	-19398	4.375	4.375	-18479	16196	21257	95155	70752	22312	93064		4.8	Si
SLV 14	-0.98	6510.56	-71208	-51787	-22483	4.375	4.375	-39457	16250	21328	95155	70752	22312	93064		4.14	Si
SLV 14	1.22	611.37	-35240	-25629	-25603	4.375	4.375	-19527	16250	21328	95155	70752	22312	93064		3.63	Si
SLV 6	-0.98	-3616.54	-62738	-45627	-25535	4.375	4.375	-34764	16250	21328	95155	70752	22312	93064		3.64	Si
SLV 6	1.22	3077.51	-32462	-23608	-24964	4.375	4.375	-17987	16097	21128	95155	70752	22312	93064		3.73	Si
SLV 5	-0.98	-3233.68	-62603	-45529	-25174	4.375	4.375	-34689	16250	21328	95155	70752	22312	93064		3.7	Si
SLV 5	1.22	3088.96	-32418	-23577	-24689	4.375	4.375	-17963	16093	21122	95155	70752	22312	93064		3.77	Si
SLD 6	-0.98	6796.49	-61402	-44656	-17149	4.375	4.375	-34023	16250	21328	95155	70752	22312	93064		5.43	Si
SLD 6	1.22	3155.84	-32176	-23401	-19374	4.375	4.375	-17829	16066	21086	95155	70752	22312	93064		4.8	Si
SLV 13	-0.98	7110.06	-70997	-51634	-21919	4.375	4.375	-39340	16250	21328	95155	70752	22312	93064		4.25	Si
SLV 13	1.22	629.3	-35172	-25580	-25171	4.375	4.375	-19490	16250	21328	95155	70752	22312	93064		3.7	Si
SLV 9	-0.98	-4684.45	-68179	-49585	-29160	4.375	4.375	-37779	16250	21328	95155	70752	22312	93064		3.19	Si
SLV 9	1.22	1682.77	-34150	-24836	-28828	4.375	4.375	-18923	16250	21328	95155	70752	22312	93064		3.23	Si
SLD 9	-0.98	6348.53	-63693	-46322	-18653	4.375	4.375	-35293	16250	21328	95155	70752	22312	93064		4.99	Si
SLD 9	1.22	2594.73	-32903	-23930	-20955	4.375	4.375	-18232	16146	21192	95155	70752	22312	93064		4.44	Si
SLV 10	-0.98	-5067.31	-68314	-49683	-29521	4.375	4.375	-37854	16250	21328	95155	70752	22312	93064		3.15	Si
SLV 10	1.22	1671.31	-34193	-24868	-29103	4.375	4.375	-18947	16250	21328	95155	70752	22312	93064		3.2	Si
SLD 10	-0.98	6181.52	-63752	-46365	-18810	4.375	4.375	-35326	16250	21328	95155	70752	22312	93064		4.95	Si
SLD 10	1.22	2589.73	-32922	-23943	-21075	4.375	4.375	-18243	16149	21195	95155	70752	22312	93064		4.42	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 0.51 Ta 0.05 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-39636	0.25	222.56	4965.83	6961.12	5963.47	26.8	Si
SLV 4	-39713	0.25	222.56	4973.56	6973.09	5973.33	26.84	Si
SLV 1	-40596	0.25	222.56	5061.74	7110.44	6086.09	27.35	Si
SLV 2	-40673	0.25	222.56	5069.38	7122.42	6095.9	27.39	Si
SLV 7	-40929	0.25	222.56	5094.81	7162.37	6128.59	27.54	Si
SLV 8	-40978	0.25	222.56	5099.67	7170.02	6134.85	27.57	Si
SLV 11	-42985	0.25	222.56	5295.6	7479.29	6387.45	28.7	Si
SLV 12	-43034	0.25	222.56	5300.34	7486.81	6393.57	28.73	Si
SLV 5	-44127	0.25	222.56	5404.89	7654.04	6529.46	29.34	Si
SLV 6	-44176	0.25	222.56	5409.56	7661.55	6535.56	29.37	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.05 Ta = 0.0494

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-29739	-68314	448	0.781	3579.8	0.955	11.88871	6.19867	Si
SLV 9	-29704	-68179	447	0.782	3576.2	0.955	11.90132	6.19867	Si
SLV 6	-28059	-62738	-134	0.83	3409.1	0.953	12.65829	6.19867	Si
SLV 5	-28023	-62603	-134	0.831	3405.5	0.953	12.67223	6.19867	Si
SLV 12	-25384	-57884	331	0.895	3137.4	0.949	13.7061	6.19867	Si
SLV 11	-25348	-57749	331	0.896	3133.8	0.949	13.72302	6.19867	Si
SLV 8	-23704	-52308	-250	0.95	2966.9	0.947	14.58889	6.19867	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-23668	-52173	-250	0.952	2963.3	0.947	14.60777	6.19867	Si
SLV 14	-30185	-71208	1086	0.752	3625.1	0.955	11.4475	3.99966	Si
SLV 13	-30129	-70997	1085	0.754	3619.4	0.955	11.46624	3.99966	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.3	SLU 77	Si
V_SLU	3.3	SLU 84	Si
PF_SLV	2.807	SLV 7	Si
V_SLV	3.153	SLV 10	Si
PFFP_SLV	26.795	SLV 3	Si
R_SLV	1.918	SLV 10	Si

Maschio 34

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.723	-4.784	-11.013	-4.784	L2	L4	3.29	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	-0.98	7184.78	-27471	-0.0000435	0.0003743	0.0035	3.29	36954.22	38717.43	38717.43	5.39	No	Si
SLU 81	2	11071.72	-26646	-0.0000504	0.0003743	0.0035	3.29	36083.66	37691.15	37691.15	3.4	No	Si
SLU 74	-0.98	7053.92	-26773	-0.0000424	0.0003743	0.0035	3.29	36218.38	37848.5	37848.5	5.37	No	Si
SLU 74	2	10783.39	-25862	-0.0000489	0.0003743	0.0035	3.29	35243.47	36720.81	36720.81	3.41	No	Si
SLU 82	-0.98	7164.18	-27469	-0.0000434	0.0003743	0.0035	3.29	36951.88	38714.65	38714.65	5.4	No	Si
SLU 82	2	11035.33	-26585	-0.0000502	0.0003743	0.0035	3.29	36019.14	37615.94	37615.94	3.41	No	Si
SLU 83	-0.98	7235.82	-27699	-0.0000438	0.0003743	0.0035	3.29	37191.75	39001.42	39001.42	5.39	No	Si
SLU 83	2	11279.56	-26950	-0.0000511	0.0003743	0.0035	3.29	36405.81	38068.3	38068.3	3.37	No	Si
SLU 79	-0.98	7065.7	-26877	-0.0000425	0.0003743	0.0035	3.29	36328.59	37977.61	37977.61	5.37	No	Si
SLU 79	2	10909.98	-26072	-0.0000494	0.0003743	0.0035	3.29	35470.14	36980.62	36980.62	3.39	No	Si
SLU 78	-0.98	7084.36	-26998	-0.0000427	0.0003743	0.0035	3.29	36457.02	38128.53	38128.53	5.38	No	Si
SLU 78	2	10954.84	-26105	-0.0000495	0.0003743	0.0035	3.29	35505.67	37021.48	37021.48	3.38	No	Si
SLU 41	-0.98	6071.81	-23214	-0.0000364	0.0003743	0.0035	3.29	32306.34	33476.58	33476.58	5.51	No	Si
SLU 41	2	9718.93	-22928	-0.0000433	0.0003743	0.0035	3.29	31979.88	33129.19	33129.19	3.41	No	Si
SLU 77	-0.98	7104.96	-27000	-0.0000428	0.0003743	0.0035	3.29	36459.38	38131.31	38131.31	5.37	No	Si
SLU 77	2	10991.23	-26166	-0.0000496	0.0003743	0.0035	3.29	35570.82	37096.49	37096.49	3.38	No	Si
SLU 84	-0.98	7215.22	-27697	-0.0000438	0.0003743	0.0035	3.29	37189.42	38998.63	38998.63	5.41	No	Si
SLU 84	2	11243.17	-26889	-0.000051	0.0003743	0.0035	3.29	36341.7	37992.99	37992.99	3.38	No	Si
SLU 80	-0.98	7045.1	-26874	-0.0000425	0.0003743	0.0035	3.29	36326.22	37974.83	37974.83	5.39	No	Si
SLU 80	2	10873.59	-26011	-0.0000492	0.0003743	0.0035	3.29	35404.86	36905.65	36905.65	3.39	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	-0.98	2432.02	-21041	-0.0000265	0.0005615	0.0035	3.29		32605.88	32605.88	13.41		Si
SLV 10	2	9226.33	-14013	-0.0000323	0.0005615	0.0035	3.29		22435.28	22435.28	2.43		Si
SLV 16	-0.98	-1471.55	-19469	-0.000023	0.0005615	0.0035	3.29		32648.7	32648.7	22.19		Si
SLV 16	2	14976.82	-21977	-0.0000527	0.0005615	0.0035	3.29		33921.41	33921.41	2.26		Si
SLV 3	-0.98	11745.28	-16714	-0.0000406	0.0005615	0.0035	3.29		26405.28	26405.28	2.25		Si
SLV 3	2	-500.69	-16174	-0.0000176	0.0005615	0.0035	3.29		27922.52	27922.52	55.77		Si
SLV 1	-0.98	11397.87	-17878	-0.0000406	0.0005615	0.0035	3.29		28097.43	28097.43	2.47		Si
SLV 1	2	-623.72	-13449	-0.000015	0.0005615	0.0035	3.29		23877.22	23877.22	38.28		Si
SLV 9	-0.98	2317.34	-20992	-0.0000262	0.0005615	0.0035	3.29		32537.17	32537.17	14.04		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	2	9478.29	-14122	-0.000033	0.0005615	0.0035	3.29		22597.72	22597.72	2.38		Si
SLV 15	-0.98	-1651.13	-19393	-0.0000232	0.0005615	0.0035	3.29		32537.99	32537.99	19.71		Si
SLV 15	2	15371.35	-22148	-0.0000538	0.0005615	0.0035	3.29		34161.44	34161.44	2.22		Si
SLV 13	-0.98	-1998.54	-20557	-0.0000251	0.0005615	0.0035	3.29		34221.55	34221.55	17.12		Si
SLV 13	2	15248.32	-19423	-0.0000521	0.0005615	0.0035	3.29		30310.75	30310.75	1.99		Si
SLV 14	-0.98	-1818.96	-20634	-0.0000249	0.0005615	0.0035	3.29		34331.99	34331.99	18.87		Si
SLV 14	2	14853.8	-19252	-0.0000508	0.0005615	0.0035	3.29		30066.93	30066.93	2.02		Si
SLV 4	-0.98	11924.86	-16790	-0.0000411	0.0005615	0.0035	3.29		26517.12	26517.12	2.22		Si
SLV 4	2	-895.22	-16004	-0.0000182	0.0005615	0.0035	3.29		27679.31	27679.31	30.92		Si
SLV 2	-0.98	11577.45	-17955	-0.0000411	0.0005615	0.0035	3.29		28209.05	28209.05	2.44		Si
SLV 2	2	-1018.24	-13279	-0.0000156	0.0005615	0.0035	3.29		23621.65	23621.65	23.2		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 63	-0.98	6560.24	-25580	-22737	65	3.29	3.29	-15358	8992	13313	33304	44333	8389	46617	No	722.24	Si
SLU 63	2	10130.53	-24424	-21710	-2332	3.29	3.29	-14664	8900	13176	33304	44333	8389	46480	No	19.93	Si
SLU 80	-0.98	7045.1	-26874	-23888	256	3.29	3.29	-16135	9096	13466	33304	44333	8389	46771	No	183.03	Si
SLU 80	2	10873.59	-26011	-23121	-2164	3.29	3.29	-15617	9027	13364	33304	44333	8389	46668	No	21.57	Si
SLU 59	-0.98	6390.12	-24757	-22006	72	3.29	3.29	-14864	8926	13215	33304	44333	8389	46520	No	649.51	Si
SLU 59	2	9760.94	-23546	-20930	-2162	3.29	3.29	-14137	8829	13072	33304	44333	8389	46376	No	21.45	Si
SLU 83	-0.98	7235.82	-27699	-24621	301	3.29	3.29	-16630	9162	13564	33304	44333	8389	46868	No	155.67	Si
SLU 83	2	11279.56	-26950	-23955	-2260	3.29	3.29	-16180	9102	13475	33304	44333	8389	46780	No	20.7	Si
SLU 57	-0.98	6429.38	-24881	-22116	76	3.29	3.29	-14938	8936	13230	33304	44333	8389	46534	No	611.43	Si
SLU 57	2	9842.2	-23640	-21013	-2160	3.29	3.29	-14193	8837	13083	33304	44333	8389	46387	No	21.48	Si
SLU 60	-0.98	6529.8	-25354	-22537	184	3.29	3.29	-15223	8974	13286	33304	44333	8389	46591	No	252.74	Si
SLU 60	2	9959.08	-24180	-21494	-2152	3.29	3.29	-14518	8880	13147	33304	44333	8389	46451	No	21.59	Si
SLU 82	-0.98	7164.18	-27469	-24417	316	3.29	3.29	-16492	9143	13537	33304	44333	8389	46841	No	148.41	Si
SLU 82	2	11035.33	-26585	-23631	-2227	3.29	3.29	-15962	9073	13432	33304	44333	8389	46736	No	20.98	Si
SLU 62	-0.98	6580.84	-25582	-22739	117	3.29	3.29	-15359	8992	13313	33304	44333	8389	46617	No	397.87	Si
SLU 62	2	10166.92	-24484	-21764	-2258	3.29	3.29	-14700	8904	13183	33304	44333	8389	46487	No	20.58	Si
SLU 61	-0.98	6509.2	-25352	-22535	132	3.29	3.29	-15221	8974	13286	33304	44333	8389	46590	No	353.72	Si
SLU 61	2	9922.69	-24120	-21440	-2225	3.29	3.29	-14481	8875	13140	33304	44333	8389	46444	No	20.87	Si
SLU 84	-0.98	7215.22	-27697	-24619	248	3.29	3.29	-16629	9162	13564	33304	44333	8389	46868	No	188.64	Si
SLU 84	2	11243.17	-26889	-23901	-2334	3.29	3.29	-16144	9097	13468	33304	44333	8389	46772	No	20.04	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	-0.98	-1471.55	-19469	-17306	-9817	3.29	3.29	-11689	12755	18883	33304	66499	8389	52187		5.32	Si
SLV 16	2	14976.82	-21977	-19535	-23072	3.29	2.8906	-13195	13056	16983	33304	66499	8389	50287		2.18	Si
SLV 2	-0.98	11577.45	-17955	-15960	11153	3.29	3.0005	-10780	12573	16976	33304	66499	8389	50280		4.51	Si
SLV 2	2	-1018.24	-13279	-11803	21852	3.29	3.29	-7972	12011	17782	33304	66499	8389	51087		2.34	Si
SLD 15	-0.98	2136.44	-18974	-16866	-4225	3.29	3.29	-11392	12695	18795	33304	66499	8389	52099		12.33	Si
SLD 15	2	10685.02	-19620	-17440	-10957	3.29	3.29	-11780	12773	18910	33304	66499	8389	52214		4.77	Si
SLV 3	-0.98	11745.28	-16714	-14856	10292	3.29	2.8268	-10035	12424	15803	33304	66499	8389	49108		4.77	Si
SLV 3	2	-500.69	-16174	-14377	20735	3.29	3.29	-9711	12359	18297	33304	66499	8389	51602		2.49	Si
SLV 13	-0.98	-1998.54	-20557	-18273	-10093	3.29	3.29	-12342	12885	19076	33304	66499	8389	52381		5.19	Si
SLV 13	2	15248.32	-19423	-17265	-24040	3.29	2.5798	-11662	12749	14801	33304	66499	8389	48105		2	Si
SLV 15	-0.98	-1651.13	-19393	-17238	-10385	3.29	3.29	-11643	12745	18869	33304	66499	8389	52174		5.02	Si
SLV 15	2	15371.35	-22148	-19687	-24115	3.29	2.8529	-13298	13076	16787	33304	66499	8389	50092		2.08	Si
SLV 14	-0.98	-1818.96	-20634	-18341	-9525	3.29	3.29	-12388	12894	19090	33304	66499	8389	52394		5.5	Si
SLV 14	2	14853.8	-19252	-17113	-22998	3.29	2.6204	-11559	12728	15009	33304	66499	8389	48314		2.1	Si
SLD 13	-0.98	1985.36	-19482	-17318	-4094	3.29	3.29	-11697	12756	18885	33304	66499	8389	52190		12.75	Si
SLD 13	2	10619.99	-18432	-16384	-10923	3.29	3.2065	-11067	12630	18224	33304	66499	8389	51528		4.72	Si
SLV 1	-0.98	11397.87	-17878	-15891	10585	3.29	3.0224	-10734	12563	17087	33304	66499	8389	50391		4.76	Si
SLV 1	2	-623.72	-13449	-11955	20810	3.29	3.29	-8075	12032	17813	33304	66499	8389	51117		2.46	Si
SLV 4	-0.98	11924.86	-16790	-14925	10861	3.29	2.8043	-10081	12433	15690	33304	66499	8389	48994		4.51	Si
SLV 4	2	-895.22	-16004	-14225	21777	3.29	3.29	-9608	12338	18267	33304	66499	8389	51571		2.37	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.51 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.25	9058	-13410	251.05	2838.24	11.31	Si
SLV 1	179667	0.25	9113	-13492	251.05	2854.45	11.37	Si
SLV 4	179667	0.25	9677	-14327	251.05	3019.38	12.03	Si
SLV 3	179667	0.25	9733	-14409	251.05	3035.45	12.09	Si
SLV 6	179667	0.25	9890	-14643	251.05	3081.21	12.27	Si
SLV 5	179667	0.25	9926	-14695	251.05	3091.43	12.31	Si
SLV 10	179667	0.25	11215	-16604	251.05	3461.59	13.79	Si
SLV 9	179667	0.25	11251	-16656	251.05	3471.61	13.83	Si
SLV 8	179667	0.25	11956	-17701	251.05	3671	14.62	Si
SLV 7	179667	0.25	11992	-17754	251.05	3680.91	14.66	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.

Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:

- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-23206	-17110	-690	0.741	2988.6	0.941	11.44299	4.45299	Si
SLV 12	-23097	-17159	-687	0.744	2977.6	0.941	11.48886	4.45299	Si
SLV 7	-21413	-16307	-609	0.791	2807.1	0.938	12.2597	4.45299	Si
SLV 8	-21304	-16356	-605	0.795	2796.1	0.938	12.3126	4.45299	Si
SLV 15	-22148	-19393	-731	0.767	2881.5	0.939	11.85847	3.37435	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 16	-21977	-19469	-724	0.771	2864.2	0.939	11.93635	3.37435	Si
SLV 9	-14122	-20992	-529	1.084	2071.7	0.921	17.10667	4.45299	Si
SLV 10	-14013	-21041	-526	1.091	2060.7	0.921	17.21247	4.45299	Si
SLV 13	-19423	-20557	-682	0.849	2605.8	0.934	13.2098	3.37435	Si
SLV 14	-19252	-20634	-676	0.855	2588.6	0.934	13.30748	3.37435	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.375	SLU 83	Si
V_SLU	19.93	SLU 63	Si
PF_SLV	1.988	SLV 13	Si
V_SLV	2.001	SLV 13	Si
PFFP_SLV	11.306	SLV 2	Si
R_SLV	2.57	SLV 11	Si

Maschio 35

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.723	-3.284	-7.723	-4.784	L2	L4	1.5	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	-0.98	-8041.63	-14377	-0.000218	0.0003743	0.0035	1.2	8527.39	9703.72	9703.72	1.21	No	Si
SLU 83	2	1082.3	-7751	-0.0000278	0.0003743	0.0035	1.5001	5157.64	5343.3	5343.3	4.94	No	Si
SLU 79	-0.98	-7840.26	-13935	-0.0002136	0.0003743	0.0035	1.2	8332.23	9470.94	9470.94	1.21	No	Si
SLU 79	2	1143.42	-7533	-0.0000278	0.0003743	0.0035	1.5001	5030.83	5222.65	5222.65	4.57	No	Si
SLU 77	-0.98	-7865.78	-13992	-0.0002141	0.0003743	0.0035	1.2	8357.82	9501.07	9501.07	1.21	No	Si
SLU 77	2	1132.18	-7566	-0.0000278	0.0003743	0.0035	1.5001	5049.99	5240.8	5240.8	4.63	No	Si
SLU 84	-0.98	-8043.77	-14392	-0.0002176	0.0003743	0.0035	1.2	8533.74	9711.41	9711.41	1.21	No	Si
SLU 84	2	1080.81	-7751	-0.0000278	0.0003743	0.0035	1.5001	5157.64	5343.3	5343.3	4.94	No	Si
SLU 81	-0.98	-7971.11	-14259	-0.0002149	0.0003743	0.0035	1.2	8475.96	9641.69	9641.69	1.21	No	Si
SLU 81	2	1068.75	-7675	-0.0000275	0.0003743	0.0035	1.5001	5113.83	5301.47	5301.47	4.96	No	Si
SLU 80	-0.98	-7842.41	-13949	-0.0002132	0.0003743	0.0035	1.2	8338.72	9478.57	9478.57	1.21	No	Si
SLU 80	2	1141.93	-7533	-0.0000278	0.0003743	0.0035	1.5001	5030.82	5222.65	5222.65	4.57	No	Si
SLU 75	-0.98	-7797.41	-13889	-0.0002107	0.0003743	0.0035	1.2	8311.9	9447.09	9447.09	1.21	No	Si
SLU 75	2	1117.15	-7491	-0.0000275	0.0003743	0.0035	1.5001	5005.88	5199.07	5199.07	4.65	No	Si
SLU 82	-0.98	-7973.26	-14274	-0.0002146	0.0003743	0.0035	1.2	8482.34	9649.36	9649.36	1.21	No	Si
SLU 82	2	1067.26	-7675	-0.0000275	0.0003743	0.0035	1.5001	5113.83	5301.47	5301.47	4.97	No	Si
SLU 74	-0.98	-7795.27	-13874	-0.000211	0.0003743	0.0035	1.2	8305.4	9439.47	9439.47	1.21	No	Si
SLU 74	2	1118.64	-7491	-0.0000275	0.0003743	0.0035	1.5001	5005.88	5199.07	5199.07	4.65	No	Si
SLU 78	-0.98	-7867.93	-14007	-0.0002137	0.0003743	0.0035	1.2	8364.29	9508.7	9508.7	1.21	No	Si
SLU 78	2	1130.69	-7566	-0.0000278	0.0003743	0.0035	1.5001	5049.99	5240.8	5240.8	4.64	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	-0.98	-6135.42	-9043	-0.0003117	0.0005615	0.0035	1.2		6919.42	6919.42	1.13		Si
SLV 8	2	1826.67	-5868	-0.0000304	0.0005615	0.0035	1.5001		4320.42	4320.42	2.37		Si
SLV 11	-0.98	-7010.36	-10453	-0.0003456	0.0005615	0.0035	1.2		7816.79	7816.79	1.12		Si
SLV 11	2	2749.03	-6027	-0.0000472	0.0005615	0.0035	1.5001		4429.05	4429.05	1.61		Si
SLV 16	-0.98	-7073.86	-11930	-0.000194	0.0005615	0.0035	1.2		8739.69	8739.69	1.24		Si
SLV 16	2	2730.26	-5680	-0.0000485	0.0005615	0.0035	1.5001		4191.99	4191.99	1.54		Si
SLD 12	-0.98	-6118.73	-9980	-0.000183	0.0005615	0.0035	1.2		7519.69	7519.69	1.23		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 12	2	1689.01	-5557	-0.0000282	0.0005615	0.0035	1.5001		4107.54	4107.54	2.43		Si
SLD 8	-0.98	-5780.17	-9397	-0.0001733	0.0005615	0.0035	1.2		7151.9	7151.9	1.24		Si
SLD 8	2	1321.31	-5492	-0.0000244	0.0005615	0.0035	1.5001		4062.79	4062.79	3.07		Si
SLD 11	-0.98	-6154.8	-10000	-0.0001869	0.0005615	0.0035	1.2		7532.26	7532.26	1.22		Si
SLD 11	2	1716.1	-5560	-0.0000286	0.0005615	0.0035	1.5001		4109.51	4109.51	2.39		Si
SLV 7	-0.98	-6218.13	-9089	-0.0003367	0.0005615	0.0035	1.2		6949.48	6949.48	1.12		Si
SLV 7	2	1888.78	-5874	-0.0000311	0.0005615	0.0035	1.5001		4324.89	4324.89	2.29		Si
SLD 7	-0.98	-5816.25	-9417	-0.0001773	0.0005615	0.0035	1.2		7164.52	7164.52	1.23		Si
SLD 7	2	1348.41	-5495	-0.0000246	0.0005615	0.0035	1.5001		4064.76	4064.76	3.01		Si
SLV 15	-0.98	-7203.36	-12001	-0.0002062	0.0005615	0.0035	1.2		8784.24	8784.24	1.22		Si
SLV 15	2	2827.51	-5690	-0.0000519	0.0005615	0.0035	1.5001		4199.04	4199.04	1.49		Si
SLV 12	-0.98	-6927.65	-10407	-0.0003232	0.0005615	0.0035	1.2		7788.08	7788.08	1.12		Si
SLV 12	2	2686.92	-6020	-0.0000455	0.0005615	0.0035	1.5001		4424.58	4424.58	1.65		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	-0.98	-7973.26	-14274	-12688	-4975	1.2	0.5743	0	0	0	33304	16171	3060	19231	No	3.87	Si
SLU 82	2	1067.26	-7675	-6823	-4050	1.5001	1.5001	-10107	8292	5597	33304	20213	3825	24038	No	5.94	Si
SLU 79	-0.98	-7840.26	-13935	-12386	-4986	1.2	0.5621	0	0	0	33304	16171	3060	19231	No	3.86	Si
SLU 79	2	1143.42	-7533	-6696	-4083	1.5001	1.5001	-9920	8267	5581	33304	20213	3825	24038	No	5.89	Si
SLU 62	-0.98	-7491.26	-13292	-11815	-4996	1.2	0.5594	0	0	0	33304	16171	3060	19231	No	3.85	Si
SLU 62	2	1212.95	-7115	-6324	-4148	1.5001	1.5001	-9369	8194	5531	33304	20213	3825	24038	No	5.8	Si
SLU 83	-0.98	-8041.63	-14377	-12780	-5017	1.2	0.5721	0	0	0	33304	16171	3060	19231	No	3.83	Si
SLU 83	2	1082.3	-7751	-6890	-4082	1.5001	1.5001	-10206	8305	5606	33304	20213	3825	24038	No	5.89	Si
SLU 78	-0.98	-7867.93	-14007	-12450	-4983	1.2	0.5649	0	0	0	33304	16171	3060	19231	No	3.86	Si
SLU 78	2	1130.69	-7566	-6725	-4074	1.5001	1.5001	-9963	8273	5584	33304	20213	3825	24038	No	5.9	Si
SLU 63	-0.98	-7493.4	-13307	-11828	-5010	1.2	0.5607	0	0	0	33304	16171	3060	19231	No	3.84	Si
SLU 63	2	1211.46	-7115	-6324	-4160	1.5001	1.5001	-9369	8194	5531	33304	20213	3825	24038	No	5.78	Si
SLU 80	-0.98	-7842.41	-13949	-12399	-4999	1.2	0.5634	0	0	0	33304	16171	3060	19231	No	3.85	Si
SLU 80	2	1141.93	-7533	-6696	-4095	1.5001	1.5001	-9920	8267	5581	33304	20213	3825	24038	No	5.87	Si
SLU 59	-0.98	-7292.04	-12864	-11435	-4978	1.2	0.5496	0	0	0	33304	16171	3060	19231	No	3.86	Si
SLU 59	2	1272.58	-6897	-6131	-4160	1.5001	1.5001	-9082	8155	5505	33304	20213	3825	24038	No	5.78	Si
SLU 77	-0.98	-7865.78	-13992	-12437	-4969	1.2	0.5636	0	0	0	33304	16171	3060	19231	No	3.87	Si
SLU 77	2	1132.18	-7566	-6725	-4062	1.5001	1.5001	-9963	8273	5584	33304	20213	3825	24038	No	5.92	Si
SLU 84	-0.98	-8043.77	-14392	-12793	-5030	1.2	0.5733	0	0	0	33304	16171	3060	19231	No	3.82	Si
SLU 84	2	1080.81	-7751	-6890	-4094	1.5001	1.5001	-10206	8305	5606	33304	20213	3825	24038	No	5.87	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	-0.98	-7073.86	-11930	-10604	-10509	1.2	0.4712	0	0	0	33304	24256	3060	27316		2.6	Si
SLV 16	2	2730.26	-5680	-5049	-9619	1.5001	0.808	-7479	11913	4331	33304	30320	3825	34145		3.55	Si
SLD 15	-0.98	-6228.65	-10664	-9479	-6766	1.2	0.4979	0	0	0	33304	24256	3060	27316		4.04	Si
SLD 15	2	1748.09	-5415	-4813	-6027	1.5001	1.2816	-7130	11843	6830	33304	30320	3825	34145		5.66	Si
SLV 13	-0.98	-6556.5	-11953	-10625	-9448	1.2	0.6045	0	0	0	33304	24256	3060	27316		2.89	Si
SLV 13	2	2019.47	-5247	-4664	-8790	1.5001	1.0954	-6909	11799	5816	33304	30320	3825	34145		3.88	Si
SLD 16	-0.98	-6173.06	-10633	-9452	-6589	1.2	0.5085	0	0	0	33304	24256	3060	27316		4.15	Si
SLD 16	2	1706.35	-5410	-4809	-5852	1.5001	1.3039	-7124	11842	6948	33304	30320	3825	34145		5.83	Si
SLV 11	-0.98	-7010.36	-10453	-9292	-8136	1.2	0.2381	0	0	0	33304	24256	3060	27316		3.36	Si
SLV 11	2	2749.03	-6027	-5357	-7078	1.5001	0.8817	-7936	12004	4763	33304	30320	3825	34145		4.82	Si
SLD 13	-0.98	-5945.03	-10646	-9463	-6120	1.2	0.5747	0	0	0	33304	24256	3060	27316		4.46	Si
SLD 13	2	1401.54	-5225	-4644	-5492	1.5001	1.4453	-6880	11793	7670	33304	30320	3825	34145		6.22	Si
SLV 12	-0.98	-6927.65	-10407	-9251	-7872	1.2	0.2531	0	0	0	33304	24256	3060	27316		3.47	Si
SLV 12	2	2686.92	-6020	-5351	-6817	1.5001	0.9112	-7928	12002	4921	33304	30320	3825	34145		5.01	Si
SLV 15	-0.98	-7203.36	-12001	-10668	-10921	1.2	0.4495	0	0	0	33304	24256	3060	27316		2.5	Si
SLV 15	2	2827.51	-5690	-5058	-10027	1.5001	0.7593	-7493	11915	4071	33304	30320	3825	34145		3.41	Si
SLD 14	-0.98	-5889.44	-10615	-9435	-5943	1.2	0.5856	0	0	0	33304	24256	3060	27316		4.6	Si
SLD 14	2	1359.79	-5220	-4640	-5317	1.5001	1.4686	-6874	11791	7793	33304	30320	3825	34145		6.42	Si
SLV 14	-0.98	-6427	-11882	-10561	-9035	1.2	0.6273	0	0	0	33304	24256	3060	27316		3.02	Si
SLV 14	2	1922.22	-5237	-4655	-8382	1.5001	1.1489	-6896	11796	6098	33304	30320	3825	34145		4.07	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.51 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.25	11863	-8008	114.46	1661.79	14.52	Si
SLV 1	179667	0.25	11971	-8081	114.46	1675.69	14.64	Si
SLV 4	179667	0.25	12272	-8284	114.46	1714.16	14.98	Si
SLV 3	179667	0.25	12381	-8357	114.46	1727.97	15.1	Si
SLV 6	179667	0.25	13325	-8995	114.46	1847.2	16.14	Si
SLV 5	179667	0.25	13394	-9041	114.46	1855.87	16.21	Si
SLV 8	179667	0.25	14690	-9916	114.46	2016.48	17.62	Si
SLV 7	179667	0.25	14759	-9963	114.46	2024.97	17.69	Si
SLV 10	179667	0.25	14970	-10105	114.46	2050.83	17.92	Si
SLV 9	179667	0.25	15040	-10152	114.46	2059.28	17.99	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-6027	-10453	-163	1.147	903.2	0.918	18.15457	4.45299	Si
SLV 12	-6020	-10407	-163	1.148	902.6	0.918	18.16918	4.45299	Si
SLV 7	-5874	-9089	-49	1.183	887.9	0.917	18.74664	4.45299	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-5868	-9043	-49	1.184	887.3	0.917	18.76208	4.45299	Si
SLV 9	-4550	-10292	-1	1.422	755.9	0.908	22.76446	4.45299	Si
SLV 10	-4543	-10247	-1	1.423	755.3	0.908	22.78744	4.45299	Si
SLV 5	-4397	-8928	113	1.437	740.8	0.906	23.03585	4.45299	Si
SLV 6	-4391	-8882	113	1.438	740.2	0.906	23.06084	4.45299	Si
SLV 15	-5690	-12001	-238	1.185	869.5	0.916	18.80369	3.37435	Si
SLV 16	-5680	-11930	-239	1.187	868.5	0.916	18.82854	3.37435	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.207	SLU 83	Si
V_SLU	3.823	SLU 84	Si
PF_SLV	1.115	SLV 11	Si
V_SLV	2.501	SLV 15	Si
PFFP_SLV	14.518	SLV 2	Si
R_SLV	4.077	SLV 11	Si

Maschio 36

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.268	1.046	-6.268	-3.284	L2	L4	4.33	0.3	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 49	-0.98	7357.08	-81271	-0.000108	0.0004492	0.0035	4.3299	85855.92	128783.24	128783.24	17.5	No	Si
SLU 49	2	5931.88	-44690	-0.0000592	0.0004492	0.0035	4.3299	69510.52	81791.71	81791.71	13.79	No	Si
SLU 50	-0.98	7171.42	-80780	-0.000107	0.0004492	0.0035	4.3299	85878.24	128374.03	128374.03	17.9	No	Si
SLU 50	2	5828.82	-44160	-0.0000584	0.0004492	0.0035	4.3299	69004.91	80962.4	80962.4	13.89	No	Si
SLU 47	-0.98	7290.12	-79887	-0.000106	0.0004492	0.0035	4.3299	85901.96	127457.01	127457.01	17.48	No	Si
SLU 47	2	5843.15	-43847	-0.0000581	0.0004492	0.0035	4.3299	68703.25	80473.5	80473.5	13.77	No	Si
SLU 84	-0.98	10341.01	-100864	-0.0001411	0.0004492	0.0035	4.3299	79598.13	145102.34	145102.34	14.03	No	Si
SLU 84	2	6576.99	-56699	-0.0000749	0.0004492	0.0035	4.3299	78901.27	99494.66	99494.66	15.13	No	Si
SLU 46	-0.98	7312	-80469	-0.0001068	0.0004492	0.0035	4.3299	85888.98	128114.76	128114.76	17.52	No	Si
SLU 46	2	5832.07	-44136	-0.0000584	0.0004492	0.0035	4.3299	68981.78	80924.75	80924.75	13.88	No	Si
SLU 44	-0.98	7245.04	-79084	-0.0001048	0.0004492	0.0035	4.3299	85904.71	126489.17	126489.17	17.46	No	Si
SLU 44	2	5743.35	-43292	-0.0000572	0.0004492	0.0035	4.3299	68161.76	79606.54	79606.54	13.86	No	Si
SLU 48	-0.98	7258.81	-81325	-0.0001079	0.0004492	0.0035	4.3299	85853.05	128828.49	128828.49	17.75	No	Si
SLU 48	2	5863.4	-44545	-0.0000589	0.0004492	0.0035	4.3299	69372.99	81564.88	81564.88	13.91	No	Si
SLU 45	-0.98	7213.73	-80523	-0.0001067	0.0004492	0.0035	4.3299	85887.3	128160.01	128160.01	17.77	No	Si
SLU 45	2	5763.59	-43990	-0.0000581	0.0004492	0.0035	4.3299	68842.05	80697.91	80697.91	14	No	Si
SLU 51	-0.98	7269.69	-80725	-0.0001071	0.0004492	0.0035	4.3299	85880.31	128328.77	128328.77	17.65	No	Si
SLU 51	2	5897.31	-44305	-0.0000587	0.0004492	0.0035	4.3299	69143.97	81189.23	81189.23	13.77	No	Si
SLU 82	-0.98	10295.93	-100061	-0.0001399	0.0004492	0.0035	4.3299	80060.17	144433.86	144433.86	14.03	No	Si
SLU 82	2	6477.18	-56144	-0.000074	0.0004492	0.0035	4.3299	78554.22	98825.86	98825.86	15.26	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	-0.98	16884.04	-61970	-0.0000958	0.0006738	0.0035	4.3299		112509.09	112509.09	6.66		Si
SLV 6	2	-5910.79	-37079	-0.0000493	0.0006738	0.0035	4.3299		82396.15	82396.15	13.94		Si
SLV 12	-0.98	-3327.55	-73873	-0.0000879	0.0006738	0.0035	4.3299		138507.51	138507.51	41.62		Si
SLV 12	2	14710.57	-38003	-0.0000641	0.0006738	0.0035	4.3299		74655.39	74655.39	5.07		Si
SLV 14	-0.98	19699.54	-74788	-0.0001163	0.0006738	0.0035	4.3299		130601.28	130601.28	6.63		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	2	3577.36	-39212	-0.0000481	0.0006738	0.0035	4.3299		76565.65	76565.65	21.4		Si
SLV 8	-0.98	-8670.85	-69081	-0.000091	0.0006738	0.0035	4.3299		131971.53	131971.53	15.22		Si
SLV 8	2	13392.77	-36998	-0.0000609	0.0006738	0.0035	4.3299		73068.46	73068.46	5.46		Si
SLV 11	-0.98	-3972.79	-74058	-0.0000892	0.0006738	0.0035	4.3299		138759.99	138759.99	34.93		Si
SLV 11	2	15146.5	-38057	-0.0000648	0.0006738	0.0035	4.3299		74740.55	74740.55	4.93		Si
SLV 5	-0.98	16238.8	-62155	-0.000095	0.0006738	0.0035	4.3299		112801.44	112801.44	6.95		Si
SLV 5	2	-5474.86	-37133	-0.0000487	0.0006738	0.0035	4.3299		82489.56	82489.56	15.07		Si
SLV 13	-0.98	18689.18	-75078	-0.000115	0.0006738	0.0035	4.3299		130956.76	130956.76	7.01		Si
SLV 13	2	4259.97	-39297	-0.0000493	0.0006738	0.0035	4.3299		76699	76699	18		Si
SLV 7	-0.98	-9316.09	-69266	-0.0000923	0.0006738	0.0035	4.3299		132224.02	132224.02	14.19		Si
SLV 7	2	13828.7	-37052	-0.0000616	0.0006738	0.0035	4.3299		73153.63	73153.63	5.29		Si
SLV 9	-0.98	21582.1	-66946	-0.0001096	0.0006738	0.0035	4.3299		120369.52	120369.52	5.58		Si
SLV 9	2	-4157.06	-38138	-0.0000478	0.0006738	0.0035	4.3299		84230.11	84230.11	20.26		Si
SLV 10	-0.98	22227.34	-66761	-0.0001105	0.0006738	0.0035	4.3299		120077.16	120077.16	5.4		Si
SLV 10	2	-4592.99	-38084	-0.0000484	0.0006738	0.0035	4.3299		84136.71	84136.71	18.32		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	-0.98	10242.74	-100918	-73395	-9488	4.3299	4.3299	-56502	10833	14072	95155	46682	22083	68765	No	7.25	Si
SLU 83	2	6508.51	-56554	-41130	-9035	4.3299	4.3299	-31663	10833	14072	95155	46682	22083	68765	No	7.61	Si
SLU 80	-0.98	9781.89	-97893	-71195	-9285	4.3299	4.3299	-54808	10833	14072	95155	46682	22083	68765	No	7.41	Si
SLU 80	2	6556.09	-54968	-39977	-8824	4.3299	4.3299	-30775	10833	14072	95155	46682	22083	68765	No	7.79	Si
SLU 71	-0.98	8273.79	-89142	-64830	-9306	4.3299	4.3299	-49908	10833	14072	95155	46682	22083	68765	No	7.39	Si
SLU 71	2	6205.97	-49489	-35992	-8913	4.3299	4.3299	-27708	10833	14072	95155	46682	22083	68765	No	7.71	Si
SLU 77	-0.98	9771	-98493	-71631	-9514	4.3299	4.3299	-55144	10833	14072	95155	46682	22083	68765	No	7.23	Si
SLU 77	2	6522.18	-55208	-40151	-9070	4.3299	4.3299	-30910	10833	14072	95155	46682	22083	68765	No	7.58	Si
SLU 56	-0.98	8668.63	-90131	-65550	-9300	4.3299	4.3299	-50462	10833	14072	95155	46682	22083	68765	No	7.39	Si
SLU 56	2	6145.04	-49878	-36275	-8910	4.3299	4.3299	-27926	10833	14072	95155	46682	22083	68765	No	7.72	Si
SLU 69	-0.98	8361.18	-89687	-65227	-9302	4.3299	4.3299	-50214	10833	14072	95155	46682	22083	68765	No	7.39	Si
SLU 69	2	6240.54	-49875	-36272	-8904	4.3299	4.3299	-27924	10833	14072	95155	46682	22083	68765	No	7.72	Si
SLU 79	-0.98	9683.62	-97947	-71234	-9518	4.3299	4.3299	-54838	10833	14072	95155	46682	22083	68765	No	7.22	Si
SLU 79	2	6487.61	-54823	-39871	-9079	4.3299	4.3299	-30694	10833	14072	95155	46682	22083	68765	No	7.57	Si
SLU 58	-0.98	8581.25	-89585	-65153	-9303	4.3299	4.3299	-50157	10833	14072	95155	46682	22083	68765	No	7.39	Si
SLU 58	2	6110.47	-49493	-35995	-8919	4.3299	4.3299	-27710	10833	14072	95155	46682	22083	68765	No	7.71	Si
SLU 81	-0.98	10197.66	-100116	-72811	-9368	4.3299	4.3299	-56053	10833	14072	95155	46682	22083	68765	No	7.34	Si
SLU 81	2	6408.7	-55999	-40727	-8921	4.3299	4.3299	-31353	10833	14072	95155	46682	22083	68765	No	7.71	Si
SLU 74	-0.98	9725.92	-97690	-71047	-9394	4.3299	4.3299	-54695	10833	14072	95155	46682	22083	68765	No	7.32	Si
SLU 74	2	6422.38	-54653	-39748	-8956	4.3299	4.3299	-30599	10833	14072	95155	46682	22083	68765	No	7.68	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	-0.98	12033.07	-76922	-55943	-14067	4.3299	4.3299	-43067	16250	21108	95155	70023	22083	92106		6.55	Si
SLV 16	2	9368.43	-39188	-28500	-13659	4.3299	4.3299	-21941	16250	21108	95155	70023	22083	92106		6.74	Si
SLD 8	-0.98	-161.45	-68519	-49832	-15047	4.3299	4.3299	-38362	16250	21108	95155	70023	22083	92106		6.12	Si
SLD 8	2	8500.43	-37335	-27153	-14094	4.3299	4.3299	-20903	16250	21108	95155	70023	22083	92106		6.54	Si
SLD 7	-0.98	-442.91	-68600	-49891	-15428	4.3299	4.3299	-38408	16250	21108	95155	70023	22083	92106		5.97	Si
SLD 7	2	8690.58	-37359	-27170	-14475	4.3299	4.3299	-20916	16250	21108	95155	70023	22083	92106		6.36	Si
SLV 11	-0.98	-3972.79	-74058	-53860	-27340	4.3299	4.3299	-41463	16250	21108	95155	70023	22083	92106		3.37	Si
SLV 11	2	15146.5	-38057	-27678	-25718	4.3299	4.3299	-21307	16250	21108	95155	70023	22083	92106		3.58	Si
SLV 15	-0.98	11022.72	-77212	-56154	-15434	4.3299	4.3299	-43229	16250	21108	95155	70023	22083	92106		5.97	Si
SLV 15	2	10051.03	-39273	-28562	-15026	4.3299	4.3299	-21988	16250	21108	95155	70023	22083	92106		6.13	Si
SLV 8	-0.98	-8670.85	-69081	-50241	-25287	4.3299	4.3299	-38677	16250	21108	95155	70023	22083	92106		3.64	Si
SLV 8	2	13392.77	-36998	-26908	-23478	4.3299	4.3299	-20714	16250	21108	95155	70023	22083	92106		3.92	Si
SLD 12	-0.98	2122.84	-70567	-51321	-15551	4.3299	4.3299	-39509	16250	21108	95155	70023	22083	92106		5.92	Si
SLD 12	2	9061.41	-37765	-27465	-14677	4.3299	4.3299	-21144	16250	21108	95155	70023	22083	92106		6.28	Si
SLV 7	-0.98	-9316.09	-69266	-50375	-26161	4.3299	4.3299	-38781	16250	21108	95155	70023	22083	92106		3.52	Si
SLV 7	2	13828.7	-37052	-26947	-24351	4.3299	4.3299	-20745	16250	21108	95155	70023	22083	92106		3.78	Si
SLV 12	-0.98	-3327.55	-73873	-53726	-26467	4.3299	4.3299	-41360	16250	21108	95155	70023	22083	92106		3.48	Si
SLV 12	2	14710.57	-38003	-27638	-24845	4.3299	4.3299	-21277	16250	21108	95155	70023	22083	92106		3.71	Si
SLD 11	-0.98	1841.38	-70648	-51380	-15932	4.3299	4.3299	-39554	16250	21108	95155	70023	22083	92106		5.78	Si
SLD 11	2	9251.57	-37788	-27482	-15058	4.3299	4.3299	-21157	16250	21108	95155	70023	22083	92106		6.12	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 0.51 Ta 0.05 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	-45724	0.25	220.27	5541.42	7894.1	6717.76	30.5	Si
SLV 1	-45851	0.25	220.27	5553.13	7913.52	6733.32	30.57	Si
SLV 4	-46385	0.25	220.27	5602.15	7995.16	6798.66	30.87	Si
SLV 3	-46512	0.25	220.27	5613.75	8014.58	6814.17	30.94	Si
SLV 6	-48827	0.25	220.27	5821.99	8369.07	7095.53	32.21	Si
SLV 5	-48908	0.25	220.27	5829.15	8381.47	7105.31	32.26	Si
SLV 8	-51028	0.25	220.27	6013.68	8706.17	7359.93	33.41	Si
SLV 7	-51109	0.25	220.27	6020.62	8718.58	7369.6	33.46	Si
SLV 10	-52127	0.25	220.27	6107.11	8874.52	7490.81	34.01	Si
SLV 9	-52208	0.25	220.27	6113.94	8886.93	7500.43	34.05	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.05 Ta = 0.0494

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-38138	-66946	-289	0.632	4428.1	0.963	9.5366	6.19867	Si
SLV 10	-38084	-66761	-289	0.633	4422.6	0.963	9.54844	6.19867	Si
SLV 11	-38057	-74058	-300	0.633	4419.9	0.963	9.55023	6.19867	Si
SLV 12	-38003	-73873	-300	0.634	4414.4	0.963	9.56212	6.19867	Si
SLV 5	-37133	-62155	303	0.646	4325.9	0.962	9.75638	6.19867	Si
SLV 6	-37079	-61970	304	0.647	4320.4	0.962	9.76874	6.19867	Si
SLV 7	-37052	-69266	292	0.647	4317.6	0.962	9.77915	6.19867	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-36998	-69081	292	0.648	4312.2	0.962	9.79156	6.19867	Si
SLV 13	-39297	-75078	-984	0.6	4546	0.964	9.0454	3.99966	Si
SLV 15	-39273	-77212	-987	0.6	4543.6	0.964	9.04909	3.99966	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	13.767	SLU 51	Si
V_SLU	7.225	SLU 79	Si
PF_SLV	4.935	SLV 11	Si
V_SLV	3.369	SLV 11	Si
PFFP_SLV	30.498	SLV 2	Si
R_SLV	1.538	SLV 9	Si

Maschio 37

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-3.284	-10.553	-3.284	L2	L4	0.46	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	-0.98	-121.12	-27842	-0.0003768	0.0003743	0.0035	0.46	0	1614.08	1614.08	13.33	No	Si
SLU 80	1.07	-349.39	-12669	-0.0001426	0.0003743	0.0035	0.46	1162.24	1932.44	1932.44	5.53	No	Si
SLU 84	-0.98	-115.88	-28823	-0.0004726	0.0003743	0.0035	0.46	0	1491.21	1491.21	12.87	No	Si
SLU 84	1.07	-355.01	-13011	-0.000147	0.0003743	0.0035	0.46	1145.03	1957.99	1957.99	5.52	No	Si
SLU 75	-0.98	-120.53	-27731	-0.0003694	0.0003743	0.0035	0.46	0	1627.88	1627.88	13.51	No	Si
SLU 75	1.07	-347.1	-12599	-0.0001416	0.0003743	0.0035	0.46	1165.4	1926.56	1926.56	5.55	No	Si
SLU 82	-0.98	-114.38	-28580	-0.0004414	0.0003743	0.0035	0.46	0	1521.68	1521.68	13.3	No	Si
SLU 82	1.07	-350.15	-12870	-0.0001448	0.0003743	0.0035	0.46	1152.41	1949.6	1949.6	5.57	No	Si
SLU 81	-0.98	-115.48	-28565	-0.0004408	0.0003743	0.0035	0.46	0	1523.46	1523.46	13.19	No	Si
SLU 81	1.07	-350.19	-12867	-0.0001448	0.0003743	0.0035	0.46	1152.57	1949.34	1949.34	5.57	No	Si
SLU 77	-0.98	-123.12	-27960	-0.0003869	0.0003743	0.0035	0.46	0	1599.2	1599.2	12.99	No	Si
SLU 77	1.07	-352	-12737	-0.0001437	0.0003743	0.0035	0.46	1159	1938.27	1938.27	5.51	No	Si
SLU 83	-0.98	-116.98	-28809	-0.0004719	0.0003743	0.0035	0.46	0	1493	1493	12.76	No	Si
SLU 83	1.07	-355.05	-13008	-0.0001469	0.0003743	0.0035	0.46	1145.19	1957.84	1957.84	5.51	No	Si
SLU 79	-0.98	-122.22	-27827	-0.0003765	0.0003743	0.0035	0.46	0	1615.86	1615.86	13.22	No	Si
SLU 79	1.07	-349.42	-12666	-0.0001426	0.0003743	0.0035	0.46	1162.38	1932.18	1932.18	5.53	No	Si
SLU 78	-0.98	-122.03	-27975	-0.0003872	0.0003743	0.0035	0.46	0	1597.41	1597.41	13.09	No	Si
SLU 78	1.07	-351.96	-12740	-0.0001437	0.0003743	0.0035	0.46	1158.85	1938.53	1938.53	5.51	No	Si
SLU 74	-0.98	-121.63	-27717	-0.0003692	0.0003743	0.0035	0.46	0	1629.66	1629.66	13.4	No	Si
SLU 74	1.07	-347.14	-12596	-0.0001416	0.0003743	0.0035	0.46	1165.54	1926.3	1926.3	5.55	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	-0.98	-754.43	-16297	-0.0002146	0.0005615	0.0035	0.46		2522.15	2522.15	3.34		Si
SLV 2	1.07	-160.17	-9871	-0.0000889	0.0005615	0.0035	0.46		1850.49	1850.49	11.55		Si
SLV 1	-0.98	-748.62	-16327	-0.0002142	0.0005615	0.0035	0.46		2524.83	2524.83	3.37		Si
SLV 1	1.07	-160.64	-9864	-0.0000889	0.0005615	0.0035	0.46		1849.58	1849.58	11.51		Si
SLV 10	-0.98	286.95	-21003	-0.0002051	0.0005615	0.0035	0.46		2785.14	2785.14	9.71		Si
SLV 10	1.07	-319.24	-7761	-0.0000882	0.0005615	0.0035	0.46		1551.89	1551.89	4.86		Si
SLV 15	-0.98	574.62	-22032	-0.0002548	0.0005615	0.0035	0.46		2802.32	2802.32	4.88		Si
SLV 15	1.07	-326.54	-7580	-0.0000875	0.0005615	0.0035	0.46		1523.49	1523.49	4.67		Si
SLV 9	-0.98	290.66	-21022	-0.0002058	0.0005615	0.0035	0.46		2786.21	2786.21	9.59		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	1.07	-319.54	-7756	-0.0000882	0.0005615	0.0035	0.46		1551.16	1551.16	4.85		Si
SLV 3	-0.98	-847.83	-15781	-0.0002206	0.0005615	0.0035	0.46		2476.69	2476.69	2.92		Si
SLV 3	1.07	-132.48	-10208	-0.0000888	0.0005615	0.0035	0.46		1891.1	1891.1	14.27		Si
SLV 13	-0.98	673.82	-22578	-0.0002753	0.0005615	0.0035	0.46		2810.39	2810.39	4.17		Si
SLV 13	1.07	-354.7	-7236	-0.0000875	0.0005615	0.0035	0.46		1468.07	1468.07	4.14		Si
SLV 14	-0.98	668.01	-22548	-0.0002741	0.0005615	0.0035	0.46		2809.94	2809.94	4.21		Si
SLV 14	1.07	-354.23	-7244	-0.0000875	0.0005615	0.0035	0.46		1469.27	1469.27	4.15		Si
SLV 4	-0.98	-853.64	-15751	-0.000221	0.0005615	0.0035	0.46		2474.02	2474.02	2.9		Si
SLV 4	1.07	-132.01	-10215	-0.0000888	0.0005615	0.0035	0.46		1892	1892	14.33		Si
SLV 16	-0.98	568.8	-22002	-0.0002537	0.0005615	0.0035	0.46		2801.87	2801.87	4.93		Si
SLV 16	1.07	-326.07	-7588	-0.0000875	0.0005615	0.0035	0.46		1524.69	1524.69	4.68		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 60	-0.98	-88.05	-26357	-21085	1002	0.46	0.46	-101861	10833	2242	95155	6198	2346	8544	No	8.53	Si
SLU 60	1.07	-322.29	-11705	-9364	3	0.46	0.46	-45238	10833	2242	95155	6198	2346	8544	No	2982.97	Si
SLU 82	-0.98	-114.38	-28580	-22864	1046	0.46	0.46	-110452	10833	2242	95155	6198	2346	8544	No	8.17	Si
SLU 82	1.07	-350.15	-12870	-10296	-15	0.46	0.46	-49740	10833	2242	95155	6198	2346	8544	No	564.81	Si
SLU 84	-0.98	-115.88	-28823	-23058	1051	0.46	0.46	-111393	10833	2242	95155	6198	2346	8544	No	8.13	Si
SLU 84	1.07	-355.01	-13011	-10409	-20	0.46	0.46	-50284	10833	2242	95155	6198	2346	8544	No	431.37	Si
SLU 77	-0.98	-123.12	-27960	-22368	995	0.46	0.46	-108060	10833	2242	95155	6198	2346	8544	No	8.59	Si
SLU 77	1.07	-352	-12737	-10190	-25	0.46	0.46	-49226	10833	2242	95155	6198	2346	8544	No	341.36	Si
SLU 78	-0.98	-122.03	-27975	-22380	997	0.46	0.46	-108115	10833	2242	95155	6198	2346	8544	No	8.57	Si
SLU 78	1.07	-351.96	-12740	-10192	-28	0.46	0.46	-49237	10833	2242	95155	6198	2346	8544	No	303.52	Si
SLU 63	-0.98	-88.45	-26614	-21291	1010	0.46	0.46	-102856	10833	2242	95155	6198	2346	8544	No	8.46	Si
SLU 63	1.07	-327.11	-11849	-9479	-5	0.46	0.46	-45793	10833	2242	95155	6198	2346	8544	No	1731	Si
SLU 61	-0.98	-86.95	-26371	-21097	1004	0.46	0.46	-101916	10833	2242	95155	6198	2346	8544	No	8.51	Si
SLU 61	1.07	-322.25	-11708	-9367	0	0.46	0.46	-45249	10833	2242	95155	6198	2346	8544	No	33328.6	Si
SLU 83	-0.98	-116.98	-28809	-23047	1049	0.46	0.46	-111338	10833	2242	95155	6198	2346	8544	No	8.15	Si
SLU 83	1.07	-355.05	-13008	-10406	-17	0.46	0.46	-50273	10833	2242	95155	6198	2346	8544	No	512.04	Si
SLU 81	-0.98	-115.48	-28565	-22852	1043	0.46	0.46	-110397	10833	2242	95155	6198	2346	8544	No	8.19	Si
SLU 81	1.07	-350.19	-12867	-10294	-12	0.46	0.46	-49729	10833	2242	95155	6198	2346	8544	No	711.6	Si
SLU 62	-0.98	-89.54	-26600	-21280	1007	0.46	0.46	-102801	10833	2242	95155	6198	2346	8544	No	8.48	Si
SLU 62	1.07	-327.15	-11846	-9477	-2	0.46	0.46	-45781	10833	2242	95155	6198	2346	8544	No	4706.75	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	-0.98	574.62	-22032	-17626	1866	0.46	0.46	-85148	16250	3364	95155	9298	2346	11644		6.24	Si
SLV 15	1.07	-326.54	-7580	-6064	-227	0.46	0.46	-29295	16250	3364	95155	9298	2346	11644		51.37	Si
SLV 13	-0.98	673.82	-22578	-18062	2115	0.46	0.46	-87258	16250	3364	95155	9298	2346	11644		5.5	Si
SLV 13	1.07	-354.7	-7236	-5789	-31	0.46	0.46	-27967	16010	3314	95155	9298	2346	11644		376.66	Si
SLD 15	-0.98	193.82	-20388	-16310	1182	0.46	0.46	-78794	16250	3364	95155	9298	2346	11644		9.85	Si
SLD 15	1.07	-278.84	-8238	-6590	-105	0.46	0.46	-31837	16250	3364	95155	9298	2346	11644		110.84	Si
SLD 14	-0.98	234.48	-20613	-16491	1287	0.46	0.46	-79665	16250	3364	95155	9298	2346	11644		9.05	Si
SLD 14	1.07	-290.81	-8091	-6473	-18	0.46	0.46	-31269	16250	3364	95155	9298	2346	11644		630.94	Si
SLV 16	-0.98	568.8	-22002	-17601	1857	0.46	0.46	-85030	16250	3364	95155	9298	2346	11644		6.27	Si
SLV 16	1.07	-326.07	-7588	-6070	-221	0.46	0.46	-29324	16250	3364	95155	9298	2346	11644		52.72	Si
SLV 9	-0.98	290.66	-21022	-16818	1486	0.46	0.46	-81245	16250	3364	95155	9298	2346	11644		7.84	Si
SLV 9	1.07	-319.54	-7756	-6205	277	0.46	0.46	-29976	16250	3364	95155	9298	2346	11644		42.04	Si
SLD 16	-0.98	191.32	-20375	-16300	1178	0.46	0.46	-78743	16250	3364	95155	9298	2346	11644		9.88	Si
SLD 16	1.07	-278.64	-8241	-6593	-103	0.46	0.46	-31850	16250	3364	95155	9298	2346	11644		113.55	Si
SLV 14	-0.98	668.01	-22548	-18038	2106	0.46	0.46	-87141	16250	3364	95155	9298	2346	11644		5.53	Si
SLV 14	1.07	-354.23	-7244	-5795	-25	0.46	0.46	-27996	16016	3315	95155	9298	2346	11644		464.39	Si
SLV 10	-0.98	286.95	-21003	-16802	1480	0.46	0.46	-81170	16250	3364	95155	9298	2346	11644		7.87	Si
SLV 10	1.07	-319.24	-7761	-6209	281	0.46	0.46	-29995	16250	3364	95155	9298	2346	11644		41.48	Si
SLD 13	-0.98	236.98	-20626	-16501	1291	0.46	0.46	-79715	16250	3364	95155	9298	2346	11644		9.02	Si
SLD 13	1.07	-291.01	-8088	-6470	-21	0.46	0.46	-31256	16250	3364	95155	9298	2346	11644		555.49	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 0.51 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 13	-12011	0.25	35.1	1675.7	2596.82	2136.26	60.86	Si
SLV 14	-12019	0.25	35.1	1676.1	2597.99	2137.04	60.88	Si
SLV 15	-12453	0.25	35.1	1698.16	2663.53	2180.85	62.13	Si
SLV 16	-12460	0.25	35.1	1698.52	2664.62	2181.57	62.15	Si
SLV 9	-12519	0.25	35.1	1701.29	2673.29	2187.29	62.31	Si
SLV 10	-12524	0.25	35.1	1701.51	2673.98	2187.75	62.33	Si
SLV 5	-13395	0.25	35.1	1736.8	2798.4	2267.6	64.6	Si
SLV 6	-13399	0.25	35.1	1736.96	2799.05	2268.01	64.61	Si
SLV 11	-13991	0.25	35.1	1754.74	2878.4	2316.57	66	Si
SLV 12	-13996	0.25	35.1	1754.86	2878.99	2316.93	66.01	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-6906	-17307	319	0.385	790	0.967	5.78237	4.45299	Si
SLV 7	-6898	-17326	319	0.385	789.2	0.967	5.78828	4.45299	Si
SLV 12	-6031	-19182	253	0.436	700.9	0.963	6.57789	4.45299	Si
SLV 11	-6023	-19201	253	0.436	700.1	0.963	6.58562	4.45299	Si
SLV 4	-7383	-15751	289	0.37	838.6	0.969	5.55081	3.37435	Si
SLV 3	-7371	-15781	288	0.37	837.3	0.968	5.5591	3.37435	Si
SLV 6	-5345	-19127	10	0.519	631.2	0.959	7.86115	4.45299	Si
SLV 5	-5337	-19147	10	0.519	630.3	0.959	7.87165	4.45299	Si
SLV 2	-6915	-16297	196	0.401	790.9	0.967	6.02496	3.37435	Si
SLV 1	-6902	-16327	195	0.401	789.6	0.967	6.03463	3.37435	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita

dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.507	SLU 77	Si
V_SLU	8.128	SLU 84	Si
PF_SLV	2.898	SLV 4	Si
V_SLV	5.504	SLV 13	Si
PFFP_SLV	60.861	SLV 13	Si
R_SLV	1.299	SLV 8	Si

Maschio 38

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-8.253	-3.284	-7.463	-3.284	L2	L4	0.79	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	1.02	1317.03	-19913	-0.0001558	0.0003743	0.0035	0.79	3538.14	4681.48	4681.48	3.55	No	Si
SLU 78	1.42	350.15	-19538	-0.0001104	0.0003743	0.0035	0.79	3551.47	4653.74	4653.74	13.29	No	Si
SLU 76	1.02	1303.01	-19647	-0.0001533	0.0003743	0.0035	0.79	3547.94	4661.73	4661.73	3.58	No	Si
SLU 76	1.42	340.93	-19271	-0.0001084	0.0003743	0.0035	0.79	3559.09	4634.16	4634.16	13.59	No	Si
SLU 80	1.02	1311.96	-19805	-0.0001548	0.0003743	0.0035	0.79	3542.29	4673.48	4673.48	3.56	No	Si
SLU 80	1.42	342.55	-19430	-0.0001094	0.0003743	0.0035	0.79	3554.74	4645.8	4645.8	13.56	No	Si
SLU 79	1.02	1307.32	-19765	-0.0001543	0.0003743	0.0035	0.79	3543.77	4670.5	4670.5	3.57	No	Si
SLU 79	1.42	343.15	-19390	-0.0001092	0.0003743	0.0035	0.79	3555.89	4642.85	4642.85	13.53	No	Si
SLU 75	1.02	1304.98	-19728	-0.0001539	0.0003743	0.0035	0.79	3545.13	4667.72	4667.72	3.58	No	Si
SLU 75	1.42	348.93	-19353	-0.0001092	0.0003743	0.0035	0.79	3556.94	4640.09	4640.09	13.3	No	Si
SLU 77	1.02	1312.39	-19873	-0.0001553	0.0003743	0.0035	0.79	3539.72	4678.5	4678.5	3.56	No	Si
SLU 77	1.42	350.75	-19498	-0.0001102	0.0003743	0.0035	0.79	3552.72	4650.78	4650.78	13.26	No	Si
SLU 82	1.02	1347.63	-20387	-0.0001606	0.0003743	0.0035	0.79	3516.9	4716.89	4716.89	3.5	No	Si
SLU 82	1.42	350.65	-20012	-0.0001133	0.0003743	0.0035	0.79	3534.11	4688.84	4688.84	13.37	No	Si
SLU 81	1.02	1342.99	-20347	-0.0001601	0.0003743	0.0035	0.79	3518.9	4713.87	4713.87	3.51	No	Si
SLU 81	1.42	351.25	-19972	-0.0001131	0.0003743	0.0035	0.79	3535.78	4685.85	4685.85	13.34	No	Si
SLU 84	1.02	1359.68	-20573	-0.0001625	0.0003743	0.0035	0.79	3507.25	4730.87	4730.87	3.48	No	Si
SLU 84	1.42	351.87	-20198	-0.0001145	0.0003743	0.0035	0.79	3525.98	4702.69	4702.69	13.36	No	Si
SLU 83	1.02	1355.03	-20532	-0.000162	0.0003743	0.0035	0.79	3509.41	4727.83	4727.83	3.49	No	Si
SLU 83	1.42	352.47	-20157	-0.0001143	0.0003743	0.0035	0.79	3527.81	4699.69	4699.69	13.33	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	1.02	1362.1	-15178	-0.0001187	0.0005615	0.0035	0.79		4682.02	4682.02	3.44		Si
SLV 13	1.42	-1133.02	-14721	-0.0001078	0.0005615	0.0035	0.79		4738.84	4738.84	4.18		Si
SLV 14	1.02	1331.22	-15118	-0.0001172	0.0005615	0.0035	0.79		4668.61	4668.61	3.51		Si
SLV 14	1.42	-1091.12	-14661	-0.0001059	0.0005615	0.0035	0.79		4724.74	4724.74	4.33		Si
SLV 11	1.02	1405.33	-14591	-0.0001172	0.0005615	0.0035	0.79		4549.74	4549.74	3.24		Si
SLV 11	1.42	-419.25	-14586	-0.0000809	0.0005615	0.0035	0.79		4706.78	4706.78	11.23		Si
SLV 4	1.02	425.16	-11638	-0.0000667	0.0005615	0.0035	0.79		3847.05	3847.05	9.05		Si
SLV 4	1.42	1600.1	-11518	-0.0001085	0.0005615	0.0035	0.79		3811.44	3811.44	2.38		Si
SLV 16	1.02	1532.65	-15472	-0.0001267	0.0005615	0.0035	0.79		4748.5	4748.5	3.1		Si
SLV 16	1.42	-1220.88	-15199	-0.0001135	0.0005615	0.0035	0.79		4847.1	4847.1	3.97		Si
SLV 12	1.02	1385.61	-14553	-0.0001163	0.0005615	0.0035	0.79		4541.23	4541.23	3.28		Si
SLV 12	1.42	-392.49	-14548	-0.0000797	0.0005615	0.0035	0.79		4697.74	4697.74	11.97		Si
SLV 3	1.02	456.04	-11697	-0.000068	0.0005615	0.0035	0.79		3864.7	3864.7	8.47		Si
SLV 3	1.42	1558.2	-11577	-0.0001071	0.0005615	0.0035	0.79		3829.07	3829.07	2.46		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	1.02	254.61	-11344	-0.0000593	0.0005615	0.0035	0.79		3759.83	3759.83	14.77		Si
SLV 1	1.42	1687.95	-11040	-0.0001102	0.0005615	0.0035	0.79		3669.96	3669.96	2.17		Si
SLV 15	1.02	1563.54	-15531	-0.0001282	0.0005615	0.0035	0.79		4761.95	4761.95	3.05		Si
SLV 15	1.42	-1262.78	-15258	-0.0001154	0.0005615	0.0035	0.79		4858.14	4858.14	3.85		Si
SLV 2	1.02	223.72	-11284	-0.0000579	0.0005615	0.0035	0.79		3742.24	3742.24	16.73		Si
SLV 2	1.42	1729.85	-10981	-0.0001119	0.0005615	0.0035	0.79		3652.43	3652.43	2.11		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	1.02	1311.96	-19805	-17605	2450	0.79	0.79	-49521	10833	3851	33304	10645	2014	12660	No	5.17	Si
SLU 80	1.42	342.55	-19430	-17271	2450	0.79	0.79	-48583	10833	3851	33304	10645	2014	12660	No	5.17	Si
SLU 81	1.02	1342.99	-20347	-18086	2506	0.79	0.79	-50875	10833	3851	33304	10645	2014	12660	No	5.05	Si
SLU 81	1.42	351.25	-19972	-17753	2506	0.79	0.79	-49937	10833	3851	33304	10645	2014	12660	No	5.05	Si
SLU 78	1.02	1317.03	-19913	-17701	2444	0.79	0.79	-49791	10833	3851	33304	10645	2014	12660	No	5.18	Si
SLU 78	1.42	350.15	-19538	-17367	2444	0.79	0.79	-48853	10833	3851	33304	10645	2014	12660	No	5.18	Si
SLU 84	1.02	1359.68	-20573	-18287	2546	0.79	0.79	-51440	10833	3851	33304	10645	2014	12660	No	4.97	Si
SLU 84	1.42	351.87	-20198	-17953	2546	0.79	0.79	-50502	10833	3851	33304	10645	2014	12660	No	4.97	Si
SLU 79	1.02	1307.32	-19765	-17569	2437	0.79	0.79	-49420	10833	3851	33304	10645	2014	12660	No	5.19	Si
SLU 79	1.42	343.15	-19390	-17236	2437	0.79	0.79	-48483	10833	3851	33304	10645	2014	12660	No	5.19	Si
SLU 63	1.02	1241.21	-18591	-16526	2439	0.79	0.79	-46486	10833	3851	33304	10645	2014	12660	No	5.19	Si
SLU 63	1.42	276.15	-18216	-16192	2439	0.79	0.79	-45548	10833	3851	33304	10645	2014	12660	No	5.19	Si
SLU 83	1.02	1355.03	-20532	-18251	2533	0.79	0.79	-51339	10833	3851	33304	10645	2014	12660	No	5	Si
SLU 83	1.42	352.47	-20157	-17918	2533	0.79	0.79	-50402	10833	3851	33304	10645	2014	12660	No	5	Si
SLU 77	1.02	1312.39	-19873	-17665	2431	0.79	0.79	-49690	10833	3851	33304	10645	2014	12660	No	5.21	Si
SLU 77	1.42	350.75	-19498	-17331	2431	0.79	0.79	-48752	10833	3851	33304	10645	2014	12660	No	5.21	Si
SLU 76	1.02	1303.01	-19647	-17464	2432	0.79	0.79	-49124	10833	3851	33304	10645	2014	12660	No	5.21	Si
SLU 76	1.42	340.93	-19271	-17130	2432	0.79	0.79	-48186	10833	3851	33304	10645	2014	12660	No	5.21	Si
SLU 82	1.02	1347.63	-20387	-18122	2519	0.79	0.79	-50976	10833	3851	33304	10645	2014	12660	No	5.03	Si
SLU 82	1.42	350.65	-20012	-17789	2519	0.79	0.79	-50038	10833	3851	33304	10645	2014	12660	No	5.03	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	1.02	1532.65	-15472	-13753	6743	0.79	0.79	-38685	16250	5777	33304	15968	2014	17982		2.67	Si
SLV 16	1.42	-1220.88	-15199	-13510	6662	0.79	0.79	-38002	16250	5777	33304	15968	2014	17982		2.7	Si
SLV 13	1.02	1362.1	-15178	-13491	6443	0.79	0.79	-37950	16250	5777	33304	15968	2014	17982		2.79	Si
SLV 13	1.42	-1133.02	-14721	-13085	6558	0.79	0.79	-36808	16250	5777	33304	15968	2014	17982		2.74	Si
SLV 12	1.02	1385.61	-14553	-12936	3893	0.79	0.79	-36387	16250	5777	33304	15968	2014	17982		4.62	Si
SLV 12	1.42	-392.49	-14548	-12931	3570	0.79	0.79	-36375	16250	5777	33304	15968	2014	17982		5.04	Si
SLV 14	1.02	1331.22	-15118	-13439	6261	0.79	0.79	-37802	16250	5777	33304	15968	2014	17982		2.87	Si
SLV 14	1.42	-1091.12	-14661	-13032	6376	0.79	0.79	-36659	16250	5777	33304	15968	2014	17982		2.82	Si
SLD 13	1.02	1093.22	-14163	-12589	3709	0.79	0.79	-35413	16250	5777	33304	15968	2014	17982		4.85	Si
SLD 13	1.42	-350.51	-13802	-12269	3759	0.79	0.79	-34511	16250	5777	33304	15968	2014	17982		4.78	Si
SLD 15	1.02	1180.31	-14316	-12725	3918	0.79	0.79	-35795	16250	5777	33304	15968	2014	17982		4.59	Si
SLD 15	1.42	-406.29	-14034	-12475	3883	0.79	0.79	-35090	16250	5777	33304	15968	2014	17982		4.63	Si
SLV 11	1.02	1405.33	-14591	-12969	4009	0.79	0.79	-36482	16250	5777	33304	15968	2014	17982		4.48	Si
SLV 11	1.42	-419.25	-14586	-12965	3687	0.79	0.79	-36470	16250	5777	33304	15968	2014	17982		4.88	Si
SLV 15	1.02	1563.54	-15531	-13805	6925	0.79	0.79	-38834	16250	5777	33304	15968	2014	17982		2.6	Si
SLV 15	1.42	-1262.78	-15258	-13563	6844	0.79	0.79	-38151	16250	5777	33304	15968	2014	17982		2.63	Si
SLD 14	1.02	1079.96	-14137	-12567	3631	0.79	0.79	-35349	16250	5777	33304	15968	2014	17982		4.95	Si
SLD 14	1.42	-332.53	-13777	-12246	3681	0.79	0.79	-34447	16250	5777	33304	15968	2014	17982		4.89	Si
SLD 16	1.02	1167.05	-14290	-12702	3840	0.79	0.79	-35731	16250	5777	33304	15968	2014	17982		4.68	Si
SLD 16	1.42	-388.31	-14008	-12452	3805	0.79	0.79	-35026	16250	5777	33304	15968	2014	17982		4.73	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.51 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.25	33237	-11816	60.28	2079.94	34.5	Si
SLV 4	179667	0.25	33528	-11919	60.28	2093.05	34.72	Si
SLV 1	179667	0.25	33528	-11919	60.28	2093.05	34.72	Si
SLV 3	179667	0.25	33819	-12023	60.28	2106.07	34.94	Si
SLV 6	179667	0.25	38161	-13566	60.28	2289.68	37.98	Si
SLV 5	179667	0.25	38347	-13632	60.28	2297.1	38.11	Si
SLV 8	179667	0.25	39131	-13911	60.28	2328	38.62	Si
SLV 7	179667	0.25	39317	-13977	60.28	2335.24	38.74	Si
SLV 10	179667	0.25	42628	-15154	60.28	2457.95	40.77	Si
SLV 9	179667	0.25	42814	-15220	60.28	2464.51	40.88	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-9297	-21696	-122	0.504	1095.8	0.96	7.62744	4.45299	Si
SLV 7	-9298	-21738	-121	0.504	1096	0.96	7.62801	4.45299	Si
SLV 12	-9262	-20248	-28	0.514	1092.3	0.959	7.78882	4.45299	Si
SLV 11	-9263	-20290	-27	0.514	1092.4	0.959	7.78938	4.45299	Si
SLV 9	-6116	-17107	545	0.636	772.7	0.945	9.78685	4.45299	Si
SLV 10	-6114	-17066	544	0.637	772.6	0.945	9.79081	4.45299	Si
SLV 5	-6151	-18556	452	0.647	776.3	0.945	9.9437	4.45299	Si
SLV 6	-6149	-18514	451	0.647	776.1	0.945	9.94767	4.45299	Si
SLV 15	-8121	-17497	282	0.541	976.3	0.955	8.23773	3.37435	Si
SLV 16	-8119	-17432	280	0.542	976.1	0.955	8.24214	3.37435	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.479	SLU 84	Si
V_SLU	4.972	SLU 84	Si
PF_SLV	2.111	SLV 2	Si
V_SLV	2.597	SLV 15	Si
PFFP_SLV	34.504	SLV 2	Si
R_SLV	1.713	SLV 8	Si

Maschio 39

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.463	-3.284	-3.233	-3.284	L2	L4	3.23	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 73	1.02	-16344.62	-39839	-0.0000798	0.0003743	0.0035	3.23	47018.54	54226.75	54226.75	3.32	No	Si
SLU 73	1.42	-9780.79	-38368	-0.0000634	0.0003743	0.0035	3.23	45898.93	52762.25	52762.25	5.39	No	Si
SLU 70	1.02	-15112.66	-36518	-0.0000727	0.0003743	0.0035	3.23	44422.68	50920.73	50920.73	3.37	No	Si
SLU 70	1.42	-8890.02	-35048	-0.0000573	0.0003743	0.0035	3.23	43196.5	49369.9	49369.9	5.55	No	Si
SLU 55	1.02	-14971.6	-35695	-0.0000714	0.0003743	0.0035	3.23	43742.27	50060.96	50060.96	3.34	No	Si
SLU 55	1.42	-9055.68	-34225	-0.0000567	0.0003743	0.0035	3.23	42489.68	48492.8	48492.8	5.35	No	Si
SLU 65	1.02	-14968.79	-35164	-0.0000707	0.0003743	0.0035	3.23	43295	49494.2	49494.2	3.31	No	Si
SLU 65	1.42	-9016.12	-33693	-0.0000559	0.0003743	0.0035	3.23	42025.36	47930.07	47930.07	5.32	No	Si
SLU 52	1.02	-14827.83	-35305	-0.0000706	0.0003743	0.0035	3.23	43414.33	49645.45	49645.45	3.35	No	Si
SLU 52	1.42	-8959.44	-33834	-0.000056	0.0003743	0.0035	3.23	42149.22	48079.21	48079.21	5.37	No	Si
SLU 68	1.02	-15112.56	-35554	-0.0000715	0.0003743	0.0035	3.23	43624.14	49911.91	49911.91	3.3	No	Si
SLU 68	1.42	-9112.36	-34084	-0.0000566	0.0003743	0.0035	3.23	42367.02	48343.17	48343.17	5.31	No	Si
SLU 47	1.02	-13595.77	-31020	-0.0000625	0.0003743	0.0035	3.23	39595.9	45021.64	45021.64	3.31	No	Si
SLU 47	1.42	-8291.01	-29550	-0.0000494	0.0003743	0.0035	3.23	38193.28	43355.25	43355.25	5.23	No	Si
SLU 78	1.02	-16488.49	-41193	-0.0000819	0.0003743	0.0035	3.23	48008.03	55560.66	55560.66	3.37	No	Si
SLU 78	1.42	-9654.68	-39723	-0.0000648	0.0003743	0.0035	3.23	46931.88	54110.63	54110.63	5.6	No	Si
SLU 44	1.02	-13451.99	-30630	-0.0000617	0.0003743	0.0035	3.23	39228.13	44576.93	44576.93	3.31	No	Si
SLU 44	1.42	-8194.77	-29159	-0.0000487	0.0003743	0.0035	3.23	37812.98	42916.9	42916.9	5.24	No	Si
SLU 76	1.02	-16488.4	-40229	-0.0000806	0.0003743	0.0035	3.23	47307.85	54615.22	54615.22	3.31	No	Si
SLU 76	1.42	-9877.03	-38759	-0.0000641	0.0003743	0.0035	3.23	46200.76	53149.32	53149.32	5.38	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	1.02	-17975.89	-23862	-0.0000645	0.0005615	0.0035	3.23		38029.15	38029.15	2.12		Si
SLV 1	1.42	-7448.22	-23145	-0.0000394	0.0005615	0.0035	3.23		37060.86	37060.86	4.98		Si
SLV 10	1.02	-12305.53	-21755	-0.0000477	0.0005615	0.0035	3.23		35192.69	35192.69	2.86		Si
SLV 10	1.42	-11782.9	-20708	-0.0000455	0.0005615	0.0035	3.23		33772.74	33772.74	2.87		Si
SLV 5	1.02	-15855.77	-20598	-0.0000564	0.0005615	0.0035	3.23		33621.41	33621.41	2.12		Si
SLV 5	1.42	-11546.43	-19764	-0.000044	0.0005615	0.0035	3.23		32449.77	32449.77	2.81		Si
SLV 2	1.02	-18128.82	-23636	-0.000065	0.0005615	0.0035	3.23		37723.17	37723.17	2.08		Si
SLV 2	1.42	-7411.2	-22918	-0.0000391	0.0005615	0.0035	3.23		36755.72	36755.72	4.96		Si
SLV 4	1.02	-16321.84	-27701	-0.0000628	0.0005615	0.0035	3.23		43125.77	43125.77	2.64		Si
SLV 4	1.42	-4152.84	-26870	-0.0000369	0.0005615	0.0035	3.23		42053.91	42053.91	10.13		Si
SLD 1	1.02	-14017.31	-26189	-0.0000562	0.0005615	0.0035	3.23		41161.72	41161.72	2.94		Si
SLD 1	1.42	-6754.05	-25235	-0.0000403	0.0005615	0.0035	3.23		39890.06	39890.06	5.91		Si
SLV 9	1.02	-12207.87	-21900	-0.0000476	0.0005615	0.0035	3.23		35387.43	35387.43	2.9		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	1.42	-11806.55	-20853	-0.0000457	0.0005615	0.0035	3.23		33969.93	33969.93	2.88		Si
SLV 3	1.02	-16168.91	-27928	-0.0000627	0.0005615	0.0035	3.23		43416.1	43416.1	2.69		Si
SLV 3	1.42	-4189.86	-27096	-0.0000372	0.0005615	0.0035	3.23		42348.99	42348.99	10.11		Si
SLV 6	1.02	-15953.44	-20453	-0.0000567	0.0005615	0.0035	3.23		33423.62	33423.62	2.1		Si
SLV 6	1.42	-11522.79	-19620	-0.0000438	0.0005615	0.0035	3.23		32244.8	32244.8	2.8		Si
SLD 2	1.02	-14082.95	-26091	-0.0000562	0.0005615	0.0035	3.23		41033.73	41033.73	2.91		Si
SLD 2	1.42	-6738.15	-25138	-0.0000402	0.0005615	0.0035	3.23		39758	39758	5.9		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	1.02	-16344.72	-40803	-36269	-16980	3.23	3.23	-24953	10271	14930	33304	43524	8236	48234	No	2.84	Si
SLU 75	1.42	-9558.44	-39332	-34962	-16980	3.23	3.23	-24054	10152	14755	33304	43524	8236	48060	No	2.83	Si
SLU 82	1.02	-16671.58	-42136	-37454	-17383	3.23	3.23	-25768	10380	15088	33304	43524	8236	48392	No	2.78	Si
SLU 82	1.42	-9724.03	-40666	-36147	-17383	3.23	3.23	-24869	10260	14913	33304	43524	8236	48218	No	2.77	Si
SLU 81	1.02	-16277.55	-42576	-37845	-17839	3.23	3.23	-26037	10416	15140	33304	43524	8236	48444	No	2.72	Si
SLU 81	1.42	-9147.32	-41106	-36539	-17839	3.23	3.23	-25138	10296	14966	33304	43524	8236	48270	No	2.71	Si
SLU 78	1.02	-16488.49	-41193	-36616	-17098	3.23	3.23	-25192	10303	14976	33304	43524	8236	48280	No	2.82	Si
SLU 78	1.42	-9654.68	-39723	-35309	-17098	3.23	3.23	-24292	10183	14802	33304	43524	8236	48106	No	2.81	Si
SLU 80	1.02	-16369.48	-40913	-36367	-16966	3.23	3.23	-25020	10280	14943	33304	43524	8236	48247	No	2.84	Si
SLU 80	1.42	-9588.79	-39443	-35060	-16966	3.23	3.23	-24121	10161	14768	33304	43524	8236	48073	No	2.83	Si
SLU 77	1.02	-16094.46	-41633	-37007	-17555	3.23	3.23	-25461	10339	15028	33304	43524	8236	48332	No	2.75	Si
SLU 77	1.42	-9077.97	-40163	-35700	-17555	3.23	3.23	-24562	10219	14854	33304	43524	8236	48158	No	2.74	Si
SLU 83	1.02	-16421.32	-42967	-38192	-17958	3.23	3.23	-26276	10448	15186	33304	43524	8236	48490	No	2.7	Si
SLU 83	1.42	-9243.56	-41496	-36886	-17958	3.23	3.23	-25377	10328	15012	33304	43524	8236	48316	No	2.69	Si
SLU 79	1.02	-15975.46	-41353	-36758	-17422	3.23	3.23	-25290	10316	14995	33304	43524	8236	48299	No	2.77	Si
SLU 79	1.42	-9012.08	-39883	-35452	-17422	3.23	3.23	-24390	10197	14821	33304	43524	8236	48125	No	2.76	Si
SLU 84	1.02	-16815.35	-42526	-37801	-17502	3.23	3.23	-26007	10412	15134	33304	43524	8236	48438	No	2.77	Si
SLU 84	1.42	-9820.27	-41056	-36494	-17502	3.23	3.23	-25108	10292	14960	33304	43524	8236	48264	No	2.76	Si
SLU 74	1.02	-15950.69	-41243	-36660	-17436	3.23	3.23	-25222	10307	14982	33304	43524	8236	48286	No	2.77	Si
SLU 74	1.42	-8981.73	-39773	-35353	-17436	3.23	3.23	-24323	10188	14808	33304	43524	8236	48112	No	2.76	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	1.02	-9832.51	-34150	-30356	-22798	3.23	3.23	-20884	14594	21212	33304	65286	8236	54516		2.39	Si
SLV 7	1.42	-685.22	-32935	-29276	-22698	3.23	3.23	-20141	14445	20996	33304	65286	8236	54300		2.39	Si
SLV 2	1.02	-18128.82	-23636	-21009	-25354	3.23	2.544	-18518	14120	16165	33304	65286	8236	49469		1.95	Si
SLV 2	1.42	-7411.2	-22918	-20372	-25242	3.23	3.23	-14016	13220	19215	33304	65286	8236	52519		2.08	Si
SLD 2	1.02	-14082.95	-26091	-23192	-17752	3.23	3.2257	-15956	13608	19753	33304	65286	8236	53057		2.99	Si
SLD 2	1.42	-6738.15	-25138	-22345	-17703	3.23	3.23	-15373	13491	19610	33304	65286	8236	52914		2.99	Si
SLD 1	1.02	-14017.31	-26189	-23279	-17548	3.23	3.23	-16016	13620	19796	33304	65286	8236	53101		3.03	Si
SLD 1	1.42	-6754.05	-25235	-22431	-17499	3.23	3.23	-15433	13503	19627	33304	65286	8236	52931		3.02	Si
SLV 8	1.02	-9930.18	-34005	-30227	-23102	3.23	3.23	-20796	14576	21186	33304	65286	8236	54490		2.36	Si
SLV 8	1.42	-661.58	-32790	-29147	-23002	3.23	3.23	-20053	14427	20970	33304	65286	8236	54274		2.36	Si
SLD 3	1.02	-13252.13	-27960	-24853	-19213	3.23	3.23	-17099	13836	20111	33304	65286	8236	53416		2.78	Si
SLD 3	1.42	-5356.21	-26956	-23961	-19149	3.23	3.23	-16485	13714	19933	33304	65286	8236	53237		2.78	Si
SLV 4	1.02	-16321.84	-27701	-24623	-29178	3.23	3.0774	-17936	14004	19393	33304	65286	8236	52697		1.81	Si
SLV 4	1.42	-4152.84	-26870	-23884	-29029	3.23	3.23	-16432	13703	19917	33304	65286	8236	53222		1.83	Si
SLV 1	1.02	-17975.89	-23862	-21211	-24879	3.23	2.585	-18399	14097	16398	33304	65286	8236	49702		2	Si
SLV 1	1.42	-7448.22	-23145	-20573	-24767	3.23	3.23	-14154	13248	19255	33304	65286	8236	52560		2.12	Si
SLD 4	1.02	-13317.77	-27862	-24767	-19417	3.23	3.23	-17039	13825	20094	33304	65286	8236	53398		2.75	Si
SLD 4	1.42	-5340.32	-26859	-23875	-19353	3.23	3.23	-16426	13702	19916	33304	65286	8236	53220		2.75	Si
SLV 3	1.02	-16168.91	-27928	-24825	-28703	3.23	3.1081	-17904	13998	19578	33304	65286	8236	52882		1.84	Si
SLV 3	1.42	-4189.86	-27096	-24085	-28554	3.23	3.23	-16571	13731	19958	33304	65286	8236	53262		1.87	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.51 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.25	11352	-16500	246.47	3436.52	13.94	Si
SLV 5	179667	0.25	11391	-16557	246.47	3447.53	13.99	Si
SLV 2	179667	0.25	11461	-16659	246.47	3466.97	14.07	Si
SLV 1	179667	0.25	11523	-16749	246.47	3484.18	14.14	Si
SLV 10	179667	0.25	12505	-18175	246.47	3754.63	15.23	Si
SLV 9	179667	0.25	12544	-18233	246.47	3765.44	15.28	Si
SLV 4	179667	0.25	12717	-18485	246.47	3812.75	15.47	Si
SLV 3	179667	0.25	12779	-18575	246.47	3829.62	15.54	Si
SLV 14	179667	0.25	15304	-22244	246.47	4503.38	18.27	Si
SLV 13	179667	0.25	15366	-22334	246.47	4519.57	18.34	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-32153	-19586	-1216	0.553	3885	0.954	8.42753	4.45299	Si
SLV 12	-31976	-19597	-1219	0.555	3867	0.954	8.46378	4.45299	Si
SLV 7	-31344	-16751	-1416	0.558	3802.8	0.953	8.51584	4.45299	Si
SLV 8	-31167	-16762	-1419	0.561	3784.8	0.953	8.55341	4.45299	Si
SLV 15	-27757	-22876	122	0.654	3438.6	0.949	10.01914	3.37435	Si
SLV 16	-27480	-22894	117	0.659	3410.4	0.948	10.10388	3.37435	Si
SLV 9	-16756	-19547	1937	0.874	2324.9	0.929	13.68002	4.45299	Si
SLV 10	-16579	-19558	1934	0.881	2307	0.928	13.7971	4.45299	Si
SLV 3	-25062	-13428	-545	0.693	3165.2	0.945	10.66315	3.37435	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 4	-24785	-13445	-550	0.699	3137.1	0.945	10.75715	3.37435	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.303	SLU 68	Si
V_SLU	2.69	SLU 83	Si
PF_SLV	2.081	SLV 2	Si
V_SLV	1.806	SLV 4	Si
PFFP_SLV	13.943	SLV 6	Si
R_SLV	1.893	SLV 11	Si

Maschio 40

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-2.233	-3.284	-0.123	-3.284	L2	L4	2.11	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	1.02	-1011.51	-22009	-0.0000418	0.0003743	0.0035	2.11	17933.11	20490	20490	20.26	No	Si
SLU 77	1.42	-641.67	-21406	-0.0000389	0.0003743	0.0035	2.11	17582.39	20076.56	20076.56	31.29	No	Si
SLU 74	1.02	-1009.4	-21797	-0.0000414	0.0003743	0.0035	2.11	17810.75	20344.95	20344.95	20.16	No	Si
SLU 74	1.42	-646.61	-21194	-0.0000385	0.0003743	0.0035	2.11	17457.23	19923.73	19923.73	30.81	No	Si
SLU 83	1.02	-1083.44	-22682	-0.0000433	0.0003743	0.0035	2.11	18315.07	20953.16	20953.16	19.34	No	Si
SLU 83	1.42	-728.82	-22108	-0.0000405	0.0003743	0.0035	2.11	17989.94	20557.9	20557.9	28.21	No	Si
SLU 41	1.02	-981.98	-19478	-0.0000371	0.0003743	0.0035	2.11	16408.51	18665.51	18665.51	19.01	No	Si
SLU 41	1.42	-682.06	-19074	-0.0000349	0.0003743	0.0035	2.11	16152.83	18371.47	18371.47	26.94	No	Si
SLU 37	1.02	-904.42	-18648	-0.0000353	0.0003743	0.0035	2.11	15878.74	18055.32	18055.32	19.96	No	Si
SLU 37	1.42	-600.04	-18220	-0.000033	0.0003743	0.0035	2.11	15599.04	17731.19	17731.19	29.55	No	Si
SLU 79	1.02	-1005.88	-21853	-0.0000415	0.0003743	0.0035	2.11	17843.31	20383.39	20383.39	20.26	No	Si
SLU 79	1.42	-646.81	-21254	-0.0000386	0.0003743	0.0035	2.11	17492.74	19967.06	19967.06	30.87	No	Si
SLU 32	1.02	-907.94	-18592	-0.0000352	0.0003743	0.0035	2.11	15842.25	18012.98	18012.98	19.84	No	Si
SLU 32	1.42	-599.84	-18160	-0.0000329	0.0003743	0.0035	2.11	15559.55	17685.51	17685.51	29.48	No	Si
SLU 35	1.02	-910.05	-18804	-0.0000356	0.0003743	0.0035	2.11	15979.44	18172.24	18172.24	19.97	No	Si
SLU 35	1.42	-594.9	-18372	-0.0000333	0.0003743	0.0035	2.11	15698.76	17846.65	17846.65	30	No	Si
SLU 39	1.02	-979.88	-19265	-0.0000367	0.0003743	0.0035	2.11	16274.44	18510.62	18510.62	18.89	No	Si
SLU 39	1.42	-687	-18862	-0.0000346	0.0003743	0.0035	2.11	16016.87	18215.73	18215.73	26.52	No	Si
SLU 81	1.02	-1081.34	-22470	-0.0000429	0.0003743	0.0035	2.11	18195.83	20806.84	20806.84	19.24	No	Si
SLU 81	1.42	-733.76	-21896	-0.0000402	0.0003743	0.0035	2.11	17868.03	20412.66	20412.66	27.82	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	1.02	1895.15	-13533	-0.0000307	0.0005615	0.0035	2.11		13457.57	13457.57	7.1		Si
SLV 9	1.42	2344.23	-10627	-0.0000279	0.0005615	0.0035	2.11		10788.28	10788.28	4.6		Si
SLV 4	1.02	-3565.41	-12113	-0.0000361	0.0005615	0.0035	2.11		13145.52	13145.52	3.69		Si
SLV 4	1.42	-1544.96	-12004	-0.0000265	0.0005615	0.0035	2.11		13045.24	13045.24	8.44		Si
SLV 1	1.02	-2389.66	-10847	-0.0000285	0.0005615	0.0035	2.11		11981.84	11981.84	5.01		Si
SLV 1	1.42	31.65	-9336	-0.0000151	0.0005615	0.0035	2.11		9570.81	9570.81	302.38		Si
SLV 7	1.02	-3120.98	-16099	-0.0000408	0.0005615	0.0035	2.11		16715.23	16715.23	5.36		Si
SLV 7	1.42	-3122.77	-18087	-0.0000442	0.0005615	0.0035	2.11		18431.18	18431.18	5.9		Si
SLV 8	1.02	-3179.29	-16037	-0.000041	0.0005615	0.0035	2.11		16659.98	16659.98	5.24		Si
SLV 8	1.42	-3124.36	-17946	-0.000044	0.0005615	0.0035	2.11		18312.1	18312.1	5.86		Si
SLV 10	1.02	1836.84	-13471	-0.0000303	0.0005615	0.0035	2.11		13401.11	13401.11	7.3		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	1.42	2342.64	-10486	-0.0000277	0.0005615	0.0035	2.11		10657.55	10657.55	4.55		Si
SLV 3	1.02	-3474.11	-12211	-0.0000359	0.0005615	0.0035	2.11		13235.58	13235.58	3.81		Si
SLV 3	1.42	-1542.46	-12225	-0.0000269	0.0005615	0.0035	2.11		13247.82	13247.82	8.59		Si
SLV 5	1.02	493.87	-11550	-0.0000209	0.0005615	0.0035	2.11		11644.7	11644.7	23.58		Si
SLV 5	1.42	2124.28	-8457	-0.0000233	0.0005615	0.0035	2.11		8732.01	8732.01	4.11		Si
SLV 6	1.02	435.56	-11488	-0.0000205	0.0005615	0.0035	2.11		11586.66	11586.66	26.6		Si
SLV 6	1.42	2122.68	-8316	-0.0000231	0.0005615	0.0035	2.11		8596.66	8596.66	4.05		Si
SLV 2	1.02	-2480.96	-10749	-0.0000288	0.0005615	0.0035	2.11		11890.95	11890.95	4.79		Si
SLV 2	1.42	29.15	-9115	-0.0000148	0.0005615	0.0035	2.11		9362.27	9362.27	321.12		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 44	1.02	-336.57	-16379	-14559	-588	2.11	2.11	-15334	8989	8535	33304	28432	5381	33813	No	57.47	Si
SLU 44	1.42	99.36	-15604	-13870	-608	2.11	2.11	-14608	8892	8443	33304	28432	5381	33813	No	55.61	Si
SLU 23	1.02	-410.64	-15560	-13831	-603	2.11	2.11	-14567	8887	8438	33304	28432	5381	33813	No	56.06	Si
SLU 23	1.42	18.15	-14994	-13328	-621	2.11	2.11	-14037	8816	8371	33304	28432	5381	33813	No	54.42	Si
SLU 47	1.02	-338.67	-16591	-14748	-606	2.11	2.11	-15532	9015	8560	33304	28432	5381	33813	No	55.83	Si
SLU 47	1.42	104.3	-15816	-14059	-626	2.11	2.11	-14807	8919	8468	33304	28432	5381	33813	No	54.04	Si
SLU 2	1.02	-235.11	-13175	-11711	-587	2.11	2.11	-12334	8589	8155	33304	28432	5381	33813	No	57.58	Si
SLU 2	1.42	146.12	-12570	-11174	-603	2.11	2.11	-11768	8514	8084	33304	28432	5381	33813	No	56.07	Si
SLU 34	1.02	-598.62	-18202	-16179	-477	2.11	2.11	-17040	9216	8751	33304	28432	5381	33813	No	70.84	Si
SLU 34	1.42	-156.74	-17695	-15729	-498	2.11	2.11	-16566	9153	8691	33304	28432	5381	33813	No	67.86	Si
SLU 68	1.02	-514.2	-18977	-16868	-622	2.11	2.11	-17766	9313	8843	33304	28432	5381	33813	No	54.4	Si
SLU 68	1.42	-23.67	-18240	-16214	-644	2.11	2.11	-17076	9221	8756	33304	28432	5381	33813	No	52.51	Si
SLU 76	1.02	-700.08	-21407	-19028	-478	2.11	2.11	-20040	9616	9131	33304	28432	5381	33813	No	70.68	Si
SLU 76	1.42	-203.51	-20729	-18426	-503	2.11	2.11	-19406	9532	9051	33304	28432	5381	33813	No	67.19	Si
SLU 65	1.02	-512.1	-18765	-16680	-604	2.11	2.11	-17567	9287	8818	33304	28432	5381	33813	No	55.97	Si
SLU 65	1.42	-28.61	-18028	-16025	-626	2.11	2.11	-16877	9195	8730	33304	28432	5381	33813	No	53.98	Si
SLU 5	1.02	-237.21	-13387	-11899	-605	2.11	2.11	-12532	8615	8180	33304	28432	5381	33813	No	55.92	Si
SLU 5	1.42	151.06	-12783	-11362	-621	2.11	2.11	-11967	8540	8109	33304	28432	5381	33813	No	54.47	Si
SLU 26	1.02	-412.74	-15772	-14020	-620	2.11	2.11	-14765	8913	8463	33304	28432	5381	33813	No	54.49	Si
SLU 26	1.42	23.09	-15206	-13517	-639	2.11	2.11	-14236	8843	8396	33304	28432	5381	33813	No	52.92	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	1.02	493.87	-11550	-10267	-6222	2.11	2.11	-10813	12579	11944	33304	42648	5381	45248		7.27	Si
SLV 5	1.42	2124.28	-8457	-7517	-6329	2.11	2.11	-7917	12000	11394	33304	42648	5381	44698		7.06	Si
SLV 2	1.02	-2480.96	-10749	-9554	-7730	2.11	2.11	-10062	12429	11801	33304	42648	5381	45106		5.84	Si
SLV 2	1.42	29.15	-9115	-8102	-7799	2.11	2.11	-8533	12123	11511	33304	42648	5381	44815		5.75	Si
SLV 12	1.02	-1778.01	-18020	-16017	6252	2.11	2.11	-16869	13791	13094	33304	42648	5381	46398		7.42	Si
SLV 12	1.42	-2904.41	-20116	-17881	6324	2.11	2.11	-18832	14183	13467	33304	42648	5381	46771		7.4	Si
SLV 1	1.02	-2389.66	-10847	-9641	-7185	2.11	2.11	-10154	12448	11819	33304	42648	5381	45123		6.28	Si
SLV 1	1.42	31.65	-9336	-8298	-7254	2.11	2.11	-8740	12165	11550	33304	42648	5381	44855		6.18	Si
SLV 15	1.02	1196.82	-18821	-16730	7760	2.11	2.11	-17620	13941	13237	33304	42648	5381	46541		6	Si
SLV 15	1.42	-809.29	-19458	-17296	7794	2.11	2.11	-18216	14060	13350	33304	42648	5381	46654		5.99	Si
SLV 13	1.02	2281.27	-17457	-15517	5011	2.11	2.11	-16342	13685	12994	33304	42648	5381	46298		9.24	Si
SLV 13	1.42	764.83	-16569	-14728	4996	2.11	2.11	-15511	13519	12836	33304	42648	5381	46140		9.24	Si
SLV 16	1.02	1105.52	-18723	-16643	7214	2.11	2.11	-17528	13922	13219	33304	42648	5381	46524		6.45	Si
SLV 16	1.42	-811.78	-19237	-17100	7249	2.11	2.11	-18009	14018	13311	33304	42648	5381	46615		6.43	Si
SLV 11	1.02	-1719.7	-18082	-16073	6600	2.11	2.11	-16928	13802	13105	33304	42648	5381	46410		7.03	Si
SLV 11	1.42	-2902.82	-20257	-18006	6672	2.11	2.11	-18964	14209	13492	33304	42648	5381	46796		7.01	Si
SLV 6	1.02	435.56	-11488	-10211	-6570	2.11	2.11	-10754	12568	11933	33304	42648	5381	45237		6.89	Si
SLV 6	1.42	2122.68	-8316	-7392	-6677	2.11	2.11	-7785	11974	11369	33304	42648	5381	44673		6.69	Si
SLV 4	1.02	-3565.41	-12113	-10767	-4981	2.11	2.11	-11340	12685	12044	33304	42648	5381	45348		9.1	Si
SLV 4	1.42	-1544.96	-12004	-10670	-5001	2.11	2.11	-11238	12664	12025	33304	42648	5381	45329		9.06	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.51 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.25	8924	-8473	161.01	1795.07	11.15	Si
SLV 1	179667	0.25	9026	-8570	161.01	1814.36	11.27	Si
SLV 4	179667	0.25	9856	-9358	161.01	1969.72	12.23	Si
SLV 3	179667	0.25	9958	-9455	161.01	1988.74	12.35	Si
SLV 6	179667	0.25	11253	-10684	161.01	2226.87	13.83	Si
SLV 5	179667	0.25	11318	-10746	161.01	2238.76	13.9	Si
SLV 10	179667	0.25	14165	-13450	161.01	2745.51	17.05	Si
SLV 9	179667	0.25	14230	-13512	161.01	2756.88	17.12	Si
SLV 8	179667	0.25	14360	-13635	161.01	2779.32	17.26	Si
SLV 7	179667	0.25	14425	-13697	161.01	2790.65	17.33	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-17138	-16026	-993	0.637	2145.3	0.947	9.77759	4.45299	Si
SLV 12	-16989	-16041	-995	0.641	2130.3	0.946	9.84557	4.45299	Si
SLV 7	-15053	-12291	-1013	0.702	1933.9	0.942	10.83857	4.45299	Si
SLV 8	-14904	-12306	-1014	0.708	1918.9	0.941	10.92435	4.45299	Si
SLV 15	-17025	-21051	-143	0.684	2133.9	0.946	10.49674	3.37435	Si
SLV 16	-16793	-21074	-145	0.691	2110.3	0.946	10.61334	3.37435	Si
SLV 9	-9746	-17946	1370	0.944	1397.9	0.924	14.84315	4.45299	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 13	-14808	-21627	566	0.737	1909.1	0.941	11.38016	3.37435	Si
SLV 10	-9597	-17961	1369	0.955	1382.9	0.923	15.02222	4.45299	Si
SLV 14	-14575	-21650	564	0.746	1885.5	0.94	11.52844	3.37435	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	18.891	SLU 39	Si
V_SLU	52.506	SLU 68	Si
PF_SLV	3.687	SLV 4	Si
V_SLV	5.747	SLV 2	Si
PFFP_SLV	11.149	SLV 2	Si
R_SLV	2.196	SLV 11	Si

Maschio 42

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.158	2.271	-5.158	6.101	L2	L4	3.83	0.3	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 76	-0.98	-26998.76	-76053	-0.000166	0.0004492	0.0035	3.83	66745.54	108391.35	108391.35	4.01	No	Si
SLU 76	1.12	-3934.49	-70553	-0.0001017	0.0004492	0.0035	3.83	67211.63	104532.27	104532.27	26.57	No	Si
SLU 81	-0.98	-27571.18	-78592	-0.0001719	0.0004492	0.0035	3.83	66251.99	110172.64	110172.64	4	No	Si
SLU 81	1.12	-4399.72	-73092	-0.0001066	0.0004492	0.0035	3.83	67099.05	106313.56	106313.56	24.16	No	Si
SLU 77	-0.98	-27205.8	-77116	-0.0001684	0.0004492	0.0035	3.83	66560.4	109136.77	109136.77	4.01	No	Si
SLU 77	1.12	-4066.79	-71615	-0.0001036	0.0004492	0.0035	3.83	67185.92	105277.69	105277.69	25.89	No	Si
SLU 75	-0.98	-27098.35	-76531	-0.0001671	0.0004492	0.0035	3.83	66666.13	108726.4	108726.4	4.01	No	Si
SLU 75	1.12	-4021.93	-71030	-0.0001027	0.0004492	0.0035	3.83	67203.88	104867.32	104867.32	26.07	No	Si
SLU 83	-0.98	-27781.86	-79184	-0.0001735	0.0004492	0.0035	3.83	66111.67	110587.86	110587.86	3.98	No	Si
SLU 83	1.12	-4380.2	-73683	-0.0001075	0.0004492	0.0035	3.83	67047.54	106728.78	106728.78	24.37	No	Si
SLU 78	-0.98	-27309.02	-77122	-0.0001686	0.0004492	0.0035	3.83	66559.09	109141.61	109141.61	4	No	Si
SLU 78	1.12	-4002.4	-71622	-0.0001035	0.0004492	0.0035	3.83	67185.65	105282.53	105282.53	26.3	No	Si
SLU 79	-0.98	-27037.39	-76633	-0.0001671	0.0004492	0.0035	3.83	66648.23	108798.49	108798.49	4.02	No	Si
SLU 79	1.12	-4022.28	-71133	-0.0001028	0.0004492	0.0035	3.83	67201.4	104939.41	104939.41	26.09	No	Si
SLU 80	-0.98	-27140.62	-76640	-0.0001674	0.0004492	0.0035	3.83	66647.02	108803.33	108803.33	4.01	No	Si
SLU 80	1.12	-3957.89	-71140	-0.0001027	0.0004492	0.0035	3.83	67201.22	104944.25	104944.25	26.52	No	Si
SLU 82	-0.98	-27674.4	-78599	-0.0001722	0.0004492	0.0035	3.83	66250.41	110177.49	110177.49	3.98	No	Si
SLU 82	1.12	-4335.33	-73098	-0.0001065	0.0004492	0.0035	3.83	67098.5	106318.41	106318.41	24.52	No	Si
SLU 84	-0.98	-27885.08	-79191	-0.0001738	0.0004492	0.0035	3.83	66109.98	110592.7	110592.7	3.97	No	Si
SLU 84	1.12	-4315.81	-73690	-0.0001074	0.0004492	0.0035	3.83	67046.88	106733.62	106733.62	24.73	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 13	-0.98	-26477.65	-56315	-0.0001259	0.0006738	0.0035	3.83		97047.16	97047.16	3.67		Si
SLD 13	1.12	-1742.39	-52543	-0.0000691	0.0006738	0.0035	3.83		92153.01	92153.01	52.89		Si
SLD 9	-0.98	-27864.39	-53961	-0.0001255	0.0006738	0.0035	3.83		93992.8	93992.8	3.37		Si
SLD 9	1.12	1985.19	-49861	-0.0000661	0.0006738	0.0035	3.83		81115.14	81115.14	40.86		Si
SLV 5	-0.98	-31501.41	-50573	-0.0001284	0.0006738	0.0035	3.83		89595.68	89595.68	2.84		Si
SLV 5	1.12	8392.71	-45981	-0.000074	0.0006738	0.0035	3.83		75715.62	75715.62	9.02		Si
SLD 10	-0.98	-28257.51	-53942	-0.0001263	0.0006738	0.0035	3.83		93968.03	93968.03	3.33		Si
SLD 10	1.12	2205.93	-49842	-0.0000665	0.0006738	0.0035	3.83		81088.57	81088.57	36.76		Si
SLV 9	-0.98	-39405.33	-55305	-0.0001531	0.0006738	0.0035	3.83		95736.83	95736.83	2.43		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	1.12	7754.14	-51416	-0.0000799	0.0006738	0.0035	3.83		83278.98	83278.98	10.74		Si
SLV 13	-0.98	-36489.9	-60855	-0.0001541	0.0006738	0.0035	3.83		102662.46	102662.46	2.81		Si
SLV 13	1.12	-769.08	-57791	-0.000074	0.0006738	0.0035	3.83		98932	98932	128.64		Si
SLV 10	-0.98	-40306.56	-55261	-0.0001554	0.0006738	0.0035	3.83		95680.04	95680.04	2.37		Si
SLV 10	1.12	8260.18	-51372	-0.0000809	0.0006738	0.0035	3.83		83218.06	83218.06	10.07		Si
SLV 6	-0.98	-32402.64	-50529	-0.0001302	0.0006738	0.0035	3.83		89538.89	89538.89	2.76		Si
SLV 6	1.12	8898.75	-45938	-0.000075	0.0006738	0.0035	3.83		75654.71	75654.71	8.5		Si
SLV 14	-0.98	-37901.08	-60787	-0.0001571	0.0006738	0.0035	3.83		102579.02	102579.02	2.71		Si
SLV 14	1.12	23.3	-57723	-0.0000724	0.0006738	0.0035	3.83		92057.2	92057.2	3951.67		Si
SLD 14	-0.98	-27083.39	-56285	-0.0001272	0.0006738	0.0035	3.83		97008.99	97008.99	3.58		Si
SLD 14	1.12	-1402.27	-52514	-0.0000683	0.0006738	0.0035	3.83		92114.84	92114.84	65.69		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	-0.98	-27571.18	-78592	-57158	-11059	3.83	3.83	-49746	10833	12447	95155	41292	19533	60825	No	5.5	Si
SLU 81	1.12	-4399.72	-73092	-53158	-11059	3.83	3.83	-46264	10833	12447	95155	41292	19533	60825	No	5.5	Si
SLU 77	-0.98	-27205.8	-77116	-56084	-11043	3.83	3.83	-48811	10833	12447	95155	41292	19533	60825	No	5.51	Si
SLU 77	1.12	-4066.79	-71615	-52084	-11043	3.83	3.83	-45330	10833	12447	95155	41292	19533	60825	No	5.51	Si
SLU 78	-0.98	-27309.02	-77122	-56089	-11123	3.83	3.83	-48816	10833	12447	95155	41292	19533	60825	No	5.47	Si
SLU 78	1.12	-4002.4	-71622	-52089	-11123	3.83	3.83	-45334	10833	12447	95155	41292	19533	60825	No	5.47	Si
SLU 84	-0.98	-27885.08	-79191	-57593	-11248	3.83	3.83	-50125	10833	12447	95155	41292	19533	60825	No	5.41	Si
SLU 84	1.12	-4315.81	-73690	-53593	-11248	3.83	3.83	-46643	10833	12447	95155	41292	19533	60825	No	5.41	Si
SLU 79	-0.98	-27037.39	-76633	-55733	-10984	3.83	3.83	-48506	10833	12447	95155	41292	19533	60825	No	5.54	Si
SLU 79	1.12	-4022.28	-71133	-51733	-10984	3.83	3.83	-45024	10833	12447	95155	41292	19533	60825	No	5.54	Si
SLU 83	-0.98	-27781.86	-79184	-57588	-11168	3.83	3.83	-50120	10833	12447	95155	41292	19533	60825	No	5.45	Si
SLU 83	1.12	-4380.2	-73683	-53588	-11168	3.83	3.83	-46639	10833	12447	95155	41292	19533	60825	No	5.45	Si
SLU 76	-0.98	-26998.76	-76053	-55311	-11008	3.83	3.83	-48139	10833	12447	95155	41292	19533	60825	No	5.53	Si
SLU 76	1.12	-3934.49	-70553	-51311	-11008	3.83	3.83	-44657	10833	12447	95155	41292	19533	60825	No	5.53	Si
SLU 80	-0.98	-27140.62	-76640	-55738	-11064	3.83	3.83	-48510	10833	12447	95155	41292	19533	60825	No	5.5	Si
SLU 80	1.12	-3957.89	-71140	-51738	-11064	3.83	3.83	-45029	10833	12447	95155	41292	19533	60825	No	5.5	Si
SLU 75	-0.98	-27098.35	-76531	-55659	-11013	3.83	3.83	-48441	10833	12447	95155	41292	19533	60825	No	5.52	Si
SLU 75	1.12	-4021.93	-71030	-51658	-11013	3.83	3.83	-44959	10833	12447	95155	41292	19533	60825	No	5.52	Si
SLU 82	-0.98	-27674.4	-78599	-57163	-11139	3.83	3.83	-49750	10833	12447	95155	41292	19533	60825	No	5.46	Si
SLU 82	1.12	-4335.33	-73098	-53163	-11139	3.83	3.83	-46269	10833	12447	95155	41292	19533	60825	No	5.46	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	-0.98	-39405.33	-55305	-40222	-22345	3.83	3.6075	-37859	16250	17586	95155	61938	19533	81471		3.65	Si
SLV 9	1.12	7754.14	-51416	-37393	-22374	3.83	3.83	-32544	16250	18671	95155	61938	19533	81471		3.64	Si
SLV 13	-0.98	-36489.9	-60855	-44258	-16907	3.83	3.83	-38519	16250	18671	95155	61938	19533	81471		4.82	Si
SLV 13	1.12	-769.08	-57791	-42030	-17881	3.83	3.83	-36580	16250	18671	95155	61938	19533	81471		4.56	Si
SLV 10	-0.98	-40306.56	-55261	-40190	-23015	3.83	3.5569	-38378	16250	17340	95155	61938	19533	81471		3.54	Si
SLV 10	1.12	8260.18	-51372	-37361	-23044	3.83	3.83	-32516	16250	18671	95155	61938	19533	81471		3.54	Si
SLD 5	-0.98	-24494.41	-51946	-37779	-12723	3.83	3.83	-32880	16250	18671	95155	61938	19533	81471		6.4	Si
SLD 5	1.12	2245.27	-47569	-34596	-12469	3.83	3.83	-30109	16250	18671	95155	61938	19533	81471		6.53	Si
SLD 9	-0.98	-27864.39	-53961	-39244	-14178	3.83	3.83	-34155	16250	18671	95155	61938	19533	81471		5.75	Si
SLD 9	1.12	1985.19	-49861	-36262	-14178	3.83	3.83	-31560	16250	18671	95155	61938	19533	81471		5.75	Si
SLD 6	-0.98	-24887.53	-51927	-37765	-13015	3.83	3.83	-32868	16250	18671	95155	61938	19533	81471		6.26	Si
SLD 6	1.12	2466.01	-47550	-34582	-12762	3.83	3.83	-30097	16250	18671	95155	61938	19533	81471		6.38	Si
SLD 10	-0.98	-28257.51	-53942	-39231	-14470	3.83	3.83	-34143	16250	18671	95155	61938	19533	81471		5.63	Si
SLD 10	1.12	2205.93	-49842	-36249	-14470	3.83	3.83	-31548	16250	18671	95155	61938	19533	81471		5.63	Si
SLV 6	-0.98	-32402.64	-50529	-36748	-19610	3.83	3.8212	-31983	16250	18628	95155	61938	19533	81471		4.15	Si
SLV 6	1.12	8898.75	-45938	-33409	-19002	3.83	3.83	-29077	16250	18671	95155	61938	19533	81471		4.29	Si
SLV 5	-0.98	-31501.41	-50573	-36780	-18939	3.83	3.83	-32011	16250	18671	95155	61938	19533	81471		4.3	Si
SLV 5	1.12	8392.71	-45981	-33441	-18332	3.83	3.83	-29104	16250	18671	95155	61938	19533	81471		4.44	Si
SLV 14	-0.98	-37901.08	-60787	-44209	-17957	3.83	3.83	-38476	16250	18671	95155	61938	19533	81471		4.54	Si
SLV 14	1.12	23.3	-57723	-41980	-18930	3.83	3.83	-36536	16250	18671	95155	61938	19533	81471		4.3	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 0.51 Ta 0.05 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 4	-41415	0.25	194.83	4990.57	7122.71	6056.64	31.09	Si
SLV 3	-41484	0.25	194.83	4996.81	7133.2	6065	31.13	Si
SLV 2	-41667	0.25	194.83	5013.4	7161.18	6087.29	31.24	Si
SLV 1	-41735	0.25	194.83	5019.61	7171.67	6095.64	31.29	Si
SLV 8	-46968	0.25	194.83	5473.88	7972.84	6723.36	34.51	Si
SLV 7	-47011	0.25	194.83	5477.52	7979.54	6728.53	34.53	Si
SLV 6	-47806	0.25	194.83	5543	8101.2	6822.1	35.01	Si
SLV 5	-47849	0.25	194.83	5546.59	8107.9	6827.25	35.04	Si
SLV 12	-51968	0.25	194.83	5871.52	8722.16	7296.84	37.45	Si
SLV 11	-52011	0.25	194.83	5874.85	8728.59	7301.72	37.48	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.05 Ta = 0.0494

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-50294	-55261	352	0.45	5602.6	0.974	6.71345	6.19867	Si
SLV 9	-50154	-55305	352	0.451	5588.4	0.973	6.72968	6.19867	Si
SLV 6	-44510	-50529	-259	0.5	5013.6	0.971	7.48947	6.19867	Si
SLV 5	-44370	-50573	-260	0.502	4999.4	0.971	7.50983	6.19867	Si
SLV 12	-42899	-55309	177	0.518	4849.6	0.97	7.75965	6.19867	Si
SLV 11	-42759	-55353	177	0.519	4835.3	0.97	7.78184	6.19867	Si
SLV 8	-37115	-50577	-434	0.579	4260.8	0.966	8.70652	6.19867	Si
SLV 7	-36975	-50621	-435	0.58	4246.6	0.966	8.73512	6.19867	Si
SLV 14	-54493	-60787	1004	0.409	6030.4	0.975	6.09842	3.99966	Si
SLV 13	-54274	-60855	1003	0.411	6008	0.975	6.11956	3.99966	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita

dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.966	SLU 84	Si
V_SLU	5.408	SLU 84	Si
PF_SLV	2.374	SLV 10	Si
V_SLV	3.535	SLV 10	Si
PFFP_SLV	31.086	SLV 4	Si
R_SLV	1.083	SLV 10	Si

Maschio 44

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.093	5.876	-3.013	5.876	L2	L4	2.08	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 70	1.02	-2159.78	-17375	-0.0000399	0.0003743	0.0035	2.08	14775.12	16662.71	16662.71	7.72	No	Si
SLU 70	1.42	1708.39	-16436	-0.000036	0.0003743	0.0035	2.08	14145.12	14752.22	14752.22	8.64	No	Si
SLU 43	1.02	-1965.01	-14535	-0.0000339	0.0003743	0.0035	2.08	12810.88	14443.27	14443.27	7.35	No	Si
SLU 43	1.42	1529.42	-13596	-0.0000301	0.0003743	0.0035	2.08	12122.68	12578.63	12578.63	8.22	No	Si
SLU 44	1.02	-1966.22	-14546	-0.0000339	0.0003743	0.0035	2.08	12818.53	14451.76	14451.76	7.35	No	Si
SLU 44	1.42	1536.49	-13607	-0.0000301	0.0003743	0.0035	2.08	12130.54	12586.63	12586.63	8.19	No	Si
SLU 48	1.02	-2043.6	-15031	-0.0000351	0.0003743	0.0035	2.08	13166.12	14838.19	14838.19	7.26	No	Si
SLU 48	1.42	1537.55	-14092	-0.000031	0.0003743	0.0035	2.08	12488.07	12953.69	12953.69	8.42	No	Si
SLU 45	1.02	-2014.19	-14851	-0.0000347	0.0003743	0.0035	2.08	13037.95	14695.56	14695.56	7.3	No	Si
SLU 45	1.42	1529.44	-13912	-0.0000306	0.0003743	0.0035	2.08	12356.22	12817.51	12817.51	8.38	No	Si
SLU 50	1.02	-2023.82	-14894	-0.0000348	0.0003743	0.0035	2.08	13069	14730.09	14730.09	7.28	No	Si
SLU 50	1.42	1545.65	-13956	-0.0000308	0.0003743	0.0035	2.08	12388.16	12850.41	12850.41	8.31	No	Si
SLU 47	1.02	-1995.63	-14726	-0.0000343	0.0003743	0.0035	2.08	12947.9	14595.45	14595.45	7.31	No	Si
SLU 47	1.42	1544.6	-13787	-0.0000305	0.0003743	0.0035	2.08	12263.6	12722.41	12722.41	8.24	No	Si
SLU 46	1.02	-2014.92	-14857	-0.0000347	0.0003743	0.0035	2.08	13042.49	14700.61	14700.61	7.3	No	Si
SLU 46	1.42	1533.67	-13919	-0.0000306	0.0003743	0.0035	2.08	12360.89	12822.32	12822.32	8.36	No	Si
SLU 49	1.02	-2044.33	-15037	-0.0000351	0.0003743	0.0035	2.08	13170.64	14843.22	14843.22	7.26	No	Si
SLU 49	1.42	1541.79	-14098	-0.000031	0.0003743	0.0035	2.08	12492.73	12958.51	12958.51	8.4	No	Si
SLU 51	1.02	-2024.55	-14901	-0.0000348	0.0003743	0.0035	2.08	13073.54	14735.15	14735.15	7.28	No	Si
SLU 51	1.42	1549.89	-13962	-0.0000308	0.0003743	0.0035	2.08	12392.83	12855.22	12855.22	8.29	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	1.02	-3851.93	-6497	-0.000033	0.0005615	0.0035	1.664		7578.12	7578.12	1.97		Si
SLV 7	1.42	1974.73	-8851	-0.0000238	0.0005615	0.0035	2.08		8971.84	8971.84	4.54		Si
SLV 1	1.02	-2057.81	-11793	-0.0000291	0.0005615	0.0035	2.08		12510.59	12510.59	6.08		Si
SLV 1	1.42	2674.86	-10187	-0.0000293	0.0005615	0.0035	2.08		10216.3	10216.3	3.82		Si
SLV 8	1.02	-3808.91	-6600	-0.0000324	0.0005615	0.0035	2.08		7674.85	7674.85	2.01		Si
SLV 8	1.42	1950.02	-8954	-0.0000238	0.0005615	0.0035	2.08		9067.71	9067.71	4.65		Si
SLV 4	1.02	-3149.04	-8520	-0.0000288	0.0005615	0.0035	2.08		9491.85	9491.85	3.01		Si
SLV 4	1.42	2764.8	-8753	-0.0000273	0.0005615	0.0035	2.08		8880.48	8880.48	3.21		Si
SLV 2	1.02	-1990.46	-11954	-0.0000291	0.0005615	0.0035	2.08		12657.78	12657.78	6.36		Si
SLV 2	1.42	2636.18	-10348	-0.0000294	0.0005615	0.0035	2.08		10365.96	10365.96	3.93		Si
SLV 12	1.02	-3205.5	-8412	-0.0000289	0.0005615	0.0035	2.08		9388.97	9388.97	2.93		Si
SLV 12	1.42	1117.02	-10745	-0.0000229	0.0005615	0.0035	2.08		10730.27	10730.27	9.61		Si
SLD 7	1.02	-2561.46	-10316	-0.000029	0.0005615	0.0035	2.08		11163.55	11163.55	4.36		Si
SLD 7	1.42	1607.8	-10910	-0.0000255	0.0005615	0.0035	2.08		10881.1	10881.1	6.77		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 8	1.02	-2542.7	-10361	-0.000029	0.0005615	0.0035	2.08		11204.78	11204.78	4.41		Si
SLD 8	1.42	1597.02	-10955	-0.0000255	0.0005615	0.0035	2.08		10922.01	10922.01	6.84		Si
SLV 3	1.02	-3216.39	-8359	-0.0000289	0.0005615	0.0035	2.08		9338.74	9338.74	2.9		Si
SLV 3	1.42	2803.49	-8592	-0.0000273	0.0005615	0.0035	2.08		8728.05	8728.05	3.11		Si
SLV 11	1.02	-3248.51	-8309	-0.000029	0.0005615	0.0035	2.08		9291.24	9291.24	2.86		Si
SLV 11	1.42	1141.72	-10642	-0.0000228	0.0005615	0.0035	2.08		10636.29	10636.29	9.32		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	1.02	-2223.66	-20613	-18322	-10604	2.08	2.08	-19575	9554	8943	33304	28028	5304	33332	No	3.14	Si
SLU 83	1.42	2021.5	-19674	-17488	-10604	2.08	2.08	-18684	9436	8832	33304	28028	5304	33332	No	3.14	Si
SLU 80	1.02	-2219.66	-19731	-17538	-10387	2.08	2.08	-18738	9443	8838	33304	28028	5304	33332	No	3.21	Si
SLU 80	1.42	1938.64	-18792	-16704	-10387	2.08	2.08	-17846	9324	8727	33304	28028	5304	33332	No	3.21	Si
SLU 74	1.02	-2209.3	-19681	-17494	-10310	2.08	2.08	-18690	9437	8832	33304	28028	5304	33332	No	3.23	Si
SLU 74	1.42	1918.19	-18742	-16660	-10310	2.08	2.08	-17799	9318	8721	33304	28028	5304	33332	No	3.23	Si
SLU 75	1.02	-2210.03	-19687	-17500	-10323	2.08	2.08	-18697	9437	8833	33304	28028	5304	33332	No	3.23	Si
SLU 75	1.42	1922.43	-18748	-16665	-10323	2.08	2.08	-17805	9318	8722	33304	28028	5304	33332	No	3.23	Si
SLU 82	1.02	-2194.98	-20439	-18168	-10523	2.08	2.08	-19411	9533	8922	33304	28028	5304	33332	No	3.17	Si
SLU 82	1.42	2017.62	-19501	-17334	-10523	2.08	2.08	-18519	9414	8811	33304	28028	5304	33332	No	3.17	Si
SLU 77	1.02	-2238.71	-19860	-17654	-10404	2.08	2.08	-18861	9459	8854	33304	28028	5304	33332	No	3.2	Si
SLU 77	1.42	1926.3	-18922	-16819	-10404	2.08	2.08	-17969	9340	8742	33304	28028	5304	33332	No	3.2	Si
SLU 81	1.02	-2194.26	-20433	-18163	-10510	2.08	2.08	-19405	9532	8922	33304	28028	5304	33332	No	3.17	Si
SLU 81	1.42	2013.38	-19494	-17328	-10510	2.08	2.08	-18513	9413	8810	33304	28028	5304	33332	No	3.17	Si
SLU 78	1.02	-2239.44	-19867	-17659	-10416	2.08	2.08	-18867	9460	8855	33304	28028	5304	33332	No	3.2	Si
SLU 78	1.42	1930.54	-18928	-16825	-10416	2.08	2.08	-17975	9341	8743	33304	28028	5304	33332	No	3.2	Si
SLU 84	1.02	-2224.39	-20619	-18328	-10617	2.08	2.08	-19581	9555	8944	33304	28028	5304	33332	No	3.14	Si
SLU 84	1.42	2025.74	-19680	-17493	-10617	2.08	2.08	-18690	9436	8832	33304	28028	5304	33332	No	3.14	Si
SLU 79	1.02	-2218.93	-19724	-17533	-10375	2.08	2.08	-18732	9442	8838	33304	28028	5304	33332	No	3.21	Si
SLU 79	1.42	1934.41	-18785	-16698	-10375	2.08	2.08	-17840	9323	8726	33304	28028	5304	33332	No	3.21	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	1.02	10.02	-17943	-15949	-11059	2.08	2.08	-17040	13825	12940	33304	42042	5304	46244		4.18	Si
SLV 5	1.42	1545.96	-14166	-12592	-9834	2.08	2.08	-13453	13107	12268	33304	42042	5304	45573		4.63	Si
SLV 4	1.02	-3149.04	-8520	-7574	-11882	2.08	2.0112	-8092	12035	10892	33304	42042	5304	44196		3.72	Si
SLV 4	1.42	2764.8	-8753	-7781	-12124	2.08	2.08	-8313	12079	11306	33304	42042	5304	44610		3.68	Si
SLV 6	1.02	53.03	-18046	-16041	-10889	2.08	2.08	-17138	13844	12958	33304	42042	5304	46262		4.25	Si
SLV 6	1.42	1521.26	-14269	-12683	-9665	2.08	2.08	-13551	13127	12287	33304	42042	5304	45591		4.72	Si
SLD 3	1.02	-2289.25	-11113	-9878	-9379	2.08	2.08	-10554	12527	11726	33304	42042	5304	45030		4.8	Si
SLD 3	1.42	1961.09	-10800	-9600	-9483	2.08	2.08	-10257	12468	11670	33304	42042	5304	44974		4.74	Si
SLD 2	1.02	-1765.02	-12652	-11247	-9796	2.08	2.08	-12016	12820	11999	33304	42042	5304	45304		4.62	Si
SLD 2	1.42	1888.75	-11553	-10269	-9593	2.08	2.08	-10971	12611	11804	33304	42042	5304	45108		4.7	Si
SLD 1	1.02	-1793.93	-12583	-11185	-9909	2.08	2.08	-11950	12807	11987	33304	42042	5304	45291		4.57	Si
SLD 1	1.42	1905.36	-11484	-10208	-9707	2.08	2.08	-10906	12598	11791	33304	42042	5304	45096		4.65	Si
SLV 1	1.02	-2057.81	-11793	-10483	-13385	2.08	2.08	-11200	12657	11846	33304	42042	5304	45151		3.37	Si
SLV 1	1.42	2674.86	-10187	-9055	-12913	2.08	2.08	-9674	12352	11561	33304	42042	5304	44865		3.47	Si
SLV 2	1.02	-1990.46	-11954	-10626	-13120	2.08	2.08	-11353	12687	11875	33304	42042	5304	45179		3.44	Si
SLV 2	1.42	2636.18	-10348	-9198	-12648	2.08	2.08	-9827	12382	11590	33304	42042	5304	44894		3.55	Si
SLV 3	1.02	-3216.39	-8359	-7430	-12147	2.08	1.9657	-7939	12004	10618	33304	42042	5304	43923		3.62	Si
SLV 3	1.42	2803.49	-8592	-7638	-12389	2.08	2.08	-8160	12049	11277	33304	42042	5304	44582		3.6	Si
SLD 4	1.02	-2260.34	-11182	-9940	-9265	2.08	2.08	-10619	12541	11738	33304	42042	5304	45042		4.86	Si
SLD 4	1.42	1944.48	-10869	-9662	-9369	2.08	2.08	-10322	12481	11682	33304	42042	5304	44987		4.8	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.51 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.25	10747	-10059	158.71	2104.01	13.26	Si
SLV 8	179667	0.25	10780	-10090	158.71	2109.92	13.29	Si
SLV 11	179667	0.25	11459	-10726	158.71	2232.25	14.06	Si
SLV 12	179667	0.25	11492	-10757	158.71	2238.1	14.1	Si
SLV 3	179667	0.25	13090	-12252	158.71	2520.49	15.88	Si
SLV 4	179667	0.25	13142	-12300	158.71	2529.42	15.94	Si
SLV 15	179667	0.25	15465	-14476	158.71	2927.16	18.44	Si
SLV 16	179667	0.25	15517	-14523	158.71	2935.75	18.5	Si
SLV 1	179667	0.25	15819	-14807	158.71	2986.43	18.82	Si
SLV 2	179667	0.25	15871	-14855	158.71	2994.97	18.87	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-12118	-21837	279	0.868	1631.2	0.934	13.51215	4.45299	Si
SLV 9	-11978	-21942	277	0.876	1617	0.933	13.64028	4.45299	Si
SLV 6	-10248	-22773	290	0.983	1442.5	0.927	15.4208	4.45299	Si
SLV 5	-10108	-22877	288	0.994	1428.4	0.926	15.59065	4.45299	Si
SLV 14	-13016	-18754	84	0.835	1721.9	0.937	12.95415	3.37435	Si
SLV 13	-12797	-18917	81	0.846	1699.7	0.936	13.13542	3.37435	Si
SLV 12	-8338	-16229	-244	1.147	1250.5	0.918	18.15919	4.45299	Si
SLV 11	-8197	-16334	-246	1.161	1236.4	0.918	18.39289	4.45299	Si
SLV 16	-11882	-17071	-73	0.895	1607.3	0.933	13.94928	3.37435	Si
SLV 15	-11662	-17235	-76	0.908	1585.1	0.932	14.1562	3.37435	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.261	SLU 49	Si
V_SLU	3.14	SLU 84	Si
PF_SLV	1.967	SLV 7	Si
V_SLV	3.373	SLV 1	Si
PFFP_SLV	13.257	SLV 7	Si
R_SLV	3.034	SLV 10	Si

Maschio 45

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-2.013	5.876	-0.123	5.876	L2	L4	1.89	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 74	1.02	-2218.47	-14836	-0.0000407	0.0003743	0.0035	1.89	11617.91	13070.18	13070.18	5.89	No	Si
SLU 74	1.42	188.72	-14170	-0.0000271	0.0003743	0.0035	1.89	11199.17	11639.9	11639.9	61.68	No	Si
SLU 83	1.02	-2334.56	-15511	-0.0000427	0.0003743	0.0035	1.89	12032.49	13553.13	13553.13	5.81	No	Si
SLU 83	1.42	126.94	-14881	-0.0000281	0.0003743	0.0035	1.89	11645.8	12144.73	12144.73	95.67	No	Si
SLU 79	1.02	-2228.37	-14891	-0.0000408	0.0003743	0.0035	1.89	11652.1	13109.54	13109.54	5.88	No	Si
SLU 79	1.42	194.31	-14220	-0.0000273	0.0003743	0.0035	1.89	11231.04	11675.42	11675.42	60.09	No	Si
SLU 73	1.02	-2198.27	-14595	-0.0000401	0.0003743	0.0035	1.89	11467.39	12898.11	12898.11	5.87	No	Si
SLU 73	1.42	165.63	-13939	-0.0000266	0.0003743	0.0035	1.89	11051.98	11476.88	11476.88	69.29	No	Si
SLU 75	1.02	-2218.87	-14840	-0.0000407	0.0003743	0.0035	1.89	11620.18	13072.79	13072.79	5.89	No	Si
SLU 75	1.42	188.05	-14174	-0.0000271	0.0003743	0.0035	1.89	11201.71	11642.73	11642.73	61.91	No	Si
SLU 84	1.02	-2334.97	-15515	-0.0000427	0.0003743	0.0035	1.89	12034.7	13555.62	13555.62	5.81	No	Si
SLU 84	1.42	126.27	-14885	-0.0000281	0.0003743	0.0035	1.89	11648.28	12147.58	12147.58	96.2	No	Si
SLU 81	1.02	-2319.18	-15360	-0.0000423	0.0003743	0.0035	1.89	11940.52	13445.99	13445.99	5.8	No	Si
SLU 81	1.42	113.16	-14737	-0.0000278	0.0003743	0.0035	1.89	11556.43	12042.44	12042.44	106.42	No	Si
SLU 76	1.02	-2213.66	-14746	-0.0000404	0.0003743	0.0035	1.89	11561.88	13005.89	13005.89	5.88	No	Si
SLU 76	1.42	179.42	-14083	-0.0000269	0.0003743	0.0035	1.89	11143.85	11578.43	11578.43	64.53	No	Si
SLU 80	1.02	-2228.78	-14895	-0.0000408	0.0003743	0.0035	1.89	11654.36	13112.15	13112.15	5.88	No	Si
SLU 80	1.42	193.64	-14224	-0.0000273	0.0003743	0.0035	1.89	11233.58	11678.25	11678.25	60.31	No	Si
SLU 82	1.02	-2319.58	-15364	-0.0000423	0.0003743	0.0035	1.89	11942.75	13448.62	13448.62	5.8	No	Si
SLU 82	1.42	112.49	-14741	-0.0000278	0.0003743	0.0035	1.89	11558.92	12045.28	12045.28	107.08	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	1.02	-2430.39	-8949	-0.00003	0.0005615	0.0035	1.89		8840.77	8840.77	3.64		Si
SLV 12	1.42	1025.02	-6917	-0.0000182	0.0005615	0.0035	1.89		6445.13	6445.13	6.29		Si
SLV 1	1.02	-2333.94	-8251	-0.0000282	0.0005615	0.0035	1.89		8252.14	8252.14	3.54		Si
SLV 1	1.42	-288.86	-7351	-0.0000148	0.0005615	0.0035	1.89		7480.33	7480.33	25.9		Si
SLV 11	1.02	-2479.9	-8931	-0.0000303	0.0005615	0.0035	1.89		8825.68	8825.68	3.56		Si
SLV 11	1.42	1038.12	-6828	-0.0000181	0.0005615	0.0035	1.89		6368.27	6368.27	6.13		Si
SLD 3	1.02	-2195.39	-8798	-0.0000284	0.0005615	0.0035	1.89		8713.66	8713.66	3.97		Si
SLD 3	1.42	182.41	-7643	-0.0000147	0.0005615	0.0035	1.89		7072.51	7072.51	38.77		Si
SLV 8	1.02	-3145.16	-7611	-0.0000325	0.0005615	0.0035	1.89		7705.19	7705.19	2.45		Si
SLV 8	1.42	854.2	-5087	-0.0000139	0.0005615	0.0035	1.89		4844.02	4844.02	5.67		Si
SLV 3	1.02	-3122.53	-7225	-0.000032	0.0005615	0.0035	1.89		7371.46	7371.46	2.36		Si
SLV 3	1.42	154.48	-5268	-0.0000103	0.0005615	0.0035	1.89		5003.83	5003.83	32.39		Si
SLV 2	1.02	-2256.42	-8279	-0.0000278	0.0005615	0.0035	1.89		8275.88	8275.88	3.67		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	1.42	-309.36	-7489	-0.0000152	0.0005615	0.0035	1.89		7600.21	7600.21	24.57		Si
SLV 7	1.02	-3194.66	-7593	-0.0000329	0.0005615	0.0035	1.89		7689.69	7689.69	2.41		Si
SLV 7	1.42	867.3	-4998	-0.0000138	0.0005615	0.0035	1.89		4765.88	4765.88	5.5		Si
SLD 7	1.02	-2227.98	-8952	-0.0000289	0.0005615	0.0035	1.89		8843.33	8843.33	3.97		Si
SLD 7	1.42	484.2	-7521	-0.0000162	0.0005615	0.0035	1.89		6968.58	6968.58	14.39		Si
SLV 4	1.02	-3045.02	-7253	-0.0000314	0.0005615	0.0035	1.89		7395.69	7395.69	2.43		Si
SLV 4	1.42	133.98	-5407	-0.0000104	0.0005615	0.0035	1.89		5126.19	5126.19	38.26		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	1.02	-2334.97	-15515	-13791	-5581	1.89	1.89	-16215	9106	7745	33304	25468	4820	30287	No	5.43	Si
SLU 84	1.42	126.27	-14885	-13231	-5652	1.89	1.89	-15557	9019	7670	33304	25468	4820	30287	No	5.36	Si
SLU 78	1.02	-2234.26	-14991	-13325	-5622	1.89	1.89	-15668	9033	7683	33304	25468	4820	30287	No	5.39	Si
SLU 78	1.42	201.84	-14317	-12727	-5691	1.89	1.89	-14964	8940	7603	33304	25468	4820	30287	No	5.32	Si
SLU 82	1.02	-2319.58	-15364	-13657	-5491	1.89	1.89	-16057	9085	7727	33304	25468	4820	30287	No	5.52	Si
SLU 82	1.42	112.49	-14741	-13103	-5561	1.89	1.89	-15407	8999	7653	33304	25468	4820	30287	No	5.45	Si
SLU 75	1.02	-2218.87	-14840	-13191	-5532	1.89	1.89	-15509	9012	7665	33304	25468	4820	30287	No	5.48	Si
SLU 75	1.42	188.05	-14174	-12599	-5600	1.89	1.89	-14813	8920	7586	33304	25468	4820	30287	No	5.41	Si
SLU 81	1.02	-2319.18	-15360	-13654	-5493	1.89	1.89	-16054	9085	7727	33304	25468	4820	30287	No	5.51	Si
SLU 81	1.42	113.16	-14737	-13100	-5563	1.89	1.89	-15402	8998	7653	33304	25468	4820	30287	No	5.44	Si
SLU 74	1.02	-2218.47	-14836	-13188	-5533	1.89	1.89	-15506	9012	7665	33304	25468	4820	30287	No	5.47	Si
SLU 74	1.42	188.72	-14170	-12595	-5602	1.89	1.89	-14809	8919	7586	33304	25468	4820	30287	No	5.41	Si
SLU 79	1.02	-2228.37	-14891	-13237	-5583	1.89	1.89	-15563	9020	7671	33304	25468	4820	30287	No	5.42	Si
SLU 79	1.42	194.31	-14220	-12640	-5652	1.89	1.89	-14862	8926	7592	33304	25468	4820	30287	No	5.36	Si
SLU 77	1.02	-2233.85	-14987	-13322	-5623	1.89	1.89	-15664	9033	7683	33304	25468	4820	30287	No	5.39	Si
SLU 77	1.42	202.5	-14313	-12723	-5693	1.89	1.89	-14960	8939	7603	33304	25468	4820	30287	No	5.32	Si
SLU 83	1.02	-2334.56	-15511	-13788	-5583	1.89	1.89	-16212	9106	7745	33304	25468	4820	30287	No	5.43	Si
SLU 83	1.42	126.94	-14881	-13228	-5654	1.89	1.89	-15553	9018	7670	33304	25468	4820	30287	No	5.36	Si
SLU 80	1.02	-2228.78	-14895	-13240	-5582	1.89	1.89	-15567	9020	7672	33304	25468	4820	30287	No	5.43	Si
SLU 80	1.42	193.64	-14224	-12643	-5651	1.89	1.89	-14866	8927	7592	33304	25468	4820	30287	No	5.36	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	1.02	-3194.66	-7593	-6749	-8621	1.89	1.5728	-9579	12333	8728	33304	38202	4820	42033		4.88	Si
SLV 7	1.42	867.3	-4998	-4443	-8642	1.89	1.89	-5224	11461	9748	33304	38202	4820	43021		4.98	Si
SLV 12	1.02	-2430.39	-8949	-7955	-6383	1.89	1.89	-9353	12287	10450	33304	38202	4820	43021		6.74	Si
SLV 12	1.42	1025.02	-6917	-6148	-6477	1.89	1.89	-7229	11862	10089	33304	38202	4820	43021		6.64	Si
SLV 8	1.02	-3145.16	-7611	-6765	-8297	1.89	1.5953	-9466	12310	8837	33304	38202	4820	42141		5.08	Si
SLV 8	1.42	854.2	-5087	-4521	-8319	1.89	1.89	-5316	11480	9764	33304	38202	4820	43021		5.17	Si
SLD 3	1.02	-2195.39	-8798	-7820	-5917	1.89	1.89	-9195	12256	10423	33304	38202	4820	43021		7.27	Si
SLD 3	1.42	182.41	-7643	-6794	-5914	1.89	1.89	-7988	12014	10218	33304	38202	4820	43021		7.27	Si
SLV 1	1.02	-2333.94	-8251	-7334	-6382	1.89	1.89	-8624	12141	10326	33304	38202	4820	43021		6.74	Si
SLV 1	1.42	-288.86	-7351	-6534	-6305	1.89	1.89	-7682	11953	10166	33304	38202	4820	43021		6.82	Si
SLV 4	1.02	-3045.02	-7253	-6447	-7981	1.89	1.5754	-9133	12243	8680	33304	38202	4820	41984		5.26	Si
SLV 4	1.42	133.98	-5407	-4806	-7912	1.89	1.89	-5651	11547	9821	33304	38202	4820	43021		5.44	Si
SLD 7	1.02	-2227.98	-8952	-7957	-5977	1.89	1.89	-9356	12288	10451	33304	38202	4820	43021		7.2	Si
SLD 7	1.42	484.2	-7521	-6686	-6013	1.89	1.89	-7861	11989	10197	33304	38202	4820	43021		7.15	Si
SLV 11	1.02	-2479.9	-8931	-7939	-6707	1.89	1.89	-9334	12283	10447	33304	38202	4820	43021		6.41	Si
SLV 11	1.42	1038.12	-6828	-6069	-6800	1.89	1.89	-7136	11844	10073	33304	38202	4820	43021		6.33	Si
SLV 2	1.02	-2256.42	-8279	-7359	-5875	1.89	1.89	-8653	12147	10331	33304	38202	4820	43021		7.32	Si
SLV 2	1.42	-309.36	-7489	-6657	-5799	1.89	1.89	-7827	11982	10191	33304	38202	4820	43021		7.42	Si
SLV 3	1.02	-3122.53	-7225	-6422	-8488	1.89	1.5384	-9317	12280	8501	33304	38202	4820	41805		4.93	Si
SLV 3	1.42	154.48	-5268	-4683	-8417	1.89	1.89	-5506	11518	9796	33304	38202	4820	43021		5.11	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.51 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.25	5460	-4644	144.22	1007.55	6.99	Si
SLV 4	179667	0.25	5514	-4689	144.22	1017.04	7.05	Si
SLV 1	179667	0.25	6313	-5369	144.22	1158.17	8.03	Si
SLV 2	179667	0.25	6367	-5415	144.22	1167.55	8.1	Si
SLV 7	179667	0.25	7107	-6045	144.22	1296.73	8.99	Si
SLV 8	179667	0.25	7141	-6074	144.22	1302.66	9.03	Si
SLV 11	179667	0.25	9363	-7963	144.22	1681.9	11.66	Si
SLV 12	179667	0.25	9397	-7992	144.22	1687.63	11.7	Si
SLV 5	179667	0.25	9950	-8462	144.22	1780	12.34	Si
SLV 6	179667	0.25	9984	-8492	144.22	1785.68	12.38	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-14913	-8394	470	0.676	1877.2	0.946	10.38429	4.45299	Si
SLV 9	-14819	-8404	467	0.679	1867.7	0.945	10.43994	4.45299	Si
SLV 6	-13545	-6722	433	0.73	1738.5	0.942	11.26129	4.45299	Si
SLV 5	-13451	-6731	430	0.734	1729	0.942	11.32738	4.45299	Si
SLV 14	-12132	-10021	362	0.799	1595.5	0.938	12.38425	3.37435	Si
SLV 13	-11985	-10035	358	0.807	1580.6	0.937	12.5108	3.37435	Si
SLV 16	-8358	-9744	232	1.068	1214.8	0.922	16.82471	3.37435	Si
SLV 15	-8211	-9758	228	1.082	1200	0.922	17.06335	3.37435	Si
SLV 2	-7573	-4445	239	1.146	1136	0.918	18.13804	3.37435	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 1	-7426	-4459	234	1.163	1121.3	0.918	18.41711	3.37435	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.798	SLU 81	Si
V_SLU	5.32	SLU 77	Si
PF_SLV	2.361	SLV 3	Si
V_SLV	4.876	SLV 7	Si
PFFP_SLV	6.986	SLV 3	Si
R_SLV	2.332	SLV 10	Si

Maschio 46

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.123	6.101	-0.123	-3.284	L2	L4	9.385	0.45	2.98	2.98	2.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	-0.98	13199.57	-77292	-0.0000299	0.0004492	0.0035	9.3849	308364.93	333250.52	333250.52	25.25	No	Si
SLU 83	2	4966.83	-89381	-0.0000324	0.0004492	0.0035	9.3849	346771.59	374580.57	374580.57	75.42	No	Si
SLU 63	-0.98	12274.9	-70885	-0.0000274	0.0004492	0.0035	9.3849	286935.58	310377.79	310377.79	25.29	No	Si
SLU 63	2	4981.22	-80571	-0.0000292	0.0004492	0.0035	9.3849	319044.96	344460.76	344460.76	69.15	No	Si
SLU 59	-0.98	11933.5	-68659	-0.0000265	0.0004492	0.0035	9.3849	279311.99	301717.4	301717.4	25.28	No	Si
SLU 59	2	4755.18	-77843	-0.0000282	0.0004492	0.0035	9.3849	310174.48	335135.55	335135.55	70.48	No	Si
SLU 79	-0.98	12858.16	-75065	-0.000029	0.0004492	0.0035	9.3849	301000.79	325637.81	325637.81	25.33	No	Si
SLU 79	2	4740.79	-86654	-0.0000313	0.0004492	0.0035	9.3849	338338.19	365255.36	365255.36	77.05	No	Si
SLU 84	-0.98	13245.25	-77298	-0.0000299	0.0004492	0.0035	9.3849	308383.92	333270.26	333270.26	25.16	No	Si
SLU 84	2	5520.01	-89639	-0.0000326	0.0004492	0.0035	9.3849	347562.36	375462.71	375462.71	68.02	No	Si
SLU 80	-0.98	12903.84	-75071	-0.000029	0.0004492	0.0035	9.3849	301020.01	325657.56	325657.56	25.24	No	Si
SLU 80	2	5293.97	-86912	-0.0000316	0.0004492	0.0035	9.3849	339141.77	366137.5	366137.5	69.16	No	Si
SLU 55	-0.98	11836.82	-68053	-0.0000263	0.0004492	0.0035	9.3849	277223.02	299362.05	299362.05	25.29	No	Si
SLU 55	2	5191.12	-76934	-0.0000279	0.0004492	0.0035	9.3849	307189.05	332028.67	332028.67	63.96	No	Si
SLU 82	-0.98	13118.12	-76688	-0.0000297	0.0004492	0.0035	9.3849	306377.4	331186.68	331186.68	25.25	No	Si
SLU 82	2	5587.16	-88559	-0.0000322	0.0004492	0.0035	9.3849	344242.02	371767.74	371767.74	66.54	No	Si
SLU 78	-0.98	12952.93	-75521	-0.0000292	0.0004492	0.0035	9.3849	302516.6	327197.19	327197.19	25.26	No	Si
SLU 78	2	5303.12	-87686	-0.0000318	0.0004492	0.0035	9.3849	341545.08	368783.77	368783.77	69.54	No	Si
SLU 76	-0.98	12807.16	-74465	-0.0000288	0.0004492	0.0035	9.3849	299001.66	323587.14	323587.14	25.27	No	Si
SLU 76	2	5729.91	-86003	-0.0000313	0.0004492	0.0035	9.3849	336306.23	363030.63	363030.63	63.36	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	-0.98	12635.24	-45556	-0.0000184	0.0006738	0.0035	9.3849		212298.1	212298.1	16.8		Si
SLV 5	2	-27242.9	-54248	-0.0000246	0.0006738	0.0035	9.3849		291492.12	291492.12	10.7		Si
SLV 12	-0.98	5271.65	-58834	-0.0000213	0.0006738	0.0035	9.3849		268491.58	268491.58	50.93		Si
SLV 12	2	34147.68	-63160	-0.0000293	0.0006738	0.0035	9.3849		286543.56	286543.56	8.39		Si
SLV 11	-0.98	4666.95	-58840	-0.0000212	0.0006738	0.0035	9.3849		268515.82	268515.82	57.54		Si
SLV 11	2	36882.41	-63121	-0.0000299	0.0006738	0.0035	9.3849		286380.91	286380.91	7.76		Si
SLV 7	-0.98	928.26	-45092	-0.0000156	0.0006738	0.0035	9.3849		210297.64	210297.64	226.55		Si
SLV 7	2	40141.81	-45348	-0.0000244	0.0006738	0.0035	9.3849		211399.69	211399.69	5.27		Si
SLV 10	-0.98	16978.63	-59299	-0.0000241	0.0006738	0.0035	9.3849		270430.31	270430.31	15.93		Si
SLV 10	2	-33237.03	-72060	-0.0000322	0.0006738	0.0035	9.3849		365408.63	365408.63	10.99		Si
SLV 6	-0.98	13239.93	-45551	-0.0000185	0.0006738	0.0035	9.3849		212273.09	212273.09	16.03		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	2	-29977.62	-54287	-0.0000253	0.0006738	0.0035	9.3849		291654.01	291654.01	9.73		Si
SLV 8	-0.98	1532.96	-45086	-0.0000157	0.0006738	0.0035	9.3849		210272.62	210272.62	137.17		Si
SLV 8	2	37407.09	-45387	-0.0000238	0.0006738	0.0035	9.3849		211567.52	211567.52	5.66		Si
SLV 3	-0.98	492.8	-29216	-0.0000101	0.0006738	0.0035	9.3849		141207.67	141207.67	286.54		Si
SLV 3	2	21133.53	-27716	-0.0000141	0.0006738	0.0035	9.3849		134549.29	134549.29	6.37		Si
SLV 4	-0.98	1439.68	-29207	-0.0000103	0.0006738	0.0035	9.3849		141167.3	141167.3	98.05		Si
SLV 4	2	16851.35	-27777	-0.0000131	0.0006738	0.0035	9.3849		134820.18	134820.18	8		Si
SLV 9	-0.98	16373.93	-59305	-0.000024	0.0006738	0.0035	9.3849		270454.55	270454.55	16.52		Si
SLV 9	2	-30502.3	-72021	-0.0000316	0.0006738	0.0035	9.3849		365254.55	365254.55	11.97		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	-0.98	12903.84	-75071	-60057	5081	9.3849	9.3849	-14221	10229	43201	95155	151772	47863	138356	No	27.23	Si
SLU 80	2	5293.97	-86912	-69529	6782	9.3849	9.3849	-16464	10528	44464	95155	151772	47863	139619	No	20.59	Si
SLU 81	-0.98	13072.44	-76682	-61346	5007	9.3849	9.3849	-14526	10270	43373	95155	151772	47863	138528	No	27.67	Si
SLU 81	2	5033.98	-88301	-70641	6721	9.3849	9.3849	-16727	10564	44612	95155	151772	47863	139767	No	20.8	Si
SLU 73	-0.98	12680.03	-73856	-59085	5154	9.3849	9.3849	-13990	10199	43071	95155	151772	47863	138227	No	26.82	Si
SLU 73	2	5797.06	-84922	-67938	6828	9.3849	9.3849	-16087	10478	44252	95155	151772	47863	139407	No	20.42	Si
SLU 78	-0.98	12952.93	-75521	-60417	5127	9.3849	9.3849	-14306	10241	43249	95155	151772	47863	138404	No	26.99	Si
SLU 78	2	5303.12	-87686	-70149	6842	9.3849	9.3849	-16610	10548	44547	95155	151772	47863	139702	No	20.42	Si
SLU 83	-0.98	13199.57	-77292	-61833	5048	9.3849	9.3849	-14641	10286	43438	95155	151772	47863	138593	No	27.45	Si
SLU 83	2	4966.83	-89381	-71505	6781	9.3849	9.3849	-16931	10591	44728	95155	151772	47863	139883	No	20.63	Si
SLU 77	-0.98	12907.25	-75515	-60412	4894	9.3849	9.3849	-14305	10241	43249	95155	151772	47863	138404	No	28.28	Si
SLU 77	2	4749.94	-87428	-69942	6594	9.3849	9.3849	-16561	10542	44519	95155	151772	47863	139674	No	21.18	Si
SLU 75	-0.98	12825.8	-74912	-59929	5086	9.3849	9.3849	-14190	10225	43184	95155	151772	47863	138339	No	27.2	Si
SLU 75	2	5370.27	-86605	-69284	6782	9.3849	9.3849	-16405	10521	44431	95155	151772	47863	139587	No	20.58	Si
SLU 84	-0.98	13245.25	-77298	-61838	5281	9.3849	9.3849	-14642	10286	43439	95155	151772	47863	138594	No	26.24	Si
SLU 84	2	5520.01	-89639	-71712	7029	9.3849	9.3849	-16980	10597	44755	95155	151772	47863	139910	No	19.91	Si
SLU 76	-0.98	12807.16	-74465	-59572	5195	9.3849	9.3849	-14106	10214	43136	95155	151772	47863	138292	No	26.62	Si
SLU 76	2	5729.91	-86003	-68802	6888	9.3849	9.3849	-16291	10506	44367	95155	151772	47863	139522	No	20.26	Si
SLU 82	-0.98	13118.12	-76688	-61351	5240	9.3849	9.3849	-14527	10270	43374	95155	151772	47863	138529	No	26.44	Si
SLU 82	2	5587.16	-88559	-70847	6969	9.3849	9.3849	-16776	10570	44640	95155	151772	47863	139795	No	20.06	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 10	-0.98	12448.84	-55236	-44189	15997	9.3849	9.3849	-10463	14593	61628	95155	227658	47863	156783		9.8	Si
SLD 10	2	-12735.37	-64458	-51566	15397	9.3849	9.3849	-12210	14942	63104	95155	227658	47863	158259		10.28	Si
SLV 9	-0.98	16373.93	-59305	-47444	29827	9.3849	9.3849	-11234	14747	62279	95155	227658	47863	157434		5.28	Si
SLV 9	2	-30502.3	-72021	-57617	27006	9.3849	9.3849	-13643	15229	64314	95155	227658	47863	159469		5.9	Si
SLV 8	-0.98	1532.96	-45086	-36069	-23235	9.3849	9.3849	-8541	14208	60004	95155	227658	47863	155159		6.68	Si
SLV 8	2	37407.09	-45387	-36309	-18091	9.3849	9.3849	-8598	14220	60052	95155	227658	47863	155207		8.58	Si
SLV 6	-0.98	13239.93	-45551	-36441	30175	9.3849	9.3849	-8629	14226	60078	95155	227658	47863	155234		5.14	Si
SLV 6	2	-29977.62	-54287	-43429	26911	9.3849	9.3849	-10283	14557	61476	95155	227658	47863	156631		5.82	Si
SLV 11	-0.98	4666.95	-58840	-47072	-23583	9.3849	9.3849	-11146	14729	62205	95155	227658	47863	157360		6.67	Si
SLV 11	2	36882.41	-63121	-50497	-17996	9.3849	9.3849	-11957	14891	62890	95155	227658	47863	158045		8.78	Si
SLV 12	-0.98	5271.65	-58834	-47068	-21210	9.3849	9.3849	-11145	14729	62204	95155	227658	47863	157359		7.42	Si
SLV 12	2	34147.68	-63160	-50528	-15625	9.3849	9.3849	-11964	14893	62896	95155	227658	47863	158051		10.12	Si
SLV 10	-0.98	16978.63	-59299	-47439	32200	9.3849	9.3849	-11233	14747	62278	95155	227658	47863	157433		4.89	Si
SLV 10	2	-33237.03	-72060	-57648	29378	9.3849	9.3849	-13650	15230	64320	95155	227658	47863	159475		5.43	Si
SLV 5	-0.98	12635.24	-45556	-36445	27802	9.3849	9.3849	-8630	14226	60079	95155	227658	47863	155235		5.58	Si
SLV 5	2	-27242.9	-54248	-43398	24540	9.3849	9.3849	-10276	14555	61470	95155	227658	47863	156625		6.38	Si
SLV 14	-0.98	17414.09	-75175	-60140	16540	9.3849	9.3849	-14240	15348	64818	95155	227658	47863	159973		9.67	Si
SLV 14	2	-14228.74	-89691	-71753	17175	9.3849	9.3849	-16990	15898	67141	95155	227658	47863	162296		9.45	Si
SLV 7	-0.98	928.26	-45092	-36074	-25608	9.3849	9.3849	-8542	14208	60005	95155	227658	47863	155160		6.06	Si
SLV 7	2	40141.81	-45348	-36278	-20463	9.3849	9.3849	-8590	14218	60046	95155	227658	47863	155201		7.58	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 0.51 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-29019	0.25	716.13	6284.54	8792.34	7538.44	10.53	Si
SLV 4	-29032	0.25	716.13	6287.26	8795.43	7541.34	10.53	Si
SLV 1	-29904	0.25	716.13	6468.44	9001.38	7734.91	10.8	Si
SLV 2	-29917	0.25	716.13	6471.15	9004.46	7737.8	10.81	Si
SLV 7	-46301	0.25	716.13	9794.66	12853.14	11323.9	15.81	Si
SLV 8	-46310	0.25	716.13	9796.31	12855.08	11325.7	15.82	Si
SLV 5	-49250	0.25	716.13	10376.26	13542.2	11959.23	16.7	Si
SLV 6	-49259	0.25	716.13	10377.89	13544.15	11961.02	16.7	Si
SLV 11	-61997	0.25	716.13	12832.14	16508.53	14670.34	20.49	Si
SLV 12	-62006	0.25	716.13	12833.71	16510.47	14672.09	20.49	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.51 Wa = 0.08 Ta = 0.033

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-72060	-59299	-136	0.716	9119.5	0.945	11.02139	4.45299	Si
SLV 9	-72021	-59305	-135	0.717	9115.6	0.945	11.02627	4.45299	Si
SLV 14	-89691	-75175	-861	0.597	10909	0.953	9.11268	3.37435	Si
SLV 13	-89630	-75184	-861	0.598	10902.9	0.953	9.11775	3.37435	Si
SLV 12	-63160	-58834	-17	0.794	8217.7	0.939	12.29073	4.45299	Si
SLV 11	-63121	-58840	-17	0.795	8213.8	0.939	12.2969	4.45299	Si
SLV 16	-87021	-75035	-825	0.612	10637.9	0.952	9.34478	3.37435	Si
SLV 15	-86960	-75044	-825	0.612	10631.7	0.951	9.35015	3.37435	Si
SLV 6	-54287	-45551	522	0.884	7320.3	0.933	13.76506	4.45299	Si
SLV 5	-54248	-45556	522	0.884	7316.3	0.933	13.77294	4.45299	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	25.162	SLU 84	Si
V_SLU	19.906	SLU 84	Si
PF_SLV	5.266	SLV 7	Si
V_SLV	4.889	SLV 10	Si
PFFP_SLV	10.527	SLV 3	Si
R_SLV	2.475	SLV 10	Si

Maschio 47

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.633	-3.284	-24.633	5.876	L4	L5	9.16	0.28	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 60	2	-3361.29	-69810	-0.000044	0.0003743	0.0035	9.16	234252.7	283326.15	283326.15	84.29	No	Si
SLU 60	5.44	-5094.45	-48520	-0.0000311	0.0003743	0.0035	9.16	180929.84	216981.64	216981.64	42.59	No	Si
SLU 32	2	-3283.63	-64358	-0.0000404	0.0003743	0.0035	9.16	222111.14	267417.35	267417.35	81.44	No	Si
SLU 32	5.44	-5059.46	-45942	-0.0000294	0.0003743	0.0035	9.16	173394.68	208177.2	208177.2	41.15	No	Si
SLU 39	2	-3292.92	-65891	-0.0000414	0.0003743	0.0035	9.16	225630.79	272043.63	272043.63	82.61	No	Si
SLU 39	5.44	-5432.45	-46570	-0.00003	0.0003743	0.0035	9.16	175252.25	210309.6	210309.6	38.71	No	Si
SLU 77	2	-3876.13	-76968	-0.000049	0.0003743	0.0035	9.16	248608.1	303109.02	303109.02	78.2	No	Si
SLU 77	5.44	-5536.9	-54831	-0.0000352	0.0003743	0.0035	9.16	198394.83	237768.7	237768.7	42.94	No	Si
SLU 83	2	-3885.42	-78501	-0.00005	0.0003743	0.0035	9.16	251449.49	307342	307342	79.1	No	Si
SLU 83	5.44	-5909.89	-55459	-0.0000358	0.0003743	0.0035	9.16	200056.55	239807.53	239807.53	40.58	No	Si
SLU 35	2	-3242.47	-65348	-0.0000411	0.0003743	0.0035	9.16	224393.03	270404.21	270404.21	83.39	No	Si
SLU 35	5.44	-4915.18	-46973	-0.00003	0.0003743	0.0035	9.16	176435.48	211680.63	211680.63	43.07	No	Si
SLU 18	2	-2727.63	-58190	-0.0000362	0.0003743	0.0035	9.16	207119.95	248430.54	248430.54	91.08	No	Si
SLU 18	5.44	-4472.74	-40662	-0.0000259	0.0003743	0.0035	9.16	157230.71	189707.68	189707.68	42.41	No	Si
SLU 41	2	-3251.76	-66881	-0.0000421	0.0003743	0.0035	9.16	227859.43	275030.98	275030.98	84.58	No	Si
SLU 41	5.44	-5288.18	-47601	-0.0000306	0.0003743	0.0035	9.16	178270.34	213826.75	213826.75	40.43	No	Si
SLU 81	2	-3926.58	-77511	-0.0000494	0.0003743	0.0035	9.16	249624.38	304609.18	304609.18	77.58	No	Si
SLU 81	5.44	-6054.16	-54429	-0.0000352	0.0003743	0.0035	9.16	197322.58	236466.21	236466.21	39.06	No	Si
SLU 74	2	-3917.29	-75978	-0.0000483	0.0003743	0.0035	9.16	246729.74	300375.11	300375.11	76.68	No	Si
SLU 74	5.44	-5681.17	-53800	-0.0000346	0.0003743	0.0035	9.16	195638.15	234440.44	234440.44	41.27	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	2	11923.44	-43660	-0.0000303	0.0005615	0.0035	9.16		186384.1	186384.1	15.63		Si
SLV 10	5.44	59680.19	-33956	-0.0000432	0.0005615	0.0035	9.16		149096.4	149096.4	2.5		Si
SLV 5	2	13681.08	-64064	-0.0000435	0.0005615	0.0035	9.16		255592.76	255592.76	18.68		Si
SLV 5	5.44	64064.01	-39561	-0.0000482	0.0005615	0.0035	9.16		171204.65	171204.65	2.67		Si
SLV 6	2	12629.75	-64180	-0.0000432	0.0005615	0.0035	9.16		255996.26	255996.26	20.27		Si
SLV 6	5.44	60148.73	-39581	-0.0000466	0.0005615	0.0035	9.16		171284.23	171284.23	2.85		Si
SLV 9	2	12974.77	-43543	-0.0000306	0.0005615	0.0035	9.16		185997.92	185997.92	14.34		Si
SLV 9	5.44	63595.48	-33935	-0.0000451	0.0005615	0.0035	9.16		149013.86	149013.86	2.34		Si
SLV 8	2	-18802.06	-60190	-0.0000431	0.0005615	0.0035	9.16		268165.33	268165.33	14.26		Si
SLV 8	5.44	-71003.67	-38421	-0.0000508	0.0005615	0.0035	9.16		187273.23	187273.23	2.64		Si
SLV 7	2	-17750.73	-60074	-0.0000427	0.0005615	0.0035	9.16		267762.25	267762.25	15.08		Si
SLV 7	5.44	-67088.39	-38401	-0.0000489	0.0005615	0.0035	9.16		187195.12	187195.12	2.79		Si
SLD 12	2	-10296.69	-46640	-0.0000315	0.0005615	0.0035	9.16		218735.67	218735.67	21.24		Si
SLD 12	5.44	-33517.57	-34729	-0.0000332	0.0005615	0.0035	9.16		172533.79	172533.79	5.15		Si
SLV 12	2	-19508.38	-39670	-0.0000308	0.0005615	0.0035	9.16		192003.91	192003.91	9.84		Si
SLV 12	5.44	-71472.21	-32796	-0.0000493	0.0005615	0.0035	9.16		164794.42	164794.42	2.31		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	2	-18457.05	-39553	-0.0000303	0.0005615	0.0035	9.16		191562.53	191562.53	10.38		Si
SLV 11	5.44	-67556.93	-32775	-0.0000469	0.0005615	0.0035	9.16		164712.6	164712.6	2.44		Si
SLV 16	2	-9628.73	-17159	-0.0000136	0.0005615	0.0035	9.16		100629.75	100629.75	10.45		Si
SLV 16	5.44	-27223.24	-26644	-0.0000259	0.0005615	0.0035	9.16		140082.5	140082.5	5.15		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	2	-3853.45	-76295	-63532	2848	9.16	9.16	-24771	10247	26282	38062	76802	23358	64344	No	22.59	Si
SLU 79	5.44	-5374.55	-54176	-45113	3508	9.16	9.16	-17589	9290	23826	38062	76802	23358	61888	No	17.64	Si
SLU 82	2	-4544.41	-77769	-64760	2923	9.16	9.16	-25249	10311	26446	38062	76802	23358	64508	No	22.07	Si
SLU 82	5.44	-5357.76	-54493	-45377	3651	9.16	9.16	-17692	9303	23861	38062	76802	23358	61923	No	16.96	Si
SLU 84	2	-4503.25	-78759	-65584	2868	9.16	9.16	-25571	10354	26556	38062	76802	23358	64618	No	22.53	Si
SLU 84	5.44	-5213.49	-55524	-46235	3605	9.16	9.16	-18027	9348	23976	38062	76802	23358	62038	No	17.21	Si
SLU 81	2	-3926.58	-77511	-64545	3265	9.16	9.16	-25166	10300	26417	38062	76802	23358	64479	No	19.75	Si
SLU 81	5.44	-6054.16	-54429	-45323	3928	9.16	9.16	-17671	9301	23854	38062	76802	23358	61916	No	15.76	Si
SLU 60	2	-3361.29	-69810	-58132	3141	9.16	9.16	-22665	9966	25562	38062	76802	23358	63624	No	20.26	Si
SLU 60	5.44	-5094.45	-48520	-40403	3747	9.16	9.16	-15753	9045	23198	38062	76802	23358	61260	No	16.35	Si
SLU 61	2	-3979.12	-70068	-58347	2799	9.16	9.16	-22749	9978	25591	38062	76802	23358	63653	No	22.74	Si
SLU 61	5.44	-4398.05	-48584	-40457	3470	9.16	9.16	-15774	9048	23205	38062	76802	23358	61267	No	17.65	Si
SLU 62	2	-3320.13	-70800	-58956	3085	9.16	9.16	-22987	10009	25672	38062	76802	23358	63734	No	20.66	Si
SLU 62	5.44	-4950.18	-49551	-41261	3700	9.16	9.16	-16088	9089	23313	38062	76802	23358	61375	No	16.59	Si
SLU 83	2	-3885.42	-78501	-65369	3210	9.16	9.16	-25487	10343	26527	38062	76802	23358	64589	No	20.12	Si
SLU 83	5.44	-5909.89	-55459	-46182	3882	9.16	9.16	-18006	9345	23969	38062	76802	23358	62031	No	15.98	Si
SLU 74	2	-3917.29	-75978	-63268	2931	9.16	9.16	-24668	10233	26247	38062	76802	23358	64309	No	21.94	Si
SLU 74	5.44	-5681.17	-53800	-44800	3588	9.16	9.16	-17467	9273	23784	38062	76802	23358	61847	No	17.24	Si
SLU 77	2	-3876.13	-76968	-64092	2876	9.16	9.16	-24989	10276	26357	38062	76802	23358	64419	No	22.4	Si
SLU 77	5.44	-5536.9	-54831	-45659	3542	9.16	9.16	-17802	9318	23899	38062	76802	23358	61961	No	17.5	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	2	-18802.06	-60190	-50121	35439	9.16	9.16	-19542	14325	36741	38062	115202	23358	74803		2.11	Si
SLV 8	5.44	-71003.67	-38421	-31994	29383	9.16	8.1959	-14016	13220	30337	38062	115202	23358	68400		2.33	Si
SLV 7	2	-17750.73	-60074	-50024	32980	9.16	9.16	-19504	14317	36721	38062	115202	23358	74784		2.27	Si
SLV 7	5.44	-67088.39	-38401	-31977	26935	9.16	8.4988	-13517	13120	31222	38062	115202	23358	69284		2.57	Si
SLV 6	2	12629.75	-64180	-53444	-25566	9.16	9.16	-20837	14584	37405	38062	115202	23358	75467		2.95	Si
SLV 6	5.44	60148.73	-39581	-32960	-19809	9.16	9.16	-12851	12987	33309	38062	115202	23358	71371		3.6	Si
SLD 8	2	-9996.72	-55418	-46147	16635	9.16	9.16	-17993	14015	35946	38062	115202	23358	74008		4.45	Si
SLD 8	5.44	-33314.14	-37139	-30927	14226	9.16	9.16	-12058	12828	32902	38062	115202	23358	70964		4.99	Si
SLV 5	2	13681.08	-64064	-53347	-28024	9.16	9.16	-20800	14577	37386	38062	115202	23358	75448		2.69	Si
SLV 5	5.44	64064.01	-39561	-32943	-22257	9.16	8.8819	-12844	12986	32294	38062	115202	23358	70356		3.16	Si
SLV 12	2	-19508.38	-39670	-33033	31832	9.16	9.16	-12880	12993	33323	38062	115202	23358	71385		2.24	Si
SLV 12	5.44	-71472.21	-32796	-27309	26981	9.16	7.202	-13625	13142	26502	38062	115202	23358	64564		2.39	Si
SLV 11	2	-18457.05	-39553	-32936	29373	9.16	9.16	-12842	12985	33304	38062	115202	23358	71366		2.43	Si
SLV 11	5.44	-67556.93	-32775	-27292	24533	9.16	7.5563	-12978	13012	27531	38062	115202	23358	65593		2.67	Si
SLV 4	2	-7274.34	-85560	-71247	18992	9.16	9.16	-27779	15972	40966	38062	115202	23358	79028		4.16	Si
SLV 4	5.44	-25661.45	-45396	-37802	15660	9.16	9.16	-14739	13364	34277	38062	115202	23358	72339		4.62	Si
SLV 10	2	11923.44	-43660	-36356	-29173	9.16	9.16	-14175	13252	33988	38062	115202	23358	72050		2.47	Si
SLV 10	5.44	59680.19	-33956	-28276	-22211	9.16	8.4673	-11024	12622	29924	38062	115202	23358	67986		3.06	Si
SLV 9	2	12974.77	-43543	-36259	-31632	9.16	9.16	-14137	13244	33969	38062	115202	23358	72031		2.28	Si
SLV 9	5.44	63595.48	-33935	-28258	-24659	9.16	8.118	-11018	12620	28686	38062	115202	23358	66748		2.71	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 15	179667	0.32	8938	-22924	744.13	3021.55	4.06	Si
SLV 16	179667	0.32	8985	-23043	744.13	3036.29	4.08	Si
SLV 13	179667	0.32	9205	-23609	744.13	3106.05	4.17	Si
SLV 14	179667	0.32	9252	-23728	744.13	3120.74	4.19	Si
SLV 11	179667	0.32	14287	-36644	744.13	4650.25	6.25	Si
SLV 12	179667	0.32	14317	-36721	744.13	4658.92	6.26	Si
SLV 9	179667	0.32	15178	-38928	744.13	4908.24	6.6	Si
SLV 10	179667	0.32	15207	-39004	744.13	4916.78	6.61	Si
SLV 7	179667	0.32	19133	-49071	744.13	6009.27	8.08	Si
SLV 8	179667	0.32	19162	-49147	744.13	6017.27	8.09	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.05 Ta = 0.0706

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-39581	-64180	-948	1.11	5285.9	0.935	17.25845	10.95836	Si
SLV 5	-39561	-64064	-948	1.111	5283.8	0.935	17.26573	10.95836	Si
SLV 8	-38421	-60190	-1001	1.136	5168.6	0.934	17.67953	10.95836	Si
SLV 7	-38401	-60074	-1002	1.136	5166.5	0.934	17.68719	10.95836	Si
SLV 10	-33956	-43660	1037	1.252	4717.9	0.929	19.5891	10.95836	Si
SLV 9	-33935	-43543	1036	1.252	4715.8	0.929	19.59922	10.95836	Si
SLV 12	-32796	-39670	983	1.288	4600.9	0.927	20.18051	10.95836	Si
SLV 11	-32775	-39553	982	1.288	4598.9	0.927	20.19124	10.95836	Si
SLV 2	-45744	-86757	-3281	0.944	5909.5	0.941	14.58413	5.89448	Si
SLV 1	-45712	-86575	-3282	0.945	5906.2	0.941	14.59252	5.89448	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita

dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	38.714	SLU 39	Si
V_SLU	15.762	SLU 81	Si
PF_SLV	2.306	SLV 12	Si
V_SLV	2.111	SLV 8	Si
PFFP_SLV	4.061	SLV 15	Si
R_SLV	1.575	SLV 6	Si

Maschio 48

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.763	5.826	-24.633	5.826	L4	L5	1.87	0.28	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 44	2.9	-497.66	-11624	-0.0000392	0.0003743	0.0035	1.87	8498.5	10039.71	10039.71	20.17	No	Si
SLU 44	4.8	467.05	-9326	-0.0000317	0.0003743	0.0035	1.87	7194.4	7593.12	7593.12	16.26	No	Si
SLU 1	2.9	-375.34	-9268	-0.0000307	0.0003743	0.0035	1.87	7158.73	8444.53	8444.53	22.5	No	Si
SLU 1	4.8	330.81	-7507	-0.0000249	0.0003743	0.0035	1.87	6030.26	6327.5	6327.5	19.13	No	Si
SLU 43	2.9	-498.46	-11583	-0.0000391	0.0003743	0.0035	1.87	8476.84	10013.65	10013.65	20.09	No	Si
SLU 43	4.8	468.01	-9214	-0.0000314	0.0003743	0.0035	1.87	7125.81	7513.32	7513.32	16.05	No	Si
SLU 48	2.9	-510.25	-12168	-0.000041	0.0003743	0.0035	1.87	8780	10388.23	10388.23	20.36	No	Si
SLU 48	4.8	459.72	-9830	-0.0000332	0.0003743	0.0035	1.87	7496.23	7953.12	7953.12	17.3	No	Si
SLU 51	2.9	-514.73	-12074	-0.0000408	0.0003743	0.0035	1.87	8732	10327.47	10327.47	20.06	No	Si
SLU 51	4.8	466.94	-9774	-0.0000331	0.0003743	0.0035	1.87	7463.29	7913.1	7913.1	16.95	No	Si
SLU 50	2.9	-515.21	-12049	-0.0000407	0.0003743	0.0035	1.87	8719.39	10311.62	10311.62	20.01	No	Si
SLU 50	4.8	467.51	-9707	-0.0000329	0.0003743	0.0035	1.87	7423.25	7864.71	7864.71	16.82	No	Si
SLU 46	2.9	-501.4	-11959	-0.0000403	0.0003743	0.0035	1.87	8673.34	10253.99	10253.99	20.45	No	Si
SLU 46	4.8	459.4	-9651	-0.0000327	0.0003743	0.0035	1.87	7389.98	7824.69	7824.69	17.03	No	Si
SLU 47	2.9	-506.04	-11857	-0.00004	0.0003743	0.0035	1.87	8620.4	10188.36	10188.36	20.13	No	Si
SLU 47	4.8	466.8	-9573	-0.0000325	0.0003743	0.0035	1.87	7343.22	7768.77	7768.77	16.64	No	Si
SLU 45	2.9	-501.88	-11935	-0.0000402	0.0003743	0.0035	1.87	8660.64	10238.19	10238.19	20.4	No	Si
SLU 45	4.8	459.97	-9584	-0.0000324	0.0003743	0.0035	1.87	7349.64	7776.43	7776.43	16.91	No	Si
SLU 49	2.9	-509.77	-12192	-0.0000411	0.0003743	0.0035	1.87	8792.5	10404.14	10404.14	20.41	No	Si
SLU 49	4.8	459.15	-9898	-0.0000334	0.0003743	0.0035	1.87	7535.98	8001.65	8001.65	17.43	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	2.9	169.68	-3439	-0.0000113	0.0005615	0.0035	1.87		3293.2	3293.2	19.41		Si
SLV 11	4.8	1005.83	877	0.0682037	0.0005615	0.0035	1.496		0	0	0		No
SLV 15	2.9	-3136.83	-8783	-0.0000551	0.0005615	0.0035	1.87		8385.76	8385.76	2.67		Si
SLV 15	4.8	2709.27	-3765	-0.0000638	0.0005615	0.0035	1.87		3576.57	3576.57	1.32		Si
SLV 13	2.9	-4013.08	-12918	-0.0000762	0.0005615	0.0035	1.87		11481.35	11481.35	2.86		Si
SLV 13	4.8	2688.52	-9067	-0.0000513	0.0005615	0.0035	1.87		7906.85	7906.85	2.94		Si
SLV 7	2.9	2155.52	-3035	-0.0000487	0.0005615	0.0035	1.87		2940.94	2940.94	1.36		Si
SLV 7	4.8	-496.16	-582	-0.0000211	0.0005615	0.0035	1.496		1432.52	1432.52	2.89		Si
SLV 3	2.9	3482.65	-7439	-0.0000579	0.0005615	0.0035	1.87		6650.6	6650.6	1.91		Si
SLV 3	4.8	-2297.36	-8628	-0.0000463	0.0005615	0.0035	1.87		8261.4	8261.4	3.6		Si
SLV 14	2.9	-4193.5	-12638	-0.0000773	0.0005615	0.0035	1.87		11277.92	11277.92	2.69		Si
SLV 14	4.8	2825.05	-8199	-0.0000502	0.0005615	0.0035	1.87		7258.75	7258.75	2.57		Si
SLV 8	2.9	2040.29	-2857	-0.0000466	0.0005615	0.0035	1.87		2783.46	2783.46	1.36		Si
SLV 8	4.8	-408.97	-28	-0.0001897	0.0005615	0.0035	1.496		924.06	924.06	2.26		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	2.9	-3317.26	-8504	-0.0000567	0.0005615	0.0035	1.87		8162.89	8162.89	2.46		Si
SLV 16	4.8	2845.8	-2896	-0.0013993	0.0005615	0.0035	1.496		2818.05	2818.05	0.99		No
SLV 4	2.9	3302.23	-7160	-0.0000548	0.0005615	0.0035	1.87		6424.42	6424.42	1.95		Si
SLV 4	4.8	-2160.83	-7759	-0.0000424	0.0005615	0.0035	1.87		7572.65	7572.65	3.5		Si
SLV 12	2.9	54.45	-3260	-0.0000097	0.0005615	0.0035	1.87		3138	3138	57.63		Si
SLV 12	4.8	1093.02	1431	0.1201505	0.0005615	0.0035	1.496		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 46	2.9	-501.4	-11959	-9959	-468	1.87	1.87	-19020	9480	4964	38062	15679	4768	20447	No	43.73	Si
SLU 46	4.8	459.4	-9651	-8037	-423	1.87	1.87	-15349	8991	4708	38062	15679	4768	20447	No	48.29	Si
SLU 48	2.9	-510.25	-12168	-10132	-487	1.87	1.87	-19352	9525	4987	38062	15679	4768	20447	No	41.98	Si
SLU 48	4.8	459.72	-9830	-8186	-442	1.87	1.87	-15634	9029	4728	38062	15679	4768	20447	No	46.24	Si
SLU 1	2.9	-375.34	-9268	-7717	-332	1.87	1.87	-14739	8910	4665	38062	15679	4768	20447	No	61.68	Si
SLU 1	4.8	330.81	-7507	-6251	-297	1.87	1.87	-11938	8536	4470	38062	15679	4768	20447	No	68.8	Si
SLU 43	2.9	-498.46	-11583	-9645	-500	1.87	1.87	-18422	9401	4922	38062	15679	4768	20447	No	40.86	Si
SLU 43	4.8	468.01	-9214	-7672	-457	1.87	1.87	-14653	8898	4659	38062	15679	4768	20447	No	44.71	Si
SLU 45	2.9	-501.88	-11935	-9938	-489	1.87	1.87	-18981	9475	4961	38062	15679	4768	20447	No	41.78	Si
SLU 45	4.8	459.97	-9584	-7980	-445	1.87	1.87	-15242	8977	4700	38062	15679	4768	20447	No	45.93	Si
SLU 49	2.9	-509.77	-12192	-10153	-465	1.87	1.87	-19391	9530	4990	38062	15679	4768	20447	No	43.94	Si
SLU 49	4.8	459.15	-9898	-8242	-420	1.87	1.87	-15741	9043	4735	38062	15679	4768	20447	No	48.63	Si
SLU 51	2.9	-514.73	-12074	-10054	-474	1.87	1.87	-19202	9505	4977	38062	15679	4768	20447	No	43.13	Si
SLU 51	4.8	466.94	-9774	-8139	-430	1.87	1.87	-15545	9017	4721	38062	15679	4768	20447	No	47.59	Si
SLU 44	2.9	-497.66	-11624	-9680	-464	1.87	1.87	-18487	9409	4927	38062	15679	4768	20447	No	44.05	Si
SLU 44	4.8	467.05	-9326	-7766	-421	1.87	1.87	-14832	8922	4672	38062	15679	4768	20447	No	48.56	Si
SLU 47	2.9	-506.04	-11857	-9874	-462	1.87	1.87	-18857	9459	4953	38062	15679	4768	20447	No	44.26	Si
SLU 47	4.8	466.8	-9573	-7971	-418	1.87	1.87	-15224	8974	4699	38062	15679	4768	20447	No	48.9	Si
SLU 50	2.9	-515.21	-12049	-10033	-496	1.87	1.87	-19163	9499	4974	38062	15679	4768	20447	No	41.24	Si
SLU 50	4.8	467.51	-9707	-8083	-451	1.87	1.87	-15438	9003	4714	38062	15679	4768	20447	No	45.3	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	2.9	169.68	-3439	-2864	-5008	1.87	1.87	-5469	11510	6027	38062	23518	4768	28287		5.65	Si
SLV 11	4.8	1005.83	877	730	-4486	1.496	0	0	0	0	38062	18814	3815	22629		5.04	Si
SLV 15	2.9	-3136.83	-8783	-7314	-5916	1.87	1.7336	-15170	13451	6529	38062	23518	4768	28287		4.78	Si
SLV 15	4.8	2709.27	-3765	-3135	-5163	1.87	0.646	-5987	11614	2101	38062	23518	4768	28287		5.48	Si
SLV 14	2.9	-4193.5	-12638	-10524	-4291	1.87	1.8095	-20100	14437	7315	38062	23518	4768	28287		6.59	Si
SLV 14	4.8	2825.05	-8199	-6827	-3714	1.87	1.7713	-13039	13025	6460	38062	23518	4768	28287		7.62	Si
SLV 3	2.9	3482.65	-7439	-6194	3860	1.87	1.4005	-11831	12783	5013	38062	23518	4768	28287		7.33	Si
SLV 3	4.8	-2297.36	-8628	-7184	3357	1.87	1.87	-13721	13161	6891	38062	23518	4768	28287		8.43	Si
SLV 16	2.9	-3317.26	-8504	-7081	-6375	1.87	1.6347	-15589	13534	6195	38062	23518	4768	28287		4.44	Si
SLV 16	4.8	2845.8	-2896	-2412	-5620	1.496	0	0	0	0	38062	18814	3815	22629		4.03	Si
SLV 5	2.9	-765.3	-16817	-14004	4871	1.87	1.87	-26745	15766	8255	38062	23518	4768	28287		5.81	Si
SLV 5	4.8	-565.33	-18258	-15203	4421	1.87	1.87	-29037	16224	8495	38062	23518	4768	28287		6.4	Si
SLV 6	2.9	-880.53	-16638	-13855	4578	1.87	1.87	-26462	15709	8225	38062	23518	4768	28287		6.18	Si
SLV 6	4.8	-478.14	-17703	-14742	4129	1.87	1.87	-28155	16048	8402	38062	23518	4768	28287		6.85	Si
SLV 2	2.9	2425.98	-11294	-9405	5486	1.87	1.87	-17962	14009	7335	38062	23518	4768	28287		5.16	Si
SLV 2	4.8	-2181.58	-13062	-10877	4806	1.87	1.87	-20773	14571	7629	38062	23518	4768	28287		5.89	Si
SLV 1	2.9	2606.41	-11573	-9637	5944	1.87	1.87	-18406	14098	7382	38062	23518	4768	28287		4.76	Si
SLV 1	4.8	-2318.11	-13930	-11600	5263	1.87	1.87	-22154	14848	7774	38062	23518	4768	28287		5.37	Si
SLV 12	2.9	54.45	-3260	-2715	-5301	1.87	1.87	-5185	11454	5997	38062	23518	4768	28287		5.34	Si
SLV 12	4.8	1093.02	1431	1192	-4778	1.496	0.514	0	0	0	38062	18814	3815	22629		4.74	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 8	179667	0.32	0	-921	151.91	0	0	No, e>t/2
SLV 12	179667	0.32	0	-806	151.91	0	0	No, e>t/2
SLV 11	179667	0.32	2176	-1139	151.91	157.25	1.04	Si
SLV 7	179667	0.32	2395	-1254	151.91	172.78	1.14	Si
SLV 16	179667	0.32	12397	-6491	151.91	834.99	5.5	Si
SLV 4	179667	0.32	13125	-6872	151.91	879.44	5.79	Si
SLV 15	179667	0.32	13394	-7013	151.91	895.69	5.9	Si
SLV 3	179667	0.32	14122	-7394	151.91	939.45	6.18	Si
SLV 14	179667	0.32	22076	-11559	151.91	1384.34	9.11	Si
SLV 2	179667	0.32	22804	-11940	151.91	1422.02	9.36	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.05 Ta = 0.0706

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-16658	-7670	-489	0.592	1949.8	0.961	8.95385	10.95836	No
SLV 6	-16151	-7541	-490	0.608	1898.2	0.96	9.20071	10.95836	No
SLV 9	-16061	-6612	-247	0.624	1889	0.96	9.45395	10.95836	No
SLV 10	-15554	-6483	-247	0.642	1837.5	0.959	9.72493	10.95836	No
SLV 1	-11695	-9481	-514	0.796	1445.4	0.949	12.18492	5.89448	Si
SLV 2	-10902	-9279	-514	0.844	1364.9	0.947	12.95284	5.89448	Si
SLV 13	-9704	-5956	294	0.948	1243.4	0.942	14.62346	5.89448	Si
SLV 14	-8910	-5755	294	1.016	1163	0.939	15.73419	5.89448	Si
SLV 3	-6721	-9945	-292	1.273	941.9	0.927	19.94478	5.89448	Si
SLV 4	-5927	-9743	-292	1.402	862	0.922	22.09718	5.89448	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	16.054	SLU 43	Si
V_SLU	40.859	SLU 43	Si
PF_SLV	0	SLV 11	No
V_SLV	4.027	SLV 16	Si
PFFP_SLV	0	SLV 8	No
R_SLV	0.817	SLV 5	No

Maschio 49

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.683	5.826	-21.763	5.826	L4	L5	2.08	0.28	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 49	2.9	-4109.14	-13767	-0.0000698	0.0003743	0.0035	2.08	10993.74	13028.33	13028.33	3.17	No	Si
SLU 49	4.8	1738.17	-18285	-0.0000641	0.0003743	0.0035	2.08	13152.26	14824.12	14824.12	8.53	No	Si
SLU 64	2.9	-4295.44	-14831	-0.0000747	0.0003743	0.0035	2.08	11566.67	13759.49	13759.49	3.2	No	Si
SLU 64	4.8	1868.08	-19637	-0.0000694	0.0003743	0.0035	2.08	13659.35	15678.23	15678.23	8.39	No	Si
SLU 43	2.9	-3988.71	-13023	-0.0000666	0.0003743	0.0035	2.08	10569.33	12497.34	12497.34	3.13	No	Si
SLU 43	4.8	1690.23	-17248	-0.0000605	0.0003743	0.0035	2.08	12720.1	14180.89	14180.89	8.39	No	Si
SLU 50	2.9	-4082.93	-13555	-0.000069	0.0003743	0.0035	2.08	10874.82	12875.86	12875.86	3.15	No	Si
SLU 50	4.8	1727.23	-18048	-0.0000633	0.0003743	0.0035	2.08	13057.13	14676.48	14676.48	8.5	No	Si
SLU 44	2.9	-3994.44	-13088	-0.0000668	0.0003743	0.0035	2.08	10607.35	12543.35	12543.35	3.14	No	Si
SLU 44	4.8	1701.12	-17324	-0.0000609	0.0003743	0.0035	2.08	12753.01	14227.54	14227.54	8.36	No	Si
SLU 47	2.9	-4041.56	-13354	-0.000068	0.0003743	0.0035	2.08	10760.73	12732.22	12732.22	3.15	No	Si
SLU 47	4.8	1719.62	-17724	-0.0000622	0.0003743	0.0035	2.08	12923.27	14474.75	14474.75	8.42	No	Si
SLU 48	2.9	-4105.7	-13728	-0.0000697	0.0003743	0.0035	2.08	10971.88	13000.09	13000.09	3.17	No	Si
SLU 48	4.8	1731.63	-18239	-0.0000639	0.0003743	0.0035	2.08	13134.08	14795.61	14795.61	8.54	No	Si
SLU 45	2.9	-4058.59	-13462	-0.0000685	0.0003743	0.0035	2.08	10821.99	12809.03	12809.03	3.16	No	Si
SLU 45	4.8	1713.13	-17839	-0.0000625	0.0003743	0.0035	2.08	12971.05	14545.98	14545.98	8.49	No	Si
SLU 51	2.9	-4086.37	-13594	-0.0000691	0.0003743	0.0035	2.08	10896.92	12903.97	12903.97	3.16	No	Si
SLU 51	4.8	1733.77	-18094	-0.0000635	0.0003743	0.0035	2.08	13075.62	14704.89	14704.89	8.48	No	Si
SLU 46	2.9	-4062.03	-13501	-0.0000686	0.0003743	0.0035	2.08	10844.22	12837.08	12837.08	3.16	No	Si
SLU 46	4.8	1719.67	-17884	-0.0000627	0.0003743	0.0035	2.08	12989.87	14574.27	14574.27	8.48	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	2.9	-5551.8	-2526	-0.0017676	0.0005615	0.0035	1.664		3658.32	3658.32	0.66		No
SLV 12	4.8	1739.66	-9600	-0.0000379	0.0005615	0.0035	2.08		9396.47	9396.47	5.4		Si
SLV 11	2.9	-5456.54	-2815	-0.0015303	0.0005615	0.0035	1.664		3943.2	3943.2	0.72		No
SLV 11	4.8	1670.57	-9845	-0.0000381	0.0005615	0.0035	2.08		9610.59	9610.59	5.75		Si
SLD 12	2.9	-4262.89	-7632	-0.0000576	0.0005615	0.0035	2.08		8485.48	8485.48	1.99		Si
SLD 12	4.8	1565.12	-12791	-0.0000453	0.0005615	0.0035	2.08		11861.89	11861.89	7.58		Si
SLV 13	2.9	-5855.46	-10259	-0.0000808	0.0005615	0.0035	2.08		10811.51	10811.51	1.85		Si
SLV 13	4.8	3366.17	-21665	-0.0000849	0.0005615	0.0035	2.08		18533.67	18533.67	5.51		Si
SLV 16	2.9	-6776.16	-5185	-0.001162	0.0005615	0.0035	1.664		6216.24	6216.24	0.92		No
SLV 16	4.8	3291.31	-17205	-0.0000712	0.0005615	0.0035	2.08		15287.93	15287.93	4.64		Si
SLV 15	2.9	-6626.99	-5637	-0.0008194	0.0005615	0.0035	1.664		6647.47	6647.47	1		Si
SLV 15	4.8	3183.12	-17588	-0.0000715	0.0005615	0.0035	2.08		15592.29	15592.29	4.9		Si
SLD 16	2.9	-4795.49	-8792	-0.0000649	0.0005615	0.0035	2.08		9521.1	9521.1	1.99		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 16	4.8	2233.95	-16078	-0.0000597	0.0005615	0.0035	2.08		14399.57	14399.57	6.45		Si
SLV 8	2.9	-3753.92	-4798	-0.0000676	0.0005615	0.0035	1.664		5849.37	5849.37	1.56		Si
SLV 8	4.8	609.47	-7100	-0.0000228	0.0005615	0.0035	2.08		7156.52	7156.52	11.74		Si
SLV 14	2.9	-6004.63	-9807	-0.000085	0.0005615	0.0035	1.664		10415.55	10415.55	1.73		Si
SLV 14	4.8	3474.35	-21282	-0.0000847	0.0005615	0.0035	2.08		18305.11	18305.11	5.27		Si
SLV 7	2.9	-3658.66	-5087	-0.0000574	0.0005615	0.0035	1.664		6123.46	6123.46	1.67		Si
SLV 7	4.8	540.38	-7345	-0.0000229	0.0005615	0.0035	2.08		7380.01	7380.01	13.66		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	2.9	-4654.34	-17014	-14168	-8059	2.08	2.08	-24327	10188	5934	38062	17440	5304	22744	No	2.82	Si
SLU 74	4.8	2056.16	-22634	-18847	-8085	2.08	2.08	-32361	10833	6309	38062	17440	5304	22744	No	2.81	Si
SLU 84	2.9	-4758.88	-17628	-14679	-8300	2.08	2.08	-25204	10305	6002	38062	17440	5304	22744	No	2.74	Si
SLU 84	4.8	2129.09	-23519	-19585	-8328	2.08	2.08	-33627	10833	6309	38062	17440	5304	22744	No	2.73	Si
SLU 75	2.9	-4657.78	-17054	-14201	-8067	2.08	2.08	-24383	10196	5938	38062	17440	5304	22744	No	2.82	Si
SLU 75	4.8	2062.69	-22679	-18885	-8094	2.08	2.08	-32426	10833	6309	38062	17440	5304	22744	No	2.81	Si
SLU 83	2.9	-4755.44	-17589	-14647	-8291	2.08	2.08	-25148	10298	5997	38062	17440	5304	22744	No	2.74	Si
SLU 83	4.8	2122.55	-23474	-19547	-8319	2.08	2.08	-33562	10833	6309	38062	17440	5304	22744	No	2.73	Si
SLU 81	2.9	-4708.33	-17323	-14425	-8184	2.08	2.08	-24768	10247	5968	38062	17440	5304	22744	No	2.78	Si
SLU 81	4.8	2104.05	-23073	-19213	-8211	2.08	2.08	-32990	10833	6309	38062	17440	5304	22744	No	2.77	Si
SLU 82	2.9	-4711.77	-17362	-14458	-8192	2.08	2.08	-24824	10254	5972	38062	17440	5304	22744	No	2.78	Si
SLU 82	4.8	2110.59	-23119	-19251	-8220	2.08	2.08	-33055	10833	6309	38062	17440	5304	22744	No	2.77	Si
SLU 79	2.9	-4678.69	-17108	-14246	-8143	2.08	2.08	-24460	10206	5944	38062	17440	5304	22744	No	2.79	Si
SLU 79	4.8	2070.26	-22843	-19022	-8169	2.08	2.08	-32661	10833	6309	38062	17440	5304	22744	No	2.78	Si
SLU 78	2.9	-4704.89	-17320	-14422	-8175	2.08	2.08	-24764	10246	5967	38062	17440	5304	22744	No	2.78	Si
SLU 78	4.8	2081.19	-23079	-19219	-8202	2.08	2.08	-32999	10833	6309	38062	17440	5304	22744	No	2.77	Si
SLU 80	2.9	-4682.13	-17147	-14278	-8151	2.08	2.08	-24516	10213	5948	38062	17440	5304	22744	No	2.79	Si
SLU 80	4.8	2076.79	-22889	-19060	-8178	2.08	2.08	-32726	10833	6309	38062	17440	5304	22744	No	2.78	Si
SLU 77	2.9	-4701.45	-17281	-14390	-8167	2.08	2.08	-24708	10239	5963	38062	17440	5304	22744	No	2.79	Si
SLU 77	4.8	2074.66	-23034	-19181	-8193	2.08	2.08	-32933	10833	6309	38062	17440	5304	22744	No	2.78	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	2.9	-5855.46	-10259	-8543	-13082	2.08	1.4078	-21907	14799	5833	38062	26160	5304	31464		2.41	Si
SLV 13	4.8	3366.17	-21665	-18041	-12973	2.08	2.08	-30977	16250	9464	38062	26160	5304	31464		2.43	Si
SLD 15	2.9	-4731.46	-8987	-7483	-8515	2.08	1.5405	-17497	13916	6003	38062	26160	5304	31464		3.7	Si
SLD 15	4.8	2187.51	-16243	-13525	-8255	2.08	2.08	-23224	15061	8772	38062	26160	5304	31464		3.81	Si
SLV 9	2.9	-2884.78	-18221	-15173	-9033	2.08	2.08	-26052	15627	9101	38062	26160	5304	31464		3.48	Si
SLV 9	4.8	2280.71	-23435	-19515	-9807	2.08	2.08	-33508	16250	9464	38062	26160	5304	31464		3.21	Si
SLD 13	2.9	-4408.7	-10983	-9146	-8848	2.08	1.9158	-17180	13853	7431	38062	26160	5304	31464		3.56	Si
SLD 13	4.8	2269.75	-18017	-15003	-8812	2.08	2.08	-25760	15569	9067	38062	26160	5304	31464		3.57	Si
SLV 15	2.9	-6626.99	-5637	-4694	-12315	1.664	0	0	0	0	38062	20928	4243	25171		2.04	Si
SLV 15	4.8	3183.12	-17588	-14646	-11683	2.08	2.08	-25148	15446	8996	38062	26160	5304	31464		2.69	Si
SLV 10	2.9	-2980.04	-17932	-14932	-9144	2.08	2.08	-25639	15544	9053	38062	26160	5304	31464		3.44	Si
SLV 10	4.8	2349.81	-23191	-19311	-9918	2.08	2.08	-33157	16250	9464	38062	26160	5304	31464		3.17	Si
SLV 16	2.9	-6776.16	-5185	-4317	-12488	1.664	0	0	0	0	38062	20928	4243	25171		2.02	Si
SLV 16	4.8	3291.31	-17205	-14327	-11856	2.08	2.08	-24599	15337	8932	38062	26160	5304	31464		2.65	Si
SLV 14	2.9	-6004.63	-9807	-8166	-13255	1.664	1.2831	0	0	0	38062	20928	4243	25171		1.9	Si
SLV 14	4.8	3474.35	-21282	-17722	-13146	2.08	2.08	-30429	16250	9464	38062	26160	5304	31464		2.39	Si
SLD 14	2.9	-4472.73	-10789	-8984	-8923	2.08	1.8763	-17223	13861	7282	38062	26160	5304	31464		3.53	Si
SLD 14	4.8	2316.19	-17852	-14866	-8886	2.08	2.08	-25525	15522	9040	38062	26160	5304	31464		3.54	Si
SLD 16	2.9	-4795.49	-8792	-7322	-8589	2.08	1.4838	-17775	13972	5805	38062	26160	5304	31464		3.66	Si
SLD 16	4.8	2233.95	-16078	-13388	-8329	2.08	2.08	-22988	15014	8744	38062	26160	5304	31464		3.78	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.32	10252	-5971	168.97	779.82	4.62	Si
SLV 8	179667	0.32	10702	-6233	168.97	811.48	4.8	Si
SLV 11	179667	0.32	10729	-6249	168.97	813.37	4.81	Si
SLV 7	179667	0.32	11179	-6511	168.97	844.8	5	Si
SLV 16	179667	0.32	17869	-10407	168.97	1286.52	7.61	Si
SLV 15	179667	0.32	18616	-10842	168.97	1332.86	7.89	Si
SLV 4	179667	0.32	19370	-11281	168.97	1379.02	8.16	Si
SLV 3	179667	0.32	20116	-11716	168.97	1424.17	8.43	Si
SLV 14	179667	0.32	24964	-14539	168.97	1702.74	10.08	Si
SLV 13	179667	0.32	25711	-14974	168.97	1743.43	10.32	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.05 Ta = 0.0706

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-20165	-15518	-462	0.555	2335.2	0.964	8.3678	10.95836	No
SLV 10	-19903	-15371	-462	0.561	2308.6	0.963	8.46461	10.95836	No
SLV 5	-18067	-17596	-460	0.609	2121.8	0.96	9.21979	10.95836	No
SLV 6	-17806	-17449	-459	0.617	2095.2	0.96	9.33898	10.95836	No
SLV 13	-18396	-8341	-150	0.615	2155.2	0.961	9.30662	5.89448	Si
SLV 14	-17987	-8111	-149	0.627	2113.6	0.96	9.49338	5.89448	Si
SLV 11	-7907	-1820	438	1.206	1091.2	0.93	18.85782	10.95836	Si
SLV 12	-7646	-1673	438	1.239	1064.8	0.928	19.39031	10.95836	Si
SLV 15	-14719	-4231	120	0.745	1781.4	0.954	11.35387	5.89448	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 16	-14309	-4002	121	0.763	1739.8	0.953	11.6382	5.89448	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.133	SLU 43	Si
V_SLU	2.731	SLU 84	Si
PF_SLV	0.659	SLV 12	No
V_SLV	1.899	SLV 14	Si
PFFP_SLV	4.615	SLV 12	Si
R_SLV	0.764	SLV 9	No

Maschio 50

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.543	-3.314	-24.633	-3.314	L4	L5	2.09	0.28	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 45	2.9	-950.39	-10943	-0.000036	0.0003743	0.0035	2.09	9335.27	11012.06	11012.06	11.59	No	Si
SLU 45	4.8	-143.13	-11030	-0.00003	0.0003743	0.0035	2.09	9392.21	11078.34	11078.34	77.4	No	Si
SLU 69	2.9	-1050.48	-12641	-0.0000416	0.0003743	0.0035	2.09	10407.26	12292.06	12292.06	11.7	No	Si
SLU 69	4.8	-253.89	-13129	-0.0000367	0.0003743	0.0035	2.09	10696.55	12641.83	12641.83	49.79	No	Si
SLU 1	2.9	-736.78	-8544	-0.0000277	0.0003743	0.0035	2.09	7648.26	9080.1	9080.1	12.32	No	Si
SLU 1	4.8	-132.59	-8674	-0.0000235	0.0003743	0.0035	2.09	7744.42	9188.35	9188.35	69.3	No	Si
SLU 3	2.9	-761.14	-8894	-0.0000289	0.0003743	0.0035	2.09	7906.42	9373.36	9373.36	12.31	No	Si
SLU 3	4.8	-138.11	-9068	-0.0000246	0.0003743	0.0035	2.09	8033.53	9518	9518	68.92	No	Si
SLU 66	2.9	-1043.1	-12441	-0.0000409	0.0003743	0.0035	2.09	10286.01	12145.3	12145.3	11.64	No	Si
SLU 66	4.8	-244.51	-12897	-0.000036	0.0003743	0.0035	2.09	10559.69	12476.49	12476.49	51.03	No	Si
SLU 64	2.9	-1018.73	-12092	-0.0000397	0.0003743	0.0035	2.09	10071.31	11882.76	11882.76	11.66	No	Si
SLU 64	4.8	-238.99	-12503	-0.0000348	0.0003743	0.0035	2.09	10323.49	12190.67	12190.67	51.01	No	Si
SLU 48	2.9	-957.77	-11144	-0.0000366	0.0003743	0.0035	2.09	9467.05	11165.37	11165.37	11.66	No	Si
SLU 48	4.8	-152.51	-11262	-0.0000307	0.0003743	0.0035	2.09	9544.3	11255.04	11255.04	73.8	No	Si
SLU 50	2.9	-940.78	-10995	-0.0000361	0.0003743	0.0035	2.09	9369.29	11051.66	11051.66	11.75	No	Si
SLU 50	4.8	-156.37	-11101	-0.0000303	0.0003743	0.0035	2.09	9438.92	11132.67	11132.67	71.19	No	Si
SLU 43	2.9	-926.02	-10594	-0.0000348	0.0003743	0.0035	2.09	9102.23	10740.14	10740.14	11.6	No	Si
SLU 43	4.8	-137.61	-10636	-0.0000289	0.0003743	0.0035	2.09	9130.22	10772.85	10772.85	78.29	No	Si
SLU 71	2.9	-1033.49	-12493	-0.000041	0.0003743	0.0035	2.09	10317.32	12183.2	12183.2	11.79	No	Si
SLU 71	4.8	-257.76	-12968	-0.0000363	0.0003743	0.0035	2.09	10601.74	12527.36	12527.36	48.6	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	2.9	-761.78	-1894	-0.0000103	0.0005615	0.0035	2.09		3046.03	3046.03	4		Si
SLV 10	4.8	625.5	1205	0.0932497	0.0005615	0.0035	1.672		0	0	0		No
SLV 15	2.9	-5124.09	-14101	-0.0000762	0.0005615	0.0035	2.09		14069.39	14069.39	2.75		Si
SLV 15	4.8	3297.24	-7969	-0.0000454	0.0005615	0.0035	2.09		7989.18	7989.18	2.42		Si
SLV 2	2.9	3592.33	-4582	-0.0000641	0.0005615	0.0035	2.09		4822.33	4822.33	1.34		Si
SLV 2	4.8	-3731.59	-11510	-0.000058	0.0005615	0.0035	2.09		11927.64	11927.64	3.2		Si
SLV 5	2.9	1447.99	-178	-0.007105	0.0005615	0.0035	1.672		426.69	426.69	0.29		No
SLV 5	4.8	-1334.84	-717	-0.0002461	0.0005615	0.0035	1.672		1861.13	1861.13	1.39		Si
SLV 13	2.9	-4458.7	-9118	-0.0000597	0.0005615	0.0035	2.09		9855.81	9855.81	2.21		Si
SLV 13	4.8	3214.74	-1979	-0.0070858	0.0005615	0.0035	1.672		2260.84	2260.84	0.7		No
SLV 6	2.9	1587.83	-420	-0.0062718	0.0005615	0.0035	1.672		675.81	675.81	0.43		No

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	4.8	-1418.91	-1354	-0.0000839	0.0005615	0.0035	1.672		2505.16	2505.16	1.77		Si
SLV 16	2.9	-4905.12	-14480	-0.0000755	0.0005615	0.0035	2.09		14377.39	14377.39	2.93		Si
SLV 16	4.8	3165.6	-8967	-0.0000467	0.0005615	0.0035	2.09		8886.04	8886.04	2.81		Si
SLV 14	2.9	-4239.73	-9496	-0.0000576	0.0005615	0.0035	2.09		10191.33	10191.33	2.4		Si
SLV 14	4.8	3083.1	-2977	-0.0004687	0.0005615	0.0035	1.672		3255.56	3255.56	1.06		Si
SLV 1	2.9	3373.36	-4204	-0.0000632	0.0005615	0.0035	2.09		4457.4	4457.4	1.32		Si
SLV 1	4.8	-3599.95	-10512	-0.0000542	0.0005615	0.0035	2.09		11083.78	11083.78	3.08		Si
SLV 9	2.9	-901.63	-1652	-0.0000116	0.0005615	0.0035	2.09		2804.25	2804.25	3.11		Si
SLV 9	4.8	709.57	1842	0.1441155	0.0005615	0.0035	1.672		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	2.9	-792.18	-13556	-11288	1901	2.09	2.09	-19289	9516	5569	38062	17523	5329	22853	No	12.02	Si
SLU 78	4.8	-351.41	-14791	-12316	1923	2.09	2.09	-21047	9751	5706	38062	17523	5329	22853	No	11.89	Si
SLU 81	2.9	-1031.81	-13939	-11607	1851	2.09	2.09	-19835	9589	5611	38062	17523	5329	22853	No	12.34	Si
SLU 81	4.8	-517.08	-15164	-12627	1884	2.09	2.09	-21578	9821	5747	38062	17523	5329	22853	No	12.13	Si
SLU 83	2.9	-1039.19	-14139	-11774	1870	2.09	2.09	-20120	9627	5634	38062	17523	5329	22853	No	12.22	Si
SLU 83	4.8	-526.46	-15397	-12821	1902	2.09	2.09	-21909	9866	5773	38062	17523	5329	22853	No	12.01	Si
SLU 42	2.9	-582.49	-11711	-9752	1879	2.09	2.09	-16664	9166	5364	38062	17523	5329	22853	No	12.16	Si
SLU 42	4.8	-424.3	-13233	-11019	1897	2.09	2.09	-18830	9455	5533	38062	17523	5329	22853	No	12.05	Si
SLU 84	2.9	-771.74	-13761	-11459	2061	2.09	2.09	-19581	9555	5592	38062	17523	5329	22853	No	11.09	Si
SLU 84	4.8	-429.31	-15195	-12653	2084	2.09	2.09	-21622	9827	5751	38062	17523	5329	22853	No	10.96	Si
SLU 76	2.9	-589.51	-12954	-10787	2014	2.09	2.09	-18433	9402	5502	38062	17523	5329	22853	No	11.35	Si
SLU 76	4.8	-281.13	-14262	-11876	2029	2.09	2.09	-20295	9650	5647	38062	17523	5329	22853	No	11.26	Si
SLU 73	2.9	-582.13	-12754	-10620	1996	2.09	2.09	-18148	9364	5480	38062	17523	5329	22853	No	11.45	Si
SLU 73	4.8	-271.75	-14030	-11683	2011	2.09	2.09	-19964	9606	5622	38062	17523	5329	22853	No	11.37	Si
SLU 80	2.9	-775.19	-13407	-11164	1905	2.09	2.09	-19078	9488	5552	38062	17523	5329	22853	No	12	Si
SLU 80	4.8	-355.27	-14629	-12182	1927	2.09	2.09	-20817	9720	5688	38062	17523	5329	22853	No	11.86	Si
SLU 75	2.9	-784.8	-13355	-11121	1882	2.09	2.09	-19004	9478	5547	38062	17523	5329	22853	No	12.14	Si
SLU 75	4.8	-342.03	-14558	-12123	1904	2.09	2.09	-20716	9707	5680	38062	17523	5329	22853	No	12	Si
SLU 82	2.9	-764.36	-13560	-11292	2043	2.09	2.09	-19296	9517	5569	38062	17523	5329	22853	No	11.19	Si
SLU 82	4.8	-419.93	-14962	-12459	2066	2.09	2.09	-21291	9783	5725	38062	17523	5329	22853	No	11.06	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	2.9	3373.36	-4204	-3501	6839	2.09	0.7276	-17329	13883	2828	38062	26285	5329	31614		4.62	Si
SLV 1	4.8	-3599.95	-10512	-8754	6429	2.09	2.09	-14958	13408	7846	38062	26285	5329	31614		4.92	Si
SLV 16	2.9	-4905.12	-14480	-12057	-4753	2.09	2.09	-20604	14537	8507	38062	26285	5329	31614		6.65	Si
SLV 16	4.8	3165.6	-8967	-7467	-4300	2.09	2.0759	-12759	12969	7538	38062	26285	5329	31614		7.35	Si
SLV 15	2.9	-5124.09	-14101	-11742	-5277	2.09	2.0448	-20065	14430	8262	38062	26285	5329	31614		5.99	Si
SLV 15	4.8	3297.24	-7969	-6636	-4825	2.09	1.8937	-11340	12685	6726	38062	26285	5329	31614		6.55	Si
SLV 4	2.9	2926.94	-9566	-7966	8521	2.09	2.09	-13612	13139	7689	38062	26285	5329	31614		3.71	Si
SLV 4	4.8	-3649.09	-17500	-14572	8488	2.09	2.09	-24901	15397	9010	38062	26285	5329	31614		3.72	Si
SLV 3	2.9	2707.97	-9187	-7650	7997	2.09	2.09	-13073	13031	7626	38062	26285	5329	31614		3.95	Si
SLV 3	4.8	-3517.46	-16502	-13742	7963	2.09	2.09	-23482	15113	8844	38062	26285	5329	31614		3.97	Si
SLV 13	2.9	-4458.7	-9118	-7592	-6435	2.09	1.6679	-16384	13694	6395	38062	26285	5329	31614		4.91	Si
SLV 13	4.8	3214.74	-1979	-1648	-6359	1.672	0	0	0	0	38062	21028	4264	25292		3.98	Si
SLV 7	2.9	-769.98	-16790	-13981	4796	2.09	2.09	-23891	15195	8892	38062	26285	5329	31614		6.59	Si
SLV 7	4.8	-1059.85	-20684	-17224	5373	2.09	2.09	-29433	16250	9509	38062	26285	5329	31614		5.88	Si
SLV 14	2.9	-4239.73	-9496	-7907	-5910	2.09	1.7956	-15850	13587	6831	38062	26285	5329	31614		5.35	Si
SLV 14	4.8	3083.1	-2977	-2479	-5834	1.672	0.0277	0	0	0	38062	21028	4264	25292		4.33	Si
SLV 2	2.9	3592.33	-4582	-3816	7363	2.09	0.7831	-6520	11721	2570	38062	26285	5329	31614		4.29	Si
SLV 2	4.8	-3731.59	-11510	-9584	6954	2.09	2.09	-16378	13692	8013	38062	26285	5329	31614		4.55	Si
SLV 8	2.9	-630.13	-17031	-14182	5131	2.09	2.09	-24235	15264	8932	38062	26285	5329	31614		6.16	Si
SLV 8	4.8	-1143.92	-21321	-17754	5708	2.09	2.09	-30339	16250	9509	38062	26285	5329	31614		5.54	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 10	179667	0.32	0	-300	169.78	0	0	No, e>t/2
SLV 9	179667	0.32	0	100	169.78	0	0	No, Trazione
SLV 6	179667	0.32	0	-720	169.78	0	0	No, e>t/2
SLV 5	179667	0.32	0	-320	169.78	0	0	No, e>t/2
SLV 13	179667	0.32	9700	-5676	169.78	744.22	4.38	Si
SLV 14	179667	0.32	10771	-6303	169.78	820.22	4.83	Si
SLV 1	179667	0.32	12093	-7077	169.78	912.28	5.37	Si
SLV 2	179667	0.32	13164	-7704	169.78	985.53	5.8	Si
SLV 15	179667	0.32	19045	-11145	169.78	1365.73	8.04	Si
SLV 16	179667	0.32	20116	-11772	169.78	1430.99	8.43	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.05 Ta = 0.0706

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-19019	-14017	240	0.596	2220	0.962	9.00963	10.95836	No
SLV 7	-18441	-13824	247	0.612	2161.1	0.961	9.25336	10.95836	No
SLV 12	-17886	-13072	175	0.632	2104.8	0.96	9.5616	10.95836	No
SLV 11	-17308	-12879	182	0.649	2045.9	0.959	9.83747	10.95836	No
SLV 4	-13872	-11855	116	0.786	1696.8	0.951	12.0143	5.89448	Si
SLV 3	-12966	-11553	127	0.831	1604.8	0.949	12.73414	5.89448	Si
SLV 16	-10096	-8705	-102	1.024	1313.8	0.939	15.84481	5.89448	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 15	-9190	-8403	-91	1.106	1222.1	0.936	17.18235	5.89448	Si
SLV 2	-8187	-9011	-54	1.217	1120.8	0.931	18.99615	5.89448	Si
SLV 1	-7281	-8708	-43	1.335	1029.4	0.926	20.95348	5.89448	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	11.587	SLU 45	Si
V_SLU	10.963	SLU 84	Si
PF_SLV	0	SLV 9	No
V_SLV	3.71	SLV 4	Si
PFFP_SLV	0	SLV 9	No
R_SLV	0.822	SLV 8	No

Maschio 51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.313	-3.314	-21.543	-3.314	L4	L5	2.23	0.28	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	4	-6030.97	-27139	-0.0001184	0.0003743	0.0035	2.23	17341.91	22093.48	22093.48	3.66	No	Si
SLU 78	4.8	-348.58	-26008	-0.0000705	0.0003743	0.0035	2.23	17135.13	21655.95	21655.95	62.13	No	Si
SLU 55	4	-5434.67	-23158	-0.0001006	0.0003743	0.0035	2.23	16415.06	20130.23	20130.23	3.7	No	Si
SLU 55	4.8	-319.87	-22042	-0.0000588	0.0003743	0.0035	2.23	16055.35	19562.07	19562.07	61.16	No	Si
SLU 73	4	-5968.99	-25853	-0.0001136	0.0003743	0.0035	2.23	17103.41	21586.7	21586.7	3.62	No	Si
SLU 73	4.8	-341.37	-24722	-0.0000667	0.0003743	0.0035	2.23	16845.64	20961.17	20961.17	61.4	No	Si
SLU 80	4	-5976.09	-26865	-0.000117	0.0003743	0.0035	2.23	17296.07	21996.46	21996.46	3.68	No	Si
SLU 80	4.8	-347.34	-25735	-0.0000697	0.0003743	0.0035	2.23	17078.45	21520.03	21520.03	61.96	No	Si
SLU 68	4	-5491.78	-23304	-0.0001015	0.0003743	0.0035	2.23	16458.78	20205.9	20205.9	3.68	No	Si
SLU 68	4.8	-207.66	-22173	-0.0000584	0.0003743	0.0035	2.23	16099.86	19627.73	19627.73	94.52	No	Si
SLU 84	4	-6145.92	-27752	-0.0001214	0.0003743	0.0035	2.23	17435.35	22300.93	22300.93	3.63	No	Si
SLU 84	4.8	-395.96	-26621	-0.0000727	0.0003743	0.0035	2.23	17252.91	21905.16	21905.16	55.32	No	Si
SLU 76	4	-6029.69	-26213	-0.0001153	0.0003743	0.0035	2.23	17176.09	21742.63	21742.63	3.61	No	Si
SLU 76	4.8	-356.56	-25083	-0.0000679	0.0003743	0.0035	2.23	16932.61	21158.14	21158.14	59.34	No	Si
SLU 82	4	-6085.22	-27392	-0.0001197	0.0003743	0.0035	2.23	17382.11	22178.99	22178.99	3.64	No	Si
SLU 82	4.8	-380.77	-26261	-0.0000715	0.0003743	0.0035	2.23	17185.38	21762.3	21762.3	57.15	No	Si
SLU 65	4	-5431.07	-22943	-0.0000999	0.0003743	0.0035	2.23	16349.32	20019.45	20019.45	3.69	No	Si
SLU 65	4.8	-192.47	-21812	-0.0000573	0.0003743	0.0035	2.23	15976.12	19447.99	19447.99	101.04	No	Si
SLU 75	4	-5970.27	-26778	-0.0001167	0.0003743	0.0035	2.23	17280.91	21964.4	21964.4	3.68	No	Si
SLU 75	4.8	-333.39	-25647	-0.0000694	0.0003743	0.0035	2.23	17059.84	21471.33	21471.33	64.4	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	4	-3716.07	-8463	-0.000045	0.0005615	0.0035	2.23		10087.38	10087.38	2.71		Si
SLV 5	4.8	-2205.09	-8193	-0.000034	0.0005615	0.0035	2.23		9822.34	9822.34	4.45		Si
SLV 9	4	-4943.77	-8858	-0.0000578	0.0005615	0.0035	2.23		10469.26	10469.26	2.12		Si
SLV 9	4.8	757.26	-8733	-0.0000259	0.0005615	0.0035	2.23		9327.28	9327.28	12.32		Si
SLV 1	4	-2041.27	-14642	-0.0000493	0.0005615	0.0035	2.23		15730.29	15730.29	7.71		Si
SLV 1	4.8	-5158.15	-13736	-0.000068	0.0005615	0.0035	2.23		14950.3	14950.3	2.9		Si
SLD 10	4	-4386.72	-14330	-0.0000643	0.0005615	0.0035	2.23		15461.56	15461.56	3.52		Si
SLD 10	4.8	178.21	-13776	-0.0000347	0.0005615	0.0035	2.23		13627.57	13627.57	76.47		Si
SLV 13	4	-6133.59	-15960	-0.0000808	0.0005615	0.0035	2.23		16864.84	16864.84	2.75		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	4.8	4716.35	-15535	-0.0000698	0.0005615	0.0035	2.23		15113.84	15113.84	3.2		Si
SLD 9	4	-4388	-14223	-0.0000641	0.0005615	0.0035	2.23		15369.47	15369.47	3.5		Si
SLD 9	4.8	241.06	-13668	-0.0000348	0.0005615	0.0035	2.23		13537.56	13537.56	56.16		Si
SLV 2	4	-2036.68	-15028	-0.0000503	0.0005615	0.0035	2.23		16063.83	16063.83	7.89		Si
SLV 2	4.8	-5383.75	-14121	-0.0000706	0.0005615	0.0035	2.23		15282.65	15282.65	2.84		Si
SLV 10	4	-4940.84	-9104	-0.0000578	0.0005615	0.0035	2.23		10704.46	10704.46	2.17		Si
SLV 10	4.8	613.19	-8979	-0.0000256	0.0005615	0.0035	2.23		9565.24	9565.24	15.6		Si
SLV 6	4	-3713.14	-8709	-0.0000455	0.0005615	0.0035	2.23		10325.98	10325.98	2.78		Si
SLV 6	4.8	-2349.16	-8440	-0.0000355	0.0005615	0.0035	2.23		10064.72	10064.72	4.28		Si
SLV 14	4	-6129	-16345	-0.0000817	0.0005615	0.0035	2.23		17185.64	17185.64	2.8		Si
SLV 14	4.8	4490.75	-15920	-0.0000693	0.0005615	0.0035	2.23		15442.73	15442.73	3.44		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	4	-6029.69	-26213	-21828	-7084	2.23	2.23	-34959	10833	6764	38062	18697	5687	24384	No	3.44	Si
SLU 76	4.8	-356.56	-25083	-20887	-7084	2.23	2.23	-33450	10833	6764	38062	18697	5687	24384	No	3.44	Si
SLU 73	4	-5968.99	-25853	-21528	-7027	2.23	2.23	-34478	10833	6764	38062	18697	5687	24384	No	3.47	Si
SLU 73	4.8	-341.37	-24722	-20587	-7027	2.23	2.23	-32970	10833	6764	38062	18697	5687	24384	No	3.47	Si
SLU 78	4	-6030.97	-27139	-22599	-7096	2.23	2.23	-36192	10833	6764	38062	18697	5687	24384	No	3.44	Si
SLU 78	4.8	-348.58	-26008	-21657	-7096	2.23	2.23	-34684	10833	6764	38062	18697	5687	24384	No	3.44	Si
SLU 75	4	-5970.27	-26778	-22299	-7039	2.23	2.23	-35712	10833	6764	38062	18697	5687	24384	No	3.46	Si
SLU 75	4.8	-333.39	-25647	-21357	-7039	2.23	2.23	-34204	10833	6764	38062	18697	5687	24384	No	3.46	Si
SLU 83	4	-5974.47	-28190	-23474	-7012	2.23	2.23	-37594	10833	6764	38062	18697	5687	24384	No	3.48	Si
SLU 83	4.8	-359.35	-27059	-22532	-7012	2.23	2.23	-36086	10833	6764	38062	18697	5687	24384	No	3.48	Si
SLU 80	4	-5976.09	-26865	-22371	-7029	2.23	2.23	-35828	10833	6764	38062	18697	5687	24384	No	3.47	Si
SLU 80	4.8	-347.34	-25735	-21429	-7029	2.23	2.23	-34320	10833	6764	38062	18697	5687	24384	No	3.47	Si
SLU 81	4	-5913.77	-27830	-23174	-6955	2.23	2.23	-37114	10833	6764	38062	18697	5687	24384	No	3.51	Si
SLU 81	4.8	-344.15	-26699	-22232	-6955	2.23	2.23	-35606	10833	6764	38062	18697	5687	24384	No	3.51	Si
SLU 82	4	-6085.22	-27392	-22810	-7123	2.23	2.23	-36530	10833	6764	38062	18697	5687	24384	No	3.42	Si
SLU 82	4.8	-380.77	-26261	-21868	-7123	2.23	2.23	-35022	10833	6764	38062	18697	5687	24384	No	3.42	Si
SLU 77	4	-5859.52	-27576	-22963	-6927	2.23	2.23	-36776	10833	6764	38062	18697	5687	24384	No	3.52	Si
SLU 77	4.8	-311.96	-26445	-22021	-6927	2.23	2.23	-35268	10833	6764	38062	18697	5687	24384	No	3.52	Si
SLU 84	4	-6145.92	-27752	-23110	-7180	2.23	2.23	-37011	10833	6764	38062	18697	5687	24384	No	3.4	Si
SLU 84	4.8	-395.96	-26621	-22168	-7180	2.23	2.23	-35503	10833	6764	38062	18697	5687	24384	No	3.4	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 13	4	-4901.82	-17320	-14422	-8268	2.23	2.23	-23098	15036	9389	38062	28046	5687	33733		4.08	Si
SLD 13	4.8	1932.43	-16642	-13858	-8280	2.23	2.23	-22195	14856	9276	38062	28046	5687	33733		4.07	Si
SLD 14	4	-4899.85	-17485	-14560	-8145	2.23	2.23	-23319	15080	9416	38062	28046	5687	33733		4.14	Si
SLD 14	4.8	1835.59	-16808	-13996	-8156	2.23	2.23	-22415	14900	9303	38062	28046	5687	33733		4.14	Si
SLV 13	4	-6133.59	-15960	-13290	-12918	2.23	2.1921	-21284	14673	9006	38062	28046	5687	33733		2.61	Si
SLV 13	4.8	4716.35	-15535	-12936	-12947	2.23	2.23	-20717	14560	9091	38062	28046	5687	33733		2.61	Si
SLV 15	4	-5925.03	-21711	-18079	-13660	2.23	2.23	-28954	16208	10120	38062	28046	5687	33733		2.47	Si
SLV 15	4.8	5112.57	-20884	-17391	-13375	2.23	2.23	-27852	15987	9982	38062	28046	5687	33733		2.52	Si
SLV 11	4	-4248.57	-28030	-23341	-8633	2.23	2.23	-37381	16250	10147	38062	28046	5687	33733		3.91	Si
SLV 11	4.8	2077.98	-26566	-22122	-8071	2.23	2.23	-35429	16250	10147	38062	28046	5687	33733		4.18	Si
SLD 15	4	-4815.77	-19827	-16510	-8589	2.23	2.23	-26442	15705	9806	38062	28046	5687	33733		3.93	Si
SLD 15	4.8	2104.29	-18982	-15806	-8469	2.23	2.23	-25314	15479	9665	38062	28046	5687	33733		3.98	Si
SLV 14	4	-6129	-16345	-13611	-12630	2.23	2.2201	-21798	14776	9185	38062	28046	5687	33733		2.67	Si
SLV 14	4.8	4490.75	-15920	-13257	-12659	2.23	2.23	-21231	14663	9156	38062	28046	5687	33733		2.66	Si
SLV 12	4	-4245.64	-28276	-23546	-8449	2.23	2.23	-37709	16250	10147	38062	28046	5687	33733		3.99	Si
SLV 12	4.8	1933.91	-26812	-22327	-7887	2.23	2.23	-35757	16250	10147	38062	28046	5687	33733		4.28	Si
SLV 16	4	-5920.44	-22097	-18400	-13372	2.23	2.23	-29469	16250	10147	38062	28046	5687	33733		2.52	Si
SLV 16	4.8	4886.97	-21270	-17712	-13087	2.23	2.23	-28366	16090	10047	38062	28046	5687	33733		2.58	Si
SLD 16	4	-4813.8	-19993	-16648	-8466	2.23	2.23	-26663	15749	9834	38062	28046	5687	33733		3.98	Si
SLD 16	4.8	2007.45	-19147	-15944	-8345	2.23	2.23	-25535	15524	9693	38062	28046	5687	33733		4.04	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.32	10677	-6667	181.16	868.08	4.79	Si
SLV 10	179667	0.32	11076	-6916	181.16	898.02	4.96	Si
SLV 5	179667	0.32	11462	-7157	181.16	926.8	5.12	Si
SLV 6	179667	0.32	11862	-7407	181.16	956.38	5.28	Si
SLV 13	179667	0.32	19890	-12420	181.16	1512.29	8.35	Si
SLV 14	179667	0.32	20516	-12810	181.16	1552.5	8.57	Si
SLV 1	179667	0.32	22509	-14055	181.16	1677.65	9.26	Si
SLV 2	179667	0.32	23134	-14445	181.16	1715.98	9.47	Si
SLV 15	179667	0.32	28670	-17902	181.16	2035.75	11.24	Si
SLV 16	179667	0.32	29296	-18292	181.16	2069.66	11.42	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.

Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:

- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.05 Ta = 0.0706

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-21445	-21011	523	0.557	2485.8	0.963	8.40945	10.95836	No
SLV 12	-21128	-19290	602	0.561	2453.6	0.963	8.46863	10.95836	No
SLV 7	-21211	-20829	524	0.563	2462.1	0.963	8.49073	10.95836	No
SLV 11	-20894	-19108	603	0.566	2429.8	0.963	8.5517	10.95836	No
SLV 4	-16972	-17701	20	0.706	2031	0.956	10.73672	5.89448	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 3	-16606	-17417	21	0.719	1993.8	0.955	10.94424	5.89448	Si
SLV 16	-15916	-11965	284	0.731	1923.7	0.954	11.13603	5.89448	Si
SLV 6	-7421	-5672	-649	1.319	1063.5	0.924	20.73623	10.95836	Si
SLV 15	-15550	-11680	285	0.745	1886.5	0.953	11.36512	5.89448	Si
SLV 5	-7188	-5490	-649	1.351	1040	0.923	21.28171	10.95836	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.606	SLU 76	Si
V_SLU	3.396	SLU 84	Si
PF_SLV	2.118	SLV 9	Si
V_SLV	2.469	SLV 15	Si
PFFP_SLV	4.792	SLV 9	Si
R_SLV	0.767	SLV 8	No

Maschio 52

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.313	-3.314	-18.813	-3.314	L4	L5	0.5	0.28	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	4	-19.99	-10347	-0.0001386	0.0003743	0.0035	0.5	708.81	1303.8	1303.8	65.21	No	Si
SLU 80	4.8	205.55	-11166	-0.0001906	0.0003743	0.0035	0.5	604.6	1286.81	1286.81	6.26	No	Si
SLU 75	4	-22.88	-10300	-0.0001383	0.0003743	0.0035	0.5	714.14	1302.91	1302.91	56.94	No	Si
SLU 75	4.8	211.43	-11110	-0.0001906	0.0003743	0.0035	0.5	612.44	1287.21	1287.21	6.09	No	Si
SLU 68	4	-49.99	-9101	-0.0001232	0.0003743	0.0035	0.5	822.39	1282.36	1282.36	25.65	No	Si
SLU 68	4.8	222.01	-9799	-0.0001667	0.0003743	0.0035	0.5	765.53	1298.15	1298.15	5.85	No	Si
SLU 72	4	-35.93	-9226	-0.0001227	0.0003743	0.0035	0.5	813.47	1284.42	1284.42	35.74	No	Si
SLU 72	4.8	210.15	-9926	-0.0001668	0.0003743	0.0035	0.5	753.28	1296.95	1296.95	6.17	No	Si
SLU 73	4	-36.35	-10088	-0.0001371	0.0003743	0.0035	0.5	736.96	1299.07	1299.07	35.73	No	Si
SLU 73	4.8	218.06	-10893	-0.0001875	0.0003743	0.0035	0.5	641.97	1288.82	1288.82	5.91	No	Si
SLU 65	4	-52.29	-8966	-0.0001214	0.0003743	0.0035	0.5	831.41	1280.22	1280.22	24.48	No	Si
SLU 65	4.8	222.66	-9653	-0.0001641	0.0003743	0.0035	0.5	778.78	1299.54	1299.54	5.84	No	Si
SLU 70	4	-36.51	-9313	-0.0001242	0.0003743	0.0035	0.5	806.91	1285.91	1285.91	35.22	No	Si
SLU 70	4.8	215.39	-10016	-0.0001695	0.0003743	0.0035	0.5	744.34	1296.13	1296.13	6.02	No	Si
SLU 78	4	-20.57	-10435	-0.0001402	0.0003743	0.0035	0.5	698.8	1305.47	1305.47	63.45	No	Si
SLU 78	4.8	210.78	-11255	-0.0001936	0.0003743	0.0035	0.5	591.77	1286.04	1286.04	6.1	No	Si
SLU 76	4	-34.05	-10223	-0.000139	0.0003743	0.0035	0.5	722.63	1301.49	1301.49	38.23	No	Si
SLU 76	4.8	217.4	-11038	-0.0001904	0.0003743	0.0035	0.5	622.4	1287.73	1287.73	5.92	No	Si
SLU 67	4	-38.82	-9178	-0.0001225	0.0003743	0.0035	0.5	816.93	1283.62	1283.62	33.06	No	Si
SLU 67	4.8	216.04	-9871	-0.0001669	0.0003743	0.0035	0.5	758.7	1297.47	1297.47	6.01	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	4	569.58	-9491	-0.0002021	0.0005615	0.0035	0.5		1615.84	1615.84	2.84		Si
SLV 4	4.8	-680	-10194	-0.0002324	0.0005615	0.0035	0.5		1682.57	1682.57	2.47		Si
SLD 15	4	-268.65	-6437	-0.0001112	0.0005615	0.0035	0.5		1272.92	1272.92	4.74		Si
SLD 15	4.8	518.15	-6983	-0.000156	0.0005615	0.0035	0.5		1338.76	1338.76	2.58		Si
SLV 1	4	573.58	-8001	-0.0001796	0.0005615	0.0035	0.5		1453.75	1453.75	2.53		Si
SLV 1	4.8	-712.38	-8498	-0.0002103	0.0005615	0.0035	0.5		1522.82	1522.82	2.14		Si
SLV 3	4	550.88	-9293	-0.0001958	0.0005615	0.0035	0.5		1593.9	1593.9	2.89		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	4.8	-656.08	-9985	-0.0002248	0.0005615	0.0035	0.5		1668.45	1668.45	2.54		Si
SLV 13	4	-596.64	-4429	-0.0001502	0.0005615	0.0035	0.4		971.25	971.25	1.63		Si
SLV 13	4.8	965.49	-4782	-0.0005967	0.0005615	0.0035	0.4		1001.06	1001.06	1.04		Si
SLV 16	4	-600.64	-5919	-0.0001567	0.0005615	0.0035	0.5		1195.78	1195.78	1.99		Si
SLV 16	4.8	997.87	-6478	-0.0003005	0.0005615	0.0035	0.5		1260.2	1260.2	1.26		Si
SLD 13	4	-259.1	-5871	-0.0001025	0.0005615	0.0035	0.5		1188.74	1188.74	4.59		Si
SLD 13	4.8	493.9	-6331	-0.0001431	0.0005615	0.0035	0.5		1237.33	1237.33	2.51		Si
SLV 2	4	592.28	-8200	-0.0001856	0.0005615	0.0035	0.5		1475.09	1475.09	2.49		Si
SLV 2	4.8	-736.3	-8707	-0.0002178	0.0005615	0.0035	0.5		1546.37	1546.37	2.1		Si
SLV 14	4	-577.94	-4628	-0.0001439	0.0005615	0.0035	0.5		1005.62	1005.62	1.74		Si
SLV 14	4.8	941.57	-4990	-0.0003963	0.0005615	0.0035	0.5		1032.15	1032.15	1.1		Si
SLV 15	4	-619.34	-5721	-0.000159	0.0005615	0.0035	0.5		1166.73	1166.73	1.88		Si
SLV 15	4.8	1021.79	-6269	-0.0003293	0.0005615	0.0035	0.5		1227.63	1227.63	1.2		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 65	4	-52.29	-8966	-7466	-407	0.5	0.5	-53333	10833	1517	38062	4192	1275	5467	No	13.44	Si
SLU 65	4.8	222.66	-9653	-8039	-408	0.5	0.5	-57420	10833	1517	38062	4192	1275	5467	No	13.39	Si
SLU 47	4	-52.01	-8019	-6677	-368	0.5	0.5	-47697	10833	1517	38062	4192	1275	5467	No	14.85	Si
SLU 47	4.8	196.22	-8624	-7181	-369	0.5	0.5	-51297	10833	1517	38062	4192	1275	5467	No	14.81	Si
SLU 67	4	-38.82	-9178	-7643	-382	0.5	0.5	-54595	10833	1517	38062	4192	1275	5467	No	14.31	Si
SLU 67	4.8	216.04	-9871	-8219	-384	0.5	0.5	-58713	10833	1517	38062	4192	1275	5467	No	14.25	Si
SLU 68	4	-49.99	-9101	-7579	-404	0.5	0.5	-54135	10833	1517	38062	4192	1275	5467	No	13.54	Si
SLU 68	4.8	222.01	-9799	-8160	-405	0.5	0.5	-58285	10833	1517	38062	4192	1275	5467	No	13.49	Si
SLU 44	4	-54.32	-7884	-6565	-371	0.5	0.5	-46895	10833	1517	38062	4192	1275	5467	No	14.73	Si
SLU 44	4.8	196.87	-8479	-7060	-372	0.5	0.5	-50433	10833	1517	38062	4192	1275	5467	No	14.69	Si
SLU 70	4	-36.51	-9313	-7755	-379	0.5	0.5	-55397	10833	1517	38062	4192	1275	5467	No	14.43	Si
SLU 70	4.8	215.39	-10016	-8340	-381	0.5	0.5	-59577	10833	1517	38062	4192	1275	5467	No	14.36	Si
SLU 72	4	-35.93	-9226	-7683	-372	0.5	0.5	-54877	10833	1517	38062	4192	1275	5467	No	14.71	Si
SLU 72	4.8	210.15	-9926	-8266	-373	0.5	0.5	-59044	10833	1517	38062	4192	1275	5467	No	14.64	Si
SLU 75	4	-22.88	-10300	-8577	-364	0.5	0.5	-61266	10833	1517	38062	4192	1275	5467	No	15.02	Si
SLU 75	4.8	211.43	-11110	-9252	-366	0.5	0.5	-66085	10833	1517	38062	4192	1275	5467	No	14.93	Si
SLU 73	4	-36.35	-10088	-8400	-389	0.5	0.5	-60005	10833	1517	38062	4192	1275	5467	No	14.06	Si
SLU 73	4.8	218.06	-10893	-9071	-391	0.5	0.5	-64793	10833	1517	38062	4192	1275	5467	No	14	Si
SLU 76	4	-34.05	-10223	-8513	-386	0.5	0.5	-60807	10833	1517	38062	4192	1275	5467	No	14.17	Si
SLU 76	4.8	217.4	-11038	-9192	-388	0.5	0.5	-65657	10833	1517	38062	4192	1275	5467	No	14.1	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	4	573.58	-8001	-6663	1607	0.5	0.5	-47593	16250	2275	38062	6288	1275	7563		4.71	Si
SLV 1	4.8	-712.38	-8498	-7076	1630	0.5	0.4985	-50548	16250	2268	38062	6288	1275	7563		4.64	Si
SLV 15	4	-619.34	-5721	-4764	-2147	0.5	0.4252	-34028	16250	1935	38062	6288	1275	7563		3.52	Si
SLV 15	4.8	1021.79	-6269	-5220	-2173	0.5	0.261	-37289	16250	1188	38062	6288	1275	7563		3.48	Si
SLV 12	4	-220.92	-8641	-7195	-1149	0.5	0.5	-51396	16250	2275	38062	6288	1275	7563		6.58	Si
SLV 12	4.8	480.62	-9476	-7891	-996	0.5	0.5	-56364	16250	2275	38062	6288	1275	7563		7.59	Si
SLV 4	4	569.58	-9491	-7904	1423	0.5	0.5	-56457	16250	2275	38062	6288	1275	7563		5.31	Si
SLV 4	4.8	-680	-10194	-8489	1553	0.5	0.5	-60635	16250	2275	38062	6288	1275	7563		4.87	Si
SLV 13	4	-596.64	-4429	-3688	-1910	0.4	0.3458	0	0	0	38062	5030	1020	6050		3.17	Si
SLV 13	4.8	965.49	-4782	-3982	-2043	0.4	0.1442	0	0	0	38062	5030	1020	6050		2.96	Si
SLV 11	4	-232.87	-8514	-7090	-1182	0.5	0.5	-50642	16250	2275	38062	6288	1275	7563		6.4	Si
SLV 11	4.8	495.89	-9342	-7780	-1030	0.5	0.5	-55571	16250	2275	38062	6288	1275	7563		7.35	Si
SLV 3	4	550.88	-9293	-7738	1371	0.5	0.5	-55276	16250	2275	38062	6288	1275	7563		5.52	Si
SLV 3	4.8	-656.08	-9985	-8315	1500	0.5	0.5	-59394	16250	2275	38062	6288	1275	7563		5.04	Si
SLV 2	4	592.28	-8200	-6828	1660	0.5	0.5	-48773	16250	2275	38062	6288	1275	7563		4.56	Si
SLV 2	4.8	-736.3	-8707	-7250	1683	0.5	0.4963	-51789	16250	2258	38062	6288	1275	7563		4.49	Si
SLV 16	4	-600.64	-5919	-4929	-2094	0.5	0.4456	-35209	16250	2027	38062	6288	1275	7563		3.61	Si
SLV 16	4.8	997.87	-6478	-5394	-2121	0.5	0.2878	-38530	16250	1310	38062	6288	1275	7563		3.57	Si
SLV 14	4	-577.94	-4628	-3853	-1858	0.5	0.3753	-27526	15922	1673	38062	6288	1275	7563		4.07	Si
SLV 14	4.8	941.57	-4990	-4156	-1991	0.5	0.1839	-29684	16250	837	38062	6288	1275	7563		3.8	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.32	26144	-3660	40.62	424.68	10.46	Si
SLV 10	179667	0.32	26673	-3734	40.62	431.46	10.62	Si
SLV 5	179667	0.32	28406	-3977	40.62	453.17	11.16	Si
SLV 6	179667	0.32	28935	-4051	40.62	459.65	11.32	Si
SLV 13	179667	0.32	31269	-4378	40.62	487.37	12	Si
SLV 14	179667	0.32	32098	-4494	40.62	496.87	12.23	Si
SLV 15	179667	0.32	38053	-5327	40.62	559.97	13.79	Si
SLV 1	179667	0.32	38809	-5433	40.62	567.33	13.97	Si
SLV 16	179667	0.32	38882	-5443	40.62	568.03	13.99	Si
SLV 2	179667	0.32	39638	-5549	40.62	575.23	14.16	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.05 Ta = 0.0706

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-5568	-6544	-10	0.51	634.7	0.968	7.65883	10.95836	No
SLV 7	-5486	-6502	-10	0.516	626.4	0.967	7.75931	10.95836	No
SLV 12	-5148	-6923	-10	0.545	591.9	0.965	8.20713	10.95836	No

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-5066	-6881	-10	0.553	583.6	0.965	8.32384	10.95836	No
SLV 6	-2687	-4704	-12	0.942	341.8	0.944	14.51465	10.95836	Si
SLV 5	-2606	-4662	-12	0.967	333.6	0.942	14.9061	10.95836	Si
SLV 4	-5073	-5470	-11	0.552	584.3	0.965	8.31309	5.89448	Si
SLV 3	-4945	-5405	-11	0.564	571.3	0.964	8.50266	5.89448	Si
SLV 10	-2267	-5082	-12	1.083	299.3	0.937	16.79283	10.95836	Si
SLV 9	-2186	-5040	-12	1.115	291.1	0.935	17.32315	10.95836	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.836	SLU 65	Si
V_SLU	13.39	SLU 65	Si
PF_SLV	1.037	SLV 13	Si
V_SLV	2.961	SLV 13	Si
PFFP_SLV	10.456	SLV 9	Si
R_SLV	0.699	SLV 8	No

Maschio 54

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.613	1.006	-19.613	5.826	L4	L5	4.82	0.16	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 43	2	-2914.29	-41442	-0.0000778	0.0004492	0.0035	4.82	55950.81	93113.19	93113.19	31.95	No	Si
SLU 43	5.44	4495.44	-32123	-0.0000641	0.0004492	0.0035	4.82	51025.21	66626.06	66626.06	14.82	No	Si
SLU 9	2	-2316.51	-34252	-0.0000631	0.0004492	0.0035	4.82	52542.31	81763.42	81763.42	35.3	No	Si
SLU 9	5.44	3885.41	-26947	-0.0000535	0.0004492	0.0035	4.82	46371.05	57646.14	57646.14	14.84	No	Si
SLU 49	2	-3019.17	-43063	-0.000081	0.0004492	0.0035	4.82	56354.19	95586.83	95586.83	31.66	No	Si
SLU 49	5.44	4850.83	-33765	-0.0000679	0.0004492	0.0035	4.82	52215.45	69474.95	69474.95	14.32	No	Si
SLU 50	2	-2908.75	-42572	-0.0000799	0.0004492	0.0035	4.82	56246.13	94837.05	94837.05	32.6	No	Si
SLU 50	5.44	4785.93	-33253	-0.0000669	0.0004492	0.0035	4.82	51859.13	68586.68	68586.68	14.33	No	Si
SLU 44	2	-2981.09	-41435	-0.0000779	0.0004492	0.0035	4.82	55948.8	93102.62	93102.62	31.23	No	Si
SLU 44	5.44	4680.01	-32239	-0.0000648	0.0004492	0.0035	4.82	51113.89	66827.48	66827.48	14.28	No	Si
SLU 46	2	-3021.93	-42498	-0.00008	0.0004492	0.0035	4.82	56228.9	94724.91	94724.91	31.35	No	Si
SLU 46	5.44	4705.58	-33200	-0.0000666	0.0004492	0.0035	4.82	51821.45	68494.65	68494.65	14.56	No	Si
SLU 48	2	-2979.08	-43067	-0.000081	0.0004492	0.0035	4.82	56355.05	95593.18	95593.18	32.09	No	Si
SLU 48	5.44	4740.09	-33695	-0.0000676	0.0004492	0.0035	4.82	52167.76	69354.1	69354.1	14.63	No	Si
SLU 47	2	-2978.33	-42000	-0.0000789	0.0004492	0.0035	4.82	56104.82	93964.54	93964.54	31.55	No	Si
SLU 47	5.44	4825.25	-32804	-0.0000661	0.0004492	0.0035	4.82	51535.66	67807.79	67807.79	14.05	No	Si
SLU 51	2	-2948.84	-42567	-0.0000799	0.0004492	0.0035	4.82	56245.16	94830.7	94830.7	32.16	No	Si
SLU 51	5.44	4896.67	-33322	-0.0000672	0.0004492	0.0035	4.82	51908.4	68707.53	68707.53	14.03	No	Si
SLU 5	2	-2346	-33684	-0.0000622	0.0004492	0.0035	4.82	52160.45	80833.92	80833.92	34.46	No	Si
SLU 5	5.44	3813.99	-26429	-0.0000524	0.0004492	0.0035	4.82	45829.21	56746.4	56746.4	14.88	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 9	2	-1986.99	-34022	-0.0000608	0.0006738	0.0035	4.82		83966.61	83966.61	42.26		Si
SLD 9	5.44	8516.4	-29872	-0.0000676	0.0006738	0.0035	4.82		64944.41	64944.41	7.63		Si
SLV 6	2	-5705.42	-37832	-0.0000755	0.0006738	0.0035	4.82		90660.37	90660.37	15.89		Si
SLV 6	5.44	14257.57	-35161	-0.0000894	0.0006738	0.0035	4.82		74216.17	74216.17	5.21		Si
SLV 12	2	1056.48	-33791	-0.0000584	0.0006738	0.0035	4.82		71815.52	71815.52	67.98		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	5.44	-7859.17	-20375	-0.0000497	0.0006738	0.0035	4.82		57930.28	57930.28	7.37		Si
SLV 11	2	1131.61	-33738	-0.0000584	0.0006738	0.0035	4.82		71721.43	71721.43	63.38		Si
SLV 11	5.44	-7317.51	-20697	-0.0000492	0.0006738	0.0035	4.82		58584.41	58584.41	8.01		Si
SLV 5	2	-5630.29	-37779	-0.0000752	0.0006738	0.0035	4.82		90567.76	90567.76	16.09		Si
SLV 5	5.44	14799.23	-35483	-0.0000912	0.0006738	0.0035	4.82		74780.86	74780.86	5.05		Si
SLD 5	2	-3722.95	-36597	-0.000069	0.0006738	0.0035	4.82		88528.97	88528.97	23.78		Si
SLD 5	5.44	8444.78	-31219	-0.0000698	0.0006738	0.0035	4.82		67306.02	67306.02	7.97		Si
SLV 10	2	-1709.07	-31713	-0.0000562	0.0006738	0.0035	4.82		79745.82	79745.82	46.66		Si
SLV 10	5.44	14407.52	-31968	-0.000084	0.0006738	0.0035	4.82		68617.96	68617.96	4.76		Si
SLD 10	2	-2019.76	-34046	-0.0000609	0.0006738	0.0035	4.82		84009.39	84009.39	41.59		Si
SLD 10	5.44	8280.13	-29732	-0.0000668	0.0006738	0.0035	4.82		64698.08	64698.08	7.81		Si
SLV 9	2	-1633.94	-31659	-0.0000559	0.0006738	0.0035	4.82		79647.75	79647.75	48.75		Si
SLV 9	5.44	14949.18	-32290	-0.0000857	0.0006738	0.0035	4.82		69182.65	69182.65	4.63		Si
SLV 13	2	4017.66	-25232	-0.00005	0.0006738	0.0035	4.82		56808.23	56808.23	14.14		Si
SLV 13	5.44	7484.03	-24598	-0.0000562	0.0006738	0.0035	4.82		55697.37	55697.37	7.44		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 47	2	-2978.33	-42000	-24660	-1172	4.82	4.82	-31977	10833	8355	108749	27715	24582	52297	No	44.63	Si
SLU 47	5.44	4825.25	-32804	-19261	-286	4.82	4.82	-24975	10833	8355	108749	27715	24582	52297	No	182.55	Si
SLU 49	2	-3019.17	-43063	-25285	-1139	4.82	4.82	-32786	10833	8355	108749	27715	24582	52297	No	45.93	Si
SLU 49	5.44	4850.83	-33765	-19825	-232	4.82	4.82	-25707	10833	8355	108749	27715	24582	52297	No	225.57	Si
SLU 81	2	-2873.71	-52708	-30948	92	4.82	4.82	-40129	10833	8355	108749	27715	24582	52297	No	566.61	Si
SLU 81	5.44	4382.16	-41343	-24275	1241	4.82	4.82	-31476	10833	8355	108749	27715	24582	52297	No	42.13	Si
SLU 83	2	-2870.94	-53273	-31279	41	4.82	4.82	-40559	10833	8355	108749	27715	24582	52297	No	1278.25	Si
SLU 83	5.44	4527.41	-41908	-24606	1201	4.82	4.82	-31907	10833	8355	108749	27715	24582	52297	No	43.54	Si
SLU 42	2	-2278.7	-44953	-26394	219	4.82	4.82	-34225	10833	8355	108749	27715	24582	52297	No	238.54	Si
SLU 42	5.44	3626.89	-35602	-20904	1211	4.82	4.82	-27106	10833	8355	108749	27715	24582	52297	No	43.2	Si
SLU 82	2	-2913.79	-52703	-30945	-5	4.82	4.82	-40126	10833	8355	108749	27715	24582	52297	No	10858.59	Si
SLU 82	5.44	4492.9	-41412	-24316	1146	4.82	4.82	-31529	10833	8355	108749	27715	24582	52297	No	45.63	Si
SLU 40	2	-2281.46	-44388	-26063	271	4.82	4.82	-33795	10833	8355	108749	27715	24582	52297	No	193.25	Si
SLU 40	5.44	3481.65	-35037	-20572	1251	4.82	4.82	-26676	10833	8355	108749	27715	24582	52297	No	41.81	Si
SLU 51	2	-2948.84	-42567	-24994	-1159	4.82	4.82	-32409	10833	8355	108749	27715	24582	52297	No	45.14	Si
SLU 51	5.44	4896.67	-33322	-19565	-263	4.82	4.82	-25370	10833	8355	108749	27715	24582	52297	No	198.7	Si
SLU 41	2	-2238.62	-44957	-26397	316	4.82	4.82	-34228	10833	8355	108749	27715	24582	52297	No	165.31	Si
SLU 41	5.44	3516.15	-35533	-20863	1306	4.82	4.82	-27053	10833	8355	108749	27715	24582	52297	No	40.04	Si
SLU 39	2	-2241.38	-44392	-26065	368	4.82	4.82	-33798	10833	8355	108749	27715	24582	52297	No	142.21	Si
SLU 39	5.44	3370.91	-34968	-20531	1346	4.82	4.82	-26623	10833	8355	108749	27715	24582	52297	No	38.85	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	2	-1709.07	-31713	-18620	-9074	4.82	4.82	-24145	16250	12532	108749	41573	24582	66155		7.29	Si
SLV 10	5.44	14407.52	-31968	-18770	-6222	4.82	4.82	-24339	16250	12532	108749	41573	24582	66155		10.63	Si
SLV 8	2	-2939.87	-39911	-23434	8568	4.82	4.82	-30386	16250	12532	108749	41573	24582	66155		7.72	Si
SLV 8	5.44	-8009.12	-23568	-13838	7241	4.82	4.82	-17943	16089	12408	108749	41573	24582	66155		9.14	Si
SLV 7	2	-2864.74	-39857	-23403	8164	4.82	4.82	-30346	16250	12532	108749	41573	24582	66155		8.1	Si
SLV 7	5.44	-7467.46	-23890	-14027	6843	4.82	4.82	-18189	16138	12445	108749	41573	24582	66155		9.67	Si
SLV 6	2	-5705.42	-37832	-22213	-8947	4.82	4.82	-28804	16250	12532	108749	41573	24582	66155		7.39	Si
SLV 6	5.44	14257.57	-35161	-20645	-5824	4.82	4.82	-26770	16250	12532	108749	41573	24582	66155		11.36	Si
SLV 5	2	-5630.29	-37779	-22182	-9351	4.82	4.82	-28763	16250	12532	108749	41573	24582	66155		7.07	Si
SLV 5	5.44	14799.23	-35483	-20834	-6221	4.82	4.82	-24339	16250	12532	108749	41573	24582	66155		10.63	Si
SLD 9	2	-1986.99	-34022	-19976	-4428	4.82	4.82	-25903	16250	12532	108749	41573	24582	66155		14.94	Si
SLD 9	5.44	8516.4	-29872	-17540	-2731	4.82	4.82	-22743	16250	12532	108749	41573	24582	66155		24.22	Si
SLV 12	2	1056.48	-33791	-19841	8441	4.82	4.82	-25727	16250	12532	108749	41573	24582	66155		7.84	Si
SLV 12	5.44	-7859.17	-20375	-11963	6843	4.82	4.82	-15512	15602	12033	108749	41573	24582	66155		9.67	Si
SLV 9	2	-1633.94	-31659	-18589	-9479	4.82	4.82	-24104	16250	12532	108749	41573	24582	66155		6.98	Si
SLV 9	5.44	14949.18	-32290	-18959	-6619	4.82	4.82	-24584	16250	12532	108749	41573	24582	66155		9.99	Si
SLD 5	2	-3722.95	-36597	-21488	-4375	4.82	4.82	-27863	16250	12532	108749	41573	24582	66155		15.12	Si
SLD 5	5.44	8444.78	-31219	-18331	-2566	4.82	4.82	-23769	16250	12532	108749	41573	24582	66155		25.78	Si
SLV 11	2	1131.61	-33738	-19809	8036	4.82	4.82	-25686	16250	12532	108749	41573	24582	66155		8.23	Si
SLV 11	5.44	-7317.51	-20697	-12152	6445	4.82	4.82	-15758	15652	12070	108749	41573	24582	66155		10.26	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.72 Ta 0.12 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-25875	0.32	236.76	1691.05	2780.15	2235.6	9.44	Si
SLV 15	-26087	0.32	236.76	1701.77	2799.01	2250.39	9.5	Si
SLV 14	-27548	0.32	236.76	1774.32	2929.1	2351.71	9.93	Si
SLV 13	-27760	0.32	236.76	1784.65	2947.97	2366.31	9.99	Si
SLV 12	-28661	0.32	236.76	1827.93	3028.19	2428.06	10.26	Si
SLV 11	-28796	0.32	236.76	1834.36	3040.26	2437.31	10.29	Si
SLV 8	-32689	0.32	236.76	2010.34	3387.43	2698.88	11.4	Si
SLV 7	-32825	0.32	236.76	2016.15	3399.51	2707.83	11.44	Si
SLV 10	-34239	0.32	236.76	2075.6	3525.75	2800.68	11.83	Si
SLV 9	-34374	0.32	236.76	2081.18	3537.83	2809.51	11.87	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.03 Ta = 0.1235

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-35483	-37779	-296	0.732	3986	0.971	10.94983	14.43566	No
SLV 6	-35161	-37832	-296	0.738	3953.2	0.971	11.04329	14.43566	No
SLV 9	-32290	-31659	229	0.799	3660.9	0.969	11.98408	14.43566	No
SLV 10	-31968	-31713	229	0.806	3628.1	0.969	12.09644	14.43566	No
SLV 1	-35242	-45631	-881	0.721	3961.5	0.971	10.78685	10.55303	Si
SLV 2	-34737	-45715	-882	0.73	3910.1	0.971	10.93263	10.55303	Si
SLV 7	-23890	-39857	-217	1.047	2806.1	0.96	15.85109	14.43566	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-23568	-39911	-217	1.06	2773.4	0.96	16.0505	14.43566	Si
SLV 3	-31764	-46254	-858	0.793	3607.4	0.969	11.89252	10.55303	Si
SLV 4	-31259	-46338	-858	0.804	3556	0.968	12.07078	10.55303	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	14.031	SLU 51	Si
V_SLU	38.846	SLU 39	Si
PF_SLV	4.628	SLV 9	Si
V_SLV	6.979	SLV 9	Si
PFFP_SLV	9.443	SLV 16	Si
R_SLV	0.759	SLV 5	No

Maschio 55

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.383	-3.314	-17.313	-3.314	L4	L5	0.93	0.28	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	2.9	1946.71	-18383	-0.0002387	0.0003743	0.0035	0.93	2620.86	4485.28	4485.28	2.3	No	Si
SLU 79	4.8	720.21	-12962	-0.0001165	0.0003743	0.0035	0.93	3080.46	4027.06	4027.06	5.59	No	Si
SLU 80	2.9	1954.18	-18409	-0.0002396	0.0003743	0.0035	0.93	2616.14	4484.85	4484.85	2.3	No	Si
SLU 80	4.8	725.25	-12986	-0.0001169	0.0003743	0.0035	0.93	3080.7	4031.68	4031.68	5.56	No	Si
SLU 78	2.9	1957.03	-18528	-0.0002413	0.0003743	0.0035	0.93	2594.47	4482.93	4482.93	2.29	No	Si
SLU 78	4.8	736.88	-13110	-0.0001185	0.0003743	0.0035	0.93	3081.6	4046.04	4046.04	5.49	No	Si
SLU 75	2.9	1927.85	-18288	-0.0002363	0.0003743	0.0035	0.93	2637.89	4486.85	4486.85	2.33	No	Si
SLU 75	4.8	728.41	-12941	-0.0001167	0.0003743	0.0035	0.93	3080.24	4022.53	4022.53	5.52	No	Si
SLU 82	2.9	1998.1	-18796	-0.0002476	0.0003743	0.0035	0.93	2543.57	4478.68	4478.68	2.24	No	Si
SLU 82	4.8	732.37	-13274	-0.0001196	0.0003743	0.0035	0.93	3081.97	4062.22	4062.22	5.55	No	Si
SLU 76	2.9	1929.98	-18187	-0.0002351	0.0003743	0.0035	0.93	2655.56	4488.53	4488.53	2.33	No	Si
SLU 76	4.8	720.14	-12833	-0.0001154	0.0003743	0.0035	0.93	3078.84	3999.34	3999.34	5.55	No	Si
SLU 81	2.9	1990.64	-18770	-0.0002468	0.0003743	0.0035	0.93	2548.64	4479.09	4479.09	2.25	No	Si
SLU 81	4.8	727.33	-13250	-0.0001192	0.0003743	0.0035	0.93	3081.97	4059.97	4059.97	5.58	No	Si
SLU 77	2.9	1949.56	-18502	-0.0002405	0.0003743	0.0035	0.93	2599.29	4483.36	4483.36	2.3	No	Si
SLU 77	4.8	731.84	-13086	-0.000118	0.0003743	0.0035	0.93	3081.47	4043.38	4043.38	5.52	No	Si
SLU 83	2.9	2019.82	-19010	-0.0002521	0.0003743	0.0035	0.93	2501.14	4475.38	4475.38	2.22	No	Si
SLU 83	4.8	735.8	-13418	-0.000121	0.0003743	0.0035	0.93	3081.51	4075.84	4075.84	5.54	No	Si
SLU 84	2.9	2027.28	-19037	-0.0002529	0.0003743	0.0035	0.93	2495.85	4474.98	4474.98	2.21	No	Si
SLU 84	4.8	740.85	-13442	-0.0001214	0.0003743	0.0035	0.93	3081.36	4078.11	4078.11	5.5	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	2.9	2016.9	-10851	-0.0001523	0.0005615	0.0035	0.93		4014.34	4014.34	1.99		Si
SLV 6	4.8	100.54	-6127	-0.0000397	0.0005615	0.0035	0.93		2504.81	2504.81	24.91		Si
SLD 3	2.9	2120.97	-14647	-0.0001839	0.0005615	0.0035	0.93		4979.03	4979.03	2.35		Si
SLD 3	4.8	258.2	-8249	-0.000059	0.0005615	0.0035	0.93		3273.73	3273.73	12.68		Si
SLD 2	2.9	2174.9	-13960	-0.0001811	0.0005615	0.0035	0.93		4841.76	4841.76	2.23		Si
SLD 2	4.8	196.82	-7725	-0.0000533	0.0005615	0.0035	0.93		3092.45	3092.45	15.71		Si
SLD 4	2.9	2151.11	-14722	-0.000186	0.0005615	0.0035	0.93		4994.07	4994.07	2.32		Si
SLD 4	4.8	247.83	-8266	-0.0000587	0.0005615	0.0035	0.93		3278.78	3278.78	13.23		Si
SLV 5	2.9	1972.06	-10740	-0.0001491	0.0005615	0.0035	0.93		3982.13	3982.13	2.02		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	4.8	115.95	-6102	-0.0000401	0.0005615	0.0035	0.93		2495.86	2495.86	21.52		Si
SLD 1	2.9	2144.76	-13885	-0.0001791	0.0005615	0.0035	0.93		4826.93	4826.93	2.25		Si
SLD 1	4.8	207.18	-7708	-0.0000536	0.0005615	0.0035	0.93		3086.23	3086.23	14.9		Si
SLV 3	2.9	3216.22	-17673	-0.0002706	0.0005615	0.0035	0.93		5600.28	5600.28	1.74		Si
SLV 3	4.8	-59.51	-7659	-0.0000475	0.0005615	0.0035	0.93		3270.78	3270.78	54.97		Si
SLV 2	2.9	3344.97	-16080	-0.0002713	0.0005615	0.0035	0.93		5270.47	5270.47	1.58		Si
SLV 2	4.8	-203.01	-6453	-0.0000456	0.0005615	0.0035	0.93		2853.65	2853.65	14.06		Si
SLV 4	2.9	3286.44	-17847	-0.0002769	0.0005615	0.0035	0.93		5636.85	5636.85	1.72		Si
SLV 4	4.8	-83.65	-7698	-0.0000487	0.0005615	0.0035	0.93		3283.53	3283.53	39.26		Si
SLV 1	2.9	3274.75	-15905	-0.0002646	0.0005615	0.0035	0.93		5234.8	5234.8	1.6		Si
SLV 1	4.8	-178.87	-6414	-0.0000444	0.0005615	0.0035	0.93		2839.86	2839.86	15.88		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	2.9	1929.98	-18187	-15144	2429	0.93	0.93	-58157	10833	2821	38062	7798	2372	10169	No	4.19	Si
SLU 76	4.8	720.14	-12833	-10687	-852	0.93	0.93	-41039	10833	2821	38062	7798	2372	10169	No	11.93	Si
SLU 83	2.9	2019.82	-19010	-15830	2557	0.93	0.93	-60792	10833	2821	38062	7798	2372	10169	No	3.98	Si
SLU 83	4.8	735.8	-13418	-11174	-833	0.93	0.93	-42910	10833	2821	38062	7798	2372	10169	No	12.21	Si
SLU 77	2.9	1949.56	-18502	-15407	2458	0.93	0.93	-59165	10833	2821	38062	7798	2372	10169	No	4.14	Si
SLU 77	4.8	731.84	-13086	-10897	-867	0.93	0.93	-41846	10833	2821	38062	7798	2372	10169	No	11.73	Si
SLU 75	2.9	1927.85	-18288	-15228	2421	0.93	0.93	-58481	10833	2821	38062	7798	2372	10169	No	4.2	Si
SLU 75	4.8	728.41	-12941	-10776	-869	0.93	0.93	-41383	10833	2821	38062	7798	2372	10169	No	11.7	Si
SLU 80	2.9	1954.18	-18409	-15330	2468	0.93	0.93	-58870	10833	2821	38062	7798	2372	10169	No	4.12	Si
SLU 80	4.8	725.25	-12986	-10814	-854	0.93	0.93	-41527	10833	2821	38062	7798	2372	10169	No	11.91	Si
SLU 84	2.9	2027.28	-19037	-15852	2562	0.93	0.93	-60876	10833	2821	38062	7798	2372	10169	No	3.97	Si
SLU 84	4.8	740.85	-13442	-11194	-845	0.93	0.93	-42987	10833	2821	38062	7798	2372	10169	No	12.04	Si
SLU 81	2.9	1990.64	-18770	-15630	2514	0.93	0.93	-60024	10833	2821	38062	7798	2372	10169	No	4.04	Si
SLU 81	4.8	727.33	-13250	-11033	-823	0.93	0.93	-42371	10833	2821	38062	7798	2372	10169	No	12.35	Si
SLU 78	2.9	1957.03	-18528	-15428	2463	0.93	0.93	-59249	10833	2821	38062	7798	2372	10169	No	4.13	Si
SLU 78	4.8	736.88	-13110	-10917	-878	0.93	0.93	-41922	10833	2821	38062	7798	2372	10169	No	11.58	Si
SLU 82	2.9	1998.1	-18796	-15652	2520	0.93	0.93	-60107	10833	2821	38062	7798	2372	10169	No	4.04	Si
SLU 82	4.8	732.37	-13274	-11053	-835	0.93	0.93	-42447	10833	2821	38062	7798	2372	10169	No	12.17	Si
SLU 79	2.9	1946.71	-18383	-15308	2463	0.93	0.93	-58786	10833	2821	38062	7798	2372	10169	No	4.13	Si
SLU 79	4.8	720.21	-12962	-10794	-842	0.93	0.93	-41450	10833	2821	38062	7798	2372	10169	No	12.07	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	2.9	-737.1	-8716	-7258	-2198	0.93	0.93	-27873	15991	4164	38062	11696	2372	14068		6.4	Si
SLV 15	4.8	1193.21	-10898	-9075	-3070	0.93	0.93	-34851	16250	4232	38062	11696	2372	14068		4.58	Si
SLD 1	2.9	2144.76	-13885	-11563	3240	0.93	0.93	-44403	16250	4232	38062	11696	2372	14068		4.34	Si
SLD 1	4.8	207.18	-7708	-6418	416	0.93	0.93	-24648	15346	3996	38062	11696	2372	14068		33.84	Si
SLV 3	2.9	3216.22	-17673	-14717	5293	0.93	0.849	-56515	16250	3863	38062	11696	2372	14068		2.66	Si
SLV 3	4.8	-59.51	-7659	-6378	1405	0.93	0.93	-24493	15315	3988	38062	11696	2372	14068		10.01	Si
SLV 1	2.9	3274.75	-15905	-13245	5381	0.93	0.7773	-50863	16250	3537	38062	11696	2372	14068		2.61	Si
SLV 1	4.8	-178.87	-6414	-5341	1787	0.93	0.93	-20511	14519	3781	38062	11696	2372	14068		7.87	Si
SLV 4	2.9	3286.44	-17847	-14862	5398	0.93	0.8426	-57072	16250	3834	38062	11696	2372	14068		2.61	Si
SLV 4	4.8	-83.65	-7698	-6410	1471	0.93	0.93	-24617	15340	3995	38062	11696	2372	14068		9.57	Si
SLD 4	2.9	2151.11	-14722	-12259	3248	0.93	0.93	-47078	16250	4232	38062	11696	2372	14068		4.33	Si
SLD 4	4.8	247.83	-8266	-6883	279	0.93	0.93	-26432	15703	4089	38062	11696	2372	14068		50.35	Si
SLD 3	2.9	2120.97	-14647	-12197	3203	0.93	0.93	-46839	16250	4232	38062	11696	2372	14068		4.39	Si
SLD 3	4.8	258.2	-8249	-6869	251	0.93	0.93	-26379	15692	4086	38062	11696	2372	14068		56.02	Si
SLV 16	2.9	-666.88	-8890	-7403	-2093	0.93	0.93	-28430	16103	4193	38062	11696	2372	14068		6.72	Si
SLV 16	4.8	1169.07	-10937	-9108	-3004	0.93	0.93	-34975	16250	4232	38062	11696	2372	14068		4.68	Si
SLV 2	2.9	3344.97	-16080	-13390	5486	0.93	0.7709	-51420	16250	3508	38062	11696	2372	14068		2.56	Si
SLV 2	4.8	-203.01	-6453	-5373	1853	0.93	0.93	-20635	14544	3787	38062	11696	2372	14068		7.59	Si
SLD 2	2.9	2174.9	-13960	-11625	3285	0.93	0.9276	-44642	16250	4221	38062	11696	2372	14068		4.28	Si
SLD 2	4.8	196.82	-7725	-6432	444	0.93	0.93	-24702	15357	3999	38062	11696	2372	14068		31.68	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.32	25884	-6740	75.55	783.69	10.37	Si
SLV 14	179667	0.32	26552	-6914	75.55	799.69	10.58	Si
SLV 15	179667	0.32	31266	-8142	75.55	906.48	12	Si
SLV 9	179667	0.32	31787	-8277	75.55	917.62	12.15	Si
SLV 16	179667	0.32	31935	-8316	75.55	920.77	12.19	Si
SLV 10	179667	0.32	32214	-8388	75.55	926.66	12.27	Si
SLV 5	179667	0.32	42125	-10969	75.55	1112.11	14.72	Si
SLV 6	179667	0.32	42552	-11081	75.55	1119.04	14.81	Si
SLV 11	179667	0.32	49729	-12949	75.55	1222.58	16.18	Si
SLV 12	179667	0.32	50156	-13061	75.55	1227.96	16.25	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.

Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:

- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.05 Ta = 0.0706

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-9076	-11148	382	0.534	1050.2	0.964	8.05097	10.95836	No
SLV 11	-9039	-11129	382	0.536	1046.5	0.964	8.08007	10.95836	No
SLV 8	-8125	-11260	423	0.582	953.5	0.961	8.80457	10.95836	No
SLV 7	-8088	-11241	423	0.584	949.7	0.96	8.84011	10.95836	No
SLV 10	-5198	-7740	-410	0.848	656.1	0.945	13.03971	10.95836	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-5161	-7722	-410	0.853	652.3	0.945	13.12057	10.95836	Si
SLV 6	-4246	-7852	-369	1.008	559.7	0.937	15.63159	10.95836	Si
SLV 5	-4209	-7834	-369	1.015	556	0.937	15.74833	10.95836	Si
SLV 16	-8839	-9830	57	0.58	1026.1	0.963	8.74876	5.89448	Si
SLV 15	-8781	-9801	57	0.583	1020.2	0.963	8.79995	5.89448	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.207	SLU 84	Si
V_SLU	3.97	SLU 84	Si
PF_SLV	1.576	SLV 2	Si
V_SLV	2.565	SLV 2	Si
PFFP_SLV	10.373	SLV 13	Si
R_SLV	0.735	SLV 12	No

Maschio 56

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.518	-3.314	-18.518	-0.094	L4	L5	3.221	0.16	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 49	2	1205.47	-26598	-0.0000742	0.0004492	0.0035	3.2207	24738.55	35673.39	35673.39	29.59	No	Si
SLU 49	4.1	-2503.38	-21859	-0.0000677	0.0004492	0.0035	3.2207	22980.37	35212.4	35212.4	14.07	No	Si
SLU 58	2	1313.38	-29258	-0.0000822	0.0004492	0.0035	3.2207	25222.2	38587.33	38587.33	29.38	No	Si
SLU 58	4.1	-2615.85	-24335	-0.0000751	0.0004492	0.0035	3.2207	24042.08	37935.36	37935.36	14.5	No	Si
SLU 45	2	1308.59	-26149	-0.0000735	0.0004492	0.0035	3.2207	24621.32	35157.17	35157.17	26.87	No	Si
SLU 45	4.1	-2467.17	-21477	-0.0000665	0.0004492	0.0035	3.2207	22788.37	34791.69	34791.69	14.1	No	Si
SLU 50	2	1362.32	-26244	-0.000074	0.0004492	0.0035	3.2207	24646.82	35265.7	35265.7	25.89	No	Si
SLU 50	4.1	-2537.69	-21528	-0.000067	0.0004492	0.0035	3.2207	22814.7	34848.42	34848.42	13.73	No	Si
SLU 51	2	1241.58	-26355	-0.0000737	0.0004492	0.0035	3.2207	24676.39	35394.05	35394.05	28.51	No	Si
SLU 51	4.1	-2512.84	-21593	-0.000067	0.0004492	0.0035	3.2207	22847.61	34919.76	34919.76	13.9	No	Si
SLU 48	2	1326.21	-26486	-0.0000745	0.0004492	0.0035	3.2207	24710.37	35545.04	35545.04	26.8	No	Si
SLU 48	4.1	-2528.23	-21794	-0.0000677	0.0004492	0.0035	3.2207	22948.34	35141.06	35141.06	13.9	No	Si
SLU 46	2	1187.85	-26261	-0.0000732	0.0004492	0.0035	3.2207	24651.43	35285.52	35285.52	29.71	No	Si
SLU 46	4.1	-2442.31	-21542	-0.0000665	0.0004492	0.0035	3.2207	22821.46	34863.03	34863.03	14.27	No	Si
SLU 44	2	1125.84	-25755	-0.0000715	0.0004492	0.0035	3.2207	24509.88	34703.87	34703.87	30.82	No	Si
SLU 44	4.1	-2374.14	-21001	-0.0000647	0.0004492	0.0035	3.2207	22539.22	34253.76	34253.76	14.43	No	Si
SLU 43	2	1327.07	-25569	-0.000072	0.0004492	0.0035	3.2207	24454.54	34489.96	34489.96	25.99	No	Si
SLU 43	4.1	-2415.56	-20893	-0.0000646	0.0004492	0.0035	3.2207	22480.97	34126.9	34126.9	14.13	No	Si
SLU 47	2	1143.46	-26093	-0.0000725	0.0004492	0.0035	3.2207	24605.72	35091.74	35091.74	30.69	No	Si
SLU 47	4.1	-2435.2	-21319	-0.0000659	0.0004492	0.0035	3.2207	22706.9	34617.95	34617.95	14.22	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	2	9005.53	-29437	-0.0001189	0.0006738	0.0035	3.2207		40087.34	40087.34	4.45		Si
SLV 2	4.1	-6225.68	-21507	-0.0000834	0.0006738	0.0035	3.2207		35825.07	35825.07	5.75		Si
SLV 1	2	8938.07	-29287	-0.0001181	0.0006738	0.0035	3.2207		39912.97	39912.97	4.47		Si
SLV 1	4.1	-5923.74	-21431	-0.0000817	0.0006738	0.0035	3.2207		35732.99	35732.99	6.03		Si
SLV 3	2	9863.52	-30267	-0.0001256	0.0006738	0.0035	3.2207		41052.58	41052.58	4.16		Si
SLV 3	4.1	-8437.31	-21546	-0.0000942	0.0006738	0.0035	3.2207		35873.02	35873.02	4.25		Si
SLV 15	2	-7193.33	-14953	-0.0000706	0.0006738	0.0035	3.2207		27511.46	27511.46	3.82		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	4.1	2392.72	-15367	-0.000049	0.0006738	0.0035	3.2207		23481.65	23481.65	9.81		Si
SLV 14	2	-8051.33	-14123	-0.0000726	0.0006738	0.0035	3.2207		26382.53	26382.53	3.28		Si
SLV 14	4.1	4604.34	-15328	-0.0000593	0.0006738	0.0035	3.2207		23429.24	23429.24	5.09		Si
SLV 4	2	9930.99	-30417	-0.0001263	0.0006738	0.0035	3.2207		41226.95	41226.95	4.15		Si
SLV 4	4.1	-8739.25	-21621	-0.0000959	0.0006738	0.0035	3.2207		35965.11	35965.11	4.12		Si
SLV 16	2	-7125.87	-15103	-0.0000707	0.0006738	0.0035	3.2207		27705.81	27705.81	3.89		Si
SLV 16	4.1	2090.77	-15442	-0.0000477	0.0006738	0.0035	3.2207		23581.23	23581.23	11.28		Si
SLV 13	2	-8118.79	-13973	-0.0000726	0.0006738	0.0035	3.2207		26178.59	26178.59	3.22		Si
SLV 13	4.1	4906.28	-15253	-0.0000606	0.0006738	0.0035	3.2207		23327.87	23327.87	4.75		Si
SLV 8	2	5028.59	-26173	-0.0000901	0.0006738	0.0035	3.2207		36291.58	36291.58	7.22		Si
SLV 8	4.1	-7826.68	-19578	-0.000086	0.0006738	0.0035	3.2207		33461.13	33461.13	4.28		Si
SLV 7	2	4985.51	-26077	-0.0000896	0.0006738	0.0035	3.2207		36180.22	36180.22	7.26		Si
SLV 7	4.1	-7633.85	-19530	-0.0000849	0.0006738	0.0035	3.2207		33402.32	33402.32	4.38		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	2	970.69	-33355	-19584	2871	3.2207	3.2207	-38005	10833	5583	108749	18519	16426	34945	No	12.17	Si
SLU 84	4.1	-2629	-28130	-16517	4002	3.2207	3.2207	-32052	10833	5583	108749	18519	16426	34945	No	8.73	Si
SLU 82	2	953.07	-33017	-19386	2827	3.2207	3.2207	-37621	10833	5583	108749	18519	16426	34945	No	12.36	Si
SLU 82	4.1	-2567.93	-27812	-16330	3946	3.2207	3.2207	-31690	10833	5583	108749	18519	16426	34945	No	8.86	Si
SLU 63	2	1154.04	-30325	-17805	2945	3.2207	3.2207	-34553	10833	5583	108749	18519	16426	34945	No	11.87	Si
SLU 63	4.1	-2563.43	-25285	-14846	3969	3.2207	3.2207	-28810	10833	5583	108749	18519	16426	34945	No	8.8	Si
SLU 81	2	1073.81	-32906	-19321	2901	3.2207	3.2207	-37494	10833	5583	108749	18519	16426	34945	No	12.05	Si
SLU 81	4.1	-2592.79	-27748	-16292	3936	3.2207	3.2207	-31616	10833	5583	108749	18519	16426	34945	No	8.88	Si
SLU 62	2	1274.78	-30213	-17740	3018	3.2207	3.2207	-34426	10833	5583	108749	18519	16426	34945	No	11.58	Si
SLU 62	4.1	-2588.28	-25220	-14808	3960	3.2207	3.2207	-28736	10833	5583	108749	18519	16426	34945	No	8.82	Si
SLU 59	2	1192.64	-29370	-17245	2944	3.2207	3.2207	-33465	10833	5583	108749	18519	16426	34945	No	11.87	Si
SLU 59	4.1	-2591	-24400	-14326	3940	3.2207	3.2207	-27801	10833	5583	108749	18519	16426	34945	No	8.87	Si
SLU 78	2	973.18	-32642	-19166	2824	3.2207	3.2207	-37193	10833	5583	108749	18519	16426	34945	No	12.38	Si
SLU 78	4.1	-2647.11	-27511	-16153	3935	3.2207	3.2207	-31347	10833	5583	108749	18519	16426	34945	No	8.88	Si
SLU 83	2	1091.43	-33243	-19519	2945	3.2207	3.2207	-37878	10833	5583	108749	18519	16426	34945	No	11.87	Si
SLU 83	4.1	-2653.85	-28065	-16479	3992	3.2207	3.2207	-31978	10833	5583	108749	18519	16426	34945	No	8.75	Si
SLU 79	2	1130.03	-32288	-18958	2944	3.2207	3.2207	-36790	10833	5583	108749	18519	16426	34945	No	11.87	Si
SLU 79	4.1	-2681.42	-27180	-15959	3962	3.2207	3.2207	-30970	10833	5583	108749	18519	16426	34945	No	8.82	Si
SLU 80	2	1009.29	-32400	-19024	2871	3.2207	3.2207	-36917	10833	5583	108749	18519	16426	34945	No	12.17	Si
SLU 80	4.1	-2656.57	-27245	-15997	3972	3.2207	3.2207	-31044	10833	5583	108749	18519	16426	34945	No	8.8	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	2	-131.55	-21483	-12614	6354	3.2207	3.2207	-24478	16250	8374	108749	27778	16426	44204		6.96	Si
SLV 11	4.1	-4384.84	-17677	-10379	5356	3.2207	3.2207	-20141	16250	8374	108749	27778	16426	44204		8.25	Si
SLV 3	2	9863.52	-30267	-17771	3085	3.2207	3.2207	-34487	16250	8374	108749	27778	16426	44204		14.33	Si
SLV 3	4.1	-8437.31	-21546	-12651	6403	3.2207	3.2207	-24550	16250	8374	108749	27778	16426	44204		6.9	Si
SLV 4	2	9930.99	-30417	-17859	3315	3.2207	3.2207	-34658	16250	8374	108749	27778	16426	44204		13.34	Si
SLV 4	4.1	-8739.25	-21621	-12695	6638	3.2207	3.2207	-24635	16250	8374	108749	27778	16426	44204		6.66	Si
SLD 8	2	2606.99	-23855	-14007	4021	3.2207	3.2207	-27181	16250	8374	108749	27778	16426	44204		10.99	Si
SLD 8	4.1	-4434.3	-18905	-11100	4689	3.2207	3.2207	-21541	16250	8374	108749	27778	16426	44204		9.43	Si
SLV 7	2	4985.51	-26077	-15311	6220	3.2207	3.2207	-29713	16250	8374	108749	27778	16426	44204		7.11	Si
SLV 7	4.1	-7633.85	-19530	-11467	6947	3.2207	3.2207	-22253	16250	8374	108749	27778	16426	44204		6.36	Si
SLV 8	2	5028.59	-26173	-15368	6367	3.2207	3.2207	-29822	16250	8374	108749	27778	16426	44204		6.94	Si
SLV 8	4.1	-7826.68	-19578	-11495	7097	3.2207	3.2207	-22308	16250	8374	108749	27778	16426	44204		6.23	Si
SLD 7	2	2588.19	-23813	-13982	3957	3.2207	3.2207	-27134	16250	8374	108749	27778	16426	44204		11.17	Si
SLD 7	4.1	-4350.19	-18884	-11088	4624	3.2207	3.2207	-21517	16250	8374	108749	27778	16426	44204		9.56	Si
SLV 12	2	-88.46	-21579	-12670	6500	3.2207	3.2207	-24587	16250	8374	108749	27778	16426	44204		6.8	Si
SLV 12	4.1	-4577.67	-17725	-10407	5506	3.2207	3.2207	-20196	16250	8374	108749	27778	16426	44204		8.03	Si
SLV 2	2	9005.53	-29437	-17284	797	3.2207	3.2207	-33541	16250	8374	108749	27778	16426	44204		55.48	Si
SLV 2	4.1	-6225.68	-21507	-12628	4617	3.2207	3.2207	-24505	16250	8374	108749	27778	16426	44204		9.57	Si
SLD 4	2	4534.75	-25481	-14961	2695	3.2207	3.2207	-29034	16250	8374	108749	27778	16426	44204		16.4	Si
SLD 4	4.1	-4668.02	-19720	-11578	4414	3.2207	3.2207	-22469	16250	8374	108749	27778	16426	44204		10.02	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.72 Ta 0.12 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 13	-17593	0.32	158.2	1145.28	1888.12	1516.7	9.59	Si
SLV 15	-17637	0.32	158.2	1147.5	1892.05	1519.77	9.61	Si
SLV 14	-17673	0.32	158.2	1149.3	1895.24	1522.27	9.62	Si
SLV 16	-17718	0.32	158.2	1151.51	1899.17	1525.34	9.64	Si
SLV 9	-18586	0.32	158.2	1194.3	1976.45	1585.37	10.02	Si
SLV 10	-18638	0.32	158.2	1196.78	1981	1588.89	10.04	Si
SLV 11	-18734	0.32	158.2	1201.42	1989.55	1595.49	10.09	Si
SLV 12	-18785	0.32	158.2	1203.89	1994.1	1599	10.11	Si
SLV 5	-19469	0.32	158.2	1236.48	2055.04	1645.76	10.4	Si
SLV 6	-19521	0.32	158.2	1238.88	2059.59	1649.24	10.42	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.03 Ta = 0.1235

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-17778	-26173	-130	0.952	2059.7	0.964	14.36189	14.43566	No
SLV 7	-17677	-26077	-130	0.957	2049.4	0.963	14.43796	14.43566	Si
SLV 6	-16019	-22907	-251	1.038	1880.8	0.96	15.7087	14.43566	Si
SLV 5	-15918	-22811	-251	1.044	1870.5	0.96	15.80066	14.43566	Si
SLV 4	-21358	-30417	-594	0.787	2424	0.969	11.80998	10.55303	Si
SLV 3	-21200	-30267	-594	0.792	2407.9	0.968	11.89203	10.55303	Si
SLV 2	-20830	-29437	-630	0.804	2370.3	0.968	12.06358	10.55303	Si
SLV 1	-20672	-29287	-630	0.809	2354.2	0.968	12.14949	10.55303	Si
SLV 12	-14207	-21579	231	1.156	1696.4	0.957	17.56063	14.43566	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-14105	-21483	231	1.163	1686.2	0.956	17.67586	14.43566	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	13.732	SLU 50	Si
V_SLU	8.733	SLU 84	Si
PF_SLV	3.224	SLV 13	Si
V_SLV	6.229	SLV 8	Si
PFFP_SLV	9.587	SLV 13	Si
R_SLV	0.995	SLV 8	No

Maschio 59

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-3.314	-15.483	-3.314	L4	L5	1.705	0.28	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 75	2	-3001.18	-16961	-0.0000952	0.0003743	0.0035	1.705	9413.68	11538.03	11538.03	3.84	No	Si
SLU 75	4.1	270.3	-18515	-0.0000661	0.0003743	0.0035	1.705	9771.58	11592.05	11592.05	42.89	No	Si
SLU 82	2	-3099.96	-17306	-0.0000979	0.0003743	0.0035	1.705	9500.53	11666.48	11666.48	3.76	No	Si
SLU 82	4.1	289.64	-18963	-0.0000681	0.0003743	0.0035	1.705	9859.02	11745.72	11745.72	40.55	No	Si
SLU 74	2	-3005.31	-16929	-0.0000951	0.0003743	0.0035	1.705	9405.51	11526.36	11526.36	3.84	No	Si
SLU 74	4.1	264.32	-18501	-0.000066	0.0003743	0.0035	1.705	9768.69	11587.21	11587.21	43.84	No	Si
SLU 84	2	-3117.71	-17559	-0.0000992	0.0003743	0.0035	1.705	9561.54	11761.88	11761.88	3.77	No	Si
SLU 84	4.1	273.2	-19236	-0.0000689	0.0003743	0.0035	1.705	9908.77	11840.01	11840.01	43.34	No	Si
SLU 78	2	-3018.93	-17214	-0.0000964	0.0003743	0.0035	1.705	9477.75	11631.99	11631.99	3.85	No	Si
SLU 78	4.1	253.85	-18787	-0.000067	0.0003743	0.0035	1.705	9825.61	11685.32	11685.32	46.03	No	Si
SLU 81	2	-3104.09	-17274	-0.0000978	0.0003743	0.0035	1.705	9492.75	11654.63	11654.63	3.75	No	Si
SLU 81	4.1	283.66	-18949	-0.000068	0.0003743	0.0035	1.705	9856.36	11740.82	11740.82	41.39	No	Si
SLU 73	2	-2951.2	-16635	-0.0000932	0.0003743	0.0035	1.705	9327.99	11418.81	11418.81	3.87	No	Si
SLU 73	4.1	267.53	-18119	-0.0000646	0.0003743	0.0035	1.705	9688.55	11457.37	11457.37	42.83	No	Si
SLU 83	2	-3121.84	-17528	-0.0000991	0.0003743	0.0035	1.705	9554.04	11749.9	11749.9	3.76	No	Si
SLU 83	4.1	267.21	-19221	-0.0000688	0.0003743	0.0035	1.705	9906.24	11835.07	11835.07	44.29	No	Si
SLU 77	2	-3023.06	-17182	-0.0000964	0.0003743	0.0035	1.705	9469.87	11620.19	11620.19	3.84	No	Si
SLU 77	4.1	247.87	-18773	-0.0000668	0.0003743	0.0035	1.705	9822.85	11680.45	11680.45	47.12	No	Si
SLU 79	2	-2993.57	-17089	-0.0000956	0.0003743	0.0035	1.705	9446.38	11585.43	11585.43	3.87	No	Si
SLU 79	4.1	224.66	-18641	-0.000066	0.0003743	0.0035	1.705	9796.87	11635.09	11635.09	51.79	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 13	2	-4169.92	-9599	-0.0000852	0.0005615	0.0035	1.705		8166.57	8166.57	1.96		Si
SLD 13	4.1	1818.97	-13495	-0.0000645	0.0005615	0.0035	1.705		9890.95	9890.95	5.44		Si
SLV 1	2	2457.61	-14307	-0.0000749	0.0005615	0.0035	1.705		10430.98	10430.98	4.24		Si
SLV 1	4.1	-4114.02	-8596	-0.0000853	0.0005615	0.0035	1.364		7477.46	7477.46	1.82		Si
SLV 14	2	-6972.63	-6933	-0.0018134	0.0005615	0.0035	1.364		6286.35	6286.35	0.9		No
SLV 14	4.1	4014.38	-14812	-0.0000953	0.0005615	0.0035	1.705		10769.07	10769.07	2.68		Si
SLV 10	2	-4220.72	-7055	-0.000104	0.0005615	0.0035	1.364		6374.23	6374.23	1.51		Si
SLV 10	4.1	763.39	-10735	-0.0000429	0.0005615	0.0035	1.705		8091.42	8091.42	10.6		Si
SLV 16	2	-6489.96	-9056	-0.0002749	0.0005615	0.0035	1.364		7794.92	7794.92	1.2		Si
SLV 16	4.1	4349.94	-16440	-0.0001054	0.0005615	0.0035	1.705		11746.37	11746.37	2.7		Si
SLV 9	2	-4275.18	-6985	-0.0001092	0.0005615	0.0035	1.364		6323.67	6323.67	1.48		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	4.1	818.34	-10739	-0.0000435	0.0005615	0.0035	1.705		8094.05	8094.05	9.89		Si
SLV 2	2	2542.89	-14417	-0.0000763	0.0005615	0.0035	1.705		10504.82	10504.82	4.13		Si
SLV 2	4.1	-4200.06	-8590	-0.0000878	0.0005615	0.0035	1.364		7473	7473	1.78		Si
SLD 14	2	-4133.31	-9647	-0.0000844	0.0005615	0.0035	1.705		8199.14	8199.14	1.98		Si
SLD 14	4.1	1782.04	-13492	-0.000064	0.0005615	0.0035	1.705		9889.12	9889.12	5.55		Si
SLV 13	2	-7057.92	-6822	-0.0020143	0.0005615	0.0035	1.364		6206.77	6206.77	0.88		No
SLV 13	4.1	4100.42	-14818	-0.0000963	0.0005615	0.0035	1.705		10773.38	10773.38	2.63		Si
SLV 15	2	-6575.25	-8946	-0.0003161	0.0005615	0.0035	1.364		7719.12	7719.12	1.17		Si
SLV 15	4.1	4435.98	-16447	-0.0001065	0.0005615	0.0035	1.705		11749.56	11749.56	2.65		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	2	-3023.06	-17182	-14308	-2523	1.705	1.705	-29970	10833	5172	38062	14296	4348	18643	No	7.39	Si
SLU 77	4.1	247.87	-18773	-15633	-3348	1.705	1.705	-32745	10833	5172	38062	14296	4348	18643	No	5.57	Si
SLU 80	2	-2989.44	-17120	-14256	-2482	1.705	1.705	-29862	10833	5172	38062	14296	4348	18643	No	7.51	Si
SLU 80	4.1	230.65	-18655	-15534	-3302	1.705	1.705	-32539	10833	5172	38062	14296	4348	18643	No	5.65	Si
SLU 79	2	-2993.57	-17089	-14230	-2487	1.705	1.705	-29807	10833	5172	38062	14296	4348	18643	No	7.5	Si
SLU 79	4.1	224.66	-18641	-15523	-3306	1.705	1.705	-32514	10833	5172	38062	14296	4348	18643	No	5.64	Si
SLU 81	2	-3104.09	-17274	-14385	-2596	1.705	1.705	-30131	10833	5172	38062	14296	4348	18643	No	7.18	Si
SLU 81	4.1	283.66	-18949	-15779	-3425	1.705	1.705	-33051	10833	5172	38062	14296	4348	18643	No	5.44	Si
SLU 84	2	-3117.71	-17559	-14622	-2592	1.705	1.705	-30628	10833	5172	38062	14296	4348	18643	No	7.19	Si
SLU 84	4.1	273.2	-19236	-16018	-3433	1.705	1.705	-33552	10833	5172	38062	14296	4348	18643	No	5.43	Si
SLU 75	2	-3001.18	-16961	-14123	-2518	1.705	1.705	-29584	10833	5172	38062	14296	4348	18643	No	7.4	Si
SLU 75	4.1	270.3	-18515	-15418	-3333	1.705	1.705	-32295	10833	5172	38062	14296	4348	18643	No	5.59	Si
SLU 74	2	-3005.31	-16929	-14097	-2523	1.705	1.705	-29529	10833	5172	38062	14296	4348	18643	No	7.39	Si
SLU 74	4.1	264.32	-18501	-15406	-3337	1.705	1.705	-32270	10833	5172	38062	14296	4348	18643	No	5.59	Si
SLU 82	2	-3099.96	-17306	-14411	-2591	1.705	1.705	-30186	10833	5172	38062	14296	4348	18643	No	7.2	Si
SLU 82	4.1	289.64	-18963	-15791	-3421	1.705	1.705	-33076	10833	5172	38062	14296	4348	18643	No	5.45	Si
SLU 78	2	-3018.93	-17214	-14334	-2519	1.705	1.705	-30025	10833	5172	38062	14296	4348	18643	No	7.4	Si
SLU 78	4.1	253.85	-18787	-15645	-3344	1.705	1.705	-32770	10833	5172	38062	14296	4348	18643	No	5.57	Si
SLU 83	2	-3121.84	-17528	-14596	-2596	1.705	1.705	-30573	10833	5172	38062	14296	4348	18643	No	7.18	Si
SLU 83	4.1	267.21	-19221	-16006	-3437	1.705	1.705	-33527	10833	5172	38062	14296	4348	18643	No	5.42	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	2	-2611.83	-14133	-11769	-4612	1.705	1.705	-24651	15347	7327	38062	21443	4348	25791		5.59	Si
SLV 12	4.1	1881.92	-16164	-13460	-5225	1.705	1.705	-28194	16055	7665	38062	21443	4348	25791		4.94	Si
SLD 15	2	-3966.71	-10516	-8757	-4859	1.705	1.4259	-22179	14853	5930	38062	21443	4348	25791		5.31	Si
SLD 15	4.1	1965.35	-14204	-11828	-5221	1.705	1.705	-24775	15372	7339	38062	21443	4348	25791		4.94	Si
SLV 1	2	2457.61	-14307	-11914	5648	1.705	1.705	-24955	15408	7356	38062	21443	4348	25791		4.57	Si
SLV 1	4.1	-4114.02	-8596	-7158	4630	1.364	1.1218	0	0	0	38062	17155	3478	20633		4.46	Si
SLV 14	2	-6972.63	-6933	-5773	-8485	1.364	0	0	0	0	38062	17155	3478	20633		2.43	Si
SLV 14	4.1	4014.38	-14812	-12334	-8458	1.705	1.705	-25835	15584	7440	38062	21443	4348	25791		3.05	Si
SLV 13	2	-7057.92	-6822	-5681	-8614	1.364	0	0	0	0	38062	17155	3478	20633		2.4	Si
SLV 13	4.1	4100.42	-14818	-12339	-8587	1.705	1.705	-25846	15586	7441	38062	21443	4348	25791		3	Si
SLV 4	2	3025.56	-16541	-13774	5272	1.705	1.705	-28851	16187	7728	38062	21443	4348	25791		4.89	Si
SLV 4	4.1	-3864.51	-10219	-8509	4126	1.705	1.423	-21589	14735	5871	38062	21443	4348	25791		6.25	Si
SLV 16	2	-6489.96	-9056	-7541	-8991	1.364	0.4076	0	0	0	38062	17155	3478	20633		2.29	Si
SLV 16	4.1	4349.94	-16440	-13690	-9091	1.705	1.705	-28676	16152	7711	38062	21443	4348	25791		2.84	Si
SLV 15	2	-6575.25	-8946	-7449	-9120	1.364	0.3525	0	0	0	38062	17155	3478	20633		2.26	Si
SLV 15	4.1	4435.98	-16447	-13695	-9219	1.705	1.705	-28687	16154	7712	38062	21443	4348	25791		2.8	Si
SLV 11	2	-2666.3	-14062	-11710	-4694	1.705	1.705	-24528	15322	7315	38062	21443	4348	25791		5.49	Si
SLV 11	4.1	1936.86	-16168	-13463	-5307	1.705	1.705	-28201	16057	7666	38062	21443	4348	25791		4.86	Si
SLV 2	2	2542.89	-14417	-12006	5778	1.705	1.705	-25148	15446	7374	38062	21443	4348	25791		4.46	Si
SLV 2	4.1	-4200.06	-8590	-7153	4758	1.364	1.0907	0	0	0	38062	17155	3478	20633		4.34	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.32	18917	-9031	138.51	1107.75	8	Si
SLV 6	179667	0.32	18937	-9041	138.51	1108.76	8	Si
SLV 1	179667	0.32	20016	-9556	138.51	1162.44	8.39	Si
SLV 2	179667	0.32	20047	-9571	138.51	1163.99	8.4	Si
SLV 9	179667	0.32	21471	-10250	138.51	1233.29	8.9	Si
SLV 10	179667	0.32	21491	-10260	138.51	1234.26	8.91	Si
SLV 3	179667	0.32	23515	-11226	138.51	1329.68	9.6	Si
SLV 4	179667	0.32	23547	-11241	138.51	1331.14	9.61	Si
SLV 13	179667	0.32	28528	-13619	138.51	1550.52	11.19	Si
SLV 14	179667	0.32	28559	-13634	138.51	1551.84	11.2	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.05 Ta = 0.0706

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-13585	-16378	416	0.653	1614.7	0.958	9.90815	10.95836	No
SLV 7	-13546	-16308	416	0.654	1610.7	0.958	9.93324	10.95836	No
SLV 12	-12446	-14133	480	0.698	1498.9	0.955	10.63106	10.95836	No
SLV 11	-12407	-14062	480	0.7	1494.9	0.955	10.66039	10.95836	No
SLV 6	-10299	-9301	-497	0.817	1280.9	0.948	12.52237	10.95836	Si
SLV 5	-10260	-9230	-497	0.819	1276.9	0.948	12.56392	10.95836	Si
SLV 10	-9160	-7055	-433	0.906	1165.4	0.944	13.95292	10.95836	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-9121	-6985	-433	0.909	1161.4	0.943	14.00458	10.95836	Si
SLV 4	-13774	-16541	22	0.671	1633.9	0.958	10.17986	5.89448	Si
SLV 3	-13713	-16430	22	0.674	1627.7	0.958	10.21985	5.89448	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.755	SLU 81	Si
V_SLU	5.424	SLU 83	Si
PF_SLV	0.879	SLV 13	No
V_SLV	2.262	SLV 15	Si
PFFP_SLV	7.998	SLV 5	Si
R_SLV	0.904	SLV 8	No

Maschio 63

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.033	2.166	-15.033	6.526	L4	L5	4.36	0.16	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	2	10883.05	-9518	-0.0000484	0.0004492	0.0035	4.36	18431.86	180013.83	180013.83	16.54	No	Si
SLU 81	4.1	10325.54	13903	-0.0000085	0.0004492	0.0035	4.36	0	188485.56	188485.56	18.25	No	Si
SLU 80	2	10494.51	-9698	-0.0000468	0.0004492	0.0035	4.36	18736.55	179948.56	179948.56	17.15	No	Si
SLU 80	4.1	9966.8	13268	-0.0000116	0.0004492	0.0035	4.36	0	188255.78	188255.78	18.89	No	Si
SLU 78	2	10573.46	-9845	-0.0000472	0.0004492	0.0035	4.36	18982.91	179895.52	179895.52	17.01	No	Si
SLU 78	4.1	10036.47	13304	-0.0000129	0.0004492	0.0035	4.36	0	188269.06	188269.06	18.76	No	Si
SLU 82	2	10890.59	-9528	-0.0000485	0.0004492	0.0035	4.36	18448.96	180010.17	180010.17	16.53	No	Si
SLU 82	4.1	10378.66	13911	-0.00001	0.0004492	0.0035	4.36	0	188488.58	188488.58	18.16	No	Si
SLU 74	2	10462.67	-9718	-0.0000466	0.0004492	0.0035	4.36	18770.06	179941.36	179941.36	17.2	No	Si
SLU 74	4.1	9891.43	13241	-0.0000099	0.0004492	0.0035	4.36	0	188246.09	188246.09	19.03	No	Si
SLU 77	2	10565.93	-9835	-0.0000471	0.0004492	0.0035	4.36	18965.98	179899.17	179899.17	17.03	No	Si
SLU 77	4.1	9983.35	13296	-0.0000115	0.0004492	0.0035	4.36	0	188266.05	188266.05	18.86	No	Si
SLU 84	2	10993.84	-9644	-0.0000489	0.0004492	0.0035	4.36	18646.01	179967.99	179967.99	16.37	No	Si
SLU 84	4.1	10470.58	13966	-0.0000116	0.0004492	0.0035	4.36	0	188508.53	188508.53	18	No	Si
SLU 75	2	10470.21	-9728	-0.0000467	0.0004492	0.0035	4.36	18787.05	179937.7	179937.7	17.19	No	Si
SLU 75	4.1	9944.55	13249	-0.0000114	0.0004492	0.0035	4.36	0	188249.11	188249.11	18.93	No	Si
SLU 83	2	10986.31	-9634	-0.0000489	0.0004492	0.0035	4.36	18628.97	179971.64	179971.64	16.38	No	Si
SLU 83	4.1	10417.46	13958	-0.0000102	0.0004492	0.0035	4.36	0	188505.51	188505.51	18.1	No	Si
SLU 79	2	10486.98	-9688	-0.0000467	0.0004492	0.0035	4.36	18719.54	179952.21	179952.21	17.16	No	Si
SLU 79	4.1	9913.68	13259	-0.0000102	0.0004492	0.0035	4.36	0	188252.77	188252.77	18.99	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	2	10995.82	-9671	-0.0000484	0.0006738	0.0035	4.36		206352.64	206352.64	18.77		Si
SLV 5	4.1	13988.88	8602	-0.0000895	0.0006738	0.0035	4.36		211413.31	211413.31	15.11		Si
SLD 5	2	8809.46	-8084	-0.0000386	0.0006738	0.0035	4.36		206792.04	206792.04	23.47		Si
SLD 5	4.1	9848.89	8886	-0.0000511	0.0006738	0.0035	4.36		211491.82	211491.82	21.47		Si
SLD 6	2	8772.78	-8100	-0.0000385	0.0006738	0.0035	4.36		206787.68	206787.68	23.57		Si
SLD 6	4.1	9800.2	8871	-0.0000506	0.0006738	0.0035	4.36		211487.66	211487.66	21.58		Si
SLD 9	2	9493.87	-6143	-0.0000444	0.0006738	0.0035	4.36		207329.66	207329.66	21.84		Si
SLD 9	4.1	10974.08	10101	-0.0000558	0.0006738	0.0035	4.36		211828.23	211828.23	19.3		Si
SLV 9	2	12889.63	-4773	-0.0000754	0.0006738	0.0035	4.36		207708.94	207708.94	16.11		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	4.1	16704.31	11623	-0.0001029	0.0006738	0.0035	4.36		212249.84	212249.84	12.71		Si
SLD 10	2	9457.19	-6159	-0.0000441	0.0006738	0.0035	4.36		207325.3	207325.3	21.92		Si
SLD 10	4.1	10925.39	10086	-0.0000554	0.0006738	0.0035	4.36		211824.07	211824.07	19.39		Si
SLV 6	2	10911.73	-9707	-0.000048	0.0006738	0.0035	4.36		206342.65	206342.65	18.91		Si
SLV 6	4.1	13877.26	8568	-0.0000887	0.0006738	0.0035	4.36		211403.77	211403.77	15.23		Si
SLV 10	2	12805.53	-4809	-0.0000746	0.0006738	0.0035	4.36		207698.95	207698.95	16.22		Si
SLV 10	4.1	16592.69	11589	-0.0001021	0.0006738	0.0035	4.36		212240.31	212240.31	12.79		Si
SLV 13	2	11680.11	1091	-0.0000815	0.0006738	0.0035	4.36		209333.16	209333.16	17.92		Si
SLV 13	4.1	13793.42	14382	-0.0000596	0.0006738	0.0035	4.36		213013.86	213013.86	15.44		Si
SLV 14	2	11548.43	1035	-0.0000806	0.0006738	0.0035	4.36		209317.51	209317.51	18.13		Si
SLV 14	4.1	13618.65	14328	-0.0000579	0.0006738	0.0035	4.36		212998.94	212998.94	15.64		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	2	10993.84	-9644	-5663	-20876	4.36	3.1203	-11204	9838	4912	77937	25070	22236	47306	No	2.27	Si
SLU 84	4.1	10470.58	13966	8200	-20427	4.36	4.2909	1054794	8651	5939	77937	25070	22236	47306	No	2.32	Si
SLU 77	2	10565.93	-9835	-5775	-20342	4.36	3.3169	-10827	9784	5192	77937	25070	22236	47306	No	2.33	Si
SLU 77	4.1	9983.35	13296	7807	-19905	4.36	4.2874	964875	8645	5931	77937	25070	22236	47306	No	2.38	Si
SLU 75	2	10470.21	-9728	-5712	-20207	4.36	3.3112	-10726	9770	5176	77937	25070	22236	47306	No	2.34	Si
SLU 75	4.1	9944.55	13249	7779	-19774	4.36	4.2883	970620	8642	5930	77937	25070	22236	47306	No	2.39	Si
SLU 60	2	9764.82	-8775	-5152	-18692	4.36	3.2015	-9962	9670	4953	77937	25070	22236	47306	No	2.53	Si
SLU 60	4.1	9184.21	12648	7427	-18296	3.488	4.36	0	0	0	77937	20056	17789	37845	No	2.07	Si
SLU 78	2	10573.46	-9845	-5780	-20383	4.36	3.318	-10836	9785	5195	77937	25070	22236	47306	No	2.32	Si
SLU 78	4.1	10036.47	13304	7812	-19946	4.36	4.2769	864469	8674	5936	77937	25070	22236	47306	No	2.37	Si
SLU 82	2	10890.59	-9528	-5594	-20701	4.36	3.1109	-11096	9824	4890	77937	25070	22236	47306	No	2.29	Si
SLU 82	4.1	10378.66	13911	8168	-20256	4.36	4.3018	1210134	8615	5929	77937	25070	22236	47306	No	2.34	Si
SLU 74	2	10462.67	-9718	-5706	-20166	4.36	3.3101	-10718	9769	5174	77937	25070	22236	47306	No	2.35	Si
SLU 74	4.1	9891.43	13241	7774	-19734	4.36	4.2989	1106222	8610	5922	77937	25070	22236	47306	No	2.4	Si
SLU 83	2	10986.31	-9634	-5657	-20835	4.36	3.119	-11196	9837	4909	77937	25070	22236	47306	No	2.27	Si
SLU 83	4.1	10417.46	13958	8196	-20386	4.36	4.301	1199889	8618	5931	77937	25070	22236	47306	No	2.32	Si
SLU 80	2	10494.51	-9698	-5694	-20194	4.36	3.2937	-10744	9773	5150	77937	25070	22236	47306	No	2.34	Si
SLU 80	4.1	9966.8	13268	7790	-19762	4.36	4.2864	951686	8648	5931	77937	25070	22236	47306	No	2.39	Si
SLU 81	2	10883.05	-9518	-5588	-20660	4.36	3.1097	-11088	9823	4887	77937	25070	22236	47306	No	2.29	Si
SLU 81	4.1	10325.54	13903	8163	-20215	4.36	4.3119	1418005	8578	5918	77937	25070	22236	47306	No	2.34	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 4	2	5168.26	-10261	-6025	-15074	4.36	4.36	-8637	14227	9925	77937	37605	22236	59841		3.97	Si
SLD 4	4.1	3501.05	6803	3994	-14937	3.488	4.36	0	0	0	77937	30084	17789	47873		3.2	Si
SLV 2	2	5235.74	-15290	-8977	-19654	4.36	4.36	-12869	15074	10515	77937	37605	22236	59841		3.04	Si
SLV 2	4.1	4567.23	4259	2501	-19261	4.36	3.3231	60143	13571	7215	77937	37605	22236	59841		3.11	Si
SLD 3	2	5224.78	-10237	-6011	-15082	4.36	4.36	-8616	14223	9922	77937	37605	22236	59841		3.97	Si
SLD 3	4.1	3576.08	6826	4008	-14945	3.488	4.36	0	0	0	77937	30084	17789	47873		3.2	Si
SLV 4	2	2284.81	-15169	-8906	-16980	4.36	4.36	-12767	15053	10501	77937	37605	22236	59841		3.52	Si
SLV 4	4.1	-670.31	3595	2111	-17040	3.488	4.36	0	0	0	77937	30084	17789	47873		2.81	Si
SLV 5	2	10995.82	-9671	-5678	-19643	4.36	3.1289	-11184	14752	7385	77937	37605	22236	59841		3.05	Si
SLV 5	4.1	13988.88	8602	5051	-18633	4.36	1.6615	77855	16250	4320	77937	37605	22236	59841		3.21	Si
SLV 6	2	10911.73	-9707	-5699	-19631	4.36	3.1676	-11107	14736	7468	77937	37605	22236	59841		3.05	Si
SLV 6	4.1	13877.26	8568	5031	-18622	4.36	1.681	77779	16250	4371	77937	37605	22236	59841		3.21	Si
SLV 10	2	12805.53	-4809	-2824	-16935	4.36	0	-12984	15937	0	77937	37605	22236	59841		3.53	Si
SLV 10	4.1	16592.69	11589	6804	-15850	4.36	2.2445	115553	16250	5836	77937	37605	22236	59841		3.78	Si
SLV 1	2	5367.41	-15233	-8944	-19673	4.36	4.36	-12821	15064	10509	77937	37605	22236	59841		3.04	Si
SLV 1	4.1	4742	4313	2533	-19278	4.36	3.2417	58625	13639	7074	77937	37605	22236	59841		3.1	Si
SLV 3	2	2416.48	-15112	-8873	-16999	4.36	4.36	-12720	15044	10495	77937	37605	22236	59841		3.52	Si
SLV 3	4.1	-495.53	3649	2142	-17057	3.488	4.36	0	0	0	77937	30084	17789	47873		2.81	Si
SLV 9	2	12889.63	-4773	-2803	-16947	4.36	0	-13003	15972	0	77937	37605	22236	59841		3.53	Si
SLV 9	4.1	16704.31	11623	6824	-15861	4.36	2.2284	115504	16250	5794	77937	37605	22236	59841		3.77	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.72 Ta 0.12 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 4	-1204	0.32	214.16	0	14977.08	7488.54	34.97	Si
SLV 3	-1145	0.32	214.16	0	14979.93	7489.97	34.97	Si
SLV 2	-674	0.32	214.16	0	15002.75	7501.38	35.03	Si
SLV 1	-615	0.32	214.16	0	15005.61	7502.8	35.03	Si
SLV 8	2717	0.32	214.16	0	15166.88	7583.44	35.41	Si
SLV 7	2754	0.32	214.16	0	15168.7	7584.35	35.41	Si
SLV 6	4485	0.32	214.16	0	15252.46	7626.23	35.61	Si
SLV 5	4522	0.32	214.16	0	15254.28	7627.14	35.61	Si
SLV 12	6599	0.32	214.16	0	15354.8	7677.4	35.85	Si
SLV 11	6636	0.32	214.16	0	15356.62	7678.31	35.85	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.03 Ta = 0.1235

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	23123	-4407	247	2.532	440.3	1	36.79936	14.43566	Si, Trazione
SLV 11	23119	-4371	247	2.533	440.3	1	36.80776	14.43566	Si, Trazione
SLV 10	22623	-4809	259	2.601	440.3	1	37.80455	14.43566	Si, Trazione
SLV 9	22618	-4773	259	2.602	440.3	1	37.81341	14.43566	Si, Trazione
SLV 8	22260	-9304	-306	2.649	440.3	1	38.50544	14.43566	Si, Trazione
SLV 7	22256	-9268	-306	2.65	440.3	1	38.51473	14.43566	Si, Trazione
SLV 6	21760	-9707	-294	2.728	440.3	1	39.65023	14.43566	Si, Trazione
SLV 5	21756	-9671	-294	2.729	440.3	1	39.66007	14.43566	Si, Trazione
SLV 16	23956	1156	897	2.357	440.3	1	34.24879	10.55303	Si, Trazione
SLV 15	23949	1212	897	2.357	440.3	1	34.26052	10.55303	Si, Trazione

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita

dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	16.37	SLU 84	Si
V_SLU	2.069	SLU 60	Si
PF_SLV	12.706	SLV 9	Si
V_SLV	2.807	SLV 3	Si
PFFP_SLV	34.966	SLV 4	Si
R_SLV	2.549	SLV 12	Si

Maschio 64

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-4.824	-13.778	-0.194	L4	L5	4.63	0.28	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 61	2	8746.68	-70295	-0.0001085	0.0003743	0.0035	4.63	76063.5	102770.97	102770.97	11.75	No	Si
SLU 61	4.1	9206.07	-57618	-0.0000895	0.0003743	0.0035	4.63	75157.39	92445.09	92445.09	10.04	No	Si
SLU 84	2	8653.86	-77631	-0.0001205	0.0003743	0.0035	4.63	74012.66	106243.4	106243.4	12.28	No	Si
SLU 84	4.1	9811.8	-63999	-0.0001004	0.0003743	0.0035	4.63	76318.2	98651.67	98651.67	10.05	No	Si
SLU 83	2	8655.47	-77615	-0.0001205	0.0003743	0.0035	4.63	74019.18	106235.55	106235.55	12.27	No	Si
SLU 83	4.1	9713.32	-63949	-0.0001002	0.0003743	0.0035	4.63	76314.69	98610.54	98610.54	10.15	No	Si
SLU 82	2	8491.98	-76647	-0.0001185	0.0003743	0.0035	4.63	74397.45	105761.95	105761.95	12.45	No	Si
SLU 82	4.1	9739.08	-63065	-0.0000989	0.0003743	0.0035	4.63	76237.54	97778.91	97778.91	10.04	No	Si
SLU 60	2	8748.29	-70279	-0.0001085	0.0003743	0.0035	4.63	76065.91	102763.7	102763.7	11.75	No	Si
SLU 60	4.1	9107.59	-57568	-0.0000893	0.0003743	0.0035	4.63	75142.77	92397.64	92397.64	10.15	No	Si
SLU 81	2	8493.59	-76631	-0.0001185	0.0003743	0.0035	4.63	74403.41	105754.18	105754.18	12.45	No	Si
SLU 81	4.1	9640.6	-63015	-0.0000986	0.0003743	0.0035	4.63	76232.4	97729.21	97729.21	10.14	No	Si
SLU 73	2	8436.62	-73384	-0.000113	0.0003743	0.0035	4.63	75430.19	104200.15	104200.15	12.35	No	Si
SLU 73	4.1	9000.07	-60172	-0.000093	0.0003743	0.0035	4.63	75793.46	94915.3	94915.3	10.55	No	Si
SLU 63	2	8908.56	-71279	-0.0001104	0.0003743	0.0035	4.63	75898.01	103221.25	103221.25	11.59	No	Si
SLU 63	4.1	9278.79	-58552	-0.0000911	0.0003743	0.0035	4.63	75416.52	93342.09	93342.09	10.06	No	Si
SLU 62	2	8910.17	-71264	-0.0001104	0.0003743	0.0035	4.63	75900.97	103213.9	103213.9	11.58	No	Si
SLU 62	4.1	9180.31	-58502	-0.0000908	0.0003743	0.0035	4.63	75403.52	93294.26	93294.26	10.16	No	Si
SLU 40	2	6447.73	-64623	-0.0000952	0.0003743	0.0035	4.63	76355.02	99162.25	99162.25	15.38	No	Si
SLU 40	4.1	8396.87	-53468	-0.0000819	0.0003743	0.0035	4.63	73635.93	88489.06	88489.06	10.54	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 10	2	6276.86	-50403	-0.0000708	0.0005615	0.0035	4.63		94489.71	94489.71	15.05		Si
SLD 10	4.1	12874.56	-42472	-0.0000712	0.0005615	0.0035	4.63		83490.95	83490.95	6.48		Si
SLV 14	2	-1292.38	-51116	-0.0000637	0.0005615	0.0035	4.63		101832.09	101832.09	78.79		Si
SLV 14	4.1	12810.29	-40713	-0.0000688	0.0005615	0.0035	4.63		80270.13	80270.13	6.27		Si
SLV 2	2	15174.39	-50330	-0.0000853	0.0005615	0.0035	4.63		94390.3	94390.3	6.22		Si
SLV 2	4.1	7743.19	-44227	-0.0000652	0.0005615	0.0035	4.63		86096.6	86096.6	11.12		Si
SLV 9	2	5976.94	-49126	-0.0000687	0.0005615	0.0035	4.63		92737.95	92737.95	15.52		Si
SLV 9	4.1	22138.87	-43305	-0.0000873	0.0005615	0.0035	4.63		84835.39	84835.39	3.83		Si
SLV 13	2	-1068.08	-50976	-0.0000631	0.0005615	0.0035	4.63		101635.42	101635.42	95.16		Si
SLV 13	4.1	13107.77	-40522	-0.000069	0.0005615	0.0035	4.63		79921.24	79921.24	6.1		Si
SLD 9	2	6339.34	-50363	-0.0000709	0.0005615	0.0035	4.63		94435.86	94435.86	14.9		Si
SLD 9	4.1	12957.43	-42419	-0.0000712	0.0005615	0.0035	4.63		83393.02	83393.02	6.44		Si
SLV 1	2	15398.69	-50190	-0.0000854	0.0005615	0.0035	4.63		94197.11	94197.11	6.12		Si
SLV 1	4.1	8040.67	-44036	-0.0000654	0.0005615	0.0035	4.63		85839.73	85839.73	10.68		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	2	10916.97	-48890	-0.0000764	0.0005615	0.0035	4.63		92415.4	92415.4	8.47		Si
SLV 5	4.1	20618.74	-44359	-0.0000862	0.0005615	0.0035	4.63		86273.95	86273.95	4.18		Si
SLV 10	2	5833.7	-49215	-0.0000686	0.0005615	0.0035	4.63		92860.81	92860.81	15.92		Si
SLV 10	4.1	21948.88	-43427	-0.0000871	0.0005615	0.0035	4.63		85008.18	85008.18	3.87		Si
SLV 6	2	10773.73	-48980	-0.0000763	0.0005615	0.0035	4.63		92538.16	92538.16	8.59		Si
SLV 6	4.1	20428.76	-44482	-0.000086	0.0005615	0.0035	4.63		86438.18	86438.18	4.23		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 69	2	8525.69	-68036	-56654	3757	4.63	4.63	-43701	10833	14044	38062	38820	11807	50626	No	13.47	Si
SLU 69	4.1	7114.11	-55453	-46176	4731	4.63	4.63	-35619	10833	14044	38062	38820	11807	50626	No	10.7	Si
SLU 71	2	8636.4	-67686	-56363	3819	4.63	4.63	-43477	10833	14044	38062	38820	11807	50626	No	13.26	Si
SLU 71	4.1	7103.84	-55129	-45907	4786	4.63	4.63	-35411	10833	14044	38062	38820	11807	50626	No	10.58	Si
SLU 51	2	8889.49	-61350	-51087	3926	4.63	4.63	-39407	10833	14044	38062	38820	11807	50626	No	12.89	Si
SLU 51	4.1	6669.31	-49731	-41412	4730	4.63	4.63	-31944	10833	14044	38062	38820	11807	50626	No	10.7	Si
SLU 43	2	8567.35	-59366	-49435	3821	4.63	4.63	-38132	10833	14044	38062	38820	11807	50626	No	13.25	Si
SLU 43	4.1	6425.39	-47814	-39815	4662	4.63	4.63	-30712	10833	14044	38062	38820	11807	50626	No	10.86	Si
SLU 48	2	8780.39	-61684	-51365	3909	4.63	4.63	-39621	10833	14044	38062	38820	11807	50626	No	12.95	Si
SLU 48	4.1	6581.1	-50006	-41640	4787	4.63	4.63	-32120	10833	14044	38062	38820	11807	50626	No	10.57	Si
SLU 45	2	8618.51	-60700	-50545	3835	4.63	4.63	-38989	10833	14044	38062	38820	11807	50626	No	13.2	Si
SLU 45	4.1	6508.38	-49072	-40863	4697	4.63	4.63	-31520	10833	14044	38062	38820	11807	50626	No	10.78	Si
SLU 66	2	8363.81	-67051	-55835	3683	4.63	4.63	-43069	10833	14044	38062	38820	11807	50626	No	13.75	Si
SLU 66	4.1	7041.39	-54519	-45399	4641	4.63	4.63	-35019	10833	14044	38062	38820	11807	50626	No	10.91	Si
SLU 50	2	8891.1	-61334	-51074	3971	4.63	4.63	-39397	10833	14044	38062	38820	11807	50626	No	12.75	Si
SLU 50	4.1	6570.83	-49682	-41371	4842	4.63	4.63	-31912	10833	14044	38062	38820	11807	50626	No	10.46	Si
SLU 72	2	8634.79	-67702	-56376	3774	4.63	4.63	-43487	10833	14044	38062	38820	11807	50626	No	13.41	Si
SLU 72	4.1	7202.32	-55179	-45948	4673	4.63	4.63	-35443	10833	14044	38062	38820	11807	50626	No	10.83	Si
SLU 49	2	8778.78	-61700	-51378	3865	4.63	4.63	-39631	10833	14044	38062	38820	11807	50626	No	13.1	Si
SLU 49	4.1	6679.58	-50055	-41682	4675	4.63	4.63	-32152	10833	14044	38062	38820	11807	50626	No	10.83	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	2	2199.29	-53698	-44715	9246	4.63	4.63	-34492	16250	21067	38062	58230	11807	59129		6.4	Si
SLV 11	4.1	-8884.93	-38966	-32447	8669	4.63	4.63	-25029	15422	19994	38062	58230	11807	58056		6.7	Si
SLV 2	2	15174.39	-50330	-41911	7939	4.63	4.63	-32329	16250	21067	38062	58230	11807	59129		7.45	Si
SLV 2	4.1	7743.19	-44227	-36829	8061	4.63	4.63	-28409	16098	20870	38062	58230	11807	58932		7.31	Si
SLV 3	2	14265.4	-51561	-42936	13293	4.63	4.63	-33119	16250	21067	38062	58230	11807	59129		4.45	Si
SLV 3	4.1	-1266.47	-42734	-35585	12420	4.63	4.63	-27449	15907	20621	38062	58230	11807	58683		4.72	Si
SLV 10	2	5833.7	-49215	-40982	-8742	4.63	4.63	-31612	16250	21067	38062	58230	11807	59129		6.76	Si
SLV 10	4.1	21948.88	-43427	-36163	-6039	4.63	4.63	-27895	15996	20737	38062	58230	11807	58799		9.74	Si
SLV 13	2	-1068.08	-50976	-42448	-8058	4.63	4.63	-32743	16250	21067	38062	58230	11807	59129		7.34	Si
SLV 13	4.1	13107.77	-40522	-33743	-5737	4.63	4.63	-26028	15622	20253	38062	58230	11807	58315		10.17	Si
SLV 12	2	2056.05	-53788	-44790	9279	4.63	4.63	-34549	16250	21067	38062	58230	11807	59129		6.37	Si
SLV 12	4.1	-9074.92	-39088	-32549	8712	4.63	4.63	-25107	15438	20014	38062	58230	11807	58076		6.67	Si
SLV 8	2	6996.08	-53552	-44593	14062	4.63	4.63	-34398	16250	21067	38062	58230	11807	59129		4.2	Si
SLV 8	4.1	-10595.04	-40142	-33427	12831	4.63	4.63	-25784	15574	20190	38062	58230	11807	58252		4.54	Si
SLV 9	2	5976.94	-49126	-40908	-8775	4.63	4.63	-31555	16250	21067	38062	58230	11807	59129		6.74	Si
SLV 9	4.1	22138.87	-43305	-36061	-6081	4.63	4.63	-27816	15980	20716	38062	58230	11807	58778		9.67	Si
SLV 7	2	7139.32	-53462	-44519	14029	4.63	4.63	-34340	16250	21067	38062	58230	11807	59129		4.21	Si
SLV 7	4.1	-10405.06	-40020	-33325	12789	4.63	4.63	-25706	15558	20169	38062	58230	11807	58231		4.55	Si
SLV 4	2	14041.1	-51702	-43053	13345	4.63	4.63	-33210	16250	21067	38062	58230	11807	59129		4.43	Si
SLV 4	4.1	-1563.95	-42926	-35745	12486	4.63	4.63	-27572	15931	20653	38062	58230	11807	58715		4.7	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.32	32196	-41739	384.87	4611.52	11.98	Si
SLV 12	179667	0.32	32285	-41854	384.87	4620.85	12.01	Si
SLV 15	179667	0.32	32495	-42127	384.87	4642.83	12.06	Si
SLV 7	179667	0.32	32522	-42161	384.87	4645.57	12.07	Si
SLV 8	179667	0.32	32610	-42276	384.87	4654.82	12.09	Si
SLV 16	179667	0.32	32634	-42307	384.87	4657.32	12.1	Si
SLV 13	179667	0.32	33099	-42909	384.87	4705.32	12.23	Si
SLV 14	179667	0.32	33238	-43090	384.87	4719.61	12.26	Si
SLV 3	179667	0.32	33580	-43533	384.87	4754.55	12.35	Si
SLV 4	179667	0.32	33720	-43714	384.87	4768.68	12.39	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.05 Ta = 0.0706

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-35636	-48980	-325	0.693	4257.2	0.956	10.52276	10.95836	No
SLV 5	-35497	-48890	-325	0.695	4243.1	0.956	10.55902	10.95836	No
SLV 10	-34002	-49215	285	0.722	4091.2	0.955	10.98238	10.95836	Si
SLV 9	-33863	-49126	285	0.724	4077	0.955	11.02223	10.95836	Si
SLV 8	-33728	-53552	-219	0.728	4063.3	0.955	11.08735	10.95836	Si
SLV 7	-33589	-53462	-220	0.731	4049.2	0.954	11.12767	10.95836	Si
SLV 12	-32094	-53788	391	0.755	3897.3	0.953	11.50941	10.95836	Si
SLV 11	-31955	-53698	391	0.757	3883.2	0.953	11.55356	10.95836	Si
SLV 2	-36914	-50330	-999	0.656	4387.2	0.958	9.9509	5.89448	Si
SLV 1	-36696	-50190	-1000	0.659	4365	0.957	10.00279	5.89448	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.04	SLU 82	Si
V_SLU	10.455	SLU 50	Si
PF_SLV	3.832	SLV 9	Si
V_SLV	4.205	SLV 8	Si
PFFP_SLV	11.982	SLV 11	Si
R_SLV	0.96	SLV 6	No

Maschio 66

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.693	6.526	-17.768	6.526	L4	L5	1.925	0.28	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 44	2.9	1231.41	-19035	-0.0000686	0.0003743	0.0035	1.925	11966.19	13957.69	13957.69	11.33	No	Si
SLU 44	4.8	-1919.56	-11725	-0.0000514	0.0003743	0.0035	1.925	8874.19	10578.16	10578.16	5.51	No	Si
SLU 50	2.9	1264.2	-19526	-0.0000706	0.0003743	0.0035	1.925	12106.48	14231.57	14231.57	11.26	No	Si
SLU 50	4.8	-1982.68	-11966	-0.0000527	0.0003743	0.0035	1.925	9005.9	10741.62	10741.62	5.42	No	Si
SLU 43	2.9	1230.92	-18992	-0.0000685	0.0003743	0.0035	1.925	11953.37	13931.36	13931.36	11.32	No	Si
SLU 43	4.8	-1910.27	-11688	-0.0000512	0.0003743	0.0035	1.925	8853.74	10552.8	10552.8	5.52	No	Si
SLU 46	2.9	1255.01	-19538	-0.0000706	0.0003743	0.0035	1.925	12109.78	14237.72	14237.72	11.34	No	Si
SLU 46	4.8	-1959.36	-12116	-0.000053	0.0003743	0.0035	1.925	9086.81	10842.1	10842.1	5.53	No	Si
SLU 45	2.9	1254.71	-19511	-0.0000705	0.0003743	0.0035	1.925	12102.56	14224.28	14224.28	11.34	No	Si
SLU 45	4.8	-1953.79	-12094	-0.0000529	0.0003743	0.0035	1.925	9074.86	10827.24	10827.24	5.54	No	Si
SLU 49	2.9	1271.65	-19804	-0.0000717	0.0003743	0.0035	1.925	12182.48	14371.1	14371.1	11.3	No	Si
SLU 49	4.8	-1995.57	-12255	-0.0000538	0.0003743	0.0035	1.925	9161.15	10934.1	10934.1	5.48	No	Si
SLU 48	2.9	1271.35	-19778	-0.0000716	0.0003743	0.0035	1.925	12175.5	14358.43	14358.43	11.29	No	Si
SLU 48	4.8	-1990	-12233	-0.0000536	0.0003743	0.0035	1.925	9149.3	10919.73	10919.73	5.49	No	Si
SLU 72	2.9	1400.84	-22276	-0.0000815	0.0003743	0.0035	1.925	12737.23	15327.94	15327.94	10.94	No	Si
SLU 72	4.8	-2068.36	-14407	-0.0000614	0.0003743	0.0035	1.925	10226.36	12293.75	12293.75	5.94	No	Si
SLU 47	2.9	1248.05	-19302	-0.0000697	0.0003743	0.0035	1.925	12043.59	14113.52	14113.52	11.31	No	Si
SLU 47	4.8	-1955.77	-11864	-0.0000521	0.0003743	0.0035	1.925	8950.43	10672.75	10672.75	5.46	No	Si
SLU 51	2.9	1264.49	-19552	-0.0000707	0.0003743	0.0035	1.925	12113.69	14244.96	14244.96	11.27	No	Si
SLU 51	4.8	-1988.26	-11988	-0.0000528	0.0003743	0.0035	1.925	9017.96	10756.59	10756.59	5.41	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	2.9	6693	-18694	-0.0001178	0.0005615	0.0035	1.925		15095.44	15095.44	2.26		Si
SLV 14	4.8	-5720.33	378	-0.0021593	0.0005615	0.0035	1.54		0	0	0		No
SLV 15	2.9	6223.57	-14662	-0.0001025	0.0005615	0.0035	1.925		12171.12	12171.12	1.96		Si
SLV 15	4.8	-5282.01	2513	0.2116788	0.0005615	0.0035	1.54		0	0	0		No
SLD 13	2.9	3387.45	-17673	-0.0000821	0.0005615	0.0035	1.925		14407.21	14407.21	4.25		Si
SLD 13	4.8	-3283.95	-6175	-0.0000518	0.0005615	0.0035	1.925		6612.44	6612.44	2.01		Si
SLV 11	2.9	2153.79	-10122	-0.0000475	0.0005615	0.0035	1.925		8924.76	8924.76	4.14		Si
SLV 11	4.8	-2123.74	-3653	-0.0000342	0.0005615	0.0035	1.54		4418.39	4418.39	2.08		Si
SLD 15	2.9	3272.31	-15932	-0.0000755	0.0005615	0.0035	1.925		13106.3	13106.3	4.01		Si
SLD 15	4.8	-3133.96	-5222	-0.000052	0.0005615	0.0035	1.54		5791.54	5791.54	1.85		Si
SLD 16	2.9	3353.04	-15935	-0.0000762	0.0005615	0.0035	1.925		13108.55	13108.55	3.91		Si
SLD 16	4.8	-3175.7	-5201	-0.0000534	0.0005615	0.0035	1.54		5772.6	5772.6	1.82		Si
SLV 16	2.9	6411.63	-14669	-0.0001053	0.0005615	0.0035	1.925		12176.3	12176.3	1.9		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	4.8	-5379.27	2563	0.2158945	0.0005615	0.0035	1.54		0	0	0		No
SLD 14	2.9	3468.18	-17676	-0.0000828	0.0005615	0.0035	1.925		14409.5	14409.5	4.15		Si
SLD 14	4.8	-3325.7	-6154	-0.0000527	0.0005615	0.0035	1.54		6594.46	6594.46	1.98		Si
SLV 13	2.9	6504.94	-18687	-0.0001157	0.0005615	0.0035	1.925		15091.53	15091.53	2.32		Si
SLV 13	4.8	-5623.07	328	-0.0037845	0.0005615	0.0035	1.54		0	0	0		No
SLV 12	2.9	2273.89	-10127	-0.0000486	0.0005615	0.0035	1.925		8927.92	8927.92	3.93		Si
SLV 12	4.8	-2185.86	-3621	-0.000036	0.0005615	0.0035	1.54		4389.95	4389.95	2.01		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	2.9	1582.05	-25677	-21381	4766	1.925	1.925	-39669	10833	5839	38062	16140	4909	21049	No	4.42	Si
SLU 81	4.8	-2086.57	-17598	-14654	4772	1.925	1.925	-27187	10569	5697	38062	16140	4909	21049	No	4.41	Si
SLU 76	2.9	1534.75	-24799	-20650	4746	1.925	1.925	-38312	10833	5839	38062	16140	4909	21049	No	4.43	Si
SLU 76	4.8	-2103.21	-16727	-13928	4753	1.925	1.925	-25841	10390	5600	38062	16140	4909	21049	No	4.43	Si
SLU 83	2.9	1598.69	-25944	-21604	4859	1.925	1.925	-40081	10833	5839	38062	16140	4909	21049	No	4.33	Si
SLU 83	4.8	-2122.78	-17737	-14770	4865	1.925	1.925	-27402	10598	5712	38062	16140	4909	21049	No	4.33	Si
SLU 75	2.9	1541.71	-25034	-20846	4744	1.925	1.925	-38676	10833	5839	38062	16140	4909	21049	No	4.44	Si
SLU 75	4.8	-2106.8	-16978	-14138	4750	1.925	1.925	-26230	10442	5628	38062	16140	4909	21049	No	4.43	Si
SLU 77	2.9	1558.05	-25275	-21047	4831	1.925	1.925	-39048	10833	5839	38062	16140	4909	21049	No	4.36	Si
SLU 77	4.8	-2137.44	-17095	-14235	4838	1.925	1.925	-26410	10466	5641	38062	16140	4909	21049	No	4.35	Si
SLU 82	2.9	1582.35	-25703	-21403	4771	1.925	1.925	-39709	10833	5839	38062	16140	4909	21049	No	4.41	Si
SLU 82	4.8	-2092.14	-17620	-14672	4777	1.925	1.925	-27221	10574	5699	38062	16140	4909	21049	No	4.41	Si
SLU 78	2.9	1558.35	-25301	-21069	4836	1.925	1.925	-39088	10833	5839	38062	16140	4909	21049	No	4.35	Si
SLU 78	4.8	-2143.01	-17117	-14254	4843	1.925	1.925	-26445	10470	5644	38062	16140	4909	21049	No	4.35	Si
SLU 79	2.9	1550.89	-25022	-20836	4830	1.925	1.925	-38657	10833	5839	38062	16140	4909	21049	No	4.36	Si
SLU 79	4.8	-2130.12	-16828	-14013	4837	1.925	1.925	-25999	10411	5611	38062	16140	4909	21049	No	4.35	Si
SLU 80	2.9	1551.19	-25048	-20858	4835	1.925	1.925	-38698	10833	5839	38062	16140	4909	21049	No	4.35	Si
SLU 80	4.8	-2135.7	-16851	-14032	4842	1.925	1.925	-26033	10416	5614	38062	16140	4909	21049	No	4.35	Si
SLU 84	2.9	1598.99	-25970	-21625	4864	1.925	1.925	-40121	10833	5839	38062	16140	4909	21049	No	4.33	Si
SLU 84	4.8	-2128.35	-17759	-14788	4870	1.925	1.925	-27436	10603	5715	38062	16140	4909	21049	No	4.32	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	2.9	2273.89	-10127	-8433	7072	1.925	1.925	-15645	13546	7301	38062	24210	4909	29119		4.12	Si
SLV 12	4.8	-2185.86	-3621	-3015	5969	1.54	1.0766	0	0	0	38062	19368	3927	23295		3.9	Si
SLV 14	2.9	6693	-18694	-15567	14075	1.925	1.8134	-28881	16193	8222	38062	24210	4909	29119		2.07	Si
SLV 14	4.8	-5720.33	378	315	14000	1.54	0	0	0	0	38062	19368	3927	23295		1.66	Si
SLV 13	2.9	6504.94	-18687	-15561	13896	1.925	1.8432	-28870	16191	8356	38062	24210	4909	29119		2.1	Si
SLV 13	4.8	-5623.07	328	273	13822	1.54	0	0	0	0	38062	19368	3927	23295		1.69	Si
SLV 15	2.9	6223.57	-14662	-12209	14144	1.925	1.6141	-22652	14947	6755	38062	24210	4909	29119		2.06	Si
SLV 15	4.8	-5282.01	2513	2093	13474	1.54	0	0	0	0	38062	19368	3927	23295		1.73	Si
SLV 16	2.9	6411.63	-14669	-12215	14324	1.925	1.5763	-22663	14949	6598	38062	24210	4909	29119		2.03	Si
SLV 16	4.8	-5379.27	2563	2134	13652	1.54	0	0	0	0	38062	19368	3927	23295		1.71	Si
SLD 15	2.9	3272.31	-15932	-13267	7981	1.925	1.925	-24614	15340	8268	38062	24210	4909	29119		3.65	Si
SLD 15	4.8	-3133.96	-5222	-4349	7698	1.54	1.0872	0	0	0	38062	19368	3927	23295		3.03	Si
SLD 16	2.9	3353.04	-15935	-13270	8058	1.925	1.925	-24619	15340	8268	38062	24210	4909	29119		3.61	Si
SLD 16	4.8	-3175.7	-5201	-4331	7775	1.54	1.0557	0	0	0	38062	19368	3927	23295		3	Si
SLD 14	2.9	3468.18	-17676	-14719	7957	1.925	1.925	-27308	15878	8558	38062	24210	4909	29119		3.66	Si
SLD 14	4.8	-3325.7	-6154	-5124	7926	1.54	1.2661	0	0	0	38062	19368	3927	23295		2.94	Si
SLV 1	2.9	-4282.17	-19127	-15927	-7560	1.925	1.925	-29550	16250	8759	38062	24210	4909	29119		3.85	Si
SLV 1	4.8	2313.89	-24599	-20484	-6878	1.925	1.925	-38004	16250	8759	38062	24210	4909	29119		4.23	Si
SLD 13	2.9	3387.45	-17673	-14716	7880	1.925	1.925	-27303	15877	8558	38062	24210	4909	29119		3.7	Si
SLD 13	4.8	-3283.95	-6175	-5142	7850	1.925	1.2921	-14304	13278	4804	38062	24210	4909	29119		3.71	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.32	14462	-7795	156.38	987.98	6.32	Si
SLV 11	179667	0.32	14497	-7814	156.38	990.1	6.33	Si
SLV 16	179667	0.32	15280	-8236	156.38	1037.67	6.64	Si
SLV 15	179667	0.32	15335	-8265	156.38	1040.96	6.66	Si
SLV 8	179667	0.32	19969	-10763	156.38	1309.83	8.38	Si
SLV 7	179667	0.32	20004	-10782	156.38	1311.77	8.39	Si
SLV 14	179667	0.32	21496	-11587	156.38	1393.79	8.91	Si
SLV 13	179667	0.32	21551	-11616	156.38	1396.74	8.93	Si
SLV 4	179667	0.32	33636	-18130	156.38	1979.13	12.66	Si
SLV 3	179667	0.32	33690	-18159	156.38	1981.43	12.67	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.05 Ta = 0.0706

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-16148	-21068	1003	0.595	1905.4	0.959	9.01571	10.95836	No
SLV 5	-16092	-21120	1003	0.597	1899.7	0.959	9.04338	10.95836	No
SLV 10	-9840	-20353	960	0.903	1264.9	0.942	13.93271	10.95836	Si
SLV 2	-21270	-16633	368	0.499	2426.6	0.967	7.49659	5.89448	Si
SLV 1	-21182	-16716	368	0.501	2417.6	0.967	7.52402	5.89448	Si
SLV 9	-9784	-20406	960	0.907	1259.2	0.941	14.00148	10.95836	Si
SLV 8	-9710	-6058	-956	0.913	1251.7	0.941	14.09665	10.95836	Si
SLV 7	-9654	-6110	-956	0.917	1246	0.941	14.16716	10.95836	Si
SLV 4	-19339	-12130	-220	0.548	2230	0.965	8.2581	5.89448	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 3	-19250	-12213	-220	0.55	2221	0.965	8.29151	5.89448	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.41	SLU 51	Si
V_SLU	4.322	SLU 84	Si
PF_SLV	0	SLV 13	No
V_SLV	1.664	SLV 14	Si
PFFP_SLV	6.318	SLV 12	Si
R_SLV	0.823	SLV 6	No

Maschio 67

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.768	6.526	-12.888	6.526	L4	L5	3.88	0.28	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 48	2.9	5525.57	-29277	-0.000055	0.0003743	0.0035	3.88	41763.8	46006.95	46006.95	8.33	No	Si
SLU 48	4.8	-4778.88	-42037	-0.0000743	0.0003743	0.0035	3.88	50557.74	62664.26	62664.26	13.11	No	Si
SLU 51	2.9	5491.04	-28869	-0.0000543	0.0003743	0.0035	3.88	41388.14	45547.79	45547.79	8.29	No	Si
SLU 51	4.8	-4741.82	-41438	-0.0000732	0.0003743	0.0035	3.88	50272.5	62124.41	62124.41	13.1	No	Si
SLU 59	2.9	6046.62	-33366	-0.0000629	0.0003743	0.0035	3.88	45203.81	50705.32	50705.32	8.39	No	Si
SLU 59	4.8	-5261.76	-48207	-0.0000863	0.0003743	0.0035	3.88	52761.21	67650.53	67650.53	12.86	No	Si
SLU 49	2.9	5530.18	-29316	-0.0000551	0.0003743	0.0035	3.88	41799.49	46051.06	46051.06	8.33	No	Si
SLU 49	4.8	-4784.3	-42091	-0.0000744	0.0003743	0.0035	3.88	50582.55	62712.67	62712.67	13.11	No	Si
SLU 50	2.9	5486.43	-28830	-0.0000542	0.0003743	0.0035	3.88	41351.83	45503.89	45503.89	8.29	No	Si
SLU 50	4.8	-4736.4	-41384	-0.0000731	0.0003743	0.0035	3.88	50246.46	62076.57	62076.57	13.11	No	Si
SLU 47	2.9	5411.78	-28531	-0.0000536	0.0003743	0.0035	3.88	41073.15	45169.65	45169.65	8.35	No	Si
SLU 47	4.8	-4699.47	-40923	-0.0000722	0.0003743	0.0035	3.88	50017.32	61665.22	61665.22	13.12	No	Si
SLU 43	2.9	5321.76	-28103	-0.0000527	0.0003743	0.0035	3.88	40667.2	44691.15	44691.15	8.4	No	Si
SLU 43	4.8	-4644.46	-40283	-0.000071	0.0003743	0.0035	3.88	49687.41	61100.95	61100.95	13.16	No	Si
SLU 58	2.9	6042.01	-33327	-0.0000628	0.0003743	0.0035	3.88	45173.67	50659.65	50659.65	8.38	No	Si
SLU 58	4.8	-5256.34	-48153	-0.0000862	0.0003743	0.0035	3.88	52747.86	67619.86	67619.86	12.86	No	Si
SLU 45	2.9	5443.23	-28914	-0.0000542	0.0003743	0.0035	3.88	41429.5	45597.9	45597.9	8.38	No	Si
SLU 45	4.8	-4732.91	-41487	-0.0000733	0.0003743	0.0035	3.88	50296.14	62168.05	62168.05	13.14	No	Si
SLU 46	2.9	5447.84	-28953	-0.0000543	0.0003743	0.0035	3.88	41465.7	45641.84	45641.84	8.38	No	Si
SLU 46	4.8	-4738.34	-41540	-0.0000734	0.0003743	0.0035	3.88	50321.99	62215.98	62215.98	13.13	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	2.9	25946.87	-25925	-0.000104	0.0005615	0.0035	3.88		44140.1	44140.1	1.7		Si
SLV 14	4.8	-19247.49	-33601	-0.0000915	0.0005615	0.0035	3.88		59447.48	59447.48	3.09		Si
SLD 15	2.9	13391.72	-22507	-0.0000609	0.0005615	0.0035	3.88		39237.1	39237.1	2.93		Si
SLD 15	4.8	-10192.43	-33469	-0.0000705	0.0005615	0.0035	3.88		59271.05	59271.05	5.82		Si
SLV 4	2.9	-16297.82	-24840	-0.000071	0.0005615	0.0035	3.88		46827.37	46827.37	2.87		Si
SLV 4	4.8	10556.63	-39541	-0.0000808	0.0005615	0.0035	3.88		63411.99	63411.99	6.01		Si
SLV 13	2.9	25381.29	-25931	-0.0001014	0.0005615	0.0035	3.88		44149.85	44149.85	1.74		Si
SLV 13	4.8	-18568.37	-33580	-0.0000899	0.0005615	0.0035	3.88		59419.21	59419.21	3.2		Si
SLV 11	2.9	10452.71	-12488	-0.0000406	0.0005615	0.0035	3.88		23550.98	23550.98	2.25		Si
SLV 11	4.8	-8096.81	-28045	-0.0000575	0.0005615	0.0035	3.88		51624.67	51624.67	6.38		Si
SLV 15	2.9	25246.35	-18741	-0.0001207	0.0005615	0.0035	3.88		33929.93	33929.93	1.34		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	4.8	-18478.74	-29387	-0.000083	0.0005615	0.0035	3.88		53528.54	53528.54	2.9		Si
SLV 3	2.9	-16863.41	-24846	-0.0000724	0.0005615	0.0035	3.88		46837.34	46837.34	2.78		Si
SLV 3	4.8	11235.75	-39520	-0.0000824	0.0005615	0.0035	3.88		63388.31	63388.31	5.64		Si
SLV 16	2.9	25811.94	-18734	-0.000128	0.0005615	0.0035	3.88		33920.11	33920.11	1.31		Si
SLV 16	4.8	-19157.86	-29408	-0.0000847	0.0005615	0.0035	3.88		53558.41	53558.41	2.8		Si
SLV 12	2.9	10813.91	-12484	-0.0000417	0.0005615	0.0035	3.88		23543.58	23543.58	2.18		Si
SLV 12	4.8	-8530.51	-28059	-0.0000584	0.0005615	0.0035	3.88		51644.15	51644.15	6.05		Si
SLD 16	2.9	13634.5	-22504	-0.0000614	0.0005615	0.0035	3.88		39232.99	39232.99	2.88		Si
SLD 16	4.8	-10483.94	-33478	-0.0000712	0.0005615	0.0035	3.88		59283.17	59283.17	5.65		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	2.9	6573.22	-37886	-31548	3946	3.88	3.88	-29039	10816	11751	38062	32532	9894	42426	No	10.75	Si
SLU 80	4.8	-5779.83	-54830	-45658	4022	3.88	3.88	-42027	10833	11769	38062	32532	9894	42426	No	10.55	Si
SLU 82	2.9	6646.64	-39086	-32547	3985	3.88	3.88	-29959	10833	11769	38062	32532	9894	42426	No	10.65	Si
SLU 82	4.8	-5910.72	-56630	-47156	4063	3.88	3.88	-43406	10833	11769	38062	32532	9894	42426	No	10.44	Si
SLU 84	2.9	6728.98	-39449	-32850	4031	3.88	3.88	-30238	10833	11769	38062	32532	9894	42426	No	10.53	Si
SLU 84	4.8	-5956.69	-57181	-47615	4110	3.88	3.88	-43828	10833	11769	38062	32532	9894	42426	No	10.32	Si
SLU 75	2.9	6530.01	-37969	-31618	3919	3.88	3.88	-29103	10825	11760	38062	32532	9894	42426	No	10.82	Si
SLU 75	4.8	-5776.34	-54933	-45743	3995	3.88	3.88	-42105	10833	11769	38062	32532	9894	42426	No	10.62	Si
SLU 74	2.9	6525.4	-37930	-31585	3916	3.88	3.88	-29073	10821	11756	38062	32532	9894	42426	No	10.83	Si
SLU 74	4.8	-5770.92	-54879	-45699	3992	3.88	3.88	-42064	10833	11769	38062	32532	9894	42426	No	10.63	Si
SLU 78	2.9	6612.35	-38333	-31920	3965	3.88	3.88	-29382	10833	11769	38062	32532	9894	42426	No	10.7	Si
SLU 78	4.8	-5822.31	-55483	-46202	4042	3.88	3.88	-42527	10833	11769	38062	32532	9894	42426	No	10.5	Si
SLU 83	2.9	6724.37	-39410	-32817	4027	3.88	3.88	-30208	10833	11769	38062	32532	9894	42426	No	10.53	Si
SLU 83	4.8	-5951.27	-57127	-47571	4106	3.88	3.88	-43787	10833	11769	38062	32532	9894	42426	No	10.33	Si
SLU 81	2.9	6642.03	-39047	-32515	3981	3.88	3.88	-29929	10833	11769	38062	32532	9894	42426	No	10.66	Si
SLU 81	4.8	-5905.3	-56576	-47112	4059	3.88	3.88	-43365	10833	11769	38062	32532	9894	42426	No	10.45	Si
SLU 77	2.9	6607.74	-38294	-31888	3962	3.88	3.88	-29352	10833	11769	38062	32532	9894	42426	No	10.71	Si
SLU 77	4.8	-5816.89	-55430	-46157	4038	3.88	3.88	-42486	10833	11769	38062	32532	9894	42426	No	10.51	Si
SLU 79	2.9	6568.6	-37846	-31515	3942	3.88	3.88	-29009	10812	11746	38062	32532	9894	42426	No	10.76	Si
SLU 79	4.8	-5774.4	-54777	-45614	4018	3.88	3.88	-41986	10833	11769	38062	32532	9894	42426	No	10.56	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	2.9	-16297.82	-24840	-20684	-16701	3.88	3.8516	-19039	14225	15341	38062	48797	9894	53403		3.2	Si
SLV 4	4.8	10556.63	-39541	-32926	-15572	3.88	3.88	-30308	16250	17654	38062	48797	9894	55716		3.58	Si
SLD 14	2.9	13689.47	-25609	-21325	11340	3.88	3.88	-19629	14342	15582	38062	48797	9894	53644		4.73	Si
SLD 14	4.8	-10529.94	-35313	-29405	10929	3.88	3.88	-27067	15830	17198	38062	48797	9894	55260		5.06	Si
SLV 14	2.9	25946.87	-25925	-21588	22848	3.88	2.8174	-19871	14391	11353	38062	48797	9894	49415		2.16	Si
SLV 14	4.8	-19247.49	-33601	-27980	21824	3.88	3.88	-25755	15568	16913	38062	48797	9894	54975		2.52	Si
SLV 15	2.9	25246.35	-18741	-15606	21483	3.88	1.7786	-14365	13290	6618	38062	48797	9894	44680		2.08	Si
SLV 15	4.8	-18478.74	-29387	-24471	21209	3.88	3.88	-22524	14922	16211	38062	48797	9894	54273		2.56	Si
SLD 16	2.9	13634.5	-22504	-18739	11036	3.88	3.88	-17249	13866	15065	38062	48797	9894	53127		4.81	Si
SLD 16	4.8	-10483.94	-33478	-27878	10944	3.88	3.88	-25660	15549	16892	38062	48797	9894	54954		5.02	Si
SLV 3	2.9	-16863.41	-24846	-20690	-17353	3.88	3.7839	-19717	14360	15214	38062	48797	9894	53276		3.07	Si
SLV 3	4.8	11235.75	-39520	-32909	-16224	3.88	3.88	-30292	16250	17654	38062	48797	9894	55716		3.43	Si
SLV 2	2.9	-16162.89	-32030	-26672	-15988	3.88	3.88	-24551	15327	16651	38062	48797	9894	54713		3.42	Si
SLV 2	4.8	10467	-43734	-36418	-15609	3.88	3.88	-33522	16250	17654	38062	48797	9894	55716		3.57	Si
SLV 1	2.9	-16728.47	-32037	-26677	-16640	3.88	3.88	-24556	15328	16652	38062	48797	9894	54714		3.29	Si
SLV 1	4.8	11146.12	-43713	-36400	-16261	3.88	3.88	-33506	16250	17654	38062	48797	9894	55716		3.43	Si
SLV 13	2.9	25381.29	-25931	-21593	22196	3.88	2.8836	-19876	14392	11620	38062	48797	9894	49682		2.24	Si
SLV 13	4.8	-18568.37	-33580	-27962	21172	3.88	3.88	-25738	15564	16909	38062	48797	9894	54971		2.6	Si
SLV 16	2.9	25811.94	-18734	-15600	22135	3.88	1.6866	-14360	13289	6276	38062	48797	9894	44338		2	Si
SLV 16	4.8	-19157.86	-29408	-24488	21861	3.88	3.8656	-22541	14925	16154	38062	48797	9894	54216		2.48	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.32	17054	-18528	315.2	2304.24	7.31	Si
SLV 11	179667	0.32	17056	-18530	315.2	2304.43	7.31	Si
SLV 8	179667	0.32	19257	-20921	315.2	2559.58	8.12	Si
SLV 7	179667	0.32	19258	-20922	315.2	2559.75	8.12	Si
SLV 16	179667	0.32	20255	-22005	315.2	2672.07	8.48	Si
SLV 15	179667	0.32	20257	-22007	315.2	2672.34	8.48	Si
SLV 14	179667	0.32	25201	-27378	315.2	3200.41	10.15	Si
SLV 13	179667	0.32	25203	-27380	315.2	3200.66	10.15	Si
SLV 4	179667	0.32	27596	-29980	315.2	3438.81	10.91	Si
SLV 3	179667	0.32	27599	-29983	315.2	3439.05	10.91	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.05 Ta = 0.0706

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-40838	-35605	1554	0.502	4684	0.966	7.54757	10.95836	No
SLV 5	-40810	-35640	1554	0.502	4681.1	0.966	7.55207	10.95836	No
SLV 10	-37630	-32729	1590	0.537	4357.5	0.964	8.09677	10.95836	No
SLV 9	-37602	-32764	1590	0.537	4354.7	0.964	8.10201	10.95836	No
SLV 8	-29671	-13477	-1649	0.655	3548	0.956	9.94951	10.95836	No
SLV 7	-29643	-13511	-1649	0.655	3545.2	0.956	9.95769	10.95836	No
SLV 12	-26463	-10601	-1614	0.722	3222.1	0.952	11.01622	10.95836	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-26435	-10636	-1613	0.723	3219.3	0.952	11.02634	10.95836	Si
SLV 2	-40679	-31205	392	0.53	4667.8	0.966	7.97052	5.89448	Si
SLV 1	-40636	-31260	392	0.53	4663.4	0.966	7.97803	5.89448	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.294	SLU 50	Si
V_SLU	10.323	SLU 84	Si
PF_SLV	1.314	SLV 16	Si
V_SLV	2.003	SLV 16	Si
PFFP_SLV	7.31	SLV 12	Si
R_SLV	0.689	SLV 6	No

Maschio 68

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.888	6.526	-8.008	6.526	L4	L5	3.88	0.28	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 45	2.9	-5044.68	-30163	-0.0000553	0.0003743	0.0035	3.88	42558.67	51276.38	51276.38	10.16	No	Si
SLU 45	4.8	4747.92	-40340	-0.0000713	0.0003743	0.0035	3.88	49717.48	58773	58773	12.38	No	Si
SLU 79	2.9	-5937.86	-39453	-0.0000728	0.0003743	0.0035	3.88	49238.17	60379.16	60379.16	10.17	No	Si
SLU 79	4.8	5593.19	-53218	-0.0000962	0.0003743	0.0035	3.88	53568.35	68974.41	68974.41	12.33	No	Si
SLU 49	2.9	-5115.3	-30614	-0.0000562	0.0003743	0.0035	3.88	42952.8	51823.47	51823.47	10.13	No	Si
SLU 49	4.8	4838.63	-40972	-0.0000726	0.0003743	0.0035	3.88	50041.9	59266.57	59266.57	12.25	No	Si
SLU 46	2.9	-5046.15	-30205	-0.0000554	0.0003743	0.0035	3.88	42595.27	51326.93	51326.93	10.17	No	Si
SLU 46	4.8	4759.59	-40401	-0.0000715	0.0003743	0.0035	3.88	49749.52	58823.23	58823.23	12.36	No	Si
SLU 48	2.9	-5113.83	-30572	-0.0000561	0.0003743	0.0035	3.88	42916.8	51773.23	51773.23	10.12	No	Si
SLU 48	4.8	4826.96	-40911	-0.0000725	0.0003743	0.0035	3.88	50011.09	59221.21	59221.21	12.27	No	Si
SLU 47	2.9	-5024.35	-29775	-0.0000547	0.0003743	0.0035	3.88	42214.09	50803.02	50803.02	10.11	No	Si
SLU 47	4.8	4743.89	-39803	-0.0000704	0.0003743	0.0035	3.88	49430.36	58318.62	58318.62	12.29	No	Si
SLU 43	2.9	-4952.75	-29297	-0.0000537	0.0003743	0.0035	3.88	41781.44	50214.95	50214.95	10.14	No	Si
SLU 43	4.8	4645.39	-39131	-0.0000691	0.0003743	0.0035	3.88	49056.96	57630.52	57630.52	12.41	No	Si
SLU 44	2.9	-4955.2	-29366	-0.0000538	0.0003743	0.0035	3.88	41844.51	50299.91	50299.91	10.15	No	Si
SLU 44	4.8	4664.85	-39233	-0.0000693	0.0003743	0.0035	3.88	49114.61	57756.5	57756.5	12.38	No	Si
SLU 51	2.9	-5092.52	-30157	-0.0000554	0.0003743	0.0035	3.88	42553.37	51269.08	51269.08	10.07	No	Si
SLU 51	4.8	4815.15	-40332	-0.0000715	0.0003743	0.0035	3.88	49713.34	58766.49	58766.49	12.2	No	Si
SLU 50	2.9	-5091.05	-30115	-0.0000554	0.0003743	0.0035	3.88	42516.7	51218.49	51218.49	10.06	No	Si
SLU 50	4.8	4803.48	-40271	-0.0000714	0.0003743	0.0035	3.88	49681.15	58715.92	58715.92	12.22	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	2.9	14631.02	-30605	-0.0000762	0.0005615	0.0035	3.88		50993.58	50993.58	3.49		Si
SLV 14	4.8	-10714.22	-41304	-0.000084	0.0005615	0.0035	3.88		69527.1	69527.1	6.49		Si
SLV 13	2.9	14090.24	-30579	-0.0000749	0.0005615	0.0035	3.88		50954.33	50954.33	3.62		Si
SLV 13	4.8	-10081.52	-41224	-0.0000824	0.0005615	0.0035	3.88		69423.54	69423.54	6.89		Si
SLV 1	2.9	-23202.27	-29581	-0.0000956	0.0005615	0.0035	3.88		53803.01	53803.01	2.32		Si
SLV 1	4.8	19313.62	-34411	-0.000093	0.0005615	0.0035	3.88		56684.58	56684.58	2.93		Si
SLV 3	2.9	-22953.3	-22269	-0.0000913	0.0005615	0.0035	3.88		42869.81	42869.81	1.87		Si
SLV 3	4.8	18519.56	-29685	-0.0000836	0.0005615	0.0035	3.88		49634.23	49634.23	2.68		Si
SLV 8	2.9	-9167.39	-14110	-0.0000392	0.0005615	0.0035	3.88		29634.91	29634.91	3.23		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	4.8	6786.48	-26623	-0.0000524	0.0005615	0.0035	3.88		45152.24	45152.24	6.65		Si
SLV 2	2.9	-22661.5	-29607	-0.0000941	0.0005615	0.0035	3.88		53840.49	53840.49	2.38		Si
SLV 2	4.8	18680.92	-34491	-0.0000916	0.0005615	0.0035	3.88		56805.77	56805.77	3.04		Si
SLV 7	2.9	-9512.74	-14093	-0.0000399	0.0005615	0.0035	3.88		29606.04	29606.04	3.11		Si
SLV 7	4.8	7190.54	-26572	-0.0000532	0.0005615	0.0035	3.88		45077.8	45077.8	6.27		Si
SLV 16	2.9	14879.99	-23294	-0.0000654	0.0005615	0.0035	3.88		40358.03	40358.03	2.71		Si
SLV 16	4.8	-11508.28	-36579	-0.0000784	0.0005615	0.0035	3.88		63470.92	63470.92	5.52		Si
SLV 15	2.9	14339.22	-23267	-0.0000642	0.0005615	0.0035	3.88		40320.2	40320.2	2.81		Si
SLV 15	4.8	-10875.58	-36498	-0.0000768	0.0005615	0.0035	3.88		63361.39	63361.39	5.83		Si
SLV 4	2.9	-22412.53	-22296	-0.0000888	0.0005615	0.0035	3.88		42911.37	42911.37	1.91		Si
SLV 4	4.8	17886.86	-29766	-0.0000823	0.0005615	0.0035	3.88		49752.63	49752.63	2.78		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	2.9	-5962.1	-39952	-33269	-3770	3.88	3.88	-30623	10833	11769	38062	32532	9894	42426	No	11.25	Si
SLU 78	4.8	5628.35	-53918	-44898	-3725	3.88	3.88	-41328	10833	11769	38062	32532	9894	42426	No	11.39	Si
SLU 82	2.9	-5986.19	-40674	-33870	-3741	3.88	3.88	-31176	10833	11769	38062	32532	9894	42426	No	11.34	Si
SLU 82	4.8	5616.79	-54932	-45743	-3695	3.88	3.88	-42105	10833	11769	38062	32532	9894	42426	No	11.48	Si
SLU 83	2.9	-6053.87	-41042	-34176	-3795	3.88	3.88	-31458	10833	11769	38062	32532	9894	42426	No	11.18	Si
SLU 83	4.8	5684.16	-55441	-46167	-3749	3.88	3.88	-42495	10833	11769	38062	32532	9894	42426	No	11.32	Si
SLU 84	2.9	-6055.34	-41083	-34211	-3800	3.88	3.88	-31490	10833	11769	38062	32532	9894	42426	No	11.16	Si
SLU 84	4.8	5695.83	-55502	-46218	-3753	3.88	3.88	-42542	10833	11769	38062	32532	9894	42426	No	11.3	Si
SLU 77	2.9	-5960.63	-39910	-33234	-3765	3.88	3.88	-30591	10833	11769	38062	32532	9894	42426	No	11.27	Si
SLU 77	4.8	5616.67	-53857	-44847	-3720	3.88	3.88	-41281	10833	11769	38062	32532	9894	42426	No	11.4	Si
SLU 80	2.9	-5939.33	-39495	-32888	-3768	3.88	3.88	-30272	10833	11769	38062	32532	9894	42426	No	11.26	Si
SLU 80	4.8	5604.86	-53279	-44366	-3723	3.88	3.88	-40838	10833	11769	38062	32532	9894	42426	No	11.4	Si
SLU 76	2.9	-5871.16	-39113	-32570	-3712	3.88	3.88	-29980	10833	11769	38062	32532	9894	42426	No	11.43	Si
SLU 76	4.8	5533.6	-52749	-43925	-3668	3.88	3.88	-40432	10833	11769	38062	32532	9894	42426	No	11.57	Si
SLU 79	2.9	-5937.86	-39453	-32853	-3763	3.88	3.88	-30241	10833	11769	38062	32532	9894	42426	No	11.27	Si
SLU 79	4.8	5593.19	-53218	-44315	-3718	3.88	3.88	-40791	10833	11769	38062	32532	9894	42426	No	11.41	Si
SLU 81	2.9	-5984.72	-40633	-33835	-3737	3.88	3.88	-31144	10833	11769	38062	32532	9894	42426	No	11.35	Si
SLU 81	4.8	5605.12	-54871	-45692	-3691	3.88	3.88	-42058	10833	11769	38062	32532	9894	42426	No	11.5	Si
SLU 75	2.9	-5892.95	-39543	-32928	-3712	3.88	3.88	-30309	10833	11769	38062	32532	9894	42426	No	11.43	Si
SLU 75	4.8	5549.31	-53348	-44424	-3667	3.88	3.88	-40891	10833	11769	38062	32532	9894	42426	No	11.57	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 3	2.9	-12193.04	-24650	-20526	-10527	3.88	3.88	-18894	14195	15422	38062	48797	9894	53484		5.08	Si
SLD 3	4.8	10148.25	-32990	-27471	-10291	3.88	3.88	-25286	15474	16811	38062	48797	9894	54873		5.33	Si
SLD 1	2.9	-12294.23	-27807	-23155	-10648	3.88	3.88	-21314	14679	15948	38062	48797	9894	54010		5.07	Si
SLD 1	4.8	10499.36	-35058	-29193	-10238	3.88	3.88	-26872	15791	17155	38062	48797	9894	55217		5.39	Si
SLV 2	2.9	-22661.5	-29607	-24654	-20721	3.88	3.5238	-25274	15471	15265	38062	48797	9894	53327		2.57	Si
SLV 2	4.8	18680.92	-34491	-28721	-19812	3.88	3.88	-26437	15704	17061	38062	48797	9894	55123		2.78	Si
SLV 16	2.9	14879.99	-23294	-19397	16030	3.88	3.88	-17854	13988	15196	38062	48797	9894	53258		3.32	Si
SLV 16	4.8	-11508.28	-36579	-30460	15183	3.88	3.88	-28037	16024	17409	38062	48797	9894	55471		3.65	Si
SLV 4	2.9	-22412.53	-22296	-18566	-20446	3.88	2.8043	-23931	15203	11938	38062	48797	9894	50000		2.45	Si
SLV 4	4.8	17886.86	-29766	-24786	-19946	3.88	3.88	-22815	14980	16274	38062	48797	9894	54336		2.72	Si
SLV 1	2.9	-23202.27	-29581	-24632	-21345	3.88	3.4669	-25655	15548	15093	38062	48797	9894	53155		2.49	Si
SLV 1	4.8	19313.62	-34411	-28654	-20436	3.88	3.88	-26376	15692	17048	38062	48797	9894	55110		2.7	Si
SLV 3	2.9	-22953.3	-22269	-18544	-21070	3.88	2.7278	-24580	15333	11711	38062	48797	9894	49774		2.36	Si
SLV 3	4.8	18519.56	-29685	-24719	-20570	3.88	3.88	-22754	14967	16261	38062	48797	9894	54323		2.64	Si
SLV 14	2.9	14631.02	-30605	-25485	15755	3.88	3.88	-23459	15108	16414	38062	48797	9894	54476		3.46	Si
SLV 14	4.8	-10714.22	-41304	-34395	15317	3.88	3.88	-31659	16250	17654	38062	48797	9894	55716		3.64	Si
SLV 13	2.9	14090.24	-30579	-25463	15131	3.88	3.88	-23438	15104	16409	38062	48797	9894	54471		3.6	Si
SLV 13	4.8	-10081.52	-41224	-34328	14692	3.88	3.88	-31598	16250	17654	38062	48797	9894	55716		3.79	Si
SLV 15	2.9	14339.22	-23267	-19375	15406	3.88	3.88	-17834	13983	15192	38062	48797	9894	53254		3.46	Si
SLV 15	4.8	-10875.58	-36498	-30393	14559	3.88	3.88	-27976	16012	17395	38062	48797	9894	55457		3.81	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.32	17577	-19096	315.2	2365.69	7.51	Si
SLV 8	179667	0.32	17606	-19127	315.2	2369.05	7.52	Si
SLV 11	179667	0.32	18636	-20246	315.2	2488.55	7.9	Si
SLV 12	179667	0.32	18665	-20277	315.2	2491.86	7.91	Si
SLV 3	179667	0.32	22378	-24311	315.2	2904.84	9.22	Si
SLV 4	179667	0.32	22423	-24360	315.2	2909.68	9.23	Si
SLV 15	179667	0.32	25907	-28146	315.2	3271.95	10.38	Si
SLV 16	179667	0.32	25952	-28195	315.2	3276.47	10.39	Si
SLV 1	179667	0.32	27559	-29940	315.2	3435.16	10.9	Si
SLV 2	179667	0.32	27604	-29989	315.2	3439.54	10.91	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.

Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:

- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.05 Ta = 0.0706

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-39955	-35645	1458	0.513	4594.1	0.965	7.72726	10.95836	No
SLV 9	-39920	-35603	1458	0.514	4590.6	0.965	7.73321	10.95836	No
SLV 6	-38154	-33818	1498	0.533	4410.8	0.964	8.03253	10.95836	No
SLV 5	-38119	-33776	1498	0.533	4407.2	0.964	8.039	10.95836	No
SLV 12	-26995	-13423	-1552	0.712	3276.1	0.953	10.85673	10.95836	No

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-26960	-13382	-1552	0.713	3272.6	0.953	10.86914	10.95836	No
SLV 8	-25194	-11597	-1513	0.756	3093.2	0.951	11.55329	10.95836	Si
SLV 7	-25159	-11555	-1513	0.757	3089.6	0.951	11.5674	10.95836	Si
SLV 14	-37531	-30010	358	0.568	4347.4	0.964	8.56996	5.89448	Si
SLV 13	-37476	-29945	358	0.569	4341.8	0.964	8.58101	5.89448	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.06	SLU 50	Si
V_SLU	11.165	SLU 84	Si
PF_SLV	1.868	SLV 3	Si
V_SLV	2.362	SLV 3	Si
PFFP_SLV	7.505	SLV 7	Si
R_SLV	0.705	SLV 10	No

Maschio 69

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.008	6.526	-5.093	6.526	L4	L5	1.915	0.28	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 8	2.9	-1362.08	-13150	-0.000051	0.0003743	0.0035	1.915	9558.14	11441.27	11441.27	8.4	No	Si
SLU 8	4.8	1469.14	-11537	-0.0000469	0.0003743	0.0035	1.915	8712.56	9430.49	9430.49	6.42	No	Si
SLU 51	2.9	-1718.25	-16145	-0.0000642	0.0003743	0.0035	1.915	10887.41	13232.71	13232.71	7.7	No	Si
SLU 51	4.8	1875.28	-14012	-0.0000587	0.0003743	0.0035	1.915	9973.16	10963.58	10963.58	5.85	No	Si
SLU 47	2.9	-1696.11	-15926	-0.0000633	0.0003743	0.0035	1.915	10800.67	13110.12	13110.12	7.73	No	Si
SLU 47	4.8	1846.58	-13804	-0.0000577	0.0003743	0.0035	1.915	9875.35	10848.83	10848.83	5.88	No	Si
SLU 45	2.9	-1699.17	-16107	-0.0000639	0.0003743	0.0035	1.915	10872.19	13210.97	13210.97	7.77	No	Si
SLU 45	4.8	1848.88	-14004	-0.0000584	0.0003743	0.0035	1.915	9969.42	10959.16	10959.16	5.93	No	Si
SLU 44	2.9	-1672.91	-15686	-0.0000622	0.0003743	0.0035	1.915	10704.18	12977.41	12977.41	7.76	No	Si
SLU 44	4.8	1815.84	-13571	-0.0000567	0.0003743	0.0035	1.915	9764.16	10721.1	10721.1	5.9	No	Si
SLU 43	2.9	-1670.3	-15637	-0.0000621	0.0003743	0.0035	1.915	10683.97	12950.09	12950.09	7.75	No	Si
SLU 43	4.8	1810.78	-13509	-0.0000564	0.0003743	0.0035	1.915	9734.43	10687.42	10687.42	5.9	No	Si
SLU 49	2.9	-1723.93	-16376	-0.000065	0.0003743	0.0035	1.915	10976.55	13362.14	13362.14	7.75	No	Si
SLU 49	4.8	1882.66	-14274	-0.0000596	0.0003743	0.0035	1.915	10093.98	11108.58	11108.58	5.9	No	Si
SLU 48	2.9	-1722.36	-16346	-0.0000649	0.0003743	0.0035	1.915	10965.15	13345.39	13345.39	7.75	No	Si
SLU 48	4.8	1879.62	-14237	-0.0000595	0.0003743	0.0035	1.915	10077.07	11088.06	11088.06	5.9	No	Si
SLU 50	2.9	-1716.68	-16116	-0.0000641	0.0003743	0.0035	1.915	10875.77	13216.08	13216.08	7.7	No	Si
SLU 50	4.8	1872.24	-13975	-0.0000585	0.0003743	0.0035	1.915	9955.91	10943.17	10943.17	5.84	No	Si
SLU 46	2.9	-1700.74	-16136	-0.000064	0.0003743	0.0035	1.915	10883.83	13227.6	13227.6	7.78	No	Si
SLU 46	4.8	1851.92	-14041	-0.0000586	0.0003743	0.0035	1.915	9986.63	10979.57	10979.57	5.93	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	2.9	-2103.17	-7756	-0.0000403	0.0005615	0.0035	1.915		7901.71	7901.71	3.76		Si
SLV 7	4.8	2414.61	-6190	-0.0000391	0.0005615	0.0035	1.915		5761.6	5761.6	2.39		Si
SLD 1	2.9	-3439.44	-14877	-0.0000743	0.0005615	0.0035	1.915		13317.62	13317.62	3.87		Si
SLD 1	4.8	3197.78	-11222	-0.0000607	0.0005615	0.0035	1.915		9635.67	9635.67	3.01		Si
SLV 4	2.9	-5660.56	-12084	-0.0000922	0.0005615	0.0035	1.915		11297.78	11297.78	2		Si
SLV 4	4.8	5255.56	-6523	-0.0001708	0.0005615	0.0035	1.915		6043.06	6043.06	1.15		Si
SLD 3	2.9	-3267.68	-13240	-0.0000675	0.0005615	0.0035	1.915		12145.28	12145.28	3.72		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 3	4.8	3129.24	-9923	-0.0000561	0.0005615	0.0035	1.915		8728.12	8728.12	2.79		Si
SLV 16	2.9	3433.8	-12194	-0.0000658	0.0005615	0.0035	1.915		10323.8	10323.8	3.01		Si
SLV 16	4.8	-2689.73	-15708	-0.0000699	0.0005615	0.0035	1.915		13901.41	13901.41	5.17		Si
SLV 3	2.9	-5788.64	-12150	-0.0000944	0.0005615	0.0035	1.915		11346.32	11346.32	1.96		Si
SLV 3	4.8	5403.79	-6429	-0.0002287	0.0005615	0.0035	1.915		5964.05	5964.05	1.1		Si
SLV 2	2.9	-6071.4	-15874	-0.000104	0.0005615	0.0035	1.915		14018.65	14018.65	2.31		Si
SLV 2	4.8	5411.17	-9497	-0.0000914	0.0005615	0.0035	1.915		8432.75	8432.75	1.56		Si
SLV 1	2.9	-6199.48	-15940	-0.0001058	0.0005615	0.0035	1.915		14065.91	14065.91	2.27		Si
SLV 1	4.8	5559.41	-9404	-0.0000961	0.0005615	0.0035	1.915		8368.27	8368.27	1.51		Si
SLD 4	2.9	-3212.71	-13211	-0.0000669	0.0005615	0.0035	1.915		12124.12	12124.12	3.77		Si
SLD 4	4.8	3065.61	-9964	-0.0000556	0.0005615	0.0035	1.915		8755.94	8755.94	2.86		Si
SLV 8	2.9	-2021.37	-7713	-0.0000395	0.0005615	0.0035	1.915		7866.27	7866.27	3.89		Si
SLV 8	4.8	2319.94	-6250	-0.0000382	0.0005615	0.0035	1.915		5812.16	5812.16	2.51		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 51	2.9	-1718.25	-16145	-13445	-1712	1.915	1.915	-25073	10288	5516	38062	16056	4883	20940	No	12.23	Si
SLU 51	4.8	1875.28	-14012	-11668	-1752	1.915	1.915	-21760	9846	5279	38062	16056	4883	20940	No	11.95	Si
SLU 69	2.9	-1839.32	-18782	-15640	-1708	1.915	1.915	-29167	10833	5809	38062	16056	4883	20940	No	12.26	Si
SLU 69	4.8	1935.63	-16815	-14002	-1750	1.915	1.915	-26113	10426	5591	38062	16056	4883	20940	No	11.97	Si
SLU 59	2.9	-1836.31	-18598	-15487	-1710	1.915	1.915	-28882	10795	5789	38062	16056	4883	20940	No	12.24	Si
SLU 59	4.8	1914.35	-16629	-13847	-1753	1.915	1.915	-25825	10388	5570	38062	16056	4883	20940	No	11.95	Si
SLU 77	2.9	-1957.38	-21234	-17682	-1706	1.915	1.915	-32976	10833	5809	38062	16056	4883	20940	No	12.27	Si
SLU 77	4.8	1974.69	-19432	-16181	-1750	1.915	1.915	-30177	10833	5809	38062	16056	4883	20940	No	11.96	Si
SLU 71	2.9	-1833.64	-18551	-15448	-1717	1.915	1.915	-28810	10786	5783	38062	16056	4883	20940	No	12.2	Si
SLU 71	4.8	1928.25	-16553	-13784	-1759	1.915	1.915	-25706	10372	5562	38062	16056	4883	20940	No	11.9	Si
SLU 80	2.9	-1953.27	-21033	-17515	-1714	1.915	1.915	-32664	10833	5809	38062	16056	4883	20940	No	12.22	Si
SLU 80	4.8	1970.36	-19207	-15994	-1758	1.915	1.915	-29828	10833	5809	38062	16056	4883	20940	No	11.91	Si
SLU 79	2.9	-1951.7	-21004	-17490	-1715	1.915	1.915	-32618	10833	5809	38062	16056	4883	20940	No	12.21	Si
SLU 79	4.8	1967.32	-19170	-15963	-1760	1.915	1.915	-29770	10833	5809	38062	16056	4883	20940	No	11.9	Si
SLU 58	2.9	-1834.74	-18568	-15462	-1711	1.915	1.915	-28836	10789	5785	38062	16056	4883	20940	No	12.24	Si
SLU 58	4.8	1911.31	-16592	-13817	-1754	1.915	1.915	-25767	10380	5566	38062	16056	4883	20940	No	11.94	Si
SLU 50	2.9	-1716.68	-16116	-13420	-1713	1.915	1.915	-25027	10281	5513	38062	16056	4883	20940	No	12.22	Si
SLU 50	4.8	1872.24	-13975	-11637	-1754	1.915	1.915	-21703	9838	5275	38062	16056	4883	20940	No	11.94	Si
SLU 72	2.9	-1835.22	-18581	-15473	-1715	1.915	1.915	-28856	10792	5787	38062	16056	4883	20940	No	12.21	Si
SLU 72	4.8	1931.29	-16590	-13815	-1758	1.915	1.915	-25763	10380	5566	38062	16056	4883	20940	No	11.91	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	2.9	-2021.37	-7713	-6423	-4625	1.915	1.915	-11978	12812	6870	38062	24085	4883	28968		6.26	Si
SLV 8	4.8	2319.94	-6250	-5205	-5107	1.915	1.759	-9706	12358	6086	38062	24085	4883	28968		5.67	Si
SLV 7	2.9	-2103.17	-7756	-6458	-4767	1.915	1.915	-12044	12826	6877	38062	24085	4883	28968		6.08	Si
SLV 7	4.8	2414.61	-6190	-5155	-5252	1.915	1.7024	-9614	12339	5882	38062	24085	4883	28968		5.52	Si
SLV 2	2.9	-6071.4	-15874	-13218	-7679	1.915	1.7251	-27767	15970	7714	38062	24085	4883	28968		3.77	Si
SLV 2	4.8	5411.17	-9497	-7908	-7430	1.915	1.1633	-14749	13366	4354	38062	24085	4883	28968		3.9	Si
SLV 15	2.9	3305.72	-12261	-10210	5136	1.915	1.915	-19041	14225	7627	38062	24085	4883	28968		5.64	Si
SLV 15	4.8	-2541.49	-15614	-13002	4824	1.915	1.915	-24249	15266	8186	38062	24085	4883	28968		6	Si
SLV 14	2.9	3022.97	-15984	-13310	6167	1.915	1.915	-24823	15381	8248	38062	24085	4883	28968		4.7	Si
SLV 14	4.8	-2534.11	-18682	-15557	6156	1.915	1.915	-29013	16219	8697	38062	24085	4883	28968		4.71	Si
SLV 1	2.9	-6199.48	-15940	-13274	-7902	1.915	1.7058	-28207	16058	7670	38062	24085	4883	28968		3.67	Si
SLV 1	4.8	5559.41	-9404	-7831	-7658	1.915	1.099	-14604	13337	4104	38062	24085	4883	28968		3.78	Si
SLV 4	2.9	-5660.56	-12084	-10062	-8488	1.915	1.4672	-24805	15378	6318	38062	24085	4883	28968		3.41	Si
SLV 4	4.8	5255.56	-6523	-5431	-8533	1.915	0.4553	-43658	16250	2072	38062	24085	4883	28968		3.39	Si
SLV 16	2.9	3433.8	-12194	-10154	5358	1.915	1.915	-18937	14204	7616	38062	24085	4883	28968		5.41	Si
SLV 16	4.8	-2689.73	-15708	-13080	5053	1.915	1.915	-24394	15295	8202	38062	24085	4883	28968		5.73	Si
SLV 3	2.9	-5788.64	-12150	-10118	-8710	1.915	1.4433	-25363	15490	6260	38062	24085	4883	28968		3.33	Si
SLV 3	4.8	5403.79	-6429	-5354	-8761	1.915	0.351	-56210	16250	1597	38062	24085	4883	28968		3.31	Si
SLV 13	2.9	2894.89	-16051	-13366	5945	1.915	1.915	-24927	15402	8259	38062	24085	4883	28968		4.87	Si
SLV 13	4.8	-2385.88	-18589	-15479	5928	1.915	1.915	-28868	16190	8681	38062	24085	4883	28968		4.89	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.32	10978	-5887	155.57	764.88	4.92	Si
SLV 8	179667	0.32	11087	-5945	155.57	771.86	4.96	Si
SLV 3	179667	0.32	12453	-6677	155.57	858.61	5.52	Si
SLV 4	179667	0.32	12623	-6769	155.57	869.28	5.59	Si
SLV 11	179667	0.32	16746	-8980	155.57	1119.29	7.19	Si
SLV 12	179667	0.32	16855	-9038	155.57	1125.65	7.24	Si
SLV 1	179667	0.32	19512	-10462	155.57	1277.58	8.21	Si
SLV 2	179667	0.32	19682	-10554	155.57	1287.08	8.27	Si
SLV 15	179667	0.32	31680	-16987	155.57	1884.87	12.12	Si
SLV 16	179667	0.32	31850	-17078	155.57	1892.33	12.16	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.05 Ta = 0.0706

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-17052	-15738	583	0.588	1996	0.961	8.89072	10.95836	No
SLV 9	-17043	-15740	583	0.588	1995.1	0.961	8.89499	10.95836	No
SLV 6	-15284	-14868	561	0.646	1816.2	0.958	9.8095	10.95836	No

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-15275	-14869	561	0.647	1815.2	0.958	9.81475	10.95836	No
SLV 12	-8118	-4903	-553	1.091	1089.2	0.934	16.97618	10.95836	Si
SLV 11	-8108	-4904	-553	1.092	1088.2	0.934	16.99223	10.95836	Si
SLV 14	-15991	-12961	211	0.642	1888.1	0.959	9.72724	5.89448	Si
SLV 13	-15977	-12963	211	0.642	1886.6	0.959	9.73504	5.89448	Si
SLV 8	-6349	-4032	-575	1.32	910.8	0.924	20.76575	10.95836	Si
SLV 7	-6340	-4034	-575	1.322	909.9	0.924	20.79	10.95836	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.845	SLU 50	Si
V_SLU	11.9	SLU 79	Si
PF_SLV	1.104	SLV 3	Si
V_SLV	3.306	SLV 3	Si
PFFP_SLV	4.917	SLV 7	Si
R_SLV	0.811	SLV 10	No

Maschio 70

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-20.613	1.006	-24.633	1.006	L4	L5	4.02	0.28	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 51	2	1174.83	-38800	-0.0000515	0.0004492	0.0035	4.02	55987.04	66242.62	66242.62	56.38	No	Si
SLU 51	4.1	2550.9	-28105	-0.00004	0.0004492	0.0035	4.02	44947.5	50619.13	50619.13	19.84	No	Si
SLU 49	2	1209.49	-39190	-0.0000521	0.0004492	0.0035	4.02	56325.66	66811.06	66811.06	55.24	No	Si
SLU 49	4.1	2512.73	-28485	-0.0000405	0.0004492	0.0035	4.02	45396.91	51174.1	51174.1	20.37	No	Si
SLU 47	2	1159.85	-38325	-0.0000509	0.0004492	0.0035	4.02	55567.19	65547.91	65547.91	56.51	No	Si
SLU 47	4.1	2493.75	-27709	-0.0000394	0.0004492	0.0035	4.02	44474.52	50040.59	50040.59	20.07	No	Si
SLU 48	2	1187.71	-39157	-0.000052	0.0004492	0.0035	4.02	56297.89	66764.16	66764.16	56.21	No	Si
SLU 48	4.1	2504	-28455	-0.0000404	0.0004492	0.0035	4.02	45360.78	51129.28	51129.28	20.42	No	Si
SLU 43	2	1094.03	-37774	-0.00005	0.0004492	0.0035	4.02	55072.94	64743.77	64743.77	59.18	No	Si
SLU 43	4.1	2416.24	-27242	-0.0000387	0.0004492	0.0035	4.02	43910.14	49357.49	49357.49	20.43	No	Si
SLU 45	2	1158.2	-38660	-0.0000513	0.0004492	0.0035	4.02	55864.17	66038.18	66038.18	57.02	No	Si
SLU 45	4.1	2441.04	-28038	-0.0000397	0.0004492	0.0035	4.02	44867.49	50520.87	50520.87	20.7	No	Si
SLU 50	2	1153.04	-38768	-0.0000514	0.0004492	0.0035	4.02	55958.9	66195.72	66195.72	57.41	No	Si
SLU 50	4.1	2542.17	-28075	-0.00004	0.0004492	0.0035	4.02	44911.02	50574.31	50574.31	19.89	No	Si
SLU 46	2	1179.99	-38693	-0.0000514	0.0004492	0.0035	4.02	55892.41	66085.08	66085.08	56	No	Si
SLU 46	4.1	2449.76	-28069	-0.0000398	0.0004492	0.0035	4.02	44904	50565.69	50565.69	20.64	No	Si
SLU 44	2	1130.34	-37828	-0.0000501	0.0004492	0.0035	4.02	55121.37	64821.94	64821.94	57.35	No	Si
SLU 44	4.1	2430.78	-27293	-0.0000388	0.0004492	0.0035	4.02	43972.16	49432.18	49432.18	20.34	No	Si
SLU 9	2	997.41	-31216	-0.0000411	0.0004492	0.0035	4.02	48503.39	55163.55	55163.55	55.31	No	Si
SLU 9	4.1	1926.12	-22972	-0.0000322	0.0004492	0.0035	4.02	38461.22	43120.14	43120.14	22.39	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	2	13081.02	-35497	-0.0000693	0.0006738	0.0035	4.02		64015.67	64015.67	4.89		Si
SLV 2	4.1	-5413.13	-30346	-0.0000478	0.0006738	0.0035	4.02		63840.9	63840.9	11.79		Si
SLV 9	2	10674.85	-20708	-0.0000454	0.0006738	0.0035	4.02		40367.54	40367.54	3.78		Si
SLV 9	4.1	10618.25	-11403	-0.0000348	0.0006738	0.0035	4.02		23595.84	23595.84	2.22		Si
SLV 5	2	15741.24	-24316	-0.0000596	0.0006738	0.0035	4.02		46606.86	46606.86	2.96		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	4.1	5278.61	-16745	-0.0000303	0.0006738	0.0035	4.02		33341.15	33341.15	6.32		Si
SLV 16	2	-11038.28	-29537	-0.0000575	0.0006738	0.0035	4.02		62536.95	62536.95	5.67		Si
SLV 16	4.1	8569.78	-18875	-0.0000391	0.0006738	0.0035	4.02		37141.08	37141.08	4.33		Si
SLV 14	2	-3806.95	-23470	-0.000036	0.0006738	0.0035	4.02		52379.33	52379.33	13.76		Si
SLV 14	4.1	12385.64	-12537	-0.0000405	0.0006738	0.0035	4.02		25687.83	25687.83	2.07		Si
SLV 1	2	13245.14	-35628	-0.0000698	0.0006738	0.0035	4.02		64208.6	64208.6	4.85		Si
SLV 1	4.1	-5400.5	-30379	-0.0000478	0.0006738	0.0035	4.02		63895.27	63895.27	11.83		Si
SLV 15	2	-10874.16	-29668	-0.0000574	0.0006738	0.0035	4.02		62747.8	62747.8	5.77		Si
SLV 15	4.1	8582.41	-18909	-0.0000392	0.0006738	0.0035	4.02		37200.41	37200.41	4.33		Si
SLV 10	2	10570.04	-20624	-0.0000451	0.0006738	0.0035	4.02		40220.6	40220.6	3.81		Si
SLV 10	4.1	10610.18	-11381	-0.0000348	0.0006738	0.0035	4.02		23556.13	23556.13	2.22		Si
SLV 6	2	15636.43	-24233	-0.0000593	0.0006738	0.0035	4.02		46464.61	46464.61	2.97		Si
SLV 6	4.1	5270.55	-16724	-0.0000302	0.0006738	0.0035	4.02		33302.66	33302.66	6.32		Si
SLV 13	2	-3642.83	-23601	-0.0000358	0.0006738	0.0035	4.02		52601.22	52601.22	14.44		Si
SLV 13	4.1	12398.27	-12570	-0.0000406	0.0006738	0.0035	4.02		25750	25750	2.08		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 50	2	1153.04	-38768	-27656	-6216	4.02	4.02	-24570	10833	12194	108749	40451	20502	60953	No	9.81	Si
SLU 50	4.1	2542.17	-28075	-20028	-5556	4.02	4.02	-17793	10706	12050	108749	40451	20502	60953	No	10.97	Si
SLU 51	2	1174.83	-38800	-27679	-6212	4.02	4.02	-24591	10833	12194	108749	40451	20502	60953	No	9.81	Si
SLU 51	4.1	2550.9	-28105	-20050	-5551	4.02	4.02	-17812	10708	12053	108749	40451	20502	60953	No	10.98	Si
SLU 48	2	1187.71	-39157	-27934	-6195	4.02	4.02	-24817	10833	12194	108749	40451	20502	60953	No	9.84	Si
SLU 48	4.1	2504	-28455	-20299	-5529	4.02	4.02	-18034	10738	12087	108749	40451	20502	60953	No	11.03	Si
SLU 44	2	1130.34	-37828	-26985	-6011	4.02	4.02	-23974	10833	12194	108749	40451	20502	60953	No	10.14	Si
SLU 44	4.1	2430.78	-27293	-19470	-5367	4.02	4.02	-17297	10640	11976	108749	40451	20502	60953	No	11.36	Si
SLU 45	2	1158.2	-38660	-27579	-6095	4.02	4.02	-24502	10833	12194	108749	40451	20502	60953	No	10	Si
SLU 45	4.1	2441.04	-28038	-20002	-5438	4.02	4.02	-17770	10703	12047	108749	40451	20502	60953	No	11.21	Si
SLU 71	2	1437.61	-43064	-30721	-5822	4.02	4.02	-27293	10833	12194	108749	40451	20502	60953	No	10.47	Si
SLU 71	4.1	2287.46	-32447	-23147	-5078	4.02	4.02	-20564	10833	12194	108749	40451	20502	60953	No	12	Si
SLU 43	2	1094.03	-37774	-26947	-6017	4.02	4.02	-23940	10833	12194	108749	40451	20502	60953	No	10.13	Si
SLU 43	4.1	2416.24	-27242	-19434	-5376	4.02	4.02	-17265	10635	11971	108749	40451	20502	60953	No	11.34	Si
SLU 47	2	1159.85	-38325	-27340	-6110	4.02	4.02	-24289	10833	12194	108749	40451	20502	60953	No	9.98	Si
SLU 47	4.1	2493.75	-27709	-19767	-5457	4.02	4.02	-17561	10675	12016	108749	40451	20502	60953	No	11.17	Si
SLU 49	2	1209.49	-39190	-27957	-6191	4.02	4.02	-24837	10833	12194	108749	40451	20502	60953	No	9.84	Si
SLU 49	4.1	2512.73	-28485	-20321	-5523	4.02	4.02	-18053	10740	12089	108749	40451	20502	60953	No	11.04	Si
SLU 46	2	1179.99	-38693	-27602	-6092	4.02	4.02	-24522	10833	12194	108749	40451	20502	60953	No	10.01	Si
SLU 46	4.1	2449.76	-28069	-20024	-5433	4.02	4.02	-17789	10705	12050	108749	40451	20502	60953	No	11.22	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	2	-11038.28	-29537	-21071	-15903	4.02	4.02	-18720	16244	18284	108749	60677	20502	81179		5.1	Si
SLV 16	4.1	8569.78	-18875	-13465	-15606	4.02	4.02	-11963	14893	16763	108749	60677	20502	81179		5.2	Si
SLD 15	2	-4025.15	-31334	-22353	-9225	4.02	4.02	-19859	16250	18291	108749	60677	20502	81179		8.8	Si
SLD 15	4.1	4575.85	-22182	-15824	-8774	4.02	4.02	-14058	15312	17235	108749	60677	20502	81179		9.25	Si
SLV 11	2	-13429.58	-40932	-29200	-9183	4.02	4.02	-25942	16250	18291	108749	60677	20502	81179		8.84	Si
SLV 11	4.1	-2101.27	-32531	-23207	-11475	4.02	4.02	-20617	16250	18291	108749	60677	20502	81179		7.07	Si
SLD 14	2	-997.87	-28682	-20461	-8807	4.02	4.02	-18178	16136	18162	108749	60677	20502	81179		9.22	Si
SLD 14	4.1	6201.61	-19454	-13878	-7571	4.02	4.02	-12329	14966	16846	108749	60677	20502	81179		10.72	Si
SLD 13	2	-927.42	-28739	-20501	-8817	4.02	4.02	-18214	16143	18170	108749	60677	20502	81179		9.21	Si
SLD 13	4.1	6207.03	-19468	-13888	-7580	4.02	4.02	-12339	14968	16848	108749	60677	20502	81179		10.71	Si
SLD 16	2	-4095.59	-31278	-22313	-9215	4.02	4.02	-19823	16250	18291	108749	60677	20502	81179		8.81	Si
SLD 16	4.1	4570.43	-22168	-15814	-8766	4.02	4.02	-14049	15310	17233	108749	60677	20502	81179		9.26	Si
SLV 15	2	-10874.16	-29668	-21164	-15927	4.02	4.02	-18803	16250	18291	108749	60677	20502	81179		5.1	Si
SLV 15	4.1	8582.41	-18909	-13489	-15626	4.02	4.02	-11984	14897	16768	108749	60677	20502	81179		5.2	Si
SLV 14	2	-3806.95	-23470	-16743	-14947	4.02	4.02	-14875	15475	17419	108749	60677	20502	81179		5.43	Si
SLV 14	4.1	12385.64	-12537	-8943	-12819	4.02	3.0661	-7945	14089	12096	108749	60677	20502	81179		6.33	Si
SLV 13	2	-3642.83	-23601	-16836	-14971	4.02	4.02	-14958	15492	17437	108749	60677	20502	81179		5.42	Si
SLV 13	4.1	12398.27	-12570	-8967	-12839	4.02	3.0711	-7967	14093	12119	108749	60677	20502	81179		6.32	Si
SLV 12	2	-13534.38	-40849	-29141	-9168	4.02	4.02	-25889	16250	18291	108749	60677	20502	81179		8.85	Si
SLV 12	4.1	-2109.34	-32509	-23191	-11462	4.02	4.02	-20603	16250	18291	108749	60677	20502	81179		7.08	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.72 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 10	-12327	0.32	334.17	1622.67	2408.35	2015.51	6.03	Si
SLV 9	-12359	0.32	334.17	1626.65	2413.3	2019.97	6.04	Si
SLV 14	-14385	0.32	334.17	1873.52	2723.16	2298.34	6.88	Si
SLV 13	-14436	0.32	334.17	1879.61	2730.83	2305.22	6.9	Si
SLV 6	-17249	0.32	334.17	2212.97	3157.31	2685.14	8.04	Si
SLV 5	-17281	0.32	334.17	2216.73	3162.2	2689.47	8.05	Si
SLV 16	-21080	0.32	334.17	2649.61	3735.12	3192.36	9.55	Si
SLV 15	-21130	0.32	334.17	2655.23	3742.71	3198.97	9.57	Si
SLV 2	-30792	0.32	334.17	3667.49	5176.29	4421.89	13.23	Si
SLV 1	-30843	0.32	334.17	3672.45	5183.67	4428.06	13.25	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.05 Ta = 0.0706

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-27728	-44457	1070	0.734	3369.9	0.953	11.20238	10.95836	Si
SLV 7	-27706	-44540	1070	0.735	3367.6	0.953	11.20993	10.95836	Si
SLV 12	-26065	-40849	1162	0.77	3201	0.951	11.77724	10.95836	Si
SLV 11	-26043	-40932	1163	0.771	3198.8	0.951	11.78566	10.95836	Si
SLV 6	-16561	-24233	-1257	1.111	2237.9	0.933	17.31369	10.95836	Si
SLV 5	-16539	-24316	-1257	1.113	2235.7	0.933	17.33315	10.95836	Si
SLV 10	-14898	-20624	-1165	1.213	2070.1	0.929	18.98889	10.95836	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-14876	-20708	-1165	1.215	2067.9	0.929	19.01225	10.95836	Si
SLV 4	-25766	-41564	148	0.812	3170.6	0.95	12.42736	5.89448	Si
SLV 3	-25731	-41695	148	0.813	3167.1	0.95	12.44149	5.89448	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	19.844	SLU 51	Si
V_SLU	9.806	SLU 50	Si
PF_SLV	2.074	SLV 14	Si
V_SLV	5.097	SLV 15	Si
PFFP_SLV	6.031	SLV 10	Si
R_SLV	1.022	SLV 8	Si

Maschio 71

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-12.263	1.006	-19.813	1.006	L4	L5	7.55	0.28	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 59	2	56214.51	-108099	-0.0001092	0.0004492	0.0035	7.55	237297.06	317962.98	317962.98	5.66	No	Si
SLU 59	4.5	20364.24	-99317	-0.0000805	0.0004492	0.0035	7.55	230765.84	299340.09	299340.09	14.7	No	Si
SLU 63	2	57841.45	-112771	-0.000114	0.0004492	0.0035	7.55	239853.1	327870.66	327870.66	5.67	No	Si
SLU 63	4.5	20257.67	-104519	-0.0000844	0.0004492	0.0035	7.55	234906.33	310370.03	310370.03	15.32	No	Si
SLU 56	2	56527.36	-109286	-0.0001104	0.0004492	0.0035	7.55	238006.58	320478.95	320478.95	5.67	No	Si
SLU 56	4.5	20375.87	-100661	-0.0000815	0.0004492	0.0035	7.55	231911.73	302190.8	302190.8	14.83	No	Si
SLU 84	2	62517.24	-125925	-0.0001281	0.0004492	0.0035	7.55	243622.38	355763.25	355763.25	5.69	No	Si
SLU 84	4.5	21378.5	-118295	-0.0000959	0.0004492	0.0035	7.55	242051.84	339583.58	339583.58	15.88	No	Si
SLU 62	2	57772.44	-112667	-0.0001139	0.0004492	0.0035	7.55	239803.04	327649.64	327649.64	5.67	No	Si
SLU 62	4.5	20293.5	-104444	-0.0000844	0.0004492	0.0035	7.55	234852.65	310212.18	310212.18	15.29	No	Si
SLU 58	2	56145.51	-107995	-0.0001091	0.0004492	0.0035	7.55	237232.77	317741.97	317741.97	5.66	No	Si
SLU 58	4.5	20400.07	-99243	-0.0000805	0.0004492	0.0035	7.55	230700.85	299182.24	299182.24	14.67	No	Si
SLU 79	2	60821.29	-121148	-0.0001229	0.0004492	0.0035	7.55	242838.38	345634.56	345634.56	5.68	No	Si
SLU 79	4.5	21520.9	-113019	-0.0000918	0.0004492	0.0035	7.55	239970.77	328395.79	328395.79	15.26	No	Si
SLU 57	2	56596.37	-109390	-0.0001105	0.0004492	0.0035	7.55	238066.94	320699.96	320699.96	5.67	No	Si
SLU 57	4.5	20340.04	-100736	-0.0000816	0.0004492	0.0035	7.55	231973.64	302348.65	302348.65	14.86	No	Si
SLU 78	2	61272.15	-122543	-0.0001244	0.0004492	0.0035	7.55	243136.28	348592.55	348592.55	5.69	No	Si
SLU 78	4.5	21460.87	-114512	-0.0000929	0.0004492	0.0035	7.55	240642.3	331562.2	331562.2	15.45	No	Si
SLU 80	2	60890.3	-121253	-0.0001231	0.0004492	0.0035	7.55	242862.61	345855.58	345855.58	5.68	No	Si
SLU 80	4.5	21485.07	-113093	-0.0000918	0.0004492	0.0035	7.55	240005.79	328553.64	328553.64	15.29	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 1	2	67377.88	-85245	-0.0000945	0.0006738	0.0035	7.55		277184.07	277184.07	4.11		Si
SLD 1	4.5	6121.75	-81340	-0.0000576	0.0006738	0.0035	7.55		266362.21	266362.21	43.51		Si
SLV 3	2	112189.35	-84211	-0.0001194	0.0006738	0.0035	7.55		274317.34	274317.34	2.45		Si
SLV 3	4.5	1586.87	-83925	-0.0000569	0.0006738	0.0035	7.55		273524.77	273524.77	172.37		Si
SLV 8	2	78839.51	-75236	-0.0000936	0.0006738	0.0035	7.55		249446.62	249446.62	3.16		Si
SLV 8	4.5	23229.61	-69806	-0.0000589	0.0006738	0.0035	7.55		234397.01	234397.01	10.09		Si
SLV 7	2	79262.31	-75488	-0.000094	0.0006738	0.0035	7.55		250142.92	250142.92	3.16		Si
SLV 7	4.5	23113.09	-69877	-0.0000589	0.0006738	0.0035	7.55		234595.66	234595.66	10.15		Si
SLD 2	2	67093.7	-85077	-0.0000942	0.0006738	0.0035	7.55		276716.07	276716.07	4.12		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 2	4.5	6200.07	-81292	-0.0000576	0.0006738	0.0035	7.55		266228.69	266228.69	42.94		Si
SLD 3	2	71939.59	-83095	-0.0000955	0.0006738	0.0035	7.55		271224.5	271224.5	3.77		Si
SLD 3	4.5	9545.2	-79022	-0.0000578	0.0006738	0.0035	7.55		259936.83	259936.83	27.23		Si
SLV 1	2	101540.77	-89135	-0.0001168	0.0006738	0.0035	7.55		287962.17	287962.17	2.84		Si
SLV 1	4.5	-6231.14	-89270	-0.0000632	0.0006738	0.0035	7.55		319170.6	319170.6	51.22		Si
SLV 2	2	100878.72	-88741	-0.0001161	0.0006738	0.0035	7.55		286871.86	286871.86	2.84		Si
SLV 2	4.5	-6048.69	-89158	-0.000063	0.0006738	0.0035	7.55		318868.28	318868.28	52.72		Si
SLD 4	2	71655.41	-82926	-0.0000952	0.0006738	0.0035	7.55		270756.49	270756.49	3.78		Si
SLD 4	4.5	9623.52	-78974	-0.0000578	0.0006738	0.0035	7.55		259803.31	259803.31	27		Si
SLV 4	2	111527.3	-83818	-0.0001187	0.0006738	0.0035	7.55		273227.04	273227.04	2.45		Si
SLV 4	4.5	1769.32	-83813	-0.0000569	0.0006738	0.0035	7.55		273213.72	273213.72	154.42		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	2	62517.24	-125925	-89832	7832	7.55	7.55	-42494	10833	22902	108749	75972	38505	114477	No	14.62	Si
SLU 84	4.5	21378.5	-118295	-84389	11718	7.55	7.55	-39919	10833	22902	108749	75972	38505	114477	No	9.77	Si
SLU 75	2	60520.74	-121528	-86695	7233	7.55	7.55	-41010	10833	22902	108749	75972	38505	114477	No	15.83	Si
SLU 75	4.5	21091.6	-113525	-80986	11003	7.55	7.55	-38310	10833	22902	108749	75972	38505	114477	No	10.4	Si
SLU 80	2	60890.3	-121253	-86499	7129	7.55	7.55	-40917	10833	22902	108749	75972	38505	114477	No	16.06	Si
SLU 80	4.5	21485.07	-113093	-80678	10915	7.55	7.55	-38164	10833	22902	108749	75972	38505	114477	No	10.49	Si
SLU 83	2	62448.23	-125821	-89757	7862	7.55	7.55	-42459	10833	22902	108749	75972	38505	114477	No	14.56	Si
SLU 83	4.5	21414.33	-118220	-84336	11747	7.55	7.55	-39894	10833	22902	108749	75972	38505	114477	No	9.75	Si
SLU 82	2	61765.82	-124910	-89107	7808	7.55	7.55	-42151	10833	22902	108749	75972	38505	114477	No	14.66	Si
SLU 82	4.5	21009.23	-117308	-83685	11654	7.55	7.55	-39586	10833	22902	108749	75972	38505	114477	No	9.82	Si
SLU 74	2	60451.73	-121424	-86621	7262	7.55	7.55	-40975	10833	22902	108749	75972	38505	114477	No	15.76	Si
SLU 74	4.5	21127.43	-113451	-80933	11032	7.55	7.55	-38284	10833	22902	108749	75972	38505	114477	No	10.38	Si
SLU 77	2	61203.15	-122439	-87345	7287	7.55	7.55	-41317	10833	22902	108749	75972	38505	114477	No	15.71	Si
SLU 77	4.5	21496.7	-114438	-81637	11096	7.55	7.55	-38617	10833	22902	108749	75972	38505	114477	No	10.32	Si
SLU 79	2	60821.29	-121148	-86424	7159	7.55	7.55	-40882	10833	22902	108749	75972	38505	114477	No	15.99	Si
SLU 79	4.5	21520.9	-113019	-80625	10944	7.55	7.55	-38139	10833	22902	108749	75972	38505	114477	No	10.46	Si
SLU 81	2	61696.81	-124805	-89033	7837	7.55	7.55	-42116	10833	22902	108749	75972	38505	114477	No	14.61	Si
SLU 81	4.5	21045.06	-117234	-83632	11683	7.55	7.55	-39561	10833	22902	108749	75972	38505	114477	No	9.8	Si
SLU 78	2	61272.15	-122543	-87419	7257	7.55	7.55	-41353	10833	22902	108749	75972	38505	114477	No	15.77	Si
SLU 78	4.5	21460.87	-114512	-81690	11067	7.55	7.55	-38643	10833	22902	108749	75972	38505	114477	No	10.34	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	2	-17703.45	-75509	-53867	-38340	7.55	7.55	-25481	16250	34352	108749	113958	38505	143101		3.73	Si
SLV 16	4.5	37118.58	-61551	-43909	-30773	7.55	7.55	-20770	16250	34352	108749	113958	38505	143101		4.65	Si
SLV 1	2	101540.77	-89135	-63587	47362	7.55	7.55	-30079	16250	34352	108749	113958	38505	143101		3.02	Si
SLV 1	4.5	-6231.14	-89270	-63683	45012	7.55	7.55	-30124	16250	34352	108749	113958	38505	143101		3.18	Si
SLV 14	2	-28352.03	-80433	-57379	-41683	7.55	7.55	-27142	16250	34352	108749	113958	38505	143101		3.43	Si
SLV 14	4.5	29300.56	-66895	-47722	-34422	7.55	7.55	-22574	16250	34352	108749	113958	38505	143101		4.16	Si
SLV 7	2	79262.31	-75488	-53851	23408	7.55	7.55	-25474	16250	34352	108749	113958	38505	143101		6.11	Si
SLV 7	4.5	23113.09	-69877	-49849	25084	7.55	7.55	-23580	16250	34352	108749	113958	38505	143101		5.7	Si
SLV 15	2	-17041.4	-75903	-54147	-38523	7.55	7.55	-25614	16250	34352	108749	113958	38505	143101		3.71	Si
SLV 15	4.5	36936.13	-61663	-43989	-30961	7.55	7.55	-20808	16250	34352	108749	113958	38505	143101		4.62	Si
SLV 13	2	-27689.98	-80826	-57660	-41865	7.55	7.55	-27275	16250	34352	108749	113958	38505	143101		3.42	Si
SLV 13	4.5	29118.11	-67008	-47802	-34609	7.55	7.55	-22612	16250	34352	108749	113958	38505	143101		4.13	Si
SLV 3	2	112189.35	-84211	-60074	50705	7.55	7.3283	-28417	16250	33344	108749	113958	38505	142092		2.8	Si
SLV 3	4.5	1586.87	-83925	-59870	48661	7.55	7.55	-28321	16250	34352	108749	113958	38505	143101		2.94	Si
SLV 2	2	100878.72	-88741	-63306	47545	7.55	7.55	-29946	16250	34352	108749	113958	38505	143101		3.01	Si
SLV 2	4.5	-6048.69	-89158	-63603	45200	7.55	7.55	-30086	16250	34352	108749	113958	38505	143101		3.17	Si
SLV 8	2	78839.51	-75236	-53672	23524	7.55	7.55	-25389	16250	34352	108749	113958	38505	143101		6.08	Si
SLV 8	4.5	23229.61	-69806	-49798	25203	7.55	7.55	-23556	16250	34352	108749	113958	38505	143101		5.68	Si
SLV 4	2	111527.3	-83818	-59793	50887	7.55	7.3332	-28285	16250	33366	108749	113958	38505	142115		2.79	Si
SLV 4	4.5	1769.32	-83813	-59790	48848	7.55	7.55	-28283	16250	34352	108749	113958	38505	143101		2.93	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.72 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 12	-66101	0.32	627.6	7675.4	10912.28	9293.84	14.81	Si
SLV 11	-66251	0.32	627.6	7689.19	10934.18	9311.68	14.84	Si
SLV 16	-68836	0.32	627.6	7924.91	11310.53	9617.72	15.32	Si
SLV 15	-69070	0.32	627.6	7946.04	11344.22	9645.13	15.37	Si
SLV 8	-70657	0.32	627.6	8088.04	11572.39	9830.22	15.66	Si
SLV 7	-70806	0.32	627.6	8101.34	11593.91	9847.63	15.69	Si
SLV 14	-75772	0.32	627.6	8533.49	12308.32	10420.91	16.6	Si
SLV 13	-76006	0.32	627.6	8553.44	12342.03	10447.74	16.65	Si
SLV 4	-84020	0.32	627.6	9212.06	13487.68	11349.87	18.08	Si
SLV 3	-84255	0.32	627.6	9230.61	13521.13	11375.87	18.13	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.05 Ta = 0.0706

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-78457	-91900	-1699	0.523	9011.8	0.966	7.86734	10.95836	No
SLV 6	-78418	-91649	-1699	0.523	9007.8	0.966	7.87073	10.95836	No
SLV 9	-76331	-89408	-1616	0.536	8795.4	0.965	8.07497	10.95836	No
SLV 10	-76292	-89156	-1617	0.536	8791.4	0.965	8.07855	10.95836	No
SLV 7	-66233	-75488	1616	0.605	7768	0.961	9.15041	10.95836	No
SLV 8	-66193	-75236	1615	0.605	7764	0.961	9.15539	10.95836	No
SLV 11	-64107	-72995	1699	0.621	7551.8	0.96	9.39947	10.95836	No
SLV 12	-64067	-72744	1698	0.621	7547.8	0.96	9.40475	10.95836	No
SLV 1	-76670	-89135	-635	0.546	8829.9	0.965	8.22107	5.89448	Si
SLV 2	-76608	-88741	-636	0.546	8823.6	0.965	8.22677	5.89448	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita

dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.656	SLU 59	Si
V_SLU	9.745	SLU 83	Si
PF_SLV	2.445	SLV 3	Si
V_SLV	2.793	SLV 4	Si
PFFP_SLV	14.808	SLV 12	Si
R_SLV	0.718	SLV 5	No

Maschio 72

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.463	1.006	-11.143	1.006	L4	L5	3.68	0.28	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	2	4872.25	-59296	-0.000098	0.0004492	0.0035	3.68	57719.73	82342.11	82342.11	16.9	No	Si
SLU 82	4.5	9061.31	-51744	-0.0000965	0.0004492	0.0035	3.68	56079.37	74596.47	74596.47	8.23	No	Si
SLU 83	2	4832.72	-59719	-0.0000986	0.0004492	0.0035	3.68	57762.35	82776.38	82776.38	17.13	No	Si
SLU 83	4.5	9080.73	-52143	-0.0000972	0.0004492	0.0035	3.68	56207.87	75006.08	75006.08	8.26	No	Si
SLU 61	2	3655.58	-52624	-0.0000841	0.0004492	0.0035	3.68	56356.47	75499.54	75499.54	20.65	No	Si
SLU 61	4.5	8075.72	-45329	-0.0000838	0.0004492	0.0035	3.68	53376.43	68016.77	68016.77	8.42	No	Si
SLU 81	2	4844.92	-59264	-0.0000979	0.0004492	0.0035	3.68	57716.32	82309.55	82309.55	16.99	No	Si
SLU 81	4.5	9057.4	-51713	-0.0000965	0.0004492	0.0035	3.68	56069.41	74565.32	74565.32	8.23	No	Si
SLU 75	2	4705.48	-57420	-0.0000945	0.0004492	0.0035	3.68	57467.86	80417.99	80417.99	17.09	No	Si
SLU 75	4.5	8619.76	-49867	-0.0000924	0.0004492	0.0035	3.68	55413.2	72671.83	72671.83	8.43	No	Si
SLU 62	2	3616.05	-53048	-0.0000847	0.0004492	0.0035	3.68	56481.66	75933.82	75933.82	21	No	Si
SLU 62	4.5	8095.15	-45728	-0.0000844	0.0004492	0.0035	3.68	53579.81	68426.38	68426.38	8.45	No	Si
SLU 74	2	4678.14	-57388	-0.0000944	0.0004492	0.0035	3.68	57462.72	80385.43	80385.43	17.18	No	Si
SLU 74	4.5	8615.84	-49837	-0.0000923	0.0004492	0.0035	3.68	55401.58	72640.68	72640.68	8.43	No	Si
SLU 60	2	3628.25	-52593	-0.000084	0.0004492	0.0035	3.68	56346.88	75466.99	75466.99	20.8	No	Si
SLU 60	4.5	8071.81	-45298	-0.0000837	0.0004492	0.0035	3.68	53360.78	67985.62	67985.62	8.42	No	Si
SLU 84	2	4860.06	-59751	-0.0000987	0.0004492	0.0035	3.68	57765.33	82808.93	82808.93	17.04	No	Si
SLU 84	4.5	9084.65	-52174	-0.0000973	0.0004492	0.0035	3.68	56217.45	75037.22	75037.22	8.26	No	Si
SLU 63	2	3643.39	-53079	-0.0000848	0.0004492	0.0035	3.68	56490.83	75966.37	75966.37	20.85	No	Si
SLU 63	4.5	8099.06	-45758	-0.0000845	0.0004492	0.0035	3.68	53595.09	68457.52	68457.52	8.45	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 14	2	-4191.37	-39520	-0.0000637	0.0006738	0.0035	3.68		70030.49	70030.49	16.71		Si
SLD 14	4.5	17727.61	-35399	-0.0000893	0.0006738	0.0035	3.68		57646.34	57646.34	3.25		Si
SLV 13	2	-13821.06	-40661	-0.000088	0.0006738	0.0035	3.68		71546.13	71546.13	5.18		Si
SLV 13	4.5	33958.06	-38687	-0.0001411	0.0006738	0.0035	3.68		62056.86	62056.86	1.83		Si
SLV 16	2	-18721.15	-42419	-0.0001023	0.0006738	0.0035	3.68		73880.58	73880.58	3.95		Si
SLV 16	4.5	32327.37	-38077	-0.0001342	0.0006738	0.0035	3.68		61238.27	61238.27	1.89		Si
SLV 2	2	24715.3	-34863	-0.0001059	0.0006738	0.0035	3.68		56926.38	56926.38	2.3		Si
SLV 2	4.5	-21116.81	-27780	-0.0000874	0.0006738	0.0035	3.68		53292.87	53292.87	2.52		Si
SLV 3	2	19851.26	-36504	-0.000096	0.0006738	0.0035	3.68		59128.03	59128.03	2.98		Si
SLV 3	4.5	-22806.37	-27079	-0.0000925	0.0006738	0.0035	3.68		52254.31	52254.31	2.29		Si
SLV 14	2	-13839.08	-40719	-0.0000881	0.0006738	0.0035	3.68		71623.6	71623.6	5.18		Si
SLV 14	4.5	33987.5	-38733	-0.0001412	0.0006738	0.0035	3.68		62117.98	62117.98	1.83		Si
SLD 13	2	-4183.64	-39495	-0.0000637	0.0006738	0.0035	3.68		69997.24	69997.24	16.73		Si
SLD 13	4.5	17714.98	-35380	-0.0000892	0.0006738	0.0035	3.68		57620.1	57620.1	3.25		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	2	-18703.13	-42360	-0.0001021	0.0006738	0.0035	3.68		73803.11	73803.11	3.95		Si
SLV 15	4.5	32297.94	-38031	-0.0001341	0.0006738	0.0035	3.68		61177.15	61177.15	1.89		Si
SLV 4	2	19833.24	-36562	-0.000096	0.0006738	0.0035	3.68		59206.29	59206.29	2.99		Si
SLV 4	4.5	-22776.93	-27124	-0.0000924	0.0006738	0.0035	3.68		52321.78	52321.78	2.3		Si
SLV 1	2	24733.32	-34804	-0.0001058	0.0006738	0.0035	3.68		56848.12	56848.12	2.3		Si
SLV 1	4.5	-21146.24	-27734	-0.0000874	0.0006738	0.0035	3.68		53225.4	53225.4	2.52		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 54	2	3488.81	-50748	-36203	-213	3.68	3.68	-35134	10833	11163	108749	37030	18768	55798	No	262.04	Si
SLU 54	4.5	7634.17	-43452	-30998	-875	3.68	3.68	-30083	10833	11163	108749	37030	18768	55798	No	63.75	Si
SLU 59	2	3392.26	-50631	-36119	-180	3.68	3.68	-35053	10833	11163	108749	37030	18768	55798	No	309.31	Si
SLU 59	4.5	7511.01	-43308	-30895	-871	3.68	3.68	-29984	10833	11163	108749	37030	18768	55798	No	64.05	Si
SLU 61	2	3655.58	-52624	-37541	-318	3.68	3.68	-36433	10833	11163	108749	37030	18768	55798	No	175.55	Si
SLU 61	4.5	8075.72	-45329	-32336	-893	3.68	3.68	-31382	10833	11163	108749	37030	18768	55798	No	62.45	Si
SLU 57	2	3476.61	-51203	-36527	-203	3.68	3.68	-35450	10833	11163	108749	37030	18768	55798	No	274.64	Si
SLU 57	4.5	7657.51	-43882	-31304	-888	3.68	3.68	-30381	10833	11163	108749	37030	18768	55798	No	62.8	Si
SLU 58	2	3364.92	-50599	-36096	-194	3.68	3.68	-35031	10833	11163	108749	37030	18768	55798	No	286.97	Si
SLU 58	4.5	7507.1	-43278	-30874	-883	3.68	3.68	-29963	10833	11163	108749	37030	18768	55798	No	63.21	Si
SLU 62	2	3616.05	-53048	-37843	-322	3.68	3.68	-36726	10833	11163	108749	37030	18768	55798	No	173.23	Si
SLU 62	4.5	8095.15	-45728	-32621	-918	3.68	3.68	-31659	10833	11163	108749	37030	18768	55798	No	60.76	Si
SLU 60	2	3628.25	-52593	-37518	-332	3.68	3.68	-36411	10833	11163	108749	37030	18768	55798	No	168.13	Si
SLU 60	4.5	8071.81	-45298	-32315	-905	3.68	3.68	-31361	10833	11163	108749	37030	18768	55798	No	61.65	Si
SLU 56	2	3449.28	-51172	-36505	-217	3.68	3.68	-35428	10833	11163	108749	37030	18768	55798	No	256.89	Si
SLU 56	4.5	7653.59	-43851	-31283	-900	3.68	3.68	-30360	10833	11163	108749	37030	18768	55798	No	61.99	Si
SLU 53	2	3461.47	-50717	-36180	-227	3.68	3.68	-35113	10833	11163	108749	37030	18768	55798	No	245.83	Si
SLU 53	4.5	7630.26	-43422	-30976	-887	3.68	3.68	-30062	10833	11163	108749	37030	18768	55798	No	62.92	Si
SLU 63	2	3643.39	-53079	-37866	-308	3.68	3.68	-36748	10833	11163	108749	37030	18768	55798	No	181.12	Si
SLU 63	4.5	8099.06	-45758	-32643	-907	3.68	3.68	-31680	10833	11163	108749	37030	18768	55798	No	61.54	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	2	-13821.06	-40661	-29007	-23716	3.68	3.68	-28151	16250	16744	108749	55545	18768	74313		3.13	Si
SLV 13	4.5	33958.06	-38687	-27598	-18245	3.68	2.8867	-26784	16250	13135	108749	55545	18768	74313		4.07	Si
SLV 1	2	24733.32	-34804	-24829	26132	3.68	3.3881	-24096	16250	15416	108749	55545	18768	74313		2.84	Si
SLV 1	4.5	-21146.24	-27734	-19785	19498	3.68	3.2326	-22082	16250	14708	108749	55545	18768	74313		3.81	Si
SLV 3	2	19851.26	-36504	-26041	24032	3.68	3.68	-25273	16250	16744	108749	55545	18768	74313		3.09	Si
SLV 3	4.5	-22806.37	-27079	-19317	17391	3.68	2.9933	-23292	16250	13620	108749	55545	18768	74313		4.27	Si
SLV 16	2	-18721.15	-42419	-30261	-25824	3.68	3.68	-29368	16250	16744	108749	55545	18768	74313		2.88	Si
SLV 16	4.5	32327.37	-38077	-27163	-20361	3.68	2.973	-26362	16250	13527	108749	55545	18768	74313		3.65	Si
SLD 2	2	12302.02	-37013	-26404	11259	3.68	3.68	-25625	16250	16744	108749	55545	18768	74313		6.6	Si
SLD 2	4.5	-5819.99	-30720	-21915	8088	3.68	3.68	-21269	16250	16744	108749	55545	18768	74313		9.19	Si
SLD 1	2	12309.75	-36988	-26386	11263	3.68	3.68	-25608	16250	16744	108749	55545	18768	74313		6.6	Si
SLD 1	4.5	-5832.62	-30701	-21901	8091	3.68	3.68	-21255	16250	16744	108749	55545	18768	74313		9.18	Si
SLV 4	2	19833.24	-36562	-26083	24024	3.68	3.68	-25313	16250	16744	108749	55545	18768	74313		3.09	Si
SLV 4	4.5	-22776.93	-27124	-19350	17382	3.68	3.0008	-23273	16250	13654	108749	55545	18768	74313		4.28	Si
SLV 14	2	-13839.08	-40719	-29048	-23724	3.68	3.68	-28191	16250	16744	108749	55545	18768	74313		3.13	Si
SLV 14	4.5	33987.5	-38733	-27631	-18254	3.68	2.8875	-26816	16250	13138	108749	55545	18768	74313		4.07	Si
SLV 2	2	24715.3	-34863	-24870	26124	3.68	3.3932	-24137	16250	15439	108749	55545	18768	74313		2.84	Si
SLV 2	4.5	-21116.81	-27780	-19818	19489	3.68	3.2396	-22071	16250	14740	108749	55545	18768	74313		3.81	Si
SLV 15	2	-18703.13	-42360	-30219	-25816	3.68	3.68	-29327	16250	16744	108749	55545	18768	74313		2.88	Si
SLV 15	4.5	32297.94	-38031	-27131	-20352	3.68	2.9723	-26330	16250	13524	108749	55545	18768	74313		3.65	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.72 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 5	-32565	0.32	305.9	3772.93	5372.28	4572.6	14.95	Si
SLV 6	-32603	0.32	305.9	3776.43	5377.85	4577.14	14.96	Si
SLV 9	-33279	0.32	305.9	3838.09	5476.67	4657.38	15.22	Si
SLV 10	-33318	0.32	305.9	3841.55	5482.15	4661.85	15.24	Si
SLV 1	-33591	0.32	305.9	3866.26	5521.41	4693.83	15.34	Si
SLV 2	-33651	0.32	305.9	3871.65	5529.99	4700.82	15.37	Si
SLV 3	-35194	0.32	305.9	4008.97	5751.71	4880.34	15.95	Si
SLV 4	-35254	0.32	305.9	4014.22	5760.3	4887.26	15.98	Si
SLV 13	-35973	0.32	305.9	4076.9	5863.58	4970.24	16.25	Si
SLV 14	-36033	0.32	305.9	4082.08	5872.17	4977.12	16.27	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.05 Ta = 0.0706

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-29706	-36676	-874	0.646	3524.2	0.958	9.80627	10.95836	No
SLV 9	-29697	-36639	-874	0.647	3523.3	0.958	9.80873	10.95836	No
SLV 6	-29256	-34919	-833	0.656	3478.5	0.958	9.95779	10.95836	No
SLV 5	-29248	-34882	-833	0.656	3477.6	0.958	9.96032	10.95836	No
SLV 12	-27581	-42341	745	0.692	3308.2	0.956	10.53143	10.95836	No
SLV 11	-27572	-42304	745	0.693	3307.3	0.956	10.53434	10.95836	No
SLV 8	-27131	-40584	785	0.701	3262.5	0.955	10.6642	10.95836	No
SLV 7	-27123	-40547	785	0.701	3261.6	0.955	10.66719	10.95836	No
SLV 14	-29489	-40719	-355	0.666	3502.2	0.958	10.11067	5.89448	Si
SLV 13	-29476	-40661	-355	0.667	3500.8	0.958	10.11467	5.89448	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.232	SLU 82	Si
V_SLU	60.763	SLU 62	Si
PF_SLV	1.827	SLV 13	Si
V_SLV	2.844	SLV 1	Si
PFFP_SLV	14.948	SLV 5	Si
R_SLV	0.895	SLV 10	No

Maschio 73

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-4.913	1.006	-6.463	1.006	L4	L5	1.55	0.28	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 71	2	1917.25	-30322	-0.0001358	0.0004492	0.0035	1.55	10062.61	16531.53	16531.53	8.62	No	Si
SLU 71	4.1	-384.5	-28823	-0.0001059	0.0004492	0.0035	1.55	10196.57	16798.63	16798.63	43.69	No	Si
SLU 69	2	1909.12	-30620	-0.000137	0.0004492	0.0035	1.55	10028.08	16623.53	16623.53	8.71	No	Si
SLU 69	4.1	-366.46	-29141	-0.0001069	0.0004492	0.0035	1.55	10173.66	16891.01	16891.01	46.09	No	Si
SLU 72	2	1926.54	-30363	-0.0001362	0.0004492	0.0035	1.55	10057.96	16544.34	16544.34	8.59	No	Si
SLU 72	4.1	-385.35	-28843	-0.000106	0.0004492	0.0035	1.55	10195.23	16804.39	16804.39	43.61	No	Si
SLU 80	2	1992.94	-33727	-0.0001519	0.0004492	0.0035	1.55	9514.23	17580.69	17580.69	8.82	No	Si
SLU 80	4.1	-109.24	-32706	-0.0001173	0.0004492	0.0035	1.55	9714.27	17927.56	17927.56	164.11	No	Si
SLU 66	2	1878.99	-30289	-0.0001351	0.0004492	0.0035	1.55	10066.2	16521.55	16521.55	8.79	No	Si
SLU 66	4.1	-345.66	-28831	-0.0001054	0.0004492	0.0035	1.55	10196.01	16801.04	16801.04	48.61	No	Si
SLU 70	2	1918.41	-30662	-0.0001373	0.0004492	0.0035	1.55	10023.06	16636.35	16636.35	8.67	No	Si
SLU 70	4.1	-367.31	-29161	-0.000107	0.0004492	0.0035	1.55	10172.13	16896.77	16896.77	46	No	Si
SLU 64	2	1856.98	-29660	-0.0001321	0.0004492	0.0035	1.55	10129.87	16327.58	16327.58	8.79	No	Si
SLU 64	4.1	-342.91	-28204	-0.0001029	0.0004492	0.0035	1.55	10232.73	16618.69	16618.69	48.46	No	Si
SLU 67	2	1888.28	-30331	-0.0001354	0.0004492	0.0035	1.55	10061.58	16534.37	16534.37	8.76	No	Si
SLU 67	4.1	-346.52	-28851	-0.0001055	0.0004492	0.0035	1.55	10194.66	16806.8	16806.8	48.5	No	Si
SLU 65	2	1872.47	-29729	-0.0001326	0.0004492	0.0035	1.55	10123.42	16348.94	16348.94	8.73	No	Si
SLU 65	4.1	-344.34	-28237	-0.000103	0.0004492	0.0035	1.55	10231.08	16628.29	16628.29	48.29	No	Si
SLU 68	2	1902.6	-30060	-0.0001345	0.0004492	0.0035	1.55	10090.72	16450.91	16450.91	8.65	No	Si
SLU 68	4.1	-365.13	-28547	-0.0001046	0.0004492	0.0035	1.55	10214.1	16718.26	16718.26	45.79	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	2	-7684.99	-27497	-0.0002022	0.0006738	0.0035	1.55		17930.85	17930.85	2.33		Si
SLV 15	4.1	5421.35	-27476	-0.0001681	0.0006738	0.0035	1.55		16795.7	16795.7	3.1		Si
SLV 1	2	10427.81	-18325	-0.0003598	0.0006738	0.0035	1.55		12170.88	12170.88	1.17		Si
SLV 1	4.1	-5841.9	-16423	-0.0001371	0.0006738	0.0035	1.55		12272.4	12272.4	2.1		Si
SLD 1	2	5266.42	-21024	-0.0001406	0.0006738	0.0035	1.55		13723.67	13723.67	2.61		Si
SLD 1	4.1	-2618	-19605	-0.0000991	0.0006738	0.0035	1.55		14037.43	14037.43	5.36		Si
SLD 3	2	4955.91	-19907	-0.000132	0.0006738	0.0035	1.55		13080.77	13080.77	2.64		Si
SLD 3	4.1	-2872.38	-19142	-0.0001008	0.0006738	0.0035	1.55		13791.72	13791.72	4.8		Si
SLV 4	2	9793.44	-15977	-0.0004143	0.0006738	0.0035	1.55		10820.78	10820.78	1.1		Si
SLV 4	4.1	-6438.36	-15401	-0.0001523	0.0006738	0.0035	1.24		11675.94	11675.94	1.81		Si
SLV 3	2	9717.73	-15758	-0.0004198	0.0006738	0.0035	1.55		10694.72	10694.72	1.1		Si
SLV 3	4.1	-6436.82	-15353	-0.0001524	0.0006738	0.0035	1.24		11647.34	11647.34	1.81		Si
SLV 16	2	-7609.28	-27717	-0.0002017	0.0006738	0.0035	1.55		18026.05	18026.05	2.37		Si
SLV 16	4.1	5419.8	-27525	-0.0001682	0.0006738	0.0035	1.55		16817.37	16817.37	3.1		Si
SLV 2	2	10503.52	-18544	-0.0003594	0.0006738	0.0035	1.55		12296.94	12296.94	1.17		Si
SLV 2	4.1	-5843.45	-16471	-0.0001372	0.0006738	0.0035	1.55		12299.47	12299.47	2.1		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 2	2	5298.92	-21118	-0.0001414	0.0006738	0.0035	1.55		13777.78	13777.78	2.6		Si
SLD 2	4.1	-2618.66	-19626	-0.0000991	0.0006738	0.0035	1.55		14048.39	14048.39	5.36		Si
SLD 4	2	4988.41	-20001	-0.0001328	0.0006738	0.0035	1.55		13134.88	13134.88	2.63		Si
SLD 4	4.1	-2873.04	-19162	-0.0001009	0.0006738	0.0035	1.55		13802.68	13802.68	4.8		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 71	2	1917.25	-30322	-21631	1468	1.55	1.55	-49841	10833	4702	108749	15597	7905	23502	No	16.01	Si
SLU 71	4.1	-384.5	-28823	-20562	1439	1.55	1.55	-47377	10833	4702	108749	15597	7905	23502	No	16.33	Si
SLU 65	2	1872.47	-29729	-21208	1444	1.55	1.55	-48867	10833	4702	108749	15597	7905	23502	No	16.27	Si
SLU 65	4.1	-344.34	-28237	-20144	1416	1.55	1.55	-46414	10833	4702	108749	15597	7905	23502	No	16.6	Si
SLU 68	2	1902.6	-30060	-21444	1474	1.55	1.55	-49411	10833	4702	108749	15597	7905	23502	No	15.94	Si
SLU 68	4.1	-365.13	-28547	-20364	1446	1.55	1.55	-46923	10833	4702	108749	15597	7905	23502	No	16.26	Si
SLU 70	2	1918.41	-30662	-21874	1480	1.55	1.55	-50400	10833	4702	108749	15597	7905	23502	No	15.88	Si
SLU 70	4.1	-367.31	-29161	-20802	1451	1.55	1.55	-47932	10833	4702	108749	15597	7905	23502	No	16.2	Si
SLU 69	2	1909.12	-30620	-21844	1459	1.55	1.55	-50332	10833	4702	108749	15597	7905	23502	No	16.11	Si
SLU 69	4.1	-366.46	-29141	-20788	1430	1.55	1.55	-47899	10833	4702	108749	15597	7905	23502	No	16.44	Si
SLU 51	2	1752.92	-26925	-19208	1410	1.55	1.55	-44257	10833	4702	108749	15597	7905	23502	No	16.67	Si
SLU 51	4.1	-504.39	-25087	-17897	1384	1.55	1.55	-41237	10833	4702	108749	15597	7905	23502	No	16.98	Si
SLU 66	2	1878.99	-30289	-21608	1429	1.55	1.55	-49788	10833	4702	108749	15597	7905	23502	No	16.45	Si
SLU 66	4.1	-345.66	-28831	-20568	1400	1.55	1.55	-47391	10833	4702	108749	15597	7905	23502	No	16.79	Si
SLU 72	2	1926.54	-30363	-21661	1490	1.55	1.55	-49909	10833	4702	108749	15597	7905	23502	No	15.78	Si
SLU 72	4.1	-385.35	-28843	-20576	1461	1.55	1.55	-47410	10833	4702	108749	15597	7905	23502	No	16.09	Si
SLU 67	2	1888.28	-30331	-21637	1450	1.55	1.55	-49856	10833	4702	108749	15597	7905	23502	No	16.2	Si
SLU 67	4.1	-346.52	-28851	-20582	1422	1.55	1.55	-47423	10833	4702	108749	15597	7905	23502	No	16.53	Si
SLU 64	2	1856.98	-29660	-21159	1409	1.55	1.55	-48753	10833	4702	108749	15597	7905	23502	No	16.68	Si
SLU 64	4.1	-342.91	-28204	-20120	1380	1.55	1.55	-46360	10833	4702	108749	15597	7905	23502	No	17.03	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	2	5178.95	-25467	-18168	5731	1.55	1.55	-41861	16250	7052	108749	23395	7905	31300		5.46	Si
SLV 5	4.1	-997.76	-21924	-15640	5901	1.55	1.55	-36036	16250	7052	108749	23395	7905	31300		5.3	Si
SLV 15	2	-7684.99	-27497	-19616	-8170	1.55	1.4866	-48310	16250	6764	108749	23395	7905	31300		3.83	Si
SLV 15	4.1	5421.35	-27476	-19601	-7956	1.55	1.55	-45164	16250	7052	108749	23395	7905	31300		3.93	Si
SLV 16	2	-7609.28	-27717	-19772	-8015	1.55	1.5014	-48212	16250	6831	108749	23395	7905	31300		3.91	Si
SLV 16	4.1	5419.8	-27525	-19635	-7800	1.55	1.55	-45243	16250	7052	108749	23395	7905	31300		4.01	Si
SLV 13	2	-6974.92	-30064	-21447	-6848	1.55	1.55	-49417	16250	7052	108749	23395	7905	31300		4.57	Si
SLV 13	4.1	6016.26	-28547	-20365	-6461	1.55	1.55	-46923	16250	7052	108749	23395	7905	31300		4.84	Si
SLV 14	2	-6899.21	-30283	-21603	-6693	1.55	1.55	-49777	16250	7052	108749	23395	7905	31300		4.68	Si
SLV 14	4.1	6014.71	-28595	-20399	-6305	1.55	1.55	-47002	16250	7052	108749	23395	7905	31300		4.96	Si
SLV 3	2	9717.73	-15758	-11241	8767	1.55	0.475	-89461	16250	2161	108749	23395	7905	31300		3.57	Si
SLV 3	4.1	-6436.82	-15353	-10952	8335	1.24	1.0672	0	0	0	108749	18716	6324	25040		3	Si
SLV 4	2	9793.44	-15977	-11398	8922	1.55	0.4861	-88547	16250	2212	108749	23395	7905	31300		3.51	Si
SLV 4	4.1	-6438.36	-15401	-10987	8491	1.24	1.0708	0	0	0	108749	18716	6324	25040		2.95	Si
SLV 6	2	5227.3	-25607	-18268	5830	1.55	1.55	-42091	16250	7052	108749	23395	7905	31300		5.37	Si
SLV 6	4.1	-998.75	-21954	-15662	6001	1.55	1.55	-36087	16250	7052	108749	23395	7905	31300		5.22	Si
SLV 2	2	10503.52	-18544	-13229	10244	1.55	0.6258	-30481	16250	2847	108749	23395	7905	31300		3.06	Si
SLV 2	4.1	-5843.45	-16471	-11750	9987	1.55	1.2607	-33825	16250	5736	108749	23395	7905	31300		3.13	Si
SLV 1	2	10427.81	-18325	-13072	10089	1.55	0.6178	-30121	16250	2811	108749	23395	7905	31300		3.1	Si
SLV 1	4.1	-5841.9	-16423	-11716	9831	1.55	1.2579	-33801	16250	5723	108749	23395	7905	31300		3.18	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.72 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-16068	0.32	128.85	1795.1	2607.3	2201.2	17.08	Si
SLV 4	-16116	0.32	128.85	1799.12	2614.25	2206.68	17.13	Si
SLV 1	-16737	0.32	128.85	1850.16	2703.78	2276.97	17.67	Si
SLV 2	-16785	0.32	128.85	1854.06	2710.73	2282.4	17.71	Si
SLV 7	-19407	0.32	128.85	2054.1	3087.34	2570.72	19.95	Si
SLV 8	-19438	0.32	128.85	2056.3	3091.58	2573.94	19.98	Si
SLV 5	-21638	0.32	128.85	2205.28	3394.8	2800.04	21.73	Si
SLV 6	-21669	0.32	128.85	2207.24	3399.04	2803.14	21.76	Si
SLV 11	-22931	0.32	128.85	2284.86	3570.22	2927.54	22.72	Si
SLV 12	-22962	0.32	128.85	2286.69	3574.22	2930.45	22.74	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.05 Ta = 0.0706

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-16471	-20434	-25	0.531	1887.1	0.966	7.98764	10.95836	No
SLV 12	-16444	-20574	-24	0.532	1884.4	0.966	7.99961	10.95836	No
SLV 9	-15076	-28989	61	0.571	1745.1	0.964	8.60397	10.95836	No
SLV 10	-15049	-29129	61	0.571	1742.4	0.964	8.61703	10.95836	No
SLV 7	-14941	-16912	-48	0.576	1731.4	0.964	8.68452	10.95836	No
SLV 8	-14914	-17052	-47	0.577	1728.7	0.963	8.69882	10.95836	No
SLV 5	-13545	-25467	38	0.627	1589.5	0.961	9.47993	10.95836	No
SLV 6	-13519	-25607	38	0.628	1586.7	0.961	9.496	10.95836	No
SLV 15	-17775	-27497	31	0.497	2019.9	0.968	7.46347	5.89448	Si
SLV 16	-17733	-27717	32	0.498	2015.6	0.968	7.47839	5.89448	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.588	SLU 72	Si
V_SLU	15.776	SLU 72	Si

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.101	SLV 3	Si
V_SLV	2.949	SLV 4	Si
PFFP_SLV	17.084	SLV 3	Si
R_SLV	0.729	SLV 11	No

Maschio 74

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	1.006	-4.113	1.006	L4	L5	3.98	0.28	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 43	2	3177.42	-32367	-0.0000475	0.0004492	0.0035	3.98	49099.6	56170.68	56170.68	17.68	No	Si
SLU 43	4.1	-1955.36	-24316	-0.0000344	0.0004492	0.0035	3.98	39747.42	52160.44	52160.44	26.68	No	Si
SLU 48	2	3234.78	-33567	-0.0000492	0.0004492	0.0035	3.98	50331.78	57909.24	57909.24	17.9	No	Si
SLU 48	4.1	-2056.52	-25426	-0.000036	0.0004492	0.0035	3.98	41150.12	53868.77	53868.77	26.19	No	Si
SLU 44	2	3157.11	-32399	-0.0000475	0.0004492	0.0035	3.98	49133.08	56217.16	56217.16	17.81	No	Si
SLU 44	4.1	-1956.21	-24349	-0.0000344	0.0004492	0.0035	3.98	39790.02	52211.68	52211.68	26.69	No	Si
SLU 46	2	3191.72	-33157	-0.0000485	0.0004492	0.0035	3.98	49915.46	57315.14	57315.14	17.96	No	Si
SLU 46	4.1	-1997.47	-25065	-0.0000354	0.0004492	0.0035	3.98	40697.43	53312.63	53312.63	26.69	No	Si
SLU 51	2	3226.99	-33245	-0.0000487	0.0004492	0.0035	3.98	50005.14	57442.52	57442.52	17.8	No	Si
SLU 51	4.1	-2075	-25099	-0.0000356	0.0004492	0.0035	3.98	40740.19	53364.96	53364.96	25.72	No	Si
SLU 45	2	3203.9	-33138	-0.0000485	0.0004492	0.0035	3.98	49895.8	57287.26	57287.26	17.88	No	Si
SLU 45	4.1	-1996.96	-25045	-0.0000354	0.0004492	0.0035	3.98	40672.29	53281.88	53281.88	26.68	No	Si
SLU 50	2	3239.18	-33226	-0.0000487	0.0004492	0.0035	3.98	49985.52	57414.64	57414.64	17.73	No	Si
SLU 50	4.1	-2074.48	-25079	-0.0000356	0.0004492	0.0035	3.98	40715.08	53334.22	53334.22	25.71	No	Si
SLU 49	2	3222.6	-33586	-0.0000492	0.0004492	0.0035	3.98	50351.2	57937.12	57937.12	17.98	No	Si
SLU 49	4.1	-2057.03	-25446	-0.000036	0.0004492	0.0035	3.98	41175.03	53899.52	53899.52	26.2	No	Si
SLU 1	2	2446.92	-25902	-0.0000374	0.0004492	0.0035	3.98	41740.51	46809	46809	19.13	No	Si
SLU 1	4.1	-1442.82	-19804	-0.0000275	0.0004492	0.0035	3.98	33677.79	44823.57	44823.57	31.07	No	Si
SLU 47	2	3187.99	-32828	-0.0000481	0.0004492	0.0035	3.98	49578.34	56839.13	56839.13	17.83	No	Si
SLU 47	4.1	-2015.78	-24731	-0.000035	0.0004492	0.0035	3.98	40275.61	52798.57	52798.57	26.19	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	2	11664.66	-25967	-0.0000548	0.0006738	0.0035	3.98		48860.65	48860.65	4.19		Si
SLV 4	4.1	-8929.01	-16963	-0.0000379	0.0006738	0.0035	3.98		40635.86	40635.86	4.55		Si
SLV 1	2	6026.83	-19094	-0.0000351	0.0006738	0.0035	3.98		37102.24	37102.24	6.16		Si
SLV 1	4.1	-11171.73	-10279	-0.0000375	0.0006738	0.0035	3.98		28695.61	28695.61	2.57		Si
SLV 8	2	13711.61	-37944	-0.0000748	0.0006738	0.0035	3.98		66819.89	66819.89	4.87		Si
SLV 8	4.1	-300.36	-30955	-0.0000393	0.0006738	0.0035	3.98		64140.71	64140.71	213.55		Si
SLV 2	2	6053.48	-19008	-0.000035	0.0006738	0.0035	3.98		36952.18	36952.18	6.1		Si
SLV 2	4.1	-11072.41	-10140	-0.0000372	0.0006738	0.0035	3.184		28438.58	28438.58	2.57		Si
SLV 7	2	13694.6	-37999	-0.0000749	0.0006738	0.0035	3.98		66900.29	66900.29	4.89		Si
SLV 7	4.1	-363.79	-31044	-0.0000395	0.0006738	0.0035	3.98		64282.84	64282.84	176.71		Si
SLV 10	2	-8844.85	-18044	-0.0000391	0.0006738	0.0035	3.98		42541.68	42541.68	4.81		Si
SLV 10	4.1	-2177.05	-13359	-0.0000205	0.0006738	0.0035	3.98		34280.69	34280.69	15.75		Si
SLV 3	2	11638.01	-26053	-0.0000549	0.0006738	0.0035	3.98		49003.56	49003.56	4.21		Si
SLV 3	4.1	-9028.33	-17102	-0.0000382	0.0006738	0.0035	3.98		40881.84	40881.84	4.53		Si
SLV 6	2	-4992.33	-14749	-0.0000276	0.0006738	0.0035	3.98		36732.56	36732.56	7.36		Si
SLV 6	4.1	-7445.02	-8210	-0.0000248	0.0006738	0.0035	3.98		24884.21	24884.21	3.34		Si
SLV 5	2	-5009.34	-14804	-0.0000277	0.0006738	0.0035	3.98		36829.44	36829.44	7.35		Si
SLV 5	4.1	-7508.45	-8299	-0.0000251	0.0006738	0.0035	3.98		25048.36	25048.36	3.34		Si
SLV 9	2	-8861.87	-18099	-0.0000392	0.0006738	0.0035	3.98		42638.56	42638.56	4.81		Si
SLV 9	4.1	-2240.48	-13448	-0.0000208	0.0006738	0.0035	3.98		34437.78	34437.78	15.37		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 45	2	3203.9	-33138	-23640	5306	3.98	3.98	-21213	10833	12073	108749	40049	20298	60347	No	11.37	Si
SLU 45	4.1	-1996.96	-25045	-17866	5002	3.98	3.98	-16032	10471	11669	108749	40049	20298	60347	No	12.06	Si
SLU 44	2	3157.11	-32399	-23112	5219	3.98	3.98	-20740	10833	12073	108749	40049	20298	60347	No	11.56	Si
SLU 44	4.1	-1956.21	-24349	-17370	4921	3.98	3.98	-15587	10412	11603	108749	40049	20298	60347	No	12.26	Si
SLU 49	2	3222.6	-33586	-23960	5392	3.98	3.98	-21500	10833	12073	108749	40049	20298	60347	No	11.19	Si
SLU 49	4.1	-2057.03	-25446	-18153	5083	3.98	3.98	-16289	10505	11707	108749	40049	20298	60347	No	11.87	Si
SLU 50	2	3239.18	-33226	-23702	5411	3.98	3.98	-21269	10833	12073	108749	40049	20298	60347	No	11.15	Si
SLU 50	4.1	-2074.48	-25079	-17891	5107	3.98	3.98	-16054	10474	11672	108749	40049	20298	60347	No	11.82	Si
SLU 43	2	3177.42	-32367	-23090	5228	3.98	3.98	-20719	10833	12073	108749	40049	20298	60347	No	11.54	Si
SLU 43	4.1	-1955.36	-24316	-17346	4932	3.98	3.98	-15565	10409	11600	108749	40049	20298	60347	No	12.23	Si
SLU 71	2	3249.61	-37036	-26421	4874	3.98	3.98	-23708	10833	12073	108749	40049	20298	60347	No	12.38	Si
SLU 71	4.1	-1842.04	-29247	-20864	4527	3.98	3.98	-18722	10830	12069	108749	40049	20298	60347	No	13.33	Si
SLU 48	2	3234.78	-33567	-23946	5397	3.98	3.98	-21488	10833	12073	108749	40049	20298	60347	No	11.18	Si
SLU 48	4.1	-2056.52	-25426	-18138	5089	3.98	3.98	-16276	10504	11705	108749	40049	20298	60347	No	11.86	Si
SLU 51	2	3226.99	-33245	-23716	5406	3.98	3.98	-21281	10833	12073	108749	40049	20298	60347	No	11.16	Si
SLU 51	4.1	-2075	-25099	-17905	5100	3.98	3.98	-16067	10476	11674	108749	40049	20298	60347	No	11.83	Si
SLU 46	2	3191.72	-33157	-23653	5300	3.98	3.98	-21225	10833	12073	108749	40049	20298	60347	No	11.39	Si
SLU 46	4.1	-1997.47	-25065	-17881	4995	3.98	3.98	-16045	10473	11671	108749	40049	20298	60347	No	12.08	Si
SLU 47	2	3187.99	-32828	-23419	5310	3.98	3.98	-21015	10833	12073	108749	40049	20298	60347	No	11.36	Si
SLU 47	4.1	-2015.78	-24731	-17642	5008	3.98	3.98	-15831	10444	11639	108749	40049	20298	60347	No	12.05	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	2	6053.48	-19008	-13560	12751	3.98	3.98	-12168	14934	16642	108749	60073	20298	80371		6.3	Si
SLV 2	4.1	-11072.41	-10140	-7233	10923	3.184	2.694	0	0	0	108749	48059	16238	64297		5.89	Si
SLD 4	2	6380.19	-27141	-19361	8399	3.98	3.98	-17374	15975	17802	108749	60073	20298	80371		9.57	Si
SLD 4	4.1	-4542.04	-19960	-14239	7894	3.98	3.98	-12777	15055	16778	108749	60073	20298	80371		10.18	Si
SLD 3	2	6368.75	-27178	-19388	8392	3.98	3.98	-17397	15979	17808	108749	60073	20298	80371		9.58	Si
SLD 3	4.1	-4584.67	-20020	-14282	7887	3.98	3.98	-12815	15063	16786	108749	60073	20298	80371		10.19	Si
SLV 14	2	-6788.27	-29990	-21394	-7916	3.98	3.98	-19198	16250	18109	108749	60073	20298	80371		10.15	Si
SLV 14	4.1	6487.49	-27300	-19475	-7615	3.98	3.98	-17476	15995	17825	108749	60073	20298	80371		10.55	Si
SLV 13	2	-6814.92	-30076	-21456	-7931	3.98	3.98	-19253	16250	18109	108749	60073	20298	80371		10.13	Si
SLV 13	4.1	6388.17	-27440	-19575	-7631	3.98	3.98	-17565	16013	17845	108749	60073	20298	80371		10.53	Si
SLV 8	2	13711.61	-37944	-27069	10264	3.98	3.98	-24290	16250	18109	108749	60073	20298	80371		7.83	Si
SLV 8	4.1	-300.36	-30955	-22082	11352	3.98	3.98	-19816	16250	18109	108749	60073	20298	80371		7.08	Si
SLV 1	2	6026.83	-19094	-13621	12735	3.98	3.98	-12223	14945	16654	108749	60073	20298	80371		6.31	Si
SLV 1	4.1	-11171.73	-10279	-7333	10907	3.98	2.7095	-9699	14440	10955	108749	60073	20298	80371		7.37	Si
SLV 4	2	11664.66	-25967	-18524	14943	3.98	3.98	-16622	15824	17635	108749	60073	20298	80371		5.38	Si
SLV 4	4.1	-8929.01	-16963	-12101	14117	3.98	3.98	-10859	14672	16350	108749	60073	20298	80371		5.69	Si
SLV 3	2	11638.01	-26053	-18585	14928	3.98	3.98	-16677	15835	17647	108749	60073	20298	80371		5.38	Si
SLV 3	4.1	-9028.33	-17102	-12200	14101	3.98	3.98	-10948	14690	16370	108749	60073	20298	80371		5.7	Si
SLV 7	2	13694.6	-37999	-27108	10254	3.98	3.98	-24325	16250	18109	108749	60073	20298	80371		7.84	Si
SLV 7	4.1	-363.79	-31044	-22146	11341	3.98	3.98	-19873	16250	18109	108749	60073	20298	80371		7.09	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.72 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 6	-9188	0.32	330.84	1228.43	1926.09	1577.26	4.77	Si
SLV 5	-9269	0.32	330.84	1238.72	1938.58	1588.65	4.8	Si
SLV 2	-12511	0.32	330.84	1644.21	2435.9	2040.05	6.17	Si
SLV 1	-12637	0.32	330.84	1659.73	2455.23	2057.48	6.22	Si
SLV 10	-13443	0.32	330.84	1758.16	2578.47	2168.31	6.55	Si
SLV 9	-13524	0.32	330.84	1767.97	2590.82	2179.4	6.59	Si
SLV 4	-19634	0.32	330.84	2484.48	3516.98	3000.73	9.07	Si
SLV 3	-19760	0.32	330.84	2498.77	3535.95	3017.36	9.12	Si
SLV 14	-26695	0.32	330.84	3248.81	4570.53	3909.67	11.82	Si
SLV 13	-26821	0.32	330.84	3261.88	4589.16	3925.52	11.87	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.05 Ta = 0.0706

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-28697	-41294	968	0.71	3462.8	0.954	10.81859	10.95836	No
SLV 12	-28574	-41239	969	0.713	3450.3	0.954	10.85908	10.95836	No
SLV 7	-25783	-37999	1184	0.77	3166.8	0.951	11.76927	10.95836	Si
SLV 8	-25660	-37944	1184	0.773	3154.4	0.95	11.81809	10.95836	Si
SLV 9	-14907	-18099	-1278	1.197	2065.3	0.929	18.71705	10.95836	Si
SLV 10	-14784	-18044	-1278	1.204	2053	0.929	18.84579	10.95836	Si
SLV 15	-27304	-37035	-69	0.77	3321.3	0.953	11.7468	5.89448	Si
SLV 16	-27112	-36949	-69	0.775	3301.8	0.952	11.82005	5.89448	Si
SLV 5	-11993	-14804	-1063	1.429	1772.2	0.92	22.56308	10.95836	Si
SLV 6	-11870	-14749	-1062	1.44	1759.9	0.92	22.74913	10.95836	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	17.678	SLU 43	Si
V_SLU	11.152	SLU 50	Si
PF_SLV	2.568	SLV 2	Si
V_SLV	5.379	SLV 4	Si
PFFP_SLV	4.767	SLV 6	Si
R_SLV	0.987	SLV 11	No

Maschio 75

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-4.824	-11.003	-3.314	L4	L5	1.51	0.28	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 45	2	189.79	-17854	-0.0000721	0.0003743	0.0035	1.51	7888.41	9537.7	9537.7	50.25	No	Si
SLU 45	5.44	-573.74	-12988	-0.0000575	0.0003743	0.0035	1.51	6846.97	8335.35	8335.35	14.53	No	Si
SLU 50	2	200.46	-18006	-0.0000729	0.0003743	0.0035	1.51	7907.58	9587.06	9587.06	47.83	No	Si
SLU 50	5.44	-583.29	-13174	-0.0000584	0.0003743	0.0035	1.51	6901.88	8413.72	8413.72	14.42	No	Si
SLU 53	2	70.52	-20007	-0.0000797	0.0003743	0.0035	1.51	8084.16	10244.22	10244.22	145.27	No	Si
SLU 53	5.44	-599.07	-14530	-0.0000644	0.0003743	0.0035	1.51	7266.99	8877.25	8877.25	14.82	No	Si
SLU 43	2	193.63	-17408	-0.0000702	0.0003743	0.0035	1.51	7827.51	9394.09	9394.09	48.52	No	Si
SLU 43	5.44	-561.74	-12595	-0.0000557	0.0003743	0.0035	1.51	6726.66	8160.86	8160.86	14.53	No	Si
SLU 66	2	163.16	-19895	-0.0000807	0.0003743	0.0035	1.51	8077.95	10206.43	10206.43	62.56	No	Si
SLU 66	5.44	-601.03	-14521	-0.0000644	0.0003743	0.0035	1.51	7264.69	8874.22	8874.22	14.76	No	Si
SLU 48	2	193.21	-18153	-0.0000735	0.0003743	0.0035	1.51	7925.33	9634.92	9634.92	49.87	No	Si
SLU 48	5.44	-584.51	-13277	-0.0000589	0.0003743	0.0035	1.51	6932.06	8456.04	8456.04	14.47	No	Si
SLU 71	2	173.83	-20047	-0.0000816	0.0003743	0.0035	1.51	8086.23	10257.54	10257.54	59.01	No	Si
SLU 71	5.44	-610.58	-14707	-0.0000653	0.0003743	0.0035	1.51	7309.63	8934.22	8934.22	14.63	No	Si
SLU 56	2	73.93	-20307	-0.0000811	0.0003743	0.0035	1.51	8098.48	10345.19	10345.19	139.92	No	Si
SLU 56	5.44	-609.85	-14820	-0.0000658	0.0003743	0.0035	1.51	7336.44	8971.1	8971.1	14.71	No	Si
SLU 69	2	166.57	-20194	-0.0000822	0.0003743	0.0035	1.51	8093.46	10307.11	10307.11	61.88	No	Si
SLU 69	5.44	-611.8	-14810	-0.0000658	0.0003743	0.0035	1.51	7334.23	8968.03	8968.03	14.66	No	Si
SLU 58	2	81.19	-20160	-0.0000805	0.0003743	0.0035	1.51	8091.84	10295.48	10295.48	126.81	No	Si
SLU 58	5.44	-608.62	-14716	-0.0000653	0.0003743	0.0035	1.51	7311.87	8937.28	8937.28	14.68	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	2	-403.01	-17045	-0.0000692	0.0005615	0.0035	1.51		10988.41	10988.41	27.27		Si
SLV 15	5.44	-1679.33	-12606	-0.0000709	0.0005615	0.0035	1.51		8758.25	8758.25	5.22		Si
SLV 12	2	723.55	-16847	-0.0000733	0.0005615	0.0035	1.51		10223.61	10223.61	14.13		Si
SLV 12	5.44	-1968.94	-15084	-0.0000853	0.0005615	0.0035	1.51		10041.77	10041.77	5.1		Si
SLV 6	2	-503.07	-13324	-0.0000561	0.0005615	0.0035	1.51		9136.96	9136.96	18.16		Si
SLV 6	5.44	1064.23	-6791	-0.0000394	0.0005615	0.0035	1.51		4799.65	4799.65	4.51		Si
SLV 7	2	1146.34	-16058	-0.0000766	0.0005615	0.0035	1.51		9862.08	9862.08	8.6		Si
SLV 7	5.44	-1467.27	-14930	-0.000077	0.0005615	0.0035	1.51		9965.59	9965.59	6.79		Si
SLV 16	2	-371.67	-16914	-0.0000682	0.0005615	0.0035	1.51		10927.74	10927.74	29.4		Si
SLV 16	5.44	-1673.1	-12500	-0.0000703	0.0005615	0.0035	1.51		8701.44	8701.44	5.2		Si
SLD 11	2	367.04	-15926	-0.0000642	0.0005615	0.0035	1.51		9801.88	9801.88	26.71		Si
SLD 11	5.44	-1118.09	-12813	-0.0000633	0.0005615	0.0035	1.51		8868.49	8868.49	7.93		Si
SLV 5	2	-523.09	-13407	-0.0000567	0.0005615	0.0035	1.51		9180.67	9180.67	17.55		Si
SLV 5	5.44	1060.25	-6859	-0.0000396	0.0005615	0.0035	1.51		4837.39	4837.39	4.56		Si
SLD 12	2	375.77	-15890	-0.0000642	0.0005615	0.0035	1.51		9785.28	9785.28	26.04		Si
SLD 12	5.44	-1116.35	-12783	-0.0000631	0.0005615	0.0035	1.51		8852.81	8852.81	7.93		Si
SLV 8	2	1166.35	-15975	-0.0000766	0.0005615	0.0035	1.51		9823.96	9823.96	8.42		Si
SLV 8	5.44	-1463.29	-14862	-0.0000767	0.0005615	0.0035	1.51		9932.32	9932.32	6.79		Si
SLV 11	2	703.54	-16931	-0.0000734	0.0005615	0.0035	1.51		10261.99	10261.99	14.59		Si
SLV 11	5.44	-1972.91	-15152	-0.0000856	0.0005615	0.0035	1.51		10075.17	10075.17	5.11		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	2	54.55	-22200	-18487	-1824	1.51	1.51	-43725	10833	4580	38062	12660	3850	16511	No	9.05	Si
SLU 79	5.44	-635.91	-16249	-13531	4464	1.51	1.51	-32004	10833	4580	38062	12660	3850	16511	No	3.7	Si
SLU 84	2	0.06	-22804	-18989	-2073	1.51	1.51	-44915	10833	4580	38062	12660	3850	16511	No	7.97	Si
SLU 84	5.44	-618.24	-16611	-13832	4419	1.51	1.51	-32716	10833	4580	38062	12660	3850	16511	No	3.74	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	2	43.89	-22048	-18360	-1851	1.51	1.51	-43426	10833	4580	38062	12660	3850	16511	No	8.92	Si
SLU 74	5.44	-626.37	-16064	-13376	4397	1.51	1.51	-31638	10833	4580	38062	12660	3850	16511	No	3.75	Si
SLU 77	2	47.3	-22347	-18609	-1858	1.51	1.51	-44015	10833	4580	38062	12660	3850	16511	No	8.89	Si
SLU 77	5.44	-637.14	-16353	-13617	4473	1.51	1.51	-32208	10833	4580	38062	12660	3850	16511	No	3.69	Si
SLU 82	2	-3.36	-22505	-18740	-2066	1.51	1.51	-44326	10833	4580	38062	12660	3850	16511	No	7.99	Si
SLU 82	5.44	-607.46	-16322	-13591	4343	1.51	1.51	-32147	10833	4580	38062	12660	3850	16511	No	3.8	Si
SLU 80	2	54.59	-22181	-18470	-1839	1.51	1.51	-43686	10833	4580	38062	12660	3850	16511	No	8.98	Si
SLU 80	5.44	-618.15	-16239	-13522	4398	1.51	1.51	-31984	10833	4580	38062	12660	3850	16511	No	3.75	Si
SLU 75	2	43.92	-22028	-18343	-1866	1.51	1.51	-43387	10833	4580	38062	12660	3850	16511	No	8.85	Si
SLU 75	5.44	-608.6	-16053	-13368	4332	1.51	1.51	-31619	10833	4580	38062	12660	3850	16511	No	3.81	Si
SLU 83	2	0.02	-22824	-19006	-2058	1.51	1.51	-44954	10833	4580	38062	12660	3850	16511	No	8.02	Si
SLU 83	5.44	-636	-16621	-13840	4484	1.51	1.51	-32736	10833	4580	38062	12660	3850	16511	No	3.68	Si
SLU 81	2	-3.39	-22525	-18757	-2051	1.51	1.51	-44365	10833	4580	38062	12660	3850	16511	No	8.05	Si
SLU 81	5.44	-625.22	-16332	-13600	4409	1.51	1.51	-32167	10833	4580	38062	12660	3850	16511	No	3.75	Si
SLU 78	2	47.33	-22328	-18592	-1873	1.51	1.51	-43976	10833	4580	38062	12660	3850	16511	No	8.82	Si
SLU 78	5.44	-619.38	-16343	-13609	4407	1.51	1.51	-32188	10833	4580	38062	12660	3850	16511	No	3.75	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	2	723.55	-16847	-14029	2397	1.51	1.51	-33182	16250	6870	38062	18990	3850	22841		9.53	Si
SLV 12	5.44	-1968.94	-15084	-12561	6337	1.51	1.51	-29710	16250	6870	38062	18990	3850	22841		3.6	Si
SLV 15	2	-403.01	-17045	-14193	3527	1.51	1.51	-33571	16250	6870	38062	18990	3850	22841		6.48	Si
SLV 15	5.44	-1679.33	-12606	-10497	7841	1.51	1.51	-24828	15382	6503	38062	18990	3850	22841		2.91	Si
SLV 14	2	-872.5	-16119	-13422	2068	1.51	1.51	-31747	16250	6870	38062	18990	3850	22841		11.04	Si
SLV 14	5.44	-914.85	-10079	-8393	6553	1.51	1.51	-19851	14387	6083	38062	18990	3850	22841		3.49	Si
SLV 11	2	703.54	-16931	-14098	2440	1.51	1.51	-33346	16250	6870	38062	18990	3850	22841		9.36	Si
SLV 11	5.44	-1972.91	-15152	-12617	6394	1.51	1.51	-29843	16250	6870	38062	18990	3850	22841		3.57	Si
SLV 16	2	-371.67	-16914	-14085	3461	1.51	1.51	-33314	16250	6870	38062	18990	3850	22841		6.6	Si
SLV 16	5.44	-1673.1	-12500	-10409	7752	1.51	1.51	-24619	15341	6486	38062	18990	3850	22841		2.95	Si
SLD 15	2	-110.83	-15953	-13284	909	1.51	1.51	-31421	16250	6870	38062	18990	3850	22841		25.12	Si
SLD 15	5.44	-982.5	-11686	-9731	5166	1.51	1.51	-23017	15020	6350	38062	18990	3850	22841		4.42	Si
SLV 1	2	572.14	-13341	-11109	-5580	1.51	1.51	-26275	15672	6626	38062	18990	3850	22841		4.09	Si
SLV 1	5.44	764.41	-9443	-7864	-1440	1.51	1.51	-18600	14137	5977	38062	18990	3850	22841		15.86	Si
SLV 2	2	603.48	-13210	-11000	-5646	1.51	1.51	-26018	15620	6604	38062	18990	3850	22841		4.05	Si
SLV 2	5.44	770.64	-9338	-7775	-1530	1.51	1.51	-18391	14095	5959	38062	18990	3850	22841		14.93	Si
SLV 13	2	-903.83	-16250	-13531	2135	1.51	1.51	-32005	16250	6870	38062	18990	3850	22841		10.7	Si
SLV 13	5.44	-921.07	-10185	-8481	6643	1.51	1.51	-20059	14429	6100	38062	18990	3850	22841		3.44	Si
SLD 16	2	-97.38	-15897	-13238	881	1.51	1.51	-31311	16250	6870	38062	18990	3850	22841		25.93	Si
SLD 16	5.44	-979.83	-11641	-9694	5127	1.51	1.51	-22928	15002	6343	38062	18990	3850	22841		4.45	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.32	19369	-8189	125.52	1001.04	7.98	Si
SLV 5	179667	0.32	19528	-8256	125.52	1008.05	8.03	Si
SLV 10	179667	0.32	20791	-8790	125.52	1063.08	8.47	Si
SLV 9	179667	0.32	20950	-8857	125.52	1069.91	8.52	Si
SLV 2	179667	0.32	22842	-9657	125.52	1149.78	9.16	Si
SLV 1	179667	0.32	23090	-9762	125.52	1160.08	9.24	Si
SLV 4	179667	0.32	27279	-11533	125.52	1326.23	10.57	Si
SLV 3	179667	0.32	27528	-11638	125.52	1335.67	10.64	Si
SLV 14	179667	0.32	27582	-11661	125.52	1337.72	10.66	Si
SLV 13	179667	0.32	27831	-11766	125.52	1347.11	10.73	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.05 Ta = 0.0706

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-15152	-16931	181	0.548	1747.4	0.965	8.25847	10.95836	No
SLV 12	-15084	-16847	182	0.55	1740.6	0.965	8.29055	10.95836	No
SLV 7	-14930	-16058	98	0.56	1724.8	0.964	8.44434	10.95836	No
SLV 8	-14862	-15975	98	0.562	1717.9	0.964	8.47768	10.95836	No
SLV 9	-7081	-14280	-105	1.045	927.6	0.938	16.19321	10.95836	Si
SLV 10	-7014	-14197	-104	1.054	920.8	0.938	16.32763	10.95836	Si
SLV 5	-6859	-13407	-188	1.063	905.1	0.937	16.4809	10.95836	Si
SLV 6	-6791	-13324	-188	1.071	898.3	0.937	16.62162	10.95836	Si
SLV 15	-12606	-17045	178	0.641	1488.4	0.959	9.71656	5.89448	Si
SLV 16	-12500	-16914	179	0.646	1477.7	0.959	9.78805	5.89448	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	14.425	SLU 50	Si
V_SLU	3.682	SLU 83	Si
PF_SLV	4.51	SLV 6	Si
V_SLV	2.913	SLV 15	Si
PFFP_SLV	7.975	SLV 6	Si
R_SLV	0.754	SLV 11	No

Maschio 76

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-3.314	-11.003	-0.691	F7	L5	2.623	0.28	0.952	0.195	0.195			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 44	5.25	1225.02	-25642	-0.0000623	0.0003743	0.0035	2.6231	22097.76	25663.5	25663.5	20.95	No	Si
SLU 44	5.44	1181.14	-25732	-0.0000623	0.0003743	0.0035	2.6231	22135.05	25738.48	25738.48	21.79	No	Si
SLU 45	5.25	1195.11	-26261	-0.0000636	0.0003743	0.0035	2.6231	22346.1	26167.97	26167.97	21.9	No	Si
SLU 45	5.44	1134.13	-26367	-0.0000636	0.0003743	0.0035	2.6231	22387.27	26250.78	26250.78	23.15	No	Si
SLU 43	5.25	1200.92	-25560	-0.000062	0.0003743	0.0035	2.6231	22064.04	25596.29	25596.29	21.31	No	Si
SLU 43	5.44	1121.4	-25646	-0.0000617	0.0003743	0.0035	2.6231	22099.64	25667.28	25667.28	22.89	No	Si
SLU 51	5.25	1319.44	-26804	-0.0000656	0.0003743	0.0035	2.6231	22553	26582.53	26582.53	20.15	No	Si
SLU 51	5.44	1262.26	-26921	-0.0000656	0.0003743	0.0035	2.6231	22596.32	26668.79	26668.79	21.13	No	Si
SLU 47	5.25	1277.05	-26239	-0.000064	0.0003743	0.0035	2.6231	22337.68	26151.03	26151.03	20.48	No	Si
SLU 47	5.44	1233.65	-26344	-0.000064	0.0003743	0.0035	2.6231	22378.57	26233.3	26233.3	21.26	No	Si
SLU 48	5.25	1247.14	-26858	-0.0000654	0.0003743	0.0035	2.6231	22573.05	26622.49	26622.49	21.35	No	Si
SLU 48	5.44	1186.63	-26978	-0.0000653	0.0003743	0.0035	2.6231	22617.18	26710.27	26710.27	22.51	No	Si
SLU 50	5.25	1304.98	-26755	-0.0000654	0.0003743	0.0035	2.6231	22534.79	26546.21	26546.21	20.34	No	Si
SLU 50	5.44	1226.41	-26869	-0.0000653	0.0003743	0.0035	2.6231	22577.26	26630.87	26630.87	21.71	No	Si
SLU 9	5.25	1002.46	-21555	-0.0000514	0.0003743	0.0035	2.6231	20120.96	22391.07	22391.07	22.34	No	Si
SLU 9	5.44	975.31	-21669	-0.0000515	0.0003743	0.0035	2.6231	20183.89	22479.9	22479.9	23.05	No	Si
SLU 46	5.25	1209.57	-26310	-0.0000638	0.0003743	0.0035	2.6231	22365.16	26206.32	26206.32	21.67	No	Si
SLU 46	5.44	1169.97	-26418	-0.0000639	0.0003743	0.0035	2.6231	22407.24	26290.9	26290.9	22.47	No	Si
SLU 49	5.25	1261.6	-26907	-0.0000656	0.0003743	0.0035	2.6231	22591.08	26658.38	26658.38	21.13	No	Si
SLU 49	5.44	1222.48	-27030	-0.0000657	0.0003743	0.0035	2.6231	22636.04	26747.72	26747.72	21.88	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	5.25	-2357.27	-18646	-0.0000502	0.0005615	0.0035	2.6231		23245.75	23245.75	9.86		Si
SLV 11	5.44	-3472.35	-18272	-0.0000548	0.0005615	0.0035	2.6231		22867.31	22867.31	6.59		Si
SLV 9	5.25	3464.85	-24097	-0.0000679	0.0005615	0.0035	2.6231		26754.64	26754.64	7.72		Si
SLV 9	5.44	4724.27	-24448	-0.000075	0.0005615	0.0035	2.6231		27115.31	27115.31	5.74		Si
SLV 5	5.25	3621.89	-24546	-0.0000697	0.0005615	0.0035	2.6231		27215.66	27215.66	7.51		Si
SLV 5	5.44	4728.96	-25145	-0.0000767	0.0005615	0.0035	2.6231		27771.46	27771.46	5.87		Si
SLV 7	5.25	-2200.23	-19095	-0.0000504	0.0005615	0.0035	2.6231		23690.77	23690.77	10.77		Si
SLV 7	5.44	-3467.66	-18968	-0.0000563	0.0005615	0.0035	2.6231		23565.54	23565.54	6.8		Si
SLV 10	5.25	3475.79	-24007	-0.0000677	0.0005615	0.0035	2.6231		26662.6	26662.6	7.67		Si
SLV 10	5.44	4740.78	-24358	-0.0000749	0.0005615	0.0035	2.6231		27022.65	27022.65	5.7		Si
SLV 8	5.25	-2189.28	-19005	-0.0000502	0.0005615	0.0035	2.6231		23602.32	23602.32	10.78		Si
SLV 8	5.44	-3451.14	-18878	-0.000056	0.0005615	0.0035	2.6231		23476.31	23476.31	6.8		Si
SLD 10	5.25	1888.61	-22632	-0.0000567	0.0005615	0.0035	2.6231		25261.66	25261.66	13.38		Si
SLD 10	5.44	2443.06	-22850	-0.00006	0.0005615	0.0035	2.6231		25483.64	25483.64	10.43		Si
SLV 12	5.25	-2346.33	-18556	-0.0000499	0.0005615	0.0035	2.6231		23155.87	23155.87	9.87		Si
SLV 12	5.44	-3455.83	-18182	-0.0000545	0.0005615	0.0035	2.6231		22775.16	22775.16	6.59		Si
SLV 6	5.25	3632.83	-24456	-0.0000696	0.0005615	0.0035	2.6231		27123.31	27123.31	7.47		Si
SLV 6	5.44	4745.47	-25054	-0.0000765	0.0005615	0.0035	2.6231		27692.76	27692.76	5.84		Si
SLD 9	5.25	1883.84	-22671	-0.0000568	0.0005615	0.0035	2.6231		25301.42	25301.42	13.43		Si
SLD 9	5.44	2435.86	-22890	-0.00006	0.0005615	0.0035	2.6231		25523.62	25523.62	10.48		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 69	5.25	1096.06	-29321	-24416	6066	2.6231	2.6231	-33244	10833	7957	9516	21993	6689	17472	No	2.88	Si
SLU 69	5.44	1079.84	-29503	-24567	6086	2.6231	2.6231	-33450	10833	7957	9516	21993	6689	17472	No	2.87	Si
SLU 67	5.25	1058.49	-28773	-23959	5869	2.6231	2.6231	-32622	10833	7957	9516	21993	6689	17472	No	2.98	Si
SLU 67	5.44	1063.18	-28943	-24101	5888	2.6231	2.6231	-32815	10833	7957	9516	21993	6689	17472	No	2.97	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 68	5.25	1125.96	-28702	-23901	5857	2.6231	2.6231	-32542	10833	7957	9516	21993	6689	17472	No	2.98	Si
SLU 68	5.44	1126.86	-28869	-24039	5877	2.6231	2.6231	-32731	10833	7957	9516	21993	6689	17472	No	2.97	Si
SLU 72	5.25	1168.36	-29267	-24371	6024	2.6231	2.6231	-33182	10833	7957	9516	21993	6689	17472	No	2.9	Si
SLU 72	5.44	1155.46	-29446	-24520	6045	2.6231	2.6231	-33385	10833	7957	9516	21993	6689	17472	No	2.89	Si
SLU 70	5.25	1110.52	-29370	-24457	5976	2.6231	2.6231	-33299	10833	7957	9516	21993	6689	17472	No	2.92	Si
SLU 70	5.44	1115.68	-29555	-24611	5996	2.6231	2.6231	-33508	10833	7957	9516	21993	6689	17472	No	2.91	Si
SLU 64	5.25	1049.84	-28023	-23335	5900	2.6231	2.6231	-31772	10833	7957	9516	21993	6689	17472	No	2.96	Si
SLU 64	5.44	1014.6	-28171	-23458	5920	2.6231	2.6231	-31939	10833	7957	9516	21993	6689	17472	No	2.95	Si
SLU 50	5.25	1304.98	-26755	-22279	5845	2.6231	2.6231	-30334	10833	7957	9516	21993	6689	17472	No	2.99	Si
SLU 50	5.44	1226.41	-26869	-22375	5870	2.6231	2.6231	-30464	10833	7957	9516	21993	6689	17472	No	2.98	Si
SLU 71	5.25	1153.9	-29218	-24330	6114	2.6231	2.6231	-33127	10833	7957	9516	21993	6689	17472	No	2.86	Si
SLU 71	5.44	1119.61	-29394	-24477	6135	2.6231	2.6231	-33326	10833	7957	9516	21993	6689	17472	No	2.85	Si
SLU 66	5.25	1044.03	-28724	-23919	5959	2.6231	2.6231	-32566	10833	7957	9516	21993	6689	17472	No	2.93	Si
SLU 66	5.44	1027.33	-28891	-24058	5979	2.6231	2.6231	-32756	10833	7957	9516	21993	6689	17472	No	2.92	Si
SLU 79	5.25	443.43	-31095	-25893	5852	2.6231	2.6231	-35255	10833	7957	9516	21993	6689	17472	No	2.99	Si
SLU 79	5.44	533.81	-31313	-26074	5853	2.6231	2.6231	-35502	10833	7957	9516	21993	6689	17472	No	2.98	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	5.25	-2357.27	-18646	-15527	7509	2.6231	2.6231	-21140	14645	10756	9516	32989	6689	20271		2.7	Si
SLV 11	5.44	-3472.35	-18272	-15215	7524	2.6231	2.6231	-20716	14560	10694	9516	32989	6689	20209		2.69	Si
SLV 4	5.25	34.77	-21412	-17830	6434	2.6231	2.6231	-24276	15272	11217	9516	32989	6689	20732		3.22	Si
SLV 4	5.44	-572.18	-21826	-18175	6536	2.6231	2.6231	-24746	15366	11286	9516	32989	6689	20801		3.18	Si
SLD 11	5.25	-680.34	-20278	-16886	5774	2.6231	2.6231	-22990	15015	11028	9516	32989	6689	20543		3.56	Si
SLD 11	5.44	-1172.14	-20177	-16802	5786	2.6231	2.6231	-22877	14992	11011	9516	32989	6689	20527		3.55	Si
SLV 8	5.25	-2189.28	-19005	-15826	8097	2.6231	2.6231	-21548	14726	10816	9516	32989	6689	20331		2.51	Si
SLV 8	5.44	-3451.14	-18878	-15720	8161	2.6231	2.6231	-21403	14697	10795	9516	32989	6689	20310		2.49	Si
SLV 7	5.25	-2200.23	-19095	-15901	8131	2.6231	2.6231	-21650	14747	10831	9516	32989	6689	20346		2.5	Si
SLV 7	5.44	-3467.66	-18968	-15795	8196	2.6231	2.6231	-21506	14718	10810	9516	32989	6689	20325		2.48	Si
SLD 7	5.25	-613.05	-20470	-17046	6037	2.6231	2.6231	-23209	15058	11060	9516	32989	6689	20575		3.41	Si
SLD 7	5.44	-1169.94	-20476	-17050	6071	2.6231	2.6231	-23215	15060	11061	9516	32989	6689	20576		3.39	Si
SLV 3	5.25	17.64	-21553	-17947	6487	2.6231	2.6231	-24436	15304	11240	9516	32989	6689	20756		3.2	Si
SLV 3	5.44	-598.04	-21968	-18293	6589	2.6231	2.6231	-24906	15398	11309	9516	32989	6689	20825		3.16	Si
SLD 12	5.25	-675.57	-20239	-16853	5759	2.6231	2.6231	-22946	15006	11021	9516	32989	6689	20537		3.57	Si
SLD 12	5.44	-1164.94	-20138	-16769	5771	2.6231	2.6231	-22832	14983	11004	9516	32989	6689	20520		3.56	Si
SLD 8	5.25	-608.28	-20431	-17013	6022	2.6231	2.6231	-23165	15050	11053	9516	32989	6689	20569		3.42	Si
SLD 8	5.44	-1162.73	-20436	-17018	6056	2.6231	2.6231	-23170	15051	11054	9516	32989	6689	20570		3.4	Si
SLV 12	5.25	-2346.33	-18556	-15452	7475	2.6231	2.6231	-21039	14624	10741	9516	32989	6689	20257		2.71	Si
SLV 12	5.44	-3455.83	-18182	-15140	7490	2.6231	2.6231	-20614	14539	10679	9516	32989	6689	20194		2.7	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 5.343 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.35	24560	-18038	18.42	2119.25	115.03	Si
SLV 11	179667	0.35	24683	-18129	18.42	2127.81	115.49	Si
SLV 8	179667	0.35	25537	-18756	18.42	2186.76	118.69	Si
SLV 7	179667	0.35	25660	-18846	18.42	2195.16	119.15	Si
SLV 16	179667	0.35	26230	-19265	18.42	2233.83	121.25	Si
SLV 15	179667	0.35	26422	-19406	18.42	2246.8	121.95	Si
SLV 14	179667	0.35	28668	-21056	18.42	2394.42	129.96	Si
SLV 13	179667	0.35	28861	-21197	18.42	2406.75	130.63	Si
SLV 4	179667	0.35	29487	-21657	18.42	2446.57	132.8	Si
SLV 3	179667	0.35	29680	-21798	18.42	2458.69	133.45	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 5.343 Wa = 0.05 Ta = 0.0054

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-25145	-24546	-490	0.703	2659.8	0.988	10.34239	3.39158	Si
SLV 6	-25054	-24456	-490	0.705	2650.6	0.988	10.37155	3.39158	Si
SLV 9	-24448	-24097	373	0.723	2588.9	0.988	10.64148	3.39158	Si
SLV 1	-23821	-23188	-1394	0.696	2524.9	0.988	10.24773	3.25766	Si
SLV 10	-24358	-24007	373	0.725	2579.7	0.988	10.67256	3.39158	Si
SLV 2	-23679	-23047	-1394	0.7	2510.5	0.988	10.29545	3.25766	Si
SLV 3	-21968	-21553	-1307	0.745	2336	0.987	10.97802	3.25766	Si
SLV 4	-21826	-21412	-1307	0.749	2321.6	0.987	11.03438	3.25766	Si
SLV 13	-21500	-21690	1480	0.75	2288.4	0.986	11.05248	3.25766	Si
SLV 14	-21359	-21549	1480	0.754	2274	0.986	11.11054	3.25766	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	20.147	SLU 51	Si
V_SLU	2.848	SLU 71	Si
PF_SLV	5.7	SLV 10	Si
V_SLV	2.48	SLV 7	Si
PFFP_SLV	115.029	SLV 12	Si
R_SLV	3.049	SLV 5	Si

Maschio 77

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-3.314	-11.003	-0.354	L4	Z medio 458 cm	2.96	0.28	2.585	1.73	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 60	2	2631.08	-42442	-0.0000979	0.0003743	0.0035	2.96	31220.7	41284.35	41284.35	15.69	No	Si
SLU 60	3.73	2236.6	-40760	-0.000092	0.0003743	0.0035	2.96	31185.91	40294.27	40294.27	18.02	No	Si
SLU 81	2	2649.36	-46257	-0.0001075	0.0003743	0.0035	2.96	30931.86	42431.8	42431.8	16.02	No	Si
SLU 81	3.73	2274.63	-44403	-0.0001011	0.0003743	0.0035	2.96	31135.98	41908.19	41908.19	18.42	No	Si
SLU 83	2	2674.98	-46830	-0.0001091	0.0003743	0.0035	2.96	30844.29	42597.29	42597.29	15.92	No	Si
SLU 83	3.73	2263.29	-45049	-0.0001026	0.0003743	0.0035	2.96	31078.53	42088.71	42088.71	18.6	No	Si
SLU 84	2	2661.6	-46847	-0.000109	0.0003743	0.0035	2.96	30841.65	42601.98	42601.98	16.01	No	Si
SLU 84	3.73	2274.27	-45069	-0.0001027	0.0003743	0.0035	2.96	31076.54	42094.29	42094.29	18.51	No	Si
SLU 58	2	2556.26	-41651	-0.0000956	0.0003743	0.0035	2.96	31216.69	40833.18	40833.18	15.97	No	Si
SLU 58	3.73	1887.87	-40239	-0.0000892	0.0003743	0.0035	2.96	31154.97	39959.51	39959.51	21.17	No	Si
SLU 62	2	2656.71	-43015	-0.0000994	0.0003743	0.0035	2.96	31209.89	41527.31	41527.31	15.63	No	Si
SLU 62	3.73	2225.26	-41406	-0.0000935	0.0003743	0.0035	2.96	31211.01	40688.37	40688.37	18.28	No	Si
SLU 59	2	2542.87	-41667	-0.0000956	0.0003743	0.0035	2.96	31216.99	40842.66	40842.66	16.06	No	Si
SLU 59	3.73	1898.85	-40259	-0.0000893	0.0003743	0.0035	2.96	31156.32	39972.43	39972.43	21.05	No	Si
SLU 61	2	2617.7	-42458	-0.0000979	0.0003743	0.0035	2.96	31220.56	41293.31	41293.31	15.77	No	Si
SLU 61	3.73	2247.58	-40780	-0.0000921	0.0003743	0.0035	2.96	31186.9	40306.63	40306.63	17.93	No	Si
SLU 63	2	2643.33	-43031	-0.0000994	0.0003743	0.0035	2.96	31209.42	41531.69	41531.69	15.71	No	Si
SLU 63	3.73	2236.24	-41426	-0.0000936	0.0003743	0.0035	2.96	31211.55	40700.2	40700.2	18.2	No	Si
SLU 56	2	2546.72	-41915	-0.0000962	0.0003743	0.0035	2.96	31220.47	40986.87	40986.87	16.09	No	Si
SLU 56	3.73	1911.33	-40480	-0.0000899	0.0003743	0.0035	2.96	31170.46	40116.84	40116.84	20.99	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	2	54.18	-28335	-0.0000531	0.0005615	0.0035	2.96		35262.58	35262.58	650.9		Si
SLV 14	3.73	2512.25	-30999	-0.0000681	0.0005615	0.0035	2.96		37563.09	37563.09	14.95		Si
SLV 2	2	3510.4	-33838	-0.0000779	0.0005615	0.0035	2.96		40050.1	40050.1	11.41		Si
SLV 2	3.73	652.41	-28889	-0.0000566	0.0005615	0.0035	2.96		35737.6	35737.6	54.78		Si
SLV 9	2	1298.08	-30441	-0.0000622	0.0005615	0.0035	2.96		37078.14	37078.14	28.56		Si
SLV 9	3.73	2873.53	-30574	-0.0000687	0.0005615	0.0035	2.96		37193.66	37193.66	12.94		Si
SLV 13	2	86.03	-28403	-0.0000534	0.0005615	0.0035	2.96		35320.71	35320.71	410.56		Si
SLV 13	3.73	2481.92	-31123	-0.0000682	0.0005615	0.0035	2.96		37671.16	37671.16	15.18		Si
SLD 3	2	2538.81	-32236	-0.0000707	0.0005615	0.0035	2.96		38641.61	38641.61	15.22		Si
SLD 3	3.73	521.05	-29450	-0.0000572	0.0005615	0.0035	2.96		36221.32	36221.32	69.52		Si
SLV 10	2	1277.74	-30397	-0.000062	0.0005615	0.0035	2.96		37040.55	37040.55	28.99		Si
SLV 10	3.73	2892.9	-30495	-0.0000686	0.0005615	0.0035	2.96		37124.86	37124.86	12.83		Si
SLV 4	2	3503.43	-33732	-0.0000777	0.0005615	0.0035	2.96		39956.23	39956.23	11.4		Si
SLV 4	3.73	-236.5	-28707	-0.0000546	0.0005615	0.0035	2.96		37800.76	37800.76	159.83		Si
SLD 1	2	2542.48	-32281	-0.0000708	0.0005615	0.0035	2.96		38681.06	38681.06	15.21		Si
SLD 1	3.73	916.61	-29531	-0.0000589	0.0005615	0.0035	2.96		36291.31	36291.31	39.59		Si
SLV 3	2	3535.28	-33799	-0.0000779	0.0005615	0.0035	2.96		40016.12	40016.12	11.32		Si
SLV 3	3.73	-266.84	-28831	-0.0000549	0.0005615	0.0035	2.96		37924.56	37924.56	142.13		Si
SLV 1	2	3542.25	-33906	-0.0000782	0.0005615	0.0035	2.96		40110.03	40110.03	11.32		Si
SLV 1	3.73	622.08	-29013	-0.0000567	0.0005615	0.0035	2.96		35844.3	35844.3	57.62		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 67	2	2231.8	-40652	-33852	6261	2.96	2.96	-40844	10833	8979	28547	24818	7548	32366	No	5.17	Si
SLU 67	3.73	1210.91	-39265	-32697	6817	2.96	2.96	-39450	10833	8979	28547	24818	7548	32366	No	4.75	Si
SLU 64	2	2229.1	-39798	-33141	6238	2.96	2.96	-39986	10833	8979	28547	24818	7548	32366	No	5.19	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 64	3.73	1187.81	-38358	-31941	6816	2.96	2.96	-38539	10833	8979	28547	24818	7548	32366	No	4.75	Si
SLU 79	2	2574.53	-45466	-37861	6275	2.96	2.96	-45681	10833	8979	28547	24818	7548	32366	No	5.16	Si
SLU 79	3.73	1925.9	-43882	-36541	6846	2.96	2.96	-44088	10833	8979	28547	24818	7548	32366	No	4.73	Si
SLU 68	2	2232.42	-40399	-33641	6304	2.96	2.96	-40589	10833	8979	28547	24818	7548	32366	No	5.13	Si
SLU 68	3.73	1194.77	-39037	-32507	6842	2.96	2.96	-39221	10833	8979	28547	24818	7548	32366	No	4.73	Si
SLU 69	2	2270.81	-41210	-34316	6432	2.96	2.96	-41404	10833	8979	28547	24818	7548	32366	No	5.03	Si
SLU 69	3.73	1188.58	-39891	-33218	7026	2.96	2.96	-40079	10833	8979	28547	24818	7548	32366	No	4.61	Si
SLU 70	2	2257.43	-41226	-34329	6392	2.96	2.96	-41420	10833	8979	28547	24818	7548	32366	No	5.06	Si
SLU 70	3.73	1199.56	-39911	-33235	6957	2.96	2.96	-40099	10833	8979	28547	24818	7548	32366	No	4.65	Si
SLU 71	2	2280.35	-40945	-34096	6501	2.96	2.96	-41138	10833	8979	28547	24818	7548	32366	No	4.98	Si
SLU 71	3.73	1165.13	-39650	-33017	7096	2.96	2.96	-39837	10833	8979	28547	24818	7548	32366	No	4.56	Si
SLU 50	2	2262.08	-37130	-30919	6204	2.96	2.96	-37305	10833	8979	28547	24818	7548	32366	No	5.22	Si
SLU 50	3.73	1127.1	-36008	-29984	6815	2.96	2.96	-36177	10833	8979	28547	24818	7548	32366	No	4.75	Si
SLU 66	2	2245.19	-40636	-33838	6301	2.96	2.96	-40827	10833	8979	28547	24818	7548	32366	No	5.14	Si
SLU 66	3.73	1199.93	-39245	-32680	6886	2.96	2.96	-39430	10833	8979	28547	24818	7548	32366	No	4.7	Si
SLU 72	2	2266.97	-40962	-34109	6462	2.96	2.96	-41154	10833	8979	28547	24818	7548	32366	No	5.01	Si
SLU 72	3.73	1176.11	-39670	-33034	7027	2.96	2.96	-39857	10833	8979	28547	24818	7548	32366	No	4.61	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	2	3503.43	-33732	-28089	9698	2.96	2.96	-33890	16250	13468	28547	37227	7548	42015		4.33	Si
SLV 4	3.73	-236.5	-28707	-23905	8408	2.96	2.96	-28842	16185	13414	28547	37227	7548	41961		4.99	Si
SLV 8	2	2291.38	-31694	-26392	11556	2.96	2.96	-31843	16250	13468	28547	37227	7548	42015		3.64	Si
SLV 8	3.73	-628.11	-29256	-24362	10561	2.96	2.96	-29394	16250	13468	28547	37227	7548	42015		3.98	Si
SLV 7	2	2311.72	-31737	-26428	11594	2.96	2.96	-31887	16250	13468	28547	37227	7548	42015		3.62	Si
SLV 7	3.73	-647.48	-29335	-24428	10601	2.96	2.96	-29473	16250	13468	28547	37227	7548	42015		3.96	Si
SLV 3	2	3535.28	-33799	-28145	9758	2.96	2.96	-33959	16250	13468	28547	37227	7548	42015		4.31	Si
SLV 3	3.73	-266.84	-28831	-24008	8471	2.96	2.96	-28967	16210	13435	28547	37227	7548	41982		4.96	Si
SLD 11	2	1571.33	-30649	-25522	6863	2.96	2.96	-30793	16250	13468	28547	37227	7548	42015		6.12	Si
SLD 11	3.73	578.44	-29932	-24925	7045	2.96	2.96	-30073	16250	13468	28547	37227	7548	42015		5.96	Si
SLV 11	2	1274.85	-30086	-25053	9624	2.96	2.96	-30228	16250	13468	28547	37227	7548	42015		4.37	Si
SLV 11	3.73	-89.53	-29968	-24955	9488	2.96	2.96	-30109	16250	13468	28547	37227	7548	42015		4.43	Si
SLD 8	2	2005.9	-31336	-26094	7688	2.96	2.96	-31483	16250	13468	28547	37227	7548	42015		5.47	Si
SLD 8	3.73	348.47	-29627	-24671	7502	2.96	2.96	-29767	16250	13468	28547	37227	7548	42015		5.6	Si
SLD 7	2	2014.78	-31354	-26109	7704	2.96	2.96	-31502	16250	13468	28547	37227	7548	42015		5.45	Si
SLD 7	3.73	340.02	-29662	-24700	7519	2.96	2.96	-29801	16250	13468	28547	37227	7548	42015		5.59	Si
SLV 12	2	1254.51	-30043	-25017	9586	2.96	2.96	-30184	16250	13468	28547	37227	7548	42015		4.38	Si
SLV 12	3.73	-70.16	-29889	-24889	9448	2.96	2.96	-30030	16250	13468	28547	37227	7548	42015		4.45	Si
SLD 12	2	1562.45	-30630	-25506	6847	2.96	2.96	-30774	16250	13468	28547	37227	7548	42015		6.14	Si
SLD 12	3.73	586.89	-29897	-24896	7028	2.96	2.96	-30038	16250	13468	28547	37227	7548	42015		5.98	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 2.865 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	179667	0.3	34105	-28266	131.44	3073.55	23.38	Si
SLV 15	179667	0.3	34218	-28360	131.44	3080.83	23.44	Si
SLV 14	179667	0.3	34292	-28422	131.44	3085.56	23.47	Si
SLV 13	179667	0.3	34406	-28516	131.44	3092.81	23.53	Si
SLV 12	179667	0.3	35609	-29513	131.44	3168.4	24.1	Si
SLV 11	179667	0.3	35681	-29573	131.44	3172.89	24.14	Si
SLV 10	179667	0.3	36234	-30031	131.44	3206.81	24.4	Si
SLV 9	179667	0.3	36306	-30091	131.44	3211.23	24.43	Si
SLV 8	179667	0.3	37068	-30722	131.44	3257.14	24.78	Si
SLV 7	179667	0.3	37141	-30782	131.44	3261.47	24.81	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 2.865 Wa = 0.05 Ta = 0.0399

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-30574	-30441	106	0.566	3414.4	0.973	8.4504	5.74868	Si
SLV 10	-30495	-30397	106	0.567	3406.4	0.973	8.46961	5.74868	Si
SLV 11	-29968	-30086	25	0.578	3352.7	0.972	8.63769	5.74868	Si
SLV 5	-29941	-32092	20	0.579	3350	0.972	8.64686	5.74868	Si
SLV 12	-29889	-30043	25	0.579	3344.7	0.972	8.65776	5.74868	Si
SLV 6	-29861	-32048	20	0.58	3341.9	0.972	8.66696	5.74868	Si
SLV 7	-29335	-31737	-61	0.587	3288.3	0.972	8.78338	5.74868	Si
SLV 8	-29256	-31694	-61	0.589	3280.2	0.972	8.80422	5.74868	Si
SLV 13	-31123	-28403	178	0.555	3470.3	0.973	8.28747	4.07563	Si
SLV 14	-30999	-28335	178	0.557	3457.7	0.973	8.31645	4.07563	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	15.631	SLU 62	Si
V_SLU	4.561	SLU 71	Si
PF_SLV	11.319	SLV 3	Si
V_SLV	3.624	SLV 7	Si
PFFP_SLV	23.383	SLV 16	Si
R_SLV	1.47	SLV 9	Si

Maschio 80

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.708	3.176	-9.708	6.526	L4	L5	3.35	0.16	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Esterna	100	100	100	100	1	CNR DT215	0.8			0.008				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 74	2	5092.57	-14160	-0.0000563	0.0004492	0.0035	3.35	18590.37	104407.01	104407.01	20.5	No	Si
SLU 74	5.44	239.33	22633	0.0010523	0.0004492	0.0035	2.68	0	104313.64	104313.64	435.87	No	Si
SLU 79	2	5106.5	-14141	-0.0000563	0.0004492	0.0035	3.35	18572.19	104412.14	104412.14	20.45	No	Si
SLU 79	5.44	254.33	22615	0.0010502	0.0004492	0.0035	2.68	0	104324.49	104324.49	410.19	No	Si
SLU 83	2	5403.89	-14250	-0.0000579	0.0004492	0.0035	3.35	18675.21	104382.98	104382.98	19.32	No	Si
SLU 83	5.44	269.41	23571	0.0010942	0.0004492	0.0035	2.68	0	103732.59	103732.59	385.04	No	Si
SLU 78	2	5138.91	-14352	-0.000057	0.0004492	0.0035	3.35	18771.88	104355.45	104355.45	20.31	No	Si
SLU 78	5.44	284.92	22751	0.001054	0.0004492	0.0035	2.68	0	104240.24	104240.24	365.85	No	Si
SLU 80	2	5100.24	-14165	-0.0000563	0.0004492	0.0035	3.35	18594.73	104405.78	104405.78	20.47	No	Si
SLU 80	5.44	292.67	22624	0.0010474	0.0004492	0.0035	2.68	0	104319.04	104319.04	356.44	No	Si
SLU 81	2	5351.29	-14082	-0.0000572	0.0004492	0.0035	3.35	18515.32	104428.17	104428.17	19.51	No	Si
SLU 81	5.44	262.15	23462	0.0010896	0.0004492	0.0035	2.68	0	103800.54	103800.54	395.96	No	Si
SLU 84	2	5397.63	-14274	-0.0000579	0.0004492	0.0035	3.35	18697.61	104376.61	104376.61	19.34	No	Si
SLU 84	5.44	307.75	23580	0.0010914	0.0004492	0.0035	2.68	0	103727.14	103727.14	337.05	No	Si
SLU 82	2	5345.03	-14105	-0.0000572	0.0004492	0.0035	3.35	18537.93	104421.8	104421.8	19.54	No	Si
SLU 82	5.44	300.49	23470	0.0010868	0.0004492	0.0035	2.68	0	103795.09	103795.09	345.42	No	Si
SLU 75	2	5086.31	-14184	-0.0000563	0.0004492	0.0035	3.35	18612.88	104400.64	104400.64	20.53	No	Si
SLU 75	5.44	277.66	22642	0.0010495	0.0004492	0.0035	2.68	0	104308.2	104308.2	375.66	No	Si
SLU 77	2	5145.17	-14329	-0.0000569	0.0004492	0.0035	3.35	18749.58	104361.81	104361.81	20.28	No	Si
SLU 77	5.44	246.58	22743	0.0010569	0.0004492	0.0035	2.68	0	104245.69	104245.69	422.76	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 1	2	6188.85	-7809	-0.0000464	0.0006738	0.0035	3.35		121600.42	121600.42	19.65		Si
SLD 1	5.44	282.2	13501	0.0006159	0.0006738	0.0035	2.68		115595.24	115595.24	409.62		Si
SLV 1	2	10482.11	-4477	-0.0001081	0.0006738	0.0035	3.35		122272.46	122272.46	11.66		Si
SLV 1	5.44	329.4	10433	0.0004665	0.0006738	0.0035	2.68		117412.6	117412.6	356.44		Si
SLD 4	2	6168.47	-7118	-0.0000459	0.0006738	0.0035	3.35		121739.79	121739.79	19.74		Si
SLD 4	5.44	-499.34	13054	0.0005772	0.0006738	0.0035	2.68		115934.63	115934.63	232.17		Si
SLD 2	2	6190.55	-7826	-0.0000465	0.0006738	0.0035	3.35		121596.84	121596.84	19.64		Si
SLD 2	5.44	310.27	13522	0.0006145	0.0006738	0.0035	2.68		115581.43	115581.43	372.52		Si
SLV 3	2	10448.06	-2844	-0.0001153	0.0006738	0.0035	3.35		122601.86	122601.86	11.73		Si
SLV 3	5.44	-1507.68	9363	0.0003163	0.0006738	0.0035	2.68		118104.62	118104.62	78.34		Si
SLD 3	2	6166.77	-7100	-0.0000459	0.0006738	0.0035	3.35		121743.37	121743.37	19.74		Si
SLD 3	5.44	-527.41	13033	0.0005738	0.0006738	0.0035	2.68		115946.96	115946.96	219.84		Si
SLV 2	2	10486.08	-4518	-0.000108	0.0006738	0.0035	3.35		122264.12	122264.12	11.66		Si
SLV 2	5.44	394.79	10482	0.0004632	0.0006738	0.0035	2.68		117383.86	117383.86	297.34		Si
SLV 4	2	10452.04	-2886	-0.0001151	0.0006738	0.0035	3.35		122593.52	122593.52	11.73		Si
SLV 4	5.44	-1442.3	9412	0.0003242	0.0006738	0.0035	2.68		118075.9	118075.9	81.87		Si
SLV 6	2	5517.72	-10875	-0.0000491	0.0006738	0.0035	3.35		120981.97	120981.97	21.93		Si
SLV 6	5.44	3021.57	15671	0.0004861	0.0006738	0.0035	2.68		114166.32	114166.32	37.78		Si
SLV 5	2	5515.18	-10848	-0.000049	0.0006738	0.0035	3.35		120987.3	120987.3	21.94		Si
SLV 5	5.44	2979.81	15640	0.0004882	0.0006738	0.0035	2.68		114186.86	114186.86	38.32		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	2	5145.17	-14329	-8413	-14691	3.35	3.35	-15696	10426	5588	67465	19263	17085	36348	No	2.47	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	5.44	246.58	22743	13353	-14221	2.68	3.35	0	0	0	67465	15410	13668	29078	No	2.04	Si
SLU 80	2	5100.24	-14165	-8317	-14577	3.35	3.35	-15517	10402	5576	67465	19263	17085	36348	No	2.49	Si
SLU 80	5.44	292.67	22624	13284	-14111	2.68	3.35	0	0	0	67465	15410	13668	29078	No	2.06	Si
SLU 83	2	5403.89	-14250	-8367	-14997	3.35	3.35	-15610	10415	5582	67465	19263	17085	36348	No	2.42	Si
SLU 83	5.44	269.41	23571	13840	-14514	2.68	3.35	0	0	0	67465	15410	13668	29078	No	2	Si
SLU 78	2	5138.91	-14352	-8427	-14720	3.35	3.35	-15722	10430	5590	67465	19263	17085	36348	No	2.47	Si
SLU 78	5.44	284.92	22751	13359	-14249	2.68	3.35	0	0	0	67465	15410	13668	29078	No	2.04	Si
SLU 81	2	5351.29	-14082	-8268	-14871	3.35	3.35	-15426	10390	5569	67465	19263	17085	36348	No	2.44	Si
SLU 81	5.44	262.15	23462	13776	-14393	2.68	3.35	0	0	0	67465	15410	13668	29078	No	2.02	Si
SLU 79	2	5106.5	-14141	-8303	-14548	3.35	3.35	-15491	10399	5574	67465	19263	17085	36348	No	2.5	Si
SLU 79	5.44	254.33	22615	13279	-14082	2.68	3.35	0	0	0	67465	15410	13668	29078	No	2.06	Si
SLU 84	2	5397.63	-14274	-8381	-15026	3.35	3.35	-15636	10418	5584	67465	19263	17085	36348	No	2.42	Si
SLU 84	5.44	307.75	23580	13845	-14543	2.68	3.35	0	0	0	67465	15410	13668	29078	No	2	Si
SLU 75	2	5086.31	-14184	-8328	-14594	3.35	3.35	-15538	10405	5577	67465	19263	17085	36348	No	2.49	Si
SLU 75	5.44	277.66	22642	13294	-14129	2.68	3.35	0	0	0	67465	15410	13668	29078	No	2.06	Si
SLU 82	2	5345.03	-14105	-8282	-14900	3.35	3.35	-15452	10394	5571	67465	19263	17085	36348	No	2.44	Si
SLU 82	5.44	300.49	23470	13781	-14422	2.68	3.35	0	0	0	67465	15410	13668	29078	No	2.02	Si
SLU 74	2	5092.57	-14160	-8314	-14565	3.35	3.35	-15512	10402	5575	67465	19263	17085	36348	No	2.5	Si
SLU 74	5.44	239.33	22633	13289	-14100	2.68	3.35	0	0	0	67465	15410	13668	29078	No	2.06	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	2	-3824.64	-17215	-10108	-16482	3.35	3.35	-18858	16250	8710	67465	28894	17085	45979		2.79	Si
SLV 13	5.44	1744.63	21721	12754	-15323	2.68	3.35	0	0	0	67465	23115	13668	36783		2.4	Si
SLV 15	2	-3858.69	-15582	-9149	-14427	3.35	3.35	-17070	15914	8530	67465	28894	17085	45979		3.19	Si
SLV 15	5.44	-92.45	20652	12126	-13915	2.68	3.35	0	0	0	67465	23115	13668	36783		2.64	Si
SLD 14	2	460.63	-13001	-7634	-12756	3.35	3.35	-14242	15348	8227	67465	28894	17085	45979		3.6	Si
SLD 14	5.44	829.75	18100	10628	-12076	2.68	3.35	0	0	0	67465	23115	13668	36783		3.05	Si
SLD 15	2	436.84	-12274	-7207	-11831	3.35	3.35	-13446	15189	8141	67465	28894	17085	45979		3.89	Si
SLD 15	5.44	-7.93	17611	10341	-11441	2.68	3.35	0	0	0	67465	23115	13668	36783		3.21	Si
SLV 10	2	1225.7	-14696	-8629	-15124	3.35	3.35	-16099	15720	8426	67465	28894	17085	45979		3.04	Si
SLV 10	5.44	3446.14	19058	11190	-13576	2.68	3.35	0	0	0	67465	23115	13668	36783		2.71	Si
SLD 13	2	458.92	-12983	-7623	-12729	3.35	3.35	-14222	15344	8225	67465	28894	17085	45979		3.61	Si
SLD 13	5.44	801.68	18079	10615	-12050	2.68	3.35	0	0	0	67465	23115	13668	36783		3.05	Si
SLV 14	2	-3820.67	-17257	-10132	-16544	3.35	3.35	-18904	16250	8710	67465	28894	17085	45979		2.78	Si
SLV 14	5.44	1810.02	21770	12782	-15385	2.68	3.35	0	0	0	67465	23115	13668	36783		2.39	Si
SLD 16	2	438.55	-12292	-7217	-11858	3.35	3.35	-13465	15193	8143	67465	28894	17085	45979		3.88	Si
SLD 16	5.44	20.14	17632	10353	-11468	2.68	3.35	0	0	0	67465	23115	13668	36783		3.21	Si
SLV 16	2	-3854.71	-15624	-9174	-14490	3.35	3.35	-17115	15923	8535	67465	28894	17085	45979		3.17	Si
SLV 16	5.44	-27.06	20701	12155	-13976	2.68	3.35	0	0	0	67465	23115	13668	36783		2.63	Si
SLV 9	2	1223.16	-14670	-8613	-15084	3.35	3.35	-16070	15714	8423	67465	28894	17085	45979		3.05	Si
SLV 9	5.44	3404.38	19026	11171	-13536	2.68	3.35	0	0	0	67465	23115	13668	36783		2.72	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.72 Ta 0.12 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 13	55	0.32	164.55	0	11553.23	5776.61	35.11	Si
SLV 14	63	0.32	164.55	0	11553.57	5776.79	35.11	Si
SLV 9	311	0.32	164.55	0	11565	5782.5	35.14	Si
SLV 10	316	0.32	164.55	0	11565.22	5782.61	35.14	Si
SLV 15	321	0.32	164.55	0	11565.44	5782.72	35.14	Si
SLV 16	328	0.32	164.55	0	11565.78	5782.89	35.14	Si
SLV 5	795	0.32	164.55	0	11587.25	5793.62	35.21	Si
SLV 6	799	0.32	164.55	0	11587.47	5793.74	35.21	Si
SLV 11	1196	0.32	164.55	0	11605.7	5802.85	35.26	Si
SLV 12	1200	0.32	164.55	0	11605.92	5802.96	35.27	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.03 Ta = 0.1235

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	19058	-14696	229	2.316	338.3	1	33.65217	14.43566	Si, Trazione
SLV 9	19026	-14670	229	2.32	338.3	1	33.7203	14.43566	Si, Trazione
SLV 14	21770	-17257	808	1.906	338.3	1	27.69414	10.55303	Si, Trazione
SLV 13	21721	-17215	808	1.911	338.3	1	27.76937	10.55303	Si, Trazione
SLV 16	20701	-15624	811	2.025	338.3	1	29.43485	10.55303	Si, Trazione
SLV 15	20652	-15582	811	2.031	338.3	1	29.51963	10.55303	Si, Trazione
SLV 6	15671	-10875	-264	2.958	338.3	1	42.98241	14.43566	Si, Trazione
SLV 5	15640	-10848	-264	2.965	338.3	1	43.09304	14.43566	Si, Trazione
SLV 12	15494	-9253	238	3.006	338.3	1	43.68041	14.43566	Si, Trazione
SLV 11	15462	-9226	238	3.013	338.3	1	43.79429	14.43566	Si, Trazione

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	19.316	SLU 83	Si
V_SLU	1.999	SLU 84	Si
PF_SLV	11.66	SLV 2	Si
V_SLV	2.391	SLV 14	Si
PFFP_SLV	35.105	SLV 13	Si
R_SLV	2.331	SLV 10	Si

Maschio 84

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.333	-3.314	-11.003	-3.314	L4	L5	1.67	0.28	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 31	2	2283.53	-13381	-0.0000742	0.0003743	0.0035	1.67	8032.65	8903.31	8903.31	3.9	No	Si
SLU 31	4.1	-304.43	-15144	-0.0000553	0.0003743	0.0035	1.67	8622.8	10378.6	10378.6	34.09	No	Si
SLU 83	2	2757.74	-16931	-0.0000948	0.0003743	0.0035	1.67	9109.6	10711.5	10711.5	3.88	No	Si
SLU 83	4.1	-264.18	-18930	-0.0000693	0.0003743	0.0035	1.67	9521.62	11905.41	11905.41	45.07	No	Si
SLU 32	2	2323.92	-13693	-0.0000759	0.0003743	0.0035	1.67	8145.3	9061.53	9061.53	3.9	No	Si
SLU 32	4.1	-298.83	-15535	-0.0000567	0.0003743	0.0035	1.67	8739.09	10525.63	10525.63	35.22	No	Si
SLU 84	2	2754.96	-16958	-0.0000949	0.0003743	0.0035	1.67	9116.22	10722.9	10722.9	3.89	No	Si
SLU 84	4.1	-271.43	-18943	-0.0000695	0.0003743	0.0035	1.67	9523.78	11910.9	11910.9	43.88	No	Si
SLU 81	2	2740.59	-16676	-0.0000935	0.0003743	0.0035	1.67	9047.11	10601.81	10601.81	3.87	No	Si
SLU 81	4.1	-270.46	-18641	-0.0000683	0.0003743	0.0035	1.67	9470.75	11780.63	11780.63	43.56	No	Si
SLU 42	2	2401.23	-14231	-0.000079	0.0003743	0.0035	1.67	8330.96	9336.12	9336.12	3.89	No	Si
SLU 42	4.1	-315.44	-16156	-0.0000593	0.0003743	0.0035	1.67	8912.29	10763.68	10763.68	34.12	No	Si
SLU 41	2	2404.01	-14204	-0.000079	0.0003743	0.0035	1.67	8321.7	9321.98	9321.98	3.88	No	Si
SLU 41	4.1	-308.19	-16143	-0.0000591	0.0003743	0.0035	1.67	8908.9	10758.76	10758.76	34.91	No	Si
SLU 39	2	2386.86	-13949	-0.0000777	0.0003743	0.0035	1.67	8234.87	9191.71	9191.71	3.85	No	Si
SLU 39	4.1	-314.47	-15854	-0.0000581	0.0003743	0.0035	1.67	8829.77	10647.16	10647.16	33.86	No	Si
SLU 40	2	2384.08	-13977	-0.0000778	0.0003743	0.0035	1.67	8244.37	9205.77	9205.77	3.86	No	Si
SLU 40	4.1	-321.72	-15867	-0.0000583	0.0003743	0.0035	1.67	8833.3	10652.02	10652.02	33.11	No	Si
SLU 82	2	2737.82	-16704	-0.0000936	0.0003743	0.0035	1.67	9053.98	10614.05	10614.05	3.88	No	Si
SLU 82	4.1	-277.71	-18654	-0.0000684	0.0003743	0.0035	1.67	9473.04	11786.07	11786.07	42.44	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 1	2	4288.38	-9180	-0.0000932	0.0005615	0.0035	1.67		6942.79	6942.79	1.62		Si
SLD 1	4.1	-1591.63	-13813	-0.0000647	0.0005615	0.0035	1.67		10547.76	10547.76	6.63		Si
SLV 14	2	-4530.14	-15073	-0.0001065	0.0005615	0.0035	1.67		11295.47	11295.47	2.49		Si
SLV 14	4.1	3540.24	-8065	-0.000075	0.0005615	0.0035	1.67		6258.23	6258.23	1.77		Si
SLV 3	2	8191.64	-7674	-0.0215125	0.0005615	0.0035	1.336		6019.55	6019.55	0.73		No
SLV 3	4.1	-3792.89	-16992	-0.000104	0.0005615	0.0035	1.67		12374.17	12374.17	3.26		Si
SLD 2	2	4331.61	-9132	-0.0000947	0.0005615	0.0035	1.67		6913.44	6913.44	1.6		Si
SLD 2	4.1	-1622.35	-13826	-0.0000651	0.0005615	0.0035	1.67		10554.9	10554.9	6.51		Si
SLV 4	2	8292.35	-7563	-0.0231236	0.0005615	0.0035	1.336		5949.93	5949.93	0.72		No
SLV 4	4.1	-3864.46	-17020	-0.000105	0.0005615	0.0035	1.67		12389.68	12389.68	3.21		Si
SLD 3	2	4551.58	-9795	-0.0000993	0.0005615	0.0035	1.67		7324.59	7324.59	1.61		Si
SLD 3	4.1	-1694.32	-14443	-0.0000682	0.0005615	0.0035	1.67		10920.05	10920.05	6.45		Si
SLV 13	2	-4630.85	-15184	-0.0001083	0.0005615	0.0035	1.67		11358.72	11358.72	2.45		Si
SLV 13	4.1	3611.81	-8037	-0.0000769	0.0005615	0.0035	1.67		6240.99	6240.99	1.73		Si
SLV 1	2	7585.7	-6250	-0.0255702	0.0005615	0.0035	1.336		5031.82	5031.82	0.66		No
SLV 1	4.1	-3556.88	-15552	-0.0000955	0.0005615	0.0035	1.67		11567.09	11567.09	3.25		Si
SLD 4	2	4594.8	-9747	-0.0001007	0.0005615	0.0035	1.67		7295.02	7295.02	1.59		Si
SLD 4	4.1	-1725.04	-14455	-0.0000687	0.0005615	0.0035	1.67		10927.26	10927.26	6.33		Si
SLV 2	2	7686.41	-6139	-0.027212	0.0005615	0.0035	1.336		4951.79	4951.79	0.64		No
SLV 2	4.1	-3628.45	-15580	-0.0000965	0.0005615	0.0035	1.67		11583	11583	3.19		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	2	2673.41	-16598	-13821	2786	1.67	1.67	-29558	10833	5066	38062	14002	4259	18261	No	6.55	Si
SLU 80	4.1	-243.03	-18500	-15406	3224	1.67	1.67	-32946	10833	5066	38062	14002	4259	18261	No	5.66	Si
SLU 77	2	2694.8	-16675	-13885	2809	1.67	1.67	-29695	10833	5066	38062	14002	4259	18261	No	6.5	Si
SLU 77	4.1	-248.54	-18612	-15498	3248	1.67	1.67	-33144	10833	5066	38062	14002	4259	18261	No	5.62	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	2	2692.02	-16702	-13908	2807	1.67	1.67	-29744	10833	5066	38062	14002	4259	18261	No	6.51	Si
SLU 78	4.1	-255.79	-18624	-15509	3248	1.67	1.67	-33166	10833	5066	38062	14002	4259	18261	No	5.62	Si
SLU 83	2	2757.74	-16931	-14098	2864	1.67	1.67	-30150	10833	5066	38062	14002	4259	18261	No	6.38	Si
SLU 83	4.1	-264.18	-18930	-15764	3303	1.67	1.67	-33711	10833	5066	38062	14002	4259	18261	No	5.53	Si
SLU 82	2	2737.82	-16704	-13909	2847	1.67	1.67	-29746	10833	5066	38062	14002	4259	18261	No	6.41	Si
SLU 82	4.1	-277.71	-18654	-15534	3282	1.67	1.67	-33219	10833	5066	38062	14002	4259	18261	No	5.56	Si
SLU 79	2	2676.19	-16571	-13799	2789	1.67	1.67	-29509	10833	5066	38062	14002	4259	18261	No	6.55	Si
SLU 79	4.1	-235.77	-18488	-15395	3224	1.67	1.67	-32923	10833	5066	38062	14002	4259	18261	No	5.66	Si
SLU 74	2	2677.65	-16420	-13673	2795	1.67	1.67	-29241	10833	5066	38062	14002	4259	18261	No	6.53	Si
SLU 74	4.1	-254.81	-18323	-15258	3226	1.67	1.67	-32629	10833	5066	38062	14002	4259	18261	No	5.66	Si
SLU 75	2	2674.87	-16448	-13696	2792	1.67	1.67	-29290	10833	5066	38062	14002	4259	18261	No	6.54	Si
SLU 75	4.1	-262.07	-18335	-15268	3227	1.67	1.67	-32652	10833	5066	38062	14002	4259	18261	No	5.66	Si
SLU 81	2	2740.59	-16676	-13886	2850	1.67	1.67	-29697	10833	5066	38062	14002	4259	18261	No	6.41	Si
SLU 81	4.1	-270.46	-18641	-15523	3282	1.67	1.67	-33197	10833	5066	38062	14002	4259	18261	No	5.56	Si
SLU 84	2	2754.96	-16958	-14121	2861	1.67	1.67	-30199	10833	5066	38062	14002	4259	18261	No	6.38	Si
SLU 84	4.1	-271.43	-18943	-15774	3304	1.67	1.67	-33734	10833	5066	38062	14002	4259	18261	No	5.53	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	2	4640.97	-12442	-10361	6072	1.67	1.386	-22157	14848	5762	38062	21003	4259	25262		4.16	Si
SLV 7	4.1	-1572.13	-16047	-13362	5537	1.67	1.67	-28576	16132	7543	38062	21003	4259	25262		4.56	Si
SLD 4	2	4594.8	-9747	-8117	5649	1.67	1.0908	-17358	13888	4242	38062	21003	4259	25262		4.47	Si
SLD 4	4.1	-1725.04	-14455	-12037	5605	1.67	1.67	-25742	15565	7278	38062	21003	4259	25262		4.51	Si
SLV 15	2	-4024.91	-16608	-13830	-5772	1.67	1.67	-29576	16250	7599	38062	21003	4259	25262		4.38	Si
SLV 15	4.1	3375.8	-9477	-7892	-5047	1.67	1.4364	-16876	13792	5547	38062	21003	4259	25262		5.01	Si
SLV 3	2	8191.64	-7674	-6390	10512	1.336	0	0	0	0	38062	16803	3407	20209		1.92	Si
SLV 3	4.1	-3792.89	-16992	-14149	10003	1.67	1.67	-30259	16250	7599	38062	21003	4259	25262		2.53	Si
SLV 8	2	4705.28	-12371	-10302	6160	1.67	1.364	-22031	14823	5661	38062	21003	4259	25262		4.1	Si
SLV 8	4.1	-1617.84	-16065	-13377	5625	1.67	1.67	-28608	16138	7546	38062	21003	4259	25262		4.49	Si
SLV 13	2	-4630.85	-15184	-12644	-6829	1.67	1.5901	-27040	15825	7046	38062	21003	4259	25262		3.7	Si
SLV 13	4.1	3611.81	-8037	-6692	-5713	1.67	1.1568	-14312	13279	4301	38062	21003	4259	25262		4.42	Si
SLV 14	2	-4530.14	-15073	-12552	-6691	1.67	1.6034	-26843	15785	7087	38062	21003	4259	25262		3.78	Si
SLV 14	4.1	3540.24	-8065	-6716	-5576	1.67	1.1881	-14362	13289	4421	38062	21003	4259	25262		4.53	Si
SLV 1	2	7585.7	-6250	-5204	9454	1.336	0	0	0	0	38062	16803	3407	20209		2.14	Si
SLV 1	4.1	-3556.88	-15552	-12950	9337	1.67	1.67	-27694	15956	7461	38062	21003	4259	25262		2.71	Si
SLV 4	2	8292.35	-7563	-6298	10650	1.336	0	0	0	0	38062	16803	3407	20209		1.9	Si
SLV 4	4.1	-3864.46	-17020	-14173	10140	1.67	1.67	-30309	16250	7599	38062	21003	4259	25262		2.49	Si
SLV 2	2	7686.41	-6139	-5112	9592	1.336	0	0	0	0	38062	16803	3407	20209		2.11	Si
SLV 2	4.1	-3628.45	-15580	-12974	9473	1.67	1.67	-27745	15966	7466	38062	21003	4259	25262		2.67	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.32	19436	-9089	135.67	1110.46	8.19	Si
SLV 14	179667	0.32	19450	-9095	135.67	1111.14	8.19	Si
SLV 9	179667	0.32	19746	-9233	135.67	1125.53	8.3	Si
SLV 10	179667	0.32	19755	-9237	135.67	1125.96	8.3	Si
SLV 15	179667	0.32	22574	-10556	135.67	1259.35	9.28	Si
SLV 16	179667	0.32	22588	-10562	135.67	1259.98	9.29	Si
SLV 5	179667	0.32	23147	-10823	135.67	1285.62	9.48	Si
SLV 6	179667	0.32	23155	-10828	135.67	1286.02	9.48	Si
SLV 11	179667	0.32	30204	-14123	135.67	1586.22	11.69	Si
SLV 12	179667	0.32	30212	-14127	135.67	1586.56	11.69	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.05 Ta = 0.0706

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-13055	-15122	390	0.665	1556.1	0.957	10.0939	10.95836	No
SLV 12	-13021	-15052	390	0.666	1552.6	0.957	10.1173	10.95836	No
SLV 7	-11944	-12442	474	0.71	1443.1	0.954	10.81824	10.95836	No
SLV 8	-11910	-12371	475	0.712	1439.6	0.954	10.84559	10.95836	No
SLV 9	-9490	-10376	-485	0.859	1194	0.946	13.20577	10.95836	Si
SLV 10	-9456	-10305	-485	0.862	1190.5	0.946	13.24755	10.95836	Si
SLV 5	-8379	-7695	-401	0.96	1081.4	0.941	14.83604	10.95836	Si
SLV 6	-8345	-7625	-401	0.964	1077.9	0.941	14.8887	10.95836	Si
SLV 15	-13114	-16608	-15	0.688	1562	0.957	10.44501	5.89448	Si
SLV 16	-13060	-16497	-15	0.69	1556.5	0.957	10.48316	5.89448	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.851	SLU 39	Si
V_SLU	5.528	SLU 84	Si
PF_SLV	0.644	SLV 2	No
V_SLV	1.898	SLV 4	Si
PFFP_SLV	8.185	SLV 13	Si
R_SLV	0.921	SLV 11	No

Maschio 86

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.268	-3.314	-6.268	-0.194	L4	L5	3.12	0.16	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 53	2	8430.86	-37799	-0.0001542	0.0004492	0.0035	3.12	22424.98	44382.69	44382.69	5.26	No	Si
SLU 53	4.1	3019.52	-30632	-0.0000991	0.0004492	0.0035	3.12	23787.98	38168.07	38168.07	12.64	No	Si
SLU 58	2	8507.99	-37953	-0.0001552	0.0004492	0.0035	3.12	22366.93	44516.05	44516.05	5.23	No	Si
SLU 58	4.1	2989.27	-30743	-0.0000993	0.0004492	0.0035	3.12	23786.91	38264.17	38264.17	12.8	No	Si
SLU 62	2	8685.14	-39144	-0.0001604	0.0004492	0.0035	3.12	21876.38	45548.89	45548.89	5.24	No	Si
SLU 62	4.1	3185.24	-31785	-0.0001035	0.0004492	0.0035	3.12	23746.09	39167.65	39167.65	12.3	No	Si
SLU 43	2	7644.76	-33206	-0.000134	0.0004492	0.0035	3.12	23600.92	40399.76	40399.76	5.28	No	Si
SLU 43	4.1	2506.27	-26550	-0.000084	0.0004492	0.0035	3.12	23389.86	34361.08	34361.08	13.71	No	Si
SLU 50	2	7852.4	-34114	-0.0001383	0.0004492	0.0035	3.12	23454.01	41187.3	41187.3	5.25	No	Si
SLU 50	4.1	2518.15	-27363	-0.0000865	0.0004492	0.0035	3.12	23537.09	35270.79	35270.79	14.01	No	Si
SLU 56	2	8534.68	-38254	-0.0001564	0.0004492	0.0035	3.12	22250.09	44776.46	44776.46	5.25	No	Si
SLU 56	4.1	3025.46	-31038	-0.0001004	0.0004492	0.0035	3.12	23780.97	38520.44	38520.44	12.73	No	Si
SLU 48	2	7879.09	-34414	-0.0001394	0.0004492	0.0035	3.12	23396.15	41447.71	41447.71	5.26	No	Si
SLU 48	4.1	2554.34	-27659	-0.0000876	0.0004492	0.0035	3.12	23582.25	35590.12	35590.12	13.93	No	Si
SLU 83	2	9198.31	-43051	-0.0001776	0.0004492	0.0035	3.12	19758.63	48485.47	48485.47	5.27	No	Si
SLU 83	4.1	3660.63	-35263	-0.0001171	0.0004492	0.0035	3.12	23207.64	42183.85	42183.85	11.52	No	Si
SLU 45	2	7775.27	-33960	-0.0001373	0.0004492	0.0035	3.12	23481.86	41053.94	41053.94	5.28	No	Si
SLU 45	4.1	2548.4	-27252	-0.0000863	0.0004492	0.0035	3.12	23519	35146.75	35146.75	13.79	No	Si
SLU 60	2	8581.32	-38690	-0.0001582	0.0004492	0.0035	3.12	22071.96	45155.12	45155.12	5.26	No	Si
SLU 60	4.1	3179.3	-31378	-0.0001023	0.0004492	0.0035	3.12	23768.62	38815.29	38815.29	12.21	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	2	8262.85	-30633	-0.000124	0.0006738	0.0035	3.12		40011.95	40011.95	4.84		Si
SLV 13	4.1	2584.84	-25536	-0.0000794	0.0006738	0.0035	3.12		34247.16	34247.16	13.25		Si
SLV 16	2	9319.16	-31413	-0.0001321	0.0006738	0.0035	3.12		40894.07	40894.07	4.39		Si
SLV 16	4.1	822.3	-25404	-0.0000698	0.0006738	0.0035	3.12		34096.9	34096.9	41.47		Si
SLV 11	2	9096.85	-31188	-0.0001302	0.0006738	0.0035	3.12		40638.83	40638.83	4.47		Si
SLV 11	4.1	-1271.17	-23990	-0.0000683	0.0006738	0.0035	3.12		37477.73	37477.73	29.48		Si
SLV 15	2	9447.12	-31630	-0.0001335	0.0006738	0.0035	3.12		41139.27	41139.27	4.35		Si
SLV 15	4.1	585	-25535	-0.000069	0.0006738	0.0035	3.12		34245.08	34245.08	58.54		Si
SLV 8	2	7550.44	-29707	-0.0001175	0.0006738	0.0035	3.12		38963.94	38963.94	5.16		Si
SLV 8	4.1	-747.53	-22604	-0.0000619	0.0006738	0.0035	3.12		35915.76	35915.76	48.05		Si
SLD 16	2	7622.95	-29919	-0.0001185	0.0006738	0.0035	3.12		39203.67	39203.67	5.14		Si
SLD 16	4.1	1671.23	-24200	-0.000071	0.0006738	0.0035	3.12		32735.3	32735.3	19.59		Si
SLV 12	2	9015.13	-31049	-0.0001293	0.0006738	0.0035	3.12		40482.24	40482.24	4.49		Si
SLV 12	4.1	-1119.62	-23906	-0.0000673	0.0006738	0.0035	3.12		37384.4	37384.4	33.39		Si
SLV 14	2	8134.89	-30417	-0.0001227	0.0006738	0.0035	3.12		39766.75	39766.75	4.89		Si
SLV 14	4.1	2822.14	-25405	-0.0000803	0.0006738	0.0035	3.12		34098.98	34098.98	12.08		Si
SLV 7	2	7632.16	-29845	-0.0001183	0.0006738	0.0035	3.12		39120.53	39120.53	5.13		Si
SLV 7	4.1	-899.08	-22688	-0.0000629	0.0006738	0.0035	3.12		36014.62	36014.62	40.06		Si
SLD 15	2	7677.88	-30012	-0.0001191	0.0006738	0.0035	3.12		39308.92	39308.92	5.12		Si
SLD 15	4.1	1569.37	-24256	-0.0000706	0.0006738	0.0035	3.12		32798.91	32798.91	20.9		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	2	8919.24	-42310	-24842	5661	3.12	3.12	-49765	10833	5408	108749	17940	15912	33852	No	5.98	Si
SLU 78	4.1	3515.91	-34633	-20335	6652	3.12	3.12	-40735	10833	5408	108749	17940	15912	33852	No	5.09	Si
SLU 82	2	8965.88	-42746	-25099	5679	3.12	3.12	-50278	10833	5408	108749	17940	15912	33852	No	5.96	Si
SLU 82	4.1	3669.75	-34973	-20535	6674	3.12	3.12	-41135	10833	5408	108749	17940	15912	33852	No	5.07	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	2	9094.5	-42596	-25011	5764	3.12	3.12	-50102	10833	5408	108749	17940	15912	33852	No	5.87	Si
SLU 81	4.1	3654.69	-34857	-20467	6675	3.12	3.12	-40999	10833	5408	108749	17940	15912	33852	No	5.07	Si
SLU 79	2	9021.16	-41859	-24578	5754	3.12	3.12	-49235	10833	5408	108749	17940	15912	33852	No	5.88	Si
SLU 79	4.1	3464.67	-34221	-20093	6651	3.12	3.12	-40251	10833	5408	108749	17940	15912	33852	No	5.09	Si
SLU 77	2	9047.85	-42160	-24754	5746	3.12	3.12	-49588	10833	5408	108749	17940	15912	33852	No	5.89	Si
SLU 77	4.1	3500.85	-34517	-20267	6653	3.12	3.12	-40599	10833	5408	108749	17940	15912	33852	No	5.09	Si
SLU 75	2	8815.42	-41856	-24576	5587	3.12	3.12	-49230	10833	5408	108749	17940	15912	33852	No	6.06	Si
SLU 75	4.1	3509.97	-34227	-20096	6567	3.12	3.12	-40257	10833	5408	108749	17940	15912	33852	No	5.15	Si
SLU 83	2	9198.31	-43051	-25277	5838	3.12	3.12	-50636	10833	5408	108749	17940	15912	33852	No	5.8	Si
SLU 83	4.1	3660.63	-35263	-20705	6760	3.12	3.12	-41477	10833	5408	108749	17940	15912	33852	No	5.01	Si
SLU 80	2	8892.54	-42009	-24666	5668	3.12	3.12	-49411	10833	5408	108749	17940	15912	33852	No	5.97	Si
SLU 80	4.1	3479.72	-34338	-20161	6651	3.12	3.12	-40388	10833	5408	108749	17940	15912	33852	No	5.09	Si
SLU 74	2	8944.04	-41705	-24488	5673	3.12	3.12	-49054	10833	5408	108749	17940	15912	33852	No	5.97	Si
SLU 74	4.1	3494.91	-34111	-20028	6567	3.12	3.12	-40121	10833	5408	108749	17940	15912	33852	No	5.15	Si
SLU 84	2	9069.69	-43201	-25366	5752	3.12	3.12	-50812	10833	5408	108749	17940	15912	33852	No	5.88	Si
SLU 84	4.1	3675.69	-35380	-20773	6760	3.12	3.12	-41613	10833	5408	108749	17940	15912	33852	No	5.01	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	2	9447.12	-31630	-18572	7035	3.12	3.12	-37203	16250	8112	108749	26910	15912	42822		6.09	Si
SLV 15	4.1	585	-25535	-14993	7333	3.12	3.12	-30034	16250	8112	108749	26910	15912	42822		5.84	Si
SLV 12	2	9015.13	-31049	-18231	8617	3.12	3.12	-36520	16250	8112	108749	26910	15912	42822		4.97	Si
SLV 12	4.1	-1119.62	-23906	-14037	8376	3.12	3.12	-28118	16250	8112	108749	26910	15912	42822		5.11	Si
SLD 12	2	7501.6	-29786	-17489	6078	3.12	3.12	-35034	16250	8112	108749	26910	15912	42822		7.05	Si
SLD 12	4.1	812.45	-23563	-13835	6312	3.12	3.12	-27714	16250	8112	108749	26910	15912	42822		6.78	Si
SLV 11	2	9096.85	-31188	-18312	8767	3.12	3.12	-36683	16250	8112	108749	26910	15912	42822		4.88	Si
SLV 11	4.1	-1271.17	-23990	-14086	8529	3.12	3.12	-28217	16250	8112	108749	26910	15912	42822		5.02	Si
SLV 16	2	9319.16	-31413	-18445	6801	3.12	3.12	-36948	16250	8112	108749	26910	15912	42822		6.3	Si
SLV 16	4.1	822.3	-25404	-14916	7094	3.12	3.12	-29879	16250	8112	108749	26910	15912	42822		6.04	Si
SLD 11	2	7537.24	-29846	-17524	6143	3.12	3.12	-35105	16250	8112	108749	26910	15912	42822		6.97	Si
SLD 11	4.1	746.34	-23599	-13856	6379	3.12	3.12	-27757	16250	8112	108749	26910	15912	42822		6.71	Si
SLD 7	2	6911.07	-29273	-17188	5736	3.12	3.12	-34430	16250	8112	108749	26910	15912	42822		7.47	Si
SLD 7	4.1	904.66	-23043	-13530	5989	3.12	3.12	-27103	16250	8112	108749	26910	15912	42822		7.15	Si
SLD 8	2	6875.43	-29212	-17152	5671	3.12	3.12	-34359	16250	8112	108749	26910	15912	42822		7.55	Si
SLD 8	4.1	970.77	-23007	-13509	5923	3.12	3.12	-27060	16250	8112	108749	26910	15912	42822		7.23	Si
SLV 8	2	7550.44	-29707	-17443	7664	3.12	3.12	-34941	16250	8112	108749	26910	15912	42822		5.59	Si
SLV 8	4.1	-747.53	-22604	-13272	7463	3.12	3.12	-26587	16250	8112	108749	26910	15912	42822		5.74	Si
SLV 7	2	7632.16	-29845	-17524	7814	3.12	3.12	-35104	16250	8112	108749	26910	15912	42822		5.48	Si
SLV 7	4.1	-899.08	-22688	-13321	7616	3.12	3.12	-26686	16250	8112	108749	26910	15912	42822		5.62	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.72 Ta 0.12 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	-22383	0.32	153.25	1352.57	2310.44	1831.51	11.95	Si
SLV 4	-22507	0.32	153.25	1357.64	2321.53	1839.59	12	Si
SLV 1	-22518	0.32	153.25	1358.09	2322.52	1840.31	12.01	Si
SLV 3	-22643	0.32	153.25	1363.13	2333.62	1848.37	12.06	Si
SLV 6	-23618	0.32	153.25	1401.72	2420.65	1911.19	12.47	Si
SLV 5	-23705	0.32	153.25	1405.06	2428.38	1916.72	12.51	Si
SLV 8	-24033	0.32	153.25	1417.62	2457.65	1937.63	12.64	Si
SLV 7	-24120	0.32	153.25	1420.9	2465.38	1943.14	12.68	Si
SLV 10	-24781	0.32	153.25	1445.52	2523.65	1984.59	12.95	Si
SLV 9	-24867	0.32	153.25	1448.69	2531.06	1989.88	12.98	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.03 Ta = 0.1235

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-18836	-31188	73	0.881	2159.5	0.966	13.25662	14.43566	No
SLV 12	-18713	-31049	73	0.886	2147	0.966	13.33722	14.43566	No
SLV 7	-17463	-29845	-224	0.935	2019.8	0.964	14.10092	14.43566	No
SLV 8	-17341	-29707	-224	0.941	2007.3	0.964	14.19316	14.43566	No
SLV 9	-17111	-27865	228	0.952	1984	0.963	14.36625	14.43566	No
SLV 10	-16989	-27727	228	0.958	1971.5	0.963	14.46211	14.43566	Si
SLV 5	-15738	-26523	-70	1.035	1844.3	0.961	15.65834	14.43566	Si
SLV 6	-15616	-26384	-70	1.042	1831.9	0.961	15.77161	14.43566	Si
SLV 15	-19868	-31630	474	0.821	2264.6	0.968	12.33417	10.55303	Si
SLV 16	-19676	-31413	474	0.828	2245	0.967	12.44592	10.55303	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.232	SLU 58	Si
V_SLU	5.008	SLU 83	Si
PF_SLV	4.355	SLV 15	Si
V_SLV	4.884	SLV 11	Si
PFFP_SLV	11.951	SLV 2	Si
R_SLV	0.918	SLV 11	No

Maschio 88

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.463	-3.314	-8.433	-3.314	L4	L5	0.97	0.28	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	2.9	-1327.25	-16195	-0.0001643	0.0003743	0.0035	0.97	3254.5	4748.69	4748.69	3.58	No	Si
SLU 79	4.8	-716.66	-11758	-0.0001002	0.0003743	0.0035	0.97	3277.89	4144.81	4144.81	5.78	No	Si
SLU 83	2.9	-1385.2	-16726	-0.0001722	0.0003743	0.0035	0.97	3205.41	4795.96	4795.96	3.46	No	Si
SLU 83	4.8	-724.53	-12152	-0.0001034	0.0003743	0.0035	0.97	3303.76	4207.37	4207.37	5.81	No	Si
SLU 82	2.9	-1365.38	-16525	-0.0001693	0.0003743	0.0035	0.97	3225.14	4777.8	4777.8	3.5	No	Si
SLU 82	4.8	-720.81	-12007	-0.0001022	0.0003743	0.0035	0.97	3294.91	4184.23	4184.23	5.8	No	Si
SLU 62	2.9	-1302.83	-15141	-0.0001535	0.0003743	0.0035	0.97	3322.63	4659.24	4659.24	3.58	No	Si
SLU 62	4.8	-621.73	-10771	-0.0000891	0.0003743	0.0035	0.97	3189.26	3961.31	3961.31	6.37	No	Si
SLU 84	2.9	-1385.49	-16745	-0.0001724	0.0003743	0.0035	0.97	3203.48	4797.69	4797.69	3.46	No	Si
SLU 84	4.8	-730.83	-12173	-0.0001038	0.0003743	0.0035	0.97	3305	4210.81	4210.81	5.76	No	Si
SLU 80	2.9	-1327.54	-16214	-0.0001645	0.0003743	0.0035	0.97	3252.92	4750.33	4750.33	3.58	No	Si
SLU 80	4.8	-722.96	-11779	-0.0001006	0.0003743	0.0035	0.97	3279.43	4148.19	4148.19	5.74	No	Si
SLU 78	2.9	-1328.8	-16328	-0.0001656	0.0003743	0.0035	0.97	3243.19	4760.25	4760.25	3.58	No	Si
SLU 78	4.8	-736.16	-11887	-0.0001019	0.0003743	0.0035	0.97	3286.97	4165.15	4165.15	5.66	No	Si
SLU 63	2.9	-1303.13	-15159	-0.0001537	0.0003743	0.0035	0.97	3321.75	4660.8	4660.8	3.58	No	Si
SLU 63	4.8	-628.03	-10793	-0.0000895	0.0003743	0.0035	0.97	3191.54	3966.67	3966.67	6.32	No	Si
SLU 81	2.9	-1365.09	-16507	-0.0001691	0.0003743	0.0035	0.97	3226.92	4776.11	4776.11	3.5	No	Si
SLU 81	4.8	-714.51	-11986	-0.0001018	0.0003743	0.0035	0.97	3293.54	4180.83	4180.83	5.85	No	Si
SLU 77	2.9	-1328.5	-16309	-0.0001654	0.0003743	0.0035	0.97	3244.84	4758.59	4758.59	3.58	No	Si
SLU 77	4.8	-729.86	-11866	-0.0001015	0.0003743	0.0035	0.97	3285.51	4161.78	4161.78	5.7	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	2.9	-3434.38	-14611	-0.0002483	0.0005615	0.0035	0.97		5417.5	5417.5	1.58		Si
SLV 13	4.8	939.19	-5632	-0.0000646	0.0005615	0.0035	0.97		2444.44	2444.44	2.6		Si
SLV 15	2.9	-3686.36	-16361	-0.0002737	0.0005615	0.0035	0.97		5829.64	5829.64	1.58		Si
SLV 15	4.8	797.11	-6846	-0.0000669	0.0005615	0.0035	0.97		2897.81	2897.81	3.64		Si
SLV 4	2.9	1666.67	-7237	-0.0001073	0.0005615	0.0035	0.97		3045.87	3045.87	1.83		Si
SLV 4	4.8	-1925.39	-10076	-0.0001321	0.0005615	0.0035	0.97		4239.66	4239.66	2.2		Si
SLV 3	2.9	1586.16	-7401	-0.0001029	0.0005615	0.0035	0.97		3108.61	3108.61	1.96		Si
SLV 3	4.8	-1887.45	-10112	-0.0001304	0.0005615	0.0035	0.97		4250.62	4250.62	2.25		Si
SLD 15	2.9	-2081.95	-13250	-0.0001592	0.0005615	0.0035	0.97		5102.86	5102.86	2.45		Si
SLD 15	4.8	58.16	-7427	-0.0000439	0.0005615	0.0035	0.97		3118.36	3118.36	53.62		Si
SLD 16	2.9	-2047.4	-13180	-0.0001572	0.0005615	0.0035	0.97		5086.91	5086.91	2.48		Si
SLD 16	4.8	41.87	-7411	-0.0000433	0.0005615	0.0035	0.97		3112.5	3112.5	74.34		Si
SLV 16	2.9	-3605.85	-16197	-0.0002663	0.0005615	0.0035	0.97		5798.88	5798.88	1.61		Si
SLV 16	4.8	759.17	-6811	-0.0000653	0.0005615	0.0035	0.97		2884.3	2884.3	3.8		Si
SLV 2	2.9	1918.65	-5486	-0.0001598	0.0005615	0.0035	0.97		2390.78	2390.78	1.25		Si
SLV 2	4.8	-1783.31	-8862	-0.0001191	0.0005615	0.0035	0.97		3844.32	3844.32	2.16		Si
SLV 1	2.9	1838.14	-5651	-0.0001368	0.0005615	0.0035	0.97		2451.3	2451.3	1.33		Si
SLV 1	4.8	-1745.37	-8898	-0.0001173	0.0005615	0.0035	0.97		3856.32	3856.32	2.21		Si
SLV 14	2.9	-3353.87	-14446	-0.0002412	0.0005615	0.0035	0.97		5378.77	5378.77	1.6		Si
SLV 14	4.8	901.25	-5596	-0.000063	0.0005615	0.0035	0.97		2431.28	2431.28	2.7		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	2.9	-1385.2	-16726	-13928	-1782	0.97	0.97	-51281	10833	2942	38062	8133	2474	10607	No	5.95	Si
SLU 83	4.8	-724.53	-12152	-10119	327	0.97	0.97	-37256	10833	2942	38062	8133	2474	10607	No	32.47	Si
SLU 81	2.9	-1365.09	-16507	-13745	-1752	0.97	0.97	-50607	10833	2942	38062	8133	2474	10607	No	6.05	Si
SLU 81	4.8	-714.51	-11986	-9981	319	0.97	0.97	-36748	10833	2942	38062	8133	2474	10607	No	33.21	Si
SLU 84	2.9	-1385.49	-16745	-13944	-1780	0.97	0.97	-51339	10833	2942	38062	8133	2474	10607	No	5.96	Si
SLU 84	4.8	-730.83	-12173	-10137	337	0.97	0.97	-37322	10833	2942	38062	8133	2474	10607	No	31.43	Si
SLU 78	2.9	-1328.8	-16328	-13596	-1701	0.97	0.97	-50059	10833	2942	38062	8133	2474	10607	No	6.24	Si
SLU 78	4.8	-736.16	-11887	-9898	387	0.97	0.97	-36444	10833	2942	38062	8133	2474	10607	No	27.41	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	2.9	-1327.25	-16195	-13486	-1706	0.97	0.97	-49653	10833	2942	38062	8133	2474	10607	No	6.22	Si
SLU 79	4.8	-716.66	-11758	-9791	361	0.97	0.97	-36048	10833	2942	38062	8133	2474	10607	No	29.42	Si
SLU 63	2.9	-1303.13	-15159	-12623	-1717	0.97	0.97	-46477	10833	2942	38062	8133	2474	10607	No	6.18	Si
SLU 63	4.8	-628.03	-10793	-8987	277	0.97	0.97	-33090	10833	2942	38062	8133	2474	10607	No	38.24	Si
SLU 77	2.9	-1328.5	-16309	-13580	-1703	0.97	0.97	-50001	10833	2942	38062	8133	2474	10607	No	6.23	Si
SLU 77	4.8	-729.86	-11866	-9881	376	0.97	0.97	-36379	10833	2942	38062	8133	2474	10607	No	28.2	Si
SLU 82	2.9	-1365.38	-16525	-13761	-1750	0.97	0.97	-50665	10833	2942	38062	8133	2474	10607	No	6.06	Si
SLU 82	4.8	-720.81	-12007	-9999	330	0.97	0.97	-36813	10833	2942	38062	8133	2474	10607	No	32.12	Si
SLU 62	2.9	-1302.83	-15141	-12608	-1719	0.97	0.97	-46419	10833	2942	38062	8133	2474	10607	No	6.17	Si
SLU 62	4.8	-621.73	-10771	-8970	267	0.97	0.97	-33024	10833	2942	38062	8133	2474	10607	No	39.8	Si
SLU 80	2.9	-1327.54	-16214	-13502	-1704	0.97	0.97	-49711	10833	2942	38062	8133	2474	10607	No	6.23	Si
SLU 80	4.8	-722.96	-11779	-9809	371	0.97	0.97	-36114	10833	2942	38062	8133	2474	10607	No	28.56	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	2.9	-3686.36	-16361	-13624	-6281	0.97	0.7791	-65154	16250	3545	38062	12200	2474	14673		2.34	Si
SLV 15	4.8	797.11	-6846	-5701	-2033	0.97	0.97	-20991	14615	3969	38062	12200	2474	14673		7.22	Si
SLV 13	2.9	-3434.38	-14611	-12167	-5672	0.97	0.7499	-60182	16250	3412	38062	12200	2474	14673		2.59	Si
SLV 13	4.8	939.19	-5632	-4690	-2253	0.97	0.9548	-17268	13870	3708	38062	12200	2474	14673		6.51	Si
SLV 16	2.9	-3605.85	-16197	-13487	-6163	0.97	0.7871	-63702	16250	3582	38062	12200	2474	14673		2.38	Si
SLV 16	4.8	759.17	-6811	-5671	-1967	0.97	0.97	-20881	14593	3964	38062	12200	2474	14673		7.46	Si
SLV 11	2.9	-2120.41	-15238	-12689	-3622	0.97	0.97	-46717	16250	4414	38062	12200	2474	14673		4.05	Si
SLV 11	4.8	-315.1	-9400	-7827	-90	0.97	0.97	-28818	16180	4395	38062	12200	2474	14673		162.43	Si
SLV 1	2.9	1838.14	-5651	-4705	3896	0.97	0.4792	-17325	13882	1862	38062	12200	2474	14673		3.77	Si
SLV 1	4.8	-1745.37	-8898	-7409	2533	0.97	0.8666	-31048	16250	3943	38062	12200	2474	14673		5.79	Si
SLV 12	2.9	-2069	-15133	-12601	-3547	0.97	0.97	-46395	16250	4414	38062	12200	2474	14673		4.14	Si
SLV 12	4.8	-339.33	-9377	-7808	-48	0.97	0.97	-28748	16166	4391	38062	12200	2474	14673		307.37	Si
SLV 14	2.9	-3353.87	-14446	-12030	-5554	0.97	0.7585	-58751	16250	3451	38062	12200	2474	14673		2.64	Si
SLV 14	4.8	901.25	-5596	-4660	-2186	0.97	0.97	-17158	13848	3761	38062	12200	2474	14673		6.71	Si
SLV 2	2.9	1918.65	-5486	-4569	4014	0.97	0.4059	-16820	13781	1566	38062	12200	2474	14673		3.66	Si
SLV 2	4.8	-1783.31	-8862	-7379	2599	0.97	0.8513	-31484	16250	3874	38062	12200	2474	14673		5.64	Si
SLD 15	2.9	-2081.95	-13250	-11034	-3334	0.97	0.97	-40624	16250	4414	38062	12200	2474	14673		4.4	Si
SLD 15	4.8	58.16	-7427	-6184	-707	0.97	0.97	-22769	14971	4066	38062	12200	2474	14673		20.76	Si
SLV 4	2.9	1666.67	-7237	-6026	3404	0.97	0.7641	-22187	14854	3178	38062	12200	2474	14673		4.31	Si
SLV 4	4.8	-1925.39	-10076	-8391	2819	0.97	0.8818	-34632	16250	4012	38062	12200	2474	14673		5.21	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.32	18836	-5116	78.8	627.91	7.97	Si
SLV 1	179667	0.32	19442	-5281	78.8	645.16	8.19	Si
SLV 4	179667	0.32	23613	-6413	78.8	759.04	9.63	Si
SLV 3	179667	0.32	24218	-6578	78.8	774.85	9.83	Si
SLV 6	179667	0.32	25306	-6873	78.8	802.79	10.19	Si
SLV 5	179667	0.32	25692	-6978	78.8	812.59	10.31	Si
SLV 10	179667	0.32	35533	-9651	78.8	1036.76	13.16	Si
SLV 9	179667	0.32	35920	-9756	78.8	1044.58	13.26	Si
SLV 8	179667	0.32	41226	-11197	78.8	1144.43	14.52	Si
SLV 7	179667	0.32	41612	-11302	78.8	1151.15	14.61	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.05 Ta = 0.0706

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-8261	-12578	370	0.602	972.7	0.96	9.12257	10.95836	No
SLV 8	-8222	-12577	370	0.605	968.8	0.96	9.1599	10.95836	No
SLV 11	-7233	-11878	390	0.671	868.3	0.955	10.21405	10.95836	No
SLV 12	-7195	-11878	390	0.674	864.4	0.955	10.26168	10.95836	No
SLV 5	-4784	-4125	-366	0.95	619.7	0.94	14.69142	10.95836	Si
SLV 6	-4746	-4124	-366	0.957	615.8	0.94	14.79249	10.95836	Si
SLV 3	-8253	-10435	90	0.634	972	0.96	9.5968	5.89448	Si
SLV 4	-8193	-10434	90	0.638	965.9	0.96	9.65871	5.89448	Si
SLV 9	-3757	-3426	-346	1.158	515.8	0.93	18.08744	10.95836	Si
SLV 10	-3718	-3425	-346	1.167	512	0.93	18.24183	10.95836	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.462	SLU 83	Si
V_SLU	5.952	SLU 83	Si
PF_SLV	1.246	SLV 2	Si
V_SLV	2.336	SLV 15	Si
PFFP_SLV	7.968	SLV 2	Si
R_SLV	0.832	SLV 7	No

Maschio 89

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.163	1.006	-5.163	5.686	L4	L5	4.68	0.16	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 56	2	10515.59	-51989	-0.0001212	0.0004492	0.0035	4.68	52527.43	93735.7	93735.7	8.91	No	Si
SLU 56	5.44	-362.61	-32091	-0.0000567	0.0004492	0.0035	4.68	48754.57	75010.71	75010.71	206.86	No	Si
SLU 80	2	11257.65	-56760	-0.0001334	0.0004492	0.0035	4.68	50421.83	99993.64	99993.64	8.88	No	Si
SLU 80	5.44	-559.29	-35305	-0.0000631	0.0004492	0.0035	4.68	50735.31	80136.82	80136.82	143.28	No	Si
SLU 79	2	11246.07	-56746	-0.0001334	0.0004492	0.0035	4.68	50429.85	99974.95	99974.95	8.89	No	Si
SLU 79	5.44	-616.28	-35267	-0.0000632	0.0004492	0.0035	4.68	50714.79	80075.66	80075.66	129.93	No	Si
SLU 57	2	10527.17	-52003	-0.0001212	0.0004492	0.0035	4.68	52522.87	93754.39	93754.39	8.91	No	Si
SLU 57	5.44	-305.62	-32129	-0.0000566	0.0004492	0.0035	4.68	48781.32	75071.87	75071.87	245.64	No	Si
SLU 83	2	11451.88	-58324	-0.0001374	0.0004492	0.0035	4.68	49478.68	102044.04	102044.04	8.91	No	Si
SLU 83	5.44	-859.43	-36265	-0.0000656	0.0004492	0.0035	4.68	51224.63	81668.48	81668.48	95.03	No	Si
SLU 58	2	10485.41	-51505	-0.0001201	0.0004492	0.0035	4.68	52676.08	93100.43	93100.43	8.88	No	Si
SLU 58	5.44	-322.18	-31687	-0.0000558	0.0004492	0.0035	4.68	48468.46	74366.91	74366.91	230.82	No	Si
SLU 62	2	10691.21	-53082	-0.000124	0.0004492	0.0035	4.68	52147.82	95169.52	95169.52	8.9	No	Si
SLU 62	5.44	-565.33	-32686	-0.0000582	0.0004492	0.0035	4.68	49161.12	75959.73	75959.73	134.36	No	Si
SLU 84	2	11463.45	-58338	-0.0001375	0.0004492	0.0035	4.68	49469.51	102062.73	102062.73	8.9	No	Si
SLU 84	5.44	-802.44	-36304	-0.0000656	0.0004492	0.0035	4.68	51243.19	81729.63	81729.63	101.85	No	Si
SLU 63	2	10702.79	-53097	-0.000124	0.0004492	0.0035	4.68	52142.47	95188.21	95188.21	8.89	No	Si
SLU 63	5.44	-508.34	-32724	-0.0000582	0.0004492	0.0035	4.68	49186.7	76020.88	76020.88	149.55	No	Si
SLU 59	2	10496.99	-51519	-0.0001201	0.0004492	0.0035	4.68	52671.88	93119.12	93119.12	8.87	No	Si
SLU 59	5.44	-265.19	-31726	-0.0000558	0.0004492	0.0035	4.68	48496	74428.07	74428.07	280.66	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	2	13969.88	-29103	-0.0000813	0.0006738	0.0035	4.68		61382.61	61382.61	4.39		Si
SLV 4	5.44	-198.57	-17173	-0.0000293	0.0006738	0.0035	4.68		49234.41	49234.41	247.94		Si
SLV 6	2	13823.22	-37210	-0.000096	0.0006738	0.0035	4.68		75217.11	75217.11	5.44		Si
SLV 6	5.44	6901.27	-25440	-0.0000586	0.0006738	0.0035	4.68		55132.39	55132.39	7.99		Si
SLD 3	2	10293.07	-34966	-0.0000836	0.0006738	0.0035	4.68		71388.43	71388.43	6.94		Si
SLD 3	5.44	-510.53	-20978	-0.0000365	0.0006738	0.0035	4.68		56748.81	56748.81	111.16		Si
SLV 2	2	16208.42	-29696	-0.0000875	0.0006738	0.0035	4.68		62394.18	62394.18	3.85		Si
SLV 2	5.44	3689.54	-19072	-0.0000403	0.0006738	0.0035	4.68		43212.26	43212.26	11.71		Si
SLV 1	2	15843.58	-29748	-0.0000868	0.0006738	0.0035	4.68		62483.76	62483.76	3.94		Si
SLV 1	5.44	3130.36	-18807	-0.0000386	0.0006738	0.0035	4.68		42681.6	42681.6	13.63		Si
SLD 4	2	10449.67	-34944	-0.000084	0.0006738	0.0035	4.68		71349.98	71349.98	6.83		Si
SLD 4	5.44	-270.5	-21092	-0.0000362	0.0006738	0.0035	4.68		56973.19	56973.19	210.62		Si
SLD 2	2	11450.12	-35201	-0.0000867	0.0006738	0.0035	4.68		71789.12	71789.12	6.27		Si
SLD 2	5.44	1438.62	-21925	-0.0000402	0.0006738	0.0035	4.68		48829.15	48829.15	33.94		Si
SLV 3	2	13605.04	-29155	-0.0000806	0.0006738	0.0035	4.68		61472.18	61472.18	4.52		Si
SLV 3	5.44	-757.75	-16908	-0.0000301	0.0006738	0.0035	4.68		48711.66	48711.66	64.28		Si
SLV 5	2	13590.22	-37243	-0.0000955	0.0006738	0.0035	4.68		75274.31	75274.31	5.54		Si
SLV 5	5.44	6544.15	-25271	-0.0000575	0.0006738	0.0035	4.68		54843.91	54843.91	8.38		Si
SLD 1	2	11293.52	-35224	-0.0000864	0.0006738	0.0035	4.68		71827.57	71827.57	6.36		Si
SLD 1	5.44	1198.59	-21811	-0.0000395	0.0006738	0.0035	4.68		48608.15	48608.15	40.55		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	2	11287.83	-57245	-33612	-4457	4.68	4.68	-44887	10833	8112	108749	26910	23868	50778	No	11.39	Si
SLU 78	5.44	-599.72	-35709	-20966	-2391	4.68	4.68	-28000	10833	8112	108749	26910	23868	50778	No	21.23	Si
SLU 71	2	10425.59	-51700	-30356	-4504	4.68	4.68	-40539	10833	8112	108749	26910	23868	50778	No	11.27	Si
SLU 71	5.44	-177.28	-31866	-18710	-2654	4.68	4.68	-24987	10833	8112	108749	26910	23868	50778	No	19.14	Si
SLU 70	2	10467.35	-52198	-30649	-4620	4.68	4.68	-40930	10833	8112	108749	26910	23868	50778	No	10.99	Si
SLU 70	5.44	-160.71	-32308	-18970	-2765	4.68	4.68	-25333	10833	8112	108749	26910	23868	50778	No	18.36	Si
SLU 69	2	10455.77	-52184	-30640	-4521	4.68	4.68	-40919	10833	8112	108749	26910	23868	50778	No	11.23	Si
SLU 69	5.44	-217.7	-32269	-18947	-2664	4.68	4.68	-25303	10833	8112	108749	26910	23868	50778	No	19.06	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 68	2	10299.05	-51138	-30026	-4580	4.68	4.68	-40099	10833	8112	108749	26910	23868	50778	No	11.09	Si
SLU 68	5.44	-137.29	-31470	-18478	-2763	4.68	4.68	-24677	10833	8112	108749	26910	23868	50778	No	18.38	Si
SLU 67	2	10321.52	-51613	-30305	-4531	4.68	4.68	-40471	10833	8112	108749	26910	23868	50778	No	11.21	Si
SLU 67	5.44	-215.71	-31849	-18700	-2707	4.68	4.68	-24973	10833	8112	108749	26910	23868	50778	No	18.76	Si
SLU 72	2	10437.16	-51714	-30364	-4603	4.68	4.68	-40551	10833	8112	108749	26910	23868	50778	No	11.03	Si
SLU 72	5.44	-120.28	-31904	-18733	-2754	4.68	4.68	-25017	10833	8112	108749	26910	23868	50778	No	18.44	Si
SLU 49	2	9706.69	-46957	-27571	-4481	4.68	4.68	-36821	10833	8112	108749	26910	23868	50778	No	11.33	Si
SLU 49	5.44	133.39	-28728	-16868	-2823	4.68	4.68	-22527	10833	8112	108749	26910	23868	50778	No	17.99	Si
SLU 51	2	9676.5	-46473	-27287	-4465	4.68	4.68	-36441	10833	8112	108749	26910	23868	50778	No	11.37	Si
SLU 51	5.44	173.81	-28325	-16631	-2812	4.68	4.68	-22210	10833	8112	108749	26910	23868	50778	No	18.06	Si
SLU 65	2	10153.22	-50553	-29683	-4490	4.68	4.68	-39640	10833	8112	108749	26910	23868	50778	No	11.31	Si
SLU 65	5.44	-192.29	-31012	-18209	-2705	4.68	4.68	-24317	10833	8112	108749	26910	23868	50778	No	18.77	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	2	9596.72	-43050	-25277	-11672	4.68	4.68	-33757	16250	12168	108749	40365	23868	64233		5.5	Si
SLV 10	5.44	5852.66	-29041	-17051	-9479	4.68	4.68	-22772	16250	12168	108749	40365	23868	64233		6.78	Si
SLV 1	2	15843.58	-29748	-17467	-8400	4.68	4.68	-23326	16250	12168	108749	40365	23868	64233		7.65	Si
SLV 1	5.44	3130.36	-18807	-11043	-3325	4.68	4.68	-14747	15449	11569	108749	40365	23868	64233		19.32	Si
SLD 10	2	8678.1	-40803	-23958	-6976	4.68	4.68	-31995	16250	12168	108749	40365	23868	64233		9.21	Si
SLD 10	5.44	2420.9	-26179	-15371	-5198	4.68	4.68	-20527	16250	12168	108749	40365	23868	64233		12.36	Si
SLD 6	2	10483.52	-38358	-22522	-7650	4.68	4.68	-30077	16250	12168	108749	40365	23868	64233		8.4	Si
SLD 6	5.44	2868.39	-24655	-14476	-5090	4.68	4.68	-19333	16250	12168	108749	40365	23868	64233		12.62	Si
SLV 9	2	9363.73	-43083	-25297	-11341	4.68	4.68	-33783	16250	12168	108749	40365	23868	64233		5.66	Si
SLV 9	5.44	5495.55	-28872	-16952	-9080	4.68	4.68	-22639	16250	12168	108749	40365	23868	64233		7.07	Si
SLV 5	2	13590.22	-37243	-21868	-12955	4.68	4.68	-29204	16250	12168	108749	40365	23868	64233		4.96	Si
SLV 5	5.44	6544.15	-25271	-14838	-8834	4.68	4.68	-19816	16250	12168	108749	40365	23868	64233		7.27	Si
SLV 6	2	13823.22	-37210	-21848	-13286	4.68	4.68	-29177	16250	12168	108749	40365	23868	64233		4.83	Si
SLV 6	5.44	6901.27	-25440	-14937	-9232	4.68	4.68	-19948	16250	12168	108749	40365	23868	64233		6.96	Si
SLD 9	2	8576.47	-40817	-23966	-6832	4.68	4.68	-32006	16250	12168	108749	40365	23868	64233		9.4	Si
SLD 9	5.44	2265.13	-26105	-15328	-5024	4.68	4.68	-20470	16250	12168	108749	40365	23868	64233		12.78	Si
SLV 2	2	16208.42	-29696	-17436	-8918	4.68	4.68	-23285	16250	12168	108749	40365	23868	64233		7.2	Si
SLV 2	5.44	3689.54	-19072	-11198	-3949	4.68	4.68	-14955	15491	11600	108749	40365	23868	64233		16.27	Si
SLD 5	2	10381.88	-38372	-22531	-7506	4.68	4.68	-30089	16250	12168	108749	40365	23868	64233		8.56	Si
SLD 5	5.44	2712.62	-24581	-14433	-4916	4.68	4.68	-19275	16250	12168	108749	40365	23868	64233		13.07	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.72 Ta 0.12 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-25488	0.32	229.88	1660.34	2729.19	2194.76	9.55	Si
SLV 4	-25625	0.32	229.88	1667.24	2741.42	2204.33	9.59	Si
SLV 1	-26843	0.32	229.88	1727.4	2849.84	2288.62	9.96	Si
SLV 2	-26980	0.32	229.88	1734.08	2862.08	2298.08	10	Si
SLV 7	-28059	0.32	229.88	1785.77	2958.18	2371.98	10.32	Si
SLV 8	-28146	0.32	229.88	1789.91	2966.01	2377.96	10.34	Si
SLV 11	-31596	0.32	229.88	1945.75	3273.68	2609.72	11.35	Si
SLV 12	-31684	0.32	229.88	1949.54	3281.51	2615.53	11.38	Si
SLV 5	-32575	0.32	229.88	1987.46	3361.08	2674.27	11.63	Si
SLV 6	-32663	0.32	229.88	1991.14	3368.92	2680.03	11.66	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.03 Ta = 0.1235

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-29041	-43050	195	0.857	3319.3	0.967	12.88194	14.43566	No
SLV 9	-28872	-43083	195	0.862	3302.1	0.967	12.95191	14.43566	No
SLV 6	-25440	-37210	-194	0.965	2952.9	0.963	14.56468	14.43566	Si
SLV 5	-25271	-37243	-194	0.971	2935.7	0.963	14.65488	14.43566	Si
SLV 12	-22711	-41074	188	1.068	2675.3	0.96	16.17645	14.43566	Si
SLV 14	-31074	-49162	647	0.793	3526.3	0.969	11.89337	10.55303	Si
SLV 11	-22542	-41108	188	1.075	2658.1	0.959	16.28795	14.43566	Si
SLV 13	-30809	-49215	647	0.799	3499.3	0.968	11.98826	10.55303	Si
SLV 16	-29175	-48569	645	0.839	3333	0.967	12.61234	10.55303	Si
SLV 15	-28910	-48622	645	0.846	3306	0.967	12.71942	10.55303	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.871	SLU 59	Si
V_SLU	10.992	SLU 70	Si
PF_SLV	3.849	SLV 2	Si
V_SLV	4.835	SLV 6	Si
PFFP_SLV	9.547	SLV 3	Si
R_SLV	0.892	SLV 10	No

Maschio 92

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.963	-3.314	-6.463	-3.314	L4	L5	0.5	0.28	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 73	4	183.37	-9348	-0.0001512	0.0003743	0.0035	0.5	804.34	1293.34	1293.34	7.05	No	Si
SLU 73	4.8	-152.36	-10680	-0.0001699	0.0003743	0.0035	0.5	669.42	1308.21	1308.21	8.59	No	Si
SLU 68	4	185.2	-8452	-0.0001362	0.0003743	0.0035	0.5	860.05	1243.91	1243.91	6.72	No	Si
SLU 68	4.8	-173.09	-9632	-0.0001543	0.0003743	0.0035	0.5	780.79	1311.07	1311.07	7.57	No	Si
SLU 52	4	173.4	-8340	-0.0001323	0.0003743	0.0035	0.5	865.02	1238.03	1238.03	7.14	No	Si
SLU 52	4.8	-129.89	-9530	-0.0001446	0.0003743	0.0035	0.5	789.58	1311.3	1311.3	10.1	No	Si
SLU 44	4	175.57	-7314	-0.0001164	0.0003743	0.0035	0.5	890.23	1184.46	1184.46	6.75	No	Si
SLU 44	4.8	-151.76	-8334	-0.0001284	0.0003743	0.0035	0.5	865.27	1261.75	1261.75	8.31	No	Si
SLU 76	4	183.03	-9478	-0.0001534	0.0003743	0.0035	0.5	793.88	1300.77	1300.77	7.11	No	Si
SLU 76	4.8	-151.21	-10827	-0.0001726	0.0003743	0.0035	0.5	650.72	1308.23	1308.23	8.65	No	Si
SLU 47	4	175.23	-7444	-0.0001183	0.0003743	0.0035	0.5	889.08	1191.09	1191.09	6.8	No	Si
SLU 47	4.8	-150.62	-8481	-0.0001306	0.0003743	0.0035	0.5	858.66	1268.56	1268.56	8.42	No	Si
SLU 5	4	145.84	-6025	-0.0000927	0.0003743	0.0035	0.5	869.55	1057.76	1057.76	7.25	No	Si
SLU 5	4.8	-129.19	-6871	-0.0001022	0.0003743	0.0035	0.5	889.7	1171.85	1171.85	9.07	No	Si
SLU 65	4	185.54	-8321	-0.0001341	0.0003743	0.0035	0.5	865.82	1237.05	1237.05	6.67	No	Si
SLU 65	4.8	-174.23	-9485	-0.0001519	0.0003743	0.0035	0.5	793.33	1311.19	1311.19	7.53	No	Si
SLU 2	4	146.18	-5894	-0.0000909	0.0003743	0.0035	0.5	864.21	1043.83	1043.83	7.14	No	Si
SLU 2	4.8	-130.34	-6723	-0.0001003	0.0003743	0.0035	0.5	887.99	1158.42	1158.42	8.89	No	Si
SLU 55	4	173.06	-8471	-0.0001343	0.0003743	0.0035	0.5	859.17	1244.91	1244.91	7.19	No	Si
SLU 55	4.8	-128.75	-9677	-0.0001469	0.0003743	0.0035	0.5	776.81	1310.98	1310.98	10.18	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	4	671.67	-3910	-0.0002045	0.0005615	0.0035	0.5		843.78	843.78	1.26		Si
SLV 1	4.8	-1369.66	-4662	-0.0082119	0.0005615	0.0035	0.4		1039.38	1039.38	0.76		No
SLV 14	4	-498.53	-7833	-0.0001652	0.0005615	0.0035	0.5		1478.46	1478.46	2.97		Si
SLV 14	4.8	1220.54	-8536	-0.0003837	0.0005615	0.0035	0.5		1511.61	1511.61	1.24		Si
SLV 3	4	721.69	-5096	-0.00019	0.0005615	0.0035	0.5		1048.01	1048.01	1.45		Si
SLV 3	4.8	-1415.08	-6173	-0.0065164	0.0005615	0.0035	0.4		1276.42	1276.42	0.9		No
SLV 13	4	-517.42	-8021	-0.000171	0.0005615	0.0035	0.5		1502.27	1502.27	2.9		Si
SLV 13	4.8	1255.83	-8739	-0.0004029	0.0005615	0.0035	0.5		1533.53	1533.53	1.22		Si
SLV 16	4	-448.52	-9018	-0.0001749	0.0005615	0.0035	0.5		1598.72	1598.72	3.56		Si
SLV 16	4.8	1175.12	-10047	-0.0003527	0.0005615	0.0035	0.5		1673.87	1673.87	1.42		Si
SLV 15	4	-467.4	-9207	-0.0001808	0.0005615	0.0035	0.5		1614.89	1614.89	3.46		Si
SLV 15	4.8	1210.4	-10251	-0.0003683	0.0005615	0.0035	0.5		1686.77	1686.77	1.39		Si
SLD 1	4	351.27	-5366	-0.0001092	0.0005615	0.0035	0.5		1088.79	1088.79	3.1		Si
SLD 1	4.8	-641.34	-6196	-0.0001678	0.0005615	0.0035	0.5		1279.42	1279.42	1.99		Si
SLV 4	4	740.57	-4907	-0.0002022	0.0005615	0.0035	0.5		1019.81	1019.81	1.38		Si
SLV 4	4.8	-1450.36	-5970	-0.0073774	0.0005615	0.0035	0.4		1249.4	1249.4	0.86		No
SLV 2	4	690.55	-3722	-0.0002445	0.0005615	0.0035	0.5		806.71	806.71	1.17		Si
SLV 2	4.8	-1404.94	-4458	-0.0091903	0.0005615	0.0035	0.4		1004.5	1004.5	0.71		No
SLD 2	4	359.38	-5285	-0.0001093	0.0005615	0.0035	0.5		1076.55	1076.55	3		Si
SLD 2	4.8	-656.49	-6109	-0.0001704	0.0005615	0.0035	0.5		1267.99	1267.99	1.93		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	4	169.13	-9555	-7956	501	0.5	0.5	-56831	10833	1517	38062	4192	1275	5467	No	10.91	Si
SLU 75	4.8	-142.72	-10900	-9076	501	0.5	0.5	-64831	10833	1517	38062	4192	1275	5467	No	10.92	Si
SLU 78	4	168.79	-9685	-8065	500	0.5	0.5	-57607	10833	1517	38062	4192	1275	5467	No	10.93	Si
SLU 78	4.8	-141.57	-11047	-9199	500	0.5	0.5	-65705	10833	1517	38062	4192	1275	5467	No	10.94	Si
SLU 70	4	170.96	-8659	-7210	519	0.5	0.5	-51502	10833	1517	38062	4192	1275	5467	No	10.54	Si
SLU 70	4.8	-163.44	-9852	-8204	518	0.5	0.5	-58597	10833	1517	38062	4192	1275	5467	No	10.55	Si
SLU 73	4	183.37	-9348	-7784	530	0.5	0.5	-55599	10833	1517	38062	4192	1275	5467	No	10.31	Si
SLU 73	4.8	-152.36	-10680	-8893	529	0.5	0.5	-63523	10833	1517	38062	4192	1275	5467	No	10.33	Si
SLU 72	4	170.12	-8578	-7143	511	0.5	0.5	-51020	10833	1517	38062	4192	1275	5467	No	10.7	Si
SLU 72	4.8	-158.64	-9763	-8130	511	0.5	0.5	-58070	10833	1517	38062	4192	1275	5467	No	10.7	Si
SLU 68	4	185.2	-8452	-7038	548	0.5	0.5	-50271	10833	1517	38062	4192	1275	5467	No	9.98	Si
SLU 68	4.8	-173.09	-9632	-8020	547	0.5	0.5	-57289	10833	1517	38062	4192	1275	5467	No	9.99	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 44	4	175.57	-7314	-6090	498	0.5	0.5	-43503	10833	1517	38062	4192	1275	5467	No	10.98	Si
SLU 44	4.8	-151.76	-8334	-6940	497	0.5	0.5	-49573	10833	1517	38062	4192	1275	5467	No	10.99	Si
SLU 76	4	183.03	-9478	-7893	529	0.5	0.5	-56375	10833	1517	38062	4192	1275	5467	No	10.33	Si
SLU 76	4.8	-151.21	-10827	-9016	529	0.5	0.5	-64398	10833	1517	38062	4192	1275	5467	No	10.34	Si
SLU 67	4	171.3	-8528	-7102	519	0.5	0.5	-50726	10833	1517	38062	4192	1275	5467	No	10.53	Si
SLU 67	4.8	-164.59	-9705	-8081	519	0.5	0.5	-57722	10833	1517	38062	4192	1275	5467	No	10.53	Si
SLU 65	4	185.54	-8321	-6929	548	0.5	0.5	-49495	10833	1517	38062	4192	1275	5467	No	9.97	Si
SLU 65	4.8	-174.23	-9485	-7898	548	0.5	0.5	-56414	10833	1517	38062	4192	1275	5467	No	9.98	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	4	721.69	-5096	-4243	2804	0.5	0.3251	-30310	16250	1479	38062	6288	1275	7563		2.7	Si
SLV 3	4.8	-1415.08	-6173	-5140	2660	0.4	0.0623	0	0	0	38062	5031	1020	6051		2.27	Si
SLV 15	4	-467.4	-9207	-7667	-2004	0.5	0.5	-54762	16250	2275	38062	6288	1275	7563		3.77	Si
SLV 15	4.8	1210.4	-10251	-8536	-2047	0.5	0.3958	-60970	16250	1801	38062	6288	1275	7563		3.7	Si
SLV 4	4	740.57	-4907	-4086	2871	0.5	0.2973	-29189	16250	1353	38062	6288	1275	7563		2.63	Si
SLV 4	4.8	-1450.36	-5970	-4971	2727	0.4	0.0211	0	0	0	38062	5031	1020	6051		2.22	Si
SLV 8	4	379.33	-7763	-6465	1403	0.5	0.5	-46176	16250	2275	38062	6288	1275	7563		5.39	Si
SLV 8	4.8	-578.06	-9197	-7658	1076	0.5	0.5	-54701	16250	2275	38062	6288	1275	7563		7.03	Si
SLV 2	4	690.55	-3722	-3099	2677	0.5	0.1934	-22138	14844	804	38062	6288	1275	7563		2.83	Si
SLV 2	4.8	-1404.94	-4458	-3713	2720	0.4	0	0	0	0	38062	5031	1020	6051		2.22	Si
SLV 1	4	671.67	-3910	-3256	2610	0.5	0.2347	-23259	15068	990	38062	6288	1275	7563		2.9	Si
SLV 1	4.8	-1369.66	-4662	-3882	2653	0.4	0	0	0	0	38062	5031	1020	6051		2.28	Si
SLV 16	4	-448.52	-9018	-7510	-1937	0.5	0.5	-53641	16250	2275	38062	6288	1275	7563		3.9	Si
SLV 16	4.8	1175.12	-10047	-8367	-1980	0.5	0.3991	-59762	16250	1816	38062	6288	1275	7563		3.82	Si
SLV 13	4	-517.42	-8021	-6680	-2198	0.5	0.5	-47711	16250	2275	38062	6288	1275	7563		3.44	Si
SLV 13	4.8	1255.83	-8739	-7277	-2054	0.5	0.3189	-51981	16250	1451	38062	6288	1275	7563		3.68	Si
SLV 14	4	-498.53	-7833	-6523	-2131	0.5	0.5	-46590	16250	2275	38062	6288	1275	7563		3.55	Si
SLV 14	4.8	1220.54	-8536	-7108	-1987	0.5	0.321	-50773	16250	1461	38062	6288	1275	7563		3.81	Si
SLD 4	4	380.47	-5805	-4834	1420	0.5	0.5	-34530	16250	2275	38062	6288	1275	7563		5.32	Si
SLD 4	4.8	-675.86	-6771	-5638	1359	0.5	0.4505	-45897	16250	2050	38062	6288	1275	7563		5.57	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.32	23814	-3334	40.62	393.97	9.7	Si
SLV 5	179667	0.32	24302	-3402	40.62	400.52	9.86	Si
SLV 10	179667	0.32	25706	-3599	40.62	419.03	10.32	Si
SLV 9	179667	0.32	26194	-3667	40.62	425.34	10.47	Si
SLV 2	179667	0.32	29732	-4162	40.62	469.29	11.55	Si
SLV 1	179667	0.32	30496	-4269	40.62	478.36	11.78	Si
SLV 14	179667	0.32	36038	-5045	40.62	539.66	13.29	Si
SLV 13	179667	0.32	36802	-5152	40.62	547.49	13.48	Si
SLV 4	179667	0.32	36814	-5154	40.62	547.61	13.48	Si
SLV 3	179667	0.32	37578	-5261	40.62	555.3	13.67	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.05 Ta = 0.0706

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-4447	-2418	38	0.612	520.6	0.961	9.2532	10.95836	No
SLV 12	-4390	-2401	39	0.619	514.8	0.961	9.35825	10.95836	No
SLV 7	-4225	-2530	52	0.636	498	0.96	9.63639	10.95836	No
SLV 8	-4168	-2513	52	0.644	492.2	0.959	9.75154	10.95836	No
SLV 9	-2218	-2241	-83	1.076	294.3	0.936	16.70057	10.95836	Si
SLV 10	-2161	-2224	-83	1.098	288.6	0.935	17.07252	10.95836	Si
SLV 5	-1995	-2353	-69	1.176	271.8	0.932	18.34272	10.95836	Si
SLV 6	-1939	-2336	-69	1.203	266.1	0.931	18.79171	10.95836	Si
SLV 15	-3942	-2231	-20	0.682	469.2	0.957	10.35468	5.89448	Si
SLV 16	-3853	-2204	-20	0.695	460.2	0.957	10.56596	5.89448	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.667	SLU 65	Si
V_SLU	9.968	SLU 65	Si
PF_SLV	0.715	SLV 2	No
V_SLV	2.219	SLV 4	Si
PFFP_SLV	9.699	SLV 6	Si
R_SLV	0.844	SLV 11	No

Maschio 93

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-3.233	-3.314	-5.463	-3.314	L4	L5	2.23	0.28	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 73	4	5045.52	-24607	-0.0001022	0.0003743	0.0035	2.23	16816.33	20000.29	20000.29	3.96	No	Si
SLU 73	4.8	-222.39	-23473	-0.0000622	0.0003743	0.0035	2.23	16508.21	20293.87	20293.87	91.25	No	Si
SLU 47	4	4169.28	-19304	-0.0000791	0.0003743	0.0035	2.23	14987.83	16849.32	16849.32	4.04	No	Si
SLU 47	4.8	-288.91	-18186	-0.0000479	0.0003743	0.0035	2.23	14476.53	17467.13	17467.13	60.46	No	Si
SLU 80	4	5049.79	-25625	-0.0001055	0.0003743	0.0035	2.23	17054.41	20467.66	20467.66	4.05	No	Si
SLU 80	4.8	-229.15	-24491	-0.0000652	0.0003743	0.0035	2.23	16786.77	20835.04	20835.04	90.92	No	Si
SLU 44	4	4113.75	-18944	-0.0000776	0.0003743	0.0035	2.23	14827.79	16601.77	16601.77	4.04	No	Si
SLU 44	4.8	-296.53	-17826	-0.000047	0.0003743	0.0035	2.23	14302.36	17230.47	17230.47	58.11	No	Si
SLU 68	4	4669.37	-22219	-0.0000917	0.0003743	0.0035	2.23	16115.09	18882.58	18882.58	4.04	No	Si
SLU 68	4.8	-307.26	-21085	-0.0000561	0.0003743	0.0035	2.23	15711.99	19091.13	19091.13	62.13	No	Si
SLU 78	4	5092.46	-25879	-0.0001067	0.0003743	0.0035	2.23	17108.15	20585.63	20585.63	4.04	No	Si
SLU 78	4.8	-233.71	-24745	-0.000066	0.0003743	0.0035	2.23	16850.62	20972.72	20972.72	89.74	No	Si
SLU 65	4	4613.84	-21859	-0.0000902	0.0003743	0.0035	2.23	15991.9	18643.24	18643.24	4.04	No	Si
SLU 65	4.8	-314.89	-20725	-0.0000551	0.0003743	0.0035	2.23	15574.46	18917.77	18917.77	60.08	No	Si
SLU 84	4	5179.27	-26442	-0.0001092	0.0003743	0.0035	2.23	17219.33	20844.61	20844.61	4.02	No	Si
SLU 84	4.8	-197.13	-25308	-0.0000673	0.0003743	0.0035	2.23	16984.22	21281.99	21281.99	107.96	No	Si
SLU 76	4	5101.05	-24967	-0.0001038	0.0003743	0.0035	2.23	16904.78	20164.8	20164.8	3.95	No	Si
SLU 76	4.8	-214.76	-23833	-0.0000632	0.0003743	0.0035	2.23	16611	20483.55	20483.55	95.38	No	Si
SLU 82	4	5123.74	-26082	-0.0001076	0.0003743	0.0035	2.23	17149.52	20679.01	20679.01	4.04	No	Si
SLU 82	4.8	-204.76	-24948	-0.0000663	0.0003743	0.0035	2.23	16900.07	21083.62	21083.62	102.97	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	4	1195.99	-19702	-0.0000568	0.0005615	0.0035	2.23		18727.3	18727.3	15.66		Si
SLV 15	4.8	5387.91	-18353	-0.0000821	0.0005615	0.0035	2.23		17542.85	17542.85	3.26		Si
SLV 9	4	2987.79	-7865	-0.0000383	0.0005615	0.0035	2.23		8484.46	8484.46	2.84		Si
SLV 9	4.8	2180.94	-8031	-0.0000334	0.0005615	0.0035	2.23		8646.49	8646.49	3.96		Si
SLV 5	4	4232.35	-8387	-0.0000496	0.0005615	0.0035	2.23		8991.88	8991.88	2.12		Si
SLV 5	4.8	-1250.09	-8647	-0.0000289	0.0005615	0.0035	2.23		10265.75	10265.75	8.21		Si
SLV 1	4	5499.82	-15729	-0.0000757	0.0005615	0.0035	2.23		15278.93	15278.93	2.78		Si
SLV 1	4.8	-5662	-15340	-0.0000758	0.0005615	0.0035	2.23		16334.99	16334.99	2.89		Si
SLV 6	4	4244.19	-8150	-0.0000495	0.0005615	0.0035	2.23		8762.29	8762.29	2.06		Si
SLV 6	4.8	-1399.59	-8411	-0.0000293	0.0005615	0.0035	2.23		10036.13	10036.13	7.17		Si
SLV 13	4	1351.28	-13988	-0.000043	0.0005615	0.0035	2.23		13805.89	13805.89	10.22		Si
SLV 13	4.8	5774.77	-13288	-0.0000717	0.0005615	0.0035	2.23		13219.65	13219.65	2.29		Si
SLV 2	4	5518.36	-15358	-0.0000748	0.0005615	0.0035	2.23		14963.58	14963.58	2.71		Si
SLV 2	4.8	-5896.08	-14970	-0.0000765	0.0005615	0.0035	2.23		16013.44	16013.44	2.72		Si
SLV 14	4	1369.82	-13618	-0.0000422	0.0005615	0.0035	2.23		13495.34	13495.34	9.85		Si
SLV 14	4.8	5540.68	-12918	-0.000069	0.0005615	0.0035	2.23		12911.08	12911.08	2.33		Si
SLV 10	4	2999.63	-7628	-0.0000378	0.0005615	0.0035	2.23		8251.88	8251.88	2.75		Si
SLV 10	4.8	2031.44	-7795	-0.0000319	0.0005615	0.0035	2.23		8415.6	8415.6	4.14		Si
SLV 4	4	5363.07	-21072	-0.0000895	0.0005615	0.0035	2.23		19806.82	19806.82	3.69		Si
SLV 4	4.8	-6282.94	-20034	-0.000093	0.0005615	0.0035	2.23		20148.81	20148.81	3.21		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	4	5019.09	-26887	-22390	6523	2.23	2.23	-35858	10833	6764	38062	18697	5686	24384	No	3.74	Si
SLU 83	4.8	-230.15	-25753	-21445	6523	2.23	2.23	-34346	10833	6764	38062	18697	5686	24384	No	3.74	Si
SLU 82	4	5123.74	-26082	-21719	6622	2.23	2.23	-34783	10833	6764	38062	18697	5686	24384	No	3.68	Si
SLU 82	4.8	-204.76	-24948	-20774	6622	2.23	2.23	-33271	10833	6764	38062	18697	5686	24384	No	3.68	Si
SLU 76	4	5101.05	-24967	-20791	6606	2.23	2.23	-33297	10833	6764	38062	18697	5686	24384	No	3.69	Si
SLU 76	4.8	-214.76	-23833	-19846	6606	2.23	2.23	-31785	10833	6764	38062	18697	5686	24384	No	3.69	Si
SLU 75	4	5036.93	-25518	-21249	6560	2.23	2.23	-34032	10833	6764	38062	18697	5686	24384	No	3.72	Si
SLU 75	4.8	-241.33	-24384	-20305	6560	2.23	2.23	-32520	10833	6764	38062	18697	5686	24384	No	3.72	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	4	5179.27	-26442	-22019	6682	2.23	2.23	-35264	10833	6764	38062	18697	5686	24384	No	3.65	Si
SLU 84	4.8	-197.13	-25308	-21074	6682	2.23	2.23	-33752	10833	6764	38062	18697	5686	24384	No	3.65	Si
SLU 78	4	5092.46	-25879	-21549	6619	2.23	2.23	-34513	10833	6764	38062	18697	5686	24384	No	3.68	Si
SLU 78	4.8	-233.71	-24745	-20605	6619	2.23	2.23	-33000	10833	6764	38062	18697	5686	24384	No	3.68	Si
SLU 81	4	4963.56	-26527	-22090	6463	2.23	2.23	-35378	10833	6764	38062	18697	5686	24384	No	3.77	Si
SLU 81	4.8	-237.78	-25393	-21145	6463	2.23	2.23	-33865	10833	6764	38062	18697	5686	24384	No	3.77	Si
SLU 80	4	5049.79	-25625	-21338	6560	2.23	2.23	-34174	10833	6764	38062	18697	5686	24384	No	3.72	Si
SLU 80	4.8	-229.15	-24491	-20394	6560	2.23	2.23	-32661	10833	6764	38062	18697	5686	24384	No	3.72	Si
SLU 77	4	4932.28	-26324	-21920	6460	2.23	2.23	-35107	10833	6764	38062	18697	5686	24384	No	3.77	Si
SLU 77	4.8	-266.72	-25190	-20976	6460	2.23	2.23	-33594	10833	6764	38062	18697	5686	24384	No	3.77	Si
SLU 73	4	5045.52	-24607	-20491	6547	2.23	2.23	-32817	10833	6764	38062	18697	5686	24384	No	3.72	Si
SLU 73	4.8	-222.39	-23473	-19546	6547	2.23	2.23	-31304	10833	6764	38062	18697	5686	24384	No	3.72	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 1	4	4273.17	-16735	-13936	8348	2.23	2.23	-22319	14880	9291	38062	28046	5686	33732		4.04	Si
SLD 1	4.8	-2565.67	-16071	-13382	8299	2.23	2.23	-21432	14703	9181	38062	28046	5686	33732		4.06	Si
SLV 2	4	5518.36	-15358	-12789	13840	2.23	2.23	-20482	14513	9062	38062	28046	5686	33732		2.44	Si
SLV 2	4.8	-5896.08	-14970	-12466	13728	2.23	2.1634	-19965	14410	8729	38062	28046	5686	33732		2.46	Si
SLV 8	4	3726.56	-27195	-22646	8898	2.23	2.23	-36269	16250	10146	38062	28046	5686	33732		3.79	Si
SLV 8	4.8	-2689.11	-25291	-21060	8476	2.23	2.23	-33729	16250	10146	38062	28046	5686	33732		3.98	Si
SLD 4	4	4215.93	-19066	-15877	8852	2.23	2.23	-25427	15502	9679	38062	28046	5686	33732		3.81	Si
SLD 4	4.8	-2832.9	-18127	-15095	8714	2.23	2.23	-24175	15252	9523	38062	28046	5686	33732		3.87	Si
SLV 3	4	5344.54	-21442	-17855	14379	2.23	2.23	-28596	16136	10075	38062	28046	5686	33732		2.35	Si
SLV 3	4.8	-6048.86	-20405	-16991	14053	2.23	2.23	-27212	15859	9902	38062	28046	5686	33732		2.4	Si
SLV 4	4	5363.07	-21072	-17547	14695	2.23	2.23	-28102	16037	10013	38062	28046	5686	33732		2.3	Si
SLV 4	4.8	-6282.94	-20034	-16683	14369	2.23	2.23	-26719	15760	9841	38062	28046	5686	33732		2.35	Si
SLD 3	4	4207.97	-19225	-16009	8716	2.23	2.23	-25639	15544	9706	38062	28046	5686	33732		3.87	Si
SLD 3	4.8	-2732.42	-18286	-15227	8578	2.23	2.23	-24387	15294	9550	38062	28046	5686	33732		3.93	Si
SLV 1	4	5499.82	-15729	-13097	13524	2.23	2.23	-20976	14612	9124	38062	28046	5686	33732		2.49	Si
SLV 1	4.8	-5662	-15340	-12774	13412	2.23	2.23	-20459	14508	9059	38062	28046	5686	33732		2.52	Si
SLD 2	4	4281.12	-16576	-13803	8483	2.23	2.23	-22107	14838	9265	38062	28046	5686	33732		3.98	Si
SLD 2	4.8	-2666.15	-15912	-13250	8435	2.23	2.23	-21220	14661	9154	38062	28046	5686	33732		4	Si
SLV 7	4	3714.73	-27432	-22843	8697	2.23	2.23	-36584	16250	10146	38062	28046	5686	33732		3.88	Si
SLV 7	4.8	-2539.62	-25528	-21257	8274	2.23	2.23	-34045	16250	10146	38062	28046	5686	33732		4.08	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.32	10474	-6540	181.16	852.8	4.71	Si
SLV 5	179667	0.32	10867	-6785	181.16	882.32	4.87	Si
SLV 10	179667	0.32	10981	-6857	181.16	890.91	4.92	Si
SLV 9	179667	0.32	11374	-7102	181.16	920.21	5.08	Si
SLV 2	179667	0.32	19508	-12181	181.16	1487.49	8.21	Si
SLV 1	179667	0.32	20123	-12565	181.16	1527.29	8.43	Si
SLV 14	179667	0.32	21200	-13237	181.16	1595.92	8.81	Si
SLV 13	179667	0.32	21814	-13621	181.16	1634.52	9.02	Si
SLV 4	179667	0.32	27855	-17392	181.16	1990.81	10.99	Si
SLV 3	179667	0.32	28470	-17776	181.16	2024.73	11.18	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.05 Ta = 0.0706

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-20246	-20876	653	0.58	2363.9	0.962	8.75801	10.95836	No
SLV 11	-20343	-22569	561	0.581	2373.7	0.962	8.78349	10.95836	No
SLV 8	-20018	-20697	653	0.585	2340.7	0.961	8.84537	10.95836	No
SLV 12	-20115	-22391	562	0.587	2350.6	0.962	8.87072	10.95836	No
SLV 3	-15526	-13170	322	0.744	1884.1	0.953	11.34819	5.89448	Si
SLV 15	-15848	-18815	16	0.749	1916.8	0.954	11.40709	5.89448	Si
SLV 4	-15170	-12891	322	0.759	1847.9	0.952	11.58109	5.89448	Si
SLV 16	-15492	-18535	17	0.763	1880.6	0.953	11.63683	5.89448	Si
SLV 9	-6996	-6054	-690	1.375	1020.7	0.922	21.67731	10.95836	Si
SLV 5	-6900	-4361	-599	1.4	1011	0.921	22.08448	10.95836	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.953	SLU 76	Si
V_SLU	3.649	SLU 84	Si
PF_SLV	2.065	SLV 6	Si
V_SLV	2.295	SLV 4	Si
PFFP_SLV	4.707	SLV 6	Si
R_SLV	0.799	SLV 7	No

Maschio 94

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.314	-2.233	-3.314	L4	L5	2.1	0.28	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 66	2.9	833.93	-13627	-0.0000424	0.0003743	0.0035	2.1	11051.31	12067.43	12067.43	14.47	No	Si
SLU 66	4.8	454.19	-14248	-0.0000412	0.0003743	0.0035	2.1	11399.8	12446.82	12446.82	27.4	No	Si
SLU 1	2.9	590.57	-9385	-0.0000288	0.0003743	0.0035	2.1	8309.75	8689.99	8689.99	14.71	No	Si
SLU 1	4.8	276.84	-9622	-0.000027	0.0003743	0.0035	2.1	8479.49	8880.52	8880.52	32.08	No	Si
SLU 45	2.9	766.24	-12027	-0.0000374	0.0003743	0.0035	2.1	10091.57	10870.76	10870.76	14.19	No	Si
SLU 45	4.8	322.67	-12257	-0.0000346	0.0003743	0.0035	2.1	10234.74	11064.96	11064.96	34.29	No	Si
SLU 48	2.9	774.37	-12243	-0.000038	0.0003743	0.0035	2.1	10226.09	11053.15	11053.15	14.27	No	Si
SLU 48	4.8	332.93	-12512	-0.0000354	0.0003743	0.0035	2.1	10392.15	11281.77	11281.77	33.89	No	Si
SLU 64	2.9	812.22	-13252	-0.0000412	0.0003743	0.0035	2.1	10834.53	11836.19	11836.19	14.57	No	Si
SLU 64	4.8	446.31	-13817	-0.0000399	0.0003743	0.0035	2.1	11159.71	12183.39	12183.39	27.3	No	Si
SLU 69	2.9	842.06	-13842	-0.0000431	0.0003743	0.0035	2.1	11173.74	12198.54	12198.54	14.49	No	Si
SLU 69	4.8	464.44	-14503	-0.000042	0.0003743	0.0035	2.1	11539.35	12604.35	12604.35	27.14	No	Si
SLU 71	2.9	828.48	-13683	-0.0000425	0.0003743	0.0035	2.1	11083.42	12101.59	12101.59	14.61	No	Si
SLU 71	4.8	466.81	-14329	-0.0000415	0.0003743	0.0035	2.1	11444.24	12496.62	12496.62	26.77	No	Si
SLU 3	2.9	612.28	-9760	-0.0000299	0.0003743	0.0035	2.1	8577.35	8991.8	8991.8	14.69	No	Si
SLU 3	4.8	284.71	-10053	-0.0000283	0.0003743	0.0035	2.1	8782.93	9229.11	9229.11	32.42	No	Si
SLU 43	2.9	744.53	-11653	-0.0000362	0.0003743	0.0035	2.1	9853.76	10554.5	10554.5	14.18	No	Si
SLU 43	4.8	314.8	-11826	-0.0000334	0.0003743	0.0035	2.1	9964.58	10700.81	10700.81	33.99	No	Si
SLU 50	2.9	760.79	-12084	-0.0000375	0.0003743	0.0035	2.1	10126.84	10918.34	10918.34	14.35	No	Si
SLU 50	4.8	335.3	-12338	-0.0000349	0.0003743	0.0035	2.1	10284.84	11133.58	11133.58	33.2	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	2.9	4589.62	-9088	-0.0000607	0.0005615	0.0035	2.1		9023.02	9023.02	1.97		Si
SLV 1	4.8	-3108.63	-4138	-0.0000497	0.0005615	0.0035	1.68		5439.92	5439.92	1.75		Si
SLV 13	2.9	-4024.03	-7287	-0.000053	0.0005615	0.0035	2.1		8404.54	8404.54	2.09		Si
SLV 13	4.8	4026.08	-12489	-0.0000625	0.0005615	0.0035	2.1		11679.89	11679.89	2.9		Si
SLV 3	2.9	5007.93	-13519	-0.0000731	0.0005615	0.0035	2.1		12501.27	12501.27	2.5		Si
SLV 3	4.8	-3122.64	-9990	-0.0000488	0.0005615	0.0035	2.1		10832.09	10832.09	3.47		Si
SLV 6	2.9	1266.36	-3026	-0.0000169	0.0005615	0.0035	2.1		3321.98	3321.98	2.62		Si
SLV 6	4.8	-717.83	553	0.041287	0.0005615	0.0035	1.68		0	0	0		No
SLV 2	2.9	4808.76	-8768	-0.0000638	0.0005615	0.0035	2.1		8749.85	8749.85	1.82		Si
SLV 2	4.8	-3258.39	-3178	-0.0001656	0.0005615	0.0035	1.68		4501.11	4501.11	1.38		Si
SLV 9	2.9	-1457.69	-2690	-0.0000187	0.0005615	0.0035	2.1		4018.61	4018.61	2.76		Si
SLV 9	4.8	1518.22	-2566	-0.0000198	0.0005615	0.0035	2.1		2862.46	2862.46	1.89		Si
SLV 5	2.9	1126.4	-3230	-0.0000162	0.0005615	0.0035	2.1		3523.91	3523.91	3.13		Si
SLV 5	4.8	-622.2	-61	-0.0001887	0.0005615	0.0035	1.68		1361.16	1361.16	2.19		Si
SLV 10	2.9	-1317.74	-2486	-0.0000168	0.0005615	0.0035	2.1		3815.71	3815.71	2.9		Si
SLV 10	4.8	1422.58	-1953	-0.0000215	0.0005615	0.0035	2.1		2245.87	2245.87	1.58		Si
SLV 4	2.9	5227.08	-13199	-0.0000743	0.0005615	0.0035	2.1		12245.58	12245.58	2.34		Si
SLV 4	4.8	-3272.4	-9029	-0.0000473	0.0005615	0.0035	2.1		9987.81	9987.81	3.05		Si
SLV 14	2.9	-3804.89	-6967	-0.0000499	0.0005615	0.0035	2.1		8112.76	8112.76	2.13		Si
SLV 14	4.8	3876.33	-11528	-0.0000587	0.0005615	0.0035	2.1		10920.49	10920.49	2.82		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	2.9	510.82	-14872	-12384	-2447	2.1	2.1	-21061	9753	5735	38062	17607	5355	22963	No	9.38	Si
SLU 82	4.8	670.51	-16453	-13700	-2449	2.1	2.1	-23300	10051	5910	38062	17607	5355	22963	No	9.38	Si
SLU 78	2.9	553.24	-14861	-12375	-2300	2.1	2.1	-21046	9751	5733	38062	17607	5355	22963	No	9.98	Si
SLU 78	4.8	594.99	-16287	-13563	-2301	2.1	2.1	-23065	10020	5892	38062	17607	5355	22963	No	9.98	Si
SLU 83	2.9	778.43	-15470	-12882	-2276	2.1	2.1	-21909	9866	5801	38062	17607	5355	22963	No	10.09	Si
SLU 83	4.8	768.71	-16912	-14083	-2288	2.1	2.1	-23950	10138	5961	38062	17607	5355	22963	No	10.04	Si
SLU 76	2.9	358.53	-14232	-11851	-2406	2.1	2.1	-20154	9632	5663	38062	17607	5355	22963	No	9.54	Si
SLU 76	4.8	528.48	-15721	-13091	-2400	2.1	2.1	-22263	9913	5829	38062	17607	5355	22963	No	9.57	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	2.9	770.3	-15255	-12703	-2253	2.1	2.1	-21604	9825	5777	38062	17607	5355	22963	No	10.19	Si
SLU 81	4.8	758.46	-16656	-13870	-2265	2.1	2.1	-23588	10090	5933	38062	17607	5355	22963	No	10.14	Si
SLU 80	2.9	539.65	-14702	-12243	-2300	2.1	2.1	-20821	9721	5716	38062	17607	5355	22963	No	9.98	Si
SLU 80	4.8	597.36	-16112	-13417	-2301	2.1	2.1	-22818	9987	5872	38062	17607	5355	22963	No	9.98	Si
SLU 73	2.9	350.4	-14016	-11671	-2383	2.1	2.1	-19849	9591	5640	38062	17607	5355	22963	No	9.64	Si
SLU 73	4.8	518.23	-15465	-12878	-2377	2.1	2.1	-21901	9865	5800	38062	17607	5355	22963	No	9.66	Si
SLU 42	2.9	364.99	-12820	-10676	-2232	2.1	2.1	-18156	9365	5507	38062	17607	5355	22963	No	10.29	Si
SLU 42	4.8	642.79	-14504	-12078	-2232	2.1	2.1	-20541	9683	5694	38062	17607	5355	22963	No	10.29	Si
SLU 75	2.9	545.11	-14646	-12196	-2277	2.1	2.1	-20741	9710	5709	38062	17607	5355	22963	No	10.09	Si
SLU 75	4.8	584.74	-16031	-13350	-2278	2.1	2.1	-22703	9972	5863	38062	17607	5355	22963	No	10.08	Si
SLU 84	2.9	518.95	-15088	-12564	-2471	2.1	2.1	-21367	9793	5759	38062	17607	5355	22963	No	9.29	Si
SLU 84	4.8	680.76	-16708	-13913	-2472	2.1	2.1	-23662	10099	5938	38062	17607	5355	22963	No	9.29	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	2.9	-3804.89	-6967	-5802	-7853	2.1	1.5116	-13794	13176	5577	38062	26411	5355	31766		4.04	Si
SLV 14	4.8	3876.33	-11528	-9600	-7196	2.1	2.1	-16326	13682	8045	38062	26411	5355	31766		4.41	Si
SLV 4	2.9	5227.08	-13199	-10991	5789	2.1	1.962	-18692	14155	7776	38062	26411	5355	31766		5.49	Si
SLV 4	4.8	-3272.4	-9029	-7518	5117	2.1	2.0627	-13098	13036	7529	38062	26411	5355	31766		6.21	Si
SLV 3	2.9	5007.93	-13519	-11257	5240	2.1	2.0387	-19145	14246	8132	38062	26411	5355	31766		6.06	Si
SLV 3	4.8	-3122.64	-9990	-8319	4568	2.1	2.1	-14147	13246	7789	38062	26411	5355	31766		6.95	Si
SLV 11	2.9	-63.31	-17460	-14539	-5342	2.1	2.1	-24726	15362	9033	38062	26411	5355	31766		5.95	Si
SLV 11	4.8	1471.52	-22070	-18378	-6493	2.1	2.1	-31255	16250	9555	38062	26411	5355	31766		4.89	Si
SLV 12	2.9	76.64	-17256	-14369	-4992	2.1	2.1	-24437	15304	8999	38062	26411	5355	31766		6.36	Si
SLV 12	4.8	1375.88	-21457	-17867	-6143	2.1	2.1	-30386	16250	9555	38062	26411	5355	31766		5.17	Si
SLV 15	2.9	-3605.72	-11718	-9757	-9400	2.1	2.1	-16594	13735	8077	38062	26411	5355	31766		3.38	Si
SLV 15	4.8	4012.07	-18340	-15272	-9483	2.1	2.1	-25973	15611	9179	38062	26411	5355	31766		3.35	Si
SLV 13	2.9	-4024.03	-7287	-6068	-8401	2.1	1.4933	-14610	13339	5577	38062	26411	5355	31766		3.78	Si
SLV 13	4.8	4026.08	-12489	-10400	-7745	2.1	2.1	-17686	13954	8205	38062	26411	5355	31766		4.1	Si
SLV 16	2.9	-3386.57	-11398	-9491	-8852	2.1	2.1	-16141	13645	8023	38062	26411	5355	31766		3.59	Si
SLV 16	4.8	3862.32	-17379	-14472	-8934	2.1	2.1	-24612	15339	9019	38062	26411	5355	31766		3.56	Si
SLV 2	2.9	4808.76	-8768	-7301	6787	2.1	1.5048	-12417	12900	5435	38062	26411	5355	31766		4.68	Si
SLV 2	4.8	-3258.39	-3178	-2646	6855	1.68	0.0738	0	0	0	38062	21129	4284	25413		3.71	Si
SLV 1	2.9	4589.62	-9088	-7568	6239	2.1	1.6349	-12870	12991	5947	38062	26411	5355	31766		5.09	Si
SLV 1	4.8	-3108.63	-4138	-3446	6306	1.68	0.8966	0	0	0	38062	21129	4284	25413		4.03	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.32	0	-883	170.6	0	0	No, e>t/2
SLV 5	179667	0.32	2132	-1254	170.6	173.07	1.01	Si
SLV 10	179667	0.32	4534	-2666	170.6	362.13	2.12	Si
SLV 9	179667	0.32	5165	-3037	170.6	410.79	2.41	Si
SLV 2	179667	0.32	7822	-4599	170.6	610.92	3.58	Si
SLV 1	179667	0.32	8810	-5180	170.6	683.41	4.01	Si
SLV 4	179667	0.32	16425	-9658	170.6	1206.72	7.07	Si
SLV 3	179667	0.32	17414	-10239	170.6	1270.04	7.44	Si
SLV 14	179667	0.32	17931	-10543	170.6	1302.75	7.64	Si
SLV 13	179667	0.32	18919	-11124	170.6	1364.47	8	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.05 Ta = 0.0706

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-19747	-16127	-21	0.59	2295.4	0.963	8.90719	10.95836	No
SLV 7	-19154	-15082	-153	0.599	2235	0.962	9.05542	10.95836	No
SLV 12	-19195	-15958	-12	0.605	2239.2	0.962	9.13938	10.95836	No
SLV 8	-18602	-14914	-144	0.615	2178.9	0.961	9.29868	10.95836	No
SLV 15	-13903	-13561	102	0.789	1701.3	0.951	12.05509	5.89448	Si
SLV 16	-13039	-13297	116	0.832	1613.5	0.949	12.73766	5.89448	Si
SLV 3	-11925	-10079	-338	0.88	1500.6	0.946	13.51873	5.89448	Si
SLV 4	-11061	-9815	-324	0.937	1412.9	0.943	14.44434	5.89448	Si
SLV 13	-8167	-10276	78	1.221	1120.2	0.931	19.07301	5.89448	Si
SLV 14	-7302	-10012	92	1.332	1033	0.926	20.90102	5.89448	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	14.176	SLU 43	Si
V_SLU	9.289	SLU 84	Si
PF_SLV	0	SLV 6	No
V_SLV	3.35	SLV 15	Si
PFFP_SLV	0	SLV 6	No
R_SLV	0.813	SLV 11	No

Maschio 95

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-3.013	5.826	-5.093	5.826	L4	L5	2.08	0.28	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 58	2.9	6950.74	-17599	-0.0001077	0.0003743	0.0035	2.08	12870.27	14396.88	14396.88	2.07	No	Si
SLU 58	4.8	-2499.81	-20234	-0.0000766	0.0003743	0.0035	2.08	13862.06	16798.21	16798.21	6.72	No	Si
SLU 50	2.9	6462.93	-15634	-0.0000972	0.0003743	0.0035	2.08	11972.27	13204.41	13204.41	2.04	No	Si
SLU 50	4.8	-2294.56	-17885	-0.0000675	0.0003743	0.0035	2.08	12990	15705.82	15705.82	6.84	No	Si
SLU 51	2.9	6462.93	-15663	-0.0000973	0.0003743	0.0035	2.08	11986.44	13221.66	13221.66	2.05	No	Si
SLU 51	4.8	-2298.93	-17938	-0.0000677	0.0003743	0.0035	2.08	13011.77	15735.54	15735.54	6.84	No	Si
SLU 49	2.9	6488.52	-15837	-0.000098	0.0003743	0.0035	2.08	12071.14	13325.58	13325.58	2.05	No	Si
SLU 49	4.8	-2306.55	-18138	-0.0000684	0.0003743	0.0035	2.08	13093.08	15839.74	15839.74	6.87	No	Si
SLU 44	2.9	6272	-15080	-0.0000938	0.0003743	0.0035	2.08	11694.49	12874.86	12874.86	2.05	No	Si
SLU 44	4.8	-2230.08	-17243	-0.000065	0.0003743	0.0035	2.08	12717.58	15322.02	15322.02	6.87	No	Si
SLU 45	2.9	6393.06	-15507	-0.0000961	0.0003743	0.0035	2.08	11909.38	13128.34	13128.34	2.05	No	Si
SLU 45	4.8	-2266.3	-17720	-0.0000668	0.0003743	0.0035	2.08	12921.14	15610.87	15610.87	6.89	No	Si
SLU 43	2.9	6272	-15032	-0.0000936	0.0003743	0.0035	2.08	11669.88	12846.44	12846.44	2.05	No	Si
SLU 43	4.8	-2222.8	-17155	-0.0000647	0.0003743	0.0035	2.08	12679.1	15266.45	15266.45	6.87	No	Si
SLU 48	2.9	6488.52	-15808	-0.0000979	0.0003743	0.0035	2.08	12057.15	13308.34	13308.34	2.05	No	Si
SLU 48	4.8	-2302.18	-18085	-0.0000682	0.0003743	0.0035	2.08	13071.69	15816.49	15816.49	6.87	No	Si
SLU 46	2.9	6393.06	-15536	-0.0000962	0.0003743	0.0035	2.08	11923.67	13145.55	13145.55	2.06	No	Si
SLU 46	4.8	-2270.67	-17773	-0.0000067	0.0003743	0.0035	2.08	12943.21	15641.45	15641.45	6.89	No	Si
SLU 47	2.9	6367.47	-15381	-0.0000955	0.0003743	0.0035	2.08	11846.77	13053.48	13053.48	2.05	No	Si
SLU 47	4.8	-2265.96	-17608	-0.0000664	0.0003743	0.0035	2.08	12874.24	15545.44	15545.44	6.86	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	2.9	11813.44	-11560	-0.0079123	0.0005615	0.0035	2.08		10931.45	10931.45	0.93		No
SLV 3	4.8	-4411.78	-14125	-0.0000712	0.0005615	0.0035	2.08		14015.27	14015.27	3.18		Si
SLV 8	2.9	7855.53	-5879	-0.0133076	0.0005615	0.0035	1.664		6025.05	6025.05	0.77		No
SLV 8	4.8	-2062.66	-8711	-0.000038	0.0005615	0.0035	2.08		9449.66	9449.66	4.58		Si
SLV 7	2.9	8004.19	-5619	-0.0155583	0.0005615	0.0035	1.664		5780.71	5780.71	0.72		No
SLV 7	4.8	-2143.63	-8389	-0.0000377	0.0005615	0.0035	2.08		9168.08	9168.08	4.28		Si
SLV 12	2.9	4127.81	-5374	-0.0000726	0.0005615	0.0035	2.08		5550.53	5550.53	1.34		Si
SLV 12	4.8	-479.68	-7939	-0.000024	0.0005615	0.0035	2.08		8765.69	8765.69	18.27		Si
SLV 2	2.9	11081.95	-16619	-0.0001782	0.0005615	0.0035	2.08		14824.83	14824.83	1.34		Si
SLV 2	4.8	-4626.5	-18853	-0.0000868	0.0005615	0.0035	2.08		17607.68	17607.68	3.81		Si
SLD 4	2.9	7942.54	-12685	-0.0001166	0.0005615	0.0035	2.08		11781.25	11781.25	1.48		Si
SLD 4	4.8	-2909.69	-14937	-0.0000617	0.0005615	0.0035	2.08		14661.35	14661.35	5.04		Si
SLD 3	2.9	8042.46	-12510	-0.0001202	0.0005615	0.0035	2.08		11648.3	11648.3	1.45		Si
SLD 3	4.8	-2964.12	-14721	-0.0000615	0.0005615	0.0035	2.08		14494.82	14494.82	4.89		Si
SLV 1	2.9	11314.73	-16211	-0.0001919	0.0005615	0.0035	2.08		14503.53	14503.53	1.28		Si
SLV 1	4.8	-4753.29	-18348	-0.0000863	0.0005615	0.0035	2.08		17234.92	17234.92	3.63		Si
SLV 11	2.9	4276.47	-5113	-0.0000938	0.0005615	0.0035	2.08		5303.42	5303.42	1.24		Si
SLV 11	4.8	-560.66	-7617	-0.0000238	0.0005615	0.0035	2.08		8471.18	8471.18	15.11		Si
SLV 4	2.9	11580.66	-11969	-0.0053706	0.0005615	0.0035	2.08		11238.8	11238.8	0.97		No
SLV 4	4.8	-4284.98	-14630	-0.0000716	0.0005615	0.0035	2.08		14422.22	14422.22	3.37		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	2.9	7469.24	-19817	-16502	8737	2.08	1.9892	-28334	10722	5972	38062	17439	5304	22743	No	2.6	Si
SLU 77	4.8	-2711.93	-22865	-19040	8681	2.08	2.08	-32693	10833	6309	38062	17439	5304	22743	No	2.62	Si
SLU 80	2.9	7443.65	-19672	-16381	8720	2.08	1.9848	-28127	10695	5944	38062	17439	5304	22743	No	2.61	Si
SLU 80	4.8	-2708.68	-22718	-18918	8665	2.08	2.08	-32483	10833	6309	38062	17439	5304	22743	No	2.62	Si
SLU 75	2.9	7373.78	-19545	-16275	8645	2.08	1.9881	-27945	10670	5940	38062	17439	5304	22743	No	2.63	Si
SLU 75	4.8	-2680.42	-22552	-18780	8592	2.08	2.08	-32246	10833	6309	38062	17439	5304	22743	No	2.65	Si
SLU 81	2.9	7461.78	-19883	-16557	8743	2.08	1.9941	-28429	10735	5994	38062	17439	5304	22743	No	2.6	Si
SLU 81	4.8	-2720.51	-22941	-19103	8688	2.08	2.08	-32801	10833	6309	38062	17439	5304	22743	No	2.62	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	2.9	7557.25	-20184	-16807	8850	2.08	1.9967	-28859	10792	6034	38062	17439	5304	22743	No	2.57	Si
SLU 83	4.8	-2756.39	-23306	-19407	8794	2.08	2.08	-33323	10833	6309	38062	17439	5304	22743	No	2.59	Si
SLU 84	2.9	7557.25	-20213	-16831	8866	2.08	1.9983	-28900	10798	6042	38062	17439	5304	22743	No	2.57	Si
SLU 84	4.8	-2760.77	-23359	-19451	8811	2.08	2.08	-33399	10833	6309	38062	17439	5304	22743	No	2.58	Si
SLU 79	2.9	7443.65	-19643	-16357	8704	2.08	1.9831	-28086	10689	5935	38062	17439	5304	22743	No	2.61	Si
SLU 79	4.8	-2704.31	-22665	-18874	8648	2.08	2.08	-32407	10833	6309	38062	17439	5304	22743	No	2.63	Si
SLU 82	2.9	7461.78	-19912	-16581	8759	2.08	1.9957	-28470	10740	6002	38062	17439	5304	22743	No	2.6	Si
SLU 82	4.8	-2724.89	-22994	-19147	8705	2.08	2.08	-32876	10833	6309	38062	17439	5304	22743	No	2.61	Si
SLU 74	2.9	7373.78	-19516	-16251	8629	2.08	1.9865	-27904	10665	5932	38062	17439	5304	22743	No	2.64	Si
SLU 74	4.8	-2676.05	-22499	-18736	8575	2.08	2.08	-32170	10833	6309	38062	17439	5304	22743	No	2.65	Si
SLU 78	2.9	7469.24	-19846	-16526	8753	2.08	1.9909	-28376	10728	5980	38062	17439	5304	22743	No	2.6	Si
SLU 78	4.8	-2716.3	-22918	-19084	8698	2.08	2.08	-32768	10833	6309	38062	17439	5304	22743	No	2.61	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	2.9	11813.44	-11560	-9626	10817	2.08	0.0542	-209179	16250	247	38062	26159	5304	31463		2.91	Si
SLV 3	4.8	-4411.78	-14125	-11762	9964	2.08	2.08	-20196	14456	8419	38062	26159	5304	31463		3.16	Si
SLD 2	2.9	7739.43	-14695	-12237	8714	2.08	1.54	-21011	14619	6304	38062	26159	5304	31463		3.61	Si
SLD 2	4.8	-3055.3	-16782	-13974	8355	2.08	2.08	-23995	15216	8862	38062	26159	5304	31463		3.77	Si
SLD 1	2.9	7839.35	-14520	-12091	8772	2.08	1.5003	-20761	14569	6120	38062	26159	5304	31463		3.59	Si
SLD 1	4.8	-3109.72	-16565	-13794	8411	2.08	2.08	-23685	15154	8825	38062	26159	5304	31463		3.74	Si
SLV 4	2.9	11580.66	-11969	-9966	10682	2.08	0.2172	-170924	16250	988	38062	26159	5304	31463		2.95	Si
SLV 4	4.8	-4284.98	-14630	-12182	9833	2.08	2.08	-20918	14600	8503	38062	26159	5304	31463		3.2	Si
SLV 6	2.9	6193.17	-21382	-17805	10193	2.08	2.08	-30572	16250	9464	38062	26159	5304	31463		3.09	Si
SLV 6	4.8	-3201.04	-22789	-18976	10015	2.08	2.08	-32583	16250	9464	38062	26159	5304	31463		3.14	Si
SLD 4	2.9	7942.54	-12685	-10563	8059	2.08	1.2416	-18138	14044	4883	38062	26159	5304	31463		3.9	Si
SLD 4	4.8	-2909.69	-14937	-12439	7675	2.08	2.08	-21358	14688	8554	38062	26159	5304	31463		4.1	Si
SLV 2	2.9	11081.95	-16619	-13839	12188	2.08	1.1195	-23763	15169	4755	38062	26159	5304	31463		2.58	Si
SLV 2	4.8	-4626.5	-18853	-15699	11395	2.08	2.08	-26956	15808	9206	38062	26159	5304	31463		2.76	Si
SLD 3	2.9	8042.46	-12510	-10417	8117	2.08	1.1913	-17887	13994	4668	38062	26159	5304	31463		3.88	Si
SLD 3	4.8	-2964.12	-14721	-12258	7731	2.08	2.08	-21048	14626	8518	38062	26159	5304	31463		4.07	Si
SLV 1	2.9	11314.73	-16211	-13499	12323	2.08	1.0261	-23179	15052	4325	38062	26159	5304	31463		2.55	Si
SLV 1	4.8	-4753.29	-18348	-15279	11526	2.08	2.08	-26235	15664	9122	38062	26159	5304	31463		2.73	Si
SLV 5	2.9	6341.84	-21121	-17588	10280	2.08	2.08	-30199	16250	9464	38062	26159	5304	31463		3.06	Si
SLV 5	4.8	-3282.01	-22466	-18708	10098	2.08	2.08	-32123	16250	9464	38062	26159	5304	31463		3.12	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.32	11876	-6916	168.97	892.98	5.28	Si
SLV 12	179667	0.32	12375	-7207	168.97	927.2	5.49	Si
SLV 7	179667	0.32	12976	-7557	168.97	968.09	5.73	Si
SLV 8	179667	0.32	13475	-7848	168.97	1001.73	5.93	Si
SLV 15	179667	0.32	19277	-11227	168.97	1373.36	8.13	Si
SLV 16	179667	0.32	20058	-11682	168.97	1420.65	8.41	Si
SLV 3	179667	0.32	22945	-13363	168.97	1589.72	9.41	Si
SLV 4	179667	0.32	23726	-13818	168.97	1633.95	9.67	Si
SLV 13	179667	0.32	26842	-15633	168.97	1803.92	10.68	Si
SLV 14	179667	0.32	27624	-16088	168.97	1844.9	10.92	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.05 Ta = 0.0706

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-20593	-17647	-405	0.548	2378.8	0.964	8.25253	10.95836	No
SLV 6	-20431	-14328	-426	0.55	2362.3	0.964	8.29598	10.95836	No
SLV 9	-20230	-17398	-405	0.556	2341.8	0.964	8.38307	10.95836	No
SLV 5	-20068	-14079	-425	0.559	2325.3	0.964	8.42826	10.95836	No
SLV 14	-16280	-17136	-85	0.686	1940	0.957	10.41952	5.89448	Si
SLV 12	-7436	-4920	439	1.266	1043.6	0.927	19.84007	10.95836	Si
SLV 2	-15740	-6071	-155	0.702	1885.2	0.956	10.67334	5.89448	Si
SLV 13	-15711	-16746	-85	0.707	1882.2	0.956	10.75137	5.89448	Si
SLV 8	-7274	-1601	418	1.29	1027.3	0.926	20.23855	10.95836	Si
SLV 1	-15171	-5681	-155	0.724	1827.3	0.955	11.02488	5.89448	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.043	SLU 50	Si
V_SLU	2.565	SLU 84	Si
PF_SLV	0.722	SLV 7	No
V_SLV	2.553	SLV 1	Si
PFFP_SLV	5.285	SLV 11	Si
R_SLV	0.753	SLV 10	No

Maschio 96

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	5.826	-2.013	5.826	L4	L5	1.88	0.28	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 47	2.9	479.08	-10132	-0.0000341	0.0003743	0.0035	1.88	7723.81	8219.44	8219.44	17.16	No	Si
SLU 47	4.8	-625.46	-9350	-0.0000331	0.0003743	0.0035	1.88	7255.47	8553.38	8553.38	13.68	No	Si
SLU 1	2.9	342.76	-7927	-0.0000261	0.0003743	0.0035	1.88	6349.3	6658.33	6658.33	19.43	No	Si
SLU 1	4.8	-443.22	-7365	-0.0000253	0.0003743	0.0035	1.88	5971.48	7098.19	7098.19	16.02	No	Si
SLU 51	2.9	486.59	-10327	-0.0000348	0.0003743	0.0035	1.88	7837.19	8361.78	8361.78	17.18	No	Si
SLU 51	4.8	-631.03	-9539	-0.0000337	0.0003743	0.0035	1.88	7370.82	8691.21	8691.21	13.77	No	Si
SLU 44	2.9	470.87	-9921	-0.0000334	0.0003743	0.0035	1.88	7599.37	8066.27	8066.27	17.13	No	Si
SLU 44	4.8	-618.68	-9115	-0.0000323	0.0003743	0.0035	1.88	7111.23	8384.16	8384.16	13.55	No	Si
SLU 46	2.9	471.21	-10233	-0.0000344	0.0003743	0.0035	1.88	7782.5	8292.75	8292.75	17.6	No	Si
SLU 46	4.8	-617.45	-9443	-0.0000333	0.0003743	0.0035	1.88	7312.4	8621.12	8621.12	13.96	No	Si
SLU 45	2.9	470.15	-10208	-0.0000343	0.0003743	0.0035	1.88	7768.17	8274.74	8274.74	17.6	No	Si
SLU 45	4.8	-615.65	-9376	-0.0000331	0.0003743	0.0035	1.88	7271.6	8572.51	8572.51	13.92	No	Si
SLU 48	2.9	478.36	-10420	-0.000035	0.0003743	0.0035	1.88	7890.47	8429.53	8429.53	17.62	No	Si
SLU 48	4.8	-622.42	-9610	-0.0000339	0.0003743	0.0035	1.88	7413.69	8743.02	8743.02	14.05	No	Si
SLU 49	2.9	479.42	-10445	-0.0000351	0.0003743	0.0035	1.88	7904.62	8447.61	8447.61	17.62	No	Si
SLU 49	4.8	-624.22	-9677	-0.0000341	0.0003743	0.0035	1.88	7453.95	8791.28	8791.28	14.08	No	Si
SLU 50	2.9	485.53	-10303	-0.0000347	0.0003743	0.0035	1.88	7822.94	8343.74	8343.74	17.18	No	Si
SLU 50	4.8	-629.23	-9472	-0.0000335	0.0003743	0.0035	1.88	7330.24	8642.46	8642.46	13.73	No	Si
SLU 43	2.9	469.1	-9880	-0.0000332	0.0003743	0.0035	1.88	7575.02	8036.6	8036.6	17.13	No	Si
SLU 43	4.8	-615.68	-9004	-0.0000319	0.0003743	0.0035	1.88	7041.86	8303.98	8303.98	13.49	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	2.9	3824.02	-11186	-0.0000685	0.0005615	0.0035	1.88		9412.24	9412.24	2.46		Si
SLV 2	4.8	-2665.07	-8078	-0.0000477	0.0005615	0.0035	1.88		7868.29	7868.29	2.95		Si
SLV 11	2.9	-1842.76	-1189	-0.0004162	0.0005615	0.0035	1.504		1991.11	1991.11	1.08		Si
SLV 11	4.8	390.79	-165	-0.0007971	0.0005615	0.0035	1.504		356	356	0.91		No
SLV 12	2.9	-1950.4	-1385	-0.000397	0.0005615	0.0035	1.504		2168.96	2168.96	1.11		Si
SLV 12	4.8	471.64	-755	-0.0000084	0.0005615	0.0035	1.88		900.71	900.71	1.91		Si
SLV 8	2.9	-4.44	-1529	-0.0000043	0.0005615	0.0035	1.88		2298.29	2298.29	518.06		Si
SLV 8	4.8	-921.52	1250	0.1158392	0.0005615	0.0035	1.504		0	0	0		No
SLV 4	2.9	3090.81	-6832	-0.0000506	0.0005615	0.0035	1.88		6194.74	6194.74	2		Si
SLV 4	4.8	-2599.96	-2770	-0.000197	0.0005615	0.0035	1.504		3407.16	3407.16	1.31		Si
SLV 16	2.9	-3395.73	-6353	-0.0000569	0.0005615	0.0035	1.504		6465.97	6465.97	1.9		Si
SLV 16	4.8	2043.91	-9452	-0.0000461	0.0005615	0.0035	1.88		8223.21	8223.21	4.02		Si
SLV 15	2.9	-3227.19	-6045	-0.0000539	0.0005615	0.0035	1.504		6211.29	6211.29	1.92		Si
SLV 15	4.8	1917.31	-8529	-0.0000421	0.0005615	0.0035	1.88		7563.19	7563.19	3.94		Si
SLV 1	2.9	3992.57	-10878	-0.0000696	0.0005615	0.0035	1.88		9199.39	9199.39	2.3		Si
SLV 1	4.8	-2791.67	-7154	-0.0000469	0.0005615	0.0035	1.88		7132.99	7132.99	2.56		Si
SLV 7	2.9	103.2	-1332	-0.0000046	0.0005615	0.0035	1.88		1429.54	1429.54	13.85		Si
SLV 7	4.8	-1002.37	1840	0.1696069	0.0005615	0.0035	1.504		0	0	0		No
SLV 3	2.9	3259.36	-6524	-0.0000537	0.0005615	0.0035	1.88		5941.85	5941.85	1.82		Si
SLV 3	4.8	-2726.56	-1846	-0.0006332	0.0005615	0.0035	1.504		2584.17	2584.17	0.95		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 36	2.9	197.88	-10902	-9078	-896	1.88	1.88	-17245	9244	4866	38062	15763	4794	20557	No	22.94	Si
SLU 36	4.8	-209.07	-11323	-9428	-927	1.88	1.88	-17911	9333	4913	38062	15763	4794	20557	No	22.16	Si
SLU 83	2.9	284.98	-13002	-10827	-952	1.88	1.88	-20568	9687	5099	38062	15763	4794	20557	No	21.6	Si
SLU 83	4.8	-325.13	-13218	-11007	-989	1.88	1.88	-20910	9732	5123	38062	15763	4794	20557	No	20.78	Si
SLU 84	2.9	286.04	-13027	-10847	-971	1.88	1.88	-20607	9692	5102	38062	15763	4794	20557	No	21.17	Si
SLU 84	4.8	-326.93	-13285	-11063	-1009	1.88	1.88	-21016	9747	5131	38062	15763	4794	20557	No	20.38	Si
SLU 81	2.9	276.77	-12790	-10651	-949	1.88	1.88	-20233	9642	5076	38062	15763	4794	20557	No	21.67	Si
SLU 81	4.8	-318.35	-12984	-10812	-986	1.88	1.88	-20540	9683	5097	38062	15763	4794	20557	No	20.85	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 39	2.9	150.43	-10838	-9025	-997	1.88	1.88	-17144	9230	4859	38062	15763	4794	20557	No	20.62	Si
SLU 39	4.8	-145.89	-11345	-9447	-1028	1.88	1.88	-17946	9337	4915	38062	15763	4794	20557	No	19.99	Si
SLU 41	2.9	158.64	-11049	-9201	-1000	1.88	1.88	-17479	9275	4882	38062	15763	4794	20557	No	20.56	Si
SLU 41	4.8	-152.66	-11579	-9642	-1032	1.88	1.88	-18317	9387	4941	38062	15763	4794	20557	No	19.92	Si
SLU 82	2.9	277.83	-12815	-10671	-968	1.88	1.88	-20272	9647	5078	38062	15763	4794	20557	No	21.24	Si
SLU 82	4.8	-320.15	-13051	-10868	-1005	1.88	1.88	-20646	9697	5105	38062	15763	4794	20557	No	20.45	Si
SLU 33	2.9	189.66	-10690	-8902	-893	1.88	1.88	-16910	9199	4842	38062	15763	4794	20557	No	23.02	Si
SLU 33	4.8	-202.3	-11088	-9234	-924	1.88	1.88	-17541	9283	4887	38062	15763	4794	20557	No	22.25	Si
SLU 42	2.9	159.7	-11074	-9221	-1019	1.88	1.88	-17518	9280	4885	38062	15763	4794	20557	No	20.17	Si
SLU 42	4.8	-154.46	-11646	-9698	-1051	1.88	1.88	-18423	9401	4949	38062	15763	4794	20557	No	19.56	Si
SLU 40	2.9	151.49	-10862	-9045	-1016	1.88	1.88	-17183	9236	4862	38062	15763	4794	20557	No	20.23	Si
SLU 40	4.8	-147.69	-11412	-9503	-1048	1.88	1.88	-18052	9351	4923	38062	15763	4794	20557	No	19.62	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	2.9	601.27	-15702	-13075	-5222	1.88	1.88	-24839	15384	8098	38062	23644	4794	28438		5.45	Si
SLV 9	4.8	173.76	-17856	-14869	-4692	1.88	1.88	-28247	16066	8457	38062	23644	4794	28438		6.06	Si
SLV 3	2.9	3259.36	-6524	-5432	5687	1.88	1.3212	-10320	12481	4617	38062	23644	4794	28438		5	Si
SLV 3	4.8	-2726.56	-1846	-1537	4870	1.504	0	0	0	0	38062	18916	3835	22751		4.67	Si
SLV 4	2.9	3090.81	-6832	-5689	5227	1.88	1.4628	-10807	12578	5152	38062	23644	4794	28438		5.44	Si
SLV 4	4.8	-2599.96	-2770	-2307	4410	1.504	0.0043	0	0	0	38062	18916	3835	22751		5.16	Si
SLV 14	2.9	-2662.52	-10707	-8916	-6463	1.88	1.88	-16938	13804	7267	38062	23644	4794	28438		4.4	Si
SLV 14	4.8	1978.8	-14760	-12291	-5696	1.88	1.88	-23349	15086	7942	38062	23644	4794	28438		4.99	Si
SLV 13	2.9	-2493.98	-10399	-8660	-6004	1.88	1.88	-16450	13707	7215	38062	23644	4794	28438		4.74	Si
SLV 13	4.8	1852.2	-13836	-11522	-5236	1.88	1.88	-21887	14794	7788	38062	23644	4794	28438		5.43	Si
SLV 7	2.9	103.2	-1332	-1109	4740	1.88	1.88	-2107	10838	5705	38062	23644	4794	28438		6	Si
SLV 7	4.8	-1002.37	1840	1532	4160	1.504	1.1859	0	0	0	38062	18916	3835	22751		5.47	Si
SLV 10	2.9	493.63	-15899	-13239	-5516	1.88	1.88	-25150	15447	8131	38062	23644	4794	28438		5.16	Si
SLV 10	4.8	254.61	-18446	-15361	-4986	1.88	1.88	-29180	16250	8554	38062	23644	4794	28438		5.7	Si
SLV 8	2.9	-4.44	-1529	-1273	4446	1.88	1.88	-2418	10900	5738	38062	23644	4794	28438		6.4	Si
SLV 8	4.8	-921.52	1250	1041	3866	1.504	0.6087	0	0	0	38062	18916	3835	22751		5.88	Si
SLV 15	2.9	-3227.19	-6045	-5034	-3875	1.504	1.2185	0	0	0	38062	18916	3835	22751		5.87	Si
SLV 15	4.8	1917.31	-8529	-7102	-3317	1.88	1.88	-13491	13115	6904	38062	23644	4794	28438		8.57	Si
SLV 16	2.9	-3395.73	-6353	-5290	-4335	1.504	1.2165	0	0	0	38062	18916	3835	22751		5.25	Si
SLV 16	4.8	2043.91	-9452	-7871	-3777	1.88	1.88	-14953	13407	7058	38062	23644	4794	28438		7.53	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.32	0	-764	152.73	0	0	No, e>t/2
SLV 7	179667	0.32	0	-201	152.73	0	0	No, e>t/2
SLV 8	179667	0.32	0	-557	152.73	0	0	No, e>t/2
SLV 12	179667	0.32	2128	-1120	152.73	154.64	1.01	Si
SLV 3	179667	0.32	9380	-4938	152.73	648.82	4.25	Si
SLV 4	179667	0.32	10439	-5495	152.73	716.72	4.69	Si
SLV 15	179667	0.32	12947	-6815	152.73	873.24	5.72	Si
SLV 16	179667	0.32	14005	-7373	152.73	937.5	6.14	Si
SLV 1	179667	0.32	18327	-9647	152.73	1188.54	7.78	Si
SLV 2	179667	0.32	19385	-10205	152.73	1247.3	8.17	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.05 Ta = 0.0706

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-16799	-6592	-469	0.592	1965.5	0.961	8.94864	10.95836	No
SLV 9	-16265	-6471	-469	0.608	1911.2	0.96	9.2065	10.95836	No
SLV 6	-15723	-6102	-312	0.635	1856	0.959	9.62233	10.95836	No
SLV 5	-15189	-5981	-313	0.654	1801.8	0.958	9.9193	10.95836	No
SLV 14	-12339	-7557	-376	0.774	1512.1	0.951	11.83609	5.89448	Si
SLV 13	-11503	-7368	-377	0.821	1427.3	0.948	12.58284	5.89448	Si
SLV 2	-8753	-5923	145	1.05	1148.5	0.938	16.27294	5.89448	Si
SLV 1	-7917	-5735	145	1.139	1064	0.934	17.71963	5.89448	Si
SLV 16	-7310	-7865	-141	1.214	1002.7	0.931	18.95224	5.89448	Si
SLV 15	-6474	-7676	-141	1.334	918.5	0.926	20.95266	5.89448	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	13.487	SLU 43	Si
V_SLU	19.556	SLU 42	Si
PF_SLV	0	SLV 7	No
V_SLV	4.4	SLV 14	Si
PFFP_SLV	0	SLV 7	No
R_SLV	0.817	SLV 10	No

Maschio 97

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.284	-0.133	5.826	L4	L5	9.11	0.28	3.44	3.44	3.44			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 35	2	-588.64	-74749	-0.0000417	0.0004492	0.0035	9.1099	258822.57	341302.85	341302.85	579.81	No	Si
SLU 35	5.44	-2075.09	-50880	-0.0000286	0.0004492	0.0035	9.1099	193924	257497.53	257497.53	124.09	No	Si
SLU 81	2	-990.4	-88696	-0.00005	0.0004492	0.0035	9.1099	289035.25	386371.98	386371.98	390.12	No	Si
SLU 81	5.44	-2654.42	-59040	-0.0000334	0.0004492	0.0035	9.1099	217982.61	287183.59	287183.59	108.19	No	Si
SLU 39	2	-864.13	-75433	-0.0000422	0.0004492	0.0035	9.1099	260437.53	343553.1	343553.1	397.57	No	Si
SLU 39	5.44	-2644.34	-50521	-0.0000286	0.0004492	0.0035	9.1099	192818.73	256160.58	256160.58	96.87	No	Si
SLU 74	2	-840.87	-86909	-0.0000489	0.0004492	0.0035	9.1099	285482.16	380879.17	380879.17	452.96	No	Si
SLU 74	5.44	-2225.85	-58320	-0.0000329	0.0004492	0.0035	9.1099	215937.78	284661.33	284661.33	127.89	No	Si
SLU 32	2	-714.59	-73647	-0.0000411	0.0004492	0.0035	9.1099	256191.81	337677.31	337677.31	472.55	No	Si
SLU 32	5.44	-2215.77	-49801	-0.000028	0.0004492	0.0035	9.1099	190594.61	253484	253484	114.4	No	Si
SLU 41	2	-738.18	-76536	-0.0000428	0.0004492	0.0035	9.1099	263010.71	347178.63	347178.63	470.32	No	Si
SLU 41	5.44	-2503.66	-51600	-0.0000292	0.0004492	0.0035	9.1099	196125.4	260174.11	260174.11	103.92	No	Si
SLU 83	2	-864.45	-89798	-0.0000506	0.0004492	0.0035	9.1099	291181.06	389761.21	389761.21	450.88	No	Si
SLU 83	5.44	-2513.74	-60119	-0.000034	0.0004492	0.0035	9.1099	221020.42	290965.71	290965.71	115.75	No	Si
SLU 18	2	-664.23	-66581	-0.000037	0.0004492	0.0035	9.1099	238487.43	313599.02	313599.02	472.12	No	Si
SLU 18	5.44	-2007.92	-44121	-0.0000248	0.0004492	0.0035	9.1099	172521.77	232373.69	232373.69	115.73	No	Si
SLU 40	2	-1602.63	-75733	-0.0000427	0.0004492	0.0035	9.1099	261139.46	344537.15	344537.15	214.98	No	Si
SLU 40	5.44	-2054.15	-50619	-0.0000284	0.0004492	0.0035	9.1099	193121.61	256526.5	256526.5	124.88	No	Si
SLU 20	2	-538.29	-67683	-0.0000376	0.0004492	0.0035	9.1099	241345.89	317460.85	317460.85	589.76	No	Si
SLU 20	5.44	-1867.24	-45201	-0.0000253	0.0004492	0.0035	9.1099	176030.39	236387.23	236387.23	126.6	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	2	-28712.74	-46347	-0.0000355	0.0006738	0.0035	9.1099		245200.98	245200.98	8.54		Si
SLV 7	5.44	-73543.11	-33760	-0.0000471	0.0006738	0.0035	9.1099		194519.62	194519.62	2.64		Si
SLV 12	2	-23524.8	-63205	-0.0000431	0.0006738	0.0035	9.1099		309965.66	309965.66	13.18		Si
SLV 12	5.44	-66816.29	-38872	-0.0000454	0.0006738	0.0035	9.1099		215104.04	215104.04	3.22		Si
SLV 5	2	22105.91	-55406	-0.0000382	0.0006738	0.0035	9.1099		239934.37	239934.37	10.85		Si
SLV 5	5.44	64431.96	-39570	-0.0000448	0.0006738	0.0035	9.1099		177135.27	177135.27	2.75		Si
SLV 11	2	-25551.96	-63185	-0.0000438	0.0006738	0.0035	9.1099		309886.08	309886.08	12.13		Si
SLV 11	5.44	-71198.57	-38776	-0.0000473	0.0006738	0.0035	9.1099		214716.67	214716.67	3.02		Si
SLD 10	2	11677.87	-64888	-0.0000397	0.0006738	0.0035	9.1099		276123.35	276123.35	23.65		Si
SLD 10	5.44	30652.76	-41591	-0.0000336	0.0006738	0.0035	9.1099		185295.26	185295.26	6.04		Si
SLV 10	2	27293.85	-72265	-0.0000496	0.0006738	0.0035	9.1099		301675.73	301675.73	11.05		Si
SLV 10	5.44	71158.79	-44682	-0.0000501	0.0006738	0.0035	9.1099		197714.6	197714.6	2.78		Si
SLV 8	2	-26685.58	-46367	-0.0000348	0.0006738	0.0035	9.1099		245284.62	245284.62	9.19		Si
SLV 8	5.44	-69160.83	-33856	-0.0000446	0.0006738	0.0035	9.1099		194907	194907	2.82		Si
SLV 6	2	24133.07	-55427	-0.0000389	0.0006738	0.0035	9.1099		240014.18	240014.18	9.95		Si
SLV 6	5.44	68814.24	-39666	-0.0000467	0.0006738	0.0035	9.1099		177523.77	177523.77	2.58		Si
SLD 6	2	10329.49	-57682	-0.0000351	0.0006738	0.0035	9.1099		248677.23	248677.23	24.07		Si
SLD 6	5.44	29648.93	-39438	-0.000032	0.0006738	0.0035	9.1099		176600.89	176600.89	5.96		Si
SLV 9	2	25266.69	-72244	-0.0000488	0.0006738	0.0035	9.1099		301606.58	301606.58	11.94		Si
SLV 9	5.44	66776.5	-44586	-0.0000484	0.0006738	0.0035	9.1099		197332.4	197332.4	2.96		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 18	2	-664.23	-66581	-47497	984	9.1099	9.1099	-18621	10816	27589	108749	91669	46461	136338	No	138.57	Si
SLU 18	5.44	-2007.92	-44121	-31475	1133	9.1099	9.1099	-12339	9979	25453	108749	91669	46461	134202	No	118.45	Si
SLU 56	2	-515.03	-79159	-56470	938	9.1099	9.1099	-22138	10833	27633	108749	91669	46461	136382	No	145.34	Si
SLU 56	5.44	-1448.75	-53000	-37809	1127	9.1099	9.1099	-14823	10310	26298	108749	91669	46461	135047	No	119.79	Si
SLU 53	2	-640.97	-78057	-55684	944	9.1099	9.1099	-21830	10833	27633	108749	91669	46461	136382	No	144.46	Si
SLU 53	5.44	-1589.43	-51921	-37039	1131	9.1099	9.1099	-14521	10269	26195	108749	91669	46461	134944	No	119.31	Si
SLU 83	2	-864.45	-89798	-64060	1050	9.1099	9.1099	-25114	10833	27633	108749	91669	46461	136382	No	129.94	Si
SLU 83	5.44	-2513.74	-60119	-42888	1250	9.1099	9.1099	-16814	10575	26975	108749	91669	46461	135724	No	108.58	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 39	2	-864.13	-75433	-53812	913	9.1099	9.1099	-21096	10833	27633	108749	91669	46461	136382	No	149.31	Si
SLU 39	5.44	-2644.34	-50521	-36040	1074	9.1099	9.1099	-14129	10217	26062	108749	91669	46461	134811	No	125.48	Si
SLU 20	2	-538.29	-67683	-48284	978	9.1099	9.1099	-18929	10833	27633	108749	91669	46461	136382	No	139.42	Si
SLU 20	5.44	-1867.24	-45201	-32245	1129	9.1099	9.1099	-12641	10019	25556	108749	91669	46461	134305	No	118.93	Si
SLU 60	2	-790.51	-79843	-56958	1126	9.1099	9.1099	-22330	10833	27633	108749	91669	46461	136382	No	121.14	Si
SLU 60	5.44	-2017.99	-52641	-37553	1312	9.1099	9.1099	-14722	10296	26264	108749	91669	46461	135012	No	102.89	Si
SLU 58	2	-534.15	-78372	-55908	937	9.1099	9.1099	-21918	10833	27633	108749	91669	46461	136382	No	145.56	Si
SLU 58	5.44	-1362.54	-52277	-37293	1124	9.1099	9.1099	-14620	10283	26229	108749	91669	46461	134978	No	120.07	Si
SLU 62	2	-664.56	-80946	-57745	1120	9.1099	9.1099	-22638	10833	27633	108749	91669	46461	136382	No	121.76	Si
SLU 62	5.44	-1877.31	-53720	-38323	1309	9.1099	9.1099	-15024	10337	26366	108749	91669	46461	135115	No	103.25	Si
SLU 81	2	-990.4	-88696	-63274	1055	9.1099	9.1099	-24806	10833	27633	108749	91669	46461	136382	No	129.24	Si
SLU 81	5.44	-2654.42	-59040	-42118	1254	9.1099	9.1099	-16512	10535	26872	108749	91669	46461	135621	No	108.18	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	2	3232.51	-32618	-23269	-15292	9.1099	9.1099	-9122	14324	36539	108749	137503	46461	145287		9.5	Si
SLV 2	5.44	19027.54	-31808	-22691	-12949	9.1099	9.1099	-8896	14279	36423	108749	137503	46461	145172		11.21	Si
SLV 7	2	-28712.74	-46347	-33063	29872	9.1099	9.1099	-12962	15092	38497	108749	137503	46461	147246		4.93	Si
SLV 7	5.44	-73543.11	-33760	-24084	24142	9.1099	7.1297	-12122	14925	29794	108749	137503	46461	138543		5.74	Si
SLV 10	2	27293.85	-72265	-51552	-28891	9.1099	9.1099	-20210	16250	41450	108749	137503	46461	150199		5.2	Si
SLV 10	5.44	71158.79	-44682	-31875	-22873	9.1099	8.8872	-12496	14999	37325	108749	137503	46461	146073		6.39	Si
SLV 15	2	-4651.4	-85994	-61346	16273	9.1099	9.1099	-24050	16250	41450	108749	137503	46461	150199		9.23	Si
SLV 15	5.44	-21411.86	-46634	-33268	14218	9.1099	9.1099	-13042	15108	38538	108749	137503	46461	147287		10.36	Si
SLV 12	2	-23524.8	-63205	-45089	30525	9.1099	9.1099	-17677	16035	40903	108749	137503	46461	149651		4.9	Si
SLV 12	5.44	-66816.29	-38872	-27730	24573	9.1099	8.5083	-11697	14839	35352	108749	137503	46461	144101		5.86	Si
SLV 6	2	24133.07	-55427	-39540	-31905	9.1099	9.1099	-15501	15600	39793	108749	137503	46461	148542		4.66	Si
SLV 6	5.44	68814.24	-39666	-28297	-25651	9.1099	8.4604	-11093	14719	34867	108749	137503	46461	143616		5.6	Si
SLV 9	2	25266.69	-72244	-51537	-26531	9.1099	9.1099	-20204	16250	41450	108749	137503	46461	150199		5.66	Si
SLV 9	5.44	66776.5	-44586	-31807	-20527	9.1099	9.1099	-12469	14994	38246	108749	137503	46461	146995		7.16	Si
SLV 8	2	-26685.58	-46367	-33077	27512	9.1099	9.1099	-12968	15094	38500	108749	137503	46461	147249		5.35	Si
SLV 8	5.44	-69160.83	-33856	-24152	21795	9.1099	7.5366	-11502	14800	31232	108749	137503	46461	139981		6.42	Si
SLV 11	2	-25551.96	-63185	-45074	32886	9.1099	9.1099	-17671	16034	40900	108749	137503	46461	149648		4.55	Si
SLV 11	5.44	-71198.57	-38776	-27662	26920	9.1099	8.1564	-12163	14933	34103	108749	137503	46461	142852		5.31	Si
SLV 5	2	22105.91	-55406	-39525	-29544	9.1099	9.1099	-15495	15599	39790	108749	137503	46461	148539		5.03	Si
SLV 5	5.44	64431.96	-39570	-28228	-23304	9.1099	8.78	-11067	14713	36171	108749	137503	46461	144920		6.22	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.72 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-31690	0.32	740.06	4135.87	6029.62	5082.74	6.87	Si
SLV 4	-31751	0.32	740.06	4143.27	6038.94	5091.1	6.88	Si
SLV 1	-33873	0.32	740.06	4398.61	6360.59	5379.6	7.27	Si
SLV 2	-33934	0.32	740.06	4405.93	6369.84	5387.89	7.28	Si
SLV 7	-41680	0.32	740.06	5315.03	7536.16	6425.6	8.68	Si
SLV 8	-41720	0.32	740.06	5319.52	7541.98	6430.75	8.69	Si
SLV 5	-48957	0.32	740.06	6136.22	8615.94	7376.08	9.97	Si
SLV 6	-48996	0.32	740.06	6140.54	8621.73	7381.14	9.97	Si
SLV 11	-52417	0.32	740.06	6515.63	9129.67	7822.65	10.57	Si
SLV 12	-52456	0.32	740.06	6519.87	9135.47	7827.67	10.58	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.72 Wa = 0.05 Ta = 0.0706

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-44682	-72265	945	1.002	5795	0.94	15.49251	10.95836	Si
SLV 9	-44586	-72244	944	1.004	5785.2	0.94	15.52123	10.95836	Si
SLV 6	-39666	-55427	-912	1.104	5287.4	0.935	17.15733	10.95836	Si
SLV 5	-39570	-55406	-913	1.106	5277.7	0.935	17.19255	10.95836	Si
SLV 12	-38872	-63205	896	1.123	5207.1	0.934	17.45869	10.95836	Si
SLV 11	-38776	-63185	896	1.125	5197.4	0.934	17.49534	10.95836	Si
SLV 8	-33856	-46367	-961	1.251	4700.8	0.929	19.57414	10.95836	Si
SLV 7	-33760	-46347	-961	1.254	4691.1	0.929	19.62025	10.95836	Si
SLV 14	-48528	-88744	3094	0.898	6184.6	0.943	13.84304	5.89448	Si
SLV 13	-48377	-88712	3094	0.901	6169.3	0.943	13.88029	5.89448	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	96.871	SLU 39	Si
V_SLU	102.886	SLU 60	Si
PF_SLV	2.58	SLV 6	Si
V_SLV	4.551	SLV 11	Si
PFFP_SLV	6.868	SLV 3	Si
R_SLV	1.414	SLV 10	Si

Maschio 98

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.633	-3.314	-24.633	5.826	L5	L6	9.141	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 51	5.44	-406.13	-42933	-0.0000258	0.0003743	0.0035	9.1407	163889.2	197417.35	197417.35	486.1	No	Si
SLU 51	8.96	3656.65	-22161	-0.0000144	0.0003743	0.0035	9.1407	92668.25	98733.57	98733.57	27	No	Si
SLU 26	5.44	-707.19	-39504	-0.0000238	0.0003743	0.0035	9.1407	153174.9	185123.04	185123.04	261.77	No	Si
SLU 26	8.96	3295.4	-20381	-0.0000132	0.0003743	0.0035	9.1407	85861.06	91554.99	91554.99	27.78	No	Si
SLU 49	5.44	-554.75	-43587	-0.0000262	0.0003743	0.0035	9.1407	165885.43	199725.71	199725.71	360.03	No	Si
SLU 49	8.96	3554.4	-22753	-0.0000147	0.0003743	0.0035	9.1407	94907.14	101107.58	101107.58	28.45	No	Si
SLU 68	5.44	-850.74	-47461	-0.0000288	0.0003743	0.0035	9.1407	177405.22	212855.28	212855.28	250.2	No	Si
SLU 68	8.96	3846.87	-24178	-0.0000157	0.0003743	0.0035	9.1407	100250.02	106760.9	106760.9	27.75	No	Si
SLU 44	5.44	-252.34	-40882	-0.0000244	0.0003743	0.0035	9.1407	157531.88	190077.82	190077.82	753.26	No	Si
SLU 44	8.96	3676.23	-20010	-0.0000131	0.0003743	0.0035	9.1407	84428.3	90055.75	90055.75	24.5	No	Si
SLU 55	5.44	-668.51	-46899	-0.0000283	0.0003743	0.0035	9.1407	175765.9	210939.36	210939.36	315.54	No	Si
SLU 55	8.96	3638.8	-23379	-0.0000151	0.0003743	0.0035	9.1407	97265.29	103595.26	103595.26	28.47	No	Si
SLU 5	5.44	64.69	-33964	-0.0000201	0.0003743	0.0035	9.1407	134995.63	141466.4	141466.4	2186.87	No	Si
SLU 5	8.96	3395.05	-17292	-0.0000114	0.0003743	0.0035	9.1407	73785.53	78930.98	78930.98	23.25	No	Si
SLU 2	5.44	-108.79	-32925	-0.0000195	0.0003743	0.0035	9.1407	131465.2	161084.3	161084.3	1480.71	No	Si
SLU 2	8.96	3124.75	-16212	-0.0000106	0.0003743	0.0035	9.1407	69483.97	74441.4	74441.4	23.82	No	Si
SLU 9	5.44	-262.58	-34976	-0.0000208	0.0003743	0.0035	9.1407	138394.91	168867.41	168867.41	643.12	No	Si
SLU 9	8.96	3105.18	-18363	-0.0000119	0.0003743	0.0035	9.1407	78010.48	83316.07	83316.07	26.83	No	Si
SLU 47	5.44	-78.86	-41922	-0.000025	0.0003743	0.0035	9.1407	160772.22	193818.95	193818.95	2457.71	No	Si
SLU 47	8.96	3946.52	-21090	-0.0000138	0.0003743	0.0035	9.1407	88585.97	94408.13	94408.13	23.92	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	5.44	63771.89	-37842	-0.0000473	0.0005615	0.0035	9.1407		164109.09	164109.09	2.57		Si
SLV 5	8.96	73319.2	-14015	-0.0042449	0.0005615	0.0035	9.1407		66041.91	66041.91	0.9		No
SLV 12	5.44	-67271.19	-33879	-0.0000472	0.0005615	0.0035	9.1407		168763.2	168763.2	2.51		Si
SLV 12	8.96	-70103.26	-21436	-0.0000596	0.0005615	0.0035	7.3126		118162.59	118162.59	1.69		Si
SLV 9	5.44	63689.81	-33565	-0.0000452	0.0005615	0.0035	9.1407		147178.54	147178.54	2.31		Si
SLV 9	8.96	80516.72	-19899	-0.0001476	0.0005615	0.0035	9.1407		91147.12	91147.12	1.13		Si
SLV 10	5.44	60141.56	-33592	-0.0000434	0.0005615	0.0035	9.1407		147285.86	147285.86	2.45		Si
SLV 10	8.96	75475.38	-19886	-0.000096	0.0005615	0.0035	9.1407		91090.04	91090.04	1.21		Si
SLV 8	5.44	-67189.12	-38155	-0.000049	0.0005615	0.0035	9.1407		185848.91	185848.91	2.77		Si
SLV 8	8.96	-77300.78	-15552	-0.0003263	0.0005615	0.0035	7.3126		93607.41	93607.41	1.21		Si
SLV 7	5.44	-63640.86	-38129	-0.0000474	0.0005615	0.0035	9.1407		185746.57	185746.57	2.92		Si
SLV 7	8.96	-72259.44	-15566	-0.0002332	0.0005615	0.0035	7.3126		93664.84	93664.84	1.3		Si
SLV 3	5.44	-17946.75	-43010	-0.0000323	0.0005615	0.0035	9.1407		204290.59	204290.59	11.38		Si
SLV 3	8.96	-28277.7	-8162	-0.0000259	0.0005615	0.0035	7.3126		61703.62	61703.62	2.18		Si
SLV 4	5.44	-23502.81	-43052	-0.0000345	0.0005615	0.0035	9.1407		204450.7	204450.7	8.7		Si
SLV 4	8.96	-36171.71	-8141	-0.0000902	0.0005615	0.0035	7.3126		61611.58	61611.58	1.7		Si
SLV 11	5.44	-63722.94	-33852	-0.0000453	0.0005615	0.0035	9.1407		168656.43	168656.43	2.65		Si
SLV 11	8.96	-65061.92	-21450	-0.0000503	0.0005615	0.0035	7.3126		118218.04	118218.04	1.82		Si
SLV 6	5.44	60223.63	-37868	-0.0000457	0.0005615	0.0035	9.1407		164214.84	164214.84	2.73		Si
SLV 6	8.96	68277.86	-14002	-0.0019423	0.0005615	0.0035	9.1407		65984.2	65984.2	0.97		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 59	5.44	-995.77	-47910	-39895	3553	9.1407	9.1407	-15588	9023	23093	40441	76640	23309	63534	No	17.88	Si
SLU 59	8.96	3348.94	-24450	-20360	3566	9.1407	9.1407	-7955	8005	20488	40441	76640	23309	60929	No	17.09	Si
SLU 82	5.44	-2367.31	-53504	-44554	3581	9.1407	9.1407	-17408	9266	23714	40441	76640	23309	64155	No	17.92	Si
SLU 82	8.96	2576.83	-26360	-21951	3585	9.1407	9.1407	-8577	8088	20700	40441	76640	23309	61141	No	17.05	Si
SLU 60	5.44	-2346.55	-47923	-39906	3743	9.1407	9.1407	-15592	9023	23094	40441	76640	23309	63535	No	16.97	Si
SLU 60	8.96	1836.24	-23258	-19367	3689	9.1407	9.1407	-7567	7953	20356	40441	76640	23309	60797	No	16.48	Si
SLU 61	5.44	-1595.43	-47965	-39941	3690	9.1407	9.1407	-15606	9025	23099	40441	76640	23309	63540	No	17.22	Si
SLU 61	8.96	2676.48	-23272	-19379	3701	9.1407	9.1407	-7572	7954	20357	40441	76640	23309	60798	No	16.43	Si
SLU 63	5.44	-1421.96	-49004	-40806	3702	9.1407	9.1407	-15944	9070	23214	40441	76640	23309	63655	No	17.2	Si
SLU 63	8.96	2946.77	-24352	-20278	3712	9.1407	9.1407	-7923	8001	20477	40441	76640	23309	60918	No	16.41	Si
SLU 84	5.44	-2193.83	-54544	-45419	3592	9.1407	9.1407	-17746	9311	23829	40441	76640	23309	64270	No	17.89	Si
SLU 84	8.96	2847.12	-27440	-22850	3596	9.1407	9.1407	-8928	8135	20820	40441	76640	23309	61261	No	17.04	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	5.44	-2944.95	-54502	-45384	3645	9.1407	9.1407	-17732	9309	23825	40441	76640	23309	64266	No	17.63	Si
SLU 83	8.96	2006.88	-27427	-22839	3583	9.1407	9.1407	-8923	8134	20819	40441	76640	23309	61260	No	17.1	Si
SLU 62	5.44	-2173.07	-48962	-40771	3755	9.1407	9.1407	-15930	9068	23210	40441	76640	23309	63651	No	16.95	Si
SLU 62	8.96	2106.53	-24338	-20267	3699	9.1407	9.1407	-7919	8000	20476	40441	76640	23309	60917	No	16.47	Si
SLU 52	5.44	-841.99	-45860	-38188	3495	9.1407	9.1407	-14921	8934	22865	40441	76640	23309	63306	No	18.11	Si
SLU 52	8.96	3368.51	-22299	-18569	3553	9.1407	9.1407	-7255	7912	20249	40441	76640	23309	60690	No	17.08	Si
SLU 55	5.44	-668.51	-46899	-39053	3506	9.1407	9.1407	-15259	8979	22981	40441	76640	23309	63422	No	18.09	Si
SLU 55	8.96	3638.8	-23379	-19468	3563	9.1407	9.1407	-7607	7959	20369	40441	76640	23309	60810	No	17.07	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	5.44	-63640.86	-38129	-31750	9816	9.1407	8.7037	-13107	13038	31774	40441	114959	23309	72215		7.36	Si
SLV 7	8.96	-72259.44	-15566	-12962	10500	7.3126	0	0	0	0	40441	91968	18647	40441		3.85	Si
SLV 6	5.44	60223.63	-37868	-31534	-3649	9.1407	8.94	-12321	12881	32243	40441	114959	23309	72684		19.92	Si
SLV 6	8.96	68277.86	-14002	-11660	-4561	9.1407	0	-134219	16250	0	40441	114959	23309	40441		8.87	Si
SLV 5	5.44	63771.89	-37842	-31511	-4630	9.1407	8.6554	-12312	12879	31212	40441	114959	23309	71653		15.48	Si
SLV 5	8.96	73319.2	-14015	-11671	-5539	9.1407	0	-133433	16250	0	40441	114959	23309	40441		7.3	Si
SLV 10	5.44	60141.56	-33592	-27972	-4784	9.1407	8.3399	-10929	12603	29429	40441	114959	23309	69870		14.61	Si
SLV 10	8.96	75475.38	-19886	-16559	-5549	9.1407	2.3248	-25775	15572	10136	40441	114959	23309	50577		9.12	Si
SLV 9	5.44	63689.81	-33565	-27950	-5764	9.1407	8.0185	-10921	12601	28291	40441	114959	23309	68732		11.92	Si
SLV 9	8.96	80516.72	-19899	-16570	-6527	9.1407	1.5724	-38324	16250	7155	40441	114959	23309	47596		7.29	Si
SLV 8	5.44	-67189.12	-38155	-31773	10796	9.1407	8.4282	-13542	13125	30974	40441	114959	23309	71415		6.62	Si
SLV 8	8.96	-77300.78	-15552	-12951	11478	7.3126	0	0	0	0	40441	91968	18647	40441		3.52	Si
SLV 11	5.44	-63722.94	-33852	-28189	8681	9.1407	8.0638	-12559	12929	29191	40441	114959	23309	69632		8.02	Si
SLV 11	8.96	-65061.92	-21450	-17862	9513	7.3126	4.6114	0	0	0	40441	91968	18647	40441		4.25	Si
SLV 3	5.44	-17946.75	-43010	-35815	5806	9.1407	9.1407	-13994	13215	33823	40441	114959	23309	74264		12.79	Si
SLV 3	8.96	-28277.7	-8162	-6797	5762	7.3126	3.3179	0	0	0	40441	91968	18647	40441		7.02	Si
SLV 12	5.44	-67271.19	-33879	-28211	9662	9.1407	7.7541	-13074	13032	28293	40441	114959	23309	68734		7.11	Si
SLV 12	8.96	-70103.26	-21436	-17850	10491	7.3126	3.9001	0	0	0	40441	91968	18647	40441		3.85	Si
SLV 4	5.44	-23502.81	-43052	-35850	7341	9.1407	9.1407	-14007	13218	33830	40441	114959	23309	74271		10.12	Si
SLV 4	8.96	-36171.71	-8141	-6779	7293	7.3126	0.3821	0	0	0	40441	91968	18647	40441		5.55	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 1	179667	0.39	8961	-22934	948.31	3022.31	3.19	Si
SLV 2	179667	0.39	8962	-22937	948.31	3022.68	3.19	Si
SLV 3	179667	0.39	9071	-23217	948.31	3057.28	3.22	Si
SLV 4	179667	0.39	9072	-23220	948.31	3057.65	3.22	Si
SLV 5	179667	0.39	9704	-24837	948.31	3256.19	3.43	Si
SLV 6	179667	0.39	9705	-24839	948.31	3256.42	3.43	Si
SLV 7	179667	0.39	10073	-25781	948.31	3371.26	3.56	Si
SLV 8	179667	0.39	10074	-25783	948.31	3371.49	3.56	Si
SLV 9	179667	0.39	10452	-26751	948.31	3488.79	3.68	Si
SLV 10	179667	0.39	10453	-26753	948.31	3489.02	3.68	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-21450	-33852	892	1.758	3492	0.909	28.08544	13.42943	Si
SLV 12	-21436	-33879	892	1.758	3490.7	0.909	28.0987	13.42943	Si
SLV 9	-19899	-33565	786	1.856	3338.2	0.907	29.75487	13.42943	Si
SLV 10	-19886	-33592	786	1.857	3336.9	0.907	29.7697	13.42943	Si
SLV 7	-15566	-38129	-802	2.188	2911.9	0.899	35.38408	13.42943	Si
SLV 8	-15552	-38155	-802	2.19	2910.6	0.899	35.4048	13.42943	Si
SLV 5	-14015	-37842	-908	2.334	2761.2	0.896	37.8597	13.42943	Si
SLV 6	-14002	-37868	-908	2.335	2759.9	0.896	37.88334	13.42943	Si
SLV 15	-27776	-28754	2830	1.401	4123.8	0.92	22.13714	7.08809	Si
SLV 16	-27754	-28796	2830	1.402	4121.6	0.92	22.15056	7.08809	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	23.249	SLU 5	Si
V_SLU	16.411	SLU 63	Si
PF_SLV	0.901	SLV 5	No
V_SLV	3.523	SLV 8	Si
PFFP_SLV	3.187	SLV 1	Si
R_SLV	2.091	SLV 11	Si

Maschio 99

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.713	5.826	-24.633	5.826	L5	L6	1.92	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 47	6.34	-1675.94	-9523	-0.0000424	0.0003743	0.0035	1.92	7551.34	9008.19	9008.19	5.38	No	Si
SLU 47	8.14	74.41	-7468	-0.0000217	0.0003743	0.0035	1.92	6190.89	6495.8	6495.8	87.3	No	Si
SLU 50	6.34	-1706.8	-9676	-0.0000431	0.0003743	0.0035	1.92	7646.95	9118.66	9118.66	5.34	No	Si
SLU 50	8.14	51.6	-7617	-0.000022	0.0003743	0.0035	1.92	6294.36	6599.29	6599.29	127.89	No	Si
SLU 44	6.34	-1644.36	-9222	-0.0000412	0.0003743	0.0035	1.92	7361.23	8792.74	8792.74	5.35	No	Si
SLU 44	8.14	93.21	-7152	-0.000021	0.0003743	0.0035	1.92	5968.55	6277.19	6277.19	67.35	No	Si
SLU 43	6.34	-1643.64	-9074	-0.0000407	0.0003743	0.0035	1.92	7266.78	8687.73	8687.73	5.29	No	Si
SLU 43	8.14	89.2	-6985	-0.0000204	0.0003743	0.0035	1.92	5849.48	6162.15	6162.15	69.08	No	Si
SLU 45	6.34	-1682.54	-9501	-0.0000424	0.0003743	0.0035	1.92	7537.8	8992.66	8992.66	5.34	No	Si
SLU 45	8.14	52.91	-7440	-0.0000214	0.0003743	0.0035	1.92	6171.58	6476.61	6476.61	122.41	No	Si
SLU 46	6.34	-1682.98	-9590	-0.0000427	0.0003743	0.0035	1.92	7593.23	9056.41	9056.41	5.38	No	Si
SLU 46	8.14	55.31	-7541	-0.0000218	0.0003743	0.0035	1.92	6241.54	6546.31	6546.31	118.35	No	Si
SLU 48	6.34	-1714.12	-9803	-0.0000436	0.0003743	0.0035	1.92	7724.96	9209.89	9209.89	5.37	No	Si
SLU 48	8.14	34.11	-7756	-0.0000222	0.0003743	0.0035	1.92	6390.72	6696.68	6696.68	196.34	No	Si
SLU 49	6.34	-1714.56	-9891	-0.0000439	0.0003743	0.0035	1.92	7779.46	9274.22	9274.22	5.41	No	Si
SLU 49	8.14	36.51	-7857	-0.0000225	0.0003743	0.0035	1.92	6459.56	6766.89	6766.89	185.34	No	Si
SLU 58	6.34	-1727.72	-10399	-0.0000456	0.0003743	0.0035	1.92	8086.03	9639.61	9639.61	5.58	No	Si
SLU 58	8.14	-112.48	-8666	-0.0000256	0.0003743	0.0035	1.92	7002.18	8387.72	8387.72	74.57	No	Si
SLU 51	6.34	-1707.23	-9765	-0.0000434	0.0003743	0.0035	1.92	7701.84	9182.75	9182.75	5.38	No	Si
SLU 51	8.14	54	-7717	-0.0000223	0.0003743	0.0035	1.92	6363.69	6669.27	6669.27	123.5	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	6.34	629.65	-2086	-0.0000111	0.0005615	0.0035	1.92		2144.3	2144.3	3.41		Si
SLV 4	8.14	-2435.48	-3771	-0.000043	0.0005615	0.0035	1.536		4511.75	4511.75	1.85		Si
SLV 16	6.34	-3125.95	-6601	-0.0000489	0.0005615	0.0035	1.92		6950.57	6950.57	2.22		Si
SLV 16	8.14	2124.93	-2078	-0.0009438	0.0005615	0.0035	1.92		2136.37	2136.37	1.01		Si
SLV 3	6.34	629.31	-3008	-0.0000137	0.0005615	0.0035	1.92		2984.01	2984.01	4.74		Si
SLV 3	8.14	-2477.9	-4887	-0.0000386	0.0005615	0.0035	1.92		5482.85	5482.85	2.21		Si
SLV 15	6.34	-3126.29	-7523	-0.0000499	0.0005615	0.0035	1.92		7727.64	7727.64	2.47		Si
SLV 15	8.14	2082.51	-3193	-0.0000371	0.0005615	0.0035	1.92		3151.52	3151.52	1.51		Si
SLV 11	6.34	-1727.22	911	0.0765501	0.0005615	0.0035	1.536		0	0	0		No
SLV 11	8.14	254.48	3064	0	0.0005615	0.0035	1.536		0	0	0		No
SLV 7	6.34	-600.54	2265	0	0.0005615	0.0035	1.536		0	0	0		No
SLV 7	8.14	-1113.64	2556	0.2073142	0.0005615	0.0035	1.536		0	0	0		No
SLV 12	6.34	-1727.01	1500	0.1244348	0.0005615	0.0035	1.536		0	0	0		No
SLV 12	8.14	281.57	3777	0	0.0005615	0.0035	1.536		0	0	0		No
SLD 12	6.34	-1472.84	-3631	-0.0000232	0.0005615	0.0035	1.92		4387.7	4387.7	2.98		Si
SLD 12	8.14	74.32	-1887	-0.0000058	0.0005615	0.0035	1.92		1960.02	1960.02	26.37		Si
SLV 8	6.34	-600.33	2854	0	0.0005615	0.0035	1.536		0	0	0		No
SLV 8	8.14	-1086.55	3269	0.2637951	0.0005615	0.0035	1.536		0	0	0		No
SLV 14	6.34	-3198.42	-12333	-0.0000638	0.0005615	0.0035	1.92		11511.77	11511.77	3.6		Si
SLV 14	8.14	2330.26	-7777	-0.0000423	0.0005615	0.0035	1.92		7109.42	7109.42	3.05		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 44	6.34	-1644.36	-9222	-7679	-803	1.92	1.92	-14284	8849	4757	40441	16098	4896	20994	No	26.16	Si
SLU 44	8.14	93.21	-7152	-5955	-806	1.92	1.92	-11078	8421	4527	40441	16098	4896	20994	No	26.06	Si
SLU 48	6.34	-1714.12	-9803	-8163	-796	1.92	1.92	-15184	8969	4822	40441	16098	4896	20994	No	26.38	Si
SLU 48	8.14	34.11	-7756	-6459	-799	1.92	1.92	-12014	8546	4594	40441	16098	4896	20994	No	26.27	Si
SLU 47	6.34	-1675.94	-9523	-7930	-802	1.92	1.92	-14751	8911	4791	40441	16098	4896	20994	No	26.18	Si
SLU 47	8.14	74.41	-7468	-6219	-805	1.92	1.92	-11567	8487	4562	40441	16098	4896	20994	No	26.08	Si
SLU 43	6.34	-1643.64	-9074	-7556	-810	1.92	1.92	-14055	8818	4741	40441	16098	4896	20994	No	25.91	Si
SLU 43	8.14	89.2	-6985	-5816	-813	1.92	1.92	-10819	8387	4509	40441	16098	4896	20994	No	25.81	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 51	6.34	-1707.23	-9765	-8131	-804	1.92	1.92	-15126	8961	4817	40441	16098	4896	20994	No	26.11	Si
SLU 51	8.14	54	-7717	-6426	-807	1.92	1.92	-11953	8538	4590	40441	16098	4896	20994	No	26.01	Si
SLU 45	6.34	-1682.54	-9501	-7912	-797	1.92	1.92	-14717	8907	4788	40441	16098	4896	20994	No	26.35	Si
SLU 45	8.14	52.91	-7440	-6196	-800	1.92	1.92	-11525	8481	4559	40441	16098	4896	20994	No	26.25	Si
SLU 46	6.34	-1682.98	-9590	-7986	-792	1.92	1.92	-14855	8925	4798	40441	16098	4896	20994	No	26.5	Si
SLU 46	8.14	55.31	-7541	-6279	-795	1.92	1.92	-11680	8502	4571	40441	16098	4896	20994	No	26.4	Si
SLU 50	6.34	-1706.8	-9676	-8058	-809	1.92	1.92	-14988	8943	4808	40441	16098	4896	20994	No	25.96	Si
SLU 50	8.14	51.6	-7617	-6342	-812	1.92	1.92	-11798	8517	4579	40441	16098	4896	20994	No	25.86	Si
SLU 49	6.34	-1714.56	-9891	-8237	-791	1.92	1.92	-15321	8987	4831	40441	16098	4896	20994	No	26.53	Si
SLU 49	8.14	36.51	-7857	-6542	-794	1.92	1.92	-12169	8567	4606	40441	16098	4896	20994	No	26.43	Si
SLU 58	6.34	-1727.72	-10399	-8659	-554	1.92	1.92	-16107	9092	4888	40441	16098	4896	20994	No	37.86	Si
SLU 58	8.14	-112.48	-8666	-7216	-558	1.92	1.92	-13424	8734	4695	40441	16098	4896	20994	No	37.62	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	6.34	556.84	-8740	-7278	3815	1.92	1.92	-13539	13124	7056	40441	24147	4896	29043		7.61	Si
SLV 1	8.14	-2272.57	-10586	-8815	3303	1.92	1.92	-16397	13696	7363	40441	24147	4896	29043		8.79	Si
SLV 11	6.34	-1727.22	911	759	-1740	1.536	0	0	0	0	40441	19318	3917	23234		13.35	Si
SLV 11	8.14	254.48	3064	2552	-1882	1.536	1.92	0	0	0	40441	19318	3917	23234		12.34	Si
SLV 4	6.34	629.65	-2086	-1737	3604	1.92	1.92	-3232	11063	5947	40441	24147	4896	29043		8.06	Si
SLV 4	8.14	-2435.48	-3771	-3140	2899	1.536	0.9426	0	0	0	40441	19318	3917	23234		8.01	Si
SLV 15	6.34	-3126.29	-7523	-6264	-4498	1.92	1.6332	-13788	13174	6025	40441	24147	4896	29043		6.46	Si
SLV 15	8.14	2082.51	-3193	-2659	-3991	1.92	0.9236	-4947	11406	2950	40441	24147	4896	29043		7.28	Si
SLV 2	6.34	557.18	-7818	-6510	3689	1.92	1.92	-12110	12839	6902	40441	24147	4896	29043		7.87	Si
SLV 2	8.14	-2230.15	-9470	-7886	3177	1.92	1.92	-14669	13351	7177	40441	24147	4896	29043		9.14	Si
SLV 13	6.34	-3198.76	-13255	-11037	-4413	1.92	1.92	-20531	14523	7807	40441	24147	4896	29043		6.58	Si
SLV 13	8.14	2287.84	-8893	-7405	-3714	1.92	1.92	-13774	13172	7081	40441	24147	4896	29043		7.82	Si
SLV 3	6.34	629.31	-3008	-2505	3730	1.92	1.92	-4660	11349	6101	40441	24147	4896	29043		7.79	Si
SLV 3	8.14	-2477.9	-4887	-4069	3026	1.92	1.3588	-10746	12566	4781	40441	24147	4896	29043		9.6	Si
SLV 12	6.34	-1727.01	1500	1249	-1821	1.536	0	0	0	0	40441	19318	3917	23234		12.76	Si
SLV 12	8.14	281.57	3777	3145	-1963	1.536	1.92	0	0	0	40441	19318	3917	23234		11.84	Si
SLV 16	6.34	-3125.95	-6601	-5497	-4624	1.92	1.4592	-13530	13123	5362	40441	24147	4896	29043		6.28	Si
SLV 16	8.14	2124.93	-2078	-1730	-4118	1.92	0	-112700	16250	0	40441	24147	4896	29043		7.05	Si
SLV 14	6.34	-3198.42	-12333	-10270	-4539	1.92	1.92	-19103	14237	7654	40441	24147	4896	29043		6.4	Si
SLV 14	8.14	2330.26	-7777	-6476	-3840	1.92	1.92	-12046	12826	6895	40441	24147	4896	29043		7.56	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 8	179667	0.39	0	2859	199.19	0	0	No, Trazione
SLV 11	179667	0.39	0	1984	199.19	0	0	No, Trazione
SLV 12	179667	0.39	0	2646	199.19	0	0	No, Trazione
SLV 7	179667	0.39	0	2197	199.19	0	0	No, Trazione
SLV 4	179667	0.39	6325	-3400	199.19	456.29	2.29	Si
SLV 16	179667	0.39	7642	-4108	199.19	546.38	2.74	Si
SLV 3	179667	0.39	8252	-4436	199.19	587.48	2.95	Si
SLV 15	179667	0.39	9569	-5144	199.19	675.07	3.39	Si
SLV 2	179667	0.39	16997	-9137	199.19	1136.87	5.71	Si
SLV 14	179667	0.39	18314	-9846	199.19	1213.1	6.09	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-14860	-15063	-254	0.68	1779.9	0.956	10.33282	13.42943	No
SLV 5	-14439	-15398	-383	0.688	1737.1	0.955	10.47616	13.42943	No
SLV 10	-14174	-14527	-254	0.707	1710.2	0.954	10.77113	13.42943	No
SLV 6	-13753	-14862	-383	0.717	1667.4	0.953	10.93337	13.42943	No
SLV 13	-9455	-8908	120	1.002	1231.4	0.939	15.49765	7.08809	Si
SLV 14	-8380	-8069	119	1.104	1122.7	0.934	17.1736	7.08809	Si
SLV 1	-8051	-10025	-309	1.121	1089.4	0.933	17.46079	7.08809	Si
SLV 2	-6976	-9186	-309	1.254	981	0.927	19.66948	7.08809	Si
SLV 15	-4235	-3838	312	1.815	706.6	0.907	29.07373	7.08809	Si
SLV 16	-3160	-2999	311	2.207	600.9	0.898	35.73051	7.08809	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.286	SLU 43	Si
V_SLU	25.808	SLU 43	Si
PF_SLV	0	SLV 7	No
V_SLV	6.28	SLV 16	Si
PFFP_SLV	0	SLV 12	No
R_SLV	0.769	SLV 9	No

Maschio 100

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.683	5.826	-21.813	5.826	L5	L6	2.13	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	6.34	-1813.33	-17437	-0.0000602	0.0003743	0.0035	2.13	13237.72	16048.7	16048.7	8.85	No	Si
SLU 81	8.14	1704.82	-18792	-0.0000634	0.0003743	0.0035	2.13	13819.61	15610.63	15610.63	9.16	No	Si
SLU 44	6.34	-1544.25	-13934	-0.0000479	0.0003743	0.0035	2.13	11434.19	13661.14	13661.14	8.85	No	Si
SLU 44	8.14	1457.34	-14640	-0.0000493	0.0003743	0.0035	2.13	11832.54	12928.44	12928.44	8.87	No	Si
SLU 43	6.34	-1545.47	-13822	-0.0000476	0.0003743	0.0035	2.13	11369.89	13582.32	13582.32	8.79	No	Si
SLU 43	8.14	1450.8	-14500	-0.0000488	0.0003743	0.0035	2.13	11754.92	12841.12	12841.12	8.85	No	Si
SLU 55	6.34	-1673.63	-15789	-0.0000543	0.0003743	0.0035	2.13	12443.02	14959.83	14959.83	8.94	No	Si
SLU 55	8.14	1584.66	-16849	-0.0000567	0.0003743	0.0035	2.13	12965.21	14332.62	14332.62	9.04	No	Si
SLU 52	6.34	-1668.36	-15342	-0.0000529	0.0003743	0.0035	2.13	12211.02	14664.11	14664.11	8.79	No	Si
SLU 52	8.14	1568.18	-16332	-0.000055	0.0003743	0.0035	2.13	12715.29	13999.31	13999.31	8.93	No	Si
SLU 61	6.34	-1722.04	-15901	-0.000055	0.0003743	0.0035	2.13	12500.11	15034.56	15034.56	8.73	No	Si
SLU 61	8.14	1613.08	-17001	-0.0000573	0.0003743	0.0035	2.13	13036.67	14430.89	14430.89	8.95	No	Si
SLU 82	6.34	-1812.6	-17504	-0.0000604	0.0003743	0.0035	2.13	13267.89	16090.29	16090.29	8.88	No	Si
SLU 82	8.14	1708.74	-18876	-0.0000636	0.0003743	0.0035	2.13	13853.6	15666.75	15666.75	9.17	No	Si
SLU 63	6.34	-1727.3	-16348	-0.0000563	0.0003743	0.0035	2.13	12723.35	15334.8	15334.8	8.88	No	Si
SLU 63	8.14	1629.55	-17518	-0.000059	0.0003743	0.0035	2.13	13274.44	14768.28	14768.28	9.06	No	Si
SLU 62	6.34	-1728.03	-16282	-0.0000561	0.0003743	0.0035	2.13	12690.47	15289.75	15289.75	8.85	No	Si
SLU 62	8.14	1625.63	-17434	-0.0000587	0.0003743	0.0035	2.13	13236.44	14713.23	14713.23	9.05	No	Si
SLU 60	6.34	-1722.77	-15834	-0.0000548	0.0003743	0.0035	2.13	12466.18	14990.05	14990.05	8.7	No	Si
SLU 60	8.14	1609.15	-16917	-0.000057	0.0003743	0.0035	2.13	12997.14	14376.36	14376.36	8.93	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	6.34	-3761.71	-14900	-0.0000659	0.0005615	0.0035	2.13		15170.52	15170.52	4.03		Si
SLV 14	8.14	3968.67	-18338	-0.0000772	0.0005615	0.0035	2.13		16695.95	16695.95	4.21		Si
SLV 13	6.34	-3729.76	-15597	-0.0000676	0.0005615	0.0035	2.13		15736.36	15736.36	4.22		Si
SLV 13	8.14	3938.27	-19147	-0.0000793	0.0005615	0.0035	2.13		17383.05	17383.05	4.41		Si
SLV 12	6.34	-1900.79	-4578	-0.000025	0.0005615	0.0035	2.13		5941.13	5941.13	3.13		Si
SLV 12	8.14	1574.89	-4993	-0.0000235	0.0005615	0.0035	2.13		5325.86	5325.86	3.38		Si
SLV 15	6.34	-3660.97	-11130	-0.0000548	0.0005615	0.0035	2.13		12007.24	12007.24	3.28		Si
SLV 15	8.14	3684.49	-14062	-0.000063	0.0005615	0.0035	2.13		13148.88	13148.88	3.57		Si
SLV 11	6.34	-1880.39	-5023	-0.0000258	0.0005615	0.0035	2.13		6368.64	6368.64	3.39		Si
SLV 11	8.14	1555.47	-5510	-0.0000247	0.0005615	0.0035	2.13		5828.61	5828.61	3.75		Si
SLD 15	6.34	-2293.52	-11551	-0.0000459	0.0005615	0.0035	2.13		12366.25	12366.25	5.39		Si
SLD 15	8.14	2258.48	-13237	-0.0000502	0.0005615	0.0035	2.13		12480.14	12480.14	5.53		Si
SLV 3	6.34	1213.62	-8931	-0.0000312	0.0005615	0.0035	2.13		9038.11	9038.11	7.45		Si
SLV 3	8.14	-1568.2	-6997	-0.0000287	0.0005615	0.0035	2.13		8258.14	8258.14	5.27		Si
SLV 4	6.34	1181.67	-8234	-0.0000291	0.0005615	0.0035	2.13		8404.08	8404.08	7.11		Si
SLV 4	8.14	-1537.8	-6187	-0.0000263	0.0005615	0.0035	2.13		7496.98	7496.98	4.88		Si
SLD 16	6.34	-2307.23	-11252	-0.0000452	0.0005615	0.0035	2.13		12112.26	12112.26	5.25		Si
SLD 16	8.14	2271.53	-12889	-0.0000494	0.0005615	0.0035	2.13		12200.03	12200.03	5.37		Si
SLV 16	6.34	-3692.92	-10433	-0.0000531	0.0005615	0.0035	2.13		11393.5	11393.5	3.09		Si
SLV 16	8.14	3714.89	-13252	-0.000061	0.0005615	0.0035	2.13		12492.63	12492.63	3.36		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	6.34	-1765.06	-17937	-14937	-4390	2.13	2.13	-25045	10284	6133	40441	17859	5432	23291	No	5.31	Si
SLU 77	8.14	1688.04	-19306	-16077	-4393	2.13	2.13	-26956	10539	6285	40441	17859	5432	23291	No	5.3	Si
SLU 75	6.34	-1759.07	-17557	-14620	-4348	2.13	2.13	-24514	10213	6091	40441	17859	5432	23291	No	5.36	Si
SLU 75	8.14	1675.48	-18873	-15716	-4351	2.13	2.13	-26351	10458	6237	40441	17859	5432	23291	No	5.35	Si
SLU 81	6.34	-1813.33	-17437	-14520	-4417	2.13	2.13	-24346	10191	6078	40441	17859	5432	23291	No	5.27	Si
SLU 81	8.14	1704.82	-18792	-15648	-4420	2.13	2.13	-26237	10443	6228	40441	17859	5432	23291	No	5.27	Si
SLU 80	6.34	-1769.94	-17794	-14817	-4410	2.13	2.13	-24845	10257	6117	40441	17859	5432	23291	No	5.28	Si
SLU 80	8.14	1694.2	-19185	-15976	-4413	2.13	2.13	-26787	10516	6272	40441	17859	5432	23291	No	5.28	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	6.34	-1764.19	-17392	-14482	-4364	2.13	2.13	-24283	10182	6073	40441	17859	5432	23291	No	5.34	Si
SLU 76	8.14	1680.33	-18724	-15592	-4366	2.13	2.13	-26143	10430	6221	40441	17859	5432	23291	No	5.33	Si
SLU 83	6.34	-1818.6	-17884	-14892	-4472	2.13	2.13	-24970	10274	6127	40441	17859	5432	23291	No	5.21	Si
SLU 83	8.14	1721.3	-19309	-16079	-4475	2.13	2.13	-26960	10539	6286	40441	17859	5432	23291	No	5.2	Si
SLU 84	6.34	-1817.87	-17951	-14948	-4485	2.13	2.13	-25063	10286	6135	40441	17859	5432	23291	No	5.19	Si
SLU 84	8.14	1725.22	-19393	-16149	-4488	2.13	2.13	-27077	10555	6295	40441	17859	5432	23291	No	5.19	Si
SLU 82	6.34	-1812.6	-17504	-14576	-4430	2.13	2.13	-24439	10203	6085	40441	17859	5432	23291	No	5.26	Si
SLU 82	8.14	1708.74	-18876	-15718	-4433	2.13	2.13	-26355	10458	6237	40441	17859	5432	23291	No	5.25	Si
SLU 78	6.34	-1764.33	-18004	-14992	-4403	2.13	2.13	-25138	10296	6141	40441	17859	5432	23291	No	5.29	Si
SLU 78	8.14	1691.96	-19390	-16147	-4406	2.13	2.13	-27073	10554	6295	40441	17859	5432	23291	No	5.29	Si
SLU 79	6.34	-1770.67	-17727	-14762	-4398	2.13	2.13	-24751	10245	6110	40441	17859	5432	23291	No	5.3	Si
SLU 79	8.14	1690.28	-19101	-15906	-4400	2.13	2.13	-26670	10500	6262	40441	17859	5432	23291	No	5.29	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	6.34	-2130.08	-19468	-16211	-5596	2.13	2.13	-27182	15853	9455	40441	26789	5432	32220		5.76	Si
SLV 10	8.14	2420.81	-21944	-18273	-5368	2.13	2.13	-30639	16250	9692	40441	26789	5432	32220		6	Si
SLV 13	6.34	-3729.76	-15597	-12988	-8162	2.13	2.13	-21777	14772	8810	40441	26789	5432	32220		3.95	Si
SLV 13	8.14	3938.27	-19147	-15944	-7490	2.13	2.13	-26734	15763	9401	40441	26789	5432	32220		4.3	Si
SLD 16	6.34	-2307.23	-11252	-9370	-4956	2.13	2.13	-15711	13559	8087	40441	26789	5432	32220		6.5	Si
SLD 16	8.14	2271.53	-12889	-10733	-4678	2.13	2.13	-17996	14016	8359	40441	26789	5432	32220		6.89	Si
SLV 16	6.34	-3692.92	-10433	-8688	-7465	2.13	2.13	-14567	13330	7950	40441	26789	5432	32220		4.32	Si
SLV 16	8.14	3714.89	-13252	-11035	-6811	2.13	2.13	-18503	14117	8420	40441	26789	5432	32220		4.73	Si
SLV 14	6.34	-3761.71	-14900	-12408	-8126	2.13	2.13	-20804	14577	8694	40441	26789	5432	32220		3.96	Si
SLV 14	8.14	3968.67	-18338	-15270	-7453	2.13	2.13	-25603	15537	9267	40441	26789	5432	32220		4.32	Si
SLD 13	6.34	-2323.7	-13514	-11254	-5262	2.13	2.13	-18869	14191	8463	40441	26789	5432	32220		6.12	Si
SLD 13	8.14	2369.28	-15473	-12885	-4976	2.13	2.13	-21604	14738	8790	40441	26789	5432	32220		6.48	Si
SLV 9	6.34	-2109.68	-19913	-16582	-5619	2.13	2.13	-27803	15977	9529	40441	26789	5432	32220		5.73	Si
SLV 9	8.14	2401.39	-22461	-18704	-5391	2.13	2.13	-31361	16250	9692	40441	26789	5432	32220		5.98	Si
SLV 15	6.34	-3660.97	-11130	-9268	-7501	2.13	2.13	-15540	13525	8066	40441	26789	5432	32220		4.3	Si
SLV 15	8.14	3684.49	-14062	-11709	-6847	2.13	2.13	-19633	14343	8554	40441	26789	5432	32220		4.71	Si
SLD 15	6.34	-2293.52	-11551	-9619	-4971	2.13	2.13	-16128	13642	8136	40441	26789	5432	32220		6.48	Si
SLD 15	8.14	2258.48	-13237	-11022	-4694	2.13	2.13	-18481	14113	8417	40441	26789	5432	32220		6.86	Si
SLD 14	6.34	-2337.41	-13216	-11005	-5246	2.13	2.13	-18452	14107	8414	40441	26789	5432	32220		6.14	Si
SLD 14	8.14	2382.33	-15126	-12596	-4960	2.13	2.13	-21119	14641	8732	40441	26789	5432	32220		6.5	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 8	179667	0.39	5972	-3562	220.98	479.15	2.17	Si
SLV 7	179667	0.39	6808	-4061	220.98	543.14	2.46	Si
SLV 12	179667	0.39	8470	-5052	220.98	668.03	3.02	Si
SLV 11	179667	0.39	9307	-5551	220.98	729.73	3.3	Si
SLV 4	179667	0.39	12486	-7447	220.98	957.3	4.33	Si
SLV 3	179667	0.39	13796	-8228	220.98	1047.83	4.74	Si
SLV 2	179667	0.39	20771	-12388	220.98	1498.4	6.78	Si
SLV 16	179667	0.39	20814	-12414	220.98	1501.04	6.79	Si
SLV 1	179667	0.39	22080	-13169	220.98	1577.06	7.14	Si
SLV 15	179667	0.39	22124	-13195	220.98	1579.65	7.15	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-18376	-19045	-401	0.614	2166.8	0.959	9.30213	13.42943	No
SLV 10	-17925	-18742	-400	0.627	2121	0.959	9.50793	13.42943	No
SLV 5	-17215	-17217	-354	0.651	2048.7	0.957	9.88956	13.42943	No
SLV 6	-16764	-16913	-354	0.666	2003	0.956	10.12324	13.42943	No
SLV 13	-14731	-16857	-196	0.752	1796.4	0.952	11.48496	7.08809	Si
SLV 14	-14026	-16382	-195	0.784	1724.8	0.95	11.98939	7.08809	Si
SLV 1	-10861	-10761	-40	0.981	1403.8	0.941	15.15458	7.08809	Si
SLV 15	-10337	-13079	26	1.022	1350.7	0.939	15.8277	7.08809	Si
SLV 2	-10156	-10286	-39	1.036	1332.4	0.938	16.05167	7.08809	Si
SLV 16	-9633	-12604	27	1.082	1279.4	0.936	16.80814	7.08809	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.701	SLU 60	Si
V_SLU	5.19	SLU 84	Si
PF_SLV	3.085	SLV 16	Si
V_SLV	3.947	SLV 13	Si
PFFP_SLV	2.168	SLV 8	Si
R_SLV	0.693	SLV 9	No

Maschio 101

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.493	-3.314	-24.633	-3.314	L5	L6	2.14	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 40	6.34	-103.27	-8968	-0.0000235	0.0003743	0.0035	2.14	8184.72	9830	9830	95.19	No	Si
SLU 40	8.14	-1831.86	-10014	-0.0000389	0.0003743	0.0035	2.14	8956.27	10709.65	10709.65	5.85	No	Si
SLU 61	6.34	-224.96	-9545	-0.0000259	0.0003743	0.0035	2.14	8615.44	10322.44	10322.44	45.89	No	Si
SLU 61	8.14	-1852.33	-10145	-0.0000394	0.0003743	0.0035	2.14	9049.95	10814.69	10814.69	5.84	No	Si
SLU 82	6.34	-208.75	-10643	-0.0000287	0.0003743	0.0035	2.14	9401.11	11212.47	11212.47	53.71	No	Si
SLU 82	8.14	-2089.37	-11570	-0.0000451	0.0003743	0.0035	2.14	10031.86	11962.3	11962.3	5.73	No	Si
SLU 83	6.34	-276.14	-11066	-0.0000303	0.0003743	0.0035	2.14	9692.52	11554.23	11554.23	41.84	No	Si
SLU 83	8.14	-2116.63	-12001	-0.0000465	0.0003743	0.0035	2.14	10315.1	12288.37	12288.37	5.81	No	Si
SLU 63	6.34	-234.72	-9789	-0.0000266	0.0003743	0.0035	2.14	8793.07	10525.87	10525.87	44.84	No	Si
SLU 63	8.14	-1888.78	-10426	-0.0000404	0.0003743	0.0035	2.14	9249.18	11038.62	11038.62	5.84	No	Si
SLU 42	6.34	-113.03	-9211	-0.0000242	0.0003743	0.0035	2.14	8367.28	10036.18	10036.18	88.8	No	Si
SLU 42	8.14	-1868.31	-10295	-0.0000399	0.0003743	0.0035	2.14	9156.79	10934.3	10934.3	5.85	No	Si
SLU 76	6.34	-226.87	-10403	-0.0000282	0.0003743	0.0035	2.14	9232.83	11020.09	11020.09	48.57	No	Si
SLU 76	8.14	-1995.04	-11173	-0.0000433	0.0003743	0.0035	2.14	9765.3	11641.35	11641.35	5.84	No	Si
SLU 84	6.34	-218.51	-10886	-0.0000294	0.0003743	0.0035	2.14	9569.38	11408.46	11408.46	52.21	No	Si
SLU 84	8.14	-2125.82	-11851	-0.0000462	0.0003743	0.0035	2.14	10217.05	12175.19	12175.19	5.73	No	Si
SLU 73	6.34	-217.11	-10160	-0.0000275	0.0003743	0.0035	2.14	9060.43	10826.43	10826.43	49.87	No	Si
SLU 73	8.14	-1958.59	-10892	-0.0000422	0.0003743	0.0035	2.14	9573.43	11413.21	11413.21	5.83	No	Si
SLU 81	6.34	-266.39	-10823	-0.0000296	0.0003743	0.0035	2.14	9525.78	11357.32	11357.32	42.63	No	Si
SLU 81	8.14	-2080.18	-11720	-0.0000455	0.0003743	0.0035	2.14	10131.4	12077.43	12077.43	5.81	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	6.34	1939.02	-3701	-0.000024	0.0005615	0.0035	2.14		4073.77	4073.77	2.1		Si
SLV 2	8.14	-4725.58	-7641	-0.0000616	0.0005615	0.0035	1.712		8898.81	8898.81	1.88		Si
SLD 5	6.34	56.59	-2320	-0.0000061	0.0005615	0.0035	2.14		2674.66	2674.66	47.26		Si
SLD 5	8.14	-2058.37	-3178	-0.0000267	0.0005615	0.0035	1.712		4582.47	4582.47	2.23		Si
SLV 6	6.34	545.2	3503	0.2462706	0.0005615	0.0035	1.712		0	0	0		No
SLV 6	8.14	-3086.59	1672	0.1259891	0.0005615	0.0035	1.712		0	0	0		No
SLV 13	6.34	-2422.9	-4520	-0.0000301	0.0005615	0.0035	2.14		5912.68	5912.68	2.44		Si
SLV 13	8.14	1646.67	-1314	-0.0009294	0.0005615	0.0035	1.712		1635.53	1635.53	0.99		No
SLV 9	6.34	-770.97	3599	0	0.0005615	0.0035	1.712		0	0	0		No
SLV 9	8.14	-1164.55	3974	0.2874682	0.0005615	0.0035	1.712		0	0	0		No
SLV 5	6.34	530.88	4148	0.2922211	0.0005615	0.0035	1.712		0	0	0		No
SLV 5	8.14	-3067.05	2433	0.1816004	0.0005615	0.0035	1.712		0	0	0		No
SLV 14	6.34	-2400.48	-5529	-0.0000309	0.0005615	0.0035	2.14		6889.96	6889.96	2.87		Si
SLV 14	8.14	1616.07	-2506	-0.0000208	0.0005615	0.0035	2.14		2864.42	2864.42	1.77		Si
SLV 10	6.34	-756.65	2955	0.2133458	0.0005615	0.0035	1.712		0	0	0		No
SLV 10	8.14	-1184.09	3213	0.2332342	0.0005615	0.0035	1.712		0	0	0		No
SLD 6	6.34	62.84	-2601	-0.0000068	0.0005615	0.0035	2.14		2961.35	2961.35	47.12		Si
SLD 6	8.14	-2066.9	-3511	-0.0000259	0.0005615	0.0035	1.712		4916.2	4916.2	2.38		Si
SLV 1	6.34	1916.6	-2692	-0.0000267	0.0005615	0.0035	2.14		3054.69	3054.69	1.59		Si
SLV 1	8.14	-4694.98	-6449	-0.0000689	0.0005615	0.0035	1.712		7784.03	7784.03	1.66		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	6.34	-226.87	-10403	-8663	3021	2.14	2.14	-14457	8872	5316	40441	17943	5457	23399	No	7.75	Si
SLU 76	8.14	-1995.04	-11173	-9304	3001	2.14	2.14	-15527	9015	5402	40441	17943	5457	23399	No	7.8	Si
SLU 78	6.34	-290.13	-10947	-9116	3019	2.14	2.14	-15213	8973	5376	40441	17943	5457	23399	No	7.75	Si
SLU 78	8.14	-2038.97	-11739	-9775	3007	2.14	2.14	-16314	9120	5464	40441	17943	5457	23399	No	7.78	Si
SLU 81	6.34	-266.39	-10823	-9012	3113	2.14	2.14	-15041	8950	5363	40441	17943	5457	23399	No	7.52	Si
SLU 81	8.14	-2080.18	-11720	-9760	3111	2.14	2.14	-16288	9116	5462	40441	17943	5457	23399	No	7.52	Si
SLU 84	6.34	-218.51	-10886	-9065	3210	2.14	2.14	-15128	8962	5370	40441	17943	5457	23399	No	7.29	Si
SLU 84	8.14	-2125.82	-11851	-9868	3198	2.14	2.14	-16469	9140	5477	40441	17943	5457	23399	No	7.32	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 73	6.34	-217.11	-10160	-8460	2983	2.14	2.14	-14119	8827	5289	40441	17943	5457	23399	No	7.84	Si
SLU 73	8.14	-1958.59	-10892	-9070	2964	2.14	2.14	-15137	8963	5370	40441	17943	5457	23399	No	7.9	Si
SLU 82	6.34	-208.75	-10643	-8863	3173	2.14	2.14	-14791	8917	5343	40441	17943	5457	23399	No	7.37	Si
SLU 82	8.14	-2089.37	-11570	-9634	3160	2.14	2.14	-16079	9088	5446	40441	17943	5457	23399	No	7.4	Si
SLU 77	6.34	-347.76	-11127	-9265	2959	2.14	2.14	-15463	9006	5396	40441	17943	5457	23399	No	7.91	Si
SLU 77	8.14	-2029.78	-11889	-9900	2958	2.14	2.14	-16523	9148	5481	40441	17943	5457	23399	No	7.91	Si
SLU 80	6.34	-275.05	-10766	-8965	3018	2.14	2.14	-14961	8939	5356	40441	17943	5457	23399	No	7.75	Si
SLU 80	8.14	-2025.36	-11554	-9621	3005	2.14	2.14	-16057	9085	5444	40441	17943	5457	23399	No	7.79	Si
SLU 75	6.34	-280.37	-10704	-8913	2982	2.14	2.14	-14875	8928	5350	40441	17943	5457	23399	No	7.85	Si
SLU 75	8.14	-2002.52	-11458	-9541	2970	2.14	2.14	-15923	9068	5433	40441	17943	5457	23399	No	7.88	Si
SLU 83	6.34	-276.14	-11066	-9215	3150	2.14	2.14	-15378	8995	5390	40441	17943	5457	23399	No	7.43	Si
SLU 83	8.14	-2116.63	-12001	-9994	3148	2.14	2.14	-16679	9168	5494	40441	17943	5457	23399	No	7.43	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 2	6.34	657.49	-5775	-4809	4226	2.14	2.14	-8026	12022	7203	40441	26914	5457	32371		7.66	Si
SLD 2	8.14	-2759.72	-7583	-6314	3860	2.14	2.1181	-10538	12524	7428	40441	26914	5457	32371		8.39	Si
SLV 5	6.34	530.88	4148	3454	3837	1.712	2.14	0	0	0	40441	21531	4366	25897		6.75	Si
SLV 5	8.14	-3067.05	2433	2026	3048	1.712	0	0	0	0	40441	21531	4366	25897		8.5	Si
SLD 4	6.34	610.02	-8666	-7216	4117	2.14	2.14	-12043	12825	7685	40441	26914	5457	32371		7.86	Si
SLD 4	8.14	-2538.9	-10338	-8608	3902	2.14	2.14	-14366	13290	7963	40441	26914	5457	32371		8.29	Si
SLV 3	6.34	1805.98	-9260	-7711	6980	2.14	2.14	-12869	12990	7784	40441	26914	5457	32371		4.64	Si
SLV 3	8.14	-4192.6	-12707	-10581	6478	2.14	2.14	-17659	13948	8358	40441	26914	5457	32371		5	Si
SLV 4	6.34	1828.4	-10269	-8551	7118	2.14	2.14	-14271	13271	7952	40441	26914	5457	32371		4.55	Si
SLV 4	8.14	-4223.19	-13899	-11574	6616	2.14	2.14	-19316	14280	8556	40441	26914	5457	32371		4.89	Si
SLV 6	6.34	545.2	3503	2917	3925	1.712	2.14	0	0	0	40441	21531	4366	25897		6.6	Si
SLV 6	8.14	-3086.59	1672	1392	3136	1.712	0	0	0	0	40441	21531	4366	25897		8.26	Si
SLV 1	6.34	1916.6	-2692	-2242	7227	2.14	1.0744	-3742	11165	3359	40441	26914	5457	32371		4.48	Si
SLV 1	8.14	-4694.98	-6449	-5370	6374	1.712	1.026	0	0	0	40441	21531	4366	25897		4.06	Si
SLD 3	6.34	600.4	-8233	-6855	4057	2.14	2.14	-11441	12705	7613	40441	26914	5457	32371		7.98	Si
SLD 3	8.14	-2525.77	-9826	-8182	3843	2.14	2.14	-13655	13148	7878	40441	26914	5457	32371		8.42	Si
SLD 1	6.34	647.86	-5342	-4449	4167	2.14	2.14	-7424	11902	7131	40441	26914	5457	32371		7.77	Si
SLD 1	8.14	-2746.59	-7071	-5888	3800	2.14	2.0447	-10333	12483	7147	40441	26914	5457	32371		8.52	Si
SLV 2	6.34	1939.02	-3701	-3082	7365	2.14	1.6384	-5144	11445	5251	40441	26914	5457	32371		4.4	Si
SLV 2	8.14	-4725.58	-7641	-6363	6512	1.712	1.3547	0	0	0	40441	21531	4366	25897		3.98	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.39	0	2791	222.01	0	0	No, Trazione
SLV 9	179667	0.39	0	3559	222.01	0	0	No, Trazione
SLV 10	179667	0.39	0	2846	222.01	0	0	No, Trazione
SLV 6	179667	0.39	0	2078	222.01	0	0	No, Trazione
SLV 13	179667	0.39	4695	-2813	222.01	381.71	1.72	Si
SLV 14	179667	0.39	6557	-3929	222.01	526.45	2.37	Si
SLV 1	179667	0.39	8964	-5371	222.01	707.86	3.19	Si
SLV 2	179667	0.39	10827	-6488	222.01	843.87	3.8	Si
SLV 15	179667	0.39	15378	-9215	222.01	1160.15	5.23	Si
SLV 16	179667	0.39	17241	-10331	222.01	1283.03	5.78	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-16471	-17547	432	0.675	1974.5	0.956	10.26005	13.42943	No
SLV 12	-15978	-16438	277	0.701	1924.4	0.955	10.67034	13.42943	No
SLV 7	-15738	-16959	433	0.701	1900.1	0.954	10.67821	13.42943	No
SLV 11	-15245	-15850	277	0.729	1849.9	0.953	11.11913	13.42943	No
SLV 4	-10500	-12328	365	0.986	1368.6	0.939	15.25781	7.08809	Si
SLV 3	-9353	-11407	366	1.082	1252.5	0.934	16.83375	7.08809	Si
SLV 16	-8855	-8632	-153	1.15	1202.3	0.932	17.93298	7.08809	Si
SLV 15	-7708	-7710	-153	1.283	1086.6	0.927	20.12479	7.08809	Si
SLV 2	-4711	-6603	152	1.847	786.7	0.907	29.59021	7.08809	Si
SLV 1	-3563	-5682	152	2.227	673.8	0.898	36.02805	7.08809	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.725	SLU 82	Si
V_SLU	7.289	SLU 84	Si
PF_SLV	0	SLV 5	No
V_SLV	3.977	SLV 2	Si
PFFP_SLV	0	SLV 10	No
R_SLV	0.764	SLV 8	No

Maschio 102

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.313	-3.314	-21.593	-3.314	L5	L6	2.28	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	7.44	-2105.55	-20489	-0.0000655	0.0003743	0.0035	2.28	15994.48	19370.65	19370.65	9.2	No	Si
SLU 79	8.24	-2475.04	-18040	-0.0000612	0.0003743	0.0035	2.28	14857.51	17847.74	17847.74	7.21	No	Si
SLU 82	7.44	-2160.66	-20265	-0.0000652	0.0003743	0.0035	2.28	15899.36	19262.18	19262.18	8.91	No	Si
SLU 82	8.24	-2482.26	-17856	-0.0000607	0.0003743	0.0035	2.28	14763.82	17724.43	17724.43	7.14	No	Si
SLU 74	7.44	-2106.87	-20379	-0.0000652	0.0003743	0.0035	2.28	15948.24	19317.56	19317.56	9.17	No	Si
SLU 74	8.24	-2457.16	-17931	-0.0000608	0.0003743	0.0035	2.28	14802.19	17774.67	17774.67	7.23	No	Si
SLU 77	7.44	-2135.66	-20785	-0.0000665	0.0003743	0.0035	2.28	16117.58	19515.35	19515.35	9.14	No	Si
SLU 77	8.24	-2509.72	-18312	-0.0000622	0.0003743	0.0035	2.28	14994.52	18031.98	18031.98	7.18	No	Si
SLU 78	7.44	-2171.4	-20558	-0.0000661	0.0003743	0.0035	2.28	16023.56	19404.38	19404.38	8.94	No	Si
SLU 78	8.24	-2491.85	-18112	-0.0000615	0.0003743	0.0035	2.28	14893.91	17896.22	17896.22	7.18	No	Si
SLU 75	7.44	-2142.6	-20153	-0.0000648	0.0003743	0.0035	2.28	15851.01	19207.1	19207.1	8.96	No	Si
SLU 75	8.24	-2439.29	-17730	-0.0000601	0.0003743	0.0035	2.28	14698.89	17640.22	17640.22	7.23	No	Si
SLU 80	7.44	-2141.28	-20262	-0.0000651	0.0003743	0.0035	2.28	15898.12	19260.78	19260.78	8.99	No	Si
SLU 80	8.24	-2457.17	-17839	-0.0000605	0.0003743	0.0035	2.28	14754.99	17712.92	17712.92	7.21	No	Si
SLU 81	7.44	-2124.92	-20492	-0.0000656	0.0003743	0.0035	2.28	15995.7	19372.06	19372.06	9.12	No	Si
SLU 81	8.24	-2500.12	-18057	-0.0000614	0.0003743	0.0035	2.28	14866.23	17859.32	17859.32	7.14	No	Si
SLU 83	7.44	-2153.72	-20897	-0.000067	0.0003743	0.0035	2.28	16163.44	19570.59	19570.59	9.09	No	Si
SLU 83	8.24	-2552.68	-18438	-0.0000628	0.0003743	0.0035	2.28	15056.88	18117.44	18117.44	7.1	No	Si
SLU 84	7.44	-2189.46	-20670	-0.0000666	0.0003743	0.0035	2.28	16070.32	19459.2	19459.2	8.89	No	Si
SLU 84	8.24	-2534.82	-18237	-0.0000621	0.0003743	0.0035	2.28	14957.16	17981.26	17981.26	7.09	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	7.44	-984.48	-4835	-0.0000173	0.0005615	0.0035	2.28		6615.89	6615.89	6.72		Si
SLV 5	8.24	-1809	-4629	-0.0000218	0.0005615	0.0035	2.28		6403.16	6403.16	3.54		Si
SLV 4	7.44	-947.55	-15184	-0.0000423	0.0005615	0.0035	2.28		16597.38	16597.38	17.52		Si
SLV 4	8.24	-4629.2	-14777	-0.000065	0.0005615	0.0035	2.28		16236.88	16236.88	3.51		Si
SLV 1	7.44	-748.36	-9593	-0.0000272	0.0005615	0.0035	2.28		11423.41	11423.41	15.26		Si
SLV 1	8.24	-4147.33	-9867	-0.0000495	0.0005615	0.0035	2.28		11685.5	11685.5	2.82		Si
SLD 2	7.44	-1160.99	-12199	-0.0000362	0.0005615	0.0035	2.28		13897.51	13897.51	11.97		Si
SLD 2	8.24	-2748.04	-11279	-0.000044	0.0005615	0.0035	2.28		13046.03	13046.03	4.75		Si
SLV 2	7.44	-789.38	-10199	-0.000029	0.0005615	0.0035	2.28		12005.9	12005.9	15.21		Si
SLV 2	8.24	-4268.29	-10415	-0.0000516	0.0005615	0.0035	2.28		12215.28	12215.28	2.86		Si
SLD 3	7.44	-1213.4	-14131	-0.0000413	0.0005615	0.0035	2.28		15668.08	15668.08	12.91		Si
SLD 3	8.24	-2855.29	-12962	-0.0000489	0.0005615	0.0035	2.28		14604.77	14604.77	5.11		Si
SLD 4	7.44	-1231.01	-14391	-0.0000421	0.0005615	0.0035	2.28		15896.22	15896.22	12.91		Si
SLD 4	8.24	-2907.21	-13197	-0.0000498	0.0005615	0.0035	2.28		14824.4	14824.4	5.1		Si
SLV 6	7.44	-1010.68	-5222	-0.0000183	0.0005615	0.0035	2.28		7015.55	7015.55	6.94		Si
SLV 6	8.24	-1886.25	-4979	-0.0000231	0.0005615	0.0035	2.28		6764.26	6764.26	3.59		Si
SLV 3	7.44	-906.53	-14578	-0.0000405	0.0005615	0.0035	2.28		16061.06	16061.06	17.72		Si
SLV 3	8.24	-4508.24	-14229	-0.0000627	0.0005615	0.0035	2.28		15753.63	15753.63	3.49		Si
SLD 1	7.44	-1143.38	-11939	-0.0000354	0.0005615	0.0035	2.28		13658.37	13658.37	11.95		Si
SLD 1	8.24	-2696.12	-11044	-0.000043	0.0005615	0.0035	2.28		12823.64	12823.64	4.76		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	7.44	-2171.4	-20558	-17119	-1450	2.28	2.28	-26815	10520	6716	40441	19117	5814	24931	No	17.19	Si
SLU 78	8.24	-2491.85	-18112	-15082	-1050	2.28	2.28	-23624	10094	6444	40441	19117	5814	24931	No	23.74	Si
SLU 67	7.44	-1962.99	-18256	-15202	-1493	2.28	2.28	-23812	10119	6460	40441	19117	5814	24931	No	16.69	Si
SLU 67	8.24	-2135.49	-15910	-13249	-1083	2.28	2.28	-20753	9711	6200	40441	19117	5814	24931	No	23.02	Si
SLU 66	7.44	-1927.26	-18482	-15390	-1466	2.28	2.28	-24108	10159	6485	40441	19117	5814	24931	No	17.01	Si
SLU 66	8.24	-2153.35	-16111	-13416	-1041	2.28	2.28	-21015	9746	6222	40441	19117	5814	24931	No	23.96	Si
SLU 65	7.44	-1927.9	-17404	-14492	-1478	2.28	2.28	-22701	9971	6366	40441	19117	5814	24931	No	16.86	Si
SLU 65	8.24	-2036.34	-15122	-12593	-1096	2.28	2.28	-19725	9574	6112	40441	19117	5814	24931	No	22.75	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 68	7.44	-1956.7	-17809	-14830	-1483	2.28	2.28	-23229	10042	6411	40441	19117	5814	24931	No	16.81	Si
SLU 68	8.24	-2088.9	-15504	-12910	-1094	2.28	2.28	-20223	9641	6155	40441	19117	5814	24931	No	22.78	Si
SLU 69	7.44	-1956.06	-18887	-15728	-1470	2.28	2.28	-24636	10229	6530	40441	19117	5814	24931	No	16.96	Si
SLU 69	8.24	-2205.91	-16492	-13734	-1039	2.28	2.28	-21512	9813	6265	40441	19117	5814	24931	No	23.99	Si
SLU 72	7.44	-1961.67	-18365	-15293	-1469	2.28	2.28	-23955	10138	6472	40441	19117	5814	24931	No	16.97	Si
SLU 72	8.24	-2153.37	-16019	-13339	-1065	2.28	2.28	-20895	9730	6212	40441	19117	5814	24931	No	23.42	Si
SLU 71	7.44	-1925.94	-18592	-15481	-1441	2.28	2.28	-24250	10178	6498	40441	19117	5814	24931	No	17.3	Si
SLU 71	8.24	-2171.23	-16220	-13506	-1022	2.28	2.28	-21157	9765	6234	40441	19117	5814	24931	No	24.39	Si
SLU 70	7.44	-1991.79	-18661	-15539	-1498	2.28	2.28	-24340	10190	6505	40441	19117	5814	24931	No	16.64	Si
SLU 70	8.24	-2188.05	-16292	-13566	-1082	2.28	2.28	-21250	9778	6242	40441	19117	5814	24931	No	23.05	Si
SLU 75	7.44	-2142.6	-20153	-16782	-1445	2.28	2.28	-26287	10449	6671	40441	19117	5814	24931	No	17.25	Si
SLU 75	8.24	-2439.29	-17730	-14764	-1051	2.28	2.28	-23127	10028	6402	40441	19117	5814	24931	No	23.71	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	7.44	-1865.92	-22264	-18540	-4525	2.28	2.28	-29041	16225	10358	40441	28675	5814	34489		7.62	Si
SLV 11	8.24	-1349.9	-18957	-15785	-2669	2.28	2.28	-24726	15362	9807	40441	28675	5814	34489		12.92	Si
SLV 3	7.44	-906.53	-14578	-12140	5772	2.28	2.28	-19015	14220	9078	40441	28675	5814	34489		5.98	Si
SLV 3	8.24	-4508.24	-14229	-11848	4520	2.28	2.28	-18559	14129	9020	40441	28675	5814	34489		7.63	Si
SLV 13	7.44	-1929.05	-12302	-10244	-7885	2.28	2.28	-16047	13626	8699	40441	28675	5814	34489		4.37	Si
SLV 13	8.24	1393.05	-9158	-7626	-6080	2.28	2.28	-11946	12806	8175	40441	28675	5814	34489		5.67	Si
SLV 12	7.44	-1892.12	-22651	-18862	-4517	2.28	2.28	-29545	16250	10374	40441	28675	5814	34489		7.63	Si
SLV 12	8.24	-1427.14	-19307	-16077	-2634	2.28	2.28	-25183	15453	9865	40441	28675	5814	34489		13.09	Si
SLV 14	7.44	-1970.07	-12908	-10749	-7873	2.28	2.28	-16837	13784	8800	40441	28675	5814	34489		4.38	Si
SLV 14	8.24	1272.09	-9707	-8083	-6025	2.28	2.28	-12661	12949	8267	40441	28675	5814	34489		5.72	Si
SLV 16	7.44	-2128.24	-17893	-14900	-8656	2.28	2.28	-23339	15084	9630	40441	28675	5814	34489		3.98	Si
SLV 16	8.24	911.19	-14069	-11715	-6195	2.28	2.28	-18351	14087	8993	40441	28675	5814	34489		5.57	Si
SLV 4	7.44	-947.55	-15184	-12644	5784	2.28	2.28	-19805	14378	9179	40441	28675	5814	34489		5.96	Si
SLV 4	8.24	-4629.2	-14777	-12305	4575	2.28	2.28	-19275	14272	9111	40441	28675	5814	34489		7.54	Si
SLV 15	7.44	-2087.22	-17287	-14395	-8668	2.28	2.28	-22549	14926	9529	40441	28675	5814	34489		3.98	Si
SLV 15	8.24	1032.15	-13520	-11259	-6250	2.28	2.28	-17636	13944	8902	40441	28675	5814	34489		5.52	Si
SLV 2	7.44	-789.38	-10199	-8493	6567	2.28	2.28	-13303	13077	8349	40441	28675	5814	34489		5.25	Si
SLV 2	8.24	-4268.29	-10415	-8673	4746	2.28	2.1906	-13585	13134	8056	40441	28675	5814	34489		7.27	Si
SLV 1	7.44	-748.36	-9593	-7989	6555	2.28	2.28	-12513	12919	8248	40441	28675	5814	34489		5.26	Si
SLV 1	8.24	-4147.33	-9867	-8216	4690	2.28	2.159	-13676	13152	7951	40441	28675	5814	34489		7.35	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.39	7697	-4914	236.54	653.28	2.76	Si
SLV 9	179667	0.39	7834	-5001	236.54	664.28	2.81	Si
SLV 6	179667	0.39	8258	-5272	236.54	698.16	2.95	Si
SLV 10	179667	0.39	8395	-5359	236.54	709.07	3	Si
SLV 1	179667	0.39	15724	-10038	236.54	1260.64	5.33	Si
SLV 13	179667	0.39	16180	-10330	236.54	1292.93	5.47	Si
SLV 2	179667	0.39	16602	-10599	236.54	1322.5	5.59	Si
SLV 14	179667	0.39	17058	-10890	236.54	1354.32	5.73	Si
SLV 3	179667	0.39	22876	-14604	236.54	1738.35	7.35	Si
SLV 15	179667	0.39	23333	-14896	236.54	1766.81	7.47	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-16534	-18810	516	0.706	2000.7	0.954	10.76538	13.42943	No
SLV 8	-16557	-19458	487	0.707	2002.9	0.954	10.7762	13.42943	No
SLV 11	-16248	-18558	516	0.717	1971.5	0.953	10.93182	13.42943	No
SLV 7	-16270	-19206	487	0.718	1973.8	0.953	10.94261	13.42943	No
SLV 16	-12257	-13472	200	0.928	1566.5	0.943	14.31091	7.08809	Si
SLV 4	-12331	-15631	105	0.93	1574.1	0.943	14.33912	7.08809	Si
SLV 15	-11808	-13077	200	0.957	1521	0.941	14.77847	7.08809	Si
SLV 3	-11882	-15236	105	0.959	1528.6	0.941	14.80506	7.08809	Si
SLV 6	-4177	-6161	-510	2.036	755.1	0.901	32.84515	13.42943	Si
SLV 10	-4155	-5513	-482	2.048	752.9	0.901	33.04293	13.42943	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.094	SLU 84	Si
V_SLU	16.639	SLU 70	Si
PF_SLV	2.818	SLV 1	Si
V_SLV	3.979	SLV 15	Si
PFFP_SLV	2.762	SLV 5	Si
R_SLV	0.802	SLV 12	No

Maschio 103

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.263	-3.314	-18.813	-3.314	L5	L6	0.55	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 65	7.44	156.79	-5940	-0.0000816	0.0003743	0.0035	0.55	1014.6	1202.17	1202.17	7.67	No	Si
SLU 65	8.24	234.34	-5306	-0.0000834	0.0003743	0.0035	0.55	965.34	1119.96	1119.96	4.78	No	Si
SLU 70	7.44	175.35	-6324	-0.0000887	0.0003743	0.0035	0.55	1037.61	1245.42	1245.42	7.1	No	Si
SLU 70	8.24	243.33	-5637	-0.0000886	0.0003743	0.0035	0.55	992.76	1168.86	1168.86	4.8	No	Si
SLU 66	7.44	176.43	-6237	-0.0000878	0.0003743	0.0035	0.55	1032.81	1235.43	1235.43	7	No	Si
SLU 66	8.24	237.01	-5541	-0.0000866	0.0003743	0.0035	0.55	985.17	1158.48	1158.48	4.89	No	Si
SLU 68	7.44	162.97	-6078	-0.0000841	0.0003743	0.0035	0.55	1023.46	1217.56	1217.56	7.47	No	Si
SLU 68	8.24	236.93	-5429	-0.0000852	0.0003743	0.0035	0.55	975.98	1141.74	1141.74	4.82	No	Si
SLU 67	7.44	169.17	-6186	-0.0000862	0.0003743	0.0035	0.55	1029.94	1229.74	1229.74	7.27	No	Si
SLU 67	8.24	240.74	-5514	-0.0000868	0.0003743	0.0035	0.55	983.02	1155.61	1155.61	4.8	No	Si
SLU 26	7.44	132.68	-5021	-0.0000676	0.0003743	0.0035	0.55	938.58	1070.04	1070.04	8.06	No	Si
SLU 26	8.24	200.75	-4509	-0.0000697	0.0003743	0.0035	0.55	883.32	982.76	982.76	4.9	No	Si
SLU 25	7.44	138.87	-5130	-0.0000696	0.0003743	0.0035	0.55	949.07	1088.87	1088.87	7.84	No	Si
SLU 25	8.24	204.56	-4594	-0.0000712	0.0003743	0.0035	0.55	893.09	996.97	996.97	4.87	No	Si
SLU 23	7.44	126.5	-4883	-0.0000653	0.0003743	0.0035	0.55	924.6	1046.23	1046.23	8.27	No	Si
SLU 23	8.24	198.16	-4386	-0.000068	0.0003743	0.0035	0.55	868.72	962.31	962.31	4.86	No	Si
SLU 69	7.44	182.61	-6375	-0.0000903	0.0003743	0.0035	0.55	1040.23	1251.16	1251.16	6.85	No	Si
SLU 69	8.24	239.6	-5663	-0.0000885	0.0003743	0.0035	0.55	994.81	1171.75	1171.75	4.89	No	Si
SLU 72	7.44	174	-6250	-0.0000876	0.0003743	0.0035	0.55	1033.54	1236.91	1236.91	7.11	No	Si
SLU 72	8.24	237.03	-5570	-0.000087	0.0003743	0.0035	0.55	987.51	1161.62	1161.62	4.9	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 16	7.44	-78.15	-3959	-0.0000479	0.0005615	0.0035	0.55		1018.42	1018.42	13.03		Si
SLD 16	8.24	415.53	-4000	-0.0000869	0.0005615	0.0035	0.55		955.74	955.74	2.3		Si
SLD 13	7.44	-97.72	-3322	-0.0000434	0.0005615	0.0035	0.55		882.61	882.61	9.03		Si
SLD 13	8.24	377.07	-3441	-0.0000767	0.0005615	0.0035	0.55		838.62	838.62	2.22		Si
SLV 14	7.44	-400.72	-1720	-0.0001544	0.0005615	0.0035	0.44		512.37	512.37	1.28		Si
SLV 14	8.24	662.85	-2683	-0.000527	0.0005615	0.0035	0.44		683.75	683.75	1.03		Si
SLV 15	7.44	-373.55	-2750	-0.0000726	0.0005615	0.0035	0.55		755.14	755.14	2.02		Si
SLV 15	8.24	735.8	-3580	-0.0002123	0.0005615	0.0035	0.55		867.49	867.49	1.18		Si
SLV 2	7.44	644.1	-6630	-0.0001452	0.0005615	0.0035	0.55		1439.78	1439.78	2.24		Si
SLV 2	8.24	-394.55	-4750	-0.0000923	0.0005615	0.0035	0.55		1177.93	1177.93	2.99		Si
SLD 15	7.44	-81.94	-3868	-0.0000474	0.0005615	0.0035	0.55		999.8	999.8	12.2		Si
SLD 15	8.24	412.38	-3919	-0.0000857	0.0005615	0.0035	0.55		938.56	938.56	2.28		Si
SLV 1	7.44	635.28	-6419	-0.0001416	0.0005615	0.0035	0.55		1404.7	1404.7	2.21		Si
SLV 1	8.24	-401.88	-4561	-0.000091	0.0005615	0.0035	0.55		1140.75	1140.75	2.84		Si
SLV 13	7.44	-409.54	-1510	-0.0004012	0.0005615	0.0035	0.44		459.95	459.95	1.12		Si
SLV 13	8.24	655.52	-2494	-0.0047509	0.0005615	0.0035	0.44		645.09	645.09	0.98		No
SLD 14	7.44	-93.94	-3413	-0.0000439	0.0005615	0.0035	0.55		902.1	902.1	9.6		Si
SLD 14	8.24	380.21	-3522	-0.0000778	0.0005615	0.0035	0.55		855.51	855.51	2.25		Si
SLV 16	7.44	-364.73	-2961	-0.0000716	0.0005615	0.0035	0.55		803.11	803.11	2.2		Si
SLV 16	8.24	743.13	-3770	-0.0001968	0.0005615	0.0035	0.55		907.12	907.12	1.22		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	7.44	213.84	-7133	-5940	559	0.55	0.55	-38570	10833	1668	40441	4611	1402	6014	No	10.77	Si
SLU 84	8.24	246.75	-6391	-5322	-381	0.55	0.55	-34560	10833	1668	40441	4611	1402	6014	No	15.78	Si
SLU 60	7.44	197.36	-6371	-5305	533	0.55	0.55	-34452	10833	1668	40441	4611	1402	6014	No	11.29	Si
SLU 60	8.24	207.13	-5659	-4713	-337	0.55	0.55	-30602	10833	1668	40441	4611	1402	6014	No	17.83	Si
SLU 80	7.44	206.21	-6964	-5799	532	0.55	0.55	-37660	10833	1668	40441	4611	1402	6014	No	11.31	Si
SLU 80	8.24	245.64	-6231	-5188	-373	0.55	0.55	-33692	10833	1668	40441	4611	1402	6014	No	16.11	Si
SLU 63	7.44	196.27	-6459	-5378	531	0.55	0.55	-34926	10833	1668	40441	4611	1402	6014	No	11.32	Si
SLU 63	8.24	213.44	-5755	-4793	-353	0.55	0.55	-31122	10833	1668	40441	4611	1402	6014	No	17.03	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	7.44	221.11	-7183	-5981	578	0.55	0.55	-38842	10833	1668	40441	4611	1402	6014	No	10.4	Si
SLU 83	8.24	243.02	-6418	-5344	-372	0.55	0.55	-34704	10833	1668	40441	4611	1402	6014	No	16.19	Si
SLU 62	7.44	203.54	-6509	-5420	551	0.55	0.55	-35198	10833	1668	40441	4611	1402	6014	No	10.91	Si
SLU 62	8.24	209.72	-5782	-4815	-344	0.55	0.55	-31265	10833	1668	40441	4611	1402	6014	No	17.5	Si
SLU 77	7.44	214.83	-7089	-5903	546	0.55	0.55	-38336	10833	1668	40441	4611	1402	6014	No	11.01	Si
SLU 77	8.24	248.21	-6324	-5266	-363	0.55	0.55	-34198	10833	1668	40441	4611	1402	6014	No	16.57	Si
SLU 81	7.44	214.93	-7045	-5866	560	0.55	0.55	-38095	10833	1668	40441	4611	1402	6014	No	10.74	Si
SLU 81	8.24	240.44	-6295	-5242	-365	0.55	0.55	-34040	10833	1668	40441	4611	1402	6014	No	16.46	Si
SLU 82	7.44	207.66	-6995	-5825	540	0.55	0.55	-37824	10833	1668	40441	4611	1402	6014	No	11.13	Si
SLU 82	8.24	244.16	-6269	-5220	-375	0.55	0.55	-33896	10833	1668	40441	4611	1402	6014	No	16.04	Si
SLU 79	7.44	213.48	-7015	-5841	551	0.55	0.55	-37932	10833	1668	40441	4611	1402	6014	No	10.91	Si
SLU 79	8.24	241.92	-6257	-5211	-364	0.55	0.55	-33836	10833	1668	40441	4611	1402	6014	No	16.53	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	7.44	680.08	-7870	-6554	2246	0.55	0.55	-42558	16250	2502	40441	6917	1402	8319		3.7	Si
SLV 4	8.24	-314.27	-5836	-4860	77	0.55	0.55	-31560	16250	2502	40441	6917	1402	8319		108.7	Si
SLV 3	7.44	671.26	-7660	-6378	2230	0.55	0.55	-41419	16250	2502	40441	6917	1402	8319		3.73	Si
SLV 3	8.24	-321.6	-5647	-4702	74	0.55	0.55	-30535	16250	2502	40441	6917	1402	8319		112.35	Si
SLV 16	7.44	-364.73	-2961	-2466	-1665	0.55	0.4554	-19523	14321	1826	40441	6917	1402	8319		5	Si
SLV 16	8.24	743.13	-3770	-3139	-555	0.55	0.2336	-20384	14493	948	40441	6917	1402	8319		14.99	Si
SLD 2	7.44	352.48	-5511	-4589	1202	0.55	0.55	-29803	16250	2502	40441	6917	1402	8319		6.92	Si
SLD 2	8.24	-71.13	-4411	-3673	-113	0.55	0.55	-23853	15187	2339	40441	6917	1402	8319		73.8	Si
SLD 1	7.44	348.69	-5421	-4514	1196	0.55	0.55	-29314	16250	2502	40441	6917	1402	8319		6.96	Si
SLD 1	8.24	-74.27	-4330	-3606	-114	0.55	0.55	-23414	15099	2325	40441	6917	1402	8319		73.1	Si
SLV 15	7.44	-373.55	-2750	-2290	-1681	0.55	0.4175	-19785	14374	1680	40441	6917	1402	8319		4.95	Si
SLV 15	8.24	735.8	-3580	-2981	-558	0.55	0.2084	-19359	14288	834	40441	6917	1402	8319		14.92	Si
SLV 13	7.44	-409.54	-1510	-1257	-1568	0.44	0.0111	0	0	0	40441	5534	1122	6655		4.24	Si
SLV 13	8.24	655.52	-2494	-2077	-573	0.44	0.0364	0	0	0	40441	5534	1122	6655		11.62	Si
SLV 1	7.44	635.28	-6419	-5345	2343	0.55	0.5281	-34710	16250	2403	40441	6917	1402	8319		3.55	Si
SLV 1	8.24	-401.88	-4561	-3798	59	0.55	0.55	-24662	15349	2364	40441	6917	1402	8319		141.83	Si
SLV 2	7.44	644.1	-6630	-5521	2359	0.55	0.5335	-35850	16250	2427	40441	6917	1402	8319		3.53	Si
SLV 2	8.24	-394.55	-4750	-3956	61	0.55	0.55	-25687	15554	2395	40441	6917	1402	8319		136.06	Si
SLV 14	7.44	-400.72	-1720	-1432	-1552	0.44	0.1261	0	0	0	40441	5534	1122	6655		4.29	Si
SLV 14	8.24	662.85	-2683	-2234	-570	0.44	0.0839	0	0	0	40441	5534	1122	6655		11.67	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.39	9409	-1449	57.06	190.35	3.34	Si
SLV 10	179667	0.39	10033	-1545	57.06	202.09	3.54	Si
SLV 13	179667	0.39	11732	-1807	57.06	233.5	4.09	Si
SLV 14	179667	0.39	12709	-1957	57.06	251.19	4.4	Si
SLV 5	179667	0.39	13669	-2105	57.06	268.32	4.7	Si
SLV 6	179667	0.39	14293	-2201	57.06	279.31	4.9	Si
SLV 15	179667	0.39	18134	-2793	57.06	344.54	6.04	Si
SLV 16	179667	0.39	19111	-2943	57.06	360.46	6.32	Si
SLV 1	179667	0.39	25933	-3993	57.06	464.15	8.13	Si
SLV 2	179667	0.39	26910	-4144	57.06	477.92	8.38	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-3772	-4827	-3	0.769	460.7	0.952	11.73735	13.42943	No
SLV 7	-3682	-4750	-3	0.784	451.5	0.951	11.98897	13.42943	No
SLV 12	-3407	-4802	-4	0.837	423.6	0.948	12.82923	13.42943	No
SLV 11	-3317	-4725	-4	0.856	414.4	0.947	13.13266	13.42943	No
SLV 4	-3333	-3790	-5	0.852	416	0.947	13.0763	7.08809	Si
SLV 3	-3192	-3669	-4	0.883	401.7	0.946	13.57805	7.08809	Si
SLV 6	-1226	-1718	-8	1.85	203.6	0.908	29.61935	13.42943	Si
SLV 2	-2568	-2857	-6	1.055	338.6	0.937	16.36089	7.08809	Si
SLV 5	-1136	-1641	-7	1.95	194.7	0.905	31.32053	13.42943	Si
SLV 1	-2428	-2736	-6	1.104	324.3	0.935	17.16496	7.08809	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.779	SLU 65	Si
V_SLU	10.398	SLU 83	Si
PF_SLV	0.984	SLV 13	No
V_SLV	3.527	SLV 2	Si
PFFP_SLV	3.336	SLV 9	Si
R_SLV	0.874	SLV 8	No

Maschio 105

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.613	1.006	-19.613	5.826	L5	L6	4.82	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 72	5.44	2969.22	-35029	-0.000066	0.0004492	0.0035	4.82	53038.25	71669.37	71669.37	24.14	No	Si
SLU 72	8.96	1649.03	-20351	-0.0000371	0.0004492	0.0035	4.82	38453.76	46201.63	46201.63	28.02	No	Si
SLU 47	5.44	2805.3	-30924	-0.0000582	0.0004492	0.0035	4.82	50068.91	64545.67	64545.67	23.01	No	Si
SLU 47	8.96	1526.84	-17703	-0.0000324	0.0004492	0.0035	4.82	34648.93	41017.13	41017.13	26.86	No	Si
SLU 46	5.44	2710.21	-31313	-0.0000587	0.0004492	0.0035	4.82	50387.28	65220.74	65220.74	24.06	No	Si
SLU 46	8.96	1391.53	-18053	-0.0000327	0.0004492	0.0035	4.82	35171.85	41724.37	41724.37	29.98	No	Si
SLU 48	5.44	2745.57	-31801	-0.0000597	0.0004492	0.0035	4.82	50776.1	66068.44	66068.44	24.06	No	Si
SLU 48	8.96	1509.19	-18528	-0.0000337	0.0004492	0.0035	4.82	35873.18	42669.49	42669.49	28.27	No	Si
SLU 9	5.44	2294.2	-25396	-0.0000473	0.0004492	0.0035	4.82	44708.86	54954.08	54954.08	23.95	No	Si
SLU 9	8.96	1383.61	-14813	-0.0000272	0.0004492	0.0035	4.82	30087.79	35118.83	35118.83	25.38	No	Si
SLU 51	5.44	2863.45	-31433	-0.0000593	0.0004492	0.0035	4.82	50483.89	65428.91	65428.91	22.85	No	Si
SLU 51	8.96	1668.94	-18193	-0.0000335	0.0004492	0.0035	4.82	35380.05	42003.32	42003.32	25.17	No	Si
SLU 50	5.44	2795.07	-31371	-0.000059	0.0004492	0.0035	4.82	50434.5	65322.29	65322.29	23.37	No	Si
SLU 50	8.96	1595.62	-18150	-0.0000333	0.0004492	0.0035	4.82	35316.18	41917.61	41917.61	26.27	No	Si
SLU 49	5.44	2813.95	-31863	-0.0000599	0.0004492	0.0035	4.82	50824.14	66175.06	66175.06	23.52	No	Si
SLU 49	8.96	1582.51	-18571	-0.000034	0.0004492	0.0035	4.82	35936.21	42755.2	42755.2	27.02	No	Si
SLU 44	5.44	2701.56	-30374	-0.000057	0.0004492	0.0035	4.82	49605.64	63591.35	63591.35	23.54	No	Si
SLU 44	8.96	1335.86	-17184	-0.0000311	0.0004492	0.0035	4.82	33861.53	39966.73	39966.73	29.92	No	Si
SLU 5	5.44	2236.05	-24887	-0.0000463	0.0004492	0.0035	4.82	44136.68	54070.84	54070.84	24.18	No	Si
SLU 5	8.96	1241.51	-14323	-0.000026	0.0004492	0.0035	4.82	29271.96	34108.17	34108.17	27.47	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	5.44	-5079.55	-19760	-0.0000429	0.0006738	0.0035	4.82		56681.95	56681.95	11.16		Si
SLV 11	8.96	-6157.71	-11349	-0.000031	0.0006738	0.0035	4.82		39092.74	39092.74	6.35		Si
SLV 5	5.44	9581.56	-32990	-0.0000753	0.0006738	0.0035	4.82		70409.55	70409.55	7.35		Si
SLV 5	8.96	8423.21	-18743	-0.0000481	0.0006738	0.0035	4.82		43901.15	43901.15	5.21		Si
SLV 6	5.44	9213.93	-32686	-0.000074	0.0006738	0.0035	4.82		69877.84	69877.84	7.58		Si
SLV 6	8.96	7896.65	-18421	-0.0000465	0.0006738	0.0035	4.82		43236.95	43236.95	5.48		Si
SLV 9	5.44	10603.88	-30435	-0.000073	0.0006738	0.0035	4.82		65930.54	65930.54	6.22		Si
SLV 9	8.96	9148.91	-18097	-0.0000486	0.0006738	0.0035	4.82		42566.26	42566.26	4.65		Si
SLV 8	5.44	-6469.5	-22012	-0.0000496	0.0006738	0.0035	4.82		61254.44	61254.44	9.47		Si
SLV 8	8.96	-7409.98	-11674	-0.0000341	0.0006738	0.0035	4.82		39785.11	39785.11	5.37		Si
SLV 10	5.44	10236.26	-30132	-0.0000717	0.0006738	0.0035	4.82		65398.83	65398.83	6.39		Si
SLV 10	8.96	8622.35	-17775	-0.0000469	0.0006738	0.0035	4.82		41901.22	41901.22	4.86		Si
SLV 7	5.44	-6101.88	-22315	-0.0000494	0.0006738	0.0035	4.82		61870.36	61870.36	10.14		Si
SLV 7	8.96	-6883.41	-11995	-0.0000336	0.0006738	0.0035	4.82		40470.78	40470.78	5.88		Si
SLV 12	5.44	-5447.18	-19457	-0.0000431	0.0006738	0.0035	4.82		56066.02	56066.02	10.29		Si
SLV 12	8.96	-6684.27	-11028	-0.0000315	0.0006738	0.0035	4.82		38407.08	38407.08	5.75		Si
SLV 13	5.44	6411.4	-23804	-0.0000526	0.0006738	0.0035	4.82		54169.16	54169.16	8.45		Si
SLV 13	8.96	4787.23	-15072	-0.0000344	0.0006738	0.0035	4.82		36205.17	36205.17	7.56		Si
SLD 9	5.44	5814.47	-28093	-0.0000587	0.0006738	0.0035	4.82		61825.14	61825.14	10.63		Si
SLD 9	8.96	4486.39	-16297	-0.0000358	0.0006738	0.0035	4.82		38797.24	38797.24	8.65		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	5.44	2958.53	-39287	-23067	545	4.82	4.82	-29911	10833	8355	115546	27715	24582	52297	No	95.97	Si
SLU 84	8.96	1192.16	-22514	-13219	1233	4.82	4.82	-17141	10619	8189	115546	27715	24582	52297	No	42.41	Si
SLU 82	5.44	2854.79	-38737	-22744	638	4.82	4.82	-29492	10833	8355	115546	27715	24582	52297	No	82.01	Si
SLU 82	8.96	1001.18	-21995	-12914	1310	4.82	4.82	-16746	10566	8149	115546	27715	24582	52297	No	39.93	Si
SLU 42	5.44	2389.28	-33250	-19523	807	4.82	4.82	-25315	10833	8355	115546	27715	24582	52297	No	64.77	Si
SLU 42	8.96	906.84	-19134	-11235	1374	4.82	4.82	-14568	10276	7925	115546	27715	24582	52297	No	38.06	Si
SLU 81	5.44	2786.42	-38675	-22708	675	4.82	4.82	-29446	10833	8355	115546	27715	24582	52297	No	77.47	Si
SLU 81	8.96	927.86	-21952	-12889	1343	4.82	4.82	-16713	10562	8145	115546	27715	24582	52297	No	38.93	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	5.44	2890.15	-39225	-23031	582	4.82	4.82	-29864	10833	8355	115546	27715	24582	52297	No	89.81	Si
SLU 83	8.96	1118.84	-22470	-13194	1267	4.82	4.82	-17108	10614	8186	115546	27715	24582	52297	No	41.28	Si
SLU 41	5.44	2320.91	-33188	-19487	845	4.82	4.82	-25268	10833	8355	115546	27715	24582	52297	No	61.91	Si
SLU 41	8.96	833.52	-19091	-11209	1408	4.82	4.82	-14535	10271	7921	115546	27715	24582	52297	No	37.15	Si
SLU 32	5.44	2243.49	-32176	-18892	565	4.82	4.82	-24497	10833	8355	115546	27715	24582	52297	No	92.51	Si
SLU 32	8.96	826.86	-18665	-10959	1115	4.82	4.82	-14210	10228	7888	115546	27715	24582	52297	No	46.91	Si
SLU 18	5.44	2111.41	-29041	-17052	602	4.82	4.82	-22111	10833	8355	115546	27715	24582	52297	No	86.91	Si
SLU 18	8.96	662.44	-16414	-9637	1108	4.82	4.82	-12497	10000	7712	115546	27715	24582	52297	No	47.18	Si
SLU 39	5.44	2217.18	-32638	-19164	938	4.82	4.82	-24849	10833	8355	115546	27715	24582	52297	No	55.78	Si
SLU 39	8.96	642.54	-18572	-10905	1484	4.82	4.82	-14140	10219	7881	115546	27715	24582	52297	No	35.24	Si
SLU 40	5.44	2285.55	-32700	-19200	900	4.82	4.82	-24896	10833	8355	115546	27715	24582	52297	No	58.1	Si
SLU 40	8.96	715.86	-18615	-10930	1450	4.82	4.82	-14173	10223	7884	115546	27715	24582	52297	No	36.05	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	5.44	9581.56	-32990	-19370	-3027	4.82	4.82	-25117	16250	12532	115546	41573	24582	66155		21.85	Si
SLV 5	8.96	8423.21	-18743	-11005	-2237	4.82	4.82	-14270	15354	11841	115546	41573	24582	66155		29.58	Si
SLV 6	5.44	9213.93	-32686	-19192	-2778	4.82	4.82	-24886	16250	12532	115546	41573	24582	66155		23.82	Si
SLV 6	8.96	7896.65	-18421	-10816	-2009	4.82	4.82	-14025	15305	11803	115546	41573	24582	66155		32.94	Si
SLV 7	5.44	-6101.88	-22315	-13102	3519	4.82	4.82	-16989	15898	12260	115546	41573	24582	66155		18.8	Si
SLV 7	8.96	-6883.41	-11995	-7043	3370	4.82	4.82	-9133	14327	11049	115546	41573	24582	66155		19.63	Si
SLV 14	5.44	5835.75	-23329	-13698	-2787	4.82	4.82	-17762	16052	12380	115546	41573	24582	66155		23.74	Si
SLV 14	8.96	3962.71	-14569	-8554	-1644	4.82	4.82	-11092	14718	11351	115546	41573	24582	66155		40.25	Si
SLV 9	5.44	10603.88	-30435	-17870	-4122	4.82	4.82	-23172	16250	12532	115546	41573	24582	66155		16.05	Si
SLV 9	8.96	9148.91	-18097	-10626	-3004	4.82	4.82	-13778	15256	11765	115546	41573	24582	66155		22.02	Si
SLV 4	5.44	-2277.02	-28642	-16818	2825	4.82	4.82	-21807	16250	12532	115546	41573	24582	66155		23.42	Si
SLV 4	8.96	-3048.29	-14698	-8630	2595	4.82	4.82	-11191	14738	11366	115546	41573	24582	66155		25.49	Si
SLV 12	5.44	-5447.18	-19457	-11424	2674	4.82	4.82	-14814	15463	11925	115546	41573	24582	66155		24.74	Si
SLV 12	8.96	-6684.27	-11028	-6475	2831	4.82	4.82	-8396	14179	10935	115546	41573	24582	66155		23.37	Si
SLV 13	5.44	6411.4	-23804	-13977	-3178	4.82	4.82	-18123	16125	12435	115546	41573	24582	66155		20.82	Si
SLV 13	8.96	4787.23	-15072	-8850	-2001	4.82	4.82	-11475	14795	11410	115546	41573	24582	66155		33.06	Si
SLV 8	5.44	-6469.5	-22012	-12924	3769	4.82	4.82	-16759	15852	12225	115546	41573	24582	66155		17.55	Si
SLV 8	8.96	-7409.98	-11674	-6854	3598	4.82	4.82	-8888	14278	11011	115546	41573	24582	66155		18.39	Si
SLV 10	5.44	10236.26	-30132	-17692	-3872	4.82	4.82	-22941	16250	12532	115546	41573	24582	66155		17.09	Si
SLV 10	8.96	8622.35	-17775	-10437	-2776	4.82	4.82	-13533	15207	11727	115546	41573	24582	66155		23.83	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 7.2 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 12	-15479	0.39	302.36	1102.72	1830.25	1466.48	4.85	Si
SLV 11	-15778	0.39	302.36	1121.35	1857.79	1489.57	4.93	Si
SLV 8	-16038	0.39	302.36	1137.47	1881.75	1509.61	4.99	Si
SLV 7	-16337	0.39	302.36	1155.92	1909.32	1532.62	5.07	Si
SLV 16	-17729	0.39	302.36	1240.43	2037.09	1638.76	5.42	Si
SLV 15	-18197	0.39	302.36	1268.37	2079.98	1674.18	5.54	Si
SLV 4	-19593	0.39	302.36	1350.16	2207.98	1779.07	5.88	Si
SLV 3	-20061	0.39	302.36	1377.12	2251	1814.06	6	Si
SLV 14	-20289	0.39	302.36	1390.16	2271.96	1831.06	6.06	Si
SLV 13	-20758	0.39	302.36	1416.74	2315.01	1865.88	6.17	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-18743	-32990	-170	1.295	2291.8	0.951	19.78453	16.72944	Si
SLV 6	-18421	-32686	-170	1.315	2259.1	0.951	20.09696	16.72944	Si
SLV 9	-18097	-30435	175	1.335	2226.2	0.95	20.41868	16.72944	Si
SLV 10	-17775	-30132	175	1.356	2193.5	0.95	20.75213	16.72944	Si
SLV 1	-17226	-32320	-573	1.373	2137.8	0.948	21.0374	12.9417	Si
SLV 2	-16723	-31845	-574	1.408	2086.7	0.947	21.60563	12.9417	Si
SLV 7	-11995	-22315	-173	1.89	1607.9	0.934	29.39446	16.72944	Si
SLV 8	-11674	-22012	-173	1.932	1575.4	0.933	30.09125	16.72944	Si
SLV 3	-15202	-29117	-574	1.528	1932.5	0.944	23.52675	12.9417	Si
SLV 13	-15072	-23804	577	1.539	1919.3	0.943	23.70389	12.9417	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	22.85	SLU 51	Si
V_SLU	35.238	SLU 39	Si
PF_SLV	4.653	SLV 9	Si
V_SLV	16.05	SLV 9	Si
PFFP_SLV	4.85	SLV 12	Si
R_SLV	1.183	SLV 5	Si

Maschio 106

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.333	-3.314	-17.363	-3.314	L5	L6	1.03	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 60	6.34	692.91	-11089	-0.0000865	0.0003743	0.0035	1.03	3554.11	4205.4	4205.4	6.07	No	Si
SLU 60	8.14	429.86	-7717	-0.000056	0.0003743	0.0035	1.03	2929.73	3219.45	3219.45	7.49	No	Si
SLU 58	6.34	690.4	-11087	-0.0000864	0.0003743	0.0035	1.03	3553.87	4205	4205	6.09	No	Si
SLU 58	8.14	437.9	-7704	-0.0000562	0.0003743	0.0035	1.03	2926.65	3215.55	3215.55	7.34	No	Si
SLU 69	6.34	545.08	-11106	-0.0000813	0.0003743	0.0035	1.03	3556.2	4208.94	4208.94	7.72	No	Si
SLU 69	8.14	531.84	-7980	-0.000061	0.0003743	0.0035	1.03	2992.8	3301.42	3301.42	6.21	No	Si
SLU 62	6.34	715.37	-11329	-0.0000889	0.0003743	0.0035	1.03	3583.25	4256.39	4256.39	5.95	No	Si
SLU 62	8.14	436.38	-7890	-0.0000573	0.0003743	0.0035	1.03	2971.39	3273.15	3273.15	7.5	No	Si
SLU 67	6.34	510.87	-10854	-0.0000785	0.0003743	0.0035	1.03	3523.56	4155.77	4155.77	8.13	No	Si
SLU 67	8.14	529.14	-7806	-0.0000599	0.0003743	0.0035	1.03	2951.45	3247.23	3247.23	6.14	No	Si
SLU 66	6.34	522.61	-10867	-0.000079	0.0003743	0.0035	1.03	3525.19	4158.34	4158.34	7.96	No	Si
SLU 66	8.14	525.33	-7807	-0.0000598	0.0003743	0.0035	1.03	2951.68	3247.54	3247.54	6.18	No	Si
SLU 59	6.34	678.66	-11075	-0.0000859	0.0003743	0.0035	1.03	3552.34	4202.42	4202.42	6.19	No	Si
SLU 59	8.14	441.71	-7703	-0.0000563	0.0003743	0.0035	1.03	2926.41	3215.25	3215.25	7.28	No	Si
SLU 61	6.34	681.17	-11077	-0.000086	0.0003743	0.0035	1.03	3552.57	4202.81	4202.81	6.17	No	Si
SLU 61	8.14	433.67	-7716	-0.0000562	0.0003743	0.0035	1.03	2929.49	3219.15	3219.15	7.42	No	Si
SLU 63	6.34	703.63	-11316	-0.0000884	0.0003743	0.0035	1.03	3581.82	4253.82	4253.82	6.05	No	Si
SLU 63	8.14	440.19	-7889	-0.0000574	0.0003743	0.0035	1.03	2971.16	3272.85	3272.85	7.44	No	Si
SLU 70	6.34	533.34	-11094	-0.0000808	0.0003743	0.0035	1.03	3554.67	4206.35	4206.35	7.89	No	Si
SLU 70	8.14	535.66	-7979	-0.0000612	0.0003743	0.0035	1.03	2992.57	3301.12	3301.12	6.16	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	6.34	3032.69	-10491	-0.0001872	0.0005615	0.0035	1.03		4449.99	4449.99	1.47		Si
SLV 1	8.14	-1020.9	-3475	-0.000057	0.0005615	0.0035	0.824		1915.25	1915.25	1.88		Si
SLV 4	6.34	2956.43	-11845	-0.0001787	0.0005615	0.0035	1.03		4870.58	4870.58	1.65		Si
SLV 4	8.14	-754.89	-4954	-0.0000492	0.0005615	0.0035	1.03		2567.62	2567.62	3.4		Si
SLV 3	6.34	2936.29	-11708	-0.0001772	0.0005615	0.0035	1.03		4827.75	4827.75	1.64		Si
SLV 3	8.14	-761.54	-4813	-0.0000486	0.0005615	0.0035	1.03		2507.37	2507.37	3.29		Si
SLV 5	6.34	1355.82	-7010	-0.0000806	0.0005615	0.0035	1.03		3164.78	3164.78	2.33		Si
SLV 5	8.14	-443.12	-3048	-0.0000292	0.0005615	0.0035	1.03		1719.52	1719.52	3.88		Si
SLV 6	6.34	1368.68	-7097	-0.0000815	0.0005615	0.0035	1.03		3199.3	3199.3	2.34		Si
SLV 6	8.14	-438.88	-3138	-0.0000295	0.0005615	0.0035	1.03		1760.75	1760.75	4.01		Si
SLV 14	6.34	-2069.95	-4670	-0.0002646	0.0005615	0.0035	0.824		2445.53	2445.53	1.18		Si
SLV 14	8.14	1497.65	-6782	-0.0000856	0.0005615	0.0035	1.03		3074.93	3074.93	2.05		Si
SLV 2	6.34	3052.82	-10627	-0.0001883	0.0005615	0.0035	1.03		4492.09	4492.09	1.47		Si
SLV 2	8.14	-1014.25	-3616	-0.0000559	0.0005615	0.0035	0.824		1979.46	1979.46	1.95		Si
SLV 13	6.34	-2090.09	-4533	-0.0003387	0.0005615	0.0035	0.824		2386.47	2386.47	1.14		Si
SLV 13	8.14	1491	-6642	-0.0000848	0.0005615	0.0035	1.03		3019.76	3019.76	2.03		Si
SLV 16	6.34	-2166.35	-5887	-0.0001568	0.0005615	0.0035	0.824		2963.89	2963.89	1.37		Si
SLV 16	8.14	1757.01	-8120	-0.0001023	0.0005615	0.0035	1.03		3608.31	3608.31	2.05		Si
SLV 15	6.34	-2186.49	-5750	-0.0001684	0.0005615	0.0035	0.824		2906.27	2906.27	1.33		Si
SLV 15	8.14	1750.37	-7980	-0.0001015	0.0005615	0.0035	1.03		3551.72	3551.72	2.03		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 58	6.34	690.4	-11087	-9233	1001	1.03	1.03	-32013	10833	3124	40441	8636	2627	11262	No	11.25	Si
SLU 58	8.14	437.9	-7704	-6416	34	1.03	1.03	-22245	9910	2858	40441	8636	2627	11262	No	329.12	Si
SLU 63	6.34	703.63	-11316	-9423	1017	1.03	1.03	-32674	10833	3124	40441	8636	2627	11262	No	11.08	Si
SLU 63	8.14	440.19	-7889	-6569	74	1.03	1.03	-22777	9981	2879	40441	8636	2627	11262	No	153.11	Si
SLU 59	6.34	678.66	-11075	-9222	987	1.03	1.03	-31978	10833	3124	40441	8636	2627	11262	No	11.41	Si
SLU 59	8.14	441.71	-7703	-6415	28	1.03	1.03	-22242	9910	2858	40441	8636	2627	11262	No	405.07	Si
SLU 61	6.34	681.17	-11077	-9224	980	1.03	1.03	-31983	10833	3124	40441	8636	2627	11262	No	11.5	Si
SLU 61	8.14	433.67	-7716	-6425	72	1.03	1.03	-22279	9915	2859	40441	8636	2627	11262	No	157.24	Si
SLU 62	6.34	715.37	-11329	-9433	1031	1.03	1.03	-32710	10833	3124	40441	8636	2627	11262	No	10.92	Si
SLU 62	8.14	436.38	-7890	-6570	80	1.03	1.03	-22780	9982	2879	40441	8636	2627	11262	No	140.83	Si
SLU 56	6.34	673.65	-11189	-9317	969	1.03	1.03	-32307	10833	3124	40441	8636	2627	11262	No	11.62	Si
SLU 56	8.14	458.19	-7831	-6521	6	1.03	1.03	-22610	9959	2872	40441	8636	2627	11262	No	1795.92	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	6.34	697.5	-12366	-10298	968	1.03	1.03	-35706	10833	3124	40441	8636	2627	11262	No	11.64	Si
SLU 83	8.14	521.71	-8874	-7390	36	1.03	1.03	-25622	10361	2988	40441	8636	2627	11262	No	313.63	Si
SLU 57	6.34	661.91	-11177	-9307	955	1.03	1.03	-32272	10833	3124	40441	8636	2627	11262	No	11.79	Si
SLU 57	8.14	462	-7830	-6520	0	1.03	1.03	-22608	9959	2872	40441	8636	2627	11262	No	78003.18	Si
SLU 84	6.34	685.76	-12354	-10288	953	1.03	1.03	-35671	10833	3124	40441	8636	2627	11262	No	11.81	Si
SLU 84	8.14	525.52	-8873	-7389	29	1.03	1.03	-25620	10360	2988	40441	8636	2627	11262	No	381.85	Si
SLU 60	6.34	692.91	-11089	-9234	994	1.03	1.03	-32019	10833	3124	40441	8636	2627	11262	No	11.33	Si
SLU 60	8.14	429.86	-7717	-6426	78	1.03	1.03	-22282	9915	2860	40441	8636	2627	11262	No	144.31	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 1	6.34	1545.32	-9168	-7634	2514	1.03	1.03	-26470	15711	4531	40441	12954	2627	15580		6.2	Si
SLD 1	8.14	-227.32	-4797	-3995	946	1.03	1.03	-13851	13187	3803	40441	12954	2627	15580		16.47	Si
SLV 13	6.34	-2090.09	-4533	-3775	-3506	0.824	0.1618	0	0	0	40441	10363	2101	12464		3.55	Si
SLV 13	8.14	1491	-6642	-5531	-1996	1.03	0.8716	-19178	14252	3478	40441	12954	2627	15580		7.8	Si
SLV 1	6.34	3032.69	-10491	-8736	5069	1.03	0.6778	-30290	16250	3084	40441	12954	2627	15580		3.07	Si
SLV 1	8.14	-1020.9	-3475	-2894	2279	0.824	0.6638	0	0	0	40441	10363	2101	12464		5.47	Si
SLV 3	6.34	2936.29	-11708	-9749	4702	1.03	0.7926	-33805	16250	3606	40441	12954	2627	15580		3.31	Si
SLV 3	8.14	-761.54	-4813	-4008	1899	1.03	1.03	-13898	13196	3806	40441	12954	2627	15580		8.2	Si
SLV 15	6.34	-2186.49	-5750	-4788	-3874	0.824	0.4043	0	0	0	40441	10363	2101	12464		3.22	Si
SLV 15	8.14	1750.37	-7980	-6645	-2377	1.03	0.887	-23041	15025	3731	40441	12954	2627	15580		6.56	Si
SLV 2	6.34	3052.82	-10627	-8850	5079	1.03	0.6832	-30685	16250	3109	40441	12954	2627	15580		3.07	Si
SLV 2	8.14	-1014.25	-3616	-3011	2267	0.824	0.7035	0	0	0	40441	10363	2101	12464		5.5	Si
SLV 14	6.34	-2069.95	-4670	-3889	-3496	0.824	0.2152	0	0	0	40441	10363	2101	12464		3.57	Si
SLV 14	8.14	1497.65	-6782	-5648	-2008	1.03	0.8826	-19583	14333	3542	40441	12954	2627	15580		7.76	Si
SLV 16	6.34	-2166.35	-5887	-4902	-3864	0.824	0.441	0	0	0	40441	10363	2101	12464		3.23	Si
SLV 16	8.14	1757.01	-8120	-6762	-2389	1.03	0.8959	-23446	15106	3789	40441	12954	2627	15580		6.52	Si
SLV 4	6.34	2956.43	-11845	-9863	4711	1.03	0.7962	-34200	16250	3623	40441	12954	2627	15580		3.31	Si
SLV 4	8.14	-754.89	-4954	-4125	1887	1.03	1.03	-14303	13277	3829	40441	12954	2627	15580		8.26	Si
SLD 2	6.34	1553.97	-9226	-7683	2519	1.03	1.03	-26639	15745	4541	40441	12954	2627	15580		6.19	Si
SLD 2	8.14	-224.47	-4857	-4045	940	1.03	1.03	-14025	13222	3813	40441	12954	2627	15580		16.57	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.39	14571	-4202	106.86	532.18	4.98	Si
SLV 14	179667	0.39	15045	-4339	106.86	547.6	5.12	Si
SLV 9	179667	0.39	17130	-4940	106.86	614.07	5.75	Si
SLV 10	179667	0.39	17433	-5028	106.86	623.52	5.84	Si
SLV 15	179667	0.39	18605	-5366	106.86	659.67	6.17	Si
SLV 16	179667	0.39	19079	-5502	106.86	674.09	6.31	Si
SLV 5	179667	0.39	23285	-6715	106.86	796.8	7.46	Si
SLV 6	179667	0.39	23587	-6803	106.86	805.26	7.54	Si
SLV 11	179667	0.39	30577	-8818	106.86	987.39	9.24	Si
SLV 12	179667	0.39	30880	-8906	106.86	994.69	9.31	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-6787	-9749	373	0.747	834.5	0.95	11.42876	13.42943	No
SLV 11	-6695	-9693	373	0.756	825.1	0.95	11.56639	13.42943	No
SLV 8	-5896	-8555	367	0.841	744	0.945	12.93096	13.42943	No
SLV 7	-5803	-8498	367	0.852	734.6	0.944	13.10903	13.42943	No
SLV 10	-3471	-5475	-364	1.284	498.9	0.924	20.20717	13.42943	Si
SLV 9	-3378	-5418	-364	1.311	489.6	0.923	20.65421	13.42943	Si
SLV 16	-6693	-9662	123	0.789	824.9	0.95	12.07323	7.08809	Si
SLV 15	-6548	-9574	123	0.804	810.2	0.949	12.30618	7.08809	Si
SLV 6	-2580	-4280	-371	1.6	409.7	0.912	25.50232	13.42943	Si
SLV 5	-2487	-4224	-371	1.643	400.4	0.911	26.21907	13.42943	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.95	SLU 62	Si
V_SLU	10.923	SLU 62	Si
PF_SLV	1.142	SLV 13	Si
V_SLV	3.067	SLV 2	Si
PFFP_SLV	4.98	SLV 13	Si
R_SLV	0.851	SLV 12	No

Maschio 107

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.518	-3.314	-18.518	-0.094	L5	L6	3.221	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 51	5.44	2959.6	-18362	-0.0000605	0.0004492	0.0035	3.2207	20945.84	26196.55	26196.55	8.85	No	Si
SLU 51	7.54	-1139.5	-13991	-0.0000401	0.0004492	0.0035	3.2207	17524.02	25767.51	25767.51	22.61	No	Si
SLU 44	5.44	2849.34	-17736	-0.0000582	0.0004492	0.0035	3.2207	20515.9	25476.62	25476.62	8.94	No	Si
SLU 44	7.54	-994.59	-13406	-0.0000379	0.0004492	0.0035	3.2207	16992.06	25009.43	25009.43	25.15	No	Si
SLU 46	5.44	2876.69	-18274	-0.0000598	0.0004492	0.0035	3.2207	20886.68	26095.46	26095.46	9.07	No	Si
SLU 46	7.54	-1026.17	-13975	-0.0000395	0.0004492	0.0035	3.2207	17509.93	25747.87	25747.87	25.09	No	Si
SLU 48	5.44	2917.73	-18572	-0.0000608	0.0004492	0.0035	3.2207	21086.13	26439.02	26439.02	9.06	No	Si
SLU 48	7.54	-1130.09	-14274	-0.0000408	0.0004492	0.0035	3.2207	17775.29	26120.68	26120.68	23.11	No	Si
SLU 43	5.44	2814.11	-17700	-0.000058	0.0004492	0.0035	3.2207	20490.81	25435.61	25435.61	9.04	No	Si
SLU 43	7.54	-1073.24	-13422	-0.0000383	0.0004492	0.0035	3.2207	17007.04	25030.84	25030.84	23.32	No	Si
SLU 45	5.44	2855.55	-18252	-0.0000597	0.0004492	0.0035	3.2207	20872.21	26070.85	26070.85	9.13	No	Si
SLU 45	7.54	-1073.36	-13985	-0.0000398	0.0004492	0.0035	3.2207	17518.64	25760	25760	24	No	Si
SLU 49	5.44	2938.86	-18594	-0.000061	0.0004492	0.0035	3.2207	21100.24	26463.63	26463.63	9	No	Si
SLU 49	7.54	-1082.9	-14264	-0.0000405	0.0004492	0.0035	3.2207	17766.73	26108.55	26108.55	24.11	No	Si
SLU 59	5.44	3011.32	-20431	-0.0000663	0.0004492	0.0035	3.2207	22225.17	28577.64	28577.64	9.49	No	Si
SLU 59	7.54	-916.22	-15836	-0.0000438	0.0004492	0.0035	3.2207	19087.68	28068.87	28068.87	30.64	No	Si
SLU 50	5.44	2938.46	-18340	-0.0000603	0.0004492	0.0035	3.2207	20931.47	26171.94	26171.94	8.91	No	Si
SLU 50	7.54	-1186.69	-14001	-0.0000403	0.0004492	0.0035	3.2207	17532.72	25779.64	25779.64	21.72	No	Si
SLU 47	5.44	2911.52	-18056	-0.0000594	0.0004492	0.0035	3.2207	20738.27	25844.79	25844.79	8.88	No	Si
SLU 47	7.54	-1051.32	-13695	-0.0000389	0.0004492	0.0035	3.2207	17257.28	25391.4	25391.4	24.15	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	5.44	3210.24	-13211	-0.0000473	0.0006738	0.0035	3.2207		20557.77	20557.77	6.4		Si
SLV 9	7.54	2270.76	-10438	-0.0000359	0.0006738	0.0035	3.2207		16695	16695	7.35		Si
SLV 10	5.44	3148.77	-13318	-0.0000473	0.0006738	0.0035	3.2207		20704.89	20704.89	6.58		Si
SLV 10	7.54	2106.17	-10523	-0.0000354	0.0006738	0.0035	3.2207		16816.29	16816.29	7.98		Si
SLV 5	5.44	3884.5	-15938	-0.0000575	0.0006738	0.0035	3.2207		24237.52	24237.52	6.24		Si
SLV 5	7.54	2686.3	-12815	-0.0000439	0.0006738	0.0035	3.2207		20013.66	20013.66	7.45		Si
SLV 6	5.44	3823.02	-16045	-0.0000575	0.0006738	0.0035	3.2207		24379.55	24379.55	6.38		Si
SLV 6	7.54	2521.7	-12900	-0.0000433	0.0006738	0.0035	3.2207		20130.89	20130.89	7.98		Si
SLV 16	5.44	611.32	-11152	-0.00003	0.0006738	0.0035	3.2207		17702.83	17702.83	28.96		Si
SLV 16	7.54	-2349.75	-8116	-0.0000305	0.0006738	0.0035	3.2207		18031.08	18031.08	7.67		Si
SLV 1	5.44	3755.14	-19618	-0.0000664	0.0006738	0.0035	3.2207		28668.48	28668.48	7.63		Si
SLV 1	7.54	1104.43	-15749	-0.0000439	0.0006738	0.0035	3.2207		23987.3	23987.3	21.72		Si
SLV 12	5.44	481.96	-14833	-0.0000386	0.0006738	0.0035	3.2207		22760.94	22760.94	47.23		Si
SLV 12	7.54	-3931.62	-11050	-0.0000452	0.0006738	0.0035	3.2207		22202.62	22202.62	5.65		Si
SLV 7	5.44	1217.69	-17452	-0.0000488	0.0006738	0.0035	3.2207		26149.63	26149.63	21.47		Si
SLV 7	7.54	-3351.5	-13342	-0.0000483	0.0006738	0.0035	3.2207		25320.19	25320.19	7.55		Si
SLV 8	5.44	1156.22	-17559	-0.0000487	0.0006738	0.0035	3.2207		26274.24	26274.24	22.72		Si
SLV 8	7.54	-3516.09	-13427	-0.0000493	0.0006738	0.0035	3.2207		25436.31	25436.31	7.23		Si
SLV 11	5.44	543.43	-14726	-0.0000387	0.0006738	0.0035	3.2207		22616.36	22616.36	41.62		Si
SLV 11	7.54	-3767.03	-10964	-0.0000442	0.0006738	0.0035	3.2207		22086.49	22086.49	5.86		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	5.44	2997	-22554	-13243	3274	3.2207	3.2207	-25699	10833	5583	115546	18519	16426	34945	No	10.67	Si
SLU 79	7.54	-710.22	-17812	-10458	3241	3.2207	3.2207	-20295	10833	5583	115546	18519	16426	34945	No	10.78	Si
SLU 55	5.44	2963.23	-20125	-11817	3215	3.2207	3.2207	-22931	10833	5583	115546	18519	16426	34945	No	10.87	Si
SLU 55	7.54	-828.04	-15540	-9125	3306	3.2207	3.2207	-17707	10694	5511	115546	18519	16426	34945	No	10.57	Si
SLU 56	5.44	2969.44	-20642	-12120	3258	3.2207	3.2207	-23520	10833	5583	115546	18519	16426	34945	No	10.73	Si
SLU 56	7.54	-906.8	-16119	-9464	3229	3.2207	3.2207	-18367	10782	5556	115546	18519	16426	34945	No	10.82	Si
SLU 57	5.44	2990.58	-20663	-12133	3240	3.2207	3.2207	-23544	10833	5583	115546	18519	16426	34945	No	10.79	Si
SLU 57	7.54	-859.61	-16109	-9459	3282	3.2207	3.2207	-18355	10781	5555	115546	18519	16426	34945	No	10.65	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 58	5.44	2990.18	-20410	-11984	3326	3.2207	3.2207	-23255	10833	5583	115546	18519	16426	34945	No	10.51	Si
SLU 58	7.54	-963.41	-15846	-9304	3297	3.2207	3.2207	-18055	10741	5535	115546	18519	16426	34945	No	10.6	Si
SLU 59	5.44	3011.32	-20431	-11996	3308	3.2207	3.2207	-23280	10833	5583	115546	18519	16426	34945	No	10.56	Si
SLU 59	7.54	-916.22	-15836	-9298	3351	3.2207	3.2207	-18044	10739	5534	115546	18519	16426	34945	No	10.43	Si
SLU 80	5.44	3018.14	-22576	-13255	3255	3.2207	3.2207	-25723	10833	5583	115546	18519	16426	34945	No	10.73	Si
SLU 80	7.54	-663.03	-17802	-10452	3295	3.2207	3.2207	-20284	10833	5583	115546	18519	16426	34945	No	10.61	Si
SLU 62	5.44	2950.17	-20977	-12317	3286	3.2207	3.2207	-23901	10833	5583	115546	18519	16426	34945	No	10.64	Si
SLU 62	7.54	-810.99	-16347	-9598	3255	3.2207	3.2207	-18626	10817	5574	115546	18519	16426	34945	No	10.73	Si
SLU 63	5.44	2971.31	-20998	-12329	3267	3.2207	3.2207	-23926	10833	5583	115546	18519	16426	34945	No	10.7	Si
SLU 63	7.54	-763.8	-16338	-9593	3309	3.2207	3.2207	-18615	10815	5573	115546	18519	16426	34945	No	10.56	Si
SLU 51	5.44	2959.6	-18362	-10781	3215	3.2207	3.2207	-20922	10833	5583	115546	18519	16426	34945	No	10.87	Si
SLU 51	7.54	-1139.5	-13991	-8215	3262	3.2207	3.2207	-15942	10459	5390	115546	18519	16426	34945	No	10.71	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 8	5.44	1714.3	-16293	-9566	2930	3.2207	3.2207	-18564	16213	8355	115546	27778	16426	44204		15.09	Si
SLD 8	7.54	-1904.21	-12559	-7374	3263	3.2207	3.2207	-14310	15362	7916	115546	27778	16426	44204		13.55	Si
SLV 7	5.44	1217.69	-17452	-10247	3624	3.2207	3.2207	-19885	16250	8374	115546	27778	16426	44204		12.2	Si
SLV 7	7.54	-3351.5	-13342	-7834	4413	3.2207	3.2207	-15202	15540	8008	115546	27778	16426	44204		10.02	Si
SLD 7	5.44	1741.11	-16246	-9539	2901	3.2207	3.2207	-18511	16202	8349	115546	27778	16426	44204		15.24	Si
SLD 7	7.54	-1832.41	-12522	-7352	3235	3.2207	3.2207	-14267	15353	7912	115546	27778	16426	44204		13.67	Si
SLV 3	5.44	2955.1	-20072	-11786	3216	3.2207	3.2207	-22871	16250	8374	115546	27778	16426	44204		13.75	Si
SLV 3	7.54	-706.91	-15907	-9340	3560	3.2207	3.2207	-18125	16125	8309	115546	27778	16426	44204		12.42	Si
SLV 11	5.44	543.43	-14726	-8646	3283	3.2207	3.2207	-16779	15856	8171	115546	27778	16426	44204		13.47	Si
SLV 11	7.54	-3767.03	-10964	-6438	3991	3.2207	3.2207	-12493	14999	7729	115546	27778	16426	44204		11.08	Si
SLV 4	5.44	2858.84	-20240	-11884	3319	3.2207	3.2207	-23062	16250	8374	115546	27778	16426	44204		13.32	Si
SLV 4	7.54	-964.64	-16040	-9418	3663	3.2207	3.2207	-18277	16155	8325	115546	27778	16426	44204		12.07	Si
SLV 12	5.44	481.96	-14833	-8709	3349	3.2207	3.2207	-16901	15880	8183	115546	27778	16426	44204		13.2	Si
SLV 12	7.54	-3931.62	-11050	-6488	4057	3.2207	3.2207	-12590	15018	7739	115546	27778	16426	44204		10.9	Si
SLV 8	5.44	1156.22	-17559	-10310	3690	3.2207	3.2207	-20007	16250	8374	115546	27778	16426	44204		11.98	Si
SLV 8	7.54	-3516.09	-13427	-7884	4479	3.2207	3.2207	-15299	15560	8018	115546	27778	16426	44204		9.87	Si
SLD 11	5.44	1477	-15145	-8892	2763	3.2207	3.2207	-17256	15951	8220	115546	27778	16426	44204		16	Si
SLD 11	7.54	-1978.53	-11551	-6783	3063	3.2207	3.2207	-13162	15132	7798	115546	27778	16426	44204		14.43	Si
SLD 12	5.44	1450.19	-15191	-8920	2792	3.2207	3.2207	-17309	15962	8225	115546	27778	16426	44204		15.83	Si
SLD 12	7.54	-2050.33	-11589	-6804	3092	3.2207	3.2207	-13204	15141	7802	115546	27778	16426	44204		14.3	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 7.2 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 13	-8426	0.39	202.03	613.94	1042.54	828.24	4.1	Si
SLV 14	-8566	0.39	202.03	623.15	1055.86	839.51	4.16	Si
SLV 15	-8634	0.39	202.03	627.59	1062.3	844.95	4.18	Si
SLV 16	-8775	0.39	202.03	636.75	1075.58	856.16	4.24	Si
SLV 9	-10963	0.39	202.03	775.27	1281.34	1028.3	5.09	Si
SLV 10	-11053	0.39	202.03	780.77	1289.75	1035.26	5.12	Si
SLV 11	-11658	0.39	202.03	817.5	1346.15	1081.82	5.35	Si
SLV 12	-11747	0.39	202.03	822.89	1354.48	1088.69	5.39	Si
SLV 5	-13325	0.39	202.03	915.61	1500.39	1208	5.98	Si
SLV 6	-13415	0.39	202.03	920.75	1508.62	1214.69	6.01	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-10403	-16045	-196	1.513	1316.1	0.945	23.2711	16.72944	Si
SLV 5	-10321	-15938	-197	1.523	1307.8	0.944	23.43723	16.72944	Si
SLV 8	-9615	-17559	-89	1.627	1236.3	0.942	25.10553	16.72944	Si
SLV 7	-9533	-17452	-89	1.638	1227.9	0.941	25.29794	16.72944	Si
SLV 2	-11850	-19786	-494	1.331	1463	0.949	20.36735	12.9417	Si
SLV 1	-11721	-19618	-494	1.343	1449.8	0.949	20.57014	12.9417	Si
SLV 10	-8947	-13318	91	1.728	1168.6	0.939	26.74755	16.72944	Si
SLV 4	-11614	-20240	-461	1.356	1439	0.949	20.77818	12.9417	Si
SLV 9	-8864	-13211	91	1.741	1160.2	0.938	26.96618	16.72944	Si
SLV 3	-11484	-20072	-461	1.37	1425.8	0.948	20.98896	12.9417	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.851	SLU 51	Si
V_SLU	10.429	SLU 59	Si
PF_SLV	5.647	SLV 12	Si
V_SLV	9.87	SLV 8	Si
PFFP_SLV	4.099	SLV 13	Si
R_SLV	1.391	SLV 6	Si

Maschio 109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-3.314	-15.433	-3.314	L5	L6	1.655	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 40	5.44	-299.44	-12793	-0.0000471	0.0003743	0.0035	1.655	7715.66	9225.11	9225.11	30.81	No	Si
SLU 40	7.54	1308.21	-13139	-0.0000614	0.0003743	0.0035	1.655	7844.8	8682.57	8682.57	6.64	No	Si
SLU 42	5.44	-277.36	-13115	-0.000048	0.0003743	0.0035	1.655	7835.84	9384.88	9384.88	33.84	No	Si
SLU 42	7.54	1308.75	-13461	-0.0000627	0.0003743	0.0035	1.655	7961.07	8844.34	8844.34	6.76	No	Si
SLU 35	5.44	-228.96	-12998	-0.000047	0.0003743	0.0035	1.655	7792.78	9326.87	9326.87	40.74	No	Si
SLU 35	7.54	1270.54	-13305	-0.0000616	0.0003743	0.0035	1.655	7905.17	8765.83	8765.83	6.9	No	Si
SLU 34	5.44	-233.95	-12595	-0.0000456	0.0003743	0.0035	1.655	7640.08	9125.65	9125.65	39.01	No	Si
SLU 34	7.54	1237.98	-12840	-0.0000593	0.0003743	0.0035	1.655	7733.59	8533.36	8533.36	6.89	No	Si
SLU 31	5.44	-256.03	-12273	-0.0000447	0.0003743	0.0035	1.655	7514.03	8951.31	8951.31	34.96	No	Si
SLU 31	7.54	1237.44	-12518	-0.0000581	0.0003743	0.0035	1.655	7610.3	8373.84	8373.84	6.77	No	Si
SLU 33	5.44	-254.22	-12683	-0.0000461	0.0003743	0.0035	1.655	7674.1	9170.57	9170.57	36.07	No	Si
SLU 33	7.54	1276.07	-12982	-0.0000604	0.0003743	0.0035	1.655	7786.7	8603.97	8603.97	6.74	No	Si
SLU 36	5.44	-232.14	-13006	-0.000047	0.0003743	0.0035	1.655	7795.51	9330.53	9330.53	40.19	No	Si
SLU 36	7.54	1276.61	-13304	-0.0000616	0.0003743	0.0035	1.655	7904.75	8765.25	8765.25	6.87	No	Si
SLU 39	5.44	-296.27	-12785	-0.000047	0.0003743	0.0035	1.655	7712.87	9221.48	9221.48	31.13	No	Si
SLU 39	7.54	1302.15	-13140	-0.0000613	0.0003743	0.0035	1.655	7845.22	8683.15	8683.15	6.67	No	Si
SLU 32	5.44	-251.04	-12676	-0.0000461	0.0003743	0.0035	1.655	7671.29	9166.85	9166.85	36.51	No	Si
SLU 32	7.54	1270	-12983	-0.0000603	0.0003743	0.0035	1.655	7787.13	8604.54	8604.54	6.78	No	Si
SLU 41	5.44	-274.18	-13107	-0.0000479	0.0003743	0.0035	1.655	7833.13	9381.22	9381.22	34.22	No	Si
SLU 41	7.54	1302.69	-13462	-0.0000626	0.0003743	0.0035	1.655	7961.48	8844.92	8844.92	6.79	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 16	5.44	-1549.02	-9556	-0.0000499	0.0005615	0.0035	1.655		7767.47	7767.47	5.01		Si
SLD 16	7.54	2467.13	-11908	-0.0000695	0.0005615	0.0035	1.655		8570.61	8570.61	3.47		Si
SLV 2	5.44	3534.75	-13239	-0.0000878	0.0005615	0.0035	1.655		9422.35	9422.35	2.67		Si
SLV 2	7.54	-2890.01	-6650	-0.0000617	0.0005615	0.0035	1.655		5771.15	5771.15	2		Si
SLV 14	5.44	-3224.87	-7250	-0.0000694	0.0005615	0.0035	1.655		6191.52	6191.52	1.92		Si
SLV 14	7.54	4185.69	-12518	-0.0000949	0.0005615	0.0035	1.655		8959.44	8959.44	2.14		Si
SLD 15	5.44	-1541.08	-9524	-0.0000497	0.0005615	0.0035	1.655		7746.08	7746.08	5.03		Si
SLD 15	7.54	2468.36	-11874	-0.0000694	0.0005615	0.0035	1.655		8549.26	8549.26	3.46		Si
SLV 3	5.44	3185.61	-14015	-0.0000863	0.0005615	0.0035	1.655		9925.47	9925.47	3.12		Si
SLV 3	7.54	-2462.3	-8088	-0.0000561	0.0005615	0.0035	1.655		6776.58	6776.58	2.75		Si
SLV 16	5.44	-3592.5	-8101	-0.0000778	0.0005615	0.0035	1.655		6785.88	6785.88	1.89		Si
SLV 16	7.54	4610.55	-14034	-0.0001061	0.0005615	0.0035	1.655		9937.55	9937.55	2.16		Si
SLV 13	5.44	-3206.37	-7175	-0.0000691	0.0005615	0.0035	1.324		6138.98	6138.98	1.91		Si
SLV 13	7.54	4188.55	-12440	-0.0000948	0.0005615	0.0035	1.655		8909.35	8909.35	2.13		Si
SLV 1	5.44	3553.24	-13164	-0.0000878	0.0005615	0.0035	1.655		9374.19	9374.19	2.64		Si
SLV 1	7.54	-2887.16	-6572	-0.0000617	0.0005615	0.0035	1.655		5716.12	5716.12	1.98		Si
SLV 15	5.44	-3574	-8026	-0.0000774	0.0005615	0.0035	1.324		6734.74	6734.74	1.88		Si
SLV 15	7.54	4613.4	-13956	-0.000106	0.0005615	0.0035	1.655		9886.55	9886.55	2.14		Si
SLV 4	5.44	3167.11	-14090	-0.0000864	0.0005615	0.0035	1.655		9974.1	9974.1	3.15		Si
SLV 4	7.54	-2465.15	-8166	-0.0000564	0.0005615	0.0035	1.655		6830.12	6830.12	2.77		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 39	5.44	-296.27	-12785	-10646	-1608	1.655	1.655	-22974	10008	4638	40441	13876	4220	18097	No	11.26	Si
SLU 39	7.54	1302.15	-13140	-10942	-1568	1.655	1.655	-23612	10093	4677	40441	13876	4220	18097	No	11.54	Si
SLU 74	5.44	-154.7	-15309	-12748	-1624	1.655	1.655	-27509	10612	4918	40441	13876	4220	18097	No	11.15	Si
SLU 74	7.54	1368.98	-15240	-12691	-1615	1.655	1.655	-27385	10596	4910	40441	13876	4220	18097	No	11.2	Si
SLU 81	5.44	-199.92	-15418	-12839	-1676	1.655	1.655	-27706	10639	4930	40441	13876	4220	18097	No	10.79	Si
SLU 81	7.54	1401.12	-15397	-12822	-1644	1.655	1.655	-27668	10634	4928	40441	13876	4220	18097	No	11.01	Si
SLU 78	5.44	-135.79	-15638	-13022	-1614	1.655	1.655	-28101	10691	4954	40441	13876	4220	18097	No	11.22	Si
SLU 78	7.54	1375.58	-15561	-12958	-1610	1.655	1.655	-27962	10673	4946	40441	13876	4220	18097	No	11.24	Si
SLU 77	5.44	-132.62	-15631	-13016	-1613	1.655	1.655	-28088	10690	4954	40441	13876	4220	18097	No	11.22	Si
SLU 77	7.54	1369.52	-15562	-12959	-1605	1.655	1.655	-27964	10673	4946	40441	13876	4220	18097	No	11.27	Si
SLU 84	5.44	-181.02	-15748	-13113	-1666	1.655	1.655	-28298	10717	4967	40441	13876	4220	18097	No	10.86	Si
SLU 84	7.54	1407.72	-15718	-13089	-1639	1.655	1.655	-28245	10710	4963	40441	13876	4220	18097	No	11.04	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	5.44	-177.84	-15740	-13107	-1666	1.655	1.655	-28284	10716	4966	40441	13876	4220	18097	No	10.87	Si
SLU 83	7.54	1401.66	-15719	-13090	-1634	1.655	1.655	-28247	10711	4963	40441	13876	4220	18097	No	11.08	Si
SLU 82	5.44	-203.1	-15425	-12845	-1677	1.655	1.655	-27719	10640	4931	40441	13876	4220	18097	No	10.79	Si
SLU 82	7.54	1407.18	-15396	-12821	-1648	1.655	1.655	-27666	10633	4928	40441	13876	4220	18097	No	10.98	Si
SLU 75	5.44	-157.88	-15316	-12754	-1624	1.655	1.655	-27523	10614	4919	40441	13876	4220	18097	No	11.14	Si
SLU 75	7.54	1375.04	-15239	-12690	-1620	1.655	1.655	-27383	10596	4910	40441	13876	4220	18097	No	11.17	Si
SLU 40	5.44	-299.44	-12793	-10653	-1609	1.655	1.655	-22988	10009	4638	40441	13876	4220	18097	No	11.25	Si
SLU 40	7.54	1308.21	-13139	-10941	-1573	1.655	1.655	-23610	10092	4677	40441	13876	4220	18097	No	11.5	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	5.44	3553.24	-13164	-10962	5267	1.655	1.655	-23655	15148	7020	40441	20815	4220	25035		4.75	Si
SLV 1	7.54	-2887.16	-6572	-5472	4483	1.655	1.1646	-16919	13801	4500	40441	20815	4220	25035		5.58	Si
SLV 13	5.44	-3206.37	-7175	-5975	-6601	1.324	1.1419	0	0	0	40441	16652	3376	20028		3.03	Si
SLV 13	7.54	4188.55	-12440	-10359	-5894	1.655	1.4724	-22354	14887	6138	40441	20815	4220	25035		4.25	Si
SLV 16	5.44	-3592.5	-8101	-6746	-7282	1.655	1.1522	-21130	14643	4724	40441	20815	4220	25035		3.44	Si
SLV 16	7.54	4610.55	-14034	-11686	-6527	1.655	1.4969	-25218	15460	6480	40441	20815	4220	25035		3.84	Si
SLV 12	5.44	-1652.2	-11177	-9307	-3912	1.655	1.655	-20084	14433	6689	40441	20815	4220	25035		6.4	Si
SLV 12	7.54	2630.23	-13734	-11437	-3622	1.655	1.655	-24680	15353	7114	40441	20815	4220	25035		6.91	Si
SLV 15	5.44	-3574	-8026	-6684	-7274	1.324	1.1467	0	0	0	40441	16652	3376	20028		2.75	Si
SLV 15	7.54	4613.4	-13956	-11621	-6519	1.655	1.4908	-25077	15432	6442	40441	20815	4220	25035		3.84	Si
SLV 4	5.44	3167.11	-14090	-11733	4586	1.655	1.655	-25319	15480	7174	40441	20815	4220	25035		5.46	Si
SLV 4	7.54	-2465.15	-8166	-6800	3850	1.655	1.5769	-14674	13351	5895	40441	20815	4220	25035		6.5	Si
SLV 14	5.44	-3224.87	-7250	-6037	-6610	1.655	1.1481	-18953	14208	4567	40441	20815	4220	25035		3.79	Si
SLV 14	7.54	4185.69	-12518	-10424	-5903	1.655	1.4794	-22494	14916	6179	40441	20815	4220	25035		4.24	Si
SLV 3	5.44	3185.61	-14015	-11671	4595	1.655	1.655	-25185	15454	7161	40441	20815	4220	25035		5.45	Si
SLV 3	7.54	-2462.3	-8088	-6735	3859	1.655	1.5692	-14533	13323	5854	40441	20815	4220	25035		6.49	Si
SLV 2	5.44	3534.75	-13239	-11024	5258	1.655	1.655	-23790	15175	7032	40441	20815	4220	25035		4.76	Si
SLV 2	7.54	-2890.01	-6650	-5538	4474	1.655	1.1788	-16914	13800	4555	40441	20815	4220	25035		5.6	Si
SLV 11	5.44	-1640.39	-11129	-9267	-3906	1.655	1.655	-19998	14416	6681	40441	20815	4220	25035		6.41	Si
SLV 11	7.54	2632.06	-13684	-11395	-3617	1.655	1.655	-24590	15335	7106	40441	20815	4220	25035		6.92	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 1	179667	0.39	14864	-6888	171.7	870.46	5.07	Si
SLV 2	179667	0.39	15033	-6966	171.7	879.28	5.12	Si
SLV 5	179667	0.39	15597	-7228	171.7	908.56	5.29	Si
SLV 6	179667	0.39	15705	-7278	171.7	914.13	5.32	Si
SLV 3	179667	0.39	18117	-8396	171.7	1035.96	6.03	Si
SLV 4	179667	0.39	18287	-8474	171.7	1044.31	6.08	Si
SLV 9	179667	0.39	19454	-9015	171.7	1101.32	6.41	Si
SLV 10	179667	0.39	19562	-9065	171.7	1106.53	6.44	Si
SLV 7	179667	0.39	26443	-12254	171.7	1418.48	8.26	Si
SLV 8	179667	0.39	26551	-12304	171.7	1423.06	8.29	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-10018	-12926	275	0.83	1250.8	0.947	12.73903	13.42943	No
SLV 8	-10016	-12973	275	0.83	1250.5	0.947	12.74179	13.42943	No
SLV 11	-9216	-11129	350	0.883	1169.4	0.944	13.5868	13.42943	Si
SLV 12	-9213	-11177	350	0.883	1169.2	0.944	13.58997	13.42943	Si
SLV 5	-6613	-10089	-309	1.159	906.1	0.931	18.09703	13.42943	Si
SLV 6	-6611	-10136	-309	1.159	905.8	0.931	18.10222	13.42943	Si
SLV 9	-5811	-8292	-234	1.293	825.2	0.925	20.30022	13.42943	Si
SLV 10	-5809	-8340	-234	1.293	825	0.925	20.30674	13.42943	Si
SLV 3	-9763	-14015	-17	0.871	1224.9	0.946	13.3804	7.08809	Si
SLV 4	-9759	-14090	-17	0.871	1224.5	0.946	13.38458	7.08809	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.637	SLU 40	Si
V_SLU	10.789	SLU 82	Si
PF_SLV	1.884	SLV 15	Si
V_SLV	2.753	SLV 15	Si
PFFP_SLV	5.07	SLV 1	Si
R_SLV	0.949	SLV 7	No

Maschio 112

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.033	2.166	-15.033	6.526	L5	L6	4.36	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	5.44	-34510.89	48799	0.0000496	0.0004492	0.0035	3.488	0	181069.41	181069.41	5.25	No	Si
SLU 78	7.54	-14425.47	52365	0.001186	0.0004492	0.0035	3.488	0	178053.94	178053.94	12.34	No	Si
SLU 79	5.44	-34247.06	48447	0.0000499	0.0004492	0.0035	3.488	0	181367.31	181367.31	5.3	No	Si
SLU 79	7.54	-14373.46	52013	0.0011757	0.0004492	0.0035	3.488	0	178351.83	178351.83	12.41	No	Si
SLU 83	5.44	-35609.41	50362	0.0000515	0.0004492	0.0035	3.488	0	179748.13	179748.13	5.05	No	Si
SLU 83	7.54	-14985.14	53927	0.0012149	0.0004492	0.0035	3.488	0	176732.66	176732.66	11.79	No	Si
SLU 77	5.44	-34595.1	48795	0.0000452	0.0004492	0.0035	3.488	0	181072.97	181072.97	5.23	No	Si
SLU 77	7.54	-14535.37	52361	0.0011803	0.0004492	0.0035	3.488	0	178057.49	178057.49	12.25	No	Si
SLU 75	5.44	-34245.57	48481	0.0000513	0.0004492	0.0035	3.488	0	181338.16	181338.16	5.3	No	Si
SLU 75	7.54	-14324	52047	0.0011795	0.0004492	0.0035	3.488	0	178322.69	178322.69	12.45	No	Si
SLU 82	5.44	-35259.87	50048	0.0000576	0.0004492	0.0035	3.488	0	180013.33	180013.33	5.11	No	Si
SLU 82	7.54	-14773.77	53614	0.001214	0.0004492	0.0035	3.488	0	176997.85	176997.85	11.98	No	Si
SLU 84	5.44	-35525.2	50366	0.0000558	0.0004492	0.0035	3.488	0	179744.58	179744.58	5.06	No	Si
SLU 84	7.54	-14875.24	53931	0.0012205	0.0004492	0.0035	3.488	0	176729.1	176729.1	11.88	No	Si
SLU 74	5.44	-34329.78	48477	0.0000469	0.0004492	0.0035	3.488	0	181341.72	181341.72	5.28	No	Si
SLU 74	7.54	-14433.9	52043	0.0011738	0.0004492	0.0035	3.488	0	178326.24	178326.24	12.35	No	Si
SLU 81	5.44	-35344.09	50044	0.0000532	0.0004492	0.0035	3.488	0	180016.88	180016.88	5.09	No	Si
SLU 81	7.54	-14883.67	53609	0.0012084	0.0004492	0.0035	3.488	0	177001.4	177001.4	11.89	No	Si
SLU 80	5.44	-34162.85	48451	0.0000543	0.0004492	0.0035	3.488	0	181363.75	181363.75	5.31	No	Si
SLU 80	7.54	-14263.55	52017	0.0011814	0.0004492	0.0035	3.488	0	178348.28	178348.28	12.5	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 4	5.44	-27529.87	34974	-0.0000578	0.0006738	0.0035	4.36		201501.3	201501.3	7.32		Si
SLD 4	7.54	-11122.09	38386	0.000842	0.0006738	0.0035	3.488		198456.64	198456.64	17.84		Si
SLD 7	5.44	-29138.88	33989	-0.0000963	0.0006738	0.0035	4.36		202305.44	202305.44	6.94		Si
SLD 7	7.54	-14878.68	36907	0.0005998	0.0006738	0.0035	3.488		199788.46	199788.46	13.43		Si
SLV 12	5.44	-33093.26	32678	-0.000158	0.0006738	0.0035	4.36		203375.19	203375.19	6.15		Si
SLV 12	7.54	-22040.06	34860	0.0001664	0.0006738	0.0035	3.488		201593.82	201593.82	9.15		Si
SLV 8	5.44	-36898.53	35066	-0.0001859	0.0006738	0.0035	4.36		201426.42	201426.42	5.46		Si
SLV 8	7.54	-21551.8	38266	0.000315	0.0006738	0.0035	3.488		198565.09	198565.09	9.21		Si
SLV 4	5.44	-33295.28	37425	-0.0001236	0.0006738	0.0035	4.36		199322.35	199322.35	5.99		Si
SLV 4	7.54	-12690.98	41826	0.0008887	0.0006738	0.0035	3.488		195360.61	195360.61	15.39		Si
SLD 8	5.44	-29230.98	34002	-0.0000975	0.0006738	0.0035	4.36		202294.73	202294.73	6.92		Si
SLD 8	7.54	-14971.28	36920	0.0005956	0.0006738	0.0035	3.488		199776.65	199776.65	13.34		Si
SLD 12	5.44	-27659.99	33012	-0.0000837	0.0006738	0.0035	4.36		203102.24	203102.24	7.34		Si
SLD 12	7.54	-15141.62	35509	0.0005357	0.0006738	0.0035	3.488		201046.52	201046.52	13.28		Si
SLV 7	5.44	-36687.38	35035	-0.0001837	0.0006738	0.0035	4.36		201450.97	201450.97	5.49		Si
SLV 7	7.54	-21339.52	38236	0.0003245	0.0006738	0.0035	3.488		198592.16	198592.16	9.31		Si
SLV 3	5.44	-32964.65	37377	-0.0001194	0.0006738	0.0035	4.36		199364.74	199364.74	6.05		Si
SLV 3	7.54	-12358.57	41779	0.0009037	0.0006738	0.0035	3.488		195403	195403	15.81		Si
SLV 11	5.44	-32882.11	32648	-0.0001557	0.0006738	0.0035	4.36		203399.75	203399.75	6.19		Si
SLV 11	7.54	-21827.78	34830	0.0001759	0.0006738	0.0035	3.488		201618.37	201618.37	9.24		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	5.44	-34247.06	48447	28446	-9432	3.488	4.36	0	0	0	79749	20056	17789	37845	No	4.01	Si
SLU 79	7.54	-14373.46	52013	30539	-9432	3.488	4.36	0	0	0	79749	20056	17789	37845	No	4.01	Si
SLU 74	5.44	-34329.78	48477	28464	-9443	3.488	4.36	0	0	0	79749	20056	17789	37845	No	4.01	Si
SLU 74	7.54	-14433.9	52043	30557	-9443	3.488	4.36	0	0	0	79749	20056	17789	37845	No	4.01	Si
SLU 82	5.44	-35259.87	50048	29386	-9724	3.488	4.36	0	0	0	79749	20056	17789	37845	No	3.89	Si
SLU 82	7.54	-14773.77	53614	31479	-9724	3.488	4.36	0	0	0	79749	20056	17789	37845	No	3.89	Si
SLU 80	5.44	-34162.85	48451	28448	-9445	3.488	4.36	0	0	0	79749	20056	17789	37845	No	4.01	Si
SLU 80	7.54	-14263.55	52017	30542	-9445	3.488	4.36	0	0	0	79749	20056	17789	37845	No	4.01	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	5.44	-35344.09	50044	29383	-9712	3.488	4.36	0	0	0	79749	20056	17789	37845	No	3.9	Si
SLU 81	7.54	-14883.67	53609	31477	-9712	3.488	4.36	0	0	0	79749	20056	17789	37845	No	3.9	Si
SLU 78	5.44	-34510.89	48799	28653	-9533	3.488	4.36	0	0	0	79749	20056	17789	37845	No	3.97	Si
SLU 78	7.54	-14425.47	52365	30746	-9533	3.488	4.36	0	0	0	79749	20056	17789	37845	No	3.97	Si
SLU 83	5.44	-35609.41	50362	29570	-9790	3.488	4.36	0	0	0	79749	20056	17789	37845	No	3.87	Si
SLU 83	7.54	-14985.14	53927	31664	-9790	3.488	4.36	0	0	0	79749	20056	17789	37845	No	3.87	Si
SLU 77	5.44	-34595.1	48795	28650	-9521	3.488	4.36	0	0	0	79749	20056	17789	37845	No	3.97	Si
SLU 77	7.54	-14535.37	52361	30744	-9521	3.488	4.36	0	0	0	79749	20056	17789	37845	No	3.97	Si
SLU 84	5.44	-35525.2	50366	29573	-9802	3.488	4.36	0	0	0	79749	20056	17789	37845	No	3.86	Si
SLU 84	7.54	-14875.24	53931	31666	-9802	3.488	4.36	0	0	0	79749	20056	17789	37845	No	3.86	Si
SLU 75	5.44	-34245.57	48481	28466	-9455	3.488	4.36	0	0	0	79749	20056	17789	37845	No	4	Si
SLU 75	7.54	-14324	52047	30560	-9455	3.488	4.36	0	0	0	79749	20056	17789	37845	No	4	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	5.44	-26019.69	37005	21727	-8264	3.488	4.36	0	0	0	79749	30084	17789	47873		5.79	Si
SLV 1	7.54	-5200.36	41418	24319	-8580	3.488	4.36	0	0	0	79749	30084	17789	47873		5.58	Si
SLV 9	5.44	-9732.22	31405	18440	-7542	3.488	4.36	0	0	0	79749	30084	17789	47873		6.35	Si
SLV 9	7.54	2032.93	33627	19744	-7128	3.488	4.36	0	0	0	79749	30084	17789	47873		6.72	Si
SLV 5	5.44	-13537.49	33793	19841	-8367	3.488	4.36	0	0	0	79749	30084	17789	47873		5.72	Si
SLV 5	7.54	2521.19	37032	21744	-8196	3.488	4.36	0	0	0	79749	30084	17789	47873		5.84	Si
SLV 10	5.44	-9943.37	31435	18457	-7541	3.488	4.36	0	0	0	79749	30084	17789	47873		6.35	Si
SLV 10	7.54	1820.65	33657	19762	-7127	3.488	4.36	0	0	0	79749	30084	17789	47873		6.72	Si
SLV 6	5.44	-13748.63	33823	19859	-8366	3.488	4.36	0	0	0	79749	30084	17789	47873		5.72	Si
SLV 6	7.54	2308.91	37062	21761	-8195	3.488	4.36	0	0	0	79749	30084	17789	47873		5.84	Si
SLV 2	5.44	-26350.32	37052	21755	-8263	3.488	4.36	0	0	0	79749	30084	17789	47873		5.79	Si
SLV 2	7.54	-5532.76	41465	24346	-8579	3.488	4.36	0	0	0	79749	30084	17789	47873		5.58	Si
SLD 2	5.44	-24479.44	34815	20442	-7200	3.488	4.36	0	0	0	79749	30084	17789	47873		6.65	Si
SLD 2	7.54	-7971.66	38230	22447	-7314	3.488	4.36	0	0	0	79749	30084	17789	47873		6.55	Si
SLD 1	5.44	-24337.52	34794	20430	-7201	3.488	4.36	0	0	0	79749	30084	17789	47873		6.65	Si
SLD 1	7.54	-7828.98	38209	22435	-7314	3.488	4.36	0	0	0	79749	30084	17789	47873		6.55	Si
SLV 4	5.44	-33295.28	37425	21974	-7349	4.36	3.871	781193	16250	10065	79749	37605	22236	59841		8.14	Si
SLV 4	7.54	-12690.98	41826	24558	-7841	3.488	4.36	0	0	0	79749	30084	17789	47873		6.11	Si
SLV 3	5.44	-32964.65	37377	21946	-7350	4.36	3.8942	803071	16250	10125	79749	37605	22236	59841		8.14	Si
SLV 3	7.54	-12358.57	41779	24531	-7842	3.488	4.36	0	0	0	79749	30084	17789	47873		6.1	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 7.2 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 13	29943	0.39	273.5	0	16484.79	8242.4	30.14	Si
SLV 14	29990	0.39	273.5	0	16487.07	8243.54	30.14	Si
SLV 15	30192	0.39	273.5	0	16496.85	8248.42	30.16	Si
SLV 16	30239	0.39	273.5	0	16499.12	8249.56	30.16	Si
SLV 9	33386	0.39	273.5	0	16651.45	8325.72	30.44	Si
SLV 10	33416	0.39	273.5	0	16652.9	8326.45	30.44	Si
SLV 11	34216	0.39	273.5	0	16691.62	8345.81	30.51	Si
SLV 12	34246	0.39	273.5	0	16693.07	8346.54	30.52	Si
SLV 4	40882	0.39	273.5	0	16787.57	8393.78	30.69	Si
SLV 3	40835	0.39	273.5	0	16790.15	8395.07	30.69	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	39111	35066	-228	1.353	450.6	1	19.66808	16.72944	Si, Trazione
SLV 7	39071	35035	-228	1.355	450.6	1	19.69145	16.72944	Si, Trazione
SLV 6	37654	33823	-225	1.415	450.6	1	20.56171	16.72944	Si, Trazione
SLV 5	37615	33793	-225	1.417	450.6	1	20.58717	16.72944	Si, Trazione
SLV 12	36237	32678	225	1.48	450.6	1	21.50686	16.72944	Si, Trazione
SLV 11	36198	32648	225	1.482	450.6	1	21.53463	16.72944	Si, Trazione
SLV 10	34781	31435	228	1.553	450.6	1	22.56768	16.72944	Si, Trazione
SLV 9	34741	31405	228	1.555	450.6	1	22.59817	16.72944	Si, Trazione
SLV 4	41965	37425	-755	1.219	450.6	1	17.71488	12.9417	Si, Trazione
SLV 3	41903	37377	-755	1.221	450.6	1	17.74545	12.9417	Si, Trazione

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.048	SLU 83	Si
V_SLU	3.861	SLU 84	Si
PF_SLV	5.459	SLV 8	Si
V_SLV	5.579	SLV 1	Si
PFFP_SLV	30.136	SLV 13	Si
R_SLV	1.176	SLV 8	Si

Maschio 113

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-4.824	-13.778	-3.384	L5	L6	1.439	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	5.44	-635.34	-14353	-0.0000682	0.0003743	0.0035	1.4393	6715.99	8134.75	8134.75	12.8	No	Si
SLU 81	8.96	-48.49	-10253	-0.0000405	0.0003743	0.0035	1.4393	5534.96	6562.21	6562.21	135.32	No	Si
SLU 42	5.44	-562.96	-12404	-0.0000583	0.0003743	0.0035	1.4393	6228.04	7494.68	7494.68	13.31	No	Si
SLU 42	8.96	-2.41	-8935	-0.0000343	0.0003743	0.0035	1.4393	5030.09	5924.25	5924.25	2457.25	No	Si
SLU 40	5.44	-555.93	-12151	-0.0000571	0.0003743	0.0035	1.4393	6155.03	7406.68	7406.68	13.32	No	Si
SLU 40	8.96	5.28	-8655	-0.0000332	0.0003743	0.0035	1.4393	4914.66	5311.74	5311.74	1006.73	No	Si
SLU 83	5.44	-642.36	-14605	-0.0000695	0.0003743	0.0035	1.4393	6769.49	8222.11	8222.11	12.8	No	Si
SLU 83	8.96	-56.18	-10534	-0.0000418	0.0003743	0.0035	1.4393	5634.65	6694.17	6694.17	119.16	No	Si
SLU 84	5.44	-629.15	-14584	-0.0000692	0.0003743	0.0035	1.4393	6765.12	8214.79	8214.79	13.06	No	Si
SLU 84	8.96	-38.54	-10496	-0.0000413	0.0003743	0.0035	1.4393	5621.39	6676.32	6676.32	173.22	No	Si
SLU 41	5.44	-576.17	-12425	-0.0000587	0.0003743	0.0035	1.4393	6234.01	7501.69	7501.69	13.02	No	Si
SLU 41	8.96	-20.05	-8973	-0.0000348	0.0003743	0.0035	1.4393	5045.42	5942.89	5942.89	296.44	No	Si
SLU 82	5.44	-622.12	-14332	-0.0000679	0.0003743	0.0035	1.4393	6711.44	8127.52	8127.52	13.06	No	Si
SLU 82	8.96	-30.86	-10215	-0.00004	0.0003743	0.0035	1.4393	5521.33	6544.56	6544.56	212.1	No	Si
SLU 39	5.44	-569.15	-12172	-0.0000574	0.0003743	0.0035	1.4393	6161.2	7414.28	7414.28	13.03	No	Si
SLU 39	8.96	-12.36	-8692	-0.0000335	0.0003743	0.0035	1.4393	4930.35	5804.38	5804.38	469.59	No	Si
SLU 77	5.44	-612.74	-14335	-0.0000678	0.0003743	0.0035	1.4393	6712.21	8128.74	8128.74	13.27	No	Si
SLU 77	8.96	-84.85	-10483	-0.000042	0.0003743	0.0035	1.4393	5616.64	6669.95	6669.95	78.61	No	Si
SLU 74	5.44	-605.71	-14083	-0.0000665	0.0003743	0.0035	1.4393	6656.32	8042.51	8042.51	13.28	No	Si
SLU 74	8.96	-77.16	-10202	-0.0000407	0.0003743	0.0035	1.4393	5516.44	6538.25	6538.25	84.74	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	5.44	-700.18	-11775	-0.0000563	0.0005615	0.0035	1.4393		7762.93	7762.93	11.09		Si
SLV 3	8.96	-1098.25	-9264	-0.0000526	0.0005615	0.0035	1.4393		6403.22	6403.22	5.83		Si
SLV 4	5.44	-715.51	-11925	-0.0000571	0.0005615	0.0035	1.4393		7839.03	7839.03	10.96		Si
SLV 4	8.96	-1084.79	-9405	-0.0000529	0.0005615	0.0035	1.4393		6482.89	6482.89	5.98		Si
SLV 8	5.44	-1161.92	-13750	-0.0000721	0.0005615	0.0035	1.4393		8754.1	8754.1	7.53		Si
SLV 8	8.96	-929.36	-11508	-0.0000589	0.0005615	0.0035	1.4393		7623.82	7623.82	8.2		Si
SLV 9	5.44	400.17	-5385	-0.0000262	0.0005615	0.0035	1.4393		3728.67	3728.67	9.32		Si
SLV 9	8.96	759.29	-2281	-0.0000208	0.0005615	0.0035	1.4393		1705.39	1705.39	2.25		Si
SLV 2	5.44	-268.44	-9650	-0.0000408	0.0005615	0.0035	1.4393		6621.88	6621.88	24.67		Si
SLV 2	8.96	-724.34	-6875	-0.0000371	0.0005615	0.0035	1.4393		5019	5019	6.93		Si
SLV 14	5.44	-61.57	-7360	-0.0000285	0.0005615	0.0035	1.4393		5306.99	5306.99	86.2		Si
SLV 14	8.96	928.18	-4526	-0.0000312	0.0005615	0.0035	1.4393		3184.41	3184.41	3.43		Si
SLV 1	5.44	-253.1	-9500	-0.0000399	0.0005615	0.0035	1.4393		6536.78	6536.78	25.83		Si
SLV 1	8.96	-737.8	-6734	-0.0000368	0.0005615	0.0035	1.4393		4933.39	4933.39	6.69		Si
SLV 13	5.44	-46.23	-7210	-0.0000277	0.0005615	0.0035	1.4393		5219.51	5219.51	112.89		Si
SLV 13	8.96	914.72	-4385	-0.0000304	0.0005615	0.0035	1.4393		3094.13	3094.13	3.38		Si
SLV 7	5.44	-1152.12	-13655	-0.0000715	0.0005615	0.0035	1.4393		8707.79	8707.79	7.56		Si
SLV 7	8.96	-937.96	-11418	-0.0000587	0.0005615	0.0035	1.4393		7576.24	7576.24	8.08		Si
SLV 10	5.44	390.38	-5481	-0.0000265	0.0005615	0.0035	1.4393		3788.64	3788.64	9.7		Si
SLV 10	8.96	767.89	-2371	-0.0000212	0.0005615	0.0035	1.4393		1766.62	1766.62	2.3		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	5.44	-592.5	-14062	-11709	-2847	1.4393	1.4393	-29054	10818	4360	40441	12068	3670	15738	No	5.53	Si
SLU 75	8.96	-59.52	-10164	-8464	773	1.4393	1.4393	-21001	9745	3927	40441	12068	3670	15738	No	20.37	Si
SLU 79	5.44	-603.03	-14234	-11853	-2850	1.4393	1.4393	-29411	10833	4366	40441	12068	3670	15738	No	5.52	Si
SLU 79	8.96	-87.43	-10407	-8666	860	1.4393	1.4393	-21503	9812	3954	40441	12068	3670	15738	No	18.31	Si
SLU 84	5.44	-629.15	-14584	-12145	-3077	1.4393	1.4393	-30134	10833	4366	40441	12068	3670	15738	No	5.11	Si
SLU 84	8.96	-38.54	-10496	-8740	686	1.4393	1.4393	-21687	9836	3964	40441	12068	3670	15738	No	22.93	Si
SLU 78	5.44	-599.52	-14314	-11920	-2870	1.4393	1.4393	-29576	10833	4366	40441	12068	3670	15738	No	5.48	Si
SLU 78	8.96	-67.21	-10445	-8698	814	1.4393	1.4393	-21581	9822	3958	40441	12068	3670	15738	No	19.34	Si
SLU 83	5.44	-642.36	-14605	-12162	-3100	1.4393	1.4393	-30178	10833	4366	40441	12068	3670	15738	No	5.08	Si
SLU 83	8.96	-56.18	-10534	-8772	729	1.4393	1.4393	-21765	9847	3968	40441	12068	3670	15738	No	21.58	Si
SLU 82	5.44	-622.12	-14332	-11934	-3054	1.4393	1.4393	-29612	10833	4366	40441	12068	3670	15738	No	5.15	Si
SLU 82	8.96	-30.86	-10215	-8506	645	1.4393	1.4393	-21107	9759	3933	40441	12068	3670	15738	No	24.4	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	5.44	-605.71	-14083	-11727	-2869	1.4393	1.4393	-29098	10824	4362	40441	12068	3670	15738	No	5.48	Si
SLU 74	8.96	-77.16	-10202	-8495	816	1.4393	1.4393	-21079	9755	3931	40441	12068	3670	15738	No	19.29	Si
SLU 81	5.44	-635.34	-14353	-11952	-3076	1.4393	1.4393	-29656	10833	4366	40441	12068	3670	15738	No	5.12	Si
SLU 81	8.96	-48.49	-10253	-8538	688	1.4393	1.4393	-21185	9769	3937	40441	12068	3670	15738	No	22.87	Si
SLU 80	5.44	-589.82	-14213	-11836	-2827	1.4393	1.4393	-29368	10833	4366	40441	12068	3670	15738	No	5.57	Si
SLU 80	8.96	-69.79	-10369	-8635	816	1.4393	1.4393	-21425	9801	3950	40441	12068	3670	15738	No	19.28	Si
SLU 77	5.44	-612.74	-14335	-11937	-2893	1.4393	1.4393	-29620	10833	4366	40441	12068	3670	15738	No	5.44	Si
SLU 77	8.96	-84.85	-10483	-8729	857	1.4393	1.4393	-21659	9832	3963	40441	12068	3670	15738	No	18.37	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	5.44	-61.57	-7360	-6129	-6137	1.4393	1.4393	-15208	13458	5424	40441	18102	3670	21772		3.55	Si
SLV 14	8.96	928.18	-4526	-3769	-2003	1.4393	1.4393	-9352	12287	4952	40441	18102	3670	21772		10.87	Si
SLV 1	5.44	-253.1	-9500	-7911	1904	1.4393	1.4393	-19629	14342	5780	40441	18102	3670	21772		11.43	Si
SLV 1	8.96	-737.8	-6734	-5607	3556	1.4393	1.4393	-13914	13199	5320	40441	18102	3670	21772		6.12	Si
SLD 13	5.44	-234.83	-8546	-7116	-3623	1.4393	1.4393	-17658	13948	5621	40441	18102	3670	21772		6.01	Si
SLD 13	8.96	344.75	-5806	-4835	-446	1.4393	1.4393	-11998	12816	5165	40441	18102	3670	21772		48.8	Si
SLV 13	5.44	-46.23	-7210	-6004	-6128	1.4393	1.4393	-14898	13396	5399	40441	18102	3670	21772		3.55	Si
SLV 13	8.96	914.72	-4385	-3651	-1992	1.4393	1.4393	-9060	12229	4928	40441	18102	3670	21772		10.93	Si
SLD 14	5.44	-241.41	-8610	-7170	-3626	1.4393	1.4393	-17791	13975	5632	40441	18102	3670	21772		6	Si
SLD 14	8.96	350.52	-5867	-4886	-451	1.4393	1.4393	-12123	12841	5175	40441	18102	3670	21772		48.3	Si
SLV 15	5.44	-493.3	-9485	-7898	-5389	1.4393	1.4393	-19599	14336	5778	40441	18102	3670	21772		4.04	Si
SLV 15	8.96	554.28	-6915	-5758	-2132	1.4393	1.4393	-14287	13274	5350	40441	18102	3670	21772		10.21	Si
SLV 9	5.44	400.17	-5385	-4484	-4180	1.4393	1.4393	-11126	12642	5095	40441	18102	3670	21772		5.21	Si
SLV 9	8.96	759.29	-2281	-1900	111	1.4393	1.1605	-4714	11359	3691	40441	18102	3670	21772		195.5	Si
SLV 16	5.44	-508.64	-9635	-8023	-5398	1.4393	1.4393	-19909	14398	5803	40441	18102	3670	21772		4.03	Si
SLV 16	8.96	567.74	-7056	-5875	-2143	1.4393	1.4393	-14579	13332	5373	40441	18102	3670	21772		10.16	Si
SLV 2	5.44	-268.44	-9650	-8036	1895	1.4393	1.4393	-19939	14404	5805	40441	18102	3670	21772		11.49	Si
SLV 2	8.96	-724.34	-6875	-5725	3545	1.4393	1.4393	-14205	13258	5343	40441	18102	3670	21772		6.14	Si
SLV 10	5.44	390.38	-5481	-4564	-4186	1.4393	1.4393	-11324	12681	5111	40441	18102	3670	21772		5.2	Si
SLV 10	8.96	767.89	-2371	-1975	105	1.4393	1.1876	-4900	11397	3790	40441	18102	3670	21772		208.29	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.39	8773	-3536	152.8	466.57	3.05	Si
SLV 10	179667	0.39	8970	-3615	152.8	476.39	3.12	Si
SLV 5	179667	0.39	9252	-3729	152.8	490.39	3.21	Si
SLV 6	179667	0.39	9449	-3808	152.8	500.14	3.27	Si
SLV 13	179667	0.39	15975	-6438	152.8	807.03	5.28	Si
SLV 14	179667	0.39	16283	-6562	152.8	820.75	5.37	Si
SLV 1	179667	0.39	17570	-7081	152.8	877.29	5.74	Si
SLV 2	179667	0.39	17879	-7205	152.8	890.65	5.83	Si
SLV 15	179667	0.39	22673	-9138	152.8	1089.34	7.13	Si
SLV 16	179667	0.39	22982	-9262	152.8	1101.54	7.21	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-11508	-13750	-96	0.669	1371.8	0.957	10.15385	13.42943	No
SLV 7	-11418	-13655	-96	0.673	1362.6	0.957	10.2238	13.42943	No
SLV 12	-10804	-13064	-31	0.711	1300.1	0.955	10.81674	13.42943	No
SLV 11	-10713	-12968	-31	0.716	1291	0.955	10.8961	13.42943	No
SLV 4	-9405	-11925	-124	0.79	1158	0.95	12.08218	7.08809	Si
SLV 3	-9264	-11775	-125	0.8	1143.7	0.949	12.24169	7.08809	Si
SLV 16	-7056	-9635	93	1.005	919.9	0.939	15.55335	7.08809	Si
SLV 15	-6915	-9485	92	1.022	905.6	0.938	15.82561	7.08809	Si
SLV 2	-6875	-9650	-84	1.028	901.6	0.938	15.9194	7.08809	Si
SLV 6	-3076	-6167	39	1.9	520	0.906	30.47066	13.42943	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	12.8	SLU 83	Si
V_SLU	5.077	SLU 83	Si
PF_SLV	2.246	SLV 9	Si
V_SLV	3.548	SLV 14	Si
PFFP_SLV	3.054	SLV 9	Si
R_SLV	0.756	SLV 8	No

Maschio 115

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-3.384	-13.778	-0.354	Z medio 632 cm	L6	3.031	0.28	2.64	1.759	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 71	7.2	78.11	-25959	-0.0000487	0.0003743	0.0035	3.0307	27517.44	30849.04	30849.04	394.96	No	Si
SLU 71	8.96	-820.49	-20436	-0.0000405	0.0003743	0.0035	3.0307	23641.97	28223.63	28223.63	34.4	No	Si
SLU 24	7.2	94.12	-21000	-0.0000389	0.0003743	0.0035	3.0307	24086.87	26404.54	26404.54	280.55	No	Si
SLU 24	8.96	-773.07	-16472	-0.0000326	0.0003743	0.0035	3.0307	20201.58	24044.22	24044.22	31.1	No	Si
SLU 69	7.2	84.88	-26117	-0.000049	0.0003743	0.0035	3.0307	27612.06	30994.51	30994.51	365.17	No	Si
SLU 69	8.96	-866.24	-20554	-0.0000409	0.0003743	0.0035	3.0307	23736.67	28345.98	28345.98	32.72	No	Si
SLU 29	7.2	70.5	-21467	-0.0000397	0.0003743	0.0035	3.0307	24447.25	26812.92	26812.92	380.31	No	Si
SLU 29	8.96	-731.11	-16974	-0.0000335	0.0003743	0.0035	3.0307	20667.43	24578.71	24578.71	33.62	No	Si
SLU 66	7.2	101.72	-25492	-0.0000478	0.0003743	0.0035	3.0307	27230.76	30417.93	30417.93	299.03	No	Si
SLU 66	8.96	-862.45	-19934	-0.0000397	0.0003743	0.0035	3.0307	23237.04	27710.49	27710.49	32.13	No	Si
SLU 27	7.2	77.27	-21625	-0.00004	0.0003743	0.0035	3.0307	24566.65	26950.74	26950.74	348.78	No	Si
SLU 27	8.96	-776.86	-17092	-0.0000338	0.0003743	0.0035	3.0307	20776.56	24706.16	24706.16	31.8	No	Si
SLU 28	7.2	115.4	-21708	-0.0000403	0.0003743	0.0035	3.0307	24629.82	27024.19	27024.19	234.17	No	Si
SLU 28	8.96	-713.64	-17181	-0.0000338	0.0003743	0.0035	3.0307	20857.84	24801.63	24801.63	34.75	No	Si
SLU 64	7.2	111.8	-24710	-0.0000463	0.0003743	0.0035	3.0307	26734.23	29702.78	29702.78	265.68	No	Si
SLU 64	8.96	-812.92	-19195	-0.000038	0.0003743	0.0035	3.0307	22624.04	26962.82	26962.82	33.17	No	Si
SLU 25	7.2	132.25	-21083	-0.0000392	0.0003743	0.0035	3.0307	24151.88	26477.38	26477.38	200.21	No	Si
SLU 25	8.96	-709.85	-16561	-0.0000326	0.0003743	0.0035	3.0307	20284.79	24138.58	24138.58	34.01	No	Si
SLU 22	7.2	104.19	-20218	-0.0000374	0.0003743	0.0035	3.0307	23467.1	25727.38	25727.38	246.92	No	Si
SLU 22	8.96	-723.54	-15733	-0.0000311	0.0003743	0.0035	3.0307	19498.78	23205.22	23205.22	32.07	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	7.2	3831.95	-25392	-0.0000601	0.0005615	0.0035	3.0307		32874.55	32874.55	8.58		Si
SLV 5	8.96	4510.7	-22002	-0.0000561	0.0005615	0.0035	3.0307		28925.97	28925.97	6.41		Si
SLD 12	7.2	-1582.95	-16447	-0.000035	0.0005615	0.0035	3.0307		24990.08	24990.08	15.79		Si
SLD 12	8.96	-2745.86	-11714	-0.0000304	0.0005615	0.0035	3.0307		18997.93	18997.93	6.92		Si
SLV 8	7.2	-4347.76	-14185	-0.0000406	0.0005615	0.0035	3.0307		22165.71	22165.71	5.1		Si
SLV 8	8.96	-5428.37	-8663	-0.0000348	0.0005615	0.0035	3.0307		14932.86	14932.86	2.75		Si
SLD 11	7.2	-1557.86	-16421	-0.0000348	0.0005615	0.0035	3.0307		24959.32	24959.32	16.02		Si
SLD 11	8.96	-2707.6	-11679	-0.0000302	0.0005615	0.0035	3.0307		18951.28	18951.28	7		Si
SLV 10	7.2	4440.77	-24222	-0.0000601	0.0005615	0.0035	3.0307		31502.49	31502.49	7.09		Si
SLV 10	8.96	4284.62	-21123	-0.0000535	0.0005615	0.0035	3.0307		27915.91	27915.91	6.52		Si
SLV 9	7.2	4498.3	-24164	-0.0000602	0.0005615	0.0035	3.0307		31434.79	31434.79	6.99		Si
SLV 9	8.96	4372.34	-21043	-0.0000537	0.0005615	0.0035	3.0307		27823.91	27823.91	6.36		Si
SLV 12	7.2	-3681.41	-12958	-0.000036	0.0005615	0.0035	3.0307		20602.08	20602.08	5.6		Si
SLV 12	8.96	-5566.74	-7703	-0.0000347	0.0005615	0.0035	3.0307		13600.86	13600.86	2.44		Si
SLV 7	7.2	-4290.23	-14127	-0.0000403	0.0005615	0.0035	3.0307		22091.45	22091.45	5.15		Si
SLV 7	8.96	-5340.65	-8582	-0.0000343	0.0005615	0.0035	3.0307		14820.95	14820.95	2.78		Si
SLV 6	7.2	3774.43	-25450	-0.00006	0.0005615	0.0035	3.0307		32942.78	32942.78	8.73		Si
SLV 6	8.96	4422.99	-22082	-0.0000559	0.0005615	0.0035	3.0307		29018.56	29018.56	6.56		Si
SLV 11	7.2	-3623.89	-12900	-0.0000357	0.0005615	0.0035	3.0307		20528.77	20528.77	5.66		Si
SLV 11	8.96	-5479.02	-7623	-0.0000341	0.0005615	0.0035	3.0307		13489.81	13489.81	2.46		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 63	7.2	83.09	-26498	-22065	-411	3.0307	3.0307	-26002	10411	8835	28547	25410	7728	33139	No	80.64	Si
SLU 63	8.96	-286.6	-20536	-17100	-2617	3.0307	3.0307	-20151	9631	8173	28547	25410	7728	33139	No	12.66	Si
SLU 82	7.2	136.73	-28320	-23583	-605	3.0307	3.0307	-27791	10650	9037	28547	25410	7728	33139	No	54.79	Si
SLU 82	8.96	-481.43	-21871	-18213	-2674	3.0307	3.0307	-21462	9806	8321	28547	25410	7728	33139	No	12.39	Si
SLU 83	7.2	81.75	-28862	-24034	-542	3.0307	3.0307	-28322	10721	9097	28547	25410	7728	33139	No	61.15	Si
SLU 83	8.96	-548.44	-22403	-18655	-2664	3.0307	3.0307	-21984	9876	8380	28547	25410	7728	33139	No	12.44	Si
SLU 61	7.2	99.94	-25873	-21545	-453	3.0307	3.0307	-25389	10330	8766	28547	25410	7728	33139	No	73.11	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 61	8.96	-282.82	-19915	-16583	-2581	3.0307	3.0307	-19543	9550	8104	28547	25410	7728	33139	No	12.84	Si
SLU 60	7.2	61.8	-25789	-21475	-433	3.0307	3.0307	-25307	10319	8756	28547	25410	7728	33139	No	76.59	Si
SLU 60	8.96	-346.04	-19826	-16509	-2537	3.0307	3.0307	-19455	9538	8094	28547	25410	7728	33139	No	13.06	Si
SLU 84	7.2	119.89	-28945	-24103	-562	3.0307	3.0307	-28404	10732	9107	28547	25410	7728	33139	No	58.92	Si
SLU 84	8.96	-485.22	-22492	-18729	-2709	3.0307	3.0307	-22071	9887	8390	28547	25410	7728	33139	No	12.23	Si
SLU 62	7.2	44.96	-26414	-21996	-390	3.0307	3.0307	-25920	10400	8826	28547	25410	7728	33139	No	84.89	Si
SLU 62	8.96	-349.82	-20447	-17026	-2572	3.0307	3.0307	-20064	9620	8163	28547	25410	7728	33139	No	12.88	Si
SLU 42	7.2	112.28	-24453	-20363	-804	3.0307	3.0307	-23996	10144	8608	28547	25410	7728	33139	No	41.24	Si
SLU 42	8.96	-395.84	-19030	-15847	-2564	3.0307	3.0307	-18674	9434	8006	28547	25410	7728	33139	No	12.92	Si
SLU 81	7.2	98.6	-28237	-23513	-584	3.0307	3.0307	-27709	10639	9028	28547	25410	7728	33139	No	56.72	Si
SLU 81	8.96	-544.65	-21783	-18139	-2629	3.0307	3.0307	-21375	9794	8311	28547	25410	7728	33139	No	12.61	Si
SLU 40	7.2	129.13	-23828	-19842	-846	3.0307	3.0307	-23383	10062	8539	28547	25410	7728	33139	No	39.18	Si
SLU 40	8.96	-392.05	-18409	-15330	-2529	3.0307	3.0307	-18065	9353	7937	28547	25410	7728	33139	No	13.11	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	7.2	-2208.6	-19486	-16226	1973	3.0307	3.0307	-19122	14241	12085	28547	38116	7728	40631		20.6	Si
SLV 3	8.96	-1706.43	-14376	-11971	629	3.0307	3.0307	-14107	13238	11234	28547	38116	7728	39780		63.23	Si
SLV 10	7.2	4440.77	-24222	-20170	-1278	3.0307	3.0307	-23769	15171	12873	28547	38116	7728	41420		32.42	Si
SLV 10	8.96	4284.62	-21123	-17589	-2553	3.0307	3.0307	-20728	14562	12357	28547	38116	7728	40904		16.02	Si
SLV 16	7.2	-77.52	-15484	-12894	-589	3.0307	3.0307	-15195	13456	11418	28547	38116	7728	39965		67.85	Si
SLV 16	8.96	-2305.01	-11303	-9412	-1857	3.0307	3.0307	-11092	12635	10722	28547	38116	7728	39268		21.14	Si
SLV 7	7.2	-4290.23	-14127	-11764	1931	3.0307	3.0307	-13863	13189	11192	28547	38116	7728	39739		20.58	Si
SLV 7	8.96	-5340.65	-8582	-7147	602	3.0307	2.6792	-9569	12330	9250	28547	38116	7728	37796		62.78	Si
SLV 13	7.2	2449.21	-18773	-15632	-1310	3.0307	3.0307	-18422	14101	11966	28547	38116	7728	40512		30.94	Si
SLV 13	8.96	787.75	-15203	-12660	-2581	3.0307	3.0307	-14919	13400	11371	28547	38116	7728	39918		15.47	Si
SLV 14	7.2	2359.14	-18864	-15708	-1320	3.0307	3.0307	-18511	14119	11981	28547	38116	7728	40528		30.7	Si
SLV 14	8.96	650.4	-15329	-12765	-2580	3.0307	3.0307	-15043	13425	11392	28547	38116	7728	39939		15.48	Si
SLV 9	7.2	4498.3	-24164	-20122	-1271	3.0307	3.0307	-23712	15159	12864	28547	38116	7728	41410		32.58	Si
SLV 9	8.96	4372.34	-21043	-17522	-2553	3.0307	3.0307	-20649	14546	12344	28547	38116	7728	40890		16.01	Si
SLV 15	7.2	12.56	-15393	-12818	-579	3.0307	3.0307	-15105	13438	11403	28547	38116	7728	39950		69.04	Si
SLV 15	8.96	-2167.66	-11178	-9308	-1858	3.0307	3.0307	-10969	12610	10701	28547	38116	7728	39248		21.13	Si
SLV 4	7.2	-2298.67	-19577	-16302	1962	3.0307	3.0307	-19211	14259	12100	28547	38116	7728	40646		20.71	Si
SLV 4	8.96	-1843.78	-14502	-12076	630	3.0307	3.0307	-14231	13263	11255	28547	38116	7728	39801		63.22	Si
SLV 8	7.2	-4347.76	-14185	-11812	1924	3.0307	3.0307	-13920	13201	11202	28547	38116	7728	39748		20.66	Si
SLV 8	8.96	-5428.37	-8663	-7214	602	3.0307	2.6661	-9706	12358	9225	28547	38116	7728	37772		62.71	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 8.08 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.41	11229	-9529	189.18	1235.95	6.53	Si
SLV 12	179667	0.41	11307	-9595	189.18	1243.87	6.58	Si
SLV 7	179667	0.41	12881	-10931	189.18	1401.2	7.41	Si
SLV 8	179667	0.41	12959	-10997	189.18	1408.92	7.45	Si
SLV 15	179667	0.41	15162	-12866	189.18	1622.42	8.58	Si
SLV 16	179667	0.41	15284	-12970	189.18	1634.06	8.64	Si
SLV 13	179667	0.41	20203	-17144	189.18	2082.67	11.01	Si
SLV 14	179667	0.41	20326	-17248	189.18	2093.35	11.07	Si
SLV 3	179667	0.41	20668	-17538	189.18	2123.07	11.22	Si
SLV 4	179667	0.41	20790	-17642	189.18	2133.66	11.28	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 8.08 Wa = 0.05 Ta = 0.0416

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-22082	-25450	-544	0.741	2563.8	0.963	11.18683	7.42348	Si
SLV 5	-22002	-25392	-544	0.744	2555.6	0.963	11.22272	7.42348	Si
SLV 10	-21123	-24222	190	0.785	2466.1	0.962	11.86482	7.42348	Si
SLV 9	-21043	-24164	189	0.788	2458	0.962	11.90491	7.42348	Si
SLV 2	-18528	-22956	-1290	0.824	2202.2	0.958	12.5067	5.17577	Si
SLV 1	-18402	-22866	-1290	0.829	2189.4	0.957	12.58151	5.17577	Si
SLV 14	-15329	-18864	1154	0.974	1877.2	0.951	14.88406	5.17577	Si
SLV 13	-15203	-18773	1154	0.981	1864.4	0.951	14.99175	5.17577	Si
SLV 4	-14502	-19577	-1197	1.018	1793.2	0.949	15.5825	5.17577	Si
SLV 3	-14376	-19486	-1197	1.025	1780.4	0.949	15.70086	5.17577	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	31.102	SLU 24	Si
V_SLU	12.232	SLU 84	Si
PF_SLV	2.443	SLV 12	Si
V_SLV	15.468	SLV 13	Si
PFFP_SLV	6.533	SLV 11	Si
R_SLV	1.507	SLV 6	Si

Maschio 117

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.823	6.526	-17.718	6.526	L5	L6	2.105	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 45	6.34	5095.1	-10852	-0.0000702	0.0003743	0.0035	2.105	9356.4	9911.89	9911.89	1.95	No	Si
SLU 45	8.14	-1184.73	-8318	-0.0000302	0.0003743	0.0035	2.105	7541.33	9124.66	9124.66	7.7	No	Si
SLU 51	6.34	5140.92	-10670	-0.0000705	0.0003743	0.0035	2.105	9233.39	9760.85	9760.85	1.9	No	Si
SLU 51	8.14	-1203.5	-8136	-0.0000299	0.0003743	0.0035	2.105	7402.12	8971	8971	7.45	No	Si
SLU 50	6.34	5132.06	-10655	-0.0000704	0.0003743	0.0035	2.105	9222.84	9747.98	9747.98	1.9	No	Si
SLU 50	8.14	-1201.68	-8121	-0.0000298	0.0003743	0.0035	2.105	7390.19	8957.79	8957.79	7.45	No	Si
SLU 59	6.34	5596.48	-12247	-0.0000783	0.0003743	0.0035	2.105	10259.32	11084.22	11084.22	1.98	No	Si
SLU 59	8.14	-1240.52	-9713	-0.0000345	0.0003743	0.0035	2.105	8568.25	10277.82	10277.82	8.29	No	Si
SLU 46	6.34	5103.95	-10868	-0.0000703	0.0003743	0.0035	2.105	9366.84	9924.8	9924.8	1.94	No	Si
SLU 46	8.14	-1186.55	-8334	-0.0000303	0.0003743	0.0035	2.105	7553.16	9137.68	9137.68	7.7	No	Si
SLU 47	6.34	5058.58	-10553	-0.0000694	0.0003743	0.0035	2.105	9153.83	9664.18	9664.18	1.91	No	Si
SLU 47	8.14	-1190.96	-8019	-0.0000295	0.0003743	0.0035	2.105	7312.17	8871.3	8871.3	7.45	No	Si
SLU 49	6.34	5192.19	-10995	-0.0000716	0.0003743	0.0035	2.105	9452.02	10030.65	10030.65	1.93	No	Si
SLU 49	8.14	-1200.3	-8461	-0.0000307	0.0003743	0.0035	2.105	7649.65	9241.74	9241.74	7.7	No	Si
SLU 48	6.34	5183.33	-10980	-0.0000714	0.0003743	0.0035	2.105	9441.64	10017.71	10017.71	1.93	No	Si
SLU 48	8.14	-1198.48	-8446	-0.0000307	0.0003743	0.0035	2.105	7637.89	9229.04	9229.04	7.7	No	Si
SLU 43	6.34	4955.59	-10400	-0.0000679	0.0003743	0.0035	2.105	9048.87	9537.83	9537.83	1.92	No	Si
SLU 43	8.14	-1174.17	-7866	-0.0000289	0.0003743	0.0035	2.105	7193.59	8739.37	8739.37	7.44	No	Si
SLU 44	6.34	4970.35	-10426	-0.0000681	0.0003743	0.0035	2.105	9066.69	9559.18	9559.18	1.92	No	Si
SLU 44	8.14	-1177.21	-7892	-0.000029	0.0003743	0.0035	2.105	7213.7	8761.79	8761.79	7.44	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	6.34	9307.99	-1741	-0.0501528	0.0005615	0.0035	2.105		2037.41	2037.41	0.22		No
SLV 13	8.14	-4482.89	1235	0.0950559	0.0005615	0.0035	1.684		0	0	0		No
SLD 13	6.34	6381.54	-6123	-0.0027257	0.0005615	0.0035	2.105		6334.23	6334.23	0.99		No
SLD 13	8.14	-2448.02	-3723	-0.0000336	0.0005615	0.0035	1.684		5048.9	5048.9	2.06		Si
SLV 14	6.34	9282.13	-2068	-0.0475988	0.0005615	0.0035	2.105		2369.83	2369.83	0.26		No
SLV 14	8.14	-4600.49	908	0.0711486	0.0005615	0.0035	1.684		0	0	0		No
SLV 11	6.34	5085.25	-4585	-0.0035028	0.0005615	0.0035	2.105		4862.16	4862.16	0.96		No
SLV 11	8.14	-2021.48	-2778	-0.0000303	0.0005615	0.0035	1.684		4115.55	4115.55	2.04		Si
SLD 15	6.34	6223.97	-5532	-0.0056303	0.0005615	0.0035	2.105		5773.95	5773.95	0.93		No
SLD 15	8.14	-2458.02	-3244	-0.0000392	0.0005615	0.0035	1.684		4576.67	4576.67	1.86		Si
SLV 12	6.34	5068.74	-4794	-0.0017501	0.0005615	0.0035	2.105		5063.77	5063.77	1		No
SLV 12	8.14	-2096.58	-2987	-0.0000302	0.0005615	0.0035	1.684		4322.58	4322.58	2.06		Si
SLV 16	6.34	8928.04	-717	-0.0553356	0.0005615	0.0035	2.105		988.37	988.37	0.11		No
SLV 16	8.14	-4626.27	2005	0.1520466	0.0005615	0.0035	1.684		0	0	0		No
SLD 16	6.34	6212.87	-5672	-0.0046434	0.0005615	0.0035	2.105		5907.24	5907.24	0.95		No
SLD 16	8.14	-2508.5	-3384	-0.0000387	0.0005615	0.0035	1.684		4715.14	4715.14	1.88		Si
SLV 15	6.34	8953.89	-390	-0.0580423	0.0005615	0.0035	2.105		651	651	0.07		No
SLV 15	8.14	-4508.66	2332	0.1759786	0.0005615	0.0035	1.684		0	0	0		No
SLD 14	6.34	6370.44	-6263	-0.0014621	0.0005615	0.0035	2.105		6466.73	6466.73	1.02		Si
SLD 14	8.14	-2498.5	-3863	-0.0000339	0.0005615	0.0035	1.684		5185.35	5185.35	2.08		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	6.34	6086.72	-14265	-11879	4061	2.105	1.8774	-20154	9632	5063	40441	17649	5368	23017	No	5.67	Si
SLU 77	8.14	-1261.63	-11702	-9744	4061	2.105	2.105	-16533	9149	5392	40441	17649	5368	23017	No	5.67	Si
SLU 82	6.34	6063.08	-14377	-11972	4044	2.105	1.8923	-20312	9653	5114	40441	17649	5368	23017	No	5.69	Si
SLU 82	8.14	-1255.01	-11813	-9837	4044	2.105	2.105	-16690	9170	5405	40441	17649	5368	23017	No	5.69	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	6.34	5998.48	-14138	-11773	4005	2.105	1.8846	-19974	9608	5070	40441	17649	5368	23017	No	5.75	Si
SLU 74	8.14	-1247.88	-11574	-9638	4005	2.105	2.105	-16353	9125	5378	40441	17649	5368	23017	No	5.75	Si
SLU 78	6.34	6095.57	-14281	-11892	4067	2.105	1.877	-20176	9635	5063	40441	17649	5368	23017	No	5.66	Si
SLU 78	8.14	-1263.45	-11717	-9757	4067	2.105	2.105	-16554	9152	5394	40441	17649	5368	23017	No	5.66	Si
SLU 75	6.34	6007.34	-14153	-11786	4010	2.105	1.8841	-19996	9611	5070	40441	17649	5368	23017	No	5.74	Si
SLU 75	8.14	-1249.7	-11590	-9651	4010	2.105	2.105	-16375	9128	5380	40441	17649	5368	23017	No	5.74	Si
SLU 83	6.34	6142.46	-14489	-12065	4095	2.105	1.8856	-20470	9674	5108	40441	17649	5368	23017	No	5.62	Si
SLU 83	8.14	-1266.94	-11925	-9930	4095	2.105	2.105	-16848	9191	5417	40441	17649	5368	23017	No	5.62	Si
SLU 80	6.34	6044.3	-13956	-11621	4040	2.105	1.8581	-19717	9573	4981	40441	17649	5368	23017	No	5.7	Si
SLU 80	8.14	-1266.64	-11392	-9486	4040	2.105	2.105	-16095	9090	5358	40441	17649	5368	23017	No	5.7	Si
SLU 84	6.34	6151.31	-14504	-12078	4101	2.105	1.8852	-20492	9677	5108	40441	17649	5368	23017	No	5.61	Si
SLU 84	8.14	-1268.76	-11941	-9943	4101	2.105	2.105	-16870	9194	5419	40441	17649	5368	23017	No	5.61	Si
SLU 81	6.34	6054.22	-14361	-11959	4038	2.105	1.8928	-20290	9650	5114	40441	17649	5368	23017	No	5.7	Si
SLU 81	8.14	-1253.19	-11798	-9824	4038	2.105	2.105	-16668	9167	5403	40441	17649	5368	23017	No	5.7	Si
SLU 79	6.34	6035.45	-13940	-11608	4035	2.105	1.8586	-19695	9570	4981	40441	17649	5368	23017	No	5.7	Si
SLU 79	8.14	-1264.82	-11377	-9473	4035	2.105	2.105	-16073	9088	5356	40441	17649	5368	23017	No	5.7	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	6.34	6249.05	-9297	-7742	5085	2.105	1.1411	-13136	13044	4168	40441	26474	5368	31841		6.26	Si
SLV 10	8.14	-2010.66	-6643	-5532	4999	2.105	2.105	-9386	12294	7246	40441	26474	5368	31841		6.37	Si
SLV 15	6.34	8953.89	-390	-325	7679	2.105	0	0	0	0	40441	26474	5368	31841		4.15	Si
SLV 15	8.14	-4508.66	2332	1942	7257	1.684	0	0	0	0	40441	21179	4294	25473		3.51	Si
SLV 16	6.34	8928.04	-717	-597	7730	2.105	0	0	0	0	40441	26474	5368	31841		4.12	Si
SLV 16	8.14	-4626.27	2005	1670	7308	1.684	0	0	0	0	40441	21179	4294	25473		3.49	Si
SLV 9	6.34	6265.57	-9089	-7568	5052	2.105	1.0894	-12841	12985	3961	40441	26474	5368	31841		6.3	Si
SLV 9	8.14	-1935.56	-6435	-5358	4967	2.105	2.105	-9091	12235	7211	40441	26474	5368	31841		6.41	Si
SLD 15	6.34	6223.97	-5532	-4607	4899	2.105	0	-159729	16250	0	40441	26474	5368	31841		6.5	Si
SLD 15	8.14	-2458.02	-3244	-2701	4719	1.684	0.8843	0	0	0	40441	21179	4294	25473		5.4	Si
SLD 13	6.34	6381.54	-6123	-5099	5087	2.105	0.0308	-151005	16250	140	40441	26474	5368	31841		6.26	Si
SLD 13	8.14	-2448.02	-3723	-3100	4917	1.684	1.1849	0	0	0	40441	21179	4294	25473		5.18	Si
SLV 14	6.34	9282.13	-2068	-1722	8159	2.105	0	0	16250	0	40441	26474	5368	31841		3.9	Si
SLV 14	8.14	-4600.49	908	756	7760	1.684	0	0	0	0	40441	21179	4294	25473		3.28	Si
SLV 13	6.34	9307.99	-1741	-1450	8108	2.105	0	0	16250	0	40441	26474	5368	31841		3.93	Si
SLV 13	8.14	-4482.89	1235	1028	7709	1.684	0	0	0	0	40441	21179	4294	25473		3.3	Si
SLD 16	6.34	6212.87	-5672	-4723	4921	2.105	0	-154663	16250	0	40441	26474	5368	31841		6.47	Si
SLD 16	8.14	-2508.5	-3384	-2818	4741	1.684	0.9337	0	0	0	40441	21179	4294	25473		5.37	Si
SLD 14	6.34	6370.44	-6263	-5215	5109	2.105	0.1061	-141418	16250	483	40441	26474	5368	31841		6.23	Si
SLD 14	8.14	-2498.5	-3863	-3217	4938	1.684	1.2173	0	0	0	40441	21179	4294	25473		5.16	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 15	179667	0.39	0	999	218.38	0	0	No, Trazione
SLV 16	179667	0.39	0	673	218.38	0	0	No, Trazione
SLV 14	179667	0.39	0	-467	218.38	0	0	No, e>t/2
SLV 13	179667	0.39	0	-140	218.38	0	0	No, e>t/2
SLV 11	179667	0.39	6584	-3881	218.38	519.85	2.38	Si
SLV 12	179667	0.39	6938	-4089	218.38	546.46	2.5	Si
SLV 9	179667	0.39	13029	-7679	218.38	983.38	4.5	Si
SLV 10	179667	0.39	13383	-7888	218.38	1007.53	4.61	Si
SLV 7	179667	0.39	15528	-9152	218.38	1151.03	5.27	Si
SLV 8	179667	0.39	15882	-9361	218.38	1174.22	5.38	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-11038	-12627	635	0.913	1418.1	0.942	14.08304	13.42943	Si
SLV 5	-10830	-12475	635	0.927	1397	0.941	14.31462	13.42943	Si
SLV 10	-7925	-5305	782	1.175	1103.4	0.928	18.39269	13.42943	Si
SLV 9	-7718	-5153	782	1.199	1082.5	0.927	18.79985	13.42943	Si
SLV 8	-7396	-8502	-785	1.239	1050.1	0.926	19.46369	13.42943	Si
SLV 7	-7188	-8350	-785	1.267	1029.2	0.924	19.92099	13.42943	Si
SLV 2	-13453	-19769	-34	0.814	1663	0.949	12.46545	7.08809	Si
SLV 1	-13128	-19531	-34	0.831	1630	0.948	12.73462	7.08809	Si
SLV 4	-12360	-18532	-460	0.844	1552.2	0.946	12.96045	7.08809	Si
SLV 3	-12035	-18293	-460	0.862	1519.2	0.945	13.26347	7.08809	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.899	SLU 51	Si
V_SLU	5.612	SLU 84	Si
PF_SLV	0	SLV 13	No
V_SLV	3.283	SLV 14	Si
PFFP_SLV	0	SLV 16	No
R_SLV	1.049	SLV 6	Si

Maschio 118

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.818	6.526	-12.838	6.526	L5	L6	3.98	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	6.34	2986.11	-55171	-0.0000901	0.0003743	0.0035	3.98	56402.93	73194.3	73194.3	24.51	No	Si
SLU 84	8.14	-5355.79	-50279	-0.0000873	0.0003743	0.0035	3.98	55715.72	71873.48	71873.48	13.42	No	Si
SLU 73	6.34	2846.31	-52236	-0.0000846	0.0003743	0.0035	3.98	56091.47	70635.25	70635.25	24.82	No	Si
SLU 73	8.14	-5114.58	-47344	-0.0000816	0.0003743	0.0035	3.98	54900.61	69808.05	69808.05	13.65	No	Si
SLU 82	6.34	2934.37	-54544	-0.0000888	0.0003743	0.0035	3.98	56361.73	72661.1	72661.1	24.76	No	Si
SLU 82	8.14	-5321.76	-49651	-0.0000861	0.0003743	0.0035	3.98	55566.83	71510.42	71510.42	13.44	No	Si
SLU 75	6.34	2906.23	-53653	-0.0000872	0.0003743	0.0035	3.98	56279.49	71873.46	71873.46	24.73	No	Si
SLU 75	8.14	-5182.7	-48760	-0.0000842	0.0003743	0.0035	3.98	55331.67	70925.37	70925.37	13.69	No	Si
SLU 81	6.34	2928.34	-54499	-0.0000887	0.0003743	0.0035	3.98	56358.27	72621.49	72621.49	24.8	No	Si
SLU 81	8.14	-5315.53	-49607	-0.000086	0.0003743	0.0035	3.98	55555.72	71484.79	71484.79	13.45	No	Si
SLU 78	6.34	2957.97	-54280	-0.0000884	0.0003743	0.0035	3.98	56340.3	72427.44	72427.44	24.49	No	Si
SLU 78	8.14	-5216.73	-49388	-0.0000854	0.0003743	0.0035	3.98	55500.17	71359.38	71359.38	13.68	No	Si
SLU 80	6.34	2945.77	-53462	-0.0000869	0.0003743	0.0035	3.98	56258.24	71705.54	71705.54	24.34	No	Si
SLU 80	8.14	-5178.48	-48569	-0.0000839	0.0003743	0.0035	3.98	55277.65	70778.79	70778.79	13.67	No	Si
SLU 76	6.34	2898.05	-52864	-0.0000858	0.0003743	0.0035	3.98	56183.46	71181.83	71181.83	24.56	No	Si
SLU 76	8.14	-5148.61	-47971	-0.0000828	0.0003743	0.0035	3.98	55100.29	70311.74	70311.74	13.66	No	Si
SLU 79	6.34	2939.74	-53417	-0.0000869	0.0003743	0.0035	3.98	56253.09	71666.34	71666.34	24.38	No	Si
SLU 79	8.14	-5172.25	-48525	-0.0000838	0.0003743	0.0035	3.98	55264.84	70744.35	70744.35	13.68	No	Si
SLU 83	6.34	2980.08	-55126	-0.00009	0.0003743	0.0035	3.98	56400.45	73158.25	73158.25	24.55	No	Si
SLU 83	8.14	-5349.56	-50234	-0.0000872	0.0003743	0.0035	3.98	55705.59	71847.5	71847.5	13.43	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	6.34	-12988.43	-39895	-0.000084	0.0005615	0.0035	3.98		70070.95	70070.95	5.39		Si
SLV 4	8.14	11826.3	-35937	-0.0000753	0.0005615	0.0035	3.98		60819.1	60819.1	5.14		Si
SLV 13	6.34	17071.37	-32621	-0.0000817	0.0005615	0.0035	3.98		55624.04	55624.04	3.26		Si
SLV 13	8.14	-19007.35	-29077	-0.0000804	0.0005615	0.0035	3.98		54938.34	54938.34	2.89		Si
SLV 1	6.34	-12451.55	-42615	-0.000087	0.0005615	0.0035	3.98		73602.71	73602.71	5.91		Si
SLV 1	8.14	12072.68	-38608	-0.00008	0.0005615	0.0035	3.98		64270.21	64270.21	5.32		Si
SLV 16	6.34	16534.5	-29901	-0.0000764	0.0005615	0.0035	3.98		51423.45	51423.45	3.11		Si
SLV 16	8.14	-19253.74	-26405	-0.0000772	0.0005615	0.0035	3.98		50843.72	50843.72	2.64		Si
SLD 16	6.34	8237.99	-33525	-0.0000639	0.0005615	0.0035	3.98		57032.97	57032.97	6.92		Si
SLD 16	8.14	-10284.22	-29885	-0.0000629	0.0005615	0.0035	3.98		56120.47	56120.47	5.46		Si
SLV 3	6.34	-12873.19	-39776	-0.0000835	0.0005615	0.0035	3.98		69917.49	69917.49	5.43		Si
SLV 3	8.14	12335.27	-35817	-0.0000762	0.0005615	0.0035	3.98		60630.7	60630.7	4.92		Si
SLV 14	6.34	16956.14	-32740	-0.0000816	0.0005615	0.0035	3.98		55809.54	55809.54	3.29		Si
SLV 14	8.14	-19516.32	-29196	-0.0000818	0.0005615	0.0035	3.98		55121.52	55121.52	2.82		Si
SLD 15	6.34	8287.45	-33474	-0.0000639	0.0005615	0.0035	3.98		56953.02	56953.02	6.87		Si
SLD 15	8.14	-10065.75	-29834	-0.0000623	0.0005615	0.0035	3.98		56047.03	56047.03	5.57		Si
SLD 14	6.34	8422.22	-34770	-0.0000662	0.0005615	0.0035	3.98		58982.19	58982.19	7		Si
SLD 14	8.14	-10401.22	-31110	-0.0000649	0.0005615	0.0035	3.98		57883.98	57883.98	5.57		Si
SLV 15	6.34	16649.73	-29781	-0.0000764	0.0005615	0.0035	3.98		51240.43	51240.43	3.08		Si
SLV 15	8.14	-18744.77	-26286	-0.0000758	0.0005615	0.0035	3.98		50662.52	50662.52	2.7		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	6.34	2906.23	-53653	-44677	4510	3.98	3.98	-40091	10833	12073	40441	33370	10149	43519	No	9.65	Si
SLU 75	8.14	-5182.7	-48760	-40603	4510	3.98	3.98	-36435	10833	12073	40441	33370	10149	43519	No	9.65	Si
SLU 84	6.34	2986.11	-55171	-45942	4651	3.98	3.98	-41226	10833	12073	40441	33370	10149	43519	No	9.36	Si
SLU 84	8.14	-5355.79	-50279	-41868	4651	3.98	3.98	-37570	10833	12073	40441	33370	10149	43519	No	9.36	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	6.34	2957.97	-54280	-45200	4558	3.98	3.98	-40560	10833	12073	40441	33370	10149	43519	No	9.55	Si
SLU 78	8.14	-5216.73	-49388	-41126	4558	3.98	3.98	-36904	10833	12073	40441	33370	10149	43519	No	9.55	Si
SLU 77	6.34	2951.94	-54235	-45163	4551	3.98	3.98	-40526	10833	12073	40441	33370	10149	43519	No	9.56	Si
SLU 77	8.14	-5210.5	-49343	-41089	4551	3.98	3.98	-36871	10833	12073	40441	33370	10149	43519	No	9.56	Si
SLU 74	6.34	2900.2	-53608	-44640	4504	3.98	3.98	-40057	10833	12073	40441	33370	10149	43519	No	9.66	Si
SLU 74	8.14	-5176.47	-48716	-40566	4504	3.98	3.98	-36402	10833	12073	40441	33370	10149	43519	No	9.66	Si
SLU 82	6.34	2934.37	-54544	-45419	4603	3.98	3.98	-40757	10833	12073	40441	33370	10149	43519	No	9.45	Si
SLU 82	8.14	-5321.76	-49651	-41345	4603	3.98	3.98	-37101	10833	12073	40441	33370	10149	43519	No	9.45	Si
SLU 80	6.34	2945.77	-53462	-44518	4530	3.98	3.98	-39948	10833	12073	40441	33370	10149	43519	No	9.61	Si
SLU 80	8.14	-5178.48	-48569	-40444	4530	3.98	3.98	-36292	10833	12073	40441	33370	10149	43519	No	9.61	Si
SLU 83	6.34	2980.08	-55126	-45905	4644	3.98	3.98	-41192	10833	12073	40441	33370	10149	43519	No	9.37	Si
SLU 83	8.14	-5349.56	-50234	-41831	4644	3.98	3.98	-37536	10833	12073	40441	33370	10149	43519	No	9.37	Si
SLU 79	6.34	2939.74	-53417	-44481	4523	3.98	3.98	-39915	10833	12073	40441	33370	10149	43519	No	9.62	Si
SLU 79	8.14	-5172.25	-48525	-40407	4523	3.98	3.98	-36259	10833	12073	40441	33370	10149	43519	No	9.62	Si
SLU 81	6.34	2928.34	-54499	-45382	4597	3.98	3.98	-40723	10833	12073	40441	33370	10149	43519	No	9.47	Si
SLU 81	8.14	-5315.53	-49607	-41308	4597	3.98	3.98	-37068	10833	12073	40441	33370	10149	43519	No	9.47	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	6.34	-12873.19	-39776	-33122	-14250	3.98	3.98	-29722	16250	18109	40441	50055	10149	58550		4.11	Si
SLV 3	8.14	12335.27	-35817	-29826	-13404	3.98	3.98	-26764	15769	17573	40441	50055	10149	58014		4.33	Si
SLD 13	6.34	8471.68	-34719	-28911	10484	3.98	3.98	-25943	15605	17391	40441	50055	10149	57831		5.52	Si
SLD 13	8.14	-10182.75	-31058	-25863	10124	3.98	3.98	-23208	15058	16781	40441	50055	10149	57222		5.65	Si
SLD 14	6.34	8422.22	-34770	-28954	10578	3.98	3.98	-25981	15613	17399	40441	50055	10149	57840		5.47	Si
SLD 14	8.14	-10401.22	-31110	-25905	10218	3.98	3.98	-23246	15066	16789	40441	50055	10149	57230		5.6	Si
SLV 14	6.34	16956.14	-32740	-27263	20534	3.98	3.98	-24464	15310	17061	40441	50055	10149	57502		2.8	Si
SLV 14	8.14	-19516.32	-29196	-24312	19688	3.98	3.9646	-22142	14845	16479	40441	50055	10149	56920		2.89	Si
SLV 16	6.34	16534.5	-29901	-24899	19993	3.98	3.98	-22343	14885	16588	40441	50055	10149	57029		2.85	Si
SLV 16	8.14	-19253.74	-26405	-21988	19393	3.98	3.7825	-20971	14611	15474	40441	50055	10149	55915		2.88	Si
SLV 15	6.34	16649.73	-29781	-24799	19774	3.98	3.98	-22253	14867	16568	40441	50055	10149	57009		2.88	Si
SLV 15	8.14	-18744.77	-26286	-21889	19175	3.98	3.8307	-20612	14539	15595	40441	50055	10149	56035		2.92	Si
SLV 13	6.34	17071.37	-32621	-27164	20315	3.98	3.98	-24375	15292	17041	40441	50055	10149	57482		2.83	Si
SLV 13	8.14	-19007.35	-29077	-24213	19469	3.98	3.98	-21727	14762	16451	40441	50055	10149	56892		2.92	Si
SLV 1	6.34	-12451.55	-42615	-35486	-13709	3.98	3.98	-31844	16250	18109	40441	50055	10149	58550		4.27	Si
SLV 1	8.14	12072.68	-38608	-32149	-13110	3.98	3.98	-28849	16186	18038	40441	50055	10149	58479		4.46	Si
SLV 2	6.34	-12566.79	-42735	-35586	-13491	3.98	3.98	-31933	16250	18109	40441	50055	10149	58550		4.34	Si
SLV 2	8.14	11563.71	-38727	-32249	-12891	3.98	3.98	-28938	16204	18058	40441	50055	10149	58499		4.54	Si
SLV 4	6.34	-12988.43	-39895	-33221	-14032	3.98	3.98	-29811	16250	18109	40441	50055	10149	58550		4.17	Si
SLV 4	8.14	11826.3	-35937	-29925	-13185	3.98	3.98	-26853	15787	17593	40441	50055	10149	58034		4.4	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 15	179667	0.39	25130	-28005	412.91	3275.55	7.93	Si
SLV 16	179667	0.39	25237	-28125	412.91	3286.75	7.96	Si
SLV 11	179667	0.39	25444	-28355	412.91	3308.31	8.01	Si
SLV 12	179667	0.39	25513	-28431	412.91	3315.42	8.03	Si
SLV 13	179667	0.39	27635	-30797	412.91	3531.32	8.55	Si
SLV 14	179667	0.39	27742	-30916	412.91	3541.97	8.58	Si
SLV 7	179667	0.39	28202	-31428	412.91	3587.38	8.69	Si
SLV 8	179667	0.39	28270	-31504	412.91	3594.1	8.7	Si
SLV 9	179667	0.39	33793	-37659	412.91	4105.65	9.94	Si
SLV 10	179667	0.39	33862	-37736	412.91	4111.59	9.96	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-29805	-44730	1089	0.682	3588.1	0.955	10.38008	13.42943	No
SLV 5	-29744	-44670	1089	0.683	3581.9	0.955	10.39877	13.42943	No
SLV 10	-27895	-41004	1104	0.72	3394.1	0.953	10.99325	13.42943	No
SLV 9	-27834	-40944	1104	0.722	3387.9	0.952	11.01435	13.42943	No
SLV 8	-22201	-35066	-1115	0.871	2816.1	0.944	13.40316	13.42943	No
SLV 7	-22140	-35005	-1115	0.873	2810	0.944	13.43509	13.42943	Si
SLV 12	-20291	-31340	-1101	0.938	2622.7	0.941	14.49127	13.42943	Si
SLV 11	-20230	-31279	-1101	0.94	2616.5	0.941	14.52876	13.42943	Si
SLV 2	-29388	-45712	301	0.714	3545.7	0.954	10.87393	7.08809	Si
SLV 1	-29292	-45617	301	0.716	3536	0.954	10.9051	7.08809	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	13.42	SLU 84	Si
V_SLU	9.357	SLU 84	Si
PF_SLV	2.641	SLV 16	Si
V_SLV	2.8	SLV 14	Si
PFFP_SLV	7.933	SLV 15	Si
R_SLV	0.773	SLV 6	No

Maschio 119

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.938	6.526	-7.958	6.526	L5	L6	3.98	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 50	6.34	-2039.55	-40454	-0.000063	0.0003743	0.0035	3.98	51799.48	63721.32	63721.32	31.24	No	Si
SLU 50	8.14	4208.84	-35588	-0.0000602	0.0003743	0.0035	3.98	48606.31	55046.86	55046.86	13.08	No	Si
SLU 47	6.34	-2007.61	-39900	-0.000062	0.0003743	0.0035	3.98	51478.08	63246.38	63246.38	31.5	No	Si
SLU 47	8.14	4150.5	-35035	-0.0000592	0.0003743	0.0035	3.98	48190.44	54362.7	54362.7	13.1	No	Si
SLU 51	6.34	-2039.48	-40509	-0.0000631	0.0003743	0.0035	3.98	51831.11	63769.21	63769.21	31.27	No	Si
SLU 51	8.14	4221.08	-35644	-0.0000603	0.0003743	0.0035	3.98	48647.41	55115.65	55115.65	13.06	No	Si
SLU 46	6.34	-1997.66	-40654	-0.0000632	0.0003743	0.0035	3.98	51913.2	63894.53	63894.53	31.98	No	Si
SLU 46	8.14	4153.47	-35788	-0.0000604	0.0003743	0.0035	3.98	48754.24	55295.47	55295.47	13.31	No	Si
SLU 49	6.34	-2029.48	-41300	-0.0000643	0.0003743	0.0035	3.98	52270.16	64457.35	64457.35	31.76	No	Si
SLU 49	8.14	4232.21	-36434	-0.0000616	0.0003743	0.0035	3.98	49221.47	56100.05	56100.05	13.26	No	Si
SLU 43	6.34	-1975.91	-39162	-0.0000608	0.0003743	0.0035	3.98	51032.55	62620.59	62620.59	31.69	No	Si
SLU 43	8.14	4051.36	-34296	-0.0000578	0.0003743	0.0035	3.98	47618.85	53455.52	53455.52	13.19	No	Si
SLU 79	6.34	-2193.8	-50856	-0.0000806	0.0003743	0.0035	3.98	55840.41	72211.51	72211.51	32.92	No	Si
SLU 79	8.14	4913.98	-45936	-0.0000788	0.0003743	0.0035	3.98	54402.19	65328.38	65328.38	13.29	No	Si
SLU 44	6.34	-1975.79	-39254	-0.0000609	0.0003743	0.0035	3.98	51089.39	62698.47	62698.47	31.73	No	Si
SLU 44	8.14	4071.76	-34389	-0.000058	0.0003743	0.0035	3.98	47691.48	53568.78	53568.78	13.16	No	Si
SLU 48	6.34	-2029.55	-41245	-0.0000642	0.0003743	0.0035	3.98	52240.07	64408.73	64408.73	31.74	No	Si
SLU 48	8.14	4219.97	-36379	-0.0000614	0.0003743	0.0035	3.98	49181.9	56030.74	56030.74	13.28	No	Si
SLU 80	6.34	-2193.73	-50911	-0.0000807	0.0003743	0.0035	3.98	55851.79	72244.24	72244.24	32.93	No	Si
SLU 80	8.14	4926.22	-45991	-0.0000789	0.0003743	0.0035	3.98	54423.15	65373.68	65373.68	13.27	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	6.34	-15129.64	-33086	-0.0000782	0.0005615	0.0035	3.98		60760.36	60760.36	4.02		Si
SLV 1	8.14	20057.65	-29518	-0.0000835	0.0005615	0.0035	3.98		50836.88	50836.88	2.53		Si
SLV 15	6.34	12081.26	-35898	-0.0000758	0.0005615	0.0035	3.98		60758.85	60758.85	5.03		Si
SLV 15	8.14	-12782.76	-31922	-0.0000713	0.0005615	0.0035	3.98		59061.32	59061.32	4.62		Si
SLV 2	6.34	-15263.96	-33088	-0.0000785	0.0005615	0.0035	3.98		60762.92	60762.92	3.98		Si
SLV 2	8.14	19613.17	-29520	-0.0000825	0.0005615	0.0035	3.98		50839.57	50839.57	2.59		Si
SLD 2	6.34	-7439.6	-33909	-0.0000628	0.0005615	0.0035	3.98		61948.66	61948.66	8.33		Si
SLD 2	8.14	10341.04	-30225	-0.0000635	0.0005615	0.0035	3.98		51921.56	51921.56	5.02		Si
SLV 16	6.34	11946.94	-35900	-0.0000755	0.0005615	0.0035	3.98		60761.63	60761.63	5.09		Si
SLV 16	8.14	-13227.24	-31923	-0.0000723	0.0005615	0.0035	3.98		59063.87	59063.87	4.47		Si
SLD 1	6.34	-7381.94	-33908	-0.0000626	0.0005615	0.0035	3.98		61947.57	61947.57	8.39		Si
SLD 1	8.14	10531.83	-30224	-0.0000639	0.0005615	0.0035	3.98		51920.4	51920.4	4.93		Si
SLD 3	6.34	-7424.47	-32335	-0.0000604	0.0005615	0.0035	3.98		59663.18	59663.18	8.04		Si
SLD 3	8.14	10186.86	-28660	-0.0000608	0.0005615	0.0035	3.98		49526.21	49526.21	4.86		Si
SLV 4	6.34	-15363.89	-29505	-0.0000732	0.0005615	0.0035	3.98		55576.09	55576.09	3.62		Si
SLV 4	8.14	18830.23	-25957	-0.0000756	0.0005615	0.0035	3.98		45431.41	45431.41	2.41		Si
SLV 3	6.34	-15229.57	-29503	-0.0000729	0.0005615	0.0035	3.98		55573.57	55573.57	3.65		Si
SLV 3	8.14	19274.71	-25956	-0.0000767	0.0005615	0.0035	3.98		45428.77	45428.77	2.36		Si
SLD 4	6.34	-7482.13	-32336	-0.0000605	0.0005615	0.0035	3.98		59664.28	59664.28	7.97		Si
SLD 4	8.14	9996.07	-28661	-0.0000604	0.0005615	0.0035	3.98		49527.36	49527.36	4.95		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	6.34	-2193.8	-50856	-42348	-3953	3.98	3.98	-38001	10833	12073	40441	33370	10149	43519	No	11.01	Si
SLU 79	8.14	4913.98	-45936	-38251	-3953	3.98	3.98	-34325	10833	12073	40441	33370	10149	43519	No	11.01	Si
SLU 77	6.34	-2183.8	-51646	-43007	-3954	3.98	3.98	-38592	10833	12073	40441	33370	10149	43519	No	11.01	Si
SLU 77	8.14	4925.11	-46727	-38910	-3954	3.98	3.98	-34916	10833	12073	40441	33370	10149	43519	No	11.01	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	6.34	-2151.91	-51056	-42515	-3899	3.98	3.98	-38151	10833	12073	40441	33370	10149	43519	No	11.16	Si
SLU 75	8.14	4858.61	-46136	-38418	-3899	3.98	3.98	-34474	10833	12073	40441	33370	10149	43519	No	11.16	Si
SLU 83	6.34	-2183.64	-52398	-43632	-3984	3.98	3.98	-39153	10833	12073	40441	33370	10149	43519	No	10.92	Si
SLU 83	8.14	4979.33	-47478	-39535	-3984	3.98	3.98	-35477	10833	12073	40441	33370	10149	43519	No	10.92	Si
SLU 84	6.34	-2183.57	-52453	-43678	-3990	3.98	3.98	-39194	10833	12073	40441	33370	10149	43519	No	10.91	Si
SLU 84	8.14	4991.57	-47533	-39582	-3990	3.98	3.98	-35518	10833	12073	40441	33370	10149	43519	No	10.91	Si
SLU 78	6.34	-2183.73	-51702	-43053	-3960	3.98	3.98	-38633	10833	12073	40441	33370	10149	43519	No	10.99	Si
SLU 78	8.14	4937.35	-46782	-38956	-3960	3.98	3.98	-34957	10833	12073	40441	33370	10149	43519	No	10.99	Si
SLU 81	6.34	-2151.82	-51751	-43094	-3922	3.98	3.98	-38670	10833	12073	40441	33370	10149	43519	No	11.1	Si
SLU 81	8.14	4900.59	-46832	-38997	-3922	3.98	3.98	-34994	10833	12073	40441	33370	10149	43519	No	11.1	Si
SLU 80	6.34	-2193.73	-50911	-42394	-3960	3.98	3.98	-38042	10833	12073	40441	33370	10149	43519	No	10.99	Si
SLU 80	8.14	4926.22	-45991	-38298	-3960	3.98	3.98	-34366	10833	12073	40441	33370	10149	43519	No	10.99	Si
SLU 76	6.34	-2161.86	-50302	-41887	-3903	3.98	3.98	-37587	10833	12073	40441	33370	10149	43519	No	11.15	Si
SLU 76	8.14	4855.64	-45382	-37790	-3903	3.98	3.98	-33911	10833	12073	40441	33370	10149	43519	No	11.15	Si
SLU 82	6.34	-2151.75	-51807	-43140	-3929	3.98	3.98	-38712	10833	12073	40441	33370	10149	43519	No	11.08	Si
SLU 82	8.14	4912.83	-46887	-39044	-3929	3.98	3.98	-35036	10833	12073	40441	33370	10149	43519	No	11.08	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	6.34	-15263.96	-33088	-27553	-19662	3.98	3.98	-24724	15362	17119	40441	50055	10149	57560		2.93	Si
SLV 2	8.14	19613.17	-29520	-24581	-18907	3.98	3.9768	-22058	14828	16511	40441	50055	10149	56952		3.01	Si
SLV 13	6.34	12181.19	-39482	-32877	13682	3.98	3.98	-29502	16250	18109	40441	50055	10149	58550		4.28	Si
SLV 13	8.14	-11999.82	-35484	-29548	13001	3.98	3.98	-26515	15720	17518	40441	50055	10149	57959		4.46	Si
SLV 3	6.34	-15229.57	-29503	-24567	-19424	3.98	3.98	-22045	14826	16522	40441	50055	10149	56963		2.93	Si
SLV 3	8.14	19274.71	-25956	-21614	-18742	3.98	3.7422	-19395	14296	14979	40441	50055	10149	55420		2.96	Si
SLV 1	6.34	-15129.64	-33086	-27551	-19834	3.98	3.98	-24723	15361	17119	40441	50055	10149	57560		2.9	Si
SLV 1	8.14	20057.65	-29518	-24580	-19079	3.98	3.9315	-22057	14828	16323	40441	50055	10149	56764		2.98	Si
SLV 16	6.34	11946.94	-35900	-29895	14265	3.98	3.98	-26826	15782	17587	40441	50055	10149	58028		4.07	Si
SLV 16	8.14	-13227.24	-31923	-26583	13510	3.98	3.98	-23854	15188	16925	40441	50055	10149	57366		4.25	Si
SLD 2	6.34	-7439.6	-33909	-28236	-10000	3.98	3.98	-25338	15484	17256	40441	50055	10149	57697		5.77	Si
SLD 2	8.14	10341.04	-30225	-25169	-9679	3.98	3.98	-22585	14934	16642	40441	50055	10149	57083		5.9	Si
SLV 14	6.34	12046.87	-39484	-32878	13854	3.98	3.98	-29503	16250	18109	40441	50055	10149	58550		4.23	Si
SLV 14	8.14	-12444.31	-35486	-29549	13173	3.98	3.98	-26516	15720	17518	40441	50055	10149	57959		4.4	Si
SLV 4	6.34	-15363.89	-29505	-24569	-19251	3.98	3.98	-22047	14826	16522	40441	50055	10149	56963		2.96	Si
SLV 4	8.14	18830.23	-25957	-21615	-18570	3.98	3.7937	-19396	14296	15186	40441	50055	10149	55627		3	Si
SLV 15	6.34	12081.26	-35898	-29893	14093	3.98	3.98	-26824	15782	17587	40441	50055	10149	58028		4.12	Si
SLV 15	8.14	-12782.76	-31922	-26582	13338	3.98	3.98	-23853	15187	16925	40441	50055	10149	57366		4.3	Si
SLD 1	6.34	-7381.94	-33908	-28236	-10074	3.98	3.98	-25337	15484	17255	40441	50055	10149	57696		5.73	Si
SLD 1	8.14	10531.83	-30224	-25168	-9753	3.98	3.98	-22584	14934	16642	40441	50055	10149	57083		5.85	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.39	23309	-25975	412.91	3081.52	7.46	Si
SLV 8	179667	0.39	23310	-25977	412.91	3081.63	7.46	Si
SLV 11	179667	0.39	24895	-27743	412.91	3250.84	7.87	Si
SLV 12	179667	0.39	24896	-27744	412.91	3250.94	7.87	Si
SLV 3	179667	0.39	25179	-28060	412.91	3280.68	7.95	Si
SLV 4	179667	0.39	25181	-28062	412.91	3280.85	7.95	Si
SLV 1	179667	0.39	28369	-31614	412.91	3603.79	8.73	Si
SLV 2	179667	0.39	28370	-31616	412.91	3603.94	8.73	Si
SLV 15	179667	0.39	30465	-33950	412.91	3804.88	9.21	Si
SLV 16	179667	0.39	30467	-33952	412.91	3805.03	9.22	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-29225	-42966	1123	0.692	3529.1	0.954	10.5449	13.42943	No
SLV 10	-29216	-42999	1123	0.692	3528.2	0.954	10.54769	13.42943	No
SLV 5	-28251	-40281	1129	0.712	3430.2	0.953	10.86031	13.42943	No
SLV 6	-28242	-40315	1129	0.712	3429.3	0.953	10.86329	13.42943	No
SLV 11	-19658	-31099	-1139	0.961	2558.5	0.939	14.86461	13.42943	Si
SLV 12	-19649	-31132	-1139	0.961	2557.6	0.939	14.87032	13.42943	Si
SLV 7	-18684	-28414	-1134	1.001	2459.9	0.937	15.52656	13.42943	Si
SLV 8	-18675	-28448	-1134	1.002	2459	0.937	15.5328	13.42943	Si
SLV 13	-27015	-41934	325	0.766	3304.7	0.951	11.69548	7.08809	Si
SLV 14	-27001	-41986	325	0.766	3303.3	0.951	11.70073	7.08809	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	13.057	SLU 51	Si
V_SLU	10.906	SLU 84	Si
PF_SLV	2.357	SLV 3	Si
V_SLV	2.902	SLV 1	Si
PFFP_SLV	7.463	SLV 7	Si
R_SLV	0.785	SLV 9	No

Maschio 120

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.058	6.526	-5.093	6.526	L5	L6	1.965	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	6.34	-3761.28	-18082	-0.0000878	0.0003743	0.0035	1.965	12031.12	14657.86	14657.86	3.9	No	Si
SLU 84	8.14	2361.57	-16382	-0.0000688	0.0003743	0.0035	1.965	11388.52	12703.13	12703.13	5.38	No	Si
SLU 78	6.34	-3740.85	-17954	-0.0000872	0.0003743	0.0035	1.965	11986.38	14605.57	14605.57	3.9	No	Si
SLU 78	8.14	2397.9	-16215	-0.0000686	0.0003743	0.0035	1.965	11319.7	12605.21	12605.21	5.26	No	Si
SLU 80	6.34	-3705.35	-17670	-0.0000858	0.0003743	0.0035	1.965	11884.53	14489.94	14489.94	3.91	No	Si
SLU 80	8.14	2402.43	-15903	-0.0000676	0.0003743	0.0035	1.965	11189.09	12423.97	12423.97	5.17	No	Si
SLU 77	6.34	-3735.64	-17910	-0.000087	0.0003743	0.0035	1.965	11970.67	14587.44	14587.44	3.9	No	Si
SLU 77	8.14	2385.69	-16170	-0.0000683	0.0003743	0.0035	1.965	11301.1	12579.04	12579.04	5.27	No	Si
SLU 82	6.34	-3709.17	-17790	-0.0000863	0.0003743	0.0035	1.965	11927.82	14538.53	14538.53	3.92	No	Si
SLU 82	8.14	2307.92	-16082	-0.0000673	0.0003743	0.0035	1.965	11264.55	12527.96	12527.96	5.43	No	Si
SLU 79	6.34	-3700.14	-17625	-0.0000856	0.0003743	0.0035	1.965	11868.38	14472.01	14472.01	3.91	No	Si
SLU 79	8.14	2390.23	-15858	-0.0000673	0.0003743	0.0035	1.965	11170	12397.97	12397.97	5.19	No	Si
SLU 74	6.34	-3683.53	-17617	-0.0000855	0.0003743	0.0035	1.965	11865.61	14468.94	14468.94	3.93	No	Si
SLU 74	8.14	2332.04	-15870	-0.0000668	0.0003743	0.0035	1.965	11174.89	12404.62	12404.62	5.32	No	Si
SLU 81	6.34	-3703.96	-17745	-0.0000861	0.0003743	0.0035	1.965	11911.86	14520.52	14520.52	3.92	No	Si
SLU 81	8.14	2295.71	-16037	-0.000067	0.0003743	0.0035	1.965	11245.74	12501.86	12501.86	5.45	No	Si
SLU 83	6.34	-3756.07	-18037	-0.0000876	0.0003743	0.0035	1.965	12015.61	14639.63	14639.63	3.9	No	Si
SLU 83	8.14	2349.37	-16337	-0.0000685	0.0003743	0.0035	1.965	11370.18	12676.88	12676.88	5.4	No	Si
SLU 75	6.34	-3688.74	-17662	-0.0000857	0.0003743	0.0035	1.965	11881.77	14486.86	14486.86	3.93	No	Si
SLU 75	8.14	2344.25	-15914	-0.0000671	0.0003743	0.0035	1.965	11193.96	12430.63	12430.63	5.3	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	6.34	-5132.49	-12143	-0.0000802	0.0005615	0.0035	1.965		11666.92	11666.92	2.27		Si
SLV 3	8.14	6994.01	-8862	-0.0001844	0.0005615	0.0035	1.965		8206.63	8206.63	1.17		Si
SLD 2	6.34	-3786.33	-13368	-0.0000699	0.0005615	0.0035	1.965		12591.24	12591.24	3.33		Si
SLD 2	8.14	4367.3	-11149	-0.0000692	0.0005615	0.0035	1.965		9893.3	9893.3	2.27		Si
SLD 1	6.34	-3783.94	-13387	-0.00007	0.0005615	0.0035	1.965		12605.44	12605.44	3.33		Si
SLD 1	8.14	4370.54	-11181	-0.0000693	0.0005615	0.0035	1.965		9915.85	9915.85	2.27		Si
SLV 1	6.34	-5390.59	-15312	-0.0000905	0.0005615	0.0035	1.965		14022.91	14022.91	2.6		Si
SLV 1	8.14	7901.37	-12144	-0.0001421	0.0005615	0.0035	1.965		10610.01	10610.01	1.34		Si
SLV 4	6.34	-5138.06	-12099	-0.0000802	0.0005615	0.0035	1.965		11634.41	11634.41	2.26		Si
SLV 4	8.14	6986.45	-8789	-0.0001892	0.0005615	0.0035	1.965		8145.94	8145.94	1.17		Si
SLD 4	6.34	-3672.6	-11978	-0.0000647	0.0005615	0.0035	1.965		11538.88	11538.88	3.14		Si
SLD 4	8.14	3969.63	-9713	-0.0000617	0.0005615	0.0035	1.965		8871	8871	2.23		Si
SLV 15	6.34	231.91	-8572	-0.0000254	0.0005615	0.0035	1.965		7966.26	7966.26	34.35		Si
SLV 15	8.14	-4441.03	-8802	-0.0000674	0.0005615	0.0035	1.965		8979	8979	2.02		Si
SLV 16	6.34	226.34	-8529	-0.0000252	0.0005615	0.0035	1.965		7929.74	7929.74	35.03		Si
SLV 16	8.14	-4448.59	-8728	-0.0000676	0.0005615	0.0035	1.965		8918.48	8918.48	2		Si
SLV 2	6.34	-5396.16	-15268	-0.0000905	0.0005615	0.0035	1.965		13991.53	13991.53	2.59		Si
SLV 2	8.14	7893.82	-12071	-0.0001428	0.0005615	0.0035	1.965		10556.97	10556.97	1.34		Si
SLD 3	6.34	-3670.21	-11996	-0.0000647	0.0005615	0.0035	1.965		11553.59	11553.59	3.15		Si
SLD 3	8.14	3972.87	-9744	-0.0000618	0.0005615	0.0035	1.965		8893.21	8893.21	2.24		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 72	6.34	-3453.27	-16025	-13344	-2959	1.965	1.965	-24253	10178	5600	40441	16476	5011	21487	No	7.26	Si
SLU 72	8.14	2372.58	-14085	-11729	-2964	1.965	1.965	-21317	9787	5385	40441	16476	5011	21487	No	7.25	Si
SLU 78	6.34	-3740.85	-17954	-14951	-3024	1.965	1.965	-27173	10567	5814	40441	16476	5011	21487	No	7.11	Si
SLU 78	8.14	2397.9	-16215	-13502	-3027	1.965	1.965	-24540	10216	5621	40441	16476	5011	21487	No	7.1	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 70	6.34	-3488.77	-16310	-13581	-2962	1.965	1.965	-24684	10236	5632	40441	16476	5011	21487	No	7.25	Si
SLU 70	8.14	2368.05	-14396	-11988	-2966	1.965	1.965	-21788	9850	5419	40441	16476	5011	21487	No	7.24	Si
SLU 83	6.34	-3756.07	-18037	-15020	-2984	1.965	1.965	-27299	10584	5824	40441	16476	5011	21487	No	7.2	Si
SLU 83	8.14	2349.37	-16337	-13604	-2987	1.965	1.965	-24726	10241	5635	40441	16476	5011	21487	No	7.19	Si
SLU 79	6.34	-3700.14	-17625	-14677	-3012	1.965	1.965	-26675	10501	5778	40441	16476	5011	21487	No	7.13	Si
SLU 79	8.14	2390.23	-15858	-13205	-3015	1.965	1.965	-24000	10145	5582	40441	16476	5011	21487	No	7.13	Si
SLU 76	6.34	-3656.71	-17407	-14495	-2973	1.965	1.965	-26344	10457	5754	40441	16476	5011	21487	No	7.23	Si
SLU 76	8.14	2356.92	-15633	-13018	-2976	1.965	1.965	-23659	10099	5557	40441	16476	5011	21487	No	7.22	Si
SLU 77	6.34	-3735.64	-17910	-14914	-3015	1.965	1.965	-27106	10559	5809	40441	16476	5011	21487	No	7.13	Si
SLU 77	8.14	2385.69	-16170	-13465	-3018	1.965	1.965	-24472	10207	5616	40441	16476	5011	21487	No	7.12	Si
SLU 75	6.34	-3688.74	-17662	-14707	-2970	1.965	1.965	-26730	10509	5782	40441	16476	5011	21487	No	7.24	Si
SLU 75	8.14	2344.25	-15914	-13252	-2972	1.965	1.965	-24086	10156	5588	40441	16476	5011	21487	No	7.23	Si
SLU 84	6.34	-3761.28	-18082	-15057	-2994	1.965	1.965	-27366	10593	5829	40441	16476	5011	21487	No	7.18	Si
SLU 84	8.14	2361.57	-16382	-13642	-2996	1.965	1.965	-24793	10250	5640	40441	16476	5011	21487	No	7.17	Si
SLU 80	6.34	-3705.35	-17670	-14714	-3021	1.965	1.965	-26742	10510	5783	40441	16476	5011	21487	No	7.11	Si
SLU 80	8.14	2402.43	-15903	-13243	-3025	1.965	1.965	-24068	10154	5587	40441	16476	5011	21487	No	7.1	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	6.34	-5390.59	-15312	-12750	-8154	1.965	1.8914	-24381	15293	8099	40441	24714	5011	29724		3.65	Si
SLV 1	8.14	7901.37	-12144	-10112	-7759	1.965	0.9956	-18379	14092	3929	40441	24714	5011	29724		3.83	Si
SLD 4	6.34	-3672.6	-11978	-9974	-4546	1.965	1.965	-18128	14042	7726	40441	24714	5011	29724		6.54	Si
SLD 4	8.14	3969.63	-9713	-8088	-4387	1.965	1.7214	-14699	13357	6438	40441	24714	5011	29724		6.78	Si
SLV 5	6.34	-3815.17	-17751	-14782	-4643	1.965	1.965	-26865	15790	8688	40441	24714	5011	29724		6.4	Si
SLV 5	8.14	4956.34	-15938	-13272	-4499	1.965	1.965	-24122	15241	8386	40441	24714	5011	29724		6.61	Si
SLV 2	6.34	-5396.16	-15268	-12714	-8169	1.965	1.8873	-24364	15289	8080	40441	24714	5011	29724		3.64	Si
SLV 2	8.14	7893.82	-12071	-10051	-7775	1.965	0.9856	-18268	14070	3883	40441	24714	5011	29724		3.82	Si
SLV 4	6.34	-5138.06	-12099	-10075	-7724	1.965	1.6736	-21738	14764	6919	40441	24714	5011	29724		3.85	Si
SLV 4	8.14	6986.45	-8789	-7319	-7348	1.965	0.5628	-47756	16250	2561	40441	24714	5011	29724		4.05	Si
SLD 1	6.34	-3783.94	-13387	-11147	-4736	1.965	1.965	-20260	14469	7961	40441	24714	5011	29724		6.28	Si
SLD 1	8.14	4370.54	-11181	-9310	-4569	1.965	1.7748	-16921	13801	6858	40441	24714	5011	29724		6.51	Si
SLV 3	6.34	-5132.49	-12143	-10111	-7709	1.965	1.6795	-21739	14765	6943	40441	24714	5011	29724		3.86	Si
SLV 3	8.14	6994.01	-8862	-7380	-7333	1.965	0.5799	-46695	16250	2639	40441	24714	5011	29724		4.05	Si
SLD 2	6.34	-3786.33	-13368	-11132	-4743	1.965	1.965	-20232	14463	7958	40441	24714	5011	29724		6.27	Si
SLD 2	8.14	4367.3	-11149	-9284	-4576	1.965	1.7724	-16874	13791	6844	40441	24714	5011	29724		6.5	Si
SLD 3	6.34	-3670.21	-11996	-9990	-4540	1.965	1.965	-18156	14048	7729	40441	24714	5011	29724		6.55	Si
SLD 3	8.14	3972.87	-9744	-8114	-4381	1.965	1.7244	-14747	13366	6453	40441	24714	5011	29724		6.79	Si
SLV 6	6.34	-3818.73	-17723	-14758	-4653	1.965	1.965	-26823	15781	8683	40441	24714	5011	29724		6.39	Si
SLV 6	8.14	4951.52	-15891	-13233	-4509	1.965	1.965	-24051	15227	8378	40441	24714	5011	29724		6.59	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 8	179667	0.39	10351	-5695	203.86	743.31	3.65	Si
SLV 7	179667	0.39	10430	-5739	203.86	748.53	3.67	Si
SLV 12	179667	0.39	10677	-5874	203.86	764.91	3.75	Si
SLV 11	179667	0.39	10755	-5917	203.86	770.1	3.78	Si
SLV 4	179667	0.39	16633	-9151	203.86	1141.66	5.6	Si
SLV 3	179667	0.39	16755	-9219	203.86	1149.05	5.64	Si
SLV 16	179667	0.39	17717	-9748	203.86	1206.38	5.92	Si
SLV 15	179667	0.39	17839	-9815	203.86	1213.63	5.95	Si
SLV 2	179667	0.39	22361	-12303	203.86	1470.23	7.21	Si
SLV 1	179667	0.39	22484	-12371	203.86	1476.91	7.24	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-12602	-13461	737	0.763	1556.9	0.949	11.67538	13.42943	No
SLV 6	-12514	-13466	736	0.767	1547.9	0.949	11.74817	13.42943	No
SLV 9	-12267	-14732	754	0.779	1522.8	0.948	11.93428	13.42943	No
SLV 10	-12178	-14736	753	0.784	1513.9	0.948	12.01058	13.42943	No
SLV 7	-5136	-4725	-779	1.541	802.9	0.914	24.51768	13.42943	Si
SLV 8	-5048	-4729	-780	1.561	794.1	0.913	24.84413	13.42943	Si
SLV 11	-4800	-5996	-762	1.621	769.5	0.911	25.85766	13.42943	Si
SLV 12	-4712	-6000	-763	1.642	760.7	0.91	26.22028	13.42943	Si
SLV 1	-10406	-8919	187	0.939	1334.1	0.942	14.47971	7.08809	Si
SLV 2	-10267	-8927	185	0.949	1320.1	0.942	14.64945	7.08809	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.897	SLU 84	Si
V_SLU	7.098	SLU 78	Si
PF_SLV	1.166	SLV 4	Si
V_SLV	3.639	SLV 2	Si
PFFP_SLV	3.646	SLV 8	Si
R_SLV	0.869	SLV 5	No

Maschio 121

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-20.613	1.006	-24.633	1.006	L5	L6	4.02	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 40	5.44	-2316.24	-17608	-0.0000261	0.0004492	0.0035	4.02	30860.5	41630.38	41630.38	17.97	No	Si
SLU 40	7.54	-2761.1	-12763	-0.0000208	0.0004492	0.0035	4.02	23273.57	33196.04	33196.04	12.02	No	Si
SLU 83	5.44	-3121.76	-21889	-0.0000331	0.0004492	0.0035	4.02	36994.18	48723.45	48723.45	15.61	No	Si
SLU 83	7.54	-2830.89	-14939	-0.0000236	0.0004492	0.0035	4.02	26765.19	36983.32	36983.32	13.06	No	Si
SLU 42	5.44	-2362.77	-18025	-0.0000267	0.0004492	0.0035	4.02	31481.79	42353.88	42353.88	17.93	No	Si
SLU 42	7.54	-2735.65	-13116	-0.0000212	0.0004492	0.0035	4.02	23849.62	33810.66	33810.66	12.36	No	Si
SLU 84	5.44	-3110.12	-21911	-0.0000331	0.0004492	0.0035	4.02	37025.23	48760.8	48760.8	15.68	No	Si
SLU 84	7.54	-2816.73	-14952	-0.0000236	0.0004492	0.0035	4.02	26786.86	37007.3	37007.3	13.14	No	Si
SLU 33	5.44	-2434.49	-17959	-0.0000267	0.0004492	0.0035	4.02	31383.36	42241.25	42241.25	17.35	No	Si
SLU 33	7.54	-2541.91	-12771	-0.0000204	0.0004492	0.0035	4.02	23286.05	33209.31	33209.31	13.06	No	Si
SLU 41	5.44	-2374.41	-18002	-0.0000267	0.0004492	0.0035	4.02	31448.18	42316.53	42316.53	17.82	No	Si
SLU 41	7.54	-2749.8	-13103	-0.0000212	0.0004492	0.0035	4.02	23827.21	33786.69	33786.69	12.29	No	Si
SLU 39	5.44	-2327.88	-17585	-0.000026	0.0004492	0.0035	4.02	30826.61	41590.93	41590.93	17.87	No	Si
SLU 39	7.54	-2775.26	-12750	-0.0000208	0.0004492	0.0035	4.02	23251.03	33172.06	33172.06	11.95	No	Si
SLU 32	5.44	-2446.13	-17936	-0.0000267	0.0004492	0.0035	4.02	31349.7	42201.8	42201.8	17.25	No	Si
SLU 32	7.54	-2556.06	-12757	-0.0000204	0.0004492	0.0035	4.02	23263.51	33185.34	33185.34	12.98	No	Si
SLU 81	5.44	-3075.23	-21471	-0.0000324	0.0004492	0.0035	4.02	36420.01	48035.71	48035.71	15.62	No	Si
SLU 81	7.54	-2856.34	-14586	-0.0000232	0.0004492	0.0035	4.02	26207.95	36368.7	36368.7	12.73	No	Si
SLU 82	5.44	-3063.59	-21494	-0.0000324	0.0004492	0.0035	4.02	36451.32	48073.06	48073.06	15.69	No	Si
SLU 82	7.54	-2842.19	-14599	-0.0000232	0.0004492	0.0035	4.02	26229.76	36392.67	36392.67	12.8	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	5.44	-2196.92	-9891	-0.000016	0.0006738	0.0035	4.02		28242.1	28242.1	12.86		Si
SLV 10	7.54	3237.94	-3942	-0.0000108	0.0006738	0.0035	4.02		9448.39	9448.39	2.92		Si
SLV 14	5.44	-6731.34	-12789	-0.000028	0.0006738	0.0035	4.02		33584.56	33584.56	4.99		Si
SLV 14	7.54	8392.42	-4290	-0.0001892	0.0006738	0.0035	4.02		10118.58	10118.58	1.21		Si
SLV 16	5.44	-7752.46	-15893	-0.0000338	0.0006738	0.0035	4.02		39131.46	39131.46	5.05		Si
SLV 16	7.54	7261.77	-6881	-0.0000236	0.0006738	0.0035	4.02		15091.99	15091.99	2.08		Si
SLV 1	5.44	2832.07	-14831	-0.0000233	0.0006738	0.0035	4.02		29883.12	29883.12	10.55		Si
SLV 1	7.54	-10079.93	-11884	-0.0000337	0.0006738	0.0035	4.02		31921.27	31921.27	3.17		Si
SLV 2	5.44	2807.92	-14885	-0.0000233	0.0006738	0.0035	4.02		29980.99	29980.99	10.68		Si
SLV 2	7.54	-10128.72	-11987	-0.0000339	0.0006738	0.0035	4.02		32111.51	32111.51	3.17		Si
SLV 4	5.44	1786.8	-17989	-0.0000253	0.0006738	0.0035	4.02		35565.49	35565.49	19.9		Si
SLV 4	7.54	-11259.38	-14578	-0.0000389	0.0006738	0.0035	4.02		36788.05	36788.05	3.27		Si
SLV 15	5.44	-7728.31	-15839	-0.0000337	0.0006738	0.0035	4.02		39035.45	39035.45	5.05		Si
SLV 15	7.54	7310.56	-6777	-0.0000238	0.0006738	0.0035	4.02		14895.18	14895.18	2.04		Si
SLV 13	5.44	-6707.19	-12735	-0.0000279	0.0006738	0.0035	4.02		33485.55	33485.55	4.99		Si
SLV 13	7.54	8441.22	-4186	-0.0002717	0.0006738	0.0035	4.02		9918.87	9918.87	1.18		Si
SLV 3	5.44	1810.95	-17935	-0.0000253	0.0006738	0.0035	4.02		35469.13	35469.13	19.59		Si
SLV 3	7.54	-11210.59	-14474	-0.0000387	0.0006738	0.0035	4.02		36603.55	36603.55	3.27		Si
SLV 9	5.44	-2181.51	-9856	-0.000016	0.0006738	0.0035	4.02		28178.04	28178.04	12.92		Si
SLV 9	7.54	3269.1	-3876	-0.0000108	0.0006738	0.0035	4.02		9320.84	9320.84	2.85		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 43	5.44	-3240.44	-18534	-13222	-3590	4.02	4.02	-11746	9900	11143	115546	40451	20502	60953	No	16.98	Si
SLU 43	7.54	-1080.29	-10169	-7254	-3596	4.02	4.02	-6445	9193	10347	115546	40451	20502	60953	No	16.95	Si
SLU 49	5.44	-3343.5	-19762	-14097	-3704	4.02	4.02	-12524	10003	11260	115546	40451	20502	60953	No	16.46	Si
SLU 49	7.54	-1162.96	-11287	-8052	-3710	4.02	4.02	-7154	9287	10454	115546	40451	20502	60953	No	16.43	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 46	5.44	-3296.97	-19344	-13800	-3608	4.02	4.02	-12260	9968	11220	115546	40451	20502	60953	No	16.89	Si
SLU 46	7.54	-1188.41	-10934	-7800	-3614	4.02	4.02	-6930	9257	10420	115546	40451	20502	60953	No	16.86	Si
SLU 47	5.44	-3267.56	-18989	-13546	-3702	4.02	4.02	-12035	9938	11186	115546	40451	20502	60953	No	16.47	Si
SLU 47	7.54	-1031.24	-10545	-7522	-3708	4.02	4.02	-6683	9224	10383	115546	40451	20502	60953	No	16.44	Si
SLU 50	5.44	-3333.5	-19368	-13817	-3781	4.02	4.02	-12275	9970	11222	115546	40451	20502	60953	No	16.12	Si
SLU 50	7.54	-1029.38	-10875	-7758	-3788	4.02	4.02	-6892	9252	10414	115546	40451	20502	60953	No	16.09	Si
SLU 48	5.44	-3355.14	-19739	-14081	-3694	4.02	4.02	-12510	10001	11258	115546	40451	20502	60953	No	16.5	Si
SLU 48	7.54	-1177.11	-11274	-8042	-3701	4.02	4.02	-7145	9286	10452	115546	40451	20502	60953	No	16.47	Si
SLU 72	5.44	-3323.55	-20872	-14890	-2939	4.02	4.02	-13228	10097	11365	115546	40451	20502	60953	No	20.74	Si
SLU 72	7.54	-1653.03	-12825	-9149	-2946	4.02	4.02	-8128	9417	10600	115546	40451	20502	60953	No	20.69	Si
SLU 44	5.44	-3221.03	-18572	-13249	-3606	4.02	4.02	-11770	9903	11146	115546	40451	20502	60953	No	16.9	Si
SLU 44	7.54	-1056.69	-10192	-7270	-3612	4.02	4.02	-6459	9195	10349	115546	40451	20502	60953	No	16.87	Si
SLU 51	5.44	-3321.86	-19391	-13833	-3791	4.02	4.02	-12289	9972	11224	115546	40451	20502	60953	No	16.08	Si
SLU 51	7.54	-1015.22	-10889	-7768	-3797	4.02	4.02	-6901	9253	10416	115546	40451	20502	60953	No	16.05	Si
SLU 45	5.44	-3308.61	-19322	-13784	-3598	4.02	4.02	-12246	9966	11218	115546	40451	20502	60953	No	16.94	Si
SLU 45	7.54	-1202.57	-10921	-7790	-3605	4.02	4.02	-6921	9256	10419	115546	40451	20502	60953	No	16.91	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	5.44	1786.8	-17989	-12833	7515	4.02	4.02	-11401	14780	16637	115546	60677	20502	81179		10.8	Si
SLV 4	7.54	-11259.38	-14578	-10400	6691	4.02	3.7129	-10043	14509	15084	115546	60677	20502	81179		12.13	Si
SLV 15	5.44	-7728.31	-15839	-11299	-11421	4.02	4.02	-10038	14508	16330	115546	60677	20502	81179		7.11	Si
SLV 15	7.54	7310.56	-6777	-4835	-10137	4.02	2.7938	-4295	13359	10450	115546	60677	20502	81179		8.01	Si
SLV 2	5.44	2807.92	-14885	-10618	7475	4.02	4.02	-9434	14387	16194	115546	60677	20502	81179		10.86	Si
SLV 2	7.54	-10128.72	-11987	-8551	6179	4.02	3.4951	-8771	14254	13950	115546	60677	20502	81179		13.14	Si
SLD 13	5.44	-4279.49	-14236	-10155	-6033	4.02	4.02	-9022	14304	16101	115546	60677	20502	81179		13.46	Si
SLD 13	7.54	2800.35	-7154	-5103	-5689	4.02	4.02	-4534	13407	15091	115546	60677	20502	81179		14.27	Si
SLV 14	5.44	-6731.34	-12789	-9123	-11402	4.02	4.02	-8105	14121	15895	115546	60677	20502	81179		7.12	Si
SLV 14	7.54	8392.42	-4290	-3060	-10589	4.02	0.1606	-43998	16250	731	115546	60677	20502	81179		7.67	Si
SLD 15	5.44	-4715.82	-15568	-11106	-6014	4.02	4.02	-9867	14473	16291	115546	60677	20502	81179		13.5	Si
SLD 15	7.54	2315.11	-8269	-5899	-5468	4.02	4.02	-5240	13548	15250	115546	60677	20502	81179		14.85	Si
SLV 16	5.44	-7752.46	-15893	-11338	-11362	4.02	4.02	-10073	14515	16338	115546	60677	20502	81179		7.14	Si
SLV 16	7.54	7261.77	-6881	-4908	-10077	4.02	2.8638	-4361	13372	10723	115546	60677	20502	81179		8.06	Si
SLV 3	5.44	1810.95	-17935	-12794	7455	4.02	4.02	-11367	14773	16629	115546	60677	20502	81179		10.89	Si
SLV 3	7.54	-11210.59	-14474	-10326	6632	4.02	3.7065	-9989	14498	15046	115546	60677	20502	81179		12.24	Si
SLV 1	5.44	2832.07	-14831	-10580	7416	4.02	4.02	-9399	14380	16186	115546	60677	20502	81179		10.95	Si
SLV 1	7.54	-10079.93	-11884	-8477	6120	4.02	3.4853	-8720	14244	13901	115546	60677	20502	81179		13.26	Si
SLV 13	5.44	-6707.19	-12735	-9085	-11461	4.02	4.02	-8071	14114	15887	115546	60677	20502	81179		7.08	Si
SLV 13	7.54	8441.22	-4186	-2986	-10648	4.02	0	-58240	16250	0	115546	60677	20502	81179		7.62	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 7.2 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 9	-4520	0.39	426.76	618.91	1201.08	910	2.13	Si
SLV 10	-4586	0.39	426.76	627.76	1211.47	919.61	2.15	Si
SLV 13	-4836	0.39	426.76	661.16	1250.71	955.94	2.24	Si
SLV 14	-4939	0.39	426.76	674.96	1266.97	970.97	2.28	Si
SLV 5	-6857	0.39	426.76	928.07	1565.75	1246.91	2.92	Si
SLV 6	-6923	0.39	426.76	936.71	1576	1256.36	2.94	Si
SLV 15	-7460	0.39	426.76	1006.64	1659.3	1332.97	3.12	Si
SLV 16	-7564	0.39	426.76	1020.08	1675.32	1347.7	3.16	Si
SLV 1	-12626	0.39	426.76	1659.52	2454.21	2056.87	4.82	Si
SLV 2	-12730	0.39	426.76	1672.23	2470.04	2071.14	4.85	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-6731	-20239	1007	2.149	1269.4	0.898	34.76341	13.42943	Si
SLV 11	-6653	-20204	1007	2.165	1261.9	0.898	35.03325	13.42943	Si
SLV 8	-5119	-20867	1020	2.538	1114.1	0.892	41.3564	13.42943	Si
SLV 7	-5042	-20833	1020	2.561	1106.7	0.892	41.73293	13.42943	Si
SLV 16	-6591	-15893	284	2.249	1255.8	0.898	36.40857	7.08809	Si
SLV 15	-6470	-15839	285	2.276	1244	0.897	36.85917	7.08809	Si
SLV 10	-898	-9891	-1014	4.903	757.6	0.926	76.9826	13.42943	Si
SLV 9	-821	-9856	-1014	4.989	753.4	0.929	78.01547	13.42943	Si
SLV 14	-4841	-12789	-322	2.704	1087.6	0.891	44.10271	7.08809	Si
SLV 13	-4720	-12735	-322	2.743	1076.2	0.891	44.75535	7.08809	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	11.953	SLU 39	Si
V_SLU	16.052	SLU 51	Si
PF_SLV	1.175	SLV 13	Si
V_SLV	7.083	SLV 13	Si
PFFP_SLV	2.132	SLV 9	Si
R_SLV	2.589	SLV 12	Si

Maschio 122

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-12.263	1.006	-19.813	1.006	L5	L6	7.55	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 33	5.44	2821.41	-75394	-0.0000526	0.0004492	0.0035	7.55	201540.07	240454.45	240454.45	85.22	No	Si
SLU 33	7.94	-7529.24	-65726	-0.0000483	0.0004492	0.0035	7.55	184982.09	244417.63	244417.63	32.46	No	Si
SLU 81	5.44	4042.23	-90190	-0.000064	0.0004492	0.0035	7.55	221588.55	279984.38	279984.38	69.26	No	Si
SLU 81	7.94	-8566.05	-77550	-0.0000574	0.0004492	0.0035	7.55	204859.85	275388.59	275388.59	32.15	No	Si
SLU 41	5.44	2928.76	-77102	-0.0000539	0.0004492	0.0035	7.55	204180.31	245137.95	245137.95	83.7	No	Si
SLU 41	7.94	-7682.67	-67772	-0.0000499	0.0004492	0.0035	7.55	188714.07	250002.65	250002.65	32.54	No	Si
SLU 75	5.44	4168.54	-89478	-0.0000636	0.0004492	0.0035	7.55	220771.23	278476.25	278476.25	66.8	No	Si
SLU 75	7.94	-8307.76	-76375	-0.0000564	0.0004492	0.0035	7.55	203067.35	272388.98	272388.98	32.79	No	Si
SLU 40	5.44	2646.76	-76176	-0.000053	0.0004492	0.0035	7.55	202759.78	242599.32	242599.32	91.66	No	Si
SLU 40	7.94	-7863.32	-66950	-0.0000494	0.0004492	0.0035	7.55	187228.74	247757.79	247757.79	31.51	No	Si
SLU 32	5.44	2869.76	-75324	-0.0000526	0.0004492	0.0035	7.55	201428.84	240260.41	240260.41	83.72	No	Si
SLU 32	7.94	-7453.45	-65677	-0.0000483	0.0004492	0.0035	7.55	184891.97	244284.99	244284.99	32.77	No	Si
SLU 39	5.44	2695.1	-76106	-0.000053	0.0004492	0.0035	7.55	202650.16	242405.28	242405.28	89.94	No	Si
SLU 39	7.94	-7787.53	-66901	-0.0000493	0.0004492	0.0035	7.55	187140.35	247625.15	247625.15	31.8	No	Si
SLU 42	5.44	2880.42	-77173	-0.0000539	0.0004492	0.0035	7.55	204287.86	245332	245332	85.17	No	Si
SLU 42	7.94	-7758.46	-67821	-0.00005	0.0004492	0.0035	7.55	188801.22	250135.29	250135.29	32.24	No	Si
SLU 84	5.44	4227.54	-91257	-0.0000649	0.0004492	0.0035	7.55	222787.02	282246.96	282246.96	66.76	No	Si
SLU 84	7.94	-8536.99	-78470	-0.0000581	0.0004492	0.0035	7.55	206234.48	277736.02	277736.02	32.53	No	Si
SLU 82	5.44	3993.88	-90260	-0.0000641	0.0004492	0.0035	7.55	221669.04	280134.4	280134.4	70.14	No	Si
SLU 82	7.94	-8641.84	-77599	-0.0000575	0.0004492	0.0035	7.55	204933.11	275512.63	275512.63	31.88	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	5.44	24779.78	-55724	-0.00005	0.0006738	0.0035	7.55		195374.06	195374.06	7.88		Si
SLV 7	7.94	-551.53	-49486	-0.0000328	0.0006738	0.0035	7.55		203388.24	203388.24	368.77		Si
SLV 3	5.44	44457.8	-61918	-0.000065	0.0006738	0.0035	7.55		212538.53	212538.53	4.78		Si
SLV 3	7.94	-26017.32	-57530	-0.0000519	0.0006738	0.0035	7.55		228245.8	228245.8	8.77		Si
SLV 16	5.44	-31480.56	-56648	-0.0000543	0.0006738	0.0035	7.55		225584.57	225584.57	7.17		Si
SLV 16	7.94	23366.35	-41502	-0.0000395	0.0006738	0.0035	7.55		150639.08	150639.08	6.45		Si
SLV 2	5.44	38680.77	-65613	-0.0000644	0.0006738	0.0035	7.55		222778.19	222778.19	5.76		Si
SLV 2	7.94	-32712.19	-59697	-0.0000571	0.0006738	0.0035	7.55		234781.38	234781.38	7.18		Si
SLV 8	5.44	24882.57	-55700	-0.00005	0.0006738	0.0035	7.55		195305.85	195305.85	7.85		Si
SLV 8	7.94	-314.09	-49545	-0.0000327	0.0006738	0.0035	7.55		203577.84	203577.84	648.16		Si
SLV 15	5.44	-31641.52	-56686	-0.0000544	0.0006738	0.0035	7.55		225700.82	225700.82	7.13		Si
SLV 15	7.94	22994.55	-41409	-0.0000393	0.0006738	0.0035	7.55		150335.4	150335.4	6.54		Si
SLV 13	5.44	-37579.51	-60420	-0.0000602	0.0006738	0.0035	7.55		236961.67	236961.67	6.31		Si
SLV 13	7.94	15927.87	-43482	-0.0000369	0.0006738	0.0035	7.55		157074.59	157074.59	9.86		Si
SLV 4	5.44	44618.76	-61880	-0.0000651	0.0006738	0.0035	7.55		212431.72	212431.72	4.76		Si
SLV 4	7.94	-25645.52	-57624	-0.0000518	0.0006738	0.0035	7.55		228527.6	228527.6	8.91		Si
SLV 14	5.44	-37418.55	-60381	-0.0000601	0.0006738	0.0035	7.55		236845.42	236845.42	6.33		Si
SLV 14	7.94	16299.67	-43575	-0.0000372	0.0006738	0.0035	7.55		157378.27	157378.27	9.66		Si
SLV 1	5.44	38519.81	-65652	-0.0000644	0.0006738	0.0035	7.55		222885	222885	5.79		Si
SLV 1	7.94	-33083.99	-59604	-0.0000572	0.0006738	0.0035	7.55		234499.58	234499.58	7.09		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	5.44	4042.23	-90190	-64339	8271	7.55	7.55	-30435	10833	22902	115546	75972	38505	114477	No	13.84	Si
SLU 81	7.94	-8566.05	-77550	-55323	9142	7.55	7.55	-26170	10833	22902	115546	75972	38505	114477	No	12.52	Si
SLU 74	5.44	4216.88	-89408	-63781	7565	7.55	7.55	-30171	10833	22902	115546	75972	38505	114477	No	15.13	Si
SLU 74	7.94	-8231.97	-76327	-54450	8457	7.55	7.55	-25757	10833	22902	115546	75972	38505	114477	No	13.54	Si
SLU 84	5.44	4227.54	-91257	-65100	8218	7.55	7.55	-30795	10833	22902	115546	75972	38505	114477	No	13.93	Si
SLU 84	7.94	-8536.99	-78470	-55979	9114	7.55	7.55	-26480	10833	22902	115546	75972	38505	114477	No	12.56	Si
SLU 73	5.44	4107	-86941	-62022	7385	7.55	7.55	-29339	10833	22902	115546	75972	38505	114477	No	15.5	Si
SLU 73	7.94	-7922.3	-73851	-52684	8250	7.55	7.55	-24921	10833	22902	115546	75972	38505	114477	No	13.88	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	5.44	4275.88	-91186	-65050	8233	7.55	7.55	-30771	10833	22902	115546	75972	38505	114477	No	13.91	Si
SLU 83	7.94	-8461.2	-78421	-55944	9126	7.55	7.55	-26464	10833	22902	115546	75972	38505	114477	No	12.54	Si
SLU 77	5.44	4450.54	-90404	-64492	7526	7.55	7.55	-30507	10833	22902	115546	75972	38505	114477	No	15.21	Si
SLU 77	7.94	-8127.12	-77198	-55071	8441	7.55	7.55	-26051	10833	22902	115546	75972	38505	114477	No	13.56	Si
SLU 75	5.44	4168.54	-89478	-63832	7551	7.55	7.55	-30195	10833	22902	115546	75972	38505	114477	No	15.16	Si
SLU 75	7.94	-8307.76	-76375	-54484	8445	7.55	7.55	-25773	10833	22902	115546	75972	38505	114477	No	13.56	Si
SLU 78	5.44	4402.19	-90475	-64542	7512	7.55	7.55	-30531	10833	22902	115546	75972	38505	114477	No	15.24	Si
SLU 78	7.94	-8202.91	-77246	-55106	8429	7.55	7.55	-26067	10833	22902	115546	75972	38505	114477	No	13.58	Si
SLU 82	5.44	3993.88	-90260	-64390	8257	7.55	7.55	-30459	10833	22902	115546	75972	38505	114477	No	13.86	Si
SLU 82	7.94	-8641.84	-77599	-55357	9130	7.55	7.55	-26186	10833	22902	115546	75972	38505	114477	No	12.54	Si
SLU 79	5.44	4654.88	-88816	-63359	7331	7.55	7.55	-29971	10833	22902	115546	75972	38505	114477	No	15.61	Si
SLU 79	7.94	-7586.27	-75512	-53868	8238	7.55	7.55	-25482	10833	22902	115546	75972	38505	114477	No	13.9	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	5.44	-31641.52	-56686	-40439	-30939	7.55	7.55	-19129	16250	34352	115546	113958	38505	149898		4.84	Si
SLV 15	7.94	22994.55	-41409	-29540	-25221	7.55	7.55	-13973	15295	32333	115546	113958	38505	147879		5.86	Si
SLD 4	5.44	21132.69	-61440	-43830	19649	7.55	7.55	-20733	16250	34352	115546	113958	38505	149898		7.63	Si
SLD 4	7.94	-13698.09	-53559	-38208	18379	7.55	7.55	-18074	16115	34067	115546	113958	38505	149612		8.14	Si
SLV 1	5.44	38519.81	-65652	-46834	39850	7.55	7.55	-22154	16250	34352	115546	113958	38505	149898		3.76	Si
SLV 1	7.94	-33083.99	-59604	-42520	35409	7.55	7.55	-20113	16250	34352	115546	113958	38505	149898		4.23	Si
SLV 16	5.44	-31480.56	-56648	-40411	-30819	7.55	7.55	-19116	16250	34352	115546	113958	38505	149898		4.86	Si
SLV 16	7.94	23366.35	-41502	-29607	-25104	7.55	7.55	-14005	15301	32346	115546	113958	38505	147892		5.89	Si
SLV 13	5.44	-37579.51	-60420	-43102	-30882	7.55	7.55	-20389	16250	34352	115546	113958	38505	149898		4.85	Si
SLV 13	7.94	15927.87	-43482	-31019	-25780	7.55	7.55	-14673	15435	32629	115546	113958	38505	148174		5.75	Si
SLV 3	5.44	44457.8	-61918	-44171	39793	7.55	7.55	-20894	16250	34352	115546	113958	38505	149898		3.77	Si
SLV 3	7.94	-26017.32	-57530	-41041	35968	7.55	7.55	-19414	16250	34352	115546	113958	38505	149898		4.17	Si
SLV 4	5.44	44618.76	-61880	-44143	39914	7.55	7.55	-20881	16250	34352	115546	113958	38505	149898		3.76	Si
SLV 4	7.94	-25645.52	-57624	-41107	36085	7.55	7.55	-19445	16250	34352	115546	113958	38505	149898		4.15	Si
SLV 14	5.44	-37418.55	-60381	-43075	-30761	7.55	7.55	-20376	16250	34352	115546	113958	38505	149898		4.87	Si
SLV 14	7.94	16299.67	-43575	-31086	-25664	7.55	7.55	-14705	15441	32642	115546	113958	38505	148188		5.77	Si
SLD 2	5.44	18512.29	-63066	-44990	19669	7.55	7.55	-21282	16250	34352	115546	113958	38505	149898		7.62	Si
SLD 2	7.94	-16798.34	-54468	-38856	18134	7.55	7.55	-18380	16176	34196	115546	113958	38505	149742		8.26	Si
SLV 2	5.44	38680.77	-65613	-46807	39971	7.55	7.55	-22141	16250	34352	115546	113958	38505	149898		3.75	Si
SLV 2	7.94	-32712.19	-59697	-42586	35526	7.55	7.55	-20145	16250	34352	115546	113958	38505	149898		4.22	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 7.2 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 15	-47786	0.39	801.5	5864.99	8220.81	7042.9	8.79	Si
SLV 16	-47843	0.39	801.5	5870.92	8229.1	7050.01	8.8	Si
SLV 11	-48549	0.39	801.5	5945.21	8333.22	7139.22	8.91	Si
SLV 12	-48585	0.39	801.5	5948.98	8338.52	7143.75	8.91	Si
SLV 13	-50382	0.39	801.5	6136.32	8603.56	7369.94	9.2	Si
SLV 14	-50438	0.39	801.5	6142.15	8611.86	7377	9.2	Si
SLV 7	-51790	0.39	801.5	6281.42	8811.27	7546.34	9.42	Si
SLV 8	-51826	0.39	801.5	6285.1	8816.57	7550.84	9.42	Si
SLV 9	-57202	0.39	801.5	6825.94	9610.66	8218.3	10.25	Si
SLV 10	-57237	0.39	801.5	6829.48	9615.91	8222.69	10.26	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-50129	-68145	-1461	0.765	6155.4	0.951	11.69623	13.42943	No
SLV 5	-50042	-68169	-1461	0.766	6146.5	0.951	11.71433	13.42943	No
SLV 10	-47623	-66575	-1368	0.8	5901	0.949	12.25805	13.42943	No
SLV 9	-47535	-66600	-1368	0.801	5892.1	0.949	12.27797	13.42943	No
SLV 8	-46457	-55700	1372	0.817	5782.6	0.948	12.52448	13.42943	No
SLV 7	-46369	-55724	1373	0.818	5773.7	0.948	12.54494	13.42943	No
SLV 12	-43950	-54130	1465	0.853	5528.3	0.946	13.1147	13.42943	No
SLV 11	-43862	-54155	1466	0.855	5519.4	0.946	13.13728	13.42943	No
SLV 2	-51793	-65613	-578	0.759	6324.4	0.952	11.59748	7.08809	Si
SLV 1	-51656	-65652	-577	0.761	6310.4	0.952	11.62479	7.08809	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	31.508	SLU 40	Si
V_SLU	12.522	SLU 81	Si
PF_SLV	4.761	SLV 4	Si
V_SLV	3.75	SLV 2	Si
PFFP_SLV	8.787	SLV 15	Si
R_SLV	0.871	SLV 6	No

Maschio 124

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.463	1.006	-9.398	1.006	L5	L6	1.935	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	5.44	907.17	-28679	-0.0000862	0.0004492	0.0035	1.9353	15731.13	21426.05	21426.05	23.62	No	Si
SLU 83	7.94	2992.1	-23942	-0.000091	0.0004492	0.0035	1.9353	14790.12	18887.59	18887.59	6.31	No	Si
SLU 62	5.44	747.78	-25794	-0.0000761	0.0004492	0.0035	1.9353	15236.14	19880.05	19880.05	26.59	No	Si
SLU 62	7.94	2675.38	-21260	-0.00008	0.0004492	0.0035	1.9353	13966.63	17140.45	17140.45	6.41	No	Si
SLU 39	5.44	729.18	-24113	-0.000071	0.0004492	0.0035	1.9353	14835.68	18979.57	18979.57	26.03	No	Si
SLU 39	7.94	2595.52	-20404	-0.0000768	0.0004492	0.0035	1.9353	13659.73	16546.46	16546.46	6.38	No	Si
SLU 81	5.44	882.62	-28349	-0.000085	0.0004492	0.0035	1.9353	15686.81	21249.13	21249.13	24.07	No	Si
SLU 81	7.94	2973.45	-23646	-0.0000899	0.0004492	0.0035	1.9353	14709.75	18729.37	18729.37	6.3	No	Si
SLU 41	5.44	753.73	-24444	-0.0000722	0.0004492	0.0035	1.9353	14920.88	19156.5	19156.5	25.42	No	Si
SLU 41	7.94	2614.17	-20700	-0.0000778	0.0004492	0.0035	1.9353	13768.08	16751.5	16751.5	6.41	No	Si
SLU 61	5.44	727.6	-25484	-0.000075	0.0004492	0.0035	1.9353	15168.51	19714.02	19714.02	27.09	No	Si
SLU 61	7.94	2657.27	-20981	-0.000079	0.0004492	0.0035	1.9353	13868.97	16946.89	16946.89	6.38	No	Si
SLU 60	5.44	723.24	-25464	-0.0000749	0.0004492	0.0035	1.9353	15163.97	19703.12	19703.12	27.24	No	Si
SLU 60	7.94	2656.73	-20964	-0.000079	0.0004492	0.0035	1.9353	13863.11	16935.42	16935.42	6.37	No	Si
SLU 40	5.44	733.55	-24134	-0.0000711	0.0004492	0.0035	1.9353	14841.02	18990.47	18990.47	25.89	No	Si
SLU 40	7.94	2596.06	-20421	-0.0000768	0.0004492	0.0035	1.9353	13665.86	16557.93	16557.93	6.38	No	Si
SLU 82	5.44	886.98	-28370	-0.0000851	0.0004492	0.0035	1.9353	15689.64	21260.03	21260.03	23.97	No	Si
SLU 82	7.94	2973.99	-23663	-0.0000899	0.0004492	0.0035	1.9353	14714.32	18738.22	18738.22	6.3	No	Si
SLU 84	5.44	911.53	-28700	-0.0000863	0.0004492	0.0035	1.9353	15733.76	21436.95	21436.95	23.52	No	Si
SLU 84	7.94	2992.64	-23958	-0.000091	0.0004492	0.0035	1.9353	14794.55	18896.44	18896.44	6.31	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	5.44	9310.21	-23176	-0.0001439	0.0006738	0.0035	1.9353		19160.9	19160.9	2.06		Si
SLV 2	7.94	-3522	-15399	-0.0000687	0.0006738	0.0035	1.9353		15370.41	15370.41	4.36		Si
SLV 1	5.44	9302.92	-23185	-0.0001439	0.0006738	0.0035	1.9353		19167.07	19167.07	2.06		Si
SLV 1	7.94	-3525.57	-15408	-0.0000688	0.0006738	0.0035	1.9353		15377.47	15377.47	4.36		Si
SLV 15	5.44	-7881.42	-14831	-0.0001175	0.0006738	0.0035	1.9353		14928.44	14928.44	1.89		Si
SLV 15	7.94	7209.31	-15418	-0.0001059	0.0006738	0.0035	1.9353		13715.83	13715.83	1.9		Si
SLV 16	5.44	-7874.14	-14822	-0.0001174	0.0006738	0.0035	1.9353		14921.6	14921.6	1.9		Si
SLV 16	7.94	7212.88	-15409	-0.0001059	0.0006738	0.0035	1.9353		13709.47	13709.47	1.9		Si
SLD 16	5.44	-2958.41	-17214	-0.000069	0.0006738	0.0035	1.9353		16767.86	16767.86	5.67		Si
SLD 16	7.94	4138.66	-15406	-0.0000739	0.0006738	0.0035	1.9353		13707.92	13707.92	3.31		Si
SLD 15	5.44	-2961.54	-17218	-0.000069	0.0006738	0.0035	1.9353		16770.65	16770.65	5.66		Si
SLD 15	7.94	4137.12	-15410	-0.0000739	0.0006738	0.0035	1.9353		13710.66	13710.66	3.31		Si
SLV 3	5.44	9217.34	-21851	-0.0001404	0.0006738	0.0035	1.9353		18230.83	18230.83	1.98		Si
SLV 3	7.94	-3626.81	-14453	-0.000067	0.0006738	0.0035	1.9353		14634.35	14634.35	4.04		Si
SLV 14	5.44	-7788.55	-16156	-0.0001149	0.0006738	0.0035	1.9353		15959.71	15959.71	2.05		Si
SLV 14	7.94	7314.11	-16364	-0.0001081	0.0006738	0.0035	1.9353		14379.66	14379.66	1.97		Si
SLV 4	5.44	9224.62	-21842	-0.0001405	0.0006738	0.0035	1.9353		18224.66	18224.66	1.98		Si
SLV 4	7.94	-3623.24	-14444	-0.0000669	0.0006738	0.0035	1.9353		14627.29	14627.29	4.04		Si
SLV 13	5.44	-7795.83	-16165	-0.000115	0.0006738	0.0035	1.9353		15966.55	15966.55	2.05		Si
SLV 13	7.94	7310.54	-16373	-0.000108	0.0006738	0.0035	1.9353		14386.03	14386.03	1.97		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 57	5.44	794.38	-25434	-18144	-142	1.9353	1.9353	-33483	10833	5870	115546	19474	9870	29344	No	207.05	Si
SLU 57	7.94	2556.49	-20842	-14868	-577	1.9353	1.9353	-27438	10833	5870	115546	19474	9870	29344	No	50.84	Si
SLU 59	5.44	813.84	-25001	-17835	-112	1.9353	1.9353	-32913	10833	5870	115546	19474	9870	29344	No	262.84	Si
SLU 59	7.94	2497.46	-20416	-14565	-553	1.9353	1.9353	-26878	10833	5870	115546	19474	9870	29344	No	53.08	Si
SLU 56	5.44	790.02	-25414	-18130	-145	1.9353	1.9353	-33457	10833	5870	115546	19474	9870	29344	No	202.4	Si
SLU 56	7.94	2555.95	-20826	-14856	-579	1.9353	1.9353	-27416	10833	5870	115546	19474	9870	29344	No	50.7	Si
SLU 60	5.44	723.24	-25464	-18165	-262	1.9353	1.9353	-33522	10833	5870	115546	19474	9870	29344	No	112.01	Si
SLU 60	7.94	2656.73	-20964	-14956	-571	1.9353	1.9353	-27599	10833	5870	115546	19474	9870	29344	No	51.37	Si
SLU 58	5.44	809.48	-24981	-17821	-115	1.9353	1.9353	-32887	10833	5870	115546	19474	9870	29344	No	255.4	Si
SLU 58	7.94	2496.91	-20400	-14553	-554	1.9353	1.9353	-26856	10833	5870	115546	19474	9870	29344	No	52.93	Si
SLU 53	5.44	765.47	-25084	-17894	-163	1.9353	1.9353	-33022	10833	5870	115546	19474	9870	29344	No	179.6	Si
SLU 53	7.94	2537.3	-20530	-14646	-573	1.9353	1.9353	-27028	10833	5870	115546	19474	9870	29344	No	51.2	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 63	5.44	752.14	-25814	-18415	-240	1.9353	1.9353	-33984	10833	5870	115546	19474	9870	29344	No	122.1	Si
SLU 63	7.94	2675.92	-21276	-15178	-575	1.9353	1.9353	-28010	10833	5870	115546	19474	9870	29344	No	51.01	Si
SLU 54	5.44	769.83	-25104	-17909	-160	1.9353	1.9353	-33049	10833	5870	115546	19474	9870	29344	No	183.25	Si
SLU 54	7.94	2537.84	-20547	-14658	-571	1.9353	1.9353	-27049	10833	5870	115546	19474	9870	29344	No	51.35	Si
SLU 62	5.44	747.78	-25794	-18401	-244	1.9353	1.9353	-33957	10833	5870	115546	19474	9870	29344	No	120.47	Si
SLU 62	7.94	2675.38	-21260	-15166	-577	1.9353	1.9353	-27988	10833	5870	115546	19474	9870	29344	No	50.87	Si
SLU 61	5.44	727.6	-25484	-18180	-259	1.9353	1.9353	-33549	10833	5870	115546	19474	9870	29344	No	113.41	Si
SLU 61	7.94	2657.27	-20981	-14967	-570	1.9353	1.9353	-27621	10833	5870	115546	19474	9870	29344	No	51.52	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	5.44	-7874.14	-14822	-10574	-7783	1.9353	1.3092	-29220	16250	5957	115546	29211	9870	39081		5.02	Si
SLV 16	7.94	7212.88	-15409	-10992	-4744	1.9353	1.4986	-20285	16250	6819	115546	29211	9870	39081		8.24	Si
SLV 2	5.44	9310.21	-23176	-16533	7774	1.9353	1.6978	-30511	16250	7725	115546	29211	9870	39081		5.03	Si
SLV 2	7.94	-3522	-15399	-10985	4010	1.9353	1.9353	-20272	16250	8806	115546	29211	9870	39081		9.75	Si
SLV 13	5.44	-7795.83	-16165	-11532	-7711	1.9353	1.4562	-28660	16250	6626	115546	29211	9870	39081		5.07	Si
SLV 13	7.94	7310.54	-16373	-11680	-4701	1.9353	1.5634	-21554	16250	7114	115546	29211	9870	39081		8.31	Si
SLV 15	5.44	-7881.42	-14831	-10580	-7784	1.9353	1.3087	-29250	16250	5955	115546	29211	9870	39081		5.02	Si
SLV 15	7.94	7209.31	-15418	-10999	-4750	1.9353	1.5002	-20297	16250	6826	115546	29211	9870	39081		8.23	Si
SLV 1	5.44	9302.92	-23185	-16540	7772	1.9353	1.6992	-30522	16250	7731	115546	29211	9870	39081		5.03	Si
SLV 1	7.94	-3525.57	-15408	-10992	4004	1.9353	1.9353	-20284	16250	8806	115546	29211	9870	39081		9.76	Si
SLD 15	5.44	-2961.54	-17218	-12283	-3331	1.9353	1.9353	-22667	16250	8806	115546	29211	9870	39081		11.73	Si
SLD 15	7.94	4137.12	-15410	-10993	-2243	1.9353	1.9353	-20287	16250	8806	115546	29211	9870	39081		17.42	Si
SLD 16	5.44	-2958.41	-17214	-12280	-3330	1.9353	1.9353	-22662	16250	8806	115546	29211	9870	39081		11.74	Si
SLD 16	7.94	4138.66	-15406	-10991	-2241	1.9353	1.9353	-20282	16250	8806	115546	29211	9870	39081		17.44	Si
SLV 3	5.44	9217.34	-21851	-15588	7700	1.9353	1.6375	-28766	16250	7451	115546	29211	9870	39081		5.08	Si
SLV 3	7.94	-3626.81	-14453	-10311	3955	1.9353	1.9353	-19027	16250	8806	115546	29211	9870	39081		9.88	Si
SLV 14	5.44	-7788.55	-16156	-11525	-7710	1.9353	1.4567	-28633	16250	6628	115546	29211	9870	39081		5.07	Si
SLV 14	7.94	7314.11	-16364	-11673	-4695	1.9353	1.562	-21542	16250	7107	115546	29211	9870	39081		8.32	Si
SLV 4	5.44	9224.62	-21842	-15582	7701	1.9353	1.636	-28754	16250	7444	115546	29211	9870	39081		5.07	Si
SLV 4	7.94	-3623.24	-14444	-10304	3961	1.9353	1.9353	-19015	16250	8806	115546	29211	9870	39081		9.87	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 7.2 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-13273	0.39	205.45	1609.93	2267.55	1938.74	9.44	Si
SLV 15	-13282	0.39	205.45	1610.83	2268.86	1939.84	9.44	Si
SLV 12	-14349	0.39	205.45	1718.67	2427.38	2073.03	10.09	Si
SLV 11	-14355	0.39	205.45	1719.23	2428.22	2073.72	10.09	Si
SLV 14	-14426	0.39	205.45	1726.32	2438.81	2082.56	10.14	Si
SLV 13	-14435	0.39	205.45	1727.19	2440.11	2083.65	10.14	Si
SLV 8	-16423	0.39	205.45	1919.05	2732.45	2325.75	11.32	Si
SLV 7	-16429	0.39	205.45	1919.58	2733.27	2326.43	11.32	Si
SLV 10	-18193	0.39	205.45	2080.41	2990.24	2535.33	12.34	Si
SLV 9	-18198	0.39	205.45	2080.91	2991.05	2535.98	12.34	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-13905	-22283	-686	0.696	1685	0.953	10.61158	13.42943	No
SLV 6	-13890	-22277	-686	0.697	1683.5	0.953	10.62128	13.42943	No
SLV 9	-13655	-20177	-684	0.707	1659.6	0.953	10.78332	13.42943	No
SLV 10	-13640	-20171	-684	0.708	1658.1	0.953	10.79335	13.42943	No
SLV 7	-12306	-17836	711	0.769	1522.6	0.949	11.77875	13.42943	No
SLV 8	-12291	-17830	711	0.77	1521.2	0.949	11.79076	13.42943	No
SLV 11	-12056	-15730	713	0.782	1497.3	0.948	11.98864	13.42943	No
SLV 12	-12042	-15724	713	0.783	1495.8	0.948	12.00111	13.42943	No
SLV 1	-13641	-23185	-199	0.739	1658.1	0.953	11.27457	7.08809	Si
SLV 2	-13618	-23176	-199	0.74	1655.9	0.953	11.29105	7.08809	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.299	SLU 81	Si
V_SLU	50.704	SLU 56	Si
PF_SLV	1.894	SLV 15	Si
V_SLV	5.021	SLV 15	Si
PFFP_SLV	9.437	SLV 16	Si
R_SLV	0.79	SLV 5	No

Maschio 125

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-4.913	1.006	-6.463	1.006	L5	L6	1.55	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	5.44	-783	-19069	-0.0000746	0.0004492	0.0035	1.55	9464.17	13064.58	13064.58	16.69	No	Si
SLU 83	7.54	1713.12	-17969	-0.0000835	0.0004492	0.0035	1.55	9207.09	11529.93	11529.93	6.73	No	Si
SLU 84	5.44	-777.66	-19079	-0.0000745	0.0004492	0.0035	1.55	9466.47	13069.48	13069.48	16.81	No	Si
SLU 84	7.54	1714.56	-17968	-0.0000835	0.0004492	0.0035	1.55	9206.79	11529.39	11529.39	6.72	No	Si
SLU 81	5.44	-796.77	-18804	-0.0000738	0.0004492	0.0035	1.55	9405.5	12941.62	12941.62	16.24	No	Si
SLU 81	7.54	1719.8	-17743	-0.0000827	0.0004492	0.0035	1.55	9149.84	11429.84	11429.84	6.65	No	Si
SLU 19	5.44	-631.96	-14112	-0.0000547	0.0004492	0.0035	1.55	8026.49	10533.27	10533.27	16.67	No	Si
SLU 19	7.54	1330.46	-13285	-0.0000611	0.0004492	0.0035	1.55	7716.41	8910.08	8910.08	6.7	No	Si
SLU 82	5.44	-791.43	-18814	-0.0000737	0.0004492	0.0035	1.55	9407.88	12946.52	12946.52	16.36	No	Si
SLU 82	7.54	1721.24	-17741	-0.0000828	0.0004492	0.0035	1.55	9149.53	11429.3	11429.3	6.64	No	Si
SLU 18	5.44	-637.3	-14102	-0.0000547	0.0004492	0.0035	1.55	8022.66	10527.63	10527.63	16.52	No	Si
SLU 18	7.54	1329.03	-13286	-0.0000611	0.0004492	0.0035	1.55	7716.88	8910.77	8910.77	6.7	No	Si
SLU 39	5.44	-822.9	-15675	-0.0000628	0.0004492	0.0035	1.55	8557.11	11367.54	11367.54	13.81	No	Si
SLU 39	7.54	1615.37	-15308	-0.0000723	0.0004492	0.0035	1.55	8438.91	10061.36	10061.36	6.23	No	Si
SLU 42	5.44	-803.79	-15950	-0.0000635	0.0004492	0.0035	1.55	8643.27	11514.63	11514.63	14.33	No	Si
SLU 42	7.54	1610.12	-15533	-0.000073	0.0004492	0.0035	1.55	8511.87	10189.4	10189.4	6.33	No	Si
SLU 41	5.44	-809.13	-15939	-0.0000636	0.0004492	0.0035	1.55	8640.01	11508.99	11508.99	14.22	No	Si
SLU 41	7.54	1608.69	-15534	-0.000073	0.0004492	0.0035	1.55	8512.26	10190.08	10190.08	6.33	No	Si
SLU 40	5.44	-817.56	-15685	-0.0000628	0.0004492	0.0035	1.55	8560.45	11373.18	11373.18	13.91	No	Si
SLU 40	7.54	1616.8	-15306	-0.0000723	0.0004492	0.0035	1.55	8438.51	10060.67	10060.67	6.22	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	5.44	-5875.94	-15462	-0.000137	0.0006738	0.0035	1.55		11712.12	11712.12	1.99		Si
SLV 16	7.54	5936.02	-14241	-0.0001393	0.0006738	0.0035	1.55		9822.28	9822.28	1.65		Si
SLV 1	5.44	5314.94	-10643	-0.000135	0.0006738	0.0035	1.55		7752.6	7752.6	1.46		Si
SLV 1	7.54	-4160.21	-8911	-0.0000988	0.0006738	0.0035	1.24		7632.29	7632.29	1.83		Si
SLD 14	5.44	-2688.67	-14046	-0.0000803	0.0006738	0.0035	1.55		10871.77	10871.77	4.04		Si
SLD 14	7.54	3083.15	-12343	-0.0000795	0.0006738	0.0035	1.55		8730.21	8730.21	2.83		Si
SLV 2	5.44	5338.76	-10584	-0.0001369	0.0006738	0.0035	1.55		7719.06	7719.06	1.45		Si
SLV 2	7.54	-4155.27	-8782	-0.0000994	0.0006738	0.0035	1.24		7547.57	7547.57	1.82		Si
SLV 14	5.44	-5915.81	-15384	-0.0001379	0.0006738	0.0035	1.55		11665.62	11665.62	1.97		Si
SLV 14	7.54	6021.53	-13383	-0.0001448	0.0006738	0.0035	1.55		9328.71	9328.71	1.55		Si
SLD 13	5.44	-2698.89	-14071	-0.0000805	0.0006738	0.0035	1.55		10886.63	10886.63	4.03		Si
SLD 13	7.54	3081.03	-12398	-0.0000796	0.0006738	0.0035	1.55		8762.03	8762.03	2.84		Si
SLV 13	5.44	-5939.63	-15442	-0.0001385	0.0006738	0.0035	1.55		11700.24	11700.24	1.97		Si
SLV 13	7.54	6016.59	-13512	-0.000144	0.0006738	0.0035	1.55		9402.85	9402.85	1.56		Si
SLV 15	5.44	-5899.75	-15520	-0.0001376	0.0006738	0.0035	1.55		11746.73	11746.73	1.99		Si
SLV 15	7.54	5931.08	-14370	-0.000139	0.0006738	0.0035	1.55		9896.42	9896.42	1.67		Si
SLV 3	5.44	5354.81	-10721	-0.0001361	0.0006738	0.0035	1.55		7797.65	7797.65	1.46		Si
SLV 3	7.54	-4245.72	-9769	-0.000098	0.0006738	0.0035	1.24		8196.34	8196.34	1.93		Si
SLV 4	5.44	5378.63	-10663	-0.000138	0.0006738	0.0035	1.55		7764.11	7764.11	1.44		Si
SLV 4	7.54	-4240.78	-9640	-0.0000983	0.0006738	0.0035	1.24		8111.62	8111.62	1.91		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	5.44	-783	-19069	-13603	-1889	1.55	1.55	-31344	10833	4702	115546	15597	7905	23502	No	12.44	Si
SLU 83	7.54	1713.12	-17969	-12818	-1889	1.55	1.55	-29536	10833	4702	115546	15597	7905	23502	No	12.44	Si
SLU 81	5.44	-796.77	-18804	-13414	-1894	1.55	1.55	-30908	10833	4702	115546	15597	7905	23502	No	12.41	Si
SLU 81	7.54	1719.8	-17743	-12657	-1894	1.55	1.55	-29164	10833	4702	115546	15597	7905	23502	No	12.41	Si
SLU 82	5.44	-791.43	-18814	-13422	-1889	1.55	1.55	-30926	10833	4702	115546	15597	7905	23502	No	12.44	Si
SLU 82	7.54	1721.24	-17741	-12656	-1889	1.55	1.55	-29162	10833	4702	115546	15597	7905	23502	No	12.44	Si
SLU 40	5.44	-817.56	-15685	-11189	-1770	1.55	1.55	-25782	10833	4702	115546	15597	7905	23502	No	13.28	Si
SLU 40	7.54	1616.8	-15306	-10919	-1770	1.55	1.55	-25160	10833	4702	115546	15597	7905	23502	No	13.28	Si
SLU 75	5.44	-655.42	-18792	-13405	-1692	1.55	1.55	-30888	10833	4702	115546	15597	7905	23502	No	13.89	Si
SLU 75	7.54	1560.4	-17398	-12412	-1692	1.55	1.55	-28598	10833	4702	115546	15597	7905	23502	No	13.89	Si
SLU 74	5.44	-660.76	-18781	-13398	-1697	1.55	1.55	-30871	10833	4702	115546	15597	7905	23502	No	13.85	Si
SLU 74	7.54	1558.97	-17400	-12412	-1697	1.55	1.55	-28600	10833	4702	115546	15597	7905	23502	No	13.85	Si
SLU 84	5.44	-777.66	-19079	-13611	-1884	1.55	1.55	-31361	10833	4702	115546	15597	7905	23502	No	12.48	Si
SLU 84	7.54	1714.56	-17968	-12818	-1884	1.55	1.55	-29534	10833	4702	115546	15597	7905	23502	No	12.47	Si
SLU 41	5.44	-809.13	-15939	-11371	-1770	1.55	1.55	-26200	10833	4702	115546	15597	7905	23502	No	13.28	Si
SLU 41	7.54	1608.69	-15534	-11082	-1770	1.55	1.55	-25533	10833	4702	115546	15597	7905	23502	No	13.28	Si
SLU 42	5.44	-803.79	-15950	-11378	-1765	1.55	1.55	-26217	10833	4702	115546	15597	7905	23502	No	13.32	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 42	7.54	1610.12	-15533	-11081	-1765	1.55	1.55	-25531	10833	4702	115546	15597	7905	23502	No	13.32	Si
SLU 39	5.44	-822.9	-15675	-11182	-1775	1.55	1.55	-25765	10833	4702	115546	15597	7905	23502	No	13.24	Si
SLU 39	7.54	1615.37	-15308	-10920	-1775	1.55	1.55	-25162	10833	4702	115546	15597	7905	23502	No	13.24	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	5.44	5354.81	-10721	-7648	5241	1.55	0.8266	-17623	16025	3709	115546	23395	7905	31300		5.97	Si
SLV 3	7.54	-4245.72	-9769	-6969	4762	1.24	1.0212	0	0	0	115546	18716	6324	25040		5.26	Si
SLD 16	5.44	-2672.82	-14083	-10046	-3652	1.55	1.55	-23148	16250	7052	115546	23395	7905	31300		8.57	Si
SLD 16	7.54	3045.41	-12718	-9072	-3526	1.55	1.55	-20904	16250	7052	115546	23395	7905	31300		8.88	Si
SLV 13	5.44	-5939.63	-15442	-11016	-7227	1.55	1.1711	-34145	16250	5328	115546	23395	7905	31300		4.33	Si
SLV 13	7.54	6016.59	-13512	-9639	-6749	1.55	0.9892	-22210	16250	4501	115546	23395	7905	31300		4.64	Si
SLV 15	5.44	-5899.75	-15520	-11072	-7314	1.55	1.1846	-33923	16250	5390	115546	23395	7905	31300		4.28	Si
SLV 15	7.54	5931.08	-14370	-10251	-7016	1.55	1.0868	-23621	16250	4945	115546	23395	7905	31300		4.46	Si
SLV 2	5.44	5338.76	-10584	-7551	5387	1.55	0.8118	-17398	15980	3632	115546	23395	7905	31300		5.81	Si
SLV 2	7.54	-4155.27	-8782	-6265	5089	1.24	0.9056	0	0	0	115546	18716	6324	25040		4.92	Si
SLV 16	5.44	-5875.94	-15462	-11030	-7254	1.55	1.1849	-33784	16250	5391	115546	23395	7905	31300		4.31	Si
SLV 16	7.54	5936.02	-14241	-10159	-6956	1.55	1.0745	-23409	16250	4889	115546	23395	7905	31300		4.5	Si
SLV 4	5.44	5378.63	-10663	-7607	5300	1.55	0.8117	-17527	16005	3638	115546	23395	7905	31300		5.91	Si
SLV 4	7.54	-4240.78	-9640	-6877	4822	1.24	1.0053	0	0	0	115546	18716	6324	25040		5.19	Si
SLD 15	5.44	-2683.04	-14108	-10064	-3678	1.55	1.55	-23189	16250	7052	115546	23395	7905	31300		8.51	Si
SLD 15	7.54	3043.29	-12773	-9112	-3552	1.55	1.55	-20995	16250	7052	115546	23395	7905	31300		8.81	Si
SLV 14	5.44	-5915.81	-15384	-10974	-7167	1.55	1.1713	-34005	16250	5330	115546	23395	7905	31300		4.37	Si
SLV 14	7.54	6021.53	-13383	-9547	-6689	1.55	0.9752	-21998	16250	4437	115546	23395	7905	31300		4.68	Si
SLV 1	5.44	5314.94	-10643	-7592	5327	1.55	0.8268	-17494	15999	3704	115546	23395	7905	31300		5.88	Si
SLV 1	7.54	-4160.21	-8911	-6357	5030	1.24	0.9244	0	0	0	115546	18716	6324	25040		4.98	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 7.2 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	-9050	0.39	164.55	1122.82	1576.19	1349.51	8.2	Si
SLV 1	-9179	0.39	164.55	1136.73	1595.57	1366.15	8.3	Si
SLV 4	-9705	0.39	164.55	1192.93	1674.56	1433.74	8.71	Si
SLV 3	-9834	0.39	164.55	1206.54	1693.74	1450.14	8.81	Si
SLV 6	-9994	0.39	164.55	1223.41	1717.62	1470.51	8.94	Si
SLV 5	-10077	0.39	164.55	1232.02	1729.87	1480.94	9	Si
SLV 10	-11439	0.39	164.55	1371.2	1932.42	1651.81	10.04	Si
SLV 9	-11522	0.39	164.55	1379.39	1944.66	1662.02	10.1	Si
SLV 8	-12179	0.39	164.55	1443.96	2041.7	1742.83	10.59	Si
SLV 7	-12261	0.39	164.55	1451.95	2053.78	1752.86	10.65	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-10234	-13921	11	0.794	1257.9	0.95	12.13422	13.42943	No
SLV 12	-10130	-13884	11	0.8	1247.3	0.95	12.24262	13.42943	No
SLV 7	-9468	-12482	-9	0.847	1180.1	0.948	12.99101	13.42943	No
SLV 8	-9364	-12444	-8	0.855	1169.5	0.947	13.11737	13.42943	No
SLV 9	-6799	-13660	2	1.111	909.7	0.935	17.283	13.42943	Si
SLV 10	-6694	-13623	2	1.125	899.2	0.934	17.50879	13.42943	Si
SLV 5	-6032	-12221	-17	1.22	832.3	0.93	19.07478	13.42943	Si
SLV 6	-5928	-12183	-17	1.237	821.8	0.929	19.35369	13.42943	Si
SLV 15	-9956	-15520	30	0.81	1229.6	0.949	12.40477	7.08809	Si
SLV 16	-9793	-15462	31	0.822	1213.1	0.949	12.58391	7.08809	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.223	SLU 40	Si
V_SLU	12.408	SLU 81	Si
PF_SLV	1.444	SLV 4	Si
V_SLV	4.28	SLV 15	Si
PFFP_SLV	8.201	SLV 2	Si
R_SLV	0.904	SLV 11	No

Maschio 126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	1.006	-4.113	1.006	L5	L6	3.98	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 51	5.44	2736.5	-18415	-0.0000282	0.0004492	0.0035	3.98	31689.68	35215.51	35215.51	12.87	No	Si
SLU 51	7.54	-993.09	-10821	-0.0000152	0.0004492	0.0035	3.98	19821.74	29448.54	29448.54	29.65	No	Si
SLU 49	5.44	2748.1	-18784	-0.0000287	0.0004492	0.0035	3.98	32224.22	35837.73	35837.73	13.04	No	Si
SLU 49	7.54	-900.22	-11212	-0.0000155	0.0004492	0.0035	3.98	20474.77	30158.9	30158.9	33.5	No	Si
SLU 45	5.44	2719.61	-18350	-0.0000281	0.0004492	0.0035	3.98	31595.01	35105.79	35105.79	12.91	No	Si
SLU 45	7.54	-820.29	-10821	-0.0000149	0.0004492	0.0035	3.98	19821.92	29448.74	29448.74	35.9	No	Si
SLU 1	5.44	2016.36	-13916	-0.0000211	0.0004492	0.0035	3.98	24862.04	27476.15	27476.15	13.63	No	Si
SLU 1	7.54	-529.18	-8251	-0.0000111	0.0004492	0.0035	3.98	15425.19	24786.92	24786.92	46.84	No	Si
SLU 43	5.44	2672.22	-17562	-0.000027	0.0004492	0.0035	3.98	30440.46	33775.53	33775.53	12.64	No	Si
SLU 43	7.54	-854.23	-10058	-0.000014	0.0004492	0.0035	3.98	18536.64	28064.61	28064.61	32.85	No	Si
SLU 46	5.44	2712.31	-18366	-0.0000281	0.0004492	0.0035	3.98	31618.75	35133.29	35133.29	12.95	No	Si
SLU 46	7.54	-841.28	-10841	-0.000015	0.0004492	0.0035	3.98	19855.48	29485.13	29485.13	35.05	No	Si
SLU 44	5.44	2660.06	-17589	-0.000027	0.0004492	0.0035	3.98	30480.65	33822.18	33822.18	12.71	No	Si
SLU 44	7.54	-889.22	-10091	-0.0000141	0.0004492	0.0035	3.98	18593.31	28125.26	28125.26	31.63	No	Si
SLU 47	5.44	2695.85	-18007	-0.0000276	0.0004492	0.0035	3.98	31095.63	34529.41	34529.41	12.81	No	Si
SLU 47	7.54	-948.15	-10463	-0.0000147	0.0004492	0.0035	3.98	19220.73	28799.03	28799.03	30.37	No	Si
SLU 50	5.44	2743.8	-18398	-0.0000282	0.0004492	0.0035	3.98	31665.97	35188.01	35188.01	12.82	No	Si
SLU 50	7.54	-972.09	-10800	-0.0000152	0.0004492	0.0035	3.98	19788.17	29412.15	29412.15	30.26	No	Si
SLU 48	5.44	2755.4	-18768	-0.0000287	0.0004492	0.0035	3.98	32200.69	35810.23	35810.23	13	No	Si
SLU 48	7.54	-879.22	-11192	-0.0000155	0.0004492	0.0035	3.98	20441.42	30122.51	30122.51	34.26	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	5.44	-3107.44	-14879	-0.0000242	0.0006738	0.0035	3.98		36961.62	36961.62	11.89		Si
SLV 14	7.54	8415.07	-12437	-0.0000311	0.0006738	0.0035	3.98		25213.07	25213.07	3		Si
SLV 13	5.44	-3160.31	-15073	-0.0000245	0.0006738	0.0035	3.98		37303.86	37303.86	11.8		Si
SLV 13	7.54	8550.05	-12526	-0.0000315	0.0006738	0.0035	3.98		25375.5	25375.5	2.97		Si
SLV 15	5.44	-2203.04	-18106	-0.0000266	0.0006738	0.0035	3.98		42651.95	42651.95	19.36		Si
SLV 15	7.54	10141.65	-14624	-0.0000372	0.0006738	0.0035	3.98		29171.97	29171.97	2.88		Si
SLV 6	5.44	1651.62	-8994	-0.0000141	0.0006738	0.0035	3.98		18870.31	18870.31	11.43		Si
SLV 6	7.54	-5730.54	-4494	-0.0000205	0.0006738	0.0035	3.184		17931.86	17931.86	3.13		Si
SLV 16	5.44	-2150.17	-17912	-0.0000262	0.0006738	0.0035	3.98		42309.7	42309.7	19.68		Si
SLV 16	7.54	10006.67	-14535	-0.0000368	0.0006738	0.0035	3.98		29012	29012	2.9		Si
SLV 5	5.44	1617.85	-9118	-0.0000142	0.0006738	0.0035	3.98		19100.25	19100.25	11.81		Si
SLV 5	7.54	-5644.34	-4551	-0.0000198	0.0006738	0.0035	3.184		18038.75	18038.75	3.2		Si
SLV 2	5.44	5947.07	-11216	-0.0000249	0.0006738	0.0035	3.98		22980.59	22980.59	3.86		Si
SLV 2	7.54	-10528.22	-3957	-0.0002057	0.0006738	0.0035	3.184		16920.7	16920.7	1.61		Si
SLV 3	5.44	6851.47	-14443	-0.0000307	0.0006738	0.0035	3.98		28846.46	28846.46	4.21		Si
SLV 3	7.54	-8801.64	-6144	-0.000036	0.0006738	0.0035	3.184		21032.92	21032.92	2.39		Si
SLV 4	5.44	6904.34	-14249	-0.0000306	0.0006738	0.0035	3.98		28497.17	28497.17	4.13		Si
SLV 4	7.54	-8936.62	-6055	-0.0000384	0.0006738	0.0035	3.184		20867.24	20867.24	2.34		Si
SLV 1	5.44	5894.2	-11410	-0.0000251	0.0006738	0.0035	3.98		23335.26	23335.26	3.96		Si
SLV 1	7.54	-10393.24	-4046	-0.0001956	0.0006738	0.0035	3.184		17088.07	17088.07	1.64		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 44	5.44	2660.06	-17589	-12547	3467	3.98	3.98	-11259	9835	10960	115546	40049	20298	60347	No	17.41	Si
SLU 44	7.54	-889.22	-10091	-7199	3467	3.98	3.98	-6460	9195	10247	115546	40049	20298	60347	No	17.41	Si
SLU 46	5.44	2712.31	-18366	-13102	3495	3.98	3.98	-11757	9901	11034	115546	40049	20298	60347	No	17.27	Si
SLU 46	7.54	-841.28	-10841	-7733	3495	3.98	3.98	-6940	9259	10318	115546	40049	20298	60347	No	17.27	Si
SLU 51	5.44	2736.5	-18415	-13137	3644	3.98	3.98	-11788	9905	11038	115546	40049	20298	60347	No	16.56	Si
SLU 51	7.54	-993.09	-10821	-7719	3644	3.98	3.98	-6927	9257	10316	115546	40049	20298	60347	No	16.56	Si
SLU 47	5.44	2695.85	-18007	-12846	3557	3.98	3.98	-11527	9870	10999	115546	40049	20298	60347	No	16.97	Si
SLU 47	7.54	-948.15	-10463	-7464	3556	3.98	3.98	-6698	9226	10282	115546	40049	20298	60347	No	16.97	Si
SLU 48	5.44	2755.4	-18768	-13389	3582	3.98	3.98	-12014	9935	11072	115546	40049	20298	60347	No	16.85	Si
SLU 48	7.54	-879.22	-11192	-7984	3582	3.98	3.98	-7164	9289	10351	115546	40049	20298	60347	No	16.85	Si
SLU 50	5.44	2743.8	-18398	-13125	3642	3.98	3.98	-11778	9904	11037	115546	40049	20298	60347	No	16.57	Si
SLU 50	7.54	-972.09	-10800	-7705	3641	3.98	3.98	-6914	9255	10314	115546	40049	20298	60347	No	16.57	Si
SLU 45	5.44	2719.61	-18350	-13090	3492	3.98	3.98	-11746	9900	11032	115546	40049	20298	60347	No	17.28	Si
SLU 45	7.54	-820.29	-10821	-7719	3492	3.98	3.98	-6927	9257	10316	115546	40049	20298	60347	No	17.28	Si
SLU 49	5.44	2748.1	-18784	-13400	3585	3.98	3.98	-12025	9937	11073	115546	40049	20298	60347	No	16.83	Si
SLU 49	7.54	-900.22	-11212	-7998	3585	3.98	3.98	-7177	9290	10353	115546	40049	20298	60347	No	16.84	Si
SLU 43	5.44	2672.22	-17562	-12528	3462	3.98	3.98	-11242	9832	10957	115546	40049	20298	60347	No	17.43	Si
SLU 43	7.54	-854.23	-10058	-7175	3462	3.98	3.98	-6438	9192	10243	115546	40049	20298	60347	No	17.43	Si
SLU 72	5.44	2587.88	-19957	-14236	2844	3.98	3.98	-12775	10037	11185	115546	40049	20298	60347	No	21.22	Si
SLU 72	7.54	-508.07	-12772	-9111	2844	3.98	3.98	-8176	9423	10501	115546	40049	20298	60347	No	21.22	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	5.44	6851.47	-14443	-10303	11042	3.98	3.98	-9245	14349	15991	115546	60073	20298	80371		7.28	Si
SLV 3	7.54	-8801.64	-6144	-4383	10331	3.184	1.672	0	0	0	115546	48059	16238	64297		6.22	Si
SLD 4	5.44	4030.89	-14488	-10335	5814	3.98	3.98	-9274	14355	15997	115546	60073	20298	80371		13.82	Si
SLD 4	7.54	-3924.76	-7907	-5641	5511	3.98	3.98	-5062	13512	15058	115546	60073	20298	80371		14.58	Si
SLV 4	5.44	6904.34	-14249	-10165	11031	3.98	3.98	-9121	14324	15963	115546	60073	20298	80371		7.29	Si
SLV 4	7.54	-8936.62	-6055	-4319	10321	3.184	1.542	0	0	0	115546	48059	16238	64297		6.23	Si
SLV 15	5.44	-2203.04	-18106	-12917	-6591	3.98	3.98	-11591	14818	16513	115546	60073	20298	80371		12.19	Si
SLV 15	7.54	10141.65	-14624	-10432	-5703	3.98	3.8895	-9361	14372	15652	115546	60073	20298	80371		14.09	Si
SLV 13	5.44	-3160.31	-15073	-10753	-7204	3.98	3.98	-9649	14430	16081	115546	60073	20298	80371		11.16	Si
SLV 13	7.54	8550.05	-12526	-8936	-6494	3.98	3.9223	-8019	14104	15489	115546	60073	20298	80371		12.38	Si
SLV 1	5.44	5894.2	-11410	-8139	10429	3.98	3.98	-7304	13961	15558	115546	60073	20298	80371		7.71	Si
SLV 1	7.54	-10393.24	-4046	-2886	9540	3.184	0	0	0	0	115546	48059	16238	64297		6.74	Si
SLD 3	5.44	4008.2	-14571	-10395	5819	3.98	3.98	-9328	14366	16009	115546	60073	20298	80371		13.81	Si
SLD 3	7.54	-3866.82	-7945	-5668	5515	3.98	3.98	-5086	13517	15064	115546	60073	20298	80371		14.57	Si
SLV 2	5.44	5947.07	-11216	-8001	10419	3.98	3.98	-7180	13936	15530	115546	60073	20298	80371		7.71	Si
SLV 2	7.54	-10528.22	-3957	-2823	9530	3.184	0	0	0	0	115546	48059	16238	64297		6.75	Si
SLV 16	5.44	-2150.17	-17912	-12778	-6601	3.98	3.98	-11466	14793	16486	115546	60073	20298	80371		12.18	Si
SLV 16	7.54	10006.67	-14535	-10369	-5713	3.98	3.9046	-9304	14361	15701	115546	60073	20298	80371		14.07	Si
SLV 14	5.44	-3107.44	-14879	-10614	-7214	3.98	3.98	-9525	14405	16053	115546	60073	20298	80371		11.14	Si
SLV 14	7.54	8415.07	-12437	-8873	-6505	3.98	3.9402	-7962	14092	15548	115546	60073	20298	80371		12.36	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 7.2 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	-4655	0.39	422.51	636.84	1221.93	929.39	2.2	Si
SLV 1	-4744	0.39	422.51	648.71	1235.89	942.3	2.23	Si
SLV 6	-5296	0.39	422.51	722.2	1322.5	1022.35	2.42	Si
SLV 5	-5353	0.39	422.51	729.73	1331.37	1030.55	2.44	Si
SLV 4	-6688	0.39	422.51	905.61	1539.03	1222.32	2.89	Si
SLV 3	-6776	0.39	422.51	917.23	1552.82	1235.03	2.92	Si
SLV 10	-7864	0.39	422.51	1058.58	1721.35	1389.97	3.29	Si
SLV 9	-7921	0.39	422.51	1065.92	1730.13	1398.02	3.31	Si
SLV 8	-12071	0.39	422.51	1590.11	2368.58	1979.35	4.68	Si
SLV 7	-12128	0.39	422.51	1597.11	2377.28	1987.2	4.7	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-5630	-19229	1027	2.383	1156.7	0.894	38.74158	13.42943	Si
SLV 8	-5579	-19105	1028	2.397	1151.7	0.894	38.96446	13.42943	Si
SLV 11	-4740	-20328	965	2.643	1071.8	0.891	43.11399	13.42943	Si
SLV 12	-4689	-20204	965	2.659	1067	0.891	43.38618	13.42943	Si
SLV 5	-1396	-9118	-958	4.411	782.6	0.908	70.62255	13.42943	Si
SLV 6	-1345	-8994	-958	4.457	779.1	0.909	71.25268	13.42943	Si
SLV 3	-5201	-14443	406	2.57	1115.6	0.893	41.84467	7.08809	Si
SLV 4	-5121	-14249	406	2.593	1107.9	0.892	42.2401	7.08809	Si
SLV 9	-506	-10217	-1021	5.36	731.3	0.948	82.1659	13.42943	Si
SLV 10	-455	-10093	-1021	5.428	729.3	0.952	82.87961	13.42943	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	12.639	SLU 43	Si
V_SLU	16.559	SLU 51	Si
PF_SLV	1.607	SLV 2	Si
V_SLV	6.224	SLV 3	Si
PFFP_SLV	2.2	SLV 2	Si
R_SLV	2.885	SLV 7	Si

Maschio 127

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-4.824	-11.003	-3.384	L5	L6	1.44	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 58	5.44	-135.71	-13944	-0.0000576	0.0003743	0.0035	1.44	6629.6	8000.78	8000.78	58.95	No	Si
SLU 58	8.96	-343.36	-9504	-0.0000423	0.0003743	0.0035	1.44	5258.73	6210.3	6210.3	18.09	No	Si
SLU 48	5.44	-110.97	-12657	-0.0000516	0.0003743	0.0035	1.44	6303.4	7580.46	7580.46	68.31	No	Si
SLU 48	8.96	-335.01	-8683	-0.0000387	0.0003743	0.0035	1.44	4929.68	5803.04	5803.04	17.32	No	Si
SLU 69	5.44	-140.04	-14031	-0.0000581	0.0003743	0.0035	1.44	6649.65	8030.33	8030.33	57.34	No	Si
SLU 69	8.96	-350.06	-9686	-0.0000431	0.0003743	0.0035	1.44	5328.68	6300.03	6300.03	18	No	Si
SLU 71	5.44	-136.48	-13935	-0.0000576	0.0003743	0.0035	1.44	6627.61	7997.88	7997.88	58.6	No	Si
SLU 71	8.96	-352.21	-9617	-0.0000429	0.0003743	0.0035	1.44	5302.22	6266.04	6266.04	17.79	No	Si
SLU 45	5.44	-109.51	-12379	-0.0000504	0.0003743	0.0035	1.44	6225.27	7491.13	7491.13	68.4	No	Si
SLU 45	8.96	-325.17	-8396	-0.0000374	0.0003743	0.0035	1.44	4809.01	5655.99	5655.99	17.39	No	Si
SLU 43	5.44	-104.49	-12005	-0.0000487	0.0003743	0.0035	1.44	6115.88	7356.02	7356.02	70.4	No	Si
SLU 43	8.96	-317.47	-8040	-0.0000358	0.0003743	0.0035	1.44	4655.16	5469.49	5469.49	17.23	No	Si
SLU 66	5.44	-138.58	-13753	-0.0000568	0.0003743	0.0035	1.44	6584.94	7936.8	7936.8	57.27	No	Si
SLU 66	8.96	-340.22	-9399	-0.0000418	0.0003743	0.0035	1.44	5218.11	6158.41	6158.41	18.1	No	Si
SLU 51	5.44	-95.14	-12544	-0.0000509	0.0003743	0.0035	1.44	6272.12	7545.01	7545.01	79.3	No	Si
SLU 51	8.96	-320.23	-8577	-0.0000381	0.0003743	0.0035	1.44	4885.24	5748.79	5748.79	17.95	No	Si
SLU 64	5.44	-133.56	-13379	-0.0000551	0.0003743	0.0035	1.44	6493.59	7812.97	7812.97	58.5	No	Si
SLU 64	8.96	-332.52	-9043	-0.0000402	0.0003743	0.0035	1.44	5076.8	5980.8	5980.8	17.99	No	Si
SLU 50	5.44	-107.4	-12561	-0.0000512	0.0003743	0.0035	1.44	6276.72	7550.18	7550.18	70.3	No	Si
SLU 50	8.96	-337.15	-8614	-0.0000385	0.0003743	0.0035	1.44	4900.78	5767.76	5767.76	17.11	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	5.44	477.71	-5769	-0.0000289	0.0005615	0.0035	1.44		3970.6	3970.6	8.31		Si
SLV 6	8.96	401.89	-2526	-0.0000154	0.0005615	0.0035	1.44		1872.24	1872.24	4.66		Si
SLV 16	5.44	-223.16	-12396	-0.000051	0.0005615	0.0035	1.44		8084.09	8084.09	36.23		Si
SLV 16	8.96	-850.68	-8065	-0.0000438	0.0005615	0.0035	1.44		5724.02	5724.02	6.73		Si
SLV 9	5.44	520.14	-6295	-0.0000316	0.0005615	0.0035	1.44		4294.45	4294.45	8.26		Si
SLV 9	8.96	138.13	-2506	-0.0000113	0.0005615	0.0035	1.44		1858.77	1858.77	13.46		Si
SLV 12	5.44	-690.03	-14931	-0.0000691	0.0005615	0.0035	1.44		9325.39	9325.39	13.51		Si
SLV 12	8.96	-910.21	-11359	-0.000058	0.0005615	0.0035	1.44		7548.94	7548.94	8.29		Si
SLV 15	5.44	-217.77	-12506	-0.0000513	0.0005615	0.0035	1.44		8140.41	8140.41	37.38		Si
SLV 15	8.96	-850.97	-8215	-0.0000444	0.0005615	0.0035	1.44		5812.66	5812.66	6.83		Si
SLV 10	5.44	516.7	-6225	-0.0000313	0.0005615	0.0035	1.44		4251.66	4251.66	8.23		Si
SLV 10	8.96	138.32	-2410	-0.000011	0.0005615	0.0035	1.44		1793.9	1793.9	12.97		Si
SLV 11	5.44	-686.59	-15001	-0.0000693	0.0005615	0.0035	1.44		9357.77	9357.77	13.63		Si
SLV 11	8.96	-910.39	-11454	-0.0000584	0.0005615	0.0035	1.44		7599.53	7599.53	8.35		Si
SLV 13	5.44	144.25	-9894	-0.0000397	0.0005615	0.0035	1.44		6242.21	6242.21	43.27		Si
SLV 13	8.96	-536.41	-5530	-0.0000289	0.0005615	0.0035	1.44		4197.8	4197.8	7.83		Si
SLV 14	5.44	138.86	-9785	-0.0000392	0.0005615	0.0035	1.44		6183.98	6183.98	44.53		Si
SLV 14	8.96	-536.12	-5380	-0.0000283	0.0005615	0.0035	1.44		4104.68	4104.68	7.66		Si
SLV 5	5.44	481.15	-5839	-0.0000292	0.0005615	0.0035	1.44		4014.29	4014.29	8.34		Si
SLV 5	8.96	401.71	-2621	-0.0000158	0.0005615	0.0035	1.44		1936.06	1936.06	4.82		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 58	5.44	-135.71	-13944	-11611	-1136	1.44	1.44	-28797	10784	4348	40441	12074	3672	15746	No	13.86	Si
SLU 58	8.96	-343.36	-9504	-7914	2081	1.44	1.44	-19628	9561	3855	40441	12074	3672	15746	No	7.57	Si
SLU 72	5.44	-124.21	-13919	-11590	-1092	1.44	1.44	-28745	10777	4345	40441	12074	3672	15746	No	14.42	Si
SLU 72	8.96	-335.28	-9580	-7977	2097	1.44	1.44	-19784	9582	3864	40441	12074	3672	15746	No	7.51	Si
SLU 80	5.44	-152.52	-15302	-12742	-1334	1.44	1.44	-31602	10833	4368	40441	12074	3672	15746	No	11.81	Si
SLU 80	8.96	-341.49	-10470	-8718	2102	1.44	1.44	-21622	9827	3963	40441	12074	3672	15746	No	7.49	Si
SLU 77	5.44	-168.35	-15414	-12836	-1383	1.44	1.44	-31834	10833	4368	40441	12074	3672	15746	No	11.38	Si
SLU 77	8.96	-356.27	-10576	-8807	2139	1.44	1.44	-21842	9857	3974	40441	12074	3672	15746	No	7.36	Si
SLU 79	5.44	-164.78	-15318	-12756	-1358	1.44	1.44	-31636	10833	4368	40441	12074	3672	15746	No	11.59	Si
SLU 79	8.96	-358.42	-10507	-8749	2148	1.44	1.44	-21699	9838	3967	40441	12074	3672	15746	No	7.33	Si
SLU 83	5.44	-175.46	-15633	-13018	-1443	1.44	1.44	-32286	10833	4368	40441	12074	3672	15746	No	10.91	Si
SLU 83	8.96	-351.24	-10601	-8828	2089	1.44	1.44	-21894	9864	3977	40441	12074	3672	15746	No	7.54	Si
SLU 70	5.44	-127.78	-14015	-11670	-1117	1.44	1.44	-28944	10804	4356	40441	12074	3672	15746	No	14.1	Si
SLU 70	8.96	-333.14	-9649	-8035	2089	1.44	1.44	-19928	9601	3871	40441	12074	3672	15746	No	7.54	Si
SLU 78	5.44	-156.09	-15398	-12822	-1359	1.44	1.44	-31800	10833	4368	40441	12074	3672	15746	No	11.59	Si
SLU 78	8.96	-339.35	-10539	-8776	2094	1.44	1.44	-21766	9847	3970	40441	12074	3672	15746	No	7.52	Si
SLU 71	5.44	-136.48	-13935	-11604	-1116	1.44	1.44	-28779	10782	4347	40441	12074	3672	15746	No	14.1	Si
SLU 71	8.96	-352.21	-9617	-8008	2143	1.44	1.44	-19861	9593	3868	40441	12074	3672	15746	No	7.35	Si
SLU 69	5.44	-140.04	-14031	-11684	-1142	1.44	1.44	-28978	10808	4358	40441	12074	3672	15746	No	13.79	Si
SLU 69	8.96	-350.06	-9686	-8066	2134	1.44	1.44	-20004	9612	3876	40441	12074	3672	15746	No	7.38	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	5.44	138.86	-9785	-8148	2931	1.44	1.44	-20207	14458	5830	40441	18111	3672	21783		7.43	Si
SLV 14	8.96	-536.12	-5380	-4480	4414	1.44	1.44	-11112	12639	5096	40441	18111	3672	21783		4.93	Si
SLV 5	5.44	481.15	-5839	-4862	-3267	1.44	1.44	-12058	12828	5172	40441	18111	3672	21783		6.67	Si
SLV 5	8.96	401.71	-2621	-2183	1140	1.44	1.44	-5413	11499	4637	40441	18111	3672	21783		19.11	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	5.44	-353.13	-10875	-9056	-4664	1.44	1.44	-22459	14908	6011	40441	18111	3672	21783		4.67	Si
SLV 4	8.96	27.91	-8450	-7036	-1356	1.44	1.44	-17451	13907	5607	40441	18111	3672	21783		16.06	Si
SLV 1	5.44	14.28	-8373	-6972	-5340	1.44	1.44	-17292	13875	5595	40441	18111	3672	21783		4.08	Si
SLV 1	8.96	342.18	-5915	-4926	-1080	1.44	1.44	-12216	12860	5185	40441	18111	3672	21783		20.16	Si
SLV 13	5.44	144.25	-9894	-8239	2963	1.44	1.44	-20434	14503	5848	40441	18111	3672	21783		7.35	Si
SLV 13	8.96	-536.41	-5530	-4605	4439	1.44	1.44	-11420	12701	5121	40441	18111	3672	21783		4.91	Si
SLV 3	5.44	-347.74	-10985	-9147	-4631	1.44	1.44	-22686	14954	6030	40441	18111	3672	21783		4.7	Si
SLV 3	8.96	27.62	-8600	-7161	-1331	1.44	1.44	-17760	13969	5632	40441	18111	3672	21783		16.36	Si
SLV 16	5.44	-223.16	-12396	-10323	3639	1.44	1.44	-25601	15537	6265	40441	18111	3672	21783		5.99	Si
SLV 16	8.96	-850.68	-8065	-6716	4163	1.44	1.44	-16656	13748	5543	40441	18111	3672	21783		5.23	Si
SLV 15	5.44	-217.77	-12506	-10414	3672	1.44	1.44	-25828	15582	6283	40441	18111	3672	21783		5.93	Si
SLV 15	8.96	-850.97	-8215	-6840	4188	1.44	1.44	-16965	13810	5568	40441	18111	3672	21783		5.2	Si
SLV 6	5.44	477.71	-5769	-4804	-3288	1.44	1.44	-11913	12799	5161	40441	18111	3672	21783		6.63	Si
SLV 6	8.96	401.89	-2526	-2103	1124	1.44	1.44	-5216	11460	4621	40441	18111	3672	21783		19.39	Si
SLV 2	5.44	8.89	-8263	-6881	-5373	1.44	1.44	-17065	13830	5576	40441	18111	3672	21783		4.05	Si
SLV 2	8.96	342.47	-5765	-4801	-1105	1.44	1.44	-11907	12798	5160	40441	18111	3672	21783		19.71	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 10	179667	0.39	8114	-3272	152.87	433.68	2.84	Si
SLV 9	179667	0.39	8270	-3335	152.87	441.56	2.89	Si
SLV 6	179667	0.39	8650	-3488	152.87	460.65	3.01	Si
SLV 5	179667	0.39	8807	-3551	152.87	468.47	3.06	Si
SLV 14	179667	0.39	15734	-6344	152.87	796.68	5.21	Si
SLV 13	179667	0.39	15979	-6443	152.87	807.63	5.28	Si
SLV 2	179667	0.39	17523	-7065	152.87	875.67	5.73	Si
SLV 1	179667	0.39	17768	-7164	152.87	886.3	5.8	Si
SLV 16	179667	0.39	22841	-9210	152.87	1096.5	7.17	Si
SLV 15	179667	0.39	23086	-9308	152.87	1106.17	7.24	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-11454	-15001	132	0.669	1366.4	0.957	10.15767	13.42943	No
SLV 7	-11570	-14544	35	0.671	1378.1	0.957	10.18259	13.42943	No
SLV 12	-11359	-14931	132	0.673	1356.7	0.957	10.23223	13.42943	No
SLV 8	-11474	-14474	35	0.675	1368.4	0.957	10.25665	13.42943	No
SLV 3	-8600	-10985	-138	0.85	1076.4	0.947	13.0464	7.08809	Si
SLV 4	-8450	-10875	-138	0.862	1061.3	0.946	13.24815	7.08809	Si
SLV 15	-8215	-12506	184	0.878	1037.4	0.945	13.50193	7.08809	Si
SLV 16	-8065	-12396	185	0.891	1022.2	0.944	13.71715	7.08809	Si
SLV 5	-2621	-5839	-138	2.092	475.3	0.901	33.75771	13.42943	Si
SLV 1	-5915	-8373	-190	1.145	804.6	0.932	17.85607	7.08809	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	17.107	SLU 50	Si
V_SLU	7.33	SLU 79	Si
PF_SLV	4.659	SLV 6	Si
V_SLV	4.054	SLV 2	Si
PFFP_SLV	2.837	SLV 10	Si
R_SLV	0.756	SLV 11	No

Maschio 128

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-3.384	-11.003	-0.691	L5	Z medio 798 cm	2.693	0.28	2.543	1.761	3.324			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 51	5.44	2410.39	-26764	-0.000069	0.0003743	0.0035	2.693	23474.04	27406.39	27406.39	11.37	No	Si
SLU 51	7.2	2277.38	-21131	-0.000055	0.0003743	0.0035	2.693	20621.17	22814.88	22814.88	10.02	No	Si
SLU 48	5.44	2339.11	-26820	-0.0000687	0.0003743	0.0035	2.693	23496.83	27451.27	27451.27	11.74	No	Si
SLU 48	7.2	2247.18	-21178	-0.000055	0.0003743	0.0035	2.693	20649.67	22852	22852	10.17	No	Si
SLU 50	5.44	2385.56	-26708	-0.0000687	0.0003743	0.0035	2.693	23451.12	27361.19	27361.19	11.47	No	Si
SLU 50	7.2	2248.32	-21071	-0.0000547	0.0003743	0.0035	2.693	20584.77	22767.66	22767.66	10.13	No	Si
SLU 44	5.44	2283.86	-25574	-0.0000655	0.0003743	0.0035	2.693	22963.76	26411.42	26411.42	11.56	No	Si
SLU 44	7.2	2175.98	-20033	-0.000052	0.0003743	0.0035	2.693	19935.37	21957.87	21957.87	10.09	No	Si
SLU 46	5.44	2292.4	-26262	-0.0000672	0.0003743	0.0035	2.693	23265	26988.4	26988.4	11.77	No	Si
SLU 46	7.2	2215.85	-20669	-0.0000537	0.0003743	0.0035	2.693	20337.87	22452.68	22452.68	10.13	No	Si
SLU 49	5.44	2363.93	-26877	-0.000069	0.0003743	0.0035	2.693	23519.53	27495.93	27495.93	11.63	No	Si
SLU 49	7.2	2276.24	-21238	-0.0000553	0.0003743	0.0035	2.693	20685.84	22899.29	22899.29	10.06	No	Si
SLU 47	5.44	2355.4	-26188	-0.0000673	0.0003743	0.0035	2.693	23233.12	26925.81	26925.81	11.43	No	Si
SLU 47	7.2	2236.37	-20602	-0.0000536	0.0003743	0.0035	2.693	20296.05	22400.22	22400.22	10.02	No	Si
SLU 68	5.44	2361.09	-28664	-0.0000733	0.0003743	0.0035	2.693	24184.97	28684.83	28684.83	12.15	No	Si
SLU 68	7.2	2368.76	-22592	-0.0000589	0.0003743	0.0035	2.693	21468.02	23974.1	23974.1	10.12	No	Si
SLU 70	5.44	2369.62	-29353	-0.0000751	0.0003743	0.0035	2.693	24411.54	29045.27	29045.27	12.26	No	Si
SLU 70	7.2	2408.63	-23228	-0.0000605	0.0003743	0.0035	2.693	21813.4	24485.46	24485.46	10.17	No	Si
SLU 72	5.44	2416.07	-29240	-0.000075	0.0003743	0.0035	2.693	24375.79	28986.33	28986.33	12	No	Si
SLU 72	7.2	2409.77	-23121	-0.0000603	0.0003743	0.0035	2.693	21756.21	24398.98	24398.98	10.13	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 10	5.44	3121.1	-23142	-0.0000618	0.0005615	0.0035	2.693		26523.04	26523.04	8.5		Si
SLD 10	7.2	3363.1	-19310	-0.0000546	0.0005615	0.0035	2.693		22604.96	22604.96	6.72		Si
SLD 9	5.44	3116.79	-23182	-0.0000619	0.0005615	0.0035	2.693		26564.1	26564.1	8.52		Si
SLD 9	7.2	3355.28	-19340	-0.0000546	0.0005615	0.0035	2.693		22635.34	22635.34	6.75		Si
SLV 1	5.44	2507.92	-22943	-0.0000585	0.0005615	0.0035	2.693		26317.28	26317.28	10.49		Si
SLV 1	7.2	2738.01	-16246	-0.0000452	0.0005615	0.0035	2.693		19550.27	19550.27	7.14		Si
SLV 9	5.44	5041.56	-25293	-0.0000757	0.0005615	0.0035	2.693		28769.25	28769.25	5.71		Si
SLV 9	7.2	5445.05	-22541	-0.0000715	0.0005615	0.0035	2.693		25901.05	25901.05	4.76		Si
SLV 6	5.44	4984.69	-25329	-0.0000756	0.0005615	0.0035	2.693		28806.84	28806.84	5.78		Si
SLV 6	7.2	5418.35	-21179	-0.0000683	0.0005615	0.0035	2.693		24502.28	24502.28	4.52		Si
SLV 5	5.44	4974.83	-25419	-0.0000757	0.0005615	0.0035	2.693		28902.44	28902.44	5.81		Si
SLV 5	7.2	5400.42	-21248	-0.0000684	0.0005615	0.0035	2.693		24572.88	24572.88	4.55		Si
SLD 6	5.44	3092.4	-23196	-0.0000618	0.0005615	0.0035	2.693		26579.55	26579.55	8.6		Si
SLD 6	7.2	3344.15	-18757	-0.0000533	0.0005615	0.0035	2.693		22048.76	22048.76	6.59		Si
SLV 2	5.44	2523.36	-22801	-0.0000583	0.0005615	0.0035	2.693		26170.19	26170.19	10.37		Si
SLV 2	7.2	2766.08	-16138	-0.0000451	0.0005615	0.0035	2.693		19443.69	19443.69	7.03		Si
SLD 5	5.44	3088.1	-23236	-0.0000619	0.0005615	0.0035	2.693		26620.62	26620.62	8.62		Si
SLD 5	7.2	3336.33	-18787	-0.0000534	0.0005615	0.0035	2.693		22079.01	22079.01	6.62		Si
SLV 10	5.44	5051.42	-25202	-0.0000756	0.0005615	0.0035	2.693		28673.74	28673.74	5.68		Si
SLV 10	7.2	5462.98	-22472	-0.0000714	0.0005615	0.0035	2.693		25829.78	25829.78	4.73		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	5.44	1957.4	-31163	-25950	3063	2.693	2.693	-34415	10833	8169	28547	22579	6867	29446	No	9.61	Si
SLU 79	7.2	2382.67	-24513	-20412	2397	2.693	2.693	-27070	10554	7958	28547	22579	6867	29446	No	12.28	Si
SLU 78	5.44	1935.77	-31332	-26090	3043	2.693	2.693	-34601	10833	8169	28547	22579	6867	29446	No	9.68	Si
SLU 78	7.2	2410.58	-24680	-20551	2348	2.693	2.693	-27255	10578	7977	28547	22579	6867	29446	No	12.54	Si
SLU 67	5.44	2298.08	-28738	-23931	3047	2.693	2.693	-31737	10833	8169	28547	22579	6867	29446	No	9.66	Si
SLU 67	7.2	2348.24	-22659	-18869	2280	2.693	2.693	-25024	10281	7752	28547	22579	6867	29446	No	12.91	Si
SLU 80	5.44	1982.22	-31220	-25997	3064	2.693	2.693	-34477	10833	8169	28547	22579	6867	29446	No	9.61	Si
SLU 80	7.2	2411.73	-24573	-20462	2382	2.693	2.693	-27136	10563	7965	28547	22579	6867	29446	No	12.36	Si
SLU 71	5.44	2391.25	-29184	-24302	3126	2.693	2.693	-32229	10833	8169	28547	22579	6867	29446	No	9.42	Si
SLU 71	7.2	2380.71	-23061	-19203	2377	2.693	2.693	-25467	10340	7797	28547	22579	6867	29446	No	12.39	Si
SLU 69	5.44	2344.79	-29296	-24396	3106	2.693	2.693	-32353	10833	8169	28547	22579	6867	29446	No	9.48	Si
SLU 69	7.2	2379.57	-23168	-19293	2343	2.693	2.693	-25586	10356	7809	28547	22579	6867	29446	No	12.57	Si
SLU 66	5.44	2273.26	-28682	-23884	3047	2.693	2.693	-31675	10833	8169	28547	22579	6867	29446	No	9.66	Si
SLU 66	7.2	2319.19	-22599	-18819	2295	2.693	2.693	-24957	10272	7746	28547	22579	6867	29446	No	12.83	Si
SLU 72	5.44	2416.07	-29240	-24349	3126	2.693	2.693	-32291	10833	8169	28547	22579	6867	29446	No	9.42	Si
SLU 72	7.2	2409.77	-23121	-19253	2362	2.693	2.693	-25534	10349	7803	28547	22579	6867	29446	No	12.47	Si
SLU 68	5.44	2361.09	-28664	-23869	3068	2.693	2.693	-31654	10833	8169	28547	22579	6867	29446	No	9.6	Si
SLU 68	7.2	2368.76	-22592	-18813	2304	2.693	2.693	-24949	10271	7745	28547	22579	6867	29446	No	12.78	Si
SLU 70	5.44	2369.62	-29353	-24442	3106	2.693	2.693	-32415	10833	8169	28547	22579	6867	29446	No	9.48	Si
SLU 70	7.2	2408.63	-23228	-19343	2328	2.693	2.693	-25652	10365	7815	28547	22579	6867	29446	No	12.65	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	5.44	-1843.1	-17850	-14864	5521	2.693	2.693	-19712	14359	10827	28547	33869	6867	39374		7.13	Si
SLV 7	7.2	-2043.21	-11211	-9335	3205	2.693	2.693	-12380	12893	9722	28547	33869	6867	38268		11.94	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 8	5.44	91.52	-19870	-16546	3660	2.693	2.693	-21944	14805	11164	28547	33869	6867	39710		10.85	Si
SLD 8	7.2	64.49	-14343	-11943	2353	2.693	2.693	-15839	13584	10243	28547	33869	6867	38790		16.49	Si
SLV 11	5.44	-1776.38	-17723	-14758	4578	2.693	2.693	-19573	14331	10806	28547	33869	6867	39353		8.6	Si
SLV 11	7.2	-1998.58	-12504	-10412	2698	2.693	2.693	-13808	13178	9937	28547	33869	6867	38484		14.27	Si
SLD 11	5.44	115.91	-19855	-16534	3268	2.693	2.693	-21927	14802	11161	28547	33869	6867	39708		12.15	Si
SLD 11	7.2	75.61	-14926	-12429	2149	2.693	2.693	-16483	13713	10340	28547	33869	6867	38887		18.09	Si
SLV 4	5.44	477.98	-20530	-17096	4623	2.693	2.693	-22672	14951	11274	28547	33869	6867	39820		8.61	Si
SLV 4	7.2	532.99	-13127	-10931	2908	2.693	2.693	-14496	13316	10041	28547	33869	6867	38587		13.27	Si
SLD 7	5.44	87.22	-19910	-16579	3671	2.693	2.693	-21987	14814	11170	28547	33869	6867	39717		10.82	Si
SLD 7	7.2	56.67	-14373	-11968	2366	2.693	2.693	-15872	13591	10248	28547	33869	6867	38795		16.4	Si
SLV 3	5.44	462.54	-20672	-17214	4663	2.693	2.693	-22829	14983	11297	28547	33869	6867	39844		8.55	Si
SLV 3	7.2	504.92	-13235	-11021	2955	2.693	2.693	-14616	13340	10059	28547	33869	6867	38605		13.06	Si
SLV 8	5.44	-1833.24	-17759	-14788	5495	2.693	2.693	-19612	14339	10812	28547	33869	6867	39359		7.16	Si
SLV 8	7.2	-2025.29	-11142	-9278	3175	2.693	2.693	-12304	12878	9710	28547	33869	6867	38257		12.05	Si
SLD 3	5.44	1102.89	-21148	-17611	3280	2.693	2.693	-23355	15088	11377	28547	33869	6867	39923		12.17	Si
SLD 3	7.2	1180.34	-15281	-12725	2252	2.693	2.693	-16875	13792	10399	28547	33869	6867	38946		17.29	Si
SLV 12	5.44	-1766.52	-17632	-14683	4552	2.693	2.693	-19472	14311	10791	28547	33869	6867	39338		8.64	Si
SLV 12	7.2	-1980.66	-12435	-10354	2668	2.693	2.693	-13732	13163	9925	28547	33869	6867	38472		14.42	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.32 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 8	179667	0.37	20197	-15229	142.37	1850.14	13	Si
SLV 12	179667	0.37	20246	-15266	142.37	1853.93	13.02	Si
SLV 7	179667	0.37	20311	-15316	142.37	1859	13.06	Si
SLV 11	179667	0.37	20360	-15352	142.37	1862.78	13.08	Si
SLV 4	179667	0.37	24218	-18262	142.37	2151.18	15.11	Si
SLV 16	179667	0.37	24381	-18384	142.37	2162.9	15.19	Si
SLV 3	179667	0.37	24397	-18396	142.37	2164.05	15.2	Si
SLV 15	179667	0.37	24560	-18519	142.37	2175.73	15.28	Si
SLV 2	179667	0.37	27742	-20918	142.37	2396.58	16.83	Si
SLV 14	179667	0.37	27905	-21041	142.37	2407.5	16.91	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.32 Wa = 0.05 Ta = 0.0386

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-22541	-25293	-46	0.68	2564.8	0.968	10.2159	6.52101	Si
SLV 10	-22472	-25202	-46	0.682	2557.8	0.968	10.24356	6.52101	Si
SLV 5	-21248	-25419	39	0.716	2433.2	0.966	10.76658	6.52101	Si
SLV 6	-21179	-25329	39	0.718	2426.2	0.966	10.79757	6.52101	Si
SLV 13	-20556	-22522	-146	0.732	2362.8	0.966	11.01319	4.68208	Si
SLV 14	-20448	-22379	-146	0.735	2351.8	0.965	11.06456	4.68208	Si
SLV 11	-12504	-17723	-52	1.121	1544.1	0.949	17.16235	6.52101	Si
SLV 12	-12435	-17632	-52	1.126	1537.1	0.949	17.24561	6.52101	Si
SLV 15	-17545	-20251	-148	0.837	2056.4	0.961	12.66444	4.68208	Si
SLV 16	-17436	-20109	-148	0.842	2045.4	0.961	12.73375	4.68208	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.016	SLU 47	Si
V_SLU	9.419	SLU 72	Si
PF_SLV	4.522	SLV 6	Si
V_SLV	7.132	SLV 7	Si
PFFP_SLV	12.995	SLV 8	Si
R_SLV	1.567	SLV 9	Si

Maschio 129

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-3.384	-11.003	-0.691	Z medio 798 cm	L6	2.693	0.28	0.977	1.759	0.196			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 42	8.76	-481.57	-17536	-0.0000383	0.0003743	0.0035	2.693	18218.87	21632.1	21632.1	44.92	No	Si
SLU 42	8.96	-47.53	-17525	-0.0000363	0.0003743	0.0035	2.693	18210.18	21621.25	21621.25	454.85	No	Si
SLU 47	8.76	84.13	-17417	-0.0000362	0.0003743	0.0035	2.693	18131.36	19888.52	19888.52	236.41	No	Si
SLU 47	8.96	401.25	-17296	-0.0000374	0.0003743	0.0035	2.693	18042.14	19774.92	19774.92	49.28	No	Si
SLU 83	8.76	-504.47	-20851	-0.0000458	0.0003743	0.0035	2.693	20450.34	24553.26	24553.26	48.67	No	Si
SLU 83	8.96	-31.07	-20789	-0.0000434	0.0003743	0.0035	2.693	20412.03	24500.05	24500.05	788.51	No	Si
SLU 39	8.76	-540.68	-16882	-0.0000372	0.0003743	0.0035	2.693	17732.9	21037.99	21037.99	38.91	No	Si
SLU 39	8.96	-127.27	-16854	-0.0000352	0.0003743	0.0035	2.693	17711.33	21012.23	21012.23	165.09	No	Si
SLU 32	8.76	-432.46	-17024	-0.000037	0.0003743	0.0035	2.693	17839.36	21165.89	21165.89	48.94	No	Si
SLU 32	8.96	-21.6	-17018	-0.000035	0.0003743	0.0035	2.693	17835.1	21160.75	21160.75	979.87	No	Si
SLU 20	8.76	-428.62	-15696	-0.0000341	0.0003743	0.0035	2.693	16813.26	19909.98	19909.98	46.45	No	Si
SLU 20	8.96	-67.91	-15623	-0.0000322	0.0003743	0.0035	2.693	16755.09	19838.87	19838.87	292.13	No	Si
SLU 41	8.76	-529.47	-17460	-0.0000384	0.0003743	0.0035	2.693	18162.77	21562.16	21562.16	40.72	No	Si
SLU 41	8.96	-106.36	-17445	-0.0000364	0.0003743	0.0035	2.693	18152.05	21548.82	21548.82	202.61	No	Si
SLU 81	8.76	-515.68	-20273	-0.0000446	0.0003743	0.0035	2.693	20089.19	24052.47	24052.47	46.64	No	Si
SLU 81	8.96	-51.99	-20197	-0.0000422	0.0003743	0.0035	2.693	20040.71	23986.45	23986.45	461.37	No	Si
SLU 40	8.76	-492.78	-16959	-0.0000371	0.0003743	0.0035	2.693	17790.54	21107.09	21107.09	42.83	No	Si
SLU 40	8.96	-68.45	-16933	-0.0000351	0.0003743	0.0035	2.693	17771.11	21083.76	21083.76	308	No	Si
SLU 18	8.76	-439.84	-15118	-0.0000329	0.0003743	0.0035	2.693	16347.63	19349.94	19349.94	43.99	No	Si
SLU 18	8.96	-88.83	-15031	-0.0000311	0.0003743	0.0035	2.693	16276.55	19266.25	19266.25	216.89	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	8.76	-1359.91	-11375	-0.0000287	0.0005615	0.0035	2.693		16017.86	16017.86	11.78		Si
SLV 3	8.96	-2146.16	-10820	-0.0000311	0.0005615	0.0035	2.693		15391.96	15391.96	7.17		Si
SLV 9	8.76	3432.84	-20361	-0.0000572	0.0005615	0.0035	2.693		23668.94	23668.94	6.89		Si
SLV 9	8.96	4308.73	-20477	-0.0000616	0.0005615	0.0035	2.693		23786.97	23786.97	5.52		Si
SLV 12	8.76	-3660.96	-8683	-0.0000335	0.0005615	0.0035	2.693		12869.27	12869.27	3.52		Si
SLV 12	8.96	-3400.06	-8698	-0.0000323	0.0005615	0.0035	2.693		12886.55	12886.55	3.79		Si
SLV 6	8.76	3439.95	-19611	-0.0000556	0.0005615	0.0035	2.693		22908.86	22908.86	6.66		Si
SLV 6	8.96	3747.16	-19448	-0.0000567	0.0005615	0.0035	2.693		22744.61	22744.61	6.07		Si
SLV 10	8.76	3496.46	-20287	-0.0000574	0.0005615	0.0035	2.693		23593.67	23593.67	6.75		Si
SLV 10	8.96	4382.1	-20403	-0.0000617	0.0005615	0.0035	2.693		23712.15	23712.15	5.41		Si
SLV 11	8.76	-3724.58	-8758	-0.0000339	0.0005615	0.0035	2.693		12956.51	12956.51	3.48		Si
SLV 11	8.96	-3473.44	-8772	-0.0000328	0.0005615	0.0035	2.693		12973.22	12973.22	3.73		Si
SLV 8	8.76	-3717.46	-8007	-0.0000323	0.0005615	0.0035	2.693		12072.17	12072.17	3.25		Si
SLV 8	8.96	-4035.01	-7743	-0.0000334	0.0005615	0.0035	2.693		11755.17	11755.17	2.91		Si
SLV 4	8.76	-1260.29	-11259	-0.0000281	0.0005615	0.0035	2.693		15886.81	15886.81	12.61		Si
SLV 4	8.96	-2031.26	-10704	-0.0000304	0.0005615	0.0035	2.693		15262.51	15262.51	7.51		Si
SLV 7	8.76	-3781.08	-8082	-0.0000328	0.0005615	0.0035	2.693		12160.39	12160.39	3.22		Si
SLV 7	8.96	-4108.38	-7817	-0.000034	0.0005615	0.0035	2.693		11843.66	11843.66	2.88		Si
SLV 5	8.76	3376.33	-19685	-0.0000555	0.0005615	0.0035	2.693		22983.76	22983.76	6.81		Si
SLV 5	8.96	3673.78	-19522	-0.0000565	0.0005615	0.0035	2.693		22818.91	22818.91	6.21		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 50	8.76	15.51	-17867	-14878	1455	2.693	2.693	-19731	9575	7220	9516	22579	6867	16736	No	11.5	Si
SLU 50	8.96	324.13	-17756	-14785	1463	2.693	2.693	-19608	9559	7208	9516	22579	6867	16723	No	11.43	Si
SLU 51	8.76	63.41	-17944	-14942	1420	2.693	2.693	-19816	9587	7229	9516	22579	6867	16744	No	11.8	Si
SLU 51	8.96	382.95	-17835	-14851	1428	2.693	2.693	-19696	9571	7217	9516	22579	6867	16732	No	11.72	Si
SLU 43	8.76	-6.91	-16712	-13916	1403	2.693	2.693	-18456	9405	7092	9516	22579	6867	16607	No	11.84	Si
SLU 43	8.96	282.3	-16572	-13800	1410	2.693	2.693	-18302	9385	7076	9516	22579	6867	16592	No	11.77	Si
SLU 69	8.76	-110.71	-19735	-16433	1436	2.693	2.693	-21794	9850	7427	9516	22579	6867	16943	No	11.8	Si
SLU 69	8.96	281.69	-19692	-16398	1443	2.693	2.693	-21746	9844	7423	9516	22579	6867	16938	No	11.74	Si
SLU 48	8.76	-9.86	-17970	-14964	1416	2.693	2.693	-19845	9590	7232	9516	22579	6867	16747	No	11.83	Si
SLU 48	8.96	320.14	-17869	-14880	1423	2.693	2.693	-19734	9576	7220	9516	22579	6867	16736	No	11.76	Si
SLU 64	8.76	-107.76	-18476	-15385	1423	2.693	2.693	-20404	9665	7288	9516	22579	6867	16803	No	11.81	Si
SLU 64	8.96	243.85	-18395	-15318	1430	2.693	2.693	-20314	9653	7279	9516	22579	6867	16794	No	11.74	Si
SLU 72	8.76	-37.44	-19708	-16411	1440	2.693	2.693	-21764	9846	7425	9516	22579	6867	16940	No	11.76	Si
SLU 72	8.96	344.51	-19657	-16369	1448	2.693	2.693	-21709	9839	7419	9516	22579	6867	16934	No	11.7	Si
SLU 71	8.76	-85.34	-19631	-16347	1476	2.693	2.693	-21680	9835	7416	9516	22579	6867	16932	No	11.47	Si
SLU 71	8.96	285.69	-19578	-16303	1483	2.693	2.693	-21621	9827	7410	9516	22579	6867	16926	No	11.41	Si
SLU 45	8.76	-21.07	-17393	-14483	1389	2.693	2.693	-19207	9505	7167	9516	22579	6867	16683	No	12.01	Si
SLU 45	8.96	299.22	-17278	-14387	1397	2.693	2.693	-19080	9488	7155	9516	22579	6867	16670	No	11.93	Si
SLU 66	8.76	-121.92	-19157	-15952	1410	2.693	2.693	-21156	9765	7363	9516	22579	6867	16879	No	11.97	Si
SLU 66	8.96	260.78	-19100	-15905	1417	2.693	2.693	-21093	9757	7357	9516	22579	6867	16873	No	11.91	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 15	8.76	-596.66	-13924	-11595	1012	2.693	2.693	-15377	13492	10174	9516	33869	6867	19689		19.46	Si
SLD 15	8.96	50.82	-14042	-11693	1126	2.693	2.693	-15507	13518	10193	9516	33869	6867	19709		17.5	Si
SLD 11	8.76	-1720.18	-11791	-9819	1007	2.693	2.693	-13022	13021	9818	9516	33869	6867	19334		19.21	Si
SLD 11	8.96	-1455.93	-11755	-9788	1068	2.693	2.693	-12981	13013	9812	9516	33869	6867	19328		18.1	Si
SLV 11	8.76	-3724.58	-8758	-7293	1065	2.693	2.693	-9671	12351	9313	9516	33869	6867	18829		17.69	Si
SLV 11	8.96	-3473.44	-8772	-7304	1199	2.693	2.693	-9687	12354	9315	9516	33869	6867	18831		15.7	Si
SLV 16	8.76	-1071.94	-13512	-11252	1013	2.693	2.693	-14922	13401	10105	9516	33869	6867	19620		19.37	Si
SLV 16	8.96	85.23	-13888	-11565	1273	2.693	2.693	-15338	13484	10168	9516	33869	6867	19683		15.46	Si
SLV 14	8.76	1075.29	-16993	-14150	976	2.693	2.693	-18766	14170	10685	9516	33869	6867	20200		20.69	Si
SLV 14	8.96	2419.88	-17400	-14489	1201	2.693	2.693	-19215	14260	10752	9516	33869	6867	20268		16.87	Si
SLV 15	8.76	-1171.56	-13628	-11348	1070	2.693	2.693	-15050	13427	10124	9516	33869	6867	19640		18.35	Si
SLV 15	8.96	-29.67	-14004	-11661	1331	2.693	2.693	-15465	13510	10187	9516	33869	6867	19702		14.81	Si
SLV 12	8.76	-3660.96	-8683	-7231	1028	2.693	2.693	-9589	12335	9301	9516	33869	6867	18816		18.31	Si
SLV 12	8.96	-3400.06	-8698	-7243	1163	2.693	2.693	-9606	12338	9303	9516	33869	6867	18819		16.19	Si
SLV 7	8.76	-3781.08	-8082	-6730	1032	2.693	2.6359	-8925	12202	9005	9516	33869	6867	18521		17.95	Si
SLV 7	8.96	-4108.38	-7817	-6509	1024	2.693	2.4627	-9474	12312	8489	9516	33869	6867	18005		17.58	Si
SLD 16	8.76	-553.9	-13874	-11553	987	2.693	2.693	-15322	13481	10165	9516	33869	6867	19681		19.94	Si
SLD 16	8.96	100.14	-13992	-11652	1102	2.693	2.693	-15452	13507	10185	9516	33869	6867	19700		17.88	Si
SLV 13	8.76	975.67	-17109	-14247	1034	2.693	2.693	-18894	14196	10704	9516	33869	6867	20219		19.56	Si
SLV 13	8.96	2304.98	-17515	-14585	1259	2.693	2.693	-19343	14285	10772	9516	33869	6867	20287		16.11	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 8.862 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 8	179667	0.42	10107	-7621	23.94	996.32	41.62	Si
SLV 7	179667	0.42	10205	-7695	23.94	1005.28	41.99	Si
SLV 12	179667	0.42	11342	-8552	23.94	1108.41	46.3	Si
SLV 11	179667	0.42	11440	-8626	23.94	1117.19	46.67	Si
SLV 4	179667	0.42	14030	-10579	23.94	1345.01	56.18	Si
SLV 3	179667	0.42	14183	-10695	23.94	1358.19	56.73	Si
SLV 16	179667	0.42	18147	-13684	23.94	1688.08	70.51	Si
SLV 15	179667	0.42	18301	-13799	23.94	1700.39	71.03	Si
SLV 2	179667	0.42	18651	-14064	23.94	1728.48	72.2	Si
SLV 1	179667	0.42	18805	-14179	23.94	1740.68	72.71	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 8.862 Wa = 0.05 Ta = 0.0057

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-20477	-20361	589	0.835	2189.3	0.985	12.32597	3.91802	Si
SLV 10	-20403	-20287	589	0.838	2181.8	0.985	12.36214	3.91802	Si
SLV 5	-19522	-19685	-432	0.876	2092	0.984	12.93233	3.91802	Si
SLV 6	-19448	-19611	-432	0.879	2084.5	0.984	12.97277	3.91802	Si
SLV 13	-17515	-17109	1756	0.884	1887.5	0.983	13.07323	3.75501	Si
SLV 14	-17400	-16993	1756	0.889	1875.8	0.983	13.14426	3.75501	Si
SLV 1	-14331	-14856	-1648	1.048	1563.1	0.979	15.56024	3.75501	Si
SLV 2	-14216	-14740	-1647	1.056	1551.3	0.979	15.66698	3.75501	Si
SLV 15	-14004	-13628	1735	1.063	1529.7	0.979	15.77878	3.75501	Si
SLV 16	-13888	-13512	1735	1.07	1518	0.979	15.88912	3.75501	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	38.91	SLU 39	Si
V_SLU	11.412	SLU 71	Si
PF_SLV	2.883	SLV 7	Si
V_SLV	14.806	SLV 15	Si
PFFP_SLV	41.618	SLV 8	Si
R_SLV	3.146	SLV 9	Si

Maschio 131

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.708	3.176	-9.708	6.526	L5	L6	3.35	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Esterna	100	100	100	100	1	CNR DT215	0.8			0.008				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	5.44	-21281.29	36493	-0.0000497	0.0004492	0.0035	3.35	0	95150.36	95150.36	4.47	No	Si
SLU 83	8.96	1268.93	41285	0.0018488	0.0004492	0.0035	2.68	0	91387.06	91387.06	72.02	No	Si
SLU 75	5.44	-20501.96	35103	-0.0000491	0.0004492	0.0035	3.35	0	96197.26	96197.26	4.69	No	Si
SLU 75	8.96	1304.29	39895	0.00178	0.0004492	0.0035	2.68	0	92458.97	92458.97	70.89	No	Si
SLU 74	5.44	-20538.6	35093	-0.0000509	0.0004492	0.0035	3.35	0	96204.09	96204.09	4.68	No	Si
SLU 74	8.96	1243.34	39885	0.0017847	0.0004492	0.0035	2.68	0	92466.55	92466.55	74.37	No	Si
SLU 80	5.44	-20453.24	35065	-0.0000479	0.0004492	0.0035	3.35	0	96223.44	96223.44	4.7	No	Si
SLU 80	8.96	1316.43	39857	0.0017771	0.0004492	0.0035	2.68	0	92488.02	92488.02	70.26	No	Si
SLU 84	5.44	-21244.65	36503	-0.0000479	0.0004492	0.0035	3.35	0	95142.79	95142.79	4.48	No	Si
SLU 84	8.96	1329.88	41295	0.0018441	0.0004492	0.0035	2.68	0	91379.49	91379.49	68.71	No	Si
SLU 82	5.44	-21085.92	36294	-0.000046	0.0004492	0.0035	3.35	0	95303.82	95303.82	4.52	No	Si
SLU 82	8.96	1316.81	41086	0.0018353	0.0004492	0.0035	2.68	0	91540.56	91540.56	69.52	No	Si
SLU 78	5.44	-20660.69	35312	-0.0000509	0.0004492	0.0035	3.35	0	96052.1	96052.1	4.65	No	Si
SLU 78	8.96	1317.36	40104	0.0017887	0.0004492	0.0035	2.68	0	92297.9	92297.9	70.06	No	Si
SLU 79	5.44	-20489.87	35055	-0.0000497	0.0004492	0.0035	3.35	0	96230.26	96230.26	4.7	No	Si
SLU 79	8.96	1255.47	39847	0.0017819	0.0004492	0.0035	2.68	0	92495.59	92495.59	73.67	No	Si
SLU 77	5.44	-20697.33	35302	-0.0000527	0.0004492	0.0035	3.35	0	96058.92	96058.92	4.64	No	Si
SLU 77	8.96	1256.41	40094	0.0017935	0.0004492	0.0035	2.68	0	92305.48	92305.48	73.47	No	Si
SLU 81	5.44	-21122.56	36284	-0.0000478	0.0004492	0.0035	3.35	0	95311.39	95311.39	4.51	No	Si
SLU 81	8.96	1255.86	41076	0.0018401	0.0004492	0.0035	2.68	0	91548.13	91548.13	72.9	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 7	5.44	-16040.49	23323	-0.0001022	0.0006738	0.0035	3.35		108964.69	108964.69	6.79		Si
SLD 7	8.96	-1401.52	26941	0.0011596	0.0006738	0.0035	2.68		106317.94	106317.94	75.86		Si
SLV 15	5.44	-17162.82	29859	-0.0000293	0.0006738	0.0035	3.35		103986.72	103986.72	6.06		Si
SLV 15	8.96	-328.13	31614	0.0014726	0.0006738	0.0035	2.68		102585.25	102585.25	312.63		Si
SLV 7	5.44	-18711.9	22308	-0.0001655	0.0006738	0.0035	3.35		109704.32	109704.32	5.86		Si
SLV 7	8.96	-4336.82	25919	0.0008618	0.0006738	0.0035	2.68		107073.63	107073.63	24.69		Si
SLD 12	5.44	-16472.34	24777	-0.0000952	0.0006738	0.0035	3.35		107905.48	107905.48	6.55		Si
SLD 12	8.96	-1264.05	27983	0.0012207	0.0006738	0.0035	2.68		105485.29	105485.29	83.45		Si
SLD 8	5.44	-16025.99	23339	-0.0001017	0.0006738	0.0035	3.35		108953.16	108953.16	6.8		Si
SLD 8	8.96	-1355.57	26956	0.0011642	0.0006738	0.0035	2.68		106305.3	106305.3	78.42		Si
SLD 11	5.44	-16486.85	24761	-0.0000957	0.0006738	0.0035	3.35		107917.01	107917.01	6.55		Si
SLD 11	8.96	-1310	27967	0.0012161	0.0006738	0.0035	2.68		105497.94	105497.94	80.53		Si
SLV 8	5.44	-18678.65	22344	-0.0001646	0.0006738	0.0035	3.35		109677.88	109677.88	5.87		Si
SLV 8	8.96	-4231.48	25955	0.0008724	0.0006738	0.0035	2.68		107047.19	107047.19	25.3		Si
SLV 12	5.44	-19636.28	25845	-0.0001535	0.0006738	0.0035	3.35		107127.41	107127.41	5.46		Si
SLV 12	8.96	-4005.38	28420	0.0010086	0.0006738	0.0035	2.68		105136.2	105136.2	26.25		Si
SLV 16	5.44	-17110.75	29916	-0.0000252	0.0006738	0.0035	3.35		103941.33	103941.33	6.07		Si
SLV 16	8.96	-163.19	31670	0.0014893	0.0006738	0.0035	2.68		102539.86	102539.86	628.34		Si
SLV 11	5.44	-19669.53	25809	-0.0001545	0.0006738	0.0035	3.35		107153.84	107153.84	5.45		Si
SLV 11	8.96	-4110.72	28384	0.000998	0.0006738	0.0035	2.68		105165.18	105165.18	25.58		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	5.44	-21122.56	36284	21304	-6358	3.35	3.2786	2948190	9803	5142	67465	19263	17085	36348	No	5.72	Si
SLU 81	8.96	1255.86	41076	24118	-6358	2.68	3.35	0	0	0	67465	15410	13668	29078	No	4.57	Si
SLU 78	5.44	-20660.69	35312	20733	-6244	3.35	3.2697	2630545	9893	5176	67465	19263	17085	36348	No	5.82	Si
SLU 78	8.96	1317.36	40104	23547	-6244	2.68	3.35	0	0	0	67465	15410	13668	29078	No	4.66	Si
SLU 82	5.44	-21085.92	36294	21310	-6364	3.35	3.2821	3062642	9748	5119	67465	19263	17085	36348	No	5.71	Si
SLU 82	8.96	1316.81	41086	24124	-6364	2.68	3.35	0	0	0	67465	15410	13668	29078	No	4.57	Si
SLU 75	5.44	-20501.96	35103	20611	-6195	3.35	3.2728	2693092	9840	5153	67465	19263	17085	36348	No	5.87	Si
SLU 75	8.96	1304.29	39895	23425	-6195	2.68	3.35	0	0	0	67465	15410	13668	29078	No	4.69	Si
SLU 84	5.44	-21244.65	36503	21433	-6413	3.35	3.279	2979366	9805	5144	67465	19263	17085	36348	No	5.67	Si
SLU 84	8.96	1329.88	41295	24247	-6413	2.68	3.35	0	0	0	67465	15410	13668	29078	No	4.53	Si
SLU 74	5.44	-20538.6	35093	20605	-6188	3.35	3.2692	2602334	9891	5174	67465	19263	17085	36348	No	5.87	Si
SLU 74	8.96	1243.34	39885	23419	-6188	2.68	3.35	0	0	0	67465	15410	13668	29078	No	4.7	Si
SLU 77	5.44	-20697.33	35302	20728	-6237	3.35	3.2661	2546325	9944	5197	67465	19263	17085	36348	No	5.83	Si
SLU 77	8.96	1256.41	40094	23541	-6237	2.68	3.35	0	0	0	67465	15410	13668	29078	No	4.66	Si
SLU 79	5.44	-20489.87	35055	20583	-6178	3.35	3.2715	2655301	9857	5160	67465	19263	17085	36348	No	5.88	Si
SLU 79	8.96	1255.47	39847	23397	-6178	2.68	3.35	0	0	0	67465	15410	13668	29078	No	4.71	Si
SLU 80	5.44	-20453.24	35065	20589	-6185	3.35	3.2751	2750916	9805	5138	67465	19263	17085	36348	No	5.88	Si
SLU 80	8.96	1316.43	39857	23402	-6185	2.68	3.35	0	0	0	67465	15410	13668	29078	No	4.7	Si
SLU 83	5.44	-21281.29	36493	21427	-6406	3.35	3.2755	2873524	9857	5166	67465	19263	17085	36348	No	5.67	Si
SLU 83	8.96	1268.93	41285	24241	-6406	2.68	3.35	0	0	0	67465	15410	13668	29078	No	4.54	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	5.44	-14048.52	29839	17520	-5188	2.68	3.35	0	0	0	67465	23115	13668	36783		7.09	Si
SLV 13	8.96	2713.52	31926	18745	-5265	2.68	3.35	0	0	0	67465	23115	13668	36783		6.99	Si
SLV 12	5.44	-19636.28	25845	15175	-3514	3.35	2.7457	536061	16250	7139	67465	28894	17085	45979		13.09	Si
SLV 12	8.96	-4005.38	28420	16687	-4804	2.68	3.35	0	0	0	67465	23115	13668	36783		7.66	Si
SLV 16	5.44	-17110.75	29916	17565	-4660	3.35	3.3091	3766834	13683	7245	67465	28894	17085	45979		9.87	Si
SLV 16	8.96	-163.19	31670	18595	-5435	2.68	3.35	0	0	0	67465	23115	13668	36783		6.77	Si
SLV 14	5.44	-13996.45	29895	17553	-5220	2.68	3.35	0	0	0	67465	23115	13668	36783		7.05	Si
SLV 14	8.96	2878.46	31983	18779	-5297	2.68	3.35	0	0	0	67465	23115	13668	36783		6.94	Si
SLV 9	5.44	-9288.53	25741	15114	-5360	2.68	3.35	0	0	0	67465	23115	13668	36783		6.86	Si
SLV 9	8.96	6028.13	29425	17277	-4325	2.68	3.35	0	0	0	67465	23115	13668	36783		8.51	Si
SLV 11	5.44	-19669.53	25809	15154	-3493	3.35	2.7386	531906	16250	7120	67465	28894	17085	45979		13.16	Si
SLV 11	8.96	-4110.72	28384	16666	-4784	2.68	3.35	0	0	0	67465	23115	13668	36783		7.69	Si
SLV 5	5.44	-8330.9	22240	13058	-4942	2.68	3.35	0	0	0	67465	23115	13668	36783		7.44	Si
SLV 5	8.96	5802.02	26960	15830	-3652	2.68	3.35	0	0	0	67465	23115	13668	36783		10.07	Si
SLV 10	5.44	-9255.28	25777	15135	-5380	2.68	3.35	0	0	0	67465	23115	13668	36783		6.84	Si
SLV 10	8.96	6133.46	29461	17298	-4345	2.68	3.35	0	0	0	67465	23115	13668	36783		8.47	Si
SLV 6	5.44	-8297.65	22276	13079	-4962	2.68	3.35	0	0	0	67465	23115	13668	36783		7.41	Si
SLV 6	8.96	5907.36	26996	15851	-3672	2.68	3.35	0	0	0	67465	23115	13668	36783		10.02	Si
SLV 15	5.44	-17162.82	29859	17532	-4628	3.35	3.3006	3231935	13875	7328	67465	28894	17085	45979		9.93	Si
SLV 15	8.96	-328.13	31614	18562	-5403	2.68	3.35	0	0	0	67465	23115	13668	36783		6.81	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 7.2 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 14	30777	0.39	210.15	0	11436.46	5718.23	27.21	Si
SLV 13	30720	0.39	210.15	0	11440.31	5720.15	27.22	Si
SLV 16	30591	0.39	210.15	0	11449.04	5724.52	27.24	Si
SLV 15	30534	0.39	210.15	0	11452.89	5726.44	27.25	Si
SLV 10	27621	0.39	210.15	0	11647.11	5823.55	27.71	Si
SLV 9	27584	0.39	210.15	0	11649.41	5824.7	27.72	Si
SLV 12	27001	0.39	210.15	0	11686.44	5843.22	27.81	Si
SLV 11	26965	0.39	210.15	0	11688.75	5844.37	27.81	Si
SLV 6	24739	0.39	210.15	0	11827.76	5913.88	28.14	Si
SLV 5	24702	0.39	210.15	0	11829.91	5914.96	28.15	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	29461	25777	179	1.385	346.2	1	20.12358	16.72944	Si, Trazione
SLV 9	29425	25741	179	1.387	346.2	1	20.15255	16.72944	Si, Trazione
SLV 12	28420	25845	174	1.445	346.2	1	20.99428	16.72944	Si, Trazione
SLV 11	28384	25809	174	1.447	346.2	1	21.02573	16.72944	Si, Trazione
SLV 6	26996	22276	-175	1.534	346.2	1	22.29988	16.72944	Si, Trazione
SLV 5	26960	22240	-175	1.537	346.2	1	22.33524	16.72944	Si, Trazione
SLV 14	31983	29895	590	1.23	346.2	1	17.87246	12.9417	Si, Trazione
SLV 13	31926	29839	590	1.232	346.2	1	17.90937	12.9417	Si, Trazione
SLV 8	25955	22344	-180	1.607	346.2	1	23.35294	16.72944	Si, Trazione
SLV 16	31670	29916	588	1.244	346.2	1	18.07877	12.9417	Si, Trazione

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.471	SLU 83	Si
V_SLU	4.534	SLU 84	Si
PF_SLV	5.448	SLV 11	Si
V_SLV	6.768	SLV 16	Si
PFFP_SLV	27.211	SLV 14	Si
R_SLV	1.203	SLV 10	Si

Maschio 134

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.333	-3.314	-11.003	-3.314	L5	L6	1.67	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 41	5.44	464.22	-12968	-0.0000493	0.0003743	0.0035	1.67	7878.64	8695.37	8695.37	18.73	No	Si
SLU 41	7.54	-1330.02	-13319	-0.0000616	0.0003743	0.0035	1.67	8010.05	9591.58	9591.58	7.21	No	Si
SLU 84	5.44	424.56	-15577	-0.0000585	0.0003743	0.0035	1.67	8751.09	10038.27	10038.27	23.64	No	Si
SLU 84	7.54	-1458.47	-15637	-0.0000722	0.0003743	0.0035	1.67	8768.35	10564.16	10564.16	7.24	No	Si
SLU 81	5.44	433.63	-15249	-0.0000574	0.0003743	0.0035	1.67	8654.46	9865.01	9865.01	22.75	No	Si
SLU 81	7.54	-1443.62	-15301	-0.0000707	0.0003743	0.0035	1.67	8670.22	10437.44	10437.44	7.23	No	Si
SLU 39	5.44	478.29	-12644	-0.0000483	0.0003743	0.0035	1.67	7753.73	8533.75	8533.75	17.84	No	Si
SLU 39	7.54	-1322.46	-12982	-0.0000602	0.0003743	0.0035	1.67	7883.92	9421.41	9421.41	7.12	No	Si
SLU 32	5.44	433.48	-12585	-0.0000475	0.0003743	0.0035	1.67	7730.44	8504.28	8504.28	19.62	No	Si
SLU 32	7.54	-1291.6	-12907	-0.0000596	0.0003743	0.0035	1.67	7855.6	9384.18	9384.18	7.27	No	Si
SLU 31	5.44	443.43	-12168	-0.0000462	0.0003743	0.0035	1.67	7563.6	8298.64	8298.64	18.71	No	Si
SLU 31	7.54	-1266.54	-12440	-0.0000575	0.0003743	0.0035	1.67	7673.16	9138.73	9138.73	7.22	No	Si
SLU 33	5.44	438.48	-12589	-0.0000476	0.0003743	0.0035	1.67	7732.22	8506.52	8506.52	19.4	No	Si
SLU 33	7.54	-1298.89	-12905	-0.0000597	0.0003743	0.0035	1.67	7854.89	9383.26	9383.26	7.22	No	Si
SLU 40	5.44	483.29	-12648	-0.0000484	0.0003743	0.0035	1.67	7755.49	8536	8536	17.66	No	Si
SLU 40	7.54	-1329.75	-12980	-0.0000603	0.0003743	0.0035	1.67	7883.22	9420.49	9420.49	7.08	No	Si
SLU 42	5.44	469.22	-12972	-0.0000494	0.0003743	0.0035	1.67	7880.36	8697.63	8697.63	18.54	No	Si
SLU 42	7.54	-1337.31	-13317	-0.0000617	0.0003743	0.0035	1.67	8009.37	9590.64	9590.64	7.17	No	Si
SLU 82	5.44	438.63	-15253	-0.0000575	0.0003743	0.0035	1.67	8655.82	9867.38	9867.38	22.5	No	Si
SLU 82	7.54	-1450.91	-15300	-0.0000708	0.0003743	0.0035	1.67	8669.67	10436.75	10436.75	7.19	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	5.44	-3932.99	-13493	-0.0000927	0.0005615	0.0035	1.67		10359.57	10359.57	2.63		Si
SLV 14	7.54	3341.18	-6250	-0.0000767	0.0005615	0.0035	1.67		5031.75	5031.75	1.51		Si
SLV 15	5.44	-3767.14	-14733	-0.0000951	0.0005615	0.0035	1.67		11093.1	11093.1	2.94		Si
SLV 15	7.54	2992.51	-7884	-0.0000632	0.0005615	0.0035	1.67		6148.12	6148.12	2.05		Si
SLV 16	5.44	-3781.02	-14660	-0.000095	0.0005615	0.0035	1.67		11049.47	11049.47	2.92		Si
SLV 16	7.54	2987.16	-7817	-0.000063	0.0005615	0.0035	1.67		6107.09	6107.09	2.04		Si
SLV 13	5.44	-3919.11	-13566	-0.0000928	0.0005615	0.0035	1.67		10402.42	10402.42	2.65		Si
SLV 13	7.54	3346.53	-6317	-0.0000763	0.0005615	0.0035	1.67		5080.57	5080.57	1.52		Si
SLD 3	5.44	1971.87	-9329	-0.0000535	0.0005615	0.0035	1.67		7035.52	7035.52	3.57		Si
SLD 3	7.54	-2730.32	-12177	-0.0000728	0.0005615	0.0035	1.67		9541.42	9541.42	3.49		Si
SLD 4	5.44	1965.91	-9298	-0.0000534	0.0005615	0.0035	1.67		7016.08	7016.08	3.57		Si
SLD 4	7.54	-2732.61	-12148	-0.0000727	0.0005615	0.0035	1.67		9523.48	9523.48	3.49		Si
SLV 2	5.44	4171.24	-6411	-0.0001342	0.0005615	0.0035	1.67		5148.4	5148.4	1.23		Si
SLV 2	7.54	-4813.25	-12904	-0.0001053	0.0005615	0.0035	1.67		9995.1	9995.1	2.08		Si
SLV 3	5.44	4337.09	-7651	-0.0001078	0.0005615	0.0035	1.67		6005.6	6005.6	1.38		Si
SLV 3	7.54	-5161.92	-14539	-0.0001147	0.0005615	0.0035	1.67		10977.14	10977.14	2.13		Si
SLV 1	5.44	4185.12	-6484	-0.0001318	0.0005615	0.0035	1.67		5201.22	5201.22	1.24		Si
SLV 1	7.54	-4807.9	-12972	-0.0001053	0.0005615	0.0035	1.67		10037.41	10037.41	2.09		Si
SLV 4	5.44	4323.21	-7578	-0.0001083	0.0005615	0.0035	1.67		5959.54	5959.54	1.38		Si
SLV 4	7.54	-5167.27	-14472	-0.0001146	0.0005615	0.0035	1.67		10937.03	10937.03	2.12		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	5.44	367.29	-15418	-12839	1708	1.67	1.67	-27456	10605	4959	40441	14002	4259	18261	No	10.69	Si
SLU 80	7.54	-1397.94	-15436	-12854	1731	1.67	1.67	-27489	10610	4961	40441	14002	4259	18261	No	10.55	Si
SLU 82	5.44	438.63	-15253	-12702	1773	1.67	1.67	-27163	10566	4941	40441	14002	4259	18261	No	10.3	Si
SLU 82	7.54	-1450.91	-15300	-12740	1776	1.67	1.67	-27246	10577	4946	40441	14002	4259	18261	No	10.28	Si
SLU 74	5.44	388.82	-15189	-12648	1733	1.67	1.67	-27050	10551	4934	40441	14002	4259	18261	No	10.54	Si
SLU 74	7.54	-1412.76	-15227	-12680	1752	1.67	1.67	-27117	10560	4938	40441	14002	4259	18261	No	10.42	Si
SLU 84	5.44	424.56	-15577	-12971	1774	1.67	1.67	-27740	10643	4977	40441	14002	4259	18261	No	10.29	Si
SLU 84	7.54	-1458.47	-15637	-13021	1779	1.67	1.67	-27847	10657	4983	40441	14002	4259	18261	No	10.27	Si
SLU 83	5.44	419.56	-15573	-12967	1771	1.67	1.67	-27732	10642	4976	40441	14002	4259	18261	No	10.31	Si
SLU 83	7.54	-1451.18	-15639	-13023	1771	1.67	1.67	-27850	10658	4984	40441	14002	4259	18261	No	10.31	Si
SLU 76	5.44	384.7	-15097	-12571	1708	1.67	1.67	-26885	10529	4923	40441	14002	4259	18261	No	10.69	Si
SLU 76	7.54	-1395.25	-15097	-12572	1733	1.67	1.67	-26885	10529	4923	40441	14002	4259	18261	No	10.54	Si
SLU 78	5.44	379.75	-15518	-12922	1738	1.67	1.67	-27634	10629	4970	40441	14002	4259	18261	No	10.51	Si
SLU 78	7.54	-1427.6	-15563	-12959	1762	1.67	1.67	-27714	10640	4975	40441	14002	4259	18261	No	10.36	Si
SLU 75	5.44	393.82	-15194	-12652	1736	1.67	1.67	-27058	10552	4934	40441	14002	4259	18261	No	10.52	Si
SLU 75	7.54	-1420.05	-15225	-12678	1759	1.67	1.67	-27113	10560	4938	40441	14002	4259	18261	No	10.38	Si
SLU 81	5.44	433.63	-15249	-12698	1770	1.67	1.67	-27155	10565	4940	40441	14002	4259	18261	No	10.32	Si
SLU 81	7.54	-1443.62	-15301	-12742	1768	1.67	1.67	-27249	10578	4946	40441	14002	4259	18261	No	10.33	Si
SLU 77	5.44	374.75	-15513	-12918	1734	1.67	1.67	-27626	10628	4970	40441	14002	4259	18261	No	10.53	Si
SLU 77	7.54	-1420.31	-15565	-12961	1755	1.67	1.67	-27718	10640	4975	40441	14002	4259	18261	No	10.41	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	5.44	4337.09	-7651	-6371	8336	1.67	0.8045	-13626	13142	2960	40441	21003	4259	25262		3.03	Si
SLV 3	7.54	-5161.92	-14539	-12107	7695	1.67	1.4399	-30370	16250	6552	40441	21003	4259	25262		3.28	Si
SLV 1	5.44	4185.12	-6484	-5399	7756	1.67	0.5686	-11547	12726	2026	40441	21003	4259	25262		3.26	Si
SLV 1	7.54	-4807.9	-12972	-10802	7043	1.67	1.3931	-28101	16037	6255	40441	21003	4259	25262		3.59	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	5.44	4323.21	-7578	-6310	8334	1.67	0.7936	-13495	13116	2914	40441	21003	4259	25262		3.03	Si
SLV 4	7.54	-5167.27	-14472	-12051	7693	1.67	1.4338	-30347	16250	6524	40441	21003	4259	25262		3.28	Si
SLV 2	5.44	4171.24	-6411	-5338	7755	1.67	0.5531	-11416	12700	1967	40441	21003	4259	25262		3.26	Si
SLV 2	7.54	-4813.25	-12904	-10745	7041	1.67	1.386	-28097	16036	6223	40441	21003	4259	25262		3.59	Si
SLV 15	5.44	-3767.14	-14733	-12269	-5494	1.67	1.67	-26238	15664	7325	40441	21003	4259	25262		4.6	Si
SLV 15	7.54	2992.51	-7884	-6565	-4721	1.67	1.3664	-14041	13225	5060	40441	21003	4259	25262		5.35	Si
SLV 13	5.44	-3919.11	-13566	-11297	-6074	1.67	1.6384	-24159	15248	6995	40441	21003	4259	25262		4.16	Si
SLV 13	7.54	3346.53	-6317	-5260	-5373	1.67	0.9157	-11249	12667	3248	40441	21003	4259	25262		4.7	Si
SLV 16	5.44	-3781.02	-14660	-12208	-5496	1.67	1.67	-26107	15638	7312	40441	21003	4259	25262		4.6	Si
SLV 16	7.54	2987.16	-7817	-6509	-4723	1.67	1.3586	-13921	13201	5022	40441	21003	4259	25262		5.35	Si
SLD 4	5.44	1965.91	-9298	-7743	4214	1.67	1.67	-16558	13728	6419	40441	21003	4259	25262		6	Si
SLD 4	7.54	-2732.61	-12148	-10115	3957	1.67	1.67	-21633	14743	6894	40441	21003	4259	25262		6.38	Si
SLD 3	5.44	1971.87	-9329	-7769	4214	1.67	1.67	-16614	13739	6425	40441	21003	4259	25262		5.99	Si
SLD 3	7.54	-2730.32	-12177	-10140	3958	1.67	1.67	-21684	14753	6899	40441	21003	4259	25262		6.38	Si
SLV 14	5.44	-3932.99	-13493	-11236	-6076	1.67	1.6306	-24028	15222	6950	40441	21003	4259	25262		4.16	Si
SLV 14	7.54	3341.18	-6250	-5204	-5375	1.67	0.9011	-11129	12643	3190	40441	21003	4259	25262		4.7	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 14	179667	0.39	14015	-6553	173.26	833.28	4.81	Si
SLV 13	179667	0.39	14159	-6621	173.26	840.98	4.85	Si
SLV 10	179667	0.39	15127	-7074	173.26	892.21	5.15	Si
SLV 9	179667	0.39	15219	-7117	173.26	897.04	5.18	Si
SLV 16	179667	0.39	17348	-8112	173.26	1006.69	5.81	Si
SLV 15	179667	0.39	17493	-8180	173.26	1013.97	5.85	Si
SLV 6	179667	0.39	19392	-9068	173.26	1108.28	6.4	Si
SLV 5	179667	0.39	19484	-9111	173.26	1112.77	6.42	Si
SLV 12	179667	0.39	26239	-12269	173.26	1422.58	8.21	Si
SLV 11	179667	0.39	26331	-12312	173.26	1426.53	8.23	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-10195	-13557	280	0.824	1270.8	0.948	12.64289	13.42943	No
SLV 11	-10187	-13603	279	0.825	1270	0.947	12.65184	13.42943	No
SLV 8	-9291	-11432	404	0.878	1179.2	0.944	13.52441	13.42943	Si
SLV 7	-9283	-11479	404	0.879	1178.4	0.944	13.53482	13.42943	Si
SLV 10	-6371	-9665	-366	1.195	883.8	0.929	18.7004	13.42943	Si
SLV 9	-6363	-9712	-366	1.196	883	0.929	18.71988	13.42943	Si
SLV 6	-5467	-7541	-241	1.363	792.8	0.923	21.47787	13.42943	Si
SLV 5	-5459	-7588	-242	1.365	792	0.923	21.50335	13.42943	Si
SLV 16	-9913	-14660	-92	0.86	1242.2	0.946	13.20738	7.08809	Si
SLV 15	-9900	-14733	-92	0.861	1241	0.946	13.22183	7.08809	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.084	SLU 40	Si
V_SLU	10.267	SLU 84	Si
PF_SLV	1.234	SLV 2	Si
V_SLV	3.03	SLV 3	Si
PFFP_SLV	4.81	SLV 14	Si
R_SLV	0.941	SLV 12	No

Maschio 136

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.268	-3.314	-6.268	-0.194	L5	L6	3.12	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 50	5.44	3752.05	-20533	-0.0000734	0.0004492	0.0035	3.12	21248.61	27625.97	27625.97	7.36	No	Si
SLU 50	7.54	-115.38	-15679	-0.0000409	0.0004492	0.0035	3.12	18171.71	26955.62	26955.62	233.62	No	Si
SLU 45	5.44	3679.75	-20413	-0.0000727	0.0004492	0.0035	3.12	21187.29	27492.15	27492.15	7.47	No	Si
SLU 45	7.54	-31.04	-15617	-0.0000403	0.0004492	0.0035	3.12	18125	26881.66	26881.66	866.13	No	Si
SLU 49	5.44	3774.59	-20810	-0.0000743	0.0004492	0.0035	3.12	21388.2	27936.82	27936.82	7.4	No	Si
SLU 49	7.54	-17.86	-15947	-0.0000411	0.0004492	0.0035	3.12	18373.22	27278.25	27278.25	1527.55	No	Si
SLU 43	5.44	3608.06	-19815	-0.0000706	0.0004492	0.0035	3.12	20869.58	26822.67	26822.67	7.43	No	Si
SLU 43	7.54	-36.82	-15032	-0.0000387	0.0004492	0.0035	3.12	17670.48	26177.37	26177.37	710.99	No	Si
SLU 47	5.44	3718.13	-20238	-0.0000724	0.0004492	0.0035	3.12	21096.12	27296.02	27296.02	7.34	No	Si
SLU 47	7.54	11.33	-15365	-0.0000395	0.0004492	0.0035	3.12	17931.77	21842.54	21842.54	1927.07	No	Si
SLU 44	5.44	3646.13	-19879	-0.000071	0.0004492	0.0035	3.12	20904.49	26894.37	26894.37	7.38	No	Si
SLU 44	7.54	50.62	-15042	-0.0000388	0.0004492	0.0035	3.12	17678.65	21480.4	21480.4	424.37	No	Si
SLU 48	5.44	3751.75	-20772	-0.0000741	0.0004492	0.0035	3.12	21369.12	27893.8	27893.8	7.43	No	Si
SLU 48	7.54	-70.32	-15941	-0.0000414	0.0004492	0.0035	3.12	18368.6	27270.79	27270.79	387.82	No	Si
SLU 51	5.44	3774.9	-20571	-0.0000736	0.0004492	0.0035	3.12	21268.16	27668.99	27668.99	7.33	No	Si
SLU 51	7.54	-62.92	-15685	-0.0000406	0.0004492	0.0035	3.12	18176.41	26963.08	26963.08	428.52	No	Si
SLU 59	5.44	3953.72	-22826	-0.0000811	0.0004492	0.0035	3.12	22283.21	30193.12	30193.12	7.64	No	Si
SLU 59	7.54	250.88	-17640	-0.0000469	0.0004492	0.0035	3.12	19560.41	24388.9	24388.9	97.21	No	Si
SLU 46	5.44	3702.6	-20452	-0.0000729	0.0004492	0.0035	3.12	21207.08	27535.17	27535.17	7.44	No	Si
SLU 46	7.54	21.42	-15623	-0.0000402	0.0004492	0.0035	3.12	18129.72	22131.22	22131.22	1032.97	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	5.44	3402.65	-15502	-0.0000564	0.0006738	0.0035	3.12		22805.55	22805.55	6.7		Si
SLV 5	7.54	3326.7	-12373	-0.0000478	0.0006738	0.0035	3.12		18704.02	18704.02	5.62		Si
SLV 9	5.44	3991.62	-16801	-0.0000629	0.0006738	0.0035	3.12		24367.74	24367.74	6.1		Si
SLV 9	7.54	2809.37	-13668	-0.0000486	0.0006738	0.0035	3.12		20420.12	20420.12	7.27		Si
SLV 14	5.44	4144.42	-18927	-0.0000694	0.0006738	0.0035	3.12		26772.16	26772.16	6.46		Si
SLV 14	7.54	381.28	-15281	-0.0000407	0.0006738	0.0035	3.12		22519.91	22519.91	59.06		Si
SLV 13	5.44	4102.17	-19128	-0.0000697	0.0006738	0.0035	3.12		26999.81	26999.81	6.58		Si
SLV 13	7.54	136.38	-15424	-0.0000398	0.0006738	0.0035	3.12		22705.34	22705.34	166.48		Si
SLD 10	5.44	3389.87	-16958	-0.0000603	0.0006738	0.0035	3.12		24545.13	24545.13	7.24		Si
SLD 10	7.54	1440.61	-13401	-0.000041	0.0006738	0.0035	3.12		20069.64	20069.64	13.93		Si
SLD 14	5.44	3434.48	-17931	-0.0000631	0.0006738	0.0035	3.12		25645.36	25645.36	7.47		Si
SLD 14	7.54	316.27	-14137	-0.0000374	0.0006738	0.0035	3.12		21035.17	21035.17	66.51		Si
SLD 9	5.44	3378.1	-17014	-0.0000603	0.0006738	0.0035	3.12		24608.54	24608.54	7.28		Si
SLD 9	7.54	1372.39	-13441	-0.0000408	0.0006738	0.0035	3.12		20122.21	20122.21	14.66		Si
SLV 6	5.44	3429.63	-15374	-0.0000562	0.0006738	0.0035	3.12		22639.96	22639.96	6.6		Si
SLV 6	7.54	3483.09	-12282	-0.0000483	0.0006738	0.0035	3.12		18581.43	18581.43	5.33		Si
SLV 16	5.44	3656.75	-19592	-0.0000687	0.0006738	0.0035	3.12		27523.73	27523.73	7.53		Si
SLV 16	7.54	-1354.6	-15469	-0.000046	0.0006738	0.0035	3.12		27267.12	27267.12	20.13		Si
SLV 10	5.44	4018.6	-16673	-0.0000627	0.0006738	0.0035	3.12		24222.36	24222.36	6.03		Si
SLV 10	7.54	2965.76	-13576	-0.0000491	0.0006738	0.0035	3.12		20299.61	20299.61	6.84		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	5.44	4026.76	-24874	-14605	3576	3.12	3.12	-29257	10833	5408	115546	17940	15912	33852	No	9.47	Si
SLU 76	7.54	674.16	-19447	-11418	3671	3.12	3.12	-22873	10833	5408	115546	17940	15912	33852	No	9.22	Si
SLU 63	5.44	3958.35	-23434	-13759	3642	3.12	3.12	-27563	10833	5408	115546	17940	15912	33852	No	9.3	Si
SLU 63	7.54	424.65	-18155	-10660	3689	3.12	3.12	-21354	10833	5408	115546	17940	15912	33852	No	9.18	Si
SLU 79	5.44	4060.68	-25169	-14778	3691	3.12	3.12	-29604	10833	5408	115546	17940	15912	33852	No	9.17	Si
SLU 79	7.54	547.44	-19760	-11602	3663	3.12	3.12	-23241	10833	5408	115546	17940	15912	33852	No	9.24	Si
SLU 84	5.44	4088.16	-25815	-15158	3659	3.12	3.12	-30364	10833	5408	115546	17940	15912	33852	No	9.25	Si
SLU 84	7.54	773.67	-20281	-11908	3703	3.12	3.12	-23854	10833	5408	115546	17940	15912	33852	No	9.14	Si
SLU 59	5.44	3953.72	-22826	-13403	3652	3.12	3.12	-26848	10833	5408	115546	17940	15912	33852	No	9.27	Si
SLU 59	7.54	250.88	-17640	-10358	3701	3.12	3.12	-20749	10833	5408	115546	17940	15912	33852	No	9.15	Si
SLU 83	5.44	4065.32	-25777	-15135	3680	3.12	3.12	-30319	10833	5408	115546	17940	15912	33852	No	9.2	Si
SLU 83	7.54	721.21	-20274	-11904	3651	3.12	3.12	-23847	10833	5408	115546	17940	15912	33852	No	9.27	Si
SLU 62	5.44	3935.51	-23396	-13737	3662	3.12	3.12	-27518	10833	5408	115546	17940	15912	33852	No	9.24	Si
SLU 62	7.54	372.18	-18149	-10656	3637	3.12	3.12	-21347	10833	5408	115546	17940	15912	33852	No	9.31	Si
SLU 80	5.44	4083.53	-25208	-14801	3670	3.12	3.12	-29649	10833	5408	115546	17940	15912	33852	No	9.22	Si
SLU 80	7.54	599.9	-19766	-11606	3715	3.12	3.12	-23249	10833	5408	115546	17940	15912	33852	No	9.11	Si
SLU 58	5.44	3930.87	-22788	-13380	3673	3.12	3.12	-26803	10833	5408	115546	17940	15912	33852	No	9.22	Si
SLU 58	7.54	198.42	-17634	-10354	3649	3.12	3.12	-20741	10833	5408	115546	17940	15912	33852	No	9.28	Si
SLU 78	5.44	4083.22	-25447	-14941	3632	3.12	3.12	-29930	10833	5408	115546	17940	15912	33852	No	9.32	Si
SLU 78	7.54	644.97	-20028	-11760	3677	3.12	3.12	-23557	10833	5408	115546	17940	15912	33852	No	9.21	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	5.44	3656.75	-19592	-11503	3833	3.12	3.12	-23044	16250	8112	115546	26910	15912	42822		11.17	Si
SLV 16	7.54	-1354.6	-15469	-9083	3980	3.12	3.12	-18195	16139	8057	115546	26910	15912	42822		10.76	Si
SLD 8	5.44	2417.58	-17376	-10202	2980	3.12	3.12	-20437	16250	8112	115546	26910	15912	42822		14.37	Si
SLD 8	7.54	-866.18	-13138	-7714	3301	3.12	3.12	-15453	15591	7783	115546	26910	15912	42822		12.97	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	5.44	2366.05	-19016	-11166	4078	3.12	3.12	-22367	16250	8112	115546	26910	15912	42822		10.5	Si
SLV 11	7.54	-2976.88	-14297	-8395	4795	3.12	3.12	-16816	15863	7919	115546	26910	15912	42822		8.93	Si
SLV 12	5.44	2393.03	-18888	-11090	3989	3.12	3.12	-22216	16250	8112	115546	26910	15912	42822		10.73	Si
SLV 12	7.54	-2820.48	-14205	-8341	4707	3.12	3.12	-16708	15842	7908	115546	26910	15912	42822		9.1	Si
SLD 12	5.44	2669.27	-17931	-10528	3218	3.12	3.12	-21090	16250	8112	115546	26910	15912	42822		13.31	Si
SLD 12	7.54	-1087.33	-13691	-8039	3524	3.12	3.12	-16104	15721	7848	115546	26910	15912	42822		12.15	Si
SLV 7	5.44	1777.08	-17717	-10403	3520	3.12	3.12	-20839	16250	8112	115546	26910	15912	42822		12.17	Si
SLV 7	7.54	-2459.55	-13003	-7635	4273	3.12	3.12	-15294	15559	7767	115546	26910	15912	42822		10.02	Si
SLV 8	5.44	1804.06	-17589	-10327	3431	3.12	3.12	-20688	16250	8112	115546	26910	15912	42822		12.48	Si
SLV 8	7.54	-2303.16	-12911	-7581	4184	3.12	3.12	-15186	15537	7756	115546	26910	15912	42822		10.23	Si
SLV 15	5.44	3614.5	-19793	-11622	3972	3.12	3.12	-23280	16250	8112	115546	26910	15912	42822		10.78	Si
SLV 15	7.54	-1599.49	-15613	-9167	4119	3.12	3.12	-18364	16173	8073	115546	26910	15912	42822		10.4	Si
SLD 11	5.44	2657.5	-17987	-10561	3257	3.12	3.12	-21156	16250	8112	115546	26910	15912	42822		13.15	Si
SLD 11	7.54	-1155.55	-13731	-8063	3563	3.12	3.12	-16151	15730	7853	115546	26910	15912	42822		12.02	Si
SLD 7	5.44	2405.81	-17432	-10235	3019	3.12	3.12	-20503	16250	8112	115546	26910	15912	42822		14.19	Si
SLD 7	7.54	-934.4	-13178	-7738	3340	3.12	3.12	-15500	15600	7788	115546	26910	15912	42822		12.82	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 7.2 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	-11667	0.39	195.72	814.33	1345.17	1079.75	5.52	Si
SLV 1	-11821	0.39	195.72	823.48	1359.49	1091.49	5.58	Si
SLV 4	-11897	0.39	195.72	828	1366.58	1097.29	5.61	Si
SLV 3	-12051	0.39	195.72	837.1	1380.89	1108.99	5.67	Si
SLV 6	-12905	0.39	195.72	886.79	1459.62	1173.2	5.99	Si
SLV 5	-13003	0.39	195.72	892.43	1468.64	1180.53	6.03	Si
SLV 8	-13673	0.39	195.72	930.35	1529.97	1230.16	6.29	Si
SLV 7	-13771	0.39	195.72	935.86	1538.91	1237.38	6.32	Si
SLV 10	-14173	0.39	195.72	958.2	1575.43	1266.81	6.47	Si
SLV 9	-14271	0.39	195.72	963.62	1584.37	1273.99	6.51	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-10895	-16801	186	1.415	1357.9	0.948	21.70733	16.72944	Si
SLV 10	-10807	-16673	186	1.425	1349	0.947	21.86568	16.72944	Si
SLV 11	-10277	-19016	78	1.497	1295.2	0.945	23.01265	16.72944	Si
SLV 12	-10190	-18888	78	1.508	1286.3	0.945	23.18973	16.72944	Si
SLV 5	-9612	-15502	-79	1.585	1227.7	0.943	24.42632	16.72944	Si
SLV 6	-9524	-15374	-79	1.597	1218.8	0.942	24.62608	16.72944	Si
SLV 13	-12202	-19128	458	1.264	1490.5	0.952	19.29676	12.9417	Si
SLV 14	-12064	-18927	458	1.276	1476.5	0.951	19.49598	12.9417	Si
SLV 15	-12016	-19793	426	1.283	1471.7	0.951	19.60259	12.9417	Si
SLV 16	-11879	-19592	426	1.296	1457.7	0.951	19.80789	12.9417	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.33	SLU 51	Si
V_SLU	9.112	SLU 80	Si
PF_SLV	5.335	SLV 6	Si
V_SLV	8.93	SLV 11	Si
PFFP_SLV	5.517	SLV 2	Si
R_SLV	1.298	SLV 9	Si

Maschio 138

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.413	-3.314	-8.433	-3.314	L5	L6	1.02	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 57	6.34	-764.76	-10670	-0.0000875	0.0003743	0.0035	1.02	3444.84	4199.56	4199.56	5.49	No	Si
SLU 57	8.14	-326.14	-7490	-0.0000519	0.0003743	0.0035	1.02	2835.97	3360.69	3360.69	10.3	No	Si
SLU 61	6.34	-786.75	-10525	-0.0000873	0.0003743	0.0035	1.02	3424.79	4161.78	4161.78	5.29	No	Si
SLU 61	8.14	-290.25	-7346	-0.0000498	0.0003743	0.0035	1.02	2800.03	3311.56	3311.56	11.41	No	Si
SLU 60	6.34	-797.81	-10538	-0.0000878	0.0003743	0.0035	1.02	3426.67	4165.24	4165.24	5.22	No	Si
SLU 60	8.14	-285.78	-7349	-0.0000497	0.0003743	0.0035	1.02	2800.76	3312.54	3312.54	11.59	No	Si
SLU 56	6.34	-775.83	-10683	-0.000088	0.0003743	0.0035	1.02	3446.65	4203.05	4203.05	5.42	No	Si
SLU 56	8.14	-321.67	-7493	-0.0000518	0.0003743	0.0035	1.02	2836.68	3361.62	3361.62	10.45	No	Si
SLU 58	6.34	-782.82	-10581	-0.0000875	0.0003743	0.0035	1.02	3432.67	4176.42	4176.42	5.34	No	Si
SLU 58	8.14	-304.25	-7387	-0.0000505	0.0003743	0.0035	1.02	2810.38	3325.61	3325.61	10.93	No	Si
SLU 83	6.34	-819.69	-11749	-0.0000969	0.0003743	0.0035	1.02	3570.87	4461.06	4461.06	5.44	No	Si
SLU 83	8.14	-376.57	-8442	-0.0000594	0.0003743	0.0035	1.02	3055.37	3650.75	3650.75	9.69	No	Si
SLU 59	6.34	-771.76	-10568	-0.000087	0.0003743	0.0035	1.02	3430.82	4172.96	4172.96	5.41	No	Si
SLU 59	8.14	-308.73	-7385	-0.0000507	0.0003743	0.0035	1.02	2809.65	3324.62	3324.62	10.77	No	Si
SLU 53	6.34	-755.36	-10445	-0.0000856	0.0003743	0.0035	1.02	3413.44	4141.13	4141.13	5.48	No	Si
SLU 53	8.14	-316.45	-7309	-0.0000505	0.0003743	0.0035	1.02	2790.67	3298.94	3298.94	10.42	No	Si
SLU 63	6.34	-807.22	-10763	-0.0000896	0.0003743	0.0035	1.02	3457.33	4224.01	4224.01	5.23	No	Si
SLU 63	8.14	-295.47	-7530	-0.0000511	0.0003743	0.0035	1.02	2845.8	3373.43	3373.43	11.42	No	Si
SLU 62	6.34	-818.28	-10776	-0.0000901	0.0003743	0.0035	1.02	3459.09	4227.51	4227.51	5.17	No	Si
SLU 62	8.14	-291	-7533	-0.000051	0.0003743	0.0035	1.02	2846.51	3374.36	3374.36	11.6	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	6.34	2265.07	-3897	-0.0110533	0.0005615	0.0035	0.816		1918.41	1918.41	0.85		No
SLV 1	8.14	-2064.2	-5804	-0.0001461	0.0005615	0.0035	0.816		2898.76	2898.76	1.4		Si
SLV 4	6.34	2363.35	-4909	-0.0043547	0.0005615	0.0035	0.816		2321.83	2321.83	0.98		No
SLV 4	8.14	-2305.83	-6916	-0.0001532	0.0005615	0.0035	0.816		3342.4	3342.4	1.45		Si
SLV 15	6.34	-3304.64	-11881	-0.0002107	0.0005615	0.0035	0.816		5084.8	5084.8	1.54		Si
SLV 15	8.14	1491.5	-5386	-0.0000858	0.0005615	0.0035	1.02		2502.26	2502.26	1.68		Si
SLV 2	6.34	2287.94	-3756	-0.0130045	0.0005615	0.0035	0.816		1855.66	1855.66	0.81		No
SLV 2	8.14	-2055.69	-5670	-0.0001497	0.0005615	0.0035	0.816		2842.54	2842.54	1.38		Si
SLV 14	6.34	-3357.18	-10587	-0.000229	0.0005615	0.0035	0.816		4670	4670	1.39		Si
SLV 14	8.14	1750.14	-4005	-0.0002288	0.0005615	0.0035	1.02		1966.08	1966.08	1.12		Si
SLV 3	6.34	2340.48	-5050	-0.0007583	0.0005615	0.0035	1.02		2375.15	2375.15	1.01		Si
SLV 3	8.14	-2314.33	-7051	-0.0001516	0.0005615	0.0035	0.816		3394.93	3394.93	1.47		Si
SLV 13	6.34	-3380.05	-10728	-0.0002298	0.0005615	0.0035	0.816		4716.51	4716.51	1.4		Si
SLV 13	8.14	1741.63	-4139	-0.0001868	0.0005615	0.0035	1.02		2022.32	2022.32	1.16		Si
SLV 16	6.34	-3281.77	-11740	-0.0002092	0.0005615	0.0035	0.816		5041.05	5041.05	1.54		Si
SLV 16	8.14	1500	-5251	-0.000087	0.0005615	0.0035	1.02		2451.19	2451.19	1.63		Si
SLV 10	6.34	-1473.5	-6877	-0.0000864	0.0005615	0.0035	1.02		3327.12	3327.12	2.26		Si
SLV 10	8.14	708.38	-3158	-0.0000396	0.0005615	0.0035	1.02		1587.08	1587.08	2.24		Si
SLV 9	6.34	-1488.1	-6967	-0.0000874	0.0005615	0.0035	1.02		3362.42	3362.42	2.26		Si
SLV 9	8.14	702.95	-3244	-0.0000396	0.0005615	0.0035	1.02		1626.01	1626.01	2.31		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 57	6.34	-764.76	-10670	-8885	-1013	1.02	1.02	-31110	10833	3094	40441	8552	2601	11153	No	11.01	Si
SLU 57	8.14	-326.14	-7490	-6237	-246	1.02	1.02	-21839	9856	2815	40441	8552	2601	11153	No	45.32	Si
SLU 62	6.34	-818.28	-10776	-8974	-1084	1.02	1.02	-31420	10833	3094	40441	8552	2601	11153	No	10.29	Si
SLU 62	8.14	-291	-7533	-6273	-316	1.02	1.02	-21963	9873	2820	40441	8552	2601	11153	No	35.32	Si
SLU 63	6.34	-807.22	-10763	-8963	-1070	1.02	1.02	-31382	10833	3094	40441	8552	2601	11153	No	10.43	Si
SLU 63	8.14	-295.47	-7530	-6270	-310	1.02	1.02	-21955	9872	2819	40441	8552	2601	11153	No	35.97	Si
SLU 83	6.34	-819.69	-11749	-9784	-1035	1.02	1.02	-34256	10833	3094	40441	8552	2601	11153	No	10.78	Si
SLU 83	8.14	-376.57	-8442	-7030	-314	1.02	1.02	-24613	10226	2921	40441	8552	2601	11153	No	35.56	Si
SLU 59	6.34	-771.76	-10568	-8800	-1030	1.02	1.02	-30813	10833	3094	40441	8552	2601	11153	No	10.83	Si
SLU 59	8.14	-308.73	-7385	-6149	-260	1.02	1.02	-21531	9815	2803	40441	8552	2601	11153	No	42.89	Si
SLU 60	6.34	-797.81	-10538	-8775	-1052	1.02	1.02	-30726	10833	3094	40441	8552	2601	11153	No	10.6	Si
SLU 60	8.14	-285.78	-7349	-6120	-312	1.02	1.02	-21428	9801	2799	40441	8552	2601	11153	No	35.78	Si
SLU 56	6.34	-775.83	-10683	-8896	-1028	1.02	1.02	-31149	10833	3094	40441	8552	2601	11153	No	10.85	Si
SLU 56	8.14	-321.67	-7493	-6240	-252	1.02	1.02	-21847	9857	2815	40441	8552	2601	11153	No	44.29	Si
SLU 58	6.34	-782.82	-10581	-8811	-1044	1.02	1.02	-30851	10833	3094	40441	8552	2601	11153	No	10.69	Si
SLU 58	8.14	-304.25	-7387	-6152	-266	1.02	1.02	-21539	9816	2804	40441	8552	2601	11153	No	41.97	Si
SLU 84	6.34	-808.63	-11736	-9773	-1021	1.02	1.02	-34218	10833	3094	40441	8552	2601	11153	No	10.93	Si
SLU 84	8.14	-381.05	-8439	-7027	-308	1.02	1.02	-24605	10225	2920	40441	8552	2601	11153	No	36.22	Si
SLU 61	6.34	-786.75	-10525	-8764	-1038	1.02	1.02	-30687	10833	3094	40441	8552	2601	11153	No	10.75	Si
SLU 61	8.14	-290.25	-7346	-6117	-306	1.02	1.02	-21419	9800	2799	40441	8552	2601	11153	No	36.45	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	6.34	2340.48	-5050	-4205	4324	1.02	0.1397	-121277	16250	635	40441	12828	2601	15429		3.57	Si
SLV 3	8.14	-2314.33	-7051	-5871	2000	0.816	0.5453	0	0	0	40441	10263	2081	12343		6.17	Si
SLD 14	6.34	-1726.99	-8996	-7491	-2772	1.02	0.9541	-26230	15663	4184	40441	12828	2601	15429		5.57	Si
SLD 14	8.14	588.52	-4869	-4055	-1051	1.02	1.02	-14197	13256	3786	40441	12828	2601	15429		14.68	Si
SLD 13	6.34	-1736.81	-9057	-7542	-2778	1.02	0.9547	-26407	15698	4196	40441	12828	2601	15429		5.55	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 13	8.14	584.87	-4927	-4103	-1049	1.02	1.02	-14365	13290	3796	40441	12828	2601	15429		14.71	Si
SLV 16	6.34	-3281.77	-11740	-9776	-5241	0.816	0.6914	0	0	0	40441	10263	2081	12343		2.36	Si
SLV 16	8.14	1500	-5251	-4373	-2004	1.02	0.673	-15310	13479	2540	40441	12828	2601	15429		7.7	Si
SLV 15	6.34	-3304.64	-11881	-9894	-5255	0.816	0.6956	0	0	0	40441	10263	2081	12343		2.35	Si
SLV 15	8.14	1491.5	-5386	-4485	-2000	1.02	0.6992	-15703	13557	2654	40441	12828	2601	15429		7.72	Si
SLV 1	6.34	2265.07	-3897	-3245	3950	0.816	0	0	0	0	40441	10263	2081	12343		3.13	Si
SLV 1	8.14	-2064.2	-5804	-4833	1732	0.816	0.4631	0	0	0	40441	10263	2081	12343		7.12	Si
SLV 13	6.34	-3380.05	-10728	-8934	-5630	0.816	0.5848	0	0	0	40441	10263	2081	12343		2.19	Si
SLV 13	8.14	1741.63	-4139	-3447	-2267	1.02	0.2678	-47240	16250	1218	40441	12828	2601	15429		6.8	Si
SLV 14	6.34	-3357.18	-10587	-8816	-5616	0.816	0.5787	0	0	0	40441	10263	2081	12343		2.2	Si
SLV 14	8.14	1750.14	-4005	-3335	-2272	1.02	0.219	-56207	16250	996	40441	12828	2601	15429		6.79	Si
SLV 4	6.34	2363.35	-4909	-4088	4339	0.816	0.0857	0	0	0	40441	10263	2081	12343		2.85	Si
SLV 4	8.14	-2305.83	-6916	-5759	1996	0.816	0.5298	0	0	0	40441	10263	2081	12343		6.19	Si
SLV 2	6.34	2287.94	-3756	-3128	3964	0.816	0	0	0	0	40441	10263	2081	12343		3.11	Si
SLV 2	8.14	-2055.69	-5670	-4721	1728	0.816	0.4423	0	0	0	40441	10263	2081	12343		7.14	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.39	11845	-3383	105.82	436.89	4.13	Si
SLV 1	179667	0.39	12340	-3524	105.82	453.54	4.29	Si
SLV 6	179667	0.39	15585	-4451	105.82	559.57	5.29	Si
SLV 4	179667	0.39	15834	-4522	105.82	567.45	5.36	Si
SLV 5	179667	0.39	15901	-4541	105.82	569.6	5.38	Si
SLV 3	179667	0.39	16329	-4663	105.82	583.07	5.51	Si
SLV 10	179667	0.39	22703	-6484	105.82	772.8	7.3	Si
SLV 9	179667	0.39	23019	-6574	105.82	781.66	7.39	Si
SLV 8	179667	0.39	28880	-8248	105.82	936.36	8.85	Si
SLV 7	179667	0.39	29196	-8338	105.82	944.19	8.92	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-7043	-9095	205	0.739	859.1	0.952	11.28678	13.42943	No
SLV 8	-6949	-9039	205	0.748	849.6	0.952	11.42013	13.42943	No
SLV 11	-5916	-7909	220	0.853	744.6	0.946	13.10685	13.42943	No
SLV 12	-5822	-7854	220	0.864	735.1	0.945	13.28981	13.42943	No
SLV 3	-7033	-9072	38	0.761	858	0.952	11.62387	7.08809	Si
SLV 5	-3177	-5035	-222	1.398	467.9	0.921	22.06569	13.42943	Si
SLV 4	-6885	-8985	38	0.775	843.1	0.951	11.84109	7.08809	Si
SLV 6	-3083	-4980	-222	1.43	458.5	0.919	22.6015	13.42943	Si
SLV 1	-5873	-7854	-91	0.877	740.3	0.945	13.48391	7.08809	Si
SLV 2	-5726	-7768	-90	0.896	725.4	0.944	13.7842	7.08809	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.166	SLU 62	Si
V_SLU	10.291	SLU 62	Si
PF_SLV	0.811	SLV 2	No
V_SLV	2.193	SLV 13	Si
PFFP_SLV	4.129	SLV 2	Si
R_SLV	0.84	SLV 7	No

Maschio 139

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.163	1.006	-5.163	5.686	L5	L6	4.68	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	5.44	-964.17	-34546	-0.0000626	0.0004492	0.0035	4.68	50315.31	78926.56	78926.56	81.86	No	Si
SLU 84	8.96	-2749.03	-17618	-0.000036	0.0004492	0.0035	4.68	33287.49	49374.34	49374.34	17.96	No	Si
SLU 41	5.44	-877.09	-29328	-0.0000528	0.0004492	0.0035	4.68	46628.88	70430	70430	80.3	No	Si
SLU 41	8.96	-2445.4	-15029	-0.0000308	0.0004492	0.0035	4.68	29390.34	44409.1	44409.1	18.16	No	Si
SLU 74	5.44	-984.29	-33561	-0.0000609	0.0004492	0.0035	4.68	49726.02	77355.13	77355.13	78.59	No	Si
SLU 74	8.96	-2676.85	-17276	-0.0000353	0.0004492	0.0035	4.68	32793.26	48719.65	48719.65	18.2	No	Si
SLU 82	5.44	-993.81	-34099	-0.0000619	0.0004492	0.0035	4.68	50053.92	78213.14	78213.14	78.7	No	Si
SLU 82	8.96	-2732.96	-17289	-0.0000354	0.0004492	0.0035	4.68	32812.05	48744.39	48744.39	17.84	No	Si
SLU 81	5.44	-1031.38	-34059	-0.0000619	0.0004492	0.0035	4.68	50030.01	78149.22	78149.22	75.77	No	Si
SLU 81	8.96	-2812.53	-17236	-0.0000355	0.0004492	0.0035	4.68	32734.43	48642.24	48642.24	17.29	No	Si
SLU 60	5.44	-899.99	-30728	-0.0000554	0.0004492	0.0035	4.68	47754.66	72813.74	72813.74	80.9	No	Si
SLU 60	8.96	-2541.63	-15386	-0.0000317	0.0004492	0.0035	4.68	29948.44	45094.18	45094.18	17.74	No	Si
SLU 79	5.44	-909.17	-33609	-0.0000608	0.0004492	0.0035	4.68	49756.08	77432.2	77432.2	85.17	No	Si
SLU 79	8.96	-2673.21	-17209	-0.0000352	0.0004492	0.0035	4.68	32694.51	48589.77	48589.77	18.18	No	Si
SLU 83	5.44	-1001.73	-34506	-0.0000627	0.0004492	0.0035	4.68	50292.31	78862.65	78862.65	78.73	No	Si
SLU 83	8.96	-2828.59	-17565	-0.0000361	0.0004492	0.0035	4.68	33210.77	49272.19	49272.19	17.42	No	Si
SLU 62	5.44	-870.35	-31175	-0.0000562	0.0004492	0.0035	4.68	48093.17	73549.44	73549.44	84.51	No	Si
SLU 62	8.96	-2557.7	-15714	-0.0000323	0.0004492	0.0035	4.68	30455.87	45724.13	45724.13	17.88	No	Si
SLU 39	5.44	-906.73	-28880	-0.0000521	0.0004492	0.0035	4.68	46248.1	69668.49	69668.49	76.83	No	Si
SLU 39	8.96	-2429.33	-14700	-0.0000302	0.0004492	0.0035	4.68	28871.38	43777.28	43777.28	18.02	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	5.44	-5812.97	-21507	-0.0000492	0.0006738	0.0035	4.68		57793.66	57793.66	9.94		Si
SLV 11	8.96	-7408.72	-9682	-0.0000322	0.0006738	0.0035	4.68		33844.52	33844.52	4.57		Si
SLV 10	5.44	3687.76	-27880	-0.0000557	0.0006738	0.0035	4.68		59296.5	59296.5	16.08		Si
SLV 10	8.96	7836.08	-18208	-0.0000479	0.0006738	0.0035	4.68		41477.56	41477.56	5.29		Si
SLV 12	5.44	-5550.88	-21687	-0.000049	0.0006738	0.0035	4.68		58148.5	58148.5	10.48		Si
SLV 12	8.96	-7058.29	-9844	-0.0000317	0.0006738	0.0035	4.68		34181.33	34181.33	4.84		Si
SLV 8	5.44	-4715.89	-18133	-0.0000409	0.0006738	0.0035	4.68		51129.61	51129.61	10.84		Si
SLV 8	8.96	-11042.89	-5060	-0.0001031	0.0006738	0.0035	3.744		23873.09	23873.09	2.16		Si
SLD 3	5.44	-745.47	-19937	-0.0000352	0.0006738	0.0035	4.68		54692.16	54692.16	73.37		Si
SLD 3	8.96	-5716.27	-7549	-0.0000249	0.0006738	0.0035	4.68		29279.45	29279.45	5.12		Si
SLV 1	5.44	1927.14	-17781	-0.0000341	0.0006738	0.0035	4.68		40618.23	40618.23	21.08		Si
SLV 1	8.96	-6459.84	-4708	-0.0000253	0.0006738	0.0035	3.744		23101.72	23101.72	3.58		Si
SLV 7	5.44	-4977.98	-17953	-0.0000412	0.0006738	0.0035	4.68		50774.77	50774.77	10.2		Si
SLV 7	8.96	-11393.32	-4898	-0.0001296	0.0006738	0.0035	3.744		23519.18	23519.18	2.06		Si
SLV 2	5.44	2337.54	-18062	-0.0000355	0.0006738	0.0035	4.68		41184.05	41184.05	17.62		Si
SLV 2	8.96	-5911.11	-4961	-0.0000225	0.0006738	0.0035	4.68		23655.88	23655.88	4		Si
SLV 3	5.44	-844.45	-15923	-0.0000286	0.0006738	0.0035	4.68		46766.27	46766.27	55.38		Si
SLV 3	8.96	-10928.15	-2198	-0.0002569	0.0006738	0.0035	3.744		17568.82	17568.82	1.61		Si
SLV 4	5.44	-434.05	-16204	-0.0000281	0.0006738	0.0035	4.68		47321.89	47321.89	109.02		Si
SLV 4	8.96	-10379.42	-2451	-0.0002305	0.0006738	0.0035	3.744		18128.58	18128.58	1.75		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 46	5.44	-668.54	-27134	-15932	-2496	4.68	4.68	-21276	10833	8112	115546	26910	23868	50778	No	20.34	Si
SLU 46	8.96	-1926.34	-13882	-8151	-2572	4.68	4.68	-10886	9785	7327	115546	26910	23868	50778	No	19.74	Si
SLU 47	5.44	-598.02	-26761	-15713	-2514	4.68	4.68	-20984	10833	8112	115546	26910	23868	50778	No	20.2	Si
SLU 47	8.96	-1853.58	-13522	-7939	-2599	4.68	4.68	-10603	9747	7299	115546	26910	23868	50778	No	19.54	Si
SLU 72	5.44	-724.8	-30513	-17916	-2423	4.68	4.68	-23926	10833	8112	115546	26910	23868	50778	No	20.95	Si
SLU 72	8.96	-2193.59	-15665	-9198	-2496	4.68	4.68	-12283	9971	7466	115546	26910	23868	50778	No	20.34	Si
SLU 45	5.44	-706.1	-27094	-15908	-2467	4.68	4.68	-21245	10833	8112	115546	26910	23868	50778	No	20.58	Si
SLU 45	8.96	-2005.9	-13829	-8120	-2542	4.68	4.68	-10844	9779	7323	115546	26910	23868	50778	No	19.98	Si
SLU 44	5.44	-627.66	-26314	-15450	-2432	4.68	4.68	-20634	10833	8112	115546	26910	23868	50778	No	20.88	Si
SLU 44	8.96	-1837.52	-13193	-7746	-2509	4.68	4.68	-10345	9713	7273	115546	26910	23868	50778	No	20.24	Si
SLU 50	5.44	-630.98	-27142	-15937	-2547	4.68	4.68	-21283	10833	8112	115546	26910	23868	50778	No	19.93	Si
SLU 50	8.96	-2002.25	-13761	-8080	-2639	4.68	4.68	-10791	9772	7317	115546	26910	23868	50778	No	19.24	Si
SLU 48	5.44	-676.46	-27541	-16171	-2549	4.68	4.68	-21596	10833	8112	115546	26910	23868	50778	No	19.92	Si
SLU 48	8.96	-2021.97	-14158	-8313	-2632	4.68	4.68	-11101	9814	7348	115546	26910	23868	50778	No	19.29	Si
SLU 51	5.44	-593.42	-27182	-15960	-2577	4.68	4.68	-21314	10833	8112	115546	26910	23868	50778	No	19.71	Si
SLU 51	8.96	-1922.69	-13815	-8111	-2669	4.68	4.68	-10833	9778	7322	115546	26910	23868	50778	No	19.03	Si
SLU 49	5.44	-638.89	-27581	-16194	-2578	4.68	4.68	-21627	10833	8112	115546	26910	23868	50778	No	19.7	Si
SLU 49	8.96	-1942.4	-14211	-8344	-2662	4.68	4.68	-11143	9819	7353	115546	26910	23868	50778	No	19.08	Si
SLU 70	5.44	-770.27	-30912	-18150	-2425	4.68	4.68	-24239	10833	8112	115546	26910	23868	50778	No	20.94	Si
SLU 70	8.96	-2213.3	-16061	-9430	-2489	4.68	4.68	-12594	10013	7497	115546	26910	23868	50778	No	20.4	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	5.44	4522.76	-24326	-14283	-4665	4.68	4.68	-19075	16250	12168	115546	40365	23868	64233		13.77	Si
SLV 6	8.96	3851.47	-13424	-7882	-4754	4.68	4.68	-10526	14605	10936	115546	40365	23868	64233		13.51	Si
SLV 10	5.44	3687.76	-27880	-16370	-3940	4.68	4.68	-21862	16250	12168	115546	40365	23868	64233		16.3	Si
SLV 10	8.96	7836.08	-18208	-10691	-3248	4.68	4.68	-14278	15356	11498	115546	40365	23868	64233		19.78	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	5.44	-434.05	-16204	-9514	-2224	4.68	4.68	-12706	15041	11263	115546	40365	23868	64233		28.89	Si
SLV 4	8.96	-10379.42	-2451	-1439	-3690	3.744	0	0	0	0	115546	32292	19094	51386		13.93	Si
SLV 1	5.44	1927.14	-17781	-10440	-3410	4.68	4.68	-13943	15289	11448	115546	40365	23868	64233		18.83	Si
SLV 1	8.96	-6459.84	-4708	-2764	-4633	3.744	2.9033	0	0	0	115546	32292	19094	51386		11.09	Si
SLD 6	5.44	1630.54	-23562	-13835	-2935	4.68	4.68	-18476	16195	12127	115546	40365	23868	64233		21.89	Si
SLD 6	8.96	717.32	-12407	-7285	-2991	4.68	4.68	-9729	14446	10817	115546	40365	23868	64233		21.48	Si
SLV 9	5.44	3425.67	-27701	-16265	-3710	4.68	4.68	-21721	16250	12168	115546	40365	23868	64233		17.31	Si
SLV 9	8.96	7485.64	-18047	-10596	-2997	4.68	4.68	-14151	15330	11479	115546	40365	23868	64233		21.43	Si
SLV 2	5.44	2337.54	-18062	-10605	-3771	4.68	4.68	-14163	15333	11481	115546	40365	23868	64233		17.03	Si
SLV 2	8.96	-5911.11	-4961	-2913	-5025	4.68	3.4452	-5293	13559	7474	115546	40365	23868	64233		12.78	Si
SLD 2	5.44	653.91	-20873	-12256	-2538	4.68	4.68	-16367	15773	11811	115546	40365	23868	64233		25.3	Si
SLD 2	8.96	-3518.08	-8760	-5144	-3092	4.68	4.68	-6869	13874	10389	115546	40365	23868	64233		20.78	Si
SLV 3	5.44	-844.45	-15923	-9349	-1863	4.68	4.68	-12486	14997	11230	115546	40365	23868	64233		34.48	Si
SLV 3	8.96	-10928.15	-2198	-1291	-3298	3.744	0	0	0	0	115546	32292	19094	51386		15.58	Si
SLV 5	5.44	4260.66	-24146	-14178	-4435	4.68	4.68	-18934	16250	12168	115546	40365	23868	64233		14.48	Si
SLV 5	8.96	3501.04	-13262	-7787	-4504	4.68	4.68	-10399	14580	10917	115546	40365	23868	64233		14.26	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 7.2 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-10997	0.39	293.58	809.3	1394.14	1101.72	3.75	Si
SLV 4	-11289	0.39	293.58	828.84	1421.75	1125.29	3.83	Si
SLV 7	-12035	0.39	293.58	878.4	1492.45	1185.42	4.04	Si
SLV 8	-12222	0.39	293.58	890.66	1510.1	1200.38	4.09	Si
SLV 1	-13229	0.39	293.58	956.31	1605.02	1280.66	4.36	Si
SLV 2	-13521	0.39	293.58	975.08	1632.35	1303.72	4.44	Si
SLV 11	-15111	0.39	293.58	1075.8	1781.42	1428.61	4.87	Si
SLV 12	-15298	0.39	293.58	1087.4	1798.58	1442.99	4.92	Si
SLV 5	-19474	0.39	293.58	1336.84	2182.24	1759.54	5.99	Si
SLV 6	-19660	0.39	293.58	1347.49	2199.35	1773.42	6.04	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-18208	-27880	209	1.292	2226.2	0.951	19.74196	16.72944	Si
SLV 9	-18047	-27701	209	1.303	2209.8	0.951	19.90236	16.72944	Si
SLV 14	-20908	-29910	665	1.126	2500.5	0.956	17.10788	12.9417	Si
SLV 13	-20655	-29629	665	1.138	2474.8	0.956	17.29981	12.9417	Si
SLV 16	-18399	-28052	661	1.259	2245.6	0.952	19.22441	12.9417	Si
SLV 15	-18146	-27771	660	1.274	2219.9	0.951	19.46768	12.9417	Si
SLV 6	-13424	-24326	-186	1.679	1740.9	0.94	25.95118	16.72944	Si
SLV 5	-13262	-24146	-186	1.696	1724.6	0.94	26.2288	16.72944	Si
SLV 12	-9844	-21687	194	2.163	1379.2	0.927	33.89627	16.72944	Si
SLV 11	-9682	-21507	194	2.192	1362.9	0.927	34.37161	16.72944	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	17.295	SLU 81	Si
V_SLU	19.028	SLU 51	Si
PF_SLV	1.608	SLV 3	Si
V_SLV	11.092	SLV 1	Si
PFFP_SLV	3.753	SLV 3	Si
R_SLV	1.18	SLV 10	Si

Maschio 142

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.963	-3.314	-6.513	-3.314	L5	L6	0.55	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 76	7.44	-137.82	-6857	-0.0000907	0.0003743	0.0035	0.55	1061.07	1342.31	1342.31	9.74	No	Si
SLU 76	8.24	-268.37	-6553	-0.0001036	0.0003743	0.0035	0.55	1048.98	1312.41	1312.41	4.89	No	Si
SLU 75	7.44	-144.14	-6965	-0.0000929	0.0003743	0.0035	0.55	1064.58	1353.2	1353.2	9.39	No	Si
SLU 75	8.24	-270.83	-6641	-0.0001051	0.0003743	0.0035	0.55	1052.79	1320.89	1320.89	4.88	No	Si
SLU 65	7.44	-105.4	-6014	-0.0000761	0.0003743	0.0035	0.55	1019.53	1257.16	1257.16	11.93	No	Si
SLU 65	8.24	-256.67	-5732	-0.0000915	0.0003743	0.0035	0.55	1000.11	1217.73	1217.73	4.74	No	Si
SLU 70	7.44	-122.06	-6406	-0.000083	0.0003743	0.0035	0.55	1041.95	1298.3	1298.3	10.64	No	Si
SLU 70	8.24	-265.78	-6085	-0.0000971	0.0003743	0.0035	0.55	1024.03	1266.38	1266.38	4.76	No	Si
SLU 72	7.44	-120.49	-6330	-0.0000819	0.0003743	0.0035	0.55	1038	1291.08	1291.08	10.72	No	Si
SLU 72	8.24	-260.71	-6014	-0.0000956	0.0003743	0.0035	0.55	1019.53	1257.16	1257.16	4.82	No	Si
SLU 68	7.44	-110.57	-6156	-0.0000785	0.0003743	0.0035	0.55	1028.27	1274.97	1274.97	11.53	No	Si
SLU 68	8.24	-259.99	-5865	-0.0000936	0.0003743	0.0035	0.55	1009.62	1236.97	1236.97	4.76	No	Si
SLU 69	7.44	-129.17	-6453	-0.0000845	0.0003743	0.0035	0.55	1044.29	1302.79	1302.79	10.09	No	Si
SLU 69	8.24	-261.87	-6109	-0.000097	0.0003743	0.0035	0.55	1025.46	1269.33	1269.33	4.85	No	Si
SLU 66	7.44	-124	-6311	-0.0000821	0.0003743	0.0035	0.55	1037.02	1289.37	1289.37	10.4	No	Si
SLU 66	8.24	-258.54	-5976	-0.0000948	0.0003743	0.0035	0.55	1017.08	1252.15	1252.15	4.84	No	Si
SLU 67	7.44	-116.88	-6264	-0.0000806	0.0003743	0.0035	0.55	1034.45	1284.95	1284.95	10.99	No	Si
SLU 67	8.24	-262.45	-5953	-0.000095	0.0003743	0.0035	0.55	1015.54	1249.01	1249.01	4.76	No	Si
SLU 78	7.44	-149.31	-7107	-0.0000954	0.0003743	0.0035	0.55	1068.59	1367.57	1367.57	9.16	No	Si
SLU 78	8.24	-274.16	-6774	-0.0001073	0.0003743	0.0035	0.55	1058.07	1333.99	1333.99	4.87	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 1	7.44	139.39	-3422	-0.000049	0.0005615	0.0035	0.55		834.83	834.83	5.99		Si
SLD 1	8.24	-424.89	-3829	-0.0000866	0.0005615	0.0035	0.55		991.69	991.69	2.33		Si
SLV 13	7.44	-617.1	-6736	-0.0001428	0.0005615	0.0035	0.55		1524.71	1524.71	2.47		Si
SLV 13	8.24	435.5	-5060	-0.0001006	0.0005615	0.0035	0.55		1179.02	1179.02	2.71		Si
SLD 4	7.44	127.74	-3891	-0.0000527	0.0005615	0.0035	0.55		932.72	932.72	7.3		Si
SLD 4	8.24	-453.98	-4248	-0.0000945	0.0005615	0.0035	0.55		1077.4	1077.4	2.37		Si
SLV 14	7.44	-609.34	-6526	-0.0001392	0.0005615	0.0035	0.55		1494.97	1494.97	2.45		Si
SLV 14	8.24	442.24	-4861	-0.0000991	0.0005615	0.0035	0.55		1139.49	1139.49	2.58		Si
SLV 3	7.44	418.76	-2949	-0.0000821	0.0005615	0.0035	0.55		737.69	737.69	1.76		Si
SLV 3	8.24	-816.6	-4111	-0.0002226	0.0005615	0.0035	0.44		1049.55	1049.55	1.29		Si
SLD 2	7.44	142.72	-3332	-0.0000484	0.0005615	0.0035	0.55		816.17	816.17	5.72		Si
SLD 2	8.24	-421.99	-3744	-0.0000855	0.0005615	0.0035	0.55		973.42	973.42	2.31		Si
SLV 2	7.44	460.69	-1470	-0.0075952	0.0005615	0.0035	0.44		401.56	401.56	0.87		No
SLV 2	8.24	-737.2	-2766	-0.0010234	0.0005615	0.0035	0.44		758.87	758.87	1.03		Si
SLD 3	7.44	124.41	-3981	-0.0000532	0.0005615	0.0035	0.55		951.77	951.77	7.65		Si
SLD 3	8.24	-456.87	-4334	-0.0000956	0.0005615	0.0035	0.55		1094.8	1094.8	2.4		Si
SLV 1	7.44	452.92	-1680	-0.0021928	0.0005615	0.0035	0.44		453.53	453.53	1		Si
SLV 1	8.24	-743.95	-2966	-0.0005673	0.0005615	0.0035	0.44		804.24	804.24	1.08		Si
SLV 4	7.44	426.52	-2739	-0.0000852	0.0005615	0.0035	0.55		695.07	695.07	1.63		Si
SLV 4	8.24	-809.86	-3912	-0.000241	0.0005615	0.0035	0.44		1008.92	1008.92	1.25		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	7.44	-144.14	-6965	-5800	-359	0.55	0.55	-37661	10833	1668	40441	4612	1403	6014	No	16.73	Si
SLU 75	8.24	-270.83	-6641	-5530	536	0.55	0.55	-35907	10833	1668	40441	4612	1403	6014	No	11.21	Si
SLU 84	7.44	-154.25	-7189	-5986	-402	0.55	0.55	-38872	10833	1668	40441	4612	1403	6014	No	14.96	Si
SLU 84	8.24	-269.35	-6864	-5716	554	0.55	0.55	-37114	10833	1668	40441	4612	1403	6014	No	10.86	Si
SLU 73	7.44	-132.65	-6715	-5592	-334	0.55	0.55	-36308	10833	1668	40441	4612	1403	6014	No	18.02	Si
SLU 73	8.24	-265.04	-6421	-5346	533	0.55	0.55	-34716	10833	1668	40441	4612	1403	6014	No	11.27	Si
SLU 83	7.44	-161.37	-7236	-6026	-422	0.55	0.55	-39127	10833	1668	40441	4612	1403	6014	No	14.27	Si
SLU 83	8.24	-265.45	-6887	-5735	544	0.55	0.55	-37241	10833	1668	40441	4612	1403	6014	No	11.06	Si
SLU 82	7.44	-149.07	-7047	-5868	-387	0.55	0.55	-38103	10833	1668	40441	4612	1403	6014	No	15.53	Si
SLU 82	8.24	-266.03	-6731	-5605	546	0.55	0.55	-36395	10833	1668	40441	4612	1403	6014	No	11.02	Si
SLU 77	7.44	-156.43	-7154	-5958	-394	0.55	0.55	-38684	10833	1668	40441	4612	1403	6014	No	15.28	Si
SLU 77	8.24	-270.25	-6797	-5660	535	0.55	0.55	-36752	10833	1668	40441	4612	1403	6014	No	11.25	Si
SLU 81	7.44	-156.19	-7094	-5907	-407	0.55	0.55	-38359	10833	1668	40441	4612	1403	6014	No	14.78	Si
SLU 81	8.24	-262.12	-6755	-5625	536	0.55	0.55	-36522	10833	1668	40441	4612	1403	6014	No	11.23	Si
SLU 80	7.44	-147.74	-7031	-5855	-376	0.55	0.55	-38015	10833	1668	40441	4612	1403	6014	No	15.99	Si
SLU 80	8.24	-269.09	-6702	-5581	543	0.55	0.55	-36238	10833	1668	40441	4612	1403	6014	No	11.07	Si
SLU 76	7.44	-137.82	-6857	-5710	-348	0.55	0.55	-37076	10833	1668	40441	4612	1403	6014	No	17.26	Si
SLU 76	8.24	-268.37	-6553	-5457	542	0.55	0.55	-35435	10833	1668	40441	4612	1403	6014	No	11.1	Si
SLU 78	7.44	-149.31	-7107	-5918	-374	0.55	0.55	-38429	10833	1668	40441	4612	1403	6014	No	16.08	Si
SLU 78	8.24	-274.16	-6774	-5641	545	0.55	0.55	-36626	10833	1668	40441	4612	1403	6014	No	11.04	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	7.44	426.52	-2739	-2281	1961	0.55	0.3579	-14811	13379	1341	40441	6917	1403	8320		4.24	Si
SLV 4	8.24	-809.86	-3912	-3257	756	0.44	0.204	0	0	0	40441	5534	1122	6656		8.8	Si
SLD 13	7.44	-318.31	-5584	-4650	-1171	0.55	0.55	-30195	16250	2503	40441	6917	1403	8320		7.1	Si
SLD 13	8.24	79.62	-4724	-3934	199	0.55	0.55	-25543	15525	2391	40441	6917	1403	8320		41.74	Si
SLV 1	7.44	452.92	-1680	-1399	1825	0.44	0.0163	0	0	0	40441	5534	1122	6656		3.65	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	8.24	-743.95	-2966	-2469	758	0.44	0.0724	0	0	0	40441	5534	1122	6656		8.78	Si
SLV 13	7.44	-617.1	-6736	-5609	-2427	0.55	0.55	-36423	16250	2503	40441	6917	1403	8320		3.43	Si
SLV 13	8.24	435.5	-5060	-4214	-24	0.55	0.55	-27361	15889	2447	40441	6917	1403	8320		347.5	Si
SLV 15	7.44	-651.26	-8006	-6666	-2305	0.55	0.55	-43286	16250	2503	40441	6917	1403	8320		3.61	Si
SLV 15	8.24	362.84	-6206	-5168	-24	0.55	0.55	-33555	16250	2503	40441	6917	1403	8320		349.96	Si
SLD 14	7.44	-314.98	-5494	-4575	-1165	0.55	0.55	-29707	16250	2503	40441	6917	1403	8320		7.14	Si
SLD 14	8.24	82.51	-4638	-3862	199	0.55	0.55	-25080	15433	2377	40441	6917	1403	8320		41.89	Si
SLV 16	7.44	-643.5	-7795	-6491	-2291	0.55	0.55	-42149	16250	2503	40441	6917	1403	8320		3.63	Si
SLV 16	8.24	369.59	-6006	-5002	-25	0.55	0.55	-32477	16250	2503	40441	6917	1403	8320		326.27	Si
SLV 14	7.44	-609.34	-6526	-5434	-2413	0.55	0.5449	-35286	16250	2479	40441	6917	1403	8320		3.45	Si
SLV 14	8.24	442.24	-4861	-4048	-26	0.55	0.55	-26283	15673	2414	40441	6917	1403	8320		324.14	Si
SLV 2	7.44	460.69	-1470	-1224	1839	0.44	0	0	0	0	40441	5534	1122	6656		3.62	Si
SLV 2	8.24	-737.2	-2766	-2303	756	0.44	0.0255	0	0	0	40441	5534	1122	6656		8.8	Si
SLV 3	7.44	418.76	-2949	-2456	1947	0.55	0.3991	-15947	13606	1520	40441	6917	1403	8320		4.27	Si
SLV 3	8.24	-816.6	-4111	-3423	758	0.44	0.2291	0	0	0	40441	5534	1122	6656		8.78	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.39	10119	-1558	57.06	203.72	3.57	Si
SLV 5	179667	0.39	10799	-1663	57.06	216.36	3.79	Si
SLV 2	179667	0.39	12492	-1924	57.06	247.3	4.33	Si
SLV 1	179667	0.39	13556	-2088	57.06	266.33	4.67	Si
SLV 10	179667	0.39	15062	-2320	57.06	292.72	5.13	Si
SLV 9	179667	0.39	15742	-2424	57.06	304.42	5.33	Si
SLV 4	179667	0.39	19633	-3024	57.06	368.89	6.46	Si
SLV 3	179667	0.39	20697	-3188	57.06	385.77	6.76	Si
SLV 14	179667	0.39	28969	-4461	57.06	506.11	8.87	Si
SLV 13	179667	0.39	30033	-4625	57.06	520.19	9.12	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-3992	-5391	-10	0.731	483	0.954	11.14543	13.42943	No
SLV 12	-3901	-5312	-10	0.746	473.7	0.953	11.37568	13.42943	No
SLV 7	-3603	-5374	-10	0.797	443.5	0.95	12.19534	13.42943	No
SLV 8	-3512	-5296	-10	0.815	434.2	0.949	12.4737	13.42943	No
SLV 15	-3545	-4277	-9	0.808	437.6	0.95	12.3748	7.08809	Si
SLV 16	-3402	-4155	-8	0.837	423	0.948	12.83029	7.08809	Si
SLV 9	-1345	-2091	-4	1.734	215.5	0.911	27.6678	13.42943	Si
SLV 10	-1253	-2012	-3	1.824	206.4	0.908	29.17628	13.42943	Si
SLV 13	-2751	-3287	-7	0.998	357	0.94	15.42648	7.08809	Si
SLV 14	-2607	-3165	-6	1.042	342.5	0.938	16.15088	7.08809	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.744	SLU 65	Si
V_SLU	10.858	SLU 84	Si
PF_SLV	0.872	SLV 2	No
V_SLV	3.428	SLV 13	Si
PFFP_SLV	3.57	SLV 6	Si
R_SLV	0.83	SLV 11	No

Maschio 143

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-3.183	-3.314	-5.463	-3.314	L5	L6	2.28	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	7.44	2197.48	-20685	-0.0000667	0.0003743	0.0035	2.28	16076.09	18283.28	18283.28	8.32	No	Si
SLU 80	8.24	1815.89	-18254	-0.0000573	0.0003743	0.0035	2.28	14965.19	16583.21	16583.21	9.13	No	Si
SLU 73	7.44	2157.36	-19686	-0.0000636	0.0003743	0.0035	2.28	15644.72	17576.57	17576.57	8.15	No	Si
SLU 73	8.24	1722.16	-17306	-0.000054	0.0003743	0.0035	2.28	14475.42	15935.82	15935.82	9.25	No	Si
SLU 75	7.44	2190.64	-20547	-0.0000662	0.0003743	0.0035	2.28	16018.74	18185.23	18185.23	8.3	No	Si
SLU 75	8.24	1796.62	-18119	-0.0000568	0.0003743	0.0035	2.28	14897.54	16490.6	16490.6	9.18	No	Si
SLU 78	7.44	2223.02	-20973	-0.0000677	0.0003743	0.0035	2.28	16193.86	18489.06	18489.06	8.32	No	Si
SLU 78	8.24	1839.47	-18526	-0.0000582	0.0003743	0.0035	2.28	15099.52	16770.16	16770.16	9.12	No	Si
SLU 68	7.44	2018.21	-18238	-0.0000586	0.0003743	0.0035	2.28	14957.2	16572.21	16572.21	8.21	No	Si
SLU 68	8.24	1510.65	-15887	-0.0000488	0.0003743	0.0035	2.28	13683.87	14987.16	14987.16	9.92	No	Si
SLU 82	7.44	2206.23	-20637	-0.0000666	0.0003743	0.0035	2.28	16056.26	18249.22	18249.22	8.27	No	Si
SLU 82	8.24	1839.19	-18224	-0.0000573	0.0003743	0.0035	2.28	14950.11	16562.47	16562.47	9.01	No	Si
SLU 76	7.44	2189.75	-20112	-0.0000065	0.0003743	0.0035	2.28	15832.69	17876.07	17876.07	8.16	No	Si
SLU 76	8.24	1765.01	-17712	-0.0000554	0.0003743	0.0035	2.28	14689	16211.73	16211.73	9.19	No	Si
SLU 52	7.44	1923.13	-17503	-0.0000559	0.0003743	0.0035	2.28	14579.88	16069.58	16069.58	8.36	No	Si
SLU 52	8.24	1531.83	-15247	-0.0000472	0.0003743	0.0035	2.28	13303.82	14565.56	14565.56	9.51	No	Si
SLU 65	7.44	1985.83	-17813	-0.0000572	0.0003743	0.0035	2.28	14741.28	16280.73	16280.73	8.2	No	Si
SLU 65	8.24	1467.8	-15480	-0.0000474	0.0003743	0.0035	2.28	13444.29	14719.02	14719.02	10.03	No	Si
SLU 84	7.44	2238.61	-21063	-0.000068	0.0003743	0.0035	2.28	16230.03	18553.5	18553.5	8.29	No	Si
SLU 84	8.24	1882.04	-18630	-0.0000588	0.0003743	0.0035	2.28	15150.6	16842.19	16842.19	8.95	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 14	7.44	988.07	-12208	-0.0000351	0.0005615	0.0035	2.28		12664.99	12664.99	12.82		Si
SLD 14	8.24	2491.93	-11190	-0.0000421	0.0005615	0.0035	2.28		11812.9	11812.9	4.74		Si
SLV 6	7.44	1484.73	-6241	-0.0000237	0.0005615	0.0035	2.28		7046.15	7046.15	4.75		Si
SLV 6	8.24	-281.72	-4745	-0.0000128	0.0005615	0.0035	2.28		6523.02	6523.02	23.15		Si
SLV 5	7.44	1510.67	-6627	-0.0000248	0.0005615	0.0035	2.28		7442.84	7442.84	4.93		Si
SLV 5	8.24	-217.19	-5104	-0.0000132	0.0005615	0.0035	2.28		6893.04	6893.04	31.74		Si
SLV 14	7.44	338.1	-9820	-0.0000252	0.0005615	0.0035	2.28		10625.32	10625.32	31.43		Si
SLV 14	8.24	4259.48	-9845	-0.0000503	0.0005615	0.0035	2.28		10650.06	10650.06	2.5		Si
SLD 13	7.44	1005.5	-12467	-0.0000359	0.0005615	0.0035	2.28		12883.02	12883.02	12.81		Si
SLD 13	8.24	2535.31	-11430	-0.000043	0.0005615	0.0035	2.28		12013.69	12013.69	4.74		Si
SLV 13	7.44	378.71	-10424	-0.0000269	0.0005615	0.0035	2.28		11174.77	11174.77	29.51		Si
SLV 13	8.24	4360.53	-10407	-0.0000522	0.0005615	0.0035	2.28		11160.06	11160.06	2.56		Si
SLV 16	7.44	511.91	-14656	-0.0000382	0.0005615	0.0035	2.28		14743.65	14743.65	28.8		Si
SLV 16	8.24	4526.12	-14221	-0.0000628	0.0005615	0.0035	2.28		14370.93	14370.93	3.18		Si
SLV 10	7.44	865.31	-5340	-0.0000177	0.0005615	0.0035	2.28		6111.19	6111.19	7.06		Si
SLV 10	8.24	1679.07	-4790	-0.0000214	0.0005615	0.0035	2.28		5535.66	5535.66	3.3		Si
SLV 9	7.44	891.25	-5725	-0.0000188	0.0005615	0.0035	2.28		6512.13	6512.13	7.31		Si
SLV 9	8.24	1743.6	-5149	-0.0000227	0.0005615	0.0035	2.28		5911.41	5911.41	3.39		Si
SLV 15	7.44	552.52	-15259	-0.0000399	0.0005615	0.0035	2.28		15263.37	15263.37	27.62		Si
SLV 15	8.24	4627.17	-14782	-0.000065	0.0005615	0.0035	2.28		14852.2	14852.2	3.21		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 70	7.44	2051.48	-19099	-15904	2069	2.28	2.28	-24913	10266	6554	40441	19116	5814	24930	No	12.05	Si
SLU 70	8.24	1585.11	-16700	-13907	1610	2.28	2.28	-21784	9849	6288	40441	19116	5814	24930	No	15.49	Si
SLU 72	7.44	2025.94	-18812	-15665	2042	2.28	2.28	-24538	10216	6522	40441	19116	5814	24930	No	12.21	Si
SLU 72	8.24	1561.53	-16429	-13681	1592	2.28	2.28	-21430	9802	6257	40441	19116	5814	24930	No	15.66	Si
SLU 75	7.44	2190.64	-20547	-17110	2017	2.28	2.28	-26802	10518	6715	40441	19116	5814	24930	No	12.36	Si
SLU 75	8.24	1796.62	-18119	-15088	1582	2.28	2.28	-23635	10096	6445	40441	19116	5814	24930	No	15.76	Si
SLU 76	7.44	2189.75	-20112	-16747	2013	2.28	2.28	-26233	10442	6666	40441	19116	5814	24930	No	12.39	Si
SLU 76	8.24	1765.01	-17712	-14749	1595	2.28	2.28	-23103	10025	6400	40441	19116	5814	24930	No	15.63	Si
SLU 78	7.44	2223.02	-20973	-17464	2032	2.28	2.28	-27357	10592	6762	40441	19116	5814	24930	No	12.27	Si
SLU 78	8.24	1839.47	-18526	-15427	1589	2.28	2.28	-24165	10166	6490	40441	19116	5814	24930	No	15.69	Si
SLU 68	7.44	2018.21	-18238	-15187	2050	2.28	2.28	-23790	10116	6458	40441	19116	5814	24930	No	12.16	Si
SLU 68	8.24	1510.65	-15887	-13229	1615	2.28	2.28	-20722	9707	6197	40441	19116	5814	24930	No	15.44	Si
SLU 69	7.44	2014.5	-19322	-16089	2035	2.28	2.28	-25203	10305	6579	40441	19116	5814	24930	No	12.25	Si
SLU 69	8.24	1597.14	-16905	-14077	1564	2.28	2.28	-22050	9885	6310	40441	19116	5814	24930	No	15.94	Si
SLU 65	7.44	1985.83	-17813	-14833	2035	2.28	2.28	-23235	10042	6411	40441	19116	5814	24930	No	12.25	Si
SLU 65	8.24	1467.8	-15480	-12891	1608	2.28	2.28	-20192	9637	6152	40441	19116	5814	24930	No	15.51	Si
SLU 66	7.44	1982.12	-18896	-15735	2020	2.28	2.28	-24648	10231	6531	40441	19116	5814	24930	No	12.34	Si
SLU 66	8.24	1554.29	-16499	-13739	1557	2.28	2.28	-21521	9814	6265	40441	19116	5814	24930	No	16.02	Si
SLU 67	7.44	2019.1	-18674	-15550	2054	2.28	2.28	-24358	10192	6507	40441	19116	5814	24930	No	12.14	Si
SLU 67	8.24	1542.26	-16294	-13568	1602	2.28	2.28	-21254	9778	6242	40441	19116	5814	24930	No	15.56	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	7.44	511.91	-14656	-12204	-6061	2.28	2.28	-19117	14240	9091	40441	28675	5814	34489		5.69	Si
SLV 16	8.24	4526.12	-14221	-11842	-4822	2.28	2.28	-18549	14127	9018	40441	28675	5814	34489		7.15	Si
SLV 4	7.44	2576.65	-17661	-14707	9605	2.28	2.28	-23037	15024	9591	40441	28675	5814	34489		3.59	Si
SLV 4	8.24	-2009.85	-14071	-11717	7269	2.28	2.28	-18354	14088	8993	40441	28675	5814	34489		4.74	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	7.44	552.52	-15259	-12707	-6070	2.28	2.28	-19904	14398	9191	40441	28675	5814	34489		5.68	Si
SLV 15	8.24	4627.17	-14782	-12309	-4869	2.28	2.28	-19281	14273	9112	40441	28675	5814	34489		7.08	Si
SLD 3	7.44	1967.29	-15877	-13221	4944	2.28	2.28	-20710	14559	9294	40441	28675	5814	34489		6.98	Si
SLD 3	8.24	-141.25	-13288	-11065	3740	2.28	2.28	-17333	13883	8863	40441	28675	5814	34489		9.22	Si
SLV 14	7.44	338.1	-9820	-8177	-6670	2.28	2.28	-12809	12979	8285	40441	28675	5814	34489		5.17	Si
SLV 14	8.24	4259.48	-9845	-8198	-4952	2.28	2.1221	-12842	12985	7716	40441	28675	5814	34489		6.96	Si
SLD 4	7.44	1949.86	-15618	-13005	4948	2.28	2.28	-20371	14491	9251	40441	28675	5814	34489		6.97	Si
SLD 4	8.24	-184.63	-13048	-10865	3760	2.28	2.28	-17019	13820	8823	40441	28675	5814	34489		9.17	Si
SLV 3	7.44	2617.26	-18265	-15210	9595	2.28	2.28	-23825	15182	9692	40441	28675	5814	34489		3.59	Si
SLV 3	8.24	-1908.79	-14632	-12185	7222	2.28	2.28	-19086	14234	9087	40441	28675	5814	34489		4.78	Si
SLV 1	7.44	2443.44	-13429	-11183	8985	2.28	2.28	-17517	13920	8887	40441	28675	5814	34489		3.84	Si
SLV 1	8.24	-2175.44	-10257	-8541	7091	2.28	2.28	-13379	13093	8358	40441	28675	5814	34489		4.86	Si
SLV 2	7.44	2402.83	-12826	-10680	8995	2.28	2.28	-16730	13763	8786	40441	28675	5814	34489		3.83	Si
SLV 2	8.24	-2276.49	-9696	-8074	7138	2.28	2.28	-12647	12946	8265	40441	28675	5814	34489		4.83	Si
SLV 13	7.44	378.71	-10424	-8680	-6680	2.28	2.28	-13597	13136	8386	40441	28675	5814	34489		5.16	Si
SLV 13	8.24	4360.53	-10407	-8666	-4999	2.28	2.1629	-13574	13132	7953	40441	28675	5814	34489		6.9	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.39	8144	-5199	236.54	689.02	2.91	Si
SLV 10	179667	0.39	8352	-5332	236.54	705.63	2.98	Si
SLV 5	179667	0.39	8705	-5557	236.54	733.69	3.1	Si
SLV 9	179667	0.39	8914	-5690	236.54	750.16	3.17	Si
SLV 2	179667	0.39	15861	-10125	236.54	1270.33	5.37	Si
SLV 14	179667	0.39	16555	-10569	236.54	1319.21	5.58	Si
SLV 1	179667	0.39	16740	-10687	236.54	1332.17	5.63	Si
SLV 13	179667	0.39	17435	-11130	236.54	1380.34	5.84	Si
SLV 4	179667	0.39	22820	-14568	236.54	1734.77	7.33	Si
SLV 16	179667	0.39	23514	-15011	236.54	1778	7.52	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-15742	-17883	529	0.735	1920.1	0.952	11.22801	13.42943	No
SLV 11	-15678	-18474	489	0.74	1913.6	0.952	11.30235	13.42943	No
SLV 8	-15466	-17639	528	0.746	1892.1	0.951	11.40321	13.42943	No
SLV 12	-15402	-18230	489	0.751	1885.6	0.951	11.47944	13.42943	No
SLV 3	-11923	-12848	221	0.948	1532.7	0.942	14.63304	7.08809	Si
SLV 15	-11709	-14818	88	0.972	1511.1	0.941	15.01079	7.08809	Si
SLV 4	-11490	-12466	221	0.977	1488.9	0.94	15.1048	7.08809	Si
SLV 16	-11277	-14436	88	1.002	1467.3	0.939	15.50319	7.08809	Si
SLV 5	-4394	-5271	-484	1.973	776.4	0.903	31.76821	13.42943	Si
SLV 9	-4330	-5861	-523	1.986	770.1	0.902	31.99789	13.42943	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.147	SLU 73	Si
V_SLU	12.049	SLU 70	Si
PF_SLV	2.5	SLV 14	Si
V_SLV	3.591	SLV 4	Si
PFFP_SLV	2.913	SLV 6	Si
R_SLV	0.836	SLV 7	No

Maschio 144

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.314	-2.283	-3.314	L5	L6	2.15	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 19	6.34	70.93	-8842	-0.0000228	0.0003743	0.0035	2.15	8133.62	8491.24	8491.24	119.71	No	Si
SLU 19	8.14	1469.16	-9427	-0.0000344	0.0003743	0.0035	2.15	8575.06	8965.15	8965.15	6.1	No	Si
SLU 39	6.34	110.19	-10231	-0.0000267	0.0003743	0.0035	2.15	9162.28	9625.77	9625.77	87.36	No	Si
SLU 39	8.14	1684.93	-11101	-0.0000405	0.0003743	0.0035	2.15	9772.51	10354.03	10354.03	6.15	No	Si
SLU 21	6.34	81.43	-9112	-0.0000236	0.0003743	0.0035	2.15	8339.04	8709.46	8709.46	106.95	No	Si
SLU 21	8.14	1503.48	-9733	-0.0000355	0.0003743	0.0035	2.15	8801.23	9215.32	9215.32	6.13	No	Si
SLU 84	6.34	164.47	-12207	-0.0000324	0.0003743	0.0035	2.15	10508.91	11297.34	11297.34	68.69	No	Si
SLU 84	8.14	1953.11	-12984	-0.0000477	0.0003743	0.0035	2.15	11000.8	11969.71	11969.71	6.13	No	Si
SLU 40	6.34	54.52	-10053	-0.0000259	0.0003743	0.0035	2.15	9034.76	9479.2	9479.2	173.86	No	Si
SLU 40	8.14	1691.25	-10949	-0.0000402	0.0003743	0.0035	2.15	9667.42	10225.4	10225.4	6.05	No	Si
SLU 63	6.34	180.88	-10995	-0.0000293	0.0003743	0.0035	2.15	9699.31	10264.29	10264.29	56.75	No	Si
SLU 63	8.14	1731.03	-11461	-0.0000419	0.0003743	0.0035	2.15	10017.11	10658.82	10658.82	6.16	No	Si
SLU 61	6.34	170.38	-10725	-0.0000285	0.0003743	0.0035	2.15	9511.74	10037.34	10037.34	58.91	No	Si
SLU 61	8.14	1696.71	-11155	-0.0000408	0.0003743	0.0035	2.15	9809.5	10399.64	10399.64	6.13	No	Si
SLU 82	6.34	153.97	-11936	-0.0000316	0.0003743	0.0035	2.15	10332.83	11064.42	11064.42	71.86	No	Si
SLU 82	8.14	1918.8	-12678	-0.0000466	0.0003743	0.0035	2.15	10809.55	11704.35	11704.35	6.1	No	Si
SLU 31	6.34	73.25	-9528	-0.0000246	0.0003743	0.0035	2.15	8650.52	9048.04	9048.04	123.52	No	Si
SLU 31	8.14	1560.29	-10224	-0.0000372	0.0003743	0.0035	2.15	9157.4	9620.13	9620.13	6.17	No	Si
SLU 42	6.34	65.02	-10324	-0.0000267	0.0003743	0.0035	2.15	9228.69	9702.81	9702.81	149.22	No	Si
SLU 42	8.14	1725.56	-11255	-0.0000413	0.0003743	0.0035	2.15	9877.24	10483.59	10483.59	6.08	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	6.34	2640.94	-6009	-0.0000337	0.0005615	0.0035	2.15		6375.83	6375.83	2.41		Si
SLV 2	8.14	-2176.16	-2587	-0.000039	0.0005615	0.0035	1.72		4002.81	4002.81	1.84		Si
SLD 9	6.34	-102.47	-3577	-0.0000095	0.0005615	0.0035	2.15		5004.9	5004.9	48.84		Si
SLD 9	8.14	1912.97	-4246	-0.0000241	0.0005615	0.0035	2.15		4642.26	4642.26	2.43		Si
SLV 10	6.34	-584.7	3036	0.218578	0.0005615	0.0035	1.72		0	0	0		No
SLV 10	8.14	2874.19	1711	0.0841134	0.0005615	0.0035	1.72		0	0	0		No
SLV 13	6.34	-2185.46	-4201	-0.0000269	0.0005615	0.0035	2.15		5626.88	5626.88	2.57		Si
SLV 13	8.14	4903.57	-7935	-0.0000634	0.0005615	0.0035	2.15		8211.07	8211.07	1.67		Si
SLV 1	6.34	2615.26	-6997	-0.0000356	0.0005615	0.0035	2.15		7325.35	7325.35	2.8		Si
SLV 1	8.14	-2148.24	-3783	-0.0000265	0.0005615	0.0035	2.15		5211.73	5211.73	2.43		Si
SLV 5	6.34	839.12	1566	0.1061062	0.0005615	0.0035	1.72		0	0	0		No
SLV 5	8.14	776.48	2193	0.1516494	0.0005615	0.0035	1.72		0	0	0		No
SLV 9	6.34	-601.1	2405	0.1736644	0.0005615	0.0035	1.72		0	0	0		No
SLV 9	8.14	2892.02	948	0.0049547	0.0005615	0.0035	1.72		0	0	0		No
SLD 10	6.34	-95.31	-3302	-0.0000088	0.0005615	0.0035	2.15		4726.92	4726.92	49.59		Si
SLD 10	8.14	1905.19	-3913	-0.0000236	0.0005615	0.0035	2.15		4308.05	4308.05	2.26		Si
SLV 6	6.34	855.52	2197	0.1513706	0.0005615	0.0035	1.72		0	0	0		No
SLV 6	8.14	758.65	2957	0.2063446	0.0005615	0.0035	1.72		0	0	0		No
SLV 14	6.34	-2159.78	-3213	-0.0000283	0.0005615	0.0035	1.72		4638	4638	2.15		Si
SLV 14	8.14	4875.65	-6739	-0.0000703	0.0005615	0.0035	2.15		7079.39	7079.39	1.45		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	6.34	183.2	-11682	-9727	-2730	2.15	2.15	-16158	9099	5478	40441	18027	5483	23509	No	8.61	Si
SLU 76	8.14	1822.16	-12259	-10208	-2712	2.15	2.15	-16957	9205	5542	40441	18027	5483	23509	No	8.67	Si
SLU 83	6.34	220.14	-12384	-10312	-2873	2.15	2.15	-17130	9228	5556	40441	18027	5483	23509	No	8.18	Si
SLU 83	8.14	1946.8	-13136	-10939	-2874	2.15	2.15	-18171	9367	5639	40441	18027	5483	23509	No	8.18	Si
SLU 73	6.34	172.7	-11411	-9502	-2695	2.15	2.15	-15784	9049	5448	40441	18027	5483	23509	No	8.72	Si
SLU 73	8.14	1787.84	-11953	-9953	-2677	2.15	2.15	-16533	9149	5508	40441	18027	5483	23509	No	8.78	Si
SLU 78	6.34	243.04	-12261	-10210	-2730	2.15	2.15	-16960	9206	5542	40441	18027	5483	23509	No	8.61	Si
SLU 78	8.14	1865.02	-12861	-10709	-2719	2.15	2.15	-17789	9316	5608	40441	18027	5483	23509	No	8.65	Si
SLU 75	6.34	232.54	-11991	-9985	-2695	2.15	2.15	-16586	9156	5512	40441	18027	5483	23509	No	8.72	Si
SLU 75	8.14	1830.7	-12554	-10454	-2685	2.15	2.15	-17366	9260	5574	40441	18027	5483	23509	No	8.76	Si
SLU 80	6.34	230.82	-12070	-10051	-2728	2.15	2.15	-16696	9171	5521	40441	18027	5483	23509	No	8.62	Si
SLU 80	8.14	1852.26	-12667	-10548	-2717	2.15	2.15	-17521	9281	5587	40441	18027	5483	23509	No	8.65	Si
SLU 81	6.34	209.64	-12114	-10087	-2839	2.15	2.15	-16756	9179	5526	40441	18027	5483	23509	No	8.28	Si
SLU 81	8.14	1912.48	-12830	-10684	-2839	2.15	2.15	-17747	9311	5605	40441	18027	5483	23509	No	8.28	Si
SLU 84	6.34	164.47	-12207	-10165	-2928	2.15	2.15	-16885	9196	5536	40441	18027	5483	23509	No	8.03	Si
SLU 84	8.14	1953.11	-12984	-10812	-2918	2.15	2.15	-17959	9339	5622	40441	18027	5483	23509	No	8.06	Si
SLU 77	6.34	298.71	-12438	-10358	-2675	2.15	2.15	-17205	9238	5562	40441	18027	5483	23509	No	8.79	Si
SLU 77	8.14	1858.7	-13013	-10836	-2675	2.15	2.15	-18000	9344	5625	40441	18027	5483	23509	No	8.79	Si
SLU 82	6.34	153.97	-11936	-9940	-2894	2.15	2.15	-16511	9146	5506	40441	18027	5483	23509	No	8.12	Si
SLU 82	8.14	1918.8	-12678	-10557	-2883	2.15	2.15	-17536	9283	5588	40441	18027	5483	23509	No	8.15	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	6.34	-2159.78	-3213	-2676	-7377	1.72	1.2087	0	0	0	40441	21632	4386	26018		3.53	Si
SLV 14	8.14	4875.65	-6739	-5612	-6534	2.15	1.0547	-9322	12281	3627	40441	27040	5483	32523		4.98	Si
SLV 4	6.34	2727.11	-12358	-10291	4204	2.15	2.15	-17094	13835	8329	40441	27040	5483	32523		7.74	Si
SLV 4	8.14	-2571.84	-8770	-7303	3360	2.15	2.15	-12132	12843	7732	40441	27040	5483	32523		9.68	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	6.34	-2073.61	-9562	-7962	-7219	2.15	2.15	-13226	13062	7863	40441	27040	5483	32523		4.51	Si
SLV 16	8.14	4479.97	-12922	-10761	-6659	2.15	2.15	-17875	13992	8423	40441	27040	5483	32523		4.88	Si
SLV 13	6.34	-2185.46	-4201	-3499	-7531	2.15	1.6645	-7528	11922	5557	40441	27040	5483	32523		4.32	Si
SLV 13	8.14	4903.57	-7935	-6608	-6688	2.15	1.3711	-10976	12612	4842	40441	27040	5483	32523		4.86	Si
SLD 14	6.34	-768.14	-6073	-5057	-4108	2.15	2.15	-8401	12097	7282	40441	27040	5483	32523		7.92	Si
SLD 14	8.14	2755.04	-7625	-6349	-3747	2.15	2.141	-10547	12526	7509	40441	27040	5483	32523		8.68	Si
SLV 15	6.34	-2099.29	-10550	-8785	-7373	2.15	2.15	-14593	13335	8028	40441	27040	5483	32523		4.41	Si
SLV 15	8.14	4507.89	-14118	-11756	-6813	2.15	2.15	-19529	14322	8622	40441	27040	5483	32523		4.77	Si
SLD 13	6.34	-779.16	-6497	-5411	-4174	2.15	2.15	-8988	12214	7353	40441	27040	5483	32523		7.79	Si
SLD 13	8.14	2767.02	-8138	-6776	-3813	2.15	2.15	-11256	12668	7626	40441	27040	5483	32523		8.53	Si
SLV 9	6.34	-601.1	2405	2003	-3690	1.72	2.15	0	0	0	40441	21632	4386	26018		7.05	Si
SLV 9	8.14	2892.02	948	789	-3008	1.72	0	0	0	0	40441	21632	4386	26018		8.65	Si
SLV 10	6.34	-584.7	3036	2528	-3592	1.72	2.15	0	0	0	40441	21632	4386	26018		7.24	Si
SLV 10	8.14	2874.19	1711	1425	-2910	1.72	0	0	0	0	40441	21632	4386	26018		8.94	Si
SLV 2	6.34	2640.94	-6009	-5004	4045	2.15	1.9066	-8312	12079	6449	40441	27040	5483	32523		8.04	Si
SLV 2	8.14	-2176.16	-2587	-2155	3485	1.72	0.7018	0	0	0	40441	21632	4386	26018		7.47	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.39	0	1253	223.06	0	0	No, Trazione
SLV 10	179667	0.39	0	1963	223.06	0	0	No, Trazione
SLV 6	179667	0.39	0	2503	223.06	0	0	No, Trazione
SLV 5	179667	0.39	0	1793	223.06	0	0	No, Trazione
SLV 2	179667	0.39	6638	-3996	223.06	535.11	2.4	Si
SLV 1	179667	0.39	8486	-5108	223.06	675.43	3.03	Si
SLV 14	179667	0.39	9627	-5796	223.06	760.22	3.41	Si
SLV 13	179667	0.39	11475	-6908	223.06	894.45	4.01	Si
SLV 4	179667	0.39	17074	-10279	223.06	1278.12	5.73	Si
SLV 3	179667	0.39	18922	-11391	223.06	1397.16	6.26	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-17287	-18335	390	0.653	2058.9	0.957	9.90904	13.42943	No
SLV 7	-17000	-17558	254	0.669	2029.7	0.957	10.16543	13.42943	No
SLV 12	-16533	-17758	390	0.678	1982.2	0.956	10.30532	13.42943	No
SLV 8	-16245	-16980	254	0.695	1953	0.955	10.57923	13.42943	No
SLV 15	-11013	-12818	322	0.955	1422	0.941	14.75948	7.08809	Si
SLV 3	-10055	-10227	-131	1.045	1325	0.937	16.20136	7.08809	Si
SLV 16	-9832	-11914	322	1.048	1302.5	0.936	16.25983	7.08809	Si
SLV 4	-8874	-9323	-130	1.155	1205.6	0.932	18.00656	7.08809	Si
SLV 13	-5165	-7172	128	1.74	833.3	0.91	27.77901	7.08809	Si
SLV 1	-4207	-4581	-325	1.974	738.4	0.903	31.7736	7.08809	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.046	SLU 40	Si
V_SLU	8.028	SLU 84	Si
PF_SLV	0	SLV 5	No
V_SLV	3.527	SLV 14	Si
PFFP_SLV	0	SLV 10	No
R_SLV	0.738	SLV 11	No

Maschio 145

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-2.963	5.826	-5.093	5.826	L5	L6	2.13	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 45	6.34	623.67	-14038	-0.0000412	0.0003743	0.0035	2.13	11493.85	12554.53	12554.53	20.13	No	Si
SLU 45	8.14	-2163.33	-14177	-0.0000534	0.0003743	0.0035	2.13	11573.32	13834.42	13834.42	6.39	No	Si
SLU 47	6.34	634.18	-13917	-0.000041	0.0003743	0.0035	2.13	11424.55	12480.23	12480.23	19.68	No	Si
SLU 47	8.14	-2180.47	-14067	-0.0000532	0.0003743	0.0035	2.13	11510.33	13755.53	13755.53	6.31	No	Si
SLU 44	6.34	648.3	-13521	-0.00004	0.0003743	0.0035	2.13	11193.34	12236.38	12236.38	18.87	No	Si
SLU 44	8.14	-2132.7	-13613	-0.0000515	0.0003743	0.0035	2.13	11247.47	13434.39	13434.39	6.3	No	Si
SLU 49	6.34	610.16	-14499	-0.0000424	0.0003743	0.0035	2.13	11754.26	12840.39	12840.39	21.04	No	Si
SLU 49	8.14	-2219.64	-14699	-0.0000553	0.0003743	0.0035	2.13	11864.52	14209.51	14209.51	6.4	No	Si
SLU 59	6.34	611.72	-15669	-0.0000457	0.0003743	0.0035	2.13	12381.01	13576.26	13576.26	22.19	No	Si
SLU 59	8.14	-2316.92	-16085	-0.0000602	0.0003743	0.0035	2.13	12592.47	15157.3	15157.3	6.54	No	Si
SLU 50	6.34	619.03	-14205	-0.0000417	0.0003743	0.0035	2.13	11588.83	12657.56	12657.56	20.45	No	Si
SLU 50	8.14	-2214	-14407	-0.0000545	0.0003743	0.0035	2.13	11702.98	13999.27	13999.27	6.32	No	Si
SLU 48	6.34	609.55	-14434	-0.0000422	0.0003743	0.0035	2.13	11717.88	12799.8	12799.8	21	No	Si
SLU 48	8.14	-2211.1	-14631	-0.0000551	0.0003743	0.0035	2.13	11827.2	14160.45	14160.45	6.4	No	Si
SLU 43	6.34	647.27	-13412	-0.0000397	0.0003743	0.0035	2.13	11128.89	12166.15	12166.15	18.8	No	Si
SLU 43	8.14	-2118.46	-13500	-0.0000511	0.0003743	0.0035	2.13	11180.88	13355.02	13355.02	6.3	No	Si
SLU 46	6.34	624.29	-14103	-0.0000414	0.0003743	0.0035	2.13	11531.13	12594.81	12594.81	20.17	No	Si
SLU 46	8.14	-2171.87	-14245	-0.0000537	0.0003743	0.0035	2.13	11611.72	13882.89	13882.89	6.39	No	Si
SLU 51	6.34	619.64	-14270	-0.0000419	0.0003743	0.0035	2.13	11625.74	12697.97	12697.97	20.49	No	Si
SLU 51	8.14	-2222.54	-14475	-0.0000547	0.0003743	0.0035	2.13	11740.83	14048.04	14048.04	6.32	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 4	6.34	1003.84	-9361	-0.0000308	0.0005615	0.0035	2.13		9406.6	9406.6	9.37		Si
SLD 4	8.14	-3320.67	-10444	-0.0000504	0.0005615	0.0035	2.13		11402.75	11402.75	3.43		Si
SLV 3	6.34	1728.63	-5588	-0.0000261	0.0005615	0.0035	2.13		5904.43	5904.43	3.42		Si
SLV 3	8.14	-5444.63	-7668	-0.0000796	0.0005615	0.0035	1.704		8880.96	8880.96	1.63		Si
SLV 4	6.34	1690.95	-6383	-0.0000279	0.0005615	0.0035	2.13		6666.48	6666.48	3.94		Si
SLV 4	8.14	-5469.48	-8581	-0.0000737	0.0005615	0.0035	1.704		9731.72	9731.72	1.78		Si
SLD 2	6.34	1012.67	-11220	-0.0000357	0.0005615	0.0035	2.13		10866.48	10866.48	10.73		Si
SLD 2	8.14	-3563.58	-12138	-0.0000568	0.0005615	0.0035	2.13		12867.44	12867.44	3.61		Si
SLD 1	6.34	1028.84	-10879	-0.0000349	0.0005615	0.0035	2.13		10596.66	10596.66	10.3		Si
SLD 1	8.14	-3552.91	-11746	-0.0000557	0.0005615	0.0035	2.13		12532.11	12532.11	3.53		Si
SLV 2	6.34	1712.76	-10609	-0.0000392	0.0005615	0.0035	2.13		10384.02	10384.02	6.06		Si
SLV 2	8.14	-6021.64	-12431	-0.0000791	0.0005615	0.0035	2.13		13119.49	13119.49	2.18		Si
SLD 3	6.34	1020.02	-9020	-0.00003	0.0005615	0.0035	2.13		9116.73	9116.73	8.94		Si
SLD 3	8.14	-3310	-10052	-0.0000493	0.0005615	0.0035	2.13		11049.4	11049.4	3.34		Si
SLV 1	6.34	1750.45	-9814	-0.0000373	0.0005615	0.0035	2.13		9760.21	9760.21	5.58		Si
SLV 1	8.14	-5996.79	-11518	-0.0000781	0.0005615	0.0035	2.13		12337.35	12337.35	2.06		Si
SLV 8	6.34	810.8	-3780	-0.0000151	0.0005615	0.0035	2.13		4130.15	4130.15	5.09		Si
SLV 8	8.14	-2012.3	-5200	-0.0000272	0.0005615	0.0035	2.13		6539.91	6539.91	3.25		Si
SLV 7	6.34	834.87	-3272	-0.0000139	0.0005615	0.0035	2.13		3623.7	3623.7	4.34		Si
SLV 7	8.14	-1996.43	-4617	-0.0000259	0.0005615	0.0035	2.13		5978.6	5978.6	2.99		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	6.34	591.31	-17492	-14566	3612	2.13	2.13	-24424	10201	6084	40441	17859	5431	23290	No	6.45	Si
SLU 77	8.14	-2422.74	-18112	-15082	3615	2.13	2.13	-25288	10316	6153	40441	17859	5431	23290	No	6.44	Si
SLU 84	6.34	612.13	-17532	-14599	3651	2.13	2.13	-24478	10208	6088	40441	17859	5431	23290	No	6.38	Si
SLU 84	8.14	-2426.86	-18192	-15149	3655	2.13	2.13	-25401	10331	6161	40441	17859	5431	23290	No	6.37	Si
SLU 76	6.34	615.94	-16976	-14136	3578	2.13	2.13	-23702	10105	6026	40441	17859	5431	23290	No	6.51	Si
SLU 76	8.14	-2392.11	-17547	-14612	3582	2.13	2.13	-24501	10211	6090	40441	17859	5431	23290	No	6.5	Si
SLU 80	6.34	601.4	-17328	-14429	3629	2.13	2.13	-24194	10170	6066	40441	17859	5431	23290	No	6.42	Si
SLU 80	8.14	-2434.19	-17956	-14952	3632	2.13	2.13	-25071	10287	6135	40441	17859	5431	23290	No	6.41	Si
SLU 78	6.34	591.92	-17558	-14620	3619	2.13	2.13	-24515	10213	6091	40441	17859	5431	23290	No	6.44	Si
SLU 78	8.14	-2431.28	-18179	-15138	3622	2.13	2.13	-25383	10329	6160	40441	17859	5431	23290	No	6.43	Si
SLU 75	6.34	606.05	-17161	-14291	3563	2.13	2.13	-23962	10139	6047	40441	17859	5431	23290	No	6.54	Si
SLU 75	8.14	-2383.51	-17726	-14761	3567	2.13	2.13	-24750	10244	6110	40441	17859	5431	23290	No	6.53	Si
SLU 79	6.34	600.79	-17263	-14375	3622	2.13	2.13	-24103	10158	6058	40441	17859	5431	23290	No	6.43	Si
SLU 79	8.14	-2425.64	-17888	-14896	3626	2.13	2.13	-24976	10275	6128	40441	17859	5431	23290	No	6.42	Si
SLU 82	6.34	626.25	-17136	-14269	3596	2.13	2.13	-23925	10135	6044	40441	17859	5431	23290	No	6.48	Si
SLU 82	8.14	-2379.1	-17739	-14771	3600	2.13	2.13	-24768	10247	6111	40441	17859	5431	23290	No	6.47	Si
SLU 83	6.34	611.51	-17466	-14544	3644	2.13	2.13	-24387	10196	6081	40441	17859	5431	23290	No	6.39	Si
SLU 83	8.14	-2418.32	-18124	-15093	3648	2.13	2.13	-25306	10319	6154	40441	17859	5431	23290	No	6.38	Si
SLU 81	6.34	625.64	-17070	-14215	3589	2.13	2.13	-23834	10122	6037	40441	17859	5431	23290	No	6.49	Si
SLU 81	8.14	-2370.55	-17671	-14715	3593	2.13	2.13	-24673	10234	6104	40441	17859	5431	23290	No	6.48	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	6.34	1712.76	-10609	-8834	7058	2.13	2.13	-14813	13379	7979	40441	26788	5431	32219		4.56	Si
SLV 2	8.14	-6021.64	-12431	-10351	6535	2.13	1.7417	-21453	14707	7173	40441	26788	5431	32219		4.93	Si
SLD 1	6.34	1028.84	-10879	-9059	4459	2.13	2.13	-15189	13455	8024	40441	26788	5431	32219		7.23	Si
SLD 1	8.14	-3552.91	-11746	-9781	4238	2.13	2.13	-16401	13697	8169	40441	26788	5431	32219		7.6	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	6.34	1750.45	-9814	-8173	6990	2.13	2.13	-13703	13157	7847	40441	26788	5431	32219		4.61	Si
SLV 1	8.14	-5996.79	-11518	-9591	6467	2.13	1.633	-21186	14654	6700	40441	26788	5431	32219		4.98	Si
SLV 3	6.34	1728.63	-5588	-4653	6828	2.13	2.13	-7802	11977	7143	40441	26788	5431	32219		4.72	Si
SLV 3	8.14	-5444.63	-7668	-6385	6222	1.704	1.0647	0	0	0	40441	21430	4345	25776		4.14	Si
SLD 3	6.34	1020.02	-9020	-7511	4388	2.13	2.13	-12594	12936	7715	40441	26788	5431	32219		7.34	Si
SLD 3	8.14	-3310	-10052	-8370	4131	2.13	2.13	-14035	13224	7887	40441	26788	5431	32219		7.8	Si
SLD 2	6.34	1012.67	-11220	-9343	4488	2.13	2.13	-15665	13550	8081	40441	26788	5431	32219		7.18	Si
SLD 2	8.14	-3563.58	-12138	-10108	4267	2.13	2.13	-16948	13806	8234	40441	26788	5431	32219		7.55	Si
SLV 5	6.34	907.58	-17360	-14456	4129	2.13	2.13	-24238	15264	9104	40441	26788	5431	32219		7.8	Si
SLV 5	8.14	-3836.96	-17451	-14532	4098	2.13	2.13	-24366	15290	9119	40441	26788	5431	32219		7.86	Si
SLV 4	6.34	1690.95	-6383	-5315	6895	2.13	2.13	-8912	12199	7275	40441	26788	5431	32219		4.67	Si
SLV 4	8.14	-5469.48	-8581	-7145	6290	1.704	1.2827	0	0	0	40441	21430	4345	25776		4.1	Si
SLV 6	6.34	883.51	-17867	-14878	4173	2.13	2.13	-24947	15406	9188	40441	26788	5431	32219		7.72	Si
SLV 6	8.14	-3852.83	-18034	-15017	4141	2.13	2.13	-25180	15453	9216	40441	26788	5431	32219		7.78	Si
SLD 4	6.34	1003.84	-9361	-7795	4418	2.13	2.13	-13071	13031	7771	40441	26788	5431	32219		7.29	Si
SLD 4	8.14	-3320.67	-10444	-8697	4160	2.13	2.13	-14582	13333	7952	40441	26788	5431	32219		7.75	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.39	7600	-4533	220.98	603	2.73	Si
SLV 8	179667	0.39	8527	-5086	220.98	672.24	3.04	Si
SLV 11	179667	0.39	9225	-5502	220.98	723.71	3.28	Si
SLV 12	179667	0.39	10152	-6055	220.98	791.31	3.58	Si
SLV 3	179667	0.39	13666	-8151	220.98	1038.97	4.7	Si
SLV 4	179667	0.39	15118	-9016	220.98	1137.34	5.15	Si
SLV 15	179667	0.39	19082	-11381	220.98	1394.2	6.31	Si
SLV 16	179667	0.39	20534	-12247	220.98	1483.98	6.72	Si
SLV 1	179667	0.39	20716	-12355	220.98	1495.04	6.77	Si
SLV 2	179667	0.39	22168	-13221	220.98	1582.22	7.16	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-16367	-18833	-627	0.665	1962.5	0.956	10.11118	13.42943	No
SLV 9	-15808	-18437	-629	0.685	1905.7	0.954	10.42274	13.42943	No
SLV 6	-15109	-18437	-537	0.716	1834.7	0.953	10.92689	13.42943	No
SLV 5	-14550	-18041	-538	0.739	1777.9	0.952	11.29184	13.42943	No
SLV 14	-14589	-14865	-308	0.752	1781.9	0.952	11.47869	7.08809	Si
SLV 12	-6644	-5857	585	1.382	978.2	0.921	21.81743	13.42943	Si
SLV 13	-13714	-14245	-311	0.791	1693.1	0.949	12.11401	7.08809	Si
SLV 11	-6085	-5461	583	1.476	922.1	0.917	23.39614	13.42943	Si
SLV 8	-5386	-5461	675	1.602	852.3	0.912	25.51459	13.42943	Si
SLV 16	-11672	-10972	55	0.923	1485.9	0.943	14.22518	7.08809	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.299	SLU 44	Si
V_SLU	6.372	SLU 84	Si
PF_SLV	1.631	SLV 3	Si
V_SLV	4.098	SLV 4	Si
PFFP_SLV	2.729	SLV 7	Si
R_SLV	0.753	SLV 10	No

Maschio 146

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	5.826	-2.063	5.826	L5	L6	1.93	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 50	6.34	1416.02	-9549	-0.0000398	0.0003743	0.0035	1.93	7615.54	8023.24	8023.24	5.67	No	Si
SLU 50	8.14	345.3	-8393	-0.0000267	0.0003743	0.0035	1.93	6863.83	7190.01	7190.01	20.82	No	Si
SLU 46	6.34	1394.2	-9491	-0.0000394	0.0003743	0.0035	1.93	7578.75	7980.7	7980.7	5.72	No	Si
SLU 46	8.14	337.63	-8348	-0.0000265	0.0003743	0.0035	1.93	6833.58	7157.97	7157.97	21.2	No	Si
SLU 44	6.34	1361.21	-9116	-0.000038	0.0003743	0.0035	1.93	7339.38	7708.53	7708.53	5.66	No	Si
SLU 44	8.14	293.66	-7940	-0.0000249	0.0003743	0.0035	1.93	6556.76	6869.64	6869.64	23.39	No	Si
SLU 49	6.34	1422.23	-9782	-0.0000406	0.0003743	0.0035	1.93	7761.15	8193.52	8193.52	5.76	No	Si
SLU 49	8.14	359.64	-8658	-0.0000276	0.0003743	0.0035	1.93	7040.04	7378.85	7378.85	20.52	No	Si
SLU 1	6.34	1045.99	-7146	-0.0000293	0.0003743	0.0035	1.93	6000.21	6315.08	6315.08	6.04	No	Si
SLU 1	8.14	288.84	-6330	-0.0000202	0.0003743	0.0035	1.93	5405.5	5753.97	5753.97	19.92	No	Si
SLU 51	6.34	1416.78	-9638	-0.0000401	0.0003743	0.0035	1.93	7671.63	8088.46	8088.46	5.71	No	Si
SLU 51	8.14	340.72	-8493	-0.000027	0.0003743	0.0035	1.93	6930.74	7261.28	7261.28	21.31	No	Si
SLU 48	6.34	1421.48	-9692	-0.0000403	0.0003743	0.0035	1.93	7705.51	8128.09	8128.09	5.72	No	Si
SLU 48	8.14	364.21	-8558	-0.0000274	0.0003743	0.0035	1.93	6973.7	7307.32	7307.32	20.06	No	Si
SLU 43	6.34	1359.95	-8967	-0.0000375	0.0003743	0.0035	1.93	7243.02	7601.16	7601.16	5.59	No	Si
SLU 43	8.14	301.28	-7774	-0.0000245	0.0003743	0.0035	1.93	6441.81	6752.43	6752.43	22.41	No	Si
SLU 45	6.34	1393.44	-9401	-0.0000391	0.0003743	0.0035	1.93	7522.2	7915.69	7915.69	5.68	No	Si
SLU 45	8.14	342.21	-8248	-0.0000262	0.0003743	0.0035	1.93	6766.16	7086.93	7086.93	20.71	No	Si
SLU 47	6.34	1389.24	-9407	-0.0000391	0.0003743	0.0035	1.93	7525.6	7919.59	7919.59	5.7	No	Si
SLU 47	8.14	315.66	-8250	-0.000026	0.0003743	0.0035	1.93	6767.64	7088.48	7088.48	22.46	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	6.34	1497.42	1623	0.112957	0.0005615	0.0035	1.544		0	0	0		No
SLV 8	8.14	331.71	2942	0.2307806	0.0005615	0.0035	1.544		0	0	0		No
SLV 4	6.34	2601.89	-6191	-0.0000408	0.0005615	0.0035	1.93		5812.68	5812.68	2.23		Si
SLV 4	8.14	-1527.58	-2964	-0.0000233	0.0005615	0.0035	1.93		3810.14	3810.14	2.49		Si
SLD 7	6.34	1230.17	-3266	-0.0000196	0.0005615	0.0035	1.93		3236.12	3236.12	2.63		Si
SLD 7	8.14	373.05	-2312	-0.0000095	0.0005615	0.0035	1.93		2365.53	2365.53	6.34		Si
SLV 12	6.34	558.5	2243	0.1738251	0.0005615	0.0035	1.544		0	0	0		No
SLV 12	8.14	1608.79	1909	0.1353299	0.0005615	0.0035	1.544		0	0	0		No
SLV 16	6.34	-527.83	-4125	-0.0000158	0.0005615	0.0035	1.93		4845.83	4845.83	9.18		Si
SLV 16	8.14	2729.36	-6406	-0.0000427	0.0005615	0.0035	1.93		5996.1	5996.1	2.2		Si
SLV 11	6.34	552.44	2882	0.2245765	0.0005615	0.0035	1.544		0	0	0		No
SLV 11	8.14	1578.79	2677	0.1988729	0.0005615	0.0035	1.544		0	0	0		No
SLV 7	6.34	1491.35	2262	0.1661849	0.0005615	0.0035	1.544		0	0	0		No
SLV 7	8.14	301.7	3710	0.2917883	0.0005615	0.0035	1.544		0	0	0		No
SLD 8	6.34	1232.81	-3545	-0.0000203	0.0005615	0.0035	1.93		3487.66	3487.66	2.83		Si
SLD 8	8.14	386.14	-2647	-0.0000105	0.0005615	0.0035	1.93		2671.91	2671.91	6.92		Si
SLV 15	6.34	-537.33	-3125	-0.0000131	0.0005615	0.0035	1.93		3955.4	3955.4	7.36		Si
SLV 15	8.14	2682.37	-5203	-0.0000415	0.0005615	0.0035	1.93		4957.75	4957.75	1.85		Si
SLV 3	6.34	2592.4	-5191	-0.00004	0.0005615	0.0035	1.93		4946.61	4946.61	1.91		Si
SLV 3	8.14	-1574.56	-1762	-0.000069	0.0005615	0.0035	1.544		2711.33	2711.33	1.72		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 42	6.34	1022.21	-9493	-7905	-940	1.93	1.93	-14627	8895	4807	40441	16182	4922	21104	No	22.45	Si
SLU 42	8.14	846.59	-9714	-8089	-937	1.93	1.93	-14968	8940	4831	40441	16182	4922	21104	No	22.52	Si
SLU 82	6.34	1308.14	-11023	-9179	-829	1.93	1.93	-16985	9209	4977	40441	16182	4922	21104	No	25.44	Si
SLU 82	8.14	837.03	-10848	-9033	-826	1.93	1.93	-16716	9173	4957	40441	16182	4922	21104	No	25.54	Si
SLU 36	6.34	1071.33	-9619	-8010	-803	1.93	1.93	-14822	8921	4821	40441	16182	4922	21104	No	26.28	Si
SLU 36	8.14	790.36	-9693	-8072	-800	1.93	1.93	-14937	8936	4829	40441	16182	4922	21104	No	26.37	Si
SLU 40	6.34	994.18	-9202	-7662	-933	1.93	1.93	-14179	8835	4774	40441	16182	4922	21104	No	22.61	Si
SLU 40	8.14	824.59	-9404	-7831	-931	1.93	1.93	-14491	8877	4797	40441	16182	4922	21104	No	22.68	Si
SLU 39	6.34	993.43	-9112	-7588	-930	1.93	1.93	-14041	8817	4765	40441	16182	4922	21104	No	22.68	Si
SLU 39	8.14	829.16	-9304	-7747	-928	1.93	1.93	-14336	8856	4786	40441	16182	4922	21104	No	22.75	Si
SLU 35	6.34	1070.57	-9530	-7936	-800	1.93	1.93	-14685	8902	4811	40441	16182	4922	21104	No	26.38	Si
SLU 35	8.14	794.93	-9593	-7989	-797	1.93	1.93	-14783	8915	4818	40441	16182	4922	21104	No	26.47	Si
SLU 83	6.34	1335.42	-11225	-9347	-833	1.93	1.93	-17296	9251	4999	40441	16182	4922	21104	No	25.32	Si
SLU 83	8.14	863.61	-11058	-9208	-830	1.93	1.93	-17039	9216	4981	40441	16182	4922	21104	No	25.42	Si
SLU 41	6.34	1021.46	-9403	-7830	-937	1.93	1.93	-14490	8876	4797	40441	16182	4922	21104	No	22.52	Si
SLU 41	8.14	851.17	-9613	-8005	-934	1.93	1.93	-14813	8920	4820	40441	16182	4922	21104	No	22.59	Si
SLU 84	6.34	1336.18	-11314	-9421	-836	1.93	1.93	-17434	9269	5009	40441	16182	4922	21104	No	25.24	Si
SLU 84	8.14	859.03	-11158	-9291	-833	1.93	1.93	-17193	9237	4992	40441	16182	4922	21104	No	25.34	Si
SLU 81	6.34	1307.39	-10934	-9105	-827	1.93	1.93	-16848	9191	4967	40441	16182	4922	21104	No	25.53	Si
SLU 81	8.14	841.6	-10748	-8950	-823	1.93	1.93	-16561	9153	4946	40441	16182	4922	21104	No	25.63	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	6.34	-531.02	-9048	-7535	-3990	1.93	1.93	-13942	13205	7136	40441	24273	4922	29195		7.32	Si
SLV 13	8.14	2358.5	-11112	-9253	-3490	1.93	1.93	-17123	13841	7480	40441	24273	4922	29195		8.37	Si
SLV 14	6.34	-521.53	-10049	-8368	-4119	1.93	1.93	-15484	13514	7303	40441	24273	4922	29195		7.09	Si
SLV 14	8.14	2405.48	-12315	-10255	-3619	1.93	1.93	-18976	14212	7680	40441	24273	4922	29195		8.07	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	6.34	2608.2	-12115	-10088	3515	1.93	1.93	-18668	14150	7647	40441	24273	4922	29195		8.3	Si
SLV 2	8.14	-1851.45	-8873	-7389	2735	1.93	1.93	-13672	13151	7107	40441	24273	4922	29195		10.67	Si
SLV 15	6.34	-537.33	-3125	-2602	-4019	1.93	1.93	-4815	11380	6150	40441	24273	4922	29195		7.26	Si
SLV 15	8.14	2682.37	-5203	-4333	-3235	1.93	1.3485	-8018	12020	4539	40441	24273	4922	29195		9.03	Si
SLV 16	6.34	-527.83	-4125	-3435	-4148	1.93	1.93	-6357	11688	6316	40441	24273	4922	29195		7.04	Si
SLV 16	8.14	2729.36	-6406	-5334	-3364	1.93	1.6169	-9871	12391	5610	40441	24273	4922	29195		8.68	Si
SLV 3	6.34	2592.4	-5191	-4322	3615	1.93	1.3968	-7998	12016	4699	40441	24273	4922	29195		8.08	Si
SLV 3	8.14	-1574.56	-1762	-1467	3119	1.544	0.2139	0	0	0	40441	19419	3937	23356		7.49	Si
SLD 14	6.34	369.74	-8697	-7242	-1905	1.93	1.93	-13401	13097	7078	40441	24273	4922	29195		15.32	Si
SLD 14	8.14	1264.55	-9334	-7773	-1691	1.93	1.93	-14383	13293	7184	40441	24273	4922	29195		17.26	Si
SLV 1	6.34	2598.7	-11114	-9255	3645	1.93	1.93	-17126	13842	7480	40441	24273	4922	29195		8.01	Si
SLV 1	8.14	-1898.44	-7670	-6387	2864	1.93	1.93	-11819	12781	6907	40441	24273	4922	29195		10.19	Si
SLD 16	6.34	366.93	-6089	-5070	-1919	1.93	1.93	-9382	12293	6643	40441	24273	4922	29195		15.21	Si
SLD 16	8.14	1406.86	-6732	-5606	-1581	1.93	1.93	-10373	12491	6750	40441	24273	4922	29195		18.46	Si
SLV 4	6.34	2601.89	-6191	-5156	3486	1.93	1.6343	-9540	12325	5640	40441	24273	4922	29195		8.38	Si
SLV 4	8.14	-1527.58	-2964	-2468	2990	1.93	1.3491	-6551	11727	4430	40441	24273	4922	29195		9.76	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.39	0	2897	200.23	0	0	No, Trazione
SLV 12	179667	0.39	0	1737	200.23	0	0	No, Trazione
SLV 8	179667	0.39	0	2179	200.23	0	0	No, Trazione
SLV 11	179667	0.39	0	2454	200.23	0	0	No, Trazione
SLV 3	179667	0.39	6140	-3318	200.23	445.84	2.23	Si
SLV 4	179667	0.39	8220	-4442	200.23	588.41	2.94	Si
SLV 15	179667	0.39	8870	-4794	200.23	632.12	3.16	Si
SLV 16	179667	0.39	10950	-5918	200.23	769.06	3.84	Si
SLV 1	179667	0.39	17139	-9262	200.23	1151.15	5.75	Si
SLV 2	179667	0.39	19219	-10386	200.23	1271.06	6.35	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-15660	-15804	-421	0.644	1862.6	0.957	9.76809	13.42943	No
SLV 6	-15350	-14990	-304	0.661	1831.1	0.957	10.04526	13.42943	No
SLV 9	-14930	-15240	-421	0.67	1788.4	0.956	10.18644	13.42943	No
SLV 5	-14620	-14427	-304	0.689	1757	0.955	10.48462	13.42943	No
SLV 14	-9868	-10870	-302	0.956	1274.6	0.941	14.76558	7.08809	Si
SLV 13	-8725	-9988	-303	1.056	1159	0.936	16.3996	7.08809	Si
SLV 2	-8836	-8159	88	1.066	1170.2	0.936	16.54	7.08809	Si
SLV 1	-7694	-7276	87	1.19	1054.8	0.931	18.58732	7.08809	Si
SLV 16	-4417	-5692	-83	1.806	726.2	0.909	28.89116	7.08809	Si
SLV 4	-3385	-2980	307	2.12	624.5	0.9	34.2425	7.08809	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.589	SLU 43	Si
V_SLU	22.45	SLU 42	Si
PF_SLV	0	SLV 7	No
V_SLV	7.038	SLV 16	Si
PFFP_SLV	0	SLV 12	No
R_SLV	0.727	SLV 10	No

Maschio 147

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.314	-0.133	1.266	L5	L6	4.58	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 42	5.44	2964.08	-27480	-0.0000379	0.0003743	0.0035	4.5801	49684.29	53864.35	53864.35	18.17	No	Si
SLU 42	7.54	-141.55	-19649	-0.0000235	0.0003743	0.0035	4.5801	38224.28	46032.62	46032.62	325.19	No	Si
SLU 84	5.44	3289.51	-32023	-0.0000443	0.0003743	0.0035	4.5801	55347.72	60594.06	60594.06	18.42	No	Si
SLU 84	7.54	-53.6	-22918	-0.0000274	0.0003743	0.0035	4.5801	43270.33	51779.37	51779.37	966.06	No	Si
SLU 76	5.44	3208.16	-30605	-0.0000423	0.0003743	0.0035	4.5801	53657.86	58715.1	58715.1	18.3	No	Si
SLU 76	7.54	186.36	-21987	-0.0000265	0.0003743	0.0035	4.5801	41871.86	43983.5	43983.5	236.01	No	Si
SLU 13	5.44	2478.76	-22648	-0.000031	0.0003743	0.0035	4.5801	42868.59	45146.09	45146.09	18.21	No	Si
SLU 13	7.54	194.13	-16243	-0.0000194	0.0003743	0.0035	4.5801	32569.64	34183.79	34183.79	176.09	No	Si
SLU 82	5.44	3256.89	-31467	-0.0000435	0.0003743	0.0035	4.5801	54693.04	59853.97	59853.97	18.38	No	Si
SLU 82	7.54	-89.73	-22348	-0.0000268	0.0003743	0.0035	4.5801	42418.21	50812.54	50812.54	566.27	No	Si
SLU 40	5.44	2931.46	-26923	-0.0000371	0.0003743	0.0035	4.5801	48940.91	52844.78	52844.78	18.03	No	Si
SLU 40	7.54	-177.69	-19079	-0.0000229	0.0003743	0.0035	4.5801	37306.84	45010.03	45010.03	253.31	No	Si
SLU 31	5.44	2850.11	-25505	-0.0000352	0.0003743	0.0035	4.5801	46997.32	50260.63	50260.63	17.63	No	Si
SLU 31	7.54	62.27	-18148	-0.0000216	0.0003743	0.0035	4.5801	35783.02	37374.94	37374.94	600.19	No	Si
SLU 10	5.44	2446.14	-22092	-0.0000302	0.0003743	0.0035	4.5801	42030.9	44167.34	44167.34	18.06	No	Si
SLU 10	7.54	158	-15674	-0.0000187	0.0003743	0.0035	4.5801	31584.16	33241.04	33241.04	210.39	No	Si
SLU 34	5.44	2882.73	-26061	-0.0000359	0.0003743	0.0035	4.5801	47768.38	51271.34	51271.34	17.79	No	Si
SLU 34	7.54	98.4	-18718	-0.0000223	0.0003743	0.0035	4.5801	36719.06	38340.36	38340.36	389.62	No	Si
SLU 73	5.44	3175.55	-30049	-0.0000415	0.0003743	0.0035	4.5801	52975.5	57984.22	57984.22	18.26	No	Si
SLU 73	7.54	150.23	-21418	-0.0000257	0.0003743	0.0035	4.5801	41001.15	42987.93	42987.93	286.15	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	5.44	-5787.88	-31350	-0.0000464	0.0005615	0.0035	4.5801		69062	69062	11.93		Si
SLV 12	7.54	-12190.49	-24012	-0.0000474	0.0005615	0.0035	4.5801		55828.49	55828.49	4.58		Si
SLV 11	5.44	-6045.57	-32055	-0.0000477	0.0005615	0.0035	4.5801		70302.86	70302.86	11.63		Si
SLV 11	7.54	-13049.29	-24655	-0.0000496	0.0005615	0.0035	4.5801		56996.92	56996.92	4.37		Si
SLV 2	5.44	18.03	-13919	-0.0000162	0.0005615	0.0035	4.5801		31147.11	31147.11	1727.92		Si
SLV 2	7.54	7464.53	-13651	-0.0000273	0.0005615	0.0035	4.5801		30600.75	30600.75	4.1		Si
SLV 9	5.44	12262.27	-12641	-0.0000342	0.0005615	0.0035	4.5801		28519.89	28519.89	2.33		Si
SLV 9	7.54	10408.76	-4763	-0.0001615	0.0005615	0.0035	4.5801		11733	11733	1.13		Si
SLV 10	5.44	12519.96	-11935	-0.0000343	0.0005615	0.0035	4.5801		27057.43	27057.43	2.16		Si
SLV 10	7.54	11267.57	-4121	-0.0020277	0.0005615	0.0035	4.5801		10314.69	10314.69	0.92		No
SLD 6	5.44	5277.24	-16044	-0.0000268	0.0005615	0.0035	4.5801		35458.6	35458.6	6.72		Si
SLD 6	7.54	5832.19	-10772	-0.0000214	0.0005615	0.0035	4.5801		24626.35	24626.35	4.22		Si
SLD 5	5.44	5164.84	-16351	-0.000027	0.0005615	0.0035	4.5801		36079.89	36079.89	6.99		Si
SLD 5	7.54	5457.58	-11052	-0.0000211	0.0005615	0.0035	4.5801		25216.44	25216.44	4.62		Si
SLV 6	5.44	9673.61	-9807	-0.0000267	0.0005615	0.0035	4.5801		22598.46	22598.46	2.34		Si
SLV 6	7.54	13189.55	-5390	-0.0011867	0.0005615	0.0035	4.5801		13101.12	13101.12	0.99		No
SLD 10	5.44	6502.2	-16961	-0.0000298	0.0005615	0.0035	4.5801		37299.26	37299.26	5.74		Si
SLD 10	7.54	5004.23	-10229	-0.0000194	0.0005615	0.0035	4.5801		23485.95	23485.95	4.69		Si
SLV 5	5.44	9415.92	-10512	-0.0000268	0.0005615	0.0035	4.5801		24080.78	24080.78	2.56		Si
SLV 5	7.54	12330.75	-6033	-0.000091	0.0005615	0.0035	4.5801		14503.64	14503.64	1.18		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	5.44	3256.89	-31467	-26203	5460	4.5801	4.5801	-20433	9669	12399	40441	38401	11679	50080	No	9.17	Si
SLU 82	7.54	-89.73	-22348	-18610	5459	4.5801	4.5801	-14512	8879	11387	40441	38401	11679	50080	No	9.17	Si
SLU 83	5.44	3069.2	-32105	-26735	5551	4.5801	4.5801	-20847	9724	12470	40441	38401	11679	50080	No	9.02	Si
SLU 83	7.54	-219.36	-22988	-19142	5510	4.5801	4.5801	-14927	8935	11458	40441	38401	11679	50080	No	9.09	Si
SLU 63	5.44	2885.54	-28611	-23824	5435	4.5801	4.5801	-18578	9421	12082	40441	38401	11679	50080	No	9.21	Si
SLU 63	7.54	42.13	-20443	-17023	5438	4.5801	4.5801	-13275	8714	11175	40441	38401	11679	50080	No	9.21	Si
SLU 84	5.44	3289.51	-32023	-26666	5542	4.5801	4.5801	-20794	9717	12461	40441	38401	11679	50080	No	9.04	Si
SLU 84	7.54	-53.6	-22918	-19084	5540	4.5801	4.5801	-14881	8929	11450	40441	38401	11679	50080	No	9.04	Si
SLU 62	5.44	2665.23	-28692	-23893	5444	4.5801	4.5801	-18631	9429	12091	40441	38401	11679	50080	No	9.2	Si
SLU 62	7.54	-123.63	-20513	-17081	5407	4.5801	4.5801	-13320	8720	11183	40441	38401	11679	50080	No	9.26	Si
SLU 81	5.44	3036.59	-31549	-26271	5470	4.5801	4.5801	-20486	9676	12408	40441	38401	11679	50080	No	9.16	Si
SLU 81	7.54	-255.49	-22418	-18668	5429	4.5801	4.5801	-14557	8885	11395	40441	38401	11679	50080	No	9.22	Si
SLU 78	5.44	3119.5	-31622	-26332	5452	4.5801	4.5801	-20533	9682	12417	40441	38401	11679	50080	No	9.19	Si
SLU 78	7.54	145.01	-22985	-19140	5452	4.5801	4.5801	-14925	8934	11458	40441	38401	11679	50080	No	9.19	Si
SLU 80	5.44	3093.9	-31216	-25994	5474	4.5801	4.5801	-20270	9647	12372	40441	38401	11679	50080	No	9.15	Si
SLU 80	7.54	111.99	-22603	-18822	5474	4.5801	4.5801	-14677	8901	11415	40441	38401	11679	50080	No	9.15	Si
SLU 79	5.44	2873.6	-31298	-26063	5483	4.5801	4.5801	-20323	9654	12381	40441	38401	11679	50080	No	9.13	Si
SLU 79	7.54	-53.77	-22673	-18880	5444	4.5801	4.5801	-14722	8907	11423	40441	38401	11679	50080	No	9.2	Si
SLU 77	5.44	2899.19	-31704	-26400	5461	4.5801	4.5801	-20586	9689	12426	40441	38401	11679	50080	No	9.17	Si
SLU 77	7.54	-20.76	-23054	-19198	5421	4.5801	4.5801	-14970	8940	11465	40441	38401	11679	50080	No	9.24	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	5.44	-5787.88	-31350	-26106	8443	4.5801	4.5801	-20357	14488	18580	40441	57602	11679	59021		6.99	Si
SLV 12	7.54	-12190.49	-24012	-19995	7233	4.5801	4.5801	-15592	13535	17358	40441	57602	11679	57799		7.99	Si
SLD 11	5.44	-1649.2	-25818	-21499	6088	4.5801	4.5801	-16765	13770	17658	40441	57602	11679	58099		9.54	Si
SLD 11	7.54	-5691.93	-19274	-16049	5528	4.5801	4.5801	-12515	12920	16568	40441	57602	11679	57009		10.31	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	5.44	9505.86	-21014	-17499	6049	4.5801	4.5801	-13645	13146	16858	40441	57602	11679	57299		9.47	Si
SLV 14	7.54	1057.91	-9420	-7844	6384	4.5801	4.5801	-6117	11640	14927	40441	57602	11679	55368		8.67	Si
SLD 15	5.44	2563.16	-23979	-19967	6109	4.5801	4.5801	-15570	13531	17352	40441	57602	11679	57793		9.46	Si
SLD 15	7.54	-3146.64	-15648	-13031	5924	4.5801	4.5801	-10161	12449	15965	40441	57602	11679	56406		9.52	Si
SLV 16	5.44	4013.51	-26839	-22349	8266	4.5801	4.5801	-17427	13902	17828	40441	57602	11679	58269		7.05	Si
SLV 16	7.54	-5979.51	-15387	-12813	7890	4.5801	4.5801	-9991	12415	15921	40441	57602	11679	56362		7.14	Si
SLV 8	5.44	-8634.23	-29221	-24333	6258	4.5801	4.5801	-18974	14212	18225	40441	57602	11679	58666		9.37	Si
SLV 8	7.54	-10268.5	-25282	-21052	5045	4.5801	4.5801	-16416	13700	17569	40441	57602	11679	58010		11.5	Si
SLV 11	5.44	-6045.57	-32055	-26693	8936	4.5801	4.5801	-20815	14580	18697	40441	57602	11679	59138		6.62	Si
SLV 11	7.54	-13049.29	-24655	-20531	7725	4.5801	4.5801	-16009	13619	17465	40441	57602	11679	57906		7.5	Si
SLV 7	5.44	-8891.92	-29927	-24920	6751	4.5801	4.5801	-19432	14303	18343	40441	57602	11679	58784		8.71	Si
SLV 7	7.54	-11127.3	-25925	-21588	5537	4.5801	4.5801	-16834	13783	17676	40441	57602	11679	58117		10.5	Si
SLV 15	5.44	3610.01	-27943	-23269	9038	4.5801	4.5801	-18144	14046	18012	40441	57602	11679	58453		6.47	Si
SLV 15	7.54	-7324.27	-16394	-13651	8661	4.5801	4.5801	-10645	12546	16089	40441	57602	11679	56530		6.53	Si
SLV 13	5.44	9102.37	-22119	-18419	6820	4.5801	4.5801	-14362	13289	17042	40441	57602	11679	57483		8.43	Si
SLV 13	7.54	-286.85	-10426	-8682	7155	4.5801	4.5801	-6770	11771	15095	40441	57602	11679	55536		7.76	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 10	179667	0.39	3889	-4987	475.16	680.39	1.43	Si
SLV 9	179667	0.39	4390	-5630	475.16	765.51	1.61	Si
SLV 6	179667	0.39	4894	-6276	475.16	850.42	1.79	Si
SLV 5	179667	0.39	5395	-6918	475.16	934.35	1.97	Si
SLV 14	179667	0.39	7969	-10219	475.16	1356.01	2.85	Si
SLV 13	179667	0.39	8753	-11226	475.16	1481.5	3.12	Si
SLV 2	179667	0.39	11318	-14514	475.16	1881.41	3.96	Si
SLV 1	179667	0.39	12103	-15521	475.16	2000.72	4.21	Si
SLV 16	179667	0.39	12592	-16148	475.16	2074.34	4.37	Si
SLV 15	179667	0.39	13377	-17155	475.16	2191.29	4.61	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-22277	-29927	-368	1.009	2909.4	0.939	15.61459	13.42943	Si
SLV 8	-21563	-29221	-368	1.036	2837.1	0.937	16.05485	13.42943	Si
SLV 11	-19556	-32055	405	1.119	2634.2	0.934	17.41614	13.42943	Si
SLV 12	-18842	-31350	405	1.152	2562	0.932	17.96928	13.42943	Si
SLV 3	-18389	-20848	-1281	1.136	2516.3	0.931	17.72992	7.08809	Si
SLV 4	-17270	-19743	-1281	1.193	2403.5	0.928	18.67857	7.08809	Si
SLV 1	-12161	-15023	-1290	1.556	1890.5	0.914	24.73619	7.08809	Si
SLV 2	-11042	-13919	-1290	1.668	1779	0.91	26.62897	7.08809	Si
SLV 15	-9317	-27943	1297	1.878	1608	0.904	30.17418	7.08809	Si
SLV 16	-8198	-26839	1297	2.045	1498	0.9	33.01901	7.08809	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	17.635	SLU 31	Si
V_SLU	9.022	SLU 83	Si
PF_SLV	0.915	SLV 10	No
V_SLV	6.468	SLV 15	Si
PFFP_SLV	1.432	SLV 10	Si
R_SLV	1.163	SLV 7	Si

Maschio 148

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	2.066	-0.133	5.826	L5	L6	3.76	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 46	5.44	-3489.46	-21206	-0.0000394	0.0003743	0.0035	3.7599	31979.02	38203.93	38203.93	10.95	No	Si
SLU 46	7.54	911.43	-14616	-0.0000232	0.0003743	0.0035	3.7599	23730.72	24859.83	24859.83	27.28	No	Si
SLU 64	5.44	-3682.98	-22814	-0.0000424	0.0003743	0.0035	3.7599	33760.83	40344.1	40344.1	10.95	No	Si
SLU 64	7.54	684.48	-15800	-0.0000244	0.0003743	0.0035	3.7599	25324.75	26487.25	26487.25	38.7	No	Si
SLU 69	5.44	-3821.04	-24179	-0.0000449	0.0003743	0.0035	3.7599	35201.86	42125.75	42125.75	11.02	No	Si
SLU 69	7.54	680.5	-17099	-0.0000264	0.0003743	0.0035	3.7599	27017.32	28298.85	28298.85	41.59	No	Si
SLU 45	5.44	-3495.87	-21075	-0.0000392	0.0003743	0.0035	3.7599	31830.64	38030.15	38030.15	10.88	No	Si
SLU 45	7.54	842.11	-14497	-0.0000228	0.0003743	0.0035	3.7599	23568.15	24697.85	24697.85	29.33	No	Si
SLU 43	5.44	-3402.8	-20236	-0.0000376	0.0003743	0.0035	3.7599	30861.11	36884.03	36884.03	10.84	No	Si
SLU 43	7.54	855.7	-13701	-0.0000217	0.0003743	0.0035	3.7599	22465.61	23617.87	23617.87	27.6	No	Si
SLU 48	5.44	-3540.86	-21601	-0.0000401	0.0003743	0.0035	3.7599	32425.57	38723.95	38723.95	10.94	No	Si
SLU 48	7.54	851.72	-15000	-0.0000236	0.0003743	0.0035	3.7599	24253.8	25385.94	25385.94	29.81	No	Si
SLU 49	5.44	-3534.45	-21732	-0.0000403	0.0003743	0.0035	3.7599	32571.56	38896.04	38896.04	11	No	Si
SLU 49	7.54	921.04	-15119	-0.0000239	0.0003743	0.0035	3.7599	24414.28	25548.85	25548.85	27.74	No	Si
SLU 50	5.44	-3492.79	-21288	-0.0000395	0.0003743	0.0035	3.7599	32072.24	38311.7	38311.7	10.97	No	Si
SLU 50	7.54	874.92	-14708	-0.0000232	0.0003743	0.0035	3.7599	23856.14	24985.29	24985.29	28.56	No	Si
SLU 44	5.44	-3392.13	-20453	-0.0000379	0.0003743	0.0035	3.7599	31114.49	37184.3	37184.3	10.96	No	Si
SLU 44	7.54	971.24	-13899	-0.0000222	0.0003743	0.0035	3.7599	22741.81	23885.44	23885.44	24.59	No	Si
SLU 66	5.44	-3776.04	-23653	-0.0000439	0.0003743	0.0035	3.7599	34654.47	41449.96	41449.96	10.98	No	Si
SLU 66	7.54	670.88	-16596	-0.0000256	0.0003743	0.0035	3.7599	26368.71	27593.89	27593.89	41.13	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	5.44	2048.15	-29394	-0.0000476	0.0005615	0.0035	3.7599		47507.51	47507.51	23.2		Si
SLV 6	7.54	9168.38	-23154	-0.0000549	0.0005615	0.0035	3.7599		38664.36	38664.36	4.22		Si
SLD 11	5.44	-4951.72	-12437	-0.0000289	0.0005615	0.0035	3.7599		25956.33	25956.33	5.24		Si
SLD 11	7.54	-3325.45	-7386	-0.0000179	0.0005615	0.0035	3.7599		17412.48	17412.48	5.24		Si
SLV 7	5.44	-6736.15	-3602	-0.0001135	0.0005615	0.0035	3.008		10727.46	10727.46	1.59		Si
SLV 7	7.54	-7500.06	-782	-0.0006909	0.0005615	0.0035	3.008		5617.9	5617.9	0.75		No
SLD 7	5.44	-4545.76	-11469	-0.0000266	0.0005615	0.0035	3.7599		24376	24376	5.36		Si
SLD 7	7.54	-3027.35	-7178	-0.0000169	0.0005615	0.0035	3.7599		17051.91	17051.91	5.63		Si
SLV 11	5.44	-7677.45	-5855	-0.0000366	0.0005615	0.0035	3.008		14735.22	14735.22	1.92		Si
SLV 11	7.54	-8194.65	-1264	-0.0006668	0.0005615	0.0035	3.008		6499.18	6499.18	0.79		No
SLV 8	5.44	-6691.62	-4383	-0.0000434	0.0005615	0.0035	3.008		12126.28	12126.28	1.81		Si
SLV 8	7.54	-6910.01	-1433	-0.0004715	0.0005615	0.0035	3.008		6807.48	6807.48	0.99		No
SLV 5	5.44	2003.61	-28612	-0.0000463	0.0005615	0.0035	3.7599		46384	46384	23.15		Si
SLV 5	7.54	8578.33	-22503	-0.0000525	0.0005615	0.0035	3.7599		37758.46	37758.46	4.4		Si
SLV 10	5.44	1106.85	-31648	-0.0000489	0.0005615	0.0035	3.7599		50771.85	50771.85	45.87		Si
SLV 10	7.54	8473.79	-23635	-0.000054	0.0005615	0.0035	3.7599		39337.05	39337.05	4.64		Si
SLV 12	5.44	-7632.92	-6637	-0.0000324	0.0005615	0.0035	3.008		16110.11	16110.11	2.11		Si
SLV 12	7.54	-7604.6	-1914	-0.0004683	0.0005615	0.0035	3.008		7684.28	7684.28	1.01		Si
SLV 9	5.44	1062.31	-30866	-0.0000476	0.0005615	0.0035	3.7599		49635.07	49635.07	46.72		Si
SLV 9	7.54	7883.73	-22985	-0.0000516	0.0005615	0.0035	3.7599		38428.81	38428.81	4.87		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	5.44	-3972.13	-26426	-22005	-4065	3.7599	3.7599	-20902	9731	10245	40441	31525	9588	41113	No	10.11	Si
SLU 77	7.54	409.99	-18905	-15743	-4069	3.7599	3.7599	-14953	8938	9410	40441	31525	9588	41113	No	10.1	Si
SLU 75	5.44	-3920.73	-26030	-21676	-4059	3.7599	3.7599	-20589	9690	10201	40441	31525	9588	41113	No	10.13	Si
SLU 75	7.54	469.7	-18521	-15422	-4063	3.7599	3.7599	-14649	8898	9367	40441	31525	9588	41113	No	10.12	Si
SLU 82	5.44	-3892.42	-26154	-21779	-4127	3.7599	3.7599	-20687	9703	10215	40441	31525	9588	41113	No	9.96	Si
SLU 82	7.54	367.36	-18499	-15404	-4131	3.7599	3.7599	-14632	8895	9365	40441	31525	9588	41113	No	9.95	Si
SLU 79	5.44	-3924.05	-26112	-21744	-4035	3.7599	3.7599	-20654	9698	10210	40441	31525	9588	41113	No	10.19	Si
SLU 79	7.54	433.19	-18612	-15499	-4038	3.7599	3.7599	-14722	8907	9378	40441	31525	9588	41113	No	10.18	Si
SLU 78	5.44	-3965.72	-26556	-22114	-4106	3.7599	3.7599	-21005	9745	10259	40441	31525	9588	41113	No	10.01	Si
SLU 78	7.54	479.31	-19024	-15841	-4109	3.7599	3.7599	-15047	8951	9423	40441	31525	9588	41113	No	10.01	Si
SLU 76	5.44	-3868.38	-25804	-21487	-4056	3.7599	3.7599	-20410	9666	10176	40441	31525	9588	41113	No	10.14	Si
SLU 76	7.54	539.12	-18307	-15245	-4059	3.7599	3.7599	-14480	8875	9344	40441	31525	9588	41113	No	10.13	Si
SLU 81	5.44	-3898.82	-26024	-21670	-4087	3.7599	3.7599	-20584	9689	10200	40441	31525	9588	41113	No	10.06	Si
SLU 81	7.54	298.04	-18380	-15305	-4091	3.7599	3.7599	-14538	8883	9352	40441	31525	9588	41113	No	10.05	Si
SLU 83	5.44	-3943.81	-26549	-22108	-4133	3.7599	3.7599	-21000	9744	10259	40441	31525	9588	41113	No	9.95	Si
SLU 83	7.54	307.65	-18883	-15724	-4137	3.7599	3.7599	-14936	8936	9408	40441	31525	9588	41113	No	9.94	Si
SLU 84	5.44	-3937.41	-26680	-22217	-4174	3.7599	3.7599	-21103	9758	10273	40441	31525	9588	41113	No	9.85	Si
SLU 84	7.54	376.97	-19002	-15823	-4177	3.7599	3.7599	-15030	8948	9421	40441	31525	9588	41113	No	9.84	Si
SLU 80	5.44	-3917.65	-26243	-21853	-4075	3.7599	3.7599	-20757	9712	10225	40441	31525	9588	41113	No	10.09	Si
SLU 80	7.54	502.52	-18731	-15598	-4079	3.7599	3.7599	-14816	8920	9391	40441	31525	9588	41113	No	10.08	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	5.44	-3107.39	-24520	-20419	-5789	3.7599	3.7599	-19395	14296	15050	40441	47288	9588	55491		9.59	Si
SLV 13	7.54	1278.99	-15760	-13124	-5236	3.7599	3.7599	-12466	12910	13591	40441	47288	9588	54032		10.32	Si
SLV 14	5.44	-3037.65	-25745	-21438	-6380	3.7599	3.7599	-20363	14489	15254	40441	47288	9588	55695		8.73	Si
SLV 14	7.54	2202.93	-16779	-13972	-5827	3.7599	3.7599	-13272	13071	13761	40441	47288	9588	54202		9.3	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 9	5.44	-1102.97	-23439	-19518	-4324	3.7599	3.7599	-18540	14125	14870	40441	47288	9588	55311		12.79	Si
SLD 9	7.54	3743.69	-16956	-14119	-3817	3.7599	3.7599	-13411	13099	13790	40441	47288	9588	54231		14.21	Si
SLD 10	5.44	-1083.54	-23781	-19802	-4489	3.7599	3.7599	-18810	14179	14927	40441	47288	9588	55368		12.34	Si
SLD 10	7.54	4001.08	-17240	-14356	-3982	3.7599	3.7599	-13636	13144	13838	40441	47288	9588	54279		13.63	Si
SLV 16	5.44	-5659.58	-18242	-15190	-4563	3.7599	3.7599	-14428	13302	14005	40441	47288	9588	54445		11.93	Si
SLV 16	7.54	-2620.58	-10263	-8546	-4647	3.7599	3.7599	-8118	12040	12676	40441	47288	9588	53117		11.43	Si
SLV 10	5.44	1106.85	-31648	-26353	-6711	3.7599	3.7599	-25032	15423	16237	40441	47288	9588	56678		8.45	Si
SLV 10	7.54	8473.79	-23635	-19682	-5582	3.7599	3.7599	-18695	14156	14903	40441	47288	9588	55344		9.92	Si
SLV 9	5.44	1062.31	-30866	-25702	-6334	3.7599	3.7599	-24414	15299	16107	40441	47288	9588	56548		8.93	Si
SLV 9	7.54	7883.73	-22985	-19140	-5205	3.7599	3.7599	-18180	14053	14794	40441	47288	9588	55235		10.61	Si
SLD 14	5.44	-2898.97	-21152	-17613	-4325	3.7599	3.7599	-16730	13763	14489	40441	47288	9588	54930		12.7	Si
SLD 14	7.54	1248.69	-14210	-11833	-4082	3.7599	3.7599	-11240	12665	13333	40441	47288	9588	53774		13.17	Si
SLV 5	5.44	2003.61	-28612	-23826	-4893	3.7599	3.7599	-22631	14943	15732	40441	47288	9588	56173		11.48	Si
SLV 5	7.54	8578.33	-22503	-18738	-3906	3.7599	3.7599	-17799	13976	14714	40441	47288	9588	55155		14.12	Si
SLV 6	5.44	2048.15	-29394	-24477	-5271	3.7599	3.7599	-23249	15067	15862	40441	47288	9588	56303		10.68	Si
SLV 6	7.54	9168.38	-23154	-19280	-4283	3.7599	3.7599	-18314	14079	14823	40441	47288	9588	55264		12.9	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.39	0	-2276	390.08	0	0	No, e>t/2
SLV 8	179667	0.39	0	-1811	390.08	0	0	No, e>t/2
SLV 7	179667	0.39	0	-1160	390.08	0	0	No, e>t/2
SLV 11	179667	0.39	0	-1625	390.08	0	0	No, e>t/2
SLV 3	179667	0.39	7830	-8243	390.08	1094.88	2.81	Si
SLV 4	179667	0.39	8798	-9262	390.08	1222.02	3.13	Si
SLV 15	179667	0.39	9303	-9794	390.08	1287.65	3.3	Si
SLV 16	179667	0.39	10271	-10813	390.08	1412.03	3.62	Si
SLV 1	179667	0.39	14189	-14938	390.08	1896.96	4.86	Si
SLV 2	179667	0.39	15157	-15957	390.08	2012.22	5.16	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.2 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-20615	-29394	-245	0.917	2624.1	0.943	14.12374	13.42943	Si
SLV 10	-19685	-31648	500	0.941	2529.9	0.942	14.52674	13.42943	Si
SLV 5	-19897	-28612	-246	0.944	2551.3	0.942	14.56261	13.42943	Si
SLV 9	-18967	-30866	500	0.97	2457.1	0.94	14.99815	13.42943	Si
SLV 2	-14303	-18232	-1202	1.177	1985.7	0.929	18.40994	7.08809	Si
SLV 1	-13178	-17008	-1202	1.254	1872.4	0.925	19.69287	7.08809	Si
SLV 14	-11203	-25745	1283	1.413	1674	0.919	22.35677	7.08809	Si
SLV 13	-10078	-24520	1283	1.529	1561.4	0.915	24.29057	7.08809	Si
SLV 4	-7788	-10729	-1277	1.836	1333.8	0.905	29.47881	7.08809	Si
SLV 3	-6663	-9504	-1277	2.038	1223.2	0.9	32.90624	7.08809	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.839	SLU 43	Si
V_SLU	9.842	SLU 84	Si
PF_SLV	0.749	SLV 7	No
V_SLV	8.445	SLV 10	Si
PFFP_SLV	0	SLV 7	No
R_SLV	1.052	SLV 6	Si

Maschio 149

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.633	-3.314	-24.633	5.826	L6	L7	9.141	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	8.96	3327.59	-25231	-0.0000161	0.0003743	0.0035	9.1407	104148.26	114052.84	114052.84	34.27	No	Si
SLU 81	12.48	11335.94	-3176	-0.0000112	0.0003743	0.0035	9.1407	14336.32	22182.11	22182.11	1.96	No	Si
SLU 10	8.96	4086.19	-17879	-0.000012	0.0003743	0.0035	9.1407	76106.41	84701.85	84701.85	20.73	No	Si
SLU 10	12.48	9046.9	-2111	-0.0000249	0.0003743	0.0035	9.1407	9571.55	17453.27	17453.27	1.93	No	Si
SLU 18	8.96	2543.57	-18656	-0.0000119	0.0003743	0.0035	9.1407	79161.43	87846.22	87846.22	34.54	No	Si
SLU 18	12.48	8462.75	-1994	-0.0000209	0.0003743	0.0035	9.1407	9042.93	16929.79	16929.79	2	No	Si
SLU 52	8.96	4948.66	-21759	-0.0000146	0.0003743	0.0035	9.1407	91140.51	100327.43	100327.43	20.27	No	Si
SLU 52	12.48	10891.48	-2595	-0.0000242	0.0003743	0.0035	9.1407	11743.72	19606.72	19606.72	1.8	No	Si
SLU 40	8.96	3347.19	-21361	-0.0000138	0.0003743	0.0035	9.1407	89623.15	98740.59	98740.59	29.5	No	Si
SLU 40	12.48	10046.81	-2687	-0.0000114	0.0003743	0.0035	9.1407	12153.79	20013.7	20013.7	1.99	No	Si
SLU 60	8.96	3406.04	-22536	-0.0000145	0.0003743	0.0035	9.1407	94089.72	103439.09	103439.09	30.37	No	Si
SLU 60	12.48	10307.32	-2478	-0.0000211	0.0003743	0.0035	9.1407	11217.09	19084.29	19084.29	1.85	No	Si
SLU 61	8.96	4288.12	-22546	-0.0000148	0.0003743	0.0035	9.1407	94125.75	103477.32	103477.32	24.13	No	Si
SLU 61	12.48	10862.77	-2473	-0.0000415	0.0003743	0.0035	9.1407	11196.84	19064.2	19064.2	1.76	No	Si
SLU 73	8.96	4870.21	-24453	-0.0000162	0.0003743	0.0035	9.1407	101272.54	110990.82	110990.82	22.79	No	Si
SLU 73	12.48	11920.09	-3293	-0.0000122	0.0003743	0.0035	9.1407	14860.07	22703.81	22703.81	1.9	No	Si
SLU 19	8.96	3425.65	-18666	-0.0000122	0.0003743	0.0035	9.1407	79198.76	87884.75	87884.75	25.65	No	Si
SLU 19	12.48	9018.19	-1989	-0.0000525	0.0003743	0.0035	9.1407	9022.6	16909.66	16909.66	1.88	No	Si
SLU 82	8.96	4209.66	-25240	-0.0000164	0.0003743	0.0035	9.1407	104183.39	114090.46	114090.46	27.1	No	Si
SLU 82	12.48	11891.38	-3171	-0.0000136	0.0003743	0.0035	9.1407	14316.18	22162.08	22162.08	1.86	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 2	8.96	8440.66	-13224	-0.0000108	0.0005615	0.0035	9.1407		66237.75	66237.75	7.85		Si
SLD 2	12.48	12278.38	3111	0.0197778	0.0005615	0.0035	7.3126		0	0	0		No
SLD 4	8.96	-12097.25	-13508	-0.0000124	0.0005615	0.0035	9.1407		108224.94	108224.94	8.95		Si
SLD 4	12.48	689.17	2980	0.0225524	0.0005615	0.0035	7.3126		0	0	0		No
SLV 6	8.96	75977.03	-13463	-0.0041445	0.0005615	0.0035	9.1407		67263.06	67263.06	0.89		No
SLV 6	12.48	49846.74	1895	-0.0148049	0.0005615	0.0035	9.1407		0	0	0		No
SLV 4	8.96	-31210.68	-8412	-0.0000332	0.0005615	0.0035	7.3126		86587.49	86587.49	2.77		Si
SLV 4	12.48	-8523.91	10355	0.0806231	0.0005615	0.0035	7.3126		0	0	0		No
SLD 1	8.96	11891.6	-13236	-0.0000121	0.0005615	0.0035	9.1407		66287.26	66287.26	5.57		Si
SLD 1	12.48	14822.2	3078	0.0182239	0.0005615	0.0035	7.3126		0	0	0		No
SLD 3	8.96	-8646.32	-13520	-0.0000111	0.0005615	0.0035	9.1407		108273.6	108273.6	12.52		Si
SLD 3	12.48	3232.99	2947	0.0217007	0.0005615	0.0035	7.3126		0	0	0		No
SLV 2	8.96	15468.94	-7766	-0.0000106	0.0005615	0.0035	9.1407		42554.72	42554.72	2.75		Si
SLV 2	12.48	17851.48	10655	0.0769781	0.0005615	0.0035	7.3126		0	0	0		No
SLV 3	8.96	-23171.1	-8439	-0.0000162	0.0005615	0.0035	7.3126		86702.2	86702.2	3.74		Si
SLV 3	12.48	-2597.64	10279	0.0789716	0.0005615	0.0035	7.3126		0	0	0		No
SLV 5	8.96	81111.33	-13480	-0.0057768	0.0005615	0.0035	9.1407		67336.69	67336.69	0.83		No
SLV 5	12.48	53631.43	1846	-0.0160972	0.0005615	0.0035	9.1407		0	0	0		No
SLV 1	8.96	23508.52	-7793	-0.0000177	0.0005615	0.0035	9.1407		42672.66	42672.66	1.82		Si
SLV 1	12.48	23777.76	10578	0.0745472	0.0005615	0.0035	7.3126		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 52	8.96	4948.66	-21759	-18119	3095	9.1407	9.1407	-7079	7888	20189	78503	76640	23309	98692	No	31.89	Si
SLU 52	12.48	10891.48	-2595	-2161	3231	9.1407	1.1217	-6744	7848	2465	78503	76640	23309	80968	No	25.06	Si
SLU 55	8.96	5233.85	-22843	-19022	3149	9.1407	9.1407	-7432	7935	20310	78503	76640	23309	98813	No	31.38	Si
SLU 55	12.48	11173.46	-3730	-3106	3285	9.1407	4.724	-1214	7106	9400	78503	76640	23309	87903	No	26.75	Si
SLU 60	8.96	3406.04	-22536	-18766	2726	9.1407	9.1407	-7332	7922	20276	78503	76640	23309	98779	No	36.23	Si
SLU 60	12.48	10307.32	-2478	-2063	2751	9.1407	1.2318	-5905	7734	2668	78503	76640	23309	81171	No	29.5	Si
SLU 59	8.96	4930.99	-23922	-19920	3045	9.1407	9.1407	-7783	7982	20430	78503	76640	23309	98933	No	32.49	Si
SLU 59	12.48	11085.15	-4867	-4053	3137	9.1407	6.8787	-1584	7156	13782	78503	76640	23309	92285	No	29.42	Si
SLU 44	8.96	5117.82	-19907	-16577	3037	9.1407	9.1407	-6477	7808	19984	78503	76640	23309	98487	No	32.43	Si
SLU 44	12.48	10094.45	-2887	-2404	3171	9.1407	3.2221	-939	7070	6378	78503	76640	23309	84881	No	26.77	Si
SLU 63	8.96	4573.31	-23630	-19677	3016	9.1407	9.1407	-7688	7970	20397	78503	76640	23309	98900	No	32.79	Si
SLU 63	12.48	11144.75	-3608	-3004	3109	9.1407	4.4439	-1174	7101	8836	78503	76640	23309	87339	No	28.09	Si
SLU 73	8.96	4870.21	-24453	-20363	2793	9.1407	9.1407	-7956	8005	20489	78503	76640	23309	98992	No	35.44	Si
SLU 73	12.48	11920.09	-3293	-2742	2932	9.1407	2.8516	-3442	7403	5911	78503	76640	23309	84414	No	28.79	Si
SLU 76	8.96	5155.4	-25538	-21266	2847	9.1407	9.1407	-8309	8052	20609	78503	76640	23309	99112	No	34.82	Si
SLU 76	12.48	12202.07	-4428	-3687	2986	9.1407	5.4431	-1441	7137	10877	78503	76640	23309	89380	No	29.93	Si
SLU 47	8.96	5403.01	-20992	-17480	3091	9.1407	9.1407	-6830	7855	20104	78503	76640	23309	98607	No	31.9	Si
SLU 47	12.48	10376.43	-4022	-3349	3225	9.1407	5.9706	-1308	7119	11901	78503	76640	23309	90404	No	28.03	Si
SLU 61	8.96	4288.12	-22546	-18774	2962	9.1407	9.1407	-7335	7922	20277	78503	76640	23309	98780	No	33.34	Si
SLU 61	12.48	10862.77	-2473	-2060	3055	9.1407	0.5353	-11087	8455	1267	78503	76640	23309	79770	No	26.11	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	8.96	-75682.37	-21141	-17605	-21975	7.3126	2.9715	0	0	0	78503	91968	18647	78503		3.57	Si
SLV 12	12.48	-37939.93	-6900	-5745	-26543	7.3126	0	0	0	0	78503	91968	18647	78503		2.96	Si
SLV 7	8.96	-74487.4	-15634	-13018	-20817	7.3126	0	0	0	0	78503	91968	18647	78503		3.77	Si
SLV 7	12.48	-34286.54	848	706	-25328	7.3126	0	0	0	0	78503	91968	18647	78503		3.1	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	8.96	81111.33	-13480	-11225	25743	9.1407	0	-119084	16250	0	78503	114959	23309	78503		3.05	Si
SLV 5	12.48	53631.43	1846	1537	30349	9.1407	0	0	7923	0	78503	114959	23309	78503		2.59	Si
SLV 8	8.96	-79621.71	-15616	-13004	-22369	7.3126	0	0	0	0	78503	91968	18647	78503		3.51	Si
SLV 8	12.48	-38071.23	897	747	-26882	7.3126	0	0	0	0	78503	91968	18647	78503		2.92	Si
SLV 6	8.96	75977.03	-13463	-11211	24191	9.1407	0	-119511	16250	0	78503	114959	23309	78503		3.25	Si
SLV 6	12.48	49846.74	1895	1578	28795	9.1407	0	0	8387	0	78503	114959	23309	78503		2.73	Si
SLV 11	8.96	-70548.07	-21158	-17619	-20423	7.3126	3.7082	0	0	0	78503	91968	18647	78503		3.84	Si
SLV 11	12.48	-34155.25	-6948	-5786	-24989	7.3126	0	0	0	0	78503	91968	18647	78503		3.14	Si
SLD 9	8.96	38909.35	-18023	-15008	12547	9.1407	7.2345	-5864	11589	23476	78503	114959	23309	101979		8.13	Si
SLD 9	12.48	28013.57	-3986	-3319	14573	9.1407	0	-70869	16250	0	78503	114959	23309	78503		5.39	Si
SLD 5	8.96	37218.96	-15660	-13040	12377	9.1407	6.5809	-5095	11436	21072	78503	114959	23309	99575		8.05	Si
SLD 5	12.48	27959.54	-652	-543	14427	9.1407	0	0	0	0	78503	114959	23309	78503		5.44	Si
SLV 9	8.96	85050.67	-19005	-15826	26137	9.1407	0.2857	-104368	16250	1300	78503	114959	23309	79803		3.05	Si
SLV 9	12.48	53762.72	-5950	-4954	30688	9.1407	0	0	16250	0	78503	114959	23309	78503		2.56	Si
SLV 10	8.96	79916.37	-18988	-15812	24585	9.1407	1.0847	-51952	16250	4935	78503	114959	23309	83439		3.39	Si
SLV 10	12.48	49978.04	-5901	-4914	29134	9.1407	0	0	16250	0	78503	114959	23309	78503		2.69	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.46	0	-5929	1121.08	0	0	No, e>t/2
SLV 4	179667	0.46	0	3954	1121.08	0	0	No, Trazione
SLV 8	179667	0.46	0	-5891	1121.08	0	0	No, e>t/2
SLV 1	179667	0.46	0	4315	1121.08	0	0	No, Trazione
SLV 6	179667	0.46	0	-4486	1121.08	0	0	No, e>t/2
SLV 3	179667	0.46	0	3894	1121.08	0	0	No, Trazione
SLV 5	179667	0.46	0	-4525	1121.08	0	0	No, e>t/2
SLV 2	179667	0.46	0	4376	1121.08	0	0	No, Trazione
SLV 10	179667	0.46	4882	-12494	1121.08	1693.31	1.51	Si
SLV 9	179667	0.46	4897	-12533	1121.08	1698.36	1.51	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-6948	-21158	952	3.408	2100.4	0.889	55.68414	15.29191	Si
SLV 12	-6900	-21141	952	3.419	2096	0.89	55.8599	15.29191	Si
SLV 9	-5950	-19005	919	3.65	2013.8	0.891	59.51463	15.29191	Si
SLV 10	-5901	-18988	919	3.662	2009.6	0.891	59.71164	15.29191	Si
SLV 15	-15708	-26855	3102	2.079	2925.8	0.899	33.60508	8.07112	Si
SLV 16	-15632	-26828	3102	2.085	2918.3	0.899	33.7166	8.07112	Si
SLV 13	-15409	-26209	3092	2.105	2896.6	0.899	34.05263	8.07112	Si
SLV 14	-15332	-26183	3092	2.112	2889.1	0.898	34.16702	8.07112	Si
SLV 7	848	-15634	-901	6.644	1653	1	96.55693	15.29191	Si, Trazione
SLV 8	897	-15616	-901	6.665	1653	1	96.86137	15.29191	Si, Trazione

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.755	SLU 61	Si
V_SLU	25.056	SLU 52	Si
PF_SLV	0	SLD 1	No
V_SLV	2.558	SLV 9	Si
PFFP_SLV	0	SLV 4	No
R_SLV	3.641	SLV 11	Si

Maschio 150

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.633	5.826	-22.713	5.826	L6	L7	1.92	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 43	9.86	1007.81	-6017	-0.0000258	0.0003743	0.0035	1.92	5140.91	5487.81	5487.81	5.45	No	Si
SLU 43	11.66	-21.67	-4648	-0.0000131	0.0003743	0.0035	1.92	4083.31	5208.03	5208.03	240.37	No	Si
SLU 44	9.86	1016.78	-6195	-0.0000264	0.0003743	0.0035	1.92	5273.82	5619.27	5619.27	5.53	No	Si
SLU 44	11.66	-36.3	-4781	-0.0000136	0.0003743	0.0035	1.92	4188.81	5317.31	5317.31	146.5	No	Si
SLU 46	9.86	1040.84	-6604	-0.0000278	0.0003743	0.0035	1.92	5574.83	5902.02	5902.02	5.67	No	Si
SLU 46	11.66	40.29	-5282	-0.0000151	0.0003743	0.0035	1.92	4581.11	4891.08	4891.08	121.38	No	Si
SLU 49	9.86	1063.55	-6946	-0.000029	0.0003743	0.0035	1.92	5821.63	6135.44	6135.44	5.77	No	Si
SLU 49	11.66	85.84	-5662	-0.0000166	0.0003743	0.0035	1.92	4873.22	5204.12	5204.12	60.62	No	Si
SLU 50	9.86	1053.22	-6700	-0.0000282	0.0003743	0.0035	1.92	5644.49	5967.33	5967.33	5.67	No	Si
SLU 50	11.66	69.43	-5409	-0.0000157	0.0003743	0.0035	1.92	4679.36	4996.93	4996.93	71.97	No	Si
SLU 47	9.86	1039.49	-6536	-0.0000276	0.0003743	0.0035	1.92	5525.52	5856.06	5856.06	5.63	No	Si
SLU 47	11.66	9.25	-5161	-0.0000145	0.0003743	0.0035	1.92	4487.6	4791.1	4791.1	517.95	No	Si
SLU 48	9.86	1058.17	-6839	-0.0000287	0.0003743	0.0035	1.92	5744.83	6062.19	6062.19	5.73	No	Si
SLU 48	11.66	94.62	-5582	-0.0000164	0.0003743	0.0035	1.92	4812.46	5139.34	5139.34	54.32	No	Si
SLU 45	9.86	1035.46	-6497	-0.0000274	0.0003743	0.0035	1.92	5496.75	5829.35	5829.35	5.63	No	Si
SLU 45	11.66	49.07	-5202	-0.000015	0.0003743	0.0035	1.92	4519.28	4824.88	4824.88	98.32	No	Si
SLU 1	9.86	762.34	-4744	-0.0000199	0.0003743	0.0035	1.92	4159.66	4442.68	4442.68	5.83	No	Si
SLU 1	11.66	29.86	-3796	-0.0000108	0.0003743	0.0035	1.92	3391.23	3635.11	3635.11	121.72	No	Si
SLU 51	9.86	1058.6	-6807	-0.0000286	0.0003743	0.0035	1.92	5721.81	6040.34	6040.34	5.71	No	Si
SLU 51	11.66	60.65	-5489	-0.0000159	0.0003743	0.0035	1.92	4740.61	5062.92	5062.92	83.48	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	9.86	282.66	3463	0.2720579	0.0005615	0.0035	1.536		0	0	0		No
SLV 11	11.66	410.7	1614	0.1247556	0.0005615	0.0035	1.536		0	0	0		No
SLD 7	9.86	382.91	-626	-0.0000063	0.0005615	0.0035	1.92		784.88	784.88	2.05		Si
SLD 7	11.66	652.06	-1513	-0.00001	0.0005615	0.0035	1.92		1613.79	1613.79	2.47		Si
SLV 3	9.86	38.31	-399	-0.0000014	0.0005615	0.0035	1.92		570.72	570.72	14.9		Si
SLV 3	11.66	1810.78	-2273	-0.0000502	0.0005615	0.0035	1.92		2315.78	2315.78	1.28		Si
SLD 8	9.86	328.76	-266	-0.0002411	0.0005615	0.0035	1.536		444.78	444.78	1.35		Si
SLD 8	11.66	710.79	-1268	-0.0000111	0.0005615	0.0035	1.92		1386.43	1386.43	1.95		Si
SLD 12	9.86	478.98	-861	-0.0000075	0.0005615	0.0035	1.92		1004.73	1004.73	2.1		Si
SLD 12	11.66	312.41	-1393	-0.0000065	0.0005615	0.0035	1.92		1502.07	1502.07	4.81		Si
SLV 7	9.86	-68.09	4854	0.3842353	0.0005615	0.0035	1.536		0	0	0		No
SLV 7	11.66	1339.92	1908	0.1386137	0.0005615	0.0035	1.536		0	0	0		No
SLD 11	9.86	533.12	-1221	-0.0000082	0.0005615	0.0035	1.92		1341.92	1341.92	2.52		Si
SLD 11	11.66	253.68	-1638	-0.0000067	0.0005615	0.0035	1.92		1728.91	1728.91	6.82		Si
SLV 12	9.86	158.53	4288	0.338128	0.0005615	0.0035	1.536		0	0	0		No
SLV 12	11.66	545.33	2175	0.1682179	0.0005615	0.0035	1.536		0	0	0		No
SLV 8	9.86	-192.23	5680	0.4502258	0.0005615	0.0035	1.536		0	0	0		No
SLV 8	11.66	1474.56	2469	0.1826794	0.0005615	0.0035	1.536		0	0	0		No
SLV 4	9.86	-156.07	894	0	0.0005615	0.0035	1.536		0	0	0		No
SLV 4	11.66	2021.6	-1395	-0.0048978	0.0005615	0.0035	1.92		1503.9	1503.9	0.74		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 36	9.86	710.63	-6283	-5232	-729	1.92	1.92	-9733	8242	4431	40441	16098	4896	20994	No	28.78	Si
SLU 36	11.66	456.27	-6212	-5173	-730	1.92	1.92	-9623	8227	4423	40441	16098	4896	20994	No	28.75	Si
SLU 40	9.86	635.2	-5534	-4608	-772	1.92	1.92	-8572	8087	4348	40441	16098	4896	20994	No	27.19	Si
SLU 40	11.66	401.05	-5521	-4598	-773	1.92	1.92	-8553	8085	4346	40441	16098	4896	20994	No	27.17	Si
SLU 38	9.86	705.69	-6145	-5117	-700	1.92	1.92	-9518	8213	4416	40441	16098	4896	20994	No	30	Si
SLU 38	11.66	431.08	-6039	-5029	-701	1.92	1.92	-9354	8192	4404	40441	16098	4896	20994	No	29.97	Si
SLU 41	9.86	652.52	-5769	-4804	-828	1.92	1.92	-8935	8136	4374	40441	16098	4896	20994	No	25.36	Si
SLU 41	11.66	455.37	-5822	-4848	-828	1.92	1.92	-9018	8147	4380	40441	16098	4896	20994	No	25.34	Si
SLU 32	9.86	682.54	-5835	-4859	-719	1.92	1.92	-9038	8149	4381	40441	16098	4896	20994	No	29.21	Si
SLU 32	11.66	419.51	-5752	-4790	-719	1.92	1.92	-8910	8132	4372	40441	16098	4896	20994	No	29.19	Si
SLU 42	9.86	657.9	-5876	-4893	-805	1.92	1.92	-9101	8158	4386	40441	16098	4896	20994	No	26.07	Si
SLU 42	11.66	446.59	-5902	-4914	-806	1.92	1.92	-9142	8163	4389	40441	16098	4896	20994	No	26.05	Si
SLU 35	9.86	705.25	-6176	-5143	-752	1.92	1.92	-9567	8220	4419	40441	16098	4896	20994	No	27.92	Si
SLU 35	11.66	465.05	-6133	-5107	-753	1.92	1.92	-9499	8211	4414	40441	16098	4896	20994	No	27.89	Si
SLU 39	9.86	629.81	-5427	-4519	-795	1.92	1.92	-8406	8065	4336	40441	16098	4896	20994	No	26.42	Si
SLU 39	11.66	409.82	-5442	-4531	-795	1.92	1.92	-8429	8068	4337	40441	16098	4896	20994	No	26.41	Si
SLU 83	9.86	897.99	-7041	-5863	-702	1.92	1.92	-10906	8399	4515	40441	16098	4896	20994	No	29.91	Si
SLU 83	11.66	403.84	-6675	-5558	-703	1.92	1.92	-10339	8323	4474	40441	16098	4896	20994	No	29.88	Si
SLU 37	9.86	700.3	-6038	-5028	-722	1.92	1.92	-9352	8191	4404	40441	16098	4896	20994	No	29.07	Si
SLU 37	11.66	439.86	-5959	-4962	-723	1.92	1.92	-9231	8175	4395	40441	16098	4896	20994	No	29.04	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	9.86	-192.23	5680	4730	-3677	1.536	1.92	0	0	0	40441	19318	3917	23234		6.32	Si
SLV 8	11.66	1474.56	2469	2056	-3548	1.536	1.0885	0	0	0	40441	19318	3917	23234		6.55	Si
SLV 14	9.86	1424.97	-9438	-7860	2898	1.92	1.92	-14620	13341	7172	40441	24147	4896	29043		10.02	Si
SLV 14	11.66	-1568.82	-6120	-5096	2283	1.92	1.92	-9479	12313	6619	40441	24147	4896	29043		12.72	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	9.86	158.53	4288	3571	-2169	1.536	1.92	0	0	0	40441	19318	3917	23234		10.71	Si
SLV 12	11.66	545.33	2175	1811	-2420	1.536	1.92	0	0	0	40441	19318	3917	23234		9.6	Si
SLV 4	9.86	-156.07	894	744	-3692	1.536	1.92	0	0	0	40441	19318	3917	23234		6.29	Si
SLV 4	11.66	2021.6	-1395	-1161	-3078	1.92	0	-98801	16250	0	40441	24147	4896	29043		9.44	Si
SLV 10	9.86	1531.37	-14691	-12234	3044	1.92	1.92	-22756	14968	8047	40441	24147	4896	29043		9.54	Si
SLV 10	11.66	-1097.97	-10301	-8578	2915	1.92	1.92	-15957	13608	7316	40441	24147	4896	29043		9.96	Si
SLV 13	9.86	1619.35	-10731	-8936	3344	1.92	1.92	-16622	13741	7387	40441	24147	4896	29043		8.69	Si
SLV 13	11.66	-1779.64	-6998	-5828	2729	1.92	1.92	-10840	12585	6765	40441	24147	4896	29043		10.64	Si
SLV 7	9.86	-68.09	4854	4042	-3392	1.536	1.92	0	0	0	40441	19318	3917	23234		6.85	Si
SLV 7	11.66	1339.92	1908	1589	-3263	1.536	0.7735	0	0	0	40441	19318	3917	23234		7.12	Si
SLV 3	9.86	38.31	-399	-332	-3246	1.92	1.92	-618	10540	5666	40441	24147	4896	29043		8.95	Si
SLV 3	11.66	1810.78	-2273	-1893	-2632	1.92	0.4903	-13875	13192	1811	40441	24147	4896	29043		11.03	Si
SLV 9	9.86	1655.51	-15517	-12921	3329	1.92	1.92	-24035	15224	8184	40441	24147	4896	29043		8.72	Si
SLV 9	11.66	-1232.6	-10862	-9045	3199	1.92	1.92	-16826	13782	7409	40441	24147	4896	29043		9.08	Si
SLV 11	9.86	282.66	3463	2883	-1884	1.536	1.92	0	0	0	40441	19318	3917	23234		12.33	Si
SLV 11	11.66	410.7	1614	1344	-2135	1.536	1.92	0	0	0	40441	19318	3917	23234		10.88	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.46	0	2179	235.48	0	0	No, Trazione
SLV 7	179667	0.46	0	2679	235.48	0	0	No, Trazione
SLV 12	179667	0.46	0	2843	235.48	0	0	No, Trazione
SLV 4	179667	0.46	0	-1176	235.48	0	0	No, e>t/2
SLV 8	179667	0.46	0	3343	235.48	0	0	No, Trazione
SLV 3	179667	0.46	4121	-2215	235.48	301.78	1.28	Si
SLV 16	179667	0.46	5287	-2842	235.48	384.11	1.63	Si
SLV 15	179667	0.46	7221	-3882	235.48	517.75	2.2	Si
SLV 2	179667	0.46	10621	-5710	235.48	743.78	3.16	Si
SLV 1	179667	0.46	12555	-6750	235.48	867.25	3.68	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-9269	-13736	250	1.006	1212.6	0.938	15.58061	15.29191	Si
SLV 5	-8735	-12894	377	1.043	1158.5	0.936	16.19869	15.29191	Si
SLV 10	-8698	-13032	250	1.059	1154.8	0.936	16.44732	15.29191	Si
SLV 6	-8164	-12191	377	1.101	1100.8	0.933	17.15114	15.29191	Si
SLV 13	-6427	-8846	-120	1.36	925.7	0.924	21.3993	8.07112	Si
SLV 14	-5532	-7744	-120	1.523	835.9	0.917	24.12873	8.07112	Si
SLV 1	-4647	-6042	303	1.701	747.5	0.911	27.14888	8.07112	Si
SLV 2	-3752	-4940	303	1.974	658.9	0.903	31.7625	8.07112	Si
SLV 15	-3318	-3643	-311	2.139	616.3	0.899	34.57639	8.07112	Si
SLV 16	-2423	-2541	-310	2.595	530	0.892	42.28175	8.07112	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.445	SLU 43	Si
V_SLU	25.345	SLU 41	Si
PF_SLV	0	SLV 4	No
V_SLV	6.293	SLV 4	Si
PFFP_SLV	0	SLV 12	No
R_SLV	1.019	SLV 9	Si

Maschio 151

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-21.813	5.826	-19.613	5.826	L6	L7	2.2	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 51	9.86	656.18	-10269	-0.00003	0.0003743	0.0035	2.2	9446.76	9914.36	9914.36	15.11	No	Si
SLU 51	11.66	-1312.59	-9284	-0.0000319	0.0003743	0.0035	2.2	8700.96	10401.62	10401.62	7.92	No	Si
SLU 61	9.86	786.69	-10021	-0.0000302	0.0003743	0.0035	2.2	9262.11	9706.28	9706.28	12.34	No	Si
SLU 61	11.66	-1326.55	-9181	-0.0000317	0.0003743	0.0035	2.2	8620.97	10311.41	10311.41	7.77	No	Si
SLU 43	9.86	717.53	-9042	-0.0000272	0.0003743	0.0035	2.2	8512.04	8894.71	8894.71	12.4	No	Si
SLU 43	11.66	-1255.23	-7994	-0.0000282	0.0003743	0.0035	2.2	7672.49	9268.86	9268.86	7.38	No	Si
SLU 44	9.86	723.27	-9166	-0.0000275	0.0003743	0.0035	2.2	8609.28	8997.03	8997.03	12.44	No	Si
SLU 44	11.66	-1273.46	-8104	-0.0000286	0.0003743	0.0035	2.2	7762.81	9368.86	9368.86	7.36	No	Si
SLU 47	9.86	690.87	-9743	-0.0000288	0.0003743	0.0035	2.2	9052.26	9473.92	9473.92	13.71	No	Si
SLU 47	11.66	-1296.67	-8716	-0.0000303	0.0003743	0.0035	2.2	8255.55	9908.13	9908.13	7.64	No	Si
SLU 55	9.86	736.88	-10376	-0.0000308	0.0003743	0.0035	2.2	9525.52	10004.16	10004.16	13.58	No	Si
SLU 55	11.66	-1338.94	-9501	-0.0000326	0.0003743	0.0035	2.2	8868.08	10592.23	10592.23	7.91	No	Si
SLU 52	9.86	769.27	-9800	-0.0000295	0.0003743	0.0035	2.2	9095.35	9521.28	9521.28	12.38	No	Si
SLU 52	11.66	-1315.73	-8889	-0.0000309	0.0003743	0.0035	2.2	8392.19	10056.97	10056.97	7.64	No	Si
SLU 46	9.86	668.79	-9915	-0.0000291	0.0003743	0.0035	2.2	9182.58	9617.72	9617.72	14.38	No	Si
SLU 46	11.66	-1284.65	-8887	-0.0000307	0.0003743	0.0035	2.2	8390.62	10055.24	10055.24	7.83	No	Si
SLU 60	9.86	783.25	-9947	-0.00003	0.0003743	0.0035	2.2	9206.07	9643.81	9643.81	12.31	No	Si
SLU 60	11.66	-1315.61	-9115	-0.0000315	0.0003743	0.0035	2.2	8569.34	10253.52	10253.52	7.79	No	Si
SLU 45	9.86	665.35	-9841	-0.0000289	0.0003743	0.0035	2.2	9126.27	9555.38	9555.38	14.36	No	Si
SLU 45	11.66	-1273.71	-8821	-0.0000304	0.0003743	0.0035	2.2	8338.3	9998.02	9998.02	7.85	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	9.86	1199.15	-5155	-0.0000203	0.0005615	0.0035	2.2		5685.66	5685.66	4.74		Si
SLV 16	11.66	-2714.97	-5611	-0.0000325	0.0005615	0.0035	2.2		7162.61	7162.61	2.64		Si
SLV 8	9.86	-194.19	-783	-0.0000031	0.0005615	0.0035	2.2		2185.15	2185.15	11.25		Si
SLV 8	11.66	813.27	-837	-0.0000229	0.0005615	0.0035	2.2		1183.19	1183.19	1.45		Si
SLV 15	9.86	1406.29	-5799	-0.0000233	0.0005615	0.0035	2.2		6331.55	6331.55	4.5		Si
SLV 15	11.66	-2931.02	-6343	-0.0000355	0.0005615	0.0035	2.2		7896.26	7896.26	2.69		Si
SLV 12	9.86	327.55	-665	-0.0000038	0.0005615	0.0035	2.2		997.5	997.5	3.05		Si
SLV 12	11.66	-480.14	-1248	-0.0000061	0.0005615	0.0035	2.2		2679.19	2679.19	5.58		Si
SLV 14	9.86	1456.56	-9222	-0.0000322	0.0005615	0.0035	2.2		9648.93	9648.93	6.62		Si
SLV 14	11.66	-3370.6	-9054	-0.0000448	0.0005615	0.0035	2.2		10508.7	10508.7	3.12		Si
SLV 11	9.86	459.84	-1076	-0.0000056	0.0005615	0.0035	2.2		1439.26	1439.26	3.13		Si
SLV 11	11.66	-618.11	-1715	-0.0000081	0.0005615	0.0035	2.2		3173.65	3173.65	5.13		Si
SLV 7	9.86	-61.9	-1195	-0.0000033	0.0005615	0.0035	2.2		2623.1	2623.1	42.38		Si
SLV 7	11.66	675.29	-1304	-0.0000078	0.0005615	0.0035	2.2		1684.61	1684.61	2.49		Si
SLV 4	9.86	-539.99	-5551	-0.000017	0.0005615	0.0035	2.2		7102.32	7102.32	13.15		Si
SLV 4	11.66	1596.38	-4244	-0.0000207	0.0005615	0.0035	2.2		4761.08	4761.08	2.98		Si
SLV 3	9.86	-332.85	-6195	-0.0000172	0.0005615	0.0035	2.2		7749.41	7749.41	23.28		Si
SLV 3	11.66	1380.34	-4975	-0.0000211	0.0005615	0.0035	2.2		5504.67	5504.67	3.99		Si
SLV 13	9.86	1663.71	-9866	-0.0000353	0.0005615	0.0035	2.2		10221.78	10221.78	6.14		Si
SLV 13	11.66	-3586.65	-9786	-0.0000481	0.0005615	0.0035	2.2		11182.41	11182.41	3.12		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	9.86	730.99	-11418	-9508	2222	2.2	2.2	-15435	9002	5546	40441	18446	5610	24056	No	10.83	Si
SLU 76	11.66	-1370.78	-10669	-8884	2223	2.2	2.2	-14422	8867	5462	40441	18446	5610	24056	No	10.82	Si
SLU 84	9.86	748.41	-11640	-9693	2279	2.2	2.2	-15735	9042	5570	40441	18446	5610	24056	No	10.55	Si
SLU 84	11.66	-1381.6	-10961	-9127	2281	2.2	2.2	-14817	8920	5495	40441	18446	5610	24056	No	10.55	Si
SLU 81	9.86	777.36	-10989	-9150	2258	2.2	2.2	-14854	8925	5498	40441	18446	5610	24056	No	10.65	Si
SLU 81	11.66	-1347.45	-10282	-8562	2260	2.2	2.2	-13900	8798	5419	40441	18446	5610	24056	No	10.64	Si
SLU 79	9.86	692.85	-11870	-9884	2236	2.2	2.2	-16046	9084	5596	40441	18446	5610	24056	No	10.76	Si
SLU 79	11.66	-1375.75	-11170	-9302	2237	2.2	2.2	-15100	8958	5518	40441	18446	5610	24056	No	10.75	Si
SLU 83	9.86	744.97	-11565	-9630	2277	2.2	2.2	-15634	9029	5562	40441	18446	5610	24056	No	10.57	Si
SLU 83	11.66	-1370.66	-10895	-9072	2278	2.2	2.2	-14727	8908	5487	40441	18446	5610	24056	No	10.56	Si
SLU 82	9.86	780.81	-11063	-9213	2261	2.2	2.2	-14955	8938	5506	40441	18446	5610	24056	No	10.64	Si
SLU 82	11.66	-1358.39	-10349	-8618	2262	2.2	2.2	-13989	8810	5427	40441	18446	5610	24056	No	10.63	Si
SLU 78	9.86	676.51	-12167	-10132	2220	2.2	2.2	-16448	9137	5629	40441	18446	5610	24056	No	10.84	Si
SLU 78	11.66	-1381.97	-11451	-9536	2221	2.2	2.2	-15480	9008	5549	40441	18446	5610	24056	No	10.83	Si
SLU 77	9.86	673.07	-12093	-10070	2217	2.2	2.2	-16347	9124	5620	40441	18446	5610	24056	No	10.85	Si
SLU 77	11.66	-1371.03	-11385	-9481	2219	2.2	2.2	-15390	8997	5542	40441	18446	5610	24056	No	10.84	Si
SLU 80	9.86	696.3	-11945	-9947	2238	2.2	2.2	-16147	9097	5604	40441	18446	5610	24056	No	10.75	Si
SLU 80	11.66	-1386.69	-11237	-9357	2240	2.2	2.2	-15190	8970	5525	40441	18446	5610	24056	No	10.74	Si
SLU 73	9.86	763.38	-10842	-9028	2204	2.2	2.2	-14656	8899	5482	40441	18446	5610	24056	No	10.92	Si
SLU 73	11.66	-1347.57	-10057	-8374	2205	2.2	2.2	-13594	8757	5394	40441	18446	5610	24056	No	10.91	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 14	9.86	947.33	-8377	-6976	2626	2.2	2.2	-11325	12682	7812	40441	27669	5610	33279		12.67	Si
SLD 14	11.66	-2012.88	-7911	-6588	2356	2.2	2.2	-10694	12555	7734	40441	27669	5610	33279		14.13	Si
SLV 10	9.86	1185.62	-14223	-11843	2543	2.2	2.2	-19226	14262	8785	40441	27669	5610	33279		13.09	Si
SLV 10	11.66	-2665.56	-12725	-10596	2257	2.2	2.2	-17202	13857	8536	40441	27669	5610	33279		14.74	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	9.86	1199.15	-5155	-4292	3815	2.2	2.2	-6968	11810	7275	40441	27669	5610	33279		8.72	Si
SLV 16	11.66	-2714.97	-5611	-4673	3246	2.2	1.8485	-9065	12230	6330	40441	27669	5610	33279		10.25	Si
SLV 13	9.86	1663.71	-9866	-8216	4282	2.2	2.2	-13337	13084	8060	40441	27669	5610	33279		7.77	Si
SLV 13	11.66	-3586.65	-9786	-8149	3650	2.2	2.2	-13228	13062	8046	40441	27669	5610	33279		9.12	Si
SLD 13	9.86	1036.25	-8654	-7206	2749	2.2	2.2	-11698	12756	7858	40441	27669	5610	33279		12.11	Si
SLD 13	11.66	-2105.62	-8225	-6849	2479	2.2	2.2	-11118	12640	7787	40441	27669	5610	33279		13.42	Si
SLV 9	9.86	1317.9	-14634	-12186	2726	2.2	2.2	-19782	14373	8854	40441	27669	5610	33279		12.21	Si
SLV 9	11.66	-2803.53	-13192	-10985	2441	2.2	2.2	-17833	13983	8614	40441	27669	5610	33279		13.63	Si
SLD 15	9.86	923.99	-6864	-5716	2671	2.2	2.2	-9279	12273	7560	40441	27669	5610	33279		12.46	Si
SLD 15	11.66	-1818.29	-6710	-5587	2429	2.2	2.2	-9070	12231	7534	40441	27669	5610	33279		13.7	Si
SLD 16	9.86	835.08	-6588	-5486	2548	2.2	2.2	-8906	12198	7514	40441	27669	5610	33279		13.06	Si
SLD 16	11.66	-1725.56	-6396	-5326	2306	2.2	2.2	-8646	12146	7482	40441	27669	5610	33279		14.43	Si
SLV 15	9.86	1406.29	-5799	-4829	4103	2.2	2.2	-7839	11984	7382	40441	27669	5610	33279		8.11	Si
SLV 15	11.66	-2931.02	-6343	-5282	3534	2.2	1.9137	-9902	12397	6643	40441	27669	5610	33279		9.42	Si
SLV 14	9.86	1456.56	-9222	-7679	3995	2.2	2.2	-12467	12910	7953	40441	27669	5610	33279		8.33	Si
SLV 14	11.66	-3370.6	-9054	-7540	3362	2.2	2.1833	-12240	12865	7864	40441	27669	5610	33279		9.9	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.46	0	-1707	269.83	0	0	No, e>t/2
SLV 12	179667	0.46	0	-1248	269.83	0	0	No, e>t/2
SLV 7	179667	0.46	0	-1620	269.83	0	0	No, e>t/2
SLV 8	179667	0.46	0	-1161	269.83	0	0	No, e>t/2
SLV 4	179667	0.46	8595	-5294	269.83	699.49	2.59	Si
SLV 16	179667	0.46	9068	-5586	269.83	735.59	2.73	Si
SLV 3	179667	0.46	9760	-6012	269.83	787.94	2.92	Si
SLV 15	179667	0.46	10234	-6304	269.83	823.42	3.05	Si
SLV 2	179667	0.46	14668	-9036	269.83	1143.51	4.24	Si
SLV 14	179667	0.46	15142	-9327	269.83	1176.36	4.36	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-9424	-15095	313	1.105	1268.4	0.934	17.20593	15.29191	Si
SLV 6	-9178	-14654	314	1.129	1243.6	0.933	17.59245	15.29191	Si
SLV 9	-9033	-15866	370	1.138	1228.9	0.932	17.74955	15.29191	Si
SLV 10	-8787	-15424	370	1.163	1204.1	0.931	18.16356	15.29191	Si
SLV 1	-7224	-9356	6	1.394	1046.6	0.923	21.96147	8.07112	Si
SLV 2	-6839	-8665	7	1.454	1007.9	0.921	22.9512	8.07112	Si
SLV 13	-5920	-11925	194	1.595	916	0.915	25.33936	8.07112	Si
SLV 14	-5535	-11233	194	1.675	877.5	0.912	26.68587	8.07112	Si
SLV 3	-4887	-5100	-201	1.829	813.1	0.907	29.28851	8.07112	Si
SLV 7	-1635	-910	-376	3.402	502.2	0.89	55.57441	15.29191	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.357	SLU 44	Si
V_SLU	10.547	SLU 84	Si
PF_SLV	1.455	SLV 8	Si
V_SLV	7.772	SLV 13	Si
PFFP_SLV	0	SLV 7	No
R_SLV	1.125	SLV 5	Si

Maschio 152

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.493	-3.314	-24.633	-3.314	L6	L7	2.14	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	9.86	418.46	-6141	-0.0000184	0.0003743	0.0035	2.14	5909.19	6316.11	6316.11	15.09	No	Si
SLU 81	11.66	-2636.65	-7882	-0.0000389	0.0003743	0.0035	2.14	7344.33	8905.8	8905.8	3.38	No	Si
SLU 73	9.86	369.05	-5788	-0.0000171	0.0003743	0.0035	2.14	5605.79	6000.16	6000.16	16.26	No	Si
SLU 73	11.66	-2516.81	-7385	-0.0000367	0.0003743	0.0035	2.14	6945.16	8463.44	8463.44	3.36	No	Si
SLU 76	9.86	363.03	-6069	-0.0000178	0.0003743	0.0035	2.14	5847.8	6254.18	6254.18	17.23	No	Si
SLU 76	11.66	-2576.85	-7735	-0.0000381	0.0003743	0.0035	2.14	7226.94	8774.6	8774.6	3.41	No	Si
SLU 63	9.86	346.83	-5730	-0.0000168	0.0003743	0.0035	2.14	5555	5946.31	5946.31	17.14	No	Si
SLU 63	11.66	-2429.81	-7197	-0.0000356	0.0003743	0.0035	2.14	6792.44	8298.22	8298.22	3.42	No	Si
SLU 83	9.86	412.44	-6422	-0.000019	0.0003743	0.0035	2.14	6147.73	6548.24	6548.24	15.88	No	Si
SLU 83	11.66	-2696.69	-8233	-0.0000403	0.0003743	0.0035	2.14	7620.01	9211.28	9211.28	3.42	No	Si
SLU 52	9.86	284.91	-5251	-0.0000151	0.0003743	0.0035	2.14	5135.26	5500.53	5500.53	19.31	No	Si
SLU 52	11.66	-2233.46	-6452	-0.0000322	0.0003743	0.0035	2.14	6173.74	7642.75	7642.75	3.42	No	Si
SLU 61	9.86	352.85	-5449	-0.0000161	0.0003743	0.0035	2.14	5309.65	5685.95	5685.95	16.11	No	Si
SLU 61	11.66	-2369.77	-6847	-0.0000342	0.0003743	0.0035	2.14	6504.05	7991.97	7991.97	3.37	No	Si
SLU 40	9.86	443.78	-4907	-0.0000154	0.0003743	0.0035	2.14	4828.15	5176.38	5176.38	11.66	No	Si
SLU 40	11.66	-2298.08	-6673	-0.0000332	0.0003743	0.0035	2.14	6358.71	7840.4	7840.4	3.41	No	Si
SLU 84	9.86	430.96	-6267	-0.0000188	0.0003743	0.0035	2.14	6016.53	6422.4	6422.4	14.9	No	Si
SLU 84	11.66	-2713.16	-8130	-0.0000402	0.0003743	0.0035	2.14	7539.49	9122.37	9122.37	3.36	No	Si
SLU 82	9.86	436.98	-5986	-0.0000181	0.0003743	0.0035	2.14	5776.47	6181.18	6181.18	14.15	No	Si
SLU 82	11.66	-2653.12	-7780	-0.0000388	0.0003743	0.0035	2.14	7262.56	8814.61	8814.61	3.32	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	9.86	1066.19	6603	0.4639932	0.0005615	0.0035	1.712		0	0	0		No
SLV 5	11.66	-3504.05	1632	0.1234955	0.0005615	0.0035	1.712		0	0	0		No
SLD 6	9.86	494.13	47	-0.0022675	0.0005615	0.0035	1.712		203.94	203.94	0.41		No
SLD 6	11.66	-2407.19	-2472	-0.0000786	0.0005615	0.0035	1.712		3868.93	3868.93	1.61		Si
SLD 9	9.86	271.56	180	0.0096178	0.0005615	0.0035	1.712		0	0	0		No
SLD 9	11.66	-1888.96	-1963	-0.0000573	0.0005615	0.0035	1.712		3350.11	3350.11	1.77		Si
SLV 10	9.86	293.62	5176	0.3666371	0.0005615	0.0035	1.712		0	0	0		No
SLV 10	11.66	-1968.07	1628	0.1214011	0.0005615	0.0035	1.712		0	0	0		No
SLD 10	9.86	216.96	-195	-0.0000461	0.0005615	0.0035	1.712		462.81	462.81	2.13		Si
SLD 10	11.66	-1818.63	-2220	-0.0000311	0.0005615	0.0035	1.712		3613.16	3613.16	1.99		Si
SLV 6	9.86	941.02	5743	0.4034658	0.0005615	0.0035	1.712		0	0	0		No
SLV 6	11.66	-3342.8	1042	0.0798528	0.0005615	0.0035	1.712		0	0	0		No
SLV 2	9.86	1290.71	-1060	-0.0005655	0.0005615	0.0035	1.712		1371.18	1371.18	1.06		Si
SLV 2	11.66	-4166.31	-4618	-0.0000984	0.0005615	0.0035	1.712		6006.69	6006.69	1.44		Si
SLV 1	9.86	1486.71	287	-0.0094725	0.0005615	0.0035	2.14		0	0	0		No
SLV 1	11.66	-4418.8	-3694	-0.0003911	0.0005615	0.0035	1.712		5099.55	5099.55	1.15		Si
SLD 5	9.86	548.73	422	0.0241041	0.0005615	0.0035	1.712		0	0	0		No
SLD 5	11.66	-2477.53	-2215	-0.0001632	0.0005615	0.0035	1.712		3607.65	3607.65	1.46		Si
SLV 9	9.86	418.79	6036	0.4271796	0.0005615	0.0035	1.712		0	0	0		No
SLV 9	11.66	-2129.32	2219	0.1644376	0.0005615	0.0035	1.712		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	9.86	308.94	-6799	-5662	4213	2.14	2.14	-9449	8204	4916	40441	17943	5457	23399	No	5.55	Si
SLU 77	11.66	-2641.52	-8464	-7048	4213	2.14	2.14	-11763	8513	5101	40441	17943	5457	23399	No	5.55	Si
SLU 81	9.86	418.46	-6141	-5114	4317	2.14	2.14	-8534	8082	4843	40441	17943	5457	23399	No	5.42	Si
SLU 81	11.66	-2636.65	-7882	-6564	4317	2.14	2.14	-10954	8405	5036	40441	17943	5457	23399	No	5.42	Si
SLU 79	9.86	326.14	-6608	-5502	4195	2.14	2.14	-9183	8169	4895	40441	17943	5457	23399	No	5.58	Si
SLU 79	11.66	-2609.44	-8256	-6875	4195	2.14	2.14	-11474	8474	5078	40441	17943	5457	23399	No	5.58	Si
SLU 82	9.86	436.98	-5986	-4985	4373	2.14	2.14	-8319	8054	4826	40441	17943	5457	23399	No	5.35	Si
SLU 82	11.66	-2653.12	-7780	-6478	4362	2.14	2.14	-10811	8386	5025	40441	17943	5457	23399	No	5.36	Si
SLU 83	9.86	412.44	-6422	-5347	4388	2.14	2.14	-8924	8134	4874	40441	17943	5457	23399	No	5.33	Si
SLU 83	11.66	-2696.69	-8233	-6855	4388	2.14	2.14	-11441	8470	5075	40441	17943	5457	23399	No	5.33	Si
SLU 76	9.86	363.03	-6069	-5054	4217	2.14	2.14	-8434	8069	4835	40441	17943	5457	23399	No	5.55	Si
SLU 76	11.66	-2576.85	-7735	-6441	4199	2.14	2.14	-10749	8378	5020	40441	17943	5457	23399	No	5.57	Si
SLU 84	9.86	430.96	-6267	-5218	4444	2.14	2.14	-8709	8106	4857	40441	17943	5457	23399	No	5.27	Si
SLU 84	11.66	-2713.16	-8130	-6770	4433	2.14	2.14	-11298	8451	5064	40441	17943	5457	23399	No	5.28	Si
SLU 80	9.86	344.66	-6453	-5374	4251	2.14	2.14	-8968	8140	4878	40441	17943	5457	23399	No	5.5	Si
SLU 80	11.66	-2625.91	-8154	-6790	4241	2.14	2.14	-11331	8455	5066	40441	17943	5457	23399	No	5.52	Si
SLU 75	9.86	333.48	-6364	-5299	4198	2.14	2.14	-8844	8124	4868	40441	17943	5457	23399	No	5.57	Si
SLU 75	11.66	-2597.95	-8011	-6671	4187	2.14	2.14	-11134	8429	5051	40441	17943	5457	23399	No	5.59	Si
SLU 78	9.86	327.46	-6644	-5533	4269	2.14	2.14	-9234	8176	4899	40441	17943	5457	23399	No	5.48	Si
SLU 78	11.66	-2657.99	-8362	-6963	4259	2.14	2.14	-11620	8494	5089	40441	17943	5457	23399	No	5.49	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	9.86	1290.71	-1060	-883	6702	1.712	0	0	0	0	40441	21531	4366	25897		3.86	Si
SLV 2	11.66	-4166.31	-4618	-3845	6176	1.712	0.5033	0	0	0	40441	21531	4366	25897		4.19	Si
SLV 6	9.86	941.02	5743	4782	6577	1.712	2.14	0	0	0	40441	21531	4366	25897		3.94	Si
SLV 6	11.66	-3342.8	1042	868	6431	1.712	0	0	0	0	40441	21531	4366	25897		4.03	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	9.86	1066.19	6603	5499	6897	1.712	2.14	0	0	0	40441	21531	4366	25897		3.75	Si
SLV 5	11.66	-3504.05	1632	1359	6750	1.712	0	0	0	0	40441	21531	4366	25897		3.84	Si
SLV 3	9.86	1169.41	-5903	-4915	5390	2.14	2.14	-8203	12057	7225	40441	26914	5457	32371		6.01	Si
SLV 3	11.66	-3789.03	-7815	-6508	4857	2.14	1.7555	-13322	13081	6430	40441	26914	5457	32371		6.67	Si
SLD 1	9.86	724.62	-2373	-1976	4648	2.14	2.14	-3298	11076	6637	40441	26914	5457	32371		6.96	Si
SLD 1	11.66	-2860.06	-4555	-3793	4424	1.712	1.3261	0	0	0	40441	21531	4366	25897		5.85	Si
SLV 1	9.86	1486.71	287	239	7202	2.14	0	0	9641	0	40441	26914	5457	32371		4.49	Si
SLV 1	11.66	-4418.8	-3694	-3076	6676	1.712	0	0	0	0	40441	21531	4366	25897		3.88	Si
SLD 5	9.86	548.73	422	351	4544	1.712	0	0	0	0	40441	21531	4366	25897		5.7	Si
SLD 5	11.66	-2477.53	-2215	-1844	4482	1.712	0	0	0	0	40441	21531	4366	25897		5.78	Si
SLV 9	9.86	418.79	6036	5027	4901	1.712	2.14	0	0	0	40441	21531	4366	25897		5.28	Si
SLV 9	11.66	-2129.32	2219	1848	5072	1.712	0.3309	0	0	0	40441	21531	4366	25897		5.11	Si
SLD 6	9.86	494.13	47	39	4404	1.712	0	0	0	0	40441	21531	4366	25897		5.88	Si
SLD 6	11.66	-2407.19	-2472	-2059	4342	1.712	0.2891	0	0	0	40441	21531	4366	25897		5.96	Si
SLV 10	9.86	293.62	5176	4310	4581	1.712	2.14	0	0	0	40441	21531	4366	25897		5.65	Si
SLV 10	11.66	-1968.07	1628	1356	4753	1.712	0	0	0	0	40441	21531	4366	25897		5.45	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.46	0	2520	262.46	0	0	No, Trazione
SLV 9	179667	0.46	0	3515	262.46	0	0	No, Trazione
SLV 13	179667	0.46	0	-1711	262.46	0	0	No, e>t/2
SLV 5	179667	0.46	0	3214	262.46	0	0	No, Trazione
SLV 10	179667	0.46	0	2820	262.46	0	0	No, Trazione
SLV 1	179667	0.46	4526	-2712	262.46	368.4	1.4	Si
SLV 14	179667	0.46	4672	-2799	262.46	379.9	1.45	Si
SLV 2	179667	0.46	6342	-3800	262.46	509.88	1.94	Si
SLV 15	179667	0.46	11114	-6659	262.46	864.44	3.29	Si
SLV 3	179667	0.46	12783	-7660	262.46	982.6	3.74	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-10197	-14934	369	1.009	1337.9	0.938	15.63888	15.29191	Si
SLV 12	-10157	-14548	227	1.024	1333.9	0.938	15.87376	15.29191	Si
SLV 7	-9583	-14181	369	1.061	1275.8	0.935	16.48628	15.29191	Si
SLV 11	-9543	-13795	227	1.077	1271.8	0.935	16.73745	15.29191	Si
SLV 4	-6321	-8834	326	1.472	947.2	0.918	23.28951	8.07112	Si
SLV 16	-6188	-7548	-148	1.517	933.9	0.918	24.03136	8.07112	Si
SLV 3	-5359	-7655	326	1.662	851.1	0.912	26.47985	8.07112	Si
SLV 15	-5226	-6369	-148	1.717	837.9	0.911	27.38901	8.07112	Si
SLV 2	-2810	-3037	147	2.578	601.1	0.893	41.97069	8.07112	Si
SLV 14	-2677	-1751	-327	2.612	588.5	0.892	42.56546	8.07112	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.322	SLU 82	Si
V_SLU	5.266	SLU 84	Si
PF_SLV	0	SLD 5	No
V_SLV	3.755	SLV 5	Si
PFFP_SLV	0	SLV 10	No
R_SLV	1.023	SLV 8	Si

Maschio 153

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.313	-3.314	-21.593	-3.314	L6	L7	2.28	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 40	10.96	-791.32	-10097	-0.0000291	0.0003743	0.0035	2.28	9722.78	11551.74	11551.74	14.6	No	Si
SLU 40	11.76	-1258.7	-8983	-0.0000293	0.0003743	0.0035	2.28	8825.6	10533.77	10533.77	8.37	No	Si
SLU 60	10.96	-820.44	-10900	-0.0000313	0.0003743	0.0035	2.28	10342.54	12241.9	12241.9	14.92	No	Si
SLU 60	11.76	-1333.31	-9493	-0.0000311	0.0003743	0.0035	2.28	9241.38	10995.97	10995.97	8.25	No	Si
SLU 81	10.96	-929.51	-12139	-0.0000352	0.0003743	0.0035	2.28	11253.86	13310.9	13310.9	14.32	No	Si
SLU 81	11.76	-1473.37	-10688	-0.000035	0.0003743	0.0035	2.28	10180.98	12059.39	12059.39	8.18	No	Si
SLU 62	10.96	-843.19	-11373	-0.0000327	0.0003743	0.0035	2.28	10696.49	12651.59	12651.59	15	No	Si
SLU 62	11.76	-1379.8	-9952	-0.0000325	0.0003743	0.0035	2.28	9607.94	11417.06	11417.06	8.27	No	Si
SLU 84	10.96	-962.14	-12490	-0.0000363	0.0003743	0.0035	2.28	11502.87	13596.08	13596.08	14.13	No	Si
SLU 84	11.76	-1514.35	-11040	-0.0000362	0.0003743	0.0035	2.28	10447.65	12362.14	12362.14	8.16	No	Si
SLU 73	10.96	-929.74	-11589	-0.0000338	0.0003743	0.0035	2.28	10856.05	12840.89	12840.89	13.81	No	Si
SLU 73	11.76	-1384.13	-10148	-0.0000331	0.0003743	0.0035	2.28	9762.52	11596.92	11596.92	8.38	No	Si
SLU 63	10.96	-853.08	-11252	-0.0000324	0.0003743	0.0035	2.28	10606.83	12546.5	12546.5	14.71	No	Si
SLU 63	11.76	-1374.29	-9844	-0.0000322	0.0003743	0.0035	2.28	9522.78	11318.06	11318.06	8.24	No	Si
SLU 61	10.96	-830.33	-10780	-0.0000311	0.0003743	0.0035	2.28	10250.88	12138.02	12138.02	14.62	No	Si
SLU 61	11.76	-1327.81	-9385	-0.0000308	0.0003743	0.0035	2.28	9154.49	10898.06	10898.06	8.21	No	Si
SLU 83	10.96	-952.26	-12611	-0.0000366	0.0003743	0.0035	2.28	11587.29	13694.47	13694.47	14.38	No	Si
SLU 83	11.76	-1519.86	-11147	-0.0000365	0.0003743	0.0035	2.28	10528.3	12455.2	12455.2	8.19	No	Si
SLU 82	10.96	-939.39	-12018	-0.000035	0.0003743	0.0035	2.28	11167.44	13212.33	13212.33	14.06	No	Si
SLU 82	11.76	-1467.86	-10581	-0.0000347	0.0003743	0.0035	2.28	10098.6	11967.37	11967.37	8.15	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	10.96	-670.97	-2314	-0.0000094	0.0005615	0.0035	2.28		3930.37	3930.37	5.86		Si
SLV 6	11.76	-1491.96	-2144	-0.000017	0.0005615	0.0035	1.824		3744.73	3744.73	2.51		Si
SLV 5	10.96	-607.8	-1900	-0.0000081	0.0005615	0.0035	2.28		3479.17	3479.17	5.72		Si
SLV 5	11.76	-1533.28	-1831	-0.0000213	0.0005615	0.0035	1.824		3403.67	3403.67	2.22		Si
SLV 2	10.96	-328.99	-5883	-0.0000157	0.0005615	0.0035	2.28		7703.2	7703.2	23.41		Si
SLV 2	11.76	-3113.83	-5737	-0.0000343	0.0005615	0.0035	2.28		7550.24	7550.24	2.42		Si
SLV 9	10.96	-854.68	-2530	-0.000011	0.0005615	0.0035	2.28		4164.93	4164.93	4.87		Si
SLV 9	11.76	-196.84	-1960	-0.0000057	0.0005615	0.0035	2.28		3544.57	3544.57	18.01		Si
SLV 4	10.96	-267.42	-9472	-0.0000239	0.0005615	0.0035	2.28		11307.32	11307.32	42.28		Si
SLV 4	11.76	-3177.59	-8870	-0.0000407	0.0005615	0.0035	2.28		10722.95	10722.95	3.37		Si
SLV 1	10.96	-230.08	-5235	-0.0000136	0.0005615	0.0035	2.28		7028.88	7028.88	30.55		Si
SLV 1	11.76	-3178.53	-5247	-0.0000351	0.0005615	0.0035	2.28		7041.41	7041.41	2.22		Si
SLD 1	10.96	-475.33	-7027	-0.0000194	0.0005615	0.0035	2.28		8879.32	8879.32	18.68		Si
SLD 1	11.76	-1903.52	-6388	-0.0000266	0.0005615	0.0035	2.28		8229.92	8229.92	4.32		Si
SLD 2	10.96	-517.79	-7305	-0.0000203	0.0005615	0.0035	2.28		9155.98	9155.98	17.68		Si
SLD 2	11.76	-1875.75	-6599	-0.000027	0.0005615	0.0035	2.28		8446.04	8446.04	4.5		Si
SLD 3	10.96	-448.13	-8606	-0.000023	0.0005615	0.0035	2.28		10461.92	10461.92	23.35		Si
SLD 3	11.76	-1931.92	-7767	-0.0000302	0.0005615	0.0035	2.28		9617.32	9617.32	4.98		Si
SLV 3	10.96	-168.51	-8824	-0.0000218	0.0005615	0.0035	2.28		10677.95	10677.95	63.37		Si
SLV 3	11.76	-3242.29	-8380	-0.0000399	0.0005615	0.0035	2.28		10235.14	10235.14	3.16		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	10.96	-929.51	-12139	-10108	495	2.28	2.28	-15833	9056	5781	40441	19117	5814	24931	No	50.41	Si
SLU 81	11.76	-1473.37	-10688	-8900	193	2.28	2.28	-13941	8803	5620	40441	19117	5814	24931	No	129.08	Si
SLU 83	10.96	-952.26	-12611	-10501	505	2.28	2.28	-16449	9138	5834	40441	19117	5814	24931	No	49.32	Si
SLU 83	11.76	-1519.86	-11147	-9282	203	2.28	2.28	-14540	8883	5671	40441	19117	5814	24931	No	122.91	Si
SLU 42	10.96	-814.07	-10570	-8801	472	2.28	2.28	-13787	8783	5607	40441	19117	5814	24931	No	52.82	Si
SLU 42	11.76	-1305.19	-9442	-7863	187	2.28	2.28	-12316	8587	5482	40441	19117	5814	24931	No	133.17	Si
SLU 61	10.96	-830.33	-10780	-8976	494	2.28	2.28	-14061	8819	5630	40441	19117	5814	24931	No	50.47	Si
SLU 61	11.76	-1327.81	-9385	-7815	207	2.28	2.28	-12242	8577	5475	40441	19117	5814	24931	No	120.46	Si
SLU 41	10.96	-804.19	-10690	-8902	471	2.28	2.28	-13944	8804	5620	40441	19117	5814	24931	No	52.93	Si
SLU 41	11.76	-1310.69	-9549	-7952	198	2.28	2.28	-12456	8605	5494	40441	19117	5814	24931	No	125.79	Si
SLU 82	10.96	-939.39	-12018	-10008	496	2.28	2.28	-15676	9035	5768	40441	19117	5814	24931	No	50.31	Si
SLU 82	11.76	-1467.86	-10581	-8811	182	2.28	2.28	-13801	8785	5608	40441	19117	5814	24931	No	136.86	Si
SLU 60	10.96	-820.44	-10900	-9077	493	2.28	2.28	-14218	8840	5644	40441	19117	5814	24931	No	50.57	Si
SLU 60	11.76	-1333.31	-9493	-7905	218	2.28	2.28	-12382	8595	5487	40441	19117	5814	24931	No	114.39	Si
SLU 62	10.96	-843.19	-11373	-9470	504	2.28	2.28	-14834	8922	5696	40441	19117	5814	24931	No	49.47	Si
SLU 62	11.76	-1379.8	-9952	-8287	228	2.28	2.28	-12981	8675	5538	40441	19117	5814	24931	No	109.52	Si
SLU 84	10.96	-962.14	-12490	-10401	506	2.28	2.28	-16292	9117	5820	40441	19117	5814	24931	No	49.22	Si
SLU 84	11.76	-1514.35	-11040	-9193	192	2.28	2.28	-14400	8864	5659	40441	19117	5814	24931	No	129.94	Si
SLU 63	10.96	-853.08	-11252	-9370	505	2.28	2.28	-14677	8901	5683	40441	19117	5814	24931	No	49.37	Si
SLU 63	11.76	-1374.29	-9844	-8197	217	2.28	2.28	-12840	8657	5526	40441	19117	5814	24931	No	115.07	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	10.96	-230.08	-5235	-4359	5303	2.28	2.28	-6828	11782	7522	40441	28675	5814	34489		6.5	Si
SLV 1	11.76	-3178.53	-5247	-4369	3732	2.28	1.6027	-9778	12372	5552	40441	28675	5814	34489		9.24	Si
SLV 4	10.96	-267.42	-9472	-7888	4222	2.28	2.28	-12355	12888	8228	40441	28675	5814	34489		8.17	Si
SLV 4	11.76	-3177.59	-8870	-7386	3385	2.28	2.28	-11569	12731	8127	40441	28675	5814	34489		10.19	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	10.96	-991.43	-10925	-9098	-4481	2.28	2.28	-14250	13267	8470	40441	28675	5814	34489		7.7	Si
SLV 15	11.76	1212.49	-8810	-7337	-3408	2.28	2.28	-11492	12715	8117	40441	28675	5814	34489		10.12	Si
SLV 5	10.96	-607.8	-1900	-1582	2753	2.28	2.28	-2478	10912	6966	40441	28675	5814	34489		12.53	Si
SLV 5	11.76	-1533.28	-1831	-1525	1296	1.824	0.9076	0	0	0	40441	22940	4651	27591		21.3	Si
SLV 6	10.96	-670.97	-2314	-1927	2464	2.28	2.28	-3018	11020	7035	40441	28675	5814	34489		14	Si
SLV 6	11.76	-1491.96	-2144	-1785	1121	1.824	1.3319	0	0	0	40441	22940	4651	27591		24.62	Si
SLV 16	10.96	-1090.34	-11573	-9637	-4932	2.28	2.28	-15096	13436	8578	40441	28675	5814	34489		6.99	Si
SLV 16	11.76	1277.19	-9300	-7744	-3681	2.28	2.28	-12131	12843	8199	40441	28675	5814	34489		9.37	Si
SLV 3	10.96	-168.51	-8824	-7348	4674	2.28	2.28	-11510	12719	8120	40441	28675	5814	34489		7.38	Si
SLV 3	11.76	-3242.29	-8380	-6978	3658	2.28	2.2593	-10931	12603	7973	40441	28675	5814	34489		9.43	Si
SLV 14	10.96	-1151.91	-7984	-6648	-4302	2.28	2.28	-10414	12500	7980	40441	28675	5814	34489		8.02	Si
SLV 14	11.76	1340.95	-6167	-5135	-3608	2.28	2.28	-8044	12025	7677	40441	28675	5814	34489		9.56	Si
SLV 13	10.96	-1053	-7336	-6109	-3851	2.28	2.28	-9569	12330	7872	40441	28675	5814	34489		8.96	Si
SLV 13	11.76	1276.26	-5677	-4728	-3334	2.28	2.28	-7405	11898	7596	40441	28675	5814	34489		10.34	Si
SLV 2	10.96	-328.99	-5883	-4899	4852	2.28	2.28	-7673	11951	7630	40441	28675	5814	34489		7.11	Si
SLV 2	11.76	-3113.83	-5737	-4777	3458	2.28	1.7916	-9561	12329	6185	40441	28675	5814	34489		9.97	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.46	3275	-2091	279.64	286.44	1.02	Si
SLV 9	179667	0.46	3583	-2288	279.64	312.76	1.12	Si
SLV 6	179667	0.46	3813	-2434	279.64	332.26	1.19	Si
SLV 10	179667	0.46	4121	-2631	279.64	358.4	1.28	Si
SLV 1	179667	0.46	8853	-5652	279.64	745.36	2.67	Si
SLV 2	179667	0.46	9695	-6189	279.64	811.47	2.9	Si
SLV 13	179667	0.46	9881	-6308	279.64	825.97	2.95	Si
SLV 14	179667	0.46	10723	-6845	279.64	891.07	3.19	Si
SLV 3	179667	0.46	14072	-8984	279.64	1141.85	4.08	Si
SLV 4	179667	0.46	14914	-9521	279.64	1202.81	4.3	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-9718	-13531	566	1.089	1309.6	0.933	16.95905	15.29191	Si
SLV 11	-9520	-13271	566	1.107	1289.5	0.933	17.25547	15.29191	Si
SLV 8	-9362	-14123	541	1.124	1273.7	0.932	17.53235	15.29191	Si
SLV 7	-9164	-13863	541	1.143	1253.6	0.931	17.8491	15.29191	Si
SLV 16	-7618	-9059	210	1.355	1097.9	0.923	21.32231	8.07112	Si
SLV 15	-7307	-8651	210	1.399	1066.7	0.922	22.0522	8.07112	Si
SLV 4	-6433	-11030	126	1.549	979	0.917	24.56209	8.07112	Si
SLV 10	-2372	-2514	-536	2.85	581.9	0.89	46.56786	15.29191	Si
SLV 3	-6122	-10623	126	1.607	947.9	0.915	25.52957	8.07112	Si
SLV 9	-2174	-2253	-536	2.983	563.6	0.889	48.76638	15.29191	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.153	SLU 82	Si
V_SLU	49.223	SLU 84	Si
PF_SLV	2.215	SLV 1	Si
V_SLV	6.503	SLV 1	Si
PFFP_SLV	1.024	SLV 5	Si
R_SLV	1.109	SLV 12	Si

Maschio 154

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.263	-3.314	-18.813	-3.314	L6	L7	0.55	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	10.96	176.48	-4365	-0.0000652	0.0003743	0.0035	0.55	866.19	958.87	958.87	5.43	No	Si
SLU 77	11.76	83.39	-3827	-0.0000482	0.0003743	0.0035	0.55	795.52	870.78	870.78	10.44	No	Si
SLU 79	10.96	175.11	-4292	-0.0000642	0.0003743	0.0035	0.55	857.13	946.63	946.63	5.41	No	Si
SLU 79	11.76	76.98	-3759	-0.0000467	0.0003743	0.0035	0.55	785.88	859.9	859.9	11.17	No	Si
SLU 83	10.96	178.03	-4286	-0.0000645	0.0003743	0.0035	0.55	856.44	945.71	945.71	5.31	No	Si
SLU 83	11.76	71.35	-3752	-0.000046	0.0003743	0.0035	0.55	784.85	858.76	858.76	12.04	No	Si
SLU 56	10.96	166.66	-4017	-0.00006	0.0003743	0.0035	0.55	821.58	901.43	901.43	5.41	No	Si
SLU 56	11.76	65.77	-3485	-0.0000425	0.0003743	0.0035	0.55	745.38	816.49	816.49	12.41	No	Si
SLU 60	10.96	160.79	-3786	-0.0000567	0.0003743	0.0035	0.55	789.63	864.11	864.11	5.37	No	Si
SLU 60	11.76	52.09	-3267	-0.0000386	0.0003743	0.0035	0.55	711.26	771.65	771.65	14.81	No	Si
SLU 63	10.96	164.75	-3905	-0.0000585	0.0003743	0.0035	0.55	806.35	883.29	883.29	5.36	No	Si
SLU 63	11.76	54.84	-3393	-0.0000402	0.0003743	0.0035	0.55	731.19	798.05	798.05	14.55	No	Si
SLU 62	10.96	168.21	-3938	-0.0000593	0.0003743	0.0035	0.55	810.85	888.58	888.58	5.28	No	Si
SLU 62	11.76	53.73	-3410	-0.0000403	0.0003743	0.0035	0.55	733.82	801.49	801.49	14.92	No	Si
SLU 84	10.96	174.56	-4253	-0.0000637	0.0003743	0.0035	0.55	852.33	940.28	940.28	5.39	No	Si
SLU 84	11.76	72.46	-3735	-0.000046	0.0003743	0.0035	0.55	782.43	856.07	856.07	11.81	No	Si
SLU 81	10.96	170.6	-4134	-0.0000618	0.0003743	0.0035	0.55	837.08	920.62	920.62	5.4	No	Si
SLU 81	11.76	69.71	-3609	-0.0000443	0.0003743	0.0035	0.55	764.01	836.07	836.07	11.99	No	Si
SLU 58	10.96	165.3	-3943	-0.000059	0.0003743	0.0035	0.55	811.61	889.48	889.48	5.38	No	Si
SLU 58	11.76	59.36	-3417	-0.000041	0.0003743	0.0035	0.55	734.92	802.94	802.94	13.53	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 16	10.96	-7.33	-2172	-0.0000219	0.0005615	0.0035	0.55		620.68	620.68	84.63		Si
SLD 16	11.76	221.24	-2276	-0.0000461	0.0005615	0.0035	0.55		597.25	597.25	2.7		Si
SLV 1	10.96	382.97	-4362	-0.0000866	0.0005615	0.0035	0.55		1032.79	1032.79	2.7		Si
SLV 1	11.76	-325.02	-2842	-0.0000646	0.0005615	0.0035	0.55		776.04	776.04	2.39		Si
SLD 14	10.96	-28.1	-1866	-0.0000211	0.0005615	0.0035	0.55		547.31	547.31	19.48		Si
SLD 14	11.76	211.64	-2071	-0.0000431	0.0005615	0.0035	0.55		548.43	548.43	2.59		Si
SLD 13	10.96	-21.69	-1819	-0.00002	0.0005615	0.0035	0.55		535.93	535.93	24.71		Si
SLD 13	11.76	197.58	-2008	-0.0000408	0.0005615	0.0035	0.55		533.39	533.39	2.7		Si
SLV 3	10.96	430.08	-5058	-0.0001	0.0005615	0.0035	0.55		1178.56	1178.56	2.74		Si
SLV 3	11.76	-303.3	-3311	-0.000066	0.0005615	0.0035	0.55		880.14	880.14	2.9		Si
SLV 15	10.96	-149.14	-1178	-0.0000282	0.0005615	0.0035	0.55		377.07	377.07	2.53		Si
SLV 15	11.76	406.87	-1901	-0.000119	0.0005615	0.0035	0.55		507.3	507.3	1.25		Si
SLV 16	10.96	-164.07	-1289	-0.0000311	0.0005615	0.0035	0.55		404.74	404.74	2.47		Si
SLV 16	11.76	439.64	-2046	-0.0001311	0.0005615	0.0035	0.55		542.35	542.35	1.23		Si
SLV 14	10.96	-211.17	-593	-0.0004607	0.0005615	0.0035	0.44		226.62	226.62	1.07		Si
SLV 14	11.76	417.91	-1576	-0.001055	0.0005615	0.0035	0.44		427.94	427.94	1.02		Si
SLV 2	10.96	368.04	-4473	-0.0000861	0.0005615	0.0035	0.55		1056.53	1056.53	2.87		Si
SLV 2	11.76	-292.26	-2987	-0.0000614	0.0005615	0.0035	0.55		808.94	808.94	2.77		Si
SLV 13	10.96	-196.24	-482	-0.0005257	0.0005615	0.0035	0.44		197.54	197.54	1.01		Si
SLV 13	11.76	385.14	-1431	-0.001246	0.0005615	0.0035	0.44		391.87	391.87	1.02		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 58	10.96	165.3	-3943	-3283	500	0.55	0.55	-21322	9787	1507	40441	4611	1402	6014	No	12.02	Si
SLU 58	11.76	59.36	-3417	-2846	-173	0.55	0.55	-18480	9408	1449	40441	4611	1402	6014	No	34.67	Si
SLU 83	10.96	178.03	-4286	-3569	525	0.55	0.55	-23177	10035	1545	40441	4611	1402	6014	No	11.45	Si
SLU 83	11.76	71.35	-3752	-3124	-177	0.55	0.55	-20289	9650	1486	40441	4611	1402	6014	No	34.05	Si
SLU 84	10.96	174.56	-4253	-3542	517	0.55	0.55	-23000	10011	1542	40441	4611	1402	6014	No	11.63	Si
SLU 84	11.76	72.46	-3735	-3110	-182	0.55	0.55	-20197	9637	1484	40441	4611	1402	6014	No	33	Si
SLU 79	10.96	175.11	-4292	-3574	511	0.55	0.55	-23207	10039	1546	40441	4611	1402	6014	No	11.77	Si
SLU 79	11.76	76.98	-3759	-3130	-184	0.55	0.55	-20327	9655	1487	40441	4611	1402	6014	No	32.77	Si
SLU 81	10.96	170.6	-4134	-3443	501	0.55	0.55	-22355	9925	1528	40441	4611	1402	6014	No	11.99	Si
SLU 81	11.76	69.71	-3609	-3005	-167	0.55	0.55	-19516	9547	1470	40441	4611	1402	6014	No	35.96	Si
SLU 63	10.96	164.75	-3905	-3252	506	0.55	0.55	-21115	9760	1503	40441	4611	1402	6014	No	11.88	Si
SLU 63	11.76	54.84	-3393	-2826	-172	0.55	0.55	-18350	9391	1446	40441	4611	1402	6014	No	34.94	Si
SLU 77	10.96	176.48	-4365	-3635	505	0.55	0.55	-23605	10092	1554	40441	4611	1402	6014	No	11.91	Si
SLU 77	11.76	83.39	-3827	-3187	-182	0.55	0.55	-20695	9704	1494	40441	4611	1402	6014	No	32.97	Si
SLU 78	10.96	173.01	-4333	-3608	497	0.55	0.55	-23428	10068	1550	40441	4611	1402	6014	No	12.1	Si
SLU 78	11.76	84.5	-3810	-3173	-188	0.55	0.55	-20603	9692	1492	40441	4611	1402	6014	No	31.99	Si
SLU 80	10.96	171.65	-4259	-3547	503	0.55	0.55	-23030	10015	1542	40441	4611	1402	6014	No	11.96	Si
SLU 80	11.76	78.09	-3742	-3116	-189	0.55	0.55	-20236	9643	1485	40441	4611	1402	6014	No	31.8	Si
SLU 62	10.96	168.21	-3938	-3279	514	0.55	0.55	-21292	9783	1507	40441	4611	1402	6014	No	11.7	Si
SLU 62	11.76	53.73	-3410	-2840	-167	0.55	0.55	-18441	9403	1448	40441	4611	1402	6014	No	36.11	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	10.96	-196.24	-482	-402	-895	0.44	0	0	0	0	40441	5534	1122	6655		7.44	Si
SLV 13	11.76	385.14	-1431	-1192	-332	0.44	0.0176	0	0	0	40441	5534	1122	6655		20.02	Si
SLD 1	10.96	226.24	-3479	-2897	917	0.55	0.55	-18812	14179	2184	40441	6917	1402	8319		9.07	Si
SLD 1	11.76	-106.63	-2611	-2174	-84	0.55	0.55	-14118	13240	2039	40441	6917	1402	8319		99.42	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	10.96	382.97	-4362	-3632	1724	0.55	0.55	-23588	15134	2331	40441	6917	1402	8319		4.83	Si
SLV 1	11.76	-325.02	-2842	-2366	-32	0.55	0.4818	-17693	13955	1883	40441	6917	1402	8319		262.12	Si
SLV 5	10.96	122.59	-2212	-1842	939	0.55	0.55	-11962	12809	1973	40441	6917	1402	8319		8.86	Si
SLV 5	11.76	-95.89	-1827	-1521	-297	0.55	0.55	-9877	12392	1908	40441	6917	1402	8319		27.98	Si
SLV 16	10.96	-164.07	-1289	-1073	-1100	0.55	0.4431	-8684	12153	1508	40441	6917	1402	8319		7.56	Si
SLV 16	11.76	439.64	-2046	-1703	-212	0.55	0.1802	-34399	16250	820	40441	6917	1402	8319		39.33	Si
SLV 4	10.96	415.15	-5169	-4304	1519	0.55	0.55	-27950	16007	2465	40441	6917	1402	8319		5.48	Si
SLV 4	11.76	-270.53	-3456	-2878	89	0.55	0.55	-18688	14154	2180	40441	6917	1402	8319		93.36	Si
SLV 3	10.96	430.08	-5058	-4212	1599	0.55	0.55	-27352	15887	2447	40441	6917	1402	8319		5.2	Si
SLV 3	11.76	-303.3	-3311	-2757	103	0.55	0.55	-17904	13997	2156	40441	6917	1402	8319		80.42	Si
SLV 14	10.96	-211.17	-593	-494	-975	0.44	0	0	0	0	40441	5534	1122	6655		6.83	Si
SLV 14	11.76	417.91	-1576	-1313	-347	0.44	0.0295	0	0	0	40441	5534	1122	6655		19.19	Si
SLV 15	10.96	-149.14	-1178	-981	-1020	0.55	0.4453	-7897	11996	1496	40441	6917	1402	8319		8.16	Si
SLV 15	11.76	406.87	-1901	-1583	-197	0.55	0.1827	-10277	12472	638	40441	6917	1402	8319		42.19	Si
SLV 2	10.96	368.04	-4473	-3725	1644	0.55	0.55	-24186	15254	2349	40441	6917	1402	8319		5.06	Si
SLV 2	11.76	-292.26	-2987	-2487	-46	0.55	0.5314	-16150	13647	2030	40441	6917	1402	8319		180.54	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.46	4401	-678	67.45	92.16	1.37	Si
SLV 10	179667	0.46	4912	-756	67.45	102.49	1.52	Si
SLV 13	179667	0.46	5802	-893	67.45	120.33	1.78	Si
SLV 14	179667	0.46	6601	-1016	67.45	136.16	2.02	Si
SLV 5	179667	0.46	7410	-1141	67.45	152.01	2.25	Si
SLV 6	179667	0.46	7921	-1220	67.45	161.91	2.4	Si
SLV 15	179667	0.46	10135	-1561	67.45	204	3.02	Si
SLV 16	179667	0.46	10934	-1684	67.45	218.85	3.24	Si
SLV 1	179667	0.46	15832	-2438	67.45	305.93	4.54	Si
SLV 2	179667	0.46	16631	-2561	67.45	319.5	4.74	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-2087	-3309	-6	1.245	290	0.929	19.47666	15.29191	Si
SLV 7	-2011	-3201	-6	1.281	282.3	0.927	20.08236	15.29191	Si
SLV 12	-1723	-3266	-7	1.443	253.3	0.921	22.7766	15.29191	Si
SLV 11	-1647	-3158	-6	1.493	245.7	0.919	23.61104	15.29191	Si
SLV 4	-2046	-2362	-3	1.266	285.8	0.928	19.82211	8.07112	Si
SLV 3	-1927	-2193	-3	1.326	273.8	0.925	20.82243	8.07112	Si
SLV 6	-693	-373	2	2.671	151.7	0.892	43.53021	15.29191	Si
SLV 2	-1628	-1481	0	1.509	243.7	0.919	23.87832	8.07112	Si
SLV 5	-617	-265	2	2.852	144.5	0.89	46.5562	15.29191	Si
SLV 1	-1509	-1312	0	1.597	231.9	0.915	25.34577	8.07112	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.282	SLU 62	Si
V_SLU	11.453	SLU 83	Si
PF_SLV	1.007	SLV 13	Si
V_SLV	4.826	SLV 1	Si
PFFP_SLV	1.366	SLV 9	Si
R_SLV	1.274	SLV 8	Si

Maschio 156

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.613	1.006	-19.613	5.826	L6	L7	4.82	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 42	8.96	717.32	-17542	-0.0000304	0.0004492	0.0035	4.82	34406.52	40691.79	40691.79	56.73	No	Si
SLU 42	12.48	95.19	-7583	-0.0000125	0.0004492	0.0035	4.82	16803.97	19665.36	19665.36	206.6	No	Si
SLU 9	8.96	563.37	-13879	-0.0000239	0.0004492	0.0035	4.82	28522.15	33183.6	33183.6	58.9	No	Si
SLU 9	12.48	303.92	-6434	-0.000011	0.0004492	0.0035	4.82	14446.24	17121.76	17121.76	56.34	No	Si
SLU 37	8.96	707.2	-17320	-0.00003	0.0004492	0.0035	4.82	34068.82	40241.48	40241.48	56.9	No	Si
SLU 37	12.48	289.42	-7786	-0.0000132	0.0004492	0.0035	4.82	17213.84	20115.11	20115.11	69.5	No	Si
SLU 30	8.96	661.48	-15767	-0.0000272	0.0004492	0.0035	4.82	31640.14	37085.51	37085.51	56.06	No	Si
SLU 30	12.48	390.21	-7298	-0.0000126	0.0004492	0.0035	4.82	16225.34	19034.31	19034.31	48.78	No	Si
SLU 38	8.96	778.78	-17358	-0.0000302	0.0004492	0.0035	4.82	34126.96	40318.77	40318.77	51.77	No	Si
SLU 38	12.48	314.25	-7802	-0.0000133	0.0004492	0.0035	4.82	17245.18	20149.61	20149.61	64.12	No	Si
SLU 34	8.96	714.77	-16886	-0.0000293	0.0004492	0.0035	4.82	33402.4	39362.57	39362.57	55.07	No	Si
SLU 34	12.48	144.29	-7377	-0.0000122	0.0004492	0.0035	4.82	16387.19	19210.37	19210.37	133.14	No	Si
SLU 13	8.96	616.66	-14998	-0.0000259	0.0004492	0.0035	4.82	30392.44	35500.19	35500.19	57.57	No	Si
SLU 13	12.48	58.01	-6513	-0.0000106	0.0004492	0.0035	4.82	14611.61	17297.82	17297.82	298.2	No	Si
SLU 17	8.96	680.67	-15470	-0.0000268	0.0004492	0.0035	4.82	31162.61	36474.21	36474.21	53.59	No	Si
SLU 17	12.48	227.96	-6937	-0.0000117	0.0004492	0.0035	4.82	15488.36	18237.06	18237.06	80	No	Si
SLU 80	8.96	825.64	-20565	-0.0000358	0.0004492	0.0035	4.82	38744.64	46571.77	46571.77	56.41	No	Si
SLU 80	12.48	256.49	-9170	-0.0000154	0.0004492	0.0035	4.82	19948.78	23142.41	23142.41	90.23	No	Si
SLU 29	8.96	589.9	-15729	-0.000027	0.0004492	0.0035	4.82	31578.89	37006.78	37006.78	62.73	No	Si
SLU 29	12.48	365.38	-7282	-0.0000125	0.0004492	0.0035	4.82	16193.59	18999.81	18999.81	52	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	8.96	-7881.44	-11068	-0.0000341	0.0006738	0.0035	4.82		38492.45	38492.45	4.88		Si
SLV 7	12.48	-1227.44	-4530	-0.0000098	0.0006738	0.0035	4.82		24043.3	24043.3	19.59		Si
SLV 10	8.96	8541.2	-16611	-0.0000448	0.0006738	0.0035	4.82		39456.21	39456.21	4.62		Si
SLV 10	12.48	1045.49	-7349	-0.000014	0.0006738	0.0035	4.82		19314.55	19314.55	18.47		Si
SLV 16	8.96	-1361.81	-11132	-0.0000208	0.0006738	0.0035	4.82		38629.75	38629.75	28.37		Si
SLV 16	12.48	-4039.45	-4051	-0.0000149	0.0006738	0.0035	4.82		22963.87	22963.87	5.68		Si
SLV 9	8.96	8990.3	-16903	-0.0000462	0.0006738	0.0035	4.82		40069.78	40069.78	4.46		Si
SLV 9	12.48	1295.55	-7489	-0.0000147	0.0006738	0.0035	4.82		19628.4	19628.4	15.15		Si
SLV 8	8.96	-8330.54	-10776	-0.0000345	0.0006738	0.0035	4.82		37869.46	37869.46	4.55		Si
SLV 8	12.48	-1477.5	-4390	-0.00001	0.0006738	0.0035	4.82		23727.21	23727.21	16.06		Si
SLV 11	8.96	-7226.01	-10185	-0.0000312	0.0006738	0.0035	4.82		36610.31	36610.31	5.07		Si
SLV 11	12.48	-3084.82	-3795	-0.0000123	0.0006738	0.0035	4.82		22381.96	22381.96	7.26		Si
SLV 12	8.96	-7675.11	-9893	-0.0000317	0.0006738	0.0035	4.82		35976.57	35976.57	4.69		Si
SLV 12	12.48	-3334.88	-3655	-0.0000126	0.0006738	0.0035	4.82		22062.66	22062.66	6.62		Si
SLV 5	8.96	8334.88	-17786	-0.0000463	0.0006738	0.0035	4.82		41923.46	41923.46	5.03		Si
SLV 5	12.48	3152.93	-8223	-0.0000197	0.0006738	0.0035	4.82		21272.6	21272.6	6.75		Si
SLV 6	8.96	7885.77	-17494	-0.0000449	0.0006738	0.0035	4.82		41309.89	41309.89	5.24		Si
SLV 6	12.48	2902.86	-8083	-0.0000189	0.0006738	0.0035	4.82		20958.75	20958.75	7.22		Si
SLV 1	8.96	2021.57	-16547	-0.0000311	0.0006738	0.0035	4.82		39321	39321	19.45		Si
SLV 1	12.48	3857.5	-7827	-0.0000205	0.0006738	0.0035	4.82		20386.32	20386.32	5.28		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 46	8.96	414.68	-16957	-9956	-1292	4.82	4.82	-12910	10055	7754	115546	27715	24582	52297	No	40.48	Si
SLU 46	12.48	-54.36	-7686	-4513	-967	4.82	4.82	-5852	9114	7028	115546	27715	24582	52297	No	54.08	Si
SLU 49	8.96	526.41	-17454	-10248	-1465	4.82	4.82	-13289	10105	7793	115546	27715	24582	52297	No	35.7	Si
SLU 49	12.48	132.15	-8121	-4768	-1124	4.82	4.82	-6183	9158	7062	115546	27715	24582	52297	No	46.54	Si
SLU 45	8.96	343.1	-16918	-9934	-1356	4.82	4.82	-12881	10051	7751	115546	27715	24582	52297	No	38.56	Si
SLU 45	12.48	-79.19	-7671	-4504	-1036	4.82	4.82	-5840	9112	7027	115546	27715	24582	52297	No	50.48	Si
SLU 69	8.96	552.94	-19304	-11334	-1308	4.82	4.82	-14697	10293	7938	115546	27715	24582	52297	No	39.97	Si
SLU 69	12.48	193.6	-8969	-5266	-936	4.82	4.82	-6829	9244	7129	115546	27715	24582	52297	No	55.88	Si
SLU 47	8.96	546.22	-16613	-9755	-1336	4.82	4.82	-12649	10020	7727	115546	27715	24582	52297	No	39.16	Si
SLU 47	12.48	76.2	-7377	-4332	-1012	4.82	4.82	-5617	9082	7004	115546	27715	24582	52297	No	51.65	Si
SLU 51	8.96	610.23	-17086	-10032	-1551	4.82	4.82	-13008	10068	7764	115546	27715	24582	52297	No	33.71	Si
SLU 51	12.48	246.16	-7802	-4581	-1215	4.82	4.82	-5940	9125	7037	115546	27715	24582	52297	No	43.04	Si
SLU 50	8.96	538.65	-17047	-10010	-1616	4.82	4.82	-12979	10064	7761	115546	27715	24582	52297	No	32.37	Si
SLU 50	12.48	221.33	-7786	-4572	-1284	4.82	4.82	-5928	9124	7036	115546	27715	24582	52297	No	40.73	Si
SLU 48	8.96	454.83	-17416	-10226	-1529	4.82	4.82	-13260	10101	7790	115546	27715	24582	52297	No	34.2	Si
SLU 48	12.48	107.32	-8105	-4759	-1193	4.82	4.82	-6171	9156	7061	115546	27715	24582	52297	No	43.85	Si
SLU 72	8.96	708.34	-18973	-11140	-1331	4.82	4.82	-14445	10259	7912	115546	27715	24582	52297	No	39.3	Si
SLU 72	12.48	332.45	-8666	-5088	-958	4.82	4.82	-6598	9213	7105	115546	27715	24582	52297	No	54.57	Si
SLU 71	8.96	636.76	-18935	-11118	-1395	4.82	4.82	-14416	10256	7909	115546	27715	24582	52297	No	37.49	Si
SLU 71	12.48	307.62	-8650	-5079	-1027	4.82	4.82	-6586	9211	7104	115546	27715	24582	52297	No	50.91	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	8.96	-7226.01	-10185	-5980	-7735	4.82	4.82	-7755	14051	10836	115546	41572	24582	66154		8.55	Si
SLV 11	12.48	-3084.82	-3795	-2228	-9507	4.82	4.7917	-2890	13078	10026	115546	41572	24582	66154		6.96	Si
SLV 6	8.96	7885.77	-17494	-10272	6388	4.82	4.82	-13319	15164	11694	115546	41572	24582	66154		10.36	Si
SLV 6	12.48	2902.86	-8083	-4746	8675	4.82	4.82	-6154	13731	10589	115546	41572	24582	66154		7.63	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	8.96	8334.88	-17786	-10443	6471	4.82	4.82	-13541	15208	11729	115546	41572	24582	66154		10.22	Si
SLV 5	12.48	3152.93	-8223	-4828	8789	4.82	4.82	-6261	13752	10606	115546	41572	24582	66154		7.53	Si
SLV 7	8.96	-7881.44	-11068	-6499	-7922	4.82	4.82	-8427	14185	10940	115546	41572	24582	66154		8.35	Si
SLV 7	12.48	-1227.44	-4530	-2660	-9001	4.82	4.82	-3449	13190	10172	115546	41572	24582	66154		7.35	Si
SLV 12	8.96	-7675.11	-9893	-5809	-7817	4.82	4.82	-7532	14006	10802	115546	41572	24582	66154		8.46	Si
SLV 12	12.48	-3334.88	-3655	-2146	-9621	4.82	4.4929	-2989	13098	9416	115546	41572	24582	66154		6.88	Si
SLD 12	8.96	-3182.52	-12116	-7114	-3808	4.82	4.82	-9225	14345	11063	115546	41572	24582	66154		17.37	Si
SLD 12	12.48	-1497.32	-4943	-2902	-4465	4.82	4.82	-3763	13253	10220	115546	41572	24582	66154		14.82	Si
SLV 8	8.96	-8330.54	-10776	-6327	-8005	4.82	4.82	-8204	14141	10905	115546	41572	24582	66154		8.26	Si
SLV 8	12.48	-1477.5	-4390	-2577	-9114	4.82	4.82	-3342	13168	10155	115546	41572	24582	66154		7.26	Si
SLD 11	8.96	-2986.61	-12244	-7189	-3772	4.82	4.82	-9322	14364	11078	115546	41572	24582	66154		17.54	Si
SLD 11	12.48	-1388.24	-5004	-2938	-4415	4.82	4.82	-3810	13262	10228	115546	41572	24582	66154		14.98	Si
SLV 9	8.96	8990.3	-16903	-9925	6658	4.82	4.82	-12869	15074	11625	115546	41572	24582	66154		9.94	Si
SLV 9	12.48	1295.55	-7489	-4397	8283	4.82	4.82	-5702	13640	10519	115546	41572	24582	66154		7.99	Si
SLV 10	8.96	8541.2	-16611	-9753	6576	4.82	4.82	-12647	15029	11591	115546	41572	24582	66154		10.06	Si
SLV 10	12.48	1045.49	-7349	-4315	8169	4.82	4.82	-5595	13619	10503	115546	41572	24582	66154		8.1	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.72 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 12	-5947	0.46	357.45	455.71	923.96	689.83	1.93	Si
SLV 11	-6162	0.46	357.45	471.44	944.8	708.12	1.98	Si
SLV 8	-6242	0.46	357.45	477.31	952.56	714.94	2	Si
SLV 7	-6457	0.46	357.45	492.97	973.32	733.15	2.05	Si
SLV 16	-7607	0.46	357.45	575.8	1084.14	829.97	2.32	Si
SLV 15	-7944	0.46	357.45	599.77	1116.48	858.12	2.4	Si
SLV 4	-8592	0.46	357.45	645.56	1178.73	912.14	2.55	Si
SLV 3	-8928	0.46	357.45	669.16	1211.07	940.11	2.63	Si
SLV 14	-9378	0.46	357.45	700.43	1254.1	977.26	2.73	Si
SLV 13	-9714	0.46	357.45	723.73	1286.07	1004.9	2.81	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-8223	-17786	-208	2.547	1227.9	0.919	40.27907	19.04959	Si
SLV 6	-8083	-17494	-208	2.58	1213.9	0.918	40.84161	19.04959	Si
SLV 9	-7489	-16903	199	2.734	1154.4	0.915	43.4225	19.04959	Si
SLV 10	-7349	-16611	199	2.773	1140.4	0.914	44.07503	19.04959	Si
SLV 1	-7827	-16547	-679	2.598	1188.3	0.917	41.18078	14.73654	Si
SLV 2	-7608	-16089	-680	2.654	1166.3	0.916	42.12444	14.73654	Si
SLV 3	-6719	-14531	-677	2.91	1077.7	0.911	46.42323	14.73654	Si
SLV 4	-6500	-14074	-677	2.981	1055.8	0.91	47.61925	14.73654	Si
SLV 7	-4530	-11068	-199	3.885	861.8	0.898	62.88375	19.04959	Si
SLV 8	-4390	-10776	-199	3.964	848.2	0.897	64.22707	19.04959	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	48.78	SLU 30	Si
V_SLU	32.371	SLU 50	Si
PF_SLV	4.457	SLV 9	Si
V_SLV	6.876	SLV 12	Si
PFFP_SLV	1.93	SLV 12	Si
R_SLV	2.114	SLV 5	Si

Maschio 157

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.333	-3.314	-17.363	-3.314	L6	L7	1.03	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 55	9.86	531.74	-6691	-0.0000533	0.0003743	0.0035	1.03	2660.75	2907.45	2907.45	5.47	No	Si
SLU 55	11.66	62.66	-4270	-0.0000244	0.0003743	0.0035	1.03	1879.43	1968.82	1968.82	31.42	No	Si
SLU 21	9.86	464.8	-5631	-0.0000448	0.0003743	0.0035	1.03	2343.8	2511.34	2511.34	5.4	No	Si
SLU 21	11.66	37.24	-3673	-0.0000204	0.0003743	0.0035	1.03	1655	1740.69	1740.69	46.74	No	Si
SLU 59	9.86	564.2	-6974	-0.000056	0.0003743	0.0035	1.03	2738.44	2992.3	2992.3	5.3	No	Si
SLU 59	11.66	62	-4483	-0.0000256	0.0003743	0.0035	1.03	1956.39	2051.56	2051.56	33.09	No	Si
SLU 18	9.86	440.57	-5380	-0.0000426	0.0003743	0.0035	1.03	2263.09	2409.06	2409.06	5.47	No	Si
SLU 18	11.66	38.15	-3481	-0.0000194	0.0003743	0.0035	1.03	1580.1	1668.54	1668.54	43.73	No	Si
SLU 61	9.86	543.03	-6625	-0.0000532	0.0003743	0.0035	1.03	2641.97	2887.51	2887.51	5.32	No	Si
SLU 61	11.66	45.36	-4207	-0.0000236	0.0003743	0.0035	1.03	1856.25	1944.36	1944.36	42.86	No	Si
SLU 58	9.86	569.14	-6992	-0.0000563	0.0003743	0.0035	1.03	2743.54	2997.99	2997.99	5.27	No	Si
SLU 58	11.66	62.16	-4496	-0.0000257	0.0003743	0.0035	1.03	1960.81	2056.39	2056.39	33.08	No	Si
SLU 62	9.86	577.14	-6913	-0.0000561	0.0003743	0.0035	1.03	2722.05	2974.11	2974.11	5.15	No	Si
SLU 62	11.66	44.76	-4424	-0.0000247	0.0003743	0.0035	1.03	1935.16	2028.49	2028.49	45.32	No	Si
SLU 20	9.86	469.74	-5650	-0.0000451	0.0003743	0.0035	1.03	2349.79	2519.08	2519.08	5.36	No	Si
SLU 20	11.66	37.4	-3685	-0.0000205	0.0003743	0.0035	1.03	1659.77	1745.35	1745.35	46.67	No	Si
SLU 60	9.86	547.97	-6644	-0.0000535	0.0003743	0.0035	1.03	2647.3	2893.15	2893.15	5.28	No	Si
SLU 60	11.66	45.52	-4220	-0.0000236	0.0003743	0.0035	1.03	1860.79	1949.14	1949.14	42.82	No	Si
SLU 63	9.86	572.2	-6894	-0.0000558	0.0003743	0.0035	1.03	2716.9	2968.41	2968.41	5.19	No	Si
SLU 63	11.66	44.61	-4412	-0.0000247	0.0003743	0.0035	1.03	1930.7	2023.67	2023.67	45.36	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	9.86	-1577.1	-3201	-0.0003645	0.0005615	0.0035	0.824		1789.83	1789.83	1.13		Si
SLV 15	11.66	1437.21	-4211	-0.0000904	0.0005615	0.0035	1.03		2075.98	2075.98	1.44		Si
SLV 14	9.86	-1358.84	-2692	-0.0003534	0.0005615	0.0035	0.824		1555.13	1555.13	1.14		Si
SLV 14	11.66	1169.02	-3462	-0.0000717	0.0005615	0.0035	1.03		1743.09	1743.09	1.49		Si
SLV 16	9.86	-1668.37	-3211	-0.0005557	0.0005615	0.0035	0.824		1794.12	1794.12	1.08		Si
SLV 16	11.66	1531.37	-4382	-0.0000993	0.0005615	0.0035	1.03		2146.81	2146.81	1.4		Si
SLV 1	9.86	2330.6	-6802	-0.0001549	0.0005615	0.0035	1.03		3082.61	3082.61	1.32		Si
SLV 1	11.66	-1321.21	-2156	-0.0007889	0.0005615	0.0035	0.824		1303.15	1303.15	0.99		No
SLV 5	9.86	1415.87	-4758	-0.000081	0.0005615	0.0035	1.03		2293.61	2293.61	1.62		Si
SLV 5	11.66	-888.32	-1510	-0.0004134	0.0005615	0.0035	0.824		994.5	994.5	1.12		Si
SLV 13	9.86	-1267.56	-2683	-0.0002103	0.0005615	0.0035	0.824		1550.79	1550.79	1.22		Si
SLV 13	11.66	1074.85	-3290	-0.0000638	0.0005615	0.0035	1.03		1664.75	1664.75	1.55		Si
SLV 6	9.86	1357.58	-4764	-0.0000763	0.0005615	0.0035	1.03		2295.86	2295.86	1.69		Si
SLV 6	11.66	-828.18	-1620	-0.0002139	0.0005615	0.0035	0.824		1047.73	1047.73	1.27		Si
SLV 4	9.86	1929.79	-7329	-0.0001102	0.0005615	0.0035	1.03		3291.33	3291.33	1.71		Si
SLV 4	11.66	-864.69	-3249	-0.000047	0.0005615	0.0035	1.03		1811.81	1811.81	2.1		Si
SLV 3	9.86	2021.07	-7320	-0.0001166	0.0005615	0.0035	1.03		3287.62	3287.62	1.63		Si
SLV 3	11.66	-958.85	-3077	-0.0000548	0.0005615	0.0035	0.824		1732.79	1732.79	1.81		Si
SLV 2	9.86	2239.32	-6811	-0.0001421	0.0005615	0.0035	1.03		3086.29	3086.29	1.38		Si
SLV 2	11.66	-1227.04	-2328	-0.0003977	0.0005615	0.0035	0.824		1384.28	1384.28	1.13		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 58	9.86	569.14	-6992	-5823	734	1.03	1.03	-20190	9636	2779	40441	8636	2627	11262	No	15.35	Si
SLU 58	11.66	62.16	-4496	-3744	443	1.03	1.03	-12981	8675	2502	40441	8636	2627	11262	No	25.42	Si
SLU 55	9.86	531.74	-6691	-5572	679	1.03	1.03	-19320	9521	2746	40441	8636	2627	11262	No	16.58	Si
SLU 55	11.66	62.66	-4270	-3556	427	1.03	1.03	-12330	8589	2477	40441	8636	2627	11262	No	26.36	Si
SLU 60	9.86	547.97	-6644	-5532	691	1.03	1.03	-19182	9502	2740	40441	8636	2627	11262	No	16.3	Si
SLU 60	11.66	45.52	-4220	-3514	472	1.03	1.03	-12183	8569	2471	40441	8636	2627	11262	No	23.84	Si
SLU 62	9.86	577.14	-6913	-5757	735	1.03	1.03	-19961	9606	2770	40441	8636	2627	11262	No	15.32	Si
SLU 62	11.66	44.76	-4424	-3684	487	1.03	1.03	-12774	8648	2494	40441	8636	2627	11262	No	23.13	Si
SLU 57	9.86	541.95	-7072	-5889	682	1.03	1.03	-20419	9667	2788	40441	8636	2627	11262	No	16.51	Si
SLU 57	11.66	91.15	-4614	-3842	418	1.03	1.03	-13322	8721	2515	40441	8636	2627	11262	No	26.93	Si
SLU 56	9.86	546.89	-7091	-5904	688	1.03	1.03	-20473	9674	2790	40441	8636	2627	11262	No	16.36	Si
SLU 56	11.66	91.31	-4626	-3852	419	1.03	1.03	-13358	8725	2516	40441	8636	2627	11262	No	26.88	Si
SLU 61	9.86	543.03	-6625	-5516	685	1.03	1.03	-19128	9495	2738	40441	8636	2627	11262	No	16.45	Si
SLU 61	11.66	45.36	-4207	-3503	472	1.03	1.03	-12148	8564	2470	40441	8636	2627	11262	No	23.87	Si
SLU 53	9.86	517.73	-6821	-5680	644	1.03	1.03	-19695	9570	2760	40441	8636	2627	11262	No	17.49	Si
SLU 53	11.66	92.06	-4422	-3682	404	1.03	1.03	-12767	8647	2494	40441	8636	2627	11262	No	27.85	Si
SLU 59	9.86	564.2	-6974	-5807	728	1.03	1.03	-20135	9629	2777	40441	8636	2627	11262	No	15.47	Si
SLU 59	11.66	62	-4483	-3733	442	1.03	1.03	-12945	8670	2501	40441	8636	2627	11262	No	25.46	Si
SLU 63	9.86	572.2	-6894	-5741	729	1.03	1.03	-19906	9599	2768	40441	8636	2627	11262	No	15.44	Si
SLU 63	11.66	44.61	-4412	-3674	486	1.03	1.03	-12739	8643	2493	40441	8636	2627	11262	No	23.16	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	9.86	-1267.56	-2683	-2234	-2334	0.824	0.1277	0	0	0	40441	10363	2101	12464		5.34	Si
SLV 13	11.66	1074.85	-3290	-2740	-639	1.03	0.5649	-9499	12316	1948	40441	12954	2627	15580		24.38	Si
SLV 3	9.86	2021.07	-7320	-6095	3286	1.03	0.7167	-21135	14644	2939	40441	12954	2627	15580		4.74	Si
SLV 3	11.66	-958.85	-3077	-2562	1253	0.824	0.6102	0	0	0	40441	10363	2101	12464		9.94	Si
SLV 2	9.86	2239.32	-6811	-5672	3637	1.03	0.5587	-19667	14350	2245	40441	12954	2627	15580		4.28	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	11.66	-1227.04	-2328	-1939	1540	0.824	0	0	0	0	40441	10363	2101	12464		8.1	Si
SLV 4	9.86	1929.79	-7329	-6103	3112	1.03	0.7551	-21162	14649	3097	40441	12954	2627	15580		5.01	Si
SLV 4	11.66	-864.69	-3249	-2706	1141	1.03	0.7466	-13021	13021	2722	40441	12954	2627	15580		13.66	Si
SLV 1	9.86	2330.6	-6802	-5664	3811	1.03	0.5171	-19640	14345	2077	40441	12954	2627	15580		4.09	Si
SLV 1	11.66	-1321.21	-2156	-1796	1652	0.824	0	0	0	0	40441	10363	2101	12464		7.54	Si
SLV 16	9.86	-1668.37	-3211	-2673	-3033	0.824	0	0	0	0	40441	10363	2101	12464		4.11	Si
SLV 16	11.66	1531.37	-4382	-3649	-1151	1.03	0.4967	-12654	12947	1801	40441	12954	2627	15580		13.54	Si
SLV 5	9.86	1415.87	-4758	-3962	2241	1.03	0.6522	-13737	13164	2404	40441	12954	2627	15580		6.95	Si
SLV 5	11.66	-888.32	-1510	-1258	1295	0.824	0	0	0	0	40441	10363	2101	12464		9.62	Si
SLV 14	9.86	-1358.84	-2692	-2242	-2508	0.824	0.031	0	0	0	40441	10363	2101	12464		4.97	Si
SLV 14	11.66	1169.02	-3462	-2883	-752	1.03	0.5319	-9996	12416	1849	40441	12954	2627	15580		20.72	Si
SLV 15	9.86	-1577.1	-3201	-2666	-2859	0.824	0.067	0	0	0	40441	10363	2101	12464		4.36	Si
SLV 15	11.66	1437.21	-4211	-3506	-1038	1.03	0.521	-12157	12848	1874	40441	12954	2627	15580		15.01	Si
SLV 6	9.86	1357.58	-4764	-3967	2130	1.03	0.69	-13754	13168	2544	40441	12954	2627	15580		7.31	Si
SLV 6	11.66	-828.18	-1620	-1349	1223	0.824	0.0113	0	0	0	40441	10363	2101	12464		10.19	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.46	7835	-2260	126.33	300.11	2.38	Si
SLV 14	179667	0.46	7867	-2269	126.33	301.29	2.38	Si
SLV 15	179667	0.46	9850	-2841	126.33	372.05	2.95	Si
SLV 16	179667	0.46	9882	-2850	126.33	373.19	2.95	Si
SLV 9	179667	0.46	10441	-3011	126.33	392.75	3.11	Si
SLV 10	179667	0.46	10462	-3017	126.33	393.47	3.11	Si
SLV 5	179667	0.46	14685	-4235	126.33	535.9	4.24	Si
SLV 6	179667	0.46	14705	-4241	126.33	536.57	4.25	Si
SLV 11	179667	0.46	17157	-4948	126.33	614.92	4.87	Si
SLV 12	179667	0.46	17178	-4954	126.33	615.57	4.87	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-4295	-6491	-45	1.149	582	0.933	17.90507	15.29191	Si
SLV 11	-4181	-6387	-44	1.174	570.5	0.931	18.31516	15.29191	Si
SLV 8	-3774	-5664	-54	1.27	529.5	0.927	19.90966	15.29191	Si
SLV 7	-3660	-5560	-53	1.301	518	0.926	20.42018	15.29191	Si
SLV 10	-1767	-3037	73	2.184	329.4	0.899	35.30908	15.29191	Si
SLV 16	-4050	-6277	7	1.211	557.3	0.93	18.92471	8.07112	Si
SLV 9	-1653	-2933	73	2.279	318.3	0.897	36.92585	15.29191	Si
SLV 15	-3872	-6113	7	1.255	539.3	0.928	19.64643	8.07112	Si
SLV 14	-3292	-5241	42	1.414	481	0.922	22.29835	8.07112	Si
SLV 6	-1246	-2210	64	2.705	279.3	0.891	44.11739	15.29191	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.153	SLU 62	Si
V_SLU	15.317	SLU 62	Si
PF_SLV	0.986	SLV 1	No
V_SLV	4.088	SLV 1	Si
PFFP_SLV	2.376	SLV 13	Si
R_SLV	1.171	SLV 12	Si

Maschio 158

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.518	-3.314	-18.518	-0.094	L6	L7	3.221	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 43	8.96	2617.52	-11023	-0.0000394	0.0004492	0.0035	3.2207	14643.15	17235.5	17235.5	6.58	No	Si
SLU 43	11.06	-1439.67	-7164	-0.0000241	0.0004492	0.0035	3.2207	10223.46	16547.38	16547.38	11.49	No	Si
SLU 50	8.96	2773.65	-11615	-0.0000417	0.0004492	0.0035	3.2207	15253.7	18034.59	18034.59	6.5	No	Si
SLU 50	11.06	-1621.12	-7658	-0.0000262	0.0004492	0.0035	3.2207	10832.14	17236.81	17236.81	10.63	No	Si
SLU 48	8.96	2733.64	-11829	-0.0000421	0.0004492	0.0035	3.2207	15469.88	18322.2	18322.2	6.7	No	Si
SLU 48	11.06	-1542.21	-7927	-0.0000265	0.0004492	0.0035	3.2207	11157.82	17611.65	17611.65	11.42	No	Si
SLU 44	8.96	2727.59	-11008	-0.0000399	0.0004492	0.0035	3.2207	14627.48	17214.98	17214.98	6.31	No	Si
SLU 44	11.06	-1430.33	-7104	-0.0000239	0.0004492	0.0035	3.2207	10149.35	16464.39	16464.39	11.51	No	Si
SLU 47	8.96	2805.65	-11304	-0.0000411	0.0004492	0.0035	3.2207	14935.22	17616.46	17616.46	6.28	No	Si
SLU 47	11.06	-1521.06	-7351	-0.000025	0.0004492	0.0035	3.2207	10456	16809.1	16809.1	11.05	No	Si
SLU 5	8.96	2189.27	-9081	-0.0000324	0.0004492	0.0035	3.2207	12514.81	14555.74	14555.74	6.65	No	Si
SLU 5	11.06	-1124.89	-5986	-0.0000197	0.0004492	0.0035	3.2207	8723.64	14875.84	14875.84	13.22	No	Si
SLU 46	8.96	2721.62	-11524	-0.0000412	0.0004492	0.0035	3.2207	15160.92	17912.11	17912.11	6.58	No	Si
SLU 46	11.06	-1445.88	-7644	-0.0000253	0.0004492	0.0035	3.2207	10814.94	17217.13	17217.13	11.91	No	Si
SLU 2	8.96	2111.21	-8785	-0.0000313	0.0004492	0.0035	3.2207	12173.42	14142.33	14142.33	6.7	No	Si
SLU 2	11.06	-1034.16	-5739	-0.0000187	0.0004492	0.0035	3.2207	8399.73	14512.92	14512.92	14.03	No	Si
SLU 49	8.96	2799.68	-11820	-0.0000424	0.0004492	0.0035	3.2207	15460.85	18310.12	18310.12	6.54	No	Si
SLU 49	11.06	-1536.6	-7891	-0.0000264	0.0004492	0.0035	3.2207	11114.77	17561.85	17561.85	11.43	No	Si
SLU 51	8.96	2839.69	-11606	-0.000042	0.0004492	0.0035	3.2207	15244.57	18022.52	18022.52	6.35	No	Si
SLU 51	11.06	-1615.52	-7622	-0.0000261	0.0004492	0.0035	3.2207	10788.59	17187.02	17187.02	10.64	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	8.96	7842.52	-10579	-0.0000649	0.0006738	0.0035	3.2207		16896.43	16896.43	2.15		Si
SLV 6	11.06	-2226.07	-4633	-0.0000213	0.0006738	0.0035	3.2207		12957.97	12957.97	5.82		Si
SLD 5	8.96	4645.48	-9897	-0.0000456	0.0006738	0.0035	3.2207		15927.5	15927.5	3.43		Si
SLD 5	11.06	-1458.11	-5548	-0.00002	0.0006738	0.0035	3.2207		14317.48	14317.48	9.82		Si
SLV 9	8.96	8049.75	-9221	-0.0000667	0.0006738	0.0035	3.2207		14963.95	14963.95	1.86		Si
SLV 9	11.06	-1631.52	-3620	-0.0000161	0.0006738	0.0035	3.2207		11442.63	11442.63	7.01		Si
SLD 9	8.96	4653.88	-9364	-0.0000443	0.0006738	0.0035	3.2207		15169.44	15169.44	3.26		Si
SLD 9	11.06	-1232.47	-5166	-0.0000181	0.0006738	0.0035	3.2207		13753.12	13753.12	11.16		Si
SLV 14	8.96	3635.26	-7509	-0.0000349	0.0006738	0.0035	3.2207		12484.04	12484.04	3.43		Si
SLV 14	11.06	-371.71	-4281	-0.000012	0.0006738	0.0035	3.2207		12432.9	12432.9	33.45		Si
SLD 6	8.96	4559.82	-9931	-0.0000453	0.0006738	0.0035	3.2207		15975.32	15975.32	3.5		Si
SLD 6	11.06	-1484.58	-5597	-0.0000203	0.0006738	0.0035	3.2207		14388.96	14388.96	9.69		Si
SLV 10	8.96	7853.39	-9298	-0.0000647	0.0006738	0.0035	3.2207		15075.41	15075.41	1.92		Si
SLV 10	11.06	-1692.19	-3732	-0.0000166	0.0006738	0.0035	3.2207		11610.51	11610.51	6.86		Si
SLV 5	8.96	8038.89	-10502	-0.0000663	0.0006738	0.0035	3.2207		16786.81	16786.81	2.09		Si
SLV 5	11.06	-2165.4	-4522	-0.0000207	0.0006738	0.0035	3.2207		12791.97	12791.97	5.91		Si
SLD 10	8.96	4568.22	-9397	-0.0000439	0.0006738	0.0035	3.2207		15217.26	15217.26	3.33		Si
SLD 10	11.06	-1258.93	-5215	-0.0000183	0.0006738	0.0035	3.2207		13825.52	13825.52	10.98		Si
SLV 13	8.96	3942.74	-7388	-0.000036	0.0006738	0.0035	3.2207		12306.64	12306.64	3.12		Si
SLV 13	11.06	-276.71	-4106	-0.0000112	0.0006738	0.0035	3.2207		12172.98	12172.98	43.99		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	8.96	2770.98	-13875	-8147	2952	3.2207	3.2207	-15810	10441	5381	115546	18519	16426	34945	No	11.84	Si
SLU 80	11.06	-1140.08	-9616	-5646	3021	3.2207	3.2207	-10957	9794	5047	115546	18519	16426	34945	No	11.57	Si
SLU 49	8.96	2799.68	-11820	-6940	2975	3.2207	3.2207	-13468	10129	5220	115546	18519	16426	34945	No	11.74	Si
SLU 49	11.06	-1536.6	-7891	-4633	3045	3.2207	3.2207	-8991	9532	4912	115546	18519	16426	34945	No	11.48	Si
SLU 55	8.96	2783.73	-12356	-7255	2964	3.2207	3.2207	-14078	10210	5262	115546	18519	16426	34945	No	11.79	Si
SLU 55	11.06	-1288.03	-8252	-4845	3081	3.2207	3.2207	-9403	9587	4940	115546	18519	16426	34945	No	11.34	Si
SLU 58	8.96	2751.73	-12667	-7437	3049	3.2207	3.2207	-14433	10258	5286	115546	18519	16426	34945	No	11.46	Si
SLU 58	11.06	-1388.1	-8559	-5025	3046	3.2207	3.2207	-9752	9634	4964	115546	18519	16426	34945	No	11.47	Si
SLU 47	8.96	2805.65	-11304	-6637	2969	3.2207	3.2207	-12880	10051	5179	115546	18519	16426	34945	No	11.77	Si
SLU 47	11.06	-1521.06	-7351	-4316	3087	3.2207	3.2207	-8376	9450	4870	115546	18519	16426	34945	No	11.32	Si
SLU 50	8.96	2773.65	-11615	-6820	3054	3.2207	3.2207	-13234	10098	5204	115546	18519	16426	34945	No	11.44	Si
SLU 50	11.06	-1621.12	-7658	-4496	3052	3.2207	3.2207	-8726	9497	4894	115546	18519	16426	34945	No	11.45	Si
SLU 59	8.96	2817.77	-12658	-7432	3069	3.2207	3.2207	-14423	10256	5285	115546	18519	16426	34945	No	11.39	Si
SLU 59	11.06	-1382.49	-8523	-5004	3138	3.2207	3.2207	-9711	9628	4962	115546	18519	16426	34945	No	11.14	Si
SLU 57	8.96	2777.76	-12872	-7558	2970	3.2207	3.2207	-14666	10289	5302	115546	18519	16426	34945	No	11.77	Si
SLU 57	11.06	-1303.58	-8792	-5162	3039	3.2207	3.2207	-10018	9669	4983	115546	18519	16426	34945	No	11.5	Si
SLU 72	8.96	2792.9	-12823	-7529	2957	3.2207	3.2207	-14611	10282	5298	115546	18519	16426	34945	No	11.82	Si
SLU 72	11.06	-1373.1	-8715	-5117	3026	3.2207	3.2207	-9930	9657	4977	115546	18519	16426	34945	No	11.55	Si
SLU 51	8.96	2839.69	-11606	-6814	3074	3.2207	3.2207	-13224	10097	5203	115546	18519	16426	34945	No	11.37	Si
SLU 51	11.06	-1615.52	-7622	-4475	3143	3.2207	3.2207	-8685	9491	4891	115546	18519	16426	34945	No	11.12	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 9	8.96	4653.88	-9364	-5498	4250	3.2207	3.2207	-10669	14634	7541	115546	27778	16426	44204		10.4	Si
SLD 9	11.06	-1232.47	-5166	-3034	4605	3.2207	3.2207	-5887	13677	7048	115546	27778	16426	44204		9.6	Si
SLV 6	8.96	7842.52	-10579	-6212	7228	3.2207	2.6071	-12054	14911	6220	115546	27778	16426	44204		6.12	Si
SLV 6	11.06	-2226.07	-4633	-2720	8081	3.2207	3.2207	-5279	13556	6985	115546	27778	16426	44204		5.47	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	8.96	7853.39	-9298	-5459	6882	3.2207	2.2971	-10594	14619	5373	115546	27778	16426	44204		6.42	Si
SLV 10	11.06	-1692.19	-3732	-2191	7685	3.2207	3.2207	-4252	13350	6880	115546	27778	16426	44204		5.75	Si
SLD 5	8.96	4645.48	-9897	-5811	4395	3.2207	3.2207	-11277	14755	7604	115546	27778	16426	44204		10.06	Si
SLD 5	11.06	-1458.11	-5548	-3258	4768	3.2207	3.2207	-6322	13764	7093	115546	27778	16426	44204		9.27	Si
SLV 1	8.96	3906.54	-11660	-6846	4251	3.2207	3.2207	-13285	15157	7811	115546	27778	16426	44204		10.4	Si
SLV 1	11.06	-2056.31	-7111	-4175	4580	3.2207	3.2207	-8102	14120	7276	115546	27778	16426	44204		9.65	Si
SLV 2	8.96	3599.05	-11780	-6917	4109	3.2207	3.2207	-13423	15185	7825	115546	27778	16426	44204		10.76	Si
SLV 2	11.06	-2151.31	-7285	-4278	4438	3.2207	3.2207	-8301	14160	7297	115546	27778	16426	44204		9.96	Si
SLD 6	8.96	4559.82	-9931	-5831	4355	3.2207	3.2207	-11316	14763	7608	115546	27778	16426	44204		10.15	Si
SLD 6	11.06	-1484.58	-5597	-3286	4729	3.2207	3.2207	-6377	13775	7099	115546	27778	16426	44204		9.35	Si
SLV 9	8.96	8049.75	-9221	-5414	6972	3.2207	2.212	-10506	14601	5168	115546	27778	16426	44204		6.34	Si
SLV 9	11.06	-1631.52	-3620	-2126	7776	3.2207	3.2207	-4125	13325	6867	115546	27778	16426	44204		5.68	Si
SLD 10	8.96	4568.22	-9397	-5518	4210	3.2207	3.2207	-10708	14642	7545	115546	27778	16426	44204		10.5	Si
SLD 10	11.06	-1258.93	-5215	-3062	4566	3.2207	3.2207	-5942	13688	7054	115546	27778	16426	44204		9.68	Si
SLV 5	8.96	8038.89	-10502	-6166	7319	3.2207	2.5347	-11966	14893	6040	115546	27778	16426	44204		6.04	Si
SLV 5	11.06	-2165.4	-4522	-2655	8172	3.2207	3.2207	-5152	13530	6972	115546	27778	16426	44204		5.41	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.72 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 13	-4341	0.46	238.84	331.34	652.02	491.68	2.06	Si
SLV 9	-4343	0.46	238.84	331.5	652.23	491.86	2.06	Si
SLV 10	-4456	0.46	238.84	339.69	663.14	501.42	2.1	Si
SLV 14	-4518	0.46	238.84	344.17	669.11	506.64	2.12	Si
SLV 5	-5473	0.46	238.84	412.45	760.99	586.72	2.46	Si
SLV 15	-5496	0.46	238.84	414.11	763.24	588.68	2.46	Si
SLV 6	-5586	0.46	238.84	420.43	771.85	596.14	2.5	Si
SLV 16	-5673	0.46	238.84	426.59	780.25	603.42	2.53	Si
SLV 1	-8106	0.46	238.84	592.81	1012.15	802.48	3.36	Si
SLV 11	-8193	0.46	238.84	598.59	1020.44	809.51	3.39	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-5710	-10579	-210	2.463	842.1	0.92	38.89059	19.04959	Si
SLV 5	-5681	-10502	-210	2.473	839.2	0.92	39.04973	19.04959	Si
SLV 10	-4957	-9298	50	2.766	766.7	0.915	43.94658	19.04959	Si
SLV 9	-4928	-9221	50	2.778	763.8	0.915	44.14746	19.04959	Si
SLV 2	-6194	-11780	-458	2.28	890.7	0.924	35.87883	14.73654	Si
SLV 1	-6149	-11660	-458	2.293	886.2	0.923	36.09462	14.73654	Si
SLV 8	-4559	-9677	-50	2.942	727	0.912	46.91181	19.04959	Si
SLV 7	-4531	-9600	-50	2.956	724.2	0.911	47.13993	19.04959	Si
SLV 4	-5849	-11510	-410	2.391	856	0.921	37.71434	14.73654	Si
SLV 3	-5804	-11389	-410	2.405	851.5	0.921	37.95192	14.73654	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.279	SLU 47	Si
V_SLU	11.117	SLU 51	Si
PF_SLV	1.859	SLV 9	Si
V_SLV	5.409	SLV 5	Si
PFFP_SLV	2.059	SLV 13	Si
R_SLV	2.042	SLV 6	Si

Maschio 161

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-3.314	-15.433	-3.314	L6	L7	1.655	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 40	8.96	-427	-7498	-0.0000298	0.0003743	0.0035	1.655	5218.35	6162.5	6162.5	14.43	No	Si
SLU 40	11.06	1142.64	-8025	-0.0000405	0.0003743	0.0035	1.655	5511.3	5808.12	5808.12	5.08	No	Si
SLU 34	8.96	-369.83	-7695	-0.0000298	0.0003743	0.0035	1.655	5329.1	6285.88	6285.88	17	No	Si
SLU 34	11.06	1092.2	-8069	-0.00004	0.0003743	0.0035	1.655	5535.04	5835.81	5835.81	5.34	No	Si
SLU 41	8.96	-395.98	-7846	-0.0000307	0.0003743	0.0035	1.655	5412.68	6380.58	6380.58	16.11	No	Si
SLU 41	11.06	1146.16	-8372	-0.0000417	0.0003743	0.0035	1.655	5698.65	6029.68	6029.68	5.26	No	Si
SLU 31	8.96	-396.26	-7347	-0.0000289	0.0003743	0.0035	1.655	5133.19	6068.2	6068.2	15.31	No	Si
SLU 31	11.06	1086.86	-7729	-0.0000387	0.0003743	0.0035	1.655	5348.1	5620.64	5620.64	5.17	No	Si
SLU 39	8.96	-422.41	-7498	-0.0000298	0.0003743	0.0035	1.655	5218.61	6162.79	6162.79	14.59	No	Si
SLU 39	11.06	1140.82	-8033	-0.0000405	0.0003743	0.0035	1.655	5515.32	5812.81	5812.81	5.1	No	Si
SLU 36	8.96	-374.46	-8108	-0.0000313	0.0003743	0.0035	1.655	5556.65	6547	6547	17.48	No	Si
SLU 36	11.06	1159.26	-8565	-0.0000426	0.0003743	0.0035	1.655	5801.11	6153.86	6153.86	5.31	No	Si
SLU 35	8.96	-369.87	-8109	-0.0000313	0.0003743	0.0035	1.655	5556.91	6547.3	6547.3	17.7	No	Si
SLU 35	11.06	1157.44	-8573	-0.0000426	0.0003743	0.0035	1.655	5804.99	6158.61	6158.61	5.32	No	Si
SLU 32	8.96	-396.3	-7761	-0.0000304	0.0003743	0.0035	1.655	5366.05	6327.57	6327.57	15.97	No	Si
SLU 32	11.06	1152.1	-8233	-0.0000413	0.0003743	0.0035	1.655	5624.05	5940.62	5940.62	5.16	No	Si
SLU 42	8.96	-400.57	-7845	-0.0000307	0.0003743	0.0035	1.655	5412.42	6380.28	6380.28	15.93	No	Si
SLU 42	11.06	1147.98	-8365	-0.0000417	0.0003743	0.0035	1.655	5694.72	6024.95	6024.95	5.25	No	Si
SLU 33	8.96	-400.89	-7761	-0.0000304	0.0003743	0.0035	1.655	5365.79	6327.28	6327.28	15.78	No	Si
SLU 33	11.06	1153.92	-8226	-0.0000413	0.0003743	0.0035	1.655	5620.08	5935.91	5935.91	5.14	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	8.96	-1566.3	-7550	-0.0000432	0.0005615	0.0035	1.655		6402.87	6402.87	4.09		Si
SLV 12	11.06	2353.85	-9148	-0.0000583	0.0005615	0.0035	1.655		6846.92	6846.92	2.91		Si
SLV 3	8.96	2225.33	-9569	-0.0000582	0.0005615	0.0035	1.655		7106.01	7106.01	3.19		Si
SLV 3	11.06	-1760.98	-4626	-0.000037	0.0005615	0.0035	1.655		4302.87	4302.87	2.44		Si
SLV 13	8.96	-2404.7	-4016	-0.0000638	0.0005615	0.0035	1.324		3838.46	3838.46	1.6		Si
SLV 13	11.06	3185.6	-8140	-0.0000684	0.0005615	0.0035	1.655		6231.49	6231.49	1.96		Si
SLV 15	8.96	-2767.83	-4907	-0.000068	0.0005615	0.0035	1.324		4509.02	4509.02	1.63		Si
SLV 15	11.06	3627.02	-9285	-0.0000785	0.0005615	0.0035	1.655		6930.92	6930.92	1.91		Si
SLV 4	8.96	2075.9	-9534	-0.0000563	0.0005615	0.0035	1.655		7084.29	7084.29	3.41		Si
SLV 4	11.06	-1641.8	-4819	-0.0000354	0.0005615	0.0035	1.655		4445.39	4445.39	2.71		Si
SLD 16	8.96	-1343.96	-5964	-0.0000351	0.0005615	0.0035	1.655		5279.35	5279.35	3.93		Si
SLD 16	11.06	2047.34	-7770	-0.0000497	0.0005615	0.0035	1.655		6007.57	6007.57	2.93		Si
SLV 14	8.96	-2554.13	-3980	-0.0000781	0.0005615	0.0035	1.324		3811.81	3811.81	1.49		Si
SLV 14	11.06	3304.79	-8332	-0.000071	0.0005615	0.0035	1.655		6348.56	6348.56	1.92		Si
SLV 1	8.96	2588.45	-8677	-0.0000597	0.0005615	0.0035	1.655		6558.72	6558.72	2.53		Si
SLV 1	11.06	-2202.39	-3481	-0.0000646	0.0005615	0.0035	1.324		3435.29	3435.29	1.56		Si
SLV 16	8.96	-2917.26	-4872	-0.0000782	0.0005615	0.0035	1.324		4483.6	4483.6	1.54		Si
SLV 16	11.06	3746.2	-9477	-0.0000811	0.0005615	0.0035	1.655		7049.7	7049.7	1.88		Si
SLV 2	8.96	2439.03	-8642	-0.0000576	0.0005615	0.0035	1.655		6537.24	6537.24	2.68		Si
SLV 2	11.06	-2083.21	-3674	-0.0000508	0.0005615	0.0035	1.324		3580.31	3580.31	1.72		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	8.96	-364.25	-9306	-7749	-932	1.655	1.655	-16723	9174	4251	40441	13876	4220	18097	No	19.42	Si
SLU 81	11.06	1230.83	-9452	-7871	-1905	1.655	1.655	-16985	9209	4268	40441	13876	4220	18097	No	9.5	Si
SLU 84	8.96	-342.41	-9653	-8038	-904	1.655	1.655	-17346	9257	4290	40441	13876	4220	18097	No	20.03	Si
SLU 84	11.06	1237.99	-9784	-8147	-1907	1.655	1.655	-17582	9289	4304	40441	13876	4220	18097	No	9.49	Si
SLU 76	8.96	-311.67	-9503	-7913	-885	1.655	1.655	-17076	9221	4273	40441	13876	4220	18097	No	20.45	Si
SLU 76	11.06	1182.21	-9488	-7901	-1841	1.655	1.655	-17050	9218	4272	40441	13876	4220	18097	No	9.83	Si
SLU 78	8.96	-316.3	-9917	-8258	-924	1.655	1.655	-17819	9320	4319	40441	13876	4220	18097	No	19.59	Si
SLU 78	11.06	1249.27	-9985	-8314	-1926	1.655	1.655	-17942	9337	4327	40441	13876	4220	18097	No	9.4	Si
SLU 75	8.96	-342.73	-9569	-7968	-950	1.655	1.655	-17195	9237	4281	40441	13876	4220	18097	No	19.05	Si
SLU 75	11.06	1243.93	-9645	-8032	-1929	1.655	1.655	-17332	9255	4289	40441	13876	4220	18097	No	9.38	Si
SLU 82	8.96	-368.84	-9306	-7749	-930	1.655	1.655	-16722	9174	4251	40441	13876	4220	18097	No	19.46	Si
SLU 82	11.06	1232.65	-9445	-7865	-1910	1.655	1.655	-16971	9207	4267	40441	13876	4220	18097	No	9.47	Si
SLU 74	8.96	-338.14	-9569	-7969	-952	1.655	1.655	-17196	9237	4281	40441	13876	4220	18097	No	19.01	Si
SLU 74	11.06	1242.11	-9652	-8038	-1924	1.655	1.655	-17345	9257	4290	40441	13876	4220	18097	No	9.41	Si
SLU 83	8.96	-337.82	-9654	-8039	-906	1.655	1.655	-17347	9257	4290	40441	13876	4220	18097	No	19.98	Si
SLU 83	11.06	1236.17	-9792	-8154	-1901	1.655	1.655	-17595	9290	4305	40441	13876	4220	18097	No	9.52	Si
SLU 77	8.96	-311.71	-9917	-8258	-926	1.655	1.655	-17820	9320	4319	40441	13876	4220	18097	No	19.55	Si
SLU 77	11.06	1247.45	-9992	-8321	-1920	1.655	1.655	-17955	9338	4328	40441	13876	4220	18097	No	9.42	Si
SLU 73	8.96	-338.1	-9155	-7624	-911	1.655	1.655	-16452	9138	4235	40441	13876	4220	18097	No	19.86	Si
SLU 73	11.06	1176.87	-9149	-7618	-1844	1.655	1.655	-16439	9136	4234	40441	13876	4220	18097	No	9.81	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	8.96	-2554.13	-3980	-3315	-5355	1.324	0.5575	0	0	0	40441	16652	3376	20028		3.74	Si
SLV 14	11.06	3304.79	-8332	-6939	-4779	1.655	1.2927	-14973	13411	4854	40441	20815	4220	25035		5.24	Si
SLV 1	8.96	2588.45	-8677	-7226	4351	1.655	1.5876	-15593	13535	6017	40441	20815	4220	25035		5.75	Si
SLV 1	11.06	-2202.39	-3481	-2899	2969	1.324	0.5845	0	0	0	40441	16652	3376	20028		6.75	Si
SLV 11	8.96	-1470.87	-7572	-6305	-2243	1.655	1.655	-13607	13138	6088	40441	20815	4220	25035		11.16	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	11.06	2277.74	-9025	-7515	-3286	1.655	1.655	-16217	13660	6330	40441	20815	4220	25035		7.62	Si
SLV 13	8.96	-2404.7	-4016	-3344	-5138	1.324	0.686	0	0	0	40441	16652	3376	20028		3.9	Si
SLV 13	11.06	3185.6	-8140	-6778	-4561	1.655	1.3084	-14626	13342	4888	40441	20815	4220	25035		5.49	Si
SLV 12	8.96	-1566.3	-7550	-6287	-2382	1.655	1.655	-13566	13130	6084	40441	20815	4220	25035		10.51	Si
SLV 12	11.06	2353.85	-9148	-7618	-3425	1.655	1.655	-16438	13704	6351	40441	20815	4220	25035		7.31	Si
SLV 15	8.96	-2767.83	-4907	-4086	-5317	1.324	0.7903	0	0	0	40441	16652	3376	20028		3.77	Si
SLV 15	11.06	3627.02	-9285	-7731	-5170	1.655	1.3106	-16684	13753	5047	40441	20815	4220	25035		4.84	Si
SLV 3	8.96	2225.33	-9569	-7968	4173	1.655	1.655	-17194	13856	6421	40441	20815	4220	25035		6	Si
SLV 3	11.06	-1760.98	-4626	-3852	2359	1.655	1.3405	-10310	12479	4684	40441	20815	4220	25035		10.61	Si
SLV 2	8.96	2439.03	-8642	-7196	4134	1.655	1.6359	-15530	13523	6194	40441	20815	4220	25035		6.06	Si
SLV 2	11.06	-2083.21	-3674	-3059	2750	1.324	0.7814	0	0	0	40441	16652	3376	20028		7.28	Si
SLV 16	8.96	-2917.26	-4872	-4057	-5533	1.324	0.6861	0	0	0	40441	16652	3376	20028		3.62	Si
SLV 16	11.06	3746.2	-9477	-7892	-5389	1.655	1.2967	-17030	13823	5019	40441	20815	4220	25035		4.65	Si
SLV 4	8.96	2075.9	-9534	-7939	3956	1.655	1.655	-17131	13843	6415	40441	20815	4220	25035		6.33	Si
SLV 4	11.06	-1641.8	-4819	-4013	2140	1.655	1.4604	-9858	12388	5066	40441	20815	4220	25035		11.7	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 1	179667	0.46	8122	-3764	202.98	498.9	2.46	Si
SLV 2	179667	0.46	8538	-3957	202.98	522.95	2.58	Si
SLV 5	179667	0.46	8870	-4110	202.98	542.03	2.67	Si
SLV 6	179667	0.46	9136	-4234	202.98	557.24	2.75	Si
SLV 3	179667	0.46	10584	-4905	202.98	639.06	3.15	Si
SLV 4	179667	0.46	11000	-5097	202.98	662.24	3.26	Si
SLV 9	179667	0.46	11909	-5518	202.98	712.34	3.51	Si
SLV 10	179667	0.46	12174	-5642	202.98	726.86	3.58	Si
SLV 7	179667	0.46	17076	-7913	202.98	983.98	4.85	Si
SLV 8	179667	0.46	17342	-8036	202.98	997.34	4.91	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-4915	-8971	287	1.46	735.2	0.919	23.1028	15.29191	Si
SLV 8	-4878	-8948	287	1.469	731.5	0.918	23.24345	15.29191	Si
SLV 11	-4709	-7572	376	1.493	714.6	0.917	23.66856	15.29191	Si
SLV 12	-4672	-7550	376	1.502	710.8	0.917	23.81759	15.29191	Si
SLV 5	-3777	-5999	-372	1.752	621.7	0.908	28.03556	15.29191	Si
SLV 6	-3739	-5977	-372	1.765	617.9	0.908	28.24484	15.29191	Si
SLV 9	-3571	-4601	-283	1.84	601.2	0.906	29.50423	15.29191	Si
SLV 10	-3533	-4578	-283	1.854	597.5	0.906	29.73357	15.29191	Si
SLV 3	-4768	-9569	-48	1.532	720.5	0.917	24.27356	8.07112	Si
SLV 4	-4709	-9534	-47	1.547	714.6	0.917	24.51235	8.07112	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.083	SLU 40	Si
V_SLU	9.379	SLU 75	Si
PF_SLV	1.492	SLV 14	Si
V_SLV	3.619	SLV 16	Si
PFFP_SLV	2.458	SLV 1	Si
R_SLV	1.511	SLV 7	Si

Maschio 164

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.033	2.166	-15.033	6.386	L6	L7	4.22	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	8.96	-2543.39	55824	0.0019667	0.0004492	0.0035	3.376	0	162282.59	162282.59	63.81	No	Si
SLU 77	11.06	8105.03	59273	0.0017965	0.0004492	0.0035	3.376	0	159061.09	159061.09	19.62	No	Si
SLU 81	8.96	-2685.91	57076	0.0020062	0.0004492	0.0035	3.376	0	161148.15	161148.15	60	No	Si
SLU 81	11.06	8153.14	60524	0.001841	0.0004492	0.0035	3.376	0	157922.02	157922.02	19.37	No	Si
SLU 83	8.96	-2684.65	57397	0.0020184	0.0004492	0.0035	3.376	0	160856.97	160856.97	59.92	No	Si
SLU 83	11.06	8243.89	60846	0.0018483	0.0004492	0.0035	3.376	0	157602.66	157602.66	19.12	No	Si
SLU 78	8.96	-2418.16	55828	0.0019735	0.0004492	0.0035	3.376	0	162279.38	162279.38	67.11	No	Si
SLU 78	11.06	8192.62	59276	0.001792	0.0004492	0.0035	3.376	0	159057.88	159057.88	19.41	No	Si
SLU 76	8.96	-2298.89	55154	0.0019545	0.0004492	0.0035	3.376	0	162889.79	162889.79	70.86	No	Si
SLU 76	11.06	8099.25	58602	0.0017716	0.0004492	0.0035	3.376	0	159668.44	159668.44	19.71	No	Si
SLU 79	8.96	-2506.36	55469	0.0019553	0.0004492	0.0035	3.376	0	162603.96	162603.96	64.88	No	Si
SLU 79	11.06	8044.01	58918	0.0017864	0.0004492	0.0035	3.376	0	159382.54	159382.54	19.81	No	Si
SLU 82	8.96	-2560.67	57080	0.0020131	0.0004492	0.0035	3.376	0	161144.94	161144.94	62.93	No	Si
SLU 82	11.06	8240.74	60528	0.0018365	0.0004492	0.0035	3.376	0	157918.5	157918.5	19.16	No	Si
SLU 75	8.96	-2419.42	55506	0.0019614	0.0004492	0.0035	3.376	0	162570.56	162570.56	67.19	No	Si
SLU 75	11.06	8101.88	58955	0.0017847	0.0004492	0.0035	3.376	0	159349.14	159349.14	19.67	No	Si
SLU 84	8.96	-2559.42	57401	0.0020252	0.0004492	0.0035	3.376	0	160853.76	160853.76	62.85	No	Si
SLU 84	11.06	8331.48	60849	0.0018437	0.0004492	0.0035	3.376	0	157599.14	157599.14	18.92	No	Si
SLU 80	8.96	-2381.12	55473	0.0019622	0.0004492	0.0035	3.376	0	162600.75	162600.75	68.29	No	Si
SLU 80	11.06	8131.6	58921	0.0017819	0.0004492	0.0035	3.376	0	159379.33	159379.33	19.6	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 5	8.96	3197.21	39090	0.0012997	0.0006738	0.0035	3.376		184096.19	184096.19	57.58		Si
SLD 5	11.06	8634.97	41655	0.0011053	0.0006738	0.0035	3.376		181860.85	181860.85	21.06		Si
SLV 10	8.96	9125.61	37082	0.000907	0.0006738	0.0035	3.376		185846.19	185846.19	20.37		Si
SLV 10	11.06	12179.2	39654	0.0008405	0.0006738	0.0035	3.376		183604.54	183604.54	15.08		Si
SLV 11	8.96	-12486.07	37213	0.0007335	0.0006738	0.0035	3.376		185826.32	185826.32	14.88		Si
SLV 11	11.06	-1258.41	39967	0.0014381	0.0006738	0.0035	3.376		183427.16	183427.16	145.76		Si
SLV 12	8.96	-12700.6	37243	0.0007232	0.0006738	0.0035	3.376		185799.85	185799.85	14.63		Si
SLV 12	11.06	-1440.08	39997	0.0014296	0.0006738	0.0035	3.376		183400.69	183400.69	127.35		Si
SLV 8	8.96	-12650.09	40043	0.0008314	0.0006738	0.0035	3.376		183360.89	183360.89	14.49		Si
SLV 8	11.06	-1231.41	42714	0.0015431	0.0006738	0.0035	3.376		180998.27	180998.27	146.98		Si
SLV 7	8.96	-12435.55	40012	0.0008417	0.0006738	0.0035	3.376		183387.36	183387.36	14.75		Si
SLV 7	11.06	-1049.73	42684	0.0015517	0.0006738	0.0035	3.376		181027.21	181027.21	172.45		Si
SLD 6	8.96	3103.63	39104	0.0013052	0.0006738	0.0035	3.376		184084.64	184084.64	59.31		Si
SLD 6	11.06	8555.72	41668	0.0011101	0.0006738	0.0035	3.376		181849.3	181849.3	21.25		Si
SLV 9	8.96	9340.14	37052	0.0008944	0.0006738	0.0035	3.376		185872.66	185872.66	19.9		Si
SLV 9	11.06	12360.87	39624	0.0008296	0.0006738	0.0035	3.376		183631.02	183631.02	14.86		Si
SLV 5	8.96	9390.66	39851	0.000997	0.0006738	0.0035	3.376		183433.03	183433.03	19.53		Si
SLV 5	11.06	12569.55	42342	0.0009207	0.0006738	0.0035	3.376		181257.53	181257.53	14.42		Si
SLV 6	8.96	9176.13	39882	0.0010097	0.0006738	0.0035	3.376		183406.55	183406.55	19.99		Si
SLV 6	11.06	12387.87	42372	0.0009315	0.0006738	0.0035	3.376		181228.59	181228.59	14.63		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	8.96	-2684.65	57397	33701	-5176	3.376	4.22	0	0	0	79749	19412	17218	36630	No	7.08	Si
SLU 83	11.06	8243.89	60846	35726	-5176	3.376	4.22	0	0	0	79749	19412	17218	36630	No	7.08	Si
SLU 79	8.96	-2506.36	55469	32569	-4996	3.376	4.22	0	0	0	79749	19412	17218	36630	No	7.33	Si
SLU 79	11.06	8044.01	58918	34594	-4996	3.376	4.22	0	0	0	79749	19412	17218	36630	No	7.33	Si
SLU 81	8.96	-2685.91	57076	33513	-5133	3.376	4.22	0	0	0	79749	19412	17218	36630	No	7.14	Si
SLU 81	11.06	8153.14	60524	35537	-5133	3.376	4.22	0	0	0	79749	19412	17218	36630	No	7.14	Si
SLU 78	8.96	-2418.16	55828	32780	-5025	3.376	4.22	0	0	0	79749	19412	17218	36630	No	7.29	Si
SLU 78	11.06	8192.62	59276	34804	-5025	3.376	4.22	0	0	0	79749	19412	17218	36630	No	7.29	Si
SLU 74	8.96	-2544.65	55503	32589	-5000	3.376	4.22	0	0	0	79749	19412	17218	36630	No	7.33	Si
SLU 74	11.06	8014.29	58951	34614	-5000	3.376	4.22	0	0	0	79749	19412	17218	36630	No	7.33	Si
SLU 82	8.96	-2560.67	57080	33515	-5116	3.376	4.22	0	0	0	79749	19412	17218	36630	No	7.16	Si
SLU 82	11.06	8240.74	60528	35539	-5116	3.376	4.22	0	0	0	79749	19412	17218	36630	No	7.16	Si
SLU 80	8.96	-2381.12	55473	32571	-4978	3.376	4.22	0	0	0	79749	19412	17218	36630	No	7.36	Si
SLU 80	11.06	8131.6	58921	34596	-4978	3.376	4.22	0	0	0	79749	19412	17218	36630	No	7.36	Si
SLU 84	8.96	-2559.42	57401	33703	-5158	3.376	4.22	0	0	0	79749	19412	17218	36630	No	7.1	Si
SLU 84	11.06	8331.48	60849	35728	-5158	3.376	4.22	0	0	0	79749	19412	17218	36630	No	7.1	Si
SLU 75	8.96	-2419.42	55506	32591	-4982	3.376	4.22	0	0	0	79749	19412	17218	36630	No	7.35	Si
SLU 75	11.06	8101.88	58955	34616	-4982	3.376	4.22	0	0	0	79749	19412	17218	36630	No	7.35	Si
SLU 77	8.96	-2543.39	55824	32777	-5043	3.376	4.22	0	0	0	79749	19412	17218	36630	No	7.26	Si
SLU 77	11.06	8105.03	59273	34802	-5043	3.376	4.22	0	0	0	79749	19412	17218	36630	No	7.26	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	8.96	-5012.67	43261	25401	-3962	3.376	4.22	0	0	0	79749	29118	17218	46336		11.69	Si
SLV 4	11.06	3727.39	45773	26876	-4685	3.376	4.22	0	0	0	79749	29118	17218	46336		9.89	Si
SLD 8	8.96	-6508.55	39173	23000	-3849	3.376	4.22	0	0	0	79749	29118	17218	46336		12.04	Si
SLD 8	11.06	2571.48	41818	24554	-4463	3.376	4.22	0	0	0	79749	29118	17218	46336		10.38	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	8.96	-4676.74	43213	25373	-3938	3.376	4.22	0	0	0	79749	29118	17218	46336		11.77	Si
SLV 3	11.06	4011.87	45726	26848	-4661	3.376	4.22	0	0	0	79749	29118	17218	46336		9.94	Si
SLV 7	8.96	-12435.55	40012	23493	-4377	3.376	4.22	0	0	0	79749	29118	17218	46336		10.59	Si
SLV 7	11.06	-1049.73	42684	25062	-5787	3.376	4.22	0	0	0	79749	29118	17218	46336		8.01	Si
SLV 8	8.96	-12650.09	40043	23511	-4392	3.376	4.22	0	0	0	79749	29118	17218	46336		10.55	Si
SLV 8	11.06	-1231.41	42714	25080	-5803	3.376	4.22	0	0	0	79749	29118	17218	46336		7.99	Si
SLD 12	8.96	-6507.15	38004	22314	-3777	3.376	4.22	0	0	0	79749	29118	17218	46336		12.27	Si
SLD 12	11.06	2494.49	40683	23887	-4313	3.376	4.22	0	0	0	79749	29118	17218	46336		10.74	Si
SLV 11	8.96	-12486.07	37213	21850	-4216	3.376	4.22	0	0	0	79749	29118	17218	46336		10.99	Si
SLV 11	11.06	-1258.41	39967	23467	-5429	3.376	4.22	0	0	0	79749	29118	17218	46336		8.54	Si
SLD 7	8.96	-6414.97	39159	22993	-3842	3.376	4.22	0	0	0	79749	29118	17218	46336		12.06	Si
SLD 7	11.06	2650.73	41805	24546	-4456	3.376	4.22	0	0	0	79749	29118	17218	46336		10.4	Si
SLV 12	8.96	-12700.6	37243	21868	-4232	3.376	4.22	0	0	0	79749	29118	17218	46336		10.95	Si
SLV 12	11.06	-1440.08	39997	23484	-5444	3.376	4.22	0	0	0	79749	29118	17218	46336		8.51	Si
SLD 11	8.96	-6413.57	37991	22307	-3771	3.376	4.22	0	0	0	79749	29118	17218	46336		12.29	Si
SLD 11	11.06	2573.74	40670	23880	-4306	3.376	4.22	0	0	0	79749	29118	17218	46336		10.76	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.72 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 4	45265	0.46	312.95	0	15913.73	7956.86	25.43	Si
SLV 3	45217	0.46	312.95	0	15916.7	7958.35	25.43	Si
SLV 2	45191	0.46	312.95	0	15918.35	7959.17	25.43	Si
SLV 1	45143	0.46	312.95	0	15921.32	7960.66	25.44	Si
SLV 8	42157	0.46	312.95	0	16099.09	8049.54	25.72	Si
SLV 7	42127	0.46	312.95	0	16100.87	8050.44	25.72	Si
SLV 6	41911	0.46	312.95	0	16113.54	8056.77	25.74	Si
SLV 5	41880	0.46	312.95	0	16115.32	8057.66	25.75	Si
SLV 12	39427	0.46	312.95	0	16253.35	8126.68	25.97	Si
SLV 11	39396	0.46	312.95	0	16255.02	8127.51	25.97	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	41764	39882	-213	1.208	436.1	1	17.55366	19.04959	No, Trazione
SLV 5	41741	39851	-213	1.209	436.1	1	17.56525	19.04959	No, Trazione
SLV 8	41241	40043	-241	1.224	436.1	1	17.78982	19.04959	No, Trazione
SLV 7	41217	40012	-241	1.225	436.1	1	17.80173	19.04959	No, Trazione
SLV 10	39212	37082	243	1.298	436.1	1	18.86	19.04959	No, Trazione
SLV 9	39188	37052	243	1.299	436.1	1	18.87333	19.04959	No, Trazione
SLV 12	38689	37243	215	1.32	436.1	1	19.18032	19.04959	Si, Trazione
SLV 11	38665	37213	215	1.321	436.1	1	19.19408	19.04959	Si, Trazione
SLV 2	44566	43212	-755	1.094	436.1	1	15.89623	14.73654	Si, Trazione
SLV 1	44528	43165	-755	1.095	436.1	1	15.9116	14.73654	Si, Trazione

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	18.916	SLU 84	Si
V_SLU	7.077	SLU 83	Si
PF_SLV	14.42	SLV 5	Si
V_SLV	7.985	SLV 8	Si
PFFP_SLV	25.425	SLV 4	Si
R_SLV	0.921	SLV 6	No

Maschio 165

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-4.824	-13.778	-3.384	L6	L7	1.44	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 40	8.96	-165.78	-8299	-0.0000344	0.0003743	0.0035	1.4395	4765.1	5602.99	5602.99	33.8	No	Si
SLU 40	12.48	312.39	-4004	-0.0000198	0.0003743	0.0035	1.4395	2600.58	2787.4	2787.4	8.92	No	Si
SLU 31	8.96	-149.54	-7913	-0.0000326	0.0003743	0.0035	1.4395	4597.09	5400.5	5400.5	36.11	No	Si
SLU 31	12.48	275.94	-3885	-0.0000188	0.0003743	0.0035	1.4395	2531.29	2713.6	2713.6	9.83	No	Si
SLU 33	8.96	-168.75	-8291	-0.0000344	0.0003743	0.0035	1.4395	4762.04	5599.28	5599.28	33.18	No	Si
SLU 33	12.48	277.61	-4213	-0.0000201	0.0003743	0.0035	1.4395	2721.01	2916.32	2916.32	10.5	No	Si
SLU 82	8.96	-196.14	-9859	-0.0000413	0.0003743	0.0035	1.4395	5391.1	6380.14	6380.14	32.53	No	Si
SLU 82	12.48	320.02	-4790	-0.000023	0.0003743	0.0035	1.4395	3045.49	3261.81	3261.81	10.19	No	Si
SLU 81	8.96	-213.56	-9897	-0.0000417	0.0003743	0.0035	1.4395	5405.29	6397.66	6397.66	29.96	No	Si
SLU 81	12.48	311.01	-4809	-0.0000229	0.0003743	0.0035	1.4395	3055.63	3271.83	3271.83	10.52	No	Si
SLU 42	8.96	-171.04	-8581	-0.0000357	0.0003743	0.0035	1.4395	4884.61	5748.4	5748.4	33.61	No	Si
SLU 42	12.48	297.65	-4290	-0.0000207	0.0003743	0.0035	1.4395	2764.87	2963.57	2963.57	9.96	No	Si
SLU 39	8.96	-183.21	-8337	-0.0000349	0.0003743	0.0035	1.4395	4781.38	5622.75	5622.75	30.69	No	Si
SLU 39	12.48	303.38	-4022	-0.0000197	0.0003743	0.0035	1.4395	2611.23	2798.79	2798.79	9.23	No	Si
SLU 41	8.96	-188.47	-8619	-0.0000361	0.0003743	0.0035	1.4395	4900.51	5767.79	5767.79	30.6	No	Si
SLU 41	12.48	288.64	-4308	-0.0000206	0.0003743	0.0035	1.4395	2775.34	2974.87	2974.87	10.31	No	Si
SLU 19	8.96	-134.7	-7396	-0.0000303	0.0003743	0.0035	1.4395	4363.71	5128.41	5128.41	38.07	No	Si
SLU 19	12.48	248.71	-3517	-0.0000169	0.0003743	0.0035	1.4395	2314.36	2483.13	2483.13	9.98	No	Si
SLU 18	8.96	-152.12	-7434	-0.0000307	0.0003743	0.0035	1.4395	4381.18	5148.79	5148.79	33.85	No	Si
SLU 18	12.48	239.7	-3535	-0.0000169	0.0003743	0.0035	1.4395	2325.33	2494.8	2494.8	10.41	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	8.96	547.15	-3163	-0.0000201	0.0005615	0.0035	1.4395		2296.97	2296.97	4.2		Si
SLV 5	12.48	-158.18	-1377	-0.0000074	0.0005615	0.0035	1.4395		1474.6	1474.6	9.32		Si
SLD 13	8.96	95.48	-5466	-0.0000218	0.0005615	0.0035	1.4395		3780.01	3780.01	39.59		Si
SLD 13	12.48	409.96	-2519	-0.0000155	0.0005615	0.0035	1.4395		1867	1867	4.55		Si
SLV 9	8.96	743.04	-2172	-0.0000203	0.0005615	0.0035	1.4395		1631.57	1631.57	2.2		Si
SLV 9	12.48	246.01	-630	-0.0000067	0.0005615	0.0035	1.4395		565.45	565.45	2.3		Si
SLV 14	8.96	417.51	-3939	-0.000021	0.0005615	0.0035	1.4395		2806.26	2806.26	6.72		Si
SLV 14	12.48	819.6	-1514	-0.0000302	0.0005615	0.0035	1.4395		1180.97	1180.97	1.44		Si
SLV 16	8.96	-59.26	-6351	-0.0000246	0.0005615	0.0035	1.4395		4699.93	4699.93	79.31		Si
SLV 16	12.48	869.94	-2918	-0.0000245	0.0005615	0.0035	1.4395		2133.18	2133.18	2.45		Si
SLV 10	8.96	744.73	-2256	-0.0000204	0.0005615	0.0035	1.4395		1688.6	1688.6	2.27		Si
SLV 10	12.48	279.76	-721	-0.0000076	0.0005615	0.0035	1.4395		629.22	629.22	2.25		Si
SLV 6	8.96	548.84	-3247	-0.0000204	0.0005615	0.0035	1.4395		2352.97	2352.97	4.29		Si
SLV 6	12.48	-124.43	-1468	-0.0000073	0.0005615	0.0035	1.4395		1536.8	1536.8	12.35		Si
SLV 15	8.96	-61.9	-6220	-0.0000242	0.0005615	0.0035	1.4395		4619.57	4619.57	74.63		Si
SLV 15	12.48	817.1	-2776	-0.0000231	0.0005615	0.0035	1.4395		2038.35	2038.35	2.49		Si
SLD 14	8.96	96.61	-5522	-0.000022	0.0005615	0.0035	1.4395		3815.3	3815.3	39.49		Si
SLD 14	12.48	432.64	-2580	-0.0000161	0.0005615	0.0035	1.4395		1907.74	1907.74	4.41		Si
SLV 13	8.96	414.86	-3807	-0.0000205	0.0005615	0.0035	1.4395		2720.48	2720.48	6.56		Si
SLV 13	12.48	766.76	-1371	-0.0000304	0.0005615	0.0035	1.4395		1082.49	1082.49	1.41		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	8.96	-204.37	-10133	-8438	-2692	1.4395	1.4395	-20935	9736	3924	40441	12070	3671	15740	No	5.85	Si
SLU 78	12.48	270.5	-5286	-4402	-523	1.4395	1.4395	-10920	8400	3386	40441	12070	3671	15740	No	30.09	Si
SLU 81	8.96	-213.56	-9897	-8241	-2855	1.4395	1.4395	-20446	9671	3898	40441	12070	3671	15740	No	5.51	Si
SLU 81	12.48	311.01	-4809	-4004	-739	1.4395	1.4395	-9935	8269	3333	40441	12070	3671	15740	No	21.31	Si
SLU 80	8.96	-202.03	-10062	-8379	-2644	1.4395	1.4395	-20788	9716	3916	40441	12070	3671	15740	No	5.95	Si
SLU 80	12.48	248.08	-5256	-4377	-484	1.4395	1.4395	-10858	8392	3383	40441	12070	3671	15740	No	32.53	Si
SLU 75	8.96	-199.11	-9851	-8203	-2661	1.4395	1.4395	-20353	9658	3893	40441	12070	3671	15740	No	5.92	Si
SLU 75	12.48	285.24	-5000	-4163	-576	1.4395	1.4395	-10329	8322	3354	40441	12070	3671	15740	No	27.33	Si
SLU 74	8.96	-216.54	-9889	-8235	-2707	1.4395	1.4395	-20431	9669	3897	40441	12070	3671	15740	No	5.81	Si
SLU 74	12.48	276.23	-5018	-4179	-557	1.4395	1.4395	-10367	8327	3356	40441	12070	3671	15740	No	28.26	Si
SLU 82	8.96	-196.14	-9859	-8209	-2809	1.4395	1.4395	-20367	9660	3894	40441	12070	3671	15740	No	5.6	Si
SLU 82	12.48	320.02	-4790	-3989	-758	1.4395	1.4395	-9897	8264	3331	40441	12070	3671	15740	No	20.78	Si
SLU 83	8.96	-218.82	-10179	-8476	-2886	1.4395	1.4395	-21029	9748	3929	40441	12070	3671	15740	No	5.45	Si
SLU 83	12.48	296.27	-5095	-4243	-686	1.4395	1.4395	-10526	8348	3365	40441	12070	3671	15740	No	22.95	Si
SLU 84	8.96	-201.4	-10141	-8444	-2840	1.4395	1.4395	-20950	9738	3925	40441	12070	3671	15740	No	5.54	Si
SLU 84	12.48	305.27	-5077	-4227	-705	1.4395	1.4395	-10488	8343	3363	40441	12070	3671	15740	No	22.33	Si
SLU 79	8.96	-219.46	-10100	-8411	-2690	1.4395	1.4395	-20866	9727	3920	40441	12070	3671	15740	No	5.85	Si
SLU 79	12.48	239.07	-5274	-4392	-465	1.4395	1.4395	-10896	8397	3385	40441	12070	3671	15740	No	33.85	Si
SLU 77	8.96	-221.79	-10171	-8470	-2738	1.4395	1.4395	-21014	9746	3928	40441	12070	3671	15740	No	5.75	Si
SLU 77	12.48	261.49	-5304	-4417	-504	1.4395	1.4395	-10958	8406	3388	40441	12070	3671	15740	No	31.21	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	8.96	548.84	-3247	-2704	-178	1.4395	1.4395	-6708	11758	4739	40441	18104	3671	21775		122.18	Si
SLV 6	12.48	-124.43	-1468	-1222	2974	1.4395	1.4395	-3033	11023	4443	40441	18104	3671	21775		7.32	Si
SLV 13	8.96	414.86	-3807	-3170	-4313	1.4395	1.4395	-7866	11990	4833	40441	18104	3671	21775		5.05	Si
SLV 13	12.48	766.76	-1371	-1142	-1704	1.4395	0.482	-8494	12115	1635	40441	18104	3671	21775		12.78	Si
SLV 11	8.96	-846.19	-10214	-8505	-3170	1.4395	1.4395	-21101	14637	5900	40441	18104	3671	21775		6.87	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	12.48	413.82	-5311	-4422	-3390	1.4395	1.4395	-10971	12611	5083	40441	18104	3671	21775		6.42	Si
SLV 12	8.96	-844.5	-10297	-8575	-3254	1.4395	1.4395	-21274	14671	5914	40441	18104	3671	21775		6.69	Si
SLV 12	12.48	447.56	-5401	-4498	-3467	1.4395	1.4395	-11159	12648	5098	40441	18104	3671	21775		6.28	Si
SLV 14	8.96	417.51	-3939	-3280	-4444	1.4395	1.4395	-8137	12044	4855	40441	18104	3671	21775		4.9	Si
SLV 14	12.48	819.6	-1514	-1260	-1825	1.4395	0.5347	-3127	11042	1653	40441	18104	3671	21775		11.93	Si
SLD 16	8.96	-113.65	-6585	-5483	-3033	1.4395	1.4395	-13604	13138	5295	40441	18104	3671	21775		7.18	Si
SLD 16	12.48	455.76	-3196	-2661	-1557	1.4395	1.4395	-6603	11737	4731	40441	18104	3671	21775		13.98	Si
SLV 5	8.96	547.15	-3163	-2634	-95	1.4395	1.4395	-6534	11724	4725	40441	18104	3671	21775		229.6	Si
SLV 5	12.48	-158.18	-1377	-1147	3051	1.4395	1.4395	-2845	10986	4428	40441	18104	3671	21775		7.14	Si
SLD 15	8.96	-114.79	-6529	-5436	-2977	1.4395	1.4395	-13488	13114	5286	40441	18104	3671	21775		7.31	Si
SLD 15	12.48	433.08	-3135	-2611	-1505	1.4395	1.4395	-6477	11712	4721	40441	18104	3671	21775		14.47	Si
SLV 15	8.96	-61.9	-6220	-5179	-4713	1.4395	1.4395	-12850	12987	5234	40441	18104	3671	21775		4.62	Si
SLV 15	12.48	817.1	-2776	-2311	-3220	1.4395	1.2761	-5734	11563	4132	40441	18104	3671	21775		6.76	Si
SLV 16	8.96	-59.26	-6351	-5289	-4844	1.4395	1.4395	-13121	13041	5256	40441	18104	3671	21775		4.5	Si
SLV 16	12.48	869.94	-2918	-2429	-3341	1.4395	1.2648	-6028	11622	4116	40441	18104	3671	21775		6.52	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.46	3565	-1437	180.66	196.46	1.09	Si
SLV 10	179667	0.46	3784	-1525	180.66	208.24	1.15	Si
SLV 5	179667	0.46	4288	-1728	180.66	235.15	1.3	Si
SLV 6	179667	0.46	4507	-1817	180.66	246.82	1.37	Si
SLV 13	179667	0.46	8303	-3347	180.66	443.07	2.45	Si
SLV 14	179667	0.46	8647	-3485	180.66	460.31	2.55	Si
SLV 1	179667	0.46	10713	-4318	180.66	562.11	3.11	Si
SLV 2	179667	0.46	11056	-4456	180.66	578.73	3.2	Si
SLV 15	179667	0.46	13141	-5297	180.66	677.73	3.75	Si
SLV 16	179667	0.46	13485	-5435	180.66	693.74	3.84	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-6148	-11288	-126	1.119	828.1	0.934	17.4139	15.29191	Si
SLV 7	-6057	-11204	-127	1.132	818.9	0.933	17.63297	15.29191	Si
SLV 12	-5401	-10297	-66	1.248	752.7	0.928	19.5446	15.29191	Si
SLV 11	-5311	-10214	-66	1.265	743.6	0.928	19.81995	15.29191	Si
SLV 4	-5407	-9653	-123	1.239	753.3	0.928	19.39357	8.07112	Si
SLV 3	-5265	-9522	-123	1.265	739	0.927	19.82438	8.07112	Si
SLV 2	-4003	-7241	-59	1.57	612.3	0.916	24.90258	8.07112	Si
SLV 1	-3861	-7109	-59	1.612	598.1	0.915	25.61331	8.07112	Si
SLV 6	-1468	-3247	86	2.973	364.6	0.889	48.578	15.29191	Si
SLV 5	-1377	-3163	86	3.073	356.3	0.889	50.23535	15.29191	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.923	SLU 40	Si
V_SLU	5.453	SLU 83	Si
PF_SLV	1.412	SLV 13	Si
V_SLV	4.496	SLV 16	Si
PFFP_SLV	1.087	SLV 9	Si
R_SLV	1.139	SLV 8	Si

Maschio 167

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-3.384	-13.778	-0.354	Z medio 984 cm	L7	3.03	0.28	2.643	1.765	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 40	10.71	406.28	-13530	-0.0000258	0.0003743	0.0035	3.0305	17290.07	18105.59	18105.59	44.56	No	Si
SLU 40	12.48	1434.1	-9759	-0.0000224	0.0003743	0.0035	3.0305	13116.72	13950.01	13950.01	9.73	No	Si
SLU 42	10.71	423.62	-14212	-0.0000271	0.0003743	0.0035	3.0305	17992.16	18882.25	18882.25	44.57	No	Si
SLU 42	12.48	1512.14	-10432	-0.000024	0.0003743	0.0035	3.0305	13897.84	14674.67	14674.67	9.7	No	Si
SLU 41	10.71	375.23	-14137	-0.0000268	0.0003743	0.0035	3.0305	17915.59	18796.29	18796.29	50.09	No	Si
SLU 41	12.48	1469.55	-10365	-0.0000237	0.0003743	0.0035	3.0305	13821.23	14602.61	14602.61	9.94	No	Si
SLU 18	10.71	237.21	-11960	-0.0000222	0.0003743	0.0035	3.0305	15613.11	16347.65	16347.65	68.92	No	Si
SLU 18	12.48	1268.59	-8501	-0.0000195	0.0003743	0.0035	3.0305	11613.87	12409.09	12409.09	9.78	No	Si
SLU 63	10.71	391.68	-15522	-0.0000294	0.0003743	0.0035	3.0305	19293.84	20393.94	20393.94	52.07	No	Si
SLU 63	12.48	1557.22	-11132	-0.0000254	0.0003743	0.0035	3.0305	14693.64	15436.31	15436.31	9.91	No	Si
SLU 21	10.71	302.93	-12718	-0.0000239	0.0003743	0.0035	3.0305	16433.3	17191.2	17191.2	56.75	No	Si
SLU 21	12.48	1389.22	-9241	-0.0000213	0.0003743	0.0035	3.0305	12504.06	13359.85	13359.85	9.62	No	Si
SLU 19	10.71	285.6	-12035	-0.0000225	0.0003743	0.0035	3.0305	15695.42	16430.97	16430.97	57.53	No	Si
SLU 19	12.48	1311.18	-8568	-0.0000198	0.0003743	0.0035	3.0305	11694.84	12494.95	12494.95	9.53	No	Si
SLU 61	10.71	374.35	-14840	-0.0000281	0.0003743	0.0035	3.0305	18623.11	19602.8	19602.8	52.37	No	Si
SLU 61	12.48	1479.18	-10459	-0.0000239	0.0003743	0.0035	3.0305	13929.04	14704.07	14704.07	9.94	No	Si
SLU 84	10.71	512.37	-17017	-0.0000327	0.0003743	0.0035	3.0305	20705.64	22156.42	22156.42	43.24	No	Si
SLU 84	12.48	1680.14	-12323	-0.0000281	0.0003743	0.0035	3.0305	16008.41	16750.48	16750.48	9.97	No	Si
SLU 20	10.71	254.54	-12642	-0.0000236	0.0003743	0.0035	3.0305	16352.78	17107.06	17107.06	67.21	No	Si
SLU 20	12.48	1346.63	-9174	-0.000021	0.0003743	0.0035	3.0305	12424.67	13278.34	13278.34	9.86	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	10.71	2668.41	-11391	-0.0000295	0.0005615	0.0035	3.0305		16564.09	16564.09	6.21		Si
SLV 13	12.48	2082.57	-7837	-0.000021	0.0005615	0.0035	3.0305		11774.49	11774.49	5.65		Si
SLV 5	10.71	4564.48	-18330	-0.0000492	0.0005615	0.0035	3.0305		24743.2	24743.2	5.42		Si
SLV 5	12.48	3427.46	-12664	-0.0000345	0.0005615	0.0035	3.0305		18226.06	18226.06	5.32		Si
SLV 12	10.71	-3706.61	-4999	-0.0000228	0.0005615	0.0035	3.0305		9855.61	9855.61	2.66		Si
SLV 12	12.48	-1728.98	-3680	-0.0000123	0.0005615	0.0035	3.0305		7972.61	7972.61	4.61		Si
SLV 9	10.71	5096.02	-17095	-0.0000488	0.0005615	0.0035	3.0305		23358.33	23358.33	4.58		Si
SLV 9	12.48	3646.36	-11764	-0.0000336	0.0005615	0.0035	3.0305		17050.48	17050.48	4.68		Si
SLV 10	10.71	5043.6	-17139	-0.0000487	0.0005615	0.0035	3.0305		23408.24	23408.24	4.64		Si
SLV 10	12.48	3548.09	-11837	-0.0000334	0.0005615	0.0035	3.0305		17145.94	17145.94	4.83		Si
SLV 11	10.71	-3654.19	-4954	-0.0000225	0.0005615	0.0035	3.0305		9791.96	9791.96	2.68		Si
SLV 11	12.48	-1630.71	-3607	-0.0000119	0.0005615	0.0035	3.0305		7867.91	7867.91	4.82		Si
SLV 7	10.71	-4185.74	-6190	-0.0000262	0.0005615	0.0035	3.0305		11524	11524	2.75		Si
SLV 7	12.48	-1849.61	-4507	-0.0000142	0.0005615	0.0035	3.0305		9156.23	9156.23	4.95		Si
SLV 6	10.71	4512.06	-18375	-0.0000491	0.0005615	0.0035	3.0305		24793.5	24793.5	5.49		Si
SLV 6	12.48	3329.19	-12737	-0.0000343	0.0005615	0.0035	3.0305		18320.8	18320.8	5.5		Si
SLV 14	10.71	2586.33	-11461	-0.0000293	0.0005615	0.0035	3.0305		16655.75	16655.75	6.44		Si
SLV 14	12.48	1928.69	-7952	-0.0000207	0.0005615	0.0035	3.0305		11931.91	11931.91	6.19		Si
SLV 8	10.71	-4238.16	-6235	-0.0000265	0.0005615	0.0035	3.0305		11585.8	11585.8	2.73		Si
SLV 8	12.48	-1947.89	-4580	-0.0000147	0.0005615	0.0035	3.0305		9260.08	9260.08	4.75		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 63	10.71	391.68	-15522	-12926	-1511	3.0305	3.0305	-15233	8975	7616	28547	25409	7728	33137	No	21.93	Si
SLU 63	12.48	1557.22	-11132	-9269	-2507	3.0305	3.0305	-10924	8401	7129	28547	25409	7728	33137	No	13.22	Si
SLU 41	10.71	375.23	-14137	-11772	-1702	3.0305	3.0305	-13873	8794	7462	28547	25409	7728	33137	No	19.47	Si
SLU 41	12.48	1469.55	-10365	-8631	-2372	3.0305	3.0305	-10172	8301	7043	28547	25409	7728	33137	No	13.97	Si
SLU 62	10.71	343.29	-15447	-12863	-1546	3.0305	3.0305	-15159	8966	7608	28547	25409	7728	33137	No	21.44	Si
SLU 62	12.48	1514.63	-11065	-9214	-2506	3.0305	3.0305	-10859	8392	7121	28547	25409	7728	33137	No	13.22	Si
SLU 42	10.71	423.62	-14212	-11835	-1667	3.0305	3.0305	-13947	8804	7471	28547	25409	7728	33137	No	19.88	Si
SLU 42	12.48	1512.14	-10432	-8687	-2373	3.0305	3.0305	-10237	8309	7051	28547	25409	7728	33137	No	13.97	Si
SLU 83	10.71	463.98	-16942	-14108	-1737	3.0305	3.0305	-16626	9161	7774	28547	25409	7728	33137	No	19.08	Si
SLU 83	12.48	1637.55	-12256	-10206	-2618	3.0305	3.0305	-12028	8548	7253	28547	25409	7728	33137	No	12.66	Si
SLU 60	10.71	325.96	-14764	-12295	-1555	3.0305	3.0305	-14489	8876	7532	28547	25409	7728	33137	No	21.32	Si
SLU 60	12.48	1436.59	-10392	-8654	-2432	3.0305	3.0305	-10199	8304	7046	28547	25409	7728	33137	No	13.63	Si
SLU 61	10.71	374.35	-14840	-12357	-1520	3.0305	3.0305	-14563	8886	7540	28547	25409	7728	33137	No	21.81	Si
SLU 61	12.48	1479.18	-10459	-8709	-2433	3.0305	3.0305	-10264	8313	7054	28547	25409	7728	33137	No	13.62	Si
SLU 84	10.71	512.37	-17017	-14170	-1702	3.0305	3.0305	-16700	9171	7782	28547	25409	7728	33137	No	19.47	Si
SLU 84	12.48	1680.14	-12323	-10261	-2619	3.0305	3.0305	-12093	8557	7261	28547	25409	7728	33137	No	12.65	Si
SLU 82	10.71	495.03	-16334	-13602	-1711	3.0305	3.0305	-16030	9082	7706	28547	25409	7728	33137	No	19.37	Si
SLU 82	12.48	1602.1	-11650	-9701	-2544	3.0305	3.0305	-11433	8469	7186	28547	25409	7728	33137	No	13.02	Si
SLU 81	10.71	446.64	-16259	-13539	-1746	3.0305	3.0305	-15956	9072	7698	28547	25409	7728	33137	No	18.98	Si
SLU 81	12.48	1559.51	-11583	-9646	-2544	3.0305	3.0305	-11367	8460	7179	28547	25409	7728	33137	No	13.03	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	10.71	-3654.19	-4954	-4126	-5509	3.0305	2.333	-6330	11683	7632	28547	38113	7728	36178		6.57	Si
SLV 11	12.48	-1630.71	-3607	-3003	-5051	3.0305	3.0305	-3539	11125	9440	28547	38113	7728	37986		7.52	Si
SLV 7	10.71	-4185.74	-6190	-5155	-5024	3.0305	2.5171	-7337	11884	8376	28547	38113	7728	36922		7.35	Si
SLV 7	12.48	-1849.61	-4507	-3753	-4671	3.0305	3.0305	-4423	11301	9590	28547	38113	7728	38136		8.17	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	10.71	-38.73	-7819	-6511	-2831	3.0305	3.0305	-7673	11951	10141	28547	38113	7728	38688		13.66	Si
SLV 16	12.48	345.57	-5505	-4584	-2950	3.0305	3.0305	-5402	11497	9756	28547	38113	7728	38302		12.98	Si
SLV 12	10.71	-3706.61	-4999	-4163	-5514	3.0305	2.3213	-6419	11700	7605	28547	38113	7728	36152		6.56	Si
SLV 12	12.48	-1728.98	-3680	-3064	-5050	3.0305	3.0305	-3611	11139	9452	28547	38113	7728	37998		7.52	Si
SLV 10	10.71	5043.6	-17139	-14272	3770	3.0305	3.0305	-16820	13781	11693	28547	38113	7728	40240		10.67	Si
SLV 10	12.48	3548.09	-11837	-9857	2214	3.0305	3.0305	-11616	12740	10810	28547	38113	7728	39357		17.78	Si
SLV 6	10.71	4512.06	-18375	-15301	4255	3.0305	3.0305	-18032	14023	11899	28547	38113	7728	40446		9.51	Si
SLV 6	12.48	3329.19	-12737	-10607	2594	3.0305	3.0305	-12500	12917	10960	28547	38113	7728	39507		15.23	Si
SLV 5	10.71	4564.48	-18330	-15264	4260	3.0305	3.0305	-17989	14014	11892	28547	38113	7728	40438		9.49	Si
SLV 5	12.48	3427.46	-12664	-10546	2593	3.0305	3.0305	-12428	12902	10948	28547	38113	7728	39495		15.23	Si
SLV 8	10.71	-4238.16	-6235	-5192	-5029	3.0305	2.5064	-7421	11901	8352	28547	38113	7728	36899		7.34	Si
SLV 8	12.48	-1947.89	-4580	-3814	-4670	3.0305	3.0305	-4495	11316	9602	28547	38113	7728	38148		8.17	Si
SLV 15	10.71	43.35	-7749	-6453	-2824	3.0305	3.0305	-7605	11938	10129	28547	38113	7728	38676		13.7	Si
SLV 15	12.48	499.45	-5390	-4488	-2952	3.0305	3.0305	-5290	11475	9737	28547	38113	7728	38283		12.97	Si
SLV 9	10.71	5096.02	-17095	-14235	3775	3.0305	3.0305	-16776	13772	11686	28547	38113	7728	40232		10.66	Si
SLV 9	12.48	3646.36	-11764	-9796	2213	3.0305	3.0305	-11544	12726	10798	28547	38113	7728	39345		17.78	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 11.597 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.48	5497	-4664	222.58	629.51	2.83	Si
SLV 12	179667	0.48	5562	-4720	222.58	636.7	2.86	Si
SLV 7	179667	0.48	6745	-5723	222.58	765.85	3.44	Si
SLV 8	179667	0.48	6810	-5778	222.58	772.91	3.47	Si
SLV 15	179667	0.48	8046	-6827	222.58	905.44	4.07	Si
SLV 16	179667	0.48	8148	-6914	222.58	916.29	4.12	Si
SLV 13	179667	0.48	11494	-9753	222.58	1262.65	5.67	Si
SLV 14	179667	0.48	11596	-9840	222.58	1272.95	5.72	Si
SLV 3	179667	0.48	12205	-10356	222.58	1333.98	5.99	Si
SLV 4	179667	0.48	12307	-10443	222.58	1344.17	6.04	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 11.597 Wa = 0.05 Ta = 0.0416

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-12737	-18375	-523	1.178	1614.5	0.944	18.13708	8.43283	Si
SLV 5	-12664	-18330	-523	1.184	1607.1	0.944	18.22732	8.43283	Si
SLV 10	-11837	-17139	294	1.268	1523.3	0.941	19.57667	8.43283	Si
SLV 9	-11764	-17095	293	1.275	1515.9	0.941	19.68147	8.43283	Si
SLV 2	-10954	-15580	-1373	1.268	1433.9	0.938	19.63216	5.87437	Si
SLV 1	-10840	-15510	-1374	1.278	1422.3	0.938	19.80801	5.87437	Si
SLV 4	-8507	-11938	-1286	1.558	1186.6	0.928	24.40188	5.87437	Si
SLV 3	-8392	-11868	-1286	1.575	1175.1	0.928	24.6753	5.87437	Si
SLV 14	-7952	-11461	1348	1.636	1130.7	0.925	25.69384	5.87437	Si
SLV 13	-7837	-11391	1348	1.654	1119.2	0.925	25.99986	5.87437	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.53	SLU 19	Si
V_SLU	12.652	SLU 84	Si
PF_SLV	2.659	SLV 12	Si
V_SLV	6.557	SLV 12	Si
PFFP_SLV	2.828	SLV 11	Si
R_SLV	2.151	SLV 6	Si

Maschio 169

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.823	6.526	-17.718	6.526	L6	L7	2.105	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 62	9.86	2482.68	-10367	-0.0000458	0.0003743	0.0035	2.105	9025.78	9510.22	9510.22	3.83	No	Si
SLU 62	11.66	-1319.44	-7852	-0.00003	0.0003743	0.0035	2.105	7182.46	8726.96	8726.96	6.61	No	Si
SLU 58	9.86	2441.74	-10253	-0.0000451	0.0003743	0.0035	2.105	8947.57	9417.41	9417.41	3.86	No	Si
SLU 58	11.66	-1307.58	-7738	-0.0000296	0.0003743	0.0035	2.105	7094.25	8628.43	8628.43	6.6	No	Si
SLU 55	9.86	2413.13	-10091	-0.0000445	0.0003743	0.0035	2.105	8834.52	9284.72	9284.72	3.85	No	Si
SLU 55	11.66	-1300.3	-7576	-0.0000291	0.0003743	0.0035	2.105	6966.86	8485.99	8485.99	6.53	No	Si
SLU 63	9.86	2487.44	-10392	-0.0000459	0.0003743	0.0035	2.105	9043.26	9531.11	9531.11	3.83	No	Si
SLU 63	11.66	-1322.1	-7877	-0.0000301	0.0003743	0.0035	2.105	7202.17	8748.93	8748.93	6.62	No	Si
SLU 60	9.86	2446.13	-10162	-0.0000449	0.0003743	0.0035	2.105	8883.97	9342.58	9342.58	3.82	No	Si
SLU 60	11.66	-1307.74	-7647	-0.0000293	0.0003743	0.0035	2.105	7022.57	8548.11	8548.11	6.54	No	Si
SLU 61	9.86	2450.89	-10187	-0.000045	0.0003743	0.0035	2.105	8901.62	9363.3	9363.3	3.82	No	Si
SLU 61	11.66	-1310.39	-7672	-0.0000294	0.0003743	0.0035	2.105	7042.46	8570.44	8570.44	6.54	No	Si
SLU 81	9.86	2627.59	-11136	-0.0000491	0.0003743	0.0035	2.105	9545.57	10148.01	10148.01	3.86	No	Si
SLU 81	11.66	-1346.12	-8590	-0.0000322	0.0003743	0.0035	2.105	7746.36	9346.7	9346.7	6.94	No	Si
SLU 59	9.86	2446.5	-10279	-0.0000452	0.0003743	0.0035	2.105	8965.14	9438.17	9438.17	3.86	No	Si
SLU 59	11.66	-1310.23	-7764	-0.0000297	0.0003743	0.0035	2.105	7114.06	8650.59	8650.59	6.6	No	Si
SLU 52	9.86	2376.58	-9886	-0.0000436	0.0003743	0.0035	2.105	8690.72	9118.12	9118.12	3.84	No	Si
SLU 52	11.66	-1288.59	-7371	-0.0000284	0.0003743	0.0035	2.105	6805	8307.66	8307.66	6.45	No	Si
SLU 82	9.86	2632.35	-11162	-0.0000492	0.0003743	0.0035	2.105	9562.36	10169.19	10169.19	3.86	No	Si
SLU 82	11.66	-1348.78	-8615	-0.0000323	0.0003743	0.0035	2.105	7765.41	9367.5	9367.5	6.95	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 13	9.86	2794.14	-7597	-0.0000398	0.0005615	0.0035	2.105		7709.3	7709.3	2.76		Si
SLD 13	11.66	-2280.16	-5807	-0.0000313	0.0005615	0.0035	2.105		7045.51	7045.51	3.09		Si
SLD 15	9.86	2656.06	-6915	-0.000037	0.0005615	0.0035	2.105		7077.41	7077.41	2.66		Si
SLD 15	11.66	-2228.87	-5111	-0.0000295	0.0005615	0.0035	2.105		6379.42	6379.42	2.86		Si
SLV 14	9.86	3871.55	-7594	-0.0000506	0.0005615	0.0035	2.105		7706.91	7706.91	1.99		Si
SLV 14	11.66	-3968.23	-6022	-0.0000554	0.0005615	0.0035	1.684		7251.6	7251.6	1.83		Si
SLD 14	9.86	2708.03	-7689	-0.0000393	0.0005615	0.0035	2.105		7794.12	7794.12	2.88		Si
SLD 14	11.66	-2260.66	-5899	-0.0000314	0.0005615	0.0035	2.105		7134.35	7134.35	3.16		Si
SLV 15	9.86	3757.67	-5826	-0.0000517	0.0005615	0.0035	2.105		6052.63	6052.63	1.61		Si
SLV 15	11.66	-3898.54	-4222	-0.0001122	0.0005615	0.0035	1.684		5532.8	5532.8	1.42		Si
SLV 11	9.86	1968.33	-4780	-0.0000265	0.0005615	0.0035	2.105		5050.16	5050.16	2.57		Si
SLV 11	11.66	-1690.29	-2885	-0.0000218	0.0005615	0.0035	1.684		4221.33	4221.33	2.5		Si
SLD 16	9.86	2569.95	-7007	-0.0000365	0.0005615	0.0035	2.105		7163.55	7163.55	2.79		Si
SLD 16	11.66	-2209.38	-5204	-0.0000294	0.0005615	0.0035	2.105		6467.6	6467.6	2.93		Si
SLV 12	9.86	1840.22	-4917	-0.0000257	0.0005615	0.0035	2.105		5183.05	5183.05	2.82		Si
SLV 12	11.66	-1661.29	-3022	-0.0000212	0.0005615	0.0035	2.105		4357.52	4357.52	2.62		Si
SLV 13	9.86	4072.15	-7379	-0.0000534	0.0005615	0.0035	2.105		7507.79	7507.79	1.84		Si
SLV 13	11.66	-4013.65	-5806	-0.0000583	0.0005615	0.0035	1.684		7045.06	7045.06	1.76		Si
SLV 16	9.86	3557.07	-6041	-0.0000469	0.0005615	0.0035	2.105		6256.71	6256.71	1.76		Si
SLV 16	11.66	-3853.13	-4437	-0.0000865	0.0005615	0.0035	1.684		5739.6	5739.6	1.49		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	9.86	2627.83	-11418	-9508	2239	2.105	2.105	-16132	9095	5361	40441	17649	5368	23017	No	10.28	Si
SLU 75	11.66	-1330.94	-8871	-7387	2239	2.105	2.105	-12534	8616	5078	40441	17649	5368	23017	No	10.28	Si
SLU 81	9.86	2627.59	-11136	-9273	2248	2.105	2.105	-15734	9042	5329	40441	17649	5368	23017	No	10.24	Si
SLU 81	11.66	-1346.12	-8590	-7153	2248	2.105	2.105	-12136	8563	5047	40441	17649	5368	23017	No	10.24	Si
SLU 83	9.86	2664.14	-11341	-9444	2274	2.105	2.105	-16023	9081	5352	40441	17649	5368	23017	No	10.12	Si
SLU 83	11.66	-1357.83	-8794	-7323	2274	2.105	2.105	-12425	8601	5069	40441	17649	5368	23017	No	10.12	Si
SLU 82	9.86	2632.35	-11162	-9294	2252	2.105	2.105	-15769	9047	5332	40441	17649	5368	23017	No	10.22	Si
SLU 82	11.66	-1348.78	-8615	-7174	2252	2.105	2.105	-12171	8567	5050	40441	17649	5368	23017	No	10.22	Si
SLU 74	9.86	2623.07	-11392	-9487	2235	2.105	2.105	-16096	9091	5358	40441	17649	5368	23017	No	10.3	Si
SLU 74	11.66	-1328.29	-8846	-7366	2235	2.105	2.105	-12498	8611	5075	40441	17649	5368	23017	No	10.3	Si
SLU 80	9.86	2627.96	-11253	-9371	2249	2.105	2.105	-15899	9064	5342	40441	17649	5368	23017	No	10.23	Si
SLU 80	11.66	-1348.62	-8707	-7250	2249	2.105	2.105	-12301	8585	5060	40441	17649	5368	23017	No	10.23	Si
SLU 79	9.86	2623.2	-11228	-9350	2245	2.105	2.105	-15863	9060	5340	40441	17649	5368	23017	No	10.25	Si
SLU 79	11.66	-1345.96	-8681	-7229	2245	2.105	2.105	-12265	8580	5057	40441	17649	5368	23017	No	10.25	Si
SLU 78	9.86	2664.38	-11623	-9678	2266	2.105	2.105	-16421	9134	5383	40441	17649	5368	23017	No	10.16	Si
SLU 78	11.66	-1342.65	-9076	-7558	2266	2.105	2.105	-12823	8654	5101	40441	17649	5368	23017	No	10.16	Si
SLU 84	9.86	2668.9	-11366	-9465	2278	2.105	2.105	-16059	9086	5355	40441	17649	5368	23017	No	10.1	Si
SLU 84	11.66	-1360.49	-8820	-7344	2278	2.105	2.105	-12461	8606	5072	40441	17649	5368	23017	No	10.1	Si
SLU 77	9.86	2659.62	-11597	-9657	2262	2.105	2.105	-16385	9129	5381	40441	17649	5368	23017	No	10.18	Si
SLU 77	11.66	-1339.99	-9051	-7537	2262	2.105	2.105	-12787	8649	5098	40441	17649	5368	23017	No	10.18	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 14	9.86	2708.03	-7689	-6403	2764	2.105	2.1009	-10864	12589	7406	40441	26474	5368	31841		11.52	Si
SLD 14	11.66	-2260.66	-5899	-4912	2575	2.105	2.0078	-8772	12171	6842	40441	26474	5368	31841		12.37	Si
SLD 15	9.86	2656.06	-6915	-5758	2686	2.105	2.0051	-9770	12371	6945	40441	26474	5368	31841		11.85	Si
SLD 15	11.66	-2228.87	-5111	-4256	2477	2.105	1.8492	-8250	12067	6248	40441	26474	5368	31841		12.85	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 13	9.86	2794.14	-7597	-6326	2823	2.105	2.0541	-10733	12563	7226	40441	26474	5368	31841		11.28	Si
SLD 13	11.66	-2280.16	-5807	-4835	2634	2.105	1.9794	-8757	12168	6744	40441	26474	5368	31841		12.09	Si
SLV 13	9.86	4072.15	-7379	-6145	4459	2.105	1.5019	-10425	12502	5257	40441	26474	5368	31841		7.14	Si
SLV 13	11.66	-4013.65	-5806	-4835	4016	1.684	1.0837	0	0	0	40441	21179	4294	25473		6.34	Si
SLV 16	9.86	3557.07	-6041	-5030	4011	2.105	1.391	-8535	12124	4722	40441	26474	5368	31841		7.94	Si
SLV 16	11.66	-3853.13	-4437	-3695	3522	1.684	0.5523	0	0	0	40441	21179	4294	25473		7.23	Si
SLV 9	9.86	3016.59	-9957	-8291	2951	2.105	2.105	-14068	13230	7798	40441	26474	5368	31841		10.79	Si
SLV 9	11.66	-2073.98	-8166	-6800	2888	2.105	2.105	-11538	12724	7500	40441	26474	5368	31841		11.03	Si
SLV 10	9.86	2888.49	-10095	-8406	2863	2.105	2.105	-14262	13269	7821	40441	26474	5368	31841		11.12	Si
SLV 10	11.66	-2044.97	-8304	-6915	2800	2.105	2.105	-11732	12763	7522	40441	26474	5368	31841		11.37	Si
SLV 15	9.86	3757.67	-5826	-4851	4148	2.105	1.2224	-8231	12063	4129	40441	26474	5368	31841		7.68	Si
SLV 15	11.66	-3898.54	-4222	-3515	3659	1.684	0.3871	0	0	0	40441	21179	4294	25473		6.96	Si
SLV 14	9.86	3871.55	-7594	-6324	4323	2.105	1.6281	-10729	12563	5727	40441	26474	5368	31841		7.37	Si
SLV 14	11.66	-3968.23	-6022	-5014	3880	1.684	1.1805	0	0	0	40441	21179	4294	25473		6.57	Si
SLD 16	9.86	2569.95	-7007	-5835	2627	2.105	2.0572	-9900	12397	7141	40441	26474	5368	31841		12.12	Si
SLD 16	11.66	-2209.38	-5204	-4333	2419	2.105	1.8837	-8237	12064	6363	40441	26474	5368	31841		13.16	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.46	6494	-3828	258.17	513.07	1.99	Si
SLV 12	179667	0.46	6727	-3965	258.17	530.66	2.06	Si
SLV 7	179667	0.46	7065	-4164	258.17	556.01	2.15	Si
SLV 8	179667	0.46	7299	-4302	258.17	573.46	2.22	Si
SLV 15	179667	0.46	8809	-5192	258.17	684.95	2.65	Si
SLV 16	179667	0.46	9174	-5407	258.17	711.56	2.76	Si
SLV 3	179667	0.46	10713	-6314	258.17	821.96	3.18	Si
SLV 4	179667	0.46	11078	-6529	258.17	847.81	3.28	Si
SLV 13	179667	0.46	11421	-6731	258.17	871.93	3.38	Si
SLV 14	179667	0.46	11786	-6947	258.17	897.5	3.48	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-8816	-6908	603	1.097	1193.3	0.933	17.094	15.29191	Si
SLV 9	-8779	-6708	603	1.101	1189.5	0.933	17.15459	15.29191	Si
SLV 6	-8075	-9285	595	1.177	1118.5	0.929	18.40462	15.29191	Si
SLV 5	-8038	-9085	594	1.181	1114.8	0.929	18.475	15.29191	Si
SLV 12	-3322	-3125	-596	2.218	645	0.897	35.94257	15.29191	Si
SLV 11	-3285	-2925	-596	2.233	641.4	0.896	36.20796	15.29191	Si
SLV 14	-7767	-2867	193	1.255	1087.5	0.928	19.65964	8.07112	Si
SLV 13	-7709	-2553	193	1.262	1081.6	0.927	19.78172	8.07112	Si
SLV 8	-2582	-5502	-605	2.578	574	0.891	42.03257	15.29191	Si
SLV 7	-2545	-5302	-605	2.599	570.4	0.891	42.39044	15.29191	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.819	SLU 60	Si
V_SLU	10.102	SLU 84	Si
PF_SLV	1.419	SLV 15	Si
V_SLV	6.342	SLV 13	Si
PFFP_SLV	1.987	SLV 11	Si
R_SLV	1.118	SLV 10	Si

Maschio 170

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.818	6.526	-12.838	6.526	L6	L7	3.98	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 61	9.86	4532.26	-23226	-0.0000418	0.0003743	0.0035	3.98	36758.17	39643.94	39643.94	8.75	No	Si
SLU 61	11.66	-3248.01	-19017	-0.0000329	0.0003743	0.0035	3.98	31501.4	37741.5	37741.5	11.62	No	Si
SLU 81	9.86	4914.92	-25555	-0.0000462	0.0003743	0.0035	3.98	39400.59	43112.73	43112.73	8.77	No	Si
SLU 81	11.66	-3482.54	-21284	-0.0000367	0.0003743	0.0035	3.98	34410.02	41125.1	41125.1	11.81	No	Si
SLU 19	9.86	3737.62	-19116	-0.0000341	0.0003743	0.0035	3.98	31631.15	33232.2	33232.2	8.89	No	Si
SLU 19	11.66	-2672.88	-15862	-0.0000272	0.0003743	0.0035	3.98	27152.2	32843	32843	12.29	No	Si
SLU 84	9.86	4985.71	-26135	-0.0000472	0.0003743	0.0035	3.98	40028.02	43807.05	43807.05	8.79	No	Si
SLU 84	11.66	-3490.39	-21863	-0.0000376	0.0003743	0.0035	3.98	35124.22	41973.52	41973.52	12.03	No	Si
SLU 62	9.86	4590.59	-23733	-0.0000427	0.0003743	0.0035	3.98	37349.94	40452.68	40452.68	8.81	No	Si
SLU 62	11.66	-3235.41	-19525	-0.0000336	0.0003743	0.0035	3.98	32168.08	38488.34	38488.34	11.9	No	Si
SLU 60	9.86	4526.03	-23190	-0.0000418	0.0003743	0.0035	3.98	36715.98	39586.81	39586.81	8.75	No	Si
SLU 60	11.66	-3237.78	-18982	-0.0000328	0.0003743	0.0035	3.98	31453.91	37688.07	37688.07	11.64	No	Si
SLU 63	9.86	4596.82	-23769	-0.0000428	0.0003743	0.0035	3.98	37391.45	40509.93	40509.93	8.81	No	Si
SLU 63	11.66	-3245.63	-19561	-0.0000337	0.0003743	0.0035	3.98	32214.88	38541.46	38541.46	11.87	No	Si
SLU 83	9.86	4979.48	-26099	-0.0000471	0.0003743	0.0035	3.98	39989.49	43766.1	43766.1	8.79	No	Si
SLU 83	11.66	-3480.16	-21828	-0.0000375	0.0003743	0.0035	3.98	35080.31	41922.41	41922.41	12.05	No	Si
SLU 52	9.86	4344.98	-22447	-0.0000403	0.0003743	0.0035	3.98	35832.3	38406.34	38406.34	8.84	No	Si
SLU 52	11.66	-3115.07	-18239	-0.0000315	0.0003743	0.0035	3.98	30460.57	36561.72	36561.72	11.74	No	Si
SLU 82	9.86	4921.16	-25591	-0.0000462	0.0003743	0.0035	3.98	39439.81	43157.65	43157.65	8.77	No	Si
SLU 82	11.66	-3492.76	-21320	-0.0000368	0.0003743	0.0035	3.98	34454.61	41179.55	41179.55	11.79	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	9.86	-4698.6	-20625	-0.0000377	0.0005615	0.0035	3.98		41741.81	41741.81	8.88		Si
SLV 2	11.66	8365.74	-17466	-0.0000408	0.0005615	0.0035	3.98		32840.58	32840.58	3.93		Si
SLD 15	9.86	6768.96	-16315	-0.0000358	0.0005615	0.0035	3.98		30888.99	30888.99	4.56		Si
SLD 15	11.66	-6942.64	-12995	-0.0000315	0.0005615	0.0035	3.98		28777.5	28777.5	4.15		Si
SLV 14	9.86	10916.88	-17146	-0.0000456	0.0005615	0.0035	3.98		32301.31	32301.31	2.96		Si
SLV 14	11.66	-13540.06	-13673	-0.0000494	0.0005615	0.0035	3.98		29949.59	29949.59	2.21		Si
SLV 3	9.86	-4252.88	-18084	-0.0000332	0.0005615	0.0035	3.98		37488.51	37488.51	8.81		Si
SLV 3	11.66	8820.26	-15014	-0.0000382	0.0005615	0.0035	3.98		28650	28650	3.25		Si
SLV 1	9.86	-3857.68	-20554	-0.0000358	0.0005615	0.0035	3.98		41629.96	41629.96	10.79		Si
SLV 1	11.66	8182.38	-17395	-0.0000403	0.0005615	0.0035	3.98		32722.15	32722.15	4		Si
SLV 16	9.86	10521.69	-14676	-0.0000414	0.0005615	0.0035	3.98		28067.68	28067.68	2.67		Si
SLV 16	11.66	-12902.19	-11292	-0.000048	0.0005615	0.0035	3.184		25770.7	25770.7	2		Si
SLD 16	9.86	6408	-16345	-0.0000351	0.0005615	0.0035	3.98		30941.03	30941.03	4.83		Si
SLD 16	11.66	-6863.93	-13026	-0.0000314	0.0005615	0.0035	3.98		28830.03	28830.03	4.2		Si
SLV 4	9.86	-5093.79	-18155	-0.000035	0.0005615	0.0035	3.98		37606.96	37606.96	7.38		Si
SLV 4	11.66	9003.62	-15085	-0.0000387	0.0005615	0.0035	3.98		28772.44	28772.44	3.2		Si
SLV 13	9.86	11757.8	-17075	-0.0000473	0.0005615	0.0035	3.98		32180.53	32180.53	2.74		Si
SLV 13	11.66	-13723.42	-13602	-0.0000501	0.0005615	0.0035	3.98		29826.47	29826.47	2.17		Si
SLV 15	9.86	11362.6	-14605	-0.0000433	0.0005615	0.0035	3.98		27944.99	27944.99	2.46		Si
SLV 15	11.66	-13085.55	-11221	-0.0000491	0.0005615	0.0035	3.184		25641.08	25641.08	1.96		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	9.86	4896.2	-26624	-22171	4576	3.98	3.98	-19895	9597	10695	40441	33370	10149	43519	No	9.51	Si
SLU 77	11.66	-3354.07	-22353	-18614	4576	3.98	3.98	-16703	9172	10221	40441	33370	10149	43519	No	9.51	Si
SLU 75	9.86	4837.87	-26117	-21748	4550	3.98	3.98	-19515	9547	10639	40441	33370	10149	43519	No	9.56	Si
SLU 75	11.66	-3366.67	-21846	-18191	4550	3.98	3.98	-16324	9121	10164	40441	33370	10149	43519	No	9.56	Si
SLU 78	9.86	4902.43	-26660	-22200	4585	3.98	3.98	-19921	9601	10699	40441	33370	10149	43519	No	9.49	Si
SLU 78	11.66	-3364.3	-22389	-18644	4585	3.98	3.98	-16730	9175	10225	40441	33370	10149	43519	No	9.49	Si
SLU 82	9.86	4921.16	-25591	-21310	4667	3.98	3.98	-19123	9494	10580	40441	33370	10149	43519	No	9.33	Si
SLU 82	11.66	-3492.76	-21320	-17754	4667	3.98	3.98	-15931	9069	10106	40441	33370	10149	43519	No	9.33	Si
SLU 83	9.86	4979.48	-26099	-21733	4692	3.98	3.98	-19502	9545	10637	40441	33370	10149	43519	No	9.27	Si
SLU 83	11.66	-3480.16	-21828	-18176	4692	3.98	3.98	-16310	9119	10162	40441	33370	10149	43519	No	9.27	Si
SLU 74	9.86	4831.64	-26081	-21718	4541	3.98	3.98	-19489	9543	10635	40441	33370	10149	43519	No	9.58	Si
SLU 74	11.66	-3356.44	-21810	-18162	4541	3.98	3.98	-16297	9117	10160	40441	33370	10149	43519	No	9.58	Si
SLU 84	9.86	4985.71	-26135	-21763	4701	3.98	3.98	-19529	9548	10641	40441	33370	10149	43519	No	9.26	Si
SLU 84	11.66	-3490.39	-21863	-18206	4701	3.98	3.98	-16337	9123	10166	40441	33370	10149	43519	No	9.26	Si
SLU 79	9.86	4852.6	-25839	-21517	4543	3.98	3.98	-19308	9519	10608	40441	33370	10149	43519	No	9.58	Si
SLU 79	11.66	-3338.03	-21568	-17960	4543	3.98	3.98	-16116	9093	10134	40441	33370	10149	43519	No	9.58	Si
SLU 80	9.86	4858.83	-25875	-21547	4552	3.98	3.98	-19335	9522	10612	40441	33370	10149	43519	No	9.56	Si
SLU 80	11.66	-3348.26	-21604	-17990	4552	3.98	3.98	-16143	9097	10138	40441	33370	10149	43519	No	9.56	Si
SLU 81	9.86	4914.92	-25555	-21280	4658	3.98	3.98	-19096	9491	10576	40441	33370	10149	43519	No	9.34	Si
SLU 81	11.66	-3482.54	-21284	-17724	4658	3.98	3.98	-15904	9065	10102	40441	33370	10149	43519	No	9.34	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 14	9.86	6581.89	-17428	-14512	8025	3.98	3.98	-13023	13021	14511	40441	50055	10149	54952		6.85	Si
SLD 14	11.66	-7144.62	-14070	-11716	7444	3.98	3.98	-10513	12519	13952	40441	50055	10149	54392		7.31	Si
SLV 16	9.86	10521.69	-14676	-12221	13553	3.98	3.8192	-10967	12610	13485	40441	50055	10149	53926		3.98	Si
SLV 16	11.66	-12902.19	-11292	-9403	12725	3.184	2.5423	0	0	0	40441	40044	8119	40441		3.18	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 15	9.86	6768.96	-16315	-13586	7845	3.98	3.98	-12191	12855	14325	40441	50055	10149	54766		6.98	Si
SLD 15	11.66	-6942.64	-12995	-10821	7492	3.98	3.98	-9710	12359	13773	40441	50055	10149	54214		7.24	Si
SLV 14	9.86	10916.88	-17146	-14278	14525	3.98	3.98	-12812	12979	14464	40441	50055	10149	54905		3.78	Si
SLV 14	11.66	-13540.06	-13673	-11386	13169	3.98	2.9992	-13645	13146	11039	40441	50055	10149	51480		3.91	Si
SLV 4	9.86	-5093.79	-18155	-15118	-8782	3.98	3.98	-13566	13130	14632	40441	50055	10149	55073		6.27	Si
SLV 4	11.66	9003.62	-15085	-12561	-7426	3.98	3.98	-11272	12671	14121	40441	50055	10149	54562		7.35	Si
SLV 3	9.86	-4252.88	-18084	-15059	-8213	3.98	3.98	-13513	13119	14620	40441	50055	10149	55061		6.7	Si
SLV 3	11.66	8820.26	-15014	-12502	-6857	3.98	3.98	-11219	12660	14109	40441	50055	10149	54550		7.96	Si
SLV 15	9.86	11362.6	-14605	-12162	14122	3.98	3.6361	-10913	12599	12827	40441	50055	10149	53268		3.77	Si
SLV 15	11.66	-13085.55	-11221	-9344	13294	3.184	2.4715	0	0	0	40441	40044	8119	40441		3.04	Si
SLV 9	9.86	6601.5	-21187	-17642	8309	3.98	3.98	-15831	13583	15137	40441	50055	10149	55578		6.69	Si
SLV 9	11.66	-6767.45	-17720	-14756	7101	3.98	3.98	-13241	13065	14559	40441	50055	10149	55000		7.74	Si
SLV 13	9.86	11757.8	-17075	-14218	15095	3.98	3.9042	-12759	12968	14177	40441	50055	10149	54618		3.62	Si
SLV 13	11.66	-13723.42	-13602	-11327	13738	3.98	2.9432	-13833	13183	10864	40441	50055	10149	51305		3.73	Si
SLD 13	9.86	6942.84	-17397	-14487	8269	3.98	3.98	-13000	13017	14506	40441	50055	10149	54947		6.65	Si
SLD 13	11.66	-7223.32	-14039	-11691	7688	3.98	3.98	-10490	12515	13946	40441	50055	10149	54387		7.07	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.46	10132	-11291	488.14	1475.85	3.02	Si
SLV 12	179667	0.46	10173	-11336	488.14	1481.36	3.03	Si
SLV 7	179667	0.46	11124	-12397	488.14	1609.12	3.3	Si
SLV 8	179667	0.46	11165	-12442	488.14	1614.55	3.31	Si
SLV 15	179667	0.46	11489	-12804	488.14	1657.67	3.4	Si
SLV 16	179667	0.46	11553	-12875	488.14	1666.11	3.41	Si
SLV 13	179667	0.46	13655	-15217	488.14	1939.93	3.97	Si
SLV 14	179667	0.46	13719	-15288	488.14	1948.09	3.99	Si
SLV 3	179667	0.46	14797	-16490	488.14	2084.9	4.27	Si
SLV 4	179667	0.46	14861	-16561	488.14	2092.92	4.29	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-12051	-24083	1080	1.414	1791.3	0.919	22.35378	15.29191	Si
SLV 5	-12031	-24024	1080	1.416	1789.2	0.919	22.38409	15.29191	Si
SLV 10	-11567	-22204	1034	1.461	1742.8	0.918	23.14058	15.29191	Si
SLV 9	-11547	-22144	1034	1.463	1740.7	0.918	23.17299	15.29191	Si
SLV 8	-6236	-16796	-1016	2.239	1215.2	0.897	36.29667	15.29191	Si
SLV 7	-6216	-16737	-1016	2.244	1213.3	0.896	36.37489	15.29191	Si
SLV 12	-5752	-14917	-1062	2.349	1168.5	0.895	38.15783	15.29191	Si
SLV 11	-5732	-14857	-1062	2.354	1166.5	0.895	38.24409	15.29191	Si
SLV 2	-10587	-23742	401	1.605	1644.7	0.914	25.51196	8.07112	Si
SLV 1	-10555	-23649	401	1.608	1641.5	0.914	25.57199	8.07112	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.746	SLU 60	Si
V_SLU	9.257	SLU 84	Si
PF_SLV	1.959	SLV 15	Si
V_SLV	3.042	SLV 15	Si
PFFP_SLV	3.023	SLV 11	Si
R_SLV	1.462	SLV 6	Si

Maschio 171

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.938	6.526	-7.958	6.526	L6	L7	3.98	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 50	9.86	-3059.59	-20543	-0.0000347	0.0003743	0.0035	3.98	33478.14	40005.54	40005.54	13.08	No	Si
SLU 50	11.66	2512.08	-16220	-0.0000273	0.0003743	0.0035	3.98	27663.33	28886.3	28886.3	11.5	No	Si
SLU 55	9.86	-3186.02	-21746	-0.0000368	0.0003743	0.0035	3.98	34980.76	41806.46	41806.46	13.12	No	Si
SLU 55	11.66	2586.36	-17424	-0.0000292	0.0003743	0.0035	3.98	29348.48	30676.41	30676.41	11.86	No	Si
SLU 65	9.86	-3193.35	-21697	-0.0000367	0.0003743	0.0035	3.98	34919.69	41735.28	41735.28	13.07	No	Si
SLU 65	11.66	2590.11	-17311	-0.0000291	0.0003743	0.0035	3.98	29193.18	30508.16	30508.16	11.78	No	Si
SLU 68	9.86	-3245.58	-22261	-0.0000377	0.0003743	0.0035	3.98	35607.92	42534.13	42534.13	13.11	No	Si
SLU 68	11.66	2641.05	-17876	-0.00003	0.0003743	0.0035	3.98	29968.27	31354.79	31354.79	11.87	No	Si
SLU 44	9.86	-2963.55	-19482	-0.000033	0.0003743	0.0035	3.98	32111.63	38424.44	38424.44	12.97	No	Si
SLU 44	11.66	2428.8	-15159	-0.0000256	0.0003743	0.0035	3.98	26135.95	27328	27328	11.25	No	Si
SLU 43	9.86	-2955.14	-19413	-0.0000329	0.0003743	0.0035	3.98	32022.42	38324.05	38324.05	12.97	No	Si
SLU 43	11.66	2410.21	-15091	-0.0000255	0.0003743	0.0035	3.98	26036.39	27228.42	27228.42	11.3	No	Si
SLU 51	9.86	-3064.64	-20584	-0.0000348	0.0003743	0.0035	3.98	33530.07	40067.01	40067.01	13.07	No	Si
SLU 51	11.66	2523.24	-16261	-0.0000274	0.0003743	0.0035	3.98	27721.47	28946.78	28946.78	11.47	No	Si
SLU 64	9.86	-3184.94	-21628	-0.0000366	0.0003743	0.0035	3.98	34835.78	41637.41	41637.41	13.07	No	Si
SLU 64	11.66	2571.52	-17243	-0.0000289	0.0003743	0.0035	3.98	29098.77	30406.22	30406.22	11.82	No	Si
SLU 52	9.86	-3133.79	-21182	-0.0000358	0.0003743	0.0035	3.98	34282.33	40969.61	40969.61	13.07	No	Si
SLU 52	11.66	2535.42	-16859	-0.0000283	0.0003743	0.0035	3.98	28564.44	29833.9	29833.9	11.77	No	Si
SLU 47	9.86	-3015.78	-20046	-0.0000339	0.0003743	0.0035	3.98	32843.73	39262.82	39262.82	13.02	No	Si
SLU 47	11.66	2479.74	-15724	-0.0000266	0.0003743	0.0035	3.98	26953.66	28154.98	28154.98	11.35	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	9.86	-10622.71	-17899	-0.0000461	0.0005615	0.0035	3.98		37178.89	37178.89	3.5		Si
SLV 2	11.66	14267.58	-14512	-0.0000521	0.0005615	0.0035	3.98		27783.02	27783.02	1.95		Si
SLV 14	9.86	4847.57	-18097	-0.0000344	0.0005615	0.0035	3.98		33828.38	33828.38	6.98		Si
SLV 14	11.66	-9647.94	-14728	-0.0000395	0.0005615	0.0035	3.98		31785.95	31785.95	3.29		Si
SLV 4	9.86	-10654.97	-15138	-0.0000423	0.0005615	0.0035	3.98		32503.29	32503.29	3.05		Si
SLV 4	11.66	13787.87	-11788	-0.000052	0.0005615	0.0035	3.98		22983.86	22983.86	1.67		Si
SLV 3	9.86	-9743.75	-15175	-0.0000404	0.0005615	0.0035	3.98		32568.53	32568.53	3.34		Si
SLV 3	11.66	13594.14	-11825	-0.0000509	0.0005615	0.0035	3.98		23049.93	23049.93	1.7		Si
SLV 15	9.86	5726.53	-15374	-0.0000324	0.0005615	0.0035	3.98		29270.76	29270.76	5.11		Si
SLV 15	11.66	-10321.37	-12042	-0.000038	0.0005615	0.0035	3.98		27123.65	27123.65	2.63		Si
SLD 4	9.86	-5962.47	-15978	-0.0000337	0.0005615	0.0035	3.98		33972.01	33972.01	5.7		Si
SLD 4	11.66	7019.8	-12622	-0.0000312	0.0005615	0.0035	3.98		24466.85	24466.85	3.49		Si
SLV 1	9.86	-9711.49	-17936	-0.0000442	0.0005615	0.0035	3.98		37240.93	37240.93	3.83		Si
SLV 1	11.66	14073.85	-14549	-0.0000514	0.0005615	0.0035	3.98		27847.44	27847.44	1.98		Si
SLD 3	9.86	-5571.34	-15994	-0.0000329	0.0005615	0.0035	3.98		33999.65	33999.65	6.1		Si
SLD 3	11.66	6936.65	-12638	-0.000031	0.0005615	0.0035	3.98		24495.27	24495.27	3.53		Si
SLV 16	9.86	4815.31	-15336	-0.0000305	0.0005615	0.0035	3.98		29206.44	29206.44	6.07		Si
SLV 16	11.66	-10127.65	-12004	-0.0000375	0.0005615	0.0035	3.98		27057.46	27057.46	2.67		Si
SLV 13	9.86	5758.79	-18134	-0.0000363	0.0005615	0.0035	3.98		33882.29	33882.29	5.88		Si
SLV 13	11.66	-9841.66	-14765	-0.00004	0.0005615	0.0035	3.98		31851.01	31851.01	3.24		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	9.86	-3458.55	-25270	-21042	-3470	3.98	3.98	-18882	9462	10545	40441	33370	10149	43519	No	12.54	Si
SLU 78	11.66	2777.2	-20884	-17391	-3470	3.98	3.98	-15605	9025	10058	40441	33370	10149	43519	No	12.54	Si
SLU 81	9.86	-3428.15	-24057	-20033	-3424	3.98	3.98	-17976	9341	10410	40441	33370	10149	43519	No	12.71	Si
SLU 81	11.66	2723.84	-19672	-16381	-3424	3.98	3.98	-14699	8904	9923	40441	33370	10149	43519	No	12.71	Si
SLU 83	9.86	-3480.37	-24622	-20503	-3481	3.98	3.98	-18398	9398	10473	40441	33370	10149	43519	No	12.5	Si
SLU 83	11.66	2774.78	-20236	-16851	-3481	3.98	3.98	-15121	8961	9986	40441	33370	10149	43519	No	12.5	Si
SLU 84	9.86	-3485.42	-24663	-20537	-3490	3.98	3.98	-18429	9402	10477	40441	33370	10149	43519	No	12.47	Si
SLU 84	11.66	2785.93	-20277	-16885	-3490	3.98	3.98	-15152	8965	9990	40441	33370	10149	43519	No	12.47	Si
SLU 79	9.86	-3459.64	-24458	-20366	-3472	3.98	3.98	-18276	9381	10454	40441	33370	10149	43519	No	12.53	Si
SLU 79	11.66	2780.02	-20072	-16715	-3472	3.98	3.98	-14999	8944	9967	40441	33370	10149	43519	No	12.53	Si
SLU 75	9.86	-3406.32	-24705	-20572	-3413	3.98	3.98	-18460	9406	10482	40441	33370	10149	43519	No	12.75	Si
SLU 75	11.66	2726.26	-20320	-16920	-3413	3.98	3.98	-15183	8969	9995	40441	33370	10149	43519	No	12.75	Si
SLU 77	9.86	-3453.5	-25229	-21008	-3461	3.98	3.98	-18852	9458	10540	40441	33370	10149	43519	No	12.57	Si
SLU 77	11.66	2766.04	-20843	-17356	-3461	3.98	3.98	-15575	9021	10053	40441	33370	10149	43519	No	12.57	Si
SLU 82	9.86	-3433.19	-24098	-20067	-3433	3.98	3.98	-18007	9345	10414	40441	33370	10149	43519	No	12.68	Si
SLU 82	11.66	2734.99	-19713	-16415	-3433	3.98	3.98	-14730	8908	9928	40441	33370	10149	43519	No	12.68	Si
SLU 76	9.86	-3415.82	-23961	-19953	-3430	3.98	3.98	-17905	9332	10399	40441	33370	10149	43519	No	12.69	Si
SLU 76	11.66	2747.67	-19576	-16301	-3430	3.98	3.98	-14628	8895	9912	40441	33370	10149	43519	No	12.69	Si
SLU 80	9.86	-3464.69	-24499	-20400	-3481	3.98	3.98	-18306	9385	10459	40441	33370	10149	43519	No	12.5	Si
SLU 80	11.66	2791.17	-20113	-16749	-3481	3.98	3.98	-15029	8948	9972	40441	33370	10149	43519	No	12.5	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	9.86	-10622.71	-17899	-14904	-14580	3.98	3.98	-13374	13092	14589	40441	50055	10149	55030		3.77	Si
SLV 2	11.66	14267.58	-14512	-12084	-13351	3.98	3.0204	-10843	12585	10644	40441	50055	10149	51085		3.83	Si
SLV 13	9.86	5758.79	-18134	-15101	9163	3.98	3.98	-13550	13127	14628	40441	50055	10149	55069		6.01	Si
SLV 13	11.66	-9841.66	-14765	-12295	8218	3.98	3.9704	-11033	12623	14033	40441	50055	10149	54474		6.63	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 4	9.86	-5962.47	-15978	-13305	-7431	3.98	3.98	-11939	12804	14269	40441	50055	10149	54710		7.36	Si
SLD 4	11.66	7019.8	-12622	-10511	-7028	3.98	3.98	-9432	12303	13710	40441	50055	10149	54151		7.71	Si
SLD 2	9.86	-5950.35	-17189	-14314	-7649	3.98	3.98	-12844	12986	14471	40441	50055	10149	54912		7.18	Si
SLD 2	11.66	7232.54	-13817	-11506	-7123	3.98	3.98	-10325	12482	13909	40441	50055	10149	54350		7.63	Si
SLV 3	9.86	-9743.75	-15175	-12637	-13471	3.98	3.98	-11340	12685	14136	40441	50055	10149	54577		4.05	Si
SLV 3	11.66	13594.14	-11825	-9847	-12525	3.98	2.5212	-8836	12184	8601	40441	50055	10149	49042		3.92	Si
SLV 16	9.86	4815.31	-15336	-12771	9045	3.98	3.98	-11460	12709	14163	40441	50055	10149	54603		6.04	Si
SLV 16	11.66	-10127.65	-12004	-9996	7815	3.98	3.439	-10431	12503	12039	40441	50055	10149	52480		6.72	Si
SLV 1	9.86	-9711.49	-17936	-14935	-13966	3.98	3.98	-13402	13097	14595	40441	50055	10149	55036		3.94	Si
SLV 1	11.66	14073.85	-14549	-12115	-12737	3.98	3.0679	-10871	12591	10816	40441	50055	10149	51257		4.02	Si
SLV 15	9.86	5726.53	-15374	-12802	9659	3.98	3.98	-11488	12714	14169	40441	50055	10149	54610		5.65	Si
SLV 15	11.66	-10321.37	-12042	-10027	8429	3.98	3.3986	-10589	12534	11928	40441	50055	10149	52369		6.21	Si
SLV 14	9.86	4847.57	-18097	-15070	8549	3.98	3.98	-13523	13121	14622	40441	50055	10149	55063		6.44	Si
SLV 14	11.66	-9647.94	-14728	-12264	7604	3.98	3.98	-11005	12618	14061	40441	50055	10149	54502		7.17	Si
SLV 4	9.86	-10654.97	-15138	-12606	-14085	3.98	3.8585	-11731	12763	13789	40441	50055	10149	54230		3.85	Si
SLV 4	11.66	13787.87	-11788	-9816	-13139	3.98	2.461	-8808	12178	8392	40441	50055	10149	48833		3.72	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 8	179667	0.46	9354	-10424	488.14	1370.03	2.81	Si
SLV 7	179667	0.46	9376	-10448	488.14	1372.95	2.81	Si
SLV 12	179667	0.46	9411	-10488	488.14	1377.82	2.82	Si
SLV 11	179667	0.46	9433	-10512	488.14	1380.73	2.83	Si
SLV 4	179667	0.46	12127	-13515	488.14	1741.8	3.57	Si
SLV 3	179667	0.46	12161	-13552	488.14	1746.18	3.58	Si
SLV 16	179667	0.46	12317	-13726	488.14	1766.66	3.62	Si
SLV 15	179667	0.46	12350	-13763	488.14	1771.03	3.63	Si
SLV 2	179667	0.46	14566	-16233	488.14	2055.8	4.21	Si
SLV 1	179667	0.46	14600	-16270	488.14	2060.02	4.22	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-11802	-22668	964	1.444	1766.2	0.919	22.84885	15.29191	Si
SLV 6	-11796	-22656	964	1.445	1765.7	0.919	22.85707	15.29191	Si
SLV 9	-11340	-23380	996	1.486	1720	0.917	23.54588	15.29191	Si
SLV 10	-11334	-23368	996	1.486	1719.5	0.917	23.55463	15.29191	Si
SLV 7	-5061	-13628	-978	2.544	1102.3	0.892	41.45085	15.29191	Si
SLV 8	-5056	-13617	-978	2.546	1101.8	0.892	41.47704	15.29191	Si
SLV 11	-4600	-14340	-946	2.69	1058.6	0.891	43.90259	15.29191	Si
SLV 12	-4594	-14329	-946	2.692	1058.1	0.891	43.93173	15.29191	Si
SLV 1	-9983	-18676	247	1.686	1584.5	0.912	26.8721	8.07112	Si
SLV 2	-9974	-18659	247	1.687	1583.6	0.912	26.88935	8.07112	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	11.252	SLU 44	Si
V_SLU	12.469	SLU 84	Si
PF_SLV	1.667	SLV 4	Si
V_SLV	3.717	SLV 4	Si
PFFP_SLV	2.807	SLV 8	Si
R_SLV	1.494	SLV 5	Si

Maschio 172

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.058	6.526	-5.093	6.526	L6	L7	1.965	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 72	9.86	-2760.66	-11002	-0.0000552	0.0003743	0.0035	1.965	8686.35	10318.01	10318.01	3.74	No	Si
SLU 72	11.66	1683.06	-8486	-0.000038	0.0003743	0.0035	1.965	7074.77	7415.36	7415.36	4.41	No	Si
SLU 46	9.86	-2587.97	-10002	-0.0000505	0.0003743	0.0035	1.965	8072.27	9595.12	9595.12	3.71	No	Si
SLU 46	11.66	1575.17	-7516	-0.0000342	0.0003743	0.0035	1.965	6393.62	6722.84	6722.84	4.27	No	Si
SLU 44	9.86	-2520.33	-9391	-0.000048	0.0003743	0.0035	1.965	7679.81	9143.46	9143.46	3.63	No	Si
SLU 44	11.66	1572.4	-6905	-0.0000324	0.0003743	0.0035	1.965	5947.88	6294.63	6294.63	4	No	Si
SLU 49	9.86	-2648.23	-10301	-0.000052	0.0003743	0.0035	1.965	8259.52	9817.36	9817.36	3.71	No	Si
SLU 49	11.66	1625.67	-7815	-0.0000355	0.0003743	0.0035	1.965	6606.93	6934.52	6934.52	4.27	No	Si
SLU 50	9.86	-2621.89	-9935	-0.0000506	0.0003743	0.0035	1.965	8029.97	9545.32	9545.32	3.64	No	Si
SLU 50	11.66	1648.64	-7449	-0.0000346	0.0003743	0.0035	1.965	6345.5	6675.7	6675.7	4.05	No	Si
SLU 43	9.86	-2501.37	-9337	-0.0000477	0.0003743	0.0035	1.965	7644.68	9104.13	9104.13	3.64	No	Si
SLU 43	11.66	1547.64	-6851	-0.000032	0.0003743	0.0035	1.965	5908.07	6257.27	6257.27	4.04	No	Si
SLU 48	9.86	-2636.86	-10268	-0.0000518	0.0003743	0.0035	1.965	8239.48	9793.6	9793.6	3.71	No	Si
SLU 48	11.66	1610.81	-7782	-0.0000353	0.0003743	0.0035	1.965	6584.08	6911.63	6911.63	4.29	No	Si
SLU 47	9.86	-2580.59	-9690	-0.0000495	0.0003743	0.0035	1.965	7873.46	9363.45	9363.45	3.63	No	Si
SLU 47	11.66	1622.9	-7204	-0.0000337	0.0003743	0.0035	1.965	6167.6	6503.39	6503.39	4.01	No	Si
SLU 45	9.86	-2576.6	-9969	-0.0000503	0.0003743	0.0035	1.965	8051.89	9571.1	9571.1	3.71	No	Si
SLU 45	11.66	1560.31	-7484	-0.0000339	0.0003743	0.0035	1.965	6370.43	6700.1	6700.1	4.29	No	Si
SLU 51	9.86	-2633.27	-9967	-0.0000508	0.0003743	0.0035	1.965	8050.39	9569.32	9569.32	3.63	No	Si
SLU 51	11.66	1663.5	-7481	-0.0000348	0.0003743	0.0035	1.965	6368.72	6698.42	6698.42	4.03	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	9.86	-5513.01	-10437	-0.0000852	0.0005615	0.0035	1.965		10315.23	10315.23	1.87		Si
SLV 1	11.66	5594.41	-8818	-0.0000947	0.0005615	0.0035	1.965		8170.07	8170.07	1.46		Si
SLV 4	9.86	-5151.2	-8216	-0.0000856	0.0005615	0.0035	1.572		8496.96	8496.96	1.65		Si
SLV 4	11.66	5012.71	-6685	-0.0001086	0.0005615	0.0035	1.965		6359.75	6359.75	1.27		Si
SLV 16	9.86	1482.4	-5514	-0.0000272	0.0005615	0.0035	1.965		5333.51	5333.51	3.6		Si
SLV 16	11.66	-3201.89	-3276	-0.0002116	0.0005615	0.0035	1.572		4162.93	4162.93	1.3		Si
SLD 1	9.86	-3515.13	-9036	-0.0000552	0.0005615	0.0035	1.965		9173.4	9173.4	2.61		Si
SLD 1	11.66	3081.83	-7238	-0.0000468	0.0005615	0.0035	1.965		6836.62	6836.62	2.22		Si
SLV 11	9.86	103.42	-4110	-0.0000119	0.0005615	0.0035	1.965		4074.28	4074.28	39.39		Si
SLV 11	11.66	-1495.49	-2222	-0.0000254	0.0005615	0.0035	1.572		3186.58	3186.58	2.13		Si
SLD 2	9.86	-3627.66	-8984	-0.0000563	0.0005615	0.0035	1.965		9130.19	9130.19	2.52		Si
SLD 2	11.66	3187.75	-7186	-0.0000481	0.0005615	0.0035	1.965		6791.94	6791.94	2.13		Si
SLV 2	9.86	-5775.18	-10315	-0.0000909	0.0005615	0.0035	1.572		10219.7	10219.7	1.77		Si
SLV 2	11.66	5841.17	-8697	-0.0001055	0.0005615	0.0035	1.965		8069.53	8069.53	1.38		Si
SLV 3	9.86	-4889.03	-8338	-0.0000776	0.0005615	0.0035	1.572		8596.62	8596.62	1.76		Si
SLV 3	11.66	4765.95	-6807	-0.0000898	0.0005615	0.0035	1.965		6464.96	6464.96	1.36		Si
SLV 15	9.86	1744.57	-5635	-0.0000298	0.0005615	0.0035	1.965		5441.09	5441.09	3.12		Si
SLV 15	11.66	-3448.65	-3397	-0.0002741	0.0005615	0.0035	1.572		4274.14	4274.14	1.24		Si
SLD 4	9.86	-3351.98	-8064	-0.0000514	0.0005615	0.0035	1.965		8372.37	8372.37	2.5		Si
SLD 4	11.66	2822.96	-6303	-0.0000423	0.0005615	0.0035	1.965		6027.84	6027.84	2.14		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	9.86	-2834.79	-11787	-9815	-2489	1.965	1.965	-17839	9323	5130	40441	16476	5011	21487	No	8.63	Si
SLU 80	11.66	1665.63	-9272	-7721	-2489	1.965	1.965	-14033	8815	4850	40441	16476	5011	21487	No	8.63	Si
SLU 79	9.86	-2823.41	-11755	-9789	-2474	1.965	1.965	-17791	9317	5126	40441	16476	5011	21487	No	8.68	Si
SLU 79	11.66	1650.77	-9240	-7694	-2474	1.965	1.965	-13984	8809	4847	40441	16476	5011	21487	No	8.68	Si
SLU 71	9.86	-2749.28	-10969	-9134	-2443	1.965	1.965	-16602	9158	5039	40441	16476	5011	21487	No	8.8	Si
SLU 71	11.66	1668.2	-8454	-7040	-2443	1.965	1.965	-12795	8650	4760	40441	16476	5011	21487	No	8.8	Si
SLU 77	9.86	-2838.37	-12088	-10066	-2461	1.965	1.965	-18295	9384	5163	40441	16476	5011	21487	No	8.73	Si
SLU 77	11.66	1612.94	-9573	-7972	-2461	1.965	1.965	-14489	8876	4884	40441	16476	5011	21487	No	8.73	Si
SLU 69	9.86	-2764.25	-11303	-9412	-2430	1.965	1.965	-17106	9225	5076	40441	16476	5011	21487	No	8.84	Si
SLU 69	11.66	1630.38	-8788	-7318	-2430	1.965	1.965	-13300	8718	4797	40441	16476	5011	21487	No	8.84	Si
SLU 70	9.86	-2775.62	-11335	-9439	-2444	1.965	1.965	-17155	9232	5079	40441	16476	5011	21487	No	8.79	Si
SLU 70	11.66	1645.23	-8820	-7344	-2444	1.965	1.965	-13348	8724	4800	40441	16476	5011	21487	No	8.79	Si
SLU 84	9.86	-2806.3	-11825	-9847	-2441	1.965	1.965	-17897	9331	5134	40441	16476	5011	21487	No	8.8	Si
SLU 84	11.66	1607.66	-9310	-7752	-2441	1.965	1.965	-14090	8823	4855	40441	16476	5011	21487	No	8.8	Si
SLU 72	9.86	-2760.66	-11002	-9161	-2457	1.965	1.965	-16650	9164	5042	40441	16476	5011	21487	No	8.74	Si
SLU 72	11.66	1683.06	-8486	-7067	-2457	1.965	1.965	-12844	8657	4763	40441	16476	5011	21487	No	8.74	Si
SLU 76	9.86	-2782.11	-11510	-9584	-2437	1.965	1.965	-17419	9267	5099	40441	16476	5011	21487	No	8.82	Si
SLU 76	11.66	1625.03	-8994	-7490	-2437	1.965	1.965	-13613	8759	4820	40441	16476	5011	21487	No	8.82	Si
SLU 78	9.86	-2849.75	-12121	-10093	-2476	1.965	1.965	-18344	9390	5167	40441	16476	5011	21487	No	8.68	Si
SLU 78	11.66	1627.8	-9605	-7999	-2476	1.965	1.965	-14537	8883	4887	40441	16476	5011	21487	No	8.68	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 4	9.86	-3351.98	-8064	-6715	-3465	1.965	1.7005	-14199	13257	6312	40441	24714	5011	29724		8.58	Si
SLD 4	11.66	2822.96	-6303	-5249	-3336	1.965	1.604	-9540	12325	5535	40441	24714	5011	29724		8.91	Si
SLV 4	9.86	-5151.2	-8216	-6842	-5738	1.572	1.0667	0	0	0	40441	19771	4009	23779		4.14	Si
SLV 4	11.66	5012.71	-6685	-5567	-5436	1.965	0.6982	-28918	16200	3167	40441	24714	5011	29724		5.47	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	9.86	-5775.18	-10315	-8590	-6601	1.572	1.268	0	0	0	40441	19771	4009	23779		3.6	Si
SLV 2	11.66	5841.17	-8697	-7242	-6287	1.965	0.9325	-13162	13049	3407	40441	24714	5011	29724		4.73	Si
SLV 6	9.86	-4134.04	-11841	-9860	-4580	1.965	1.9001	-18700	14157	7532	40441	24714	5011	29724		6.49	Si
SLV 6	11.66	3888.01	-9871	-8220	-4467	1.965	1.7659	-14940	13405	6628	40441	24714	5011	29724		6.65	Si
SLV 1	9.86	-5513.01	-10437	-8691	-6318	1.965	1.3629	-23036	15025	5733	40441	24714	5011	29724		4.7	Si
SLV 1	11.66	5594.41	-8818	-7343	-6004	1.965	1.0442	-13346	13086	3826	40441	24714	5011	29724		4.95	Si
SLV 5	9.86	-3966.61	-11918	-9924	-4399	1.965	1.9491	-18037	14024	7654	40441	24714	5011	29724		6.76	Si
SLV 5	11.66	3730.42	-9949	-8285	-4286	1.965	1.8227	-15057	13428	6853	40441	24714	5011	29724		6.93	Si
SLV 3	9.86	-4889.03	-8338	-6943	-5455	1.572	1.1884	0	0	0	40441	19771	4009	23779		4.36	Si
SLV 3	11.66	4765.95	-6807	-5668	-5153	1.965	0.847	-10302	12477	2959	40441	24714	5011	29724		5.77	Si
SLV 15	9.86	1744.57	-5635	-4692	3050	1.965	1.965	-8528	12122	6670	40441	24714	5011	29724		9.75	Si
SLV 15	11.66	-3448.65	-3397	-2829	2736	1.572	0	0	0	0	40441	19771	4009	23779		8.69	Si
SLD 1	9.86	-3515.13	-9036	-7525	-3723	1.965	1.7806	-15188	13454	6708	40441	24714	5011	29724		7.98	Si
SLD 1	11.66	3081.83	-7238	-6028	-3589	1.965	1.6703	-10955	12608	5896	40441	24714	5011	29724		8.28	Si
SLD 2	9.86	-3627.66	-8984	-7481	-3845	1.965	1.7362	-15506	13518	6572	40441	24714	5011	29724		7.73	Si
SLD 2	11.66	3187.75	-7186	-5984	-3711	1.965	1.6168	-10876	12592	5700	40441	24714	5011	29724		8.01	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.46	5671	-3120	241.01	420.62	1.75	Si
SLV 11	179667	0.46	5812	-3198	241.01	430.66	1.79	Si
SLV 8	179667	0.46	7318	-4026	241.01	536.67	2.23	Si
SLV 7	179667	0.46	7459	-4104	241.01	546.48	2.27	Si
SLV 16	179667	0.46	8021	-4413	241.01	585.39	2.43	Si
SLV 15	179667	0.46	8241	-4535	241.01	600.58	2.49	Si
SLV 14	179667	0.46	11716	-6446	241.01	833.21	3.46	Si
SLV 13	179667	0.46	11936	-6567	241.01	847.58	3.52	Si
SLV 4	179667	0.46	13510	-7433	241.01	948.58	3.94	Si
SLV 3	179667	0.46	13730	-7555	241.01	962.55	3.99	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-10646	-7777	574	0.89	1358.4	0.943	13.71623	15.29191	No
SLV 5	-10606	-7963	574	0.893	1354.4	0.943	13.76068	15.29191	No
SLV 10	-8272	-9082	565	1.092	1118.2	0.933	17.01778	15.29191	Si
SLV 9	-8232	-9267	565	1.097	1114.1	0.933	17.08698	15.29191	Si
SLV 2	-10907	-4657	185	0.903	1384.9	0.944	13.90524	8.07112	Si
SLV 1	-10844	-4948	185	0.907	1378.6	0.944	13.97447	8.07112	Si
SLV 4	-8747	-3332	-156	1.084	1166.2	0.935	16.84059	8.07112	Si
SLV 3	-8684	-3623	-156	1.09	1159.9	0.935	16.94307	8.07112	Si
SLV 8	-3446	-3361	-566	2.071	635.7	0.9	33.46084	15.29191	Si
SLV 7	-3406	-3547	-566	2.087	631.8	0.899	33.72804	15.29191	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.628	SLU 44	Si
V_SLU	8.634	SLU 80	Si
PF_SLV	1.239	SLV 15	Si
V_SLV	3.603	SLV 2	Si
PFFP_SLV	1.745	SLV 12	Si
R_SLV	0.897	SLV 6	No

Maschio 173

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-20.613	1.006	-24.633	1.006	L6	L7	4.02	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 42	8.96	4325.45	8327	0.0000737	0.0004492	0.0035	3.216	0	192266.08	192266.08	44.45	No	Si
SLU 42	11.06	281.14	16674	0.0006422	0.0004492	0.0035	3.216	0	187536.59	187536.59	667.05	No	Si
SLU 78	8.96	4288.31	7375	0.0000383	0.0004492	0.0035	3.216	0	192056.23	192056.23	44.79	No	Si
SLU 78	11.06	593.58	18610	0.0007003	0.0004492	0.0035	3.216	0	186204.51	186204.51	313.7	No	Si
SLU 77	8.96	4287.62	7377	0.0000384	0.0004492	0.0035	3.216	0	192056.73	192056.73	44.79	No	Si
SLU 77	11.06	571.85	18596	0.000701	0.0004492	0.0035	3.216	0	186215.11	186215.11	325.64	No	Si
SLU 83	8.96	4692.25	8936	0.0000761	0.0004492	0.0035	3.216	0	192400.35	192400.35	41	No	Si
SLU 83	11.06	601.99	19940	0.0007523	0.0004492	0.0035	3.216	0	185186.1	185186.1	307.62	No	Si
SLU 81	8.96	4681.67	9203	0.0000873	0.0004492	0.0035	3.216	0	192459.11	192459.11	41.11	No	Si
SLU 81	11.06	537.02	20092	0.0007621	0.0004492	0.0035	3.216	0	185070.03	185070.03	344.62	No	Si
SLU 41	8.96	4324.77	8329	0.0000739	0.0004492	0.0035	3.216	0	192266.57	192266.57	44.46	No	Si
SLU 41	11.06	259.41	16661	0.000643	0.0004492	0.0035	3.216	0	187546	187546	722.97	No	Si
SLU 39	8.96	4314.18	8596	0.000085	0.0004492	0.0035	3.216	0	192325.34	192325.34	44.58	No	Si
SLU 39	11.06	194.44	16812	0.0006528	0.0004492	0.0035	3.216	0	187442.88	187442.88	964.02	No	Si
SLU 84	8.96	4692.93	8934	0.000076	0.0004492	0.0035	3.216	0	192399.86	192399.86	41	No	Si
SLU 84	11.06	623.73	19954	0.0007516	0.0004492	0.0035	3.216	0	185175.5	185175.5	296.89	No	Si
SLU 40	8.96	4314.87	8594	0.0000849	0.0004492	0.0035	3.216	0	192324.84	192324.84	44.57	No	Si
SLU 40	11.06	216.17	16826	0.000652	0.0004492	0.0035	3.216	0	187433.46	187433.46	867.05	No	Si
SLU 82	8.96	4682.35	9201	0.0000872	0.0004492	0.0035	3.216	0	192458.62	192458.62	41.1	No	Si
SLU 82	11.06	558.75	20105	0.0007614	0.0004492	0.0035	3.216	0	185059.43	185059.43	331.2	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	8.96	2173.75	6495	0.0001283	0.0006738	0.0035	3.216		209297.87	209297.87	96.28		Si
SLV 10	11.06	4309.15	15136	0.0003437	0.0006738	0.0035	3.216		201714.11	201714.11	46.81		Si
SLV 9	8.96	2188.78	6580	0.0001308	0.0006738	0.0035	3.216		209227.09	209227.09	95.59		Si
SLV 9	11.06	4397.77	15252	0.0003431	0.0006738	0.0035	3.216		201608.29	201608.29	45.84		Si
SLV 16	8.96	486.56	-304	-0.0000018	0.0006738	0.0035	4.02		214922.13	214922.13	441.72		Si
SLV 16	11.06	6796.3	7745	-0.0000278	0.0006738	0.0035	4.02		208262.62	208262.62	30.64		Si
SLV 1	8.96	4781.79	10105	0.000117	0.0006738	0.0035	3.216		206280.86	206280.86	43.14		Si
SLV 1	11.06	-5352.5	19403	0.0004515	0.0006738	0.0035	3.216		197932.76	197932.76	36.98		Si
SLV 13	8.96	613.49	1580	0.0000262	0.0006738	0.0035	3.216		213369.94	213369.94	347.8		Si
SLV 13	11.06	7919.52	9767	-0.0000274	0.0006738	0.0035	4.02		206587.58	206587.58	26.09		Si
SLV 2	8.96	4758.26	9971	0.0001132	0.0006738	0.0035	3.216		206402.31	206402.31	43.38		Si
SLV 2	11.06	-5491.27	19220	0.0004361	0.0006738	0.0035	3.216		198098.41	198098.41	36.08		Si
SLV 4	8.96	4654.86	8222	0.0000501	0.0006738	0.0035	3.216		207867.19	207867.19	44.66		Si
SLV 4	11.06	-6475.73	17381	0.0003052	0.0006738	0.0035	3.216		199767.83	199767.83	30.85		Si
SLV 14	8.96	589.96	1446	0.0000223	0.0006738	0.0035	3.216		213480.77	213480.77	361.86		Si
SLV 14	11.06	7780.75	9584	-0.000027	0.0006738	0.0035	4.02		206738.79	206738.79	26.57		Si
SLV 15	8.96	510.09	-170	-0.0000026	0.0006738	0.0035	4.02		214819.26	214819.26	421.14		Si
SLV 15	11.06	6935.07	7927	-0.0000282	0.0006738	0.0035	4.02		208111.41	208111.41	30.01		Si
SLV 3	8.96	4678.38	8356	0.000054	0.0006738	0.0035	3.216		207756.37	207756.37	44.41		Si
SLV 3	11.06	-6336.96	17564	0.0003206	0.0006738	0.0035	3.216		199602.17	199602.17	31.5		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 72	8.96	3310.09	5444	3883	-4531	3.216	4.02	0	0	0	79749	32361	16402	48763	No	10.76	Si
SLU 72	11.06	1142.18	17064	12173	-4529	3.216	4.02	0	0	0	79749	32361	16402	48763	No	10.77	Si
SLU 45	8.96	2510.26	3824	2728	-4908	3.216	4.02	0	0	0	79749	32361	16402	48763	No	9.94	Si
SLU 45	11.06	1054.86	15364	10960	-4906	3.216	4.02	0	0	0	79749	32361	16402	48763	No	9.94	Si
SLU 48	8.96	2520.84	3558	2538	-5044	4.02	3.9043	153084	8481	9271	79749	40451	20502	60953	No	12.09	Si
SLU 48	11.06	1119.83	15213	10852	-5042	3.216	4.02	0	0	0	79749	32361	16402	48763	No	9.67	Si
SLU 43	8.96	2496.86	4417	3151	-4926	3.216	4.02	0	0	0	79749	32361	16402	48763	No	9.9	Si
SLU 43	11.06	1221.05	15887	11333	-4924	3.216	4.02	0	0	0	79749	32361	16402	48763	No	9.9	Si
SLU 46	8.96	2510.94	3822	2727	-4933	3.216	4.02	0	0	0	79749	32361	16402	48763	No	9.88	Si
SLU 46	11.06	1076.59	15378	10970	-4931	3.216	4.02	0	0	0	79749	32361	16402	48763	No	9.89	Si
SLU 51	8.96	2518.71	3881	2769	-5224	3.216	4.02	0	0	0	79749	32361	16402	48763	No	9.34	Si
SLU 51	11.06	1372.72	15597	11127	-5222	3.216	4.02	0	0	0	79749	32361	16402	48763	No	9.34	Si
SLU 49	8.96	2521.53	3555	2536	-5069	4.02	3.9024	151326	8482	9268	79749	40451	20502	60953	No	12.02	Si
SLU 49	11.06	1141.56	15226	10862	-5067	3.216	4.02	0	0	0	79749	32361	16402	48763	No	9.62	Si
SLU 50	8.96	2518.02	3883	2770	-5198	3.216	4.02	0	0	0	79749	32361	16402	48763	No	9.38	Si
SLU 50	11.06	1350.99	15583	11117	-5196	3.216	4.02	0	0	0	79749	32361	16402	48763	No	9.38	Si
SLU 44	8.96	2498	4413	3148	-4968	3.216	4.02	0	0	0	79749	32361	16402	48763	No	9.81	Si
SLU 44	11.06	1257.27	15910	11350	-4967	3.216	4.02	0	0	0	79749	32361	16402	48763	No	9.82	Si
SLU 47	8.96	2508.58	4146	2958	-5104	3.216	4.02	0	0	0	79749	32361	16402	48763	No	9.55	Si
SLU 47	11.06	1322.24	15758	11241	-5103	3.216	4.02	0	0	0	79749	32361	16402	48763	No	9.56	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 15	8.96	1727.01	2727	1946	-5041	3.216	4.02	0	0	0	79749	48542	16402	64943		12.88	Si
SLD 15	11.06	3376.74	11155	7957	-4146	3.216	4.02	0	0	0	79749	48542	16402	64943		15.66	Si
SLV 16	8.96	486.56	-304	-217	-7483	4.02	1.2236	-454	12596	4315	79749	60677	20502	81179		10.85	Si
SLV 16	11.06	6796.3	7745	5525	-5402	4.02	3.3974	124008	13935	13256	79749	60677	20502	81179		15.03	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 13	8.96	1768.37	3485	2486	-5485	3.216	4.02	0	0	0	79749	48542	16402	64943		11.84	Si
SLD 13	11.06	3808.33	11954	8528	-4638	3.216	4.02	0	0	0	79749	48542	16402	64943		14	Si
SLV 9	8.96	2188.78	6580	4694	-6325	3.216	4.02	0	0	0	79749	48542	16402	64943		10.27	Si
SLV 9	11.06	4397.77	15252	10881	-5897	3.216	4.02	0	0	0	79749	48542	16402	64943		11.01	Si
SLV 15	8.96	510.09	-170	-121	-7585	4.02	0	-461	12637	0	79749	60677	20502	79749		10.51	Si
SLV 15	11.06	6935.07	7927	5655	-5503	4.02	3.4055	127804	13956	13308	79749	60677	20502	81179		14.75	Si
SLD 14	8.96	1758.27	3428	2445	-5441	3.216	4.02	0	0	0	79749	48542	16402	64943		11.93	Si
SLD 14	11.06	3748.76	11876	8472	-4594	3.216	4.02	0	0	0	79749	48542	16402	64943		14.14	Si
SLD 16	8.96	1716.91	2670	1905	-4998	3.216	4.02	0	0	0	79749	48542	16402	64943		13	Si
SLD 16	11.06	3317.18	11076	7901	-4103	3.216	4.02	0	0	0	79749	48542	16402	64943		15.83	Si
SLV 14	8.96	589.96	1446	1031	-8493	3.216	4.02	0	0	0	79749	48542	16402	64943		7.65	Si
SLV 14	11.06	7780.75	9584	6837	-6520	4.02	3.5945	188770	13899	13988	79749	60677	20502	81179		12.45	Si
SLV 10	8.96	2173.75	6495	4633	-6260	3.216	4.02	0	0	0	79749	48542	16402	64943		10.37	Si
SLV 10	11.06	4309.15	15136	10798	-5833	3.216	4.02	0	0	0	79749	48542	16402	64943		11.13	Si
SLV 13	8.96	613.49	1580	1127	-8594	3.216	4.02	0	0	0	79749	48542	16402	64943		7.56	Si
SLV 13	11.06	7919.52	9767	6967	-6622	4.02	3.5974	193085	13919	14020	79749	60677	20502	81179		12.26	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.72 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 1	18698	0.46	504.51	0	28840.4	14420.2	28.58	Si
SLV 2	18515	0.46	504.51	0	28857.03	14428.51	28.6	Si
SLV 5	17438	0.46	504.51	0	28955.23	14477.61	28.7	Si
SLV 6	17321	0.46	504.51	0	28965.85	14482.92	28.71	Si
SLV 3	16855	0.46	504.51	0	29008.32	14504.16	28.75	Si
SLV 4	16673	0.46	504.51	0	29024.95	14512.48	28.77	Si
SLV 9	14543	0.46	504.51	0	29219	14609.5	28.96	Si
SLV 10	14427	0.46	504.51	0	29229.62	14614.81	28.97	Si
SLV 7	11295	0.46	504.51	0	29497.77	14748.89	29.23	Si
SLV 8	11179	0.46	504.51	0	29507.64	14753.82	29.24	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	31484	9138	-1023	1.691	727	1	24.57501	15.29191	Si, Trazione
SLV 6	31388	9053	-1023	1.698	727	1	24.67627	15.29191	Si, Trazione
SLV 7	27732	3307	1036	2.012	727	1	29.24283	15.29191	Si, Trazione
SLV 8	27636	3221	1036	2.022	727	1	29.38447	15.29191	Si, Trazione
SLV 9	24903	6580	-1007	2.348	727	1	34.13045	15.29191	Si, Trazione
SLV 10	24807	6495	-1007	2.362	727	1	34.32105	15.29191	Si, Trazione
SLV 1	37875	10105	-321	1.369	727	1	19.88893	8.07112	Si, Trazione
SLV 2	37726	9971	-321	1.376	727	1	19.99174	8.07112	Si, Trazione
SLV 3	36750	8356	296	1.425	727	1	20.71314	8.07112	Si, Trazione
SLV 4	36600	8222	296	1.433	727	1	20.82417	8.07112	Si, Trazione

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	40.998	SLU 84	Si
V_SLU	9.335	SLU 51	Si
PF_SLV	26.086	SLV 13	Si
V_SLV	7.557	SLV 13	Si
PFFP_SLV	28.583	SLV 1	Si
R_SLV	1.607	SLV 5	Si

Maschio 174

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-12.263	1.006	-19.813	1.006	L6	L7	7.55	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 53	8.96	-5410.98	-49081	-0.0000355	0.0004492	0.0035	7.55	150074.41	197364.66	197364.66	36.47	No	Si
SLU 53	11.46	-18958.85	-39355	-0.0000362	0.0004492	0.0035	7.55	125931.1	167873.84	167873.84	8.85	No	Si
SLU 82	8.96	-6421.66	-50742	-0.0000372	0.0004492	0.0035	7.55	153922.67	202193.95	202193.95	31.49	No	Si
SLU 82	11.46	-19981.37	-42065	-0.0000386	0.0004492	0.0035	7.55	132936.11	176229.49	176229.49	8.82	No	Si
SLU 61	8.96	-5359.2	-47297	-0.0000343	0.0004492	0.0035	7.55	145854.45	192181.58	192181.58	35.86	No	Si
SLU 61	11.46	-18957.9	-38104	-0.0000353	0.0004492	0.0035	7.55	122623.08	164014.43	164014.43	8.65	No	Si
SLU 54	8.96	-5496.23	-49113	-0.0000356	0.0004492	0.0035	7.55	150150.96	197459.76	197459.76	35.93	No	Si
SLU 54	11.46	-19041.33	-39396	-0.0000362	0.0004492	0.0035	7.55	126038.09	167999.56	167999.56	8.82	No	Si
SLU 62	8.96	-5090.83	-48132	-0.0000347	0.0004492	0.0035	7.55	147841.87	194608.38	194608.38	38.23	No	Si
SLU 62	11.46	-18935.53	-38863	-0.0000358	0.0004492	0.0035	7.55	124634.02	166354.18	166354.18	8.79	No	Si
SLU 63	8.96	-5176.08	-48165	-0.0000347	0.0004492	0.0035	7.55	147919.33	194703.48	194703.48	37.62	No	Si
SLU 63	11.46	-19018.01	-38903	-0.0000359	0.0004492	0.0035	7.55	124741.59	166479.9	166479.9	8.75	No	Si
SLU 52	8.96	-5211.09	-46364	-0.0000335	0.0004492	0.0035	7.55	143609.46	189469.71	189469.71	36.36	No	Si
SLU 52	11.46	-18201.3	-36620	-0.0000339	0.0004492	0.0035	7.55	118643.11	159440.25	159440.25	8.76	No	Si
SLU 81	8.96	-6336.41	-50709	-0.0000371	0.0004492	0.0035	7.55	153847.67	202098.85	202098.85	31.89	No	Si
SLU 81	11.46	-19898.89	-42025	-0.0000385	0.0004492	0.0035	7.55	132832.3	176103.78	176103.78	8.85	No	Si
SLU 55	8.96	-5027.97	-47232	-0.0000034	0.0004492	0.0035	7.55	145698.01	191991.61	191991.61	38.18	No	Si
SLU 55	11.46	-18261.4	-37420	-0.0000344	0.0004492	0.0035	7.55	120796.29	161905.72	161905.72	8.87	No	Si
SLU 60	8.96	-5273.94	-47265	-0.0000342	0.0004492	0.0035	7.55	145776.16	192086.49	192086.49	36.42	No	Si
SLU 60	11.46	-18875.43	-38063	-0.0000352	0.0004492	0.0035	7.55	122514.55	163888.71	163888.71	8.68	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	8.96	-14702.05	-33247	-0.0000294	0.0006738	0.0035	7.55		150859.18	150859.18	10.26		Si
SLV 15	11.46	21651.38	-20720	-0.0000247	0.0006738	0.0035	7.55		80505.42	80505.42	3.72		Si
SLV 3	8.96	12861.82	-38589	-0.000032	0.0006738	0.0035	7.55		141096.81	141096.81	10.97		Si
SLV 3	11.46	-42682.81	-34445	-0.000045	0.0006738	0.0035	7.55		154858.98	154858.98	3.63		Si
SLD 1	8.96	44.54	-37741	-0.0000247	0.0006738	0.0035	7.55		138295.72	138295.72	3105.3		Si
SLD 1	11.46	-28726.32	-31910	-0.0000359	0.0006738	0.0035	7.55		146392.47	146392.47	5.1		Si
SLV 5	8.96	-11899.4	-38688	-0.0000316	0.0006738	0.0035	7.55		169024.28	169024.28	14.2		Si
SLV 5	11.46	-33772.89	-33766	-0.0000398	0.0006738	0.0035	7.55		152591.24	152591.24	4.52		Si
SLV 16	8.96	-14361.34	-33392	-0.0000293	0.0006738	0.0035	7.55		151342.1	151342.1	10.54		Si
SLV 16	11.46	21899.79	-20840	-0.0000249	0.0006738	0.0035	7.55		80927.03	80927.03	3.7		Si
SLV 6	8.96	-11681.81	-38780	-0.0000315	0.0006738	0.0035	7.55		169332.69	169332.69	14.5		Si
SLV 6	11.46	-33614.24	-33843	-0.0000398	0.0006738	0.0035	7.55		152846.95	152846.95	4.55		Si
SLV 1	8.96	5857.78	-39485	-0.0000289	0.0006738	0.0035	7.55		144058.47	144058.47	24.59		Si
SLV 1	11.46	-48983.7	-36339	-0.0000498	0.0006738	0.0035	7.55		161181.54	161181.54	3.29		Si
SLD 2	8.96	190.78	-37803	-0.0000248	0.0006738	0.0035	7.55		138500.81	138500.81	725.96		Si
SLD 2	11.46	-28619.69	-31961	-0.0000359	0.0006738	0.0035	7.55		146564.34	146564.34	5.12		Si
SLV 2	8.96	6198.49	-39630	-0.0000292	0.0006738	0.0035	7.55		144536.26	144536.26	23.32		Si
SLV 2	11.46	-48735.29	-36459	-0.0000497	0.0006738	0.0035	7.55		161581.95	161581.95	3.32		Si
SLV 4	8.96	13202.53	-38733	-0.0000323	0.0006738	0.0035	7.55		141574.6	141574.6	10.72		Si
SLV 4	11.46	-42434.4	-34565	-0.000045	0.0006738	0.0035	7.55		155259.38	155259.38	3.66		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	8.96	-6473.44	-52525	-37470	12277	7.55	7.55	-17725	10697	22613	115546	75972	38505	114477	No	9.32	Si
SLU 74	11.46	-19982.31	-43317	-30901	9480	7.55	7.55	-14617	10282	21737	115546	75972	38505	114477	No	12.08	Si
SLU 73	8.96	-6273.56	-49809	-35533	11997	7.55	7.55	-16808	10574	22354	115546	75972	38505	114477	No	9.54	Si
SLU 73	11.46	-19224.76	-40582	-28950	9218	7.55	7.55	-13694	10159	21477	115546	75972	38505	114477	No	12.42	Si
SLU 84	8.96	-6238.55	-51610	-36817	13047	7.55	7.55	-17416	10655	22526	115546	75972	38505	114477	No	8.77	Si
SLU 84	11.46	-20041.48	-42865	-30579	10107	7.55	7.55	-14465	10262	21694	115546	75972	38505	114477	No	11.33	Si
SLU 82	8.96	-6421.66	-50742	-36198	13093	7.55	7.55	-17123	10616	22443	115546	75972	38505	114477	No	8.74	Si
SLU 82	11.46	-19981.37	-42065	-30008	10157	7.55	7.55	-14195	10226	21618	115546	75972	38505	114477	No	11.27	Si
SLU 76	8.96	-6090.44	-50677	-36152	11952	7.55	7.55	-17101	10613	22437	115546	75972	38505	114477	No	9.58	Si
SLU 76	11.46	-19284.87	-41381	-29520	9168	7.55	7.55	-13964	10195	21553	115546	75972	38505	114477	No	12.49	Si
SLU 81	8.96	-6336.41	-50709	-36175	13086	7.55	7.55	-17112	10615	22440	115546	75972	38505	114477	No	8.75	Si
SLU 81	11.46	-19898.89	-42025	-29979	10146	7.55	7.55	-14181	10224	21614	115546	75972	38505	114477	No	11.28	Si
SLU 77	8.96	-6290.33	-53393	-38089	12232	7.55	7.55	-18018	10736	22695	115546	75972	38505	114477	No	9.36	Si
SLU 77	11.46	-20042.42	-44116	-31472	9429	7.55	7.55	-14887	10318	21813	115546	75972	38505	114477	No	12.14	Si
SLU 83	8.96	-6153.29	-51577	-36794	13040	7.55	7.55	-17405	10654	22523	115546	75972	38505	114477	No	8.78	Si
SLU 83	11.46	-19959	-42824	-30550	10096	7.55	7.55	-14451	10260	21690	115546	75972	38505	114477	No	11.34	Si
SLU 75	8.96	-6558.7	-52558	-37494	12284	7.55	7.55	-17736	10698	22616	115546	75972	38505	114477	No	9.32	Si
SLU 75	11.46	-20064.79	-43358	-30930	9490	7.55	7.55	-14631	10284	21741	115546	75972	38505	114477	No	12.06	Si
SLU 78	8.96	-6375.58	-53426	-38113	12238	7.55	7.55	-18029	10737	22698	115546	75972	38505	114477	No	9.35	Si
SLU 78	11.46	-20124.9	-44157	-31501	9440	7.55	7.55	-14901	10320	21817	115546	75972	38505	114477	No	12.13	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	8.96	6198.49	-39630	-28271	32880	7.55	7.55	-13373	15175	32079	115546	113958	38505	147625		4.49	Si
SLV 2	11.46	-48735.29	-36459	-26009	26384	7.55	7.3148	-12770	15054	30833	115546	113958	38505	146379		5.55	Si
SLV 3	8.96	12861.82	-38589	-27528	31557	7.55	7.55	-13022	15104	31931	115546	113958	38505	147476		4.67	Si
SLV 3	11.46	-42682.81	-34445	-24572	24707	7.55	7.55	-11624	14825	31339	115546	113958	38505	146885		5.95	Si
SLV 15	8.96	-14702.05	-33247	-23718	-17538	7.55	7.55	-11219	14744	31169	115546	113958	38505	146714		8.37	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	11.46	21651.38	-20720	-14781	-14853	7.55	7.55	-6992	13898	29381	115546	113958	38505	144927		9.76	Si
SLV 4	8.96	13202.53	-38733	-27631	31530	7.55	7.55	-13071	15114	31951	115546	113958	38505	147497		4.68	Si
SLV 4	11.46	-42434.4	-34565	-24658	24661	7.55	7.55	-11664	14833	31357	115546	113958	38505	146902		5.96	Si
SLD 2	8.96	190.78	-37803	-26967	18463	7.55	7.55	-12757	15051	31818	115546	113958	38505	147364		7.98	Si
SLD 2	11.46	-28619.69	-31961	-22800	14600	7.55	7.55	-10785	14657	30985	115546	113958	38505	146531		10.04	Si
SLD 4	8.96	3268.31	-37406	-26685	17873	7.55	7.55	-12623	15025	31762	115546	113958	38505	147308		8.24	Si
SLD 4	11.46	-25853.86	-31128	-22206	13844	7.55	7.55	-10504	14601	30866	115546	113958	38505	146412		10.58	Si
SLD 1	8.96	44.54	-37741	-26923	18474	7.55	7.55	-12736	15047	31810	115546	113958	38505	147355		7.98	Si
SLD 1	11.46	-28726.32	-31910	-22763	14619	7.55	7.55	-10768	14654	30978	115546	113958	38505	146523		10.02	Si
SLV 16	8.96	-14361.34	-33392	-23821	-17565	7.55	7.55	-11268	14754	31189	115546	113958	38505	146735		8.35	Si
SLV 16	11.46	21899.79	-20840	-14867	-14898	7.55	7.55	-7033	13907	29398	115546	113958	38505	144944		9.73	Si
SLD 3	8.96	3122.06	-37344	-26641	17885	7.55	7.55	-12602	15020	31753	115546	113958	38505	147299		8.24	Si
SLD 3	11.46	-25960.49	-31076	-22169	13864	7.55	7.55	-10487	14597	30859	115546	113958	38505	146404		10.56	Si
SLV 1	8.96	5857.78	-39485	-28168	32907	7.55	7.55	-13324	15165	32059	115546	113958	38505	147604		4.49	Si
SLV 1	11.46	-48983.7	-36339	-25923	26430	7.55	7.2811	-12787	15057	30698	115546	113958	38505	146243		5.53	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.72 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 15	-24881	0.46	947.52	3259.67	4791.5	4025.58	4.25	Si
SLV 16	-25023	0.46	947.52	3276.94	4813.13	4045.03	4.27	Si
SLV 13	-25992	0.46	947.52	3394.75	4960.85	4177.8	4.41	Si
SLV 14	-26134	0.46	947.52	3411.92	4982.44	4197.18	4.43	Si
SLV 11	-26418	0.46	947.52	3446.34	5025.82	4236.08	4.47	Si
SLV 12	-26508	0.46	947.52	3457.28	5039.62	4248.45	4.48	Si
SLV 7	-28824	0.46	947.52	3735.18	5390.33	4562.76	4.82	Si
SLV 8	-28915	0.46	947.52	3745.96	5404.02	4574.99	4.83	Si
SLV 9	-30121	0.46	947.52	3889.06	5586.37	4737.72	5	Si
SLV 10	-30211	0.46	947.52	3899.75	5600.03	4749.89	5.01	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-28957	-35792	1306	1.2	4011.2	0.929	18.7709	15.29191	Si
SLV 7	-28832	-35699	1306	1.204	3998.6	0.929	18.83839	15.29191	Si
SLV 12	-27088	-34189	1396	1.262	3822.8	0.926	19.79215	15.29191	Si
SLV 11	-26962	-34097	1396	1.266	3810.2	0.926	19.86746	15.29191	Si
SLV 6	-26140	-38780	-1409	1.296	3727.4	0.925	20.37124	15.29191	Si
SLV 5	-26015	-38688	-1409	1.301	3714.8	0.925	20.45127	15.29191	Si
SLV 10	-24270	-37178	-1319	1.375	3539.4	0.922	21.6806	15.29191	Si
SLV 9	-24145	-37085	-1319	1.381	3526.9	0.922	21.77115	15.29191	Si
SLV 4	-30188	-38733	250	1.19	4135.4	0.931	18.57872	8.07112	Si
SLV 3	-29992	-38589	251	1.196	4115.6	0.931	18.67993	8.07112	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.652	SLU 61	Si
V_SLU	8.744	SLU 82	Si
PF_SLV	3.291	SLV 1	Si
V_SLV	4.485	SLV 1	Si
PFFP_SLV	4.249	SLV 15	Si
R_SLV	1.228	SLV 8	Si

Maschio 176

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.463	1.006	-9.398	1.006	L6	L7	1.935	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 61	8.96	-2198.55	-15150	-0.0000581	0.0004492	0.0035	1.9353	11305.7	14736.77	14736.77	6.7	No	Si
SLU 61	11.46	2515.79	-12226	-0.0000526	0.0004492	0.0035	1.9353	9646.16	10867.97	10867.97	4.32	No	Si
SLU 81	8.96	-2441.47	-16294	-0.0000635	0.0004492	0.0035	1.9353	11886.83	15544.98	15544.98	6.37	No	Si
SLU 81	11.46	2711.6	-13388	-0.0000575	0.0004492	0.0035	1.9353	10335.35	11674.53	11674.53	4.31	No	Si
SLU 19	8.96	-1933.33	-12250	-0.0000478	0.0004492	0.0035	1.9353	9660.71	12584.63	12584.63	6.51	No	Si
SLU 19	11.46	2127.53	-10092	-0.0000435	0.0004492	0.0035	1.9353	8277.11	9252.43	9252.43	4.35	No	Si
SLU 60	8.96	-2198.78	-15136	-0.0000581	0.0004492	0.0035	1.9353	11298.36	14726.89	14726.89	6.7	No	Si
SLU 60	11.46	2512.43	-12213	-0.0000525	0.0004492	0.0035	1.9353	9638.35	10859.09	10859.09	4.32	No	Si
SLU 82	8.96	-2441.25	-16308	-0.0000635	0.0004492	0.0035	1.9353	11893.7	15554.86	15554.86	6.37	No	Si
SLU 82	11.46	2714.96	-13401	-0.0000576	0.0004492	0.0035	1.9353	10342.72	11683.41	11683.41	4.3	No	Si
SLU 62	8.96	-2194.02	-15468	-0.000059	0.0004492	0.0035	1.9353	11471.01	14961.34	14961.34	6.82	No	Si
SLU 62	11.46	2529.13	-12520	-0.0000535	0.0004492	0.0035	1.9353	9824.43	11072.23	11072.23	4.38	No	Si
SLU 63	8.96	-2193.79	-15482	-0.000059	0.0004492	0.0035	1.9353	11478.21	14971.22	14971.22	6.82	No	Si
SLU 63	11.46	2532.48	-12533	-0.0000536	0.0004492	0.0035	1.9353	9832.12	11081.12	11081.12	4.38	No	Si
SLU 18	8.96	-1933.55	-12236	-0.0000477	0.0004492	0.0035	1.9353	9652.18	12574.12	12574.12	6.5	No	Si
SLU 18	11.46	2124.17	-10079	-0.0000434	0.0004492	0.0035	1.9353	8268.5	9242.08	9242.08	4.35	No	Si
SLU 83	8.96	-2436.71	-16626	-0.0000644	0.0004492	0.0035	1.9353	12048.25	15779.42	15779.42	6.48	No	Si
SLU 83	11.46	2728.3	-13695	-0.0000585	0.0004492	0.0035	1.9353	10510.89	11887.67	11887.67	4.36	No	Si
SLU 84	8.96	-2436.49	-16640	-0.0000644	0.0004492	0.0035	1.9353	12054.99	15789.31	15789.31	6.48	No	Si
SLU 84	11.46	2731.65	-13708	-0.0000586	0.0004492	0.0035	1.9353	10518.15	11896.56	11896.56	4.36	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	8.96	4908.05	-11907	-0.0000722	0.0006738	0.0035	1.9353		10965.15	10965.15	2.23		Si
SLV 2	11.46	-3342.93	-6885	-0.0000474	0.0006738	0.0035	1.9353		8369.21	8369.21	2.5		Si
SLV 15	8.96	-7678.47	-11233	-0.0001375	0.0006738	0.0035	1.5482		12044.93	12044.93	1.57		Si
SLV 15	11.46	6741.33	-11348	-0.0001042	0.0006738	0.0035	1.9353		10502.91	10502.91	1.56		Si
SLD 13	8.96	-4199.82	-11682	-0.0000644	0.0006738	0.0035	1.9353		12412.29	12412.29	2.96		Si
SLD 13	11.46	4009.23	-10335	-0.0000596	0.0006738	0.0035	1.9353		9659.63	9659.63	2.41		Si
SLV 14	8.96	-7975.38	-11800	-0.000141	0.0006738	0.0035	1.5482		12508.86	12508.86	1.57		Si
SLV 14	11.46	7105.66	-11950	-0.0001103	0.0006738	0.0035	1.9353		11000.86	11000.86	1.55		Si
SLV 4	8.96	5190.92	-11311	-0.000075	0.0006738	0.0035	1.9353		10472.52	10472.52	2.02		Si
SLV 4	11.46	-3697.93	-6271	-0.0000552	0.0006738	0.0035	1.5482		7842.02	7842.02	2.12		Si
SLV 3	8.96	5204.95	-11340	-0.0000752	0.0006738	0.0035	1.9353		10496.89	10496.89	2.02		Si
SLV 3	11.46	-3707.25	-6282	-0.0000554	0.0006738	0.0035	1.5482		7851.57	7851.57	2.12		Si
SLV 1	8.96	4922.07	-11937	-0.0000724	0.0006738	0.0035	1.9353		10989.52	10989.52	2.23		Si
SLV 1	11.46	-3352.25	-6896	-0.0000475	0.0006738	0.0035	1.9353		8378.77	8378.77	2.5		Si
SLD 14	8.96	-4205.84	-11669	-0.0000644	0.0006738	0.0035	1.9353		12401.92	12401.92	2.95		Si
SLD 14	11.46	4013.24	-10330	-0.0000596	0.0006738	0.0035	1.9353		9655.61	9655.61	2.41		Si
SLV 16	8.96	-7692.5	-11204	-0.0001386	0.0006738	0.0035	1.5482		12020.79	12020.79	1.56		Si
SLV 16	11.46	6750.66	-11336	-0.0001045	0.0006738	0.0035	1.9353		10493.72	10493.72	1.55		Si
SLV 13	8.96	-7961.35	-11830	-0.0001399	0.0006738	0.0035	1.5482		12533.01	12533.01	1.57		Si
SLV 13	11.46	7096.33	-11961	-0.00011	0.0006738	0.0035	1.9353		11010.05	11010.05	1.55		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	8.96	-2436.71	-16626	-11860	-2447	1.9353	1.9353	-21887	10833	5870	115546	19474	9870	29344	No	11.99	Si
SLU 83	11.46	2728.3	-13695	-9770	-295	1.9353	1.9353	-18029	10737	5818	115546	19474	9870	29344	No	99.46	Si
SLU 73	8.96	-2209.47	-15943	-11374	-2221	1.9353	1.9353	-20989	10833	5870	115546	19474	9870	29344	No	13.21	Si
SLU 73	11.46	2536.49	-12922	-9218	-262	1.9353	1.9353	-17012	10602	5745	115546	19474	9870	29344	No	112.1	Si
SLU 75	8.96	-2273.2	-16775	-11967	-2278	1.9353	1.9353	-22083	10833	5870	115546	19474	9870	29344	No	12.88	Si
SLU 75	11.46	2627.03	-13732	-9796	-292	1.9353	1.9353	-18078	10744	5822	115546	19474	9870	29344	No	100.53	Si
SLU 74	8.96	-2273.42	-16761	-11957	-2277	1.9353	1.9353	-22065	10833	5870	115546	19474	9870	29344	No	12.89	Si
SLU 74	11.46	2623.67	-13719	-9787	-291	1.9353	1.9353	-18061	10741	5821	115546	19474	9870	29344	No	101	Si
SLU 81	8.96	-2441.47	-16294	-11624	-2452	1.9353	1.9353	-21450	10833	5870	115546	19474	9870	29344	No	11.97	Si
SLU 81	11.46	2711.6	-13388	-9551	-299	1.9353	1.9353	-17625	10683	5789	115546	19474	9870	29344	No	98.1	Si
SLU 82	8.96	-2441.25	-16308	-11634	-2452	1.9353	1.9353	-21469	10833	5870	115546	19474	9870	29344	No	11.97	Si
SLU 82	11.46	2714.96	-13401	-9560	-300	1.9353	1.9353	-17641	10686	5790	115546	19474	9870	29344	No	97.66	Si
SLU 78	8.96	-2268.44	-17106	-12203	-2273	1.9353	1.9353	-22520	10833	5870	115546	19474	9870	29344	No	12.91	Si
SLU 78	11.46	2643.72	-14039	-10015	-288	1.9353	1.9353	-18482	10798	5851	115546	19474	9870	29344	No	101.96	Si
SLU 84	8.96	-2436.49	-16640	-11870	-2447	1.9353	1.9353	-21906	10833	5870	115546	19474	9870	29344	No	11.99	Si
SLU 84	11.46	2731.65	-13708	-9779	-296	1.9353	1.9353	-18046	10739	5820	115546	19474	9870	29344	No	99	Si
SLU 77	8.96	-2268.66	-17092	-12193	-2272	1.9353	1.9353	-22501	10833	5870	115546	19474	9870	29344	No	12.91	Si
SLU 77	11.46	2640.37	-14026	-10006	-286	1.9353	1.9353	-18465	10795	5850	115546	19474	9870	29344	No	102.44	Si
SLU 76	8.96	-2204.71	-16275	-11610	-2216	1.9353	1.9353	-21426	10833	5870	115546	19474	9870	29344	No	13.24	Si
SLU 76	11.46	2553.18	-13229	-9437	-258	1.9353	1.9353	-17416	10655	5774	115546	19474	9870	29344	No	113.87	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	8.96	-7961.35	-11830	-8439	-7776	1.5482	0.884	0	0	0	115546	23369	7896	31265		4.02	Si
SLV 13	11.46	7096.33	-11961	-8533	-4206	1.9353	1.1232	-15747	15649	4921	115546	29211	9870	39081		9.29	Si
SLD 14	8.96	-4205.84	-11669	-8325	-4131	1.9353	1.8217	-16436	15787	8053	115546	29211	9870	39081		9.46	Si
SLD 14	11.46	4013.24	-10330	-7369	-1898	1.9353	1.7375	-13600	15220	7404	115546	29211	9870	39081		20.59	Si
SLD 13	8.96	-4199.82	-11682	-8334	-4123	1.9353	1.8244	-16430	15786	8064	115546	29211	9870	39081		9.48	Si
SLD 13	11.46	4009.23	-10335	-7373	-1898	1.9353	1.7392	-13606	15221	7412	115546	29211	9870	39081		20.59	Si
SLV 15	8.96	-7678.47	-11233	-8014	-7394	1.5482	0.8523	0	0	0	115546	23369	7896	31265		4.23	Si
SLV 15	11.46	6741.33	-11348	-8095	-3982	1.9353	1.1207	-14939	15488	4860	115546	29211	9870	39081		9.81	Si
SLV 4	8.96	5190.92	-11311	-8069	4995	1.9353	1.5261	-14890	15478	6614	115546	29211	9870	39081		7.82	Si
SLV 4	11.46	-3697.93	-6271	-4474	3865	1.5482	1.134	0	0	0	115546	23369	7896	31265		8.09	Si
SLV 1	8.96	4922.07	-11937	-8515	4632	1.9353	1.6659	-15714	15643	7297	115546	29211	9870	39081		8.44	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	11.46	-3352.25	-6896	-4920	3641	1.9353	1.4447	-12224	14945	6045	115546	29211	9870	39081		10.73	Si
SLV 2	8.96	4908.05	-11907	-8494	4614	1.9353	1.6664	-15675	15635	7295	115546	29211	9870	39081		8.47	Si
SLV 2	11.46	-3342.93	-6885	-4912	3640	1.9353	1.4464	-12190	14938	6050	115546	29211	9870	39081		10.74	Si
SLV 14	8.96	-7975.38	-11800	-8418	-7794	1.5482	0.8753	0	0	0	115546	23369	7896	31265		4.01	Si
SLV 14	11.46	7105.66	-11950	-8525	-4207	1.9353	1.1192	-15732	15646	4903	115546	29211	9870	39081		9.29	Si
SLV 3	8.96	5204.95	-11340	-8090	5013	1.9353	1.526	-14929	15486	6617	115546	29211	9870	39081		7.8	Si
SLV 3	11.46	-3707.25	-6282	-4482	3865	1.5482	1.1326	0	0	0	115546	23369	7896	31265		8.09	Si
SLV 16	8.96	-7692.5	-11204	-7993	-7413	1.5482	0.8432	0	0	0	115546	23369	7896	31265		4.22	Si
SLV 16	11.46	6750.66	-11336	-8087	-3982	1.9353	1.1165	-14924	15485	4841	115546	29211	9870	39081		9.81	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.72 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 12	-9260	0.46	242.88	1175.57	1666.41	1420.99	5.85	Si
SLV 11	-9279	0.46	242.88	1177.72	1669.26	1423.49	5.86	Si
SLV 8	-9344	0.46	242.88	1185.05	1679.04	1432.04	5.9	Si
SLV 7	-9362	0.46	242.88	1187.19	1681.87	1434.53	5.91	Si
SLV 16	-9554	0.46	242.88	1208.89	1710.67	1459.78	6.01	Si
SLV 15	-9583	0.46	242.88	1212.22	1715.1	1463.66	6.03	Si
SLV 4	-9832	0.46	242.88	1240.16	1752.41	1496.29	6.16	Si
SLV 3	-9861	0.46	242.88	1243.48	1756.85	1500.16	6.18	Si
SLV 14	-9893	0.46	242.88	1247.11	1761.73	1504.42	6.19	Si
SLV 13	-9923	0.46	242.88	1250.42	1766.16	1508.29	6.21	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-7488	-12557	-703	1.152	1034.8	0.929	18.00897	15.29191	Si
SLV 10	-7482	-12539	-703	1.153	1034.2	0.929	18.02102	15.29191	Si
SLV 5	-7358	-12589	-728	1.165	1021.7	0.929	18.22989	15.29191	Si
SLV 6	-7352	-12571	-728	1.166	1021.1	0.929	18.24227	15.29191	Si
SLV 11	-6419	-10570	748	1.292	927.1	0.923	20.34763	15.29191	Si
SLV 12	-6413	-10551	748	1.293	926.5	0.923	20.36333	15.29191	Si
SLV 7	-6288	-10602	723	1.316	914	0.922	20.73708	15.29191	Si
SLV 8	-6282	-10583	723	1.317	913.4	0.922	20.75335	15.29191	Si
SLV 13	-7268	-11830	-166	1.239	1012.6	0.928	19.39582	8.07112	Si
SLV 14	-7258	-11800	-166	1.24	1011.6	0.928	19.41672	8.07112	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.303	SLU 82	Si
V_SLU	11.966	SLU 82	Si
PF_SLV	1.548	SLV 14	Si
V_SLV	4.011	SLV 14	Si
PFFP_SLV	5.851	SLV 12	Si
R_SLV	1.178	SLV 9	Si

Maschio 177

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-4.913	1.006	-6.463	1.006	L6	L7	1.55	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 75	8.96	-2778.78	-8292	-0.0000642	0.0004492	0.0035	1.55	5421.56	27661	27661	9.95	No	Si
SLU 75	11.06	4541.4	-5808	-0.0001459	0.0004492	0.0035	1.55	0	27847.19	27847.19	6.13	No	Si
SLU 77	8.96	-2788.35	-8522	-0.0000649	0.0004492	0.0035	1.55	5543.4	27641.2	27641.2	9.91	No	Si
SLU 77	11.06	4561.82	-5986	-0.0001445	0.0004492	0.0035	1.55	4115.3	27832.02	27832.02	6.1	No	Si
SLU 78	8.96	-2785.36	-8515	-0.0000648	0.0004492	0.0035	1.55	5539.65	27641.82	27641.82	9.92	No	Si
SLU 78	11.06	4564.92	-5978	-0.0001448	0.0004492	0.0035	1.55	4110.39	27832.72	27832.72	6.1	No	Si
SLU 83	8.96	-2965.43	-7993	-0.0000674	0.0004492	0.0035	1.55	5260.74	27686.74	27686.74	9.34	No	Si
SLU 83	11.06	4768.47	-5723	-0.0001591	0.0004492	0.0035	1.55	0	27854.49	27854.49	5.84	No	Si
SLU 79	8.96	-2728.37	-8230	-0.0000632	0.0004492	0.0035	1.55	5388.34	27666.35	27666.35	10.14	No	Si
SLU 79	11.06	4481.02	-5658	-0.0001447	0.0004492	0.0035	1.55	0	27860.03	27860.03	6.22	No	Si
SLU 84	8.96	-2962.45	-7986	-0.0000673	0.0004492	0.0035	1.55	5256.88	27687.36	27687.36	9.35	No	Si
SLU 84	11.06	4771.56	-5715	-0.0001594	0.0004492	0.0035	1.55	0	27855.19	27855.19	5.84	No	Si
SLU 81	8.96	-2958.85	-7770	-0.0000671	0.0004492	0.0035	1.55	5139.24	27705.92	27705.92	9.36	No	Si
SLU 81	11.06	4744.95	-5554	-0.0001602	0.0004492	0.0035	1.55	0	27868.96	27868.96	5.87	No	Si
SLU 80	8.96	-2725.39	-8223	-0.0000631	0.0004492	0.0035	1.55	5384.53	27666.96	27666.96	10.15	No	Si
SLU 80	11.06	4484.11	-5650	-0.000145	0.0004492	0.0035	1.55	0	27860.73	27860.73	6.21	No	Si
SLU 74	8.96	-2781.77	-8299	-0.0000643	0.0004492	0.0035	1.55	5425.36	27660.38	27660.38	9.94	No	Si
SLU 74	11.06	4538.31	-5817	-0.0001456	0.0004492	0.0035	1.55	0	27846.49	27846.49	6.14	No	Si
SLU 82	8.96	-2955.86	-7763	-0.000067	0.0004492	0.0035	1.55	5135.33	27706.54	27706.54	9.37	No	Si
SLU 82	11.06	4748.05	-5546	-0.0001605	0.0004492	0.0035	1.55	0	27869.66	27869.66	5.87	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 15	8.96	-3461.84	-6704	-0.0000822	0.0006738	0.0035	1.55		32999.51	32999.51	9.53		Si
SLD 15	11.06	4530.79	-4140	-0.0001619	0.0006738	0.0035	1.55		33079.68	33079.68	7.3		Si
SLD 14	8.96	-3451.65	-6166	-0.0000856	0.0006738	0.0035	1.55		33023.35	33023.35	9.57		Si
SLD 14	11.06	4678.07	-3749	-0.0001734	0.0006738	0.0035	1.55		33056.58	33056.58	7.07		Si
SLV 13	8.96	-5783.58	-6669	-0.0001929	0.0006738	0.0035	1.55		33001.07	33001.07	5.71		Si
SLV 13	11.06	6985.26	-4004	-0.0002839	0.0006738	0.0035	1.55		33085.64	33085.64	4.74		Si
SLV 16	8.96	-5753.99	-7554	-0.0001795	0.0006738	0.0035	1.55		32961.84	32961.84	5.73		Si
SLV 16	11.06	6676.7	-4598	-0.0002626	0.0006738	0.0035	1.55		33059.56	33059.56	4.95		Si
SLD 13	8.96	-3463.06	-6240	-0.0000855	0.0006738	0.0035	1.55		33020.08	33020.08	9.53		Si
SLD 13	11.06	4672	-3813	-0.0001724	0.0006738	0.0035	1.55		33074.94	33074.94	7.08		Si
SLV 10	8.96	-2937.07	-4469	-0.0000803	0.0006738	0.0035	1.55		33098.54	33098.54	11.27		Si
SLV 10	11.06	4649.61	-2582	-0.0001833	0.0006738	0.0035	1.55		32719.35	32719.35	7.04		Si
SLV 14	8.96	-5757	-6497	-0.0001938	0.0006738	0.0035	1.55		33008.69	33008.69	5.73		Si
SLV 14	11.06	6999.41	-3856	-0.0002859	0.0006738	0.0035	1.55		33087.4	33087.4	4.73		Si
SLD 16	8.96	-3450.43	-6630	-0.0000822	0.0006738	0.0035	1.55		33002.78	33002.78	9.56		Si
SLD 16	11.06	4536.86	-4076	-0.0001629	0.0006738	0.0035	1.55		33082.46	33082.46	7.29		Si
SLV 9	8.96	-2954.04	-4579	-0.0000798	0.0006738	0.0035	1.55		33093.68	33093.68	11.2		Si
SLV 9	11.06	4640.58	-2676	-0.0001821	0.0006738	0.0035	1.55		32746.67	32746.67	7.06		Si
SLV 15	8.96	-5780.56	-7726	-0.0001785	0.0006738	0.0035	1.55		32954.22	32954.22	5.7		Si
SLV 15	11.06	6662.56	-4746	-0.0002604	0.0006738	0.0035	1.55		33053.06	33053.06	4.96		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	8.96	-2962.45	-7986	-5697	-4688	1.55	1.2121	-16866	10588	3593	35117	15597	7905	23502	No	5.01	Si
SLU 84	11.06	4771.56	-5715	-4077	-4689	1.55	0	-30812	10833	0	35117	15597	7905	23502	No	5.01	Si
SLU 83	8.96	-2965.43	-7993	-5702	-4675	1.55	1.212	-16883	10590	3594	35117	15597	7905	23502	No	5.03	Si
SLU 83	11.06	4768.47	-5723	-4083	-4676	1.55	0	-30800	10833	0	35117	15597	7905	23502	No	5.03	Si
SLU 78	8.96	-2785.36	-8515	-6075	-4454	1.55	1.3437	-16295	10508	3953	35117	15597	7905	23502	No	5.28	Si
SLU 78	11.06	4564.92	-5978	-4264	-4454	1.55	0.034	-29663	10833	103	35117	15597	7905	23502	No	5.28	Si
SLU 75	8.96	-2778.78	-8292	-5915	-4430	1.55	1.3197	-16146	10488	3876	35117	15597	7905	23502	No	5.3	Si
SLU 75	11.06	4541.4	-5808	-4144	-4431	1.55	0	-29510	10833	0	35117	15597	7905	23502	No	5.3	Si
SLU 74	8.96	-2781.77	-8299	-5921	-4417	1.55	1.3195	-16163	10491	3876	35117	15597	7905	23502	No	5.32	Si
SLU 74	11.06	4538.31	-5817	-4149	-4417	1.55	0	-29492	10833	0	35117	15597	7905	23502	No	5.32	Si
SLU 80	8.96	-2725.39	-8223	-5866	-4382	1.55	1.3307	-15880	10453	3895	35117	15597	7905	23502	No	5.36	Si
SLU 80	11.06	4484.11	-5650	-4031	-4382	1.55	0	-29131	10833	0	35117	15597	7905	23502	No	5.36	Si
SLU 77	8.96	-2788.35	-8522	-6080	-4440	1.55	1.3435	-16312	10510	3954	35117	15597	7905	23502	No	5.29	Si
SLU 77	11.06	4561.82	-5986	-4270	-4441	1.55	0.0386	-29643	10833	117	35117	15597	7905	23502	No	5.29	Si
SLU 79	8.96	-2728.37	-8230	-5871	-4369	1.55	1.3304	-15896	10455	3895	35117	15597	7905	23502	No	5.38	Si
SLU 79	11.06	4481.02	-5658	-4036	-4369	1.55	0	-29114	10833	0	35117	15597	7905	23502	No	5.38	Si
SLU 82	8.96	-2955.86	-7763	-5538	-4665	1.55	1.1826	-16771	10577	3502	35117	15597	7905	23502	No	5.04	Si
SLU 82	11.06	4748.05	-5546	-3956	-4665	1.55	0	-30555	10833	0	35117	15597	7905	23502	No	5.04	Si
SLU 81	8.96	-2958.85	-7770	-5543	-4652	1.55	1.1825	-16788	10579	3503	35117	15597	7905	23502	No	5.05	Si
SLU 81	11.06	4744.95	-5554	-3962	-4652	1.55	0	-30546	10833	0	35117	15597	7905	23502	No	5.05	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	8.96	-2937.07	-4469	-3188	-5760	1.55	0.3533	-18788	16250	1608	35117	23395	7905	31300		5.43	Si
SLV 10	11.06	4649.61	-2582	-1842	-5633	1.55	0	-21072	16250	0	35117	23395	7905	31300		5.56	Si
SLD 16	8.96	-3450.43	-6630	-4730	-4637	1.55	0.7638	-20324	16250	3475	35117	23395	7905	31300		6.75	Si
SLD 16	11.06	4536.86	-4076	-2908	-4454	1.55	0	-27313	16250	0	35117	23395	7905	31300		7.03	Si
SLD 15	8.96	-3461.84	-6704	-4782	-4621	1.55	0.7758	-20339	16250	3530	35117	23395	7905	31300		6.77	Si
SLD 15	11.06	4530.79	-4140	-2953	-4439	1.55	0	-27472	16250	0	35117	23395	7905	31300		7.05	Si
SLV 14	8.96	-5757	-6497	-4635	-7968	1.55	0	-37015	16250	0	35117	23395	7905	31300		3.93	Si
SLV 14	11.06	6999.41	-3856	-2751	-7541	1.55	0	-30929	16250	0	35117	23395	7905	31300		4.15	Si
SLD 13	8.96	-3463.06	-6240	-4451	-5020	1.55	0.66	-20873	16250	3003	35117	23395	7905	31300		6.23	Si
SLD 13	11.06	4672	-3813	-2720	-4838	1.55	0	-26860	16250	0	35117	23395	7905	31300		6.47	Si
SLV 15	8.96	-5780.56	-7726	-5512	-7022	1.55	0.0804	-37624	16250	366	35117	23395	7905	31300		4.46	Si
SLV 15	11.06	6662.56	-4746	-3386	-6595	1.55	0	-35008	16250	0	35117	23395	7905	31300		4.75	Si
SLV 13	8.96	-5783.58	-6669	-4757	-7931	1.55	0	-37325	16250	0	35117	23395	7905	31300		3.95	Si
SLV 13	11.06	6985.26	-4004	-2856	-7504	1.55	0	-31751	16250	0	35117	23395	7905	31300		4.17	Si
SLV 9	8.96	-2954.04	-4579	-3266	-5736	1.55	0.3895	-18792	16250	1772	35117	23395	7905	31300		5.46	Si
SLV 9	11.06	4640.58	-2676	-1909	-5609	1.55	0	-21598	16250	0	35117	23395	7905	31300		5.58	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	8.96	-5753.99	-7554	-5389	-7059	1.55	0.0399	-37482	16250	182	35117	23395	7905	31300		4.43	Si
SLV 16	11.06	6676.7	-4598	-3280	-6632	1.55	0	-34362	16250	0	35117	23395	7905	31300		4.72	Si
SLD 14	8.96	-3451.65	-6166	-4399	-5036	1.55	0.6456	-20871	16250	2937	35117	23395	7905	31300		6.22	Si
SLD 14	11.06	4678.07	-3749	-2675	-4854	1.55	0	-26645	16250	0	35117	23395	7905	31300		6.45	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.72 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 6	-2064	0.46	194.52	281.51	11126.96	5704.24	29.32	Si
SLV 5	-2159	0.46	194.52	294.04	11120.8	5707.42	29.34	Si
SLV 10	-2514	0.46	194.52	340.86	11097.64	5719.25	29.4	Si
SLV 9	-2609	0.46	194.52	353.24	11091.48	5722.36	29.42	Si
SLV 2	-2645	0.46	194.52	357.98	11089.11	5723.55	29.42	Si
SLV 1	-2793	0.46	194.52	377.3	11079.46	5728.38	29.45	Si
SLV 4	-3615	0.46	194.52	483.15	11025.86	5754.5	29.58	Si
SLV 3	-3763	0.46	194.52	501.95	11016.21	5759.08	29.61	Si
SLV 14	-4144	0.46	194.52	549.97	10991.38	5770.68	29.67	Si
SLV 13	-4292	0.46	194.52	568.5	10981.73	5775.12	29.69	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-5340	-8103	-4	1.344	762.6	0.925	21.12071	15.29191	Si
SLV 12	-5220	-7993	-4	1.368	750.5	0.924	21.51661	15.29191	Si
SLV 7	-4903	-7395	-23	1.432	718.7	0.921	22.58412	15.29191	Si
SLV 8	-4783	-7286	-23	1.459	706.6	0.92	23.0386	15.29191	Si
SLV 9	-3094	-4579	28	1.994	538.4	0.904	32.06273	15.29191	Si
SLV 10	-2974	-4469	28	2.048	526.6	0.902	32.97808	15.29191	Si
SLV 5	-2657	-3871	9	2.21	495.5	0.899	35.73164	15.29191	Si
SLV 6	-2537	-3761	9	2.277	483.8	0.898	36.86223	15.29191	Si
SLV 15	-5098	-7726	30	1.389	738.2	0.923	21.87105	8.07112	Si
SLV 16	-4910	-7554	30	1.429	719.3	0.921	22.54407	8.07112	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.838	SLU 84	Si
V_SLU	5.012	SLU 84	Si
PF_SLV	4.727	SLV 14	Si
V_SLV	3.928	SLV 14	Si
PFFP_SLV	29.324	SLV 6	Si
R_SLV	1.381	SLV 11	Si

Maschio 178

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	1.006	-4.113	1.006	L6	L7	3.98	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	8.96	-5246.96	7508	-0.0000085	0.0004492	0.0035	3.98	0	188456.9	188456.9	35.92	No	Si
SLU 79	11.06	-2720.42	18968	0.0005939	0.0004492	0.0035	3.184	0	182275.6	182275.6	67	No	Si
SLU 81	8.96	-5660.42	9046	0.0000207	0.0004492	0.0035	3.184	0	188793.73	188793.73	33.35	No	Si
SLU 81	11.06	-2493.16	20134	0.0006542	0.0004492	0.0035	3.184	0	181392.54	181392.54	72.76	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	8.96	-5267.17	7173	-0.000013	0.0004492	0.0035	3.98	0	188383.47	188383.47	35.77	No	Si
SLU 78	11.06	-2544.96	18611	0.0005902	0.0004492	0.0035	3.184	0	182546.38	182546.38	71.73	No	Si
SLU 77	8.96	-5258.32	7181	-0.0000128	0.0004492	0.0035	3.98	0	188385.21	188385.21	35.83	No	Si
SLU 77	11.06	-2527.41	18605	0.0005911	0.0004492	0.0035	3.184	0	182550.41	182550.41	72.23	No	Si
SLU 83	8.96	-5675.29	8763	0.0000085	0.0004492	0.0035	3.184	0	188731.79	188731.79	33.25	No	Si
SLU 83	11.06	-2567.1	19966	0.000643	0.0004492	0.0035	3.184	0	181519.77	181519.77	70.71	No	Si
SLU 75	8.96	-5252.29	7456	-0.0000093	0.0004492	0.0035	3.98	0	188445.41	188445.41	35.88	No	Si
SLU 75	11.06	-2471.02	18779	0.0006014	0.0004492	0.0035	3.184	0	182419.15	182419.15	73.82	No	Si
SLU 84	8.96	-5684.13	8755	0.0000077	0.0004492	0.0035	3.184	0	188730.05	188730.05	33.2	No	Si
SLU 84	11.06	-2584.65	19971	0.0006422	0.0004492	0.0035	3.184	0	181515.74	181515.74	70.23	No	Si
SLU 82	8.96	-5669.26	9038	0.0000199	0.0004492	0.0035	3.184	0	188792	188792	33.3	No	Si
SLU 82	11.06	-2510.71	20139	0.0006533	0.0004492	0.0035	3.184	0	181388.51	181388.51	72.25	No	Si
SLU 76	8.96	-5246.82	7778	-0.0000037	0.0004492	0.0035	3.98	0	188515.95	188515.95	35.93	No	Si
SLU 76	11.06	-2675.74	19145	0.0006037	0.0004492	0.0035	3.184	0	182141.66	182141.66	68.07	No	Si
SLU 80	8.96	-5255.8	7500	-0.0000088	0.0004492	0.0035	3.98	0	188455.16	188455.16	35.86	No	Si
SLU 80	11.06	-2737.97	18973	0.0005931	0.0004492	0.0035	3.184	0	182271.57	182271.57	66.57	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	8.96	-1474.51	782	-0.0000092	0.0006738	0.0035	3.98		209958.23	209958.23	142.39		Si
SLV 4	11.06	-8812.8	9372	-0.0000409	0.0006738	0.0035	3.98		202917.58	202917.58	23.03		Si
SLV 15	8.96	-4438.62	7407	0.0000288	0.0006738	0.0035	3.184		204528.12	204528.12	46.08		Si
SLV 15	11.06	5384.85	16320	0.0003272	0.0006738	0.0035	3.184		196608.71	196608.71	36.51		Si
SLV 3	8.96	-1392.1	683	-0.0000087	0.0006738	0.0035	3.98		210039.31	210039.31	150.88		Si
SLV 3	11.06	-8634.17	9205	-0.00004	0.0006738	0.0035	3.98		203054.21	203054.21	23.52		Si
SLV 1	8.96	-2140.66	2057	-0.0000109	0.0006738	0.0035	3.98		208913.33	208913.33	97.59		Si
SLV 1	11.06	-9366.85	10705	-0.0000394	0.0006738	0.0035	3.98		201744.15	201744.15	21.54		Si
SLD 1	8.96	-2821.89	3619	-0.000009	0.0006738	0.0035	3.98		207633.32	207633.32	73.58		Si
SLD 1	11.06	-5202.13	12365	0.0001809	0.0006738	0.0035	3.184		200252.95	200252.95	38.49		Si
SLV 2	8.96	-2223.07	2156	-0.0000112	0.0006738	0.0035	3.98		208832.25	208832.25	93.94		Si
SLV 2	11.06	-9545.49	10872	-0.0000404	0.0006738	0.0035	3.98		201594.41	201594.41	21.12		Si
SLV 16	8.96	-4521.03	7506	0.0000278	0.0006738	0.0035	3.184		204447.04	204447.04	45.22		Si
SLV 16	11.06	5206.22	16487	0.0003446	0.0006738	0.0035	3.184		196458.93	196458.93	37.74		Si
SLD 2	8.96	-2857.26	3661	-0.0000092	0.0006738	0.0035	3.98		207598.52	207598.52	72.66		Si
SLD 2	11.06	-5278.81	12436	0.0001791	0.0006738	0.0035	3.184		200188.67	200188.67	37.92		Si
SLV 6	8.96	-4147.78	6094	-0.0000041	0.0006738	0.0035	3.98		205604.35	205604.35	49.57		Si
SLV 6	11.06	-5461.35	15082	0.0002738	0.0006738	0.0035	3.184		197811.96	197811.96	36.22		Si
SLV 5	8.96	-4095.15	6031	-0.0000037	0.0006738	0.0035	3.98		205656.13	205656.13	50.22		Si
SLV 5	11.06	-5347.27	14976	0.0002764	0.0006738	0.0035	3.184		197907.59	197907.59	37.01		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 44	8.96	-3368.02	4280	3053	5456	3.98	3.6091	92143	8721	8813	79749	40049	20298	60347	No	11.06	Si
SLU 44	11.06	-2841.05	15934	11367	5454	3.184	3.98	0	0	0	79749	32039	16238	48278	No	8.85	Si
SLU 46	8.96	-3388.37	3675	2622	5451	3.98	3.204	53056	8865	7953	79749	40049	20298	60347	No	11.07	Si
SLU 46	11.06	-2710.27	15400	10986	5449	3.184	3.98	0	0	0	79749	32039	16238	48278	No	8.86	Si
SLU 49	8.96	-3403.24	3392	2420	5588	3.98	2.9603	42724	8917	7391	79749	40049	20298	60347	No	10.8	Si
SLU 49	11.06	-2784.21	15232	10866	5586	3.184	3.98	0	0	0	79749	32039	16238	48278	No	8.64	Si
SLU 72	8.96	-4221.66	5232	3733	5120	3.98	3.5494	103458	8853	8799	79749	40049	20298	60347	No	11.79	Si
SLU 72	11.06	-2923.21	17037	12154	5118	3.184	3.98	0	0	0	79749	32039	16238	48278	No	9.43	Si
SLU 47	8.96	-3382.9	3997	2851	5593	3.98	3.4309	69214	8797	8451	79749	40049	20298	60347	No	10.79	Si
SLU 47	11.06	-2914.99	15766	11247	5591	3.184	3.98	0	0	0	79749	32039	16238	48278	No	8.64	Si
SLU 51	8.96	-3391.88	3720	2653	5718	3.98	3.2343	54805	8858	8021	79749	40049	20298	60347	No	10.55	Si
SLU 51	11.06	-2977.22	15595	11125	5717	3.184	3.98	0	0	0	79749	32039	16238	48278	No	8.45	Si
SLU 48	8.96	-3394.4	3400	2426	5571	3.98	2.9751	43132	8913	7425	79749	40049	20298	60347	No	10.83	Si
SLU 48	11.06	-2766.65	15227	10862	5569	3.184	3.98	0	0	0	79749	32039	16238	48278	No	8.67	Si
SLU 45	8.96	-3379.53	3683	2627	5434	3.98	3.2172	53639	8860	7981	79749	40049	20298	60347	No	11.11	Si
SLU 45	11.06	-2692.72	15395	10982	5432	3.184	3.98	0	0	0	79749	32039	16238	48278	No	8.89	Si
SLU 50	8.96	-3383.04	3727	2659	5702	3.98	3.2472	55421	8853	8049	79749	40049	20298	60347	No	10.58	Si
SLU 50	11.06	-2959.67	15590	11121	5700	3.184	3.98	0	0	0	79749	32039	16238	48278	No	8.47	Si
SLU 43	8.96	-3353.29	4293	3063	5428	3.98	3.6267	95030	8710	8845	79749	40049	20298	60347	No	11.12	Si
SLU 43	11.06	-2811.79	15925	11361	5426	3.184	3.98	0	0	0	79749	32039	16238	48278	No	8.9	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	8.96	-2223.07	2156	1538	8921	3.98	2.8767	26211	13087	10542	79749	60073	20298	80371		9.01	Si
SLV 2	11.06	-9545.49	10872	7756	6219	3.98	3.336	172261	14584	13623	79749	60073	20298	80371		12.92	Si
SLD 1	8.96	-2821.89	3619	2581	5832	3.98	3.6306	80710	12974	13188	79749	60073	20298	80371		13.78	Si
SLD 1	11.06	-5202.13	12365	8821	4671	3.184	3.98	0	0	0	79749	48059	16238	64297		13.77	Si
SLV 3	8.96	-1392.1	683	488	8494	3.98	0	4852	12958	0	79749	60073	20298	79749		9.39	Si
SLV 3	11.06	-8634.17	9205	6567	5704	3.98	3.156	128463	14565	12871	79749	60073	20298	80371		14.09	Si
SLD 4	8.96	-2533.41	3065	2187	5740	3.98	3.4903	56585	12998	12702	79749	60073	20298	80371		14	Si
SLD 4	11.06	-4957.36	11785	8407	4540	3.184	3.98	0	0	0	79749	48059	16238	64297		14.16	Si
SLV 6	8.96	-4147.78	6094	4347	5688	3.98	3.9281	476359	12712	13982	79749	60073	20298	80371		14.13	Si
SLV 6	11.06	-5461.35	15082	10759	5013	3.184	3.98	0	0	0	79749	48059	16238	64297		12.83	Si
SLD 2	8.96	-2857.26	3661	2612	5879	3.98	3.6287	81407	12981	13189	79749	60073	20298	80371		13.67	Si
SLD 2	11.06	-5278.81	12436	8872	4718	3.184	3.98	0	0	0	79749	48059	16238	64297		13.63	Si
SLV 4	8.96	-1474.51	782	558	8604	3.98	0.3162	5778	12981	1149	79749	60073	20298	80371		9.34	Si
SLV 4	11.06	-8812.8	9372	6685	5814	3.98	3.1489	130198	14614	12885	79749	60073	20298	80371		13.82	Si
SLV 1	8.96	-2140.66	2057	1467	8811	3.98	2.8482	24707	13070	10423	79749	60073	20298	80371		9.12	Si
SLV 1	11.06	-9366.85	10705	7637	6109	3.98	3.345	170919	14535	13613	79749	60073	20298	80371		13.16	Si
SLV 5	8.96	-4095.15	6031	4302	5618	3.98	3.9329	507772	12695	13980	79749	60073	20298	80371		14.31	Si
SLV 5	11.06	-5347.27	14976	10683	4942	3.184	3.98	0	0	0	79749	48059	16238	64297		13.01	Si
SLD 3	8.96	-2498.03	3023	2156	5693	3.98	3.4906	55820	12991	12697	79749	60073	20298	80371		14.12	Si
SLD 3	11.06	-4880.68	11714	8356	4492	3.184	3.98	0	0	0	79749	48059	16238	64297		14.31	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.72 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 14	17338	0.46	499.49	0	28670.78	14335.39	28.7	Si
SLV 13	17171	0.46	499.49	0	28685.97	14342.99	28.72	Si
SLV 10	16533	0.46	499.49	0	28744.12	14372.06	28.77	Si
SLV 9	16427	0.46	499.49	0	28753.82	14376.91	28.78	Si
SLV 16	15834	0.46	499.49	0	28807.79	14403.9	28.84	Si
SLV 15	15668	0.46	499.49	0	28822.98	14411.49	28.85	Si
SLV 6	14365	0.46	499.49	0	28941.64	14470.82	28.97	Si
SLV 5	14259	0.46	499.49	0	28951.34	14475.67	28.98	Si
SLV 12	11521	0.46	499.49	0	29185.68	14592.84	29.22	Si
SLV 11	11415	0.46	499.49	0	29194.69	14597.35	29.22	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	30715	8111	-957	1.73	719.8	1	25.13976	15.29191	Si, Trazione
SLV 9	30637	8048	-957	1.736	719.8	1	25.22636	15.29191	Si, Trazione
SLV 12	26989	3532	985	2.065	719.8	1	30.01497	15.29191	Si, Trazione
SLV 11	26911	3469	985	2.074	719.8	1	30.13694	15.29191	Si, Trazione
SLV 6	25179	6094	-956	2.283	719.8	1	33.17577	15.29191	Si, Trazione
SLV 5	25101	6031	-956	2.293	719.8	1	33.32354	15.29191	Si, Trazione
SLV 14	35891	8879	-279	1.452	719.8	1	21.10239	8.07112	Si, Trazione
SLV 13	35769	8780	-279	1.458	719.8	1	21.19665	8.07112	Si, Trazione
SLV 16	34773	7506	304	1.512	719.8	1	21.97366	8.07112	Si, Trazione
SLV 15	34651	7407	304	1.519	719.8	1	22.07562	8.07112	Si, Trazione

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	33.203	SLU 84	Si
V_SLU	8.445	SLU 51	Si
PF_SLV	21.119	SLV 2	Si
V_SLV	9.01	SLV 2	Si
PFFP_SLV	28.7	SLV 14	Si
R_SLV	1.644	SLV 10	Si

Maschio 179

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-4.824	-11.003	-3.384	L6	L7	1.44	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 50	8.96	-194.55	-8788	-0.0000369	0.0003743	0.0035	1.4402	4973.45	5855.62	5855.62	30.1	No	Si
SLU 50	12.48	-344.16	-4463	-0.0000221	0.0003743	0.0035	1.4402	2864.35	3452.46	3452.46	10.03	No	Si
SLU 47	8.96	-160.21	-8431	-0.0000348	0.0003743	0.0035	1.4402	4824.44	5674.64	5674.64	35.42	No	Si
SLU 47	12.48	-309.3	-4160	-0.0000203	0.0003743	0.0035	1.4402	2692.08	3269.51	3269.51	10.57	No	Si
SLU 48	8.96	-198.79	-8853	-0.0000372	0.0003743	0.0035	1.4402	5000.26	5887.68	5887.68	29.62	No	Si
SLU 48	12.48	-325.95	-4480	-0.0000218	0.0003743	0.0035	1.4402	2873.89	3462.59	3462.59	10.62	No	Si
SLU 8	8.96	-159.37	-7144	-0.0000297	0.0003743	0.0035	1.4402	4249.28	4994.95	4994.95	31.34	No	Si
SLU 8	12.48	-276.67	-3693	-0.000018	0.0003743	0.0035	1.4402	2420.21	2977.85	2977.85	10.76	No	Si
SLU 58	8.96	-207.25	-9628	-0.0000405	0.0003743	0.0035	1.4402	5307.2	6272.24	6272.24	30.26	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 58	12.48	-349.1	-4748	-0.0000233	0.0003743	0.0035	1.4402	3023.7	3624.05	3624.05	10.38	No	Si
SLU 62	8.96	-207.47	-9694	-0.0000408	0.0003743	0.0035	1.4402	5332.48	6304.73	6304.73	30.39	No	Si
SLU 62	12.48	-327.92	-4593	-0.0000223	0.0003743	0.0035	1.4402	2937.12	3530.2	3530.2	10.77	No	Si
SLU 59	8.96	-189.78	-9590	-0.0000401	0.0003743	0.0035	1.4402	5292.83	6253.8	6253.8	32.95	No	Si
SLU 59	12.48	-342.16	-4733	-0.0000231	0.0003743	0.0035	1.4402	3015.42	3615.01	3615.01	10.57	No	Si
SLU 43	8.96	-184.11	-8200	-0.0000343	0.0003743	0.0035	1.4402	4725.33	5554.34	5554.34	30.17	No	Si
SLU 43	12.48	-297.57	-3907	-0.0000192	0.0003743	0.0035	1.4402	2545.7	3112.69	3112.69	10.46	No	Si
SLU 71	8.96	-222.26	-9731	-0.0000412	0.0003743	0.0035	1.4402	5346.47	6322.74	6322.74	28.45	No	Si
SLU 71	12.48	-348.64	-4963	-0.0000241	0.0003743	0.0035	1.4402	3141.9	3754.62	3754.62	10.77	No	Si
SLU 51	8.96	-177.08	-8750	-0.0000364	0.0003743	0.0035	1.4402	4957.98	5837.22	5837.22	32.96	No	Si
SLU 51	12.48	-337.22	-4448	-0.0000219	0.0003743	0.0035	1.4402	2855.92	3443.51	3443.51	10.21	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	8.96	-361.38	-8823	-0.000039	0.0005615	0.0035	1.4402		6159.99	6159.99	17.05		Si
SLV 15	12.48	-693.84	-4873	-0.0000288	0.0005615	0.0035	1.4402		3784.14	3784.14	5.45		Si
SLV 1	8.96	32.14	-5451	-0.0000208	0.0005615	0.0035	1.4402		3772.94	3772.94	117.4		Si
SLV 1	12.48	262.09	-2008	-0.0000114	0.0005615	0.0035	1.4402		1520.4	1520.4	5.8		Si
SLV 13	8.96	135.38	-6253	-0.0000254	0.0005615	0.0035	1.4402		4269.39	4269.39	31.54		Si
SLV 13	12.48	-698.65	-3195	-0.0000225	0.0005615	0.0035	1.4402		2697.86	2697.86	3.86		Si
SLV 6	8.96	654.62	-2617	-0.0000197	0.0005615	0.0035	1.4402		1933.42	1933.42	2.95		Si
SLV 6	12.48	-107.49	-336	-0.0000029	0.0005615	0.0035	1.4402		751.57	751.57	6.99		Si
SLD 14	8.96	-27.16	-6641	-0.0000252	0.0005615	0.0035	1.4402		4879.66	4879.66	179.64		Si
SLD 14	12.48	-447.31	-3214	-0.0000187	0.0005615	0.0035	1.4402		2709.97	2709.97	6.06		Si
SLV 5	8.96	649.33	-2708	-0.0000199	0.0005615	0.0035	1.4402		1994.18	1994.18	3.07		Si
SLV 5	12.48	-85.9	-437	-0.0000029	0.0005615	0.0035	1.4402		822.28	822.28	9.57		Si
SLV 14	8.96	143.67	-6111	-0.000025	0.0005615	0.0035	1.4402		4182.21	4182.21	29.11		Si
SLV 14	12.48	-732.46	-3038	-0.0000224	0.0005615	0.0035	1.4402		2594.63	2594.63	3.54		Si
SLV 16	8.96	-353.09	-8681	-0.0000383	0.0005615	0.0035	1.4402		6080.36	6080.36	17.22		Si
SLV 16	12.48	-727.64	-4716	-0.0000288	0.0005615	0.0035	1.4402		3683.89	3683.89	5.06		Si
SLV 10	8.96	685.6	-2857	-0.000021	0.0005615	0.0035	1.4402		2094.1	2094.1	3.05		Si
SLV 10	12.48	-395.71	-692	-0.0000162	0.0005615	0.0035	1.1522		1001.04	1001.04	2.53		Si
SLV 9	8.96	680.3	-2948	-0.0000213	0.0005615	0.0035	1.4402		2154.85	2154.85	3.17		Si
SLV 9	12.48	-374.12	-793	-0.0000112	0.0005615	0.0035	1.1522		1071.14	1071.14	2.86		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	8.96	-233.97	-10343	-8613	-1362	1.4402	1.4402	-21358	9792	3949	40441	12075	3672	15748	No	11.56	Si
SLU 74	12.48	-312.08	-4987	-4153	1044	1.4402	1.4402	-10299	8318	3354	40441	12075	3672	15748	No	15.08	Si
SLU 78	8.96	-221.72	-10599	-8826	-1336	1.4402	1.4402	-21888	9863	3977	40441	12075	3672	15748	No	11.79	Si
SLU 78	12.48	-328.43	-5250	-4372	1093	1.4402	1.4402	-10842	8390	3383	40441	12075	3672	15748	No	14.4	Si
SLU 41	8.96	-200	-8995	-7490	-1316	1.4402	1.4402	-18574	9421	3799	40441	12075	3672	15748	No	11.97	Si
SLU 41	12.48	-264.91	-4323	-3600	831	1.4402	1.4402	-8927	8135	3280	40441	12075	3672	15748	No	18.95	Si
SLU 79	8.96	-234.95	-10572	-8803	-1343	1.4402	1.4402	-21830	9855	3974	40441	12075	3672	15748	No	11.72	Si
SLU 79	12.48	-353.58	-5248	-4370	1144	1.4402	1.4402	-10838	8390	3383	40441	12075	3672	15748	No	13.77	Si
SLU 81	8.96	-229.96	-10344	-8614	-1416	1.4402	1.4402	-21360	9793	3949	40441	12075	3672	15748	No	11.12	Si
SLU 81	12.48	-309.11	-4815	-4009	1012	1.4402	1.4402	-9943	8270	3335	40441	12075	3672	15748	No	15.57	Si
SLU 83	8.96	-235.18	-10638	-8858	-1437	1.4402	1.4402	-21967	9873	3981	40441	12075	3672	15748	No	10.96	Si
SLU 83	12.48	-332.4	-5093	-4241	1076	1.4402	1.4402	-10517	8347	3366	40441	12075	3672	15748	No	14.64	Si
SLU 82	8.96	-212.48	-10307	-8582	-1369	1.4402	1.4402	-21283	9782	3945	40441	12075	3672	15748	No	11.5	Si
SLU 82	12.48	-302.17	-4800	-3997	996	1.4402	1.4402	-9912	8266	3333	40441	12075	3672	15748	No	15.8	Si
SLU 75	8.96	-216.5	-10306	-8582	-1315	1.4402	1.4402	-21281	9782	3945	40441	12075	3672	15748	No	11.97	Si
SLU 75	12.48	-305.14	-4973	-4141	1029	1.4402	1.4402	-10268	8314	3352	40441	12075	3672	15748	No	15.3	Si
SLU 84	8.96	-217.7	-10600	-8827	-1390	1.4402	1.4402	-21890	9863	3977	40441	12075	3672	15748	No	11.33	Si
SLU 84	12.48	-325.46	-5078	-4228	1061	1.4402	1.4402	-10486	8343	3364	40441	12075	3672	15748	No	14.85	Si
SLU 77	8.96	-239.19	-10637	-8858	-1383	1.4402	1.4402	-21965	9873	3981	40441	12075	3672	15748	No	11.39	Si
SLU 77	12.48	-335.37	-5265	-4385	1109	1.4402	1.4402	-10873	8394	3385	40441	12075	3672	15748	No	14.21	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	8.96	685.6	-2857	-2379	660	1.4402	1.4402	-5900	11597	4676	40441	18113	3672	21785		33.02	Si
SLV 10	12.48	-395.71	-692	-577	4340	1.1522	0.4459	0	0	0	40441	14490	2938	17428		4.02	Si
SLV 13	8.96	135.38	-6253	-5207	1882	1.4402	1.4402	-12913	12999	5242	40441	18113	3672	21785		11.58	Si
SLV 13	12.48	-698.65	-3195	-2661	4009	1.4402	1.4402	-6598	11736	4733	40441	18113	3672	21785		5.43	Si
SLV 14	8.96	143.67	-6111	-5089	1991	1.4402	1.4402	-12619	12940	5218	40441	18113	3672	21785		10.94	Si
SLV 14	12.48	-732.46	-3038	-2530	4138	1.4402	1.4369	-6273	11671	4696	40441	18113	3672	21785		5.26	Si
SLV 4	8.96	-456.33	-7879	-6561	-3524	1.4402	1.4402	-16270	13671	5513	40441	18113	3672	21785		6.18	Si
SLV 4	12.48	233.1	-3528	-2938	-2431	1.4402	1.4402	-7286	11874	4788	40441	18113	3672	21785		8.96	Si
SLV 6	8.96	654.62	-2617	-2179	-872	1.4402	1.4098	-5404	11497	4539	40441	18113	3672	21785		24.98	Si
SLV 6	12.48	-107.49	-336	-280	2868	1.4402	1.2012	-832	10583	3559	40441	18113	3672	21785		7.59	Si
SLV 3	8.96	-464.62	-8022	-6680	-3633	1.4402	1.4402	-16564	13730	5536	40441	18113	3672	21785		6	Si
SLV 3	12.48	266.91	-3686	-3069	-2560	1.4402	1.4402	-7611	11939	4814	40441	18113	3672	21785		8.51	Si
SLV 5	8.96	649.33	-2708	-2255	-942	1.4402	1.4402	-5592	11535	4652	40441	18113	3672	21785		23.13	Si
SLV 5	12.48	-85.9	-437	-364	2786	1.4402	1.4402	-902	10597	4273	40441	18113	3672	21785		7.82	Si
SLV 9	8.96	680.3	-2948	-2455	590	1.4402	1.4402	-6088	11634	4692	40441	18113	3672	21785		36.92	Si
SLV 9	12.48	-374.12	-793	-660	4257	1.1522	0.745	0	0	0	40441	14490	2938	17428		4.09	Si
SLV 2	8.96	40.43	-5309	-4421	-3116	1.4402	1.4402	-10963	12609	5085	40441	18113	3672	21785		6.99	Si
SLV 2	12.48	228.29	-1850	-1541	-766	1.4402	1.4402	-3821	11181	4509	40441	18113	3672	21785		28.42	Si
SLV 1	8.96	32.14	-5451	-4539	-3225	1.4402	1.4402	-11257	12668	5108	40441	18113	3672	21785		6.76	Si
SLV 1	12.48	262.09	-2008	-1672	-895	1.4402	1.4402	-4146	11246	4535	40441	18113	3672	21785		24.33	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.46	0	-1103	180.74	0	0	No, e>t/2
SLV 6	179667	0.46	0	-1032	180.74	0	0	No, e>t/2
SLV 10	179667	0.46	3459	-1395	180.74	190.88	1.06	Si
SLV 9	179667	0.46	3637	-1467	180.74	200.43	1.11	Si
SLV 2	179667	0.46	7725	-3115	180.74	414.07	2.29	Si
SLV 1	179667	0.46	8003	-3227	180.74	428.13	2.37	Si
SLV 14	179667	0.46	10730	-4327	180.74	563.2	3.12	Si
SLV 13	179667	0.46	11008	-4439	180.74	576.65	3.19	Si
SLV 4	179667	0.46	13098	-5282	180.74	676.06	3.74	Si
SLV 3	179667	0.46	13376	-5394	180.74	689.02	3.81	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-6387	-11515	122	1.086	852.4	0.935	16.87736	15.29191	Si
SLV 12	-6287	-11425	122	1.1	842.2	0.934	17.10623	15.29191	Si
SLV 7	-6031	-11275	59	1.146	816.4	0.933	17.84913	15.29191	Si
SLV 8	-5931	-11184	58	1.161	806.2	0.932	18.10383	15.29191	Si
SLV 15	-4873	-8823	127	1.343	699.7	0.924	21.11812	8.07112	Si
SLV 16	-4716	-8681	126	1.377	683.8	0.923	21.69005	8.07112	Si
SLV 3	-3686	-8022	-85	1.663	580.7	0.913	26.47564	8.07112	Si
SLV 4	-3528	-7879	-85	1.716	565	0.911	27.37016	8.07112	Si
SLV 13	-3195	-6253	67	1.845	531.9	0.907	29.54643	8.07112	Si
SLV 14	-3038	-6111	66	1.911	516.3	0.906	30.66462	8.07112	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.032	SLU 50	Si
V_SLU	10.96	SLU 83	Si
PF_SLV	2.53	SLV 10	Si
V_SLV	4.016	SLV 10	Si
PFFP_SLV	0	SLV 5	No
R_SLV	1.104	SLV 11	Si

Maschio 180

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-3.384	-11.003	-0.691	L6	Z medio 1150 cm	2.693	0.28	2.539	1.755	3.324			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 49	8.96	1105.05	-17866	-0.000042	0.0003743	0.0035	2.6928	18456.71	20285.44	20285.44	18.36	No	Si
SLU 49	10.72	366.84	-13952	-0.0000301	0.0003743	0.0035	2.6928	15370.96	16266.57	16266.57	44.34	No	Si
SLU 68	8.96	1160.39	-18983	-0.0000448	0.0003743	0.0035	2.6928	19238.64	21150.04	21150.04	18.23	No	Si
SLU 68	10.72	455.93	-14747	-0.0000322	0.0003743	0.0035	2.6928	16041.49	17085.04	17085.04	37.47	No	Si
SLU 46	8.96	1074.96	-17279	-0.0000406	0.0003743	0.0035	2.6928	18028.18	19756.14	19756.14	18.38	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 46	10.72	370.18	-13374	-0.0000288	0.0003743	0.0035	2.6928	14869.64	15678.49	15678.49	42.35	No	Si
SLU 44	8.96	1091.02	-16623	-0.0000392	0.0003743	0.0035	2.6928	17534.91	19056	19056	17.47	No	Si
SLU 44	10.72	370.81	-12709	-0.0000274	0.0003743	0.0035	2.6928	14279.1	15009.42	15009.42	40.48	No	Si
SLU 5	8.96	901.77	-13871	-0.0000324	0.0003743	0.0035	2.6928	15301.5	16183.94	16183.94	17.95	No	Si
SLU 5	10.72	315.28	-10761	-0.0000231	0.0003743	0.0035	2.6928	12457.72	13088	13088	41.51	No	Si
SLU 51	8.96	1112.95	-17746	-0.0000418	0.0003743	0.0035	2.6928	18369.99	20182.42	20182.42	18.13	No	Si
SLU 51	10.72	346.72	-13829	-0.0000297	0.0003743	0.0035	2.6928	15265.12	16140.8	16140.8	46.55	No	Si
SLU 47	8.96	1121.11	-17210	-0.0000406	0.0003743	0.0035	2.6928	17976.95	19682.27	19682.27	17.56	No	Si
SLU 47	10.72	367.47	-13288	-0.0000286	0.0003743	0.0035	2.6928	14793.89	15591.28	15591.28	42.43	No	Si
SLU 65	8.96	1130.29	-18396	-0.0000433	0.0003743	0.0035	2.6928	18833.11	20704.26	20704.26	18.32	No	Si
SLU 65	10.72	459.26	-14169	-0.0000309	0.0003743	0.0035	2.6928	15556.3	16489	16489	35.9	No	Si
SLU 2	8.96	871.67	-13284	-0.000031	0.0003743	0.0035	2.6928	14790.7	15587.61	15587.61	17.88	No	Si
SLU 2	10.72	318.62	-10183	-0.0000219	0.0003743	0.0035	2.6928	11891.69	12529.58	12529.58	39.33	No	Si
SLU 72	8.96	1152.22	-19519	-0.0000459	0.0003743	0.0035	2.6928	19598.34	21559.96	21559.96	18.71	No	Si
SLU 72	10.72	435.17	-15288	-0.0000332	0.0003743	0.0035	2.6928	16485	17647.72	17647.72	40.55	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	8.96	5653.42	-19953	-0.0000667	0.0005615	0.0035	2.6928		23253.62	23253.62	4.11		Si
SLV 10	10.72	2755.69	-15284	-0.0000432	0.0005615	0.0035	2.6928		18604.06	18604.06	6.75		Si
SLV 14	8.96	3121.05	-17015	-0.0000486	0.0005615	0.0035	2.6928		20309.57	20309.57	6.51		Si
SLV 14	10.72	719.7	-14191	-0.0000317	0.0005615	0.0035	2.6928		17538.67	17538.67	24.37		Si
SLV 7	8.96	-4116.62	-8177	-0.0000346	0.0005615	0.0035	2.6928		12273.35	12273.35	2.98		Si
SLV 7	10.72	-2036.64	-6265	-0.0000213	0.0005615	0.0035	2.6928		9936.27	9936.27	4.88		Si
SLV 12	8.96	-3491.11	-8914	-0.0000332	0.0005615	0.0035	2.6928		13140.48	13140.48	3.76		Si
SLV 12	10.72	-2250.5	-7602	-0.000025	0.0005615	0.0035	2.6928		11584.89	11584.89	5.15		Si
SLV 13	8.96	3011.99	-17133	-0.0000483	0.0005615	0.0035	2.6928		20425.97	20425.97	6.78		Si
SLV 13	10.72	658.9	-14254	-0.0000315	0.0005615	0.0035	2.6928		17599.46	17599.46	26.71		Si
SLV 11	8.96	-3560.75	-8989	-0.0000337	0.0005615	0.0035	2.6928		13228.92	13228.92	3.72		Si
SLV 11	10.72	-2289.33	-7642	-0.0000252	0.0005615	0.0035	2.6928		11633.24	11633.24	5.08		Si
SLV 9	8.96	5583.77	-20028	-0.0000666	0.0005615	0.0035	2.6928		23329.56	23329.56	4.18		Si
SLV 9	10.72	2716.86	-15324	-0.0000431	0.0005615	0.0035	2.6928		18643.21	18643.21	6.86		Si
SLV 8	8.96	-4046.97	-8102	-0.0000341	0.0005615	0.0035	2.6928		12184.45	12184.45	3.01		Si
SLV 8	10.72	-1997.81	-6225	-0.0000211	0.0005615	0.0035	2.6928		9887.39	9887.39	4.95		Si
SLV 6	8.96	5097.55	-19141	-0.0000623	0.0005615	0.0035	2.6928		22433.67	22433.67	4.4		Si
SLV 6	10.72	3008.39	-13906	-0.0000414	0.0005615	0.0035	2.6928		17262.62	17262.62	5.74		Si
SLV 5	8.96	5027.9	-19216	-0.0000622	0.0005615	0.0035	2.6928		22509.15	22509.15	4.48		Si
SLV 5	10.72	2969.56	-13946	-0.0000414	0.0005615	0.0035	2.6928		17301.35	17301.35	5.83		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 72	8.96	1152.22	-19519	-16254	1861	2.6928	2.6928	-21557	9819	7403	28547	22578	6867	29445	No	15.83	Si
SLU 72	10.72	435.17	-15288	-12731	1167	2.6928	2.6928	-16885	9196	6934	28547	22578	6867	29445	No	25.22	Si
SLU 68	8.96	1160.39	-18983	-15807	1836	2.6928	2.6928	-20965	9740	7344	28547	22578	6867	29445	No	16.04	Si
SLU 68	10.72	455.93	-14747	-12280	1162	2.6928	2.6928	-16287	9116	6873	28547	22578	6867	29445	No	25.35	Si
SLU 51	8.96	1112.95	-17746	-14777	1734	2.6928	2.6928	-19599	9558	7206	28547	22578	6867	29445	No	16.98	Si
SLU 51	10.72	346.72	-13829	-11515	1058	2.6928	2.6928	-15273	8981	6771	28547	22578	6867	29445	No	27.84	Si
SLU 66	8.96	1056.85	-18976	-15801	1725	2.6928	2.6928	-20957	9739	7343	28547	22578	6867	29445	No	17.07	Si
SLU 66	10.72	432.5	-14778	-12306	1069	2.6928	2.6928	-16321	9121	6877	28547	22578	6867	29445	No	27.55	Si
SLU 70	8.96	1144.32	-19639	-16354	1829	2.6928	2.6928	-21690	9836	7417	28547	22578	6867	29445	No	16.1	Si
SLU 70	10.72	455.29	-15412	-12833	1132	2.6928	2.6928	-17021	9214	6947	28547	22578	6867	29445	No	26	Si
SLU 71	8.96	1094.84	-19442	-16190	1813	2.6928	2.6928	-21472	9807	7395	28547	22578	6867	29445	No	16.24	Si
SLU 71	10.72	409.05	-15233	-12685	1133	2.6928	2.6928	-16823	9188	6927	28547	22578	6867	29445	No	26	Si
SLU 67	8.96	1114.23	-19052	-15865	1772	2.6928	2.6928	-21041	9750	7351	28547	22578	6867	29445	No	16.61	Si
SLU 67	10.72	458.63	-14834	-12352	1103	2.6928	2.6928	-16382	9129	6883	28547	22578	6867	29445	No	26.69	Si
SLU 47	8.96	1121.11	-17210	-14331	1709	2.6928	2.6928	-19007	9479	7147	28547	22578	6867	29445	No	17.23	Si
SLU 47	10.72	367.47	-13288	-11065	1052	2.6928	2.6928	-14675	8901	6711	28547	22578	6867	29445	No	28	Si
SLU 65	8.96	1130.29	-18396	-15319	1779	2.6928	2.6928	-20317	9653	7279	28547	22578	6867	29445	No	16.55	Si
SLU 65	10.72	459.26	-14169	-11799	1133	2.6928	2.6928	-15649	9031	6809	28547	22578	6867	29445	No	26	Si
SLU 69	8.96	1086.95	-19563	-16290	1781	2.6928	2.6928	-21605	9825	7408	28547	22578	6867	29445	No	16.53	Si
SLU 69	10.72	429.17	-15356	-12787	1098	2.6928	2.6928	-16959	9206	6941	28547	22578	6867	29445	No	26.82	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 5	8.96	2647.61	-16336	-13604	1086	2.6928	2.6928	-18042	14025	10575	28547	33867	6867	39121		36.02	Si
SLD 5	10.72	1505.82	-12178	-10140	2276	2.6928	2.6928	-13449	13106	9882	28547	33867	6867	38429		16.89	Si
SLV 8	8.96	-4046.97	-8102	-6747	1655	2.6928	2.5408	-9523	12321	8766	28547	33867	6867	37312		22.54	Si
SLV 8	10.72	-1997.81	-6225	-5184	-2264	2.6928	2.6928	-6875	11792	8891	28547	33867	6867	37437		16.53	Si
SLV 9	8.96	5583.77	-20028	-16677	797	2.6928	2.6928	-22119	14840	11190	28547	33867	6867	39736		49.84	Si
SLV 9	10.72	2716.86	-15324	-12760	3900	2.6928	2.6928	-16924	13801	10406	28547	33867	6867	38953		9.99	Si
SLV 10	8.96	5653.42	-19953	-16615	792	2.6928	2.6928	-22036	14824	11177	28547	33867	6867	39724		50.15	Si
SLV 10	10.72	2755.69	-15284	-12727	3891	2.6928	2.6928	-16880	13793	10400	28547	33867	6867	38946		10.01	Si
SLD 6	8.96	2677.99	-16304	-13576	1084	2.6928	2.6928	-18006	14018	10569	28547	33867	6867	39116		36.09	Si
SLD 6	10.72	1522.76	-12160	-10126	2271	2.6928	2.6928	-13430	13103	9879	28547	33867	6867	38426		16.92	Si
SLV 6	8.96	5097.55	-19141	-15939	898	2.6928	2.6928	-21139	14645	11042	28547	33867	6867	39588		44.07	Si
SLV 6	10.72	3008.39	-13906	-11580	4120	2.6928	2.6928	-15358	13488	10170	28547	33867	6867	38717		9.4	Si
SLV 12	8.96	-3491.11	-8914	-7423	1549	2.6928	2.6928	-9845	12386	9339	28547	33867	6867	37885		24.46	Si
SLV 12	10.72	-2250.5	-7602	-6331	-2494	2.6928	2.6928	-8396	12096	9120	28547	33867	6867	37667		15.1	Si
SLV 7	8.96	-4116.62	-8177	-6809	1660	2.6928	2.529	-9656	12348	8744	28547	33867	6867	37290		22.46	Si
SLV 7	10.72	-2036.64	-6265	-5217	-2255	2.6928	2.6928	-6919	11800	8897	28547	33867	6867	37444		16.61	Si
SLV 11	8.96	-3560.75	-8989	-7485	1554	2.6928	2.6928	-9928	12402	9351	28547	33867	6867	37898		24.39	Si
SLV 11	10.72	-2289.33	-7642	-6364	-2484	2.6928	2.6928	-8440	12105	9127	28547	33867	6867	37673		15.17	Si
SLV 5	8.96	5027.9	-19216	-16001	903	2.6928	2.6928	-21222	14661	11054	28547	33867	6867	39601		43.83	Si
SLV 5	10.72	2969.56	-13946	-11613	4130	2.6928	2.6928	-15403	13497	10177	28547	33867	6867	38723		9.38	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 9.838 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 8	179667	0.44	10703	-8070	169.1	1050.64	6.21	Si
SLV 7	179667	0.44	10791	-8137	169.1	1058.64	6.26	Si
SLV 12	179667	0.44	11771	-8875	169.1	1146.74	6.78	Si
SLV 11	179667	0.44	11859	-8942	169.1	1154.61	6.83	Si
SLV 4	179667	0.44	13552	-10218	169.1	1303.58	7.71	Si
SLV 3	179667	0.44	13690	-10322	169.1	1315.56	7.78	Si
SLV 2	179667	0.44	17083	-12880	169.1	1601.51	9.47	Si
SLV 16	179667	0.44	17110	-12901	169.1	1603.78	9.48	Si
SLV 1	179667	0.44	17221	-12984	169.1	1612.82	9.54	Si
SLV 15	179667	0.44	17248	-13005	169.1	1615.08	9.55	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 9.838 Wa = 0.05 Ta = 0.0385

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-15324	-20028	-9	0.947	1830.2	0.957	14.39508	7.44316	Si
SLV 10	-15284	-19953	-9	0.95	1826.2	0.956	14.42818	7.44316	Si
SLV 5	-13946	-19216	5	1.026	1690.3	0.953	15.64325	7.44316	Si
SLV 6	-13906	-19141	5	1.029	1686.2	0.953	15.68284	7.44316	Si
SLV 13	-14254	-17133	-28	1.006	1721.5	0.954	15.32456	5.34906	Si
SLV 14	-14191	-17015	-28	1.01	1715.1	0.954	15.38385	5.34906	Si
SLV 15	-11949	-13821	-30	1.166	1487.5	0.948	17.88189	5.34906	Si
SLV 16	-11887	-13704	-30	1.171	1481.1	0.948	17.96379	5.34906	Si
SLV 11	-7642	-8989	-15	1.679	1051.4	0.93	26.22769	7.44316	Si
SLV 12	-7602	-8914	-15	1.686	1047.4	0.93	26.3424	7.44316	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	17.466	SLU 44	Si
V_SLU	15.825	SLU 72	Si
PF_SLV	2.981	SLV 7	Si
V_SLV	9.376	SLV 5	Si
PFFP_SLV	6.213	SLV 8	Si
R_SLV	1.934	SLV 9	Si

Maschio 181

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-3.384	-11.003	-0.691	Z medio 1150 cm	L7	2.693	0.28	0.981	1.765	0.196			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 5	12.28	720.72	-8089	-0.0000194	0.0003743	0.0035	2.6928	9743.46	10416.06	10416.06	14.45	No	Si
SLU 5	12.48	699.05	-7938	-0.000019	0.0003743	0.0035	2.6928	9582.4	10243.2	10243.2	14.65	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 44	12.28	806.72	-9324	-0.0000223	0.0003743	0.0035	2.6928	11028.76	11709.53	11709.53	14.51	No	Si
SLU 44	12.48	784.25	-9102	-0.0000218	0.0003743	0.0035	2.6928	10802.35	11500.25	11500.25	14.66	No	Si
SLU 68	12.28	938.59	-11068	-0.0000266	0.0003743	0.0035	2.6928	12753.25	13386.4	13386.4	14.26	No	Si
SLU 68	12.48	921.47	-10893	-0.0000261	0.0003743	0.0035	2.6928	12585.45	13216.38	13216.38	14.34	No	Si
SLU 49	12.28	882.07	-10562	-0.0000252	0.0003743	0.0035	2.6928	12264.54	12895.51	12895.51	14.62	No	Si
SLU 49	12.48	861.68	-10369	-0.0000247	0.0003743	0.0035	2.6928	12075.53	12709.11	12709.11	14.75	No	Si
SLU 72	12.28	977.23	-11622	-0.0000279	0.0003743	0.0035	2.6928	13279.39	13929.93	13929.93	14.25	No	Si
SLU 72	12.48	955.76	-11458	-0.0000275	0.0003743	0.0035	2.6928	13124.49	13768.23	13768.23	14.41	No	Si
SLU 9	12.28	759.37	-8644	-0.0000207	0.0003743	0.0035	2.6928	10327.56	11038.9	11038.9	14.54	No	Si
SLU 9	12.48	733.34	-8503	-0.0000203	0.0003743	0.0035	2.6928	10179.99	10884.96	10884.96	14.84	No	Si
SLU 50	12.28	869.95	-10415	-0.0000249	0.0003743	0.0035	2.6928	12119.98	12752.78	12752.78	14.66	No	Si
SLU 50	12.48	839.75	-10214	-0.0000243	0.0003743	0.0035	2.6928	11922.21	12559.27	12559.27	14.96	No	Si
SLU 47	12.28	873.49	-9915	-0.0000239	0.0003743	0.0035	2.6928	11625.76	12272.97	12272.97	14.05	No	Si
SLU 47	12.48	844.7	-9704	-0.0000233	0.0003743	0.0035	2.6928	11413.52	12070.69	12070.69	14.29	No	Si
SLU 51	12.28	912.14	-10470	-0.0000252	0.0003743	0.0035	2.6928	12174.31	12806.29	12806.29	14.04	No	Si
SLU 51	12.48	878.98	-10268	-0.0000246	0.0003743	0.0035	2.6928	11976.13	12611.82	12611.82	14.35	No	Si
SLU 65	12.28	871.82	-10476	-0.000025	0.0003743	0.0035	2.6928	12180.18	12812.07	12812.07	14.7	No	Si
SLU 65	12.48	861.02	-10292	-0.0000246	0.0003743	0.0035	2.6928	11999.36	12634.52	12634.52	14.67	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	12.28	-3005.43	-5257	-0.000024	0.0005615	0.0035	2.6928		8705.15	8705.15	2.9		Si
SLV 11	12.48	-1932.08	-5279	-0.0000189	0.0005615	0.0035	2.6928		8733.21	8733.21	4.52		Si
SLV 7	12.28	-2692.88	-4433	-0.0000212	0.0005615	0.0035	2.6928		7677.71	7677.71	2.85		Si
SLV 7	12.48	-1564.42	-4385	-0.0000154	0.0005615	0.0035	2.6928		7616.95	7616.95	4.87		Si
SLV 2	12.28	2182.98	-7415	-0.0000243	0.0005615	0.0035	2.6928		9851.2	9851.2	4.51		Si
SLV 2	12.48	1967.62	-7113	-0.0000227	0.0005615	0.0035	2.6928		9482.06	9482.06	4.82		Si
SLV 12	12.28	-2910.53	-5200	-0.0000234	0.0005615	0.0035	2.6928		8634.38	8634.38	2.97		Si
SLV 12	12.48	-1828.61	-5218	-0.0000183	0.0005615	0.0035	2.6928		8657.37	8657.37	4.73		Si
SLV 10	12.28	3842.49	-11380	-0.0000399	0.0005615	0.0035	2.6928		14540.79	14540.79	3.78		Si
SLV 10	12.48	2741.18	-11142	-0.0000345	0.0005615	0.0035	2.6928		14265.43	14265.43	5.2		Si
SLV 6	12.28	4155.04	-10556	-0.0000396	0.0005615	0.0035	2.6928		13588.79	13588.79	3.27		Si
SLV 6	12.48	3108.84	-10247	-0.0000342	0.0005615	0.0035	2.6928		13226.71	13226.71	4.25		Si
SLV 5	12.28	4060.14	-10613	-0.0000393	0.0005615	0.0035	2.6928		13655.09	13655.09	3.36		Si
SLV 5	12.48	3005.37	-10308	-0.0000339	0.0005615	0.0035	2.6928		13298.8	13298.8	4.43		Si
SLV 1	12.28	2034.37	-7505	-0.0000238	0.0005615	0.0035	2.6928		9959.31	9959.31	4.9		Si
SLV 1	12.48	1805.6	-7209	-0.0000222	0.0005615	0.0035	2.6928		9599.73	9599.73	5.32		Si
SLV 9	12.28	3747.59	-11438	-0.0000396	0.0005615	0.0035	2.6928		14606.7	14606.7	3.9		Si
SLV 9	12.48	2637.71	-11203	-0.0000341	0.0005615	0.0035	2.6928		14336.21	14336.21	5.44		Si
SLV 8	12.28	-2597.98	-4376	-0.0000205	0.0005615	0.0035	2.6928		7605.21	7605.21	2.93		Si
SLV 8	12.48	-1460.95	-4323	-0.0000149	0.0005615	0.0035	2.6928		7539.24	7539.24	5.16		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 50	12.28	869.95	-10415	-8672	348	2.6928	2.6928	-11502	8478	6392	9516	22578	6867	15908	No	45.76	Si
SLU 50	12.48	839.75	-10214	-8505	373	2.6928	2.6928	-11280	8448	6370	9516	22578	6867	15886	No	42.54	Si
SLU 65	12.28	871.82	-10476	-8724	358	2.6928	2.6928	-11570	8487	6399	9516	22578	6867	15915	No	44.44	Si
SLU 65	12.48	861.02	-10292	-8570	383	2.6928	2.6928	-11366	8460	6379	9516	22578	6867	15894	No	41.55	Si
SLU 46	12.28	815.3	-9971	-8303	337	2.6928	2.6928	-11012	8413	6343	9516	22578	6867	15859	No	47.11	Si
SLU 46	12.48	801.24	-9768	-8134	360	2.6928	2.6928	-10788	8383	6321	9516	22578	6867	15836	No	43.97	Si
SLU 51	12.28	912.14	-10470	-8719	360	2.6928	2.6928	-11563	8486	6399	9516	22578	6867	15914	No	44.18	Si
SLU 51	12.48	878.98	-10268	-8551	386	2.6928	2.6928	-11340	8456	6376	9516	22578	6867	15892	No	41.15	Si
SLU 68	12.28	938.59	-11068	-9216	355	2.6928	2.6928	-12223	8574	6465	9516	22578	6867	15980	No	45.03	Si
SLU 68	12.48	921.47	-10893	-9071	381	2.6928	2.6928	-12030	8549	6446	9516	22578	6867	15961	No	41.93	Si
SLU 43	12.28	736.41	-9231	-7687	354	2.6928	2.6928	-10195	8304	6261	9516	22578	6867	15777	No	44.56	Si
SLU 43	12.48	718.85	-9011	-7504	377	2.6928	2.6928	-9952	8271	6237	9516	22578	6867	15752	No	41.76	Si
SLU 44	12.28	806.72	-9324	-7764	375	2.6928	2.6928	-10297	8317	6271	9516	22578	6867	15787	No	42.09	Si
SLU 44	12.48	784.25	-9102	-7580	399	2.6928	2.6928	-10053	8285	6247	9516	22578	6867	15762	No	39.54	Si
SLU 64	12.28	801.5	-10384	-8647	337	2.6928	2.6928	-11468	8473	6389	9516	22578	6867	15904	No	47.18	Si
SLU 64	12.48	795.62	-10201	-8494	361	2.6928	2.6928	-11266	8447	6369	9516	22578	6867	15884	No	43.98	Si
SLU 47	12.28	873.49	-9915	-8257	372	2.6928	2.6928	-10950	8405	6337	9516	22578	6867	15852	No	42.63	Si
SLU 47	12.48	844.7	-9704	-8080	397	2.6928	2.6928	-10717	8373	6313	9516	22578	6867	15829	No	39.9	Si
SLU 72	12.28	977.23	-11622	-9678	343	2.6928	2.6928	-12836	8656	6526	9516	22578	6867	16042	No	46.73	Si
SLU 72	12.48	955.76	-11458	-9541	370	2.6928	2.6928	-12654	8632	6508	9516	22578	6867	16024	No	43.29	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	12.28	4155.04	-10556	-8790	4698	2.6928	2.6928	-11658	12748	9612	9516	33867	6867	19128		4.07	Si
SLV 6	12.48	3108.84	-10247	-8533	4484	2.6928	2.6928	-11317	12680	9561	9516	33867	6867	19076		4.25	Si
SLD 10	12.28	2011.4	-9425	-7849	2206	2.6928	2.6928	-10409	12499	9424	9516	33867	6867	18939		8.58	Si
SLD 10	12.48	1534.64	-9240	-7694	2112	2.6928	2.6928	-10205	12458	9393	9516	33867	6867	18908		8.95	Si
SLV 10	12.28	3842.49	-11380	-9477	4806	2.6928	2.6928	-12568	12930	9749	9516	33867	6867	19265		4.01	Si
SLV 10	12.48	2741.18	-11142	-9278	4568	2.6928	2.6928	-12305	12878	9710	9516	33867	6867	19225		4.21	Si
SLV 7	12.28	-2692.88	-4433	-3691	-4486	2.6928	2.2167	-5961	11609	7206	9516	33867	6867	16721		3.73	Si
SLV 7	12.48	-1564.42	-4385	-3651	-4211	2.6928	2.6928	-4843	11385	8584	9516	33867	6867	18100		4.3	Si
SLV 8	12.28	-2597.98	-4376	-3644	-4498	2.6928	2.258	-5777	11572	7316	9516	33867	6867	16832		3.74	Si
SLV 8	12.48	-1460.95	-4323	-3600	-4223	2.6928	2.6928	-4775	11372	8574	9516	33867	6867	18090		4.28	Si
SLD 9	12.28	1970	-9450	-7869	2212	2.6928	2.6928	-10437	12504	9428	9516	33867	6867	18944		8.56	Si
SLD 9	12.48	1489.5	-9267	-7717	2117	2.6928	2.6928	-10234	12464	9397	9516	33867	6867	18913		8.93	Si
SLV 9	12.28	3747.59	-11438	-9524	4819	2.6928	2.6928	-12632	12943	9759	9516	33867	6867	19274		4	Si
SLV 9	12.48	2637.71	-11203	-9329	4580	2.6928	2.6928	-12373	12891	9720	9516	33867	6867	19235		4.2	Si
SLV 11	12.28	-3005.43	-5257	-4377	-4377	2.6928	2.3241	-6746	11766	7657	9516	33867	6867	17172		3.92	Si
SLV 11	12.48	-1932.08	-5279	-4396	-4127	2.6928	2.6928	-5831	11583	8733	9516	33867	6867	18249		4.42	Si
SLV 5	12.28	4060.14	-10613	-8838	4711	2.6928	2.6928	-11722	12761	9622	9516	33867	6867	19137		4.06	Si
SLV 5	12.48	3005.37	-10308	-8584	4497	2.6928	2.6928	-11385	12694	9571	9516	33867	6867	19086		4.24	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	12.28	-2910.53	-5200	-4330	-4390	2.6928	2.36	-6571	11731	7752	9516	33867	6867	17267		3.93	Si
SLV 12	12.48	-1828.61	-5218	-4345	-4140	2.6928	2.6928	-5763	11569	8723	9516	33867	6867	18239		4.41	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 12.382 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 8	179667	0.49	5549	-4184	28.13	564.48	20.07	Si
SLV 7	179667	0.49	5629	-4244	28.13	572.25	20.34	Si
SLV 12	179667	0.49	6710	-5059	28.13	677.18	24.07	Si
SLV 11	179667	0.49	6789	-5119	28.13	684.82	24.34	Si
SLV 4	179667	0.49	7012	-5287	28.13	706.18	25.1	Si
SLV 3	179667	0.49	7136	-5381	28.13	718.09	25.53	Si
SLV 2	179667	0.49	9446	-7122	28.13	935.41	33.25	Si
SLV 1	179667	0.49	9570	-7216	28.13	946.89	33.66	Si
SLV 16	179667	0.49	10881	-8204	28.13	1066.78	37.92	Si
SLV 15	179667	0.49	11006	-8298	28.13	1078.02	38.32	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 12.382 Wa = 0.05 Ta = 0.0057

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-11203	-11438	394	1.392	1244.7	0.974	20.76592	4.43065	Si
SLV 10	-11142	-11380	394	1.398	1238.5	0.974	20.86501	4.43065	Si
SLV 13	-10191	-10252	1526	1.404	1141.7	0.972	20.99456	4.24514	Si
SLV 14	-10095	-10162	1527	1.415	1131.9	0.972	21.16723	4.24514	Si
SLV 5	-10308	-10613	-525	1.482	1153.6	0.972	22.15146	4.43065	Si
SLV 6	-10247	-10556	-524	1.49	1147.4	0.972	22.26761	4.43065	Si
SLV 15	-8414	-8398	1578	1.645	960.7	0.967	24.72467	4.24514	Si
SLV 16	-8318	-8308	1579	1.661	950.9	0.967	24.97342	4.24514	Si
SLV 1	-7209	-7505	-1536	1.881	838.1	0.963	28.39077	4.24514	Si
SLV 2	-7113	-7415	-1535	1.902	828.3	0.962	28.72757	4.24514	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	14.04	SLU 51	Si
V_SLU	39.54	SLU 44	Si
PF_SLV	2.851	SLV 7	Si
V_SLV	3.728	SLV 7	Si
PFFP_SLV	20.066	SLV 8	Si
R_SLV	4.687	SLV 9	Si

Maschio 183

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.708	3.176	-9.708	6.386	L6	L7	3.21	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	8.96	-1561.3	41132	0.0018934	0.0004492	0.0035	2.568	0	94795.61	94795.61	60.72	No	Si
SLU 82	12.48	7115.91	45724	0.0016035	0.0004492	0.0035	2.568	0	91555.68	91555.68	12.87	No	Si
SLU 75	8.96	-1490.44	39941	0.0018409	0.0004492	0.0035	2.568	0	95606.3	95606.3	64.15	No	Si
SLU 75	12.48	6982.53	44533	0.0015569	0.0004492	0.0035	2.568	0	92377.31	92377.31	13.23	No	Si
SLU 80	8.96	-1475.66	39903	0.0018404	0.0004492	0.0035	2.568	0	95629.78	95629.78	64.8	No	Si
SLU 80	12.48	7005.84	44495	0.0015529	0.0004492	0.0035	2.568	0	92403.3	92403.3	13.19	No	Si
SLU 81	8.96	-1621.57	41123	0.0018873	0.0004492	0.0035	2.568	0	94802.39	94802.39	58.46	No	Si
SLU 81	12.48	7073.92	45715	0.0016069	0.0004492	0.0035	2.568	0	91562.45	91562.45	12.94	No	Si
SLU 84	8.96	-1562.86	41341	0.0019036	0.0004492	0.0035	2.568	0	94651.57	94651.57	60.56	No	Si
SLU 84	12.48	7189.15	45933	0.001607	0.0004492	0.0035	2.568	0	91411.58	91411.58	12.72	No	Si
SLU 79	8.96	-1535.93	39894	0.0018343	0.0004492	0.0035	2.568	0	95635.89	95635.89	62.27	No	Si
SLU 79	12.48	6963.85	44486	0.0015563	0.0004492	0.0035	2.568	0	92410.07	92410.07	13.27	No	Si
SLU 76	8.96	-1433.93	39701	0.0018342	0.0004492	0.0035	2.568	0	95755.85	95755.85	66.78	No	Si
SLU 76	12.48	6960.6	44293	0.001547	0.0004492	0.0035	2.568	0	92542.88	92542.88	13.3	No	Si
SLU 78	8.96	-1491.99	40150	0.0018511	0.0004492	0.0035	2.568	0	95472.92	95472.92	63.99	No	Si
SLU 78	12.48	7055.77	44742	0.0015604	0.0004492	0.0035	2.568	0	92233.21	92233.21	13.07	No	Si
SLU 83	8.96	-1623.12	41331	0.0018975	0.0004492	0.0035	2.568	0	94658.34	94658.34	58.32	No	Si
SLU 83	12.48	7147.16	45923	0.0016104	0.0004492	0.0035	2.568	0	91418.36	91418.36	12.79	No	Si
SLU 77	8.96	-1552.26	40140	0.001845	0.0004492	0.0035	2.568	0	95479.69	95479.69	61.51	No	Si
SLU 77	12.48	7013.78	44732	0.0015638	0.0004492	0.0035	2.568	0	92239.99	92239.99	13.15	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	8.96	-6077.1	26039	0.0007275	0.0006738	0.0035	2.568		109004.39	109004.39	17.94		Si
SLV 7	12.48	2129.58	29732	0.0012737	0.0006738	0.0035	2.568		106484.7	106484.7	50		Si
SLV 9	8.96	3891.58	29366	0.0010926	0.0006738	0.0035	2.568		106727.48	106727.48	27.43		Si
SLV 9	12.48	7387.08	32664	0.0009323	0.0006738	0.0035	2.568		104509.65	104509.65	14.15		Si
SLV 11	8.96	-6007.23	28386	0.0008502	0.0006738	0.0035	2.568		107448.63	107448.63	17.89		Si
SLV 11	12.48	2439.44	32067	0.0013606	0.0006738	0.0035	2.568		104935.74	104935.74	43.02		Si
SLV 5	8.96	3821.71	27019	0.000983	0.0006738	0.0035	2.568		108283.81	108283.81	28.33		Si
SLV 5	12.48	7077.23	30328	0.0008454	0.0006738	0.0035	2.568		106089.01	106089.01	14.99		Si
SLV 10	8.96	3994.38	29402	0.0010849	0.0006738	0.0035	2.568		106703.41	106703.41	26.71		Si
SLV 10	12.48	7502.43	32700	0.0009234	0.0006738	0.0035	2.568		104483.35	104483.35	13.93		Si
SLV 14	8.96	640.4	31807	0.0015142	0.0006738	0.0035	2.568		105108.29	105108.29	164.13		Si
SLV 14	12.48	6164.89	35226	0.0011721	0.0006738	0.0035	2.568		102652.05	102652.05	16.65		Si
SLV 13	8.96	479.44	31750	0.0015263	0.0006738	0.0035	2.568		105145.98	105145.98	219.31		Si
SLV 13	12.48	5984.27	35170	0.001186	0.0006738	0.0035	2.568		102693.23	102693.23	17.16		Si
SLD 10	8.96	1172.92	28434	0.001298	0.0006738	0.0035	2.568		107345.72	107345.72	91.52		Si
SLD 10	12.48	5988.54	31843	0.0010211	0.0006738	0.0035	2.568		105084.79	105084.79	17.55		Si
SLV 6	8.96	3924.5	27055	0.0009752	0.0006738	0.0035	2.568		108259.74	108259.74	27.59		Si
SLV 6	12.48	7192.57	30365	0.0008365	0.0006738	0.0035	2.568		106064.95	106064.95	14.75		Si
SLD 9	8.96	1128.08	28418	0.0013014	0.0006738	0.0035	2.568		107356.22	107356.22	95.17		Si
SLD 9	12.48	5938.23	31827	0.0010249	0.0006738	0.0035	2.568		105095.29	105095.29	17.7		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	8.96	-1561.3	41132	24151	-2465	2.568	3.21	0	0	0	72726	14766	13097	27863	No	11.3	Si
SLU 82	12.48	7115.91	45724	26847	-2465	2.568	3.21	0	0	0	72726	14766	13097	27863	No	11.3	Si
SLU 79	8.96	-1535.93	39894	23424	-2415	2.568	3.21	0	0	0	72726	14766	13097	27863	No	11.54	Si
SLU 79	12.48	6963.85	44486	26120	-2415	2.568	3.21	0	0	0	72726	14766	13097	27863	No	11.54	Si
SLU 84	8.96	-1562.86	41341	24274	-2486	2.568	3.21	0	0	0	72726	14766	13097	27863	No	11.21	Si
SLU 84	12.48	7189.15	45933	26970	-2486	2.568	3.21	0	0	0	72726	14766	13097	27863	No	11.21	Si
SLU 81	8.96	-1621.57	41123	24145	-2470	2.568	3.21	0	0	0	72726	14766	13097	27863	No	11.28	Si
SLU 81	12.48	7073.92	45715	26842	-2470	2.568	3.21	0	0	0	72726	14766	13097	27863	No	11.28	Si
SLU 75	8.96	-1490.44	39941	23452	-2407	2.568	3.21	0	0	0	72726	14766	13097	27863	No	11.58	Si
SLU 75	12.48	6982.53	44533	26148	-2407	2.568	3.21	0	0	0	72726	14766	13097	27863	No	11.58	Si
SLU 74	8.96	-1550.7	39931	23446	-2412	2.568	3.21	0	0	0	72726	14766	13097	27863	No	11.55	Si
SLU 74	12.48	6940.54	44523	26142	-2412	2.568	3.21	0	0	0	72726	14766	13097	27863	No	11.55	Si
SLU 80	8.96	-1475.66	39903	23430	-2410	2.568	3.21	0	0	0	72726	14766	13097	27863	No	11.56	Si
SLU 80	12.48	7005.84	44495	26126	-2410	2.568	3.21	0	0	0	72726	14766	13097	27863	No	11.56	Si
SLU 78	8.96	-1491.99	40150	23574	-2428	2.568	3.21	0	0	0	72726	14766	13097	27863	No	11.47	Si
SLU 78	12.48	7055.77	44742	26271	-2428	2.568	3.21	0	0	0	72726	14766	13097	27863	No	11.47	Si
SLU 77	8.96	-1552.26	40140	23569	-2434	2.568	3.21	0	0	0	72726	14766	13097	27863	No	11.45	Si
SLU 77	12.48	7013.78	44732	26265	-2434	2.568	3.21	0	0	0	72726	14766	13097	27863	No	11.45	Si
SLU 83	8.96	-1623.12	41331	24268	-2492	2.568	3.21	0	0	0	72726	14766	13097	27863	No	11.18	Si
SLU 83	12.48	7147.16	45923	26964	-2492	2.568	3.21	0	0	0	72726	14766	13097	27863	No	11.18	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	8.96	-5904.43	28422	16688	-1728	2.568	3.21	0	0	0	72726	22149	13097	35246		20.4	Si
SLV 12	12.48	2554.78	32104	18850	-2788	2.568	3.21	0	0	0	72726	22149	13097	35246		12.64	Si
SLV 8	8.96	-5974.31	26076	15311	-1659	2.568	3.21	0	0	0	72726	22149	13097	35246		21.24	Si
SLV 8	12.48	2244.92	29768	17478	-2724	2.568	3.21	0	0	0	72726	22149	13097	35246		12.94	Si
SLD 12	8.96	-3185.12	28004	16443	-1693	2.568	3.21	0	0	0	72726	22149	13097	35246		20.82	Si
SLD 12	12.48	3824.51	31581	18543	-2161	2.568	3.21	0	0	0	72726	22149	13097	35246		16.31	Si
SLV 11	8.96	-6007.23	28386	16667	-1724	2.568	3.21	0	0	0	72726	22149	13097	35246		20.44	Si
SLV 11	12.48	2439.44	32067	18828	-2785	2.568	3.21	0	0	0	72726	22149	13097	35246		12.66	Si
SLV 16	8.96	-2329.24	31513	18503	-1790	2.568	3.21	0	0	0	72726	22149	13097	35246		19.69	Si
SLV 16	12.48	4680.59	35047	20578	-2102	2.568	3.21	0	0	0	72726	22149	13097	35246		16.77	Si
SLD 7	8.96	-3255.64	27008	15858	-1661	2.568	3.21	0	0	0	72726	22149	13097	35246		21.21	Si
SLD 7	12.48	3643.46	30589	17961	-2131	2.568	3.21	0	0	0	72726	22149	13097	35246		16.54	Si
SLD 11	8.96	-3229.96	27988	16433	-1692	2.568	3.21	0	0	0	72726	22149	13097	35246		20.84	Si
SLD 11	12.48	3774.19	31565	18533	-2160	2.568	3.21	0	0	0	72726	22149	13097	35246		16.32	Si
SLV 7	8.96	-6077.1	26039	15289	-1656	2.568	3.21	0	0	0	72726	22149	13097	35246		21.29	Si
SLV 7	12.48	2129.58	29732	17457	-2720	2.568	3.21	0	0	0	72726	22149	13097	35246		12.96	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 8	8.96	-3210.8	27024	15867	-1663	2.568	3.21	0	0	0	72726	22149	13097	35246		21.19	Si
SLD 8	12.48	3693.78	30605	17970	-2133	2.568	3.21	0	0	0	72726	22149	13097	35246		16.53	Si
SLV 15	8.96	-2490.21	31456	18470	-1784	2.568	3.21	0	0	0	72726	22149	13097	35246		19.75	Si
SLV 15	12.48	4499.98	34991	20545	-2096	2.568	3.21	0	0	0	72726	22149	13097	35246		16.82	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.72 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 14	33514	0.46	238.05	0	12156.22	6078.11	25.53	Si
SLV 13	33457	0.46	238.05	0	12159.55	6079.78	25.54	Si
SLV 16	33266	0.46	238.05	0	12170.79	6085.4	25.56	Si
SLV 15	33209	0.46	238.05	0	12174.12	6087.06	25.57	Si
SLV 3	25424	0.46	238.05	0	12297.82	6148.91	25.83	Si
SLV 10	31069	0.46	238.05	0	12299.44	6149.72	25.83	Si
SLV 4	25480	0.46	238.05	0	12300.57	6150.28	25.84	Si
SLV 9	31032	0.46	238.05	0	12301.43	6150.71	25.84	Si
SLV 1	25672	0.46	238.05	0	12309.84	6154.92	25.86	Si
SLV 2	25729	0.46	238.05	0	12312.58	6156.29	25.86	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	32700	29402	194	1.166	331.7	1	16.94608	19.04959	No, Trazione
SLV 9	32664	29366	194	1.168	331.7	1	16.96781	19.04959	No, Trazione
SLV 12	32104	28422	170	1.193	331.7	1	17.33398	19.04959	No, Trazione
SLV 11	32067	28386	170	1.194	331.7	1	17.35664	19.04959	No, Trazione
SLV 6	30365	27055	-173	1.272	331.7	1	18.48503	19.04959	No, Trazione
SLV 5	30328	27019	-173	1.274	331.7	1	18.51069	19.04959	No, Trazione
SLV 8	29768	26076	-197	1.3	331.7	1	18.88996	19.04959	No, Trazione
SLV 7	29732	26039	-197	1.302	331.7	1	18.91675	19.04959	No, Trazione
SLV 14	35226	31807	615	1.044	331.7	1	15.17263	14.73654	Si, Trazione
SLV 13	35170	31750	615	1.046	331.7	1	15.20082	14.73654	Si, Trazione

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	12.715	SLU 84	Si
V_SLU	11.183	SLU 83	Si
PF_SLV	13.927	SLV 10	Si
V_SLV	12.64	SLV 12	Si
PFFP_SLV	25.533	SLV 14	Si
R_SLV	0.89	SLV 10	No

Maschio 186

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.333	-3.314	-11.003	-3.314	L6	L7	1.67	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 32	8.96	270.21	-8191	-0.00003	0.0003743	0.0035	1.67	5662.62	5973.98	5973.98	22.11	No	Si
SLU 32	11.06	-1062.55	-8212	-0.0000396	0.0003743	0.0035	1.67	5674.49	6678.66	6678.66	6.29	No	Si
SLU 41	8.96	271.01	-8283	-0.0000303	0.0003743	0.0035	1.67	5712.94	6033.2	6033.2	22.26	No	Si
SLU 41	11.06	-1074.14	-8358	-0.0000403	0.0003743	0.0035	1.67	5753.68	6771.86	6771.86	6.3	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 39	8.96	288.93	-7932	-0.0000294	0.0003743	0.0035	1.67	5519.83	5808.56	5808.56	20.1	No	Si
SLU 39	11.06	-1058.23	-7996	-0.0000388	0.0003743	0.0035	1.67	5555.57	6540.15	6540.15	6.18	No	Si
SLU 35	8.96	252.29	-8541	-0.000031	0.0003743	0.0035	1.67	5852.56	6200.11	6200.11	24.58	No	Si
SLU 35	11.06	-1078.46	-8574	-0.0000411	0.0003743	0.0035	1.67	5869.86	6908.59	6908.59	6.41	No	Si
SLU 36	8.96	256.24	-8542	-0.0000311	0.0003743	0.0035	1.67	5852.63	6200.2	6200.2	24.2	No	Si
SLU 36	11.06	-1079.79	-8566	-0.0000411	0.0003743	0.0035	1.67	5865.54	6903.51	6903.51	6.39	No	Si
SLU 42	8.96	274.96	-8283	-0.0000304	0.0003743	0.0035	1.67	5713.02	6033.29	6033.29	21.94	No	Si
SLU 42	11.06	-1075.47	-8350	-0.0000403	0.0003743	0.0035	1.67	5749.3	6766.71	6766.71	6.29	No	Si
SLU 33	8.96	274.17	-8191	-0.0000301	0.0003743	0.0035	1.67	5662.7	5974.07	5974.07	21.79	No	Si
SLU 33	11.06	-1063.88	-8204	-0.0000396	0.0003743	0.0035	1.67	5670.06	6673.46	6673.46	6.27	No	Si
SLU 34	8.96	260.77	-8117	-0.0000297	0.0003743	0.0035	1.67	5622.38	5926.98	5926.98	22.73	No	Si
SLU 34	11.06	-1022.23	-8076	-0.0000387	0.0003743	0.0035	1.67	5599.72	6591.23	6591.23	6.45	No	Si
SLU 40	8.96	292.89	-7932	-0.0000294	0.0003743	0.0035	1.67	5519.9	5808.65	5808.65	19.83	No	Si
SLU 40	11.06	-1059.56	-7988	-0.0000388	0.0003743	0.0035	1.67	5551.09	6534.98	6534.98	6.17	No	Si
SLU 31	8.96	278.7	-7767	-0.0000287	0.0003743	0.0035	1.67	5427.23	5703.29	5703.29	20.46	No	Si
SLU 31	11.06	-1006.32	-7715	-0.0000372	0.0003743	0.0035	1.67	5398.04	6361	6361	6.32	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	8.96	-1453.81	-6258	-0.0000369	0.0005615	0.0035	1.67		5546.04	5546.04	3.81		Si
SLV 9	11.06	937.54	-3370	-0.0000214	0.0005615	0.0035	1.67		2871.87	2871.87	3.06		Si
SLV 16	8.96	-2665.64	-10211	-0.000065	0.0005615	0.0035	1.67		8278.26	8278.26	3.11		Si
SLV 16	11.06	2184.81	-4309	-0.0000474	0.0005615	0.0035	1.67		3591.19	3591.19	1.64		Si
SLV 4	8.96	3147.47	-4963	-0.0000922	0.0005615	0.0035	1.67		4084.01	4084.01	1.3		Si
SLV 4	11.06	-3956.61	-9941	-0.0000844	0.0005615	0.0035	1.67		8101.18	8101.18	2.05		Si
SLV 10	8.96	-1548	-6287	-0.0000381	0.0005615	0.0035	1.67		5566.85	5566.85	3.6		Si
SLV 10	11.06	1011.01	-3250	-0.0000219	0.0005615	0.0035	1.67		2779.34	2779.34	2.75		Si
SLV 1	8.96	2859.45	-3958	-0.0001355	0.0005615	0.0035	1.67		3324.3	3324.3	1.16		Si
SLV 1	11.06	-3611.74	-8714	-0.0000764	0.0005615	0.0035	1.67		7269.76	7269.76	2.01		Si
SLV 15	8.96	-2518.15	-10165	-0.000063	0.0005615	0.0035	1.67		8248.86	8248.86	3.28		Si
SLV 15	11.06	2069.76	-4496	-0.0000431	0.0005615	0.0035	1.67		3732.12	3732.12	1.8		Si
SLV 2	8.96	2711.96	-4004	-0.000095	0.0005615	0.0035	1.67		3359.2	3359.2	1.24		Si
SLV 2	11.06	-3496.7	-8527	-0.0000738	0.0005615	0.0035	1.67		7143.24	7143.24	2.04		Si
SLV 14	8.96	-3101.15	-9251	-0.0000677	0.0005615	0.0035	1.67		7636.34	7636.34	2.46		Si
SLV 14	11.06	2644.72	-2895	-0.0027999	0.0005615	0.0035	1.336		2501.75	2501.75	0.95		No
SLV 13	8.96	-2953.66	-9206	-0.0000654	0.0005615	0.0035	1.67		7605.19	7605.19	2.57		Si
SLV 13	11.06	2529.68	-3082	-0.0005943	0.0005615	0.0035	1.336		2647.82	2647.82	1.05		Si
SLV 3	8.96	3294.96	-4918	-0.0001131	0.0005615	0.0035	1.67		4049.85	4049.85	1.23		Si
SLV 3	11.06	-4071.66	-10128	-0.0000869	0.0005615	0.0035	1.67		8224.62	8224.62	2.02		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	8.96	189.7	-10390	-8652	666	1.67	1.67	-18503	9412	4401	40441	14002	4259	18261	No	27.4	Si
SLU 77	11.06	-1161.43	-10011	-8337	1658	1.67	1.67	-17829	9322	4359	40441	14002	4259	18261	No	11.01	Si
SLU 84	8.96	212.38	-10132	-8437	644	1.67	1.67	-18043	9350	4372	40441	14002	4259	18261	No	28.38	Si
SLU 84	11.06	-1158.43	-9787	-8150	1643	1.67	1.67	-17430	9268	4334	40441	14002	4259	18261	No	11.11	Si
SLU 82	8.96	230.3	-9781	-8145	654	1.67	1.67	-17418	9267	4333	40441	14002	4259	18261	No	27.94	Si
SLU 82	11.06	-1142.52	-9426	-7849	1630	1.67	1.67	-16786	9183	4294	40441	14002	4259	18261	No	11.2	Si
SLU 75	8.96	211.58	-10040	-8360	673	1.67	1.67	-17879	9328	4362	40441	14002	4259	18261	No	27.13	Si
SLU 75	11.06	-1146.85	-9642	-8029	1650	1.67	1.67	-17171	9234	4318	40441	14002	4259	18261	No	11.07	Si
SLU 81	8.96	226.35	-9781	-8145	657	1.67	1.67	-17418	9267	4333	40441	14002	4259	18261	No	27.8	Si
SLU 81	11.06	-1141.19	-9434	-7856	1626	1.67	1.67	-16800	9185	4295	40441	14002	4259	18261	No	11.23	Si
SLU 79	8.96	173.67	-10317	-8591	636	1.67	1.67	-18372	9394	4393	40441	14002	4259	18261	No	28.73	Si
SLU 79	11.06	-1118.89	-9889	-8235	1598	1.67	1.67	-17610	9292	4345	40441	14002	4259	18261	No	11.42	Si
SLU 83	8.96	208.42	-10132	-8437	647	1.67	1.67	-18042	9350	4372	40441	14002	4259	18261	No	28.23	Si
SLU 83	11.06	-1157.1	-9796	-8157	1639	1.67	1.67	-17444	9270	4335	40441	14002	4259	18261	No	11.14	Si
SLU 80	8.96	177.62	-10317	-8591	632	1.67	1.67	-18372	9394	4393	40441	14002	4259	18261	No	28.87	Si
SLU 80	11.06	-1120.22	-9881	-8228	1603	1.67	1.67	-17596	9291	4344	40441	14002	4259	18261	No	11.39	Si
SLU 78	8.96	193.66	-10390	-8652	663	1.67	1.67	-18503	9412	4401	40441	14002	4259	18261	No	27.54	Si
SLU 78	11.06	-1162.76	-10003	-8330	1663	1.67	1.67	-17814	9320	4358	40441	14002	4259	18261	No	10.98	Si
SLU 74	8.96	207.63	-10039	-8360	676	1.67	1.67	-17878	9328	4362	40441	14002	4259	18261	No	27	Si
SLU 74	11.06	-1145.52	-9650	-8036	1645	1.67	1.67	-17185	9236	4319	40441	14002	4259	18261	No	11.1	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	8.96	3294.96	-4918	-4095	6103	1.67	0.4951	-30016	16250	2253	40441	21003	4259	25262		4.14	Si
SLV 3	11.06	-4071.66	-10128	-8433	5989	1.67	1.2989	-23456	15108	5495	40441	21003	4259	25262		4.22	Si
SLV 7	8.96	1741.81	-7882	-6564	2607	1.67	1.67	-14037	13224	6184	40441	21003	4259	25262		9.69	Si
SLV 7	11.06	-2437.95	-9772	-8138	3648	1.67	1.67	-17403	13897	6498	40441	21003	4259	25262		6.93	Si
SLV 16	8.96	-2665.64	-10211	-8503	-4961	1.67	1.67	-18183	14053	6571	40441	21003	4259	25262		5.09	Si
SLV 16	11.06	2184.81	-4309	-3588	-3189	1.67	0.9839	-7673	11951	3292	40441	21003	4259	25262		7.92	Si
SLV 13	8.96	-2953.66	-9206	-7666	-5034	1.67	1.5425	-17893	13995	6044	40441	21003	4259	25262		5.02	Si
SLV 13	11.06	2529.68	-3082	-2566	-3687	1.336	0.0426	0	0	0	40441	16803	3407	20209		5.48	Si
SLV 4	8.96	3147.47	-4963	-4133	5884	1.67	0.6026	-8839	12184	2056	40441	21003	4259	25262		4.29	Si
SLV 4	11.06	-3956.61	-9941	-8278	5772	1.67	1.311	-22805	14978	5498	40441	21003	4259	25262		4.38	Si
SLV 1	8.96	2859.45	-3958	-3296	5812	1.67	0.3379	-35460	16250	1537	40441	21003	4259	25262		4.35	Si
SLV 1	11.06	-3611.74	-8714	-7256	5275	1.67	1.2616	-20756	14568	5146	40441	21003	4259	25262		4.79	Si
SLV 8	8.96	1647.62	-7911	-6588	2467	1.67	1.67	-14088	13234	6188	40441	21003	4259	25262		10.24	Si
SLV 8	11.06	-2364.48	-9653	-8038	3509	1.67	1.67	-17190	13855	6479	40441	21003	4259	25262		7.2	Si
SLV 2	8.96	2711.96	-4004	-3334	5594	1.67	0.473	-25507	15518	2055	40441	21003	4259	25262		4.52	Si
SLV 2	11.06	-3496.7	-8527	-7100	5057	1.67	1.2748	-20079	14433	5152	40441	21003	4259	25262		5	Si
SLV 14	8.96	-3101.15	-9251	-7704	-5252	1.67	1.4994	-18489	14115	5926	40441	21003	4259	25262		4.81	Si
SLV 14	11.06	2644.72	-2895	-2411	-3904	1.336	0	0	0	0	40441	16803	3407	20209		5.18	Si
SLV 15	8.96	-2518.15	-10165	-8465	-4743	1.67	1.67	-18102	14037	6564	40441	21003	4259	25262		5.33	Si
SLV 15	11.06	2069.76	-4496	-3744	-2972	1.67	1.1239	-8006	12018	3782	40441	21003	4259	25262		8.5	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 14	179667	0.46	6720	-3142	204.82	420.55	2.05	Si
SLV 13	179667	0.46	7120	-3329	204.82	444.35	2.17	Si
SLV 10	179667	0.46	7446	-3482	204.82	463.7	2.26	Si
SLV 9	179667	0.46	7702	-3601	204.82	478.75	2.34	Si
SLV 16	179667	0.46	9783	-4575	204.82	599.42	2.93	Si
SLV 15	179667	0.46	10183	-4762	204.82	622.17	3.04	Si
SLV 6	179667	0.46	11071	-5177	204.82	672.19	3.28	Si
SLV 5	179667	0.46	11326	-5296	204.82	686.45	3.35	Si
SLV 12	179667	0.46	17658	-8257	204.82	1022.3	4.99	Si
SLV 11	179667	0.46	17913	-8376	204.82	1035.12	5.05	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-5075	-9485	266	1.439	753.5	0.92	22.74038	15.29191	Si
SLV 11	-5034	-9456	266	1.448	749.4	0.919	22.88806	15.29191	Si
SLV 8	-4711	-7911	353	1.507	717	0.917	23.89596	15.29191	Si
SLV 7	-4670	-7882	354	1.517	712.9	0.916	24.06058	15.29191	Si
SLV 10	-3346	-6287	-353	1.922	581.2	0.904	30.90584	15.29191	Si
SLV 9	-3305	-6258	-353	1.938	577.2	0.903	31.18056	15.29191	Si
SLV 6	-2981	-4713	-266	2.095	545.4	0.9	33.8296	15.29191	Si
SLV 5	-2940	-4684	-266	2.115	541.4	0.9	34.15452	15.29191	Si
SLV 16	-4907	-10211	-53	1.509	736.6	0.918	23.88712	8.07112	Si
SLV 15	-4842	-10165	-53	1.524	730.1	0.918	24.13834	8.07112	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.168	SLU 40	Si
V_SLU	10.983	SLU 78	Si
PF_SLV	0.946	SLV 14	No
V_SLV	4.14	SLV 3	Si
PFFP_SLV	2.053	SLV 14	Si
R_SLV	1.487	SLV 12	Si

Maschio 188

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.268	-3.314	-6.268	-0.194	L6	L7	3.12	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 45	8.96	2589.25	-12128	-0.000044	0.0004492	0.0035	3.12	15157.63	18041.81	18041.81	6.97	No	Si
SLU 45	11.06	-1117.04	-8217	-0.0000263	0.0004492	0.0035	3.12	11091.91	17474.09	17474.09	15.64	No	Si
SLU 46	8.96	2649.11	-12125	-0.0000443	0.0004492	0.0035	3.12	15155.19	18038.48	18038.48	6.81	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 46	11.06	-1107.95	-8189	-0.0000261	0.0004492	0.0035	3.12	11059.26	17435.51	17435.51	15.74	No	Si
SLU 44	8.96	2638.8	-11601	-0.0000428	0.0004492	0.0035	3.12	14655.32	17358.15	17358.15	6.58	No	Si
SLU 44	11.06	-1083.07	-7652	-0.0000246	0.0004492	0.0035	3.12	10439.02	16711.78	16711.78	15.43	No	Si
SLU 48	8.96	2659.46	-12440	-0.0000452	0.0004492	0.0035	3.12	15448.68	18442.19	18442.19	6.93	No	Si
SLU 48	11.06	-1197.56	-8485	-0.0000274	0.0004492	0.0035	3.12	11394.88	17834.49	17834.49	14.89	No	Si
SLU 5	8.96	2113.98	-9573	-0.0000348	0.0004492	0.0035	3.12	12590.58	14683.05	14683.05	6.95	No	Si
SLU 5	11.06	-841.85	-6441	-0.0000203	0.0004492	0.0035	3.12	8987.24	15080.88	15080.88	17.91	No	Si
SLU 51	8.96	2739.32	-12227	-0.000045	0.0004492	0.0035	3.12	15250.88	18169.34	18169.34	6.63	No	Si
SLU 51	11.06	-1250.18	-8205	-0.0000269	0.0004492	0.0035	3.12	11078.56	17458.3	17458.3	13.96	No	Si
SLU 50	8.96	2679.46	-12230	-0.0000447	0.0004492	0.0035	3.12	15253.31	18172.67	18172.67	6.78	No	Si
SLU 50	11.06	-1259.27	-8234	-0.000027	0.0004492	0.0035	3.12	11111.18	17496.88	17496.88	13.89	No	Si
SLU 47	8.96	2709.01	-11913	-0.000044	0.0004492	0.0035	3.12	14954.78	17766.3	17766.3	6.56	No	Si
SLU 47	11.06	-1163.59	-7919	-0.0000257	0.0004492	0.0035	3.12	10749.73	17072.18	17072.18	14.67	No	Si
SLU 43	8.96	2539.03	-11605	-0.0000423	0.0004492	0.0035	3.12	14659.5	17363.81	17363.81	6.84	No	Si
SLU 43	11.06	-1098.23	-7699	-0.0000248	0.0004492	0.0035	3.12	10494.71	16776.07	16776.07	15.28	No	Si
SLU 49	8.96	2719.32	-12438	-0.0000455	0.0004492	0.0035	3.12	15446.27	18438.85	18438.85	6.78	No	Si
SLU 49	11.06	-1188.47	-8456	-0.0000272	0.0004492	0.0035	3.12	11362.63	17795.92	17795.92	14.97	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 6	8.96	4322.3	-9836	-0.000046	0.0006738	0.0035	3.12		15265.13	15265.13	3.53		Si
SLD 6	11.06	-969.49	-5632	-0.0000188	0.0006738	0.0035	3.12		14027.06	14027.06	14.47		Si
SLV 9	8.96	7722.49	-11013	-0.0000685	0.0006738	0.0035	3.12		16872.74	16872.74	2.18		Si
SLV 9	11.06	-1945.15	-5212	-0.0000224	0.0006738	0.0035	3.12		13429.59	13429.59	6.9		Si
SLV 14	8.96	4666.9	-12081	-0.0000537	0.0006738	0.0035	3.12		18314.21	18314.21	3.92		Si
SLV 14	11.06	-1726.29	-7715	-0.0000278	0.0006738	0.0035	3.12		16941.11	16941.11	9.81		Si
SLV 13	8.96	4384.66	-12211	-0.0000526	0.0006738	0.0035	3.12		18487.1	18487.1	4.22		Si
SLV 13	11.06	-1819.02	-7886	-0.0000286	0.0006738	0.0035	3.12		17176.31	17176.31	9.44		Si
SLV 5	8.96	7174.69	-9764	-0.000063	0.0006738	0.0035	3.12		15165.69	15165.69	2.11		Si
SLV 5	11.06	-1447.05	-4230	-0.0000175	0.0006738	0.0035	3.12		12015.16	12015.16	8.3		Si
SLV 10	8.96	7902.73	-10930	-0.0000698	0.0006738	0.0035	3.12		16760.45	16760.45	2.12		Si
SLV 10	11.06	-1885.93	-5103	-0.0000219	0.0006738	0.0035	3.12		13273.2	13273.2	7.04		Si
SLV 6	8.96	7354.94	-9681	-0.0000644	0.0006738	0.0035	3.12		15051.53	15051.53	2.05		Si
SLV 6	11.06	-1387.83	-4122	-0.000017	0.0006738	0.0035	3.12		11858.17	11858.17	8.54		Si
SLD 9	8.96	4477.46	-10406	-0.0000483	0.0006738	0.0035	3.12		16049.22	16049.22	3.58		Si
SLD 9	11.06	-1208.31	-6098	-0.0000211	0.0006738	0.0035	3.12		14691.61	14691.61	12.16		Si
SLD 5	8.96	4243.67	-9872	-0.0000457	0.0006738	0.0035	3.12		15314.93	15314.93	3.61		Si
SLD 5	11.06	-995.32	-5679	-0.000019	0.0006738	0.0035	3.12		14094.64	14094.64	14.16		Si
SLD 10	8.96	4556.09	-10370	-0.0000486	0.0006738	0.0035	3.12		16000.24	16000.24	3.51		Si
SLD 10	11.06	-1182.48	-6051	-0.0000209	0.0006738	0.0035	3.12		14624.03	14624.03	12.37		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 47	8.96	2709.01	-11913	-6995	2816	3.12	3.12	-14012	10202	5093	115546	17940	15912	33852	No	12.02	Si
SLU 47	11.06	-1163.59	-7919	-4650	2934	3.12	3.12	-9314	9575	4780	115546	17940	15912	33852	No	11.54	Si
SLU 57	8.96	2705.75	-13525	-7941	2847	3.12	3.12	-15908	10454	5219	115546	17940	15912	33852	No	11.89	Si
SLU 57	11.06	-942.51	-9373	-5503	2916	3.12	3.12	-11024	9803	4894	115546	17940	15912	33852	No	11.61	Si
SLU 49	8.96	2719.32	-12438	-7303	2843	3.12	3.12	-14629	10284	5134	115546	17940	15912	33852	No	11.91	Si
SLU 49	11.06	-1188.47	-8456	-4965	2913	3.12	3.12	-9946	9659	4822	115546	17940	15912	33852	No	11.62	Si
SLU 51	8.96	2739.32	-12227	-7179	2912	3.12	3.12	-14382	10251	5117	115546	17940	15912	33852	No	11.63	Si
SLU 51	11.06	-1250.18	-8205	-4818	2982	3.12	3.12	-9651	9620	4802	115546	17940	15912	33852	No	11.35	Si
SLU 72	8.96	2704.8	-13510	-7933	2813	3.12	3.12	-15891	10452	5218	115546	17940	15912	33852	No	12.03	Si
SLU 72	11.06	-991.18	-9339	-5484	2883	3.12	3.12	-10985	9798	4891	115546	17940	15912	33852	No	11.74	Si
SLU 59	8.96	2725.74	-13314	-7818	2915	3.12	3.12	-15660	10421	5202	115546	17940	15912	33852	No	11.61	Si
SLU 59	11.06	-1004.22	-9122	-5356	2985	3.12	3.12	-10729	9764	4874	115546	17940	15912	33852	No	11.34	Si
SLU 80	8.96	2691.23	-14597	-8571	2817	3.12	3.12	-17169	10623	5303	115546	17940	15912	33852	No	12.02	Si
SLU 80	11.06	-745.23	-10256	-6022	2885	3.12	3.12	-12063	9942	4963	115546	17940	15912	33852	No	11.73	Si
SLU 50	8.96	2679.46	-12230	-7181	2898	3.12	3.12	-14385	10251	5117	115546	17940	15912	33852	No	11.68	Si
SLU 50	11.06	-1259.27	-8234	-4835	2896	3.12	3.12	-9685	9625	4805	115546	17940	15912	33852	No	11.69	Si
SLU 58	8.96	2665.88	-13317	-7819	2901	3.12	3.12	-15663	10422	5203	115546	17940	15912	33852	No	11.67	Si
SLU 58	11.06	-1013.31	-9151	-5373	2899	3.12	3.12	-10763	9768	4876	115546	17940	15912	33852	No	11.68	Si
SLU 55	8.96	2695.44	-13000	-7633	2819	3.12	3.12	-15291	10372	5178	115546	17940	15912	33852	No	12.01	Si
SLU 55	11.06	-917.64	-8836	-5188	2937	3.12	3.12	-10392	9719	4852	115546	17940	15912	33852	No	11.53	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 10	8.96	4556.09	-10370	-6089	4226	3.12	3.12	-12197	14939	7458	115546	26910	15912	42822		10.13	Si
SLD 10	11.06	-1182.48	-6051	-3553	4564	3.12	3.12	-7117	13923	6951	115546	26910	15912	42822		9.38	Si
SLD 6	8.96	4322.3	-9836	-5775	3925	3.12	3.12	-11569	14814	7395	115546	26910	15912	42822		10.91	Si
SLD 6	11.06	-969.49	-5632	-3307	4261	3.12	3.12	-6624	13825	6901	115546	26910	15912	42822		10.05	Si
SLV 14	8.96	4666.9	-12081	-7094	4644	3.12	3.12	-14210	15342	7659	115546	26910	15912	42822		9.22	Si
SLV 14	11.06	-1726.29	-7715	-4530	4877	3.12	3.12	-9075	14315	7146	115546	26910	15912	42822		8.78	Si
SLD 9	8.96	4477.46	-10406	-6110	4193	3.12	3.12	-12239	14948	7462	115546	26910	15912	42822		10.21	Si
SLD 9	11.06	-1208.31	-6098	-3581	4530	3.12	3.12	-7173	13935	6956	115546	26910	15912	42822		9.45	Si
SLV 6	8.96	7354.94	-9681	-5684	6342	3.12	2.4008	-11387	14777	5676	115546	26910	15912	42822		6.75	Si
SLV 6	11.06	-1387.83	-4122	-2420	7106	3.12	3.12	-4848	13470	6724	115546	26910	15912	42822		6.03	Si
SLV 13	8.96	4384.66	-12211	-7170	4524	3.12	3.12	-14362	15372	7674	115546	26910	15912	42822		9.47	Si
SLV 13	11.06	-1819.02	-7886	-4630	4756	3.12	3.12	-9275	14355	7166	115546	26910	15912	42822		9	Si
SLD 5	8.96	4243.67	-9872	-5796	3891	3.12	3.12	-11612	14822	7399	115546	26910	15912	42822		11.01	Si
SLD 5	11.06	-995.32	-5679	-3334	4227	3.12	3.12	-6680	13836	6907	115546	26910	15912	42822		10.13	Si
SLV 9	8.96	7722.49	-11013	-6466	6971	3.12	2.5764	-12954	15091	6221	115546	26910	15912	42822		6.14	Si
SLV 9	11.06	-1945.15	-5212	-3060	7738	3.12	3.12	-6130	13726	6852	115546	26910	15912	42822		5.53	Si
SLV 5	8.96	7174.69	-9764	-5733	6265	3.12	2.4755	-11484	14797	5861	115546	26910	15912	42822		6.84	Si
SLV 5	11.06	-1447.05	-4230	-2484	7029	3.12	3.12	-4976	13495	6737	115546	26910	15912	42822		6.09	Si
SLV 10	8.96	7902.73	-10930	-6418	7048	3.12	2.511	-12856	15071	6055	115546	26910	15912	42822		6.08	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	11.06	-1885.93	-5103	-2996	7815	3.12	3.12	-6002	13700	6839	115546	26910	15912	42822		5.48	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.72 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 6	-4926	0.46	231.38	372.87	707.47	540.17	2.33	Si
SLV 5	-5038	0.46	231.38	380.85	718.24	549.55	2.38	Si
SLV 2	-5048	0.46	231.38	381.57	719.21	550.39	2.38	Si
SLV 1	-5224	0.46	231.38	394.03	736.08	565.05	2.44	Si
SLV 10	-5909	0.46	231.38	442.2	802.02	622.11	2.69	Si
SLV 9	-6021	0.46	231.38	449.99	812.79	631.39	2.73	Si
SLV 4	-6163	0.46	231.38	459.83	826.31	643.07	2.78	Si
SLV 3	-6338	0.46	231.38	471.94	842.99	657.47	2.84	Si
SLV 14	-8325	0.46	231.38	605.4	1031.82	818.61	3.54	Si
SLV 13	-8500	0.46	231.38	616.85	1048.38	832.62	3.6	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-6110	-11013	202	2.28	873.9	0.924	35.8381	19.04959	Si
SLV 10	-6087	-10930	202	2.286	871.6	0.924	35.94817	19.04959	Si
SLV 5	-5205	-9764	-68	2.6	783	0.918	41.16977	19.04959	Si
SLV 6	-5182	-9681	-68	2.609	780.7	0.918	41.31363	19.04959	Si
SLV 13	-6732	-12211	470	2.079	936.5	0.928	32.53585	14.73654	Si
SLV 14	-6697	-12081	470	2.087	933	0.928	32.68051	14.73654	Si
SLV 11	-4852	-10204	68	2.742	747.7	0.915	43.54007	19.04959	Si
SLV 12	-4830	-10121	68	2.751	745.5	0.915	43.7005	19.04959	Si
SLV 15	-6355	-11968	429	2.181	898.5	0.926	34.23239	14.73654	Si
SLV 16	-6319	-11838	429	2.191	895	0.926	34.39206	14.73654	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.558	SLU 47	Si
V_SLU	11.342	SLU 59	Si
PF_SLV	2.046	SLV 6	Si
V_SLV	5.48	SLV 10	Si
PFFP_SLV	2.335	SLV 6	Si
R_SLV	1.881	SLV 9	Si

Maschio 190

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.413	-3.314	-8.433	-3.314	L6	L7	1.02	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 61	9.86	-565.64	-6383	-0.0000533	0.0003743	0.0035	1.02	2540.84	2980.91	2980.91	5.27	No	Si
SLU 61	11.66	-32.78	-4106	-0.0000229	0.0003743	0.0035	1.02	1798.35	2114.54	2114.54	64.51	No	Si
SLU 60	9.86	-569.73	-6402	-0.0000535	0.0003743	0.0035	1.02	2546.02	2987.37	2987.37	5.24	No	Si
SLU 60	11.66	-33.89	-4118	-0.000023	0.0003743	0.0035	1.02	1802.85	2119.59	2119.59	62.55	No	Si
SLU 20	9.86	-485.21	-5457	-0.0000451	0.0003743	0.0035	1.02	2260.68	2643.19	2643.19	5.45	No	Si
SLU 20	11.66	-27.1	-3617	-0.00002	0.0003743	0.0035	1.02	1615.35	1912.53	1912.53	70.58	No	Si
SLU 58	9.86	-580.93	-6782	-0.0000562	0.0003743	0.0035	1.02	2652.07	3121.26	3121.26	5.37	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 58	11.66	-58.07	-4445	-0.0000255	0.0003743	0.0035	1.02	1920.34	2252.56	2252.56	38.79	No	Si
SLU 18	9.86	-460.16	-5181	-0.0000427	0.0003743	0.0035	1.02	2171.42	2540.25	2540.25	5.52	No	Si
SLU 18	11.66	-23.86	-3397	-0.0000187	0.0003743	0.0035	1.02	1530.15	1819.93	1819.93	76.26	No	Si
SLU 59	9.86	-576.84	-6764	-0.000056	0.0003743	0.0035	1.02	2647.13	3114.95	3114.95	5.4	No	Si
SLU 59	11.66	-56.96	-4433	-0.0000254	0.0003743	0.0035	1.02	1915.99	2247.59	2247.59	39.46	No	Si
SLU 21	9.86	-481.13	-5439	-0.0000449	0.0003743	0.0035	1.02	2254.89	2636.38	2636.38	5.48	No	Si
SLU 21	11.66	-25.99	-3605	-0.0000199	0.0003743	0.0035	1.02	1610.63	1907.38	1907.38	73.4	No	Si
SLU 63	9.86	-590.7	-6659	-0.0000558	0.0003743	0.0035	1.02	2618.45	3078.47	3078.47	5.21	No	Si
SLU 63	11.66	-36.01	-4326	-0.0000242	0.0003743	0.0035	1.02	1878.07	2204.49	2204.49	61.22	No	Si
SLU 62	9.86	-594.79	-6678	-0.000056	0.0003743	0.0035	1.02	2623.46	3084.82	3084.82	5.19	No	Si
SLU 62	11.66	-37.12	-4338	-0.0000243	0.0003743	0.0035	1.02	1882.47	2209.49	2209.49	59.53	No	Si
SLU 55	9.86	-549.06	-6476	-0.0000533	0.0003743	0.0035	1.02	2567.1	3013.74	3013.74	5.49	No	Si
SLU 55	11.66	-52.99	-4204	-0.000024	0.0003743	0.0035	1.02	1834.11	2154.79	2154.79	40.66	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	9.86	-1497.68	-4378	-0.0000975	0.0005615	0.0035	0.816		2294.73	2294.73	1.53		Si
SLV 10	11.66	847.5	-992	-0.0086086	0.0005615	0.0035	0.816		563.99	563.99	0.67		No
SLV 3	9.86	1930.48	-2959	-0.013055	0.0005615	0.0035	0.816		1496.3	1496.3	0.78		No
SLV 3	11.66	-1431.29	-5126	-0.0000822	0.0005615	0.0035	0.816		2613.98	2613.98	1.83		Si
SLV 1	9.86	1632.56	-2270	-0.0134057	0.0005615	0.0035	0.816		1176.68	1176.68	0.72		No
SLV 1	11.66	-1091.99	-4034	-0.0000614	0.0005615	0.0035	0.816		2145.01	2145.01	1.96		Si
SLV 9	9.86	-1442.23	-4394	-0.0000899	0.0005615	0.0035	0.816		2301.65	2301.65	1.6		Si
SLV 9	11.66	801.99	-1130	-0.0058162	0.0005615	0.0035	0.816		631.46	631.46	0.79		No
SLV 13	9.86	-2539.03	-6782	-0.0002032	0.0005615	0.0035	0.816		3289.78	3289.78	1.3		Si
SLV 13	11.66	1193.02	-1586	-0.0104067	0.0005615	0.0035	0.816		851.92	851.92	0.71		No
SLV 2	9.86	1545.73	-2245	-0.0116407	0.0005615	0.0035	0.816		1165.03	1165.03	0.75		No
SLV 2	11.66	-1020.74	-3818	-0.0000571	0.0005615	0.0035	1.02		2050.93	2050.93	2.01		Si
SLV 4	9.86	1843.65	-2935	-0.011314	0.0005615	0.0035	0.816		1484.89	1484.89	0.81		No
SLV 4	11.66	-1360.04	-4909	-0.0000777	0.0005615	0.0035	0.816		2522.35	2522.35	1.85		Si
SLV 14	9.86	-2625.86	-6757	-0.0002307	0.0005615	0.0035	0.816		3280.04	3280.04	1.25		Si
SLV 14	11.66	1264.27	-1369	-0.0144852	0.0005615	0.0035	0.816		747.96	747.96	0.59		No
SLV 16	9.86	-2327.95	-7446	-0.000147	0.0005615	0.0035	0.816		3547.63	3547.63	1.52		Si
SLV 16	11.66	924.97	-2461	-0.0000672	0.0005615	0.0035	1.02		1265.77	1265.77	1.37		Si
SLV 15	9.86	-2241.12	-7471	-0.0001376	0.0005615	0.0035	0.816		3557.17	3557.17	1.59		Si
SLV 15	11.66	853.72	-2677	-0.0000506	0.0005615	0.0035	1.02		1366.35	1366.35	1.6		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 57	9.86	-565.78	-6865	-5716	-682	1.02	1.02	-20015	9613	2745	40441	8552	2601	11153	No	16.35	Si
SLU 57	11.66	-73.23	-4556	-3794	-310	1.02	1.02	-13284	8716	2489	40441	8552	2601	11153	No	36.01	Si
SLU 59	9.86	-576.84	-6764	-5632	-708	1.02	1.02	-19721	9574	2734	40441	8552	2601	11153	No	15.76	Si
SLU 59	11.66	-56.96	-4433	-3691	-332	1.02	1.02	-12924	8668	2475	40441	8552	2601	11153	No	33.64	Si
SLU 63	9.86	-590.7	-6659	-5545	-721	1.02	1.02	-19417	9533	2723	40441	8552	2601	11153	No	15.46	Si
SLU 63	11.66	-36.01	-4326	-3602	-385	1.02	1.02	-12614	8626	2464	40441	8552	2601	11153	No	28.95	Si
SLU 62	9.86	-594.79	-6678	-5560	-726	1.02	1.02	-19469	9540	2725	40441	8552	2601	11153	No	15.37	Si
SLU 62	11.66	-37.12	-4338	-3613	-384	1.02	1.02	-12649	8631	2465	40441	8552	2601	11153	No	29.01	Si
SLU 55	9.86	-549.06	-6476	-5392	-670	1.02	1.02	-18881	9462	2702	40441	8552	2601	11153	No	16.64	Si
SLU 55	11.66	-52.99	-4204	-3501	-324	1.02	1.02	-12258	8579	2450	40441	8552	2601	11153	No	34.42	Si
SLU 53	9.86	-544.81	-6607	-5501	-652	1.02	1.02	-19263	9513	2717	40441	8552	2601	11153	No	17.1	Si
SLU 53	11.66	-71.11	-4348	-3621	-301	1.02	1.02	-12678	8635	2466	40441	8552	2601	11153	No	37.05	Si
SLU 61	9.86	-565.64	-6383	-5316	-687	1.02	1.02	-18612	9426	2692	40441	8552	2601	11153	No	16.24	Si
SLU 61	11.66	-32.78	-4106	-3419	-377	1.02	1.02	-11972	8541	2439	40441	8552	2601	11153	No	29.57	Si
SLU 56	9.86	-569.87	-6883	-5731	-687	1.02	1.02	-20068	9620	2748	40441	8552	2601	11153	No	16.24	Si
SLU 56	11.66	-74.34	-4569	-3804	-309	1.02	1.02	-13320	8720	2491	40441	8552	2601	11153	No	36.09	Si
SLU 58	9.86	-580.93	-6782	-5647	-712	1.02	1.02	-19774	9581	2736	40441	8552	2601	11153	No	15.66	Si
SLU 58	11.66	-58.07	-4445	-3701	-331	1.02	1.02	-12960	8672	2477	40441	8552	2601	11153	No	33.71	Si
SLU 60	9.86	-569.73	-6402	-5331	-691	1.02	1.02	-18665	9433	2694	40441	8552	2601	11153	No	16.13	Si
SLU 60	11.66	-33.89	-4118	-3429	-376	1.02	1.02	-12007	8545	2441	40441	8552	2601	11153	No	29.63	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	9.86	1545.73	-2245	-1870	2732	0.816	0	0	0	0	40441	10263	2081	12343		4.52	Si
SLV 2	11.66	-1020.74	-3818	-3179	1192	1.02	0.7279	-15716	13560	2764	40441	12828	2601	15429		12.95	Si
SLV 14	9.86	-2625.86	-6757	-5627	-4280	0.816	0.3642	0	0	0	40441	10263	2081	12343		2.88	Si
SLV 14	11.66	1264.27	-1369	-1140	-2226	0.816	0	0	0	0	40441	10263	2081	12343		5.55	Si
SLV 10	9.86	-1497.68	-4378	-3646	-2498	0.816	0.5038	0	0	0	40441	10263	2081	12343		4.94	Si
SLV 10	11.66	847.5	-992	-826	-1684	0.816	0	0	0	0	40441	10263	2081	12343		7.33	Si
SLV 15	9.86	-2241.12	-7471	-6221	-3512	0.816	0.6301	0	0	0	40441	10263	2081	12343		3.51	Si
SLV 15	11.66	853.72	-2677	-2229	-1510	1.02	0.5733	-7806	11978	1923	40441	12828	2601	15429		10.22	Si
SLV 16	9.86	-2327.95	-7446	-6201	-3678	0.816	0.5921	0	0	0	40441	10263	2081	12343		3.36	Si
SLV 16	11.66	924.97	-2461	-2049	-1645	1.02	0.4023	-7175	11852	1335	40441	12828	2601	15429		9.38	Si
SLV 13	9.86	-2539.03	-6782	-5647	-4114	0.816	0.4068	0	0	0	40441	10263	2081	12343		3	Si
SLV 13	11.66	1193.02	-1586	-1320	-2091	0.816	0	0	0	0	40441	10263	2081	12343		5.9	Si
SLV 4	9.86	1843.65	-2935	-2444	3334	0.816	0	0	0	0	40441	10263	2081	12343		3.7	Si
SLV 4	11.66	-1360.04	-4909	-4088	1773	0.816	0.6989	0	0	0	40441	10263	2081	12343		6.96	Si
SLV 9	9.86	-1442.23	-4394	-3659	-2393	0.816	0.5453	0	0	0	40441	10263	2081	12343		5.16	Si
SLV 9	11.66	801.99	-1130	-941	-1597	0.816	0	0	0	0	40441	10263	2081	12343		7.73	Si
SLV 1	9.86	1632.56	-2270	-1890	2897	0.816	0	0	0	0	40441	10263	2081	12343		4.26	Si
SLV 1	11.66	-1091.99	-4034	-3359	1327	0.816	0.7179	0	0	0	40441	10263	2081	12343		9.3	Si
SLV 3	9.86	1930.48	-2959	-2464	3499	0.816	0	0	0	0	40441	10263	2081	12343		3.53	Si
SLV 3	11.66	-1431.29	-5126	-4268	1908	0.816	0.6923	0	0	0	40441	10263	2081	12343		6.47	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.46	6548	-1870	125.1	250.61	2	Si
SLV 1	179667	0.46	6635	-1895	125.1	253.78	2.03	Si
SLV 4	179667	0.46	8895	-2541	125.1	334.96	2.68	Si
SLV 3	179667	0.46	8982	-2565	125.1	338.02	2.7	Si
SLV 6	179667	0.46	9336	-2666	125.1	350.46	2.8	Si
SLV 5	179667	0.46	9391	-2682	125.1	352.4	2.82	Si
SLV 10	179667	0.46	14058	-4015	125.1	510.35	4.08	Si
SLV 9	179667	0.46	14113	-4031	125.1	512.16	4.09	Si
SLV 8	179667	0.46	17159	-4901	125.1	608.99	4.87	Si
SLV 7	179667	0.46	17214	-4916	125.1	610.71	4.88	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-4417	-6554	-46	1.114	592.9	0.934	17.33786	15.29191	Si
SLV 8	-4294	-6446	-46	1.14	580.5	0.933	17.75731	15.29191	Si
SLV 11	-3769	-5538	-53	1.262	527.5	0.928	19.77097	15.29191	Si
SLV 12	-3646	-5429	-53	1.295	515.1	0.926	20.32093	15.29191	Si
SLV 3	-4246	-6481	-4	1.158	575.6	0.932	18.05292	8.07112	Si
SLV 4	-4053	-6312	-3	1.202	556.2	0.931	18.77179	8.07112	Si
SLV 5	-1669	-2871	53	2.259	318.3	0.898	36.57816	15.29191	Si
SLV 6	-1545	-2762	54	2.371	306.3	0.896	38.46906	15.29191	Si
SLV 1	-3422	-5376	26	1.366	492.5	0.924	21.49775	8.07112	Si
SLV 2	-3229	-5207	27	1.428	473.1	0.921	22.52845	8.07112	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.186	SLU 62	Si
V_SLU	15.366	SLU 62	Si
PF_SLV	0.592	SLV 14	No
V_SLV	2.884	SLV 14	Si
PFFP_SLV	2.003	SLV 2	Si
R_SLV	1.134	SLV 7	Si

Maschio 191

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.163	1.006	-5.163	5.686	L6	L7	4.68	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 56	8.96	-3105.63	-14536	-0.0000314	0.0004492	0.0035	4.68	28609.58	43444.32	43444.32	13.99	No	Si
SLU 56	12.48	264.79	-7575	-0.0000132	0.0004492	0.0035	4.68	16258.52	19075.08	19075.08	72.04	No	Si
SLU 58	8.96	-3058.36	-14154	-0.0000306	0.0004492	0.0035	4.68	27996.14	42670.95	42670.95	13.95	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 58	12.48	398.65	-7259	-0.000013	0.0004492	0.0035	4.68	15638.05	18394.09	18394.09	46.14	No	Si
SLU 66	8.96	-3078.13	-14480	-0.0000313	0.0004492	0.0035	4.68	28520.47	43331.4	43331.4	14.08	No	Si
SLU 66	12.48	251.08	-7558	-0.0000132	0.0004492	0.0035	4.68	16224.38	19037.46	19037.46	75.82	No	Si
SLU 45	8.96	-2905.03	-12891	-0.0000281	0.0004492	0.0035	4.68	25915.12	40114.3	40114.3	13.81	No	Si
SLU 45	12.48	146.09	-6792	-0.0000116	0.0004492	0.0035	4.68	14713.62	17389.75	17389.75	119.04	No	Si
SLU 43	8.96	-2799.6	-12196	-0.0000267	0.0004492	0.0035	4.68	24733.85	38705.85	38705.85	13.83	No	Si
SLU 43	12.48	193.05	-6133	-0.0000106	0.0004492	0.0035	4.68	13389.75	15972.05	15972.05	82.74	No	Si
SLU 53	8.96	-3047.47	-14222	-0.0000307	0.0004492	0.0035	4.68	28106.38	42809.23	42809.23	14.05	No	Si
SLU 53	12.48	177.9	-7233	-0.0000124	0.0004492	0.0035	4.68	15587.07	18338.38	18338.38	103.08	No	Si
SLU 48	8.96	-2963.19	-13205	-0.0000288	0.0004492	0.0035	4.68	26439.67	40749.39	40749.39	13.75	No	Si
SLU 48	12.48	232.98	-7134	-0.0000124	0.0004492	0.0035	4.68	15392.79	18126.45	18126.45	77.8	No	Si
SLU 71	8.96	-3089.01	-14412	-0.0000312	0.0004492	0.0035	4.68	28411.14	43193.11	43193.11	13.98	No	Si
SLU 71	12.48	471.83	-7584	-0.0000137	0.0004492	0.0035	4.68	16274.93	19093.17	19093.17	40.47	No	Si
SLU 50	8.96	-2915.92	-12823	-0.000028	0.0004492	0.0035	4.68	25800.23	39976.02	39976.02	13.71	No	Si
SLU 50	12.48	366.84	-6818	-0.0000122	0.0004492	0.0035	4.68	14765.18	17445.45	17445.45	47.56	No	Si
SLU 69	8.96	-3136.29	-14793	-0.0000319	0.0004492	0.0035	4.68	29019.54	43958.31	43958.31	14.02	No	Si
SLU 69	12.48	337.98	-7900	-0.0000139	0.0004492	0.0035	4.68	16890.14	19769.59	19769.59	58.49	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	8.96	-11308.1	-4414	-0.000161	0.0006738	0.0035	3.744		22458.86	22458.86	1.99		Si
SLV 7	12.48	-1408.02	-2244	-0.0000067	0.0006738	0.0035	4.68		17670.77	17670.77	12.55		Si
SLV 2	8.96	1886.1	-7350	-0.0000163	0.0006738	0.0035	4.68		18753.95	18753.95	9.94		Si
SLV 2	12.48	8562.51	-7267	-0.0000327	0.0006738	0.0035	4.68		18573.27	18573.27	2.17		Si
SLV 1	8.96	1380.49	-7112	-0.0000148	0.0006738	0.0035	4.68		18236.44	18236.44	13.21		Si
SLV 1	12.48	8026.73	-7002	-0.0000307	0.0006738	0.0035	4.68		17996.76	17996.76	2.24		Si
SLV 3	8.96	-4142.87	-4292	-0.0000162	0.0006738	0.0035	4.68		22191.81	22191.81	5.36		Si
SLV 3	12.48	5893.14	-5077	-0.0000224	0.0006738	0.0035	4.68		13763.18	13763.18	2.34		Si
SLV 16	8.96	-5959.17	-14156	-0.0000367	0.0006738	0.0035	4.68		43119.85	43119.85	7.24		Si
SLV 16	12.48	-7596.18	-3527	-0.0000669	0.0006738	0.0035	3.744		20507.89	20507.89	2.7		Si
SLV 15	8.96	-6464.78	-13919	-0.0000374	0.0006738	0.0035	4.68		42626.84	42626.84	6.59		Si
SLV 15	12.48	-8131.96	-3262	-0.000108	0.0006738	0.0035	3.744		19921.76	19921.76	2.45		Si
SLV 11	8.96	-12004.67	-7302	-0.0000551	0.0006738	0.0035	3.744		28745.3	28745.3	2.39		Si
SLV 11	12.48	-5615.55	-1700	-0.0001059	0.0006738	0.0035	3.744		16456.44	16456.44	2.93		Si
SLV 4	8.96	-3637.26	-4530	-0.0000153	0.0006738	0.0035	4.68		22712.69	22712.69	6.24		Si
SLV 4	12.48	6428.93	-5342	-0.0000245	0.0006738	0.0035	4.68		14348.44	14348.44	2.23		Si
SLV 8	8.96	-10985.21	-4566	-0.0001363	0.0006738	0.0035	3.744		22791.51	22791.51	2.07		Si
SLV 8	12.48	-1065.85	-2414	-0.0000063	0.0006738	0.0035	4.68		18045.09	18045.09	16.93		Si
SLV 12	8.96	-11681.78	-7454	-0.0000507	0.0006738	0.0035	3.744		29074.2	29074.2	2.49		Si
SLV 12	12.48	-5273.38	-1869	-0.0000849	0.0006738	0.0035	3.744		16834.14	16834.14	3.19		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 69	8.96	-3136.29	-14793	-8686	-957	4.68	4.68	-11600	9880	7398	115546	26910	23868	50778	No	53.05	Si
SLU 69	12.48	337.98	-7900	-4639	-672	4.68	4.68	-6195	9159	6858	115546	26910	23868	50778	No	75.61	Si
SLU 45	8.96	-2905.03	-12891	-7569	-1076	4.68	4.68	-10108	9681	7249	115546	26910	23868	50778	No	47.18	Si
SLU 45	12.48	146.09	-6792	-3988	-820	4.68	4.68	-5326	9043	6772	115546	26910	23868	50778	No	61.91	Si
SLU 46	8.96	-2817.28	-12944	-7600	-1014	4.68	4.68	-10150	9687	7253	115546	26910	23868	50778	No	50.1	Si
SLU 46	12.48	191.35	-6827	-4009	-755	4.68	4.68	-5353	9047	6774	115546	26910	23868	50778	No	67.24	Si
SLU 47	8.96	-2711.5	-12598	-7397	-998	4.68	4.68	-9878	9650	7226	115546	26910	23868	50778	No	50.89	Si
SLU 47	12.48	355.38	-6534	-3837	-738	4.68	4.68	-5124	9016	6752	115546	26910	23868	50778	No	68.8	Si
SLU 50	8.96	-2915.92	-12823	-7529	-1161	4.68	4.68	-10055	9674	7244	115546	26910	23868	50778	No	43.74	Si
SLU 50	12.48	366.84	-6818	-4003	-894	4.68	4.68	-5346	9046	6774	115546	26910	23868	50778	No	56.78	Si
SLU 51	8.96	-2828.16	-12876	-7560	-1098	4.68	4.68	-10096	9680	7248	115546	26910	23868	50778	No	46.23	Si
SLU 51	12.48	412.1	-6853	-4024	-829	4.68	4.68	-5374	9050	6777	115546	26910	23868	50778	No	61.24	Si
SLU 49	8.96	-2875.44	-13258	-7784	-1072	4.68	4.68	-10396	9719	7278	115546	26910	23868	50778	No	47.35	Si
SLU 49	12.48	278.24	-7170	-4210	-803	4.68	4.68	-5622	9083	6801	115546	26910	23868	50778	No	63.24	Si
SLU 43	8.96	-2799.6	-12196	-7161	-1043	4.68	4.68	-9563	9608	7195	115546	26910	23868	50778	No	48.67	Si
SLU 43	12.48	193.05	-6133	-3601	-799	4.68	4.68	-4809	8975	6720	115546	26910	23868	50778	No	63.58	Si
SLU 71	8.96	-3089.01	-14412	-8462	-983	4.68	4.68	-11300	9840	7368	115546	26910	23868	50778	No	51.65	Si
SLU 71	12.48	471.83	-7584	-4453	-698	4.68	4.68	-5947	9126	6834	115546	26910	23868	50778	No	72.77	Si
SLU 48	8.96	-2963.19	-13205	-7753	-1135	4.68	4.68	-10354	9714	7274	115546	26910	23868	50778	No	44.74	Si
SLU 48	12.48	232.98	-7134	-4189	-868	4.68	4.68	-5594	9079	6799	115546	26910	23868	50778	No	58.5	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	8.96	7426	-13967	-8201	6777	4.68	4.68	-10952	14690	11000	115546	40365	23868	64233		9.48	Si
SLV 6	12.48	6046.1	-8829	-5184	9553	4.68	4.68	-6923	13885	10397	115546	40365	23868	64233		6.72	Si
SLV 11	8.96	-12004.67	-7302	-4287	-7930	3.744	2.0879	0	0	0	115546	32292	19094	51386		6.48	Si
SLV 11	12.48	-5615.55	-1700	-998	-10301	3.744	0	0	0	0	115546	32292	19094	51386		4.99	Si
SLV 8	8.96	-10985.21	-4566	-2681	-6156	3.744	0	0	0	0	115546	32292	19094	51386		8.35	Si
SLV 8	12.48	-1065.85	-2414	-1417	-8339	4.68	4.68	-1893	12879	9643	115546	40365	23868	64233		7.7	Si
SLV 15	8.96	-6464.78	-13919	-8172	-5333	4.68	4.68	-10914	14683	10994	115546	40365	23868	64233		12.04	Si
SLV 15	12.48	-8131.96	-3262	-1915	-6174	3.744	0	0	0	0	115546	32292	19094	51386		8.32	Si
SLV 12	8.96	-11681.78	-7454	-4377	-7771	3.744	2.3184	0	0	0	115546	32292	19094	51386		6.61	Si
SLV 12	12.48	-5273.38	-1869	-1097	-10128	3.744	0	0	0	0	115546	32292	19094	51386		5.07	Si
SLV 16	8.96	-5959.17	-14156	-8312	-5084	4.68	4.68	-11100	14720	11022	115546	40365	23868	64233		12.63	Si
SLV 16	12.48	-7596.18	-3527	-2071	-5903	3.744	0.5588	0	0	0	115546	32292	19094	51386		8.71	Si
SLV 10	8.96	6729.42	-16855	-9896	5162	4.68	4.68	-13216	15143	11339	115546	40365	23868	64233		12.44	Si
SLV 10	12.48	1838.56	-8285	-4864	7765	4.68	4.68	-6496	13799	10333	115546	40365	23868	64233		8.27	Si
SLV 7	8.96	-11308.1	-4414	-2592	-6314	3.744	0	0	0	0	115546	32292	19094	51386		8.14	Si
SLV 7	12.48	-1408.02	-2244	-1318	-8512	4.68	4.68	-1760	12852	9624	115546	40365	23868	64233		7.55	Si
SLV 5	8.96	7103.1	-13815	-8111	6619	4.68	4.68	-10833	14667	10982	115546	40365	23868	64233		9.71	Si
SLV 5	12.48	5703.93	-8660	-5085	9380	4.68	4.68	-6791	13858	10377	115546	40365	23868	64233		6.85	Si
SLV 9	8.96	6406.53	-16703	-9807	5003	4.68	4.68	-13097	15119	11321	115546	40365	23868	64233		12.84	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	12.48	1496.4	-8116	-4765	7592	4.68	4.68	-6364	13773	10313	115546	40365	23868	64233		8.46	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.72 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	547	0.46	347.06	0	245.86	122.93	0.35	No
SLV 4	296	0.46	347.06	0	276.44	138.22	0.4	No
SLV 7	-1282	0.46	347.06	0	448.31	224.16	0.65	No
SLV 8	-1442	0.46	347.06	0	464.78	232.39	0.67	No
SLV 1	-1819	0.46	347.06	0	503.31	251.65	0.73	No
SLV 2	-2069	0.46	347.06	0	528.76	264.38	0.76	No
SLV 11	-5175	0.46	347.06	398.41	835.85	617.13	1.78	Si
SLV 12	-5335	0.46	347.06	410.23	851.47	630.85	1.82	Si
SLV 5	-9166	0.46	347.06	684.29	1220.22	952.25	2.74	Si
SLV 6	-9326	0.46	347.06	695.36	1235.41	965.39	2.78	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-8829	-13967	-219	2.355	1277.1	0.923	37.07838	19.04959	Si
SLV 5	-8660	-13815	-219	2.391	1260.1	0.922	37.67463	19.04959	Si
SLV 10	-8285	-16855	230	2.473	1222.4	0.92	39.04977	19.04959	Si
SLV 9	-8116	-16703	230	2.512	1205.4	0.92	39.70947	19.04959	Si
SLV 2	-7267	-7350	-748	2.678	1120.5	0.915	42.52868	14.73654	Si
SLV 1	-7002	-7112	-747	2.753	1094	0.914	43.79153	14.73654	Si
SLV 14	-5452	-16977	749	3.294	940.1	0.904	52.92663	14.73654	Si
SLV 4	-5342	-4530	-751	3.34	929.3	0.904	53.70666	14.73654	Si
SLV 13	-5187	-16739	750	3.408	913.9	0.903	54.86835	14.73654	Si
SLV 3	-5077	-4292	-751	3.458	903.2	0.902	55.70832	14.73654	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	13.71	SLU 50	Si
V_SLU	43.736	SLU 50	Si
PF_SLV	1.986	SLV 7	Si
V_SLV	4.989	SLV 11	Si
PFFP_SLV	0.354	SLV 3	No
R_SLV	1.946	SLV 6	Si

Maschio 194

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.963	-3.314	-6.513	-3.314	L6	L7	0.55	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	10.96	-151.56	-4200	-0.0000603	0.0003743	0.0035	0.55	845.61	1003.14	1003.14	6.62	No	Si
SLU 81	11.76	-84.25	-3704	-0.000047	0.0003743	0.0035	0.55	777.96	914.26	914.26	10.85	No	Si
SLU 84	10.96	-155.18	-4326	-0.0000622	0.0003743	0.0035	0.55	861.49	1023.25	1023.25	6.59	No	Si
SLU 84	11.76	-87.35	-3839	-0.0000488	0.0003743	0.0035	0.55	797.23	938.88	938.88	10.75	No	Si
SLU 83	10.96	-158.32	-4358	-0.0000629	0.0003743	0.0035	0.55	865.34	1027.92	1027.92	6.49	No	Si
SLU 83	11.76	-86.46	-3855	-0.0000489	0.0003743	0.0035	0.55	799.48	941.81	941.81	10.89	No	Si
SLU 77	10.96	-157.72	-4446	-0.0000639	0.0003743	0.0035	0.55	876.05	1040.83	1040.83	6.6	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	11.76	-96.76	-3941	-0.000051	0.0003743	0.0035	0.55	811.36	957.4	957.4	9.89	No	Si
SLU 58	10.96	-147.27	-4015	-0.0000577	0.0003743	0.0035	0.55	821.42	970.83	970.83	6.59	No	Si
SLU 58	11.76	-73.18	-3516	-0.0000437	0.0003743	0.0035	0.55	750.12	879.62	879.62	12.02	No	Si
SLU 56	10.96	-149.58	-4090	-0.0000589	0.0003743	0.0035	0.55	831.44	984.11	984.11	6.58	No	Si
SLU 56	11.76	-77.88	-3585	-0.0000449	0.0003743	0.0035	0.55	760.42	892.35	892.35	11.46	No	Si
SLU 79	10.96	-155.41	-4371	-0.0000628	0.0003743	0.0035	0.55	866.97	1029.89	1029.89	6.63	No	Si
SLU 79	11.76	-92.06	-3872	-0.0000497	0.0003743	0.0035	0.55	801.92	944.98	944.98	10.27	No	Si
SLU 62	10.96	-150.18	-4002	-0.0000579	0.0003743	0.0035	0.55	819.61	968.4	968.4	6.45	No	Si
SLU 62	11.76	-67.58	-3499	-0.0000428	0.0003743	0.0035	0.55	747.47	876.37	876.37	12.97	No	Si
SLU 63	10.96	-147.04	-3970	-0.0000572	0.0003743	0.0035	0.55	815.37	962.73	962.73	6.55	No	Si
SLU 63	11.76	-68.47	-3483	-0.0000428	0.0003743	0.0035	0.55	745.02	873.37	873.37	12.75	No	Si
SLU 60	10.96	-143.42	-3844	-0.0000553	0.0003743	0.0035	0.55	797.91	939.76	939.76	6.55	No	Si
SLU 60	11.76	-65.37	-3348	-0.0000409	0.0003743	0.0035	0.55	724.06	847.41	847.41	12.96	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	10.96	217.71	-1180	-0.000047	0.0005615	0.0035	0.55		328.64	328.64	1.51		Si
SLV 3	11.76	-509.65	-2065	-0.0002806	0.0005615	0.0035	0.44		595.02	595.02	1.17		Si
SLV 1	10.96	240.36	-537	-0.0081945	0.0005615	0.0035	0.44		162.32	162.32	0.68		No
SLV 1	11.76	-475.58	-1520	-0.0010088	0.0005615	0.0035	0.44		462.52	462.52	0.97		No
SLV 13	10.96	-396.38	-4696	-0.0000919	0.0005615	0.0035	0.55		1167.61	1167.61	2.95		Si
SLV 13	11.76	342.9	-3126	-0.0000693	0.0005615	0.0035	0.55		773.65	773.65	2.26		Si
SLD 3	10.96	37.88	-2155	-0.000025	0.0005615	0.0035	0.55		568.49	568.49	15.01		Si
SLD 3	11.76	-256.88	-2328	-0.0000511	0.0005615	0.0035	0.55		658.01	658.01	2.56		Si
SLV 14	10.96	-410.6	-4576	-0.0000922	0.0005615	0.0035	0.55		1144.01	1144.01	2.79		Si
SLV 14	11.76	375.52	-2969	-0.0000735	0.0005615	0.0035	0.55		741.76	741.76	1.98		Si
SLD 1	10.96	47.83	-1872	-0.0000233	0.0005615	0.0035	0.55		500.51	500.51	10.46		Si
SLD 1	11.76	-241.84	-2088	-0.0000473	0.0005615	0.0035	0.55		600.6	600.6	2.48		Si
SLV 4	10.96	203.48	-1060	-0.0000459	0.0005615	0.0035	0.55		298.3	298.3	1.47		Si
SLV 4	11.76	-477.03	-1909	-0.0002794	0.0005615	0.0035	0.44		557.6	557.6	1.17		Si
SLD 2	10.96	41.73	-1821	-0.0000221	0.0005615	0.0035	0.55		488.1	488.1	11.7		Si
SLD 2	11.76	-227.84	-2021	-0.0000448	0.0005615	0.0035	0.55		584.54	584.54	2.57		Si
SLV 2	10.96	226.13	-417	-0.0095255	0.0005615	0.0035	0.44		130.48	130.48	0.58		No
SLV 2	11.76	-442.96	-1364	-0.001021	0.0005615	0.0035	0.44		423.43	423.43	0.96		No
SLV 16	10.96	-433.25	-5219	-0.0001022	0.0005615	0.0035	0.55		1267.14	1267.14	2.92		Si
SLV 16	11.76	341.45	-3515	-0.0000726	0.0005615	0.0035	0.55		853.97	853.97	2.5		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 63	10.96	-147.04	-3970	-3306	-461	0.55	0.55	-21467	9807	1510	40441	4612	1403	6014	No	13.05	Si
SLU 63	11.76	-68.47	-3483	-2900	216	0.55	0.55	-18830	9455	1456	40441	4612	1403	6014	No	27.88	Si
SLU 78	10.96	-154.59	-4415	-3677	-453	0.55	0.55	-23873	10127	1560	40441	4612	1403	6014	No	13.27	Si
SLU 78	11.76	-97.65	-3925	-3268	239	0.55	0.55	-21221	9774	1505	40441	4612	1403	6014	No	25.22	Si
SLU 81	10.96	-151.56	-4200	-3497	-455	0.55	0.55	-22708	9972	1536	40441	4612	1403	6014	No	13.22	Si
SLU 81	11.76	-84.25	-3704	-3084	218	0.55	0.55	-20026	9615	1481	40441	4612	1403	6014	No	27.65	Si
SLU 80	10.96	-152.27	-4340	-3614	-454	0.55	0.55	-23465	10073	1551	40441	4612	1403	6014	No	13.26	Si
SLU 80	11.76	-92.95	-3856	-3211	239	0.55	0.55	-20851	9725	1498	40441	4612	1403	6014	No	25.19	Si
SLU 58	10.96	-147.27	-4015	-3343	-453	0.55	0.55	-21709	9839	1515	40441	4612	1403	6014	No	13.28	Si
SLU 58	11.76	-73.18	-3516	-2928	216	0.55	0.55	-19012	9479	1460	40441	4612	1403	6014	No	27.79	Si
SLU 62	10.96	-150.18	-4002	-3332	-468	0.55	0.55	-21636	9829	1514	40441	4612	1403	6014	No	12.84	Si
SLU 62	11.76	-67.58	-3499	-2913	210	0.55	0.55	-18917	9467	1458	40441	4612	1403	6014	No	28.58	Si
SLU 77	10.96	-157.72	-4446	-3703	-460	0.55	0.55	-24042	10150	1563	40441	4612	1403	6014	No	13.06	Si
SLU 77	11.76	-96.76	-3941	-3282	233	0.55	0.55	-21308	9785	1507	40441	4612	1403	6014	No	25.79	Si
SLU 84	10.96	-155.18	-4326	-3603	-469	0.55	0.55	-23392	10063	1550	40441	4612	1403	6014	No	12.82	Si
SLU 84	11.76	-87.35	-3839	-3197	233	0.55	0.55	-20756	9712	1496	40441	4612	1403	6014	No	25.84	Si
SLU 79	10.96	-155.41	-4371	-3640	-461	0.55	0.55	-23634	10096	1555	40441	4612	1403	6014	No	13.04	Si
SLU 79	11.76	-92.06	-3872	-3224	233	0.55	0.55	-20938	9736	1499	40441	4612	1403	6014	No	25.77	Si
SLU 83	10.96	-158.32	-4358	-3629	-476	0.55	0.55	-23562	10086	1553	40441	4612	1403	6014	No	12.63	Si
SLU 83	11.76	-86.46	-3855	-3210	227	0.55	0.55	-20843	9724	1497	40441	4612	1403	6014	No	26.44	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	10.96	-158.75	-2392	-1992	-1008	0.55	0.55	-12935	13004	2003	40441	6917	1403	8320		8.25	Si
SLV 10	11.76	122.9	-1799	-1498	289	0.55	0.55	-9729	12362	1904	40441	6917	1403	8320		28.82	Si
SLV 16	10.96	-433.25	-5219	-4346	-1734	0.55	0.55	-28222	16061	2473	40441	6917	1403	8320		4.8	Si
SLV 16	11.76	341.45	-3515	-2927	-74	0.55	0.5336	-19004	14218	2124	40441	6917	1403	8320		112.57	Si
SLD 14	10.96	-230.77	-3601	-2999	-969	0.55	0.55	-19472	14311	2204	40441	6917	1403	8320		8.59	Si
SLD 14	11.76	122.74	-2707	-2254	106	0.55	0.55	-14636	13344	2055	40441	6917	1403	8320		78.36	Si
SLV 1	10.96	240.36	-537	-447	1176	0.44	0	0	0	0	40441	5534	1122	6656		5.66	Si
SLV 1	11.76	-475.58	-1520	-1265	386	0.44	0	0	0	0	40441	5534	1122	6656		17.25	Si
SLV 4	10.96	203.48	-1060	-883	1252	0.55	0.2493	-5733	11563	807	40441	6917	1403	8320		6.65	Si
SLV 4	11.76	-477.03	-1909	-1590	257	0.44	0.0753	0	0	0	40441	5534	1122	6656		25.86	Si
SLV 15	10.96	-419.03	-5339	-4446	-1656	0.55	0.55	-28867	16190	2493	40441	6917	1403	8320		5.02	Si
SLV 15	11.76	308.83	-3671	-3057	-58	0.55	0.55	-19848	14386	2216	40441	6917	1403	8320		143.5	Si
SLV 3	10.96	217.71	-1180	-982	1329	0.55	0.2714	-6379	11692	889	40441	6917	1403	8320		6.26	Si
SLV 3	11.76	-509.65	-2065	-1720	273	0.44	0.0846	0	0	0	40441	5534	1122	6656		24.35	Si
SLV 2	10.96	226.13	-417	-348	1098	0.44	0	0	0	0	40441	5534	1122	6656		6.06	Si
SLV 2	11.76	-442.96	-1364	-1135	370	0.44	0	0	0	0	40441	5534	1122	6656		17.99	Si
SLV 13	10.96	-396.38	-4696	-3910	-1810	0.55	0.55	-25391	15495	2386	40441	6917	1403	8320		4.6	Si
SLV 13	11.76	342.9	-3126	-2603	55	0.55	0.4959	-16900	13797	1916	40441	6917	1403	8320		152.58	Si
SLV 14	10.96	-410.6	-4576	-3811	-1888	0.55	0.55	-24745	15366	2366	40441	6917	1403	8320		4.41	Si
SLV 14	11.76	375.52	-2969	-2473	39	0.55	0.4456	-16056	13628	1700	40441	6917	1403	8320		215.55	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.46	5019	-773	67.46	104.65	1.55	Si
SLV 5	179667	0.46	5581	-860	67.46	115.93	1.72	Si
SLV 2	179667	0.46	5977	-920	67.46	123.82	1.84	Si
SLV 1	179667	0.46	6857	-1056	67.46	141.2	2.09	Si
SLV 10	179667	0.46	8764	-1350	67.46	178.12	2.64	Si
SLV 9	179667	0.46	9326	-1436	67.46	188.81	2.8	Si
SLV 4	179667	0.46	10680	-1645	67.46	214.16	3.17	Si
SLV 3	179667	0.46	11560	-1780	67.46	230.38	3.42	Si
SLV 14	179667	0.46	18462	-2843	67.46	349.93	5.19	Si
SLV 13	179667	0.46	19342	-2979	67.46	364.21	5.4	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-2217	-3561	-6	1.187	303.1	0.931	18.52061	15.29191	Si
SLV 12	-2137	-3452	-6	1.222	295	0.93	19.10184	15.29191	Si
SLV 7	-1813	-3544	-6	1.388	262.3	0.923	21.86458	15.29191	Si
SLV 8	-1732	-3434	-6	1.437	254.2	0.921	22.6817	15.29191	Si
SLV 15	-2191	-2508	-4	1.199	300.5	0.931	18.71924	8.07112	Si
SLV 16	-2065	-2336	-3	1.256	287.8	0.928	19.66599	8.07112	Si
SLV 9	-729	-405	2	2.593	155.1	0.893	42.21762	15.29191	Si
SLV 13	-1745	-1561	-1	1.432	255.5	0.921	22.58221	8.07112	Si
SLV 10	-648	-296	2	2.774	147.5	0.891	45.25814	15.29191	Si
SLV 14	-1619	-1389	-1	1.515	242.9	0.918	23.97729	8.07112	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.448	SLU 62	Si
V_SLU	12.628	SLU 83	Si
PF_SLV	0.577	SLV 2	No
V_SLV	4.408	SLV 14	Si
PFFP_SLV	1.551	SLV 6	Si
R_SLV	1.211	SLV 11	Si

Maschio 195

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-3.183	-3.314	-5.463	-3.314	L6	L7	2.28	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 21	10.96	619.83	-9799	-0.0000273	0.0003743	0.0035	2.28	9486.53	9930.96	9930.96	16.02	No	Si
SLU 21	11.76	1082.71	-8548	-0.0000271	0.0003743	0.0035	2.28	8462.76	8878.1	8878.1	8.2	No	Si
SLU 60	10.96	710.65	-11456	-0.000032	0.0003743	0.0035	2.28	10758.16	11365.17	11365.17	15.99	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 60	11.76	1236.41	-9839	-0.0000313	0.0003743	0.0035	2.28	9518.53	9965.23	9965.23	8.06	No	Si
SLU 19	10.96	593.76	-9305	-0.0000259	0.0003743	0.0035	2.28	9088.73	9512.07	9512.07	16.02	No	Si
SLU 19	11.76	1035.42	-8070	-0.0000256	0.0003743	0.0035	2.28	8057.68	8483.14	8483.14	8.19	No	Si
SLU 84	10.96	850.36	-13114	-0.0000372	0.0003743	0.0035	2.28	11933.1	12847.41	12847.41	15.11	No	Si
SLU 84	11.76	1398.04	-11442	-0.0000365	0.0003743	0.0035	2.28	10747.31	11352.26	11352.26	8.12	No	Si
SLU 83	10.96	841.23	-13235	-0.0000374	0.0003743	0.0035	2.28	12015.55	12957.83	12957.83	15.4	No	Si
SLU 83	11.76	1403.56	-11550	-0.0000368	0.0003743	0.0035	2.28	10827.24	11447.67	11447.67	8.16	No	Si
SLU 82	10.96	824.28	-12619	-0.0000357	0.0003743	0.0035	2.28	11592.77	12400.63	12400.63	15.04	No	Si
SLU 82	11.76	1350.75	-10964	-0.0000349	0.0003743	0.0035	2.28	10390.7	10934.68	10934.68	8.1	No	Si
SLU 61	10.96	719.78	-11335	-0.0000318	0.0003743	0.0035	2.28	10668.12	11258.4	11258.4	15.64	No	Si
SLU 61	11.76	1230.89	-9731	-0.000031	0.0003743	0.0035	2.28	9432.09	9872.86	9872.86	8.02	No	Si
SLU 63	10.96	745.85	-11829	-0.0000332	0.0003743	0.0035	2.28	11030.72	11693.74	11693.74	15.68	No	Si
SLU 63	11.76	1278.17	-10208	-0.0000325	0.0003743	0.0035	2.28	9809.37	10280.79	10280.79	8.04	No	Si
SLU 81	10.96	815.15	-12741	-0.000036	0.0003743	0.0035	2.28	11677.33	12510.3	12510.3	15.35	No	Si
SLU 81	11.76	1356.28	-11073	-0.0000352	0.0003743	0.0035	2.28	10472.43	11029.24	11029.24	8.13	No	Si
SLU 62	10.96	736.72	-11951	-0.0000335	0.0003743	0.0035	2.28	11118.65	11801.5	11801.5	16.02	No	Si
SLU 62	11.76	1283.7	-10317	-0.0000328	0.0003743	0.0035	2.28	9893.99	10374.01	10374.01	8.08	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 14	10.96	349.12	-7292	-0.0000192	0.0005615	0.0035	2.28		8118.44	8118.44	23.25		Si
SLD 14	11.76	1932.2	-6555	-0.0000272	0.0005615	0.0035	2.28		7369.9	7369.9	3.81		Si
SLD 10	10.96	474.38	-5886	-0.0000166	0.0005615	0.0035	2.28		6679.4	6679.4	14.08		Si
SLD 10	11.76	1236.8	-5133	-0.0000195	0.0005615	0.0035	2.28		5895.28	5895.28	4.77		Si
SLV 14	10.96	45.96	-5275	-0.0000126	0.0005615	0.0035	2.28		6043.05	6043.05	131.5		Si
SLV 14	11.76	3346.14	-5277	-0.0000373	0.0005615	0.0035	2.28		6045.89	6045.89	1.81		Si
SLV 15	10.96	183.06	-9585	-0.0000237	0.0005615	0.0035	2.28		10396.22	10396.22	56.79		Si
SLV 15	11.76	3221.94	-8885	-0.000041	0.0005615	0.0035	2.28		9709.73	9709.73	3.01		Si
SLV 9	10.96	398.76	-2534	-0.0000083	0.0005615	0.0035	2.28		3117.49	3117.49	7.82		Si
SLV 9	11.76	1678.66	-2379	-0.0000193	0.0005615	0.0035	2.28		2948.41	2948.41	1.76		Si
SLV 16	10.96	88.37	-8930	-0.0000215	0.0005615	0.0035	2.28		9754.22	9754.22	110.38		Si
SLV 16	11.76	3284.8	-8388	-0.0000402	0.0005615	0.0035	2.28		9218.77	9218.77	2.81		Si
SLV 13	10.96	140.65	-5929	-0.0000147	0.0005615	0.0035	2.28		6723.96	6723.96	47.81		Si
SLV 13	11.76	3283.28	-5774	-0.0000361	0.0005615	0.0035	2.28		6562.44	6562.44	2		Si
SLD 13	10.96	389.77	-7573	-0.0000201	0.0005615	0.0035	2.28		8402.91	8402.91	21.56		Si
SLD 13	11.76	1905.22	-6768	-0.0000276	0.0005615	0.0035	2.28		7586.65	7586.65	3.98		Si
SLV 10	10.96	338.29	-2116	-0.0000069	0.0005615	0.0035	2.28		2659.2	2659.2	7.86		Si
SLV 10	11.76	1718.8	-2062	-0.0000238	0.0005615	0.0035	2.28		2599.4	2599.4	1.51		Si
SLD 16	10.96	367.67	-8901	-0.0000232	0.0005615	0.0035	2.28		9725.99	9725.99	26.45		Si
SLD 16	11.76	1905.07	-7925	-0.0000304	0.0005615	0.0035	2.28		8755.79	8755.79	4.6		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 20	10.96	610.7	-9921	-8261	-299	2.28	2.28	-12940	8670	5535	40441	19116	5814	24930	No	83.47	Si
SLU 20	11.76	1088.23	-8656	-7208	-103	2.28	2.28	-11291	8450	5394	40441	19116	5814	24930	No	241.7	Si
SLU 19	10.96	593.76	-9305	-7748	-298	2.28	2.28	-12137	8563	5466	40441	19116	5814	24930	No	83.54	Si
SLU 19	11.76	1035.42	-8070	-6720	-89	2.28	2.28	-10527	8348	5329	40441	19116	5814	24930	No	279.22	Si
SLU 21	10.96	619.83	-9799	-8160	-301	2.28	2.28	-12782	8649	5521	40441	19116	5814	24930	No	82.92	Si
SLU 21	11.76	1082.71	-8548	-7118	-94	2.28	2.28	-11149	8431	5382	40441	19116	5814	24930	No	266.52	Si
SLU 60	10.96	710.65	-11456	-9540	-296	2.28	2.28	-14944	8937	5705	40441	19116	5814	24930	No	84.34	Si
SLU 60	11.76	1236.41	-9839	-8193	-79	2.28	2.28	-12834	8656	5526	40441	19116	5814	24930	No	316.05	Si
SLU 62	10.96	736.72	-11951	-9951	-298	2.28	2.28	-15588	9023	5760	40441	19116	5814	24930	No	83.71	Si
SLU 62	11.76	1283.7	-10317	-8591	-83	2.28	2.28	-13457	8739	5579	40441	19116	5814	24930	No	299.87	Si
SLU 42	10.96	724.34	-11083	-9229	-269	2.28	2.28	-14457	8872	5664	40441	19116	5814	24930	No	92.57	Si
SLU 42	11.76	1202.57	-9781	-8145	-45	2.28	2.28	-12759	8646	5519	40441	19116	5814	24930	No	548.63	Si
SLU 63	10.96	745.85	-11829	-9850	-300	2.28	2.28	-15430	9002	5747	40441	19116	5814	24930	No	83.15	Si
SLU 63	11.76	1278.17	-10208	-8500	-74	2.28	2.28	-13315	8720	5567	40441	19116	5814	24930	No	339.04	Si
SLU 61	10.96	719.78	-11335	-9439	-298	2.28	2.28	-14785	8916	5692	40441	19116	5814	24930	No	83.77	Si
SLU 61	11.76	1230.89	-9731	-8103	-69	2.28	2.28	-12693	8637	5514	40441	19116	5814	24930	No	359.87	Si
SLU 84	10.96	850.36	-13114	-10920	-268	2.28	2.28	-17105	9225	5889	40441	19116	5814	24930	No	92.86	Si
SLU 84	11.76	1398.04	-11442	-9528	-25	2.28	2.28	-14924	8934	5704	40441	19116	5814	24930	No	980.26	Si
SLU 18	10.96	584.63	-9426	-7849	-296	2.28	2.28	-12296	8584	5480	40441	19116	5814	24930	No	84.1	Si
SLU 18	11.76	1040.95	-8179	-6811	-99	2.28	2.28	-10668	8367	5341	40441	19116	5814	24930	No	252.1	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	10.96	183.06	-9585	-7981	-4475	2.28	2.28	-12502	12917	8246	40441	28675	5814	34489		7.71	Si
SLV 15	11.76	3221.94	-8885	-7398	-3575	2.28	2.28	-11589	12734	8130	40441	28675	5814	34489		9.65	Si
SLV 4	10.96	1016.11	-11751	-9785	5405	2.28	2.28	-15328	13482	8607	40441	28675	5814	34489		6.38	Si
SLV 4	11.76	-1536.73	-9314	-7756	4117	2.28	2.28	-12149	12846	8201	40441	28675	5814	34489		8.38	Si
SLV 3	10.96	1110.8	-12406	-10331	5851	2.28	2.28	-16182	13653	8716	40441	28675	5814	34489		5.89	Si
SLV 3	11.76	-1599.6	-9811	-8169	4388	2.28	2.28	-12797	12976	8284	40441	28675	5814	34489		7.86	Si
SLV 2	10.96	973.7	-8096	-6742	4436	2.28	2.28	-10560	12529	7998	40441	28675	5814	34489		7.77	Si
SLV 2	11.76	-1475.4	-6203	-5165	3758	2.28	2.28	-8091	12035	7683	40441	28675	5814	34489		9.18	Si
SLV 16	10.96	88.37	-8930	-7436	-4922	2.28	2.28	-11648	12746	8137	40441	28675	5814	34489		7.01	Si
SLV 16	11.76	3284.8	-8388	-6985	-3845	2.28	2.2452	-10941	12605	7924	40441	28675	5814	34489		8.97	Si
SLV 10	10.96	338.29	-2116	-1762	-3325	2.28	2.28	-2760	10969	7002	40441	28675	5814	34489		10.37	Si
SLV 10	11.76	1718.8	-2062	-1717	-1789	2.28	0.9189	-2689	10955	2819	40441	28675	5814	34489		19.28	Si
SLV 1	10.96	1068.39	-8751	-7287	4883	2.28	2.28	-11415	12700	8107	40441	28675	5814	34489		7.06	Si
SLV 1	11.76	-1538.26	-6700	-5579	4028	2.28	2.28	-8739	12164	7766	40441	28675	5814	34489		8.56	Si
SLV 14	10.96	45.96	-5275	-4392	-5890	2.28	2.28	-6880	11793	7528	40441	28675	5814	34489		5.86	Si
SLV 14	11.76	3346.14	-5277	-4394	-4205	2.28	1.5178	-6884	11793	5012	40441	28675	5814	34489		8.2	Si
SLV 7	10.96	818.46	-15565	-12961	3286	2.28	2.28	-20302	14477	9242	40441	28675	5814	34489		10.49	Si
SLV 7	11.76	27.74	-13026	-10847	1971	2.28	2.28	-16991	13815	8819	40441	28675	5814	34489		17.49	Si
SLV 13	10.96	140.65	-5929	-4938	-5444	2.28	2.28	-7734	11964	7637	40441	28675	5814	34489		6.34	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	11.76	3283.28	-5774	-4808	-3935	2.28	1.714	-7531	11923	5722	40441	28675	5814	34489		8.77	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 10	179667	0.46	4045	-2582	279.63	351.96	1.26	Si
SLV 6	179667	0.46	4202	-2683	279.63	365.26	1.31	Si
SLV 9	179667	0.46	4576	-2921	279.63	396.71	1.42	Si
SLV 5	179667	0.46	4733	-3022	279.63	409.91	1.47	Si
SLV 14	179667	0.46	9773	-6239	279.63	817.55	2.92	Si
SLV 2	179667	0.46	10297	-6574	279.63	858.24	3.07	Si
SLV 13	179667	0.46	10604	-6769	279.63	881.9	3.15	Si
SLV 1	179667	0.46	11128	-7104	279.63	922.08	3.3	Si
SLV 16	179667	0.46	14968	-9556	279.63	1206.66	4.32	Si
SLV 4	179667	0.46	15492	-9890	279.63	1244.16	4.45	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-9834	-13633	613	1.075	1321.3	0.934	16.72842	15.29191	Si
SLV 8	-9634	-13372	613	1.093	1301.1	0.933	17.02041	15.29191	Si
SLV 11	-9450	-13814	545	1.116	1282.5	0.932	17.39127	15.29191	Si
SLV 12	-9249	-13552	545	1.135	1262.2	0.931	17.70583	15.29191	Si
SLV 3	-7813	-9790	289	1.321	1117.5	0.924	20.76184	8.07112	Si
SLV 4	-7499	-9381	289	1.363	1085.9	0.923	21.46396	8.07112	Si
SLV 5	-2615	-3045	-540	2.702	604.5	0.891	44.10479	15.29191	Si
SLV 6	-2414	-2784	-540	2.823	585.8	0.89	46.10999	15.29191	Si
SLV 15	-6531	-10393	62	1.539	988.8	0.917	24.39014	8.07112	Si
SLV 9	-2230	-3226	-608	2.927	568.7	0.889	47.84746	15.29191	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.021	SLU 61	Si
V_SLU	82.922	SLU 21	Si
PF_SLV	1.512	SLV 10	Si
V_SLV	5.855	SLV 14	Si
PFFP_SLV	1.259	SLV 10	Si
R_SLV	1.094	SLV 7	Si

Maschio 196

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.314	-2.283	-3.314	L6	L7	2.15	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 52	9.86	-311.66	-5954	-0.000017	0.0003743	0.0035	2.15	5778.53	7211.6	7211.6	23.14	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 52	11.66	2100.33	-6965	-0.0000323	0.0003743	0.0035	2.15	6636.75	7008.93	7008.93	3.34	No	Si
SLU 82	9.86	-461.61	-6821	-0.0000203	0.0003743	0.0035	2.15	6516.39	8007.97	8007.97	17.35	No	Si
SLU 82	11.66	2495	-8365	-0.000039	0.0003743	0.0035	2.15	7765.07	8109.26	8109.26	3.25	No	Si
SLU 73	9.86	-389.79	-6590	-0.0000192	0.0003743	0.0035	2.15	6322.71	7805.82	7805.82	20.03	No	Si
SLU 73	11.66	2360.52	-7949	-0.0000369	0.0003743	0.0035	2.15	7437.03	7779.05	7779.05	3.3	No	Si
SLU 63	9.86	-374.39	-6492	-0.0000189	0.0003743	0.0035	2.15	6240.12	7715.99	7715.99	20.61	No	Si
SLU 63	11.66	2289.12	-7745	-0.0000358	0.0003743	0.0035	2.15	7273.63	7617.83	7617.83	3.33	No	Si
SLU 60	9.86	-365	-6339	-0.0000184	0.0003743	0.0035	2.15	6109.47	7571.92	7571.92	20.75	No	Si
SLU 60	11.66	2219.09	-7485	-0.0000346	0.0003743	0.0035	2.15	7063.86	7413.91	7413.91	3.34	No	Si
SLU 40	9.86	-462.7	-5624	-0.0000172	0.0003743	0.0035	2.15	5491.12	6906.04	6906.04	14.93	No	Si
SLU 40	11.66	2163.02	-7164	-0.0000333	0.0003743	0.0035	2.15	6800.82	7162.92	7162.92	3.31	No	Si
SLU 61	9.86	-383.48	-6184	-0.0000181	0.0003743	0.0035	2.15	5977.36	7426.97	7426.97	19.37	No	Si
SLU 61	11.66	2234.8	-7381	-0.0000344	0.0003743	0.0035	2.15	6979.14	7332.51	7332.51	3.28	No	Si
SLU 76	9.86	-380.7	-6898	-0.00002	0.0003743	0.0035	2.15	6581.09	8075.82	8075.82	21.21	No	Si
SLU 76	11.66	2414.84	-8313	-0.0000382	0.0003743	0.0035	2.15	7724.28	8067.71	8067.71	3.34	No	Si
SLU 81	9.86	-443.12	-6975	-0.0000206	0.0003743	0.0035	2.15	6645.06	8143.26	8143.26	18.38	No	Si
SLU 81	11.66	2479.28	-8469	-0.0000391	0.0003743	0.0035	2.15	7846.19	8192.32	8192.32	3.3	No	Si
SLU 84	9.86	-452.52	-7129	-0.0000211	0.0003743	0.0035	2.15	6772.27	8278.45	8278.45	18.29	No	Si
SLU 84	11.66	2549.31	-8729	-0.0000403	0.0003743	0.0035	2.15	8047.01	8400.39	8400.39	3.3	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	9.86	-1284.25	5428	0.3917554	0.0005615	0.0035	1.72		0	0	0		No
SLV 9	11.66	3509.55	530	-0.0246805	0.0005615	0.0035	2.15		0	0	0		No
SLV 10	9.86	-1408.04	6294	0.4539008	0.0005615	0.0035	1.72		0	0	0		No
SLV 10	11.66	3672.75	1128	-0.000363	0.0005615	0.0035	1.72		0	0	0		No
SLD 5	9.86	-322.52	-779	-0.0000041	0.0005615	0.0035	2.15		2139.51	2139.51	6.63		Si
SLD 5	11.66	1791.49	-2670	-0.0000234	0.0005615	0.0035	2.15		3048.65	3048.65	1.7		Si
SLV 6	9.86	-637.5	5406	0.3876402	0.0005615	0.0035	1.72		0	0	0		No
SLV 6	11.66	2208.24	1709	0.0989478	0.0005615	0.0035	1.72		0	0	0		No
SLV 5	9.86	-513.72	4541	0.3255037	0.0005615	0.0035	1.72		0	0	0		No
SLV 5	11.66	2045.05	1110	0.0495255	0.0005615	0.0035	1.72		0	0	0		No
SLD 6	9.86	-376.51	-402	-0.0000095	0.0005615	0.0035	1.72		1744.51	1744.51	4.63		Si
SLD 6	11.66	1862.67	-2409	-0.0000284	0.0005615	0.0035	2.15		2781.33	2781.33	1.49		Si
SLD 10	9.86	-706.83	-24	-0.000242	0.0005615	0.0035	1.72		1345.04	1345.04	1.9		Si
SLD 10	11.66	2489.57	-2660	-0.00007	0.0005615	0.0035	2.15		3038.18	3038.18	1.22		Si
SLV 14	9.86	-1784.24	293	0.0217938	0.0005615	0.0035	1.72		0	0	0		No
SLV 14	11.66	4528.72	-4112	-0.0016017	0.0005615	0.0035	2.15		4507.56	4507.56	1		No
SLV 13	9.86	-1590.41	-1062	-0.0001966	0.0005615	0.0035	1.72		2434.11	2434.11	1.53		Si
SLV 13	11.66	4273.19	-5049	-0.0000817	0.0005615	0.0035	2.15		5437.03	5437.03	1.27		Si
SLD 9	9.86	-652.84	-402	-0.0000865	0.0005615	0.0035	1.72		1744.53	1744.53	2.67		Si
SLD 9	11.66	2418.39	-2921	-0.0000425	0.0005615	0.0035	2.15		3305.18	3305.18	1.37		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	9.86	-340.82	-7464	-6215	-3839	2.15	2.15	-10324	8321	5009	40441	18027	5483	23509	No	6.12	Si
SLU 79	11.66	2442.96	-8850	-7369	-3840	2.15	2.15	-12241	8577	5163	40441	18027	5483	23509	No	6.12	Si
SLU 75	9.86	-358.23	-7195	-5992	-3862	2.15	2.15	-9953	8271	4979	40441	18027	5483	23509	No	6.09	Si
SLU 75	11.66	2438.98	-8597	-7159	-3851	2.15	2.15	-11892	8530	5135	40441	18027	5483	23509	No	6.1	Si
SLU 77	9.86	-330.66	-7658	-6377	-3866	2.15	2.15	-10593	8357	5031	40441	18027	5483	23509	No	6.08	Si
SLU 77	11.66	2477.58	-9065	-7548	-3866	2.15	2.15	-12539	8616	5187	40441	18027	5483	23509	No	6.08	Si
SLU 80	9.86	-359.3	-7309	-6087	-3894	2.15	2.15	-10111	8293	4992	40441	18027	5483	23509	No	6.04	Si
SLU 80	11.66	2458.68	-8746	-7283	-3883	2.15	2.15	-12097	8557	5152	40441	18027	5483	23509	No	6.05	Si
SLU 84	9.86	-452.52	-7129	-5936	-4094	2.15	2.15	-9861	8259	4972	40441	18027	5483	23509	No	5.74	Si
SLU 84	11.66	2549.31	-8729	-7268	-4083	2.15	2.15	-12074	8554	5150	40441	18027	5483	23509	No	5.76	Si
SLU 83	9.86	-434.04	-7283	-6065	-4039	2.15	2.15	-10075	8288	4989	40441	18027	5483	23509	No	5.82	Si
SLU 83	11.66	2533.6	-8833	-7355	-4039	2.15	2.15	-12218	8573	5161	40441	18027	5483	23509	No	5.82	Si
SLU 82	9.86	-461.61	-6821	-5680	-4036	2.15	2.15	-9435	8202	4938	40441	18027	5483	23509	No	5.83	Si
SLU 82	11.66	2495	-8365	-6966	-4024	2.15	2.15	-11571	8487	5109	40441	18027	5483	23509	No	5.84	Si
SLU 76	9.86	-380.7	-6898	-5744	-3872	2.15	2.15	-9542	8217	4947	40441	18027	5483	23509	No	6.07	Si
SLU 76	11.66	2414.84	-8313	-6922	-3854	2.15	2.15	-11498	8478	5104	40441	18027	5483	23509	No	6.1	Si
SLU 78	9.86	-349.14	-7503	-6248	-3920	2.15	2.15	-10379	8328	5014	40441	18027	5483	23509	No	6	Si
SLU 78	11.66	2493.29	-8961	-7462	-3910	2.15	2.15	-12395	8597	5176	40441	18027	5483	23509	No	6.01	Si
SLU 81	9.86	-443.12	-6975	-5808	-3981	2.15	2.15	-9648	8231	4955	40441	18027	5483	23509	No	5.91	Si
SLU 81	11.66	2479.28	-8469	-7052	-3981	2.15	2.15	-11714	8506	5121	40441	18027	5483	23509	No	5.91	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 10	9.86	-706.83	-24	-20	-4576	1.72	0	0	0	0	40441	21632	4386	26018		5.69	Si
SLD 10	11.66	2489.57	-2660	-2215	-4487	2.15	0.4172	-19109	14240	1664	40441	27040	5483	32523		7.25	Si
SLV 16	9.86	-1306.15	-5948	-4953	-5570	2.15	2.15	-8227	12062	7261	40441	27040	5483	32523		5.84	Si
SLV 16	11.66	3758.34	-8168	-6801	-4893	2.15	1.8446	-11298	12676	6547	40441	27040	5483	32523		6.65	Si
SLV 6	9.86	-637.5	5406	4502	-4944	1.72	2.15	0	0	0	40441	21632	4386	26018		5.26	Si
SLV 6	11.66	2208.24	1709	1423	-5142	1.72	0	0	0	0	40441	21632	4386	26018		5.06	Si
SLV 13	9.86	-1590.41	-1062	-884	-7150	1.72	0	0	0	0	40441	21632	4386	26018		3.64	Si
SLV 13	11.66	4273.19	-5049	-4204	-6471	2.15	0.6859	-22140	14845	2851	40441	27040	5483	32523		5.03	Si
SLD 9	9.86	-652.84	-402	-335	-4437	1.72	0	0	0	0	40441	21632	4386	26018		5.86	Si
SLD 9	11.66	2418.39	-2921	-2432	-4348	2.15	0.7413	-4040	11225	2330	40441	27040	5483	32523		7.48	Si
SLV 10	9.86	-1408.04	6294	5241	-7271	1.72	2.15	0	0	0	40441	21632	4386	26018		3.58	Si
SLV 10	11.66	3672.75	1128	940	-7062	1.72	0	0	0	0	40441	21632	4386	26018		3.68	Si
SLV 5	9.86	-513.72	4541	3781	-4625	1.72	2.15	0	0	0	40441	21632	4386	26018		5.63	Si
SLV 5	11.66	2045.05	1110	924	-4823	1.72	0	0	0	0	40441	21632	4386	26018		5.39	Si
SLV 14	9.86	-1784.24	293	244	-7649	1.72	0	0	0	0	40441	21632	4386	26018		3.4	Si
SLV 14	11.66	4528.72	-4112	-3424	-6970	2.15	0	-137772	16250	0	40441	27040	5483	32523		4.67	Si
SLV 9	9.86	-1284.25	5428	4520	-6952	1.72	2.15	0	0	0	40441	21632	4386	26018		3.74	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	11.66	3509.55	530	441	-6743	2.15	0	0	9632	0	40441	27040	5483	32523		4.82	Si
SLV 15	9.86	-1112.32	-7302	-6081	-5071	2.15	2.15	-10101	12437	7487	40441	27040	5483	32523		6.41	Si
SLV 15	11.66	3502.8	-9105	-7582	-4394	2.15	2.0709	-12594	12935	7501	40441	27040	5483	32523		7.4	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.46	0	2253	263.69	0	0	No, Trazione
SLV 10	179667	0.46	0	2836	263.69	0	0	No, Trazione
SLV 6	179667	0.46	0	2955	263.69	0	0	No, Trazione
SLV 9	179667	0.46	0	2134	263.69	0	0	No, Trazione
SLV 2	179667	0.46	4078	-2455	263.69	334.52	1.27	Si
SLV 14	179667	0.46	4737	-2852	263.69	386.88	1.47	Si
SLV 1	179667	0.46	5906	-3555	263.69	478.47	1.81	Si
SLV 13	179667	0.46	6565	-3952	263.69	529.51	2.01	Si
SLV 4	179667	0.46	12262	-7382	263.69	950.48	3.6	Si
SLV 16	179667	0.46	12921	-7779	263.69	996.88	3.78	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-10510	-15262	369	0.989	1371.1	0.939	15.30314	15.29191	Si
SLV 7	-10524	-15530	214	1	1372.5	0.939	15.47925	15.29191	Si
SLV 12	-9889	-14501	369	1.039	1308.3	0.937	16.11786	15.29191	Si
SLV 8	-9903	-14769	214	1.051	1309.7	0.937	16.30272	15.29191	Si
SLV 15	-6533	-8404	346	1.439	970	0.92	22.73601	8.07112	Si
SLV 3	-6580	-9298	-172	1.451	974.7	0.92	22.92993	8.07112	Si
SLV 16	-5561	-7212	346	1.621	872.7	0.913	25.79367	8.07112	Si
SLV 4	-5608	-8107	-172	1.634	877.4	0.914	25.99691	8.07112	Si
SLV 1	-3035	-3504	-348	2.429	624.2	0.894	39.47713	8.07112	Si
SLV 13	-2988	-2609	170	2.488	619.7	0.894	40.45199	8.07112	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.25	SLU 82	Si
V_SLU	5.743	SLU 84	Si
PF_SLV	0	SLV 5	No
V_SLV	3.401	SLV 14	Si
PFFP_SLV	0	SLV 10	No
R_SLV	1.001	SLV 11	Si

Maschio 197

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-2.963	5.826	-5.093	5.826	L6	L7	2.13	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 1	9.86	718.95	-8406	-0.0000266	0.0003743	0.0035	2.13	7713.26	8049.64	8049.64	11.2	No	Si
SLU 1	11.66	-575.58	-6523	-0.0000206	0.0003743	0.0035	2.13	6200.25	7670.78	7670.78	13.33	No	Si
SLU 52	9.86	927.16	-11329	-0.000036	0.0003743	0.0035	2.13	9813.93	10440.12	10440.12	11.26	No	Si
SLU 52	11.66	-727.66	-8891	-0.000028	0.0003743	0.0035	2.13	8081.99	9716.19	9716.19	13.35	No	Si
SLU 43	9.86	942.5	-10527	-0.0000339	0.0003743	0.0035	2.13	9267.31	9769.27	9769.27	10.37	No	Si
SLU 43	11.66	-762.42	-8089	-0.0000261	0.0003743	0.0035	2.13	7466.79	9042.08	9042.08	11.86	No	Si
SLU 45	9.86	903.1	-11351	-0.0000359	0.0003743	0.0035	2.13	9829.06	10459.24	10459.24	11.58	No	Si
SLU 45	11.66	-763.36	-8913	-0.0000283	0.0003743	0.0035	2.13	8099.06	9735.24	9735.24	12.75	No	Si
SLU 60	9.86	917.26	-11551	-0.0000366	0.0003743	0.0035	2.13	9961.56	10627.95	10627.95	11.59	No	Si
SLU 60	11.66	-672.11	-9113	-0.0000281	0.0003743	0.0035	2.13	8248.65	9903.58	9903.58	14.74	No	Si
SLU 51	9.86	930.63	-11751	-0.0000372	0.0003743	0.0035	2.13	10092.42	10796.96	10796.96	11.6	No	Si
SLU 51	11.66	-773.16	-9312	-0.0000294	0.0003743	0.0035	2.13	8396.56	10072.5	10072.5	13.03	No	Si
SLU 47	9.86	938.2	-11198	-0.0000358	0.0003743	0.0035	2.13	9726.42	10330.17	10330.17	11.01	No	Si
SLU 47	11.66	-787.72	-8760	-0.000028	0.0003743	0.0035	2.13	7983.32	9607.11	9607.11	12.2	No	Si
SLU 50	9.86	929.24	-11700	-0.0000371	0.0003743	0.0035	2.13	10059.13	10753.74	10753.74	11.57	No	Si
SLU 50	11.66	-756.09	-9261	-0.0000292	0.0003743	0.0035	2.13	8358.92	10029.28	10029.28	13.26	No	Si
SLU 2	9.86	721.28	-8491	-0.0000268	0.0003743	0.0035	2.13	7778.48	8117.04	8117.04	11.25	No	Si
SLU 2	11.66	-604.04	-6607	-0.000021	0.0003743	0.0035	2.13	6271.09	7746.04	7746.04	12.82	No	Si
SLU 44	9.86	944.83	-10612	-0.0000342	0.0003743	0.0035	2.13	9326.23	9839.79	9839.79	10.41	No	Si
SLU 44	11.66	-790.89	-8174	-0.0000265	0.0003743	0.0035	2.13	7532.97	9115.27	9115.27	11.53	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	9.86	1327.62	-13406	-0.0000438	0.0005615	0.0035	2.13		12617.13	12617.13	9.5		Si
SLV 6	11.66	-2589.81	-11490	-0.0000479	0.0005615	0.0035	2.13		12313.59	12313.59	4.75		Si
SLV 12	9.86	246.11	-5043	-0.0000143	0.0005615	0.0035	2.13		5374.7	5374.7	21.84		Si
SLV 12	11.66	1358.52	-3174	-0.0000176	0.0005615	0.0035	2.13		3524.9	3524.9	2.59		Si
SLV 1	9.86	2514.78	-8996	-0.0000407	0.0005615	0.0035	2.13		9095.87	9095.87	3.62		Si
SLV 1	11.66	-2466.75	-7081	-0.0000353	0.0005615	0.0035	2.13		8336.15	8336.15	3.38		Si
SLV 7	9.86	1253.93	-3979	-0.0000187	0.0005615	0.0035	2.13		4328.82	4328.82	3.45		Si
SLV 7	11.66	550.06	-2100	-0.000009	0.0005615	0.0035	2.13		2436.57	2436.57	4.43		Si
SLV 15	9.86	-1349.11	-8022	-0.0000298	0.0005615	0.0035	2.13		9213.32	9213.32	6.83		Si
SLV 15	11.66	1594.31	-6151	-0.0000266	0.0005615	0.0035	2.13		6445.26	6445.26	4.04		Si
SLV 3	9.86	2540.39	-6335	-0.000034	0.0005615	0.0035	2.13		6621.29	6621.29	2.61		Si
SLV 3	11.66	-1566.74	-4432	-0.000022	0.0005615	0.0035	2.13		5801.18	5801.18	3.7		Si
SLV 11	9.86	87.08	-4485	-0.0000118	0.0005615	0.0035	2.13		4829.63	4829.63	55.46		Si
SLV 11	11.66	1498.38	-2616	-0.0000187	0.0005615	0.0035	2.13		2960.94	2960.94	1.98		Si
SLV 4	9.86	2789.41	-7209	-0.000038	0.0005615	0.0035	2.13		7447.72	7447.72	2.67		Si
SLV 4	11.66	-1785.74	-5305	-0.0000258	0.0005615	0.0035	2.13		6641.01	6641.01	3.72		Si
SLV 8	9.86	1412.96	-4537	-0.0000212	0.0005615	0.0035	2.13		4880.01	4880.01	3.45		Si
SLV 8	11.66	410.2	-2658	-0.0000094	0.0005615	0.0035	2.13		3003.24	3003.24	7.32		Si
SLV 2	9.86	2763.81	-9869	-0.0000448	0.0005615	0.0035	2.13		9803.29	9803.29	3.55		Si
SLV 2	11.66	-2685.75	-7954	-0.0000392	0.0005615	0.0035	2.13		9149.61	9149.61	3.41		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 49	9.86	897.86	-11989	-9983	906	2.13	2.13	-16739	9176	5473	40441	17859	5431	23290	No	25.69	Si
SLU 49	11.66	-777.27	-9551	-7953	906	2.13	2.13	-13335	8722	5202	40441	17859	5431	23290	No	25.69	Si
SLU 50	9.86	929.24	-11700	-9742	912	2.13	2.13	-16336	9123	5441	40441	17859	5431	23290	No	25.53	Si
SLU 50	11.66	-756.09	-9261	-7712	912	2.13	2.13	-12931	8669	5170	40441	17859	5431	23290	No	25.53	Si
SLU 47	9.86	938.2	-11198	-9325	935	2.13	2.13	-15635	9029	5385	40441	17859	5431	23290	No	24.92	Si
SLU 47	11.66	-787.72	-8760	-7295	935	2.13	2.13	-12231	8575	5114	40441	17859	5431	23290	No	24.92	Si
SLU 68	9.86	915.25	-12369	-10300	899	2.13	2.13	-17270	9247	5515	40441	17859	5431	23290	No	25.92	Si
SLU 68	11.66	-746.4	-9899	-8243	899	2.13	2.13	-13822	8787	5241	40441	17859	5431	23290	No	25.92	Si
SLU 51	9.86	930.63	-11751	-9785	922	2.13	2.13	-16407	9132	5446	40441	17859	5431	23290	No	25.25	Si
SLU 51	11.66	-773.16	-9312	-7755	922	2.13	2.13	-13002	8678	5176	40441	17859	5431	23290	No	25.25	Si
SLU 46	9.86	904.49	-11402	-9495	912	2.13	2.13	-15920	9067	5408	40441	17859	5431	23290	No	25.54	Si
SLU 46	11.66	-780.44	-8964	-7465	912	2.13	2.13	-12516	8613	5137	40441	17859	5431	23290	No	25.54	Si
SLU 43	9.86	942.5	-10527	-8766	923	2.13	2.13	-14698	8904	5310	40441	17859	5431	23290	No	25.23	Si
SLU 43	11.66	-762.42	-8089	-6736	923	2.13	2.13	-11294	8450	5040	40441	17859	5431	23290	No	25.23	Si
SLU 45	9.86	903.1	-11351	-9452	902	2.13	2.13	-15849	9058	5402	40441	17859	5431	23290	No	25.83	Si
SLU 45	11.66	-763.36	-8913	-7422	902	2.13	2.13	-12445	8604	5131	40441	17859	5431	23290	No	25.83	Si
SLU 65	9.86	921.89	-11783	-9812	904	2.13	2.13	-16452	9138	5450	40441	17859	5431	23290	No	25.76	Si
SLU 65	11.66	-749.57	-9313	-7755	904	2.13	2.13	-13003	8678	5176	40441	17859	5431	23290	No	25.76	Si
SLU 44	9.86	944.83	-10612	-8836	940	2.13	2.13	-14817	8920	5320	40441	17859	5431	23290	No	24.77	Si
SLU 44	11.66	-790.89	-8174	-6806	940	2.13	2.13	-11412	8466	5049	40441	17859	5431	23290	No	24.77	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	9.86	-1349.11	-8022	-6680	-1819	2.13	2.13	-11201	12657	7548	40441	26788	5431	32219		17.71	Si
SLV 15	11.66	1594.31	-6151	-5122	-1327	2.13	2.13	-8589	12134	7237	40441	26788	5431	32219		24.28	Si
SLV 16	9.86	-1100.09	-8895	-7407	-1559	2.13	2.13	-12420	12901	7694	40441	26788	5431	32219		20.67	Si
SLV 16	11.66	1375.32	-7024	-5849	-1067	2.13	2.13	-9808	12378	7382	40441	26788	5431	32219		30.19	Si
SLV 3	9.86	2540.39	-6335	-5276	2404	2.13	1.992	-8846	12186	6797	40441	26788	5431	32219		13.4	Si
SLV 3	11.66	-1566.74	-4432	-3691	1933	2.13	2.13	-6188	11654	6951	40441	26788	5431	32219		16.67	Si
SLV 1	9.86	2514.78	-8996	-7491	2914	2.13	2.13	-12561	12929	7711	40441	26788	5431	32219		11.06	Si
SLV 1	11.66	-2466.75	-7081	-5897	2422	2.13	2.13	-9887	12394	7392	40441	26788	5431	32219		13.3	Si
SLV 6	9.86	1327.62	-13406	-11164	2244	2.13	2.13	-18719	14160	8445	40441	26788	5431	32219		14.36	Si
SLV 6	11.66	-2589.81	-11490	-9568	2064	2.13	2.13	-16042	13625	8126	40441	26788	5431	32219		15.61	Si
SLD 1	9.86	1481.85	-8987	-7484	1638	2.13	2.13	-12548	12926	7709	40441	26788	5431	32219		19.67	Si
SLD 1	11.66	-1373.53	-7084	-5899	1429	2.13	2.13	-9892	12395	7392	40441	26788	5431	32219		22.55	Si
SLV 4	9.86	2789.41	-7209	-6003	2664	2.13	2.0341	-10065	12430	7079	40441	26788	5431	32219		12.1	Si
SLV 4	11.66	-1785.74	-5305	-4418	2193	2.13	2.13	-7407	11898	7096	40441	26788	5431	32219		14.69	Si
SLD 2	9.86	1588.75	-9362	-7796	1750	2.13	2.13	-13071	13031	7772	40441	26788	5431	32219		18.41	Si
SLD 2	11.66	-1467.54	-7459	-6211	1540	2.13	2.13	-10415	12500	7455	40441	26788	5431	32219		20.92	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	9.86	1168.58	-12849	-10699	2078	2.13	2.13	-17940	14005	8352	40441	26788	5431	32219		15.5	Si
SLV 5	11.66	-2449.95	-10932	-9103	1898	2.13	2.13	-15264	13469	8033	40441	26788	5431	32219		16.97	Si
SLV 2	9.86	2763.81	-9869	-8218	3174	2.13	2.13	-13780	13173	7856	40441	26788	5431	32219		10.15	Si
SLV 2	11.66	-2685.75	-7954	-6624	2682	2.13	2.13	-11106	12638	7537	40441	26788	5431	32219		12.01	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.46	5322	-3174	261.24	428.9	1.64	Si
SLV 11	179667	0.46	6112	-3645	261.24	489.88	1.88	Si
SLV 8	179667	0.46	6257	-3732	261.24	501.04	1.92	Si
SLV 12	179667	0.46	7047	-4203	261.24	561.21	2.15	Si
SLV 3	179667	0.46	9327	-5562	261.24	731.18	2.8	Si
SLV 4	179667	0.46	10791	-6435	261.24	837.31	3.21	Si
SLV 15	179667	0.46	11958	-7132	261.24	920.27	3.52	Si
SLV 16	179667	0.46	13422	-8005	261.24	1022.18	3.91	Si
SLV 1	179667	0.46	13775	-8215	261.24	1046.42	4.01	Si
SLV 2	179667	0.46	15239	-9089	261.24	1145.43	4.38	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-9148	-14535	-612	1.075	1230.5	0.934	16.73213	15.29191	Si
SLV 9	-8789	-13917	-612	1.11	1194.2	0.932	17.30443	15.29191	Si
SLV 6	-8060	-14569	-624	1.187	1120.6	0.929	18.58134	15.29191	Si
SLV 5	-7700	-13952	-623	1.23	1084.4	0.927	19.29302	15.29191	Si
SLV 14	-8356	-11440	-164	1.199	1150.5	0.93	18.73262	8.07112	Si
SLV 13	-7794	-10473	-164	1.266	1093.8	0.927	19.84579	8.07112	Si
SLV 12	-2965	-5308	630	2.39	614.4	0.894	38.86408	15.29191	Si
SLV 11	-2606	-4690	630	2.578	580.2	0.891	42.02874	15.29191	Si
SLV 16	-6501	-8672	208	1.45	963.8	0.92	22.90835	8.07112	Si
SLV 15	-5939	-7704	208	1.551	907.5	0.916	24.60636	8.07112	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.365	SLU 43	Si
V_SLU	24.773	SLU 44	Si
PF_SLV	1.976	SLV 11	Si
V_SLV	10.151	SLV 2	Si
PFFP_SLV	1.642	SLV 7	Si
R_SLV	1.094	SLV 10	Si

Maschio 198

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	5.826	-2.063	5.826	L6	L7	1.93	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 37	9.86	197.55	-6001	-0.0000184	0.0003743	0.0035	1.93	5159.68	5512.08	5512.08	27.9	No	Si
SLU 37	11.66	816.17	-6661	-0.0000258	0.0003743	0.0035	1.93	5650.06	5981.98	5981.98	7.33	No	Si
SLU 33	9.86	191.09	-5956	-0.0000183	0.0003743	0.0035	1.93	5125.31	5476.09	5476.09	28.66	No	Si
SLU 33	11.66	795.41	-6585	-0.0000254	0.0003743	0.0035	1.93	5594.37	5930.05	5930.05	7.46	No	Si
SLU 35	9.86	198.67	-6163	-0.0000189	0.0003743	0.0035	1.93	5281.4	5633.76	5633.76	28.36	No	Si
SLU 35	11.66	848.78	-6866	-0.0000267	0.0003743	0.0035	1.93	5799.02	6122.27	6122.27	7.21	No	Si
SLU 32	9.86	185.18	-5848	-0.0000179	0.0003743	0.0035	1.93	5043.27	5387.21	5387.21	29.09	No	Si
SLU 32	11.66	806.37	-6507	-0.0000253	0.0003743	0.0035	1.93	5536.82	5876.68	5876.68	7.29	No	Si
SLU 36	9.86	204.58	-6272	-0.0000193	0.0003743	0.0035	1.93	5362.25	5712.53	5712.53	27.92	No	Si
SLU 36	11.66	837.82	-6944	-0.0000268	0.0003743	0.0035	1.93	5855.59	6176.09	6176.09	7.37	No	Si
SLU 40	9.86	117.69	-5544	-0.0000164	0.0003743	0.0035	1.93	4810.94	5138.72	5138.72	43.66	No	Si
SLU 40	11.66	808.21	-6309	-0.0000247	0.0003743	0.0035	1.93	5390	5739.18	5739.18	7.1	No	Si
SLU 42	9.86	131.18	-5860	-0.0000175	0.0003743	0.0035	1.93	5052.44	5397.11	5397.11	41.14	No	Si
SLU 42	11.66	850.62	-6668	-0.0000261	0.0003743	0.0035	1.93	5654.7	5986.32	5986.32	7.04	No	Si
SLU 39	9.86	111.78	-5436	-0.0000161	0.0003743	0.0035	1.93	4727.33	5048.66	5048.66	45.17	No	Si
SLU 39	11.66	819.17	-6231	-0.0000246	0.0003743	0.0035	1.93	5331.69	5682.95	5682.95	6.94	No	Si
SLU 83	9.86	281.81	-7008	-0.0000221	0.0003743	0.0035	1.93	5901.61	6220.1	6220.1	22.07	No	Si
SLU 83	11.66	885	-7568	-0.0000291	0.0003743	0.0035	1.93	6298.85	6608.64	6608.64	7.47	No	Si
SLU 41	9.86	125.27	-5751	-0.0000171	0.0003743	0.0035	1.93	4970.02	5308.41	5308.41	42.38	No	Si
SLU 41	11.66	861.58	-6590	-0.000026	0.0003743	0.0035	1.93	5597.38	5932.85	5932.85	6.89	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 11	9.86	6.57	-323	-0.0000009	0.0005615	0.0035	1.93		503.77	503.77	76.63		Si
SLD 11	11.66	1057.71	-1878	-0.0000165	0.0005615	0.0035	1.93		1963.5	1963.5	1.86		Si
SLV 8	9.86	60.59	4256	0.3364618	0.0005615	0.0035	1.544		0	0	0		No
SLV 8	11.66	767.17	1688	0.1277878	0.0005615	0.0035	1.544		0	0	0		No
SLV 7	9.86	-65.27	5122	0	0.0005615	0.0035	1.544		0	0	0		No
SLV 7	11.66	894.56	2295	0.1751207	0.0005615	0.0035	1.544		0	0	0		No
SLV 11	9.86	-421.66	5524	0.4395316	0.0005615	0.0035	1.544		0	0	0		No
SLV 11	11.66	1862.3	1829	0.1240595	0.0005615	0.0035	1.544		0	0	0		No
SLV 15	9.86	-508.75	-627	-0.0000137	0.0005615	0.0035	1.544		1656.89	1656.89	3.26		Si
SLV 15	11.66	2411.93	-3131	-0.0000585	0.0005615	0.0035	1.93		3113.17	3113.17	1.29		Si
SLV 16	9.86	-311.67	-1984	-0.0000081	0.0005615	0.0035	1.93		2916.33	2916.33	9.36		Si
SLV 16	11.66	2212.46	-4081	-0.0000344	0.0005615	0.0035	1.93		3967.16	3967.16	1.79		Si
SLV 3	9.86	679.22	-1967	-0.0000111	0.0005615	0.0035	1.93		2046.39	2046.39	3.01		Si
SLV 3	11.66	-813.88	-1577	-0.0000123	0.0005615	0.0035	1.93		2540.93	2540.93	3.12		Si
SLD 12	9.86	61.48	-701	-0.0000024	0.0005615	0.0035	1.93		861.97	861.97	14.02		Si
SLD 12	11.66	1002.14	-2143	-0.0000152	0.0005615	0.0035	1.93		2209.59	2209.59	2.2		Si
SLD 7	9.86	159.8	-495	-0.0000027	0.0005615	0.0035	1.93		666.95	666.95	4.17		Si
SLD 7	11.66	643.3	-1678	-0.0000101	0.0005615	0.0035	1.93		1777.37	1777.37	2.76		Si
SLV 12	9.86	-295.8	4658	0.3702617	0.0005615	0.0035	1.544		0	0	0		No
SLV 12	11.66	1734.91	1222	0.0712026	0.0005615	0.0035	1.544		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	9.86	361.12	-7528	-6269	-1670	1.93	1.93	-11601	8491	4589	40441	16182	4922	21104	No	12.64	Si
SLU 78	11.66	861.24	-7923	-6598	-1672	1.93	1.93	-12209	8572	4633	40441	16182	4922	21104	No	12.62	Si
SLU 39	9.86	111.78	-5436	-4526	-1735	1.93	1.93	-8376	8061	4356	40441	16182	4922	21104	No	12.17	Si
SLU 39	11.66	819.17	-6231	-5188	-1736	1.93	1.93	-9601	8225	4445	40441	16182	4922	21104	No	12.16	Si
SLU 82	9.86	274.23	-6801	-5663	-1751	1.93	1.93	-10479	8342	4508	40441	16182	4922	21104	No	12.05	Si
SLU 82	11.66	831.63	-7288	-6068	-1753	1.93	1.93	-11230	8442	4562	40441	16182	4922	21104	No	12.04	Si
SLU 81	9.86	268.32	-6693	-5573	-1777	1.93	1.93	-10313	8319	4496	40441	16182	4922	21104	No	11.88	Si
SLU 81	11.66	842.59	-7209	-6003	-1778	1.93	1.93	-11109	8426	4553	40441	16182	4922	21104	No	11.87	Si
SLU 83	9.86	281.81	-7008	-5836	-1816	1.93	1.93	-10799	8384	4531	40441	16182	4922	21104	No	11.62	Si
SLU 83	11.66	885	-7568	-6302	-1818	1.93	1.93	-11662	8499	4593	40441	16182	4922	21104	No	11.61	Si
SLU 42	9.86	131.18	-5860	-4879	-1748	1.93	1.93	-9029	8148	4403	40441	16182	4922	21104	No	12.07	Si
SLU 42	11.66	850.62	-6668	-5552	-1750	1.93	1.93	-10274	8314	4493	40441	16182	4922	21104	No	12.06	Si
SLU 41	9.86	125.27	-5751	-4789	-1774	1.93	1.93	-8862	8126	4391	40441	16182	4922	21104	No	11.9	Si
SLU 41	11.66	861.58	-6590	-5487	-1776	1.93	1.93	-10154	8298	4484	40441	16182	4922	21104	No	11.89	Si
SLU 40	9.86	117.69	-5544	-4617	-1709	1.93	1.93	-8543	8083	4368	40441	16182	4922	21104	No	12.35	Si
SLU 40	11.66	808.21	-6309	-5253	-1711	1.93	1.93	-9721	8241	4453	40441	16182	4922	21104	No	12.34	Si
SLU 84	9.86	287.72	-7117	-5926	-1790	1.93	1.93	-10966	8407	4543	40441	16182	4922	21104	No	11.79	Si
SLU 84	11.66	874.04	-7647	-6367	-1792	1.93	1.93	-11783	8515	4602	40441	16182	4922	21104	No	11.77	Si
SLU 77	9.86	355.21	-7420	-6179	-1695	1.93	1.93	-11434	8469	4577	40441	16182	4922	21104	No	12.45	Si
SLU 77	11.66	872.21	-7845	-6533	-1698	1.93	1.93	-12088	8556	4624	40441	16182	4922	21104	No	12.43	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	9.86	1188.57	-9209	-7668	2388	1.93	1.93	-14190	13255	7163	40441	24273	4922	29195		12.23	Si
SLV 2	11.66	-1540.88	-6459	-5378	1764	1.93	1.93	-9952	12407	6705	40441	24273	4922	29195		16.55	Si
SLV 7	9.86	-65.27	5122	4265	-2855	1.544	1.93	0	0	0	40441	19419	3937	23356		8.18	Si
SLV 7	11.66	894.56	2295	1911	-3090	1.544	1.7255	0	0	0	40441	19419	3937	23356		7.56	Si
SLV 16	9.86	-311.67	-1984	-1652	-3733	1.93	1.93	-3057	11028	5960	40441	24273	4922	29195		7.82	Si
SLV 16	11.66	2212.46	-4081	-3398	-3112	1.93	1.2684	-6288	11674	4146	40441	24273	4922	29195		9.38	Si
SLV 12	9.86	-295.8	4658	3878	-3958	1.544	1.93	0	0	0	40441	19419	3937	23356		5.9	Si
SLV 12	11.66	1734.91	1222	1018	-3812	1.544	0	0	0	0	40441	19419	3937	23356		6.13	Si
SLV 15	9.86	-508.75	-627	-522	-4172	1.544	0.4616	0	0	0	40441	19419	3937	23356		5.6	Si
SLV 15	11.66	2411.93	-3131	-2607	-3551	1.93	0.5838	-16072	13631	2228	40441	24273	4922	29195		8.22	Si
SLD 11	9.86	6.57	-323	-269	-2357	1.93	1.93	-498	10516	5683	40441	24273	4922	29195		12.39	Si
SLD 11	11.66	1057.71	-1878	-1564	-2297	1.93	1.2055	-2894	10995	3711	40441	24273	4922	29195		12.71	Si
SLV 13	9.86	-196.49	-6512	-5423	-2663	1.93	1.93	-10034	12424	6714	40441	24273	4922	29195		10.96	Si
SLV 13	11.66	1884.4	-7063	-5881	-2016	1.93	1.93	-10883	12593	6805	40441	24273	4922	29195		14.48	Si
SLV 11	9.86	-421.66	5524	4600	-4238	1.544	1.93	0	0	0	40441	19419	3937	23356		5.51	Si
SLV 11	11.66	1862.3	1829	1523	-4092	1.544	0	0	0	0	40441	19419	3937	23356		5.71	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	9.86	60.59	4256	3544	-2575	1.544	1.93	0	0	0	40441	19419	3937	23356		9.07	Si
SLV 8	11.66	767.17	1688	1406	-2810	1.544	1.5316	0	0	0	40441	19419	3937	23356		8.31	Si
SLV 6	9.86	1101.48	-15360	-12791	2454	1.93	1.93	-23669	15150	8187	40441	24273	4922	29195		11.9	Si
SLV 6	11.66	-991.25	-11418	-9508	2305	1.93	1.93	-17594	13935	7531	40441	24273	4922	29195		12.66	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.46	0	3109	236.71	0	0	No, Trazione
SLV 12	179667	0.46	0	2341	236.71	0	0	No, Trazione
SLV 11	179667	0.46	0	3049	236.71	0	0	No, Trazione
SLV 8	179667	0.46	0	2400	236.71	0	0	No, Trazione
SLV 3	179667	0.46	3955	-2137	236.71	291.45	1.23	Si
SLV 15	179667	0.46	4320	-2335	236.71	317.6	1.34	Si
SLV 4	179667	0.46	6006	-3246	236.71	436.56	1.84	Si
SLV 16	179667	0.46	6372	-3443	236.71	461.96	1.95	Si
SLV 1	179667	0.46	12702	-6864	236.71	881.08	3.72	Si
SLV 13	179667	0.46	13068	-7062	236.71	904.06	3.82	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-9692	-13960	-397	0.962	1256.9	0.94	14.86526	15.29191	No
SLV 6	-9786	-14015	-239	0.968	1266.4	0.94	14.95614	15.29191	No
SLV 9	-9079	-13217	-397	1.014	1194.8	0.937	15.71869	15.29191	Si
SLV 5	-9173	-13273	-239	1.02	1204.2	0.938	15.80743	15.29191	Si
SLV 2	-6210	-7972	171	1.395	905.4	0.922	21.99487	8.07112	Si
SLV 14	-5898	-7785	-357	1.426	874	0.92	22.53735	8.07112	Si
SLV 1	-5249	-6809	171	1.582	809.1	0.915	25.12957	8.07112	Si
SLV 13	-4937	-6623	-358	1.627	777.9	0.913	25.90126	8.07112	Si
SLV 4	-2902	-2555	364	2.325	577.5	0.896	37.73423	8.07112	Si
SLV 16	-2590	-2369	-165	2.537	547.5	0.893	41.29212	8.07112	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.886	SLU 41	Si
V_SLU	11.609	SLU 83	Si
PF_SLV	0	SLV 7	No
V_SLV	5.511	SLV 11	Si
PFFP_SLV	0	SLV 12	No
R_SLV	0.972	SLV 10	No

Maschio 199

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.314	-0.133	5.826	L6	L7	9.14	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 73	8.96	2238.33	-28053	-0.0000174	0.0003743	0.0035	9.14	114400.16	121833.86	121833.86	54.43	No	Si
SLU 73	12.48	11812.96	-6560	-0.0000083	0.0003743	0.0035	9.14	29224.76	33276.59	33276.59	2.82	No	Si
SLU 10	8.96	2040.52	-20502	-0.0000128	0.0003743	0.0035	9.14	86321.21	92035.39	92035.39	45.1	No	Si
SLU 10	12.48	8946.56	-4438	-0.0000061	0.0003743	0.0035	9.14	19936.46	23950.8	23950.8	2.68	No	Si
SLU 44	8.96	2335.81	-22611	-0.0000141	0.0003743	0.0035	9.14	94363.78	100533.5	100533.5	43.04	No	Si
SLU 44	12.48	9771.83	-5342	-0.0000068	0.0003743	0.0035	9.14	23912.71	27953.21	27953.21	2.86	No	Si
SLU 61	8.96	1656.3	-25841	-0.0000158	0.0003743	0.0035	9.14	106380.31	113318.14	113318.14	68.42	No	Si
SLU 61	12.48	10733.47	-5357	-0.0000073	0.0003743	0.0035	9.14	23979.74	28020.99	28020.99	2.61	No	Si
SLU 60	8.96	805.37	-25829	-0.0000155	0.0003743	0.0035	9.14	106335.55	113270.36	113270.36	140.64	No	Si
SLU 60	12.48	10189.9	-5358	-0.000007	0.0003743	0.0035	9.14	23981.79	28023.07	28023.07	2.75	No	Si
SLU 19	8.96	1439.56	-21465	-0.0000131	0.0003743	0.0035	9.14	90014.52	95914.01	95914.01	66.63	No	Si
SLU 19	12.48	8981.38	-4443	-0.0000061	0.0003743	0.0035	9.14	19957.68	23972.16	23972.16	2.67	No	Si
SLU 82	8.96	1637.37	-29017	-0.0000177	0.0003743	0.0035	9.14	117838.29	125255.8	125255.8	76.5	No	Si
SLU 82	12.48	11847.78	-6565	-0.0000083	0.0003743	0.0035	9.14	29245.62	33297.61	33297.61	2.81	No	Si
SLU 18	8.96	588.63	-21453	-0.0000128	0.0003743	0.0035	9.14	89967.89	95864.71	95864.71	162.86	No	Si
SLU 18	12.48	8437.81	-4443	-0.0000058	0.0003743	0.0035	9.14	19959.75	23974.23	23974.23	2.84	No	Si
SLU 52	8.96	2257.26	-24877	-0.0000155	0.0003743	0.0035	9.14	102834.86	109531.37	109531.37	48.52	No	Si
SLU 52	12.48	10698.64	-5353	-0.0000073	0.0003743	0.0035	9.14	23958.67	27999.69	27999.69	2.62	No	Si
SLU 40	8.96	1420.63	-24641	-0.000015	0.0003743	0.0035	9.14	101959.97	108590.52	108590.52	76.44	No	Si
SLU 40	12.48	10095.69	-5650	-0.0000071	0.0003743	0.0035	9.14	25262.3	29308.74	29308.74	2.9	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 16	8.96	-6694.52	-16663	-0.0000122	0.0005615	0.0035	9.14		98322.34	98322.34	14.69		Si
SLD 16	12.48	5008.51	420	0.0011689	0.0005615	0.0035	7.312		0	0	0		No
SLV 15	8.96	-23798.81	-12468	-0.0000165	0.0005615	0.0035	9.14		80366.9	80366.9	3.38		Si
SLV 15	12.48	-4312.96	7485	0.1182684	0.0005615	0.0035	7.312		0	0	0		No
SLD 13	8.96	10420.94	-16888	-0.0000137	0.0005615	0.0035	9.14		78363.17	78363.17	7.52		Si
SLD 13	12.48	13863.85	295	-0.0047837	0.0005615	0.0035	9.14		0	0	0		No
SLV 13	8.96	22817.29	-13018	-0.0000163	0.0005615	0.0035	9.14		61748.98	61748.98	2.71		Si
SLV 13	12.48	21769.4	7092	0.1007441	0.0005615	0.0035	7.312		0	0	0		No
SLV 16	8.96	-15850.82	-12506	-0.0000132	0.0005615	0.0035	9.14		80530.63	80530.63	5.08		Si
SLV 16	12.48	1779.59	7373	0.1147276	0.0005615	0.0035	7.312		0	0	0		No
SLD 15	8.96	-10106.13	-16647	-0.0000135	0.0005615	0.0035	9.14		98253.23	98253.23	9.72		Si
SLD 15	12.48	2393.32	468	0.0060655	0.0005615	0.0035	7.312		0	0	0		No
SLV 9	8.96	76671.66	-18573	-0.0001651	0.0005615	0.0035	9.14		85498.12	85498.12	1.12		Si
SLV 9	12.48	50445.39	-1792	-0.0152495	0.0005615	0.0035	9.14		12169.78	12169.78	0.24		No
SLV 14	8.96	30765.28	-13056	-0.0000208	0.0005615	0.0035	9.14		61915.15	61915.15	2.01		Si
SLV 14	12.48	27861.95	6981	0.0942912	0.0005615	0.0035	7.312		0	0	0		No
SLV 10	8.96	81747.47	-18597	-0.0004493	0.0005615	0.0035	9.14		85601.25	85601.25	1.05		Si
SLV 10	12.48	54336.26	-1863	-0.0165875	0.0005615	0.0035	9.14		12490.15	12490.15	0.23		No
SLD 14	8.96	13832.56	-16904	-0.000015	0.0005615	0.0035	9.14		78432.56	78432.56	5.67		Si
SLD 14	12.48	16479.03	247	-0.0058108	0.0005615	0.0035	9.14		328.74	328.74	0.02		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 41	8.96	685.18	-25743	-21437	-1337	9.14	9.14	-8376	8061	20630	40441	76634	23307	61071	No	45.68	Si
SLU 41	12.48	9727.22	-6829	-5687	-1315	9.14	9.14	-2222	7241	18530	40441	76634	23307	58971	No	44.84	Si
SLU 74	8.96	863.33	-29802	-24817	-1229	9.14	9.14	-9697	8237	21081	40441	76634	23307	61522	No	50.04	Si
SLU 74	12.48	11153.27	-8242	-6863	-1205	9.14	9.14	-2682	7302	18687	40441	76634	23307	59128	No	49.08	Si
SLU 35	8.96	762.08	-26541	-22101	-1308	9.14	9.14	-8636	8096	20719	40441	76634	23307	61160	No	46.75	Si
SLU 35	12.48	9576.28	-8506	-7083	-1287	9.14	9.14	-2768	7313	18717	40441	76634	23307	59158	No	45.97	Si
SLU 32	8.96	646.59	-25427	-21173	-1303	9.14	9.14	-8273	8048	20595	40441	76634	23307	61036	No	46.83	Si
SLU 32	12.48	9401.18	-7327	-6101	-1283	9.14	9.14	-2384	7262	18586	40441	76634	23307	59027	No	46.02	Si
SLU 37	8.96	834.33	-25886	-21555	-1223	9.14	9.14	-8423	8067	20646	40441	76634	23307	61087	No	49.96	Si
SLU 37	12.48	9505.11	-8004	-6665	-1202	9.14	9.14	-2604	7292	18661	40441	76634	23307	59102	No	49.19	Si
SLU 83	8.96	901.92	-30119	-25080	-1263	9.14	9.14	-9800	8251	21116	40441	76634	23307	61557	No	48.74	Si
SLU 83	12.48	11479.31	-7744	-6448	-1237	9.14	9.14	-2520	7280	18632	40441	76634	23307	59073	No	47.74	Si
SLU 79	8.96	1051.08	-30261	-25199	-1149	9.14	9.14	-9846	8257	21132	40441	76634	23307	61573	No	53.61	Si
SLU 79	12.48	11257.2	-8918	-7426	-1124	9.14	9.14	-2902	7331	18762	40441	76634	23307	59203	No	52.69	Si
SLU 39	8.96	569.69	-24629	-20509	-1332	9.14	9.14	-8014	8013	20507	40441	76634	23307	60948	No	45.75	Si
SLU 39	12.48	9552.12	-5651	-4706	-1311	9.14	8.6388	-1839	7190	17391	40441	76634	23307	57832	No	44.11	Si
SLU 77	8.96	978.82	-30916	-25744	-1234	9.14	9.14	-10060	8286	21205	40441	76634	23307	61646	No	49.95	Si
SLU 77	12.48	11328.37	-9420	-7844	-1209	9.14	9.14	-3065	7353	18818	40441	76634	23307	59259	No	49.02	Si
SLU 81	8.96	786.44	-29004	-24152	-1258	9.14	9.14	-9437	8203	20993	40441	76634	23307	61433	No	48.83	Si
SLU 81	12.48	11304.21	-6565	-5467	-1233	9.14	8.5446	-2136	7229	17296	40441	76634	23307	57737	No	46.83	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	8.96	74985.51	-22777	-18967	21469	9.14	3.8337	-7411	11899	12773	40441	114951	23307	53214		2.48	Si
SLV 5	12.48	47998.87	-8997	-7492	26560	9.14	0	-118737	16250	0	40441	114951	23307	40441		1.52	Si
SLV 9	8.96	76671.66	-18573	-15466	22825	9.14	1.3254	-42383	16250	6030	40441	114951	23307	46471		2.04	Si
SLV 9	12.48	50445.39	-1792	-1492	27731	9.14	0	0	16250	0	40441	114951	23307	40441		1.46	Si
SLV 7	8.96	-80401.49	-20943	-17439	-25555	7.312	2.1926	0	0	0	40441	91961	18646	40441		1.58	Si
SLV 7	12.48	-38942.32	-7690	-6403	-30429	7.312	0	0	0	0	40441	91961	18646	40441		1.33	Si
SLV 11	8.96	-78715.34	-16738	-13938	-24199	7.312	0	0	0	0	40441	91961	18646	40441		1.67	Si
SLV 11	12.48	-36495.81	-484	-403	-29257	7.312	0	0	0	0	40441	91961	18646	40441		1.38	Si
SLD 12	8.96	-32074.68	-18475	-15385	-10361	9.14	8.5017	-6479	11712	27881	40441	114951	23307	68322		6.59	Si
SLD 12	12.48	-10050.19	-2964	-2468	-12590	7.312	3.5388	0	0	0	40441	91961	18646	40441		3.21	Si
SLV 8	8.96	-75325.68	-20967	-17459	-24067	7.312	2.9322	0	0	0	40441	91961	18646	40441		1.68	Si
SLV 8	12.48	-35051.45	-7761	-6463	-28939	7.312	0.1611	0	0	0	40441	91961	18646	40441		1.4	Si
SLV 6	8.96	80061.32	-22802	-18987	22957	9.14	3.1764	-7419	11901	10584	40441	114951	23307	51025		2.22	Si
SLV 6	12.48	51889.75	-9068	-7551	28050	9.14	0	-116493	16250	0	40441	114951	23307	40441		1.44	Si
SLD 11	8.96	-34288.79	-18465	-15376	-11011	9.14	8.139	-6759	11768	26819	40441	114951	23307	67260		6.11	Si
SLD 11	12.48	-11747.42	-2933	-2443	-13240	7.312	1.6952	0	0	0	40441	91961	18646	40441		3.05	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	8.96	81747.47	-18597	-15486	24313	9.14	0.5227	-93852	16250	2378	40441	114951	23307	42819		1.76	Si
SLV 10	12.48	54336.26	-1863	-1551	29221	9.14	0	0	16250	0	40441	114951	23307	40441		1.38	Si
SLV 12	8.96	-73639.53	-16762	-13958	-22711	7.312	0.5305	0	0	0	40441	91961	18646	40441		1.78	Si
SLV 12	12.48	-32604.93	-556	-463	-27767	7.312	0	0	0	0	40441	91961	18646	40441		1.46	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.72 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.46	0	-7316	1121	0	0	No, e>t/2
SLV 16	179667	0.46	0	926	1121	0	0	No, Trazione
SLV 14	179667	0.46	0	576	1121	0	0	No, Trazione
SLV 11	179667	0.46	0	-7259	1121	0	0	No, e>t/2
SLV 13	179667	0.46	0	665	1121	0	0	No, Trazione
SLV 15	179667	0.46	0	1015	1121	0	0	No, Trazione
SLV 9	179667	0.46	3292	-8424	1121	1153.99	1.03	Si
SLV 10	179667	0.46	3314	-8481	1121	1161.6	1.04	Si
SLV 7	179667	0.46	5739	-14687	1121	1978.94	1.77	Si
SLV 8	179667	0.46	5761	-14744	1121	1986.29	1.77	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.72 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-9068	-22802	-952	2.992	2291.7	0.889	48.90464	15.29191	Si
SLV 5	-8997	-22777	-952	3.004	2285.2	0.889	49.10776	15.29191	Si
SLV 8	-7761	-20967	-912	3.238	2172.6	0.889	52.93722	15.29191	Si
SLV 7	-7690	-20943	-912	3.252	2166.2	0.889	53.1715	15.29191	Si
SLV 2	-17037	-27072	-3100	1.971	3055.8	0.902	31.77529	8.07112	Si
SLV 1	-16926	-27034	-3100	1.98	3044.9	0.901	31.92119	8.07112	Si
SLV 4	-16645	-26521	-3088	2.002	3017.4	0.901	32.30252	8.07112	Si
SLV 3	-16534	-26483	-3088	2.011	3006.4	0.901	32.45315	8.07112	Si
SLV 10	-1863	-18597	901	5.131	1712.7	0.929	80.2349	15.29191	Si
SLV 9	-1792	-18573	901	5.168	1708.9	0.931	80.66873	15.29191	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.611	SLU 61	Si
V_SLU	44.114	SLU 39	Si
PF_SLV	0	SLD 13	No
V_SLV	1.329	SLV 7	Si
PFFP_SLV	0	SLV 16	No
R_SLV	3.198	SLV 6	Si

Maschio 200

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.633	-3.314	-24.633	5.826	L7	L8	9.141	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	12.48	14488.22	-3850	-0.0000169	0.0003743	0.0035	9.1407	17336.86	21337.89	21337.89	1.47	No	Si
SLU 82	15.64	8764.08	-3697	-0.0000059	0.0003743	0.0035	9.1407	16655.09	20653.44	20653.44	2.36	No	Si
SLU 31	12.48	12186.97	-3242	-0.0000141	0.0003743	0.0035	9.1407	14633.51	18627.01	18627.01	1.53	No	Si
SLU 31	15.64	6939.05	-3251	-0.0000047	0.0003743	0.0035	9.1407	14674.12	18667.69	18667.69	2.69	No	Si
SLU 10	12.48	11043.49	-2775	-0.0000166	0.0003743	0.0035	9.1407	12547.79	16540.42	16540.42	1.5	No	Si
SLU 10	15.64	6201.35	-2441	-0.0000042	0.0003743	0.0035	9.1407	11051.98	15046.8	15046.8	2.43	No	Si
SLU 18	12.48	10402.95	-2550	-0.0000184	0.0003743	0.0035	9.1407	11542.1	15535.94	15535.94	1.49	No	Si
SLU 18	15.64	6706.38	-2429	-0.0000047	0.0003743	0.0035	9.1407	10996.74	14991.68	14991.68	2.24	No	Si
SLU 60	12.48	12703.35	-3388	-0.0000146	0.0003743	0.0035	9.1407	15281.76	19276.37	19276.37	1.52	No	Si
SLU 60	15.64	8125.46	-2878	-0.0000058	0.0003743	0.0035	9.1407	13008.63	17001.11	17001.11	2.09	No	Si
SLU 61	12.48	13344.73	-3383	-0.0000192	0.0003743	0.0035	9.1407	15261.1	19255.67	19255.67	1.44	No	Si
SLU 61	15.64	8026.39	-2886	-0.0000056	0.0003743	0.0035	9.1407	13045.6	17038.08	17038.08	2.12	No	Si
SLU 19	12.48	11044.33	-2546	-0.0000372	0.0003743	0.0035	9.1407	11521.31	15515.18	15515.18	1.4	No	Si
SLU 19	15.64	6607.31	-2437	-0.0000046	0.0003743	0.0035	9.1407	11033.84	15028.7	15028.7	2.27	No	Si
SLU 40	12.48	12187.81	-3013	-0.0000204	0.0003743	0.0035	9.1407	13610.78	17603.36	17603.36	1.44	No	Si
SLU 40	15.64	7345	-3247	-0.0000049	0.0003743	0.0035	9.1407	14656.1	18649.64	18649.64	2.54	No	Si
SLU 52	12.48	13343.89	-3612	-0.0000146	0.0003743	0.0035	9.1407	16280.85	20277.96	20277.96	1.52	No	Si
SLU 52	15.64	7620.43	-2890	-0.0000052	0.0003743	0.0035	9.1407	13063.68	17056.16	17056.16	2.24	No	Si
SLU 39	12.48	11546.43	-3018	-0.0000143	0.0003743	0.0035	9.1407	13631.5	17624.09	17624.09	1.53	No	Si
SLU 39	15.64	7444.08	-3239	-0.000005	0.0003743	0.0035	9.1407	14619.23	18612.72	18612.72	2.5	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	12.48	19878.31	8987	0.1323519	0.0005615	0.0035	7.3126		0	0	0		No
SLV 2	15.64	4696.45	-2657	-0.0000033	0.0005615	0.0035	9.1407		16061.44	16061.44	3.42		Si
SLV 5	12.48	57627.75	688	-0.0224072	0.0005615	0.0035	9.1407		0	0	0		No
SLV 5	15.64	393.44	-2656	-0.0000017	0.0005615	0.0035	9.1407		16058.83	16058.83	40.82		Si
SLV 6	12.48	53059.35	734	-0.0207567	0.0005615	0.0035	9.1407		0	0	0		No
SLV 6	15.64	1115.51	-2651	-0.0000019	0.0005615	0.0035	9.1407		16033.89	16033.89	14.37		Si
SLV 3	12.48	-394.17	8693	0.1360691	0.0005615	0.0035	7.3126		0	0	0		No
SLV 3	15.64	6659.66	-2668	-0.0000045	0.0005615	0.0035	9.1407		16112.9	16112.9	2.42		Si
SLD 4	12.48	2092.59	1854	0.0281862	0.0005615	0.0035	7.3126		0	0	0		No
SLD 4	15.64	6788.17	-2659	-0.0000046	0.0005615	0.0035	9.1407		16070.11	16070.11	2.37		Si
SLD 1	12.48	17219.63	1920	0.0131299	0.0005615	0.0035	7.3126		0	0	0		No
SLD 1	15.64	4945.23	-2662	-0.0000034	0.0005615	0.0035	9.1407		16081.79	16081.79	3.25		Si
SLD 2	12.48	14149.05	1951	0.0187702	0.0005615	0.0035	7.3126		0	0	0		No
SLD 2	15.64	5430.56	-2658	-0.0000037	0.0005615	0.0035	9.1407		16065.02	16065.02	2.96		Si
SLD 3	12.48	5163.16	1824	0.026114	0.0005615	0.0035	7.3126		0	0	0		No
SLD 3	15.64	6302.84	-2663	-0.0000042	0.0005615	0.0035	9.1407		16086.87	16086.87	2.55		Si
SLV 4	12.48	-7547.63	8765	0.1391455	0.0005615	0.0035	7.3126		0	0	0		No
SLV 4	15.64	7790.32	-2660	-0.0000057	0.0005615	0.0035	9.1407		16073.85	16073.85	2.06		Si
SLV 1	12.48	27031.77	8916	0.1269021	0.0005615	0.0035	7.3126		0	0	0		No
SLV 1	15.64	3565.79	-2666	-0.0000029	0.0005615	0.0035	9.1407		16100.49	16100.49	4.52		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 60	12.48	12703.35	-3388	-2821	11126	9.1407	2.4616	-4103	7492	5163	35683	76640	23309	40847	No	3.67	Si
SLU 60	15.64	8125.46	-2878	-2397	11036	9.1407	5.2414	-936	7069	10375	35683	76640	23309	46058	No	4.17	Si
SLU 52	12.48	13343.89	-3612	-3008	11559	9.1407	2.6292	-4097	7491	5514	35683	76640	23309	41198	No	3.56	Si
SLU 52	15.64	7620.43	-2890	-2407	11562	9.1407	5.8017	-940	7070	11485	35683	76640	23309	47168	No	4.08	Si
SLU 82	12.48	14488.22	-3850	-3206	12344	9.1407	2.4222	-4741	7577	5139	35683	76640	23309	40822	No	3.31	Si
SLU 82	15.64	8764.08	-3697	-3078	12299	9.1407	6.5985	-1203	7105	13127	35683	76640	23309	48810	No	3.97	Si
SLU 76	12.48	14803.7	-5222	-4348	12586	9.1407	5.2061	-1699	7171	10453	35683	76640	23309	46136	No	3.67	Si
SLU 76	15.64	8247.73	-5002	-4165	12578	9.1407	8.7646	-1627	7161	17575	35683	76640	23309	53258	No	4.23	Si
SLU 83	12.48	14163.16	-4997	-4161	12153	9.1407	5.2084	-1626	7161	10444	35683	76640	23309	46127	No	3.8	Si
SLU 83	15.64	8752.75	-4990	-4155	12052	9.1407	8.4487	-1623	7161	16940	35683	76640	23309	52623	No	4.37	Si
SLU 73	12.48	14487.37	-4080	-3397	12292	9.1407	3.0573	-3978	7475	6399	35683	76640	23309	42082	No	3.42	Si
SLU 73	15.64	8358.13	-3701	-3082	12286	9.1407	6.9354	-1204	7105	13797	35683	76640	23309	49480	No	4.03	Si
SLU 81	12.48	13846.84	-3855	-3210	11859	9.1407	2.9349	-3916	7467	6136	35683	76640	23309	41819	No	3.53	Si
SLU 81	15.64	8863.16	-3688	-3071	11760	9.1407	6.502	-1200	7104	12934	35683	76640	23309	48617	No	4.13	Si
SLU 61	12.48	13344.73	-3383	-2817	11612	9.1407	1.8774	-5373	7661	4027	35683	76640	23309	39710	No	3.42	Si
SLU 61	15.64	8026.39	-2886	-2404	11575	9.1407	5.3687	-939	7070	10627	35683	76640	23309	46311	No	4	Si
SLU 84	12.48	14804.54	-4993	-4157	12639	9.1407	4.8151	-1624	7161	9655	35683	76640	23309	45338	No	3.59	Si
SLU 84	15.64	8653.68	-4998	-4162	12591	9.1407	8.5169	-1626	7161	17078	35683	76640	23309	52761	No	4.19	Si
SLU 63	12.48	13661.06	-4525	-3768	11906	9.1407	4.6548	-1472	7141	9307	35683	76640	23309	44990	No	3.78	Si
SLU 63	15.64	7915.98	-4188	-3487	11868	9.1407	8.0405	-1363	7126	16043	35683	76640	23309	51726	No	4.36	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	12.48	52966.42	-6553	-5456	42735	9.1407	0	-100087	16250	0	35683	114959	23309	35683		0.83	No
SLV 10	15.64	1315.12	-2647	-2204	43186	9.1407	9.1407	-861	10589	27101	35683	114959	23309	62784		1.45	Si
SLD 9	12.48	30657.01	-4710	-3922	25624	9.1407	0	-90419	16250	0	35683	114959	23309	35683		1.39	Si
SLD 9	15.64	3633.77	-2654	-2210	25749	9.1407	9.1407	-864	10589	27102	35683	114959	23309	62786		2.44	Si
SLV 12	12.48	-38453.38	-7295	-6075	-30800	7.3126	0	0	0	0	35683	91968	18647	35683		1.16	Si
SLV 12	15.64	11628.01	-2656	-2212	-31465	9.1407	0.5781	-12262	12897	2088	35683	114959	23309	37771		1.2	Si
SLV 9	12.48	57534.82	-6598	-5494	47783	9.1407	0	0	16250	0	35683	114959	23309	35683		0.75	No
SLV 9	15.64	593.04	-2653	-2209	48233	9.1407	9.1407	-863	10589	27102	35683	114959	23309	62785		1.3	Si
SLV 6	12.48	53059.35	734	611	42247	9.1407	0	0	4933	0	35683	114959	23309	35683		0.84	No
SLV 6	15.64	1115.51	-2651	-2207	42777	9.1407	9.1407	-862	10589	27102	35683	114959	23309	62785		1.47	Si
SLV 5	12.48	57627.75	688	573	47295	9.1407	0	0	4226	0	35683	114959	23309	35683		0.75	No
SLV 5	15.64	393.44	-2656	-2212	47824	9.1407	9.1407	-864	10590	27103	35683	114959	23309	62786		1.31	Si
SLV 11	12.48	-33884.98	-7341	-6113	-25752	7.3126	0	0	0	0	35683	91968	18647	35683		1.39	Si
SLV 11	15.64	10905.94	-2662	-2216	-26417	9.1407	1.4193	-5565	11531	4582	35683	114959	23309	40266		1.52	Si
SLV 8	12.48	-38360.45	-9	-8	-31288	7.3126	0	0	0	0	35683	91968	18647	35683		1.14	Si
SLV 8	15.64	11428.41	-2660	-2215	-31874	9.1407	0.8222	-9289	12285	2828	35683	114959	23309	38511		1.21	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 5	12.48	30698.36	-1595	-1328	25414	9.1407	0	0	16250	0	35683	114959	23309	35683		1.4	Si
SLD 5	15.64	3547.35	-2657	-2212	25574	9.1407	9.1407	-864	10590	27103	35683	114959	23309	62786		2.46	Si
SLV 7	12.48	-33792.05	-54	-45	-26240	7.3126	0	0	0	0	35683	91968	18647	35683		1.36	Si
SLV 7	15.64	10706.34	-2666	-2220	-26826	9.1407	1.6617	-4770	11371	5291	35683	114959	23309	40974		1.53	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.06 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.53	0	2489	1035.61	0	0	No, Trazione
SLV 6	179667	0.53	0	-2190	1035.61	0	0	No, e>t/2
SLV 1	179667	0.53	0	2558	1035.61	0	0	No, Trazione
SLV 2	179667	0.53	0	2603	1035.61	0	0	No, Trazione
SLV 8	179667	0.53	0	-2418	1035.61	0	0	No, e>t/2
SLV 9	179667	0.53	0	-6388	1035.61	0	0	No, e>t/2
SLV 7	179667	0.53	0	-2447	1035.61	0	0	No, e>t/2
SLV 4	179667	0.53	0	2534	1035.61	0	0	No, Trazione
SLV 5	179667	0.53	0	-2218	1035.61	0	0	No, e>t/2
SLV 10	179667	0.53	0	-6359	1035.61	0	0	No, e>t/2

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.06 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-2656	688	-1512	5.092	1598.2	0.911	81.25728	13.11449	Si, Trazione
SLV 6	-2651	734	-1512	5.095	1597.9	0.911	81.29513	13.11449	Si, Trazione
SLV 7	-2666	-54	-1384	5.1	1598.9	0.911	81.39895	13.11449	Si
SLV 8	-2660	-9	-1384	5.103	1598.5	0.911	81.43685	13.11449	Si
SLV 11	-2662	-7341	1330	5.108	1598.6	0.911	81.51283	13.11449	Si
SLV 12	-2656	-7295	1330	5.111	1598.2	0.911	81.55107	13.11449	Si
SLV 9	-2653	-6598	1202	5.125	1598	0.911	81.78086	13.11449	Si
SLV 10	-2647	-6553	1202	5.128	1597.6	0.911	81.81924	13.11449	Si
SLV 1	-2666	8916	-4634	4.774	1598.9	0.911	76.18401	7.68898	Si, Trazione
SLV 3	-2668	8693	-4595	4.776	1599	0.911	76.22768	7.68898	Si, Trazione

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.405	SLU 19	Si
V_SLU	3.307	SLU 82	Si
PF_SLV	0	SLD 1	No
V_SLV	0.747	SLV 9	No
PFFP_SLV	0	SLV 4	No
R_SLV	6.196	SLV 5	Si

Maschio 201

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.713	5.826	-24.633	5.826	L7	L8	1.92	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	13.38	-265.4	-2159	-0.0000082	0.0003743	0.0035	1.92	1990.42	3042.9	3042.9	11.47	No	Si
SLU 84	15.18	-1581.32	-658	-0.0004374	0.0003743	0.0035	1.536	0	1679.36	1679.36	1.06	No	Si
SLU 41	13.38	-89.83	-1448	-0.0000047	0.0003743	0.0035	1.92	1353.27	2405.75	2405.75	26.78	No	Si
SLU 41	15.18	-1485.8	-529	-0.0004394	0.0003743	0.0035	1.536	0	1559.01	1559.01	1.05	No	Si
SLU 81	13.38	-220.94	-1775	-0.0000068	0.0003743	0.0035	1.92	1648.63	2702.19	2702.19	12.23	No	Si
SLU 81	15.18	-1207.2	-262	-0.0004149	0.0003743	0.0035	1.536	0	1309.53	1309.53	1.08	No	Si
SLU 42	13.38	-97.95	-1514	-0.000005	0.0003743	0.0035	1.92	1413.16	2465.78	2465.78	25.17	No	Si
SLU 42	15.18	-1474.71	-539	-0.0004296	0.0003743	0.0035	1.536	0	1568.99	1568.99	1.06	No	Si
SLU 83	13.38	-257.28	-2093	-0.000008	0.0003743	0.0035	1.92	1932.02	2984.62	2984.62	11.6	No	Si
SLU 83	15.18	-1592.41	-647	-0.000447	0.0003743	0.0035	1.536	0	1669.43	1669.43	1.05	No	Si
SLU 39	13.38	-53.49	-1130	-0.0000036	0.0003743	0.0035	1.92	1062.7	2116.52	2116.52	39.57	No	Si
SLU 39	15.18	-1100.59	-143	-0.0004279	0.0003743	0.0035	1.536	0	1197.73	1197.73	1.09	No	Si
SLU 82	13.38	-229.06	-1841	-0.000007	0.0003743	0.0035	1.92	1707.77	2761.24	2761.24	12.05	No	Si
SLU 82	15.18	-1196.12	-273	-0.0004038	0.0003743	0.0035	1.536	0	1319.55	1319.55	1.1	No	Si
SLU 79	13.38	-364.07	-2624	-0.0000104	0.0003743	0.0035	1.92	2397.91	3457.07	3457.07	9.5	No	Si
SLU 79	15.18	-1957.31	-1166	-0.0004367	0.0003743	0.0035	1.536	0	2149.59	2149.59	1.1	No	Si
SLU 37	13.38	-196.62	-1979	-0.0000071	0.0003743	0.0035	1.92	1831.17	2884.6	2884.6	14.67	No	Si
SLU 37	15.18	-1850.7	-1048	-0.0004271	0.0003743	0.0035	1.536	0	2040.24	2040.24	1.1	No	Si
SLU 40	13.38	-61.61	-1196	-0.0000038	0.0003743	0.0035	1.92	1123.33	2177.27	2177.27	35.34	No	Si
SLU 40	15.18	-1089.5	-154	-0.0004148	0.0003743	0.0035	1.536	0	1207.78	1207.78	1.11	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 3	13.38	-735.6	-1043	-0.0000143	0.0005615	0.0035	1.536		2036.37	2036.37	2.77		Si
SLD 3	15.18	-688.49	237	0.0200613	0.0005615	0.0035	1.536		0	0	0		No
SLD 7	13.38	-118.5	363	0.0292529	0.0005615	0.0035	1.536		0	0	0		No
SLD 7	15.18	-1121.71	-52	-0.0004944	0.0005615	0.0035	1.536		1109	1109	0.99		No
SLD 8	13.38	-10.87	668	0.052854	0.0005615	0.0035	1.536		0	0	0		No
SLD 8	15.18	-1225.54	-67	-0.0005361	0.0005615	0.0035	1.536		1123.74	1123.74	0.92		No
SLV 12	13.38	1008.99	3369	0.2592837	0.0005615	0.0035	1.536		0	0	0		No
SLV 12	15.18	-1987.25	-433	-0.0007083	0.0005615	0.0035	1.536		1468.53	1468.53	0.74		No
SLV 11	13.38	762.25	2669	0	0.0005615	0.0035	1.536		0	0	0		No
SLV 11	15.18	-1749.23	-398	-0.0005977	0.0005615	0.0035	1.536		1435.35	1435.35	0.82		No
SLD 1	13.38	-974.97	-2375	-0.0000152	0.0005615	0.0035	1.92		3257.82	3257.82	3.34		Si
SLD 1	15.18	-445.41	120	0.0101682	0.0005615	0.0035	1.536		0	0	0		No
SLV 8	13.38	390.13	3830	0	0.0005615	0.0035	1.536		0	0	0		No
SLV 8	15.18	-1742.93	412	0.0356928	0.0005615	0.0035	1.536		0	0	0		No
SLD 4	13.38	-569.76	-573	-0.0000431	0.0005615	0.0035	1.536		1598.97	1598.97	2.81		Si
SLD 4	15.18	-848.47	213	0.018194	0.0005615	0.0035	1.536		0	0	0		No
SLV 7	13.38	143.39	3130	0.2466042	0.0005615	0.0035	1.536		0	0	0		No
SLV 7	15.18	-1504.92	447	0.0382939	0.0005615	0.0035	1.536		0	0	0		No
SLV 4	13.38	-897.3	1030	0.0848733	0.0005615	0.0035	1.536		0	0	0		No
SLV 4	15.18	-877.4	1078	0.0886062	0.0005615	0.0035	1.536		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 37	13.38	-196.62	-1979	-1648	1402	1.92	1.92	-3065	7353	3953	35683	16098	4896	20994	No	14.98	Si
SLU 37	15.18	-1850.7	-1048	-872	1393	1.536	0	0	0	0	35683	12878	3917	16795	No	12.06	Si
SLU 38	13.38	-204.74	-2045	-1703	1362	1.92	1.92	-3168	7367	3960	35683	16098	4896	20994	No	15.42	Si
SLU 38	15.18	-1839.61	-1058	-881	1353	1.536	0	0	0	0	35683	12878	3917	16795	No	12.41	Si
SLU 78	13.38	-392.39	-2897	-2412	1399	1.92	1.92	-4487	7543	4055	35683	16098	4896	20994	No	15.01	Si
SLU 78	15.18	-1992.12	-1483	-1235	1389	1.536	0	0	0	0	35683	12878	3917	16795	No	12.09	Si
SLU 77	13.38	-384.27	-2831	-2358	1439	1.92	1.92	-4385	7529	4048	35683	16098	4896	20994	No	14.59	Si
SLU 77	15.18	-2003.21	-1472	-1226	1429	1.536	0	0	0	0	35683	12878	3917	16795	No	11.75	Si
SLU 27	13.38	-381.21	-2685	-2235	1251	1.92	1.92	-4158	7499	4031	35683	16098	4896	20994	No	16.78	Si
SLU 27	15.18	-1849.21	-1665	-1387	1244	1.536	0	0	0	0	35683	12878	3917	16795	No	13.51	Si
SLU 41	13.38	-89.83	-1448	-1206	1265	1.92	1.92	-2243	7243	3894	35683	16098	4896	20994	No	16.6	Si
SLU 41	15.18	-1485.8	-529	-440	1257	1.536	0	0	0	0	35683	12878	3917	16795	No	13.36	Si
SLU 80	13.38	-372.19	-2690	-2240	1332	1.92	1.92	-4166	7500	4032	35683	16098	4896	20994	No	15.76	Si
SLU 80	15.18	-1946.22	-1177	-980	1322	1.536	0	0	0	0	35683	12878	3917	16795	No	12.7	Si
SLU 35	13.38	-216.82	-2187	-1821	1469	1.92	1.92	-3387	7396	3976	35683	16098	4896	20994	No	14.3	Si
SLU 35	15.18	-1896.6	-1354	-1127	1460	1.536	0	0	0	0	35683	12878	3917	16795	No	11.5	Si
SLU 36	13.38	-224.94	-2253	-1876	1428	1.92	1.92	-3489	7410	3983	35683	16098	4896	20994	No	14.7	Si
SLU 36	15.18	-1885.51	-1364	-1136	1420	1.536	0	0	0	0	35683	12878	3917	16795	No	11.83	Si
SLU 79	13.38	-364.07	-2624	-2185	1372	1.92	1.92	-4064	7486	4025	35683	16098	4896	20994	No	15.3	Si
SLU 79	15.18	-1957.31	-1166	-971	1362	1.536	0	0	0	0	35683	12878	3917	16795	No	12.33	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	13.38	390.13	3830	3189	4079	1.536	1.92	0	0	0	35683	19318	3917	23234		5.7	Si
SLV 8	15.18	-1742.93	412	343	3800	1.536	0	0	0	0	35683	19318	3917	23234		6.11	Si
SLV 15	13.38	779.18	-1603	-1335	1826	1.92	1.422	-2483	10913	4345	35683	24147	4896	29043		15.91	Si
SLV 15	15.18	-1319.08	-1682	-1401	2541	1.536	0.5279	0	0	0	35683	19318	3917	23234		9.14	Si
SLV 6	13.38	-1424.87	-6272	-5223	-2868	1.92	1.92	-9715	12360	6645	35683	24147	4896	29043		10.12	Si
SLV 6	15.18	108.04	-473	-393	-3042	1.92	1.92	-732	10563	5679	35683	24147	4896	29043		9.55	Si
SLV 11	13.38	762.25	2669	2222	3892	1.536	1.92	0	0	0	35683	19318	3917	23234		5.97	Si
SLV 11	15.18	-1749.23	-398	-331	4055	1.536	0	0	0	0	35683	19318	3917	23234		5.73	Si
SLV 7	13.38	143.39	3130	2606	3418	1.536	1.92	0	0	0	35683	19318	3917	23234		6.8	Si
SLV 7	15.18	-1504.92	447	372	3139	1.536	0	0	0	0	35683	19318	3917	23234		7.4	Si
SLV 5	13.38	-1671.61	-6972	-5806	-3530	1.92	1.92	-10800	12577	6761	35683	24147	4896	29043		8.23	Si
SLV 5	15.18	346.06	-437	-364	-3704	1.92	0.5049	-2576	10932	1546	35683	24147	4896	29043		7.84	Si
SLV 9	13.38	-1052.75	-7433	-6190	-3056	1.92	1.92	-11514	12719	6838	35683	24147	4896	29043		9.5	Si
SLV 9	15.18	101.75	-1282	-1067	-2788	1.92	1.92	-1985	10814	5813	35683	24147	4896	29043		10.42	Si
SLV 1	13.38	-1828.16	-3097	-2579	-1838	1.536	1.1088	0	0	0	35683	19318	3917	23234		12.64	Si
SLV 1	15.18	50.59	868	723	-2564	1.536	1.92	0	0	0	35683	19318	3917	23234		9.06	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	13.38	1008.99	3369	2805	4553	1.536	1.92	0	0	0	35683	19318	3917	23234		5.1	Si
SLV 12	15.18	-1987.25	-433	-361	4716	1.536	0	0	0	0	35683	19318	3917	23234		4.93	Si
SLV 16	13.38	1165.54	-507	-422	2861	1.92	0	0	16250	0	35683	24147	4896	29043		10.15	Si
SLV 16	15.18	-1691.78	-1738	-1447	3577	1.536	0	0	0	0	35683	19318	3917	23234		6.5	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.06 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.53	0	1535	217.53	0	0	No, Trazione
SLV 4	179667	0.53	0	960	217.53	0	0	No, Trazione
SLV 3	179667	0.53	0	318	217.53	0	0	No, Trazione
SLV 2	179667	0.53	0	-1084	217.53	0	0	No, e>t/2
SLV 8	179667	0.53	0	2537	217.53	0	0	No, Trazione
SLV 12	179667	0.53	0	1945	217.53	0	0	No, Trazione
SLV 16	179667	0.53	0	-1014	217.53	0	0	No, e>t/2
SLV 7	179667	0.53	0	2127	217.53	0	0	No, Trazione
SLV 15	179667	0.53	3080	-1656	217.53	227.15	1.04	Si
SLV 1	179667	0.53	3209	-1725	217.53	236.43	1.09	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.06 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-854	-7787	-247	4.494	357.7	0.897	72.82413	13.11449	Si
SLV 10	-853	-7171	-247	4.497	357.6	0.897	72.86618	13.11449	Si
SLV 5	-387	-7194	-339	5.531	325	0.925	86.86728	13.11449	Si
SLV 6	-386	-6578	-338	5.535	324.9	0.926	86.91997	13.11449	Si
SLV 11	-328	2462	389	5.678	321.8	0.932	88.52431	13.11449	Si, Trazione
SLV 12	-327	3078	389	5.681	321.7	0.932	88.56417	13.11449	Si, Trazione
SLV 7	139	3055	297	7.274	311.7	1	105.71423	13.11449	Si, Trazione
SLV 8	140	3671	298	7.277	311.7	1	105.75323	13.11449	Si, Trazione
SLV 13	-1216	-5066	82	3.969	387.8	0.89	64.79186	7.68898	Si
SLV 14	-1214	-4101	83	3.971	387.6	0.89	64.83103	7.68898	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.048	SLU 83	Si
V_SLU	11.503	SLU 35	Si
PF_SLV	0	SLD 1	No
V_SLV	4.926	SLV 12	Si
PFFP_SLV	0	SLV 12	No
R_SLV	5.553	SLV 9	Si

Maschio 202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.613	5.826	-21.813	5.826	L7	L8	2.2	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 52	13.38	-514.34	-2734	-0.00001	0.0003743	0.0035	2.2	2876.8	4211.44	4211.44	8.19	No	Si
SLU 52	15.18	461.82	-2327	-0.0000086	0.0003743	0.0035	2.2	2464.9	2749.3	2749.3	5.95	No	Si
SLU 2	13.38	-317.64	-2477	-0.000008	0.0003743	0.0035	2.2	2616.94	3948.92	3948.92	12.43	No	Si
SLU 2	15.18	425.19	-2184	-0.000008	0.0003743	0.0035	2.2	2318.56	2601.18	2601.18	6.12	No	Si
SLU 45	13.38	-251.14	-4129	-0.0000117	0.0003743	0.0035	2.2	4243.32	5614.98	5614.98	22.36	No	Si
SLU 45	15.18	607.67	-3982	-0.0000136	0.0003743	0.0035	2.2	4102.49	4430.68	4430.68	7.29	No	Si
SLU 44	13.38	-412.39	-3075	-0.0000101	0.0003743	0.0035	2.2	3216.74	4561.1	4561.1	11.06	No	Si
SLU 44	15.18	606.83	-2649	-0.0000104	0.0003743	0.0035	2.2	2791.21	3081.28	3081.28	5.08	No	Si
SLU 46	13.38	-256.72	-4155	-0.0000118	0.0003743	0.0035	2.2	4267.33	5639.64	5639.64	21.97	No	Si
SLU 46	15.18	611	-4005	-0.0000137	0.0003743	0.0035	2.2	4124.08	4453.12	4453.12	7.29	No	Si
SLU 19	13.38	-459.56	-1974	-0.0000077	0.0003743	0.0035	2.2	2102.59	3436.36	3436.36	7.48	No	Si
SLU 19	15.18	215.81	-1709	-0.0000055	0.0003743	0.0035	2.2	1828.19	2103.76	2103.76	9.75	No	Si
SLU 60	13.38	-548.73	-2547	-0.0000097	0.0003743	0.0035	2.2	2687.54	4019.84	4019.84	7.33	No	Si
SLU 60	15.18	394.13	-2152	-0.0000077	0.0003743	0.0035	2.2	2285.57	2567.52	2567.52	6.51	No	Si
SLU 61	13.38	-554.31	-2572	-0.0000098	0.0003743	0.0035	2.2	2712.95	4045.43	4045.43	7.3	No	Si
SLU 61	15.18	397.46	-2174	-0.0000078	0.0003743	0.0035	2.2	2308.6	2591.01	2591.01	6.52	No	Si
SLU 43	13.38	-403.09	-3033	-0.00001	0.0003743	0.0035	2.2	3175.12	4517.91	4517.91	11.21	No	Si
SLU 43	15.18	601.28	-2612	-0.0000102	0.0003743	0.0035	2.2	2753.43	3042.75	3042.75	5.06	No	Si
SLU 1	13.38	-308.34	-2435	-0.0000079	0.0003743	0.0035	2.2	2574.45	3906.38	3906.38	12.67	No	Si
SLU 1	15.18	419.64	-2146	-0.0000079	0.0003743	0.0035	2.2	2280.17	2562.03	2562.03	6.11	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	13.38	1536.49	-2090	-0.0000202	0.0005615	0.0035	2.2		2520.81	2520.81	1.64		Si
SLV 15	15.18	-727.71	-2368	-0.0000104	0.0005615	0.0035	2.2		3860.08	3860.08	5.3		Si
SLV 14	13.38	1749.08	-2978	-0.0000205	0.0005615	0.0035	2.2		3453.87	3453.87	1.97		Si
SLV 14	15.18	-773.15	-3002	-0.0000123	0.0005615	0.0035	2.2		4521.36	4521.36	5.85		Si
SLV 13	13.38	1336.68	-2889	-0.000016	0.0005615	0.0035	2.2		3360.56	3360.56	2.51		Si
SLV 13	15.18	-494.79	-3411	-0.0000114	0.0005615	0.0035	2.2		4943.57	4943.57	9.99		Si
SLV 12	13.38	722.61	-1170	-0.0000085	0.0005615	0.0035	2.2		1540.82	1540.82	2.13		Si
SLV 12	15.18	-469.99	-479	-0.0000126	0.0005615	0.0035	1.76		1859.61	1859.61	3.96		Si
SLV 7	13.38	-727.78	-1061	-0.000009	0.0005615	0.0035	1.76		2481.68	2481.68	3.41		Si
SLV 7	15.18	357.08	-451	-0.0000051	0.0005615	0.0035	2.2		766.06	766.06	2.15		Si
SLV 16	13.38	1948.88	-2179	-0.0000379	0.0005615	0.0035	2.2		2615.72	2615.72	1.34		Si
SLV 16	15.18	-1006.07	-1960	-0.0000117	0.0005615	0.0035	2.2		3431.58	3431.58	3.41		Si
SLV 4	13.38	-2007.87	-2006	-0.0000617	0.0005615	0.0035	1.76		3480.68	3480.68	1.73		Si
SLV 4	15.18	1158.29	-995	-0.0002835	0.0005615	0.0035	1.76		1352.6	1352.6	1.17		Si
SLV 2	13.38	-2207.67	-2806	-0.0000318	0.0005615	0.0035	1.76		4316.5	4316.5	1.96		Si
SLV 2	15.18	1391.21	-2038	-0.0000172	0.0005615	0.0035	2.2		2465.29	2465.29	1.77		Si
SLV 1	13.38	-2620.07	-2716	-0.0000672	0.0005615	0.0035	1.76		4223.38	4223.38	1.61		Si
SLV 1	15.18	1669.57	-2446	-0.0000207	0.0005615	0.0035	2.2		2896.56	2896.56	1.73		Si
SLV 3	13.38	-2420.26	-1917	-0.0002067	0.0005615	0.0035	1.76		3386.82	3386.82	1.4		Si
SLV 3	15.18	1436.65	-1403	-0.0000653	0.0005615	0.0035	2.2		1790.4	1790.4	1.25		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	13.38	-239.1	-5061	-4214	-2011	2.2	2.2	-6841	7857	4840	35683	18446	5610	24056	No	11.96	Si
SLU 78	15.18	197.26	-5347	-4452	-2014	2.2	2.2	-7228	7908	4871	35683	18446	5610	24056	No	11.94	Si
SLU 51	13.38	-182.66	-4781	-3981	-1993	2.2	2.2	-6462	7806	4809	35683	18446	5610	24056	No	12.07	Si
SLU 51	15.18	392.37	-4922	-4099	-1996	2.2	2.2	-6654	7832	4824	35683	18446	5610	24056	No	12.05	Si
SLU 72	13.38	-176.1	-5166	-4302	-1992	2.2	2.2	-6984	7876	4851	35683	18446	5610	24056	No	12.08	Si
SLU 72	15.18	229.76	-5442	-4532	-1996	2.2	2.2	-7357	7925	4882	35683	18446	5610	24056	No	12.05	Si
SLU 70	13.38	-137.15	-5401	-4498	-2029	2.2	2.2	-7302	7918	4878	35683	18446	5610	24056	No	11.85	Si
SLU 70	15.18	342.27	-5669	-4721	-2033	2.2	2.2	-7663	7966	4907	35683	18446	5610	24056	No	11.83	Si
SLU 49	13.38	-143.71	-5016	-4177	-2030	2.2	2.2	-6780	7848	4835	35683	18446	5610	24056	No	11.85	Si
SLU 49	15.18	504.88	-5149	-4287	-2033	2.2	2.2	-6960	7872	4849	35683	18446	5610	24056	No	11.83	Si
SLU 57	13.38	-245.66	-4675	-3893	-2011	2.2	2.2	-6320	7787	4797	35683	18446	5610	24056	No	11.96	Si
SLU 57	15.18	359.87	-4827	-4019	-2015	2.2	2.2	-6525	7814	4814	35683	18446	5610	24056	No	11.94	Si
SLU 56	13.38	-240.08	-4650	-3872	-2010	2.2	2.2	-6286	7783	4794	35683	18446	5610	24056	No	11.97	Si
SLU 56	15.18	356.54	-4804	-4000	-2013	2.2	2.2	-6494	7810	4811	35683	18446	5610	24056	No	11.95	Si
SLU 77	13.38	-233.52	-5036	-4193	-2010	2.2	2.2	-6807	7852	4837	35683	18446	5610	24056	No	11.97	Si
SLU 77	15.18	193.94	-5324	-4434	-2013	2.2	2.2	-7197	7904	4869	35683	18446	5610	24056	No	11.95	Si
SLU 48	13.38	-138.13	-4991	-4156	-2029	2.2	2.2	-6746	7844	4832	35683	18446	5610	24056	No	11.86	Si
SLU 48	15.18	501.55	-5126	-4269	-2031	2.2	2.2	-6930	7868	4847	35683	18446	5610	24056	No	11.84	Si
SLU 69	13.38	-131.57	-5376	-4477	-2028	2.2	2.2	-7268	7913	4875	35683	18446	5610	24056	No	11.86	Si
SLU 69	15.18	338.94	-5646	-4702	-2031	2.2	2.2	-7633	7962	4905	35683	18446	5610	24056	No	11.84	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	13.38	-2420.26	-1917	-1596	-1716	1.76	0	0	0	0	35683	22135	4488	26623		15.51	Si
SLV 3	15.18	1436.65	-1403	-1169	-3626	2.2	0.2287	-17908	14014	897	35683	27669	5610	33279		9.18	Si
SLD 4	13.38	-1049.49	-2252	-1875	-1285	2.2	1.9019	-3526	11122	5923	35683	27669	5610	33279		25.89	Si
SLD 4	15.18	682.29	-1682	-1401	-2103	2.2	2.0831	-2274	10871	6341	35683	27669	5610	33279		15.82	Si
SLD 3	13.38	-1226.51	-2214	-1843	-1567	2.2	1.6378	-4025	11222	5146	35683	27669	5610	33279		21.24	Si
SLD 3	15.18	801.77	-1857	-1547	-2385	2.2	2.0049	-2511	10919	6130	35683	27669	5610	33279		13.95	Si
SLD 2	13.38	-1136.08	-2604	-2168	-1369	2.2	1.991	-3892	11195	6241	35683	27669	5610	33279		24.3	Si
SLD 2	15.18	785.08	-2139	-1781	-2182	2.2	2.1989	-2891	10995	6770	35683	27669	5610	33279		15.25	Si
SLV 1	13.38	-2620.07	-2716	-2262	-1909	1.76	0.4064	0	0	0	35683	22135	4488	26623		13.95	Si
SLV 1	15.18	1669.57	-2446	-2037	-3807	2.2	1.2523	-3306	11078	3884	35683	27669	5610	33279		8.74	Si
SLD 1	13.38	-1313.1	-2565	-2136	-1651	2.2	1.7645	-4331	11283	5574	35683	27669	5610	33279		20.16	Si
SLD 1	15.18	904.56	-2314	-1927	-2464	2.2	2.1274	-3128	11042	6578	35683	27669	5610	33279		13.51	Si
SLV 6	13.38	-1130.43	-3782	-3150	-1579	2.2	2.2	-5113	11439	7047	35683	27669	5610	33279		21.08	Si
SLV 6	15.18	955.72	-3666	-3052	-2132	2.2	2.2	-4955	11408	7027	35683	27669	5610	33279		15.61	Si
SLV 5	13.38	-1393.8	-3725	-3102	-1998	2.2	2.1776	-5036	11424	6966	35683	27669	5610	33279		16.66	Si
SLV 5	15.18	1133.49	-3926	-3270	-2551	2.2	2.2	-5308	11478	7071	35683	27669	5610	33279		13.05	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	13.38	-2007.87	-2006	-1671	-1061	1.76	0.2979	0	0	0	35683	22135	4488	26623		25.1	Si
SLV 4	15.18	1158.29	-995	-829	-2970	1.76	0	0	0	0	35683	22135	4488	26623		8.96	Si
SLV 2	13.38	-2207.67	-2806	-2336	-1253	1.76	0.9394	0	0	0	35683	22135	4488	26623		21.25	Si
SLV 2	15.18	1391.21	-2038	-1697	-3151	2.2	1.2519	-2755	10968	3844	35683	27669	5610	33279		10.56	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.06 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.53	0	-1681	249.26	0	0	No, e>t/2
SLV 12	179667	0.53	0	-1646	249.26	0	0	No, e>t/2
SLV 8	179667	0.53	2929	-1804	249.26	247.77	0.99	No, M>Mu
SLV 7	179667	0.53	2986	-1839	249.26	252.46	1.01	Si
SLV 16	179667	0.53	3034	-1869	249.26	256.44	1.03	Si
SLV 15	179667	0.53	3122	-1923	249.26	263.78	1.06	Si
SLV 14	179667	0.53	3615	-2227	249.26	304.38	1.22	Si
SLV 13	179667	0.53	3704	-2281	249.26	311.66	1.25	Si
SLV 4	179667	0.53	3891	-2397	249.26	327.05	1.31	Si
SLV 3	179667	0.53	3980	-2452	249.26	334.3	1.34	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.06 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-3768	-5883	-398	2.225	668.8	0.902	35.83917	13.11449	Si
SLV 10	-3622	-5736	-401	2.284	654.5	0.901	36.83303	13.11449	Si
SLV 5	-3035	-6322	-360	2.567	597.2	0.896	41.63701	13.11449	Si
SLV 6	-2889	-6175	-363	2.646	583.1	0.895	42.96742	13.11449	Si
SLV 13	-3751	-3296	-190	2.269	667.2	0.902	36.56013	7.68898	Si
SLV 14	-3523	-3067	-195	2.365	644.8	0.9	38.17822	7.68898	Si
SLV 11	-1158	161	322	4.206	424.4	0.893	68.45612	13.11449	Si, Trazione
SLV 12	-1013	308	319	4.427	412.5	0.896	71.80432	13.11449	Si, Trazione
SLV 15	-2969	-1483	26	2.673	590.8	0.895	43.38082	7.68898	Si
SLV 16	-2740	-1253	21	2.808	568.9	0.894	45.65737	7.68898	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.06	SLU 43	Si
V_SLU	11.833	SLU 49	Si
PF_SLV	1.168	SLV 4	Si
V_SLV	8.741	SLV 1	Si
PFFP_SLV	0	SLV 11	No
R_SLV	2.733	SLV 9	Si

Maschio 203

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.493	-3.314	-24.633	-3.314	L7	L8	2.14	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 41	13.38	854.35	-2258	-0.0000115	0.0003743	0.0035	2.14	2326.49	2590.21	2590.21	3.03	No	Si
SLU 41	15.18	-1389.56	-5701	-0.0000241	0.0003743	0.0035	2.14	5529.9	6944.18	6944.18	5	No	Si
SLU 82	13.38	994.67	-2504	-0.0000131	0.0003743	0.0035	2.14	2569	2837.1	2837.1	2.85	No	Si
SLU 82	15.18	-1279.02	-6263	-0.0000248	0.0003743	0.0035	2.14	6013.77	7465.89	7465.89	5.84	No	Si
SLU 40	13.38	917.97	-1805	-0.0000113	0.0003743	0.0035	2.14	1874.52	2132.27	2132.27	2.32	No	Si
SLU 40	15.18	-1112.42	-5179	-0.0000208	0.0003743	0.0035	2.14	5071.11	6466.27	6466.27	5.81	No	Si
SLU 18	13.38	780.93	-1841	-0.00001	0.0003743	0.0035	2.14	1910.13	2168.45	2168.45	2.78	No	Si
SLU 18	15.18	-880.75	-4604	-0.0000177	0.0003743	0.0035	2.14	4554.67	5922.59	5922.59	6.72	No	Si
SLU 42	13.38	868.1	-2170	-0.0000114	0.0003743	0.0035	2.14	2238.96	2501.51	2501.51	2.88	No	Si
SLU 42	15.18	-1416.41	-5682	-0.0000243	0.0003743	0.0035	2.14	5513.81	6927.17	6927.17	4.89	No	Si
SLU 39	13.38	904.23	-1894	-0.0000113	0.0003743	0.0035	2.14	1963.17	2222.21	2222.21	2.46	No	Si
SLU 39	15.18	-1085.57	-5198	-0.0000206	0.0003743	0.0035	2.14	5087.52	6483.28	6483.28	5.97	No	Si
SLU 19	13.38	794.68	-1753	-0.00001	0.0003743	0.0035	2.14	1821.31	2078.27	2078.27	2.62	No	Si
SLU 19	15.18	-907.61	-4586	-0.0000178	0.0003743	0.0035	2.14	4537.88	5904.65	5904.65	6.51	No	Si
SLU 31	13.38	811.83	-1911	-0.0000104	0.0003743	0.0035	2.14	1980.5	2239.7	2239.7	2.76	No	Si
SLU 31	15.18	-1102.92	-5073	-0.0000204	0.0003743	0.0035	2.14	4976.95	6368.48	6368.48	5.77	No	Si
SLU 10	13.38	688.54	-1858	-0.0000093	0.0003743	0.0035	2.14	1927.49	2186.1	2186.1	3.18	No	Si
SLU 10	15.18	-898.1	-4480	-0.0000175	0.0003743	0.0035	2.14	4441.52	5802.16	5802.16	6.46	No	Si
SLU 81	13.38	980.93	-2592	-0.0000132	0.0003743	0.0035	2.14	2655.49	2925.4	2925.4	2.98	No	Si
SLU 81	15.18	-1252.17	-6282	-0.0000247	0.0003743	0.0035	2.14	6029.48	7483.16	7483.16	5.98	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	13.38	852.45	2764	0.1917112	0.0005615	0.0035	1.712		0	0	0		No
SLV 6	15.18	-1474.35	-4105	-0.0000204	0.0005615	0.0035	2.14		5506.13	5506.13	3.73		Si
SLV 13	13.38	2466.73	529	-0.0146191	0.0005615	0.0035	2.14		0	0	0		No
SLV 13	15.18	-2677.74	-4159	-0.0000348	0.0005615	0.0035	1.712		5560.19	5560.19	2.08		Si
SLD 6	13.38	665.38	-68	-0.0024639	0.0005615	0.0035	1.712		328.37	328.37	0.49		No
SLD 6	15.18	-1136.55	-4338	-0.0000186	0.0005615	0.0035	2.14		5736.15	5736.15	5.05		Si
SLV 14	13.38	2026.77	-604	-0.0082954	0.0005615	0.0035	2.14		894.58	894.58	0.44		No
SLV 14	15.18	-2225.91	-4084	-0.0000276	0.0005615	0.0035	2.14		5485.48	5485.48	2.46		Si
SLD 5	13.38	787.95	247	0.0006557	0.0005615	0.0035	1.712		0	0	0		No
SLD 5	15.18	-1262.42	-4360	-0.0000196	0.0005615	0.0035	2.14		5756.89	5756.89	4.56		Si
SLV 10	13.38	1729.22	3111	0.2098464	0.0005615	0.0035	1.712		0	0	0		No
SLV 10	15.18	-2222.92	-3948	-0.0000276	0.0005615	0.0035	2.14		5351.66	5351.66	2.41		Si
SLD 9	13.38	1163.83	396	0.0033584	0.0005615	0.0035	1.712		0	0	0		No
SLD 9	15.18	-1582.96	-4293	-0.0000216	0.0005615	0.0035	2.14		5691.33	5691.33	3.6		Si
SLD 10	13.38	1041.27	81	-0.0066441	0.0005615	0.0035	2.14		0	0	0		No
SLD 10	15.18	-1457.09	-4272	-0.0000207	0.0005615	0.0035	2.14		5670.58	5670.58	3.89		Si
SLV 5	13.38	1133.42	3488	0	0.0005615	0.0035	1.712		0	0	0		No
SLV 5	15.18	-1762.9	-4153	-0.0000228	0.0005615	0.0035	2.14		5553.83	5553.83	3.15		Si
SLV 9	13.38	2010.19	3835	0.2597109	0.0005615	0.0035	1.712		0	0	0		No
SLV 9	15.18	-2511.47	-3996	-0.0000322	0.0005615	0.0035	1.712		5399.5	5399.5	2.15		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	13.38	748.84	-3634	-3026	5357	2.14	2.14	-5050	7618	4565	35683	17943	5457	23399	No	4.37	Si
SLU 78	15.18	-1899.66	-7507	-6251	5349	2.14	2.14	-10433	8335	4995	35683	17943	5457	23399	No	4.37	Si
SLU 77	13.38	735.09	-3722	-3100	5288	2.14	2.14	-5173	7634	4574	35683	17943	5457	23399	No	4.43	Si
SLU 77	15.18	-1872.81	-7526	-6267	5289	2.14	2.14	-10458	8339	4997	35683	17943	5457	23399	No	4.42	Si
SLU 80	13.38	779.62	-3397	-2828	5297	2.14	2.14	-4720	7574	4538	35683	17943	5457	23399	No	4.42	Si
SLU 80	15.18	-1859.6	-7177	-5976	5288	2.14	2.14	-9974	8274	4958	35683	17943	5457	23399	No	4.42	Si
SLU 76	13.38	838.66	-2974	-2476	5119	2.14	2.14	-4132	7495	4491	35683	17943	5457	23399	No	4.57	Si
SLU 76	15.18	-1573.51	-6661	-5547	5105	2.14	2.14	-9257	8179	4901	35683	17943	5457	23399	No	4.58	Si
SLU 82	13.38	994.67	-2504	-2085	5081	2.14	2.0181	-3479	7408	4186	35683	17943	5457	23399	No	4.61	Si
SLU 82	15.18	-1279.02	-6263	-5216	5075	2.14	2.14	-8704	8105	4856	35683	17943	5457	23399	No	4.61	Si
SLU 74	13.38	784.97	-3358	-2796	5063	2.14	2.14	-4667	7567	4534	35683	17943	5457	23399	No	4.62	Si
SLU 74	15.18	-1568.82	-7022	-5847	5066	2.14	2.14	-9759	8246	4941	35683	17943	5457	23399	No	4.62	Si
SLU 79	13.38	765.87	-3485	-2902	5227	2.14	2.14	-4843	7590	4548	35683	17943	5457	23399	No	4.48	Si
SLU 79	15.18	-1832.74	-7195	-5992	5229	2.14	2.14	-9999	8278	4960	35683	17943	5457	23399	No	4.48	Si
SLU 84	13.38	944.8	-2868	-2388	5305	2.14	2.14	-3986	7476	4480	35683	17943	5457	23399	No	4.41	Si
SLU 84	15.18	-1583.01	-6767	-5635	5298	2.14	2.14	-9404	8198	4912	35683	17943	5457	23399	No	4.42	Si
SLU 75	13.38	798.72	-3270	-2723	5133	2.14	2.14	-4544	7550	4524	35683	17943	5457	23399	No	4.56	Si
SLU 75	15.18	-1595.67	-7004	-5832	5126	2.14	2.14	-9733	8242	4939	35683	17943	5457	23399	No	4.57	Si
SLU 83	13.38	931.05	-2956	-2462	5236	2.14	2.14	-4108	7492	4489	35683	17943	5457	23399	No	4.47	Si
SLU 83	15.18	-1556.16	-6785	-5650	5238	2.14	2.14	-9430	8202	4914	35683	17943	5457	23399	No	4.47	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	13.38	2466.73	529	440	5546	2.14	0	0	10099	0	35683	26914	5457	32371		5.84	Si
SLV 13	15.18	-2677.74	-4159	-3464	7202	1.712	1.2786	0	0	0	35683	21531	4366	25897		3.6	Si
SLD 9	13.38	1163.83	396	330	5330	1.712	0	0	0	0	35683	21531	4366	25897		4.86	Si
SLD 9	15.18	-1582.96	-4293	-3575	5545	2.14	2.1037	-5966	11610	6839	35683	26914	5457	32371		5.84	Si
SLV 1	13.38	-455.84	-627	-522	4738	1.712	1.0298	0	0	0	35683	21531	4366	25897		5.47	Si
SLV 1	15.18	-182.51	-4681	-3898	3087	2.14	2.14	-6505	11718	7021	35683	26914	5457	32371		10.49	Si
SLV 9	13.38	2010.19	3835	3193	7928	1.712	1.6374	0	0	0	35683	21531	4366	25897		3.27	Si
SLV 9	15.18	-2511.47	-3996	-3328	8427	1.712	1.3247	0	0	0	35683	21531	4366	25897		3.07	Si
SLV 10	13.38	1729.22	3111	2591	7153	1.712	1.5426	0	0	0	35683	21531	4366	25897		3.62	Si
SLV 10	15.18	-2222.92	-3948	-3288	7652	2.14	1.5208	-7745	11966	5095	35683	26914	5457	32371		4.23	Si
SLV 6	13.38	852.45	2764	2302	6910	1.712	2.14	0	0	0	35683	21531	4366	25897		3.75	Si
SLV 6	15.18	-1474.35	-4105	-3418	6417	2.14	2.1324	-5704	11558	6901	35683	26914	5457	32371		5.04	Si
SLV 5	13.38	1133.42	3488	2905	7685	1.712	2.14	0	0	0	35683	21531	4366	25897		3.37	Si
SLV 5	15.18	-1762.9	-4153	-3458	7192	2.14	1.9365	-6391	11695	6341	35683	26914	5457	32371		4.5	Si
SLD 6	13.38	665.38	-68	-57	4888	1.712	0	0	0	0	35683	21531	4366	25897		5.3	Si
SLD 6	15.18	-1136.55	-4338	-3613	4679	2.14	2.14	-6029	11622	6964	35683	26914	5457	32371		6.92	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	13.38	2026.77	-604	-503	4333	2.14	0	0	16250	0	35683	26914	5457	32371		7.47	Si
SLV 14	15.18	-2225.91	-4084	-3400	5989	2.14	1.5747	-7737	11964	5275	35683	26914	5457	32371		5.41	Si
SLD 5	13.38	787.95	247	206	5226	1.712	0	0	0	0	35683	21531	4366	25897		4.95	Si
SLD 5	15.18	-1262.42	-4360	-3630	5017	2.14	2.14	-6059	11628	6968	35683	26914	5457	32371		6.45	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.06 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.53	0	427	242.45	0	0	No, Trazione
SLV 13	179667	0.53	0	-1456	242.45	0	0	No, e>t/2
SLV 9	179667	0.53	0	630	242.45	0	0	No, Trazione
SLV 10	179667	0.53	0	212	242.45	0	0	No, Trazione
SLV 6	179667	0.53	0	9	242.45	0	0	No, Trazione
SLV 14	179667	0.53	3523	-2111	242.45	288.71	1.19	Si
SLV 1	179667	0.53	3559	-2133	242.45	291.63	1.2	Si
SLV 2	179667	0.53	4652	-2788	242.45	378.39	1.56	Si
SLV 15	179667	0.53	5922	-3548	242.45	477.49	1.97	Si
SLV 16	179667	0.53	7015	-4203	242.45	561.42	2.32	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.06 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-4140	-8102	453	2.036	697.4	0.906	32.6513	13.11449	Si
SLV 7	-4139	-7487	453	2.037	697.4	0.906	32.65884	13.11449	Si
SLV 12	-3726	-8146	203	2.235	656.5	0.903	35.97333	13.11449	Si
SLV 11	-3725	-7531	202	2.235	656.4	0.903	35.98204	13.11449	Si
SLV 6	-3632	2741	-225	2.269	647.3	0.902	36.5595	13.11449	Si, Trazione
SLV 5	-3631	3356	-226	2.269	647.2	0.902	36.56388	13.11449	Si, Trazione
SLV 10	-3217	2696	-476	2.406	606.7	0.898	38.91713	13.11449	Si, Trazione
SLV 9	-3216	3311	-476	2.406	606.6	0.898	38.92231	13.11449	Si, Trazione
SLV 4	-4446	-4429	508	1.928	727.8	0.909	30.83044	7.68898	Si
SLV 3	-4445	-3466	507	1.929	727.6	0.909	30.84119	7.68898	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.323	SLU 40	Si
V_SLU	4.368	SLU 78	Si
PF_SLV	0	SLD 5	No
V_SLV	3.073	SLV 9	Si
PFFP_SLV	0	SLV 10	No
R_SLV	2.49	SLV 8	Si

Maschio 204

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.313	-3.314	-21.593	-3.314	L7	L8	2.28	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 58	14.48	252.61	-5441	-0.0000143	0.0003743	0.0035	2.28	5683.47	6102.62	6102.62	24.16	No	Si
SLU 58	15.28	-17.04	-4109	-0.0000097	0.0003743	0.0035	2.28	4387.79	5793.72	5793.72	340.05	No	Si
SLU 16	14.48	222.24	-4546	-0.000012	0.0003743	0.0035	2.28	4819.54	5195.73	5195.73	23.38	No	Si
SLU 16	15.28	-5.76	-3506	-0.0000082	0.0003743	0.0035	2.28	3781.15	5176.26	5176.26	898.3	No	Si
SLU 39	14.48	82.47	-3562	-0.0000088	0.0003743	0.0035	2.28	3838.65	4180.49	4180.49	50.69	No	Si
SLU 39	15.28	-171.87	-2645	-0.0000072	0.0003743	0.0035	2.28	2892.53	4260.1	4260.1	24.79	No	Si
SLU 18	14.48	109.88	-3132	-0.000008	0.0003743	0.0035	2.28	3398.2	3726.21	3726.21	33.91	No	Si
SLU 18	15.28	-160.67	-2238	-0.0000062	0.0003743	0.0035	2.28	2463.8	3832.29	3832.29	23.85	No	Si
SLU 59	14.48	247.82	-5407	-0.0000142	0.0003743	0.0035	2.28	5651.61	6069.11	6069.11	24.49	No	Si
SLU 59	15.28	-14.89	-4082	-0.0000096	0.0003743	0.0035	2.28	4360.87	5766.28	5766.28	387.35	No	Si
SLU 19	14.48	105.09	-3098	-0.0000078	0.0003743	0.0035	2.28	3363.62	3690.69	3690.69	35.12	No	Si
SLU 19	15.28	-158.52	-2211	-0.0000061	0.0003743	0.0035	2.28	2435.11	3804.01	3804.01	24	No	Si
SLU 40	14.48	77.68	-3529	-0.0000087	0.0003743	0.0035	2.28	3804.58	4145.03	4145.03	53.36	No	Si
SLU 40	15.28	-169.72	-2618	-0.0000071	0.0003743	0.0035	2.28	2864.22	4231.54	4231.54	24.93	No	Si
SLU 20	14.48	172.05	-3787	-0.0000099	0.0003743	0.0035	2.28	4065.53	4413.32	4413.32	25.65	No	Si
SLU 20	15.28	-99.76	-2837	-0.0000072	0.0003743	0.0035	2.28	3092.77	4463.42	4463.42	44.74	No	Si
SLU 17	14.48	217.45	-4512	-0.0000119	0.0003743	0.0035	2.28	4786.63	5161.41	5161.41	23.74	No	Si
SLU 17	15.28	-3.61	-3479	-0.0000081	0.0003743	0.0035	2.28	3753.65	5147.81	5147.81	1425.67	No	Si
SLU 60	14.48	140.25	-4027	-0.0000103	0.0003743	0.0035	2.28	4306.53	4662.49	4662.49	33.24	No	Si
SLU 60	15.28	-171.95	-2841	-0.0000076	0.0003743	0.0035	2.28	3097.25	4468	4468	25.98	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	14.48	-440.93	-3202	-0.0000101	0.0005615	0.0035	2.28		4890.26	4890.26	11.09		Si
SLV 1	15.28	414.58	-1758	-0.0000066	0.0005615	0.0035	2.28		2265.39	2265.39	5.46		Si
SLV 10	14.48	249.86	-1510	-0.000005	0.0005615	0.0035	2.28		1991.04	1991.04	7.97		Si
SLV 10	15.28	-227.96	-1519	-0.0000049	0.0005615	0.0035	2.28		3062.33	3062.33	13.43		Si
SLV 16	14.48	581.07	-3860	-0.0000125	0.0005615	0.0035	2.28		4548.16	4548.16	7.83		Si
SLV 16	15.28	-565.87	-3328	-0.0000112	0.0005615	0.0035	2.28		5025.45	5025.45	8.88		Si
SLV 9	14.48	396.89	-1270	-0.0000053	0.0005615	0.0035	2.28		1725.62	1725.62	4.35		Si
SLV 9	15.28	-382.95	-1411	-0.0000056	0.0005615	0.0035	2.28		2943.65	2943.65	7.69		Si
SLV 2	14.48	-671.16	-3577	-0.0000124	0.0005615	0.0035	2.28		5292.26	5292.26	7.89		Si
SLV 2	15.28	657.27	-1927	-0.0000084	0.0005615	0.0035	2.28		2451.11	2451.11	3.73		Si
SLV 14	14.48	617.11	-2658	-0.0000099	0.0005615	0.0035	2.28		3251.66	3251.66	5.27		Si
SLV 14	15.28	-591.38	-2619	-0.0000096	0.0005615	0.0035	2.28		4261.12	4261.12	7.21		Si
SLV 13	14.48	847.34	-2283	-0.0000104	0.0005615	0.0035	2.28		2843.1	2843.1	3.36		Si
SLV 13	15.28	-834.07	-2450	-0.0000107	0.0005615	0.0035	2.28		4078.26	4078.26	4.89		Si
SLV 15	14.48	811.3	-3485	-0.000013	0.0005615	0.0035	2.28		4146.7	4146.7	5.11		Si
SLV 15	15.28	-808.56	-3159	-0.0000122	0.0005615	0.0035	2.28		4844.15	4844.15	5.99		Si
SLV 3	14.48	-476.97	-4404	-0.0000131	0.0005615	0.0035	2.28		6168.44	6168.44	12.93		Si
SLV 3	15.28	440.09	-2467	-0.0000084	0.0005615	0.0035	2.28		3043.98	3043.98	6.92		Si
SLV 4	14.48	-707.2	-4779	-0.0000154	0.0005615	0.0035	2.28		6557.69	6557.69	9.27		Si
SLV 4	15.28	682.78	-2636	-0.0000102	0.0005615	0.0035	2.28		3227.63	3227.63	4.73		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 70	14.48	164.39	-6471	-5388	-211	2.28	2.28	-8440	8070	5152	35683	19117	5814	24931	No	117.92	Si
SLU 70	15.28	29.87	-5019	-4180	-336	2.28	2.28	-6547	7817	4991	35683	19117	5814	24931	No	74.11	Si
SLU 39	14.48	82.47	-3562	-2967	340	2.28	2.28	-4647	7564	4829	35683	19117	5814	24931	No	73.22	Si
SLU 39	15.28	-171.87	-2645	-2202	89	2.28	2.28	-3450	7404	4727	35683	19117	5814	24931	No	278.71	Si
SLU 40	14.48	77.68	-3529	-2939	342	2.28	2.28	-4603	7558	4825	35683	19117	5814	24931	No	72.88	Si
SLU 40	15.28	-169.72	-2618	-2180	84	2.28	2.28	-3415	7400	4724	35683	19117	5814	24931	No	297.9	Si
SLU 18	14.48	109.88	-3132	-2608	371	2.28	2.28	-4085	7489	4781	35683	19117	5814	24931	No	67.24	Si
SLU 18	15.28	-160.67	-2238	-1864	141	2.28	2.28	-2920	7334	4682	35683	19117	5814	24931	No	176.81	Si
SLU 69	14.48	169.18	-6504	-5416	-213	2.28	2.28	-8484	8076	5156	35683	19117	5814	24931	No	117.04	Si
SLU 69	15.28	27.72	-5046	-4202	-331	2.28	2.28	-6582	7822	4994	35683	19117	5814	24931	No	75.4	Si
SLU 19	14.48	105.09	-3098	-2580	372	2.28	2.28	-4041	7483	4777	35683	19117	5814	24931	No	66.95	Si
SLU 19	15.28	-158.52	-2211	-1841	135	2.28	2.28	-2884	7329	4679	35683	19117	5814	24931	No	184.34	Si
SLU 82	14.48	108.05	-4424	-3684	356	2.28	2.28	-5771	7714	4925	35683	19117	5814	24931	No	70.05	Si
SLU 82	15.28	-181	-3221	-2682	72	2.28	2.28	-4201	7505	4791	35683	19117	5814	24931	No	348.17	Si
SLU 60	14.48	140.25	-4027	-3353	385	2.28	2.28	-5253	7645	4880	35683	19117	5814	24931	No	64.82	Si
SLU 60	15.28	-171.95	-2841	-2366	129	2.28	2.28	-3706	7439	4749	35683	19117	5814	24931	No	193.38	Si
SLU 81	14.48	112.84	-4458	-3712	354	2.28	2.28	-5815	7720	4928	35683	19117	5814	24931	No	70.37	Si
SLU 81	15.28	-183.15	-3248	-2704	77	2.28	2.28	-4236	7509	4794	35683	19117	5814	24931	No	322.24	Si
SLU 61	14.48	135.46	-3994	-3326	386	2.28	2.28	-5209	7639	4877	35683	19117	5814	24931	No	64.55	Si
SLU 61	15.28	-169.8	-2814	-2343	123	2.28	2.28	-3671	7434	4746	35683	19117	5814	24931	No	202.42	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	14.48	581.07	-3860	-3214	1809	2.28	2.28	-5035	11424	7293	35683	28675	5814	34489		19.06	Si
SLV 16	15.28	-565.87	-3328	-2771	1492	2.28	2.28	-4341	11285	7204	35683	28675	5814	34489		23.12	Si
SLV 15	14.48	811.3	-3485	-2902	2726	2.28	2.28	-4546	11326	7230	35683	28675	5814	34489		12.65	Si
SLV 15	15.28	-808.56	-3159	-2631	2162	2.28	2.28	-4121	11241	7176	35683	28675	5814	34489		15.95	Si
SLV 2	14.48	-671.16	-3577	-2979	-2577	2.28	2.28	-4666	11350	7246	35683	28675	5814	34489		13.39	Si
SLV 2	15.28	657.27	-1927	-1604	-2294	2.28	2.28	-2513	10919	6971	35683	28675	5814	34489		15.03	Si
SLV 1	14.48	-440.93	-3202	-2666	-1660	2.28	2.28	-4177	11252	7183	35683	28675	5814	34489		20.78	Si
SLV 1	15.28	414.58	-1758	-1464	-1624	2.28	2.28	-2293	10875	6943	35683	28675	5814	34489		21.24	Si
SLV 8	14.48	-256.75	-5792	-4823	-1640	2.28	2.28	-7554	11928	7615	35683	28675	5814	34489		21.04	Si
SLV 8	15.28	231.66	-3675	-3060	-1086	2.28	2.28	-4793	11375	7262	35683	28675	5814	34489		31.75	Si
SLV 13	14.48	847.34	-2283	-1901	3146	2.28	2.28	-2978	11012	7030	35683	28675	5814	34489		10.96	Si
SLV 13	15.28	-834.07	-2450	-2040	2293	2.28	2.28	-3196	11056	7058	35683	28675	5814	34489		15.04	Si
SLV 4	14.48	-707.2	-4779	-3979	-2997	2.28	2.28	-6233	11663	7446	35683	28675	5814	34489		11.51	Si
SLV 4	15.28	682.78	-2636	-2195	-2425	2.28	2.28	-3438	11104	7089	35683	28675	5814	34489		14.22	Si
SLV 9	14.48	396.89	-1270	-1058	1789	2.28	2.28	-1657	10748	6862	35683	28675	5814	34489		19.28	Si
SLV 9	15.28	-382.95	-1411	-1175	954	2.28	2.28	-1841	10785	6885	35683	28675	5814	34489		36.14	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	14.48	617.11	-2658	-2213	2230	2.28	2.28	-3467	11110	7093	35683	28675	5814	34489		15.47	Si
SLV 14	15.28	-591.38	-2619	-2181	1623	2.28	2.28	-3417	11100	7086	35683	28675	5814	34489		21.25	Si
SLV 3	14.48	-476.97	-4404	-3667	-2080	2.28	2.28	-5745	11566	7384	35683	28675	5814	34489		16.58	Si
SLV 3	15.28	440.09	-2467	-2054	-1755	2.28	2.28	-3217	11060	7061	35683	28675	5814	34489		19.65	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.06 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.53	3178	-2029	258.32	278.16	1.08	Si
SLV 9	179667	0.53	3194	-2039	258.32	279.5	1.08	Si
SLV 6	179667	0.53	3330	-2126	258.32	291.13	1.13	Si
SLV 10	179667	0.53	3346	-2136	258.32	292.46	1.13	Si
SLV 1	179667	0.53	4974	-3175	258.32	430.07	1.66	Si
SLV 13	179667	0.53	5026	-3209	258.32	434.41	1.68	Si
SLV 2	179667	0.53	5211	-3327	258.32	449.87	1.74	Si
SLV 14	179667	0.53	5263	-3360	258.32	454.19	1.76	Si
SLV 3	179667	0.53	6565	-4191	258.32	561.56	2.17	Si
SLV 15	179667	0.53	6617	-4224	258.32	565.8	2.19	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.06 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-2823	-7103	786	2.653	587.9	0.894	43.15121	13.11449	Si
SLV 11	-2748	-6989	786	2.696	580.7	0.893	43.87352	13.11449	Si
SLV 8	-2708	-6882	754	2.727	576.9	0.893	44.39073	13.11449	Si
SLV 7	-2633	-6768	754	2.772	569.7	0.892	45.15138	13.11449	Si
SLV 10	-1393	-1373	-777	3.819	456.1	0.891	62.3207	13.11449	Si
SLV 9	-1318	-1259	-776	3.909	449.7	0.891	63.73811	13.11449	Si
SLV 6	-1277	-1152	-809	3.95	446.3	0.892	64.35846	13.11449	Si
SLV 5	-1202	-1038	-809	4.047	440	0.893	65.85787	13.11449	Si
SLV 16	-2478	-5387	276	2.981	555.1	0.891	48.61362	7.68898	Si
SLV 15	-2361	-5209	276	3.064	544	0.891	49.99511	7.68898	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	23.379	SLU 16	Si
V_SLU	64.552	SLU 61	Si
PF_SLV	3.355	SLV 13	Si
V_SLV	10.962	SLV 13	Si
PFFP_SLV	1.077	SLV 5	Si
R_SLV	3.29	SLV 12	Si

Maschio 205

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.263	-3.314	-18.813	-3.314	L7	L8	0.55	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 21	14.48	43.99	-1311	-0.0000174	0.0003743	0.0035	0.55	330.26	355.37	355.37	8.08	No	Si
SLU 21	15.28	-27.32	-989	-0.0000125	0.0003743	0.0035	0.55	254.79	326.02	326.02	11.93	No	Si
SLU 57	14.48	61.6	-1925	-0.0000256	0.0003743	0.0035	0.55	464.38	489.17	489.17	7.94	No	Si
SLU 57	15.28	-23.76	-1549	-0.0000177	0.0003743	0.0035	0.55	383.83	461.94	461.94	19.44	No	Si
SLU 58	14.48	62.43	-1841	-0.0000248	0.0003743	0.0035	0.55	446.85	472.52	472.52	7.57	No	Si
SLU 58	15.28	-33.25	-1445	-0.0000176	0.0003743	0.0035	0.55	360.66	437.26	437.26	13.15	No	Si
SLU 16	14.48	50.72	-1500	-0.0000201	0.0003743	0.0035	0.55	373.01	400.16	400.16	7.89	No	Si
SLU 16	15.28	-24.97	-1213	-0.0000144	0.0003743	0.0035	0.55	307.83	380.75	380.75	15.25	No	Si
SLU 62	14.48	57.6	-1664	-0.0000225	0.0003743	0.0035	0.55	408.95	436.62	436.62	7.58	No	Si
SLU 62	15.28	-36.63	-1215	-0.0000157	0.0003743	0.0035	0.55	308.28	381.22	381.22	10.41	No	Si
SLU 20	14.48	45.88	-1322	-0.0000177	0.0003743	0.0035	0.55	332.99	358.25	358.25	7.81	No	Si
SLU 20	15.28	-28.35	-984	-0.0000125	0.0003743	0.0035	0.55	253.59	324.81	324.81	11.46	No	Si
SLU 60	14.48	50.79	-1498	-0.00002	0.0003743	0.0035	0.55	372.56	399.7	399.7	7.87	No	Si
SLU 60	15.28	-34.73	-1011	-0.0000135	0.0003743	0.0035	0.55	260.12	331.44	331.44	9.54	No	Si
SLU 63	14.48	55.71	-1652	-0.0000221	0.0003743	0.0035	0.55	406.37	434.01	434.01	7.79	No	Si
SLU 63	15.28	-35.6	-1220	-0.0000156	0.0003743	0.0035	0.55	309.44	382.44	382.44	10.74	No	Si
SLU 59	14.48	60.55	-1829	-0.0000245	0.0003743	0.0035	0.55	444.35	470.17	470.17	7.77	No	Si
SLU 59	15.28	-32.22	-1450	-0.0000176	0.0003743	0.0035	0.55	361.77	438.48	438.48	13.61	No	Si
SLU 56	14.48	63.49	-1937	-0.0000259	0.0003743	0.0035	0.55	466.85	491.55	491.55	7.74	No	Si
SLU 56	15.28	-24.78	-1544	-0.0000177	0.0003743	0.0035	0.55	382.73	460.8	460.8	18.59	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	14.48	121.68	-1391	-0.0000263	0.0005615	0.0035	0.55		381.79	381.79	3.14		Si
SLV 7	15.28	32.58	-458	-0.0000078	0.0005615	0.0035	0.55		141.31	141.31	4.34		Si
SLV 16	14.48	-47.53	-366	-0.0000088	0.0005615	0.0035	0.55		166.65	166.65	3.51		Si
SLV 16	15.28	35.73	314	0.1116623	0.0005615	0.0035	0.44		0	0	0		No
SLV 9	14.48	-29.36	-1082	-0.0000135	0.0005615	0.0035	0.55		353.02	353.02	12.02		Si
SLV 9	15.28	-92.22	-1282	-0.0000221	0.0005615	0.0035	0.55		403.04	403.04	4.37		Si
SLV 3	14.48	143.9	-1995	-0.0000348	0.0005615	0.0035	0.55		530.11	530.11	3.68		Si
SLV 3	15.28	-15.32	-1632	-0.0000174	0.0005615	0.0035	0.55		490.63	490.63	32.02		Si
SLV 12	14.48	49.42	-866	-0.0000135	0.0005615	0.0035	0.55		248.33	248.33	5.03		Si
SLV 12	15.28	71.36	125	0.0312389	0.0005615	0.0035	0.44		0	0	0		No
SLV 14	14.48	-79.55	-410	-0.0000178	0.0005615	0.0035	0.44		178.43	178.43	2.24		Si
SLV 14	15.28	-0.08	-109	-0.000001	0.0005615	0.0035	0.55		98.13	98.13	1288.84		Si
SLV 13	14.48	-35.76	-517	-0.0000087	0.0005615	0.0035	0.55		206.61	206.61	5.78		Si
SLV 13	15.28	-69.34	-108	-0.0002456	0.0005615	0.0035	0.44		97.83	97.83	1.41		Si
SLV 11	14.48	77.38	-934	-0.0000171	0.0005615	0.0035	0.55		265.87	265.87	3.44		Si
SLV 11	15.28	27.12	126	0.0435463	0.0005615	0.0035	0.44		0	0	0		No
SLV 15	14.48	-3.74	-472	-0.0000049	0.0005615	0.0035	0.55		194.9	194.9	52.18		Si
SLV 15	15.28	-33.54	315	0.1158994	0.0005615	0.0035	0.44		0	0	0		No
SLV 8	14.48	93.71	-1323	-0.0000227	0.0005615	0.0035	0.55		364.76	364.76	3.89		Si
SLV 8	15.28	76.82	-459	-0.000015	0.0005615	0.0035	0.55		141.5	141.5	1.84		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 50	14.48	57.83	-1869	-1556	361	0.55	0.55	-10104	8292	1277	35683	4611	1402	6014	No	16.64	Si
SLU 50	15.28	-20.94	-1504	-1252	-162	0.55	0.55	-8131	8029	1236	35683	4611	1402	6014	No	37.12	Si
SLU 62	14.48	57.6	-1664	-1385	378	0.55	0.55	-8996	8144	1254	35683	4611	1402	6014	No	15.91	Si
SLU 62	15.28	-36.63	-1215	-1012	-144	0.55	0.55	-6571	7821	1204	35683	4611	1402	6014	No	41.82	Si
SLU 63	14.48	55.71	-1652	-1375	374	0.55	0.55	-8932	8135	1253	35683	4611	1402	6014	No	16.08	Si
SLU 63	15.28	-35.6	-1220	-1016	-149	0.55	0.55	-6598	7824	1205	35683	4611	1402	6014	No	40.32	Si
SLU 79	14.48	56.7	-1892	-1576	365	0.55	0.55	-10232	8309	1279	35683	4611	1402	6014	No	16.47	Si
SLU 79	15.28	-16.85	-1526	-1271	-174	0.55	0.55	-8251	8045	1239	35683	4611	1402	6014	No	34.59	Si
SLU 77	14.48	57.75	-1988	-1655	360	0.55	0.55	-10750	8378	1290	35683	4611	1402	6014	No	16.7	Si
SLU 77	15.28	-8.39	-1625	-1353	-177	0.55	0.55	-8788	8116	1250	35683	4611	1402	6014	No	34.02	Si
SLU 80	14.48	54.81	-1880	-1566	361	0.55	0.55	-10167	8300	1278	35683	4611	1402	6014	No	16.65	Si
SLU 80	15.28	-15.83	-1531	-1275	-179	0.55	0.55	-8278	8048	1239	35683	4611	1402	6014	No	33.55	Si
SLU 56	14.48	63.49	-1937	-1613	391	0.55	0.55	-10474	8341	1284	35683	4611	1402	6014	No	15.4	Si
SLU 56	15.28	-24.78	-1544	-1286	-161	0.55	0.55	-8348	8058	1241	35683	4611	1402	6014	No	37.38	Si
SLU 59	14.48	60.55	-1829	-1523	392	0.55	0.55	-9892	8263	1273	35683	4611	1402	6014	No	15.35	Si
SLU 59	15.28	-32.22	-1450	-1207	-163	0.55	0.55	-7839	7990	1230	35683	4611	1402	6014	No	36.82	Si
SLU 58	14.48	62.43	-1841	-1533	396	0.55	0.55	-9956	8272	1274	35683	4611	1402	6014	No	15.2	Si
SLU 58	15.28	-33.25	-1445	-1203	-158	0.55	0.55	-7812	7986	1230	35683	4611	1402	6014	No	38.07	Si
SLU 57	14.48	61.6	-1925	-1603	387	0.55	0.55	-10410	8332	1283	35683	4611	1402	6014	No	15.56	Si
SLU 57	15.28	-23.76	-1549	-1290	-166	0.55	0.55	-8375	8061	1241	35683	4611	1402	6014	No	36.18	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	14.48	-13.04	-1471	-1225	565	0.55	0.55	-7954	12007	1849	35683	6917	1402	8319		14.72	Si
SLV 6	15.28	-42.52	-1867	-1555	-451	0.55	0.55	-10095	12436	1915	35683	6917	1402	8319		18.45	Si
SLV 9	14.48	-29.36	-1082	-901	423	0.55	0.55	-5852	11587	1784	35683	6917	1402	8319		19.66	Si
SLV 9	15.28	-92.22	-1282	-1068	-256	0.55	0.55	-6933	11803	1818	35683	6917	1402	8319		32.45	Si
SLV 5	14.48	14.93	-1539	-1282	696	0.55	0.55	-8322	12081	1860	35683	6917	1402	8319		11.95	Si
SLV 5	15.28	-86.76	-1866	-1554	-410	0.55	0.55	-10092	12435	1915	35683	6917	1402	8319		20.31	Si
SLD 3	14.48	80.3	-1542	-1284	425	0.55	0.55	-8338	12084	1861	35683	6917	1402	8319		19.59	Si
SLD 3	15.28	-10.76	-1195	-995	-177	0.55	0.55	-6464	11709	1803	35683	6917	1402	8319		47.06	Si
SLV 3	14.48	143.9	-1995	-1661	697	0.55	0.55	-10788	12574	1936	35683	6917	1402	8319		11.94	Si
SLV 3	15.28	-15.32	-1632	-1359	-264	0.55	0.55	-8825	12182	1876	35683	6917	1402	8319		31.48	Si
SLV 4	14.48	100.1	-1888	-1572	491	0.55	0.55	-10211	12459	1919	35683	6917	1402	8319		16.93	Si
SLV 4	15.28	53.94	-1633	-1360	-329	0.55	0.55	-8831	12183	1876	35683	6917	1402	8319		25.31	Si
SLD 5	14.48	24.61	-1349	-1123	427	0.55	0.55	-7292	11875	1829	35683	6917	1402	8319		19.46	Si
SLD 5	15.28	-42.4	-1304	-1085	-243	0.55	0.55	-7049	11826	1821	35683	6917	1402	8319		34.3	Si
SLV 2	14.48	68.08	-1933	-1609	655	0.55	0.55	-10451	12507	1926	35683	6917	1402	8319		12.69	Si
SLV 2	15.28	18.14	-2056	-1712	-473	0.55	0.55	-11116	12640	1946	35683	6917	1402	8319		17.59	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 1	14.48	66.39	-1562	-1301	496	0.55	0.55	-8446	12106	1864	35683	6917	1402	8319		16.76	Si
SLD 1	15.28	-26.5	-1380	-1149	-240	0.55	0.55	-7463	11909	1834	35683	6917	1402	8319		34.63	Si
SLV 1	14.48	111.87	-2039	-1698	861	0.55	0.55	-11028	12622	1944	35683	6917	1402	8319		9.67	Si
SLV 1	15.28	-51.13	-2055	-1711	-409	0.55	0.55	-11110	12639	1946	35683	6917	1402	8319		20.36	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.06 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 1	179667	0.53	0	-194	62.31	0	0	No, e>t/2
SLV 14	179667	0.53	0	-380	62.31	0	0	No, e>t/2
SLV 10	179667	0.53	0	209	62.31	0	0	No, Trazione
SLV 9	179667	0.53	0	306	62.31	0	0	No, Trazione
SLV 6	179667	0.53	0	220	62.31	0	0	No, Trazione
SLV 13	179667	0.53	0	-229	62.31	0	0	No, e>t/2
SLV 2	179667	0.53	0	-345	62.31	0	0	No, e>t/2
SLV 5	179667	0.53	0	316	62.31	0	0	No, Trazione
SLV 3	179667	0.53	4320	-665	62.31	90.5	1.45	Si
SLV 15	179667	0.53	4545	-700	62.31	95.07	1.53	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.06 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-1432	328	-57	1.677	215.9	0.918	26.55137	13.11449	Si, Trazione
SLV 6	-1415	210	-57	1.692	214.2	0.917	26.80408	13.11449	Si, Trazione
SLV 9	-1224	539	-58	1.88	195.1	0.912	29.977	13.11449	Si, Trazione
SLV 10	-1207	421	-58	1.899	193.4	0.911	30.29915	13.11449	Si, Trazione
SLV 1	-1355	-620	-56	1.746	208.2	0.916	27.72229	7.68898	Si
SLV 2	-1329	-805	-56	1.772	205.6	0.915	28.15607	7.68898	Si
SLV 7	-507	-1773	-59	3.273	125.3	0.889	53.48024	13.11449	Si
SLV 8	-490	-1890	-59	3.332	123.8	0.889	54.46612	13.11449	Si
SLV 3	-1078	-1250	-57	2.058	180.6	0.907	32.97439	7.68898	Si
SLV 4	-1051	-1435	-57	2.094	178	0.906	33.58754	7.68898	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.568	SLU 58	Si
V_SLU	15.197	SLU 58	Si
PF_SLV	0	SLV 11	No
V_SLV	9.667	SLV 1	Si
PFFP_SLV	0	SLV 10	No
R_SLV	2.025	SLV 5	Si

Maschio 208

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.613	1.006	-19.613	5.826	L7	L8	4.82	0.16	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 28	12.48	206.67	-7247	-0.0000122	0.0004492	0.0035	4.82	16121.39	18921.42	18921.42	91.55	No	Si
SLU 28	15.64	781.53	-1299	-0.0000036	0.0004492	0.0035	4.82	3087.92	5417.6	5417.6	6.93	No	Si
SLU 9	12.48	20.47	-6242	-0.0000101	0.0004492	0.0035	4.82	14046.72	16696.84	16696.84	815.56	No	Si
SLU 9	15.64	728.38	-1152	-0.0000033	0.0004492	0.0035	4.82	2741.99	5074.74	5074.74	6.97	No	Si
SLU 29	12.48	238.17	-6924	-0.0000117	0.0004492	0.0035	4.82	15460.67	18207.25	18207.25	76.45	No	Si
SLU 29	15.64	959.83	-1305	-0.000004	0.0004492	0.0035	4.82	3100.4	5429.99	5429.99	5.66	No	Si
SLU 27	12.48	145.34	-7234	-0.000012	0.0004492	0.0035	4.82	16094.69	18892.45	18892.45	129.98	No	Si
SLU 27	15.64	794	-1295	-0.0000037	0.0004492	0.0035	4.82	3077.41	5407.17	5407.17	6.81	No	Si
SLU 72	12.48	117.73	-8309	-0.0000137	0.0004492	0.0035	4.82	18259.86	21270.6	21270.6	180.67	No	Si
SLU 72	15.64	794.96	-1392	-0.0000038	0.0004492	0.0035	4.82	3304.4	5632.72	5632.72	7.09	No	Si
SLU 38	12.48	577.07	-7257	-0.0000129	0.0004492	0.0035	4.82	16141.76	18943.53	18943.53	32.83	No	Si
SLU 38	15.64	873.29	-1240	-0.0000037	0.0004492	0.0035	4.82	2949.68	5280.46	5280.46	6.05	No	Si
SLU 71	12.48	56.4	-8296	-0.0000136	0.0004492	0.0035	4.82	18233.88	21242.13	21242.13	376.61	No	Si
SLU 71	15.64	807.43	-1387	-0.0000038	0.0004492	0.0035	4.82	3293.92	5622.3	5622.3	6.96	No	Si
SLU 8	12.48	-40.85	-6229	-0.0000101	0.0004492	0.0035	4.82	14019.35	27732.81	27732.81	678.85	No	Si
SLU 8	15.64	740.85	-1147	-0.0000033	0.0004492	0.0035	4.82	2731.45	5064.32	5064.32	6.84	No	Si
SLU 30	12.48	299.5	-6937	-0.0000118	0.0004492	0.0035	4.82	15487.58	18236.22	18236.22	60.89	No	Si
SLU 30	15.64	947.37	-1309	-0.000004	0.0004492	0.0035	4.82	3110.9	5440.42	5440.42	5.74	No	Si
SLU 37	12.48	515.74	-7244	-0.0000128	0.0004492	0.0035	4.82	16115.07	18914.56	18914.56	36.67	No	Si
SLU 37	15.64	885.75	-1236	-0.0000038	0.0004492	0.0035	4.82	2939.17	5270.04	5270.04	5.95	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	12.48	-4396.67	-4879	-0.0000168	0.0006738	0.0035	4.82		24830.7	24830.7	5.65		Si
SLV 8	15.64	1415.31	64	-0.000307	0.0006738	0.0035	3.856		2233.03	2233.03	1.58		Si
SLV 11	12.48	-5468.8	-4241	-0.0000197	0.0006738	0.0035	4.82		23391.33	23391.33	4.28		Si
SLV 11	15.64	1553.47	-278	-0.0002035	0.0006738	0.0035	3.856		3037.77	3037.77	1.96		Si
SLV 10	12.48	3766.16	-6311	-0.0000178	0.0006738	0.0035	4.82		16974.04	16974.04	4.51		Si
SLV 10	15.64	-1855.11	-965	-0.0000098	0.0006738	0.0035	3.856		15910.26	15910.26	8.58		Si
SLV 5	12.48	5587.39	-7204	-0.0000229	0.0006738	0.0035	4.82		18990.99	18990.99	3.4		Si
SLV 5	15.64	-1979	-743	-0.0000256	0.0006738	0.0035	3.856		15400.89	15400.89	7.78		Si
SLV 6	12.48	5212.84	-7077	-0.000022	0.0006738	0.0035	4.82		18706.56	18706.56	3.59		Si
SLV 6	15.64	-1986.13	-683	-0.0000294	0.0006738	0.0035	3.856		15262.97	15262.97	7.68		Si
SLV 16	12.48	-4273.79	-3954	-0.0000154	0.0006738	0.0035	4.82		22742.45	22742.45	5.32		Si
SLV 16	15.64	506.67	-791	-0.0000023	0.0006738	0.0035	4.82		4243.5	4243.5	8.38		Si
SLV 12	12.48	-5843.35	-4114	-0.0000216	0.0006738	0.0035	3.856		23104.87	23104.87	3.95		Si
SLV 12	15.64	1546.33	-218	-0.0002254	0.0006738	0.0035	3.856		2896.41	2896.41	1.87		Si
SLV 1	12.48	4017.82	-7364	-0.00002	0.0006738	0.0035	4.82		19349.1	19349.1	4.82		Si
SLV 1	15.64	-939.33	-170	-0.0000197	0.0006738	0.0035	3.856		14075.17	14075.17	14.98		Si
SLV 9	12.48	4140.71	-6438	-0.0000188	0.0006738	0.0035	4.82		17262.85	17262.85	4.17		Si
SLV 9	15.64	-1847.97	-1025	-0.0000086	0.0006738	0.0035	3.856		16048.18	16048.18	8.68		Si
SLV 7	12.48	-4022.12	-5006	-0.0000162	0.0006738	0.0035	4.82		25117.17	25117.17	6.24		Si
SLV 7	15.64	1422.45	4	-0.0002852	0.0006738	0.0035	3.856		2374.38	2374.38	1.67		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 73	12.48	190.03	-7778	-4567	1879	4.82	4.82	-5922	9123	7036	101952	27715	24582	52297	No	27.83	Si
SLU 73	15.64	-286	-634	-372	1484	4.82	4.82	-482	8398	6476	101952	27715	24582	52297	No	35.23	Si
SLU 39	12.48	388.54	-6521	-3829	1852	4.82	4.82	-4964	8995	6937	101952	27715	24582	52297	No	28.24	Si
SLU 39	15.64	-144.57	-514	-302	1560	4.82	4.82	-391	8386	6467	101952	27715	24582	52297	No	33.52	Si
SLU 75	12.48	179.39	-8509	-4996	1738	4.82	4.82	-6478	9197	7093	101952	27715	24582	52297	No	30.09	Si
SLU 75	15.64	55.76	-967	-568	1299	4.82	4.82	-736	8431	6502	101952	27715	24582	52297	No	40.26	Si
SLU 84	12.48	391.18	-8336	-4895	1851	4.82	4.82	-6347	9180	7079	101952	27715	24582	52297	No	28.25	Si
SLU 84	15.64	189.85	-947	-556	1391	4.82	4.82	-721	8430	6501	101952	27715	24582	52297	No	37.6	Si
SLU 31	12.48	371.79	-6405	-3761	1816	4.82	4.82	-4877	8984	6928	101952	27715	24582	52297	No	28.79	Si
SLU 31	15.64	-133.6	-551	-324	1504	4.82	4.82	-420	8389	6470	101952	27715	24582	52297	No	34.78	Si
SLU 61	12.48	-10.92	-7211	-4234	1764	4.82	4.82	-5490	9065	6991	101952	27715	24582	52297	No	29.64	Si
SLU 61	15.64	-528.43	-444	-261	1397	4.82	3.6602	-445	8393	4915	101952	27715	24582	52297	No	37.43	Si
SLU 42	12.48	572.95	-6964	-4089	1788	4.82	4.82	-5302	9040	6972	101952	27715	24582	52297	No	29.25	Si
SLU 42	15.64	342.25	-865	-508	1410	4.82	4.82	-658	8421	6494	101952	27715	24582	52297	No	37.08	Si
SLU 82	12.48	268.1	-7906	-4642	2071	4.82	4.82	-6019	9136	7046	101952	27715	24582	52297	No	25.26	Si
SLU 82	15.64	-309.44	-601	-353	1687	4.82	4.82	-458	8394	6474	101952	27715	24582	52297	No	30.99	Si
SLU 81	12.48	206.78	-7893	-4634	1915	4.82	4.82	-6009	9135	7045	101952	27715	24582	52297	No	27.31	Si
SLU 81	15.64	-296.97	-597	-350	1541	4.82	4.82	-454	8394	6473	101952	27715	24582	52297	No	33.94	Si
SLU 40	12.48	449.87	-6534	-3836	2008	4.82	4.82	-4974	8997	6938	101952	27715	24582	52297	No	26.05	Si
SLU 40	15.64	-157.04	-519	-305	1707	4.82	4.82	-395	8386	6467	101952	27715	24582	52297	No	30.64	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	12.48	-5468.8	-4241	-2490	-11143	4.82	3.3613	-4635	13427	7221	101952	41572	24582	66154		5.94	Si
SLV 11	15.64	1553.47	-278	-163	-10438	3.856	0	0	0	0	101952	33258	19666	52924		5.07	Si
SLV 14	12.48	-1390.94	-4613	-2709	7344	4.82	4.82	-3512	13202	10182	101952	41572	24582	66154		9.01	Si
SLV 14	15.64	-513.76	-1015	-596	5285	4.82	4.82	-773	12655	9759	101952	41572	24582	66154		12.52	Si
SLV 8	12.48	-4396.67	-4879	-2865	-13696	4.82	4.5268	-3962	13292	9627	101952	41572	24582	66154		4.83	Si
SLV 8	15.64	1415.31	64	38	-12031	3.856	0	0	0	0	101952	33258	19666	52924		4.4	Si
SLV 13	12.48	-804.45	-4812	-2825	8453	4.82	4.82	-3664	13233	10205	101952	41572	24582	66154		7.83	Si
SLV 13	15.64	-502.58	-1109	-651	6216	4.82	4.82	-844	12669	9770	101952	41572	24582	66154		10.64	Si
SLV 5	12.48	5587.39	-7204	-4230	13540	4.82	4.82	-5485	13597	10486	101952	41572	24582	66154		4.89	Si
SLV 5	15.64	-1979	-743	-436	12134	3.856	0	0	0	0	101952	33258	19666	52924		4.36	Si
SLV 9	12.48	4140.71	-6438	-3780	15385	4.82	4.82	-4902	13480	10396	101952	41572	24582	66154		4.3	Si
SLV 9	15.64	-1847.97	-1025	-602	13133	3.856	1.8211	0	0	0	101952	33258	19666	52924		4.03	Si
SLV 6	12.48	5212.84	-7077	-4155	12832	4.82	4.82	-5388	13578	10471	101952	41572	24582	66154		5.16	Si
SLV 6	15.64	-1986.13	-683	-401	11540	3.856	0	0	0	0	101952	33258	19666	52924		4.59	Si
SLV 12	12.48	-5843.35	-4114	-2415	-11851	3.856	2.9686	0	0	0	101952	33258	19666	52924		4.47	Si
SLV 12	15.64	1546.33	-218	-128	-11033	3.856	0	0	0	0	101952	33258	19666	52924		4.8	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	12.48	3766.16	-6311	-3706	14677	4.82	4.82	-4805	13461	10381	101952	41572	24582	66154		4.51	Si
SLV 10	15.64	-1855.11	-965	-567	12538	3.856	1.4624	0	0	0	101952	33258	19666	52924		4.22	Si
SLV 7	12.48	-4022.12	-5006	-2940	-12988	4.82	4.8198	-3812	13262	10228	101952	41572	24582	66154		5.09	Si
SLV 7	15.64	1422.45	4	2	-11436	3.856	0	0	0	0	101952	33258	19666	52924		4.63	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 14.06 Ta 0.1 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 12	-1007	0.53	330.19	0	430.59	215.3	0.65	No
SLV 11	-1104	0.53	330.19	0	440.82	220.41	0.67	No
SLV 8	-1129	0.53	330.19	0	443.44	221.72	0.67	No
SLV 7	-1226	0.53	330.19	0	453.56	226.78	0.69	No
SLV 16	-1351	0.53	330.19	0	466.62	233.31	0.71	No
SLV 15	-1503	0.53	330.19	0	482.34	241.17	0.73	No
SLV 4	-1758	0.53	330.19	0	508.6	254.3	0.77	No
SLV 14	-1792	0.53	330.19	0	512.1	256.05	0.78	No
SLV 3	-1910	0.53	330.19	0	524.16	262.08	0.79	No
SLV 13	-1944	0.53	330.19	0	527.65	263.82	0.8	No

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.06 Wa = 0.03 Ta = 0.1042

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-1025	-6438	48	8.44	497.6	0.902	135.9783	21.25109	Si
SLV 10	-965	-6311	48	8.6	493.2	0.904	138.24835	21.25109	Si
SLV 5	-743	-7204	-117	9.224	477.8	0.914	146.72548	21.25109	Si
SLV 6	-683	-7077	-117	9.416	473.9	0.917	149.23793	21.25109	Si
SLV 11	-278	-4241	106	10.962	452.9	0.953	167.25716	21.25109	Si
SLV 12	-218	-4114	107	11.234	450.8	0.961	169.97047	21.25109	Si
SLV 7	4	-5006	-59	12.379	447.2	1	179.91077	21.25109	Si, Trazione
SLV 8	64	-4879	-59	12.551	447.2	1	182.40174	21.25109	Si, Trazione
SLV 13	-1109	-4812	261	8.162	504	0.9	131.84438	12.65509	Si
SLV 14	-1015	-4613	261	8.4	496.9	0.902	135.27838	12.65509	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.657	SLU 29	Si
V_SLU	25.255	SLU 82	Si
PF_SLV	1.578	SLV 8	Si
V_SLV	4.03	SLV 9	Si
PFFP_SLV	0.652	SLV 12	No
R_SLV	6.399	SLV 9	Si

Maschio 209

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.518	-3.314	-18.518	-0.094	L7	L8	3.221	0.16	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 52	12.48	2998.78	-6136	-0.0000287	0.0004492	0.0035	3.2207	8918.41	10357.81	10357.81	3.45	No	Si
SLU 52	14.58	-1991.39	-1098	-0.000062	0.0004492	0.0035	2.5766	0	7616.14	7616.14	3.82	No	Si
SLU 43	12.48	2806.97	-5822	-0.0000271	0.0004492	0.0035	3.2207	8507.91	9901.94	9901.94	3.53	No	Si
SLU 43	14.58	-2078.12	-1045	-0.0000738	0.0004492	0.0035	2.5766	0	7534.6	7534.6	3.63	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 50	12.48	2973.25	-6292	-0.000029	0.0004492	0.0035	3.2207	9120.28	10584.08	10584.08	3.56	No	Si
SLU 50	14.58	-2355.59	-1246	-0.0000786	0.0004492	0.0035	2.5766	0	7843.44	7843.44	3.33	No	Si
SLU 44	12.48	2936.06	-5826	-0.0000277	0.0004492	0.0035	3.2207	8514.05	9908.71	9908.71	3.37	No	Si
SLU 44	14.58	-2147.3	-989	-0.0000834	0.0004492	0.0035	2.5766	0	7449.59	7449.59	3.47	No	Si
SLU 49	12.48	2985.31	-6458	-0.0000295	0.0004492	0.0035	3.2207	9332.75	10823.76	10823.76	3.63	No	Si
SLU 49	14.58	-2317.22	-1384	-0.0000617	0.0004492	0.0035	2.5766	0	8053.62	8053.62	3.48	No	Si
SLU 55	12.48	3081.92	-6372	-0.0000297	0.0004492	0.0035	3.2207	9222.22	10698.88	10698.88	3.47	No	Si
SLU 55	14.58	-2130.12	-1199	-0.0000641	0.0004492	0.0035	2.5766	0	7770.83	7770.83	3.65	No	Si
SLU 59	12.48	3113.42	-6605	-0.0000305	0.0004492	0.0035	3.2207	9520.82	11037.25	11037.25	3.55	No	Si
SLU 59	14.58	-2241.18	-1321	-0.0000614	0.0004492	0.0035	2.5766	0	7958.13	7958.13	3.55	No	Si
SLU 2	12.48	2297.71	-4615	-0.0000217	0.0004492	0.0035	3.2207	6887.28	8125.17	8125.17	3.54	No	Si
SLU 2	14.58	-1635.49	-814	-0.0000584	0.0004492	0.0035	2.5766	0	7179.55	7179.55	4.39	No	Si
SLU 51	12.48	3050.7	-6295	-0.0000294	0.0004492	0.0035	3.2207	9123.89	10588.14	10588.14	3.47	No	Si
SLU 51	14.58	-2397.1	-1213	-0.0000848	0.0004492	0.0035	2.5766	0	7792.81	7792.81	3.25	No	Si
SLU 47	12.48	3019.2	-6062	-0.0000286	0.0004492	0.0035	3.2207	8821.59	10249.78	10249.78	3.39	No	Si
SLU 47	14.58	-2286.04	-1090	-0.0000862	0.0004492	0.0035	2.5766	0	7604.29	7604.29	3.33	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	12.48	7780.74	-6355	-0.0000889	0.0006738	0.0035	3.2207		10789.67	10789.67	1.39		Si
SLV 6	14.58	-5367.07	1394	-0.0003202	0.0006738	0.0035	2.5766		3747.84	3747.84	0.7		No
SLD 5	12.48	4795.47	-5498	-0.0000391	0.0006738	0.0035	3.2207		9512.96	9512.96	1.98		Si
SLD 5	14.58	-3257.35	117	-0.0001876	0.0006738	0.0035	2.5766		5736.03	5736.03	1.76		Si
SLD 9	12.48	4767.27	-5205	-0.0000394	0.0006738	0.0035	3.2207		9076.02	9076.02	1.9		Si
SLD 9	14.58	-3146.21	113	-0.0001809	0.0006738	0.0035	2.5766		5743.54	5743.54	1.83		Si
SLV 5	12.48	8107.18	-6346	-0.0001038	0.0006738	0.0035	3.2207		10777.9	10777.9	1.33		Si
SLV 5	14.58	-5518.79	1507	-0.0003293	0.0006738	0.0035	2.5766		3570.26	3570.26	0.65		No
SLV 10	12.48	7712.14	-5661	-0.0001256	0.0006738	0.0035	3.2207		9756.65	9756.65	1.27		Si
SLV 10	14.58	-5096.92	1376	-0.000302	0.0006738	0.0035	2.5766		3776.54	3776.54	0.74		No
SLD 6	12.48	4653.08	-5501	-0.0000378	0.0006738	0.0035	3.2207		9518.17	9518.17	2.05		Si
SLD 6	14.58	-3191.17	68	-0.0001831	0.0006738	0.0035	2.5766		5812.53	5812.53	1.82		Si
SLV 9	12.48	8038.58	-5653	-0.0001683	0.0006738	0.0035	3.2207		9744.7	9744.7	1.21		Si
SLV 9	14.58	-5248.64	1489	-0.000311	0.0006738	0.0035	2.5766		3598.95	3598.95	0.69		No
SLV 13	12.48	4051.85	-4029	-0.0000349	0.0006738	0.0035	3.2207		7303.49	7303.49	1.8		Si
SLV 13	14.58	-2301.66	-189	-0.0001267	0.0006738	0.0035	2.5766		6210.72	6210.72	2.7		Si
SLV 1	12.48	4280.52	-6340	-0.0000355	0.0006738	0.0035	3.2207		10768.52	10768.52	2.52		Si
SLV 1	14.58	-3202.18	-128	-0.000181	0.0006738	0.0035	2.5766		6116.26	6116.26	1.91		Si
SLD 10	12.48	4624.88	-5209	-0.0000378	0.0006738	0.0035	3.2207		9081.23	9081.23	1.96		Si
SLD 10	14.58	-3080.03	63	-0.0001764	0.0006738	0.0035	2.5766		5820.04	5820.04	1.89		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 70	12.48	3020.99	-6960	-4087	4398	3.2207	3.2207	-7930	9391	4839	101952	18519	16426	34945	No	7.95	Si
SLU 70	14.58	-2194.94	-1632	-958	4459	2.5766	0.7958	0	0	0	101952	14815	13140	27956	No	6.27	Si
SLU 51	12.48	3050.7	-6295	-3696	4394	3.2207	3.2207	-7173	9290	4787	101952	18519	16426	34945	No	7.95	Si
SLU 51	14.58	-2397.1	-1213	-712	4456	2.5766	0	0	0	0	101952	14815	13140	27956	No	6.27	Si
SLU 57	12.48	3048.03	-6768	-3974	4429	3.2207	3.2207	-7711	9362	4824	101952	18519	16426	34945	No	7.89	Si
SLU 57	14.58	-2161.3	-1492	-876	4489	2.5766	0.4862	0	0	0	101952	14815	13140	27956	No	6.23	Si
SLU 84	12.48	3092.85	-7005	-4113	4423	3.2207	3.2207	-7981	9398	4843	101952	18519	16426	34945	No	7.9	Si
SLU 84	14.58	-1913.35	-1515	-890	4481	2.5766	1.0423	0	0	0	101952	14815	13140	27956	No	6.24	Si
SLU 79	12.48	3071.65	-7104	-4171	4528	3.2207	3.2207	-8095	9413	4850	101952	18519	16426	34945	No	7.72	Si
SLU 79	14.58	-2077.39	-1602	-941	4520	2.5766	0.9418	0	0	0	101952	14815	13140	27956	No	6.18	Si
SLU 80	12.48	3149.11	-7107	-4173	4584	3.2207	3.2207	-8098	9413	4851	101952	18519	16426	34945	No	7.62	Si
SLU 80	14.58	-2118.9	-1569	-921	4644	2.5766	0.7802	0	0	0	101952	14815	13140	27956	No	6.02	Si
SLU 72	12.48	3086.38	-6797	-3991	4474	3.2207	3.2207	-7745	9366	4826	101952	18519	16426	34945	No	7.81	Si
SLU 72	14.58	-2274.82	-1461	-858	4534	2.5766	0.1595	0	0	0	101952	14815	13140	27956	No	6.17	Si
SLU 76	12.48	3117.6	-6874	-4036	4413	3.2207	3.2207	-7832	9378	4832	101952	18519	16426	34945	No	7.92	Si
SLU 76	14.58	-2007.84	-1446	-849	4517	2.5766	0.6667	0	0	0	101952	14815	13140	27956	No	6.19	Si
SLU 78	12.48	3083.71	-7270	-4269	4509	3.2207	3.2207	-8283	9438	4863	101952	18519	16426	34945	No	7.75	Si
SLU 78	14.58	-2039.03	-1740	-1022	4568	2.5766	1.3159	0	0	0	101952	14815	13140	27956	No	6.12	Si
SLU 59	12.48	3113.42	-6605	-3878	4505	3.2207	3.2207	-7526	9337	4811	101952	18519	16426	34945	No	7.76	Si
SLU 59	14.58	-2241.18	-1321	-776	4565	2.5766	0	0	0	0	101952	14815	13140	27956	No	6.12	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	12.48	3769.38	-6353	-3730	5840	3.2207	3.051	-7238	13948	6809	101952	27778	16426	44204		7.57	Si
SLV 2	14.58	-2964.61	-305	-179	5918	2.5766	0	0	0	0	101952	22223	13140	35363		5.98	Si
SLD 5	12.48	4795.47	-5498	-3228	6404	3.2207	2.2143	-6264	13753	4873	101952	27778	16426	44204		6.9	Si
SLD 5	14.58	-3257.35	117	69	6538	2.5766	0	0	0	0	101952	22223	13140	35363		5.41	Si
SLV 9	12.48	8038.58	-5653	-3319	10118	3.2207	0.5652	-37051	16250	1470	101952	27778	16426	44204		4.37	Si
SLV 9	14.58	-5248.64	1489	874	10450	2.5766	0	0	0	0	101952	22223	13140	35363		3.38	Si
SLV 1	12.48	4280.52	-6340	-3723	6322	3.2207	2.8056	-7224	13945	6260	101952	27778	16426	44204		6.99	Si
SLV 1	14.58	-3202.18	-128	-75	6401	2.5766	0	0	0	0	101952	22223	13140	35363		5.52	Si
SLV 5	12.48	8107.18	-6346	-3726	10629	3.2207	0.9988	-23586	16250	2597	101952	27778	16426	44204		4.16	Si
SLV 5	14.58	-5518.79	1507	885	10952	2.5766	0	0	0	0	101952	22223	13140	35363		3.23	Si
SLV 10	12.48	7712.14	-5661	-3324	9810	3.2207	0.7442	-28254	16250	1935	101952	27778	16426	44204		4.51	Si
SLV 10	14.58	-5096.92	1376	808	10142	2.5766	0	0	0	0	101952	22223	13140	35363		3.49	Si
SLV 6	12.48	7780.74	-6355	-3731	10321	3.2207	1.1577	-7240	13948	2584	101952	27778	16426	44204		4.28	Si
SLV 6	14.58	-5367.07	1394	818	10644	2.5766	0	0	0	0	101952	22223	13140	35363		3.32	Si
SLD 10	12.48	4624.88	-5209	-3058	6053	3.2207	2.1672	-5935	13687	4746	101952	27778	16426	44204		7.3	Si
SLD 10	14.58	-3080.03	63	37	6191	2.5766	0	0	0	0	101952	22223	13140	35363		5.71	Si
SLD 9	12.48	4767.27	-5205	-3056	6187	3.2207	2.0834	-5931	13686	4562	101952	27778	16426	44204		7.14	Si
SLD 9	14.58	-3146.21	113	66	6326	2.5766	0	0	0	0	101952	22223	13140	35363		5.59	Si
SLD 6	12.48	4653.08	-5501	-3230	6270	3.2207	2.2936	-6268	13754	5047	101952	27778	16426	44204		7.05	Si
SLD 6	14.58	-3191.17	68	40	6403	2.5766	0	0	0	0	101952	22223	13140	35363		5.52	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 14.06 Ta 0.1 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 9	-657	0.53	220.63	0	287.09	143.55	0.65	No
SLV 10	-760	0.53	220.63	0	297.78	148.89	0.67	No
SLV 5	-777	0.53	220.63	0	299.51	149.75	0.68	No
SLV 6	-880	0.53	220.63	0	310.14	155.07	0.7	No
SLV 13	-1466	0.53	220.63	0	369.58	184.79	0.84	No
SLV 14	-1627	0.53	220.63	0	385.78	192.89	0.87	No
SLV 1	-1866	0.53	220.63	0	409.59	204.8	0.93	No
SLV 2	-2027	0.53	220.63	0	425.7	212.85	0.96	No
SLV 15	-2304	0.53	220.63	0	453.2	226.6	1.03	Si
SLV 16	-2466	0.53	220.63	0	469.07	234.54	1.06	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.06 Wa = 0.03 Ta = 0.1042

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-263	-4032	7	10.509	305.9	0.939	162.58112	21.25109	Si
SLV 12	-246	-3339	127	10.543	305.1	0.942	162.65714	21.25109	Si
SLV 7	-257	-4024	7	10.545	305.6	0.94	162.98351	21.25109	Si
SLV 11	-240	-3331	127	10.58	304.8	0.943	163.05785	21.25109	Si
SLV 6	60	-6355	-126	12.564	298.8	1	182.60078	21.25109	Si, Trazione
SLV 5	66	-6346	-126	12.59	298.8	1	182.97644	21.25109	Si, Trazione
SLV 10	77	-5661	-6	12.723	298.8	1	184.90779	21.25109	Si, Trazione
SLV 9	83	-5653	-6	12.749	298.8	1	185.29049	21.25109	Si, Trazione
SLV 4	-172	-5656	-180	10.989	302.1	0.955	167.19569	12.65509	Si
SLV 3	-162	-5643	-180	11.051	301.8	0.957	167.81989	12.65509	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.251	SLU 51	Si
V_SLU	6.02	SLU 80	Si
PF_SLV	0.647	SLV 5	No
V_SLV	3.229	SLV 5	Si
PFFP_SLV	0.651	SLV 9	No
R_SLV	7.65	SLV 8	Si

Maschio 212

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.033	2.166	-15.033	6.386	L7	L8	4.22	0.16	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Esterna	100	100	100	100	1	CNR DT215	0.8			0.008				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	12.48	6614.1	58699	0.0018547	0.0004492	0.0035	3.376	0	137951.94	137951.94	20.86	No	Si
SLU 79	14.58	50683.67	62165	-0.0001745	0.0004492	0.0035	4.22	0	134121.86	134121.86	2.65	No	Si
SLU 74	12.48	6574.04	58727	0.0018579	0.0004492	0.0035	3.376	0	137922.23	137922.23	20.98	No	Si
SLU 74	14.58	50712.41	62193	-0.0001747	0.0004492	0.0035	4.22	0	134089.48	134089.48	2.64	No	Si
SLU 84	12.48	6840.46	60529	0.0019114	0.0004492	0.0035	3.376	0	135999.43	135999.43	19.88	No	Si
SLU 84	14.58	52125.79	63995	-0.0001789	0.0004492	0.0035	4.22	0	131994.26	131994.26	2.53	No	Si
SLU 83	12.48	6748.55	60515	0.0019158	0.0004492	0.0035	3.376	0	136014.14	136014.14	20.15	No	Si
SLU 83	14.58	52200.1	63981	-0.0001804	0.0004492	0.0035	4.22	0	132010.3	132010.3	2.53	No	Si
SLU 75	12.48	6665.95	58740	0.0018535	0.0004492	0.0035	3.376	0	137907.51	137907.51	20.69	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 75	14.58	50638.1	62206	-0.0001732	0.0004492	0.0035	4.22	0	134073.44	134073.44	2.65	No	Si
SLU 77	12.48	6667.99	59028	0.0018642	0.0004492	0.0035	3.376	0	137600.75	137600.75	20.64	No	Si
SLU 77	14.58	51128.46	62494	-0.0001786	0.0004492	0.0035	4.22	0	133739.17	133739.17	2.62	No	Si
SLU 82	12.48	6746.5	60228	0.0019051	0.0004492	0.0035	3.376	0	136320.9	136320.9	20.21	No	Si
SLU 82	14.58	51709.74	63694	-0.0001749	0.0004492	0.0035	4.22	0	132344.56	132344.56	2.56	No	Si
SLU 81	12.48	6654.6	60214	0.0019095	0.0004492	0.0035	3.376	0	136335.62	136335.62	20.49	No	Si
SLU 81	14.58	51784.04	63680	-0.0001764	0.0004492	0.0035	4.22	0	132360.6	132360.6	2.56	No	Si
SLU 78	12.48	6759.9	59042	0.0018598	0.0004492	0.0035	3.376	0	137586.03	137586.03	20.35	No	Si
SLU 78	14.58	51054.16	62508	-0.0001771	0.0004492	0.0035	4.22	0	133723.14	133723.14	2.62	No	Si
SLU 80	12.48	6706.01	58712	0.0018503	0.0004492	0.0035	3.376	0	137937.23	137937.23	20.57	No	Si
SLU 80	14.58	50609.37	62179	-0.000173	0.0004492	0.0035	4.22	0	134105.82	134105.82	2.65	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 4	12.48	3867.51	42905	0.0014074	0.0006738	0.0035	3.376		159518.17	159518.17	41.25		Si
SLD 4	14.58	37714.28	45532	-0.0001356	0.0006738	0.0035	4.22		156642.79	156642.79	4.15		Si
SLV 4	12.48	3020.23	45270	0.0015417	0.0006738	0.0035	3.376		156928.61	156928.61	51.96		Si
SLV 4	14.58	41088.04	47851	-0.0001634	0.0006738	0.0035	4.22		154103.21	154103.21	3.75		Si
SLV 12	12.48	-1328.4	39258	0.0014077	0.0006738	0.0035	3.376		163339.44	163339.44	122.96		Si
SLV 12	14.58	41939.54	42551	-0.0002186	0.0006738	0.0035	4.22		159905.77	159905.77	3.81		Si
SLV 8	12.48	-1122.3	41811	0.0015149	0.0006738	0.0035	3.376		160771.63	160771.63	143.25		Si
SLV 8	14.58	43999.28	44965	-0.0002275	0.0006738	0.0035	4.22		157263.35	157263.35	3.57		Si
SLD 12	12.48	1977.28	40380	0.0014135	0.0006738	0.0035	3.376		162123.66	162123.66	81.99		Si
SLD 12	14.58	38162.94	43301	-0.0001619	0.0006738	0.0035	4.22		159084.99	159084.99	4.17		Si
SLV 7	12.48	-896.6	41803	0.0015267	0.0006738	0.0035	3.376		160779.25	160779.25	179.32		Si
SLV 7	14.58	43772.63	44957	-0.0002246	0.0006738	0.0035	4.22		157271.63	157271.63	3.59		Si
SLV 11	12.48	-1102.7	39251	0.0014195	0.0006738	0.0035	3.376		163347.06	163347.06	148.13		Si
SLV 11	14.58	41712.89	42544	-0.0002157	0.0006738	0.0035	4.22		159914.05	159914.05	3.83		Si
SLD 8	12.48	2058.87	41446	0.0014493	0.0006738	0.0035	3.376		161050.34	161050.34	78.22		Si
SLD 8	14.58	39034.43	44315	-0.0001655	0.0006738	0.0035	4.22		157974.39	157974.39	4.05		Si
SLD 7	12.48	2157.33	41443	0.0014439	0.0006738	0.0035	3.376		161053.66	161053.66	74.65		Si
SLD 7	14.58	38935.56	44312	-0.0001641	0.0006738	0.0035	4.22		157978.01	157978.01	4.06		Si
SLV 3	12.48	3373.65	45259	0.0015224	0.0006738	0.0035	3.376		156941.58	156941.58	46.52		Si
SLV 3	14.58	40733.14	47839	-0.0001581	0.0006738	0.0035	4.22		154116.18	154116.18	3.78		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	12.48	6614.1	58699	34465	-20963	3.376	4.22	0	0	0	63638	19412	17218	36630	No	1.75	Si
SLU 79	14.58	50683.67	62165	36500	-20963	4.22	3.8841	1589702	10833	6732	63638	24265	21522	45787	No	2.18	Si
SLU 81	12.48	6654.6	60214	35355	-21468	3.376	4.22	0	0	0	63638	19412	17218	36630	No	1.71	Si
SLU 81	14.58	51784.04	63680	37390	-21468	4.22	3.8904	1647427	10833	6743	63638	24265	21522	45787	No	2.13	Si
SLU 75	12.48	6665.95	58740	34490	-20917	3.376	4.22	0	0	0	63638	19412	17218	36630	No	1.75	Si
SLU 75	14.58	50638.1	62206	36525	-20917	4.22	3.8879	1602719	10833	6739	63638	24265	21522	45787	No	2.19	Si
SLU 74	12.48	6574.04	58727	34482	-20996	3.376	4.22	0	0	0	63638	19412	17218	36630	No	1.74	Si
SLU 74	14.58	50712.41	62193	36517	-20996	4.22	3.8838	1589485	10833	6732	63638	24265	21522	45787	No	2.18	Si
SLU 82	12.48	6746.5	60228	35363	-21389	3.376	4.22	0	0	0	63638	19412	17218	36630	No	1.71	Si
SLU 82	14.58	51709.74	63694	37398	-21389	4.22	3.8945	1660871	10833	6750	63638	24265	21522	45787	No	2.14	Si
SLU 83	12.48	6748.55	60515	35532	-21622	3.376	4.22	0	0	0	63638	19412	17218	36630	No	1.69	Si
SLU 83	14.58	52200.1	63981	37567	-21622	4.22	3.8824	1629307	10833	6730	63638	24265	21522	45787	No	2.12	Si
SLU 84	12.48	6840.46	60529	35540	-21542	3.376	4.22	0	0	0	63638	19412	17218	36630	No	1.7	Si
SLU 84	14.58	52125.79	63995	37575	-21542	4.22	3.8864	1642203	10833	6736	63638	24265	21522	45787	No	2.13	Si
SLU 80	12.48	6706.01	58712	34473	-20884	3.376	4.22	0	0	0	63638	19412	17218	36630	No	1.75	Si
SLU 80	14.58	50609.37	62179	36509	-20884	4.22	3.8882	1602956	10833	6740	63638	24265	21522	45787	No	2.19	Si
SLU 78	12.48	6759.9	59042	34667	-21070	3.376	4.22	0	0	0	63638	19412	17218	36630	No	1.74	Si
SLU 78	14.58	51054.16	62508	36702	-21070	4.22	3.8797	1584958	10833	6725	63638	24265	21522	45787	No	2.17	Si
SLU 77	12.48	6667.99	59028	34659	-21150	3.376	4.22	0	0	0	63638	19412	17218	36630	No	1.73	Si
SLU 77	14.58	51128.46	62494	36694	-21150	4.22	3.8756	1572253	10833	6718	63638	24265	21522	45787	No	2.16	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 7	12.48	2157.33	41443	24333	-17549	3.376	4.22	0	0	0	63638	29118	17218	46336		2.64	Si
SLD 7	14.58	38935.56	44312	26018	-17779	4.22	3.694	891022	16250	9604	63638	36398	21522	57920		3.26	Si
SLV 7	12.48	-896.6	41803	24545	-21371	3.376	4.22	0	0	0	63638	29118	17218	46336		2.17	Si
SLV 7	14.58	43772.63	44957	26397	-21903	4.22	3.409	705597	16250	8864	63638	36398	21522	57920		2.64	Si
SLV 12	12.48	-1328.4	39258	23051	-20649	3.376	4.22	0	0	0	63638	29118	17218	46336		2.24	Si
SLV 12	14.58	41939.54	42551	24984	-21260	4.22	3.3731	653559	16250	8770	63638	36398	21522	57920		2.72	Si
SLD 8	12.48	2058.87	41446	24335	-17643	3.376	4.22	0	0	0	63638	29118	17218	46336		2.63	Si
SLD 8	14.58	39034.43	44315	26020	-17873	4.22	3.6875	884712	16250	9587	63638	36398	21522	57920		3.24	Si
SLV 3	12.48	3373.65	45259	26574	-17891	3.376	4.22	0	0	0	63638	29118	17218	46336		2.59	Si
SLV 3	14.58	40733.14	47839	28089	-17932	4.22	3.7756	1060750	16250	9817	63638	36398	21522	57920		3.23	Si
SLD 12	12.48	1977.28	40380	23709	-17244	3.376	4.22	0	0	0	63638	29118	17218	46336		2.69	Si
SLD 12	14.58	38162.94	43301	25424	-17506	4.22	3.686	863609	16250	9584	63638	36398	21522	57920		3.31	Si
SLD 11	12.48	2075.74	40376	23707	-17151	3.376	4.22	0	0	0	63638	29118	17218	46336		2.7	Si
SLD 11	14.58	38064.08	43298	25422	-17412	4.22	3.6926	869888	16250	9601	63638	36398	21522	57920		3.33	Si
SLV 4	12.48	3020.23	45270	26581	-18228	3.376	4.22	0	0	0	63638	29118	17218	46336		2.54	Si
SLV 4	14.58	41088.04	47851	28096	-18269	4.22	3.754	1031282	16250	9760	63638	36398	21522	57920		3.17	Si
SLV 8	12.48	-1122.3	41811	24549	-21586	3.376	4.22	0	0	0	63638	29118	17218	46336		2.15	Si
SLV 8	14.58	43999.28	44965	26401	-22119	4.22	3.3944	698730	16250	8825	63638	36398	21522	57920		2.62	Si
SLV 11	12.48	-1102.7	39251	23046	-20433	3.376	4.22	0	0	0	63638	29118	17218	46336		2.27	Si
SLV 11	14.58	41712.89	42544	24980	-21045	4.22	3.3886	660128	16250	8810	63638	36398	21522	57920		2.75	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 14.06 Ta 0.1 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	47493	0.53	289.09	0	13761.29	6880.64	23.8	Si
SLV 1	47481	0.53	289.09	0	13762.2	6881.1	23.8	Si
SLV 4	47147	0.53	289.09	0	13788.09	6894.04	23.85	Si
SLV 3	47135	0.53	289.09	0	13789	6894.5	23.85	Si
SLV 6	45090	0.53	289.09	0	13947.25	6973.63	24.12	Si
SLV 5	45082	0.53	289.09	0	13947.84	6973.92	24.12	Si
SLV 8	43935	0.53	289.09	0	14036.57	7018.29	24.28	Si
SLV 7	43927	0.53	289.09	0	14037.16	7018.58	24.28	Si
SLV 10	42685	0.53	289.09	0	14129.67	7064.84	24.44	Si
SLV 9	42677	0.53	289.09	0	14130.22	7065.11	24.44	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.06 Wa = 0.03 Ta = 0.1042

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	40691	43175	-84	1.231	391.5	1	17.89489	21.25109	No, Trazione
SLV 6	40600	43182	-84	1.234	391.5	1	17.94074	21.25109	No, Trazione
SLV 9	38542	40623	105	1.309	391.5	1	19.03044	21.25109	No, Trazione
SLV 10	38452	40630	105	1.313	391.5	1	19.08207	21.25109	No, Trazione
SLV 7	31977	41803	-115	1.626	391.5	1	23.63288	21.25109	Si, Trazione
SLV 8	31886	41811	-115	1.632	391.5	1	23.71147	21.25109	Si, Trazione
SLV 11	29828	39251	74	1.768	391.5	1	25.69326	21.25109	Si, Trazione
SLV 12	29738	39258	74	1.774	391.5	1	25.78553	21.25109	Si, Trazione
SLV 1	40173	45670	-316	1.237	391.5	1	17.97504	12.65509	Si, Trazione
SLV 2	40031	45682	-316	1.242	391.5	1	18.04828	12.65509	Si, Trazione

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.529	SLU 83	Si
V_SLU	1.694	SLU 83	Si
PF_SLV	3.574	SLV 8	Si
V_SLV	2.147	SLV 8	Si
PFFP_SLV	23.801	SLV 2	Si
R_SLV	0.842	SLV 5	No

Maschio 213

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-3.454	-13.778	-0.194	L7	L8	3.261	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 70	12.48	1593.96	-12928	-0.0000264	0.0003743	0.0035	3.2607	18146.11	19036.94	19036.94	11.94	No	Si
SLU 70	14.58	1914.21	-7030	-0.0000173	0.0003743	0.0035	3.2607	10594.77	11336.24	11336.24	5.92	No	Si
SLU 29	12.48	1281.34	-10744	-0.0000217	0.0003743	0.0035	3.2607	15492.33	16498.12	16498.12	12.88	No	Si
SLU 29	14.58	1766.04	-6227	-0.0000155	0.0003743	0.0035	3.2607	9471.79	10164.35	10164.35	5.76	No	Si
SLU 72	12.48	1671.37	-12897	-0.0000266	0.0003743	0.0035	3.2607	18108.89	18999.66	18999.66	11.37	No	Si
SLU 72	14.58	1974.03	-7117	-0.0000176	0.0003743	0.0035	3.2607	10714.12	11462.23	11462.23	5.81	No	Si
SLU 71	12.48	1578.26	-12814	-0.0000262	0.0003743	0.0035	3.2607	18011.76	18902.58	18902.58	11.98	No	Si
SLU 71	14.58	1964.51	-7107	-0.0000176	0.0003743	0.0035	3.2607	10700.8	11448.14	11448.14	5.83	No	Si
SLU 28	12.48	1297.04	-10858	-0.0000219	0.0003743	0.0035	3.2607	15634.96	16628.73	16628.73	12.82	No	Si
SLU 28	14.58	1715.74	-6150	-0.0000152	0.0003743	0.0035	3.2607	9363.39	10050.65	10050.65	5.86	No	Si
SLU 27	12.48	1203.94	-10776	-0.0000215	0.0003743	0.0035	3.2607	15531.93	16534.32	16534.32	13.73	No	Si
SLU 27	14.58	1706.23	-6140	-0.0000152	0.0003743	0.0035	3.2607	9349.74	10036.36	10036.36	5.88	No	Si
SLU 26	12.48	1287.39	-10095	-0.0000206	0.0003743	0.0035	3.2607	14670.45	15670.52	15670.52	12.17	No	Si
SLU 26	14.58	1519.1	-5367	-0.0000133	0.0003743	0.0035	3.2607	8244.88	8891.27	8891.27	5.85	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 69	12.48	1500.85	-12846	-0.000026	0.0003743	0.0035	3.2607	18049.06	18939.83	18939.83	12.62	No	Si
SLU 69	14.58	1904.69	-7021	-0.0000172	0.0003743	0.0035	3.2607	10581.42	11322.17	11322.17	5.94	No	Si
SLU 30	12.48	1374.45	-10827	-0.0000221	0.0003743	0.0035	3.2607	15595.44	16592.48	16592.48	12.07	No	Si
SLU 30	14.58	1775.56	-6236	-0.0000155	0.0003743	0.0035	3.2607	9485.41	10178.66	10178.66	5.73	No	Si
SLU 68	12.48	1584.31	-12165	-0.0000251	0.0003743	0.0035	3.2607	17237.06	18140.41	18140.41	11.45	No	Si
SLU 68	14.58	1717.56	-6247	-0.0000154	0.0003743	0.0035	3.2607	9500.43	10194.45	10194.45	5.94	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	12.48	7403.23	-14184	-0.0000461	0.0005615	0.0035	3.2607		21870.66	21870.66	2.95		Si
SLV 6	14.58	2360.93	-5863	-0.0000166	0.0005615	0.0035	3.2607		9759.51	9759.51	4.13		Si
SLV 10	12.48	7117.5	-13211	-0.0000435	0.0005615	0.0035	3.2607		20509.3	20509.3	2.88		Si
SLV 10	14.58	2503.04	-5492	-0.0000164	0.0005615	0.0035	3.2607		9192.44	9192.44	3.67		Si
SLV 14	12.48	2160.33	-8393	-0.0000202	0.0005615	0.0035	3.2607		13562.06	13562.06	6.28		Si
SLV 14	14.58	1677.45	-3839	-0.0000112	0.0005615	0.0035	3.2607		6645.01	6645.01	3.96		Si
SLV 13	12.48	2372.84	-8286	-0.0000206	0.0005615	0.0035	3.2607		13402.88	13402.88	5.65		Si
SLV 13	14.58	1671.12	-3861	-0.0000112	0.0005615	0.0035	3.2607		6680.17	6680.17	4		Si
SLV 11	12.48	-5847.98	-2565	-0.0003334	0.0005615	0.0035	2.6085		7041.64	7041.64	1.2		Si
SLV 11	14.58	-336.79	-2031	-0.0000043	0.0005615	0.0035	3.2607		6205.9	6205.9	18.43		Si
SLV 8	12.48	-5697.97	-3606	-0.0001148	0.0005615	0.0035	2.6085		8663.21	8663.21	1.52		Si
SLV 8	14.58	-474.86	-2387	-0.0000053	0.0005615	0.0035	3.2607		6764.08	6764.08	14.24		Si
SLV 12	12.48	-5983.7	-2633	-0.0003404	0.0005615	0.0035	2.6085		7148.73	7148.73	1.19		Si
SLV 12	14.58	-332.76	-2016	-0.0000042	0.0005615	0.0035	3.2607		6183	6183	18.58		Si
SLV 9	12.48	7253.22	-13143	-0.0000438	0.0005615	0.0035	3.2607		20413.58	20413.58	2.81		Si
SLV 9	14.58	2499	-5506	-0.0000164	0.0005615	0.0035	3.2607		9214.7	9214.7	3.69		Si
SLV 7	12.48	-5562.25	-3538	-0.000109	0.0005615	0.0035	2.6085		8556.74	8556.74	1.54		Si
SLV 7	14.58	-478.9	-2402	-0.0000053	0.0005615	0.0035	3.2607		6786.8	6786.8	14.17		Si
SLV 5	12.48	7538.95	-14116	-0.0000464	0.0005615	0.0035	3.2607		21776.49	21776.49	2.89		Si
SLV 5	14.58	2356.89	-5877	-0.0000166	0.0005615	0.0035	3.2607		9781.71	9781.71	4.15		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 68	12.48	1584.31	-12165	-10130	1204	3.2607	3.2607	-11095	8424	7691	35683	27339	8315	35654	No	29.6	Si
SLU 68	14.58	1717.56	-6247	-5202	868	3.2607	3.2607	-5698	7704	7034	35683	27339	8315	35654	No	41.08	Si
SLU 64	12.48	1280	-11240	-9360	1164	3.2607	3.2607	-10252	8311	7588	35683	27339	8315	35654	No	30.63	Si
SLU 64	14.58	1438.89	-5355	-4459	768	3.2607	3.2607	-4884	7596	6935	35683	27339	8315	35654	No	46.45	Si
SLU 23	12.48	1138.26	-9308	-7751	1095	3.2607	3.2607	-8489	8076	7374	35683	27339	8315	35654	No	32.56	Si
SLU 23	14.58	1256.29	-4491	-3740	742	3.2607	3.2607	-4096	7491	6839	35683	27339	8315	35654	No	48.06	Si
SLU 47	12.48	1587.42	-11105	-9247	1156	3.2607	3.2607	-10129	8295	7573	35683	27339	8315	35654	No	30.84	Si
SLU 47	14.58	1447.43	-5528	-4603	833	3.2607	3.2607	-5042	7617	6954	35683	27339	8315	35654	No	42.83	Si
SLU 43	12.48	1283.1	-10181	-8478	1116	3.2607	3.2607	-9286	8183	7471	35683	27339	8315	35654	No	31.96	Si
SLU 43	14.58	1168.76	-4636	-3860	732	3.2607	3.2607	-4228	7508	6855	35683	27339	8315	35654	No	48.69	Si
SLU 66	12.48	1351.72	-12059	-10042	1105	3.2607	3.2607	-10999	8411	7679	35683	27339	8315	35654	No	32.25	Si
SLU 66	14.58	1641.89	-6145	-5117	791	3.2607	3.2607	-5604	7692	7022	35683	27339	8315	35654	No	45.06	Si
SLU 46	12.48	1447.94	-11082	-9228	1162	3.2607	3.2607	-10107	8292	7571	35683	27339	8315	35654	No	30.68	Si
SLU 46	14.58	1381.27	-5435	-4526	836	3.2607	3.2607	-4957	7605	6944	35683	27339	8315	35654	No	42.64	Si
SLU 67	12.48	1444.83	-12141	-10110	1211	3.2607	3.2607	-11074	8421	7688	35683	27339	8315	35654	No	29.45	Si
SLU 67	14.58	1651.4	-6154	-5125	872	3.2607	3.2607	-5613	7693	7024	35683	27339	8315	35654	No	40.91	Si
SLU 44	12.48	1438.28	-10318	-8592	1291	3.2607	3.2607	-9411	8199	7486	35683	27339	8315	35654	No	27.62	Si
SLU 44	14.58	1184.62	-4652	-3874	866	3.2607	3.2607	-4243	7510	6857	35683	27339	8315	35654	No	41.17	Si
SLU 65	12.48	1435.18	-11378	-9474	1340	3.2607	3.2607	-10377	8328	7603	35683	27339	8315	35654	No	26.62	Si
SLU 65	14.58	1454.76	-5371	-4473	902	3.2607	3.2607	-4899	7598	6937	35683	27339	8315	35654	No	39.55	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	12.48	7538.95	-14116	-11755	6442	3.2607	3.2607	-12875	12992	11861	35683	41008	8315	47544		7.38	Si
SLV 5	14.58	2356.89	-5877	-4894	7150	3.2607	3.2607	-5361	11489	10489	35683	41008	8315	46172		6.46	Si
SLV 6	12.48	7403.23	-14184	-11812	6429	3.2607	3.2607	-12937	13004	11873	35683	41008	8315	47556		7.4	Si
SLV 6	14.58	2360.93	-5863	-4882	7118	3.2607	3.2607	-5347	11486	10487	35683	41008	8315	46170		6.49	Si
SLV 12	12.48	-5983.7	-2633	-2193	-4872	2.6085	0	0	0	0	35683	32807	6652	35683		7.32	Si
SLV 12	14.58	-332.76	-2016	-1679	-6206	3.2607	3.2607	-1839	10784	9846	35683	41008	8315	45529		7.34	Si
SLV 8	12.48	-5697.97	-3606	-3003	-4187	2.6085	0.1506	0	0	0	35683	32807	6652	35683		8.52	Si
SLV 8	14.58	-474.86	-2387	-1988	-5500	3.2607	3.2607	-2177	10852	9908	35683	41008	8315	45591		8.29	Si
SLV 1	12.48	3325.28	-11529	-9601	3530	3.2607	3.2607	-10516	12520	11430	35683	41008	8315	47114		13.35	Si
SLV 1	14.58	1197.43	-5098	-4245	3568	3.2607	3.2607	-4649	11347	10359	35683	41008	8315	46042		12.9	Si
SLV 10	12.48	7117.5	-13211	-11001	5744	3.2607	3.2607	-12050	12827	11711	35683	41008	8315	47394		8.25	Si
SLV 10	14.58	2503.04	-5492	-4573	6411	3.2607	3.2607	-5009	11418	10425	35683	41008	8315	46108		7.19	Si
SLV 9	12.48	7253.22	-13143	-10944	5757	3.2607	3.2354	-11987	12814	11608	35683	41008	8315	47292		8.21	Si
SLV 9	14.58	2499	-5506	-4585	6444	3.2607	3.2607	-5022	11421	10427	35683	41008	8315	46111		7.16	Si
SLV 2	12.48	3112.76	-11637	-9690	3509	3.2607	3.2607	-10613	12539	11448	35683	41008	8315	47131		13.43	Si
SLV 2	14.58	1203.75	-5075	-4226	3517	3.2607	3.2607	-4629	11342	10355	35683	41008	8315	46039		13.09	Si
SLV 7	12.48	-5562.25	-3538	-2946	-4174	2.6085	0.174	0	0	0	35683	32807	6652	35683		8.55	Si
SLV 7	14.58	-478.9	-2402	-2000	-5467	3.2607	3.2607	-2190	10855	9910	35683	41008	8315	45593		8.34	Si
SLV 11	12.48	-5847.98	-2565	-2136	-4859	2.6085	0	0	0	0	35683	32807	6652	35683		7.34	Si
SLV 11	14.58	-336.79	-2031	-1691	-6174	3.2607	3.2607	-1852	10787	9848	35683	41008	8315	45532		7.38	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.06 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.53	0	-2193	378.02	0	0	No, e>t/2
SLV 12	179667	0.53	0	-2190	378.02	0	0	No, e>t/2
SLV 8	179667	0.53	3141	-2868	378.02	393.27	1.04	Si
SLV 7	179667	0.53	3145	-2872	378.02	393.74	1.04	Si
SLV 16	179667	0.53	3307	-3019	378.02	413.52	1.09	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 15	179667	0.53	3313	-3025	378.02	414.26	1.1	Si
SLV 14	179667	0.53	4829	-4409	378.02	597.74	1.58	Si
SLV 13	179667	0.53	4835	-4414	378.02	598.46	1.58	Si
SLV 4	179667	0.53	5783	-5280	378.02	711.18	1.88	Si
SLV 3	179667	0.53	5789	-5285	378.02	711.89	1.88	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.06 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-1596	-14116	-524	4.316	619.1	0.895	70.11503	13.11449	Si
SLV 6	-1584	-14184	-524	4.327	618.1	0.895	70.29319	13.11449	Si
SLV 9	-1510	-13143	239	4.474	612.1	0.896	72.58589	13.11449	Si
SLV 10	-1498	-13211	239	4.487	611.2	0.896	72.77221	13.11449	Si
SLV 7	-1217	-3538	-239	4.815	589.4	0.902	77.57873	13.11449	Si
SLV 8	-1205	-3606	-239	4.829	588.5	0.902	77.7851	13.11449	Si
SLV 11	-1131	-2565	524	4.848	583	0.904	77.9101	13.11449	Si
SLV 12	-1119	-2633	524	4.863	582.2	0.905	78.1188	13.11449	Si
SLV 1	-1567	-11529	-1314	4.156	616.7	0.895	67.48447	7.68898	Si
SLV 2	-1548	-11637	-1314	4.174	615.2	0.895	67.7542	7.68898	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.733	SLU 30	Si
V_SLU	26.615	SLU 65	Si
PF_SLV	1.195	SLV 12	Si
V_SLV	6.457	SLV 5	Si
PFFP_SLV	0	SLV 11	No
R_SLV	5.346	SLV 5	Si

Maschio 214

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.823	6.526	-17.718	6.526	L7	L8	2.105	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 60	13.38	1858.48	-6733	-0.000031	0.0003743	0.0035	2.105	6291.04	6639.48	6639.48	3.57	No	Si
SLU 60	15.18	-2773.68	-4181	-0.000039	0.0003743	0.0035	1.684	4093.65	5426.17	5426.17	1.96	No	Si
SLU 52	13.38	1828.83	-6855	-0.0000311	0.0003743	0.0035	2.105	6390.86	6732.83	6732.83	3.68	No	Si
SLU 52	15.18	-2711.15	-4303	-0.0000369	0.0003743	0.0035	1.684	4204.45	5541.71	5541.71	2.04	No	Si
SLU 73	13.38	1939.51	-7032	-0.0000324	0.0003743	0.0035	2.105	6533.83	6867.83	6867.83	3.54	No	Si
SLU 73	15.18	-2790.57	-4451	-0.0000379	0.0003743	0.0035	1.684	4337.16	5681.87	5681.87	2.04	No	Si
SLU 19	13.38	1482.28	-5221	-0.0000241	0.0003743	0.0035	2.105	5016.68	5370.25	5370.25	3.62	No	Si
SLU 19	15.18	-2277.95	-3250	-0.0000333	0.0003743	0.0035	1.684	3235.34	4548.35	4548.35	2	No	Si
SLU 81	13.38	1969.17	-6909	-0.0000323	0.0003743	0.0035	2.105	6434.77	6774.13	6774.13	3.44	No	Si
SLU 81	15.18	-2853.09	-4328	-0.00004	0.0003743	0.0035	1.684	4227	5565.43	5565.43	1.95	No	Si
SLU 40	13.38	1592.97	-5397	-0.0000254	0.0003743	0.0035	2.105	5169.8	5532.96	5532.96	3.47	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 40	15.18	-2357.36	-3398	-0.0000342	0.0003743	0.0035	1.684	3373.51	4692.08	4692.08	1.99	No	Si
SLU 39	13.38	1592.67	-5358	-0.0000253	0.0003743	0.0035	2.105	5135.95	5497.21	5497.21	3.45	No	Si
SLU 39	15.18	-2324.36	-3358	-0.0000336	0.0003743	0.0035	1.684	3336.92	4654.09	4654.09	2	No	Si
SLU 61	13.38	1858.78	-6772	-0.0000311	0.0003743	0.0035	2.105	6322.99	6669.28	6669.28	3.59	No	Si
SLU 61	15.18	-2806.68	-4220	-0.0000396	0.0003743	0.0035	1.684	4129.11	5462.99	5462.99	1.95	No	Si
SLU 82	13.38	1969.46	-6949	-0.0000324	0.0003743	0.0035	2.105	6466.48	6804.04	6804.04	3.45	No	Si
SLU 82	15.18	-2886.09	-4368	-0.0000405	0.0003743	0.0035	1.684	4262.26	5602.6	5602.6	1.94	No	Si
SLU 18	13.38	1481.99	-5182	-0.000024	0.0003743	0.0035	2.105	4982.6	5334.05	5334.05	3.6	No	Si
SLU 18	15.18	-2244.95	-3211	-0.0000327	0.0003743	0.0035	1.684	3198.55	4509.89	4509.89	2.01	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	13.38	1622.38	-634	-0.005635	0.0005615	0.0035	2.105		903.62	903.62	0.56		No
SLV 7	15.18	1930.79	1155	0.0535573	0.0005615	0.0035	1.684		0	0	0		No
SLV 9	13.38	1457.31	-10430	-0.0000374	0.0005615	0.0035	2.105		10091.28	10091.28	6.92		Si
SLV 9	15.18	-6347.39	-8261	-0.0001092	0.0005615	0.0035	1.684		9323.56	9323.56	1.47		Si
SLV 8	13.38	1409.11	-340	-0.0063515	0.0005615	0.0035	2.105		598.4	598.4	0.42		No
SLV 8	15.18	2438.93	1450	0.0667914	0.0005615	0.0035	1.684		0	0	0		No
SLV 13	13.38	1074.65	-9673	-0.0000326	0.0005615	0.0035	2.105		9502.74	9502.74	8.84		Si
SLV 13	15.18	-5757.94	-7361	-0.0001015	0.0005615	0.0035	1.684		8493.2	8493.2	1.48		Si
SLV 5	13.38	1787.48	-8724	-0.0000353	0.0005615	0.0035	2.105		8734.19	8734.19	4.89		Si
SLV 5	15.18	-4920.48	-6737	-0.0000768	0.0005615	0.0035	1.684		7922.37	7922.37	1.61		Si
SLV 12	13.38	1078.93	-2046	-0.0000137	0.0005615	0.0035	2.105		2347.29	2347.29	2.18		Si
SLV 12	15.18	1012.02	-75	-0.0055523	0.0005615	0.0035	2.105		322.62	322.62	0.32		No
SLV 4	13.38	1791.76	-1097	-0.0032691	0.0005615	0.0035	2.105		1379.47	1379.47	0.77		No
SLV 4	15.18	1849.48	550	-0.003221	0.0005615	0.0035	1.684		0	0	0		No
SLV 3	13.38	2125.71	-1559	-0.0024391	0.0005615	0.0035	2.105		1851.38	1851.38	0.87		No
SLV 3	15.18	1053.8	88	-0.0071775	0.0005615	0.0035	2.105		0	0	0		No
SLV 11	13.38	1292.2	-2341	-0.0000165	0.0005615	0.0035	2.105		2644.11	2644.11	2.05		Si
SLV 11	15.18	503.88	-369	-0.000331	0.0005615	0.0035	1.684		629.3	629.3	1.25		Si
SLV 10	13.38	1244.04	-10135	-0.0000351	0.0005615	0.0035	2.105		9861.69	9861.69	7.93		Si
SLV 10	15.18	-5839.25	-7967	-0.0000927	0.0005615	0.0035	1.684		9051.78	9051.78	1.55		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 62	13.38	1912.13	-6978	-5811	2554	2.105	2.105	-9859	8259	4868	35683	17649	5368	23017	No	9.01	Si
SLU 62	15.18	-2646.02	-4426	-3686	2554	1.684	1.3641	0	0	0	35683	14119	4294	18413	No	7.21	Si
SLU 63	13.38	1912.43	-7017	-5843	2573	2.105	2.105	-9914	8266	4872	35683	17649	5368	23017	No	8.95	Si
SLU 63	15.18	-2679.03	-4466	-3718	2573	1.684	1.3577	0	0	0	35683	14119	4294	18413	No	7.16	Si
SLU 60	13.38	1858.48	-6733	-5606	2596	2.105	2.105	-9512	8213	4841	35683	17649	5368	23017	No	8.87	Si
SLU 60	15.18	-2773.68	-4181	-3481	2596	1.684	1.1672	0	0	0	35683	14119	4294	18413	No	7.09	Si
SLU 84	13.38	2023.12	-7194	-5991	2679	2.105	2.105	-10164	8300	4892	35683	17649	5368	23017	No	8.59	Si
SLU 84	15.18	-2758.44	-4613	-3841	2679	1.684	1.3636	0	0	0	35683	14119	4294	18413	No	6.87	Si
SLU 83	13.38	2022.82	-7155	-5958	2660	2.105	2.105	-10109	8292	4887	35683	17649	5368	23017	No	8.65	Si
SLU 83	15.18	-2725.44	-4574	-3809	2660	1.684	1.3699	0	0	0	35683	14119	4294	18413	No	6.92	Si
SLU 76	13.38	1993.17	-7278	-6060	2609	2.105	2.105	-10282	8315	4901	35683	17649	5368	23017	No	8.82	Si
SLU 76	15.18	-2662.91	-4697	-3911	2609	1.684	1.4565	0	0	0	35683	14119	4294	18413	No	7.06	Si
SLU 82	13.38	1969.46	-6949	-5786	2720	2.105	2.105	-9817	8253	4865	35683	17649	5368	23017	No	8.46	Si
SLU 82	15.18	-2886.09	-4368	-3637	2720	1.684	1.1751	0	0	0	35683	14119	4294	18413	No	6.77	Si
SLU 81	13.38	1969.17	-6909	-5754	2701	2.105	2.105	-9762	8246	4860	35683	17649	5368	23017	No	8.52	Si
SLU 81	15.18	-2853.09	-4328	-3604	2701	1.684	1.18	0	0	0	35683	14119	4294	18413	No	6.82	Si
SLU 61	13.38	1858.78	-6772	-5639	2614	2.105	2.105	-9567	8220	4845	35683	17649	5368	23017	No	8.8	Si
SLU 61	15.18	-2806.68	-4220	-3514	2614	1.684	1.1622	0	0	0	35683	14119	4294	18413	No	7.04	Si
SLU 73	13.38	1939.51	-7032	-5856	2650	2.105	2.105	-9935	8269	4874	35683	17649	5368	23017	No	8.69	Si
SLU 73	15.18	-2790.57	-4451	-3706	2650	1.684	1.2766	0	0	0	35683	14119	4294	18413	No	6.95	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 10	13.38	1352	-7461	-6213	2847	2.105	2.105	-10541	12525	7382	35683	26474	5368	31841		11.18	Si
SLD 10	15.18	-3651.29	-5401	-4498	2669	1.684	1.1295	0	0	0	35683	21179	4294	25473		9.54	Si
SLV 13	13.38	1074.65	-9673	-8055	4163	2.105	2.105	-13666	13150	7750	35683	26474	5368	31841		7.65	Si
SLV 13	15.18	-5757.94	-7361	-6130	3033	1.684	0.8109	0	0	0	35683	21179	4294	25473		8.4	Si
SLV 6	13.38	1574.22	-8429	-7019	3251	2.105	2.105	-11909	12798	7543	35683	26474	5368	31841		9.79	Si
SLV 6	15.18	-4412.34	-6442	-5365	3500	1.684	1.1027	0	0	0	35683	21179	4294	25473		7.28	Si
SLD 6	13.38	1492.15	-6732	-5606	2496	2.105	2.105	-9511	12319	7261	35683	26474	5368	31841		12.75	Si
SLD 6	15.18	-3040.71	-4750	-3955	2603	1.684	1.2369	0	0	0	35683	21179	4294	25473		9.79	Si
SLD 9	13.38	1445.03	-7590	-6320	3022	2.105	2.105	-10723	12561	7404	35683	26474	5368	31841		10.54	Si
SLD 9	15.18	-3872.95	-5530	-4605	2844	1.684	1.0564	0	0	0	35683	21179	4294	25473		8.96	Si
SLV 10	13.38	1244.04	-10135	-8440	4068	2.105	2.105	-14319	13281	7827	35683	26474	5368	31841		7.83	Si
SLV 10	15.18	-5839.25	-7967	-6634	3654	1.684	0.9586	0	0	0	35683	21179	4294	25473		6.97	Si
SLD 5	13.38	1585.17	-6860	-5713	2671	2.105	2.105	-9692	12355	7282	35683	26474	5368	31841		11.92	Si
SLD 5	15.18	-3262.37	-4878	-4062	2778	1.684	1.1513	0	0	0	35683	21179	4294	25473		9.17	Si
SLV 9	13.38	1457.31	-10430	-8685	4469	2.105	2.105	-14736	13364	7877	35683	26474	5368	31841		7.12	Si
SLV 9	15.18	-6347.39	-8261	-6879	4055	1.684	0.8525	0	0	0	35683	21179	4294	25473		6.28	Si
SLV 5	13.38	1787.48	-8724	-7264	3652	2.105	2.105	-12325	12882	7592	35683	26474	5368	31841		8.72	Si
SLV 5	15.18	-4920.48	-6737	-5610	3900	1.684	0.9664	0	0	0	35683	21179	4294	25473		6.53	Si
SLV 14	13.38	740.71	-9211	-7670	3536	2.105	2.105	-13014	13019	7674	35683	26474	5368	31841		9.01	Si
SLV 14	15.18	-4962.27	-6900	-5745	2405	1.684	0.9998	0	0	0	35683	21179	4294	25473		10.59	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.06 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.53	0	-4	238.49	0	0	No, e>t/2
SLV 8	179667	0.53	0	290	238.49	0	0	No, Trazione

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.53	0	-886	238.49	0	0	No, e>t/2
SLV 4	179667	0.53	0	-425	238.49	0	0	No, e>t/2
SLV 12	179667	0.53	0	-1422	238.49	0	0	No, e>t/2
SLV 11	179667	0.53	2913	-1717	238.49	235.76	0.99	No, M>Mu
SLV 2	179667	0.53	4787	-2821	238.49	382.59	1.6	Si
SLV 1	179667	0.53	5570	-3283	238.49	442.82	1.86	Si
SLV 16	179667	0.53	10405	-6133	238.49	800.06	3.35	Si
SLV 15	179667	0.53	11188	-6594	238.49	855.55	3.59	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.06 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-8802	-7672	684	1.114	1161	0.937	17.28514	13.11449	Si
SLV 10	-8392	-7643	684	1.158	1119.5	0.935	17.99954	13.11449	Si
SLV 5	-7108	-6589	706	1.318	989.9	0.928	20.63985	13.11449	Si
SLV 6	-6697	-6560	706	1.381	948.5	0.926	21.67578	13.11449	Si
SLV 13	-7985	-6877	171	1.258	1078.4	0.933	19.59489	7.68898	Si
SLV 14	-7342	-6832	171	1.345	1013.5	0.93	21.02096	7.68898	Si
SLV 15	-5491	-5106	-247	1.67	827.4	0.918	26.44326	7.68898	Si
SLV 16	-4848	-5060	-247	1.83	763.1	0.913	29.1358	7.68898	Si
SLV 1	-2337	-3268	245	2.948	517.1	0.892	48.05608	7.68898	Si
SLV 11	-488	-1767	-708	5.215	360	0.92	82.41197	13.11449	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.941	SLU 82	Si
V_SLU	6.771	SLU 82	Si
PF_SLV	0	SLV 3	No
V_SLV	6.283	SLV 9	Si
PFFP_SLV	0	SLV 8	No
R_SLV	1.318	SLV 9	Si

Maschio 215

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.818	6.526	-12.838	6.526	L7	L8	3.98	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	13.38	6618.16	-1025	-0.0000394	0.0003743	0.0035	3.98	0	174387.54	174387.54	26.35	No	Si
SLU 78	15.18	137.39	3737	0.0001408	0.0003743	0.0035	3.184	0	175623.57	175623.57	1278.32	No	Si
SLU 82	13.38	6681.25	1410	-0.0000435	0.0003743	0.0035	3.98	0	175019.54	175019.54	26.2	No	Si
SLU 82	15.18	114.39	6186	0.0002399	0.0003743	0.0035	3.184	0	176259.08	176259.08	1540.81	No	Si
SLU 83	13.38	6739.03	931	-0.0000436	0.0003743	0.0035	3.98	0	174895.32	174895.32	25.95	No	Si
SLU 83	15.18	143.28	5705	0.000219	0.0003743	0.0035	3.184	0	176134.39	176134.39	1229.27	No	Si
SLU 80	13.38	6551.5	-253	-0.0000408	0.0003743	0.0035	3.98	0	174588.13	174588.13	26.65	No	Si
SLU 80	15.18	155.36	4513	0.0001707	0.0003743	0.0035	3.184	0	175824.94	175824.94	1131.76	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	13.38	6544.04	-231	-0.0000408	0.0003743	0.0035	3.98	0	174593.85	174593.85	26.68	No	Si
SLU 79	15.18	159.42	4535	0.0001713	0.0003743	0.0035	3.184	0	175830.65	175830.65	1102.95	No	Si
SLU 77	13.38	6610.7	-1003	-0.0000394	0.0003743	0.0035	3.98	0	174393.26	174393.26	26.38	No	Si
SLU 77	15.18	141.45	3759	0.0001415	0.0003743	0.0035	3.184	0	175629.27	175629.27	1241.64	No	Si
SLU 74	13.38	6545.46	-503	-0.0000402	0.0003743	0.0035	3.98	0	174523.2	174523.2	26.66	No	Si
SLU 74	15.18	116.62	4262	0.000163	0.0003743	0.0035	3.184	0	175759.66	175759.66	1507.08	No	Si
SLU 75	13.38	6552.92	-525	-0.0000402	0.0003743	0.0035	3.98	0	174517.48	174517.48	26.63	No	Si
SLU 75	15.18	112.56	4240	0.0001624	0.0003743	0.0035	3.184	0	175753.96	175753.96	1561.42	No	Si
SLU 81	13.38	6673.79	1432	-0.0000435	0.0003743	0.0035	3.98	0	175025.26	175025.26	26.23	No	Si
SLU 81	15.18	118.46	6208	0.0002405	0.0003743	0.0035	3.184	0	176264.78	176264.78	1488.01	No	Si
SLU 84	13.38	6746.49	909	-0.0000436	0.0003743	0.0035	3.98	0	174889.6	174889.6	25.92	No	Si
SLU 84	15.18	139.22	5684	0.0002184	0.0003743	0.0035	3.184	0	176128.69	176128.69	1265.11	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 9	13.38	5473.93	-1586	-0.0000299	0.0005615	0.0035	3.98		203324.54	203324.54	37.14		Si
SLD 9	15.18	-1149.35	2188	0.0000183	0.0005615	0.0035	3.184		201669.33	201669.33	175.46		Si
SLV 9	13.38	6719.18	-3236	-0.0000309	0.0005615	0.0035	3.98		203056.34	203056.34	30.22		Si
SLV 9	15.18	-2740.25	703	-0.0000176	0.0005615	0.0035	3.98		202722.78	202722.78	73.98		Si
SLD 13	13.38	5664.23	-1147	-0.0000326	0.0005615	0.0035	3.98		203395.89	203395.89	35.91		Si
SLD 13	15.18	-1844.04	2500	-0.0000047	0.0005615	0.0035	3.98		201448.41	201448.41	109.24		Si
SLV 15	13.38	6429.47	-710	-0.0000387	0.0005615	0.0035	3.98		203466.93	203466.93	31.65		Si
SLV 15	15.18	-3513.23	2740	-0.0000201	0.0005615	0.0035	3.98		201278.05	201278.05	57.29		Si
SLV 13	13.38	7178.83	-2253	-0.0000386	0.0005615	0.0035	3.98		203216.19	203216.19	28.31		Si
SLV 13	15.18	-4380.56	1390	-0.0000282	0.0005615	0.0035	3.98		202235.4	202235.4	46.17		Si
SLV 5	13.38	5818.78	-2543	-0.000028	0.0005615	0.0035	3.98		203169.04	203169.04	34.92		Si
SLV 5	15.18	-607.83	1460	0.0000217	0.0005615	0.0035	3.184		202186.01	202186.01	332.64		Si
SLV 14	13.38	5610.1	-2212	-0.0000281	0.0005615	0.0035	3.98		203222.83	203222.83	36.22		Si
SLV 14	15.18	-3470.81	1416	-0.0000222	0.0005615	0.0035	3.98		202217.14	202217.14	58.26		Si
SLD 15	13.38	5338.67	-471	-0.0000324	0.0005615	0.0035	3.98		203471.92	203471.92	38.11		Si
SLD 15	15.18	-1467.3	3091	0.0000352	0.0005615	0.0035	3.184		201028.84	201028.84	137.01		Si
SLD 5	13.38	5086.54	-1289	-0.0000284	0.0005615	0.0035	3.98		203372.82	203372.82	39.98		Si
SLD 5	15.18	-235.89	2511	0.0000861	0.0005615	0.0035	3.184		201440.29	201440.29	853.96		Si
SLV 10	13.38	5717.34	-3210	-0.000024	0.0005615	0.0035	3.98		203060.58	203060.58	35.52		Si
SLV 10	15.18	-2159.26	719	-0.0000138	0.0005615	0.0035	3.98		202711.12	202711.12	93.88		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	13.38	6746.49	909	649	3632	3.98	0	4460	8421	0	71593	33370	20298	53668	No	14.78	Si
SLU 84	15.18	139.22	5684	4054	3745	3.184	3.98	0	0	0	71593	26696	16238	42934	No	11.46	Si
SLU 79	13.38	6544.04	-231	-164	3505	3.98	0	-940	8328	0	71593	33370	20298	53668	No	15.31	Si
SLU 79	15.18	159.42	4535	3235	3612	3.184	3.98	0	0	0	71593	26696	16238	42934	No	11.88	Si
SLU 74	13.38	6545.46	-503	-359	3529	3.98	0	-1953	8310	0	71593	33370	20298	53668	No	15.21	Si
SLU 74	15.18	116.62	4262	3040	3636	3.184	3.98	0	0	0	71593	26696	16238	42934	No	11.81	Si
SLU 83	13.38	6739.03	931	664	3625	3.98	0	4584	8420	0	71593	33370	20298	53668	No	14.8	Si
SLU 83	15.18	143.28	5705	4070	3738	3.184	3.98	0	0	0	71593	26696	16238	42934	No	11.48	Si
SLU 78	13.38	6618.16	-1025	-732	3556	3.98	0	-3616	8282	0	71593	33370	20298	53668	No	15.09	Si
SLU 78	15.18	137.39	3737	2666	3663	3.184	3.98	0	0	0	71593	26696	16238	42934	No	11.72	Si
SLU 82	13.38	6681.25	1410	1006	3611	3.98	0	7479	8417	0	71593	33370	20298	53668	No	14.86	Si
SLU 82	15.18	114.39	6186	4413	3724	3.184	3.98	0	0	0	71593	26696	16238	42934	No	11.53	Si
SLU 77	13.38	6610.7	-1003	-716	3549	3.98	0	-3552	8283	0	71593	33370	20298	53668	No	15.12	Si
SLU 77	15.18	141.45	3759	2682	3657	3.184	3.98	0	0	0	71593	26696	16238	42934	No	11.74	Si
SLU 75	13.38	6552.92	-525	-374	3535	3.98	0	-2031	8310	0	71593	33370	20298	53668	No	15.18	Si
SLU 75	15.18	112.56	4240	3024	3642	3.184	3.98	0	0	0	71593	26696	16238	42934	No	11.79	Si
SLU 81	13.38	6673.79	1432	1021	3605	3.98	0	7623	8416	0	71593	33370	20298	53668	No	14.89	Si
SLU 81	15.18	118.46	6208	4429	3718	3.184	3.98	0	0	0	71593	26696	16238	42934	No	11.55	Si
SLU 80	13.38	6551.5	-253	-180	3511	3.98	0	-1026	8328	0	71593	33370	20298	53668	No	15.29	Si
SLU 80	15.18	155.36	4513	3220	3619	3.184	3.98	0	0	0	71593	26696	16238	42934	No	11.86	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 9	13.38	5473.93	-1586	-1132	3660	3.98	0	-4653	11962	0	71593	50055	20298	70353		19.22	Si
SLD 9	15.18	-1149.35	2188	1561	3328	3.184	3.98	0	0	0	71593	40044	16238	56283		16.91	Si
SLV 14	13.38	5610.1	-2212	-1578	5725	3.98	0	-5453	11874	0	71593	50055	20298	70353		12.29	Si
SLV 14	15.18	-3470.81	1416	1010	3942	3.98	0	9226	11569	0	71593	50055	20298	70353		17.85	Si
SLV 10	13.38	5717.34	-3210	-2290	4376	3.98	0.6271	-5643	11663	2048	71593	50055	20298	70353		16.08	Si
SLV 10	15.18	-2159.26	719	513	3491	3.98	0	4363	11139	0	71593	50055	20298	70353		20.15	Si
SLD 15	13.38	5338.67	-471	-336	4107	3.98	0	-1817	12090	0	71593	50055	20298	70353		17.13	Si
SLD 15	15.18	-1467.3	3091	2205	3506	3.184	3.98	0	0	0	71593	40044	16238	56283		16.06	Si
SLD 13	13.38	5664.23	-1147	-818	4445	3.98	0	-3818	12102	0	71593	50055	20298	70353		15.83	Si
SLD 13	15.18	-1844.04	2500	1783	3730	3.98	3.7569	72724	10661	11215	71593	50055	20298	70353		18.86	Si
SLV 9	13.38	6719.18	-3236	-2309	5256	3.98	0	-6741	12017	0	71593	50055	20298	70353		13.39	Si
SLV 9	15.18	-2740.25	703	501	4380	3.98	0	3947	11334	0	71593	50055	20298	70353		16.06	Si
SLV 5	13.38	5818.78	-2543	-1814	3107	3.98	0	-5789	11868	0	71593	50055	20298	70353		22.64	Si
SLV 5	15.18	-607.83	1460	1041	3263	3.184	3.98	0	0	0	71593	40044	16238	56283		17.25	Si
SLV 13	13.38	7178.83	-2253	-1607	7103	3.98	0	-6354	12406	0	71593	50055	20298	70353		9.9	Si
SLV 13	15.18	-4380.56	1390	992	5334	3.98	0	8272	11879	0	71593	50055	20298	70353		13.19	Si
SLV 15	13.38	6429.47	-710	-507	6325	3.98	0	-2661	12412	0	71593	50055	20298	70353		11.12	Si
SLV 15	15.18	-3513.23	2740	1955	4819	3.98	2.1233	26238	11464	6816	71593	50055	20298	70353		14.6	Si
SLV 16	13.38	4860.73	-669	-478	4947	3.98	0	-2429	11911	0	71593	50055	20298	70353		14.22	Si
SLV 16	15.18	-2603.48	2766	1973	3427	3.98	3.1459	38554	11046	9730	71593	50055	20298	70353		20.53	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 14.06 Ta 0.06 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 9	-2122	0.53	450.92	0	27246.91	13623.45	30.21	Si
SLV 10	-2106	0.53	450.92	0	27248.12	13624.06	30.21	Si
SLV 13	-1318	0.53	450.92	0	27306	13653	30.28	Si
SLV 14	-1293	0.53	450.92	0	27307.9	13653.95	30.28	Si
SLV 5	-1100	0.53	450.92	0	27322.03	13661.01	30.3	Si
SLV 6	-1084	0.53	450.92	0	27323.24	13661.62	30.3	Si
SLV 15	396	0.53	450.92	0	27432.07	13716.04	30.42	Si
SLV 16	422	0.53	450.92	0	27433.97	13716.98	30.42	Si
SLV 1	2087	0.53	450.92	0	27556.41	13778.2	30.56	Si
SLV 2	2113	0.53	450.92	0	27558.3	13779.15	30.56	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.06 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	3190	-6579	1224	13.51	646.1	1	196.34584	13.11449	Si, Trazione
SLV 10	3231	-6596	1224	13.688	646.1	1	198.9365	13.11449	Si, Trazione
SLV 5	4116	-6691	1190	19.13	646.1	1	278.02009	13.11449	Si, Trazione
SLV 6	4157	-6707	1190	19.49	646.1	1	283.25419	13.11449	Si, Trazione
SLV 8	8077	-1235	-1286	24.148	646.1	1	350.95255	13.11449	Si, Trazione
SLV 7	8036	-1218	-1286	24.737	646.1	1	359.51559	13.11449	Si, Trazione
SLV 13	3470	-4528	398	15.399	646.1	1	223.79208	7.68898	Si, Trazione
SLV 14	3535	-4555	397	15.751	646.1	1	228.92052	7.68898	Si, Trazione
SLV 15	4646	-2887	-345	26.101	646.1	1	379.33783	7.68898	Si, Trazione
SLV 16	4711	-2913	-345	27.133	646.1	1	394.33686	7.68898	Si, Trazione

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	25.923	SLU 84	Si
V_SLU	11.465	SLU 84	Si
PF_SLV	28.308	SLV 13	Si
V_SLV	9.904	SLV 13	Si
PFFP_SLV	30.212	SLV 9	Si
R_SLV	14.972	SLV 9	Si

Maschio 216

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.938	6.526	-7.958	6.526	L7	L8	3.98	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 76	13.38	-4948.19	2422	-0.0000315	0.0003743	0.0035	3.98	0	175355.36	175355.36	35.44	No	Si
SLU 76	15.18	-1088.41	7155	0.0002203	0.0003743	0.0035	3.184	0	176586.03	176586.03	162.24	No	Si
SLU 77	13.38	-4965.61	1241	-0.0000322	0.0003743	0.0035	3.98	0	175048.34	175048.34	35.25	No	Si
SLU 77	15.18	-1128.89	5964	0.0001703	0.0003743	0.0035	3.184	0	176276.25	176276.25	156.15	No	Si
SLU 83	13.38	-5077.24	3206	-0.0000311	0.0003743	0.0035	3.98	0	175559.32	175559.32	34.58	No	Si
SLU 83	15.18	-1212	7948	0.0002445	0.0003743	0.0035	3.184	0	176792.19	176792.19	145.87	No	Si
SLU 82	13.38	-5022.6	3657	-0.0000297	0.0003743	0.0035	3.98	0	175676.44	175676.44	34.98	No	Si
SLU 82	15.18	-1215.99	8403	0.0002625	0.0003743	0.0035	3.184	0	176910.53	176910.53	145.49	No	Si
SLU 80	13.38	-5006.33	1963	-0.0000323	0.0003743	0.0035	3.98	0	175236.08	175236.08	35	No	Si
SLU 80	15.18	-1081.25	6692	0.0002022	0.0003743	0.0035	3.184	0	176465.5	176465.5	163.21	No	Si
SLU 78	13.38	-4976.1	1216	-0.0000323	0.0003743	0.0035	3.98	0	175041.85	175041.85	35.18	No	Si
SLU 78	15.18	-1119.36	5939	0.0001698	0.0003743	0.0035	3.184	0	176269.68	176269.68	157.47	No	Si
SLU 79	13.38	-4995.83	1988	-0.0000322	0.0003743	0.0035	3.98	0	175242.57	175242.57	35.08	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	15.18	-1090.78	6717	0.0002027	0.0003743	0.0035	3.184	0	176472.07	176472.07	161.79	No	Si
SLU 75	13.38	-4910.97	1691	-0.0000318	0.0003743	0.0035	3.98	0	175165.46	175165.46	35.67	No	Si
SLU 75	15.18	-1132.88	6419	0.0001882	0.0003743	0.0035	3.184	0	176394.59	176394.59	155.7	No	Si
SLU 81	13.38	-5012.11	3682	-0.0000295	0.0003743	0.0035	3.98	0	175682.93	175682.93	35.05	No	Si
SLU 81	15.18	-1225.52	8429	0.0002629	0.0003743	0.0035	3.184	0	176917.1	176917.1	144.36	No	Si
SLU 84	13.38	-5087.73	3181	-0.0000313	0.0003743	0.0035	3.98	0	175552.83	175552.83	34.51	No	Si
SLU 84	15.18	-1202.47	7923	0.0002441	0.0003743	0.0035	3.184	0	176785.62	176785.62	147.02	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 2	13.38	-4651.2	34	-0.000029	0.0005615	0.0035	3.98		203197.32	203197.32	43.69		Si
SLD 2	15.18	1441.69	3638	0.0000584	0.0005615	0.0035	3.184		200556.48	200556.48	139.11		Si
SLV 15	13.38	-817.78	3986	0.00011	0.0005615	0.0035	3.184		200394.04	200394.04	245.05		Si
SLV 15	15.18	-5669.29	7650	-0.0000147	0.0005615	0.0035	3.98		197795.87	197795.87	34.89		Si
SLV 4	13.38	-5561.31	124	-0.0000349	0.0005615	0.0035	3.98		203133.52	203133.52	36.53		Si
SLV 4	15.18	3300.85	3541	-0.0000152	0.0005615	0.0035	3.98		200625.45	200625.45	60.78		Si
SLV 1	13.38	-4612.99	-1535	-0.0000243	0.0005615	0.0035	3.98		203416.27	203416.27	44.1		Si
SLV 1	15.18	3339.95	2081	-0.0000204	0.0005615	0.0035	3.98		201660.75	201660.75	60.38		Si
SLV 13	13.38	-1431.08	2324	0.0000067	0.0005615	0.0035	3.184		201572.79	201572.79	140.85		Si
SLV 13	15.18	-4691.78	6151	-0.0000139	0.0005615	0.0035	3.98		198858.69	198858.69	42.38		Si
SLV 5	13.38	-4497.01	-2124	-0.0000208	0.0005615	0.0035	3.98		203320.28	203320.28	45.21		Si
SLV 5	15.18	1838.83	1750	-0.0000094	0.0005615	0.0035	3.98		201895.58	201895.58	109.8		Si
SLV 6	13.38	-5494.31	-2126	-0.0000277	0.0005615	0.0035	3.98		203319.92	203319.92	37.01		Si
SLV 6	15.18	2438.13	1725	-0.0000144	0.0005615	0.0035	3.98		201913.4	201913.4	82.81		Si
SLV 10	13.38	-4539.74	-968	-0.0000259	0.0005615	0.0035	3.98		203508.61	203508.61	44.83		Si
SLV 10	15.18	28.62	2946	0.0001158	0.0005615	0.0035	3.184		201047.14	201047.14	7025.8		Si
SLV 2	13.38	-6174.62	-1538	-0.0000346	0.0005615	0.0035	3.98		203415.7	203415.7	32.94		Si
SLV 2	15.18	4278.36	2042	-0.0000271	0.0005615	0.0035	3.98		201688.66	201688.66	47.14		Si
SLV 16	13.38	-2379.41	3983	0.0000159	0.0005615	0.0035	3.184		200396.49	200396.49	84.22		Si
SLV 16	15.18	-4730.87	7610	0.0000193	0.0005615	0.0035	3.184		197823.78	197823.78	41.82		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 71	13.38	-4653.91	255	182	-2136	3.98	0	1152	7954	0	71593	33370	20298	53668	No	25.12	Si
SLU 71	15.18	-839.47	4965	3542	-2095	3.184	3.98	0	0	0	71593	26696	16238	42934	No	20.49	Si
SLU 84	13.38	-5087.73	3181	2269	-2165	3.98	1.1722	25625	8013	2630	71593	33370	20298	53668	No	24.79	Si
SLU 84	15.18	-1202.47	7923	5652	-2103	3.184	3.98	0	0	0	71593	26696	16238	42934	No	20.41	Si
SLU 70	13.38	-4634.17	-517	-369	-2114	3.98	0	-1934	7902	0	71593	33370	20298	53668	No	25.39	Si
SLU 70	15.18	-868.05	4187	2987	-2074	3.184	3.98	0	0	0	71593	26696	16238	42934	No	20.7	Si
SLU 72	13.38	-4664.4	230	164	-2147	3.98	0	1033	7955	0	71593	33370	20298	53668	No	24.99	Si
SLU 72	15.18	-829.93	4940	3524	-2106	3.184	3.98	0	0	0	71593	26696	16238	42934	No	20.38	Si
SLU 78	13.38	-4976.1	1216	867	-2159	3.98	0	6697	8047	0	71593	33370	20298	53668	No	24.86	Si
SLU 78	15.18	-1119.36	5939	4236	-2106	3.184	3.98	0	0	0	71593	26696	16238	42934	No	20.38	Si
SLU 76	13.38	-4948.19	2422	1728	-2153	3.98	0	17003	8020	0	71593	33370	20298	53668	No	24.92	Si
SLU 76	15.18	-1088.41	7155	5104	-2097	3.184	3.98	0	0	0	71593	26696	16238	42934	No	20.47	Si
SLU 83	13.38	-5077.24	3206	2287	-2154	3.98	1.2194	25993	8009	2735	71593	33370	20298	53668	No	24.91	Si
SLU 83	15.18	-1212	7948	5670	-2092	3.184	3.98	0	0	0	71593	26696	16238	42934	No	20.52	Si
SLU 80	13.38	-5006.33	1963	1400	-2193	3.98	0	12515	8047	0	71593	33370	20298	53668	No	24.47	Si
SLU 80	15.18	-1081.25	6692	4774	-2138	3.184	3.98	0	0	0	71593	26696	16238	42934	No	20.08	Si
SLU 79	13.38	-4995.83	1988	1418	-2182	3.98	0	12747	8044	0	71593	33370	20298	53668	No	24.6	Si
SLU 79	15.18	-1090.78	6717	4792	-2127	3.184	3.98	0	0	0	71593	26696	16238	42934	No	20.19	Si
SLU 77	13.38	-4965.61	1241	885	-2148	3.98	0	6873	8044	0	71593	33370	20298	53668	No	24.99	Si
SLU 77	15.18	-1128.89	5964	4254	-2095	3.184	3.98	0	0	0	71593	26696	16238	42934	No	20.49	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	13.38	-5494.31	-2126	-1517	-4386	3.98	0	-5310	11853	0	71593	50055	20298	70353		16.04	Si
SLV 6	15.18	2438.13	1725	1231	-3702	3.98	1.7303	15272	11170	5412	71593	50055	20298	70353		19	Si
SLV 3	13.38	-3999.68	127	91	-4451	3.98	0	564	11717	0	71593	50055	20298	70353		15.8	Si
SLV 3	15.18	2362.44	3580	2554	-3200	3.184	3.98	0	0	0	71593	40044	16238	56283		17.59	Si
SLV 5	13.38	-4497.01	-2124	-1515	-3497	3.98	0	-4513	11499	0	71593	50055	20298	70353		20.12	Si
SLV 5	15.18	1838.83	1750	1249	-2792	3.98	2.8184	20751	10910	8610	71593	50055	20298	70353		25.2	Si
SLV 4	13.38	-5561.31	124	88	-5843	3.98	0	542	12217	0	71593	50055	20298	70353		12.04	Si
SLV 4	15.18	3300.85	3541	2526	-4625	3.98	3.1731	49909	11202	9952	71593	50055	20298	70353		15.21	Si
SLV 15	13.38	-817.78	3986	2844	3435	3.184	3.98	0	0	0	71593	40044	16238	56283		16.39	Si
SLV 15	15.18	-5669.29	7650	5457	2124	3.98	3.7466	216111	11185	11734	71593	50055	20298	70353		33.12	Si
SLD 4	13.38	-4381.36	762	544	-3395	3.98	0	3926	11873	0	71593	50055	20298	70353		20.72	Si
SLD 4	15.18	1013.54	4295	3064	-2854	3.184	3.98	0	0	0	71593	40044	16238	56283		19.72	Si
SLV 13	13.38	-1431.08	2324	1658	2717	3.184	3.98	0	0	0	71593	40044	16238	56283		20.71	Si
SLV 13	15.18	-4691.78	6151	4388	1571	3.98	3.6817	150190	11142	11486	71593	50055	20298	70353		44.78	Si
SLV 1	13.38	-4612.99	-1535	-1095	-5169	3.98	0	-4209	11679	0	71593	50055	20298	70353		13.61	Si
SLV 1	15.18	3339.95	2081	1485	-3753	3.98	1.1558	16831	11478	3715	71593	50055	20298	70353		18.75	Si
SLD 2	13.38	-4651.2	34	24	-3710	3.98	0	146	11919	0	71593	50055	20298	70353		18.96	Si
SLD 2	15.18	1441.69	3638	2595	-3098	3.184	3.98	0	0	0	71593	40044	16238	56283		18.16	Si
SLV 2	13.38	-6174.62	-1538	-1097	-6560	3.98	0	-4790	12205	0	71593	50055	20298	70353		10.72	Si
SLV 2	15.18	4278.36	2042	1457	-5178	3.98	0	14232	11822	0	71593	50055	20298	70353		13.59	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 14.06 Ta 0.06 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 6	-1328	0.53	450.92	0	27305.32	13652.66	30.28	Si
SLV 5	-1303	0.53	450.92	0	27307.17	13653.58	30.28	Si
SLV 2	-1094	0.53	450.92	0	27322.49	13661.25	30.3	Si

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 1	-1055	0.53	450.92	0	27325.39	13662.69	30.3	Si
SLV 10	230	0.53	450.92	0	27419.85	13709.93	30.4	Si
SLV 9	255	0.53	450.92	0	27421.7	13710.85	30.41	Si
SLV 4	670	0.53	450.92	0	27452.2	13726.1	30.44	Si
SLV 3	709	0.53	450.92	0	27455.09	13727.54	30.44	Si
SLV 14	4098	0.53	450.92	0	27704.26	13852.13	30.72	Si
SLV 13	4137	0.53	450.92	0	27707.16	13853.58	30.72	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.06 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	10210	568	-1279	10.799	646.1	1	156.94851	13.11449	Si, Trazione
SLV 12	10185	571	-1279	10.87	646.1	1	157.97408	13.11449	Si, Trazione
SLV 7	9019	-73	-1264	15.652	646.1	1	227.47521	13.11449	Si, Trazione
SLV 8	8994	-70	-1264	15.8	646.1	1	229.62291	13.11449	Si, Trazione
SLV 15	10182	-834	-430	11.322	646.1	1	164.54257	7.68898	Si, Trazione
SLV 16	10143	-830	-430	11.439	646.1	1	166.24429	7.68898	Si, Trazione
SLV 13	8960	-2677	313	16.731	646.1	1	243.16186	7.68898	Si, Trazione
SLV 14	8921	-2673	313	16.985	646.1	1	246.85365	7.68898	Si, Trazione
SLV 6	4920	-6212	1213	29.895	646.1	1	434.4721	13.11449	Si, Trazione
SLV 5	4945	-6215	1212	30.428	646.1	1	442.21722	13.11449	Si, Trazione

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	34.505	SLU 84	Si
V_SLU	20.079	SLU 80	Si
PF_SLV	32.944	SLV 2	Si
V_SLV	10.724	SLV 2	Si
PFFP_SLV	30.277	SLV 6	Si
R_SLV	11.968	SLV 11	Si

Maschio 217

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.058	6.526	-5.233	6.526	L7	L8	1.825	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	13.38	-1712.93	-5509	-0.0000331	0.0003743	0.0035	1.825	4494.64	5489.62	5489.62	3.2	No	Si
SLU 81	15.18	1629.13	-3383	-0.0000282	0.0003743	0.0035	1.825	2886.57	3112.63	3112.63	1.91	No	Si
SLU 10	13.38	-1298.42	-4196	-0.0000249	0.0003743	0.0035	1.825	3520.09	4457.45	4457.45	3.43	No	Si
SLU 10	15.18	1261.45	-2572	-0.0000217	0.0003743	0.0035	1.825	2231.23	2436.22	2436.22	1.93	No	Si
SLU 19	13.38	-1299.62	-4103	-0.0000246	0.0003743	0.0035	1.825	3448.63	4382.1	4382.1	3.37	No	Si
SLU 19	15.18	1278.75	-2479	-0.0000223	0.0003743	0.0035	1.825	2154.35	2357.03	2357.03	1.84	No	Si
SLU 60	13.38	-1645.84	-5336	-0.0000318	0.0003743	0.0035	1.825	4369.75	5355.65	5355.65	3.25	No	Si
SLU 60	15.18	1600.86	-3231	-0.0000278	0.0003743	0.0035	1.825	2765.39	2986.66	2986.66	1.87	No	Si
SLU 52	13.38	-1654.54	-5445	-0.0000323	0.0003743	0.0035	1.825	4448.77	5440.48	5440.48	3.29	No	Si
SLU 52	15.18	1601.11	-3341	-0.0000277	0.0003743	0.0035	1.825	2853.03	3077.73	3077.73	1.92	No	Si
SLU 82	13.38	-1722.83	-5525	-0.0000332	0.0003743	0.0035	1.825	4506.18	5501.98	5501.98	3.19	No	Si
SLU 82	15.18	1646.68	-3400	-0.0000285	0.0003743	0.0035	1.825	2899.75	3126.37	3126.37	1.9	No	Si
SLU 39	13.38	-1356.82	-4260	-0.0000257	0.0003743	0.0035	1.825	3568.75	4508.66	4508.66	3.32	No	Si
SLU 39	15.18	1289.46	-2615	-0.0000222	0.0003743	0.0035	1.825	2265.91	2472.01	2472.01	1.92	No	Si
SLU 61	13.38	-1655.74	-5352	-0.000032	0.0003743	0.0035	1.825	4381.39	5368.16	5368.16	3.24	No	Si
SLU 61	15.18	1618.42	-3248	-0.0000282	0.0003743	0.0035	1.825	2778.66	3000.46	3000.46	1.85	No	Si
SLU 18	13.38	-1289.72	-4087	-0.0000245	0.0003743	0.0035	1.825	3436.28	4369.07	4369.07	3.39	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 18	15.18	1261.2	-2462	-0.0000219	0.0003743	0.0035	1.825	2140.62	2342.93	2342.93	1.86	No	Si
SLU 40	13.38	-1366.72	-4276	-0.0000258	0.0003743	0.0035	1.825	3580.99	4521.17	4521.17	3.31	No	Si
SLU 40	15.18	1307.01	-2631	-0.0000226	0.0003743	0.0035	1.825	2279.54	2485.97	2485.97	1.9	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	13.38	-2562.46	-6690	-0.0000455	0.0005615	0.0035	1.825		6544.86	6544.86	2.55		Si
SLV 6	15.18	3702.13	-5039	-0.000107	0.0005615	0.0035	1.825		4543.17	4543.17	1.23		Si
SLV 16	13.38	-533.27	-1693	-0.0000099	0.0005615	0.0035	1.825		2380.74	2380.74	4.46		Si
SLV 16	15.18	-1400.28	-170	-0.0006775	0.0005615	0.0035	1.46		1036.36	1036.36	0.74		No
SLV 11	13.38	-13.73	-2022	-0.000006	0.0005615	0.0035	1.825		2667	2667	194.3		Si
SLV 11	15.18	-1318.27	-412	-0.0004728	0.0005615	0.0035	1.46		1252.43	1252.43	0.95		No
SLV 3	13.38	-1473.58	-6055	-0.000032	0.0005615	0.0035	1.825		6033.84	6033.84	4.09		Si
SLV 3	15.18	2813.95	-4314	-0.0000604	0.0005615	0.0035	1.825		3941.46	3941.46	1.4		Si
SLV 15	13.38	-140.31	-1540	-0.0000058	0.0005615	0.0035	1.825		2247.28	2247.28	16.02		Si
SLV 15	15.18	-1956.55	2	-0.0013058	0.0005615	0.0035	1.46		880.87	880.87	0.45		No
SLV 1	13.38	-2042.92	-7019	-0.0000405	0.0005615	0.0035	1.825		6811.72	6811.72	3.33		Si
SLV 1	15.18	3784.15	-5281	-0.0001013	0.0005615	0.0035	1.825		4741.76	4741.76	1.25		Si
SLV 12	13.38	-264.68	-2120	-0.0000086	0.0005615	0.0035	1.825		2751.53	2751.53	10.4		Si
SLV 12	15.18	-963.02	-521	-0.000251	0.0005615	0.0035	1.46		1349.73	1349.73	1.4		Si
SLV 4	13.38	-1866.54	-6207	-0.0000363	0.0005615	0.0035	1.825		6156.23	6156.23	3.3		Si
SLV 4	15.18	3370.21	-4485	-0.0001049	0.0005615	0.0035	1.825		4084.3	4084.3	1.21		Si
SLV 5	13.38	-2311.51	-6592	-0.0000421	0.0005615	0.0035	1.825		6466.11	6466.11	2.8		Si
SLV 5	15.18	3346.89	-4929	-0.0000779	0.0005615	0.0035	1.825		4452.99	4452.99	1.33		Si
SLV 2	13.38	-2435.88	-7172	-0.000045	0.0005615	0.0035	1.825		6933	6933	2.85		Si
SLV 2	15.18	4340.41	-5452	-0.0001885	0.0005615	0.0035	1.825		4881.74	4881.74	1.12		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	13.38	-1778.58	-5901	-4914	-1852	1.825	1.825	-9616	8227	4204	35683	15302	4654	19956	No	10.77	Si
SLU 76	15.18	1609.57	-3781	-3148	-1976	1.825	1.4604	-6161	7766	3175	35683	15302	4654	19956	No	10.1	Si
SLU 78	13.38	-1839.51	-6541	-5447	-1813	1.825	1.825	-10659	8366	4275	35683	15302	4654	19956	No	11	Si
SLU 78	15.18	1477.4	-4429	-3688	-1939	1.825	1.7367	-7217	7907	3845	35683	15302	4654	19956	No	10.29	Si
SLU 72	13.38	-1810.73	-6366	-5301	-1819	1.825	1.825	-10373	8328	4255	35683	15302	4654	19956	No	10.97	Si
SLU 72	15.18	1510.38	-4249	-3538	-1940	1.825	1.6711	-6924	7868	3681	35683	15302	4654	19956	No	10.29	Si
SLU 80	13.38	-1828.93	-6173	-5141	-1862	1.825	1.825	-10060	8286	4234	35683	15302	4654	19956	No	10.71	Si
SLU 80	15.18	1578.06	-4057	-3378	-1988	1.825	1.5707	-6611	7826	3442	35683	15302	4654	19956	No	10.04	Si
SLU 73	13.38	-1721.63	-5618	-4678	-1832	1.825	1.8182	-9155	8165	4157	35683	15302	4654	19956	No	10.89	Si
SLU 73	15.18	1629.38	-3493	-2909	-1953	1.825	1.3382	-5693	7703	2887	35683	15302	4654	19956	No	10.22	Si
SLU 82	13.38	-1722.83	-5525	-4601	-1841	1.825	1.802	-9003	8145	4110	35683	15302	4654	19956	No	10.84	Si
SLU 82	15.18	1646.68	-3400	-2831	-1964	1.825	1.2846	-5540	7683	2763	35683	15302	4654	19956	No	10.16	Si
SLU 81	13.38	-1712.93	-5509	-4587	-1826	1.825	1.8047	-8977	8141	4114	35683	15302	4654	19956	No	10.93	Si
SLU 81	15.18	1629.13	-3383	-2817	-1948	1.825	1.293	-5513	7680	2780	35683	15302	4654	19956	No	10.24	Si
SLU 84	13.38	-1779.78	-5808	-4836	-1861	1.825	1.8182	-9464	8206	4178	35683	15302	4654	19956	No	10.72	Si
SLU 84	15.18	1626.87	-3687	-3071	-1986	1.825	1.414	-6009	7746	3067	35683	15302	4654	19956	No	10.05	Si
SLU 79	13.38	-1819.03	-6157	-5127	-1847	1.825	1.825	-10033	8282	4232	35683	15302	4654	19956	No	10.8	Si
SLU 79	15.18	1560.51	-4041	-3365	-1973	1.825	1.5789	-6584	7822	3458	35683	15302	4654	19956	No	10.12	Si
SLU 83	13.38	-1769.88	-5792	-4823	-1846	1.825	1.8208	-9438	8203	4182	35683	15302	4654	19956	No	10.81	Si
SLU 83	15.18	1609.32	-3671	-3057	-1971	1.825	1.4223	-5982	7742	3083	35683	15302	4654	19956	No	10.13	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 2	13.38	-1784.35	-5562	-4632	-2529	1.825	1.7751	-9064	12229	6078	35683	22953	4654	27606		10.91	Si
SLD 2	15.18	2543.13	-3891	-3240	-2368	1.825	0.777	-6341	11685	2542	35683	22953	4654	27606		11.66	Si
SLV 3	13.38	-1473.58	-6055	-5042	-2726	1.825	1.825	-9866	12390	6331	35683	22953	4654	27606		10.13	Si
SLV 3	15.18	2813.95	-4314	-3592	-2180	1.825	0.7805	-7029	11823	2584	35683	22953	4654	27606		12.66	Si
SLV 4	13.38	-1866.54	-6207	-5169	-3242	1.825	1.825	-10115	12440	6357	35683	22953	4654	27606		8.52	Si
SLV 4	15.18	3370.21	-4485	-3735	-2716	1.825	0.4834	-27999	16017	2168	35683	22953	4654	27606		10.17	Si
SLV 2	13.38	-2435.88	-7172	-5972	-4083	1.825	1.7186	-12481	12913	6214	35683	22953	4654	27606		6.76	Si
SLV 2	15.18	4340.41	-5452	-4540	-3588	1.825	0.3493	-47618	16250	1589	35683	22953	4654	27606		7.69	Si
SLD 6	13.38	-1847.05	-5372	-4473	-2310	1.825	1.706	-9402	12297	5874	35683	22953	4654	27606		11.95	Si
SLD 6	15.18	2286.46	-3732	-3107	-2346	1.825	0.8994	-6081	11633	2929	35683	22953	4654	27606		11.77	Si
SLV 1	13.38	-2042.92	-7019	-5845	-3567	1.825	1.825	-11438	12704	6492	35683	22953	4654	27606		7.74	Si
SLV 1	15.18	3784.15	-5281	-4397	-3053	1.825	0.5877	-27104	15838	2606	35683	22953	4654	27606		9.04	Si
SLD 1	13.38	-1615.68	-5496	-4577	-2308	1.825	1.825	-8957	12208	6238	35683	22953	4654	27606		11.96	Si
SLD 1	15.18	2304.36	-3818	-3179	-2138	1.825	0.9268	-6221	11661	3026	35683	22953	4654	27606		12.91	Si
SLV 6	13.38	-2562.46	-6690	-5571	-3538	1.825	1.5884	-12600	12937	5754	35683	22953	4654	27606		7.8	Si
SLV 6	15.18	3702.13	-5039	-4196	-3504	1.825	0.5333	-28521	16121	2407	35683	22953	4654	27606		7.88	Si
SLV 10	13.38	-2162.48	-5336	-4443	-2310	1.825	1.5216	-10478	12512	5331	35683	22953	4654	27606		11.95	Si
SLV 10	15.18	2270.99	-3744	-3118	-2642	1.825	0.9179	-6101	11637	2991	35683	22953	4654	27606		10.45	Si
SLV 5	13.38	-2311.51	-6592	-5490	-3209	1.825	1.6856	-11689	12754	6020	35683	22953	4654	27606		8.6	Si
SLV 5	15.18	3346.89	-4929	-4105	-3162	1.825	0.7005	-8032	12023	2358	35683	22953	4654	27606		8.73	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.06 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 15	179667	0.53	0	-937	206.77	0	0	No, e>t/2
SLV 16	179667	0.53	0	-1108	206.77	0	0	No, e>t/2
SLV 11	179667	0.53	0	-1386	206.77	0	0	No, e>t/2
SLV 12	179667	0.53	2927	-1496	206.77	205.36	0.99	No, M>Mu
SLV 13	179667	0.53	3714	-1898	206.77	259.24	1.25	Si
SLV 14	179667	0.53	4050	-2069	206.77	282.04	1.36	Si
SLV 7	179667	0.53	5295	-2706	206.77	365.65	1.77	Si
SLV 8	179667	0.53	5509	-2815	206.77	379.91	1.84	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.53	8982	-4590	206.77	604.77	2.92	Si
SLV 10	179667	0.53	9196	-4699	206.77	618.29	2.99	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.06 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-5728	-4085	557	1.403	814.4	0.925	22.03853	13.11449	Si
SLV 5	-5477	-4233	557	1.452	789.2	0.923	22.85739	13.11449	Si
SLV 10	-4235	-3706	576	1.756	664.8	0.913	27.95492	13.11449	Si
SLV 9	-3984	-3854	575	1.836	639.8	0.911	29.28833	13.11449	Si
SLV 2	-6182	-4032	140	1.377	860.2	0.928	21.55444	7.68898	Si
SLV 1	-5789	-4264	140	1.449	820.6	0.926	22.75338	7.68898	Si
SLV 4	-5018	-3644	-199	1.608	743.1	0.92	25.39959	7.68898	Si
SLV 3	-4624	-3875	-199	1.709	703.7	0.917	27.09341	7.68898	Si
SLV 8	-1847	-2791	-574	2.996	431.4	0.89	48.90338	13.11449	Si
SLV 7	-1596	-2939	-574	3.239	408.1	0.889	52.93996	13.11449	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.843	SLU 19	Si
V_SLU	10.038	SLU 80	Si
PF_SLV	0.45	SLV 15	No
V_SLV	6.762	SLV 2	Si
PFFP_SLV	0	SLV 11	No
R_SLV	1.68	SLV 6	Si

Maschio 218

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-20.613	1.006	-24.633	1.006	L7	L8	4.02	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	12.48	20558.33	59607	0.0011418	0.0004492	0.0035	3.216	0	148475.23	148475.23	7.22	No	Si
SLU 81	14.58	5106.05	85830	0.0030898	0.0004492	0.0035	3.216	0	116080.2	116080.2	22.73	No	Si
SLU 75	12.48	19624.97	56324	0.0010671	0.0004492	0.0035	3.216	0	152110.64	152110.64	7.75	No	Si
SLU 75	14.58	4647.35	82281	0.0029767	0.0004492	0.0035	3.216	0	120919.78	120919.78	26.02	No	Si
SLU 83	12.48	20712.64	59699	0.0011363	0.0004492	0.0035	3.216	0	148373.28	148373.28	7.16	No	Si
SLU 83	14.58	5190.98	86211	0.0030999	0.0004492	0.0035	3.216	0	115561.07	115561.07	22.26	No	Si
SLU 82	12.48	20556.17	59626	0.0011427	0.0004492	0.0035	3.216	0	148453.65	148453.65	7.22	No	Si
SLU 82	14.58	5133.59	85871	0.0030898	0.0004492	0.0035	3.216	0	116024.03	116024.03	22.6	No	Si
SLU 80	12.48	19761.08	56658	0.0010723	0.0004492	0.0035	3.216	0	151740.1	151740.1	7.68	No	Si
SLU 80	14.58	5119.24	82972	0.0029761	0.0004492	0.0035	3.216	0	119976.99	119976.99	23.44	No	Si
SLU 84	12.48	20710.49	59718	0.0011372	0.0004492	0.0035	3.216	0	148351.69	148351.69	7.16	No	Si
SLU 84	14.58	5218.52	86252	0.0030999	0.0004492	0.0035	3.216	0	115504.9	115504.9	22.13	No	Si
SLU 78	12.48	19779.29	56416	0.0010617	0.0004492	0.0035	3.216	0	152008.68	152008.68	7.69	No	Si
SLU 78	14.58	4732.28	82662	0.0029867	0.0004492	0.0035	3.216	0	120400.66	120400.66	25.44	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	12.48	19763.24	56639	0.0010714	0.0004492	0.0035	3.216	0	151761.69	151761.69	7.68	No	Si
SLU 79	14.58	5091.7	82931	0.0029761	0.0004492	0.0035	3.216	0	120033.16	120033.16	23.57	No	Si
SLU 77	12.48	19781.44	56396	0.0010608	0.0004492	0.0035	3.216	0	152030.27	152030.27	7.69	No	Si
SLU 77	14.58	4704.74	82620	0.0029867	0.0004492	0.0035	3.216	0	120456.83	120456.83	25.6	No	Si
SLU 76	12.48	19605.33	56579	0.0010784	0.0004492	0.0035	3.216	0	151827.67	151827.67	7.74	No	Si
SLU 76	14.58	5052.67	82619	0.0029661	0.0004492	0.0035	3.216	0	120458.67	120458.67	23.84	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 3	12.48	13965.5	44095	0.000918	0.0006738	0.0035	3.216		172004.39	172004.39	12.32		Si
SLD 3	14.58	3594.45	65299	0.0023679	0.0006738	0.0035	3.216		146021.15	146021.15	40.62		Si
SLD 4	12.48	13937.9	44029	0.000917	0.0006738	0.0035	3.216		172080.81	172080.81	12.35		Si
SLD 4	14.58	3549	65221	0.0023674	0.0006738	0.0035	3.216		146123.16	146123.16	41.17		Si
SLV 1	12.48	14365.32	52369	0.0012213	0.0006738	0.0035	3.216		162311.13	162311.13	11.3		Si
SLV 1	14.58	4869.68	77478	0.0027738	0.0006738	0.0035	3.216		129509.75	129509.75	26.6		Si
SLV 3	12.48	14955.72	51632	0.0011573	0.0006738	0.0035	3.216		163214.21	163214.21	10.91		Si
SLV 3	14.58	3751.7	75925	0.0027784	0.0006738	0.0035	3.216		131659.76	131659.76	35.09		Si
SLV 7	12.48	14643.86	41328	0.0007686	0.0006738	0.0035	3.216		175175.86	175175.86	11.96		Si
SLV 7	14.58	1893.46	60617	0.0022833	0.0006738	0.0035	3.216		152128.99	152128.99	80.34		Si
SLV 2	12.48	14301.03	52213	0.001219	0.0006738	0.0035	3.216		162501.48	162501.48	11.36		Si
SLV 2	14.58	4763.8	77296	0.0027728	0.0006738	0.0035	3.216		129761.84	129761.84	27.24		Si
SLV 4	12.48	14891.43	51476	0.001155	0.0006738	0.0035	3.216		163404.56	163404.56	10.97		Si
SLV 4	14.58	3645.82	75742	0.0027775	0.0006738	0.0035	3.216		131911.85	131911.85	36.18		Si
SLD 1	12.48	13707.85	44414	0.0009458	0.0006738	0.0035	3.216		171638.89	171638.89	12.52		Si
SLD 1	14.58	4084.94	65970	0.0023654	0.0006738	0.0035	3.216		145145.18	145145.18	35.53		Si
SLD 2	12.48	13680.25	44348	0.0009448	0.0006738	0.0035	3.216		171715.31	171715.31	12.55		Si
SLD 2	14.58	4039.49	65892	0.002365	0.0006738	0.0035	3.216		145247.19	145247.19	35.96		Si
SLV 8	12.48	14602.81	41229	0.0007671	0.0006738	0.0035	3.216		175289.55	175289.55	12		Si
SLV 8	14.58	1825.84	60501	0.0022827	0.0006738	0.0035	3.216		152280.76	152280.76	83.4		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	12.48	19781.44	56396	40232	-12377	3.216	4.02	0	0	0	71593	32361	16402	48763	No	3.94	Si
SLU 77	14.58	4704.74	82620	58939	-12386	3.216	4.02	0	0	0	71593	32361	16402	48763	No	3.94	Si
SLU 78	12.48	19779.29	56416	40246	-12412	3.216	4.02	0	0	0	71593	32361	16402	48763	No	3.93	Si
SLU 78	14.58	4732.28	82662	58969	-12421	3.216	4.02	0	0	0	71593	32361	16402	48763	No	3.93	Si
SLU 84	12.48	20710.49	59718	42602	-12475	3.216	4.02	0	0	0	71593	32361	16402	48763	No	3.91	Si
SLU 84	14.58	5218.52	86252	61530	-12484	3.216	4.02	0	0	0	71593	32361	16402	48763	No	3.91	Si
SLU 83	12.48	20712.64	59699	42588	-12440	3.216	4.02	0	0	0	71593	32361	16402	48763	No	3.92	Si
SLU 83	14.58	5190.98	86211	61501	-12449	3.216	4.02	0	0	0	71593	32361	16402	48763	No	3.92	Si
SLU 59	12.48	17466.05	50292	35877	-12396	3.216	4.02	0	0	0	71593	32361	16402	48763	No	3.93	Si
SLU 59	14.58	4734.93	75243	53676	-12405	3.216	4.02	0	0	0	71593	32361	16402	48763	No	3.93	Si
SLU 76	12.48	19605.33	56579	40362	-12450	3.216	4.02	0	0	0	71593	32361	16402	48763	No	3.92	Si
SLU 76	14.58	5052.67	82619	58938	-12459	3.216	4.02	0	0	0	71593	32361	16402	48763	No	3.91	Si
SLU 79	12.48	19763.24	56639	40405	-12635	3.216	4.02	0	0	0	71593	32361	16402	48763	No	3.86	Si
SLU 79	14.58	5091.7	82931	59161	-12645	3.216	4.02	0	0	0	71593	32361	16402	48763	No	3.86	Si
SLU 80	12.48	19761.08	56658	40419	-12670	3.216	4.02	0	0	0	71593	32361	16402	48763	No	3.85	Si
SLU 80	14.58	5119.24	82972	59190	-12680	3.216	4.02	0	0	0	71593	32361	16402	48763	No	3.85	Si
SLU 72	12.48	17185.74	49303	35172	-12558	3.216	4.02	0	0	0	71593	32361	16402	48763	No	3.88	Si
SLU 72	14.58	4689.43	74431	53097	-12567	3.216	4.02	0	0	0	71593	32361	16402	48763	No	3.88	Si
SLU 71	12.48	17187.9	49284	35158	-12523	3.216	4.02	0	0	0	71593	32361	16402	48763	No	3.89	Si
SLU 71	14.58	4661.88	74390	53068	-12532	3.216	4.02	0	0	0	71593	32361	16402	48763	No	3.89	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	12.48	14301.03	52213	37248	-15078	3.216	4.02	0	0	0	71593	48541	16402	64943		4.31	Si
SLV 2	14.58	4763.8	77296	55141	-17237	3.216	4.02	0	0	0	71593	48541	16402	64943		3.77	Si
SLD 4	12.48	13937.9	44029	31409	-11177	3.216	4.02	0	0	0	71593	48541	16402	64943		5.81	Si
SLD 4	14.58	3549	65221	46527	-12102	3.216	4.02	0	0	0	71593	48541	16402	64943		5.37	Si
SLV 4	12.48	14891.43	51476	36722	-13806	3.216	4.02	0	0	0	71593	48541	16402	64943		4.7	Si
SLV 4	14.58	3645.82	75742	54033	-15964	3.216	4.02	0	0	0	71593	48541	16402	64943		4.07	Si
SLD 3	12.48	13965.5	44095	31457	-11196	3.216	4.02	0	0	0	71593	48541	16402	64943		5.8	Si
SLD 3	14.58	3594.45	65299	46583	-12122	3.216	4.02	0	0	0	71593	48541	16402	64943		5.36	Si
SLV 3	12.48	14955.72	51632	36833	-13851	3.216	4.02	0	0	0	71593	48541	16402	64943		4.69	Si
SLV 3	14.58	3751.7	75925	54163	-16010	3.216	4.02	0	0	0	71593	48541	16402	64943		4.06	Si
SLV 1	12.48	14365.32	52369	37359	-15124	3.216	4.02	0	0	0	71593	48541	16402	64943		4.29	Si
SLV 1	14.58	4869.68	77478	55271	-17282	3.216	4.02	0	0	0	71593	48541	16402	64943		3.76	Si
SLD 2	12.48	13680.25	44348	31637	-11734	3.216	4.02	0	0	0	71593	48541	16402	64943		5.53	Si
SLD 2	14.58	4039.49	65892	47006	-12658	3.216	4.02	0	0	0	71593	48541	16402	64943		5.13	Si
SLV 5	12.48	12675.87	43785	31235	-12937	3.216	4.02	0	0	0	71593	48541	16402	64943		5.02	Si
SLV 5	14.58	5620.05	65795	46937	-13588	3.216	4.02	0	0	0	71593	48541	16402	64943		4.78	Si
SLV 6	12.48	12634.81	43685	31164	-12908	3.216	4.02	0	0	0	71593	48541	16402	64943		5.03	Si
SLV 6	14.58	5552.43	65679	46854	-13559	3.216	4.02	0	0	0	71593	48541	16402	64943		4.79	Si
SLD 1	12.48	13707.85	44414	31684	-11754	3.216	4.02	0	0	0	71593	48541	16402	64943		5.53	Si
SLD 1	14.58	4084.94	65970	47062	-12678	3.216	4.02	0	0	0	71593	48541	16402	64943		5.12	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 14.06 Ta 0.06 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 1	72451	0.53	466.05	0	22199.83	11099.92	23.82	Si
SLV 2	72274	0.53	466.05	0	22225.54	11112.77	23.84	Si
SLV 3	71123	0.53	466.05	0	22391.87	11195.94	24.02	Si
SLV 4	70946	0.53	466.05	0	22417.58	11208.79	24.05	Si

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 5	61145	0.53	466.05	0	23828.48	11914.24	25.56	Si
SLV 6	61031	0.53	466.05	0	23844.26	11922.13	25.58	Si
SLV 7	56718	0.53	466.05	0	24443.62	12221.81	26.22	Si
SLV 8	56605	0.53	466.05	0	24459.4	12229.7	26.24	Si
SLV 9	50153	0.53	466.05	0	25327.6	12663.8	27.17	Si
SLV 10	50040	0.53	466.05	0	25342.46	12671.23	27.19	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.06 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	85205	43785	-754	0.465	652.6	1	6.763	13.11449	No, Trazione
SLV 6	85107	43685	-754	0.466	652.6	1	6.77319	13.11449	No, Trazione
SLV 7	80347	41328	571	0.507	652.6	1	7.36368	13.11449	No, Trazione
SLV 8	80249	41229	572	0.507	652.6	1	7.37502	13.11449	No, Trazione
SLV 9	70085	35714	-714	0.598	652.6	1	8.69277	13.11449	No, Trazione
SLV 10	69987	35615	-713	0.599	652.6	1	8.70837	13.11449	No, Trazione
SLV 1	101172	52369	-337	0.381	652.6	1	5.53444	7.68898	No, Trazione
SLV 2	101018	52213	-336	0.382	652.6	1	5.54571	7.68898	No, Trazione
SLV 11	65227	33257	612	0.658	652.6	1	9.56751	13.11449	No, Trazione
SLV 12	65129	33158	612	0.66	652.6	1	9.58547	13.11449	No, Trazione

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.163	SLU 84	Si
V_SLU	3.846	SLU 80	Si
PF_SLV	10.913	SLV 3	Si
V_SLV	3.758	SLV 1	Si
PFFP_SLV	23.817	SLV 1	Si
R_SLV	0.516	SLV 5	No

Maschio 219

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-12.263	1.006	-19.813	1.006	L7	L8	7.55	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 60	12.48	-2999.95	-18341	-0.0000135	0.0004492	0.0035	7.55	64319.96	99532.43	99532.43	33.18	No	Si
SLU 60	14.98	-22912.87	-12833	-0.0000212	0.0004492	0.0035	7.55	46036.75	80599.73	80599.73	3.52	No	Si
SLU 83	12.48	-3110.57	-18156	-0.0000134	0.0004492	0.0035	7.55	63721.23	98897.54	98897.54	31.79	No	Si
SLU 83	14.98	-23374.48	-13547	-0.0000217	0.0004492	0.0035	7.55	48456.44	83053.58	83053.58	3.55	No	Si
SLU 73	12.48	-3788.95	-18657	-0.0000141	0.0004492	0.0035	7.55	65342.57	100619.24	100619.24	26.56	No	Si
SLU 73	14.98	-23022.19	-13438	-0.0000214	0.0004492	0.0035	7.55	48089.59	82680.58	82680.58	3.59	No	Si
SLU 39	12.48	-2778.73	-12001	-0.0000092	0.0004492	0.0035	7.55	43197.55	77739.51	77739.51	27.98	No	Si
SLU 39	14.98	-19437.4	-9418	-0.000018	0.0004492	0.0035	7.55	34256.59	68754.83	68754.83	3.54	No	Si
SLU 82	12.48	-3548.21	-17423	-0.0000132	0.0004492	0.0035	7.55	61334.54	96377.2	96377.2	27.16	No	Si
SLU 82	14.98	-23846.36	-12847	-0.000022	0.0004492	0.0035	7.55	46083.67	80647.16	80647.16	3.38	No	Si
SLU 84	12.48	-3159.32	-18154	-0.0000134	0.0004492	0.0035	7.55	63713.75	98889.62	98889.62	31.3	No	Si
SLU 84	14.98	-23376.56	-13568	-0.0000217	0.0004492	0.0035	7.55	48527.16	83125.53	83125.53	3.56	No	Si
SLU 81	12.48	-3499.46	-17425	-0.0000131	0.0004492	0.0035	7.55	61342.07	96385.12	96385.12	27.54	No	Si
SLU 81	14.98	-23844.29	-12826	-0.000022	0.0004492	0.0035	7.55	46012.51	80575.22	80575.22	3.38	No	Si
SLU 61	12.48	-3048.7	-18338	-0.0000135	0.0004492	0.0035	7.55	64312.49	99524.5	99524.5	32.64	No	Si
SLU 61	14.98	-22914.95	-12854	-0.0000212	0.0004492	0.0035	7.55	46107.91	80671.67	80671.67	3.52	No	Si
SLU 62	12.48	-2611.05	-19072	-0.0000138	0.0004492	0.0035	7.55	66679.55	102044.85	102044.85	39.08	No	Si
SLU 62	14.98	-22443.07	-13554	-0.000021	0.0004492	0.0035	7.55	48480.53	83078.09	83078.09	3.7	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 40	12.48	-2827.48	-11998	-0.0000092	0.0004492	0.0035	7.55	43189.66	77731.58	77731.58	27.49	No	Si
SLU 40	14.98	-19439.48	-9439	-0.000018	0.0004492	0.0035	7.55	34329.83	68828.99	68828.99	3.54	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 1	12.48	-4112.93	-16759	-0.000013	0.0006738	0.0035	7.55		94785.2	94785.2	23.05		Si
SLD 1	14.98	-24108.82	-12550	-0.0000221	0.0006738	0.0035	7.55		79964.55	79964.55	3.32		Si
SLD 3	12.48	-3062.5	-17062	-0.0000126	0.0006738	0.0035	7.55		95844.03	95844.03	31.3		Si
SLD 3	14.98	-24101.01	-12039	-0.0000222	0.0006738	0.0035	7.55		78158.31	78158.31	3.24		Si
SLD 2	12.48	-4047.6	-16840	-0.000013	0.0006738	0.0035	7.55		95066.81	95066.81	23.49		Si
SLD 2	14.98	-24200.63	-12505	-0.0000222	0.0006738	0.0035	7.55		79806.26	79806.26	3.3		Si
SLV 2	12.48	-5475.52	-18040	-0.0000145	0.0006738	0.0035	7.55		99259.32	99259.32	18.13		Si
SLV 2	14.98	-34407.52	-14551	-0.0000339	0.0006738	0.0035	6.04		87032.89	87032.89	2.53		Si
SLV 4	12.48	-3076.75	-18737	-0.0000137	0.0006738	0.0035	7.55		101690.75	101690.75	33.05		Si
SLV 4	14.98	-34386.14	-13394	-0.0000364	0.0006738	0.0035	6.04		82944.31	82944.31	2.41		Si
SLV 1	12.48	-5627.71	-17853	-0.0000145	0.0006738	0.0035	7.55		98603.24	98603.24	17.52		Si
SLV 1	14.98	-34193.61	-14656	-0.0000334	0.0006738	0.0035	6.04		87401.65	87401.65	2.56		Si
SLD 4	12.48	-2997.17	-17143	-0.0000126	0.0006738	0.0035	7.55		96125.64	96125.64	32.07		Si
SLD 4	14.98	-24192.83	-11994	-0.0000223	0.0006738	0.0035	7.55		78000.03	78000.03	3.22		Si
SLV 3	12.48	-3228.94	-18549	-0.0000137	0.0006738	0.0035	7.55		101034.68	101034.68	31.29		Si
SLV 3	14.98	-34172.24	-13498	-0.0000356	0.0006738	0.0035	6.04		83313.07	83313.07	2.44		Si
SLV 8	12.48	656.81	-17874	-0.0000119	0.0006738	0.0035	7.55		70497.96	70497.96	107.33		Si
SLV 8	14.98	-21919.05	-9919	-0.0000207	0.0006738	0.0035	6.04		70620.62	70620.62	3.22		Si
SLV 7	12.48	559.62	-17754	-0.0000118	0.0006738	0.0035	7.55		70076.01	70076.01	125.22		Si
SLV 7	14.98	-21782.45	-9986	-0.0000205	0.0006738	0.0035	6.04		70858.57	70858.57	3.25		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	12.48	-4369.16	-21796	-15549	17874	7.55	7.55	-7355	9314	19690	101952	75972	38505	114477	No	6.4	Si
SLU 74	14.98	-24184.93	-16837	-12011	10472	7.55	7.0158	-6137	9152	17978	101952	75972	38505	114477	No	10.93	Si
SLU 76	12.48	-3400.05	-19388	-13831	17333	7.55	7.55	-6542	9206	19461	101952	75972	38505	114477	No	6.6	Si
SLU 76	14.98	-22552.38	-14159	-10101	9951	7.55	6.5466	-5530	9071	16627	101952	75972	38505	114477	No	11.5	Si
SLU 83	12.48	-3110.57	-18156	-12952	18559	7.55	7.55	-6127	9150	19344	101952	75972	38505	114477	No	6.17	Si
SLU 83	14.98	-23374.48	-13547	-9664	10833	7.55	6.1485	-5632	9084	15640	101952	75972	38505	114477	No	10.57	Si
SLU 77	12.48	-3980.27	-22527	-16070	17795	7.55	7.55	-7602	9347	19759	101952	75972	38505	114477	No	6.43	Si
SLU 77	14.98	-23715.12	-17558	-12526	10326	7.55	7.273	-6175	9157	18647	101952	75972	38505	114477	No	11.09	Si
SLU 73	12.48	-3788.95	-18657	-13309	17412	7.55	7.55	-6296	9173	19391	101952	75972	38505	114477	No	6.57	Si
SLU 73	14.98	-23022.19	-13438	-9586	10097	7.55	6.1854	-5554	9074	15715	101952	75972	38505	114477	No	11.34	Si
SLU 81	12.48	-3499.46	-17425	-12431	18639	7.55	7.55	-5880	9117	19274	101952	75972	38505	114477	No	6.14	Si
SLU 81	14.98	-23844.29	-12826	-9149	10978	7.55	5.7476	-5701	9094	14635	101952	75972	38505	114477	No	10.43	Si
SLU 82	12.48	-3548.21	-17423	-12429	18670	7.55	7.55	-5879	9117	19274	101952	75972	38505	114477	No	6.13	Si
SLU 82	14.98	-23846.36	-12847	-9164	11012	7.55	5.7562	-5702	9094	14657	101952	75972	38505	114477	No	10.4	Si
SLU 84	12.48	-3159.32	-18154	-12950	18590	7.55	7.55	-6126	9150	19343	101952	75972	38505	114477	No	6.16	Si
SLU 84	14.98	-23376.56	-13568	-9679	10867	7.55	6.1561	-5634	9085	15659	101952	75972	38505	114477	No	10.53	Si
SLU 78	12.48	-4029.02	-22525	-16068	17826	7.55	7.55	-7601	9347	19759	101952	75972	38505	114477	No	6.42	Si
SLU 78	14.98	-23717.2	-17579	-12541	10361	7.55	7.2775	-6179	9157	18660	101952	75972	38505	114477	No	11.05	Si
SLU 75	12.48	-4417.91	-21794	-15547	17905	7.55	7.55	-7354	9314	19690	101952	75972	38505	114477	No	6.39	Si
SLU 75	14.98	-24187	-16858	-12026	10506	7.55	7.0208	-6140	9152	17991	101952	75972	38505	114477	No	10.9	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	12.48	-5627.71	-17853	-12736	24248	7.55	7.55	-6024	13705	28972	101952	113958	38505	130924		5.4	Si
SLV 1	14.98	-34193.61	-14656	-10455	9652	6.04	4.3256	0	0	0	101952	91166	30804	101952		10.56	Si
SLV 2	12.48	-5475.52	-18040	-12870	23885	7.55	7.55	-6088	13718	28999	101952	113958	38505	130951		5.48	Si
SLV 2	14.98	-34407.52	-14551	-10381	9276	6.04	4.2313	0	0	0	101952	91166	30804	101952		10.99	Si
SLV 4	12.48	-3076.75	-18737	-13366	21589	7.55	7.55	-6323	13765	29098	101952	113958	38505	131050		6.07	Si
SLV 4	14.98	-34386.14	-13394	-9555	6863	6.04	3.623	0	0	0	101952	91166	30804	101952		14.85	Si
SLV 5	12.48	-7436.26	-15432	-11009	18894	7.55	7.55	-5208	13542	28627	101952	113958	38505	130579		6.91	Si
SLV 5	14.98	-21853.71	-13844	-9876	11133	7.55	6.5894	-5365	13573	25043	101952	113958	38505	126995		11.41	Si
SLD 3	12.48	-3062.5	-17062	-12172	15992	7.55	7.55	-5758	13652	28859	101952	113958	38505	130811		8.18	Si
SLD 3	14.98	-24101.01	-12039	-8588	6777	7.55	5.3191	-5777	13656	20338	101952	113958	38505	122290		18.04	Si
SLV 3	12.48	-3228.94	-18549	-13232	21952	7.55	7.55	-6259	13752	29071	101952	113958	38505	131023		5.97	Si
SLV 3	14.98	-34172.24	-13498	-9629	7240	6.04	3.7301	0	0	0	101952	91166	30804	101952		14.08	Si
SLD 1	12.48	-4112.93	-16759	-11955	17000	7.55	7.55	-5655	13631	28816	101952	113958	38505	130768		7.69	Si
SLD 1	14.98	-24108.82	-12550	-8953	7836	7.55	5.562	-5761	13652	21261	101952	113958	38505	123213		15.72	Si
SLD 2	12.48	-4047.6	-16840	-12013	16844	7.55	7.55	-5683	13637	28828	101952	113958	38505	130780		7.76	Si
SLD 2	14.98	-24200.63	-12505	-8921	7674	7.55	5.5193	-5784	13657	21106	101952	113958	38505	123058		16.03	Si
SLD 4	12.48	-2997.17	-17143	-12229	15836	7.55	7.55	-5785	13657	28871	101952	113958	38505	130823		8.26	Si
SLD 4	14.98	-24192.83	-11994	-8556	6616	7.55	5.2737	-5805	13661	20173	101952	113958	38505	122125		18.46	Si
SLV 6	12.48	-7339.07	-15552	-11095	18662	7.55	7.55	-5248	13550	28644	101952	113958	38505	130596		7	Si
SLV 6	14.98	-21990.31	-13778	-9829	10893	7.55	6.5368	-5382	13576	24849	101952	113958	38505	126801		11.64	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 14.06 Ta 0.06 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 15	-8681	0.53	875.28	1188.05	2291.6	1739.83	1.99	Si
SLV 16	-8726	0.53	875.28	1194.14	2298.78	1746.46	2	Si
SLV 11	-8946	0.53	875.28	1223.51	2333.44	1778.48	2.03	Si
SLV 12	-8975	0.53	875.28	1227.4	2338.03	1782.71	2.04	Si
SLV 13	-9100	0.53	875.28	1244.08	2357.73	1800.9	2.06	Si
SLV 14	-9146	0.53	875.28	1250.15	2364.9	1807.53	2.07	Si
SLV 7	-9586	0.53	875.28	1308.8	2434.19	1871.5	2.14	Si
SLV 8	-9615	0.53	875.28	1312.67	2438.75	1875.71	2.14	Si

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 9	-10344	0.53	875.28	1409.49	2552.95	1981.22	2.26	Si
SLV 10	-10373	0.53	875.28	1413.34	2557.5	1985.42	2.27	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.06 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-15522	-17754	-338	2.01	2551.2	0.909	32.15739	13.11449	Si
SLV 8	-15472	-17874	-340	2.015	2546.3	0.908	32.23233	13.11449	Si
SLV 11	-15186	-16347	-221	2.047	2517.9	0.908	32.77293	13.11449	Si
SLV 12	-15136	-16467	-223	2.052	2513	0.908	32.85055	13.11449	Si
SLV 5	-14726	-15432	-777	2.065	2472.3	0.907	33.09494	13.11449	Si
SLV 6	-14676	-15552	-779	2.069	2467.4	0.907	33.17505	13.11449	Si
SLV 9	-14390	-14025	-660	2.104	2439.1	0.906	33.75052	13.11449	Si
SLV 10	-14340	-14145	-662	2.109	2434.2	0.906	33.8336	13.11449	Si
SLV 3	-15649	-18549	-628	1.985	2563.9	0.909	31.74805	7.68898	Si
SLV 4	-15572	-18737	-631	1.992	2556.2	0.909	31.86332	7.68898	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.379	SLU 81	Si
V_SLU	6.132	SLU 82	Si
PF_SLV	2.412	SLV 4	Si
V_SLV	5.399	SLV 1	Si
PFFP_SLV	1.988	SLV 15	Si
R_SLV	2.452	SLV 7	Si

Maschio 221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.463	1.006	-9.398	1.006	L7	L8	1.935	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	12.48	-3124.99	-4888	-0.00005	0.0004492	0.0035	1.5482	4380.46	6563.62	6563.62	2.1	No	Si
SLU 82	14.98	1582.06	-2926	-0.0000226	0.0004492	0.0035	1.9353	2705.84	3115.31	3115.31	1.97	No	Si
SLU 42	12.48	-2741.34	-3625	-0.0000568	0.0004492	0.0035	1.5482	3315.77	5448.16	5448.16	1.99	No	Si
SLU 42	14.98	1271.02	-2327	-0.0000181	0.0004492	0.0035	1.9353	2172.28	2567.95	2567.95	2.02	No	Si
SLU 81	12.48	-3122.08	-4880	-0.00005	0.0004492	0.0035	1.5482	4373.84	6556.53	6556.53	2.1	No	Si
SLU 81	14.98	1575.54	-2918	-0.0000225	0.0004492	0.0035	1.9353	2698.85	3108.15	3108.15	1.97	No	Si
SLU 19	12.48	-2486.74	-3650	-0.0000424	0.0004492	0.0035	1.5482	3336.93	5469.86	5469.86	2.2	No	Si
SLU 19	14.98	1363.43	-2209	-0.0000207	0.0004492	0.0035	1.9353	2065.85	2459.45	2459.45	1.8	No	Si
SLU 18	12.48	-2483.83	-3642	-0.0000424	0.0004492	0.0035	1.5482	3330.02	5462.77	5462.77	2.2	No	Si
SLU 18	14.98	1356.9	-2201	-0.0000206	0.0004492	0.0035	1.9353	2058.7	2452.17	2452.17	1.81	No	Si
SLU 61	12.48	-2874.82	-5286	-0.0000417	0.0004492	0.0035	1.5482	4706.7	6915.56	6915.56	2.41	No	Si
SLU 61	14.98	1659.21	-3147	-0.0000235	0.0004492	0.0035	1.9353	2900.22	3315.08	3315.08	2	No	Si
SLU 60	12.48	-2871.92	-5278	-0.0000417	0.0004492	0.0035	1.5482	4700.18	6908.47	6908.47	2.41	No	Si
SLU 60	14.98	1652.68	-3139	-0.0000234	0.0004492	0.0035	1.9353	2893.28	3307.92	3307.92	2	No	Si
SLU 41	12.48	-2738.44	-3617	-0.0000569	0.0004492	0.0035	1.5482	3308.86	5441.07	5441.07	1.99	No	Si
SLU 41	14.98	1264.5	-2319	-0.000018	0.0004492	0.0035	1.9353	2165.16	2560.67	2560.67	2.03	No	Si
SLU 39	12.48	-2734	-3243	-0.0000798	0.0004492	0.0035	1.5482	2984.63	5110.84	5110.84	1.87	No	Si
SLU 39	14.98	1279.76	-1979	-0.0000202	0.0004492	0.0035	1.9353	1858.2	2248.93	2248.93	1.76	No	Si
SLU 40	12.48	-2736.91	-3251	-0.0000794	0.0004492	0.0035	1.5482	2991.63	5117.92	5117.92	1.87	No	Si
SLU 40	14.98	1286.29	-1987	-0.0000204	0.0004492	0.0035	1.9353	1865.41	2256.21	2256.21	1.75	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	12.48	-3907.24	-5011	-0.0000876	0.0006738	0.0035	1.5482		6725.77	6725.77	1.72		Si
SLV 10	14.98	2954.09	-3738	-0.0000709	0.0006738	0.0035	1.9353		3882.41	3882.41	1.31		Si
SLD 13	12.48	-3594.35	-4638	-0.0000789	0.0006738	0.0035	1.5482		6392.01	6392.01	1.78		Si
SLD 13	14.98	2364.83	-3242	-0.0000451	0.0006738	0.0035	1.9353		3429.63	3429.63	1.45		Si
SLV 9	12.48	-3863.94	-5015	-0.0000838	0.0006738	0.0035	1.5482		6729.97	6729.97	1.74		Si
SLV 9	14.98	2933.16	-3721	-0.0000698	0.0006738	0.0035	1.9353		3866.24	3866.24	1.32		Si
SLV 13	12.48	-5942.46	-4669	-0.0005524	0.0006738	0.0035	1.5482		6419.41	6419.41	1.08		Si
SLV 13	14.98	4223.97	-3992	-0.0015499	0.0006738	0.0035	1.9353		4113.72	4113.72	0.97		No
SLV 14	12.48	-6010.26	-4662	-0.0005687	0.0006738	0.0035	1.5482		6412.83	6412.83	1.07		Si
SLV 14	14.98	4256.74	-4020	-0.0015806	0.0006738	0.0035	1.9353		4139.04	4139.04	0.97		No
SLD 14	12.48	-3623.45	-4635	-0.0000815	0.0006738	0.0035	1.5482		6389.19	6389.19	1.76		Si
SLD 14	14.98	2378.89	-3254	-0.0000456	0.0006738	0.0035	1.9353		3440.5	3440.5	1.45		Si
SLV 16	12.48	-5475.94	-4409	-0.0004853	0.0006738	0.0035	1.5482		6186.09	6186.09	1.13		Si
SLV 16	14.98	3601.2	-3588	-0.0007811	0.0006738	0.0035	1.9353		3745.58	3745.58	1.04		Si
SLV 15	12.48	-5408.14	-4416	-0.0004696	0.0006738	0.0035	1.5482		6192.66	6192.66	1.15		Si
SLV 15	14.98	3568.43	-3560	-0.0007604	0.0006738	0.0035	1.9353		3720.26	3720.26	1.04		Si
SLV 4	12.48	2278.76	-4559	-0.0000321	0.0006738	0.0035	1.9353		4629.38	4629.38	2.03		Si
SLV 4	14.98	-2288.88	-1361	-0.0002306	0.0006738	0.0035	1.5482		3408.52	3408.52	1.49		Si
SLV 3	12.48	2346.56	-4566	-0.0000331	0.0006738	0.0035	1.9353		4635.97	4635.97	1.98		Si
SLV 3	14.98	-2321.65	-1333	-0.0002378	0.0006738	0.0035	1.5482		3382.86	3382.86	1.46		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 40	12.48	-2736.91	-3251	-2319	-2494	1.5482	0.3776	0	0	0	101952	15579	7896	23475	No	9.41	Si
SLU 40	14.98	1286.29	-1987	-1418	423	1.9353	0.9613	-2616	8682	2337	101952	19474	9870	29344	No	69.3	Si
SLU 42	12.48	-2741.34	-3625	-2586	-2483	1.5482	0.6343	0	0	0	101952	15579	7896	23475	No	9.45	Si
SLU 42	14.98	1271.02	-2327	-1660	493	1.9353	1.2641	-3063	8742	3094	101952	19474	9870	29344	No	59.47	Si
SLU 83	12.48	-3126.52	-5253	-3748	-2807	1.5482	1.1176	0	0	0	101952	15579	7896	23475	No	8.36	Si
SLU 83	14.98	1560.27	-3257	-2323	540	1.9353	1.4657	-4288	8905	3655	101952	19474	9870	29344	No	54.36	Si
SLU 82	12.48	-3124.99	-4888	-3487	-2822	1.5482	0.9849	0	0	0	101952	15579	7896	23475	No	8.32	Si
SLU 82	14.98	1582.06	-2926	-2087	465	1.9353	1.2806	-3851	8847	3172	101952	19474	9870	29344	No	63.12	Si
SLU 41	12.48	-2738.44	-3617	-2580	-2480	1.5482	0.6317	0	0	0	101952	15579	7896	23475	No	9.47	Si
SLU 41	14.98	1264.5	-2319	-1654	498	1.9353	1.2669	-3053	8740	3101	101952	19474	9870	29344	No	58.88	Si
SLU 84	12.48	-3129.42	-5261	-3753	-2811	1.5482	1.1186	0	0	0	101952	15579	7896	23475	No	8.35	Si
SLU 84	14.98	1566.8	-3265	-2329	535	1.9353	1.4632	-4298	8906	3649	101952	19474	9870	29344	No	54.86	Si
SLU 81	12.48	-3122.08	-4880	-3481	-2818	1.5482	0.9835	0	0	0	101952	15579	7896	23475	No	8.33	Si
SLU 81	14.98	1575.54	-2918	-2081	470	1.9353	1.2829	-3841	8845	3178	101952	19474	9870	29344	No	62.46	Si
SLU 39	12.48	-2734	-3243	-2314	-2491	1.5482	0.374	0	0	0	101952	15579	7896	23475	No	9.42	Si
SLU 39	14.98	1279.76	-1979	-1412	428	1.9353	0.9634	-2606	8681	2342	101952	19474	9870	29344	No	68.51	Si
SLU 61	12.48	-2874.82	-5286	-3771	-2596	1.5482	1.2714	0	0	0	101952	15579	7896	23475	No	9.04	Si
SLU 61	14.98	1659.21	-3147	-2245	239	1.9353	1.3211	-4143	8886	3287	101952	19474	9870	29344	No	122.68	Si
SLU 60	12.48	-2871.92	-5278	-3765	-2593	1.5482	1.2706	0	0	0	101952	15579	7896	23475	No	9.05	Si
SLU 60	14.98	1652.68	-3139	-2239	244	1.9353	1.3234	-4132	8884	3292	101952	19474	9870	29344	No	120.23	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	12.48	-5408.14	-4416	-3150	-5071	1.5482	0	0	0	0	101952	23369	7896	31265		6.17	Si
SLV 15	14.98	3568.43	-3560	-2540	-1148	1.9353	0	-115019	16250	0	101952	29211	9870	39081		34.03	Si
SLV 9	12.48	-3863.94	-5015	-3578	-3659	1.5482	0.5916	0	0	0	101952	23369	7896	31265		8.54	Si
SLV 9	14.98	2933.16	-3721	-2654	-1015	1.9353	0.5378	-17762	16053	2417	101952	29211	9870	39081		38.51	Si
SLV 14	12.48	-6010.26	-4662	-3325	-5697	1.5482	0	0	0	0	101952	23369	7896	31265		5.49	Si
SLV 14	14.98	4256.74	-4020	-2867	-1712	1.9353	0	-135204	16250	0	101952	29211	9870	39081		22.83	Si
SLD 16	12.48	-3389.28	-4524	-3227	-3106	1.5482	0.6554	0	0	0	101952	23369	7896	31265		10.07	Si
SLD 16	14.98	2091.23	-3064	-2185	-260	1.9353	0.8551	-4033	13307	3186	101952	29211	9870	39081		150.38	Si
SLD 13	12.48	-3594.35	-4638	-3309	-3330	1.5482	0.5782	0	0	0	101952	23369	7896	31265		9.39	Si
SLD 13	14.98	2364.83	-3242	-2313	-482	1.9353	0.7146	-4268	13354	2672	101952	29211	9870	39081		81.09	Si
SLV 10	12.48	-3907.24	-5011	-3574	-3697	1.5482	0.5635	0	0	0	101952	23369	7896	31265		8.46	Si
SLV 10	14.98	2954.09	-3738	-2667	-1033	1.9353	0.5323	-18036	16108	2401	101952	29211	9870	39081		37.82	Si
SLD 14	12.48	-3623.45	-4635	-3307	-3355	1.5482	0.5578	0	0	0	101952	23369	7896	31265		9.32	Si
SLD 14	14.98	2378.89	-3254	-2321	-494	1.9353	0.7096	-4284	13357	2654	101952	29211	9870	39081		79.06	Si
SLD 15	12.48	-3360.18	-4527	-3229	-3081	1.5482	0.6762	0	0	0	101952	23369	7896	31265		10.15	Si
SLD 15	14.98	2077.16	-3052	-2177	-248	1.9353	0.8609	-4017	13303	3207	101952	29211	9870	39081		157.9	Si
SLV 13	12.48	-5942.46	-4669	-3331	-5638	1.5482	0	0	0	0	101952	23369	7896	31265		5.55	Si
SLV 13	14.98	4223.97	-3992	-2848	-1683	1.9353	0	-134714	16250	0	101952	29211	9870	39081		23.23	Si
SLV 16	12.48	-5475.94	-4409	-3145	-5130	1.5482	0	0	0	0	101952	23369	7896	31265		6.09	Si
SLV 16	14.98	3601.2	-3588	-2560	-1177	1.9353	0	-116213	16250	0	101952	29211	9870	39081		33.2	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 14.06 Ta 0.06 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 12	-2618	0.53	224.36	356.84	647.43	502.14	2.24	Si
SLV 11	-2623	0.53	224.36	357.46	648.16	502.81	2.24	Si
SLV 8	-2663	0.53	224.36	362.79	654.46	508.62	2.27	Si
SLV 7	-2667	0.53	224.36	363.41	655.19	509.3	2.27	Si
SLV 16	-2823	0.53	224.36	383.92	679.45	531.69	2.37	Si
SLV 15	-2830	0.53	224.36	384.89	680.59	532.74	2.37	Si
SLV 4	-2972	0.53	224.36	403.65	702.71	553.18	2.47	Si
SLV 3	-2980	0.53	224.36	404.62	703.85	554.23	2.47	Si
SLV 14	-3044	0.53	224.36	413.1	713.86	563.48	2.51	Si
SLV 13	-3051	0.53	224.36	414.06	715	564.53	2.52	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.06 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-1695	-4213	728	3.2	432.9	0.889	52.30616	13.11449	Si
SLV 7	-1679	-4218	727	3.216	431.5	0.889	52.56966	13.11449	Si
SLV 6	-1628	-5056	-669	3.285	426.9	0.889	53.69866	13.11449	Si
SLV 5	-1612	-5060	-670	3.301	425.4	0.889	53.96421	13.11449	Si
SLV 12	-1513	-4168	728	3.387	416.4	0.889	55.37968	13.11449	Si
SLV 11	-1497	-4172	727	3.405	415	0.889	55.67166	13.11449	Si
SLV 10	-1447	-5011	-669	3.481	410.4	0.889	56.90969	13.11449	Si
SLV 9	-1431	-5015	-670	3.499	409	0.889	57.20473	13.11449	Si
SLV 4	-1887	-4559	239	3.165	450.8	0.89	51.69177	7.68898	Si
SLV 3	-1862	-4566	238	3.189	448.5	0.89	52.08137	7.68898	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.754	SLU 40	Si
V_SLU	8.319	SLU 82	Si
PF_SLV	0.972	SLV 14	No
V_SLV	5.488	SLV 14	Si
PFFP_SLV	2.238	SLV 12	Si
R_SLV	3.988	SLV 8	Si

Maschio 222

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-4.913	1.006	-6.463	1.006	L7	L8	1.55	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 74	12.48	-5727.53	-2186	-0.0002476	0.0004492	0.0035	1.55	0	28186.01	28186.01	4.92	No	Si
SLU 74	14.58	8385.29	911	-0.0004186	0.0004492	0.0035	1.55	0	28421.75	28421.75	3.39	No	Si
SLU 80	12.48	-5670.94	-1990	-0.0002461	0.0004492	0.0035	1.55	0	28202.79	28202.79	4.97	No	Si
SLU 80	14.58	8311.76	1278	-0.0004152	0.0004492	0.0035	1.55	0	28453.21	28453.21	3.42	No	Si
SLU 77	12.48	-5770	-2386	-0.0002482	0.0004492	0.0035	1.55	0	28168.76	28168.76	4.88	No	Si
SLU 77	14.58	8456.21	738	-0.0004225	0.0004492	0.0035	1.55	0	28406.96	28406.96	3.36	No	Si
SLU 79	12.48	-5671.71	-2000	-0.000246	0.0004492	0.0035	1.55	0	28201.95	28201.95	4.97	No	Si
SLU 79	14.58	8309.15	1278	-0.0004151	0.0004492	0.0035	1.55	0	28453.19	28453.19	3.42	No	Si
SLU 81	12.48	-5938.41	-1154	-0.0002658	0.0004492	0.0035	1.55	0	28274.69	28274.69	4.76	No	Si
SLU 81	14.58	8612.22	1934	-0.000437	0.0004492	0.0035	1.55	0	28509.26	28509.26	3.31	No	Si
SLU 84	12.48	-5980.11	-1345	-0.0002668	0.0004492	0.0035	1.55	0	28258.28	28258.28	4.73	No	Si
SLU 84	14.58	8685.75	1761	-0.0004414	0.0004492	0.0035	1.55	0	28494.49	28494.49	3.28	No	Si
SLU 78	12.48	-5769.23	-2376	-0.0002483	0.0004492	0.0035	1.55	0	28169.6	28169.6	4.88	No	Si
SLU 78	14.58	8458.82	738	-0.0004227	0.0004492	0.0035	1.55	0	28406.98	28406.98	3.36	No	Si
SLU 75	12.48	-5726.76	-2176	-0.0002476	0.0004492	0.0035	1.55	0	28186.85	28186.85	4.92	No	Si
SLU 75	14.58	8387.9	911	-0.0004188	0.0004492	0.0035	1.55	0	28421.77	28421.77	3.39	No	Si
SLU 82	12.48	-5937.64	-1144	-0.0002658	0.0004492	0.0035	1.55	0	28275.53	28275.53	4.76	No	Si
SLU 82	14.58	8614.83	1934	-0.0004372	0.0004492	0.0035	1.55	0	28509.28	28509.28	3.31	No	Si
SLU 83	12.48	-5980.88	-1355	-0.0002668	0.0004492	0.0035	1.55	0	28257.44	28257.44	4.72	No	Si
SLU 83	14.58	8683.13	1761	-0.0004412	0.0004492	0.0035	1.55	0	28494.47	28494.47	3.28	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	12.48	-4735.06	-1000	-0.0001986	0.0006738	0.0035	1.55		32296.16	32296.16	6.82		Si
SLV 9	14.58	6650.84	789	-0.0002978	0.0006738	0.0035	1.55		31720.93	31720.93	4.77		Si
SLD 15	12.48	-4740.2	-2330	-0.0001895	0.0006738	0.0035	1.55		32680.05	32680.05	6.89		Si
SLD 15	14.58	6660.06	982	-0.0002989	0.0006738	0.0035	1.55		31659.22	31659.22	4.75		Si
SLV 10	12.48	-4731.26	-881	-0.0001991	0.0006738	0.0035	1.55		32261.85	32261.85	6.82		Si
SLV 10	14.58	6675.38	792	-0.000299	0.0006738	0.0035	1.55		31720.12	31720.12	4.75		Si
SLV 15	12.48	-6051.74	-2958	-0.0002466	0.0006738	0.0035	1.55		32861.17	32861.17	5.43		Si
SLV 15	14.58	8091.43	1202	-0.0003716	0.0006738	0.0035	1.55		31589.02	31589.02	3.9		Si
SLD 13	12.48	-4809.33	-2036	-0.000195	0.0006738	0.0035	1.55		32595.16	32595.16	6.78		Si
SLD 13	14.58	6736.17	948	-0.0003025	0.0006738	0.0035	1.55		31670.22	31670.22	4.7		Si
SLV 16	12.48	-6045.79	-2772	-0.0002478	0.0006738	0.0035	1.55		32807.43	32807.43	5.43		Si
SLV 16	14.58	8129.85	1206	-0.0003736	0.0006738	0.0035	1.55		31587.76	31587.76	3.89		Si
SLD 14	12.48	-4806.78	-1956	-0.0001955	0.0006738	0.0035	1.55		32572.09	32572.09	6.78		Si
SLD 14	14.58	6752.66	949	-0.0003033	0.0006738	0.0035	1.55		31669.68	31669.68	4.69		Si
SLV 13	12.48	-6209.81	-2288	-0.0002595	0.0006738	0.0035	1.55		32667.73	32667.73	5.26		Si
SLV 13	14.58	8266.02	1124	-0.0003803	0.0006738	0.0035	1.55		31614.08	31614.08	3.82		Si
SLV 14	12.48	-6203.86	-2101	-0.0002605	0.0006738	0.0035	1.55		32613.99	32613.99	5.26		Si
SLV 14	14.58	8304.44	1128	-0.0003824	0.0006738	0.0035	1.55		31612.81	31612.81	3.81		Si
SLD 16	12.48	-4737.65	-2250	-0.00019	0.0006738	0.0035	1.55		32656.98	32656.98	6.89		Si
SLD 16	14.58	6676.55	984	-0.0002997	0.0006738	0.0035	1.55		31658.68	31658.68	4.74		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	12.48	-5770	-2386	-1702	-8305	1.55	0	-20185	10833	0	35117	15597	7905	23502	No	2.83	Si
SLU 77	14.58	8456.21	738	526	-8306	1.55	0	7360	10833	0	35117	15597	7905	23502	No	2.83	Si
SLU 81	12.48	-5938.41	-1154	-823	-8466	1.55	0	-10772	10833	0	35117	15597	7905	23502	No	2.78	Si
SLU 81	14.58	8612.22	1934	1380	-8468	1.55	0	20302	10833	0	35117	15597	7905	23502	No	2.78	Si
SLU 75	12.48	-5726.76	-2176	-1552	-8257	1.55	0	-18715	10833	0	35117	15597	7905	23502	No	2.85	Si
SLU 75	14.58	8387.9	911	650	-8258	1.55	0	9183	10833	0	35117	15597	7905	23502	No	2.85	Si
SLU 80	12.48	-5670.94	-1990	-1420	-8187	1.55	0	-17371	10833	0	35117	15597	7905	23502	No	2.87	Si
SLU 80	14.58	8311.76	1278	912	-8189	1.55	0	13151	10833	0	35117	15597	7905	23502	No	2.87	Si
SLU 74	12.48	-5727.53	-2186	-1559	-8230	1.55	0	-18784	10833	0	35117	15597	7905	23502	No	2.86	Si
SLU 74	14.58	8385.29	911	650	-8232	1.55	0	9181	10833	0	35117	15597	7905	23502	No	2.86	Si
SLU 79	12.48	-5671.71	-2000	-1427	-8160	1.55	0	-17443	10833	0	35117	15597	7905	23502	No	2.88	Si
SLU 79	14.58	8309.15	1278	912	-8162	1.55	0	13150	10833	0	35117	15597	7905	23502	No	2.88	Si
SLU 83	12.48	-5980.88	-1355	-966	-8541	1.55	0	-12455	10833	0	35117	15597	7905	23502	No	2.75	Si
SLU 83	14.58	8683.13	1761	1256	-8543	1.55	0	18293	10833	0	35117	15597	7905	23502	No	2.75	Si
SLU 82	12.48	-5937.64	-1144	-816	-8493	1.55	0	-10688	10833	0	35117	15597	7905	23502	No	2.77	Si
SLU 82	14.58	8614.83	1934	1380	-8495	1.55	0	20302	10833	0	35117	15597	7905	23502	No	2.77	Si
SLU 84	12.48	-5980.11	-1345	-959	-8568	1.55	0	-12374	10833	0	35117	15597	7905	23502	No	2.74	Si
SLU 84	14.58	8685.75	1761	1256	-8569	1.55	0	18294	10833	0	35117	15597	7905	23502	No	2.74	Si
SLU 78	12.48	-5769.23	-2376	-1695	-8332	1.55	0	-20118	10833	0	35117	15597	7905	23502	No	2.82	Si
SLU 78	14.58	8458.82	738	526	-8333	1.55	0	7362	10833	0	35117	15597	7905	23502	No	2.82	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	12.48	-4735.06	-1000	-713	-8593	1.55	0	-9654	16250	0	35117	23395	7905	31300		3.64	Si
SLV 9	14.58	6650.84	789	563	-8392	1.55	0	8631	16250	0	35117	23395	7905	31300		3.73	Si
SLV 15	12.48	-6051.74	-2958	-2110	-7632	1.55	0	-24685	16250	0	35117	23395	7905	31300		4.1	Si
SLV 15	14.58	8091.43	1202	857	-6933	1.55	0	13093	16250	0	35117	23395	7905	31300		4.51	Si
SLV 10	12.48	-4731.26	-881	-629	-8711	1.55	0	-8604	16250	0	35117	23395	7905	31300		3.59	Si
SLV 10	14.58	6675.38	792	565	-8510	1.55	0	8656	16250	0	35117	23395	7905	31300		3.68	Si
SLD 13	12.48	-4809.33	-2036	-1453	-6991	1.55	0	-17748	16250	0	35117	23395	7905	31300		4.48	Si
SLD 13	14.58	6736.17	948	676	-6694	1.55	0	10453	16250	0	35117	23395	7905	31300		4.68	Si
SLV 6	12.48	-3310.03	-477	-340	-6939	1.55	0	-4805	16250	0	35117	23395	7905	31300		4.51	Si
SLV 6	14.58	5110.4	583	416	-7157	1.55	0	6465	16250	0	35117	23395	7905	31300		4.37	Si
SLV 16	12.48	-6045.79	-2772	-1977	-7816	1.55	0	-23488	16250	0	35117	23395	7905	31300		4	Si
SLV 16	14.58	8129.85	1206	860	-7117	1.55	0	13129	16250	0	35117	23395	7905	31300		4.4	Si
SLV 13	12.48	-6209.81	-2288	-1632	-9014	1.55	0	-20231	16250	0	35117	23395	7905	31300		3.47	Si
SLV 13	14.58	8266.02	1124	802	-8319	1.55	0	12149	16250	0	35117	23395	7905	31300		3.76	Si
SLD 14	12.48	-4806.78	-1956	-1396	-7070	1.55	0	-17191	16250	0	35117	23395	7905	31300		4.43	Si
SLD 14	14.58	6752.66	949	677	-6774	1.55	0	10469	16250	0	35117	23395	7905	31300		4.62	Si
SLV 14	12.48	-6203.86	-2101	-1499	-9199	1.55	0	-18851	16250	0	35117	23395	7905	31300		3.4	Si
SLV 14	14.58	8304.44	1128	804	-8504	1.55	0	12186	16250	0	35117	23395	7905	31300		3.68	Si
SLV 5	12.48	-3313.83	-596	-425	-6821	1.55	0	-5907	16250	0	35117	23395	7905	31300		4.59	Si
SLV 5	14.58	5085.87	580	414	-7039	1.55	0	6439	16250	0	35117	23395	7905	31300		4.45	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 14.06 Ta 0.06 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 7	-195	0.53	179.69	0	11248.82	5624.41	31.3	Si
SLV 8	-169	0.53	179.69	0	11250.53	5625.26	31.3	Si
SLV 3	-163	0.53	179.69	0	11250.88	5625.44	31.31	Si
SLV 11	-161	0.53	179.69	0	11251.05	5625.52	31.31	Si
SLV 12	-135	0.53	179.69	0	11252.76	5626.38	31.31	Si
SLV 4	-122	0.53	179.69	0	11253.55	5626.78	31.31	Si
SLV 1	-96	0.53	179.69	0	11255.29	5627.64	31.32	Si
SLV 2	-55	0.53	179.69	0	11257.96	5628.98	31.33	Si
SLV 15	-49	0.53	179.69	0	11258.32	5629.16	31.33	Si
SLV 16	-8	0.53	179.69	0	11260.99	5630.49	31.33	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.06 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-2092	-477	79	2.655	416.3	0.895	43.08528	13.11449	Si
SLV 5	-2075	-596	80	2.667	414.7	0.895	43.29978	13.11449	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-1928	-881	94	2.785	400.5	0.894	45.28793	13.11449	Si
SLV 9	-1912	-1000	95	2.799	399	0.893	45.52436	13.11449	Si
SLV 8	-1399	-2711	-104	3.332	350.6	0.889	54.45248	13.11449	Si
SLV 7	-1383	-2830	-104	3.353	349.1	0.889	54.79449	13.11449	Si
SLV 12	-1236	-3116	-89	3.556	335.6	0.889	58.13489	13.11449	Si
SLV 11	-1219	-3234	-88	3.579	334.2	0.889	58.51934	13.11449	Si
SLV 2	-2044	-753	-3	2.715	411.7	0.895	44.09636	7.68898	Si
SLV 1	-2019	-939	-2	2.737	409.3	0.895	44.45502	7.68898	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.281	SLU 84	Si
V_SLU	2.743	SLU 84	Si
PF_SLV	3.807	SLV 14	Si
V_SLV	3.403	SLV 14	Si
PFFP_SLV	31.3	SLV 7	Si
R_SLV	3.285	SLV 6	Si

Maschio 223

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	1.006	-4.113	1.006	L7	L8	3.98	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	12.48	-23592.92	58985	0.0009365	0.0004492	0.0035	3.184	0	145759.94	145759.94	6.18	No	Si
SLU 82	14.58	-14401.3	84406	0.0025048	0.0004492	0.0035	3.184	0	114759.62	114759.62	7.97	No	Si
SLU 79	12.48	-22716.42	56004	0.0008702	0.0004492	0.0035	3.184	0	149026.61	149026.61	6.56	No	Si
SLU 79	14.58	-14134.81	81475	0.0024038	0.0004492	0.0035	3.184	0	118715.08	118715.08	8.4	No	Si
SLU 74	12.48	-22616.52	55696	0.0008639	0.0004492	0.0035	3.184	0	149363.95	149363.95	6.6	No	Si
SLU 74	14.58	-13674.74	80815	0.0024051	0.0004492	0.0035	3.184	0	119591.11	119591.11	8.75	No	Si
SLU 83	12.48	-23761.84	59043	0.0009286	0.0004492	0.0035	3.184	0	145696.55	145696.55	6.13	No	Si
SLU 83	14.58	-14520.28	84718	0.0025101	0.0004492	0.0035	3.184	0	114338.35	114338.35	7.87	No	Si
SLU 80	12.48	-22715.51	56015	0.0008707	0.0004492	0.0035	3.184	0	149014.26	149014.26	6.56	No	Si
SLU 80	14.58	-14155.75	81503	0.0024036	0.0004492	0.0035	3.184	0	118677.84	118677.84	8.38	No	Si
SLU 75	12.48	-22615.6	55708	0.0008644	0.0004492	0.0035	3.184	0	149351.61	149351.61	6.6	No	Si
SLU 75	14.58	-13695.68	80843	0.002405	0.0004492	0.0035	3.184	0	119556.2	119556.2	8.73	No	Si
SLU 78	12.48	-22783.61	55777	0.000857	0.0004492	0.0035	3.184	0	149275.87	149275.87	6.55	No	Si
SLU 78	14.58	-13835.61	81182	0.0024101	0.0004492	0.0035	3.184	0	119110.39	119110.39	8.61	No	Si
SLU 84	12.48	-23760.93	59054	0.0009291	0.0004492	0.0035	3.184	0	145684.2	145684.2	6.13	No	Si
SLU 84	14.58	-14541.23	84746	0.00251	0.0004492	0.0035	3.184	0	114301.11	114301.11	7.86	No	Si
SLU 81	12.48	-23593.83	58974	0.000936	0.0004492	0.0035	3.184	0	145772.29	145772.29	6.18	No	Si
SLU 81	14.58	-14380.36	84378	0.002505	0.0004492	0.0035	3.184	0	114796.86	114796.86	7.98	No	Si
SLU 77	12.48	-22784.53	55765	0.0008565	0.0004492	0.0035	3.184	0	149288.21	149288.21	6.55	No	Si
SLU 77	14.58	-13814.66	81155	0.0024103	0.0004492	0.0035	3.184	0	119147.64	119147.64	8.62	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 15	12.48	-15889.27	42802	0.0007536	0.0006738	0.0035	3.184		169760.6	169760.6	10.68		Si
SLD 15	14.58	-10297.88	63280	0.0019079	0.0006738	0.0035	3.184		145100.44	145100.44	14.09		Si
SLV 16	12.48	-16740.35	49233	0.0009592	0.0006738	0.0035	3.184		162466.49	162466.49	9.71		Si
SLV 16	14.58	-11121.05	72592	0.0022303	0.0006738	0.0035	3.184		132791.06	132791.06	11.94		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 13	12.48	-15770.33	43107	0.0007729	0.0006738	0.0035	3.184		169415.53	169415.53	10.74		Si
SLD 13	14.58	-10731.3	63939	0.0019082	0.0006738	0.0035	3.184		144249.57	144249.57	13.44		Si
SLV 15	12.48	-16688.69	49111	0.0009575	0.0006738	0.0035	3.184		162606.05	162606.05	9.74		Si
SLV 15	14.58	-10976.09	72443	0.0022331	0.0006738	0.0035	3.184		132995.42	132995.42	12.12		Si
SLD 14	12.48	-15792.5	43159	0.0007737	0.0006738	0.0035	3.184		169356.16	169356.16	10.72		Si
SLD 14	14.58	-10793.52	64003	0.001907	0.0006738	0.0035	3.184		144166.88	144166.88	13.36		Si
SLD 16	12.48	-15911.45	42855	0.0007544	0.0006738	0.0035	3.184		169701.24	169701.24	10.67		Si
SLD 16	14.58	-10360.1	63345	0.0019067	0.0006738	0.0035	3.184		145017.76	145017.76	14		Si
SLV 12	12.48	-16145.63	40390	0.0006418	0.0006738	0.0035	3.184		172496.88	172496.88	10.68		Si
SLV 12	14.58	-8715.75	58999	0.0018321	0.0006738	0.0035	3.184		150621.92	150621.92	17.28		Si
SLV 11	12.48	-16112.64	40312	0.0006407	0.0006738	0.0035	3.184		172585.21	172585.21	10.71		Si
SLV 11	14.58	-8623.17	58904	0.0018339	0.0006738	0.0035	3.184		150737.45	150737.45	17.48		Si
SLV 14	12.48	-16466.51	49936	0.0010038	0.0006738	0.0035	3.184		161613.43	161613.43	9.81		Si
SLV 14	14.58	-12115.31	74121	0.0022316	0.0006738	0.0035	3.184		130696.91	130696.91	10.79		Si
SLV 13	12.48	-16414.85	49814	0.001002	0.0006738	0.0035	3.184		161761.32	161761.32	9.85		Si
SLV 13	14.58	-11970.35	73972	0.0022343	0.0006738	0.0035	3.184		130901.27	130901.27	10.94		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	12.48	-23761.84	59043	42120	14444	3.184	3.98	0	0	0	71593	32039	16238	48278	No	3.34	Si
SLU 83	14.58	-14520.28	84718	60436	14457	3.184	3.98	0	0	0	71593	32039	16238	48278	No	3.34	Si
SLU 80	12.48	-22715.51	56015	39960	14590	3.184	3.98	0	0	0	71593	32039	16238	48278	No	3.31	Si
SLU 80	14.58	-14155.75	81503	58142	14605	3.184	3.98	0	0	0	71593	32039	16238	48278	No	3.31	Si
SLU 78	12.48	-22783.61	55777	39790	14328	3.184	3.98	0	0	0	71593	32039	16238	48278	No	3.37	Si
SLU 78	14.58	-13835.61	81182	57914	14343	3.184	3.98	0	0	0	71593	32039	16238	48278	No	3.37	Si
SLU 82	12.48	-23592.92	58985	42078	14227	3.184	3.98	0	0	0	71593	32039	16238	48278	No	3.39	Si
SLU 82	14.58	-14401.3	84406	60213	14238	3.184	3.98	0	0	0	71593	32039	16238	48278	No	3.39	Si
SLU 76	12.48	-22546.89	55954	39916	14365	3.184	3.98	0	0	0	71593	32039	16238	48278	No	3.36	Si
SLU 76	14.58	-14029.79	81182	57913	14378	3.184	3.98	0	0	0	71593	32039	16238	48278	No	3.36	Si
SLU 84	12.48	-23760.93	59054	42128	14470	3.184	3.98	0	0	0	71593	32039	16238	48278	No	3.34	Si
SLU 84	14.58	-14541.23	84746	60456	14483	3.184	3.98	0	0	0	71593	32039	16238	48278	No	3.33	Si
SLU 77	12.48	-22784.53	55765	39782	14302	3.184	3.98	0	0	0	71593	32039	16238	48278	No	3.38	Si
SLU 77	14.58	-13814.66	81155	57894	14317	3.184	3.98	0	0	0	71593	32039	16238	48278	No	3.37	Si
SLU 72	12.48	-19884.17	48764	34787	14307	3.184	3.98	0	0	0	71593	32039	16238	48278	No	3.37	Si
SLU 72	14.58	-12929.81	73144	52179	14321	3.184	3.98	0	0	0	71593	32039	16238	48278	No	3.37	Si
SLU 71	12.48	-19885.08	48753	34779	14281	3.184	3.98	0	0	0	71593	32039	16238	48278	No	3.38	Si
SLU 71	14.58	-12908.87	73116	52159	14295	3.184	3.98	0	0	0	71593	32039	16238	48278	No	3.38	Si
SLU 79	12.48	-22716.42	56004	39952	14565	3.184	3.98	0	0	0	71593	32039	16238	48278	No	3.31	Si
SLU 79	14.58	-14134.81	81475	58123	14579	3.184	3.98	0	0	0	71593	32039	16238	48278	No	3.31	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	12.48	-16414.85	49814	35536	16075	3.184	3.98	0	0	0	71593	48059	16238	64297		4	Si
SLV 13	14.58	-11970.35	73972	52770	18368	3.184	3.98	0	0	0	71593	48059	16238	64297		3.5	Si
SLV 9	12.48	-15199.81	42657	30430	13390	3.184	3.98	0	0	0	71593	48059	16238	64297		4.8	Si
SLV 9	14.58	-11937.36	63999	45655	14172	3.184	3.98	0	0	0	71593	48059	16238	64297		4.54	Si
SLV 16	12.48	-16740.35	49233	35121	15378	3.184	3.98	0	0	0	71593	48059	16238	64297		4.18	Si
SLV 16	14.58	-11121.05	72592	51786	17611	3.184	3.98	0	0	0	71593	48059	16238	64297		3.65	Si
SLD 16	12.48	-15911.45	42855	30572	12631	3.184	3.98	0	0	0	71593	48059	16238	64297		5.09	Si
SLD 16	14.58	-10360.1	63345	45188	13589	3.184	3.98	0	0	0	71593	48059	16238	64297		4.73	Si
SLV 14	12.48	-16466.51	49936	35623	16146	3.184	3.98	0	0	0	71593	48059	16238	64297		3.98	Si
SLV 14	14.58	-12115.31	74121	52876	18438	3.184	3.98	0	0	0	71593	48059	16238	64297		3.49	Si
SLD 15	12.48	-15889.27	42802	30534	12601	3.184	3.98	0	0	0	71593	48059	16238	64297		5.1	Si
SLD 15	14.58	-10297.88	63280	45143	13559	3.184	3.98	0	0	0	71593	48059	16238	64297		4.74	Si
SLD 13	12.48	-15770.33	43107	30751	12936	3.184	3.98	0	0	0	71593	48059	16238	64297		4.97	Si
SLD 13	14.58	-10731.3	63939	45613	13920	3.184	3.98	0	0	0	71593	48059	16238	64297		4.62	Si
SLD 14	12.48	-15792.5	43159	30789	12967	3.184	3.98	0	0	0	71593	48059	16238	64297		4.96	Si
SLD 14	14.58	-10793.52	64003	45658	13950	3.184	3.98	0	0	0	71593	48059	16238	64297		4.61	Si
SLV 10	12.48	-15232.81	42735	30486	13434	3.184	3.98	0	0	0	71593	48059	16238	64297		4.79	Si
SLV 10	14.58	-12029.94	64094	45723	14217	3.184	3.98	0	0	0	71593	48059	16238	64297		4.52	Si
SLV 15	12.48	-16688.69	49111	35034	15307	3.184	3.98	0	0	0	71593	48059	16238	64297		4.2	Si
SLV 15	14.58	-10976.09	72443	51679	17541	3.184	3.98	0	0	0	71593	48059	16238	64297		3.67	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 14.06 Ta 0.06 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 14	69260	0.53	461.41	0	22349.03	11174.52	24.22	Si
SLV 13	69115	0.53	461.41	0	22370	11185	24.24	Si
SLV 16	68010	0.53	461.41	0	22529.72	11264.86	24.41	Si
SLV 15	67865	0.53	461.41	0	22550.69	11275.35	24.44	Si
SLV 10	59564	0.53	461.41	0	23739.03	11869.51	25.72	Si
SLV 9	59472	0.53	461.41	0	23751.9	11875.95	25.74	Si
SLV 12	55399	0.53	461.41	0	24317.81	12158.9	26.35	Si
SLV 11	55306	0.53	461.41	0	24330.68	12165.34	26.37	Si
SLV 6	50027	0.53	461.41	0	25039	12519.5	27.13	Si
SLV 5	49934	0.53	461.41	0	25051.12	12525.56	27.15	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.06 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	82639	42735	-794	0.477	646.1	1	6.92613	13.11449	No, Trazione
SLV 9	82581	42657	-794	0.477	646.1	1	6.93247	13.11449	No, Trazione
SLV 12	78105	40390	588	0.518	646.1	1	7.52845	13.11449	No, Trazione
SLV 11	78048	40312	589	0.518	646.1	1	7.53536	13.11449	No, Trazione
SLV 6	69065	35877	-723	0.601	646.1	1	8.73674	13.11449	No, Trazione
SLV 5	69008	35800	-722	0.602	646.1	1	8.74613	13.11449	No, Trazione

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	64531	33533	660	0.657	646.1	1	9.54918	13.11449	No, Trazione
SLV 7	64474	33455	660	0.658	646.1	1	9.5597	13.11449	No, Trazione
SLV 14	96905	49936	-394	0.396	646.1	1	5.76078	7.68898	No, Trazione
SLV 13	96815	49814	-393	0.397	646.1	1	5.76799	7.68898	No, Trazione

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.131	SLU 84	Si
V_SLU	3.305	SLU 80	Si
PF_SLV	9.705	SLV 16	Si
V_SLV	3.487	SLV 14	Si
PFFP_SLV	24.218	SLV 14	Si
R_SLV	0.528	SLV 10	No

Maschio 224

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-3.454	-11.003	-0.691	L7	L8	2.763	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 14	12.48	1395.36	-9194	-0.0000239	0.0003743	0.0035	2.763	11218.65	11827.44	11827.44	8.48	No	Si
SLU 14	15.64	1485.29	-2366	-0.0000111	0.0003743	0.0035	2.763	3171.04	3590.23	3590.23	2.42	No	Si
SLU 32	12.48	1498.84	-9738	-0.0000255	0.0003743	0.0035	2.763	11789.48	12371.55	12371.55	8.25	No	Si
SLU 32	15.64	1488.63	-2340	-0.0000111	0.0003743	0.0035	2.763	3137.32	3556.06	3556.06	2.39	No	Si
SLU 42	12.48	1651.21	-9973	-0.0000266	0.0003743	0.0035	2.763	12033.48	12608.68	12608.68	7.64	No	Si
SLU 42	15.64	1558.6	-2432	-0.0000116	0.0003743	0.0035	2.763	3255.92	3676.29	3676.29	2.36	No	Si
SLU 41	12.48	1599.62	-9930	-0.0000263	0.0003743	0.0035	2.763	11988.77	12565.02	12565.02	7.86	No	Si
SLU 41	15.64	1597.16	-2452	-0.0000118	0.0003743	0.0035	2.763	3281.9	3702.65	3702.65	2.32	No	Si
SLU 79	12.48	1848.35	-11986	-0.0000316	0.0003743	0.0035	2.763	14039.01	14671.65	14671.65	7.94	No	Si
SLU 79	15.64	1829.8	-2999	-0.0000137	0.0003743	0.0035	2.763	3985.84	4418.38	4418.38	2.41	No	Si
SLU 36	12.48	1603.05	-10383	-0.0000272	0.0003743	0.0035	2.763	12453.72	13023.76	13023.76	8.12	No	Si
SLU 36	15.64	1831.36	-2873	-0.0000136	0.0003743	0.0035	2.763	3824.2	4254.44	4254.44	2.32	No	Si
SLU 37	12.48	1568.41	-10229	-0.0000268	0.0003743	0.0035	2.763	12295.81	12866.78	12866.78	8.2	No	Si
SLU 37	15.64	1845.38	-2886	-0.0000137	0.0003743	0.0035	2.763	3841.2	4271.89	4271.89	2.31	No	Si
SLU 77	12.48	1831.39	-12098	-0.0000318	0.0003743	0.0035	2.763	14145.96	14787.86	14787.86	8.07	No	Si
SLU 77	15.64	1854.34	-3006	-0.0000139	0.0003743	0.0035	2.763	3994.48	4427.1	4427.1	2.39	No	Si
SLU 38	12.48	1620.01	-10272	-0.0000271	0.0003743	0.0035	2.763	12340.06	12910.65	12910.65	7.97	No	Si
SLU 38	15.64	1806.81	-2866	-0.0000135	0.0003743	0.0035	2.763	3815.53	4245.54	4245.54	2.35	No	Si
SLU 35	12.48	1551.45	-10340	-0.0000269	0.0003743	0.0035	2.763	12409.64	12979.81	12979.81	8.37	No	Si
SLU 35	15.64	1869.92	-2893	-0.0000139	0.0003743	0.0035	2.763	3849.87	4280.75	4280.75	2.29	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	12.48	-2188	-6424	-0.0000215	0.0005615	0.0035	2.763		10603.11	10603.11	4.85		Si
SLV 12	15.64	4093.37	-2864	-0.0006322	0.0005615	0.0035	2.763		4275.31	4275.31	1.04		Si
SLV 8	12.48	-2042.62	-5132	-0.0000183	0.0005615	0.0035	2.763		8980.88	8980.88	4.4		Si
SLV 8	15.64	3345.54	-1943	-0.001722	0.0005615	0.0035	2.763		3046.78	3046.78	0.91		No
SLV 1	12.48	2387.63	-6163	-0.0000218	0.0005615	0.0035	2.763		8555.98	8555.98	3.58		Si
SLV 1	15.64	-1579.95	689	0.0398961	0.0005615	0.0035	2.2104		0	0	0		No
SLV 10	12.48	4569.05	-10199	-0.0000391	0.0005615	0.0035	2.763		13551.63	13551.63	2.97		Si
SLV 10	15.64	-2204.77	-479	-0.0003011	0.0005615	0.0035	2.2104		2860.16	2860.16	1.3		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	12.48	4611.98	-8973	-0.000037	0.0005615	0.0035	2.763		12062.93	12062.93	2.62		Si
SLV 5	15.64	-2920.82	447	0.0267979	0.0005615	0.0035	2.2104		0	0	0		No
SLV 6	12.48	4714.42	-8907	-0.0000374	0.0005615	0.0035	2.763		11982.01	11982.01	2.54		Si
SLV 6	15.64	-2952.59	441	0.0264736	0.0005615	0.0035	2.2104		0	0	0		No
SLV 7	12.48	-2145.06	-5198	-0.0000189	0.0005615	0.0035	2.763		9065.43	9065.43	4.23		Si
SLV 7	15.64	3377.31	-1937	-0.0018492	0.0005615	0.0035	2.763		3038.71	3038.71	0.9		No
SLV 9	12.48	4466.61	-10265	-0.0000388	0.0005615	0.0035	2.763		13631.11	13631.11	3.05		Si
SLV 9	15.64	-2173	-473	-0.0002962	0.0005615	0.0035	2.2104		2852.02	2852.02	1.31		Si
SLV 11	12.48	-2290.43	-6490	-0.000022	0.0005615	0.0035	2.763		10685.91	10685.91	4.67		Si
SLV 11	15.64	4125.13	-2858	-0.000717	0.0005615	0.0035	2.763		4267.38	4267.38	1.03		Si
SLV 2	12.48	2548.04	-6059	-0.0000223	0.0005615	0.0035	2.763		8424.41	8424.41	3.31		Si
SLV 2	15.64	-1629.69	679	0.0393956	0.0005615	0.0035	2.2104		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 70	12.48	1687.41	-11432	-9520	809	2.763	2.763	-12305	8585	6642	35683	23166	7046	30212	No	37.34	Si
SLU 70	15.64	1505.27	-2710	-2257	2994	2.763	2.4783	-2917	7333	5089	35683	23166	7046	30212	No	10.09	Si
SLU 65	12.48	1633.54	-10144	-8447	1192	2.763	2.763	-10919	8400	6499	35683	23166	7046	30212	No	25.35	Si
SLU 65	15.64	692.45	-1585	-1320	2730	2.763	2.763	-1706	7172	5549	35683	23166	7046	30212	No	11.07	Si
SLU 68	12.48	1686.15	-10747	-8949	1105	2.763	2.763	-11567	8487	6566	35683	23166	7046	30212	No	27.35	Si
SLU 68	15.64	1073.73	-2138	-1780	2898	2.763	2.6376	-2301	7251	5355	35683	23166	7046	30212	No	10.43	Si
SLU 66	12.48	1583.2	-10786	-8982	784	2.763	2.763	-11610	8492	6570	35683	23166	7046	30212	No	38.53	Si
SLU 66	15.64	1162.55	-2178	-1814	2745	2.763	2.5431	-2344	7257	5167	35683	23166	7046	30212	No	11.01	Si
SLU 78	12.48	1882.98	-12141	-10110	442	2.763	2.763	-13068	8687	6721	35683	23166	7046	30212	No	68.39	Si
SLU 78	15.64	1815.78	-2986	-2487	2755	2.763	2.3203	-3214	7373	4790	35683	23166	7046	30212	No	10.97	Si
SLU 72	12.48	1704.37	-11321	-9427	943	2.763	2.763	-12185	8569	6629	35683	23166	7046	30212	No	32.03	Si
SLU 72	15.64	1480.73	-2703	-2251	3012	2.763	2.5014	-2910	7332	5136	35683	23166	7046	30212	No	10.03	Si
SLU 67	12.48	1634.79	-10830	-9018	896	2.763	2.763	-11656	8499	6575	35683	23166	7046	30212	No	33.72	Si
SLU 67	15.64	1123.98	-2158	-1797	2826	2.763	2.5818	-2323	7254	5244	35683	23166	7046	30212	No	10.69	Si
SLU 71	12.48	1652.77	-11277	-9391	831	2.763	2.763	-12138	8563	6625	35683	23166	7046	30212	No	36.34	Si
SLU 71	15.64	1519.3	-2724	-2268	2932	2.763	2.471	-2931	7335	5075	35683	23166	7046	30212	No	10.3	Si
SLU 69	12.48	1635.81	-11389	-9484	697	2.763	2.763	-12258	8579	6637	35683	23166	7046	30212	No	43.33	Si
SLU 69	15.64	1543.84	-2730	-2274	2913	2.763	2.4482	-2939	7336	5029	35683	23166	7046	30212	No	10.37	Si
SLU 80	12.48	1899.94	-12029	-10017	576	2.763	2.763	-12948	8671	6708	35683	23166	7046	30212	No	52.46	Si
SLU 80	15.64	1791.24	-2979	-2481	2773	2.763	2.3408	-3207	7372	4832	35683	23166	7046	30212	No	10.89	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	12.48	-2188	-6424	-5349	-5962	2.763	2.763	-6914	11800	9129	35683	34750	7046	41795		7.01	Si
SLV 12	15.64	4093.37	-2864	-2385	-5126	2.763	0	-100271	16250	0	35683	34750	7046	35683		6.96	Si
SLV 10	12.48	4569.05	-10199	-8493	6560	2.763	2.763	-10978	12612	9757	35683	34750	7046	41795		6.37	Si
SLV 10	15.64	-2204.77	-479	-399	9877	2.2104	0	0	0	0	35683	27800	5637	33436		3.39	Si
SLV 11	12.48	-2290.43	-6490	-5404	-5992	2.763	2.763	-6986	11814	9140	35683	34750	7046	41795		6.97	Si
SLV 11	15.64	4125.13	-2858	-2380	-5237	2.763	0	-104355	16250	0	35683	34750	7046	35683		6.81	Si
SLV 7	12.48	-2145.06	-5198	-4328	-5109	2.763	2.763	-5595	11536	8924	35683	34750	7046	41795		8.18	Si
SLV 7	15.64	3377.31	-1937	-1613	-6157	2.763	0	-103645	16250	0	35683	34750	7046	35683		5.8	Si
SLD 5	12.48	2705.82	-8265	-6883	3665	2.763	2.763	-8896	12196	9435	35683	34750	7046	41795		11.41	Si
SLD 5	15.64	-951.67	-482	-402	4925	2.2104	0	0	0	0	35683	27800	5637	33436		6.79	Si
SLV 6	12.48	4714.42	-8907	-7417	7444	2.763	2.5566	-9587	12334	8829	35683	34750	7046	41795		5.61	Si
SLV 6	15.64	-2952.59	441	367	8956	2.2104	0	0	0	0	35683	27800	5637	33436		3.73	Si
SLD 6	12.48	2750.5	-8236	-6859	3678	2.763	2.763	-8865	12190	9431	35683	34750	7046	41795		11.36	Si
SLD 6	15.64	-965.52	-485	-404	4973	2.2104	0	0	0	0	35683	27800	5637	33436		6.72	Si
SLV 8	12.48	-2042.62	-5132	-4273	-5079	2.763	2.763	-5523	11521	8913	35683	34750	7046	41795		8.23	Si
SLV 8	15.64	3345.54	-1943	-1618	-6047	2.763	0	-103677	16250	0	35683	34750	7046	35683		5.9	Si
SLV 5	12.48	4611.98	-8973	-7472	7414	2.763	2.6026	-9658	12348	8999	35683	34750	7046	41795		5.64	Si
SLV 5	15.64	-2920.82	447	372	8846	2.2104	0	0	0	0	35683	27800	5637	33436		3.78	Si
SLV 9	12.48	4466.61	-10265	-8548	6530	2.763	2.763	-11049	12626	9768	35683	34750	7046	41795		6.4	Si
SLV 9	15.64	-2173	-473	-394	9767	2.2104	0	0	0	0	35683	27800	5637	33436		3.42	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.06 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 4	179667	0.53	0	-2231	320.32	0	0	No, e>t/2
SLV 1	179667	0.53	0	-1949	320.32	0	0	No, e>t/2
SLV 3	179667	0.53	0	-2240	320.32	0	0	No, e>t/2
SLV 2	179667	0.53	0	-1940	320.32	0	0	No, e>t/2
SLV 6	179667	0.53	4229	-3272	320.32	445.4	1.39	Si
SLV 5	179667	0.53	4236	-3277	320.32	446.11	1.39	Si
SLV 8	179667	0.53	5481	-4241	320.32	572.39	1.79	Si
SLV 7	179667	0.53	5488	-4246	320.32	573.09	1.79	Si
SLV 10	179667	0.53	6079	-4703	320.32	632.17	1.97	Si
SLV 9	179667	0.53	6086	-4708	320.32	632.87	1.98	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.06 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-2864	-6424	356	3.058	659.5	0.891	49.90457	13.11449	Si
SLV 11	-2858	-6490	356	3.062	658.9	0.891	49.96436	13.11449	Si
SLV 8	-1943	-5132	-247	3.754	575	0.889	61.35489	13.11449	Si
SLV 7	-1937	-5198	-247	3.76	574.5	0.889	61.44207	13.11449	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 16	-3105	-9234	1022	2.796	682.3	0.892	45.55914	7.68898	Si
SLV 15	-3096	-9338	1022	2.8	681.4	0.892	45.64113	7.68898	Si
SLV 14	-2390	-10366	990	3.231	615.4	0.889	52.82046	7.68898	Si
SLV 10	-479	-10199	249	5.779	463.4	0.932	90.16302	13.11449	Si
SLV 13	-2380	-10470	990	3.238	614.5	0.889	52.92817	7.68898	Si
SLV 9	-473	-10265	250	5.792	463.1	0.932	90.31389	13.11449	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.289	SLU 35	Si
V_SLU	10.029	SLU 72	Si
PF_SLV	0	SLV 1	No
V_SLV	3.385	SLV 10	Si
PFFP_SLV	0	SLV 1	No
R_SLV	3.805	SLV 12	Si

Maschio 229

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.268	-3.314	-6.268	-0.194	L7	L8	3.12	0.16	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 61	12.48	2875.2	-6551	-0.0000306	0.0004492	0.0035	3.12	9121.76	10547.29	10547.29	3.67	No	Si
SLU 61	14.58	-1982.62	-1665	-0.000023	0.0004492	0.0035	2.496	2525.94	8267.32	8267.32	4.17	No	Si
SLU 43	12.48	2690.97	-6081	-0.0000285	0.0004492	0.0035	3.12	8540.26	9886.44	9886.44	3.67	No	Si
SLU 43	14.58	-2103	-1516	-0.0000368	0.0004492	0.0035	2.496	2305.54	8047.31	8047.31	3.83	No	Si
SLU 51	12.48	2899.71	-6564	-0.0000308	0.0004492	0.0035	3.12	9138.33	10566.31	10566.31	3.64	No	Si
SLU 51	14.58	-2363.75	-1703	-0.0000416	0.0004492	0.0035	2.496	2582.7	8324.17	8324.17	3.52	No	Si
SLU 47	12.48	2877.12	-6326	-0.00003	0.0004492	0.0035	3.12	8845.07	10231.24	10231.24	3.56	No	Si
SLU 47	14.58	-2271.67	-1573	-0.0000455	0.0004492	0.0035	2.496	2390.22	8131.71	8131.71	3.58	No	Si
SLU 50	12.48	2829.61	-6561	-0.0000304	0.0004492	0.0035	3.12	9134.69	10562.14	10562.14	3.73	No	Si
SLU 50	14.58	-2330.93	-1735	-0.0000369	0.0004492	0.0035	2.496	2628.88	8370.48	8370.48	3.59	No	Si
SLU 63	12.48	2944.51	-6791	-0.0000316	0.0004492	0.0035	3.12	9414.67	10884.44	10884.44	3.7	No	Si
SLU 63	14.58	-2096.58	-1774	-0.000024	0.0004492	0.0035	2.496	2687.08	8428.91	8428.91	4.02	No	Si
SLU 2	12.48	2199.15	-4822	-0.0000228	0.0004492	0.0035	3.12	6927.02	8100.22	8100.22	3.68	No	Si
SLU 2	14.58	-1646.49	-1185	-0.0000289	0.0004492	0.0035	2.496	1811.95	7558.64	7558.64	4.59	No	Si
SLU 55	12.48	2957.01	-6653	-0.0000313	0.0004492	0.0035	3.12	9246.64	10690.92	10690.92	3.62	No	Si
SLU 55	14.58	-2164.43	-1699	-0.0000293	0.0004492	0.0035	2.496	2576.68	8318.14	8318.14	3.84	No	Si
SLU 52	12.48	2887.69	-6413	-0.0000303	0.0004492	0.0035	3.12	8952.03	10353.07	10353.07	3.59	No	Si
SLU 52	14.58	-2050.46	-1590	-0.0000287	0.0004492	0.0035	2.496	2415.11	8156.55	8156.55	3.98	No	Si
SLU 44	12.48	2807.8	-6086	-0.0000291	0.0004492	0.0035	3.12	8546.43	9893.39	9893.39	3.52	No	Si
SLU 44	14.58	-2157.7	-1463	-0.0000461	0.0004492	0.0035	2.496	2227.95	7970.13	7970.13	3.69	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 5	12.48	4363.64	-5403	-0.0000377	0.0006738	0.0035	3.12		9013.26	9013.26	2.07		Si
SLD 5	14.58	-3071.33	-352	-0.0001743	0.0006738	0.0035	2.496		6314.71	6314.71	2.06		Si
SLV 10	12.48	7984.57	-6610	-0.0001021	0.0006738	0.0035	3.12		10745.9	10745.9	1.35		Si
SLV 10	14.58	-5575.05	854	-0.0003469	0.0006738	0.0035	2.496		4502.77	4502.77	0.81		No
SLV 14	12.48	4766.51	-6715	-0.0000415	0.0006738	0.0035	3.12		10894.88	10894.88	2.29		Si
SLV 14	14.58	-3450.27	-885	-0.0001816	0.0006738	0.0035	2.496		7107.23	7107.23	2.06		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	12.48	7662.03	-6612	-0.000089	0.0006738	0.0035	3.12		10749.44	10749.44	1.4		Si
SLV 9	14.58	-5418.23	744	-0.0003361	0.0006738	0.0035	2.496		4669.12	4669.12	0.86		No
SLD 9	12.48	4555.99	-5738	-0.0000394	0.0006738	0.0035	3.12		9498.42	9498.42	2.08		Si
SLD 9	14.58	-3241.86	-427	-0.0001831	0.0006738	0.0035	2.496		6426.92	6426.92	1.98		Si
SLD 6	12.48	4504.33	-5402	-0.0000391	0.0006738	0.0035	3.12		9011.69	9011.69	2		Si
SLD 6	14.58	-3139.73	-304	-0.0001796	0.0006738	0.0035	2.496		6242.66	6242.66	1.99		Si
SLV 5	12.48	7211.02	-5827	-0.000098	0.0006738	0.0035	3.12		9627.13	9627.13	1.34		Si
SLV 5	14.58	-5019.1	919	-0.0003084	0.0006738	0.0035	2.496		4404.57	4404.57	0.88		No
SLV 6	12.48	7533.56	-5825	-0.0001199	0.0006738	0.0035	3.12		9623.54	9623.54	1.28		Si
SLV 6	14.58	-5175.92	1029	-0.0003188	0.0006738	0.0035	2.496		4238.23	4238.23	0.82		No
SLD 10	12.48	4696.68	-5737	-0.0000407	0.0006738	0.0035	3.12		9496.85	9496.85	2.02		Si
SLD 10	14.58	-3310.27	-379	-0.0001885	0.0006738	0.0035	2.496		6355.18	6355.18	1.92		Si
SLV 2	12.48	3263.14	-4098	-0.000028	0.0006738	0.0035	3.12		7113.6	7113.6	2.18		Si
SLV 2	14.58	-2119.83	-301	-0.0001173	0.0006738	0.0035	2.496		6237.47	6237.47	2.94		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	12.48	2991.31	-7319	-4297	4263	3.12	3.12	-8608	9481	4733	101952	17940	15912	33852	No	7.94	Si
SLU 84	14.58	-1998.34	-2043	-1200	4319	2.496	1.7459	0	0	0	101952	14352	12730	27082	No	6.27	Si
SLU 70	12.48	2904.94	-7257	-4261	4198	3.12	3.12	-8535	9471	4728	101952	17940	15912	33852	No	8.06	Si
SLU 70	14.58	-2201.01	-2142	-1258	4257	2.496	1.5974	0	0	0	101952	14352	12730	27082	No	6.36	Si
SLU 59	12.48	2979.59	-6891	-4046	4291	3.12	3.12	-8106	9414	4700	101952	17940	15912	33852	No	7.89	Si
SLU 59	14.58	-2256.51	-1829	-1074	4350	2.496	0.9796	0	0	0	101952	14352	12730	27082	No	6.23	Si
SLU 78	12.48	2984.83	-7584	-4453	4335	3.12	3.12	-8920	9523	4754	101952	17940	15912	33852	No	7.81	Si
SLU 78	14.58	-2093.77	-2268	-1332	4392	2.496	1.9109	0	0	0	101952	14352	12730	27082	No	6.17	Si
SLU 72	12.48	2946.51	-7092	-4164	4252	3.12	3.12	-8341	9446	4715	101952	17940	15912	33852	No	7.96	Si
SLU 72	14.58	-2265.51	-1972	-1158	4312	2.496	1.2339	0	0	0	101952	14352	12730	27082	No	6.28	Si
SLU 80	12.48	3026.39	-7419	-4356	4389	3.12	3.12	-8726	9497	4741	101952	17940	15912	33852	No	7.71	Si
SLU 80	14.58	-2158.27	-2099	-1232	4447	2.496	1.5946	0	0	0	101952	14352	12730	27082	No	6.09	Si
SLU 77	12.48	2914.73	-7581	-4451	4288	3.12	3.12	-8916	9522	4753	101952	17940	15912	33852	No	7.89	Si
SLU 77	14.58	-2060.94	-2300	-1350	4279	2.496	1.9915	0	0	0	101952	14352	12730	27082	No	6.33	Si
SLU 76	12.48	3003.81	-7180	-4216	4236	3.12	3.12	-8446	9459	4722	101952	17940	15912	33852	No	7.99	Si
SLU 76	14.58	-2066.19	-1968	-1156	4337	2.496	1.5306	0	0	0	101952	14352	12730	27082	No	6.24	Si
SLU 57	12.48	2938.03	-7056	-4143	4237	3.12	3.12	-8299	9440	4712	101952	17940	15912	33852	No	7.99	Si
SLU 57	14.58	-2192.01	-1999	-1174	4295	2.496	1.3907	0	0	0	101952	14352	12730	27082	No	6.31	Si
SLU 79	12.48	2956.3	-7416	-4354	4342	3.12	3.12	-8722	9496	4741	101952	17940	15912	33852	No	7.8	Si
SLU 79	14.58	-2125.45	-2130	-1251	4334	2.496	1.6863	0	0	0	101952	14352	12730	27082	No	6.25	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 6	12.48	4504.33	-5402	-3172	5838	3.12	2.1786	-6354	13771	4800	101952	26910	15912	42822		7.33	Si
SLD 6	14.58	-3139.73	-304	-179	5942	2.496	0	0	0	0	101952	21528	12730	34258		5.77	Si
SLD 10	12.48	4696.68	-5737	-3369	6201	3.12	2.2242	-6748	13850	4929	101952	26910	15912	42822		6.91	Si
SLD 10	14.58	-3310.27	-379	-223	6305	2.496	0	0	0	0	101952	21528	12730	34258		5.43	Si
SLV 13	12.48	4261.46	-6718	-3945	6175	3.12	2.7771	-7902	14080	6257	101952	26910	15912	42822		6.93	Si
SLV 13	14.58	-3204.72	-1057	-621	6249	2.496	0	0	0	0	101952	21528	12730	34258		5.48	Si
SLD 5	12.48	4363.64	-5403	-3173	5704	3.12	2.2572	-6355	13771	4973	101952	26910	15912	42822		7.51	Si
SLD 5	14.58	-3071.33	-352	-207	5807	2.496	0	0	0	0	101952	21528	12730	34258		5.9	Si
SLV 5	12.48	7211.02	-5827	-3422	9167	3.12	0.9677	-22337	16250	2516	101952	26910	15912	42822		4.67	Si
SLV 5	14.58	-5019.1	919	540	9419	2.496	0	0	0	0	101952	21528	12730	34258		3.64	Si
SLV 10	12.48	7984.57	-6610	-3881	10323	3.12	1.0561	-23228	16250	2746	101952	26910	15912	42822		4.15	Si
SLV 10	14.58	-5575.05	854	501	10578	2.496	0	0	0	0	101952	21528	12730	34258		3.24	Si
SLV 9	12.48	7662.03	-6612	-3883	10015	3.12	1.2038	-7778	14056	2707	101952	26910	15912	42822		4.28	Si
SLV 9	14.58	-5418.23	744	437	10269	2.496	0	0	0	0	101952	21528	12730	34258		3.34	Si
SLD 9	12.48	4555.99	-5738	-3369	6066	3.12	2.2982	-6750	13850	5093	101952	26910	15912	42822		7.06	Si
SLD 9	14.58	-3241.86	-427	-251	6170	2.496	0	0	0	0	101952	21528	12730	34258		5.55	Si
SLV 14	12.48	4766.51	-6715	-3943	6658	3.12	2.5504	-7898	14080	5745	101952	26910	15912	42822		6.43	Si
SLV 14	14.58	-3450.27	-885	-519	6732	2.496	0	0	0	0	101952	21528	12730	34258		5.09	Si
SLV 6	12.48	7533.56	-5825	-3420	9475	3.12	0.8	-27056	16250	2080	101952	26910	15912	42822		4.52	Si
SLV 6	14.58	-5175.92	1029	604	9727	2.496	0	0	0	0	101952	21528	12730	34258		3.52	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 14.06 Ta 0.1 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 6	-937	0.53	213.74	0	314.88	157.44	0.74	No
SLV 5	-1036	0.53	213.74	0	325.05	162.53	0.76	No
SLV 10	-1227	0.53	213.74	0	344.51	172.25	0.81	No
SLV 9	-1326	0.53	213.74	0	354.52	177.26	0.83	No
SLV 2	-1496	0.53	213.74	0	371.63	185.81	0.87	No
SLV 1	-1651	0.53	213.74	0	387.21	193.6	0.91	No
SLV 4	-2290	0.53	213.74	0	450.87	225.44	1.05	Si
SLV 3	-2446	0.53	213.74	0	466.14	233.07	1.09	Si
SLV 14	-2465	0.53	213.74	0	468.06	234.03	1.09	Si
SLV 13	-2620	0.53	213.74	0	483.3	241.65	1.13	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.06 Wa = 0.03 Ta = 0.1042

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-487	-4296	21	9.227	309.6	0.913	146.84339	21.25109	Si
SLV 12	-483	-4294	21	9.245	309.4	0.914	147.07889	21.25109	Si
SLV 7	-409	-3511	-97	9.578	304.7	0.92	151.27192	21.25109	Si
SLV 8	-405	-3509	-97	9.597	304.4	0.921	151.5162	21.25109	Si
SLV 9	-257	-6612	96	10.442	296.4	0.939	161.60218	21.25109	Si
SLV 10	-253	-6610	96	10.465	296.2	0.94	161.85804	21.25109	Si
SLV 5	-179	-5827	-21	10.996	293.1	0.953	167.75901	21.25109	Si
SLV 6	-175	-5825	-21	11.022	293	0.953	168.01809	21.25109	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 15	-498	-6024	184	9.086	310.4	0.912	144.74474	12.65509	Si
SLV 16	-492	-6020	184	9.113	310	0.913	145.10805	12.65509	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.522	SLU 51	Si
V_SLU	6.09	SLU 80	Si
PF_SLV	0.808	SLV 10	No
V_SLV	3.239	SLV 10	Si
PFFP_SLV	0.737	SLV 6	No
R_SLV	6.91	SLV 11	Si

Maschio 231

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.163	1.006	-5.163	5.686	L7	L8	4.68	0.16	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 30	12.48	819.78	-6255	-0.0000122	0.0004492	0.0035	4.68	13635.69	16233.62	16233.62	19.8	No	Si
SLU 30	15.64	895.22	-1126	-0.0000038	0.0004492	0.0035	4.68	2603.5	4884.08	4884.08	5.46	No	Si
SLU 35	12.48	963.44	-6827	-0.0000135	0.0004492	0.0035	4.68	14783.93	17465.71	17465.71	18.13	No	Si
SLU 35	15.64	827.02	-1059	-0.0000035	0.0004492	0.0035	4.68	2449.34	4731.54	4731.54	5.72	No	Si
SLU 38	12.48	1174.3	-6552	-0.0000134	0.0004492	0.0035	4.68	14234.19	16873.58	16873.58	14.37	No	Si
SLU 38	15.64	868.49	-1032	-0.0000036	0.0004492	0.0035	4.68	2386.9	4669.82	4669.82	5.38	No	Si
SLU 79	12.48	1059.08	-7774	-0.0000153	0.0004492	0.0035	4.68	16644.93	19502.04	19502.04	18.41	No	Si
SLU 79	15.64	811.27	-1110	-0.0000036	0.0004492	0.0035	4.68	2566.67	4847.62	4847.62	5.98	No	Si
SLU 28	12.48	686.49	-6562	-0.0000124	0.0004492	0.0035	4.68	14253.05	16893.83	16893.83	24.61	No	Si
SLU 28	15.64	794.95	-1141	-0.0000036	0.0004492	0.0035	4.68	2636.92	4917.18	4917.18	6.19	No	Si
SLU 71	12.48	704.56	-7476	-0.000014	0.0004492	0.0035	4.68	16065.01	18862.1	18862.1	26.77	No	Si
SLU 71	15.64	838	-1205	-0.0000038	0.0004492	0.0035	4.68	2782.88	5061.88	5061.88	6.04	No	Si
SLU 36	12.48	1041.01	-6859	-0.0000137	0.0004492	0.0035	4.68	14846.88	17533.78	17533.78	16.84	No	Si
SLU 36	15.64	768.22	-1046	-0.0000034	0.0004492	0.0035	4.68	2420.39	4702.92	4702.92	6.12	No	Si
SLU 37	12.48	1096.73	-6521	-0.0000132	0.0004492	0.0035	4.68	14170.74	16805.51	16805.51	15.32	No	Si
SLU 37	15.64	927.29	-1044	-0.0000037	0.0004492	0.0035	4.68	2415.86	4698.43	4698.43	5.07	No	Si
SLU 29	12.48	742.21	-6223	-0.000012	0.0004492	0.0035	4.68	13571.75	16165.55	16165.55	21.78	No	Si
SLU 29	15.64	954.02	-1139	-0.0000039	0.0004492	0.0035	4.68	2632.39	4912.7	4912.7	5.15	No	Si
SLU 27	12.48	608.92	-6530	-0.0000122	0.0004492	0.0035	4.68	14189.61	16825.75	16825.75	27.63	No	Si
SLU 27	15.64	853.75	-1154	-0.0000037	0.0004492	0.0035	4.68	2665.8	4945.8	4945.8	5.79	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	12.48	4917.62	-7457	-0.000023	0.0006738	0.0035	4.68		18986.46	18986.46	3.86		Si
SLV 10	15.64	-6931.69	1635	-0.0001825	0.0006738	0.0035	3.744		8958.82	8958.82	1.29		Si
SLV 7	12.48	-4029.71	-2873	-0.0000159	0.0006738	0.0035	3.744		19060.54	19060.54	4.73		Si
SLV 7	15.64	6809.45	-2398	-0.0005223	0.0006738	0.0035	3.744		7780.58	7780.58	1.14		Si
SLV 14	12.48	-4472.08	-4751	-0.0000176	0.0006738	0.0035	4.68		23196.34	23196.34	5.19		Si
SLV 14	15.64	-7574.27	2912	-0.0001769	0.0006738	0.0035	3.744		6050.16	6050.16	0.8		No
SLV 12	12.48	-7870.06	-2240	-0.0001567	0.0006738	0.0035	3.744		17661.41	17661.41	2.24		Si
SLV 12	15.64	3103.41	-614	-0.000436	0.0006738	0.0035	3.744		3732.61	3732.61	1.2		Si
SLV 4	12.48	6128.27	-5831	-0.0000236	0.0006738	0.0035	4.68		15428.31	15428.31	2.52		Si
SLV 4	15.64	7152.87	-3644	-0.0000511	0.0006738	0.0035	4.68		10572.63	10572.63	1.48		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	12.48	-8360.71	-2079	-0.0001795	0.0006738	0.0035	3.744		17302.89	17302.89	2.07		Si
SLV 11	15.64	3294.47	-634	-0.0004753	0.0006738	0.0035	3.744		3778.54	3778.54	1.15		Si
SLV 9	12.48	4426.97	-7296	-0.0000216	0.0006738	0.0035	4.68		18635.78	18635.78	4.21		Si
SLV 9	15.64	-6740.63	1615	-0.0001769	0.0006738	0.0035	3.744		9004.46	9004.46	1.34		Si
SLV 13	12.48	-5240.37	-4498	-0.0000199	0.0006738	0.0035	4.68		22643.65	22643.65	4.32		Si
SLV 13	15.64	-7275.1	2880	-0.000167	0.0006738	0.0035	3.744		6122.18	6122.18	0.84		No
SLV 8	12.48	-3539.06	-3034	-0.0000134	0.0006738	0.0035	4.68		19417.07	19417.07	5.49		Si
SLV 8	15.64	6618.4	-2378	-0.0004776	0.0006738	0.0035	4.68		7735.43	7735.43	1.17		Si
SLV 3	12.48	5359.99	-5579	-0.000021	0.0006738	0.0035	4.68		14870.87	14870.87	2.77		Si
SLV 3	15.64	7452.04	-3675	-0.0000624	0.0006738	0.0035	4.68		10643.33	10643.33	1.43		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	12.48	1123.12	-7241	-4252	1488	4.68	4.68	-5678	9090	6807	101952	26910	23868	50778	No	34.12	Si
SLU 82	15.64	-99.85	-421	-247	1466	4.68	4.68	-330	8377	6273	101952	26910	23868	50778	No	34.64	Si
SLU 76	12.48	1105.63	-7480	-4392	1324	4.68	4.68	-5866	9115	6826	101952	26910	23868	50778	No	38.36	Si
SLU 76	15.64	292.84	-771	-453	1278	4.68	4.68	-605	8414	6300	101952	26910	23868	50778	No	39.72	Si
SLU 81	12.48	1045.55	-7209	-4233	1348	4.68	4.68	-5653	9087	6804	101952	26910	23868	50778	No	37.66	Si
SLU 81	15.64	-41.06	-434	-255	1326	4.68	4.68	-340	8379	6274	101952	26910	23868	50778	No	38.29	Si
SLU 75	12.48	920.63	-7766	-4560	1381	4.68	4.68	-6090	9145	6848	101952	26910	23868	50778	No	36.78	Si
SLU 75	15.64	231.77	-794	-466	1345	4.68	4.68	-623	8416	6302	101952	26910	23868	50778	No	37.77	Si
SLU 40	12.48	1160.77	-5988	-3516	1426	4.68	4.68	-4695	8959	6709	101952	26910	23868	50778	No	35.6	Si
SLU 40	15.64	16.17	-355	-209	1402	4.68	4.68	-279	8370	6268	101952	26910	23868	50778	No	36.21	Si
SLU 42	12.48	1243.5	-6334	-3719	1349	4.68	4.68	-4966	8996	6736	101952	26910	23868	50778	No	37.63	Si
SLU 42	15.64	436.61	-673	-395	1302	4.68	4.68	-528	8404	6293	101952	26910	23868	50778	No	39.01	Si
SLU 31	12.48	1060.55	-5881	-3453	1339	4.68	4.68	-4612	8948	6700	101952	26910	23868	50778	No	37.92	Si
SLU 31	15.64	-11.57	-388	-228	1316	4.68	4.68	-304	8374	6270	101952	26910	23868	50778	No	38.59	Si
SLU 84	12.48	1205.85	-7587	-4455	1411	4.68	4.68	-5949	9127	6834	101952	26910	23868	50778	No	35.98	Si
SLU 84	15.64	320.58	-739	-434	1365	4.68	4.68	-580	8411	6298	101952	26910	23868	50778	No	37.19	Si
SLU 33	12.48	958.28	-6513	-3824	1319	4.68	4.68	-5107	9014	6750	101952	26910	23868	50778	No	38.5	Si
SLU 33	15.64	347.79	-728	-428	1281	4.68	4.68	-571	8409	6297	101952	26910	23868	50778	No	39.64	Si
SLU 73	12.48	1022.9	-7135	-4189	1401	4.68	4.68	-5594	9079	6799	101952	26910	23868	50778	No	36.25	Si
SLU 73	15.64	-127.59	-454	-266	1379	4.68	4.68	-356	8381	6276	101952	26910	23868	50778	No	36.82	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	12.48	8757.97	-8090	-4750	12277	4.68	3.7721	-6343	13769	8310	101952	40365	23868	64233		5.23	Si
SLV 5	15.64	-3225.64	-150	-88	13122	3.744	0	0	0	0	101952	32292	19094	51386		3.92	Si
SLV 12	12.48	-7870.06	-2240	-1315	-10985	3.744	0	0	0	0	101952	32292	19094	51386		4.68	Si
SLV 12	15.64	3103.41	-614	-360	-11856	3.744	0	0	0	0	101952	32292	19094	51386		4.33	Si
SLV 10	12.48	4917.62	-7457	-4378	11395	4.68	4.68	-5847	13669	10236	101952	40365	23868	64233		5.64	Si
SLV 10	15.64	-6931.69	1635	960	11220	3.744	0	0	0	0	101952	32292	19094	51386		4.58	Si
SLV 8	12.48	-3539.06	-3034	-1781	-9389	4.68	3.5204	-3164	13133	7397	101952	40365	23868	64233		6.84	Si
SLV 8	15.64	6618.4	-2378	-1396	-9247	4.68	0	-61906	16250	0	101952	40365	23868	64233		6.95	Si
SLV 6	12.48	9248.62	-8251	-4844	12992	4.68	3.6572	-6470	13794	8071	101952	40365	23868	64233		4.94	Si
SLV 6	15.64	-3416.7	-130	-76	13829	3.744	0	0	0	0	101952	32292	19094	51386		3.72	Si
SLV 7	12.48	-4029.71	-2873	-1687	-10104	3.744	2.8117	0	0	0	101952	32292	19094	51386		5.09	Si
SLV 7	15.64	6809.45	-2398	-1408	-9954	3.744	0	0	0	0	101952	32292	19094	51386		5.16	Si
SLV 2	12.48	9964.58	-7396	-4343	7224	4.68	2.9783	-5800	13660	6509	101952	40365	23868	64233		8.89	Si
SLV 2	15.64	4142.34	-2969	-1743	8997	4.68	2.8348	-2328	12966	5881	101952	40365	23868	64233		7.14	Si
SLV 11	12.48	-8360.71	-2079	-1221	-11701	3.744	0	0	0	0	101952	32292	19094	51386		4.39	Si
SLV 11	15.64	3294.47	-634	-372	-12564	3.744	0	0	0	0	101952	32292	19094	51386		4.09	Si
SLV 9	12.48	4426.97	-7296	-4284	10680	4.68	4.68	-5721	13644	10217	101952	40365	23868	64233		6.01	Si
SLV 9	15.64	-6740.63	1615	948	10512	3.744	0	0	0	0	101952	32292	19094	51386		4.89	Si
SLV 15	12.48	-9076.67	-2933	-1722	-5933	3.744	0	0	0	0	101952	32292	19094	51386		8.66	Si
SLV 15	15.64	-4264.57	2206	1295	-7732	3.744	1.2193	0	0	0	101952	32292	19094	51386		6.65	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 14.06 Ta 0.1 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 1	2775	0.53	320.6	0	0	0	0	No
SLV 3	3002	0.53	320.6	0	0	0	0	No
SLV 4	2910	0.53	320.6	0	0	0	0	No
SLV 2	2682	0.53	320.6	0	0	0	0	No
SLV 7	265	0.53	320.6	0	280.11	140.06	0.44	No
SLV 8	206	0.53	320.6	0	287.07	143.54	0.45	No
SLV 5	-494	0.53	320.6	0	365.12	182.56	0.57	No
SLV 6	-553	0.53	320.6	0	371.5	185.75	0.58	No
SLV 11	-2294	0.53	320.6	0	551.54	275.77	0.86	No
SLV 12	-2353	0.53	320.6	0	557.5	278.75	0.87	No

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.06 Wa = 0.03 Ta = 0.1042

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-2398	-2873	-155	5.809	603.5	0.889	94.93341	21.25109	Si
SLV 8	-2378	-3034	-155	5.834	601.6	0.889	95.35884	21.25109	Si
SLV 3	-3675	-5579	-448	4.486	724.7	0.896	72.76517	12.65509	Si
SLV 4	-3644	-5831	-449	4.51	721.6	0.896	73.17537	12.65509	Si
SLV 1	-3001	-7144	-435	5.075	659.9	0.892	82.70933	12.65509	Si
SLV 2	-2969	-7396	-436	5.106	657	0.892	83.23156	12.65509	Si
SLV 11	-634	-2079	110	9.517	458.3	0.919	150.53595	21.25109	Si
SLV 12	-614	-2240	110	9.587	457.1	0.92	151.42579	21.25109	Si
SLV 5	-150	-8090	-110	11.534	436	0.97	172.76654	21.25109	Si
SLV 6	-130	-8251	-111	11.636	435.6	0.974	173.68216	21.25109	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita

dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.067	SLU 37	Si
V_SLU	34.12	SLU 82	Si
PF_SLV	0.799	SLV 14	No
V_SLV	3.716	SLV 6	Si
PFFP_SLV	0	SLV 1	No
R_SLV	4.467	SLV 7	Si

Maschio 234

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-2.963	5.826	-4.953	5.826	L7	L8	1.99	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 51	13.38	-516.31	-4540	-0.0000151	0.0003743	0.0035	1.99	4155.61	43099.31	43099.31	83.47	No	Si
SLU 51	15.18	-2520.99	-1923	-0.0000522	0.0003743	0.0035	1.99	0	43439.94	43439.94	17.23	No	Si
SLU 50	13.38	-528.11	-4519	-0.0000151	0.0003743	0.0035	1.99	4138.02	43102.05	43102.05	81.62	No	Si
SLU 50	15.18	-2515.13	-1902	-0.0000522	0.0003743	0.0035	1.99	0	43442.68	43442.68	17.27	No	Si
SLU 48	13.38	-570.41	-4814	-0.0000162	0.0003743	0.0035	1.99	4383.72	43063.58	43063.58	75.5	No	Si
SLU 48	15.18	-2531.74	-2197	-0.0000499	0.0003743	0.0035	1.99	0	43404.21	43404.21	17.14	No	Si
SLU 78	13.38	-763.84	-4774	-0.0000176	0.0003743	0.0035	1.99	4350.48	43068.82	43068.82	56.38	No	Si
SLU 78	15.18	-2414.13	-2131	-0.0000472	0.0003743	0.0035	1.99	0	43412.84	43412.84	17.98	No	Si
SLU 71	13.38	-669.94	-4800	-0.0000169	0.0003743	0.0035	1.99	4371.8	43065.46	43065.46	64.28	No	Si
SLU 71	15.18	-2541.97	-2157	-0.0000506	0.0003743	0.0035	1.99	0	43409.49	43409.49	17.08	No	Si
SLU 69	13.38	-712.25	-5096	-0.000018	0.0003743	0.0035	1.99	4614.59	43026.99	43026.99	60.41	No	Si
SLU 69	15.18	-2558.59	-2452	-0.0000481	0.0003743	0.0035	1.99	0	43371.02	43371.02	16.95	No	Si
SLU 70	13.38	-700.46	-5117	-0.000018	0.0003743	0.0035	1.99	4631.76	43024.26	43024.26	61.42	No	Si
SLU 70	15.18	-2564.45	-2473	-0.0000481	0.0003743	0.0035	1.99	0	43368.28	43368.28	16.91	No	Si
SLU 77	13.38	-775.63	-4753	-0.0000176	0.0003743	0.0035	1.99	4333.07	43071.55	43071.55	55.53	No	Si
SLU 77	15.18	-2408.27	-2110	-0.0000472	0.0003743	0.0035	1.99	0	43415.58	43415.58	18.03	No	Si
SLU 72	13.38	-658.15	-4821	-0.0000169	0.0003743	0.0035	1.99	4389.18	43062.72	43062.72	65.43	No	Si
SLU 72	15.18	-2547.84	-2178	-0.0000506	0.0003743	0.0035	1.99	0	43406.75	43406.75	17.04	No	Si
SLU 49	13.38	-558.62	-4835	-0.0000162	0.0003743	0.0035	1.99	4401.1	43060.85	43060.85	77.08	No	Si
SLU 49	15.18	-2537.61	-2218	-0.0000499	0.0003743	0.0035	1.99	0	43401.47	43401.47	17.1	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	13.38	-1410.9	-912	-0.00003	0.0005615	0.0035	1.99		50852.65	50852.65	36.04		Si
SLV 2	15.18	-3632.4	2008	-0.0000956	0.0005615	0.0035	1.99		50123.02	50123.02	13.8		Si
SLD 4	13.38	-1065.38	-1319	-0.0000167	0.0005615	0.0035	1.99		50819.47	50819.47	47.7		Si
SLD 4	15.18	-2344.29	1079	-0.000061	0.0005615	0.0035	1.99		50452.7	50452.7	21.52		Si
SLV 3	13.38	-2453.53	205	-0.0000624	0.0005615	0.0035	1.99		50762.72	50762.72	20.69		Si
SLV 3	15.18	-2769.58	3092	-0.0000698	0.0005615	0.0035	1.99		49738.37	49738.37	17.96		Si
SLD 3	13.38	-1235.1	-1314	-0.0000214	0.0005615	0.0035	1.99		50819.85	50819.85	41.15		Si
SLD 3	15.18	-2078.64	1084	-0.000054	0.0005615	0.0035	1.99		50451.07	50451.07	24.27		Si
SLD 2	13.38	-780.24	-1806	-0.0000104	0.0005615	0.0035	1.99		50779.67	50779.67	65.08		Si
SLD 2	15.18	-2452.12	606	-0.0000633	0.0005615	0.0035	1.99		50620.51	50620.51	20.64		Si
SLD 1	13.38	-949.96	-1802	-0.0000124	0.0005615	0.0035	1.99		50780.04	50780.04	53.45		Si
SLD 1	15.18	-2186.47	611	-0.0000564	0.0005615	0.0035	1.99		50618.87	50618.87	23.15		Si
SLV 4	13.38	-2058.14	195	-0.0000522	0.0005615	0.0035	1.99		50766.53	50766.53	24.67		Si
SLV 4	15.18	-3388.46	3082	-0.0000877	0.0005615	0.0035	1.99		49742.18	49742.18	14.68		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	13.38	403.32	-3676	-0.000012	0.0005615	0.0035	1.99		50586.64	50586.64	125.43		Si
SLV 6	15.18	-2660.76	-1329	-0.0000603	0.0005615	0.0035	1.99		50818.59	50818.59	19.1		Si
SLV 1	13.38	-1806.29	-902	-0.0000406	0.0005615	0.0035	1.99		50853.53	50853.53	28.15		Si
SLV 1	15.18	-3013.52	2019	-0.0000788	0.0005615	0.0035	1.99		50119.21	50119.21	16.63		Si
SLV 5	13.38	150.81	-3669	-0.0000101	0.0005615	0.0035	1.99		50587.19	50587.19	335.44		Si
SLV 5	15.18	-2265.52	-1323	-0.0000497	0.0005615	0.0035	1.99		50819.15	50819.15	22.43		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 51	13.38	-516.31	-4540	-3239	1118	1.99	1.99	-5812	7719	4301	45085	16685	10149	26834	No	24	Si
SLU 51	15.18	-2520.99	-1923	-1372	1118	1.99	0	-9617	8699	0	45085	16685	10149	26834	No	24	Si
SLU 72	13.38	-658.15	-4821	-3439	1054	1.99	1.99	-6172	7767	4328	45085	16685	10149	26834	No	25.46	Si
SLU 72	15.18	-2547.84	-2178	-1554	1054	1.99	0	-10026	8646	0	45085	16685	10149	26834	No	25.46	Si
SLU 50	13.38	-528.11	-4519	-3224	1108	1.99	1.99	-5785	7716	4299	45085	16685	10149	26834	No	24.22	Si
SLU 50	15.18	-2515.13	-1902	-1357	1108	1.99	0	-9567	8700	0	45085	16685	10149	26834	No	24.22	Si
SLU 71	13.38	-669.94	-4800	-3424	1044	1.99	1.99	-6145	7764	4326	45085	16685	10149	26834	No	25.7	Si
SLU 71	15.18	-2541.97	-2157	-1539	1044	1.99	0	-9987	8647	0	45085	16685	10149	26834	No	25.7	Si
SLU 46	13.38	-438.29	-4138	-2952	1048	1.99	1.99	-5298	7651	4263	45085	16685	10149	26834	No	25.62	Si
SLU 46	15.18	-2316.34	-1521	-1085	1048	1.99	0	-8321	8627	0	45085	16685	10149	26834	No	25.62	Si
SLU 48	13.38	-570.41	-4814	-3434	1094	1.99	1.99	-6164	7766	4327	45085	16685	10149	26834	No	24.53	Si
SLU 48	15.18	-2531.74	-2197	-1567	1094	1.99	0	-9993	8625	0	45085	16685	10149	26834	No	24.53	Si
SLU 47	13.38	-388.12	-3856	-2751	1068	1.99	1.99	-4937	7603	4236	45085	16685	10149	26834	No	25.12	Si
SLU 47	15.18	-2303.64	-1239	-884	1068	1.99	0	-7429	8688	0	45085	16685	10149	26834	No	25.12	Si
SLU 70	13.38	-700.46	-5117	-3650	1040	1.99	1.99	-6551	7818	4356	45085	16685	10149	26834	No	25.81	Si
SLU 70	15.18	-2564.45	-2473	-1764	1040	1.99	0	-10237	8566	0	45085	16685	10149	26834	No	25.81	Si
SLU 45	13.38	-450.08	-4117	-2937	1038	1.99	1.99	-5271	7647	4261	45085	16685	10149	26834	No	25.86	Si
SLU 45	15.18	-2310.48	-1500	-1070	1038	1.99	0	-8256	8628	0	45085	16685	10149	26834	No	25.86	Si
SLU 49	13.38	-558.62	-4835	-3449	1104	1.99	1.99	-6191	7770	4329	45085	16685	10149	26834	No	24.31	Si
SLU 49	15.18	-2537.61	-2218	-1582	1104	1.99	0	-10028	8623	0	45085	16685	10149	26834	No	24.31	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	13.38	-2058.14	195	139	1967	1.99	0	1745	13086	0	45085	25027	10149	35176		17.89	Si
SLV 4	15.18	-3388.46	3082	2198	588	1.99	0	41386	14812	0	45085	25027	10149	35176		59.84	Si
SLV 1	13.38	-1806.29	-902	-643	1909	1.99	0	-5603	12506	0	45085	25027	10149	35176		18.43	Si
SLV 1	15.18	-3013.52	2019	1440	531	1.99	0	24151	14384	0	45085	25027	10149	35176		66.27	Si
SLD 2	13.38	-780.24	-1806	-1288	1462	1.99	1.689	-2722	10962	5184	45085	25027	10149	35176		24.05	Si
SLD 2	15.18	-2452.12	606	432	872	1.99	0	5880	13631	0	45085	25027	10149	35176		40.33	Si
SLV 5	13.38	150.81	-3669	-2617	1732	1.99	1.99	-4698	11356	6328	45085	25027	10149	35176		20.31	Si
SLV 5	15.18	-2265.52	-1323	-944	1320	1.99	0	-7701	12961	0	45085	25027	10149	35176		26.65	Si
SLV 10	13.38	1372.35	-4939	-3524	1347	1.99	1.99	-6324	11681	6509	45085	25027	10149	35176		26.1	Si
SLV 10	15.18	-1679.83	-3119	-2225	1762	1.99	1.3691	-5724	11568	4435	45085	25027	10149	35176		19.96	Si
SLV 3	13.38	-2453.53	205	147	1403	1.99	0	1826	13588	0	45085	25027	10149	35176		25.07	Si
SLV 3	15.18	-2769.58	3092	2206	24	1.99	0.2982	46256	13951	1165	45085	25027	10149	35176		1443.6	Si
SLV 14	13.38	1819.23	-5124	-3655	-9	1.99	1.9199	-6824	11781	6333	45085	25027	10149	35176		3859.5	Si
SLV 14	15.18	-362.63	-3956	-2822	1370	1.99	1.99	-5065	11430	6369	45085	25027	10149	35176		25.68	Si
SLV 9	13.38	1119.85	-4933	-3519	988	1.99	1.99	-6315	11680	6508	45085	25027	10149	35176		35.62	Si
SLV 9	15.18	-1284.59	-3112	-2220	1402	1.99	1.7466	-4544	11326	5539	45085	25027	10149	35176		25.08	Si
SLV 2	13.38	-1410.9	-912	-651	2472	1.99	0	-5075	11971	0	45085	25027	10149	35176		14.23	Si
SLV 2	15.18	-3632.4	2008	1433	1094	1.99	0	22574	15187	0	45085	25027	10149	35176		32.15	Si
SLV 6	13.38	403.32	-3676	-2622	2092	1.99	1.99	-4706	11358	6329	45085	25027	10149	35176		16.82	Si
SLV 6	15.18	-2660.76	-1329	-948	1680	1.99	0	-8226	13482	0	45085	25027	10149	35176		20.94	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 14.06 Ta 0.06 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 12	-410	0.53	225.46	0	13668.94	6834.47	30.31	Si
SLV 11	-403	0.53	225.46	0	13669.45	6834.72	30.31	Si
SLV 2	172	0.53	225.46	0	13711.67	6855.84	30.41	Si
SLV 1	182	0.53	225.46	0	13712.46	6856.23	30.41	Si
SLV 8	1009	0.53	225.46	0	13773.17	6886.59	30.54	Si
SLV 7	1015	0.53	225.46	0	13773.68	6886.84	30.55	Si
SLV 4	1321	0.53	225.46	0	13796.12	6898.06	30.6	Si
SLV 3	1332	0.53	225.46	0	13796.91	6898.45	30.6	Si
SLV 5	-2815	0.53	225.46	381.13	13492.19	6936.66	30.77	Si
SLV 6	-2822	0.53	225.46	382.02	13491.69	6936.86	30.77	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.06 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-1643	-6400	-694	3.314	436.1	0.889	54.17845	13.11449	Si
SLV 10	-1482	-6658	-694	3.485	421.5	0.889	56.9768	13.11449	Si
SLV 13	-2359	-6063	-275	2.827	503.1	0.893	46.02069	7.68898	Si
SLV 5	-471	-5021	-656	5.197	341	0.919	82.19909	13.11449	Si
SLV 14	-2107	-6467	-275	3.017	479.2	0.891	49.21262	7.68898	Si
SLV 6	-310	-5279	-656	5.634	332	0.936	87.4905	13.11449	Si
SLV 15	-1761	-4457	124	3.369	446.9	0.889	55.06421	7.68898	Si
SLV 16	-1509	-4861	124	3.64	424	0.889	59.5023	7.68898	Si
SLV 11	349	-1048	634	7.565	323.1	1	109.94688	13.11449	Si, Trazione
SLV 12	510	-1306	634	8.017	323.1	1	116.5189	13.11449	Si, Trazione

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	16.911	SLU 70	Si
V_SLU	24.004	SLU 51	Si
PF_SLV	13.799	SLV 2	Si
V_SLV	14.229	SLV 2	Si
PFFP_SLV	30.314	SLV 12	Si
R_SLV	4.131	SLV 9	Si

Maschio 235

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	5.826	-2.063	5.826	L7	L8	1.93	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 72	13.38	113.25	-3270	-0.0000092	0.0003743	0.0035	1.93	2967.77	40634.6	40634.6	358.8	No	Si
SLU 72	15.18	3249.54	-2366	-0.0000743	0.0003743	0.0035	1.93	0	40748.05	40748.05	12.54	No	Si
SLU 69	13.38	109.14	-3414	-0.0000095	0.0003743	0.0035	1.93	3090.52	40616.42	40616.42	372.13	No	Si
SLU 69	15.18	3328.48	-2687	-0.0000737	0.0003743	0.0035	1.93	0	40707.73	40707.73	12.23	No	Si
SLU 79	13.38	-127.54	-2689	-0.0000078	0.0003743	0.0035	1.93	2467.73	40741.22	40741.22	319.45	No	Si
SLU 79	15.18	3451.12	-2146	-0.0000824	0.0003743	0.0035	1.93	0	40775.6	40775.6	11.82	No	Si
SLU 80	13.38	-117.17	-2755	-0.0000079	0.0003743	0.0035	1.93	2525.54	40732.84	40732.84	347.63	No	Si
SLU 80	15.18	3438.39	-2152	-0.0000819	0.0003743	0.0035	1.93	0	40774.89	40774.89	11.86	No	Si
SLU 77	13.38	-121.28	-2900	-0.0000083	0.0003743	0.0035	1.93	2650.91	40714.6	40714.6	335.71	No	Si
SLU 77	15.18	3517.32	-2473	-0.0000816	0.0003743	0.0035	1.93	0	40734.56	40734.56	11.58	No	Si
SLU 35	13.38	-213.47	-2244	-0.0000074	0.0003743	0.0035	1.93	2077.26	40797.22	40797.22	191.12	No	Si
SLU 35	15.18	3165.67	-2192	-0.0000733	0.0003743	0.0035	1.93	0	40769.9	40769.9	12.88	No	Si
SLU 36	13.38	-203.1	-2311	-0.0000074	0.0003743	0.0035	1.93	2136.1	40788.85	40788.85	200.83	No	Si
SLU 36	15.18	3152.94	-2198	-0.0000729	0.0003743	0.0035	1.93	0	40769.19	40769.19	12.93	No	Si
SLU 70	13.38	119.51	-3481	-0.0000098	0.0003743	0.0035	1.93	3146.64	40608.08	40608.08	339.79	No	Si
SLU 70	15.18	3315.75	-2693	-0.0000733	0.0003743	0.0035	1.93	0	40707.02	40707.02	12.28	No	Si
SLU 78	13.38	-110.92	-2966	-0.0000084	0.0003743	0.0035	1.93	2708.22	40706.22	40706.22	367	No	Si
SLU 78	15.18	3504.59	-2479	-0.0000811	0.0003743	0.0035	1.93	0	40733.86	40733.86	11.62	No	Si
SLU 71	13.38	102.89	-3203	-0.0000089	0.0003743	0.0035	1.93	2911.16	40642.94	40642.94	395.02	No	Si
SLU 71	15.18	3262.28	-2360	-0.0000747	0.0003743	0.0035	1.93	0	40748.76	40748.76	12.49	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	13.38	-1519.22	224	-0.0000411	0.0005615	0.0035	1.93		47722.67	47722.67	31.41		Si
SLV 3	15.18	2661.94	-2029	-0.0000588	0.0005615	0.0035	1.93		47684.5	47684.5	17.91		Si
SLV 8	13.38	-1179.99	3075	-0.0000169	0.0005615	0.0035	1.93		46741.11	46741.11	39.61		Si
SLV 8	15.18	2938.51	-1080	-0.000074	0.0005615	0.0035	1.93		47759.04	47759.04	16.25		Si
SLD 7	13.38	-621.9	625	-0.0000167	0.0005615	0.0035	1.93		47584.49	47584.49	76.51		Si
SLD 7	15.18	2424.33	-1108	-0.0000594	0.0005615	0.0035	1.93		47756.8	47756.8	19.7		Si
SLV 11	13.38	-796.38	3846	0.000113	0.0005615	0.0035	1.544		46475.72	46475.72	58.36		Si
SLV 11	15.18	2972.84	-493	-0.0000781	0.0005615	0.0035	1.93		47805.13	47805.13	16.08		Si
SLV 7	13.38	-1417.63	3801	-0.0000185	0.0005615	0.0035	1.93		46491.3	46491.3	32.8		Si
SLV 7	15.18	3157.45	-1090	-0.0000801	0.0005615	0.0035	1.93		47758.23	47758.23	15.13		Si
SLV 4	13.38	-1147.11	-913	-0.0000246	0.0005615	0.0035	1.93		47812.53	47812.53	41.68		Si
SLV 4	15.18	2319.11	-2013	-0.0000487	0.0005615	0.0035	1.93		47685.77	47685.77	20.56		Si
SLV 12	13.38	-558.74	3120	0.0001141	0.0005615	0.0035	1.544		46725.53	46725.53	83.63		Si
SLV 12	15.18	2753.9	-483	-0.0000721	0.0005615	0.0035	1.93		47805.94	47805.94	17.36		Si
SLD 8	13.38	-518.24	309	-0.0000142	0.0005615	0.0035	1.93		47693.46	47693.46	92.03		Si
SLD 8	15.18	2328.83	-1104	-0.0000567	0.0005615	0.0035	1.93		47757.16	47757.16	20.51		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 11	13.38	-356.36	645	-0.0000082	0.0005615	0.0035	1.93		47577.79	47577.79	133.51		Si
SLD 11	15.18	2345.54	-853	-0.0000588	0.0005615	0.0035	1.93		47776.85	47776.85	20.37		Si
SLD 12	13.38	-252.7	328	-0.0000065	0.0005615	0.0035	1.93		47686.76	47686.76	188.71		Si
SLD 12	15.18	2250.03	-849	-0.0000562	0.0005615	0.0035	1.93		47777.2	47777.2	21.23		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	13.38	-250.11	-2225	-1587	-2893	1.93	1.93	-2937	7336	3964	43727	16182	9843	26025	No	9	Si
SLU 84	15.18	3119.23	-1678	-1197	-2875	1.93	0	-10429	9453	0	43727	16182	9843	26025	No	9.05	Si
SLU 78	13.38	-110.92	-2966	-2116	-3062	1.93	1.93	-3916	7467	4035	43727	16182	9843	26025	No	8.5	Si
SLU 78	15.18	3504.59	-2479	-1768	-3043	1.93	0	-13546	9604	0	43727	16182	9843	26025	No	8.55	Si
SLU 80	13.38	-117.17	-2755	-1965	-2967	1.93	1.93	-3637	7429	4015	43727	16182	9843	26025	No	8.77	Si
SLU 80	15.18	3438.39	-2152	-1535	-2948	1.93	0	-12520	9630	0	43727	16182	9843	26025	No	8.83	Si
SLU 83	13.38	-260.47	-2159	-1540	-2938	1.93	1.93	-2849	7324	3958	43727	16182	9843	26025	No	8.86	Si
SLU 83	15.18	3131.96	-1673	-1193	-2921	1.93	0	-10422	9466	0	43727	16182	9843	26025	No	8.91	Si
SLU 36	13.38	-203.1	-2311	-1648	-2823	1.93	1.93	-3050	7351	3973	43727	16182	9843	26025	No	9.22	Si
SLU 36	15.18	3152.94	-2198	-1568	-2806	1.93	0	-12135	9351	0	43727	16182	9843	26025	No	9.27	Si
SLU 77	13.38	-121.28	-2900	-2069	-3107	1.93	1.93	-3828	7455	4029	43727	16182	9843	26025	No	8.38	Si
SLU 77	15.18	3517.32	-2473	-1764	-3088	1.93	0	-13558	9618	0	43727	16182	9843	26025	No	8.43	Si
SLU 75	13.38	-145.1	-2657	-1895	-2819	1.93	1.93	-3507	7412	4006	43727	16182	9843	26025	No	9.23	Si
SLU 75	15.18	3104.5	-2097	-1496	-2802	1.93	0	-11779	9333	0	43727	16182	9843	26025	No	9.29	Si
SLU 74	13.38	-155.46	-2590	-1848	-2864	1.93	1.93	-3420	7400	3999	43727	16182	9843	26025	No	9.09	Si
SLU 74	15.18	3117.23	-2091	-1492	-2847	1.93	0	-11787	9347	0	43727	16182	9843	26025	No	9.14	Si
SLU 35	13.38	-213.47	-2244	-1601	-2868	1.93	1.93	-2962	7339	3966	43727	16182	9843	26025	No	9.07	Si
SLU 35	15.18	3165.67	-2192	-1564	-2851	1.93	0	-12147	9365	0	43727	16182	9843	26025	No	9.13	Si
SLU 79	13.38	-127.54	-2689	-1918	-3012	1.93	1.93	-3549	7418	4009	43727	16182	9843	26025	No	8.64	Si
SLU 79	15.18	3451.12	-2146	-1531	-2993	1.93	0	-12523	9643	0	43727	16182	9843	26025	No	8.7	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	13.38	-1519.22	224	160	-4283	1.93	0	2128	12528	0	43727	24273	9843	34116		7.97	Si
SLV 3	15.18	2661.94	-2029	-1448	-4834	1.93	0	-10722	13410	0	43727	24273	9843	34116		7.06	Si
SLD 8	13.38	-518.24	309	220	-3307	1.93	0	3693	11155	0	43727	24273	9843	34116		10.32	Si
SLD 8	15.18	2328.83	-1104	-787	-3371	1.93	0	-7258	13308	0	43727	24273	9843	34116		10.12	Si
SLD 12	13.38	-252.7	328	234	-3053	1.93	0.5839	5525	10759	1759	43727	24273	9843	34116		11.18	Si
SLD 12	15.18	2250.03	-849	-605	-2973	1.93	0	-5952	13282	0	43727	24273	9843	34116		11.47	Si
SLV 4	13.38	-1147.11	-913	-651	-3268	1.93	0	-4713	11694	0	43727	24273	9843	34116		10.44	Si
SLV 4	15.18	2319.11	-2013	-1436	-3820	1.93	0	-9717	12911	0	43727	24273	9843	34116		8.93	Si
SLD 7	13.38	-621.9	625	446	-3589	1.93	0	9098	11286	0	43727	24273	9843	34116		9.51	Si
SLD 7	15.18	2424.33	-1108	-791	-3653	1.93	0	-7367	13439	0	43727	24273	9843	34116		9.34	Si
SLV 8	13.38	-1179.99	3075	2194	-5431	1.93	1.7438	133604	11297	5516	43727	24273	9843	34116		6.28	Si
SLV 8	15.18	2938.51	-1080	-770	-5595	1.93	0	-7592	14154	0	43727	24273	9843	34116		6.1	Si
SLV 11	13.38	-796.38	3846	2743	-5485	1.544	1.93	0	0	0	43727	19419	7874	27293		4.98	Si
SLV 11	15.18	2972.84	-493	-352	-5313	1.93	0	-3916	14353	0	43727	24273	9843	34116		6.42	Si
SLV 7	13.38	-1417.63	3801	2711	-6079	1.93	1.776	184038	11380	5659	43727	24273	9843	34116		5.61	Si
SLV 7	15.18	3157.45	-1090	-778	-6243	1.93	0	-7764	14449	0	43727	24273	9843	34116		5.46	Si
SLV 12	13.38	-558.74	3120	2226	-4837	1.544	1.93	0	0	0	43727	19419	7874	27293		5.64	Si
SLV 12	15.18	2753.9	-483	-344	-4665	1.93	0	-3818	14062	0	43727	24273	9843	34116		7.31	Si
SLD 11	13.38	-356.36	645	460	-3335	1.93	1.2364	14317	10846	3755	43727	24273	9843	34116		10.23	Si
SLD 11	15.18	2345.54	-853	-609	-3256	1.93	0	-6032	13412	0	43727	24273	9843	34116		10.48	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 14.06 Ta 0.06 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 4	-1459	0.53	218.67	0	13177.59	6588.8	30.13	Si
SLV 3	-777	0.53	218.67	0	13227.67	6613.84	30.25	Si
SLV 16	-580	0.53	218.67	0	13242.16	6621.08	30.28	Si
SLV 15	102	0.53	218.67	0	13292.24	6646.12	30.39	Si
SLV 8	1361	0.53	218.67	0	13384.72	6692.36	30.61	Si
SLV 12	1624	0.53	218.67	0	13404.09	6702.05	30.65	Si
SLV 13	-1946	0.53	218.67	266.04	13141.82	6703.93	30.66	Si
SLV 7	1796	0.53	218.67	0	13416.7	6708.35	30.68	Si
SLV 11	2060	0.53	218.67	0	13436.07	6718.04	30.72	Si
SLV 14	-2628	0.53	218.67	356.2	13091.74	6723.97	30.75	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.06 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-941	-7935	-289	4.33	366.1	0.895	70.34099	13.11449	Si
SLV 5	-924	-7294	-288	4.36	364.8	0.895	70.79087	13.11449	Si
SLV 10	-563	-7882	-424	5.038	337.6	0.911	80.39661	13.11449	Si
SLV 9	-546	-7241	-423	5.079	336.5	0.912	80.94579	13.11449	Si
SLV 8	-485	2637	406	5.239	332.5	0.916	83.07572	13.11449	Si, Trazione
SLV 7	-468	3278	406	5.282	331.4	0.918	83.6339	13.11449	Si, Trazione
SLV 12	-107	2690	271	6.515	314.7	0.97	97.56833	13.11449	Si, Trazione
SLV 11	-90	3331	272	6.582	314.3	0.974	98.1588	13.11449	Si, Trazione
SLV 2	-1227	-4478	111	3.951	390.3	0.89	64.50208	7.68898	Si
SLV 1	-1201	-3474	112	3.988	388	0.89	65.09252	7.68898	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	11.581	SLU 77	Si
V_SLU	8.375	SLU 77	Si

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	15.126	SLV 7	Si
V_SLV	4.976	SLV 11	Si
PFFP_SLV	30.132	SLV 4	Si
R_SLV	5.364	SLV 6	Si

Maschio 236

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.314	-0.133	5.826	L7	L8	9.14	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 52	12.48	12320.61	-6171	-0.0000084	0.0003743	0.0035	9.14	27533.47	31577.07	31577.07	2.56	No	Si
SLU 52	15.64	7424.24	-2535	-0.0000054	0.0003743	0.0035	9.14	11471.09	15464.15	15464.15	2.08	No	Si
SLU 19	12.48	10287.8	-4820	-0.0000069	0.0003743	0.0035	9.14	21621.17	25648.29	25648.29	2.49	No	Si
SLU 19	15.64	6471.4	-2123	-0.0000049	0.0003743	0.0035	9.14	9624.19	13622.24	13622.24	2.1	No	Si
SLU 81	12.48	12867.25	-7004	-0.000009	0.0003743	0.0035	9.14	31149.63	35223.94	35223.94	2.74	No	Si
SLU 81	15.64	8652.83	-3296	-0.0000059	0.0003743	0.0035	9.14	14872.8	18865.77	18865.77	2.18	No	Si
SLU 82	12.48	13498.9	-7004	-0.0000093	0.0003743	0.0035	9.14	31146.8	35221.07	35221.07	2.61	No	Si
SLU 82	15.64	8510.02	-3312	-0.0000058	0.0003743	0.0035	9.14	14945.45	18938.54	18938.54	2.23	No	Si
SLU 60	12.48	11712.47	-6057	-0.0000081	0.0003743	0.0035	9.14	27038.24	31081.19	31081.19	2.65	No	Si
SLU 60	15.64	8022.26	-2484	-0.0000065	0.0003743	0.0035	9.14	11244.02	15237.52	15237.52	1.9	No	Si
SLU 43	12.48	10230.46	-6440	-0.0000076	0.0003743	0.0035	9.14	28703.01	32751.32	32751.32	3.2	No	Si
SLU 43	15.64	6822.2	-2562	-0.0000047	0.0003743	0.0035	9.14	11594.73	15587.57	15587.57	2.28	No	Si
SLU 18	12.48	9656.15	-4821	-0.0000066	0.0003743	0.0035	9.14	21624.05	25651.19	25651.19	2.66	No	Si
SLU 18	15.64	6614.21	-2107	-0.0000052	0.0003743	0.0035	9.14	9550.86	13549.16	13549.16	2.05	No	Si
SLU 61	12.48	12344.12	-6057	-0.0000084	0.0003743	0.0035	9.14	27035.39	31078.34	31078.34	2.52	No	Si
SLU 61	15.64	7879.45	-2500	-0.0000062	0.0003743	0.0035	9.14	11317.14	15310.49	15310.49	1.94	No	Si
SLU 10	12.48	10264.3	-4935	-0.0000069	0.0003743	0.0035	9.14	22124.2	26155.71	26155.71	2.55	No	Si
SLU 10	15.64	6016.19	-2158	-0.0000042	0.0003743	0.0035	9.14	9778.6	13776.12	13776.12	2.29	No	Si
SLU 73	12.48	13475.4	-7118	-0.0000093	0.0003743	0.0035	9.14	31641.08	35723.23	35723.23	2.65	No	Si
SLU 73	15.64	8054.8	-3347	-0.0000054	0.0003743	0.0035	9.14	15098.43	19091.79	19091.79	2.37	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 10	12.48	31006.87	-4115	-0.003409	0.0005615	0.0035	9.14		22585.64	22585.64	0.73		No
SLD 10	15.64	3359.85	-2370	-0.0000026	0.0005615	0.0035	9.14		14772.79	14772.79	4.4		Si
SLV 9	12.48	54644.72	-2317	-0.0158952	0.0005615	0.0035	9.14		14531.12	14531.12	0.27		No
SLV 9	15.64	946.09	-2327	-0.0000017	0.0005615	0.0035	9.14		14577.15	14577.15	15.41		Si
SLV 15	12.48	-4923.37	6007	0.0952776	0.0005615	0.0035	7.312		0	0	0		No
SLV 15	15.64	10825.13	-1739	-0.0004527	0.0005615	0.0035	9.14		11931.68	11931.68	1.1		Si
SLV 16	12.48	2411.72	5900	0.0914639	0.0005615	0.0035	7.312		0	0	0		No
SLV 16	15.64	9691.42	-1737	-0.0002882	0.0005615	0.0035	9.14		11923.73	11923.73	1.23		Si
SLD 9	12.48	28963.5	-4086	-0.0025642	0.0005615	0.0035	9.14		22453.77	22453.77	0.78		No
SLD 9	15.64	3675.67	-2371	-0.0000027	0.0005615	0.0035	9.14		14775	14775	4.02		Si
SLD 14	12.48	18294.87	-656	-0.0046934	0.0005615	0.0035	9.14		7048.43	7048.43	0.39		No
SLD 14	15.64	5911.49	-2147	-0.0000041	0.0005615	0.0035	9.14		13770.53	13770.53	2.33		Si
SLV 10	12.48	59329.12	-2384	-0.0175321	0.0005615	0.0035	9.14		14836.09	14836.09	0.25		No
SLV 10	15.64	222.07	-2326	-0.0000014	0.0005615	0.0035	9.14		14572.08	14572.08	65.62		Si
SLD 13	12.48	15146.33	-611	-0.0033112	0.0005615	0.0035	9.14		6841.77	6841.77	0.45		No
SLD 13	15.64	6398.13	-2148	-0.0000047	0.0005615	0.0035	9.14		13773.93	13773.93	2.15		Si
SLV 14	12.48	30597.04	5703	0.069271	0.0005615	0.0035	7.312		0	0	0		No
SLV 14	15.64	6070.82	-1805	-0.0000052	0.0005615	0.0035	9.14		12230.32	12230.32	2.01		Si
SLV 13	12.48	23261.95	5809	0.0783885	0.0005615	0.0035	7.312		0	0	0		No
SLV 13	15.64	7204.53	-1807	-0.0000109	0.0005615	0.0035	9.14		12238.27	12238.27	1.7		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	12.48	13436.03	-9497	-7908	9588	9.14	9.14	-3090	7356	18827	35683	76634	23307	54510	No	5.68	Si
SLU 80	15.64	7477.44	-6055	-5042	9550	9.14	9.14	-1970	7207	18445	35683	76634	23307	54128	No	5.67	Si
SLU 52	12.48	12320.61	-6171	-5139	8930	9.14	7.7204	-2008	7212	15591	35683	76634	23307	51274	No	5.74	Si
SLU 52	15.64	7424.24	-2535	-2111	8940	9.14	4.923	-825	7054	9724	35683	76634	23307	45407	No	5.08	Si
SLU 76	12.48	13666.27	-8307	-6918	9702	9.14	8.7747	-2703	7305	17947	35683	76634	23307	53631	No	5.53	Si
SLU 76	15.64	7718.52	-4706	-3919	9702	9.14	8.79	-1531	7149	17594	35683	76634	23307	53277	No	5.49	Si
SLU 60	12.48	11712.47	-6057	-5044	8370	9.14	7.9091	-1971	7207	15961	35683	76634	23307	51644	No	6.17	Si
SLU 60	15.64	8022.26	-2484	-2069	8285	9.14	4.0216	-808	7052	7941	35683	76634	23307	43624	No	5.27	Si
SLU 63	12.48	12534.98	-7246	-6034	9095	9.14	8.5201	-2358	7259	17317	35683	76634	23307	53000	No	5.83	Si
SLU 63	15.64	7543.17	-3860	-3214	9064	9.14	7.8474	-1256	7112	15627	35683	76634	23307	51310	No	5.66	Si
SLU 82	12.48	13498.9	-7004	-5832	9422	9.14	7.9279	-2279	7248	16090	35683	76634	23307	51773	No	5.49	Si
SLU 82	15.64	8510.02	-3312	-2758	9385	9.14	6.0027	-1078	7088	11913	35683	76634	23307	47597	No	5.07	Si
SLU 61	12.48	12344.12	-6057	-5043	8873	9.14	7.5956	-1971	7207	15328	35683	76634	23307	51011	No	5.75	Si
SLU 61	15.64	7879.45	-2500	-2082	8843	9.14	4.2561	-814	7053	8405	35683	76634	23307	44088	No	4.99	Si
SLU 81	12.48	12867.25	-7004	-5833	8919	9.14	8.1989	-2279	7248	16640	35683	76634	23307	52323	No	5.87	Si
SLU 81	15.64	8652.83	-3296	-2745	8826	9.14	5.8346	-1072	7087	11579	35683	76634	23307	47262	No	5.35	Si
SLU 84	12.48	13689.77	-8193	-6822	9645	9.14	8.6972	-2666	7300	17777	35683	76634	23307	53460	No	5.54	Si
SLU 84	15.64	8173.74	-4672	-3890	9605	9.14	8.4615	-1520	7147	16933	35683	76634	23307	52616	No	5.48	Si
SLU 73	12.48	13475.4	-7118	-5927	9479	9.14	8.0307	-2316	7253	16310	35683	76634	23307	51993	No	5.48	Si
SLU 73	15.64	8054.8	-3347	-2787	9481	9.14	6.4899	-1089	7090	12883	35683	76634	23307	48566	No	5.12	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	12.48	-41728.15	-8411	-7004	-36230	7.312	0	0	0	0	35683	91961	18646	35683		0.98	No
SLV 7	15.64	11446.57	-2477	-2063	-36700	9.14	0	-24647	15712	0	35683	114951	23307	35683		0.97	No
SLV 8	12.48	-37043.76	-8479	-7060	-31100	7.312	0.603	0	0	0	35683	91961	18646	35683		1.15	Si
SLV 8	15.64	10722.55	-2476	-2062	-31570	9.14	0.72	-9672	12365	2493	35683	114951	23307	38176		1.21	Si
SLV 14	12.48	30597.04	5703	4749	24241	7.312	0	0	0	0	35683	91961	18646	35683		1.47	Si
SLV 14	15.64	6070.82	-1805	-1503	24433	9.14	3.6204	-587	10534	10679	35683	114951	23307	46362		1.9	Si
SLV 12	12.48	-34621.95	-1727	-1438	-29748	7.312	0	0	0	0	35683	91961	18646	35683		1.2	Si
SLV 12	15.64	12290.75	-2099	-1747	-30130	9.14	0	-48519	16250	0	35683	114951	23307	35683		1.18	Si
SLD 10	12.48	31006.87	-4115	-3427	24877	9.14	0	0	16250	0	35683	114951	23307	35683		1.43	Si
SLD 10	15.64	3359.85	-2370	-1974	24968	9.14	9.14	-771	10571	27053	35683	114951	23307	62736		2.51	Si
SLV 6	12.48	56907.31	-9136	-7608	47301	9.14	0	-114896	16250	0	35683	114951	23307	35683		0.75	No
SLV 6	15.64	-1346.12	-2703	-2251	47556	9.14	9.14	-880	10593	27109	35683	114951	23307	62792		1.32	Si
SLV 9	12.48	54644.72	-2317	-1929	43522	9.14	0	0	16250	0	35683	114951	23307	35683		0.82	No
SLV 9	15.64	946.09	-2327	-1938	43866	9.14	9.14	-757	10568	27046	35683	114951	23307	62729		1.43	Si
SLV 10	12.48	59329.12	-2384	-1986	48652	9.14	0	0	16250	0	35683	114951	23307	35683		0.73	No
SLV 10	15.64	222.07	-2326	-1937	48996	9.14	9.14	-757	10568	27046	35683	114951	23307	62729		1.28	Si
SLV 5	12.48	52222.92	-9068	-7551	42170	9.14	0	-116142	16250	0	35683	114951	23307	35683		0.85	No
SLV 5	15.64	-622.1	-2705	-2252	42426	9.14	9.14	-880	10593	27109	35683	114951	23307	62792		1.48	Si
SLV 11	12.48	-39306.34	-1659	-1382	-34878	7.312	0	0	0	0	35683	91961	18646	35683		1.02	Si
SLV 11	15.64	13014.76	-2100	-1748	-35260	9.14	0	-51974	16250	0	35683	114951	23307	35683		1.01	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.06 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 14	179667	0.53	0	69	1071.66	0	0	No, Trazione
SLV 6	179667	0.53	0	-7490	1071.66	0	0	No, e>t/2
SLV 8	179667	0.53	0	-6914	1071.66	0	0	No, e>t/2
SLV 5	179667	0.53	0	-7451	1071.66	0	0	No, e>t/2
SLV 9	179667	0.53	0	-4050	1071.66	0	0	No, e>t/2
SLV 11	179667	0.53	0	-3474	1071.66	0	0	No, e>t/2
SLV 10	179667	0.53	0	-4090	1071.66	0	0	No, e>t/2
SLV 13	179667	0.53	0	130	1071.66	0	0	No, Trazione
SLV 7	179667	0.53	0	-6875	1071.66	0	0	No, e>t/2
SLV 12	179667	0.53	0	-3513	1071.66	0	0	No, e>t/2

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.06 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-2705	-9068	-1287	5.09	1601.4	0.91	81.2862	13.11449	Si
SLV 6	-2703	-9136	-1287	5.091	1601.3	0.91	81.29366	13.11449	Si
SLV 7	-2477	-8411	-1306	5.206	1586.2	0.913	82.8265	13.11449	Si
SLV 8	-2476	-8479	-1306	5.207	1586.1	0.913	82.83413	13.11449	Si
SLV 9	-2327	-2317	1457	5.271	1576.4	0.916	83.63789	13.11449	Si
SLV 10	-2326	-2384	1457	5.272	1576.3	0.916	83.64614	13.11449	Si
SLV 11	-2100	-1659	1439	5.4	1562.2	0.92	85.29392	13.11449	Si
SLV 12	-2099	-1727	1439	5.4	1562.1	0.92	85.30235	13.11449	Si
SLV 1	-3066	-16695	-4496	4.604	1626.8	0.906	73.8852	7.68898	Si
SLV 2	-3064	-16802	-4496	4.605	1626.7	0.906	73.89567	7.68898	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.899	SLU 60	Si
V_SLU	4.985	SLU 61	Si

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0	SLV 13	No
V_SLV	0.733	SLV 10	No
PFFP_SLV	0	SLV 16	No
R_SLV	6.198	SLV 5	Si

Maschio 238

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.333	-3.314	-17.203	-3.314	L7	F1	0.87	0.28	3.224	3.224	3.225			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	12.48	-347.87	-2289	-0.0000291	0.0003743	0.0035	0.87	903.77	1071.83	1071.83	3.08	No	Si
SLU 82	14.58	64.55	-1443	-0.0000115	0.0003743	0.0035	0.87	591.25	646.73	646.73	10.02	No	Si
SLU 39	12.48	-297.32	-1709	-0.0000234	0.0003743	0.0035	0.87	692.34	850.9	850.9	2.86	No	Si
SLU 39	14.58	79.99	-984	-0.0000093	0.0003743	0.0035	0.87	411.07	461.63	461.63	5.77	No	Si
SLU 33	12.48	-335.08	-2211	-0.000028	0.0003743	0.0035	0.87	876.1	1042.59	1042.59	3.11	No	Si
SLU 33	14.58	77.43	-1481	-0.0000123	0.0003743	0.0035	0.87	605.86	661.9	661.9	8.55	No	Si
SLU 31	12.48	-297.08	-1821	-0.0000239	0.0003743	0.0035	0.87	733.96	894.24	894.24	3.01	No	Si
SLU 31	14.58	81.39	-1061	-0.0000099	0.0003743	0.0035	0.87	441.82	492.96	492.96	6.06	No	Si
SLU 42	12.48	-309.15	-1928	-0.0000251	0.0003743	0.0035	0.87	773.57	935.04	935.04	3.02	No	Si
SLU 42	14.58	54.06	-1291	-0.0000101	0.0003743	0.0035	0.87	532.48	586.09	586.09	10.84	No	Si
SLU 81	12.48	-348.48	-2295	-0.0000291	0.0003743	0.0035	0.87	905.9	1074.09	1074.09	3.08	No	Si
SLU 81	14.58	65.37	-1452	-0.0000116	0.0003743	0.0035	0.87	594.53	650.13	650.13	9.94	No	Si
SLU 40	12.48	-296.71	-1703	-0.0000233	0.0003743	0.0035	0.87	690.09	848.5	848.5	2.86	No	Si
SLU 40	14.58	79.17	-976	-0.0000092	0.0003743	0.0035	0.87	407.66	458.14	458.14	5.79	No	Si
SLU 41	12.48	-309.76	-1934	-0.0000252	0.0003743	0.0035	0.87	775.78	937.33	937.33	3.03	No	Si
SLU 41	14.58	54.88	-1300	-0.0000102	0.0003743	0.0035	0.87	535.8	589.51	589.51	10.74	No	Si
SLU 34	12.48	-309.51	-2046	-0.0000258	0.0003743	0.0035	0.87	816.52	980.07	980.07	3.17	No	Si
SLU 34	14.58	56.28	-1377	-0.0000108	0.0003743	0.0035	0.87	565.7	620.32	620.32	11.02	No	Si
SLU 32	12.48	-335.69	-2217	-0.0000281	0.0003743	0.0035	0.87	878.24	1044.85	1044.85	3.11	No	Si
SLU 32	14.58	78.26	-1490	-0.0000124	0.0003743	0.0035	0.87	609.13	665.3	665.3	8.5	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 14	12.48	-400.3	-2286	-0.0000313	0.0005615	0.0035	0.87		1088.55	1088.55	2.72		Si
SLD 14	14.58	263.3	-798	-0.0000269	0.0005615	0.0035	0.87		387.81	387.81	1.47		Si
SLV 14	12.48	-594.27	-2703	-0.0000452	0.0005615	0.0035	0.87		1252.3	1252.3	2.11		Si
SLV 14	14.58	562.32	-102	-0.0143978	0.0005615	0.0035	0.696		92.66	92.66	0.16		No
SLV 11	12.48	-578.96	-3142	-0.0000451	0.0005615	0.0035	0.87		1421.55	1421.55	2.46		Si
SLV 11	14.58	577.82	-474	-0.0101215	0.0005615	0.0035	0.696		251.14	251.14	0.43		No
SLD 16	12.48	-463.24	-2538	-0.0000359	0.0005615	0.0035	0.87		1187.56	1187.56	2.56		Si
SLD 16	14.58	371.48	-649	-0.0016769	0.0005615	0.0035	0.696		325.1	325.1	0.88		No
SLD 15	12.48	-427.81	-2454	-0.0000336	0.0005615	0.0035	0.87		1154.74	1154.74	2.7		Si
SLD 15	14.58	309.84	-779	-0.0000751	0.0005615	0.0035	0.696		379.84	379.84	1.23		Si
SLV 15	12.48	-654.88	-3079	-0.00005	0.0005615	0.0035	0.87		1397.86	1397.86	2.13		Si
SLV 15	14.58	665.07	-64	-0.0179092	0.0005615	0.0035	0.696		76.4	76.4	0.11		No
SLV 12	12.48	-631.67	-3266	-0.0000488	0.0005615	0.0035	0.87		1468.06	1468.06	2.32		Si
SLV 12	14.58	669.53	-279	-0.0151544	0.0005615	0.0035	0.696		168.34	168.34	0.25		No
SLV 13	12.48	-511.74	-2508	-0.0000389	0.0005615	0.0035	0.87		1176.06	1176.06	2.3		Si
SLV 13	14.58	418.72	-407	-0.0061826	0.0005615	0.0035	0.696		222.6	222.6	0.53		No
SLV 16	12.48	-737.41	-3274	-0.0000567	0.0005615	0.0035	0.87		1470.77	1470.77	1.99		Si
SLV 16	14.58	808.67	240	-0.0242739	0.0005615	0.0035	0.696		0	0	0		No
SLD 12	12.48	-420	-2543	-0.0000336	0.0005615	0.0035	0.87		1189.65	1189.65	2.83		Si
SLD 12	14.58	315.25	-867	-0.0000436	0.0005615	0.0035	0.87		416.56	416.56	1.32		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	12.48	-374.13	-2866	-2387	-579	0.87	0.87	-9797	8251	2010	35683	7294	2219	9513	No	16.44	Si
SLU 79	14.58	17.92	-2175	-1811	247	0.87	0.87	-7434	7936	1933	35683	7294	2219	9513	No	38.58	Si
SLU 78	12.48	-398.67	-3021	-2516	-605	0.87	0.87	-10328	8322	2027	35683	7294	2219	9513	No	15.73	Si
SLU 78	14.58	37.7	-2265	-1886	200	0.87	0.87	-7742	7977	1943	35683	7294	2219	9513	No	47.62	Si
SLU 69	12.48	-401.1	-3311	-2757	-581	0.87	0.87	-11319	8454	2059	35683	7294	2219	9513	No	16.38	Si
SLU 69	14.58	44.99	-2486	-2070	152	0.87	0.87	-8499	8078	1968	35683	7294	2219	9513	No	62.44	Si
SLU 74	12.48	-386.85	-2803	-2334	-584	0.87	0.87	-9580	8222	2003	35683	7294	2219	9513	No	16.3	Si
SLU 74	14.58	63.64	-1957	-1630	141	0.87	0.87	-6691	7837	1909	35683	7294	2219	9513	No	67.31	Si
SLU 77	12.48	-399.29	-3027	-2521	-605	0.87	0.87	-10349	8324	2028	35683	7294	2219	9513	No	15.73	Si
SLU 77	14.58	38.53	-2273	-1893	200	0.87	0.87	-7771	7981	1944	35683	7294	2219	9513	No	47.52	Si
SLU 75	12.48	-386.24	-2797	-2329	-584	0.87	0.87	-9560	8219	2002	35683	7294	2219	9513	No	16.29	Si
SLU 75	14.58	62.81	-1949	-1623	141	0.87	0.87	-6662	7833	1908	35683	7294	2219	9513	No	67.52	Si
SLU 83	12.48	-360.92	-2520	-2098	-568	0.87	0.87	-8613	8093	1971	35683	7294	2219	9513	No	16.75	Si
SLU 83	14.58	40.26	-1768	-1472	208	0.87	0.87	-6042	7750	1888	35683	7294	2219	9513	No	45.68	Si
SLU 70	12.48	-400.48	-3305	-2752	-581	0.87	0.87	-11298	8451	2059	35683	7294	2219	9513	No	16.37	Si
SLU 70	14.58	44.17	-2478	-2063	152	0.87	0.87	-8470	8074	1967	35683	7294	2219	9513	No	62.62	Si
SLU 84	12.48	-360.31	-2514	-2093	-568	0.87	0.87	-8593	8090	1971	35683	7294	2219	9513	No	16.74	Si
SLU 84	14.58	39.44	-1759	-1465	208	0.87	0.87	-6013	7746	1887	35683	7294	2219	9513	No	45.77	Si
SLU 80	12.48	-373.52	-2860	-2382	-579	0.87	0.87	-9777	8248	2009	35683	7294	2219	9513	No	16.43	Si
SLU 80	14.58	17.1	-2166	-1804	246	0.87	0.87	-7404	7932	1932	35683	7294	2219	9513	No	38.64	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	12.48	119.14	-692	-576	-62	0.87	0.7885	-2365	10890	2404	35683	10942	2219	13160		210.99	Si
SLV 5	14.58	-586.74	-2356	-1962	1658	0.87	0.5578	-12631	12943	2021	35683	10942	2219	13160		7.94	Si
SLV 14	12.48	-594.27	-2703	-2251	-807	0.87	0.6454	-12528	12922	2335	35683	10942	2219	13160		16.3	Si
SLV 14	14.58	562.32	-102	-85	-985	0.696	0	0	0	0	35683	8753	1775	10528		10.69	Si
SLV 1	12.48	224.88	-685	-570	140	0.87	0.3198	-6386	11694	1047	35683	10942	2219	13160		94.04	Si
SLV 1	14.58	-725.89	-2875	-2394	1836	0.87	0.5476	-15728	13563	2080	35683	10942	2219	13160		7.17	Si
SLV 3	12.48	81.75	-1256	-1046	38	0.87	0.87	-4293	11275	2747	35683	10942	2219	13160		349.72	Si
SLV 3	14.58	-479.53	-2533	-2109	1193	0.87	0.737	-10269	12470	2574	35683	10942	2219	13160		11.03	Si
SLV 12	12.48	-631.67	-3266	-2720	-707	0.87	0.7249	-13488	13114	2662	35683	10942	2219	13160		18.61	Si
SLV 12	14.58	669.53	-279	-233	-1449	0.696	0	0	0	0	35683	8753	1775	10528		7.26	Si
SLV 16	12.48	-737.41	-3274	-2726	-909	0.87	0.6292	-15589	13535	2385	35683	10942	2219	13160		14.47	Si
SLV 16	14.58	808.67	240	200	-1628	0.696	0	0	0	0	35683	8753	1775	10528		6.47	Si
SLV 2	12.48	142.35	-879	-732	82	0.87	0.8193	-3006	11018	2528	35683	10942	2219	13160		160.31	Si
SLV 2	14.58	-582.28	-2571	-2141	1489	0.87	0.6255	-12293	12875	2255	35683	10942	2219	13160		8.84	Si
SLV 11	12.48	-578.96	-3142	-2617	-670	0.87	0.7523	-10741	12565	2647	35683	10942	2219	13160		19.64	Si
SLV 11	14.58	577.82	-474	-395	-1227	0.696	0	0	0	0	35683	8753	1775	10528		8.58	Si
SLV 15	12.48	-654.88	-3079	-2564	-852	0.87	0.667	-13814	13179	2461	35683	10942	2219	13160		15.45	Si
SLV 15	14.58	665.07	-64	-54	-1280	0.696	0	0	0	0	35683	8753	1775	10528		8.22	Si
SLV 6	12.48	66.43	-816	-680	-99	0.87	0.87	-2790	10975	2673	35683	10942	2219	13160		132.5	Si
SLV 6	14.58	-495.03	-2161	-1800	1436	0.87	0.6179	-10452	12507	2164	35683	10942	2219	13160		9.16	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.092 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.53	0	-659	102.74	0	0	No, e>t/2
SLV 16	179667	0.53	0	-182	102.74	0	0	No, e>t/2
SLV 15	179667	0.53	0	-431	102.74	0	0	No, e>t/2
SLV 13	179667	0.53	0	-691	102.74	0	0	No, e>t/2
SLV 14	179667	0.53	0	-441	102.74	0	0	No, e>t/2
SLV 11	179667	0.53	3358	-818	102.74	111.99	1.09	Si
SLV 8	179667	0.53	5288	-1288	102.74	174.09	1.69	Si
SLV 7	179667	0.53	5942	-1447	102.74	194.76	1.9	Si
SLV 10	179667	0.53	6254	-1524	102.74	204.56	1.99	Si
SLV 9	179667	0.53	6909	-1683	102.74	224.95	2.19	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.092 Wa = 0.05 Ta = 0.062

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-1185	-2595	-17	2.634	237.2	0.895	42.7539	13.77256	Si
SLV 8	-1181	-2719	-17	2.64	236.7	0.895	42.86101	13.77256	Si
SLV 5	-1146	-692	-23	2.685	233.4	0.894	43.6324	13.77256	Si
SLV 6	-1141	-816	-23	2.692	232.9	0.894	43.74387	13.77256	Si
SLV 11	-1037	-3142	25	2.849	222.9	0.892	46.40371	13.77256	Si
SLV 12	-1032	-3266	25	2.857	222.5	0.892	46.5274	13.77256	Si
SLV 9	-997	-1239	18	2.919	219.1	0.892	47.5658	13.77256	Si
SLV 10	-992	-1363	19	2.926	218.7	0.892	47.69526	13.77256	Si
SLV 3	-1346	-1256	-68	2.406	252.8	0.899	38.91134	7.90387	Si
SLV 4	-1339	-1450	-68	2.414	252.1	0.898	39.05286	7.90387	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.86	SLU 40	Si
V_SLU	15.729	SLU 78	Si

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0	SLV 16	No
V_SLV	6.468	SLV 16	Si
PFFP_SLV	0	SLV 12	No
R_SLV	3.104	SLV 7	Si

Maschio 239

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-3.314	-15.433	-3.314	L7	F1	1.655	0.28	3.222	3.222	3.223			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 32	12.48	-928.95	-2884	-0.0000203	0.0003743	0.0035	1.655	2240.37	2950.7	2950.7	3.18	No	Si
SLU 32	14.58	821.4	-3679	-0.0000215	0.0003743	0.0035	1.655	2806.96	3026.15	3026.15	3.68	No	Si
SLU 39	12.48	-931.84	-2309	-0.0000194	0.0003743	0.0035	1.655	1817.28	2517.46	2517.46	2.7	No	Si
SLU 39	14.58	658.28	-2908	-0.000017	0.0003743	0.0035	1.655	2258.12	2454.01	2454.01	3.73	No	Si
SLU 41	12.48	-919.52	-2661	-0.0000196	0.0003743	0.0035	1.655	2077.56	2786.33	2786.33	3.03	No	Si
SLU 41	14.58	707.5	-3362	-0.0000191	0.0003743	0.0035	1.655	2583.85	2792.34	2792.34	3.95	No	Si
SLU 82	12.48	-970.51	-3191	-0.0000217	0.0003743	0.0035	1.655	2462.29	3179.72	3179.72	3.28	No	Si
SLU 82	14.58	762.44	-3492	-0.0000202	0.0003743	0.0035	1.655	2676.05	2889.03	2889.03	3.79	No	Si
SLU 31	12.48	-880.45	-2444	-0.0000186	0.0003743	0.0035	1.655	1917.48	2622.73	2622.73	2.98	No	Si
SLU 31	14.58	676.76	-2952	-0.0000174	0.0003743	0.0035	1.655	2289.9	2486.77	2486.77	3.67	No	Si
SLU 42	12.48	-922.99	-2655	-0.0000197	0.0003743	0.0035	1.655	2073.5	2782.27	2782.27	3.01	No	Si
SLU 42	14.58	709.6	-3362	-0.0000192	0.0003743	0.0035	1.655	2583.81	2792.3	2792.3	3.94	No	Si
SLU 40	12.48	-935.31	-2304	-0.0000194	0.0003743	0.0035	1.655	1813.15	2513.15	2513.15	2.69	No	Si
SLU 40	14.58	660.39	-2908	-0.0000171	0.0003743	0.0035	1.655	2258.08	2453.97	2453.97	3.72	No	Si
SLU 81	12.48	-967.03	-3197	-0.0000217	0.0003743	0.0035	1.655	2466.25	3183.86	3183.86	3.29	No	Si
SLU 81	14.58	760.34	-3492	-0.0000202	0.0003743	0.0035	1.655	2676.09	2889.07	2889.07	3.8	No	Si
SLU 34	12.48	-868.12	-2795	-0.0000192	0.0003743	0.0035	1.655	2176.1	2885.46	2885.46	3.32	No	Si
SLU 34	14.58	725.98	-3406	-0.0000195	0.0003743	0.0035	1.655	2614.93	2824.87	2824.87	3.89	No	Si
SLU 33	12.48	-932.42	-2878	-0.0000203	0.0003743	0.0035	1.655	2236.35	2946.61	2946.61	3.16	No	Si
SLU 33	14.58	823.51	-3679	-0.0000216	0.0003743	0.0035	1.655	2806.92	3026.11	3026.11	3.67	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	12.48	-2171.6	-1999	-0.0004985	0.0005615	0.0035	1.324		2292.59	2292.59	1.06		Si
SLV 16	14.58	2149.21	-4347	-0.000047	0.0005615	0.0035	1.655		3583.47	3583.47	1.67		Si
SLV 13	12.48	-1485.18	-1849	-0.0001219	0.0005615	0.0035	1.324		2174.3	2174.3	1.46		Si
SLV 13	14.58	1470.93	-3305	-0.0000308	0.0005615	0.0035	1.655		2793.63	2793.63	1.9		Si
SLD 14	12.48	-1096.88	-2306	-0.0000232	0.0005615	0.0035	1.324		2533.39	2533.39	2.31		Si
SLD 14	14.58	1062.23	-3090	-0.0000226	0.0005615	0.0035	1.655		2627.66	2627.66	2.47		Si
SLV 12	12.48	-1665.22	-2928	-0.0000405	0.0005615	0.0035	1.324		3014.91	3014.91	1.81		Si
SLV 12	14.58	1744.04	-4241	-0.0000364	0.0005615	0.0035	1.655		3504.63	3504.63	2.01		Si
SLD 16	12.48	-1259.13	-2430	-0.0000279	0.0005615	0.0035	1.324		2629.6	2629.6	2.09		Si
SLD 16	14.58	1252.15	-3385	-0.0000262	0.0005615	0.0035	1.655		2854.49	2854.49	2.28		Si
SLV 15	12.48	-1854.46	-2129	-0.0002298	0.0005615	0.0035	1.324		2394.88	2394.88	1.29		Si
SLV 15	14.58	1902.56	-3974	-0.0000409	0.0005615	0.0035	1.655		3303.56	3303.56	1.74		Si
SLV 2	12.48	711.7	-3370	-0.0000191	0.0005615	0.0035	1.655		2843.28	2843.28	4		Si
SLV 2	14.58	-751.47	-1338	-0.0000177	0.0005615	0.0035	1.324		1770.97	1770.97	2.36		Si
SLV 11	12.48	-1462.69	-3011	-0.0000314	0.0005615	0.0035	1.324		3078.54	3078.54	2.1		Si
SLV 11	14.58	1586.51	-4004	-0.0000331	0.0005615	0.0035	1.655		3325.75	3325.75	2.1		Si
SLV 1	12.48	1028.83	-3500	-0.0000232	0.0005615	0.0035	1.655		2942.41	2942.41	2.86		Si
SLV 1	14.58	-998.13	-966	-0.0001901	0.0005615	0.0035	1.324		1474.74	1474.74	1.48		Si
SLV 14	12.48	-1802.31	-1719	-0.000374	0.0005615	0.0035	1.324		2071.93	2071.93	1.15		Si
SLV 14	14.58	1717.59	-3678	-0.0000365	0.0005615	0.0035	1.655		3077.53	3077.53	1.79		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 70	12.48	-821.87	-4453	-3708	-1901	1.655	1.655	-8002	8011	3713	35683	13876	4220	18097	No	9.52	Si
SLU 70	14.58	1009.72	-4820	-4013	-1894	1.655	1.655	-8661	8099	3753	35683	13876	4220	18097	No	9.55	Si
SLU 84	12.48	-958.18	-3543	-2950	-1888	1.655	1.655	-6367	7793	3611	35683	13876	4220	18097	No	9.58	Si
SLU 84	14.58	811.66	-3946	-3286	-1878	1.655	1.655	-7091	7890	3656	35683	13876	4220	18097	No	9.63	Si
SLU 36	12.48	-920.1	-3230	-2689	-1897	1.655	1.6279	-5803	7718	3518	35683	13876	4220	18097	No	9.54	Si
SLU 36	14.58	872.72	-4133	-3441	-1887	1.655	1.655	-7426	7935	3677	35683	13876	4220	18097	No	9.59	Si
SLU 80	12.48	-888.68	-4038	-3363	-1887	1.655	1.655	-7257	7912	3666	35683	13876	4220	18097	No	9.59	Si
SLU 80	14.58	875.85	-4444	-3701	-1875	1.655	1.655	-7986	8009	3712	35683	13876	4220	18097	No	9.65	Si
SLU 78	12.48	-955.29	-4118	-3429	-2042	1.655	1.655	-7399	7931	3675	35683	13876	4220	18097	No	8.86	Si
SLU 78	14.58	974.78	-4717	-3928	-2031	1.655	1.655	-8477	8075	3742	35683	13876	4220	18097	No	8.91	Si
SLU 77	12.48	-951.82	-4123	-3433	-2038	1.655	1.655	-7409	7932	3676	35683	13876	4220	18097	No	8.88	Si
SLU 77	14.58	972.68	-4717	-3928	-2025	1.655	1.655	-8477	8075	3742	35683	13876	4220	18097	No	8.94	Si
SLU 69	12.48	-818.39	-4459	-3713	-1897	1.655	1.655	-8012	8013	3713	35683	13876	4220	18097	No	9.54	Si
SLU 69	14.58	1007.61	-4820	-4013	-1888	1.655	1.655	-8661	8099	3753	35683	13876	4220	18097	No	9.59	Si
SLU 35	12.48	-916.62	-3235	-2694	-1893	1.655	1.6325	-5813	7720	3529	35683	13876	4220	18097	No	9.56	Si
SLU 35	14.58	870.62	-4133	-3442	-1880	1.655	1.655	-7427	7935	3677	35683	13876	4220	18097	No	9.63	Si
SLU 75	12.48	-967.61	-3766	-3136	-1983	1.655	1.655	-6767	7847	3636	35683	13876	4220	18097	No	9.13	Si
SLU 75	14.58	925.56	-4263	-3550	-1976	1.655	1.655	-7661	7966	3691	35683	13876	4220	18097	No	9.16	Si
SLU 74	12.48	-964.14	-3771	-3141	-1979	1.655	1.655	-6777	7848	3637	35683	13876	4220	18097	No	9.14	Si
SLU 74	14.58	923.46	-4263	-3550	-1969	1.655	1.655	-7661	7966	3691	35683	13876	4220	18097	No	9.19	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	12.48	-1802.31	-1719	-1431	-3734	1.324	0	0	0	0	35683	16652	3376	20028		5.36	Si
SLV 14	14.58	1717.59	-3678	-3063	-2122	1.655	1.0815	-6609	11738	3555	35683	20815	4220	25035		11.8	Si
SLD 14	12.48	-1096.88	-2306	-1921	-2275	1.324	1.0558	0	0	0	35683	16652	3376	20028		8.8	Si
SLD 14	14.58	1062.23	-3090	-2573	-1583	1.655	1.4513	-5553	11527	4684	35683	20815	4220	25035		15.81	Si
SLV 13	12.48	-1485.18	-1849	-1539	-3268	1.324	0.0724	0	0	0	35683	16652	3376	20028		6.13	Si
SLV 13	14.58	1470.93	-3305	-2752	-1655	1.655	1.1475	-5939	11605	3728	35683	20815	4220	25035		15.13	Si
SLD 15	12.48	-1123.01	-2486	-2070	-2324	1.324	1.1271	0	0	0	35683	16652	3376	20028		8.62	Si
SLD 15	14.58	1146.28	-3225	-2686	-1591	1.655	1.4163	-5796	11576	4591	35683	20815	4220	25035		15.74	Si
SLV 15	12.48	-1854.46	-2129	-1773	-3834	1.324	0	0	0	0	35683	16652	3376	20028		5.22	Si
SLV 15	14.58	1902.56	-3974	-3310	-2126	1.655	1.0464	-7142	11845	3471	35683	20815	4220	25035		11.77	Si
SLD 16	12.48	-1259.13	-2430	-2023	-2524	1.324	0.9279	0	0	0	35683	16652	3376	20028		7.93	Si
SLD 16	14.58	1252.15	-3385	-2819	-1791	1.655	1.3728	-6083	11633	4472	35683	20815	4220	25035		13.98	Si
SLV 12	12.48	-1665.22	-2928	-2438	-3059	1.324	0.7761	0	0	0	35683	16652	3376	20028		6.55	Si
SLV 12	14.58	1744.04	-4241	-3532	-2401	1.655	1.249	-7622	11941	4176	35683	20815	4220	25035		10.43	Si
SLV 11	12.48	-1462.69	-3011	-2507	-2762	1.324	1.025	0	0	0	35683	16652	3376	20028		7.25	Si
SLV 11	14.58	1586.51	-4004	-3334	-2103	1.655	1.2937	-7194	11856	4295	35683	20815	4220	25035		11.91	Si
SLV 16	12.48	-2171.6	-1999	-1665	-4300	1.324	0	0	0	0	35683	16652	3376	20028		4.66	Si
SLV 16	14.58	2149.21	-4347	-3620	-2593	1.655	0.9993	-7811	11979	3352	35683	20815	4220	25035		9.65	Si
SLD 13	12.48	-960.75	-2362	-1967	-2075	1.655	1.2624	-5575	11532	4076	35683	20815	4220	25035		12.06	Si
SLD 13	14.58	956.36	-2930	-2440	-1383	1.655	1.5034	-5266	11470	4828	35683	20815	4220	25035		18.1	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.091 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.53	0	-1071	195.2	0	0	No, e>t/2
SLV 1	179667	0.53	0	-1125	195.2	0	0	No, e>t/2
SLV 6	179667	0.53	0	-1261	195.2	0	0	No, e>t/2
SLV 2	179667	0.53	3068	-1422	195.2	195.05	1	No, M>Mu
SLV 9	179667	0.53	3697	-1713	195.2	234.06	1.2	Si
SLV 3	179667	0.53	4012	-1859	195.2	253.45	1.3	Si
SLV 10	179667	0.53	4106	-1903	195.2	259.25	1.33	Si
SLV 4	179667	0.53	4653	-2156	195.2	292.66	1.5	Si
SLV 13	179667	0.53	7047	-3266	195.2	436.09	2.23	Si
SLV 7	179667	0.53	7593	-3519	195.2	468.14	2.4	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.091 Wa = 0.05 Ta = 0.0619

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-1302	-2489	-178	3.511	361.5	0.889	57.41053	13.75212	Si
SLV 5	-1294	-2572	-179	3.522	360.8	0.889	57.5788	13.75212	Si
SLV 10	-1305	-1993	-89	3.541	361.8	0.889	57.89858	13.75212	Si
SLV 9	-1297	-2076	-90	3.552	361.1	0.889	58.06818	13.75212	Si
SLV 12	-825	-2928	181	4.274	320.3	0.895	69.43209	13.75212	Si
SLV 11	-817	-3011	181	4.29	319.6	0.895	69.67181	13.75212	Si
SLV 8	-822	-3423	93	4.32	320.1	0.895	70.18134	13.75212	Si
SLV 7	-814	-3506	92	4.336	319.4	0.895	70.42381	13.75212	Si
SLV 2	-1133	-3370	-187	3.745	346.5	0.89	61.17867	7.89716	Si
SLV 14	-1142	-1719	109	3.762	347.3	0.89	61.46647	7.89716	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.687	SLU 40	Si
V_SLU	8.864	SLU 78	Si

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.056	SLV 16	Si
V_SLV	4.658	SLV 16	Si
PFFP_SLV	0	SLV 1	No
R_SLV	4.175	SLV 6	Si

Maschio 241

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-4.824	-13.778	-3.454	L7	F1	1.369	0.28	2.766	2.389	3.144			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 28	12.48	-137.23	-3666	-0.0000167	0.0003743	0.0035	1.3693	2274.34	2813.26	2813.26	20.5	No	Si
SLU 28	14.87	157.92	-521	-0.0000048	0.0003743	0.0035	1.3693	351.83	454.72	454.72	2.88	No	Si
SLU 35	12.48	-197.41	-3826	-0.0000184	0.0003743	0.0035	1.3693	2363.04	2909.2	2909.2	14.74	No	Si
SLU 35	14.87	177.59	-600	-0.0000054	0.0003743	0.0035	1.3693	404.62	507.48	507.48	2.86	No	Si
SLU 27	12.48	-155.02	-3684	-0.0000171	0.0003743	0.0035	1.3693	2284.17	2823.82	2823.82	18.22	No	Si
SLU 27	14.87	165.11	-522	-0.000005	0.0003743	0.0035	1.3693	352.91	455.79	455.79	2.76	No	Si
SLU 69	12.48	-157.83	-4400	-0.00002	0.0003743	0.0035	1.3693	2673.18	3240.19	3240.19	20.53	No	Si
SLU 69	14.87	175.45	-600	-0.0000054	0.0003743	0.0035	1.3693	404.56	507.43	507.43	2.89	No	Si
SLU 29	12.48	-156.17	-3656	-0.000017	0.0003743	0.0035	1.3693	2268.77	2807.29	2807.29	17.98	No	Si
SLU 29	14.87	163.82	-499	-0.0000049	0.0003743	0.0035	1.3693	337.42	440.36	440.36	2.69	No	Si
SLU 38	12.48	-180.77	-3781	-0.0000179	0.0003743	0.0035	1.3693	2338.02	2882.01	2882.01	15.94	No	Si
SLU 38	14.87	169.11	-575	-0.0000052	0.0003743	0.0035	1.3693	388.12	490.97	490.97	2.9	No	Si
SLU 71	12.48	-158.98	-4373	-0.0000199	0.0003743	0.0035	1.3693	2658.48	3224.5	3224.5	20.28	No	Si
SLU 71	14.87	174.16	-577	-0.0000053	0.0003743	0.0035	1.3693	389.14	491.98	491.98	2.82	No	Si
SLU 37	12.48	-198.56	-3799	-0.0000183	0.0003743	0.0035	1.3693	2347.78	2892.63	2892.63	14.57	No	Si
SLU 37	14.87	176.3	-577	-0.0000053	0.0003743	0.0035	1.3693	389.2	492.04	492.04	2.79	No	Si
SLU 30	12.48	-138.38	-3638	-0.0000166	0.0003743	0.0035	1.3693	2258.92	2796.74	2796.74	20.21	No	Si
SLU 30	14.87	156.63	-498	-0.0000047	0.0003743	0.0035	1.3693	336.35	439.29	439.29	2.8	No	Si
SLU 8	12.48	-111.18	-3299	-0.0000148	0.0003743	0.0035	1.3693	2067.81	2595.62	2595.62	23.35	No	Si
SLU 8	14.87	137.85	-427	-0.0000041	0.0003743	0.0035	1.3693	289.07	392.28	392.28	2.85	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	12.48	-477.53	-2260	-0.0000168	0.0005615	0.0035	1.3693		1979.93	1979.93	4.15		Si
SLV 15	14.87	280.65	-696	-0.0000087	0.0005615	0.0035	1.3693		573.46	573.46	2.04		Si
SLV 10	12.48	456.5	-1321	-0.0000137	0.0005615	0.0035	1.3693		987.24	987.24	2.16		Si
SLV 10	14.87	-130.92	365	0.0447045	0.0005615	0.0035	1.0955		0	0	0		No
SLV 14	12.48	-133.3	-1577	-0.0000083	0.0005615	0.0035	1.3693		1538.23	1538.23	11.54		Si
SLV 14	14.87	139.96	-273	-0.0000056	0.0005615	0.0035	1.3693		289.55	289.55	2.07		Si
SLV 13	12.48	-107.74	-1448	-0.0000074	0.0005615	0.0035	1.3693		1454.19	1454.19	13.5		Si
SLV 13	14.87	130.96	-218	-0.000009	0.0005615	0.0035	1.3693		252.86	252.86	1.93		Si
SLV 12	12.48	-776.14	-4028	-0.000029	0.0005615	0.0035	1.3693		3085.32	3085.32	3.98		Si
SLV 12	14.87	368.03	-1229	-0.0000112	0.0005615	0.0035	1.3693		926.6	926.6	2.52		Si
SLV 9	12.48	472.83	-1238	-0.0000144	0.0005615	0.0035	1.3693		932.85	932.85	1.97		Si
SLV 9	14.87	-136.67	400	0.0489279	0.0005615	0.0035	1.0955		0	0	0		No
SLV 5	12.48	604.63	-1851	-0.0000182	0.0005615	0.0035	1.3693		1333.92	1333.92	2.21		Si
SLV 5	14.87	-217.77	460	0.0566236	0.0005615	0.0035	1.0955		0	0	0		No
SLV 6	12.48	588.3	-1933	-0.0000179	0.0005615	0.0035	1.3693		1387.28	1387.28	2.36		Si
SLV 6	14.87	-212.03	425	0.0523916	0.0005615	0.0035	1.0955		0	0	0		No
SLV 11	12.48	-759.81	-3946	-0.0000283	0.0005615	0.0035	1.3693		3035.4	3035.4	3.99		Si
SLV 11	14.87	362.28	-1194	-0.000011	0.0005615	0.0035	1.3693		903.64	903.64	2.49		Si
SLV 16	12.48	-503.1	-2389	-0.0000177	0.0005615	0.0035	1.3693		2061.87	2061.87	4.1		Si
SLV 16	14.87	289.64	-751	-0.0000088	0.0005615	0.0035	1.3693		609.89	609.89	2.11		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	12.48	-175.02	-4292	-3574	-1021	1.3693	1.3693	-9322	8187	3139	30925	11481	3492	14973	No	14.66	Si
SLU 74	14.87	151.07	-635	-529	-696	1.3693	1.3405	-1380	7128	2676	30925	11481	3492	14973	No	21.51	Si
SLU 37	12.48	-198.56	-3799	-3163	-1019	1.3693	1.3693	-8250	8045	3084	30925	11481	3492	14973	No	14.69	Si
SLU 37	14.87	176.3	-577	-480	-949	1.3693	1.1373	-1253	7112	2265	30925	11481	3492	14973	No	15.78	Si
SLU 78	12.48	-182.42	-4525	-3768	-1032	1.3693	1.3693	-9829	8255	3165	30925	11481	3492	14973	No	14.51	Si
SLU 78	14.87	180.73	-676	-563	-877	1.3693	1.2522	-1469	7140	2504	30925	11481	3492	14973	No	17.08	Si
SLU 79	12.48	-201.37	-4515	-3760	-1041	1.3693	1.3693	-9807	8252	3164	30925	11481	3492	14973	No	14.38	Si
SLU 79	14.87	186.63	-655	-545	-894	1.3693	1.1987	-1422	7134	2394	30925	11481	3492	14973	No	16.75	Si
SLU 84	12.48	-176.55	-4308	-3587	-1001	1.3693	1.3693	-9356	8192	3141	30925	11481	3492	14973	No	14.96	Si
SLU 84	14.87	147.94	-644	-536	-703	1.3693	1.3645	-1398	7131	2725	30925	11481	3492	14973	No	21.29	Si
SLU 41	12.48	-191.53	-3609	-3005	-1046	1.3693	1.3693	-7838	7989	3063	30925	11481	3492	14973	No	14.32	Si
SLU 41	14.87	144.79	-568	-473	-800	1.3693	1.2888	-1233	7109	2565	30925	11481	3492	14973	No	18.72	Si
SLU 36	12.48	-179.61	-3809	-3172	-1010	1.3693	1.3693	-8272	8047	3085	30925	11481	3492	14973	No	14.83	Si
SLU 36	14.87	170.39	-599	-498	-931	1.3693	1.2	-1300	7118	2392	30925	11481	3492	14973	No	16.08	Si
SLU 83	12.48	-194.34	-4325	-3602	-1068	1.3693	1.3693	-9394	8197	3143	30925	11481	3492	14973	No	14.02	Si
SLU 83	14.87	155.13	-645	-537	-745	1.3693	1.3328	-1402	7131	2661	30925	11481	3492	14973	No	20.09	Si
SLU 77	12.48	-200.22	-4543	-3783	-1099	1.3693	1.3693	-9867	8260	3167	30925	11481	3492	14973	No	13.63	Si
SLU 77	14.87	187.92	-678	-564	-919	1.3693	1.2223	-1472	7141	2444	30925	11481	3492	14973	No	16.3	Si
SLU 35	12.48	-197.41	-3826	-3186	-1077	1.3693	1.3693	-8311	8053	3087	30925	11481	3492	14973	No	13.9	Si
SLU 35	14.87	177.59	-600	-500	-973	1.3693	1.1664	-1304	7118	2325	30925	11481	3492	14973	No	15.38	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	12.48	-628.01	-4558	-3796	-2792	1.3693	1.3693	-9900	12397	4753	30925	17222	3492	20713		7.42	Si
SLV 7	14.87	281.18	-1134	-944	-1628	1.3693	1.3101	-2463	10909	4002	30925	17222	3492	20713		12.73	Si
SLV 12	12.48	-776.14	-4028	-3354	-4229	1.3693	1.3693	-8749	12166	4665	30925	17222	3492	20713		4.9	Si
SLV 12	14.87	368.03	-1229	-1023	-2726	1.3693	1.1555	-2669	10950	3543	30925	17222	3492	20713		7.6	Si
SLV 16	12.48	-503.1	-2389	-1990	-3662	1.3693	1.3693	-5189	11455	4392	30925	17222	3492	20713		5.66	Si
SLV 16	14.87	289.64	-751	-625	-2521	1.3693	0.8969	-1631	10743	2698	30925	17222	3492	20713		8.22	Si
SLV 8	12.48	-644.34	-4641	-3864	-2953	1.3693	1.3693	-10079	12433	4767	30925	17222	3492	20713		7.01	Si
SLV 8	14.87	286.92	-1169	-973	-1750	1.3693	1.3175	-2538	10924	4030	30925	17222	3492	20713		11.84	Si
SLV 11	12.48	-759.81	-3946	-3286	-4068	1.3693	1.3693	-8570	12131	4651	30925	17222	3492	20713		5.09	Si
SLV 11	14.87	362.28	-1194	-994	-2603	1.3693	1.1438	-2593	10935	3502	30925	17222	3492	20713		7.96	Si
SLV 6	12.48	588.3	-1933	-1610	3051	1.3693	1.1411	-4199	11256	3596	30925	17222	3492	20713		6.79	Si
SLV 6	14.87	-212.03	425	354	2184	1.0955	0.5577	0	0	0	30925	13777	2793	16571		7.59	Si
SLV 5	12.48	604.63	-1851	-1541	3213	1.3693	1.074	-4020	11221	3374	30925	17222	3492	20713		6.45	Si
SLV 5	14.87	-217.77	460	383	2306	1.0955	0.6334	0	0	0	30925	13777	2793	16571		7.18	Si
SLV 15	12.48	-477.53	-2260	-1882	-3409	1.3693	1.3693	-4909	11398	4370	30925	17222	3492	20713		6.08	Si
SLV 15	14.87	280.65	-696	-580	-2329	1.3693	0.8452	-1513	10719	2537	30925	17222	3492	20713		8.89	Si
SLV 1	12.48	331.59	-3490	-2906	2646	1.3693	1.3693	-7580	11933	4575	30925	17222	3492	20713		7.83	Si
SLV 1	14.87	-139.39	-18	-15	2102	1.0955	0	0	0	0	30925	13777	2793	16571		7.88	Si
SLV 2	12.48	306.03	-3619	-3014	2393	1.3693	1.3693	-7860	11989	4597	30925	17222	3492	20713		8.66	Si
SLV 2	14.87	-130.39	-72	-60	1910	1.0955	0	0	0	0	30925	13777	2793	16571		8.67	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.674 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.52	0	-148	119.87	0	0	No, e>t/2
SLV 6	179667	0.52	0	-209	119.87	0	0	No, e>t/2
SLV 10	179667	0.52	0	-79	119.87	0	0	No, e>t/2
SLV 9	179667	0.52	0	-18	119.87	0	0	No, e>t/2
SLV 13	179667	0.52	2244	-860	119.87	118.68	0.99	No, M>Mu
SLV 14	179667	0.52	2494	-956	119.87	131.68	1.1	Si
SLV 1	179667	0.52	3369	-1292	119.87	176.87	1.48	Si
SLV 2	179667	0.52	3619	-1388	119.87	189.67	1.58	Si
SLV 15	179667	0.52	4503	-1726	119.87	234.58	1.96	Si
SLV 16	179667	0.52	4753	-1822	119.87	247.18	2.06	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.674 Wa = 0.05 Ta = 0.0456

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-1229	-4028	-95	3.552	284.8	0.89	57.9701	9.7808	Si
SLV 11	-1194	-3946	-96	3.608	281.6	0.89	58.91268	9.7808	Si
SLV 8	-1169	-4641	-74	3.661	279.2	0.89	59.78853	9.7808	Si
SLV 7	-1134	-4558	-74	3.721	276	0.89	60.78479	9.7808	Si
SLV 16	-751	-2389	-59	4.554	241.4	0.89	74.33504	6.55054	Si
SLV 15	-696	-2260	-60	4.702	236.7	0.891	76.66398	6.55054	Si
SLV 4	-551	-4431	12	5.185	224.7	0.896	84.0943	6.55054	Si
SLV 3	-496	-4302	11	5.378	220.4	0.899	86.96086	6.55054	Si
SLV 10	365	-1321	77	9.963	194.6	1	144.79199	9.7808	Si, Trazione
SLV 9	400	-1238	77	10.191	194.6	1	148.10808	9.7808	Si, Trazione

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.688	SLU 29	Si
V_SLU	13.627	SLU 77	Si

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0	SLV 5	No
V_SLV	4.897	SLV 12	Si
PFFP_SLV	0	SLV 5	No
R_SLV	5.927	SLV 12	Si

Maschio 242

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-4.824	-11.003	-3.454	L7	F1	1.37	0.28	2.764	2.386	3.142			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 52	12.48	106.9	-3631	-0.000016	0.0003743	0.0035	1.37	2256.07	2415.51	2415.51	22.6	No	Si
SLU 52	14.87	-82.24	-146	-0.0000041	0.0003743	0.0035	1.096	99.7	594.86	594.86	7.23	No	Si
SLU 19	12.48	57.83	-3016	-0.0000127	0.0003743	0.0035	1.37	1906.46	2046.09	2046.09	35.38	No	Si
SLU 19	14.87	-72.24	-110	-0.0000076	0.0003743	0.0035	1.096	75	570.51	570.51	7.9	No	Si
SLU 81	12.48	36.62	-4111	-0.0000168	0.0003743	0.0035	1.37	2519.71	2698.47	2698.47	73.7	No	Si
SLU 81	14.87	-77.35	-148	-0.0000032	0.0003743	0.0035	1.096	100.98	596.12	596.12	7.71	No	Si
SLU 82	12.48	55.6	-4095	-0.000017	0.0003743	0.0035	1.37	2511.07	2689.25	2689.25	48.37	No	Si
SLU 82	14.87	-84.39	-146	-0.0000046	0.0003743	0.0035	1.096	99.38	594.55	594.55	7.05	No	Si
SLU 31	12.48	45.74	-3304	-0.0000137	0.0003743	0.0035	1.37	2071.69	2220.53	2220.53	48.55	No	Si
SLU 31	14.87	-69.4	-110	-0.0000056	0.0003743	0.0035	1.096	75.45	570.95	570.95	8.23	No	Si
SLU 61	12.48	87.3	-3719	-0.0000161	0.0003743	0.0035	1.37	2305.08	2467.78	2467.78	28.27	No	Si
SLU 61	14.87	-84.74	-146	-0.0000047	0.0003743	0.0035	1.096	99.32	594.49	594.49	7.02	No	Si
SLU 40	12.48	26.14	-3392	-0.0000137	0.0003743	0.0035	1.37	2121.72	2273.41	2273.41	86.98	No	Si
SLU 40	14.87	-71.89	-110	-0.0000073	0.0003743	0.0035	1.096	75.06	570.57	570.57	7.94	No	Si
SLU 10	12.48	77.43	-2928	-0.0000127	0.0003743	0.0035	1.37	1855.26	1992.47	1992.47	25.73	No	Si
SLU 10	14.87	-69.74	-110	-0.0000058	0.0003743	0.0035	1.096	75.38	570.89	570.89	8.19	No	Si
SLU 73	12.48	75.2	-4007	-0.000017	0.0003743	0.0035	1.37	2463.22	2638.03	2638.03	35.08	No	Si
SLU 73	14.87	-81.89	-146	-0.000004	0.0003743	0.0035	1.096	99.77	594.92	594.92	7.26	No	Si
SLU 60	12.48	68.31	-3735	-0.0000158	0.0003743	0.0035	1.37	2313.93	2477.25	2477.25	36.26	No	Si
SLU 60	14.87	-77.7	-148	-0.0000032	0.0003743	0.0035	1.096	100.92	596.06	596.06	7.67	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	12.48	750.72	-1160	-0.0001085	0.0005615	0.0035	1.37		881.45	881.45	1.17		Si
SLV 6	14.87	-313.28	705	0.0866646	0.0005615	0.0035	1.096		0	0	0		No
SLV 9	12.48	902.96	-1533	-0.0000579	0.0005615	0.0035	1.37		1128.07	1128.07	1.25		Si
SLV 9	14.87	-421.13	771	0.0951655	0.0005615	0.0035	1.096		0	0	0		No
SLV 5	12.48	727	-1253	-0.0000429	0.0005615	0.0035	1.37		943.17	943.17	1.3		Si
SLV 5	14.87	-299.64	679	0.0834615	0.0005615	0.0035	1.096		0	0	0		No
SLD 5	12.48	348.26	-2195	-0.0000143	0.0005615	0.0035	1.37		1557.35	1557.35	4.47		Si
SLD 5	14.87	-158.6	232	0.0287844	0.0005615	0.0035	1.096		0	0	0		No
SLV 14	12.48	593.71	-2851	-0.0000211	0.0005615	0.0035	1.37		1976.31	1976.31	3.33		Si
SLV 14	14.87	-355.5	312	0.0391942	0.0005615	0.0035	1.096		0	0	0		No
SLD 9	12.48	423.48	-2314	-0.0000161	0.0005615	0.0035	1.37		1634.83	1634.83	3.86		Si
SLD 9	14.87	-210.55	271	0.0337388	0.0005615	0.0035	1.096		0	0	0		No
SLV 13	12.48	556.56	-2997	-0.000021	0.0005615	0.0035	1.37		2069.52	2069.52	3.72		Si
SLV 13	14.87	-334.14	272	0.0341608	0.0005615	0.0035	1.096		0	0	0		No
SLD 14	12.48	284.46	-2891	-0.000016	0.0005615	0.0035	1.37		2002.23	2002.23	7.04		Si
SLD 14	14.87	-179.61	69	0.0086909	0.0005615	0.0035	1.096		0	0	0		No
SLD 10	12.48	433.82	-2274	-0.0000161	0.0005615	0.0035	1.37		1608.48	1608.48	3.71		Si
SLD 10	14.87	-216.5	282	0.0351344	0.0005615	0.0035	1.096		0	0	0		No
SLV 10	12.48	926.68	-1440	-0.0001264	0.0005615	0.0035	1.37		1066.41	1066.41	1.15		Si
SLV 10	14.87	-434.78	797	0.0983677	0.0005615	0.0035	1.096		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	12.48	36.62	-4111	-3423	276	1.37	1.37	-8925	8134	3120	30925	11487	3494	14980	No	54.34	Si
SLU 81	14.87	-77.35	-148	-123	793	1.096	0.4867	0	0	0	30925	9189	2795	11984	No	15.11	Si
SLU 44	12.48	123.1	-3450	-2873	654	1.37	1.37	-7490	7943	3047	30925	11487	3494	14980	No	22.91	Si
SLU 44	14.87	-65.48	-151	-126	816	1.096	0.7546	0	0	0	30925	9189	2795	11984	No	14.69	Si
SLU 52	12.48	106.9	-3631	-3024	597	1.37	1.37	-7882	7995	3067	30925	11487	3494	14980	No	25.09	Si
SLU 52	14.87	-82.24	-146	-122	897	1.096	0.3662	0	0	0	30925	9189	2795	11984	No	13.37	Si
SLU 73	12.48	75.2	-4007	-3337	429	1.37	1.37	-8698	8104	3109	30925	11487	3494	14980	No	34.94	Si
SLU 73	14.87	-81.89	-146	-122	829	1.096	0.3744	0	0	0	30925	9189	2795	11984	No	14.46	Si
SLU 65	12.48	91.41	-3826	-3186	485	1.37	1.37	-8306	8052	3089	30925	11487	3494	14980	No	30.86	Si
SLU 65	14.87	-65.13	-151	-126	748	1.096	0.7623	0	0	0	30925	9189	2795	11984	No	16.02	Si
SLU 82	12.48	55.6	-4095	-3410	353	1.37	1.37	-8890	8130	3119	30925	11487	3494	14980	No	42.45	Si
SLU 82	14.87	-84.39	-146	-121	835	1.096	0.3166	0	0	0	30925	9189	2795	11984	No	14.35	Si
SLU 19	12.48	57.83	-3016	-2512	356	1.37	1.37	-6547	7817	2999	30925	11487	3494	14980	No	42.12	Si
SLU 19	14.87	-72.24	-110	-91	713	1.096	0.0813	0	0	0	30925	9189	2795	11984	No	16.8	Si
SLU 10	12.48	77.43	-2928	-2438	431	1.37	1.37	-6356	7792	2989	30925	11487	3494	14980	No	34.72	Si
SLU 10	14.87	-69.74	-110	-92	707	1.096	0.1591	0	0	0	30925	9189	2795	11984	No	16.95	Si
SLU 60	12.48	68.31	-3735	-3110	444	1.37	1.37	-8108	8026	3079	30925	11487	3494	14980	No	33.74	Si
SLU 60	14.87	-77.7	-148	-123	861	1.096	0.4787	0	0	0	30925	9189	2795	11984	No	13.93	Si
SLU 61	12.48	87.3	-3719	-3097	521	1.37	1.37	-8074	8021	3077	30925	11487	3494	14980	No	28.74	Si
SLU 61	14.87	-84.74	-146	-121	903	1.096	0.3083	0	0	0	30925	9189	2795	11984	No	13.27	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	12.48	727	-1253	-1043	3372	1.37	0.3145	-11904	12798	1127	30925	17230	3494	20724		6.15	Si
SLV 5	14.87	-299.64	679	565	1953	1.096	0.7304	0	0	0	30925	13784	2795	16579		8.49	Si
SLV 13	12.48	556.56	-2997	-2496	3101	1.37	1.37	-6506	11718	4495	30925	17230	3494	20724		6.68	Si
SLV 13	14.87	-334.14	272	226	2566	1.096	0	0	0	0	30925	13784	2795	16579		6.46	Si
SLV 9	12.48	902.96	-1533	-1277	4471	1.37	0.2882	-15921	13602	1098	30925	17230	3494	20724		4.63	Si
SLV 9	14.87	-421.13	771	642	2873	1.096	0.4154	0	0	0	30925	13784	2795	16579		5.77	Si
SLV 6	12.48	750.72	-1160	-966	3552	1.37	0.1129	-28951	16250	514	30925	17230	3494	20724		5.83	Si
SLV 6	14.87	-313.28	705	587	2083	1.096	0.7211	0	0	0	30925	13784	2795	16579		7.96	Si
SLV 8	12.48	-806.34	-4332	-3608	-3881	1.37	1.37	-9405	12298	4717	30925	17230	3494	20724		5.34	Si
SLV 8	14.87	329.24	-1006	-838	-1755	1.37	1.0734	-2184	10854	3262	30925	17230	3494	20724		11.81	Si
SLV 10	12.48	926.68	-1440	-1199	4651	1.37	0.1241	-33342	16250	565	30925	17230	3494	20724		4.46	Si
SLV 10	14.87	-434.78	797	663	3003	1.096	0.4174	0	0	0	30925	13784	2795	16579		5.52	Si
SLV 7	12.48	-830.06	-4426	-3685	-4061	1.37	1.37	-9607	12338	4733	30925	17230	3494	20724		5.1	Si
SLV 7	14.87	342.88	-1032	-860	-1885	1.37	1.0584	-2241	10865	3220	30925	17230	3494	20724		10.99	Si
SLV 14	12.48	593.71	-2851	-2374	3383	1.37	1.37	-6188	11654	4471	30925	17230	3494	20724		6.13	Si
SLV 14	14.87	-355.5	312	260	2770	1.096	0	0	0	0	30925	13784	2795	16579		5.98	Si
SLV 3	12.48	-497.09	-3015	-2511	-2793	1.37	1.37	-6545	11726	4498	30925	17230	3494	20724		7.42	Si
SLV 3	14.87	263.6	-548	-456	-1652	1.37	0.6119	-1190	10655	1825	30925	17230	3494	20724		12.54	Si
SLV 11	12.48	-654.1	-4706	-3919	-2962	1.37	1.37	-10216	12460	4780	30925	17230	3494	20724		7	Si
SLV 11	14.87	221.38	-940	-783	-965	1.37	1.3487	-2041	10825	4088	30925	17230	3494	20724		21.48	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.673 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.52	0	-846	119.73	0	0	No, e>t/2
SLV 6	179667	0.52	0	133	119.73	0	0	No, Trazione
SLV 10	179667	0.52	0	158	119.73	0	0	No, Trazione
SLV 9	179667	0.52	0	94	119.73	0	0	No, Trazione
SLV 5	179667	0.52	0	68	119.73	0	0	No, Trazione
SLV 14	179667	0.52	0	-762	119.73	0	0	No, e>t/2
SLV 13	179667	0.52	2251	-863	119.73	119.1	0.99	No, M>Mu
SLV 1	179667	0.52	2471	-948	119.73	130.54	1.09	Si
SLV 16	179667	0.52	4151	-1592	119.73	216.85	1.81	Si
SLV 4	179667	0.52	4371	-1677	119.73	228	1.9	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.673 Wa = 0.05 Ta = 0.0456

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-1032	-4426	66	3.916	266.5	0.889	64.01263	9.76543	Si
SLV 8	-1006	-4332	66	3.967	264.1	0.889	64.85281	9.76543	Si
SLV 11	-940	-4706	56	4.108	258.1	0.889	67.17249	9.76543	Si
SLV 12	-914	-4612	56	4.165	255.8	0.889	68.0885	9.76543	Si
SLV 3	-548	-3015	34	5.183	224.4	0.896	84.04555	6.54512	Si
SLV 4	-507	-2869	35	5.325	221.2	0.898	86.15765	6.54512	Si
SLV 15	-242	-3949	2	6.524	202.8	0.925	102.46222	6.54512	Si
SLV 16	-201	-3802	2	6.752	200.6	0.933	105.17308	6.54512	Si
SLV 1	-35	-2063	-2	7.878	194.8	0.983	116.43108	6.54512	Si
SLV 2	6	-1917	-2	8.188	194.6	1	118.99934	6.54512	Si, Trazione

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.016	SLU 61	Si
V_SLU	13.272	SLU 61	Si

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0	SLD 5	No
V_SLV	4.456	SLV 10	Si
PFFP_SLV	0	SLV 10	No
R_SLV	6.555	SLV 7	Si

Maschio 244

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.333	-3.314	-11.003	-3.314	L7	F1	1.67	0.28	3.219	3.218	3.219			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 40	12.48	654.45	-2811	-0.0000164	0.0003743	0.0035	1.67	2208.74	2405.71	2405.71	3.68	No	Si
SLU 40	14.58	-514.68	-2480	-0.0000138	0.0003743	0.0035	1.67	1963.04	2674.1	2674.1	5.2	No	Si
SLU 31	12.48	617.14	-2889	-0.0000163	0.0003743	0.0035	1.67	2266.05	2465.08	2465.08	3.99	No	Si
SLU 31	14.58	-536.26	-2527	-0.0000142	0.0003743	0.0035	1.67	1998.1	2711.2	2711.2	5.06	No	Si
SLU 34	12.48	618.46	-3249	-0.0000175	0.0003743	0.0035	1.67	2528.1	2736.74	2736.74	4.43	No	Si
SLU 34	14.58	-586.56	-3056	-0.0000165	0.0003743	0.0035	1.67	2387.74	3105.84	3105.84	5.3	No	Si
SLU 32	12.48	654.36	-3318	-0.0000181	0.0003743	0.0035	1.67	2577.26	2787.89	2787.89	4.26	No	Si
SLU 32	14.58	-665.74	-3218	-0.0000179	0.0003743	0.0035	1.67	2505.31	3228	3228	4.85	No	Si
SLU 33	12.48	656.54	-3313	-0.0000181	0.0003743	0.0035	1.67	2574.07	2784.57	2784.57	4.24	No	Si
SLU 33	14.58	-667.03	-3217	-0.0000179	0.0003743	0.0035	1.67	2504.83	3227.49	3227.49	4.84	No	Si
SLU 41	12.48	653.58	-3176	-0.0000176	0.0003743	0.0035	1.67	2474.99	2681.46	2681.46	4.1	No	Si
SLU 41	14.58	-563.69	-3009	-0.0000161	0.0003743	0.0035	1.67	2354.04	3071.13	3071.13	5.45	No	Si
SLU 25	12.48	566.09	-3502	-0.0000177	0.0003743	0.0035	1.67	2709.17	2925.86	2925.86	5.17	No	Si
SLU 25	14.58	-715.37	-3328	-0.0000189	0.0003743	0.0035	1.67	2584.42	3311.11	3311.11	4.63	No	Si
SLU 39	12.48	652.27	-2816	-0.0000164	0.0003743	0.0035	1.67	2212.01	2409.1	2409.1	3.69	No	Si
SLU 39	14.58	-513.39	-2481	-0.0000137	0.0003743	0.0035	1.67	1963.54	2674.63	2674.63	5.21	No	Si
SLU 42	12.48	655.77	-3171	-0.0000176	0.0003743	0.0035	1.67	2471.78	2678.12	2678.12	4.08	No	Si
SLU 42	14.58	-564.98	-3009	-0.0000161	0.0003743	0.0035	1.67	2353.55	3070.62	3070.62	5.43	No	Si
SLU 24	12.48	563.91	-3507	-0.0000177	0.0003743	0.0035	1.67	2712.33	2929.17	2929.17	5.19	No	Si
SLU 24	14.58	-714.09	-3328	-0.0000188	0.0003743	0.0035	1.67	2584.9	3311.62	3311.62	4.64	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	12.48	2022.5	-2341	-0.0009321	0.0005615	0.0035	1.336		2067.02	2067.02	1.02		Si
SLV 4	14.58	-2158.85	-4097	-0.0000479	0.0005615	0.0035	1.336		3934.85	3934.85	1.82		Si
SLV 1	12.48	1920.52	-1784	-0.004037	0.0005615	0.0035	1.336		1624.6	1624.6	0.85		No
SLV 1	14.58	-1851.16	-3874	-0.0000388	0.0005615	0.0035	1.336		3764.58	3764.58	2.03		Si
SLV 13	12.48	-1269.7	-3637	-0.0000266	0.0005615	0.0035	1.67		3584.09	3584.09	2.82		Si
SLV 13	14.58	1251.37	-386	-0.0083528	0.0005615	0.0035	1.336		491.06	491.06	0.39		No
SLV 16	12.48	-1167.72	-4193	-0.0000267	0.0005615	0.0035	1.67		4008.88	4008.88	3.43		Si
SLV 16	14.58	943.68	-609	-0.0028652	0.0005615	0.0035	1.336		673.16	673.16	0.71		No
SLV 14	12.48	-1590.43	-3761	-0.0000325	0.0005615	0.0035	1.67		3678.57	3678.57	2.31		Si
SLV 14	14.58	1503.19	2	-0.0143194	0.0005615	0.0035	1.336		169.57	169.57	0.11		No
SLV 10	12.48	-909.06	-2586	-0.0000189	0.0005615	0.0035	1.67		2774.96	2774.96	3.05		Si
SLV 10	14.58	1024.57	-575	-0.0041926	0.0005615	0.0035	1.336		645.32	645.32	0.63		No
SLV 9	12.48	-704.23	-2506	-0.0000159	0.0005615	0.0035	1.67		2712.49	2712.49	3.85		Si
SLV 9	14.58	863.75	-823	-0.0009174	0.0005615	0.0035	1.336		848.08	848.08	0.98		No
SLV 2	12.48	1599.79	-1909	-0.0004328	0.0005615	0.0035	1.336		1723.49	1723.49	1.08		Si
SLV 2	14.58	-1599.34	-3485	-0.000033	0.0005615	0.0035	1.336		3469.14	3469.14	2.17		Si
SLV 15	12.48	-846.99	-4069	-0.0000226	0.0005615	0.0035	1.67		3913.76	3913.76	4.62		Si
SLV 15	14.58	691.87	-998	-0.000025	0.0005615	0.0035	1.67		990.26	990.26	1.43		Si
SLV 3	12.48	2343.23	-2217	-0.0052392	0.0005615	0.0035	1.336		1968.39	1968.39	0.84		No
SLV 3	14.58	-2410.67	-4485	-0.0000546	0.0005615	0.0035	1.336		4233.09	4233.09	1.76		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 35	12.48	655.67	-3678	-3063	1379	1.67	1.67	-6550	7818	3656	35683	14002	4259	18261	No	13.24	Si
SLU 35	14.58	-716.03	-3746	-3120	1369	1.67	1.67	-6672	7834	3663	35683	14002	4259	18261	No	13.34	Si
SLU 80	12.48	619.98	-4500	-3747	1352	1.67	1.67	-8014	8013	3747	35683	14002	4259	18261	No	13.51	Si
SLU 80	14.58	-707.31	-4047	-3370	1344	1.67	1.67	-7207	7905	3697	35683	14002	4259	18261	No	13.59	Si
SLU 77	12.48	657.34	-4565	-3802	1447	1.67	1.67	-8130	8028	3754	35683	14002	4259	18261	No	12.62	Si
SLU 77	14.58	-787.35	-4209	-3505	1437	1.67	1.67	-7495	7944	3715	35683	14002	4259	18261	No	12.71	Si
SLU 36	12.48	657.85	-3674	-3059	1381	1.67	1.67	-6542	7817	3655	35683	14002	4259	18261	No	13.22	Si
SLU 36	14.58	-717.32	-3746	-3119	1374	1.67	1.67	-6671	7834	3663	35683	14002	4259	18261	No	13.29	Si
SLU 74	12.48	656.02	-4205	-3502	1355	1.67	1.67	-7488	7943	3714	35683	14002	4259	18261	No	13.48	Si
SLU 74	14.58	-737.06	-3680	-3065	1347	1.67	1.67	-6554	7818	3656	35683	14002	4259	18261	No	13.56	Si
SLU 70	12.48	569.07	-4750	-3955	1397	1.67	1.67	-8458	8072	3775	35683	14002	4259	18261	No	13.07	Si
SLU 70	14.58	-836.99	-4319	-3596	1392	1.67	1.67	-7691	7970	3727	35683	14002	4259	18261	No	13.12	Si
SLU 78	12.48	659.52	-4561	-3798	1449	1.67	1.67	-8122	8027	3754	35683	14002	4259	18261	No	12.6	Si
SLU 78	14.58	-788.64	-4208	-3504	1442	1.67	1.67	-7494	7944	3715	35683	14002	4259	18261	No	12.67	Si
SLU 79	12.48	617.8	-4504	-3751	1350	1.67	1.67	-8021	8014	3747	35683	14002	4259	18261	No	13.53	Si
SLU 79	14.58	-706.02	-4048	-3371	1339	1.67	1.67	-7209	7906	3697	35683	14002	4259	18261	No	13.64	Si
SLU 69	12.48	566.89	-4754	-3959	1395	1.67	1.67	-8466	8073	3775	35683	14002	4259	18261	No	13.09	Si
SLU 69	14.58	-835.7	-4319	-3597	1387	1.67	1.67	-7692	7970	3727	35683	14002	4259	18261	No	13.16	Si
SLU 75	12.48	658.21	-4201	-3498	1357	1.67	1.67	-7480	7942	3714	35683	14002	4259	18261	No	13.46	Si
SLU 75	14.58	-738.35	-3680	-3064	1352	1.67	1.67	-6553	7818	3656	35683	14002	4259	18261	No	13.51	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	12.48	2343.23	-2217	-1846	4640	1.336	0	0	0	0	35683	16803	3407	20209		4.36	Si
SLV 3	14.58	-2410.67	-4485	-3735	2835	1.336	0.8926	0	0	0	35683	16803	3407	20209		7.13	Si
SLV 8	12.48	1457.03	-3471	-2891	2785	1.67	1.2459	-6182	11653	4065	35683	21003	4259	25262		9.07	Si
SLV 8	14.58	-1771.22	-3660	-3047	1983	1.336	1.0531	0	0	0	35683	16803	3407	20209		10.19	Si
SLV 14	12.48	-1590.43	-3761	-3132	-3065	1.67	1.2364	-9083	12233	4235	35683	21003	4259	25262		8.24	Si
SLV 14	14.58	1503.19	2	2	-1267	1.336	0	0	0	0	35683	16803	3407	20209		15.96	Si
SLV 1	12.48	1920.52	-1784	-1486	3938	1.336	0	0	0	0	35683	16803	3407	20209		5.13	Si
SLV 1	14.58	-1851.16	-3874	-3226	2303	1.336	1.0714	0	0	0	35683	16803	3407	20209		8.77	Si
SLV 4	12.48	2022.5	-2341	-1949	4165	1.336	0	0	0	0	35683	16803	3407	20209		4.85	Si
SLV 4	14.58	-2158.85	-4097	-3411	2358	1.336	0.9241	0	0	0	35683	16803	3407	20209		8.57	Si
SLV 16	12.48	-1167.72	-4193	-3492	-2363	1.67	1.6696	-7468	11910	5568	35683	21003	4259	25262		10.69	Si
SLV 16	14.58	943.68	-609	-507	-734	1.336	0	0	0	0	35683	16803	3407	20209		27.52	Si
SLV 2	12.48	1599.79	-1909	-1589	3462	1.336	0	0	0	0	35683	16803	3407	20209		5.84	Si
SLV 2	14.58	-1599.34	-3485	-2902	1826	1.336	1.1283	0	0	0	35683	16803	3407	20209		11.07	Si
SLV 13	12.48	-1269.7	-3637	-3028	-2589	1.67	1.4576	-7444	11906	4859	35683	21003	4259	25262		9.76	Si
SLV 13	14.58	1251.37	-386	-322	-790	1.336	0	0	0	0	35683	16803	3407	20209		25.59	Si
SLD 3	12.48	1221.57	-2661	-2215	2442	1.67	1.1276	-4738	11364	3588	35683	21003	4259	25262		10.35	Si
SLD 3	14.58	-1295.25	-3207	-2671	1667	1.67	1.2934	-7395	11896	4308	35683	21003	4259	25262		15.15	Si
SLV 7	12.48	1661.86	-3392	-2825	3089	1.67	1.0353	-6041	11625	3370	35683	21003	4259	25262		8.18	Si
SLV 7	14.58	-1932.04	-3908	-3254	2287	1.336	1.0218	0	0	0	35683	16803	3407	20209		8.84	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.089 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 10	179667	0.53	0	-315	196.52	0	0	No, e>t/2
SLV 16	179667	0.53	0	-1208	196.52	0	0	No, e>t/2
SLV 14	179667	0.53	0	-294	196.52	0	0	No, e>t/2
SLV 13	179667	0.53	0	-605	196.52	0	0	No, e>t/2
SLV 5	179667	0.53	0	-1397	196.52	0	0	No, e>t/2
SLV 9	179667	0.53	0	-513	196.52	0	0	No, e>t/2
SLV 6	179667	0.53	0	-1199	196.52	0	0	No, e>t/2
SLV 15	179667	0.53	3249	-1519	196.52	208.17	1.06	Si
SLV 2	179667	0.53	6930	-3241	196.52	433.08	2.2	Si
SLV 12	179667	0.53	7191	-3362	196.52	448.58	2.28	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.089 Wa = 0.05 Ta = 0.0618

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-1138	-2506	-298	3.711	348.9	0.89	60.62294	13.71461	Si
SLV 10	-1122	-2586	-299	3.734	347.5	0.89	60.98614	13.71461	Si
SLV 5	-1115	-1951	-139	3.81	346.9	0.89	62.22438	13.71461	Si
SLV 6	-1099	-2030	-139	3.833	345.5	0.89	62.5998	13.71461	Si
SLV 7	-92	-3392	297	6.362	277.3	0.971	95.22333	13.71461	Si
SLV 8	-77	-3471	297	6.431	277	0.975	95.83293	13.71461	Si
SLV 11	-115	-3948	137	6.372	277.9	0.965	95.94907	13.71461	Si
SLV 12	-100	-4027	137	6.439	277.5	0.969	96.57622	13.71461	Si
SLV 13	-811	-3637	-332	4.249	321.2	0.895	68.97821	7.8849	Si
SLV 14	-787	-3761	-333	4.296	319.3	0.896	69.68871	7.8849	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.676	SLU 40	Si
V_SLU	12.601	SLU 78	Si

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.113	SLV 14	No
V_SLV	4.355	SLV 3	Si
PFFP_SLV	0	SLV 5	No
R_SLV	4.42	SLV 9	Si

Maschio 246

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.413	-3.314	-8.433	-3.314	L7	F1	1.02	0.28	3.217	3.216	3.217			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 40	13.38	-287	-1839	-0.0000184	0.0003743	0.0035	1.02	878.54	1129.29	1129.29	3.93	No	Si
SLU 40	15.18	118.06	-521	-0.0000064	0.0003743	0.0035	1.02	260.95	330.04	330.04	2.8	No	Si
SLU 21	13.38	-371.1	-2260	-0.0000233	0.0003743	0.0035	1.02	1062.99	1322.63	1322.63	3.56	No	Si
SLU 21	15.18	138.19	-741	-0.000008	0.0003743	0.0035	1.02	368.42	438.28	438.28	3.17	No	Si
SLU 18	13.38	-330.64	-1875	-0.00002	0.0003743	0.0035	1.02	894.66	1146.02	1146.02	3.47	No	Si
SLU 18	15.18	126.42	-498	-0.0000068	0.0003743	0.0035	1.02	249.59	318.68	318.68	2.52	No	Si
SLU 60	13.38	-420.41	-2559	-0.0000265	0.0003743	0.0035	1.02	1190.05	1455.62	1455.62	3.46	No	Si
SLU 60	15.18	140.04	-747	-0.0000081	0.0003743	0.0035	1.02	371.41	441.32	441.32	3.15	No	Si
SLU 10	13.38	-308.11	-1977	-0.0000198	0.0003743	0.0035	1.02	939.64	1192.9	1192.9	3.87	No	Si
SLU 10	15.18	103.83	-592	-0.0000062	0.0003743	0.0035	1.02	295.84	365	365	3.52	No	Si
SLU 82	13.38	-376.78	-2522	-0.000025	0.0003743	0.0035	1.02	1174.79	1439.48	1439.48	3.82	No	Si
SLU 82	15.18	131.69	-771	-0.000008	0.0003743	0.0035	1.02	382.57	452.66	452.66	3.44	No	Si
SLU 20	13.38	-369.7	-2265	-0.0000233	0.0003743	0.0035	1.02	1065.18	1324.95	1324.95	3.58	No	Si
SLU 20	15.18	134.73	-752	-0.000008	0.0003743	0.0035	1.02	373.5	443.43	443.43	3.29	No	Si
SLU 19	13.38	-332.03	-1870	-0.00002	0.0003743	0.0035	1.02	892.4	1143.67	1143.67	3.44	No	Si
SLU 19	15.18	129.88	-487	-0.000007	0.0003743	0.0035	1.02	244.42	313.52	313.52	2.41	No	Si
SLU 39	13.38	-285.61	-1844	-0.0000184	0.0003743	0.0035	1.02	880.81	1131.64	1131.64	3.96	No	Si
SLU 39	15.18	114.61	-531	-0.0000063	0.0003743	0.0035	1.02	266.11	335.19	335.19	2.92	No	Si
SLU 61	13.38	-421.81	-2553	-0.0000265	0.0003743	0.0035	1.02	1187.9	1453.35	1453.35	3.45	No	Si
SLU 61	15.18	143.5	-737	-0.0000082	0.0003743	0.0035	1.02	366.34	436.17	436.17	3.04	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	13.38	-780.33	-2288	-0.0000488	0.0005615	0.0035	0.816		1351.87	1351.87	1.73		Si
SLV 6	15.18	442.6	-317	-0.0062325	0.0005615	0.0035	0.816		229.57	229.57	0.52		No
SLV 3	13.38	1179.35	-740	-0.0196469	0.0005615	0.0035	0.816		439.9	439.9	0.37		No
SLV 3	15.18	-795.25	-1354	-0.000377	0.0005615	0.0035	0.816		909.99	909.99	1.14		Si
SLV 10	13.38	-1433.68	-3002	-0.000285	0.0005615	0.0035	0.816		1681.57	1681.57	1.17		Si
SLV 10	15.18	811.73	-122	-0.0184809	0.0005615	0.0035	0.816		131.67	131.67	0.16		No
SLV 4	13.38	968.45	-946	-0.0120936	0.0005615	0.0035	0.816		541.58	541.58	0.56		No
SLV 4	15.18	-662.74	-1236	-0.0002245	0.0005615	0.0035	0.816		852.94	852.94	1.29		Si
SLV 13	13.38	-1471.42	-3374	-0.0001733	0.0005615	0.0035	0.816		1850.3	1850.3	1.26		Si
SLV 13	15.18	757.62	-375	-0.0137002	0.0005615	0.0035	0.816		258.32	258.32	0.34		No
SLV 9	13.38	-1299	-2871	-0.0001811	0.0005615	0.0035	0.816		1621.54	1621.54	1.25		Si
SLV 9	15.18	727.1	-197	-0.0152829	0.0005615	0.0035	0.816		169.46	169.46	0.23		No
SLV 14	13.38	-1682.32	-3580	-0.0003131	0.0005615	0.0035	0.816		1943.53	1943.53	1.16		Si
SLV 14	15.18	890.13	-257	-0.0186189	0.0005615	0.0035	0.816		199.24	199.24	0.22		No
SLV 7	13.38	930.71	-1318	-0.0069702	0.0005615	0.0035	0.816		722.96	722.96	0.78		No
SLV 7	15.18	-716.85	-1489	-0.0001368	0.0005615	0.0035	0.816		974.88	974.88	1.36		Si
SLV 16	13.38	-1209.41	-3328	-0.0000839	0.0005615	0.0035	0.816		1829.66	1829.66	1.51		Si
SLV 16	15.18	567.68	-586	-0.006171	0.0005615	0.0035	0.816		363.17	363.17	0.64		No
SLV 5	13.38	-645.64	-2156	-0.0000366	0.0005615	0.0035	0.816		1290.51	1290.51	2		Si
SLV 5	15.18	357.98	-393	-0.0025893	0.0005615	0.0035	0.816		267.22	267.22	0.75		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 57	13.38	-465.86	-3585	-2985	-442	1.02	1.02	-10453	8338	2381	35683	8552	2601	11153	No	25.23	Si
SLU 57	15.18	117.27	-1485	-1237	-474	1.02	1.02	-4330	7522	2148	35683	8552	2601	11153	No	23.53	Si
SLU 56	13.38	-464.47	-3590	-2990	-440	1.02	1.02	-10468	8340	2382	35683	8552	2601	11153	No	25.34	Si
SLU 56	15.18	113.82	-1496	-1245	-469	1.02	1.02	-4360	7526	2149	35683	8552	2601	11153	No	23.76	Si
SLU 63	13.38	-460.87	-2943	-2451	-444	1.02	1.02	-8582	8089	2310	35683	8552	2601	11153	No	25.12	Si
SLU 63	15.18	151.81	-991	-825	-461	1.02	1.02	-2889	7330	2093	35683	8552	2601	11153	No	24.18	Si
SLU 80	13.38	-430.05	-3412	-2841	-364	1.02	1.02	-9949	8271	2362	35683	8552	2601	11153	No	30.61	Si
SLU 80	15.18	119.96	-1390	-1157	-470	1.02	1.02	-4053	7485	2138	35683	8552	2601	11153	No	23.74	Si
SLU 59	13.38	-475.08	-3443	-2867	-468	1.02	1.02	-10040	8283	2366	35683	8552	2601	11153	No	23.83	Si
SLU 59	15.18	131.77	-1356	-1130	-476	1.02	1.02	-3955	7472	2134	35683	8552	2601	11153	No	23.45	Si
SLU 77	13.38	-419.44	-3559	-2964	-336	1.02	1.02	-10377	8328	2379	35683	8552	2601	11153	No	33.15	Si
SLU 77	15.18	102	-1529	-1273	-464	1.02	1.02	-4458	7539	2153	35683	8552	2601	11153	No	24.05	Si
SLU 62	13.38	-459.47	-2948	-2455	-442	1.02	1.02	-8597	8091	2311	35683	8552	2601	11153	No	25.23	Si
SLU 62	15.18	148.35	-1001	-834	-457	1.02	1.02	-2920	7334	2095	35683	8552	2601	11153	No	24.42	Si
SLU 78	13.38	-420.83	-3554	-2960	-338	1.02	1.02	-10362	8326	2378	35683	8552	2601	11153	No	32.96	Si
SLU 78	15.18	105.46	-1519	-1265	-468	1.02	1.02	-4428	7535	2152	35683	8552	2601	11153	No	23.82	Si
SLU 58	13.38	-473.68	-3448	-2872	-466	1.02	1.02	-10054	8285	2366	35683	8552	2601	11153	No	23.93	Si
SLU 58	15.18	128.31	-1367	-1138	-471	1.02	1.02	-3985	7476	2135	35683	8552	2601	11153	No	23.68	Si
SLU 79	13.38	-428.65	-3417	-2846	-362	1.02	1.02	-9964	8273	2363	35683	8552	2601	11153	No	30.77	Si
SLU 79	15.18	116.5	-1400	-1166	-465	1.02	1.02	-4083	7489	2139	35683	8552	2601	11153	No	23.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	13.38	-1682.32	-3580	-2981	-2576	0.816	0.1201	0	0	0	35683	10263	2081	12343		4.79	Si
SLV 14	15.18	890.13	-257	-214	-1149	0.816	0	0	0	0	35683	10263	2081	12343		10.74	Si
SLV 4	13.38	968.45	-946	-788	1862	0.816	0	0	0	0	35683	10263	2081	12343		6.63	Si
SLV 4	15.18	-662.74	-1236	-1029	449	0.816	0	0	0	0	35683	10263	2081	12343		27.47	Si
SLV 9	13.38	-1299	-2871	-2390	-1766	0.816	0.1725	0	0	0	35683	10263	2081	12343		6.99	Si
SLV 9	15.18	727.1	-197	-164	-1114	0.816	0	0	0	0	35683	10263	2081	12343		11.08	Si
SLV 3	13.38	1179.35	-740	-617	2206	0.816	0	0	0	0	35683	10263	2081	12343		5.59	Si
SLV 3	15.18	-795.25	-1354	-1127	654	0.816	0	0	0	0	35683	10263	2081	12343		18.86	Si
SLV 16	13.38	-1209.41	-3328	-2771	-1900	0.816	0.4398	0	0	0	35683	10263	2081	12343		6.5	Si
SLV 16	15.18	567.68	-586	-488	-693	0.816	0	0	0	0	35683	10263	2081	12343		17.82	Si
SLV 10	13.38	-1433.68	-3002	-2500	-1986	0.816	0.0973	0	0	0	35683	10263	2081	12343		6.21	Si
SLV 10	15.18	811.73	-122	-102	-1245	0.816	0	0	0	0	35683	10263	2081	12343		9.92	Si
SLV 13	13.38	-1471.42	-3374	-2809	-2232	0.816	0.2216	0	0	0	35683	10263	2081	12343		5.53	Si
SLV 13	15.18	757.62	-375	-312	-944	0.816	0	0	0	0	35683	10263	2081	12343		13.08	Si
SLV 15	13.38	-998.51	-3122	-2600	-1556	0.816	0.5706	0	0	0	35683	10263	2081	12343		7.93	Si
SLV 15	15.18	435.18	-704	-586	-488	0.816	0	0	0	0	35683	10263	2081	12343		25.31	Si
SLV 1	13.38	706.44	-992	-826	1530	0.816	0	0	0	0	35683	10263	2081	12343		8.07	Si
SLV 1	15.18	-472.8	-1025	-854	198	0.816	0.1464	0	0	0	35683	10263	2081	12343		62.28	Si
SLV 7	13.38	930.71	-1318	-1097	1616	0.816	0	0	0	0	35683	10263	2081	12343		7.64	Si
SLV 7	15.18	-716.85	-1489	-1240	750	0.816	0.0854	0	0	0	35683	10263	2081	12343		16.46	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.088 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 1	179667	0.53	0	-629	119.87	0	0	No, e>t/2
SLV 2	179667	0.53	0	-834	119.87	0	0	No, e>t/2
SLV 4	179667	0.53	0	-575	119.87	0	0	No, e>t/2
SLV 3	179667	0.53	0	-369	119.87	0	0	No, e>t/2
SLV 7	179667	0.53	3238	-925	119.87	126.73	1.06	Si
SLV 8	179667	0.53	3698	-1056	119.87	144.3	1.2	Si
SLV 11	179667	0.53	5703	-1629	119.87	219.53	1.83	Si
SLV 12	179667	0.53	6164	-1760	119.87	236.5	1.97	Si
SLV 5	179667	0.53	6267	-1790	119.87	240.3	2	Si
SLV 6	179667	0.53	6727	-1921	119.87	257.13	2.15	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.088 Wa = 0.05 Ta = 0.0617

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-849	-720	-44	3.458	226.8	0.889	56.53173	13.69381	Si
SLV 10	-834	-608	-45	3.487	225.4	0.889	57.01779	13.69381	Si
SLV 5	-825	-1325	-43	3.507	224.6	0.889	57.34543	13.69381	Si
SLV 6	-811	-1213	-43	3.538	223.3	0.889	57.84413	13.69381	Si
SLV 11	-53	-2768	2	6.593	169.2	0.972	98.53261	13.69381	Si
SLV 12	-39	-2657	2	6.702	168.9	0.979	99.48991	13.69381	Si
SLV 7	-30	-3373	3	6.772	168.8	0.984	100.06221	13.69381	Si
SLV 8	-15	-3262	3	6.888	168.6	0.991	100.98923	13.69381	Si
SLV 13	-602	-763	-29	4.058	205	0.891	66.15986	7.87814	Si
SLV 14	-579	-588	-30	4.122	203	0.892	67.16601	7.87814	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.414	SLU 19	Si
V_SLU	23.452	SLU 59	Si

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.162	SLV 10	No
V_SLV	4.791	SLV 14	Si
PFFP_SLV	0	SLV 1	No
R_SLV	4.128	SLV 9	Si

Maschio 247

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.963	-3.314	-6.513	-3.314	L7	F1	0.55	0.28	3.215	3.215	3.215			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 65	14.48	-49.03	-1683	-0.0000217	0.0003743	0.0035	0.55	413.14	492.78	492.78	10.05	No	Si
SLU 65	15.28	-56.17	-968	-0.0000153	0.0003743	0.0035	0.55	249.78	320.88	320.88	5.71	No	Si
SLU 31	14.48	-42.88	-1321	-0.0000174	0.0003743	0.0035	0.55	332.64	407.03	407.03	9.49	No	Si
SLU 31	15.28	-40.06	-712	-0.0000111	0.0003743	0.0035	0.55	186.88	255.65	255.65	6.38	No	Si
SLU 22	14.48	-37.89	-1343	-0.0000171	0.0003743	0.0035	0.55	337.8	412.55	412.55	10.89	No	Si
SLU 22	15.28	-50.66	-775	-0.0000128	0.0003743	0.0035	0.55	202.72	271.9	271.9	5.37	No	Si
SLU 67	14.48	-61.73	-1974	-0.0000261	0.0003743	0.0035	0.55	474.59	559.65	559.65	9.07	No	Si
SLU 67	15.28	-63.11	-1316	-0.0000195	0.0003743	0.0035	0.55	331.63	405.95	405.95	6.43	No	Si
SLU 64	14.48	-51.58	-1698	-0.0000222	0.0003743	0.0035	0.55	416.4	496.24	496.24	9.62	No	Si
SLU 64	15.28	-55.8	-945	-0.000015	0.0003743	0.0035	0.55	244.17	315.08	315.08	5.65	No	Si
SLU 23	14.48	-35.33	-1328	-0.0000167	0.0003743	0.0035	0.55	334.36	408.87	408.87	11.57	No	Si
SLU 23	15.28	-51.02	-799	-0.0000131	0.0003743	0.0035	0.55	208.46	277.83	277.83	5.45	No	Si
SLU 66	14.48	-63.26	-1983	-0.0000263	0.0003743	0.0035	0.55	476.45	561.72	561.72	8.88	No	Si
SLU 66	15.28	-62.89	-1302	-0.0000194	0.0003743	0.0035	0.55	328.44	402.55	402.55	6.4	No	Si
SLU 24	14.48	-49.57	-1629	-0.0000212	0.0003743	0.0035	0.55	401.4	480.35	480.35	9.69	No	Si
SLU 24	15.28	-57.74	-1133	-0.0000171	0.0003743	0.0035	0.55	289.11	361.21	361.21	6.26	No	Si
SLU 25	14.48	-48.03	-1620	-0.000021	0.0003743	0.0035	0.55	399.43	478.27	478.27	9.96	No	Si
SLU 25	15.28	-57.96	-1147	-0.0000173	0.0003743	0.0035	0.55	292.38	364.61	364.61	6.29	No	Si
SLU 73	14.48	-56.57	-1675	-0.0000225	0.0003743	0.0035	0.55	411.52	491.06	491.06	8.68	No	Si
SLU 73	15.28	-45.21	-881	-0.0000133	0.0003743	0.0035	0.55	228.71	298.92	298.92	6.61	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 7	14.48	-46.83	-1095	-0.0000155	0.0005615	0.0035	0.55		356.18	356.18	7.61		Si
SLD 7	15.28	-69.95	-258	-0.0000578	0.0005615	0.0035	0.44		137.97	137.97	1.97		Si
SLV 3	14.48	47.64	-350	-0.0000088	0.0005615	0.0035	0.55		112.48	112.48	2.36		Si
SLV 3	15.28	-71.2	281	0.1048495	0.0005615	0.0035	0.44		0	0	0		No
SLV 4	14.48	1.56	-469	-0.0000047	0.0005615	0.0035	0.55		144.32	144.32	92.79		Si
SLV 4	15.28	-10.31	285	0	0.0005615	0.0035	0.44		0	0	0		No
SLV 11	14.48	-100.98	-1342	-0.0000236	0.0005615	0.0035	0.55		418.1	418.1	4.14		Si
SLV 11	15.28	-120.73	-154	-0.000505	0.0005615	0.0035	0.44		110.23	110.23	0.91		No
SLV 8	14.48	-81.34	-920	-0.0000174	0.0005615	0.0035	0.55		311.76	311.76	3.83		Si
SLV 8	15.28	-73.54	292	0.1086468	0.0005615	0.0035	0.44		0	0	0		No
SLV 7	14.48	-51.91	-844	-0.0000135	0.0005615	0.0035	0.55		292.16	292.16	5.63		Si
SLV 7	15.28	-112.43	289	0.1086588	0.0005615	0.0035	0.44		0	0	0		No
SLV 2	14.48	30.67	-563	-0.0000086	0.0005615	0.0035	0.55		169.33	169.33	5.52		Si
SLV 2	15.28	26.16	-164	-0.000005	0.0005615	0.0035	0.55		62.67	62.67	2.4		Si
SLV 1	14.48	76.76	-444	-0.0000153	0.0005615	0.0035	0.55		137.5	137.5	1.79		Si
SLV 1	15.28	-34.73	-168	-0.0000086	0.0005615	0.0035	0.44		114.01	114.01	3.28		Si
SLD 11	14.48	-67.98	-1309	-0.0000198	0.0005615	0.0035	0.55		409.68	409.68	6.03		Si
SLD 11	15.28	-73.49	-448	-0.0000142	0.0005615	0.0035	0.44		188.46	188.46	2.56		Si
SLV 12	14.48	-130.42	-1419	-0.0000275	0.0005615	0.0035	0.55		437.19	437.19	3.35		Si
SLV 12	15.28	-81.84	-152	-0.0002609	0.0005615	0.0035	0.44		109.61	109.61	1.34		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 57	14.48	-81.3	-2079	-1731	-376	0.55	0.55	-11241	8443	1300	35683	4612	1403	6014	No	16.01	Si
SLU 57	15.28	-37	-1402	-1167	183	0.55	0.55	-7580	7955	1225	35683	4612	1403	6014	No	32.78	Si
SLU 78	14.48	-77.68	-2154	-1794	-353	0.55	0.55	-11649	8498	1309	35683	4612	1403	6014	No	17.05	Si
SLU 78	15.28	-52.64	-1500	-1249	196	0.55	0.55	-8112	8026	1236	35683	4612	1403	6014	No	30.73	Si
SLU 58	14.48	-79.56	-1990	-1657	-375	0.55	0.55	-10761	8379	1290	35683	4612	1403	6014	No	16.05	Si
SLU 58	15.28	-30.19	-1301	-1083	178	0.55	0.55	-7035	7882	1214	35683	4612	1403	6014	No	33.72	Si
SLU 56	14.48	-82.83	-2088	-1739	-378	0.55	0.55	-11290	8450	1301	35683	4612	1403	6014	No	15.89	Si
SLU 56	15.28	-36.78	-1388	-1156	179	0.55	0.55	-7505	7945	1224	35683	4612	1403	6014	No	33.61	Si
SLU 80	14.48	-74.41	-2057	-1712	-349	0.55	0.55	-11120	8427	1298	35683	4612	1403	6014	No	17.23	Si
SLU 80	15.28	-46.05	-1413	-1177	195	0.55	0.55	-7643	7963	1226	35683	4612	1403	6014	No	30.82	Si
SLU 62	14.48	-74.39	-1799	-1498	-362	0.55	0.55	-9730	8242	1269	35683	4612	1403	6014	No	16.61	Si
SLU 62	15.28	-25	-993	-827	159	0.55	0.55	-5369	7660	1180	35683	4612	1403	6014	No	37.94	Si
SLU 59	14.48	-78.03	-1981	-1650	-372	0.55	0.55	-10712	8373	1289	35683	4612	1403	6014	No	16.17	Si
SLU 59	15.28	-30.41	-1315	-1095	183	0.55	0.55	-7110	7892	1215	35683	4612	1403	6014	No	32.88	Si
SLU 79	14.48	-75.94	-2066	-1720	-352	0.55	0.55	-11169	8434	1299	35683	4612	1403	6014	No	17.1	Si
SLU 79	15.28	-45.83	-1400	-1165	191	0.55	0.55	-7567	7953	1225	35683	4612	1403	6014	No	31.56	Si
SLU 77	14.48	-79.21	-2163	-1802	-356	0.55	0.55	-11698	8504	1310	35683	4612	1403	6014	No	16.92	Si
SLU 77	15.28	-52.42	-1486	-1238	191	0.55	0.55	-8037	8016	1235	35683	4612	1403	6014	No	31.46	Si
SLU 63	14.48	-72.86	-1790	-1491	-359	0.55	0.55	-9681	8235	1268	35683	4612	1403	6014	No	16.74	Si
SLU 63	15.28	-25.22	-1007	-839	163	0.55	0.55	-5445	7670	1181	35683	4612	1403	6014	No	36.88	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	14.48	-3.92	-1655	-1378	-688	0.55	0.55	-8948	12206	1880	35683	6917	1403	8320		12.09	Si
SLV 9	15.28	0.84	-1652	-1376	494	0.55	0.55	-8934	12203	1879	35683	6917	1403	8320		16.86	Si
SLV 16	14.48	-162.02	-2131	-1775	-805	0.55	0.55	-11524	12721	1959	35683	6917	1403	8320		10.33	Si
SLV 16	15.28	-37.97	-1193	-993	378	0.55	0.55	-6448	11706	1803	35683	6917	1403	8320		22.02	Si
SLV 15	14.48	-115.94	-2012	-1675	-601	0.55	0.55	-10878	12592	1939	35683	6917	1403	8320		13.85	Si
SLV 15	15.28	-98.86	-1196	-996	429	0.55	0.55	-6468	11710	1803	35683	6917	1403	8320		19.39	Si
SLV 13	14.48	-86.82	-2106	-1753	-820	0.55	0.55	-11385	12694	1955	35683	6917	1403	8320		10.15	Si
SLV 13	15.28	-62.4	-1646	-1370	578	0.55	0.55	-8898	12196	1878	35683	6917	1403	8320		14.38	Si
SLD 14	14.48	-81.41	-1690	-1407	-559	0.55	0.55	-9139	12244	1886	35683	6917	1403	8320		14.9	Si
SLD 14	15.28	-21.12	-1095	-912	295	0.55	0.55	-5920	11601	1787	35683	6917	1403	8320		28.18	Si
SLD 13	14.48	-61.63	-1639	-1365	-471	0.55	0.55	-8862	12189	1877	35683	6917	1403	8320		17.67	Si
SLD 13	15.28	-47.26	-1096	-913	317	0.55	0.55	-5928	11602	1787	35683	6917	1403	8320		26.23	Si
SLV 3	14.48	47.64	-350	-291	613	0.55	0.4164	-1891	10795	1259	35683	6917	1403	8320		13.58	Si
SLV 3	15.28	-71.2	281	234	-286	0.44	0.0659	0	0	0	35683	5534	1122	6656		23.31	Si
SLV 14	14.48	-132.91	-2225	-1853	-1024	0.55	0.55	-12031	12823	1975	35683	6917	1403	8320		8.12	Si
SLV 14	15.28	-1.5	-1642	-1367	527	0.55	0.55	-8878	12192	1878	35683	6917	1403	8320		15.78	Si
SLV 10	14.48	-33.35	-1731	-1442	-819	0.55	0.55	-9361	12289	1893	35683	6917	1403	8320		10.16	Si
SLV 10	15.28	39.72	-1650	-1374	461	0.55	0.55	-8921	12201	1879	35683	6917	1403	8320		18.05	Si
SLD 10	14.48	-38.43	-1480	-1232	-473	0.55	0.55	-8003	12017	1851	35683	6917	1403	8320		17.58	Si
SLD 10	15.28	-2.76	-1103	-918	269	0.55	0.55	-5963	11609	1788	35683	6917	1403	8320		30.94	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.088 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.53	0	61	64.58	0	0	No, Trazione
SLV 6	179667	0.53	0	108	64.58	0	0	No, Trazione
SLV 14	179667	0.53	0	-266	64.58	0	0	No, e>t/2
SLV 2	179667	0.53	0	-436	64.58	0	0	No, e>t/2
SLV 5	179667	0.53	0	10	64.58	0	0	No, Trazione
SLV 10	179667	0.53	0	159	64.58	0	0	No, Trazione
SLV 13	179667	0.53	0	-421	64.58	0	0	No, e>t/2
SLV 1	179667	0.53	3834	-590	64.58	80.59	1.25	Si
SLV 16	179667	0.53	4584	-706	64.58	95.87	1.48	Si
SLV 15	179667	0.53	5586	-860	64.58	116.04	1.8	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.088 Wa = 0.05 Ta = 0.0617

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-1504	362	-48	1.613	224.4	0.919	25.51614	13.6781	Si, Trazione
SLV 9	-1478	243	-48	1.635	221.8	0.918	25.87319	13.6781	Si, Trazione
SLV 6	-1246	555	-44	1.856	198.6	0.912	29.58914	13.6781	Si, Trazione
SLV 5	-1220	435	-44	1.884	196	0.911	30.06881	13.6781	Si, Trazione
SLV 14	-1453	-600	-39	1.661	219.2	0.918	26.30421	7.87301	Si
SLV 13	-1412	-787	-39	1.696	215.1	0.916	26.90173	7.87301	Si
SLV 16	-1144	-1260	-27	1.983	188.4	0.908	31.71993	7.87301	Si
SLV 12	-475	-1840	-7	3.413	123.8	0.889	55.79521	13.6781	Si
SLV 15	-1103	-1447	-27	2.034	184.4	0.907	32.58625	7.87301	Si
SLV 11	-449	-1959	-7	3.511	121.4	0.889	57.40868	13.6781	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.368	SLU 22	Si
V_SLU	15.89	SLU 56	Si

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0	SLV 3	No
V_SLV	8.121	SLV 14	Si
PFFP_SLV	0	SLV 10	No
R_SLV	1.865	SLV 10	Si

Maschio 248

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-3.183	-3.314	-5.463	-3.314	L7	F1	2.28	0.28	3.213	3.212	3.214			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 61	14.48	124.94	-4451	-0.0000112	0.0003743	0.0035	2.28	4727	5099.23	5099.23	40.81	No	Si
SLU 61	15.28	738.18	-3327	-0.0000123	0.0003743	0.0035	2.28	3598.33	3931.79	3931.79	5.33	No	Si
SLU 18	14.48	103.94	-3502	-0.0000088	0.0003743	0.0035	2.28	3777.06	4116.43	4116.43	39.6	No	Si
SLU 18	15.28	632.15	-2660	-0.00001	0.0003743	0.0035	2.28	2907.78	3224.77	3224.77	5.1	No	Si
SLU 40	14.48	159.17	-3910	-0.0000101	0.0003743	0.0035	2.28	4189.33	4541.14	4541.14	28.53	No	Si
SLU 40	15.28	696.92	-3067	-0.0000114	0.0003743	0.0035	2.28	3331.82	3658.04	3658.04	5.25	No	Si
SLU 60	14.48	121.36	-4496	-0.0000113	0.0003743	0.0035	2.28	4770.39	5144.5	5144.5	42.39	No	Si
SLU 60	15.28	738.98	-3364	-0.0000124	0.0003743	0.0035	2.28	3636.45	3971.02	3971.02	5.37	No	Si
SLU 31	14.48	165.5	-3979	-0.0000103	0.0003743	0.0035	2.28	4258.13	4612.45	4612.45	27.87	No	Si
SLU 31	15.28	636.05	-3102	-0.0000111	0.0003743	0.0035	2.28	3367.32	3694.48	3694.48	5.81	No	Si
SLU 39	14.48	155.6	-3954	-0.0000102	0.0003743	0.0035	2.28	4233.55	4587.01	4587.01	29.48	No	Si
SLU 39	15.28	697.73	-3105	-0.0000115	0.0003743	0.0035	2.28	3370.28	3697.52	3697.52	5.3	No	Si
SLU 10	14.48	113.85	-3526	-0.0000089	0.0003743	0.0035	2.28	3802.03	4142.37	4142.37	36.39	No	Si
SLU 10	15.28	570.48	-2657	-0.0000096	0.0003743	0.0035	2.28	2904.77	3221.71	3221.71	5.65	No	Si
SLU 81	14.48	173.02	-4948	-0.0000126	0.0003743	0.0035	2.28	5211.11	5606.15	5606.15	32.4	No	Si
SLU 81	15.28	804.56	-3809	-0.0000138	0.0003743	0.0035	2.28	4087.95	4436.39	4436.39	5.51	No	Si
SLU 82	14.48	176.59	-4904	-0.0000126	0.0003743	0.0035	2.28	5168.43	5561.83	5561.83	31.5	No	Si
SLU 82	15.28	803.75	-3772	-0.0000137	0.0003743	0.0035	2.28	4050.41	4397.76	4397.76	5.47	No	Si
SLU 19	14.48	107.52	-3458	-0.0000087	0.0003743	0.0035	2.28	3732.14	4069.85	4069.85	37.85	No	Si
SLU 19	15.28	631.35	-2622	-0.0000099	0.0003743	0.0035	2.28	2868.74	3185.06	3185.06	5.04	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 6	14.48	47.99	-3021	-0.0000073	0.0005615	0.0035	2.28		3644.81	3644.81	75.94		Si
SLD 6	15.28	769.39	-2251	-0.0000099	0.0005615	0.0035	2.28		2807.53	2807.53	3.65		Si
SLV 9	14.48	94.67	-1291	-0.0000035	0.0005615	0.0035	2.28		1748.63	1748.63	18.47		Si
SLV 9	15.28	519.88	-1212	-0.000006	0.0005615	0.0035	2.28		1661.03	1661.03	3.2		Si
SLV 1	14.48	157.6	-4899	-0.0000124	0.0005615	0.0035	2.28		5650.59	5650.59	35.85		Si
SLV 1	15.28	1141.18	-3045	-0.000014	0.0005615	0.0035	2.28		3670.73	3670.73	3.22		Si
SLD 5	14.48	103.9	-3135	-0.0000079	0.0005615	0.0035	2.28		3768.69	3768.69	36.27		Si
SLD 5	15.28	686.4	-2310	-0.0000095	0.0005615	0.0035	2.28		2872.43	2872.43	4.18		Si
SLV 4	14.48	23.09	-5860	-0.0000138	0.0005615	0.0035	2.28		6652.16	6652.16	288.08		Si
SLV 4	15.28	1238.13	-3825	-0.0000164	0.0005615	0.0035	2.28		4511.03	4511.03	3.64		Si
SLV 5	14.48	71.34	-2183	-0.0000055	0.0005615	0.0035	2.28		2732.8	2732.8	38.31		Si
SLV 5	15.28	939.67	-1506	-0.0000102	0.0005615	0.0035	2.28		1987.29	1987.29	2.11		Si
SLV 10	14.48	-33.49	-1029	-0.0000026	0.0005615	0.0035	2.28		2522.32	2522.32	75.31		Si
SLV 10	15.28	710.12	-1077	-0.0000078	0.0005615	0.0035	2.28		1510.77	1510.77	2.13		Si
SLV 2	14.48	-43.09	-4488	-0.0000107	0.0005615	0.0035	2.28		6256.28	6256.28	145.19		Si
SLV 2	15.28	1439.07	-2833	-0.0000158	0.0005615	0.0035	2.28		3441.62	3441.62	2.39		Si
SLD 2	14.48	55.49	-4140	-0.00001	0.0005615	0.0035	2.28		4846.41	4846.41	87.34		Si
SLD 2	15.28	897.95	-2890	-0.0000121	0.0005615	0.0035	2.28		3503.65	3503.65	3.9		Si
SLV 6	14.48	-56.82	-1921	-0.0000048	0.0005615	0.0035	2.28		3501.53	3501.53	61.62		Si
SLV 6	15.28	1129.91	-1371	-0.0000153	0.0005615	0.0035	2.28		1837.6	1837.6	1.63		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	14.48	173.02	-4948	-4120	-923	2.28	2.28	-6454	7805	4983	35683	19116	5814	24930	No	27	Si
SLU 81	15.28	804.56	-3809	-3172	-508	2.28	2.28	-4969	7607	4856	35683	19116	5814	24930	No	49.12	Si
SLU 60	14.48	121.36	-4496	-3743	-893	2.28	2.28	-5864	7726	4932	35683	19116	5814	24930	No	27.93	Si
SLU 60	15.28	738.98	-3364	-2801	-514	2.28	2.28	-4388	7530	4807	35683	19116	5814	24930	No	48.5	Si
SLU 61	14.48	124.94	-4451	-3707	-898	2.28	2.28	-5806	7719	4928	35683	19116	5814	24930	No	27.76	Si
SLU 61	15.28	738.18	-3327	-2770	-512	2.28	2.28	-4339	7523	4803	35683	19116	5814	24930	No	48.72	Si
SLU 39	14.48	155.6	-3954	-3293	-833	2.28	2.28	-5158	7632	4872	35683	19116	5814	24930	No	29.92	Si
SLU 39	15.28	697.73	-3105	-2585	-463	2.28	2.28	-4050	7484	4778	35683	19116	5814	24930	No	53.81	Si
SLU 40	14.48	159.17	-3910	-3256	-838	2.28	2.28	-5100	7624	4867	35683	19116	5814	24930	No	29.73	Si
SLU 40	15.28	696.92	-3067	-2554	-461	2.28	2.28	-4001	7478	4774	35683	19116	5814	24930	No	54.09	Si
SLU 62	14.48	81.16	-5151	-4289	-828	2.28	2.28	-6718	7840	5005	35683	19116	5814	24930	No	30.1	Si
SLU 62	15.28	704.44	-3968	-3305	-457	2.28	2.28	-5176	7635	4874	35683	19116	5814	24930	No	54.6	Si
SLU 82	14.48	176.59	-4904	-4083	-928	2.28	2.28	-6396	7797	4978	35683	19116	5814	24930	No	26.85	Si
SLU 82	15.28	803.75	-3772	-3141	-505	2.28	2.28	-4920	7600	4852	35683	19116	5814	24930	No	49.35	Si
SLU 83	14.48	132.81	-5603	-4666	-859	2.28	2.28	-7308	7919	5055	35683	19116	5814	24930	No	29.04	Si
SLU 83	15.28	770.02	-4414	-3675	-450	2.28	2.28	-5757	7712	4923	35683	19116	5814	24930	No	55.39	Si
SLU 84	14.48	136.38	-5559	-4629	-864	2.28	2.28	-7251	7911	5050	35683	19116	5814	24930	No	28.86	Si
SLU 84	15.28	769.21	-4376	-3644	-448	2.28	2.28	-5709	7706	4919	35683	19116	5814	24930	No	55.69	Si
SLU 63	14.48	84.73	-5106	-4252	-833	2.28	2.28	-6661	7833	5000	35683	19116	5814	24930	No	29.92	Si
SLU 63	15.28	703.64	-3931	-3274	-454	2.28	2.28	-5128	7628	4870	35683	19116	5814	24930	No	54.89	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	14.48	-56.82	-1921	-1599	-2738	2.28	2.28	-2505	10918	6970	35683	28675	5814	34489		12.6	Si
SLV 6	15.28	1129.91	-1371	-1142	-1412	2.28	0.9477	-1788	10774	2859	35683	28675	5814	34489		24.42	Si
SLV 5	14.48	71.34	-2183	-1818	-2141	2.28	2.28	-2847	10986	7013	35683	28675	5814	34489		16.11	Si
SLV 5	15.28	939.67	-1506	-1254	-966	2.28	1.5483	-1965	10810	4686	35683	28675	5814	34489		35.71	Si
SLV 15	14.48	301.54	-3298	-2746	2634	2.28	2.28	-4301	11277	7199	35683	28675	5814	34489		13.09	Si
SLV 15	15.28	-459.07	-3056	-2545	1655	2.28	2.28	-3987	11214	7159	35683	28675	5814	34489		20.84	Si
SLD 2	14.48	55.49	-4140	-3448	-1759	2.28	2.28	-5401	11497	7339	35683	28675	5814	34489		19.61	Si
SLD 2	15.28	897.95	-2890	-2407	-1003	2.28	2.28	-3770	11171	7131	35683	28675	5814	34489		34.38	Si
SLV 4	14.48	23.09	-5860	-4880	-2702	2.28	2.28	-7644	11945	7626	35683	28675	5814	34489		12.76	Si
SLV 4	15.28	1238.13	-3825	-3185	-1712	2.28	2.28	-4989	11415	7287	35683	28675	5814	34489		20.14	Si
SLV 13	14.48	235.36	-1925	-1603	1828	2.28	2.28	-2511	10919	6971	35683	28675	5814	34489		18.86	Si
SLV 13	15.28	-258.13	-2065	-1719	1304	2.28	2.28	-2693	10955	6994	35683	28675	5814	34489		26.45	Si
SLV 1	14.48	157.6	-4899	-4079	-2572	2.28	2.28	-6390	11695	7466	35683	28675	5814	34489		13.41	Si
SLV 1	15.28	1141.18	-3045	-2535	-1364	2.28	2.28	-3971	11211	7157	35683	28675	5814	34489		25.28	Si
SLV 3	14.48	223.78	-6271	-5222	-1767	2.28	2.28	-8180	12053	7694	35683	28675	5814	34489		19.52	Si
SLV 3	15.28	940.24	-4036	-3361	-1013	2.28	2.28	-5265	11470	7322	35683	28675	5814	34489		34.04	Si
SLV 2	14.48	-43.09	-4488	-3737	-3508	2.28	2.28	-5854	11587	7397	35683	28675	5814	34489		9.83	Si
SLV 2	15.28	1439.07	-2833	-2359	-2063	2.28	1.8961	-3695	11156	5923	35683	28675	5814	34489		16.72	Si
SLV 11	14.48	315.27	-5865	-4884	1864	2.28	2.28	-7650	11947	7627	35683	28675	5814	34489		18.5	Si
SLV 11	15.28	-149.91	-4518	-3763	1004	2.28	2.28	-5894	11595	7402	35683	28675	5814	34489		34.35	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.086 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 10	179667	0.53	3413	-2179	267.4	298.19	1.12	Si
SLV 9	179667	0.53	3484	-2224	267.4	304.26	1.14	Si
SLV 6	179667	0.53	3724	-2377	267.4	324.7	1.21	Si
SLV 5	179667	0.53	3795	-2423	267.4	330.75	1.24	Si
SLV 14	179667	0.53	4935	-3150	267.4	426.78	1.6	Si
SLV 13	179667	0.53	5046	-3221	267.4	436.08	1.63	Si
SLV 2	179667	0.53	5972	-3812	267.4	512.88	1.92	Si
SLV 1	179667	0.53	6083	-3884	267.4	522.04	1.95	Si
SLV 16	179667	0.53	6568	-4193	267.4	561.73	2.1	Si
SLV 15	179667	0.53	6679	-4264	267.4	570.82	2.13	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.086 Wa = 0.05 Ta = 0.0616

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-3248	-7593	705	2.435	634.2	0.896	39.47543	13.66005	Si
SLV 11	-3159	-7370	713	2.476	625.6	0.896	40.16908	13.66005	Si
SLV 8	-3151	-7462	705	2.481	624.9	0.896	40.26054	13.66005	Si
SLV 12	-3062	-7239	713	2.524	616.3	0.895	40.98153	13.66005	Si
SLV 5	-1529	-1655	-748	3.639	473.6	0.89	59.44562	13.66005	Si
SLV 9	-1441	-1432	-741	3.739	465.9	0.89	61.02475	13.66005	Si
SLV 6	-1433	-1523	-748	3.746	465.2	0.89	61.13146	13.66005	Si
SLV 10	-1344	-1300	-741	3.851	457.6	0.891	62.78813	13.66005	Si
SLV 3	-2777	-5813	187	2.79	588.9	0.893	45.41417	7.86706	Si
SLV 4	-2626	-5606	187	2.883	574.5	0.892	46.98309	7.86706	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.045	SLU 19	Si
V_SLU	26.855	SLU 82	Si

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.626	SLV 6	Si
V_SLV	9.833	SLV 2	Si
PFFP_SLV	1.115	SLV 10	Si
R_SLV	2.89	SLV 7	Si

Maschio 249

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.314	-2.283	-3.314	L7	F1	2.15	0.28	3.211	3.21	3.212			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 19	13.38	-874.54	-1763	-0.0000107	0.0003743	0.0035	2.15	1840.62	3151.68	3151.68	3.6	No	Si
SLU 19	15.18	976.7	-4672	-0.0000184	0.0003743	0.0035	2.15	4639.64	4980.22	4980.22	5.1	No	Si
SLU 18	13.38	-859.99	-1851	-0.0000107	0.0003743	0.0035	2.15	1929.78	3241.82	3241.82	3.77	No	Si
SLU 18	15.18	955.61	-4692	-0.0000183	0.0003743	0.0035	2.15	4658.1	4999.58	4999.58	5.23	No	Si
SLU 81	13.38	-1087.91	-2616	-0.000014	0.0003743	0.0035	2.15	2692.42	4003.92	4003.92	3.68	No	Si
SLU 81	15.18	1334.71	-6380	-0.0000253	0.0003743	0.0035	2.15	6144.44	6554.14	6554.14	4.91	No	Si
SLU 42	13.38	-975.31	-2197	-0.0000123	0.0003743	0.0035	2.15	2277.4	3588.99	3588.99	3.68	No	Si
SLU 42	15.18	1454.98	-5714	-0.0000245	0.0003743	0.0035	2.15	5570.05	5963.88	5963.88	4.1	No	Si
SLU 38	13.38	-806.63	-2731	-0.0000123	0.0003743	0.0035	2.15	2804.58	4117.91	4117.91	5.11	No	Si
SLU 38	15.18	1690.53	-6091	-0.0000271	0.0003743	0.0035	2.15	5896.76	6308.81	6308.81	3.73	No	Si
SLU 82	13.38	-1102.46	-2528	-0.000014	0.0003743	0.0035	2.15	2605.62	3916.25	3916.25	3.55	No	Si
SLU 82	15.18	1355.79	-6360	-0.0000254	0.0003743	0.0035	2.15	6127.19	6537.5	6537.5	4.82	No	Si
SLU 36	13.38	-792.34	-2957	-0.0000127	0.0003743	0.0035	2.15	3025.53	4344.85	4344.85	5.48	No	Si
SLU 36	15.18	1746.97	-6427	-0.0000284	0.0003743	0.0035	2.15	6184.26	6592.26	6592.26	3.77	No	Si
SLU 31	13.38	-903.68	-1937	-0.0000112	0.0003743	0.0035	2.15	2016.48	3328.21	3328.21	3.68	No	Si
SLU 31	15.18	1152.51	-5134	-0.0000208	0.0003743	0.0035	2.15	5056.73	5419.23	5419.23	4.7	No	Si
SLU 39	13.38	-1004.44	-1918	-0.0000123	0.0003743	0.0035	2.15	1997.35	3309.14	3309.14	3.29	No	Si
SLU 39	15.18	1157.86	-5263	-0.0000212	0.0003743	0.0035	2.15	5171.8	5540.7	5540.7	4.79	No	Si
SLU 40	13.38	-1018.99	-1830	-0.0000125	0.0003743	0.0035	2.15	1908.4	3220.2	3220.2	3.16	No	Si
SLU 40	15.18	1178.95	-5243	-0.0000213	0.0003743	0.0035	2.15	5153.75	5521.66	5521.66	4.68	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 6	13.38	-1302.45	447	0.0340746	0.0005615	0.0035	1.72		0	0	0		No
SLD 6	15.18	1601.91	-4451	-0.000022	0.0005615	0.0035	2.15		4847.78	4847.78	3.03		Si
SLV 9	13.38	-1156.42	3144	0.2283183	0.0005615	0.0035	1.72		0	0	0		No
SLV 9	15.18	1693.85	-4350	-0.0000224	0.0005615	0.0035	2.15		4746.22	4746.22	2.8		Si
SLV 5	13.38	-1974.05	3244	0.2378828	0.0005615	0.0035	1.72		0	0	0		No
SLV 5	15.18	2209.58	-4183	-0.0000272	0.0005615	0.0035	2.15		4579.27	4579.27	2.07		Si
SLV 6	13.38	-2247.5	3961	0.2900215	0.0005615	0.0035	1.72		0	0	0		No
SLV 6	15.18	2496.12	-4256	-0.000031	0.0005615	0.0035	2.15		4652.52	4652.52	1.86		Si
SLD 9	13.38	-832.97	90	0.0059658	0.0005615	0.0035	1.72		1077.42	1077.42	1.29		Si
SLD 9	15.18	1255.87	-4491	-0.0000197	0.0005615	0.0035	2.15		4886.36	4886.36	3.89		Si
SLV 1	13.38	-2056.77	-947	-0.0003767	0.0005615	0.0035	1.72		2314.8	2314.8	1.13		Si
SLV 1	15.18	1897.49	-4177	-0.0000238	0.0005615	0.0035	2.15		4573.37	4573.37	2.41		Si
SLD 10	13.38	-952.24	403	0.0305663	0.0005615	0.0035	1.72		0	0	0		No
SLD 10	15.18	1380.86	-4522	-0.0000207	0.0005615	0.0035	2.15		4917.8	4917.8	3.56		Si
SLV 2	13.38	-2484.94	175	0.0013289	0.0005615	0.0035	1.72		0	0	0		No
SLV 2	15.18	2346.18	-4292	-0.0000289	0.0005615	0.0035	2.15		4688.09	4688.09	2		Si
SLV 10	13.38	-1429.86	3861	0.2804185	0.0005615	0.0035	1.72		0	0	0		No
SLV 10	15.18	1980.39	-4423	-0.000025	0.0005615	0.0035	2.15		4819.39	4819.39	2.43		Si
SLD 5	13.38	-1183.17	134	0.00909	0.0005615	0.0035	1.72		0	0	0		No
SLD 5	15.18	1476.92	-4420	-0.0000211	0.0005615	0.0035	2.15		4816.25	4816.25	3.26		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	13.38	-943.47	-3003	-2500	-5098	2.15	2.15	-4153	7498	4514	35683	18027	5483	23509	No	4.61	Si
SLU 76	15.18	1605.4	-6722	-5598	-5084	2.15	2.15	-9299	8184	4927	35683	18027	5483	23509	No	4.62	Si
SLU 74	13.38	-904.94	-3376	-2811	-5077	2.15	2.15	-4670	7567	4555	35683	18027	5483	23509	No	4.63	Si
SLU 74	15.18	1626.7	-7092	-5906	-5081	2.15	2.15	-9810	8252	4968	35683	18027	5483	23509	No	4.63	Si
SLU 78	13.38	-875.81	-3655	-3044	-5335	2.15	2.15	-5056	7619	4586	35683	18027	5483	23509	No	4.41	Si
SLU 78	15.18	1923.82	-7544	-6282	-5327	2.15	2.15	-10434	8336	5018	35683	18027	5483	23509	No	4.41	Si
SLU 79	13.38	-875.55	-3517	-2929	-5180	2.15	2.15	-4865	7593	4571	35683	18027	5483	23509	No	4.54	Si
SLU 79	15.18	1846.28	-7228	-6019	-5182	2.15	2.15	-9998	8277	4983	35683	18027	5483	23509	No	4.54	Si
SLU 77	13.38	-861.26	-3743	-3117	-5269	2.15	2.15	-5178	7635	4596	35683	18027	5483	23509	No	4.46	Si
SLU 77	15.18	1902.73	-7564	-6298	-5271	2.15	2.15	-10463	8339	5020	35683	18027	5483	23509	No	4.46	Si
SLU 84	13.38	-1058.78	-2895	-2411	-5302	2.15	2.128	-4005	7478	4456	35683	18027	5483	23509	No	4.43	Si
SLU 84	15.18	1631.83	-6831	-5688	-5295	2.15	2.15	-9449	8204	4939	35683	18027	5483	23509	No	4.44	Si
SLU 83	13.38	-1044.23	-2984	-2485	-5236	2.15	2.15	-4127	7495	4512	35683	18027	5483	23509	No	4.49	Si
SLU 83	15.18	1610.74	-6851	-5705	-5240	2.15	2.15	-9477	8208	4941	35683	18027	5483	23509	No	4.49	Si
SLU 82	13.38	-1102.46	-2528	-2105	-5110	2.15	1.9168	-3928	7468	4008	35683	18027	5483	23509	No	4.6	Si
SLU 82	15.18	1355.79	-6360	-5296	-5105	2.15	2.15	-8797	8117	4887	35683	18027	5483	23509	No	4.61	Si
SLU 75	13.38	-919.49	-3288	-2738	-5143	2.15	2.15	-4548	7551	4546	35683	18027	5483	23509	No	4.57	Si
SLU 75	15.18	1647.78	-7072	-5889	-5136	2.15	2.15	-9782	8249	4966	35683	18027	5483	23509	No	4.58	Si
SLU 80	13.38	-890.1	-3429	-2855	-5246	2.15	2.15	-4743	7577	4561	35683	18027	5483	23509	No	4.48	Si
SLU 80	15.18	1867.37	-7207	-6002	-5238	2.15	2.15	-9970	8274	4981	35683	18027	5483	23509	No	4.49	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 10	13.38	-952.24	403	336	-5604	1.72	0	0	0	0	35683	21632	4386	26018		4.64	Si
SLD 10	15.18	1380.86	-4522	-3766	-5287	2.15	2.15	-6256	11668	7024	35683	27040	5483	32523		6.15	Si
SLD 5	13.38	-1183.17	134	112	-4992	1.72	0	0	0	0	35683	21632	4386	26018		5.21	Si
SLD 5	15.18	1476.92	-4420	-3680	-5270	2.15	2.15	-6113	11639	7007	35683	27040	5483	32523		6.17	Si
SLV 2	13.38	-2484.94	175	146	-4226	1.72	0	0	0	0	35683	21632	4386	26018		6.16	Si
SLV 2	15.18	2346.18	-4292	-3574	-6526	2.15	1.585	-5936	11604	5150	35683	27040	5483	32523		4.98	Si
SLD 6	13.38	-1302.45	447	372	-5334	1.72	0	0	0	0	35683	21632	4386	26018		4.88	Si
SLD 6	15.18	1601.91	-4451	-3707	-5612	2.15	2.1455	-6157	11648	6997	35683	27040	5483	32523		5.8	Si
SLD 9	13.38	-832.97	90	75	-5262	1.72	0	0	0	0	35683	21632	4386	26018		4.94	Si
SLD 9	15.18	1255.87	-4491	-3739	-4945	2.15	2.15	-6211	11659	7019	35683	27040	5483	32523		6.58	Si
SLV 10	13.38	-1429.86	3861	3215	-8547	1.72	2.1139	0	0	0	35683	21632	4386	26018		3.04	Si
SLV 10	15.18	1980.39	-4423	-3683	-7803	2.15	1.8817	-6118	11640	6133	35683	27040	5483	32523		4.17	Si
SLV 5	13.38	-1974.05	3244	2701	-7135	1.72	1.3995	0	0	0	35683	21632	4386	26018		3.65	Si
SLV 5	15.18	2209.58	-4183	-3483	-7780	2.15	1.6404	-5786	11574	5316	35683	27040	5483	32523		4.18	Si
SLV 9	13.38	-1156.42	3144	2618	-7764	1.72	2.1215	0	0	0	35683	21632	4386	26018		3.35	Si
SLV 9	15.18	1693.85	-4350	-3622	-7021	2.15	2.0568	-6017	11620	6692	35683	27040	5483	32523		4.63	Si
SLV 6	13.38	-2247.5	3961	3298	-7918	1.72	1.5228	0	0	0	35683	21632	4386	26018		3.29	Si
SLV 6	15.18	2496.12	-4256	-3544	-8563	2.15	1.4657	-5887	11594	4758	35683	27040	5483	32523		3.8	Si
SLV 14	13.38	240.51	-159	-132	-6321	1.72	0	0	0	0	35683	21632	4386	26018		4.12	Si
SLV 14	15.18	627.07	-4847	-4036	-3996	2.15	2.15	-6704	11758	7078	35683	27040	5483	32523		8.14	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 14.085 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.53	0	142	251.71	0	0	No, Trazione
SLV 9	179667	0.53	0	120	251.71	0	0	No, Trazione
SLV 6	179667	0.53	0	548	251.71	0	0	No, Trazione
SLV 10	179667	0.53	0	526	251.71	0	0	No, Trazione
SLV 2	179667	0.53	3004	-1808	251.71	248.2	0.99	No, M>Mu
SLV 14	179667	0.53	3126	-1882	251.71	258.09	1.03	Si
SLV 1	179667	0.53	4060	-2444	251.71	333.1	1.32	Si
SLV 13	179667	0.53	4182	-2518	251.71	342.85	1.36	Si
SLV 4	179667	0.53	6560	-3949	251.71	529.11	2.1	Si
SLV 16	179667	0.53	6682	-4023	251.71	538.52	2.14	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 14.085 Wa = 0.05 Ta = 0.0615

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-4176	-7636	422	2.027	707	0.906	32.51111	13.6311	Si
SLV 11	-4166	-8254	422	2.03	706	0.906	32.5651	13.6311	Si
SLV 10	-3706	3341	-205	2.237	660.7	0.902	36.05176	13.6311	Si, Trazione
SLV 9	-3697	2723	-204	2.242	659.7	0.902	36.12174	13.6311	Si, Trazione
SLV 8	-3650	-7957	192	2.263	655.1	0.901	36.48315	13.6311	Si
SLV 7	-3640	-8574	193	2.267	654.1	0.901	36.54987	13.6311	Si
SLV 6	-3180	3020	-434	2.426	609.2	0.897	39.28008	13.6311	Si, Trazione
SLV 5	-3170	2403	-434	2.431	608.2	0.897	39.36396	13.6311	Si, Trazione
SLV 16	-4629	-3245	470	1.878	751.9	0.91	30.0048	7.85761	Si
SLV 15	-4613	-4212	471	1.882	750.3	0.91	30.07708	7.85761	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.16	SLU 40	Si
V_SLU	4.407	SLU 78	Si

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0	SLD 5	No
V_SLV	3.044	SLV 10	Si
PFFP_SLV	0	SLV 10	No
R_SLV	2.385	SLV 12	Si

Maschio 273

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)
Maschio considerato membratura sismica secondaria

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	0.706	-13.778	1.006	L5	L8	0.3	0.28	10.2	10.2	10.2			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 79	12.48	-1458	-26.89	17357	181.41	6.746	Si
SLU 79	14.58	-1096	-17.22	13043	143.29	8.32	Si
SLU 30	12.48	-1224	-23.22	14568	157.29	6.775	Si
SLU 30	14.58	-939	-16.01	11183	125.43	7.832	Si
SLU 38	12.48	-1163	-23.34	13839	150.67	6.455	Si
SLU 38	14.58	-885	-14.92	10536	119.01	7.974	Si
SLU 37	12.48	-1147	-22.63	13659	149.02	6.585	Si
SLU 37	14.58	-870	-14.1	10361	117.26	8.315	Si
SLU 34	12.48	-1105	-21.37	13155	144.33	6.755	Si
SLU 34	14.58	-830	-12.43	9884	112.45	9.046	Si
SLU 17	12.48	-1145	-21.76	13628	148.72	6.835	Si
SLU 17	14.58	-864	-15.53	10288	116.53	7.505	Si
SLU 41	12.48	-1054	-20.23	12543	138.57	6.849	Si
SLU 41	14.58	-783	-10.59	9315	106.64	10.066	Si
SLU 80	12.48	-1473	-27.6	17537	182.9	6.626	Si
SLU 80	14.58	-1110	-18.04	13218	144.93	8.031	Si
SLU 72	12.48	-1534	-27.48	18265	188.85	6.873	Si
SLU 72	14.58	-1165	-19.13	13865	150.91	7.887	Si
SLU 42	12.48	-1069	-20.95	12723	140.27	6.697	Si
SLU 42	14.58	-797	-11.42	9490	108.43	9.499	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	l'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 53	12.48	-1404	0	-19.3		16711	0.3	9173	771			1000	Si
SLU 53	14.58	-1047	0	-10.22		12463	0.3	8606	723			1000	Si
SLU 1	12.48	-1056	0	-16.01		12566	0.3	8620	724			1000	Si
SLU 1	14.58	-775	0	-9.71		9225	0.3	8174	687			1000	Si
SLU 57	12.48	-1486	0	-22.47		17696	0.3	9304	782			1000	Si
SLU 57	14.58	-1126	1	-14.09		13405	0.3	8732	733			1000	Si
SLU 58	12.48	-1440	0	-25.31		17145	0.3	9230	775			1000	Si
SLU 58	14.58	-1075	1	-17.83		12796	0.3	8651	727			1000	Si
SLU 55	12.48	-1398	0	-24.05		16640	0.3	9163	770			1000	Si
SLU 55	14.58	-1035	1	-16.15		12319	0.3	8587	721			1000	Si
SLU 56	12.48	-1471	0	-21.76		17516	0.3	9280	780			1000	Si
SLU 56	14.58	-1111	0	-13.27		13231	0.3	8709	732			1000	Si
SLU 59	12.48	-1455	0	-26.02		17325	0.3	9254	777			1000	Si
SLU 59	14.58	-1090	1	-18.65		12970	0.3	8674	729			1000	Si
SLU 61	12.48	-1294	0	-21.17		15403	0.3	8998	756			1000	Si
SLU 61	14.58	-937	0	-12.1		11157	0.3	8432	708			1000	Si
SLU 60	12.48	-1279	0	-20.46		15223	0.3	8974	754			1000	Si
SLU 60	14.58	-923	0	-11.27		10982	0.3	8409	706			1000	Si
SLU 54	12.48	-1419	0	-20.02		16892	0.3	9197	773			1000	Si
SLU 54	14.58	-1062	0	-11.05		12637	0.3	8629	725			1000	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.54 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	179667	0.46	0	-934	313.65	0	0	No, e>t/2
SLV 8	179667	0.46	0	-365	313.65	0	0	No, e>t/2
SLV 7	179667	0.46	0	-373	313.65	0	0	No, e>t/2
SLV 13	179667	0.46	0	-1762	313.65	0	0	No, e>t/2
SLV 11	179667	0.46	0	-198	313.65	0	0	No, e>t/2
SLV 14	179667	0.46	0	-1749	313.65	0	0	No, e>t/2
SLV 3	179667	0.46	0	-1532	313.65	0	0	No, e>t/2
SLV 4	179667	0.46	0	-1519	313.65	0	0	No, e>t/2
SLV 15	179667	0.46	0	-946	313.65	0	0	No, e>t/2
SLV 12	179667	0.46	0	-190	313.65	0	0	No, e>t/2

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.54 Wa = 0.05 Ta = 0.6205

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	253	-1197	2	0	0	0	0	2.39674	No, Trazione
SLV 7	176	-1393	0	0	0	0	0	2.39674	No, Trazione
SLV 15	16	-2023	4	0	0	0	0	3.7852	No, Trazione

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 16	21	-2009	4	0	0	0	0	3.7852	No, Trazione
SLV 8	179	-1385	0	0	0	0	0	2.39674	No, Trazione
SLV 11	249	-1206	2	0	0	0	0	2.39674	No, Trazione
SLV 1	-502	-3532	-2	1.344	186.2	0.893	21.85877	3.7852	Si
SLV 2	-497	-3518	-2	1.349	185.7	0.894	21.94567	3.7852	Si
SLV 13	-257	-2908	3	1.66	167.7	0.914	26.38362	3.7852	Si
SLV 14	-251	-2894	3	1.669	167.3	0.915	26.498	3.7852	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.455	SLU 38	Si
V_SLU	1000	SLU 1	Si
PFFP_SLV	0	SLV 3	No
R_SLV	0	SLV 16	No

Maschio 275

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.638	-4.824	-13.143	-4.824	L3	F1	0.495	0.3	14.238	14.238	14.238			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	0.63	488.11	-8246	-0.0001755	0.0003743	0.0035	0.495	927.69	1260.45	1260.45	2.58	No	Si
SLU 82	3.13	41.9	-6990	-0.0000845	0.0003743	0.0035	0.495	930.12	1171.48	1171.48	27.96	No	Si
SLU 79	0.63	463.49	-7999	-0.0001669	0.0003743	0.0035	0.495	932.24	1247.97	1247.97	2.69	No	Si
SLU 79	3.13	50.87	-6889	-0.0000845	0.0003743	0.0035	0.495	928.06	1160.39	1160.39	22.81	No	Si
SLU 74	0.63	461.71	-7950	-0.0001657	0.0003743	0.0035	0.495	932.92	1245.51	1245.51	2.7	No	Si
SLU 74	3.13	50.62	-6835	-0.0000838	0.0003743	0.0035	0.495	926.84	1154.57	1154.57	22.81	No	Si
SLU 80	0.63	460.42	-8033	-0.0001669	0.0003743	0.0035	0.495	931.73	1249.69	1249.69	2.71	No	Si
SLU 80	3.13	50.38	-6901	-0.0000846	0.0003743	0.0035	0.495	928.31	1161.67	1161.67	23.06	No	Si
SLU 77	0.63	464.54	-8040	-0.0001677	0.0003743	0.0035	0.495	931.63	1250	1250	2.69	No	Si
SLU 77	3.13	52.12	-6936	-0.0000853	0.0003743	0.0035	0.495	929.05	1165.51	1165.51	22.36	No	Si
SLU 81	0.63	491.18	-8212	-0.0001754	0.0003743	0.0035	0.495	928.44	1258.7	1258.7	2.56	No	Si
SLU 81	3.13	42.39	-6979	-0.0000845	0.0003743	0.0035	0.495	929.9	1170.2	1170.2	27.61	No	Si
SLU 78	0.63	461.46	-8074	-0.0001678	0.0003743	0.0035	0.495	931.07	1251.73	1251.73	2.71	No	Si
SLU 78	3.13	51.63	-6948	-0.0000854	0.0003743	0.0035	0.495	929.29	1166.79	1166.79	22.6	No	Si
SLU 75	0.63	458.64	-7984	-0.0001658	0.0003743	0.0035	0.495	932.46	1247.22	1247.22	2.72	No	Si
SLU 75	3.13	50.13	-6847	-0.0000839	0.0003743	0.0035	0.495	927.11	1155.84	1155.84	23.06	No	Si
SLU 84	0.63	490.93	-8336	-0.0001775	0.0003743	0.0035	0.495	925.53	1265.07	1265.07	2.58	No	Si
SLU 84	3.13	43.39	-7091	-0.0000861	0.0003743	0.0035	0.495	931.82	1182.54	1182.54	27.25	No	Si
SLU 83	0.63	494	-8302	-0.0001775	0.0003743	0.0035	0.495	926.38	1263.3	1263.3	2.56	No	Si
SLU 83	3.13	43.88	-7079	-0.000086	0.0003743	0.0035	0.495	931.64	1181.24	1181.24	26.92	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	0.63	-762.8	-2084	-0.0092693	0.0005615	0.0035	0.396		509.79	509.79	0.67		No
SLV 3	3.13	1159.66	-9839	-0.0003235	0.0005615	0.0035	0.495		1666.55	1666.55	1.44		Si
SLV 9	0.63	711.14	-5154	-0.0001763	0.0005615	0.0035	0.495		1060.69	1060.69	1.49		Si
SLV 9	3.13	-385.24	-851	-0.005046	0.0005615	0.0035	0.396		234.37	234.37	0.61		No
SLV 2	0.63	-757.89	-1160	-0.0140321	0.0005615	0.0035	0.396		305.13	305.13	0.4		No
SLV 2	3.13	1132.47	-8565	-0.0003139	0.0005615	0.0035	0.495		1529.04	1529.04	1.35		Si
SLV 10	0.63	685.96	-5106	-0.0001679	0.0005615	0.0035	0.495		1053.58	1053.58	1.54		Si
SLV 10	3.13	-368.37	-961	-0.0037404	0.0005615	0.0035	0.396		259.52	259.52	0.7		No
SLV 14	0.63	1372.89	-8733	-0.0004807	0.0005615	0.0035	0.495		1546.93	1546.93	1.13		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	3.13	-1072.95	491	0.298596	0.0005615	0.0035	0.396		0	0	0		No
SLV 1	0.63	-718.47	-1235	-0.0125337	0.0005615	0.0035	0.396		322.36	322.36	0.45		No
SLV 1	3.13	1106.05	-8393	-0.0003035	0.0005615	0.0035	0.495		1510.92	1510.92	1.37		Si
SLV 16	0.63	1328.55	-9582	-0.0004057	0.0005615	0.0035	0.495		1638.45	1638.45	1.23		Si
SLV 16	3.13	-1019.34	-954	-0.0224278	0.0005615	0.0035	0.396		258.03	258.03	0.25		No
SLV 15	0.63	1367.98	-9658	-0.0004312	0.0005615	0.0035	0.495		1646.7	1646.7	1.2		Si
SLV 15	3.13	-1045.76	-783	-0.0242152	0.0005615	0.0035	0.396		218.47	218.47	0.21		No
SLV 4	0.63	-802.23	-2009	-0.0107507	0.0005615	0.0035	0.396		493.48	493.48	0.62		No
SLV 4	3.13	1186.08	-10010	-0.0003339	0.0005615	0.0035	0.495		1685.41	1685.41	1.42		Si
SLV 13	0.63	1412.31	-8809	-0.0005277	0.0005615	0.0035	0.495		1554.99	1554.99	1.1		Si
SLV 13	3.13	-1099.37	663	0.491958	0.0005615	0.0035	0.396		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	0.63	494	-8302	-6991	921	0.495	0.495	-47080	10833	1609	166522	4447	1262	5709	No	6.2	Si
SLU 83	3.13	43.88	-7079	-5961	-733	0.495	0.495	-40146	10833	1609	166522	4447	1262	5709	No	7.79	Si
SLU 81	0.63	491.18	-8212	-6915	914	0.495	0.495	-46569	10833	1609	166522	4447	1262	5709	No	6.25	Si
SLU 81	3.13	42.39	-6979	-5877	-719	0.495	0.495	-39576	10833	1609	166522	4447	1262	5709	No	7.94	Si
SLU 79	0.63	463.49	-7999	-6736	871	0.495	0.495	-45362	10833	1609	166522	4447	1262	5709	No	6.55	Si
SLU 79	3.13	50.87	-6889	-5801	-740	0.495	0.495	-39067	10833	1609	166522	4447	1262	5709	No	7.71	Si
SLU 77	0.63	464.54	-8040	-6770	874	0.495	0.495	-45592	10833	1609	166522	4447	1262	5709	No	6.53	Si
SLU 77	3.13	52.12	-6936	-5841	-747	0.495	0.495	-39333	10833	1609	166522	4447	1262	5709	No	7.64	Si
SLU 78	0.63	461.46	-8074	-6799	870	0.495	0.495	-45787	10833	1609	166522	4447	1262	5709	No	6.56	Si
SLU 78	3.13	51.63	-6948	-5851	-741	0.495	0.495	-39400	10833	1609	166522	4447	1262	5709	No	7.71	Si
SLU 84	0.63	490.93	-8336	-7020	916	0.495	0.495	-47274	10833	1609	166522	4447	1262	5709	No	6.23	Si
SLU 84	3.13	43.39	-7091	-5971	-727	0.495	0.495	-40212	10833	1609	166522	4447	1262	5709	No	7.85	Si
SLU 74	0.63	461.71	-7950	-6694	868	0.495	0.495	-45082	10833	1609	166522	4447	1262	5709	No	6.58	Si
SLU 74	3.13	50.62	-6835	-5756	-733	0.495	0.495	-38764	10833	1609	166522	4447	1262	5709	No	7.79	Si
SLU 80	0.63	460.42	-8033	-6765	867	0.495	0.495	-45557	10833	1609	166522	4447	1262	5709	No	6.58	Si
SLU 80	3.13	50.38	-6901	-5811	-734	0.495	0.495	-39134	10833	1609	166522	4447	1262	5709	No	7.78	Si
SLU 82	0.63	488.11	-8246	-6944	910	0.495	0.495	-46764	10833	1609	166522	4447	1262	5709	No	6.28	Si
SLU 82	3.13	41.9	-6990	-5887	-713	0.495	0.495	-39643	10833	1609	166522	4447	1262	5709	No	8.01	Si
SLU 75	0.63	458.64	-7984	-6723	863	0.495	0.495	-45276	10833	1609	166522	4447	1262	5709	No	6.61	Si
SLU 75	3.13	50.13	-6847	-5766	-727	0.495	0.495	-38830	10833	1609	166522	4447	1262	5709	No	7.85	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 4	0.63	-168.62	-3960	-3335	-127	0.495	0.495	-22460	14909	2214	166522	6670	1262	7932		62.39	Si
SLD 4	3.13	532.18	-6964	-5865	-2229	0.495	0.495	-39494	16250	2413	166522	6670	1262	7932		3.56	Si
SLV 4	0.63	-802.23	-2009	-1692	-1071	0.396	0	0	0	0	166522	5336	1010	6346		5.92	Si
SLV 4	3.13	1186.08	-10010	-8430	-4500	0.495	0.387	-56769	16250	1887	166522	6670	1262	7932		1.76	Si
SLV 13	0.63	1412.31	-8809	-7418	2229	0.495	0.2615	-49955	16250	1275	166522	6670	1262	7932		3.56	Si
SLV 13	3.13	-1099.37	663	558	3438	0.396	0	0	0	0	166522	5336	1010	6346		1.85	Si
SLV 2	0.63	-757.89	-1160	-977	-879	0.396	0	0	0	0	166522	5336	1010	6346		7.22	Si
SLV 2	3.13	1132.47	-8565	-7212	-4157	0.495	0.3458	-48571	16250	1686	166522	6670	1262	7932		1.91	Si
SLV 15	0.63	1367.98	-9658	-8133	2036	0.495	0.3175	-54770	16250	1548	166522	6670	1262	7932		3.9	Si
SLV 15	3.13	-1045.76	-783	-659	3095	0.396	0	0	0	0	166522	5336	1010	6346		2.05	Si
SLV 1	0.63	-718.47	-1235	-1040	-823	0.396	0	0	0	0	166522	5336	1010	6346		7.71	Si
SLV 1	3.13	1106.05	-8393	-7068	-4061	0.495	0.3471	-47599	16250	1692	166522	6670	1262	7932		1.95	Si
SLV 3	0.63	-762.8	-2084	-1755	-1016	0.396	0	0	0	0	166522	5336	1010	6346		6.25	Si
SLV 3	3.13	1159.66	-9839	-8286	-4404	0.495	0.3889	-55797	16250	1896	166522	6670	1262	7932		1.8	Si
SLV 16	0.63	1328.55	-9582	-8069	1981	0.495	0.3265	-54341	16250	1592	166522	6670	1262	7932		4	Si
SLV 16	3.13	-1019.34	-954	-804	2999	0.396	0	0	0	0	166522	5336	1010	6346		2.12	Si
SLV 14	0.63	1372.89	-8733	-7354	2173	0.495	0.2709	-49526	16250	1320	166522	6670	1262	7932		3.65	Si
SLV 14	3.13	-1072.95	491	414	3342	0.396	0	0	0	0	166522	5336	1010	6346		1.9	Si
SLV 8	0.63	-101.05	-5664	-4770	-218	0.495	0.495	-32119	16250	2413	166522	6670	1262	7932		36.43	Si
SLV 8	3.13	471.95	-8496	-7155	-2258	0.495	0.495	-48183	16250	2413	166522	6670	1262	7932		3.51	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.749 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.4	0	-3350	924.37	0	0	No, e>t/2
SLV 5	179667	0.4	0	-498	924.37	0	0	No, e>t/2
SLV 7	179667	0.4	0	-4984	924.37	0	0	No, e>t/2
SLV 4	179667	0.4	0	-4696	924.37	0	0	No, e>t/2
SLV 1	179667	0.4	0	-3312	924.37	0	0	No, e>t/2
SLV 6	179667	0.4	0	-522	924.37	0	0	No, e>t/2
SLV 9	179667	0.4	0	574	924.37	0	0	No, Trazione
SLV 3	179667	0.4	0	-4658	924.37	0	0	No, e>t/2
SLV 10	179667	0.4	0	550	924.37	0	0	No, Trazione
SLV 8	179667	0.4	0	-5008	924.37	0	0	No, e>t/2

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.749 Wa = 0.05 Ta = 1.1285

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 3	-427	-2084	-38	1.196	401.4	0.93	18.68366	2.39674	Si
SLV 4	-416	-2009	-38	1.202	400.8	0.931	18.75245	2.39674	Si
SLV 7	-408	-5712	-35	1.207	400.4	0.932	18.81981	2.39674	Si
SLV 8	-400	-5664	-35	1.211	400	0.933	18.86395	2.39674	Si
SLV 1	-281	-1235	-28	1.28	394.5	0.947	19.64425	2.39674	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 2	-269	-1160	-28	1.287	394	0.948	19.71464	2.39674	Si
SLV 11	-246	-7984	-24	1.303	393.1	0.952	19.89277	2.39674	Si
SLV 12	-238	-7936	-24	1.307	392.8	0.953	19.93778	2.39674	Si
SLV 5	81	-2882	-4	1.512	387.9	1	21.97459	2.39674	Si, Trazione
SLV 6	88	-2833	-4	1.515	387.9	1	22.01709	2.39674	Si, Trazione

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.557	SLU 83	Si
V_SLU	6.2	SLU 83	Si
PF_SLV	0	SLV 13	No
V_SLV	1.763	SLV 4	Si
PFFP_SLV	0	SLV 14	No
R_SLV	7.795	SLV 3	Si

Maschio 276

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.743	-4.824	-11.143	-4.824	L3	F1	0.6	0.3	14.236	14.237	14.236			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	0.63	-254.04	-8314	-0.0001025	0.0003743	0.0035	0.6	1362.66	1730.24	1730.24	6.81	No	Si
SLU 80	3.13	-674.11	-10634	-0.0001796	0.0003743	0.0035	0.6	1339.05	1919.32	1919.32	2.85	No	Si
SLU 79	0.63	-258.57	-8273	-0.0001025	0.0003743	0.0035	0.6	1361.48	1725.38	1725.38	6.67	No	Si
SLU 79	3.13	-673.38	-10622	-0.0001793	0.0003743	0.0035	0.6	1339.6	1918.55	1918.55	2.85	No	Si
SLU 75	0.63	-257.41	-8278	-0.0001024	0.0003743	0.0035	0.6	1361.64	1726.02	1726.02	6.71	No	Si
SLU 75	3.13	-668.54	-10549	-0.0001776	0.0003743	0.0035	0.6	1343.01	1913.71	1913.71	2.86	No	Si
SLU 83	0.63	-294.42	-8607	-0.00011	0.0003743	0.0035	0.6	1369.4	1765.06	1765.06	6	No	Si
SLU 83	3.13	-702.02	-10963	-0.000188	0.0003743	0.0035	0.6	1321.41	1941.63	1941.63	2.77	No	Si
SLU 81	0.63	-297.93	-8525	-0.0001095	0.0003743	0.0035	0.6	1367.8	1755.24	1755.24	5.89	No	Si
SLU 81	3.13	-693.93	-10817	-0.0001848	0.0003743	0.0035	0.6	1329.69	1931.61	1931.61	2.78	No	Si
SLU 84	0.63	-289.89	-8649	-0.00011	0.0003743	0.0035	0.6	1370.12	1770.07	1770.07	6.11	No	Si
SLU 84	3.13	-702.75	-10975	-0.0001883	0.0003743	0.0035	0.6	1320.72	1942.44	1942.44	2.76	No	Si
SLU 82	0.63	-293.4	-8567	-0.0001095	0.0003743	0.0035	0.6	1368.63	1760.21	1760.21	6	No	Si
SLU 82	3.13	-694.66	-10828	-0.0001851	0.0003743	0.0035	0.6	1329.06	1932.4	1932.4	2.78	No	Si
SLU 74	0.63	-261.94	-8237	-0.0001024	0.0003743	0.0035	0.6	1360.41	1721.18	1721.18	6.57	No	Si
SLU 74	3.13	-667.81	-10537	-0.0001774	0.0003743	0.0035	0.6	1343.54	1912.94	1912.94	2.86	No	Si
SLU 78	0.63	-253.9	-8360	-0.000103	0.0003743	0.0035	0.6	1363.9	1735.63	1735.63	6.84	No	Si
SLU 78	3.13	-676.63	-10695	-0.0001808	0.0003743	0.0035	0.6	1336.02	1923.43	1923.43	2.84	No	Si
SLU 77	0.63	-258.43	-8319	-0.000103	0.0003743	0.0035	0.6	1362.78	1730.75	1730.75	6.7	No	Si
SLU 77	3.13	-675.89	-10684	-0.0001806	0.0003743	0.0035	0.6	1336.6	1922.65	1922.65	2.84	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 13	0.63	503.69	-3810	-0.0000786	0.0005615	0.0035	0.6		1022.29	1022.29	2.03		Si
SLD 13	3.13	-1040.78	-9691	-0.0001908	0.0005615	0.0035	0.6		2204.24	2204.24	2.12		Si
SLV 2	0.63	-1766.6	-8833	-0.0004066	0.0005615	0.0035	0.48		2067.35	2067.35	1.17		Si
SLV 2	3.13	1010.77	587	-0.0618619	0.0005615	0.0035	0.48		0	0	0		No
SLV 15	0.63	1438.37	-2390	-0.050354	0.0005615	0.0035	0.48		689.91	689.91	0.48		No
SLV 15	3.13	-1910.33	-14941	-0.0003963	0.0005615	0.0035	0.6		2734.94	2734.94	1.43		Si
SLV 13	0.63	1398.97	-1408	-0.0661481	0.0005615	0.0035	0.48		425.84	425.84	0.3		No

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	3.13	-1833.21	-13086	-0.0003613	0.0005615	0.0035	0.6		2612.56	2612.56	1.43		Si
SLV 14	0.63	1344.08	-1494	-0.0607614	0.0005615	0.0035	0.48		449.51	449.51	0.33		No
SLV 14	3.13	-1800.57	-12882	-0.0003518	0.0005615	0.0035	0.6		2587.88	2587.88	1.44		Si
SLV 16	0.63	1383.48	-2476	-0.045297	0.0005615	0.0035	0.48		712.37	712.37	0.51		No
SLV 16	3.13	-1877.69	-14737	-0.000386	0.0005615	0.0035	0.6		2721.21	2721.21	1.45		Si
SLV 3	0.63	-1672.32	-9729	-0.0003235	0.0005615	0.0035	0.48		2210.37	2210.37	1.32		Si
SLV 3	3.13	901	-1473	-0.0319274	0.0005615	0.0035	0.48		443.73	443.73	0.49		No
SLV 4	0.63	-1727.2	-9815	-0.0003434	0.0005615	0.0035	0.48		2224.35	2224.35	1.29		Si
SLV 4	3.13	933.65	-1269	-0.0377725	0.0005615	0.0035	0.48		387.38	387.38	0.41		No
SLV 6	0.63	-713.91	-5103	-0.0001134	0.0005615	0.0035	0.6		1390	1390	1.95		Si
SLV 6	3.13	110.87	-1999	-0.0000259	0.0005615	0.0035	0.6		586.5	586.5	5.29		Si
SLV 1	0.63	-1711.72	-8747	-0.0003742	0.0005615	0.0035	0.48		2053.94	2053.94	1.2		Si
SLV 1	3.13	978.12	383	-0.0735206	0.0005615	0.0035	0.48		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	0.63	-258.43	-8319	-7005	-585	0.6	0.6	-38918	10833	1950	166522	5390	1530	6920	No	11.82	Si
SLU 77	3.13	-675.89	-10684	-8997	2291	0.6	0.6	-49982	10833	1950	166522	5390	1530	6920	No	3.02	Si
SLU 75	0.63	-257.41	-8278	-6971	-579	0.6	0.6	-38729	10833	1950	166522	5390	1530	6920	No	11.95	Si
SLU 75	3.13	-668.54	-10549	-8883	2254	0.6	0.6	-49351	10833	1950	166522	5390	1530	6920	No	3.07	Si
SLU 83	0.63	-294.42	-8607	-7248	-637	0.6	0.6	-40268	10833	1950	166522	5390	1530	6920	No	10.86	Si
SLU 83	3.13	-702.02	-10963	-9232	2352	0.6	0.6	-51289	10833	1950	166522	5390	1530	6920	No	2.94	Si
SLU 84	0.63	-289.89	-8649	-7283	-630	0.6	0.6	-40462	10833	1950	166522	5390	1530	6920	No	10.98	Si
SLU 84	3.13	-702.75	-10975	-9242	2347	0.6	0.6	-51343	10833	1950	166522	5390	1530	6920	No	2.95	Si
SLU 74	0.63	-261.94	-8237	-6936	-586	0.6	0.6	-38535	10833	1950	166522	5390	1530	6920	No	11.8	Si
SLU 74	3.13	-667.81	-10537	-8873	2260	0.6	0.6	-49296	10833	1950	166522	5390	1530	6920	No	3.06	Si
SLU 81	0.63	-297.93	-8525	-7179	-638	0.6	0.6	-39885	10833	1950	166522	5390	1530	6920	No	10.84	Si
SLU 81	3.13	-693.93	-10817	-9109	2321	0.6	0.6	-50604	10833	1950	166522	5390	1530	6920	No	2.98	Si
SLU 78	0.63	-253.9	-8360	-7040	-578	0.6	0.6	-39112	10833	1950	166522	5390	1530	6920	No	11.97	Si
SLU 78	3.13	-676.63	-10695	-9007	2285	0.6	0.6	-50036	10833	1950	166522	5390	1530	6920	No	3.03	Si
SLU 79	0.63	-258.57	-8273	-6967	-584	0.6	0.6	-38703	10833	1950	166522	5390	1530	6920	No	11.85	Si
SLU 79	3.13	-673.38	-10622	-8945	2282	0.6	0.6	-49693	10833	1950	166522	5390	1530	6920	No	3.03	Si
SLU 82	0.63	-293.4	-8567	-7214	-631	0.6	0.6	-40079	10833	1950	166522	5390	1530	6920	No	10.97	Si
SLU 82	3.13	-694.66	-10828	-9118	2315	0.6	0.6	-50658	10833	1950	166522	5390	1530	6920	No	2.99	Si
SLU 80	0.63	-254.04	-8314	-7002	-577	0.6	0.6	-38897	10833	1950	166522	5390	1530	6920	No	12	Si
SLU 80	3.13	-674.11	-10634	-8955	2276	0.6	0.6	-49748	10833	1950	166522	5390	1530	6920	No	3.04	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	0.63	1398.97	-1408	-1185	1493	0.48	0	0	0	0	166522	6468	1224	7692		5.15	Si
SLV 13	3.13	-1833.21	-13086	-11019	5492	0.6	0.4797	-81229	16250	2339	166522	8085	1530	9615		1.75	Si
SLV 2	0.63	-1766.6	-8833	-7438	-2262	0.48	0.3	0	0	0	166522	6468	1224	7692		3.4	Si
SLV 2	3.13	1010.77	587	494	-2817	0.48	0	0	0	0	166522	6468	1224	7692		2.73	Si
SLV 16	0.63	1383.48	-2476	-2085	1431	0.48	0	0	0	0	166522	6468	1224	7692		5.38	Si
SLV 16	3.13	-1877.69	-14737	-12410	5814	0.6	0.5178	-85180	16250	2524	166522	8085	1530	9615		1.65	Si
SLV 12	0.63	350.63	-6175	-5200	161	0.6	0.6	-28889	16195	2915	166522	8085	1530	9615		59.88	Si
SLV 12	3.13	-989.6	-12225	-10295	3446	0.6	0.6	-57194	16250	2925	166522	8085	1530	9615		2.79	Si
SLD 15	0.63	521.06	-4239	-3569	422	0.6	0.5312	-19830	14383	2292	166522	8085	1530	9615		22.76	Si
SLD 15	3.13	-1074.48	-10506	-8847	3415	0.6	0.5932	-49150	16250	2892	166522	8085	1530	9615		2.82	Si
SLD 16	0.63	497.5	-4276	-3600	393	0.6	0.5509	-20003	14417	2383	166522	8085	1530	9615		24.46	Si
SLD 16	3.13	-1060.47	-10418	-8773	3373	0.6	0.5946	-48741	16250	2899	166522	8085	1530	9615		2.85	Si
SLV 15	0.63	1438.37	-2390	-2013	1499	0.48	0	0	0	0	166522	6468	1224	7692		5.13	Si
SLV 15	3.13	-1910.33	-14941	-12582	5911	0.6	0.5164	-86761	16250	2518	166522	8085	1530	9615		1.63	Si
SLV 1	0.63	-1711.72	-8747	-7366	-2193	0.48	0.3129	0	0	0	166522	6468	1224	7692		3.51	Si
SLV 1	3.13	978.12	383	323	-2719	0.48	0	0	0	0	166522	6468	1224	7692		2.83	Si
SLV 14	0.63	1344.08	-1494	-1258	1424	0.48	0	0	0	0	166522	6468	1224	7692		5.4	Si
SLV 14	3.13	-1800.57	-12882	-10848	5395	0.6	0.4807	-79659	16250	2343	166522	8085	1530	9615		1.78	Si
SLV 11	0.63	385.68	-6120	-5154	204	0.6	0.6	-28633	16143	2906	166522	8085	1530	9615		47.08	Si
SLV 11	3.13	-1010.44	-12355	-10405	3509	0.6	0.6	-57803	16250	2925	166522	8085	1530	9615		2.74	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.748 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.4	0	-171	1120.17	0	0	No, e>t/2
SLV 5	179667	0.4	0	-193	1120.17	0	0	No, e>t/2
SLV 7	179667	0.4	0	-5638	1120.17	0	0	No, e>t/2
SLV 2	179667	0.4	0	-1104	1120.17	0	0	No, e>t/2
SLV 1	179667	0.4	0	-1139	1120.17	0	0	No, e>t/2
SLV 8	179667	0.4	0	-5615	1120.17	0	0	No, e>t/2
SLV 4	179667	0.4	0	-2737	1120.17	0	0	No, e>t/2
SLV 3	179667	0.4	0	-2772	1120.17	0	0	No, e>t/2
SLV 9	179667	0.4	0	-1021	1120.17	0	0	No, e>t/2
SLV 10	179667	0.4	0	-999	1120.17	0	0	No, e>t/2

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.748 Wa = 0.05 Ta = 1.1282

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 16	-514	-2476	-55	1.194	486.4	0.931	18.6528	2.39674	Si
SLV 15	-506	-2390	-55	1.198	485.9	0.931	18.69483	2.39674	Si
SLV 12	-468	-6175	-51	1.216	484	0.935	18.9077	2.39674	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-462	-6120	-51	1.218	483.7	0.935	18.93478	2.39674	Si
SLV 14	-408	-1494	-42	1.245	481.1	0.94	19.25623	2.39674	Si
SLV 13	-400	-1408	-42	1.249	480.7	0.941	19.29906	2.39674	Si
SLV 8	-323	-8377	-35	1.288	477.4	0.949	19.73254	2.39674	Si
SLV 7	-317	-8322	-35	1.291	477.2	0.95	19.76007	2.39674	Si
SLV 10	-114	-2901	-8	1.41	471.2	0.978	20.94543	2.39674	Si
SLV 9	-109	-2846	-8	1.413	471.1	0.979	20.97208	2.39674	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.764	SLU 84	Si
V_SLU	2.942	SLU 83	Si
PF_SLV	0	SLV 1	No
V_SLV	1.627	SLV 15	Si
PFFP_SLV	0	SLV 1	No
R_SLV	7.783	SLV 16	Si

Maschio 281

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-0.354	-11.003	0.821	L4	L8	1.175	0.28	13.64	13.64	13.64			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 33	2	1491.16	-20759	-0.0001579	0.0003743	0.0035	1.175	4637.5	6977.25	6977.25	4.68	No	Si
SLU 33	15.64	305.64	-618	-0.0000237	0.0003743	0.0035	1.175	356.63	435.92	435.92	1.43	No	Si
SLU 40	2	1537.22	-21485	-0.0001651	0.0003743	0.0035	1.175	4526.24	7068.39	7068.39	4.6	No	Si
SLU 40	15.64	303.47	-447	-0.0004622	0.0003743	0.0035	0.94	0	337.67	337.67	1.11	No	Si
SLU 41	2	1567.38	-21797	-0.0001686	0.0003743	0.0035	1.175	4472.63	7105.81	7105.81	4.53	No	Si
SLU 41	15.64	261.49	-491	-0.0000317	0.0003743	0.0035	1.175	284.44	363.14	363.14	1.39	No	Si
SLU 82	2	1879.61	-25648	-0.0002138	0.0003743	0.0035	1.175	3530.59	7120.69	7120.69	3.79	No	Si
SLU 82	15.64	280.85	-595	-0.0000183	0.0003743	0.0035	1.175	343.15	422.28	422.28	1.5	No	Si
SLU 39	2	1541.4	-21495	-0.0001653	0.0003743	0.0035	1.175	4524.54	7069.61	7069.61	4.59	No	Si
SLU 39	15.64	315.39	-438	-0.0006377	0.0003743	0.0035	0.94	0	332.86	332.86	1.06	No	Si
SLU 32	2	1495.34	-20770	-0.0001581	0.0003743	0.0035	1.175	4636.06	6978.53	6978.53	4.67	No	Si
SLU 32	15.64	317.56	-610	-0.0000328	0.0003743	0.0035	1.175	351.87	431.1	431.1	1.36	No	Si
SLU 31	2	1461.87	-20321	-0.0001536	0.0003743	0.0035	1.175	4695.79	6923.31	6923.31	4.74	No	Si
SLU 31	15.64	258.64	-524	-0.0000198	0.0003743	0.0035	1.175	303.24	382.03	382.03	1.48	No	Si
SLU 18	2	1467.57	-19739	-0.0001495	0.0003743	0.0035	1.175	4762.88	6853.05	6853.05	4.67	No	Si
SLU 18	15.64	190.39	-352	-0.0000266	0.0003743	0.0035	1.175	204.57	283.33	283.33	1.49	No	Si
SLU 42	2	1563.2	-21787	-0.0001684	0.0003743	0.0035	1.175	4474.44	7104.57	7104.57	4.54	No	Si
SLU 42	15.64	249.57	-500	-0.0000202	0.0003743	0.0035	1.175	289.23	367.96	367.96	1.47	No	Si
SLU 81	2	1883.79	-25658	-0.0002141	0.0003743	0.0035	1.175	3527.39	7120.47	7120.47	3.78	No	Si
SLU 81	15.64	292.77	-586	-0.0000237	0.0003743	0.0035	1.175	338.39	417.46	417.46	1.43	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 16	2	1312.95	-17777	-0.0001216	0.0005615	0.0035	1.175		7794.01	7794.01	5.94		Si
SLD 16	15.64	740.07	93	-0.0155495	0.0005615	0.0035	0.94		0	0	0		No
SLV 13	2	1073.15	-18578	-0.0001197	0.0005615	0.0035	1.175		7987.8	7987.8	7.44		Si
SLV 13	15.64	896.02	632	0.036768	0.0005615	0.0035	0.94		0	0	0		No
SLV 15	2	1342.32	-18660	-0.0001275	0.0005615	0.0035	1.175		8007.81	8007.81	5.97		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	15.64	1560.08	980	0.0354236	0.0005615	0.0035	0.94		0	0	0		No
SLV 16	2	1333.65	-18608	-0.000127	0.0005615	0.0035	1.175		7995.1	7995.1	5.99		Si
SLV 16	15.64	1550.35	972	0.0346899	0.0005615	0.0035	0.94		0	0	0		No
SLV 14	2	1064.48	-18526	-0.0001192	0.0005615	0.0035	1.175		7975.11	7975.11	7.49		Si
SLV 14	15.64	886.29	623	0.0360189	0.0005615	0.0035	0.94		0	0	0		No
SLD 15	2	1316.67	-17800	-0.0001219	0.0005615	0.0035	1.175		7799.4	7799.4	5.92		Si
SLD 15	15.64	744.25	96	-0.0156709	0.0005615	0.0035	0.94		0	0	0		No
SLV 12	2	1713.46	-17708	-0.0001321	0.0005615	0.0035	1.175		7777.28	7777.28	4.54		Si
SLV 12	15.64	1560.04	421	-0.03397	0.0005615	0.0035	0.94		0	0	0		No
SLD 11	2	1480.93	-17406	-0.000124	0.0005615	0.0035	1.175		7704.82	7704.82	5.2		Si
SLD 11	15.64	756.23	-135	-0.0130869	0.0005615	0.0035	0.94		158.82	158.82	0.21		No
SLV 11	2	1719	-17741	-0.0001325	0.0005615	0.0035	1.175		7785.29	7785.29	4.53		Si
SLV 11	15.64	1566.26	426	-0.0340668	0.0005615	0.0035	0.94		0	0	0		No
SLD 12	2	1478.51	-17391	-0.0001239	0.0005615	0.0035	1.175		7701.34	7701.34	5.21		Si
SLD 12	15.64	753.52	-137	-0.0130016	0.0005615	0.0035	0.94		160.16	160.16	0.21		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	2	1863.17	-25106	-20906	3235	1.175	1.175	-63543	10833	3564	159385	9852	2996	12848	No	3.97	Si
SLU 79	15.64	148.09	-764	-636	-555	1.175	1.175	-1934	7202	2370	159385	9852	2996	12848	No	23.13	Si
SLU 78	2	1859.52	-25224	-21005	3202	1.175	1.175	-63844	10833	3564	159385	9852	2996	12848	No	4.01	Si
SLU 78	15.64	229.13	-819	-682	-750	1.175	0.9233	-2073	7221	1867	159385	9852	2996	12848	No	17.14	Si
SLU 56	2	1789.86	-23478	-19551	3191	1.175	1.175	-59425	10833	3564	159385	9852	2996	12848	No	4.03	Si
SLU 56	15.64	116.06	-724	-603	-304	1.175	1.175	-1833	7189	2365	159385	9852	2996	12848	No	42.32	Si
SLU 83	2	1909.77	-25960	-21617	3200	1.175	1.175	-65705	10833	3564	159385	9852	2996	12848	No	4.02	Si
SLU 83	15.64	238.87	-639	-532	-597	1.175	0.6413	-1618	7160	1286	159385	9852	2996	12848	No	21.51	Si
SLU 59	2	1785.16	-23339	-19435	3199	1.175	1.175	-59072	10833	3564	159385	9852	2996	12848	No	4.02	Si
SLU 59	15.64	11.18	-686	-571	-66	1.175	1.175	-1736	7176	2361	159385	9852	2996	12848	No	194.62	Si
SLU 77	2	1863.7	-25235	-21013	3215	1.175	1.175	-63870	10833	3564	159385	9852	2996	12848	No	4	Si
SLU 77	15.64	241.05	-811	-675	-771	1.175	0.8705	-2052	7218	1759	159385	9852	2996	12848	No	16.66	Si
SLU 58	2	1789.34	-23349	-19443	3212	1.175	1.175	-59098	10833	3564	159385	9852	2996	12848	No	4	Si
SLU 58	15.64	23.1	-677	-564	-88	1.175	1.175	-1714	7173	2360	159385	9852	2996	12848	No	146.38	Si
SLU 80	2	1858.99	-25095	-20897	3223	1.175	1.175	-63517	10833	3564	159385	9852	2996	12848	No	3.99	Si
SLU 80	15.64	136.17	-772	-643	-534	1.175	1.175	-1955	7205	2370	159385	9852	2996	12848	No	24.07	Si
SLU 57	2	1785.68	-23468	-19542	3178	1.175	1.175	-59399	10833	3564	159385	9852	2996	12848	No	4.04	Si
SLU 57	15.64	104.14	-733	-610	-282	1.175	1.175	-1854	7192	2366	159385	9852	2996	12848	No	45.58	Si
SLU 84	2	1905.59	-25950	-21609	3187	1.175	1.175	-65679	10833	3564	159385	9852	2996	12848	No	4.03	Si
SLU 84	15.64	226.95	-648	-539	-576	1.175	0.7111	-1639	7163	1426	159385	9852	2996	12848	No	22.32	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	2	1774.05	-16879	-14055	3625	1.175	1.175	-42721	16250	5346	159385	14778	2996	17774		4.9	Si
SLV 7	15.64	909	-396	-329	-2281	0.94	0	0	0	0	159385	11822	2397	14219		6.23	Si
SLV 5	2	876.82	-16605	-13827	1112	1.175	1.175	-42028	16250	5346	159385	14778	2996	17774		15.98	Si
SLV 5	15.64	-1304.53	-1558	-1297	2398	0.94	0	0	0	0	159385	11822	2397	14219		5.93	Si
SLD 7	2	1504.47	-17037	-14187	2907	1.175	1.175	-43120	16250	5346	159385	14778	2996	17774		6.11	Si
SLD 7	15.64	475.18	-486	-405	-1260	0.94	0	0	0	0	159385	11822	2397	14219		11.29	Si
SLV 11	2	1719	-17741	-14773	3592	1.175	1.175	-44903	16250	5346	159385	14778	2996	17774		4.95	Si
SLV 11	15.64	1566.26	426	355	-3308	0.94	0	0	0	0	159385	11822	2397	14219		4.3	Si
SLV 12	2	1713.46	-17708	-14745	3574	1.175	1.175	-44819	16250	5346	159385	14778	2996	17774		4.97	Si
SLV 12	15.64	1560.04	421	351	-3294	0.94	0	0	0	0	159385	11822	2397	14219		4.32	Si
SLV 15	2	1342.32	-18660	-15539	2679	1.175	1.175	-47230	16250	5346	159385	14778	2996	17774		6.63	Si
SLV 15	15.64	1560.08	980	816	-2873	0.94	0	0	0	0	159385	11822	2397	14219		4.95	Si
SLD 8	2	1502.05	-17022	-14175	2899	1.175	1.175	-43084	16250	5346	159385	14778	2996	17774		6.13	Si
SLD 8	15.64	472.47	-489	-407	-1253	0.94	0	0	0	0	159385	11822	2397	14219		11.34	Si
SLV 6	2	871.29	-16572	-13800	1094	1.175	1.175	-41944	16250	5346	159385	14778	2996	17774		16.25	Si
SLV 6	15.64	-1310.75	-1563	-1302	2412	0.94	0	0	0	0	159385	11822	2397	14219		5.89	Si
SLV 16	2	1333.65	-18608	-15495	2650	1.175	1.175	-47098	16250	5346	159385	14778	2996	17774		6.71	Si
SLV 16	15.64	1550.35	972	809	-2850	0.94	0	0	0	0	159385	11822	2397	14219		4.99	Si
SLV 8	2	1768.51	-16846	-14028	3607	1.175	1.175	-42637	16250	5346	159385	14778	2996	17774		4.93	Si
SLV 8	15.64	902.78	-401	-334	-2267	0.94	0	0	0	0	159385	11822	2397	14219		6.27	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 8.82 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.42	0	-5828	2030.05	0	0	No, e>t/2
SLV 10	179667	0.42	0	-10313	2030.05	0	0	No, e>t/2
SLV 2	179667	0.42	0	-7056	2030.05	0	0	No, e>t/2
SLV 5	179667	0.42	0	-9374	2030.05	0	0	No, e>t/2
SLV 1	179667	0.42	0	-7044	2030.05	0	0	No, e>t/2
SLV 3	179667	0.42	0	-5980	2030.05	0	0	No, e>t/2
SLV 8	179667	0.42	0	-5835	2030.05	0	0	No, e>t/2
SLV 6	179667	0.42	0	-9381	2030.05	0	0	No, e>t/2
SLV 4	179667	0.42	0	-5992	2030.05	0	0	No, e>t/2
SLV 9	179667	0.42	0	-10305	2030.05	0	0	No, e>t/2

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 8.82 Wa = 0.05 Ta = 1.1096

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 2	-2117	-15653	-593	0.993	933.8	0.899	16.05798	2.39674	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 1	-2108	-15705	-592	0.994	933.2	0.899	16.07869	2.39674	Si
SLV 4	-1768	-15735	-563	1.057	907.6	0.904	16.98878	2.39674	Si
SLV 3	-1760	-15787	-562	1.059	906.9	0.904	17.01119	2.39674	Si
SLV 6	-1563	-16572	-233	1.154	892.9	0.909	18.46267	2.39674	Si
SLV 5	-1558	-16605	-233	1.155	892.6	0.909	18.47834	2.39674	Si
SLV 10	-741	-17434	105	1.378	843.7	0.939	21.33385	2.39674	Si
SLV 9	-736	-17467	106	1.379	843.4	0.939	21.34996	2.39674	Si
SLV 8	-401	-16846	-133	1.476	830.2	0.961	22.33398	2.39674	Si
SLV 7	-396	-16879	-133	1.478	830	0.961	22.35196	2.39674	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.055	SLU 39	Si
V_SLU	3.971	SLU 79	Si
PF_SLV	0	SLD 15	No
V_SLV	4.298	SLV 11	Si
PFFP_SLV	0	SLV 1	No
R_SLV	6.7	SLV 2	Si

1.9 Verifiche travi di accoppiamento in muratura

Le unità di misura elencate nel capitolo sono in [m, daN] ove non espressamente specificato.

X ini.: *coordinata punto iniziale. [m]*
Y ini.: *coordinata punto iniziale. [m]*
Z ini.inf.: *coordinata punto iniziale. [m]*
Z ini.sup.: *coordinata punto iniziale. [m]*
H ini.: *altezza della sezione iniziale. [m]*
X fin.: *coordinata punto finale. [m]*
Y fin.: *coordinata punto finale. [m]*
Z fin.inf.: *coordinata punto finale. [m]*
Z fin.sup: *coordinata punto finale. [m]*
H fin.: *altezza della sezione finale. [m]*
Luce: *lunghezza della trave. [m]*
Spessore: *spessore. [m]*
R. Trazione: *resistenza a trazione dell'elemento teso disposto orizzontalmente. [daN]*
fb_: *resistenza normalizzata a compressione in direzione orizzontale dei blocchi. [daN/m²]*
fhk: *resistenza caratteristica a compressione della muratura utilizzata in direzione orizzontale. [daN/m²]*
fvk0: *resistenza caratteristica a taglio in assenza di carichi verticali. [daN/m²]*
fhmedio: *resistenza media a compressione della muratura utilizzata in direzione orizzontale. [daN/m²]*
τ0: *resistenza media a taglio in assenza di azioni normali [C8.7.1.16]. [daN/m²]*
fv0: *resistenza media a taglio in assenza di azioni normali [C8.7.1.17]. [daN/m²]*
μ: *coefficiente di attrito [C8.7.1.17].*
φ: *coefficiente di ammorsamento o ingranamento secondo Circolare 7 21-01-19 §C8.7.1.3.1.1.*
fvk,lim: *valore caratteristico massimo della resistenza a taglio che può essere impiegata nel calcolo (§11.10.3.3). [daN/m²]*
E: *modulo di elasticità longitudinale della muratura utilizzato. [daN/m²]*
G: *modulo di elasticità tangenziale della muratura utilizzato. [daN/m²]*
FC: *fattore di confidenza della muratura.*
Materiale: *descrizione del materiale.*
Fu Verticale: *carico di rottura a trazione per unità di lunghezza della maglia verticale. [daN/m]*
Fu Orizzontale: *carico di rottura a trazione per unità di lunghezza della maglia verticale. [daN/m]*
tfv: *spessore di calcolo equivalente verticale di uno strato di rinforzo.*
tfo: *spessore di calcolo equivalente orizzontale di uno strato di rinforzo.*
E: *modulo di elasticità longitudinale. [daN/m²]*
εu: *dilatazione a rottura.*
Tipo fibra: *natura della fibra.*
materiale: *materiale fibra del rinforzo.*
lato applicazione: *lato di applicazione del rinforzo.*
esposizione: *condizione di esposizione secondo CNR-DT 215 §3.2.*
ancoraggio verticale iniziale: *grado di ancoraggio iniziale dei rinforzi verticali.*
ancoraggio verticale finale: *grado di ancoraggio finale dei rinforzi verticali.*
ancoraggio orizzontale iniziale: *grado di ancoraggio iniziale dei rinforzi orizzontali.*
ancoraggio orizzontale finale: *grado di ancoraggio finale dei rinforzi orizzontali.*
strati: *numero strati del rinforzo.*
verifica taglio: *tipo di verifica a taglio.*
εlim,conv / ε,CNR DT-200: *dati relativi ai parametri per il calcolo della deformazione di progetto.*
αt: *coefficiente che tiene conto della ridotta capacità estensionale delle fibre sollecitate a tagliosecondo CNR-DT 215 §4.1.1.*
α: *coeffiicente amplificativo tensione di distacco secondo CNR-DT 215 §3.1 ovvero secondo CNR-DT 200 R1/2013 §5.3.3.*
εlim,conv: *deformazione limite convenzionale del rinforzo FRCM.*
ε,fd: *deformazione di progetto del rinforzo FRCM ovvero CRM.*

γF,d: fattore parziali di sicurezza per stato limite di distacco secondo CNR-DT 200 R1/2013 §3.4.1.
connettori: presenza di connettori per la prevenzione del distacco del rinforzo.
tipo di muratura: tipo di muratura per stato limite di distacco di estremità secondo CNR-DT 200 R1/2013 §5.3.2.
CRM / Fibrenet?: dati relativi ai parametri per il calcolo secondo metodo Fibrenet? ovvero se il materiale è di tipo CRM.
CRM: stabilisce se il rinforzo è di tipo CRM secondo le Linee Guida del C.S.L.P. Ottobre 2019.
intonaco: materiale intonaco FRCM ovvero CRM.
spessore intonaco: spessore intonaco. [m]
tipo blocco fibrenet: tipo blocco muratura per verifica a tglio tipo Fibrenet.
Comb.: combinazione.
Sez.: sezione di verifica.
*M: momento flettente nel piano. [daN*m]*
N: sforzo normale. [daN]
εm: deformazione della muratura.
εm_: deformazione elastica della muratura.
εmu: deformazione ultima della muratura.
df: distanza tra il lembo compresso e la fibra tesa più lontana. [m]
*M0d: momento resistente della sezione non rinforzata. [daN*m]*
*M1d: momento resistente della sezione rinforzata. [daN*m]*
*MRd: momento resistente della sezione. [daN*m]*
incremento > 50%: incremento resistenza superiore al 50% della resistenza non rinforzata in condizioni non sismiche.
c.s.: coefficiente di sicurezza.
Verifica: stato di verifica.
V: taglio nel piano. [daN]
df: distanza tra lembo compresso e baricentro dell'armatura tesa. [m]
fvd: resistenza a taglio di calcolo. [daN/m²]
Vt: resistenza a taglio della muratura non rinforzata. [daN]
Vt,f: resistenza a taglio del rinforzo (CNR DT215 4.1a). [daN]
Vt,c: resistenza a taglio per schiacciamento delle bielle (CNR DT215 4.1b). [daN]
Vt,c int.: contributo di resistenza a taglio delle bielle dell'intonaco se considerato. [daN]
Vt,R: resistenza a taglio della sezione rinforzata. [daN]
Stato limite: pF_SLV=Presso flessione per azioni sismiche; V_SLV=Taglio per azioni sismiche.
Coeff.s.: coefficiente di sicurezza.

Trave di accoppiamento 2

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.763	5.876	-0.98	1.02	2	-22.763	5.876	-0.98	1.02	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	143.85	-3327	-0.0000143	0.0001872	0.0035	2		10722.86	10722.86	No	74.54	Si
SLU 79	fin.	4097.71	-4677	-0.000501	0.0001872	0.0035	2		10722.86	10722.86	No	2.62	Si
SLU 81	ini.	197.46	-3375	-0.0000197	0.0001872	0.0035	2		10722.86	10722.86	No	54.3	Si
SLU 81	fin.	4170.78	-4686	-0.0005119	0.0001872	0.0035	2		10722.86	10722.86	No	2.57	Si
SLU 80	ini.	150.1	-3305	-0.0000149	0.0001872	0.0035	2		10722.86	10722.86	No	71.44	Si
SLU 80	fin.	4103.58	-4663	-0.0005019	0.0001872	0.0035	2		10722.86	10722.86	No	2.61	Si
SLU 83	ini.	194.98	-3409	-0.0000194	0.0001872	0.0035	2		10722.86	10722.86	No	54.99	Si
SLU 83	fin.	4208.02	-4743	-0.0005175	0.0001872	0.0035	2		10722.86	10722.86	No	2.55	Si
SLU 84	ini.	201.24	-3387	-0.0000201	0.0001872	0.0035	2		10722.86	10722.86	No	53.29	Si
SLU 84	fin.	4213.89	-4729	-0.0005184	0.0001872	0.0035	2		10722.86	10722.86	No	2.54	Si
SLU 77	ini.	152.26	-3362	-0.0000152	0.0001872	0.0035	2		10722.86	10722.86	No	70.42	Si
SLU 77	fin.	4119.41	-4709	-0.0005043	0.0001872	0.0035	2		10722.86	10722.86	No	2.6	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	158.51	-3340	-0.0000158	0.0001872	0.0035	2		10722.86	10722.86	No	67.65	Si
SLU 78	fin.	4125.28	-4695	-0.0005051	0.0001872	0.0035	2		10722.86	10722.86	No	2.6	Si
SLU 74	ini.	154.74	-3328	-0.0000154	0.0001872	0.0035	2		10722.86	10722.86	No	69.3	Si
SLU 74	fin.	4082.16	-4652	-0.0004987	0.0001872	0.0035	2		10722.86	10722.86	No	2.63	Si
SLU 75	ini.	160.99	-3306	-0.000016	0.0001872	0.0035	2		10722.86	10722.86	No	66.6	Si
SLU 75	fin.	4088.03	-4637	-0.0004996	0.0001872	0.0035	2		10722.86	10722.86	No	2.62	Si
SLU 82	ini.	203.71	-3353	-0.0000203	0.0001872	0.0035	2		10722.86	10722.86	No	52.64	Si
SLU 82	fin.	4176.64	-4671	-0.0005128	0.0001872	0.0035	2		10722.86	10722.86	No	2.57	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	194.98	5788	2	0	1304	7930	13475	5100	9234	No	1.6	Si
SLU 83	fin.	4208.02	5942	2	0	1304	7930	13475	5100	9234	No	1.55	Si
SLU 74	ini.	154.74	5704	2	0	1304	7930	13475	5100	9234	No	1.62	Si
SLU 74	fin.	4082.16	5794	2	0	1304	7930	13475	5100	9234	No	1.59	Si
SLU 81	ini.	197.46	5727	2	0	1304	7930	13475	5100	9234	No	1.61	Si
SLU 81	fin.	4170.78	5868	2	0	1304	7930	13475	5100	9234	No	1.57	Si
SLU 75	ini.	160.99	5711	2	0	1304	7930	13475	5100	9234	No	1.62	Si
SLU 75	fin.	4088.03	5801	2	0	1304	7930	13475	5100	9234	No	1.59	Si
SLU 78	ini.	158.51	5771	2	0	1304	7930	13475	5100	9234	No	1.6	Si
SLU 78	fin.	4125.28	5875	2	0	1304	7930	13475	5100	9234	No	1.57	Si
SLU 80	ini.	150.1	5763	2	0	1304	7930	13475	5100	9234	No	1.6	Si
SLU 80	fin.	4103.58	5856	2	0	1304	7930	13475	5100	9234	No	1.58	Si
SLU 82	ini.	203.71	5734	2	0	1304	7930	13475	5100	9234	No	1.61	Si
SLU 82	fin.	4176.64	5875	2	0	1304	7930	13475	5100	9234	No	1.57	Si
SLU 79	ini.	143.85	5757	2	0	1304	7930	13475	5100	9234	No	1.6	Si
SLU 79	fin.	4097.71	5849	2	0	1304	7930	13475	5100	9234	No	1.58	Si
SLU 77	ini.	152.26	5764	2	0	1304	7930	13475	5100	9234	No	1.6	Si
SLU 77	fin.	4119.41	5868	2	0	1304	7930	13475	5100	9234	No	1.57	Si
SLU 84	ini.	201.24	5794	2	0	1304	7930	13475	5100	9234	No	1.59	Si
SLU 84	fin.	4213.89	5949	2	0	1304	7930	13475	5100	9234	No	1.55	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-473.62	2562	-0.0000475	0.0002807	0.0035	2		15648.46	15648.46		33.04	Si
SLV 14	fin.	3591.86	-2686	-0.000405	0.0002807	0.0035	2		15635.95	15635.95		4.35	Si
SLV 6	ini.	1866.99	-1291	-0.0001959	0.0002807	0.0035	2		15635.95	15635.95		8.37	Si
SLV 6	fin.	3294.03	-731	-0.0003663	0.0002807	0.0035	2		15635.95	15635.95		4.75	Si
SLV 15	ini.	-1245.4	1326	-0.0001278	0.0002807	0.0035	2		15648.46	15648.46		12.57	Si
SLV 15	fin.	3255.93	-3911	-0.0003615	0.0002807	0.0035	2		15635.95	15635.95		4.8	Si
SLD 9	ini.	658.84	-713	-0.0000664	0.0002807	0.0035	2		15635.95	15635.95		23.73	Si
SLD 9	fin.	3209.1	-2076	-0.0003555	0.0002807	0.0035	2		15635.95	15635.95		4.87	Si
SLV 5	ini.	1996.8	-1178	-0.0002105	0.0002807	0.0035	2		15635.95	15635.95		7.83	Si
SLV 5	fin.	3318.5	-478	-0.0003695	0.0002807	0.0035	2		15635.95	15635.95		4.71	Si
SLV 9	ini.	1458.49	1376	-0.0001509	0.0002807	0.0035	2		15635.95	15635.95		10.72	Si
SLV 9	fin.	3660.69	-474	-0.000414	0.0002807	0.0035	2		15635.95	15635.95		4.27	Si
SLD 10	ini.	602.22	-762	-0.0000606	0.0002807	0.0035	2		15635.95	15635.95		25.96	Si
SLD 10	fin.	3198.42	-2186	-0.0003542	0.0002807	0.0035	2		15635.95	15635.95		4.89	Si
SLV 10	ini.	1328.69	1263	-0.0001368	0.0002807	0.0035	2		15635.95	15635.95		11.77	Si
SLV 10	fin.	3636.21	-727	-0.0004108	0.0002807	0.0035	2		15635.95	15635.95		4.3	Si
SLV 13	ini.	-270.35	2739	-0.0000269	0.0002807	0.0035	2		15648.46	15648.46		57.88	Si
SLV 13	fin.	3630.19	-2290	-0.00041	0.0002807	0.0035	2		15635.95	15635.95		4.31	Si
SLV 16	ini.	-1448.66	1150	-0.0001497	0.0002807	0.0035	2		15648.46	15648.46		10.8	Si
SLV 16	fin.	3217.6	-4308	-0.0003566	0.0002807	0.0035	2		15635.95	15635.95		4.86	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-270.35	9127	2	0	1957	7930	20213	5100	9886		1.08	Si
SLV 13	fin.	3630.19	8827	2	0	1957	7930	20213	5100	9886		1.12	Si
SLV 11	ini.	-1791.66	8176	2	0	1957	7930	20213	5100	9886		1.21	Si
SLV 11	fin.	2413.15	7456	2	0	1957	7930	20213	5100	9886		1.33	Si
SLV 12	ini.	-1921.47	8419	2	0	1957	7930	20213	5100	9886		1.17	Si
SLV 12	fin.	2388.67	7700	2	0	1957	7930	20213	5100	9886		1.28	Si
SLD 13	ini.	-90.01	6296	2	0	1957	7930	20213	5100	9886		1.57	Si
SLD 13	fin.	3189.41	6132	2	0	1957	7930	20213	5100	9886		1.61	Si
SLD 15	ini.	-514.79	6904	2	0	1957	7930	20213	5100	9886		1.43	Si
SLD 15	fin.	3023.33	6601	2	0	1957	7930	20213	5100	9886		1.5	Si
SLV 16	ini.	-1448.66	10925	2	0	1957	7930	20213	5100	9886		0.9	No
SLV 16	fin.	3217.6	10307	2	0	1957	7930	20213	5100	9886		0.96	No
SLD 16	ini.	-602.04	7067	2	0	1957	7930	20213	5100	9886		1.4	Si
SLD 16	fin.	3006.87	6766	2	0	1957	7930	20213	5100	9886		1.46	Si
SLV 15	ini.	-1245.4	10545	2	0	1957	7930	20213	5100	9886		0.94	No
SLV 15	fin.	3255.93	9923	2	0	1957	7930	20213	5100	9886		1	No
SLV 14	ini.	-473.62	9507	2	0	1957	7930	20213	5100	9886		1.04	Si
SLV 14	fin.	3591.86	9211	2	0	1957	7930	20213	5100	9886		1.07	Si
SLD 14	ini.	-177.26	6459	2	0	1957	7930	20213	5100	9886		1.53	Si
SLD 14	fin.	3172.96	6297	2	0	1957	7930	20213	5100	9886		1.57	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.271	SLV 9	Si
V_SLV	0.905	SLV 16	No

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.545	SLU 84	Si
V_SLU	1.552	SLU 84	Si

Trave di accoppiamento 3

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.763	5.876	1.42	2	0.58	-22.763	5.876	1.42	2	0.58	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-1013.7	-3402	-0.0022659	0.0001872	0.0035	0.58		958.44	958.44	No	0.95	No
SLU 81	fin.	307.34	1157	-0.0004376	0.0001872	0.0035	0.58		954.31	954.31	No	3.11	Si
SLU 74	ini.	-990.84	-3341	-0.0021667	0.0001872	0.0035	0.58		958.44	958.44	No	0.97	No
SLU 74	fin.	310.84	1151	-0.0004436	0.0001872	0.0035	0.58		954.31	954.31	No	3.07	Si
SLU 82	ini.	-1014.27	-3403	-0.0022684	0.0001872	0.0035	0.58		958.44	958.44	No	0.94	No
SLU 82	fin.	307.64	1158	-0.0004381	0.0001872	0.0035	0.58		954.31	954.31	No	3.1	Si
SLU 78	ini.	-1000.83	-3376	-0.0022094	0.0001872	0.0035	0.58		958.44	958.44	No	0.96	No
SLU 78	fin.	315.01	1165	-0.0004508	0.0001872	0.0035	0.58		954.31	954.31	No	3.03	Si
SLU 84	ini.	-1023.69	-3437	-0.002311	0.0001872	0.0035	0.58		958.44	958.44	No	0.94	No
SLU 84	fin.	311.51	1170	-0.0004448	0.0001872	0.0035	0.58		954.31	954.31	No	3.06	Si
SLU 80	ini.	-996.5	-3359	-0.0021908	0.0001872	0.0035	0.58		958.44	958.44	No	0.96	No
SLU 80	fin.	314.42	1165	-0.0004498	0.0001872	0.0035	0.58		954.31	954.31	No	3.04	Si
SLU 83	ini.	-1023.13	-3436	-0.0023084	0.0001872	0.0035	0.58		958.44	958.44	No	0.94	No
SLU 83	fin.	311.21	1169	-0.0004442	0.0001872	0.0035	0.58		954.31	954.31	No	3.07	Si
SLU 75	ini.	-991.41	-3342	-0.0021691	0.0001872	0.0035	0.58		958.44	958.44	No	0.97	No
SLU 75	fin.	311.14	1153	-0.0004441	0.0001872	0.0035	0.58		954.31	954.31	No	3.07	Si
SLU 77	ini.	-1000.26	-3375	-0.002207	0.0001872	0.0035	0.58		958.44	958.44	No	0.96	No
SLU 77	fin.	314.71	1163	-0.0004503	0.0001872	0.0035	0.58		954.31	954.31	No	3.03	Si
SLU 79	ini.	-995.93	-3358	-0.0021883	0.0001872	0.0035	0.58		958.44	958.44	No	0.96	No
SLU 79	fin.	314.12	1163	-0.0004492	0.0001872	0.0035	0.58		954.31	954.31	No	3.04	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-995.93	4525	0.58	0	252	4599	3908	1479	4851	No	1.07	Si
SLU 79	fin.	314.12	799	0.58	0	252	4599	3908	1479	4851	No	6.07	Si
SLU 77	ini.	-1000.26	4543	0.58	0	252	4599	3908	1479	4851	No	1.07	Si
SLU 77	fin.	314.71	801	0.58	0	252	4599	3908	1479	4851	No	6.06	Si
SLU 75	ini.	-991.41	4506	0.58	0	252	4599	3908	1479	4851	No	1.08	Si
SLU 75	fin.	311.14	788	0.58	0	252	4599	3908	1479	4851	No	6.16	Si
SLU 78	ini.	-1000.83	4546	0.58	0	252	4599	3908	1479	4851	No	1.07	Si
SLU 78	fin.	315.01	801	0.58	0	252	4599	3908	1479	4851	No	6.05	Si
SLU 81	ini.	-1013.7	4624	0.58	0	252	4599	3908	1479	4851	No	1.05	Si
SLU 81	fin.	307.34	746	0.58	0	252	4599	3908	1479	4851	No	6.51	Si
SLU 83	ini.	-1023.13	4664	0.58	0	252	4599	3908	1479	4851	No	1.04	Si
SLU 83	fin.	311.21	760	0.58	0	252	4599	3908	1479	4851	No	6.39	Si
SLU 80	ini.	-996.5	4528	0.58	0	252	4599	3908	1479	4851	No	1.07	Si
SLU 80	fin.	314.42	799	0.58	0	252	4599	3908	1479	4851	No	6.07	Si
SLU 74	ini.	-990.84	4503	0.58	0	252	4599	3908	1479	4851	No	1.08	Si
SLU 74	fin.	310.84	787	0.58	0	252	4599	3908	1479	4851	No	6.17	Si
SLU 84	ini.	-1023.69	4667	0.58	0	252	4599	3908	1479	4851	No	1.04	Si
SLU 84	fin.	311.51	760	0.58	0	252	4599	3908	1479	4851	No	6.38	Si
SLU 82	ini.	-1014.27	4627	0.58	0	252	4599	3908	1479	4851	No	1.05	Si
SLU 82	fin.	307.64	746	0.58	0	252	4599	3908	1479	4851	No	6.5	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 16	ini.	-847.16	-2859	-0.0015333	0.0002807	0.0035	0.58		1327.74	1327.74		1.57	Si
SLD 16	fin.	435.06	1523	-0.0006293	0.0002807	0.0035	0.58		1324.07	1324.07		3.04	Si
SLD 13	ini.	-848.39	-2688	-0.0015368	0.0002807	0.0035	0.58		1327.74	1327.74		1.57	Si
SLD 13	fin.	369.78	1493	-0.0005161	0.0002807	0.0035	0.58		1324.07	1324.07		3.58	Si
SLV 13	ini.	-1057.37	-3143	-0.0022578	0.0002807	0.0035	0.58		1327.74	1327.74		1.26	Si
SLV 13	fin.	552.67	2359	-0.0008512	0.0002807	0.0035	0.58		1324.07	1324.07		2.4	Si
SLV 15	ini.	-1024.82	-3434	-0.0021234	0.0002807	0.0035	0.58		1327.74	1327.74		1.3	Si
SLV 15	fin.	671.36	2316	-0.0011017	0.0002807	0.0035	0.58		1324.07	1324.07		1.97	Si
SLV 9	ini.	-846.29	-2128	-0.0015309	0.0002807	0.0035	0.58		1327.74	1327.74		1.57	Si
SLV 9	fin.	143.51	1347	-0.0001785	0.0002807	0.0035	0.58		1324.07	1324.07		9.23	Si
SLV 14	ini.	-1086.51	-3249	-0.0023865	0.0002807	0.0035	0.58		1327.74	1327.74		1.22	Si
SLV 14	fin.	586.05	2469	-0.0009187	0.0002807	0.0035	0.58		1324.07	1324.07		2.26	Si
SLV 16	ini.	-1053.95	-3540	-0.0022433	0.0002807	0.0035	0.58		1327.74	1327.74		1.26	Si
SLV 16	fin.	704.73	2426	-0.0011778	0.0002807	0.0035	0.58		1324.07	1324.07		1.88	Si
SLD 14	ini.	-860.9	-2734	-0.0015721	0.0002807	0.0035	0.58		1327.74	1327.74		1.54	Si
SLD 14	fin.	384.11	1540	-0.0005403	0.0002807	0.0035	0.58		1324.07	1324.07		3.45	Si
SLV 10	ini.	-864.9	-2195	-0.0015835	0.0002807	0.0035	0.58		1327.74	1327.74		1.54	Si
SLV 10	fin.	164.83	1418	-0.0002068	0.0002807	0.0035	0.58		1324.07	1324.07		8.03	Si
SLD 15	ini.	-834.65	-2813	-0.0014988	0.0002807	0.0035	0.58		1327.74	1327.74		1.59	Si
SLD 15	fin.	420.74	1475	-0.0006038	0.0002807	0.0035	0.58		1324.07	1324.07		3.15	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 8	ini.	-538.39	4056	0.58	0	378	4599	5862	1479	4977		1.23	Si
SLV 8	fin.	323.24	1640	0.58	0	378	4599	5862	1479	4977		3.04	Si
SLV 14	ini.	-1086.51	4202	0.58	0	378	4599	5862	1479	4977		1.18	Si
SLV 14	fin.	586.05	1904	0.58	0	378	4599	5862	1479	4977		2.61	Si
SLV 12	ini.	-756.38	4902	0.58	0	378	4599	5862	1479	4977		1.02	Si
SLV 12	fin.	560.43	2625	0.58	0	378	4599	5862	1479	4977		1.9	Si
SLD 12	ini.	-720.13	3889	0.58	0	378	4599	5862	1479	4977		1.28	Si
SLD 12	fin.	373.67	1484	0.58	0	378	4599	5862	1479	4977		3.36	Si
SLV 7	ini.	-519.78	3985	0.58	0	378	4599	5862	1479	4977		1.25	Si
SLV 7	fin.	301.93	1551	0.58	0	378	4599	5862	1479	4977		3.21	Si
SLV 13	ini.	-1057.37	4091	0.58	0	378	4599	5862	1479	4977		1.22	Si
SLV 13	fin.	552.67	1764	0.58	0	378	4599	5862	1479	4977		2.82	Si
SLV 15	ini.	-1024.82	4878	0.58	0	378	4599	5862	1479	4977		1.02	Si
SLV 15	fin.	671.36	2640	0.58	0	378	4599	5862	1479	4977		1.89	Si
SLV 11	ini.	-737.77	4831	0.58	0	378	4599	5862	1479	4977		1.03	Si
SLV 11	fin.	539.12	2536	0.58	0	378	4599	5862	1479	4977		1.96	Si
SLV 16	ini.	-1053.95	4990	0.58	0	378	4599	5862	1479	4977		1	No
SLV 16	fin.	704.73	2779	0.58	0	378	4599	5862	1479	4977		1.79	Si
SLD 16	ini.	-847.16	3926	0.58	0	378	4599	5862	1479	4977		1.27	Si
SLD 16	fin.	435.06	1549	0.58	0	378	4599	5862	1479	4977		3.21	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.222	SLV 14	Si
V_SLV	0.998	SLV 16	No
PF_SLU	0.936	SLU 84	No
V_SLU	1.04	SLU 84	Si

Trave di accoppiamento 6

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.543	-3.284	-0.98	1.02	2	-22.543	-3.284	-0.98	1.02	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	392.08	-1248	-0.0000394	0.0001872	0.0035	2		10722.86	10722.86	No	27.35	Si
SLU 77	fin.	1861.77	-1978	-0.0002003	0.0001872	0.0035	2		10722.86	10722.86	No	5.76	Si
SLU 80	ini.	348.17	-1371	-0.0000349	0.0001872	0.0035	2		10722.86	10722.86	No	30.8	Si
SLU 80	fin.	1869.56	-2123	-0.0002013	0.0001872	0.0035	2		10722.86	10722.86	No	5.74	Si
SLU 81	ini.	440.05	-1261	-0.0000443	0.0001872	0.0035	2		10722.86	10722.86	No	24.37	Si
SLU 81	fin.	1856.31	-1953	-0.0001997	0.0001872	0.0035	2		10722.86	10722.86	No	5.78	Si
SLU 83	ini.	440.05	-1284	-0.0000443	0.0001872	0.0035	2		10722.86	10722.86	No	24.37	Si
SLU 83	fin.	1875.59	-1985	-0.000202	0.0001872	0.0035	2		10722.86	10722.86	No	5.72	Si
SLU 79	ini.	392.34	-1234	-0.0000394	0.0001872	0.0035	2		10722.86	10722.86	No	27.33	Si
SLU 79	fin.	1848.38	-1955	-0.0001987	0.0001872	0.0035	2		10722.86	10722.86	No	5.8	Si
SLU 78	ini.	347.91	-1385	-0.0000349	0.0001872	0.0035	2		10722.86	10722.86	No	30.82	Si
SLU 78	fin.	1882.95	-2146	-0.0002029	0.0001872	0.0035	2		10722.86	10722.86	No	5.69	Si
SLU 75	ini.	347.91	-1362	-0.0000349	0.0001872	0.0035	2		10722.86	10722.86	No	30.82	Si
SLU 75	fin.	1863.66	-2114	-0.0002006	0.0001872	0.0035	2		10722.86	10722.86	No	5.75	Si
SLU 76	ini.	318.72	-1440	-0.0000319	0.0001872	0.0035	2		10722.86	10722.86	No	33.64	Si
SLU 76	fin.	1864.39	-2202	-0.0002006	0.0001872	0.0035	2		10722.86	10722.86	No	5.75	Si
SLU 84	ini.	395.88	-1422	-0.0000398	0.0001872	0.0035	2		10722.86	10722.86	No	27.09	Si
SLU 84	fin.	1896.77	-2152	-0.0002045	0.0001872	0.0035	2		10722.86	10722.86	No	5.65	Si
SLU 82	ini.	395.88	-1398	-0.0000398	0.0001872	0.0035	2		10722.86	10722.86	No	27.09	Si
SLU 82	fin.	1877.48	-2120	-0.0002022	0.0001872	0.0035	2		10722.86	10722.86	No	5.71	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	395.88	1058	2	0	1304	7930	13475	5100	9234	No	8.73	Si
SLU 82	fin.	1877.48	2520	2	0	1304	7930	13475	5100	9234	No	3.66	Si
SLU 78	ini.	347.91	1190	2	0	1304	7930	13475	5100	9234	No	7.76	Si
SLU 78	fin.	1882.95	2584	2	0	1304	7930	13475	5100	9234	No	3.57	Si
SLU 73	ini.	318.72	1227	2	0	1304	7930	13475	5100	9234	No	7.53	Si
SLU 73	fin.	1845.1	2534	2	0	1304	7930	13475	5100	9234	No	3.64	Si
SLU 77	ini.	392.08	1093	2	0	1304	7930	13475	5100	9234	No	8.45	Si
SLU 77	fin.	1861.77	2486	2	0	1304	7930	13475	5100	9234	No	3.71	Si
SLU 76	ini.	318.72	1235	2	0	1304	7930	13475	5100	9234	No	7.47	Si
SLU 76	fin.	1864.39	2576	2	0	1304	7930	13475	5100	9234	No	3.59	Si
SLU 84	ini.	395.88	1067	2	0	1304	7930	13475	5100	9234	No	8.66	Si
SLU 84	fin.	1896.77	2561	2	0	1304	7930	13475	5100	9234	No	3.61	Si
SLU 75	ini.	347.91	1181	2	0	1304	7930	13475	5100	9234	No	7.82	Si
SLU 75	fin.	1863.66	2542	2	0	1304	7930	13475	5100	9234	No	3.63	Si
SLU 70	ini.	236.59	1433	2	0	1304	7930	13475	5100	9234	No	6.44	Si
SLU 70	fin.	1774.45	2465	2	0	1304	7930	13475	5100	9234	No	3.75	Si
SLU 80	ini.	348.17	1180	2	0	1304	7930	13475	5100	9234	No	7.83	Si
SLU 80	fin.	1869.56	2552	2	0	1304	7930	13475	5100	9234	No	3.62	Si
SLU 83	ini.	440.05	971	2	0	1304	7930	13475	5100	9234	No	9.51	Si
SLU 83	fin.	1875.59	2463	2	0	1304	7930	13475	5100	9234	No	3.75	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 15	ini.	-474.59	339	-0.0000476	0.0002807	0.0035	2		15648.46	15648.46		32.97	Si
SLD 15	fin.	2246.99	-1395	-0.0002391	0.0002807	0.0035	2		15635.95	15635.95		6.96	Si
SLV 15	ini.	-1432.04	1835	-0.0001479	0.0002807	0.0035	2		15648.46	15648.46		10.93	Si
SLV 15	fin.	3496.69	-1485	-0.0003925	0.0002807	0.0035	2		15635.95	15635.95		4.47	Si
SLV 14	ini.	-2001.7	36	-0.0002109	0.0002807	0.0035	2		15648.46	15648.46		7.82	Si
SLV 14	fin.	3183.36	-3500	-0.0003523	0.0002807	0.0035	2		15635.95	15635.95		4.91	Si
SLV 16	ini.	-1208.03	2095	-0.0001238	0.0002807	0.0035	2		15648.46	15648.46		12.95	Si
SLV 16	fin.	3479.14	-1089	-0.0003902	0.0002807	0.0035	2		15635.95	15635.95		4.49	Si
SLV 4	ini.	2696.17	-1368	-0.0002921	0.0002807	0.0035	2		15635.95	15635.95		5.8	Si
SLV 4	fin.	-590.72	1214	-0.0000594	0.0002807	0.0035	2		15648.46	15648.46		26.49	Si
SLV 11	ini.	900.84	3072	-0.0000915	0.0002807	0.0035	2		15635.95	15635.95		17.36	Si
SLV 11	fin.	2414.15	2206	-0.0002586	0.0002807	0.0035	2		15635.95	15635.95		6.48	Si
SLV 12	ini.	1043.9	3238	-0.0001065	0.0002807	0.0035	2		15635.95	15635.95		14.98	Si
SLV 12	fin.	2402.94	2459	-0.0002572	0.0002807	0.0035	2		15635.95	15635.95		6.51	Si
SLV 13	ini.	-2225.71	-223	-0.0002364	0.0002807	0.0035	2		15648.46	15648.46		7.03	Si
SLV 13	fin.	3200.9	-3897	-0.0003545	0.0002807	0.0035	2		15635.95	15635.95		4.88	Si
SLD 16	ini.	-378.43	450	-0.0000378	0.0002807	0.0035	2		15648.46	15648.46		41.35	Si
SLD 16	fin.	2239.46	-1225	-0.0002382	0.0002807	0.0035	2		15635.95	15635.95		6.98	Si
SLV 3	ini.	2472.16	-1627	-0.0002654	0.0002807	0.0035	2		15635.95	15635.95		6.32	Si
SLV 3	fin.	-573.17	817	-0.0000576	0.0002807	0.0035	2		15648.46	15648.46		27.3	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 9	ini.	-1744.7	4331	2	0	1957	7930	20213	5100	9886		2.28	Si
SLV 9	fin.	1428.2	5175	2	0	1957	7930	20213	5100	9886		1.91	Si
SLV 4	ini.	2696.17	-6673	2	0	1957	7930	20213	5100	9886		1.48	Si
SLV 4	fin.	-590.72	-5581	2	0	1957	7930	20213	5100	9886		1.77	Si
SLV 2	ini.	1902.51	-5994	2	0	1957	7930	20213	5100	9886		1.65	Si
SLV 2	fin.	-886.5	-4776	2	0	1957	7930	20213	5100	9886		2.07	Si
SLV 13	ini.	-2225.71	8574	2	0	1957	7930	20213	5100	9886		1.15	Si
SLV 13	fin.	3200.9	8990	2	0	1957	7930	20213	5100	9886		1.1	Si
SLV 10	ini.	-1601.64	4091	2	0	1957	7930	20213	5100	9886		2.42	Si
SLV 10	fin.	1416.99	4933	2	0	1957	7930	20213	5100	9886		2	Si
SLV 14	ini.	-2001.7	8197	2	0	1957	7930	20213	5100	9886		1.21	Si
SLV 14	fin.	3183.36	8612	2	0	1957	7930	20213	5100	9886		1.15	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-1432.04	7895	2	0	1957	7930	20213	5100	9886		1.25	Si
SLV 15	fin.	3496.69	8185	2	0	1957	7930	20213	5100	9886		1.21	Si
SLV 3	ini.	2472.16	-6296	2	0	1957	7930	20213	5100	9886		1.57	Si
SLV 3	fin.	-573.17	-5204	2	0	1957	7930	20213	5100	9886		1.9	Si
SLV 16	ini.	-1208.03	7518	2	0	1957	7930	20213	5100	9886		1.31	Si
SLV 16	fin.	3479.14	7807	2	0	1957	7930	20213	5100	9886		1.27	Si
SLV 1	ini.	1678.5	-5617	2	0	1957	7930	20213	5100	9886		1.76	Si
SLV 1	fin.	-868.96	-4399	2	0	1957	7930	20213	5100	9886		2.25	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.472	SLV 15	Si
V_SLV	1.1	SLV 13	Si
PF_SLU	5.653	SLU 84	Si
V_SLU	3.574	SLU 78	Si

Trave di accoppiamento 7

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.543	-3.284	1.42	2	0.58	-22.543	-3.284	1.42	2	0.58	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-604.19	-2413	-0.0010173	0.0001872	0.0035	0.58		958.44	958.44	No	1.59	Si
SLU 79	fin.	67.77	-107	-0.0000825	0.0001872	0.0035	0.58		954.31	954.31	No	14.08	Si
SLU 78	ini.	-603.51	-2444	-0.0010158	0.0001872	0.0035	0.58		958.44	958.44	No	1.59	Si
SLU 78	fin.	76.81	-83	-0.000094	0.0001872	0.0035	0.58		954.31	954.31	No	12.42	Si
SLU 84	ini.	-616.42	-2482	-0.0010449	0.0001872	0.0035	0.58		958.44	958.44	No	1.55	Si
SLU 84	fin.	67.25	-116	-0.0000819	0.0001872	0.0035	0.58		954.31	954.31	No	14.19	Si
SLU 83	ini.	-621.47	-2469	-0.0010563	0.0001872	0.0035	0.58		958.44	958.44	No	1.54	Si
SLU 83	fin.	59.25	-139	-0.0000719	0.0001872	0.0035	0.58		954.31	954.31	No	16.11	Si
SLU 74	ini.	-602.68	-2406	-0.0010139	0.0001872	0.0035	0.58		958.44	958.44	No	1.59	Si
SLU 74	fin.	67.83	-106	-0.0000826	0.0001872	0.0035	0.58		954.31	954.31	No	14.07	Si
SLU 77	ini.	-608.55	-2431	-0.0010271	0.0001872	0.0035	0.58		958.44	958.44	No	1.57	Si
SLU 77	fin.	68.81	-106	-0.0000839	0.0001872	0.0035	0.58		954.31	954.31	No	13.87	Si
SLU 81	ini.	-615.59	-2444	-0.001043	0.0001872	0.0035	0.58		958.44	958.44	No	1.56	Si
SLU 81	fin.	58.28	-139	-0.0000706	0.0001872	0.0035	0.58		954.31	954.31	No	16.37	Si
SLU 75	ini.	-597.64	-2419	-0.0010026	0.0001872	0.0035	0.58		958.44	958.44	No	1.6	Si
SLU 75	fin.	75.83	-82	-0.0000928	0.0001872	0.0035	0.58		954.31	954.31	No	12.58	Si
SLU 82	ini.	-610.55	-2457	-0.0010316	0.0001872	0.0035	0.58		958.44	958.44	No	1.57	Si
SLU 82	fin.	66.28	-115	-0.0000807	0.0001872	0.0035	0.58		954.31	954.31	No	14.4	Si
SLU 80	ini.	-599.15	-2425	-0.001006	0.0001872	0.0035	0.58		958.44	958.44	No	1.6	Si
SLU 80	fin.	75.77	-83	-0.0000927	0.0001872	0.0035	0.58		954.31	954.31	No	12.6	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-621.47	4576	0.58	0	252	4599	3908	1479	4851	No	1.06	Si
SLU 83	fin.	59.25	-901	0.58	0	252	4599	3908	1479	4851	No	5.39	Si
SLU 78	ini.	-603.51	4375	0.58	0	252	4599	3908	1479	4851	No	1.11	Si
SLU 78	fin.	76.81	-748	0.58	0	252	4599	3908	1479	4851	No	6.49	Si
SLU 77	ini.	-608.55	4458	0.58	0	252	4599	3908	1479	4851	No	1.09	Si
SLU 77	fin.	68.81	-828	0.58	0	252	4599	3908	1479	4851	No	5.86	Si
SLU 74	ini.	-602.68	4420	0.58	0	252	4599	3908	1479	4851	No	1.1	Si
SLU 74	fin.	67.83	-825	0.58	0	252	4599	3908	1479	4851	No	5.88	Si
SLU 82	ini.	-610.55	4454	0.58	0	252	4599	3908	1479	4851	No	1.09	Si
SLU 82	fin.	66.28	-819	0.58	0	252	4599	3908	1479	4851	No	5.92	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-604.19	4430	0.58	0	252	4599	3908	1479	4851	No	1.1	Si
SLU 79	fin.	67.77	-827	0.58	0	252	4599	3908	1479	4851	No	5.87	Si
SLU 84	ini.	-616.42	4493	0.58	0	252	4599	3908	1479	4851	No	1.08	Si
SLU 84	fin.	67.25	-821	0.58	0	252	4599	3908	1479	4851	No	5.91	Si
SLU 81	ini.	-615.59	4538	0.58	0	252	4599	3908	1479	4851	No	1.07	Si
SLU 81	fin.	58.28	-899	0.58	0	252	4599	3908	1479	4851	No	5.4	Si
SLU 75	ini.	-597.64	4336	0.58	0	252	4599	3908	1479	4851	No	1.12	Si
SLU 75	fin.	75.83	-746	0.58	0	252	4599	3908	1479	4851	No	6.51	Si
SLU 80	ini.	-599.15	4346	0.58	0	252	4599	3908	1479	4851	No	1.12	Si
SLU 80	fin.	75.77	-747	0.58	0	252	4599	3908	1479	4851	No	6.49	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-828.34	-3881	-0.0014816	0.0002807	0.0035	0.58		1327.74	1327.74		1.6	Si
SLV 14	fin.	688.68	1661	-0.0011409	0.0002807	0.0035	0.58		1324.07	1324.07		1.92	Si
SLD 13	ini.	-603.5	-2675	-0.0009513	0.0002807	0.0035	0.58		1327.74	1327.74		2.2	Si
SLD 13	fin.	344.82	732	-0.0004746	0.0002807	0.0035	0.58		1324.07	1324.07		3.84	Si
SLD 14	ini.	-592.52	-2619	-0.0009286	0.0002807	0.0035	0.58		1327.74	1327.74		2.24	Si
SLD 14	fin.	328.82	691	-0.0004486	0.0002807	0.0035	0.58		1324.07	1324.07		4.03	Si
SLD 16	ini.	-583.97	-2458	-0.0009111	0.0002807	0.0035	0.58		1327.74	1327.74		2.27	Si
SLD 16	fin.	268.72	554	-0.0003547	0.0002807	0.0035	0.58		1324.07	1324.07		4.93	Si
SLV 13	ini.	-853.93	-4011	-0.0015523	0.0002807	0.0035	0.58		1327.74	1327.74		1.55	Si
SLV 13	fin.	725.97	1756	-0.0012278	0.0002807	0.0035	0.58		1324.07	1324.07		1.82	Si
SLV 9	ini.	-581.47	-2963	-0.000906	0.0002807	0.0035	0.58		1327.74	1327.74		2.28	Si
SLV 9	fin.	477.96	1002	-0.0007074	0.0002807	0.0035	0.58		1324.07	1324.07		2.77	Si
SLV 16	ini.	-808.73	-3508	-0.0014293	0.0002807	0.0035	0.58		1327.74	1327.74		1.64	Si
SLV 16	fin.	548.9	1343	-0.0008437	0.0002807	0.0035	0.58		1324.07	1324.07		2.41	Si
SLV 15	ini.	-834.32	-3638	-0.0014979	0.0002807	0.0035	0.58		1327.74	1327.74		1.59	Si
SLV 15	fin.	586.18	1438	-0.000919	0.0002807	0.0035	0.58		1324.07	1324.07		2.26	Si
SLD 15	ini.	-594.95	-2514	-0.0009336	0.0002807	0.0035	0.58		1327.74	1327.74		2.23	Si
SLD 15	fin.	284.72	595	-0.0003791	0.0002807	0.0035	0.58		1324.07	1324.07		4.65	Si
SLV 4	ini.	21.91	663	-0.000026	0.0002807	0.0035	0.58		1324.07	1324.07		60.44	Si
SLV 4	fin.	-606.41	-1824	-0.0009574	0.0002807	0.0035	0.58		1327.74	1327.74		2.19	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-808.73	5486	0.58	0	378	4599	5862	1479	4977		0.91	No
SLV 16	fin.	548.9	1178	0.58	0	378	4599	5862	1479	4977		4.23	Si
SLV 11	ini.	-516.09	4785	0.58	0	378	4599	5862	1479	4977		1.04	Si
SLV 11	fin.	12	-1104	0.58	0	378	4599	5862	1479	4977		4.51	Si
SLV 12	ini.	-499.75	4714	0.58	0	378	4599	5862	1479	4977		1.06	Si
SLV 12	fin.	-11.81	-1200	0.58	0	378	4599	5862	1479	4977		4.15	Si
SLD 14	ini.	-592.52	3813	0.58	0	378	4599	5862	1479	4977		1.31	Si
SLD 14	fin.	328.82	534	0.58	0	378	4599	5862	1479	4977		9.32	Si
SLD 13	ini.	-603.5	3860	0.58	0	378	4599	5862	1479	4977		1.29	Si
SLD 13	fin.	344.82	599	0.58	0	378	4599	5862	1479	4977		8.31	Si
SLD 15	ini.	-594.95	4136	0.58	0	378	4599	5862	1479	4977		1.2	Si
SLD 15	fin.	284.72	269	0.58	0	378	4599	5862	1479	4977		18.54	Si
SLV 15	ini.	-834.32	5597	0.58	0	378	4599	5862	1479	4977		0.89	No
SLV 15	fin.	586.18	1329	0.58	0	378	4599	5862	1479	4977		3.74	Si
SLD 16	ini.	-583.97	4088	0.58	0	378	4599	5862	1479	4977		1.22	Si
SLD 16	fin.	268.72	204	0.58	0	378	4599	5862	1479	4977		24.44	Si
SLV 14	ini.	-828.34	4853	0.58	0	378	4599	5862	1479	4977		1.03	Si
SLV 14	fin.	688.68	1945	0.58	0	378	4599	5862	1479	4977		2.56	Si
SLV 13	ini.	-853.93	4964	0.58	0	378	4599	5862	1479	4977		1	Si
SLV 13	fin.	725.97	2096	0.58	0	378	4599	5862	1479	4977		2.37	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.555	SLV 13	Si
V_SLV	0.889	SLV 15	No
PF_SLU	1.542	SLU 83	Si
V_SLU	1.06	SLU 83	Si

Trave di accoppiamento 8

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.313	-3.284	-0.98	1.02	2	-18.313	-3.284	-0.98	1.02	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	679.12	-17174	-0.000069	0.0001872	0.0035	2		10722.86	10722.86	No	15.79	Si
SLU 84	fin.	869.39	-12958	-0.0000891	0.0001872	0.0035	2		10722.86	10722.86	No	12.33	Si
SLU 74	ini.	550.9	-16532	-0.0000557	0.0001872	0.0035	2		10722.86	10722.86	No	19.46	Si
SLU 74	fin.	838.82	-12572	-0.0000858	0.0001872	0.0035	2		10722.86	10722.86	No	12.78	Si
SLU 75	ini.	571.73	-16518	-0.0000578	0.0001872	0.0035	2		10722.86	10722.86	No	18.76	Si
SLU 75	fin.	825.49	-12487	-0.0000844	0.0001872	0.0035	2		10722.86	10722.86	No	12.99	Si
SLU 77	ini.	567.11	-16688	-0.0000574	0.0001872	0.0035	2		10722.86	10722.86	No	18.91	Si
SLU 77	fin.	848.49	-12685	-0.0000869	0.0001872	0.0035	2		10722.86	10722.86	No	12.64	Si
SLU 78	ini.	587.94	-16674	-0.0000595	0.0001872	0.0035	2		10722.86	10722.86	No	18.24	Si
SLU 78	fin.	835.17	-12601	-0.0000854	0.0001872	0.0035	2		10722.86	10722.86	No	12.84	Si
SLU 82	ini.	662.91	-17018	-0.0000673	0.0001872	0.0035	2		10722.86	10722.86	No	16.18	Si
SLU 82	fin.	859.71	-12845	-0.0000881	0.0001872	0.0035	2		10722.86	10722.86	No	12.47	Si
SLU 80	ini.	612.49	-16612	-0.0000621	0.0001872	0.0035	2		10722.86	10722.86	No	17.51	Si
SLU 80	fin.	821.95	-12524	-0.000084	0.0001872	0.0035	2		10722.86	10722.86	No	13.05	Si
SLU 83	ini.	658.29	-17188	-0.0000668	0.0001872	0.0035	2		10722.86	10722.86	No	16.29	Si
SLU 83	fin.	882.72	-13043	-0.0000905	0.0001872	0.0035	2		10722.86	10722.86	No	12.15	Si
SLU 81	ini.	642.08	-17032	-0.0000652	0.0001872	0.0035	2		10722.86	10722.86	No	16.7	Si
SLU 81	fin.	873.04	-12930	-0.0000895	0.0001872	0.0035	2		10722.86	10722.86	No	12.28	Si
SLU 79	ini.	591.66	-16627	-0.0000599	0.0001872	0.0035	2		10722.86	10722.86	No	18.12	Si
SLU 79	fin.	835.28	-12608	-0.0000855	0.0001872	0.0035	2		10722.86	10722.86	No	12.84	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 55	ini.	666.35	-3757	2	0	1304	7930	13475	5100	9234	No	2.46	Si
SLU 55	fin.	653.4	-4405	2	0	1304	7930	13475	5100	9234	No	2.1	Si
SLU 62	ini.	714.48	-3807	2	0	1304	7930	13475	5100	9234	No	2.43	Si
SLU 62	fin.	732.73	-4392	2	0	1304	7930	13475	5100	9234	No	2.1	Si
SLU 57	ini.	644.12	-3693	2	0	1304	7930	13475	5100	9234	No	2.5	Si
SLU 57	fin.	685.17	-4321	2	0	1304	7930	13475	5100	9234	No	2.14	Si
SLU 61	ini.	719.1	-3856	2	0	1304	7930	13475	5100	9234	No	2.39	Si
SLU 61	fin.	709.72	-4455	2	0	1304	7930	13475	5100	9234	No	2.07	Si
SLU 59	ini.	668.68	-3743	2	0	1304	7930	13475	5100	9234	No	2.47	Si
SLU 59	fin.	671.96	-4376	2	0	1304	7930	13475	5100	9234	No	2.11	Si
SLU 82	ini.	662.91	-3829	2	0	1304	7930	13475	5100	9234	No	2.41	Si
SLU 82	fin.	859.71	-4304	2	0	1304	7930	13475	5100	9234	No	2.15	Si
SLU 60	ini.	698.27	-3751	2	0	1304	7930	13475	5100	9234	No	2.46	Si
SLU 60	fin.	723.05	-4350	2	0	1304	7930	13475	5100	9234	No	2.12	Si
SLU 52	ini.	650.14	-3701	2	0	1304	7930	13475	5100	9234	No	2.49	Si
SLU 52	fin.	643.72	-4363	2	0	1304	7930	13475	5100	9234	No	2.12	Si
SLU 84	ini.	679.12	-3884	2	0	1304	7930	13475	5100	9234	No	2.38	Si
SLU 84	fin.	869.39	-4346	2	0	1304	7930	13475	5100	9234	No	2.12	Si
SLU 63	ini.	735.3	-3911	2	0	1304	7930	13475	5100	9234	No	2.36	Si
SLU 63	fin.	719.4	-4497	2	0	1304	7930	13475	5100	9234	No	2.05	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 8	ini.	2695.52	-14504	-0.000292	0.0002807	0.0035	2		15635.95	15635.95		5.8	Si
SLV 8	fin.	-907.41	-7640	-0.0000921	0.0002807	0.0035	2		15648.46	15648.46		17.25	Si
SLV 13	ini.	-4947.82	-3807	-0.0005933	0.0002807	0.0035	2		15648.46	15648.46		3.16	Si
SLV 13	fin.	2401.71	-10609	-0.0002571	0.0002807	0.0035	2		15635.95	15635.95		6.51	Si
SLV 16	ini.	-4277.54	-4512	-0.0004974	0.0002807	0.0035	2		15648.46	15648.46		3.66	Si
SLV 16	fin.	1716.61	-10178	-0.0001791	0.0002807	0.0035	2		15635.95	15635.95		9.11	Si
SLV 4	ini.	5645.98	-19093	-0.0006995	0.0002807	0.0035	2		15635.95	15635.95		2.77	Si
SLV 4	fin.	-1341.25	-6673	-0.0001381	0.0002807	0.0035	2		15648.46	15648.46		11.67	Si
SLV 3	ini.	5453.59	-18864	-0.0006699	0.0002807	0.0035	2		15635.95	15635.95		2.87	Si
SLV 3	fin.	-1220.37	-6853	-0.0001251	0.0002807	0.0035	2		15648.46	15648.46		12.82	Si
SLV 14	ini.	-4755.43	-4036	-0.0005653	0.0002807	0.0035	2		15648.46	15648.46		3.29	Si
SLV 14	fin.	2280.83	-10429	-0.000243	0.0002807	0.0035	2		15635.95	15635.95		6.86	Si
SLV 15	ini.	-4469.93	-4284	-0.0005244	0.0002807	0.0035	2		15648.46	15648.46		3.5	Si
SLV 15	fin.	1837.49	-10358	-0.0001926	0.0002807	0.0035	2		15635.95	15635.95		8.51	Si
SLD 4	ini.	2613.45	-14716	-0.0002822	0.0002807	0.0035	2		15635.95	15635.95		5.98	Si
SLD 4	fin.	-272.82	-7799	-0.0000272	0.0002807	0.0035	2		15648.46	15648.46		57.36	Si
SLV 2	ini.	5168.1	-18616	-0.0006266	0.0002807	0.0035	2		15635.95	15635.95		3.03	Si
SLV 2	fin.	-777.03	-6924	-0.0000786	0.0002807	0.0035	2		15648.46	15648.46		20.14	Si
SLV 1	ini.	4975.71	-18388	-0.000598	0.0002807	0.0035	2		15635.95	15635.95		3.14	Si
SLV 1	fin.	-656.15	-7104	-0.0000661	0.0002807	0.0035	2		15648.46	15648.46		23.85	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-4947.82	14150	2	0	1957	7930	20213	5100	9886		0.7	No
SLV 13	fin.	2401.71	13457	2	0	1957	7930	20213	5100	9886		0.73	No
SLV 4	ini.	5645.98	-19041	2	0	1957	7930	20213	5100	9886		0.52	No
SLV 4	fin.	-1341.25	-19369	2	0	1957	7930	20213	5100	9886		0.51	No
SLV 15	ini.	-4469.93	12694	2	0	1957	7930	20213	5100	9886		0.78	No
SLV 15	fin.	1837.49	12144	2	0	1957	7930	20213	5100	9886		0.81	No
SLV 1	ini.	4975.71	-16874	2	0	1957	7930	20213	5100	9886		0.59	No
SLV 1	fin.	-656.15	-17347	2	0	1957	7930	20213	5100	9886		0.57	No
SLV 3	ini.	5453.59	-18331	2	0	1957	7930	20213	5100	9886		0.54	No
SLV 3	fin.	-1220.37	-18660	2	0	1957	7930	20213	5100	9886		0.53	No
SLV 8	ini.	2695.52	-9753	2	0	1957	7930	20213	5100	9886		1.01	Si
SLV 8	fin.	-907.41	-9991	2	0	1957	7930	20213	5100	9886		0.99	No
SLV 14	ini.	-4755.43	13440	2	0	1957	7930	20213	5100	9886		0.74	No
SLV 14	fin.	2280.83	12749	2	0	1957	7930	20213	5100	9886		0.78	No
SLV 2	ini.	5168.1	-17584	2	0	1957	7930	20213	5100	9886		0.56	No
SLV 2	fin.	-777.03	-18055	2	0	1957	7930	20213	5100	9886		0.55	No
SLD 4	ini.	2613.45	-9540	2	0	1957	7930	20213	5100	9886		1.04	Si
SLD 4	fin.	-272.82	-9973	2	0	1957	7930	20213	5100	9886		0.99	No
SLV 16	ini.	-4277.54	11984	2	0	1957	7930	20213	5100	9886		0.82	No
SLV 16	fin.	1716.61	11435	2	0	1957	7930	20213	5100	9886		0.86	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.769	SLV 4	Si
V_SLV	0.51	SLV 4	No
PF_SLU	12.148	SLU 83	Si
V_SLU	2.054	SLU 63	Si

Trave di accoppiamento 9

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.313	-3.284	1.42	2	0.58	-18.313	-3.284	1.42	2	0.58	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-646.05	-3785	-0.0011131	0.0001872	0.0035	0.58		958.44	958.44	No	1.48	Si
SLU 81	fin.	-100.94	-1502	-0.0001248	0.0001872	0.0035	0.58		958.44	958.44	No	9.5	Si
SLU 82	ini.	-641.73	-3783	-0.001103	0.0001872	0.0035	0.58		958.44	958.44	No	1.49	Si
SLU 82	fin.	-99.48	-1508	-0.0001229	0.0001872	0.0035	0.58		958.44	958.44	No	9.63	Si
SLU 84	ini.	-647.7	-3820	-0.001117	0.0001872	0.0035	0.58		958.44	958.44	No	1.48	Si
SLU 84	fin.	-101.34	-1527	-0.0001253	0.0001872	0.0035	0.58		958.44	958.44	No	9.46	Si
SLU 79	ini.	-632.76	-3678	-0.0010822	0.0001872	0.0035	0.58		958.44	958.44	No	1.51	Si
SLU 79	fin.	-95.94	-1450	-0.0001183	0.0001872	0.0035	0.58		958.44	958.44	No	9.99	Si
SLU 80	ini.	-628.45	-3676	-0.0010723	0.0001872	0.0035	0.58		958.44	958.44	No	1.53	Si
SLU 80	fin.	-94.48	-1457	-0.0001164	0.0001872	0.0035	0.58		958.44	958.44	No	10.14	Si
SLU 78	ini.	-638.71	-3712	-0.001096	0.0001872	0.0035	0.58		958.44	958.44	No	1.5	Si
SLU 78	fin.	-90.26	-1446	-0.0001109	0.0001872	0.0035	0.58		958.44	958.44	No	10.62	Si
SLU 83	ini.	-652.01	-3821	-0.0011271	0.0001872	0.0035	0.58		958.44	958.44	No	1.47	Si
SLU 83	fin.	-102.8	-1521	-0.0001272	0.0001872	0.0035	0.58		958.44	958.44	No	9.32	Si
SLU 74	ini.	-637.05	-3678	-0.0010921	0.0001872	0.0035	0.58		958.44	958.44	No	1.5	Si
SLU 74	fin.	-89.86	-1421	-0.0001104	0.0001872	0.0035	0.58		958.44	958.44	No	10.67	Si
SLU 77	ini.	-643.02	-3714	-0.001106	0.0001872	0.0035	0.58		958.44	958.44	No	1.49	Si
SLU 77	fin.	-91.72	-1440	-0.0001128	0.0001872	0.0035	0.58		958.44	958.44	No	10.45	Si
SLU 75	ini.	-632.74	-3676	-0.0010822	0.0001872	0.0035	0.58		958.44	958.44	No	1.51	Si
SLU 75	fin.	-88.4	-1428	-0.0001085	0.0001872	0.0035	0.58		958.44	958.44	No	10.84	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-643.02	5856	0.58	0	252	4599	3908	1479	4851	No	0.83	No
SLU 77	fin.	-91.72	-5476	0.58	0	252	4599	3908	1479	4851	No	0.89	No
SLU 75	ini.	-632.74	5804	0.58	0	252	4599	3908	1479	4851	No	0.84	No
SLU 75	fin.	-88.4	-5478	0.58	0	252	4599	3908	1479	4851	No	0.89	No
SLU 83	ini.	-652.01	6010	0.58	0	252	4599	3908	1479	4851	No	0.81	No
SLU 83	fin.	-102.8	-5679	0.58	0	252	4599	3908	1479	4851	No	0.85	No
SLU 79	ini.	-632.76	5798	0.58	0	252	4599	3908	1479	4851	No	0.84	No
SLU 79	fin.	-95.94	-5459	0.58	0	252	4599	3908	1479	4851	No	0.89	No
SLU 74	ini.	-637.05	5805	0.58	0	252	4599	3908	1479	4851	No	0.84	No
SLU 74	fin.	-89.86	-5422	0.58	0	252	4599	3908	1479	4851	No	0.89	No
SLU 82	ini.	-641.73	5957	0.58	0	252	4599	3908	1479	4851	No	0.81	No
SLU 82	fin.	-99.48	-5682	0.58	0	252	4599	3908	1479	4851	No	0.85	No
SLU 78	ini.	-638.71	5855	0.58	0	252	4599	3908	1479	4851	No	0.83	No
SLU 78	fin.	-90.26	-5533	0.58	0	252	4599	3908	1479	4851	No	0.88	No
SLU 84	ini.	-647.7	6008	0.58	0	252	4599	3908	1479	4851	No	0.81	No
SLU 84	fin.	-101.34	-5736	0.58	0	252	4599	3908	1479	4851	No	0.85	No
SLU 81	ini.	-646.05	5959	0.58	0	252	4599	3908	1479	4851	No	0.81	No
SLU 81	fin.	-100.94	-5625	0.58	0	252	4599	3908	1479	4851	No	0.86	No
SLU 80	ini.	-628.45	5796	0.58	0	252	4599	3908	1479	4851	No	0.84	No
SLU 80	fin.	-94.48	-5516	0.58	0	252	4599	3908	1479	4851	No	0.88	No

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-1329.35	-4321	-0.0037128	0.0002807	0.0035	0.58		1327.74	1327.74		1	No
SLV 14	fin.	754.75	2682	-0.0012975	0.0002807	0.0035	0.58		1324.07	1324.07		1.75	Si
SLV 13	ini.	-1386.71	-4457	-0.0040111	0.0002807	0.0035	0.58		1327.74	1327.74		0.96	No
SLV 13	fin.	794.2	2858	-0.0013972	0.0002807	0.0035	0.58		1324.07	1324.07		1.67	Si
SLV 10	ini.	-954.08	-3495	-0.0018622	0.0002807	0.0035	0.58		1327.74	1327.74		1.39	Si
SLV 10	fin.	290.05	720	-0.0003873	0.0002807	0.0035	0.58		1324.07	1324.07		4.57	Si
SLV 15	ini.	-1213.04	-4134	-0.0030489	0.0002807	0.0035	0.58		1327.74	1327.74		1.09	Si
SLV 15	fin.	718.57	2446	-0.0012102	0.0002807	0.0035	0.58		1324.07	1324.07		1.84	Si
SLV 2	ini.	351.41	-814	-0.0004855	0.0002807	0.0035	0.58		1324.07	1324.07		3.77	Si
SLV 2	fin.	-845.42	-4390	-0.0015285	0.0002807	0.0035	0.58		1327.74	1327.74		1.57	Si
SLD 13	ini.	-840.13	-3324	-0.0015138	0.0002807	0.0035	0.58		1327.74	1327.74		1.58	Si
SLD 13	fin.	303.44	666	-0.0004082	0.0002807	0.0035	0.58		1324.07	1324.07		4.36	Si
SLV 16	ini.	-1155.67	-3997	-0.0027266	0.0002807	0.0035	0.58		1327.74	1327.74		1.15	Si
SLV 16	fin.	679.13	2269	-0.0011192	0.0002807	0.0035	0.58		1324.07	1324.07		1.95	Si
SLV 4	ini.	525.09	-490	-0.000797	0.0002807	0.0035	0.58		1324.07	1324.07		2.52	Si
SLV 4	fin.	-921.04	-4802	-0.0017532	0.0002807	0.0035	0.58		1327.74	1327.74		1.44	Si
SLV 9	ini.	-990.71	-3583	-0.0019924	0.0002807	0.0035	0.58		1327.74	1327.74		1.34	Si
SLV 9	fin.	315.24	832	-0.0004269	0.0002807	0.0035	0.58		1324.07	1324.07		4.2	Si
SLV 3	ini.	467.73	-627	-0.0006885	0.0002807	0.0035	0.58		1324.07	1324.07		2.83	Si
SLV 3	fin.	-881.59	-4625	-0.0016322	0.0002807	0.0035	0.58		1327.74	1327.74		1.51	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	351.41	729	0.58	0	378	4599	5862	1479	4977		6.83	Si
SLV 2	fin.	-845.42	-6754	0.58	0	378	4599	5862	1479	4977		0.74	No
SLV 14	ini.	-1329.35	7608	0.58	0	378	4599	5862	1479	4977		0.65	No
SLV 14	fin.	754.75	41	0.58	0	378	4599	5862	1479	4977		120.71	Si
SLV 13	ini.	-1386.71	7797	0.58	0	378	4599	5862	1479	4977		0.64	No
SLV 13	fin.	794.2	275	0.58	0	378	4599	5862	1479	4977		18.09	Si
SLV 8	ini.	129.08	1736	0.58	0	378	4599	5862	1479	4977		2.87	Si
SLV 8	fin.	-442.08	-6312	0.58	0	378	4599	5862	1479	4977		0.79	No
SLV 15	ini.	-1213.04	7135	0.58	0	378	4599	5862	1479	4977		0.7	No
SLV 15	fin.	718.57	-638	0.58	0	378	4599	5862	1479	4977		7.8	Si
SLV 3	ini.	467.73	255	0.58	0	378	4599	5862	1479	4977		19.53	Si
SLV 3	fin.	-881.59	-7433	0.58	0	378	4599	5862	1479	4977		0.67	No
SLV 4	ini.	525.09	67	0.58	0	378	4599	5862	1479	4977		74.54	Si
SLV 4	fin.	-921.04	-7667	0.58	0	378	4599	5862	1479	4977		0.65	No
SLV 7	ini.	92.45	1857	0.58	0	378	4599	5862	1479	4977		2.68	Si
SLV 7	fin.	-416.89	-6162	0.58	0	378	4599	5862	1479	4977		0.81	No
SLV 1	ini.	294.05	917	0.58	0	378	4599	5862	1479	4977		5.43	Si
SLV 1	fin.	-805.97	-6520	0.58	0	378	4599	5862	1479	4977		0.76	No
SLV 16	ini.	-1155.67	6947	0.58	0	378	4599	5862	1479	4977		0.72	No
SLV 16	fin.	679.13	-872	0.58	0	378	4599	5862	1479	4977		5.71	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.957	SLV 13	No
V_SLV	0.638	SLV 13	No
PF_SLU	1.47	SLU 83	Si
V_SLU	0.807	SLU 83	No

Trave di accoppiamento 10

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-14.223	-3.284	1.12	2	0.88	-16.523	-3.284	1.12	2	0.88	2.3	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	427.36	827	-0.0002425	0.0001872	0.0035	0.88		2173.56	2173.56	No	5.09	Si
SLU 78	fin.	-304.47	-5450	-0.0001664	0.0001872	0.0035	0.88		2179.98	2179.98	No	7.16	Si
SLU 74	ini.	422.23	819	-0.0002392	0.0001872	0.0035	0.88		2173.56	2173.56	No	5.15	Si
SLU 74	fin.	-296.14	-5378	-0.0001615	0.0001872	0.0035	0.88		2179.98	2179.98	No	7.36	Si
SLU 80	ini.	424.72	829	-0.0002408	0.0001872	0.0035	0.88		2173.56	2173.56	No	5.12	Si
SLU 80	fin.	-304.18	-5422	-0.0001662	0.0001872	0.0035	0.88		2179.98	2179.98	No	7.17	Si
SLU 79	ini.	424.35	826	-0.0002405	0.0001872	0.0035	0.88		2173.56	2173.56	No	5.12	Si
SLU 79	fin.	-302.15	-5410	-0.000165	0.0001872	0.0035	0.88		2179.98	2179.98	No	7.21	Si
SLU 77	ini.	426.99	824	-0.0002422	0.0001872	0.0035	0.88		2173.56	2173.56	No	5.09	Si
SLU 77	fin.	-302.44	-5438	-0.0001652	0.0001872	0.0035	0.88		2179.98	2179.98	No	7.21	Si
SLU 84	ini.	440.5	874	-0.0002509	0.0001872	0.0035	0.88		2173.56	2173.56	No	4.93	Si
SLU 84	fin.	-309.64	-5632	-0.0001694	0.0001872	0.0035	0.88		2179.98	2179.98	No	7.04	Si
SLU 75	ini.	422.6	822	-0.0002394	0.0001872	0.0035	0.88		2173.56	2173.56	No	5.14	Si
SLU 75	fin.	-298.17	-5389	-0.0001627	0.0001872	0.0035	0.88		2179.98	2179.98	No	7.31	Si
SLU 81	ini.	435.37	865	-0.0002476	0.0001872	0.0035	0.88		2173.56	2173.56	No	4.99	Si
SLU 81	fin.	-301.31	-5560	-0.0001645	0.0001872	0.0035	0.88		2179.98	2179.98	No	7.24	Si
SLU 83	ini.	440.13	871	-0.0002507	0.0001872	0.0035	0.88		2173.56	2173.56	No	4.94	Si
SLU 83	fin.	-307.61	-5621	-0.0001682	0.0001872	0.0035	0.88		2179.98	2179.98	No	7.09	Si
SLU 82	ini.	435.74	868	-0.0002479	0.0001872	0.0035	0.88		2173.56	2173.56	No	4.99	Si
SLU 82	fin.	-303.34	-5572	-0.0001657	0.0001872	0.0035	0.88		2179.98	2179.98	No	7.19	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	427.36	-2043	0.88	0	383	6978	5929	2244	7361	No	3.6	Si
SLU 78	fin.	-304.47	-6783	0.88	0	383	6978	5929	2244	7361	No	1.09	Si
SLU 81	ini.	435.37	-2065	0.88	0	383	6978	5929	2244	7361	No	3.56	Si
SLU 81	fin.	-301.31	-6997	0.88	0	383	6978	5929	2244	7361	No	1.05	Si
SLU 77	ini.	426.99	-2044	0.88	0	383	6978	5929	2244	7361	No	3.6	Si
SLU 77	fin.	-302.44	-6772	0.88	0	383	6978	5929	2244	7361	No	1.09	Si
SLU 83	ini.	440.13	-2090	0.88	0	383	6978	5929	2244	7361	No	3.52	Si
SLU 83	fin.	-307.61	-7056	0.88	0	383	6978	5929	2244	7361	No	1.04	Si
SLU 80	ini.	424.72	-2025	0.88	0	383	6978	5929	2244	7361	No	3.63	Si
SLU 80	fin.	-304.18	-6760	0.88	0	383	6978	5929	2244	7361	No	1.09	Si
SLU 84	ini.	440.5	-2089	0.88	0	383	6978	5929	2244	7361	No	3.52	Si
SLU 84	fin.	-309.64	-7067	0.88	0	383	6978	5929	2244	7361	No	1.04	Si
SLU 82	ini.	435.74	-2064	0.88	0	383	6978	5929	2244	7361	No	3.57	Si
SLU 82	fin.	-303.34	-7008	0.88	0	383	6978	5929	2244	7361	No	1.05	Si
SLU 75	ini.	422.6	-2018	0.88	0	383	6978	5929	2244	7361	No	3.65	Si
SLU 75	fin.	-298.17	-6724	0.88	0	383	6978	5929	2244	7361	No	1.09	Si
SLU 74	ini.	422.23	-2020	0.88	0	383	6978	5929	2244	7361	No	3.64	Si
SLU 74	fin.	-296.14	-6713	0.88	0	383	6978	5929	2244	7361	No	1.1	Si
SLU 79	ini.	424.35	-2026	0.88	0	383	6978	5929	2244	7361	No	3.63	Si
SLU 79	fin.	-302.15	-6749	0.88	0	383	6978	5929	2244	7361	No	1.09	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 5	ini.	380.69	309	-0.0002072	0.0002807	0.0035	0.88		3041.63	3041.63		7.99	Si
SLV 5	fin.	-742.96	-4711	-0.0004369	0.0002807	0.0035	0.88		3047.22	3047.22		4.1	Si
SLV 4	ini.	228.45	1366	-0.000121	0.0002807	0.0035	0.88		3041.63	3041.63		13.31	Si
SLV 4	fin.	-832.06	-5823	-0.0004999	0.0002807	0.0035	0.88		3047.22	3047.22		3.66	Si
SLV 6	ini.	380.48	318	-0.000207	0.0002807	0.0035	0.88		3041.63	3041.63		7.99	Si
SLV 6	fin.	-750.74	-4728	-0.0004423	0.0002807	0.0035	0.88		3047.22	3047.22		4.06	Si
SLD 1	ini.	288.55	782	-0.0001544	0.0002807	0.0035	0.88		3041.63	3041.63		10.54	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 1	fin.	-553.46	-4667	-0.0003114	0.0002807	0.0035	0.88		3047.22	3047.22		5.51	Si
SLV 3	ini.	228.78	1351	-0.0001212	0.0002807	0.0035	0.88		3041.63	3041.63		13.3	Si
SLV 3	fin.	-819.88	-5797	-0.0004911	0.0002807	0.0035	0.88		3047.22	3047.22		3.72	Si
SLV 16	ini.	285.8	25	-0.0001529	0.0002807	0.0035	0.88		3041.63	3041.63		10.64	Si
SLV 16	fin.	594.54	-1278	-0.0003383	0.0002807	0.0035	0.88		3041.63	3041.63		5.12	Si
SLV 15	ini.	286.13	10	-0.0001531	0.0002807	0.0035	0.88		3041.63	3041.63		10.63	Si
SLV 15	fin.	606.72	-1252	-0.0003462	0.0002807	0.0035	0.88		3041.63	3041.63		5.01	Si
SLD 2	ini.	288.41	788	-0.0001543	0.0002807	0.0035	0.88		3041.63	3041.63		10.55	Si
SLD 2	fin.	-558.69	-4678	-0.0003147	0.0002807	0.0035	0.88		3047.22	3047.22		5.45	Si
SLV 1	ini.	289.65	1086	-0.000155	0.0002807	0.0035	0.88		3041.63	3041.63		10.5	Si
SLV 1	fin.	-1013.81	-6028	-0.0006359	0.0002807	0.0035	0.88		3047.22	3047.22		3.01	Si
SLV 2	ini.	289.33	1100	-0.0001549	0.0002807	0.0035	0.88		3041.63	3041.63		10.51	Si
SLV 2	fin.	-1025.99	-6054	-0.0006453	0.0002807	0.0035	0.88		3047.22	3047.22		2.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	289.33	-743	0.88	0	574	6978	8894	2244	7552		10.17	Si
SLV 2	fin.	-1025.99	-6454	0.88	0	574	6978	8894	2244	7552		1.17	Si
SLV 1	ini.	289.65	-757	0.88	0	574	6978	8894	2244	7552		9.97	Si
SLV 1	fin.	-1013.81	-6394	0.88	0	574	6978	8894	2244	7552		1.18	Si
SLV 7	ini.	177.77	-532	0.88	0	574	6978	8894	2244	7552		14.19	Si
SLV 7	fin.	-96.51	-6618	0.88	0	574	6978	8894	2244	7552		1.14	Si
SLV 8	ini.	177.56	-523	0.88	0	574	6978	8894	2244	7552		14.45	Si
SLV 8	fin.	-104.29	-6656	0.88	0	574	6978	8894	2244	7552		1.13	Si
SLD 3	ini.	262.46	-958	0.88	0	574	6978	8894	2244	7552		7.88	Si
SLD 3	fin.	-470.2	-5692	0.88	0	574	6978	8894	2244	7552		1.33	Si
SLV 4	ini.	228.45	-377	0.88	0	574	6978	8894	2244	7552		20.02	Si
SLV 4	fin.	-832.06	-7297	0.88	0	574	6978	8894	2244	7552		1.03	Si
SLD 8	ini.	240.52	-1014	0.88	0	574	6978	8894	2244	7552		7.45	Si
SLD 8	fin.	-164	-5446	0.88	0	574	6978	8894	2244	7552		1.39	Si
SLD 4	ini.	262.32	-952	0.88	0	574	6978	8894	2244	7552		7.94	Si
SLD 4	fin.	-475.42	-5718	0.88	0	574	6978	8894	2244	7552		1.32	Si
SLV 3	ini.	228.78	-392	0.88	0	574	6978	8894	2244	7552		19.27	Si
SLV 3	fin.	-819.88	-7237	0.88	0	574	6978	8894	2244	7552		1.04	Si
SLD 7	ini.	240.61	-1018	0.88	0	574	6978	8894	2244	7552		7.42	Si
SLD 7	fin.	-160.61	-5429	0.88	0	574	6978	8894	2244	7552		1.39	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.97	SLV 2	Si
V_SLV	1.035	SLV 4	Si
PF_SLU	4.934	SLU 84	Si
V_SLU	1.042	SLU 84	Si

Trave di accoppiamento 12

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.768	6.576	1.42	2	0.58	-16.768	6.576	1.42	2	0.58	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	958.36	3387	-0.0020451	0.0001872	0.0035	0.58		954.31	954.31	No	1	No
SLU 77	fin.	-1510.08	-5201	-0.0049427	0.0001872	0.0035	0.58		958.44	958.44	No	0.63	No
SLU 80	ini.	953.59	3370	-0.0020263	0.0001872	0.0035	0.58		954.31	954.31	No	1	Si
SLU 80	fin.	-1501.08	-5170	-0.0048998	0.0001872	0.0035	0.58		958.44	958.44	No	0.64	No
SLU 82	ini.	966.42	3415	-0.0020773	0.0001872	0.0035	0.58		954.31	954.31	No	0.99	No

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	fin.	-1526.86	-5260	-0.0050221	0.0001872	0.0035	0.58		958.44	958.44	No	0.63	No
SLU 78	ini.	958.91	3389	-0.0020472	0.0001872	0.0035	0.58		954.31	954.31	No	1	No
SLU 78	fin.	-1511.11	-5205	-0.0049475	0.0001872	0.0035	0.58		958.44	958.44	No	0.63	No
SLU 75	ini.	948.23	3352	-0.0020054	0.0001872	0.0035	0.58		954.31	954.31	No	1.01	Si
SLU 75	fin.	-1495.64	-5151	-0.0048738	0.0001872	0.0035	0.58		958.44	958.44	No	0.64	No
SLU 81	ini.	965.87	3413	-0.0020751	0.0001872	0.0035	0.58		954.31	954.31	No	0.99	No
SLU 81	fin.	-1525.84	-5257	-0.0050173	0.0001872	0.0035	0.58		958.44	958.44	No	0.63	No
SLU 83	ini.	976.56	3450	-0.0021186	0.0001872	0.0035	0.58		954.31	954.31	No	0.98	No
SLU 83	fin.	-1541.31	-5311	-0.0050901	0.0001872	0.0035	0.58		958.44	958.44	No	0.62	No
SLU 84	ini.	977.1	3452	-0.0021209	0.0001872	0.0035	0.58		954.31	954.31	No	0.98	No
SLU 84	fin.	-1542.33	-5314	-0.0050949	0.0001872	0.0035	0.58		958.44	958.44	No	0.62	No
SLU 74	ini.	947.68	3350	-0.0020033	0.0001872	0.0035	0.58		954.31	954.31	No	1.01	Si
SLU 74	fin.	-1494.62	-5147	-0.0048689	0.0001872	0.0035	0.58		958.44	958.44	No	0.64	No
SLU 79	ini.	953.04	3368	-0.0020241	0.0001872	0.0035	0.58		954.31	954.31	No	1	Si
SLU 79	fin.	-1500.06	-5167	-0.004895	0.0001872	0.0035	0.58		958.44	958.44	No	0.64	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	977.1	-3539	0.58	0	252	4599	3908	1479	4851	No	1.37	Si
SLU 84	fin.	-1542.33	-6647	0.58	0	252	4599	3908	1479	4851	No	0.73	No
SLU 74	ini.	947.68	-3430	0.58	0	252	4599	3908	1479	4851	No	1.41	Si
SLU 74	fin.	-1494.62	-6444	0.58	0	252	4599	3908	1479	4851	No	0.75	No
SLU 83	ini.	976.56	-3537	0.58	0	252	4599	3908	1479	4851	No	1.37	Si
SLU 83	fin.	-1541.31	-6643	0.58	0	252	4599	3908	1479	4851	No	0.73	No
SLU 79	ini.	953.04	-3452	0.58	0	252	4599	3908	1479	4851	No	1.41	Si
SLU 79	fin.	-1500.06	-6466	0.58	0	252	4599	3908	1479	4851	No	0.75	No
SLU 78	ini.	958.91	-3473	0.58	0	252	4599	3908	1479	4851	No	1.4	Si
SLU 78	fin.	-1511.11	-6514	0.58	0	252	4599	3908	1479	4851	No	0.74	No
SLU 82	ini.	966.42	-3499	0.58	0	252	4599	3908	1479	4851	No	1.39	Si
SLU 82	fin.	-1526.86	-6582	0.58	0	252	4599	3908	1479	4851	No	0.74	No
SLU 81	ini.	965.87	-3497	0.58	0	252	4599	3908	1479	4851	No	1.39	Si
SLU 81	fin.	-1525.84	-6578	0.58	0	252	4599	3908	1479	4851	No	0.74	No
SLU 75	ini.	948.23	-3432	0.58	0	252	4599	3908	1479	4851	No	1.41	Si
SLU 75	fin.	-1495.64	-6449	0.58	0	252	4599	3908	1479	4851	No	0.75	No
SLU 80	ini.	953.59	-3454	0.58	0	252	4599	3908	1479	4851	No	1.4	Si
SLU 80	fin.	-1501.08	-6470	0.58	0	252	4599	3908	1479	4851	No	0.75	No
SLU 77	ini.	958.36	-3471	0.58	0	252	4599	3908	1479	4851	No	1.4	Si
SLU 77	fin.	-1510.08	-6509	0.58	0	252	4599	3908	1479	4851	No	0.75	No

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	1527.2	5541	-0.0047094	0.0002807	0.0035	0.58		1324.07	1324.07		0.87	No
SLV 16	fin.	-1824.87	-6118	-0.005999	0.0002807	0.0035	0.58		1327.74	1327.74		0.73	No
SLV 10	ini.	975.92	2784	-0.0019485	0.0002807	0.0035	0.58		1324.07	1324.07		1.36	Si
SLV 10	fin.	-1337.86	-5229	-0.0037581	0.0002807	0.0035	0.58		1327.74	1327.74		0.99	No
SLV 14	ini.	1554.02	5244	-0.0048331	0.0002807	0.0035	0.58		1324.07	1324.07		0.85	No
SLV 14	fin.	-1856.94	-6600	-0.0061354	0.0002807	0.0035	0.58		1327.74	1327.74		0.72	No
SLV 15	ini.	1490.69	5413	-0.0045384	0.0002807	0.0035	0.58		1324.07	1324.07		0.89	No
SLV 15	fin.	-1790.9	-6004	-0.0058549	0.0002807	0.0035	0.58		1327.74	1327.74		0.74	No
SLV 9	ini.	952.6	2702	-0.0018664	0.0002807	0.0035	0.58		1324.07	1324.07		1.39	Si
SLV 9	fin.	-1316.17	-5156	-0.0036416	0.0002807	0.0035	0.58		1327.74	1327.74		1.01	Si
SLD 13	ini.	1027.05	3526	-0.002144	0.0002807	0.0035	0.58		1324.07	1324.07		1.29	Si
SLD 13	fin.	-1373.34	-4816	-0.0039429	0.0002807	0.0035	0.58		1327.74	1327.74		0.97	No
SLD 14	ini.	1042.73	3581	-0.0022084	0.0002807	0.0035	0.58		1324.07	1324.07		1.27	Si
SLD 14	fin.	-1387.92	-4865	-0.0040172	0.0002807	0.0035	0.58		1327.74	1327.74		0.96	No
SLD 16	ini.	1031.35	3709	-0.0021614	0.0002807	0.0035	0.58		1324.07	1324.07		1.28	Si
SLD 16	fin.	-1373.72	-4657	-0.0039449	0.0002807	0.0035	0.58		1327.74	1327.74		0.97	No
SLD 15	ini.	1015.67	3654	-0.0020986	0.0002807	0.0035	0.58		1324.07	1324.07		1.3	Si
SLD 15	fin.	-1359.14	-4608	-0.0038697	0.0002807	0.0035	0.58		1327.74	1327.74		0.98	No
SLV 13	ini.	1517.51	5116	-0.0046643	0.0002807	0.0035	0.58		1324.07	1324.07		0.87	No
SLV 13	fin.	-1822.97	-6486	-0.0059909	0.0002807	0.0035	0.58		1327.74	1327.74		0.73	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 15	ini.	1015.67	-3983	0.58	0	378	4599	5862	1479	4977		1.25	Si
SLD 15	fin.	-1359.14	-5592	0.58	0	378	4599	5862	1479	4977		0.89	No
SLV 14	ini.	1554.02	-5711	0.58	0	378	4599	5862	1479	4977		0.87	No
SLV 14	fin.	-1856.94	-8179	0.58	0	378	4599	5862	1479	4977		0.61	No
SLV 10	ini.	975.92	-2567	0.58	0	378	4599	5862	1479	4977		1.94	Si
SLV 10	fin.	-1337.86	-7064	0.58	0	378	4599	5862	1479	4977		0.7	No
SLV 16	ini.	1527.2	-6267	0.58	0	378	4599	5862	1479	4977		0.79	No
SLV 16	fin.	-1824.87	-7223	0.58	0	378	4599	5862	1479	4977		0.69	No
SLD 16	ini.	1031.35	-4046	0.58	0	378	4599	5862	1479	4977		1.23	Si
SLD 16	fin.	-1373.72	-5651	0.58	0	378	4599	5862	1479	4977		0.88	No
SLV 15	ini.	1490.69	-6119	0.58	0	378	4599	5862	1479	4977		0.81	No
SLV 15	fin.	-1790.9	-7085	0.58	0	378	4599	5862	1479	4977		0.7	No
SLD 13	ini.	1027.05	-3745	0.58	0	378	4599	5862	1479	4977		1.33	Si
SLD 13	fin.	-1373.34	-6002	0.58	0	378	4599	5862	1479	4977		0.83	No
SLD 14	ini.	1042.73	-3809	0.58	0	378	4599	5862	1479	4977		1.31	Si
SLD 14	fin.	-1387.92	-6061	0.58	0	378	4599	5862	1479	4977		0.82	No
SLV 9	ini.	952.6	-2473	0.58	0	378	4599	5862	1479	4977		2.01	Si
SLV 9	fin.	-1316.17	-6976	0.58	0	378	4599	5862	1479	4977		0.71	No
SLV 13	ini.	1517.51	-5563	0.58	0	378	4599	5862	1479	4977		0.89	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	fin.	-1822.97	-8042	0.58	0	378	4599	5862	1479	4977		0.62	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.715	SLV 14	No
V_SLV	0.609	SLV 14	No
PF_SLU	0.621	SLU 84	No
V_SLU	0.73	SLU 84	No

Trave di accoppiamento 15

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.613	1.046	1.18	2	0.82	-13.583	1.046	1.18	2	0.82	0.97	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	61.6	-760	-0.0000368	0.0002246	0.0035	0.82		1974.48	1974.48	No	32.05	Si
SLU 75	fin.	-7.25	190	-0.0000043	0.0002246	0.0035	0.82		1980.57	1980.57	No	273.26	Si
SLU 74	ini.	61.45	-756	-0.0000367	0.0002246	0.0035	0.82		1974.48	1974.48	No	32.13	Si
SLU 74	fin.	-6.59	195	-0.0000039	0.0002246	0.0035	0.82		1980.57	1980.57	No	300.74	Si
SLU 82	ini.	64.34	-790	-0.0000384	0.0002246	0.0035	0.82		1974.48	1974.48	No	30.69	Si
SLU 82	fin.	-8.89	188	-0.0000052	0.0002246	0.0035	0.82		1980.57	1980.57	No	222.87	Si
SLU 77	ini.	62.41	-753	-0.0000372	0.0002246	0.0035	0.82		1974.48	1974.48	No	31.64	Si
SLU 77	fin.	-5.63	204	-0.0000033	0.0002246	0.0035	0.82		1980.57	1980.57	No	352.07	Si
SLU 83	ini.	65.16	-783	-0.0000389	0.0002246	0.0035	0.82		1974.48	1974.48	No	30.3	Si
SLU 83	fin.	-7.26	202	-0.0000043	0.0002246	0.0035	0.82		1980.57	1980.57	No	272.65	Si
SLU 78	ini.	62.56	-757	-0.0000373	0.0002246	0.0035	0.82		1974.48	1974.48	No	31.56	Si
SLU 78	fin.	-6.29	199	-0.0000037	0.0002246	0.0035	0.82		1980.57	1980.57	No	314.99	Si
SLU 84	ini.	65.31	-787	-0.000039	0.0002246	0.0035	0.82		1974.48	1974.48	No	30.23	Si
SLU 84	fin.	-7.93	197	-0.0000047	0.0002246	0.0035	0.82		1980.57	1980.57	No	249.87	Si
SLU 81	ini.	64.2	-786	-0.0000383	0.0002246	0.0035	0.82		1974.48	1974.48	No	30.76	Si
SLU 81	fin.	-8.22	193	-0.0000048	0.0002246	0.0035	0.82		1980.57	1980.57	No	240.81	Si
SLU 42	ini.	61.11	-715	-0.0000365	0.0002246	0.0035	0.82		1974.48	1974.48	No	32.31	Si
SLU 42	fin.	-13.94	123	-0.0000082	0.0002246	0.0035	0.82		1980.57	1980.57	No	142.06	Si
SLU 41	ini.	60.96	-711	-0.0000364	0.0002246	0.0035	0.82		1974.48	1974.48	No	32.39	Si
SLU 41	fin.	-13.28	128	-0.0000078	0.0002246	0.0035	0.82		1980.57	1980.57	No	149.15	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	61.45	7122	0.82	0	452	6502	6630	2091	6954	No	0.98	No
SLU 74	fin.	-6.59	-3206	0.82	0	452	6502	6630	2091	6954	No	2.17	Si
SLU 83	ini.	65.16	7404	0.82	0	452	6502	6630	2091	6954	No	0.94	No
SLU 83	fin.	-7.26	-3338	0.82	0	452	6502	6630	2091	6954	No	2.08	Si
SLU 78	ini.	62.56	7173	0.82	0	452	6502	6630	2091	6954	No	0.97	No
SLU 78	fin.	-6.29	-3229	0.82	0	452	6502	6630	2091	6954	No	2.15	Si
SLU 81	ini.	64.2	7356	0.82	0	452	6502	6630	2091	6954	No	0.95	No
SLU 81	fin.	-8.22	-3322	0.82	0	452	6502	6630	2091	6954	No	2.09	Si
SLU 84	ini.	65.31	7407	0.82	0	452	6502	6630	2091	6954	No	0.94	No
SLU 84	fin.	-7.93	-3345	0.82	0	452	6502	6630	2091	6954	No	2.08	Si
SLU 75	ini.	61.6	7126	0.82	0	452	6502	6630	2091	6954	No	0.98	No
SLU 75	fin.	-7.25	-3213	0.82	0	452	6502	6630	2091	6954	No	2.16	Si
SLU 79	ini.	58.35	7097	0.82	0	452	6502	6630	2091	6954	No	0.98	No
SLU 79	fin.	-4.27	-3171	0.82	0	452	6502	6630	2091	6954	No	2.19	Si
SLU 82	ini.	64.34	7360	0.82	0	452	6502	6630	2091	6954	No	0.94	No
SLU 82	fin.	-8.89	-3329	0.82	0	452	6502	6630	2091	6954	No	2.09	Si
SLU 77	ini.	62.41	7170	0.82	0	452	6502	6630	2091	6954	No	0.97	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	fin.	-5.63	-3222	0.82	0	452	6502	6630	2091	6954	No	2.16	Si
SLU 80	ini.	58.49	7101	0.82	0	452	6502	6630	2091	6954	No	0.98	No
SLU 80	fin.	-4.94	-3178	0.82	0	452	6502	6630	2091	6954	No	2.19	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	477.11	1608	-0.0003056	0.0003369	0.0035	0.82		2237.68	2237.68		4.69	Si
SLV 15	fin.	72.09	3326	-0.000043	0.0003369	0.0035	0.82		2237.68	2237.68		31.04	Si
SLV 5	ini.	-304.98	-2661	-0.0001885	0.0003369	0.0035	0.82		2243.1	2243.1		7.35	Si
SLV 5	fin.	100.86	-1788	-0.0000604	0.0003369	0.0035	0.82		2237.68	2237.68		22.18	Si
SLV 2	ini.	-411.96	-2630	-0.0002598	0.0003369	0.0035	0.82		2243.1	2243.1		5.44	Si
SLV 2	fin.	-71.39	-3016	-0.0000424	0.0003369	0.0035	0.82		2243.1	2243.1		31.42	Si
SLV 16	ini.	477.6	1604	-0.0003059	0.0003369	0.0035	0.82		2237.68	2237.68		4.69	Si
SLV 16	fin.	75.93	3356	-0.0000453	0.0003369	0.0035	0.82		2237.68	2237.68		29.47	Si
SLV 11	ini.	369.81	1641	-0.0002318	0.0003369	0.0035	0.82		2237.68	2237.68		6.05	Si
SLV 11	fin.	-102.62	2079	-0.0000613	0.0003369	0.0035	0.82		2243.1	2243.1		21.86	Si
SLV 13	ini.	342.63	609	-0.0002137	0.0003369	0.0035	0.82		2237.68	2237.68		6.53	Si
SLV 13	fin.	153.75	2681	-0.0000928	0.0003369	0.0035	0.82		2237.68	2237.68		14.55	Si
SLV 14	ini.	343.12	605	-0.000214	0.0003369	0.0035	0.82		2237.68	2237.68		6.52	Si
SLV 14	fin.	157.59	2711	-0.0000952	0.0003369	0.0035	0.82		2237.68	2237.68		14.2	Si
SLV 12	ini.	370.13	1638	-0.000232	0.0003369	0.0035	0.82		2237.68	2237.68		6.05	Si
SLV 12	fin.	-100.17	2099	-0.0000598	0.0003369	0.0035	0.82		2243.1	2243.1		22.39	Si
SLV 1	ini.	-412.45	-2626	-0.0002601	0.0003369	0.0035	0.82		2243.1	2243.1		5.44	Si
SLV 1	fin.	-75.24	-3046	-0.0000448	0.0003369	0.0035	0.82		2243.1	2243.1		29.81	Si
SLV 6	ini.	-304.67	-2663	-0.0001883	0.0003369	0.0035	0.82		2243.1	2243.1		7.36	Si
SLV 6	fin.	103.32	-1769	-0.0000619	0.0003369	0.0035	0.82		2237.68	2237.68		21.66	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 15	ini.	222.61	7262	0.82	0	678	6502	9946	2091	7180		0.99	No
SLD 15	fin.	31.02	-2107	0.82	0	678	6502	9946	2091	7180		3.41	Si
SLV 16	ini.	477.6	10596	0.82	0	678	6502	9946	2091	7180		0.68	No
SLV 16	fin.	75.93	-2068	0.82	0	678	6502	9946	2091	7180		3.47	Si
SLV 14	ini.	343.12	10987	0.82	0	678	6502	9946	2091	7180		0.65	No
SLV 14	fin.	157.59	-2832	0.82	0	678	6502	9946	2091	7180		2.54	Si
SLD 13	ini.	165.36	7433	0.82	0	678	6502	9946	2091	7180		0.97	No
SLD 13	fin.	65.64	-2440	0.82	0	678	6502	9946	2091	7180		2.94	Si
SLV 13	ini.	342.63	10948	0.82	0	678	6502	9946	2091	7180		0.66	No
SLV 13	fin.	153.75	-2866	0.82	0	678	6502	9946	2091	7180		2.51	Si
SLV 9	ini.	-78.46	7236	0.82	0	678	6502	9946	2091	7180		0.99	No
SLV 9	fin.	169.56	-3505	0.82	0	678	6502	9946	2091	7180		2.05	Si
SLV 10	ini.	-78.14	7261	0.82	0	678	6502	9946	2091	7180		0.99	No
SLV 10	fin.	172.01	-3483	0.82	0	678	6502	9946	2091	7180		2.06	Si
SLD 14	ini.	165.57	7450	0.82	0	678	6502	9946	2091	7180		0.96	No
SLD 14	fin.	67.29	-2425	0.82	0	678	6502	9946	2091	7180		2.96	Si
SLD 16	ini.	222.82	7279	0.82	0	678	6502	9946	2091	7180		0.99	No
SLD 16	fin.	32.67	-2092	0.82	0	678	6502	9946	2091	7180		3.43	Si
SLV 15	ini.	477.11	10556	0.82	0	678	6502	9946	2091	7180		0.68	No
SLV 15	fin.	72.09	-2101	0.82	0	678	6502	9946	2091	7180		3.42	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.685	SLV 16	Si
V_SLV	0.654	SLV 14	No
PF_SLU	30.235	SLU 84	Si
V_SLU	0.939	SLU 84	No

Trave di accoppiamento 16

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-11.238	1.046	1.18	2	0.82	-12.238	1.046	1.18	2	0.82	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-765.94	-2734	-0.0005546	0.0002246	0.0035	0.82		1980.57	1980.57	No	2.59	Si
SLU 83	fin.	104.34	-1757	-0.0000628	0.0002246	0.0035	0.82		1974.48	1974.48	No	18.92	Si
SLU 75	ini.	-734.99	-2630	-0.0005274	0.0002246	0.0035	0.82		1980.57	1980.57	No	2.69	Si
SLU 75	fin.	96.44	-1701	-0.000058	0.0002246	0.0035	0.82		1974.48	1974.48	No	20.47	Si
SLU 80	ini.	-723.98	-2578	-0.0005178	0.0002246	0.0035	0.82		1980.57	1980.57	No	2.74	Si
SLU 80	fin.	92.09	-1684	-0.0000553	0.0002246	0.0035	0.82		1974.48	1974.48	No	21.44	Si
SLU 76	ini.	-724.12	-2590	-0.000518	0.0002246	0.0035	0.82		1980.57	1980.57	No	2.74	Si
SLU 76	fin.	91.4	-1687	-0.0000549	0.0002246	0.0035	0.82		1974.48	1974.48	No	21.6	Si
SLU 77	ini.	-734.14	-2614	-0.0005267	0.0002246	0.0035	0.82		1980.57	1980.57	No	2.7	Si
SLU 77	fin.	97.05	-1696	-0.0000583	0.0002246	0.0035	0.82		1974.48	1974.48	No	20.35	Si
SLU 84	ini.	-768.04	-2746	-0.0005565	0.0002246	0.0035	0.82		1980.57	1980.57	No	2.58	Si
SLU 84	fin.	104.6	-1763	-0.000063	0.0002246	0.0035	0.82		1974.48	1974.48	No	18.88	Si
SLU 74	ini.	-732.89	-2617	-0.0005256	0.0002246	0.0035	0.82		1980.57	1980.57	No	2.7	Si
SLU 74	fin.	96.19	-1695	-0.0000578	0.0002246	0.0035	0.82		1974.48	1974.48	No	20.53	Si
SLU 81	ini.	-764.69	-2738	-0.0005535	0.0002246	0.0035	0.82		1980.57	1980.57	No	2.59	Si
SLU 81	fin.	103.48	-1756	-0.0000623	0.0002246	0.0035	0.82		1974.48	1974.48	No	19.08	Si
SLU 82	ini.	-766.79	-2750	-0.0005554	0.0002246	0.0035	0.82		1980.57	1980.57	No	2.58	Si
SLU 82	fin.	103.74	-1762	-0.0000624	0.0002246	0.0035	0.82		1974.48	1974.48	No	19.03	Si
SLU 78	ini.	-736.24	-2626	-0.0005285	0.0002246	0.0035	0.82		1980.57	1980.57	No	2.69	Si
SLU 78	fin.	97.31	-1702	-0.0000585	0.0002246	0.0035	0.82		1974.48	1974.48	No	20.29	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 76	ini.	-724.12	1533	0.82	0	439	6502	6630	2091	6941	No	4.53	Si
SLU 76	fin.	91.4	1179	0.82	0	439	6502	6630	2091	6941	No	5.89	Si
SLU 73	ini.	-722.87	1535	0.82	0	439	6502	6630	2091	6941	No	4.52	Si
SLU 73	fin.	90.54	1176	0.82	0	439	6502	6630	2091	6941	No	5.9	Si
SLU 75	ini.	-734.99	1558	0.82	0	439	6502	6630	2091	6941	No	4.45	Si
SLU 75	fin.	96.44	1211	0.82	0	439	6502	6630	2091	6941	No	5.73	Si
SLU 83	ini.	-765.94	1637	0.82	0	439	6502	6630	2091	6941	No	4.24	Si
SLU 83	fin.	104.34	1267	0.82	0	439	6502	6630	2091	6941	No	5.48	Si
SLU 84	ini.	-768.04	1642	0.82	0	439	6502	6630	2091	6941	No	4.23	Si
SLU 84	fin.	104.6	1273	0.82	0	439	6502	6630	2091	6941	No	5.45	Si
SLU 77	ini.	-734.14	1551	0.82	0	439	6502	6630	2091	6941	No	4.47	Si
SLU 77	fin.	97.05	1208	0.82	0	439	6502	6630	2091	6941	No	5.74	Si
SLU 82	ini.	-766.79	1644	0.82	0	439	6502	6630	2091	6941	No	4.22	Si
SLU 82	fin.	103.74	1270	0.82	0	439	6502	6630	2091	6941	No	5.47	Si
SLU 74	ini.	-732.89	1553	0.82	0	439	6502	6630	2091	6941	No	4.47	Si
SLU 74	fin.	96.19	1206	0.82	0	439	6502	6630	2091	6941	No	5.76	Si
SLU 78	ini.	-736.24	1556	0.82	0	439	6502	6630	2091	6941	No	4.46	Si
SLU 78	fin.	97.31	1214	0.82	0	439	6502	6630	2091	6941	No	5.72	Si
SLU 81	ini.	-764.69	1639	0.82	0	439	6502	6630	2091	6941	No	4.23	Si
SLU 81	fin.	103.48	1264	0.82	0	439	6502	6630	2091	6941	No	5.49	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 10	ini.	-1821.58	-5079	-0.0016615	0.0003369	0.0035	0.82		2243.1	2243.1		1.23	Si
SLV 10	fin.	561.72	-2240	-0.0003665	0.0003369	0.0035	0.82		2237.68	2237.68		3.98	Si
SLV 15	ini.	-3333.49	-7822	-0.0051534	0.0003369	0.0035	0.82		2243.1	2243.1		0.67	No
SLV 15	fin.	2143.47	-278	-0.0022338	0.0003369	0.0035	0.82		2237.68	2237.68		1.04	Si
SLV 3	ini.	2662.78	5371	-0.0035823	0.0003369	0.0035	0.82		2237.68	2237.68		0.84	No
SLV 3	fin.	-1984.57	-1214	-0.0019231	0.0003369	0.0035	0.82		2243.1	2243.1		1.13	Si
SLV 16	ini.	-3351.01	-7875	-0.0051914	0.0003369	0.0035	0.82		2243.1	2243.1		0.67	No
SLV 16	fin.	2151.94	-291	-0.0022515	0.0003369	0.0035	0.82		2237.68	2237.68		1.04	Si
SLV 13	ini.	-3597.69	-8667	-0.005717	0.0003369	0.0035	0.82		2243.1	2243.1		0.62	No
SLV 13	fin.	2077.07	-1027	-0.0021006	0.0003369	0.0035	0.82		2237.68	2237.68		1.08	Si
SLV 2	ini.	2381.06	4473	-0.0027948	0.0003369	0.0035	0.82		2237.68	2237.68		0.94	No
SLV 2	fin.	-2042.51	-1976	-0.0020273	0.0003369	0.0035	0.82		2243.1	2243.1		1.1	Si
SLV 4	ini.	2645.26	5318	-0.0035353	0.0003369	0.0035	0.82		2237.68	2237.68		0.85	No
SLV 4	fin.	-1976.1	-1227	-0.0019084	0.0003369	0.0035	0.82		2243.1	2243.1		1.14	Si
SLV 14	ini.	-3615.21	-8720	-0.0057537	0.0003369	0.0035	0.82		2243.1	2243.1		0.62	No
SLV 14	fin.	2085.54	-1040	-0.0021171	0.0003369	0.0035	0.82		2237.68	2237.68		1.07	Si
SLD 14	ini.	-1818.83	-4691	-0.0016575	0.0003369	0.0035	0.82		2243.1	2243.1		1.23	Si
SLD 14	fin.	920.81	-1091	-0.0006567	0.0003369	0.0035	0.82		2237.68	2237.68		2.43	Si
SLV 1	ini.	2398.58	4526	-0.002842	0.0003369	0.0035	0.82		2237.68	2237.68		0.93	No
SLV 1	fin.	-2050.98	-1963	-0.0020431	0.0003369	0.0035	0.82		2243.1	2243.1		1.09	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	2645.26	-7827	0.82	0	658	6502	9946	2091	7160		0.91	No
SLV 4	fin.	-1976.1	-8725	0.82	0	658	6502	9946	2091	7160		0.82	No
SLV 14	ini.	-3615.21	9869	0.82	0	658	6502	9946	2091	7160		0.73	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	fin.	2085.54	10221	0.82	0	658	6502	9946	2091	7160		0.7	No
SLV 16	ini.	-3351.01	9660	0.82	0	658	6502	9946	2091	7160		0.74	No
SLV 16	fin.	2151.94	8912	0.82	0	658	6502	9946	2091	7160		0.8	No
SLV 15	ini.	-3333.49	9614	0.82	0	658	6502	9946	2091	7160		0.74	No
SLV 15	fin.	2143.47	8866	0.82	0	658	6502	9946	2091	7160		0.81	No
SLV 3	ini.	2662.78	-7873	0.82	0	658	6502	9946	2091	7160		0.91	No
SLV 3	fin.	-1984.57	-8771	0.82	0	658	6502	9946	2091	7160		0.82	No
SLV 13	ini.	-3597.69	9823	0.82	0	658	6502	9946	2091	7160		0.73	No
SLV 13	fin.	2077.07	10175	0.82	0	658	6502	9946	2091	7160		0.7	No
SLV 9	ini.	-1810.4	3954	0.82	0	658	6502	9946	2091	7160		1.81	Si
SLV 9	fin.	556.31	5538	0.82	0	658	6502	9946	2091	7160		1.29	Si
SLV 10	ini.	-1821.58	3984	0.82	0	658	6502	9946	2091	7160		1.8	Si
SLV 10	fin.	561.72	5567	0.82	0	658	6502	9946	2091	7160		1.29	Si
SLV 1	ini.	2398.58	-7664	0.82	0	658	6502	9946	2091	7160		0.93	No
SLV 1	fin.	-2050.98	-7462	0.82	0	658	6502	9946	2091	7160		0.96	No
SLV 2	ini.	2381.06	-7618	0.82	0	658	6502	9946	2091	7160		0.94	No
SLV 2	fin.	-2042.51	-7416	0.82	0	658	6502	9946	2091	7160		0.97	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.62	SLV 14	No
V_SLV	0.7	SLV 14	No
PF_SLU	2.579	SLU 84	Si
V_SLU	4.221	SLU 82	Si

Trave di accoppiamento 18

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.528	1.046	1.12	2	0.88	-7.428	1.046	1.12	2	0.88	0.9	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-647.23	-4930	-0.0003822	0.0002246	0.0035	0.88		2188.59	2188.59	No	3.38	Si
SLU 75	fin.	-1917.23	-8605	-0.0015529	0.0002246	0.0035	0.88		2188.59	2188.59	No	1.14	Si
SLU 82	ini.	-698.16	-5140	-0.0004179	0.0002246	0.0035	0.88		2188.59	2188.59	No	3.13	Si
SLU 82	fin.	-1940.08	-8818	-0.0015816	0.0002246	0.0035	0.88		2188.59	2188.59	No	1.13	Si
SLU 81	ini.	-693.45	-5123	-0.0004146	0.0002246	0.0035	0.88		2188.59	2188.59	No	3.16	Si
SLU 81	fin.	-1940.76	-8810	-0.0015825	0.0002246	0.0035	0.88		2188.59	2188.59	No	1.13	Si
SLU 78	ini.	-646.88	-4967	-0.0003819	0.0002246	0.0035	0.88		2188.59	2188.59	No	3.38	Si
SLU 78	fin.	-1943.13	-8698	-0.0015855	0.0002246	0.0035	0.88		2188.59	2188.59	No	1.13	Si
SLU 77	ini.	-642.16	-4951	-0.0003786	0.0002246	0.0035	0.88		2188.59	2188.59	No	3.41	Si
SLU 77	fin.	-1943.82	-8690	-0.0015864	0.0002246	0.0035	0.88		2188.59	2188.59	No	1.13	Si
SLU 80	ini.	-640.79	-4933	-0.0003777	0.0002246	0.0035	0.88		2188.59	2188.59	No	3.42	Si
SLU 80	fin.	-1935.99	-8651	-0.0015765	0.0002246	0.0035	0.88		2188.59	2188.59	No	1.13	Si
SLU 84	ini.	-697.81	-5176	-0.0004177	0.0002246	0.0035	0.88		2188.59	2188.59	No	3.14	Si
SLU 84	fin.	-1965.98	-8912	-0.0016148	0.0002246	0.0035	0.88		2188.59	2188.59	No	1.11	Si
SLU 83	ini.	-693.09	-5160	-0.0004143	0.0002246	0.0035	0.88		2188.59	2188.59	No	3.16	Si
SLU 83	fin.	-1966.67	-8904	-0.0016157	0.0002246	0.0035	0.88		2188.59	2188.59	No	1.11	Si
SLU 79	ini.	-636.08	-4917	-0.0003744	0.0002246	0.0035	0.88		2188.59	2188.59	No	3.44	Si
SLU 79	fin.	-1936.68	-8643	-0.0015773	0.0002246	0.0035	0.88		2188.59	2188.59	No	1.13	Si
SLU 74	ini.	-642.52	-4914	-0.0003789	0.0002246	0.0035	0.88		2188.59	2188.59	No	3.41	Si
SLU 74	fin.	-1917.91	-8597	-0.0015537	0.0002246	0.0035	0.88		2188.59	2188.59	No	1.14	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-693.09	-1940	0.88	0	561	6978	7116	2244	7539	No	3.89	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	fin.	-1966.67	-4345	0.88	0	561	6978	7116	2244	7539	No	1.74	Si
SLU 80	ini.	-640.79	-2019	0.88	0	561	6978	7116	2244	7539	No	3.73	Si
SLU 80	fin.	-1935.99	-4294	0.88	0	561	6978	7116	2244	7539	No	1.76	Si
SLU 84	ini.	-697.81	-1930	0.88	0	561	6978	7116	2244	7539	No	3.91	Si
SLU 84	fin.	-1965.98	-4335	0.88	0	561	6978	7116	2244	7539	No	1.74	Si
SLU 81	ini.	-693.45	-1883	0.88	0	561	6978	7116	2244	7539	No	4	Si
SLU 81	fin.	-1940.76	-4288	0.88	0	561	6978	7116	2244	7539	No	1.76	Si
SLU 77	ini.	-642.16	-2037	0.88	0	561	6978	7116	2244	7539	No	3.7	Si
SLU 77	fin.	-1943.82	-4312	0.88	0	561	6978	7116	2244	7539	No	1.75	Si
SLU 79	ini.	-636.08	-2029	0.88	0	561	6978	7116	2244	7539	No	3.72	Si
SLU 79	fin.	-1936.68	-4304	0.88	0	561	6978	7116	2244	7539	No	1.75	Si
SLU 78	ini.	-646.88	-2026	0.88	0	561	6978	7116	2244	7539	No	3.72	Si
SLU 78	fin.	-1943.13	-4302	0.88	0	561	6978	7116	2244	7539	No	1.75	Si
SLU 75	ini.	-647.23	-1969	0.88	0	561	6978	7116	2244	7539	No	3.83	Si
SLU 75	fin.	-1917.23	-4245	0.88	0	561	6978	7116	2244	7539	No	1.78	Si
SLU 74	ini.	-642.52	-1980	0.88	0	561	6978	7116	2244	7539	No	3.81	Si
SLU 74	fin.	-1917.91	-4255	0.88	0	561	6978	7116	2244	7539	No	1.77	Si
SLU 82	ini.	-698.16	-1873	0.88	0	561	6978	7116	2244	7539	No	4.03	Si
SLU 82	fin.	-1940.08	-4278	0.88	0	561	6978	7116	2244	7539	No	1.76	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 4	ini.	363.85	-2818	-0.0001958	0.0003369	0.0035	0.88		2544.2	2544.2		6.99	Si
SLD 4	fin.	-2954.96	-9259	-0.0032945	0.0003369	0.0035	0.88		2550.07	2550.07		0.86	No
SLD 2	ini.	186.48	-3245	-0.0000978	0.0003369	0.0035	0.88		2544.2	2544.2		13.64	Si
SLD 2	fin.	-3004.2	-9647	-0.003414	0.0003369	0.0035	0.88		2550.07	2550.07		0.85	No
SLD 3	ini.	381.74	-2761	-0.0002061	0.0003369	0.0035	0.88		2544.2	2544.2		6.66	Si
SLD 3	fin.	-2961.23	-9240	-0.0033099	0.0003369	0.0035	0.88		2550.07	2550.07		0.86	No
SLV 5	ini.	-585.3	-4657	-0.0003266	0.0003369	0.0035	0.88		2550.07	2550.07		4.36	Si
SLV 5	fin.	-2692.55	-9868	-0.0026651	0.0003369	0.0035	0.88		2550.07	2550.07		0.95	No
SLD 1	ini.	204.38	-3187	-0.0001074	0.0003369	0.0035	0.88		2544.2	2544.2		12.45	Si
SLD 1	fin.	-3010.47	-9628	-0.0034291	0.0003369	0.0035	0.88		2550.07	2550.07		0.85	No
SLV 1	ini.	1028.52	-3039	-0.0006316	0.0003369	0.0035	0.88		2544.2	2544.2		2.47	Si
SLV 1	fin.	-5240.19	-14603	-0.007644	0.0003369	0.0035	0.88		2550.07	2550.07		0.49	No
SLV 2	ini.	986.82	-3173	-0.0006005	0.0003369	0.0035	0.88		2544.2	2544.2		2.58	Si
SLV 2	fin.	-5225.58	-14646	-0.007619	0.0003369	0.0035	0.88		2550.07	2550.07		0.49	No
SLV 4	ini.	1392.73	-2205	-0.0009273	0.0003369	0.0035	0.88		2544.2	2544.2		1.83	Si
SLV 4	fin.	-5109.58	-13751	-0.0074201	0.0003369	0.0035	0.88		2550.07	2550.07		0.5	No
SLV 6	ini.	-611.93	-4743	-0.0003432	0.0003369	0.0035	0.88		2550.07	2550.07		4.17	Si
SLV 6	fin.	-2683.22	-9896	-0.0026447	0.0003369	0.0035	0.88		2550.07	2550.07		0.95	No
SLV 3	ini.	1434.42	-2071	-0.0009641	0.0003369	0.0035	0.88		2544.2	2544.2		1.77	Si
SLV 3	fin.	-5124.19	-13707	-0.0074452	0.0003369	0.0035	0.88		2550.07	2550.07		0.5	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-1843.63	8992	0.88	0	842	6978	10673	2244	7820		0.87	No
SLV 16	fin.	2548.5	6858	0.88	0	842	6978	10673	2244	7820		1.14	Si
SLV 3	ini.	1434.42	-12431	0.88	0	842	6978	10673	2244	7820		0.63	No
SLV 3	fin.	-5124.19	-14115	0.88	0	842	6978	10673	2244	7820		0.55	No
SLV 7	ini.	767.72	-5521	0.88	0	842	6978	10673	2244	7820		1.42	Si
SLV 7	fin.	-2305.88	-8200	0.88	0	842	6978	10673	2244	7820		0.95	No
SLV 1	ini.	1028.52	-11943	0.88	0	842	6978	10673	2244	7820		0.65	No
SLV 1	fin.	-5240.19	-12909	0.88	0	842	6978	10673	2244	7820		0.61	No
SLV 15	ini.	-1801.93	8886	0.88	0	842	6978	10673	2244	7820		0.88	No
SLV 15	fin.	2533.89	6751	0.88	0	842	6978	10673	2244	7820		1.16	Si
SLV 2	ini.	986.82	-11836	0.88	0	842	6978	10673	2244	7820		0.66	No
SLV 2	fin.	-5225.58	-12802	0.88	0	842	6978	10673	2244	7820		0.61	No
SLV 14	ini.	-2249.53	9481	0.88	0	842	6978	10673	2244	7820		0.82	No
SLV 14	fin.	2432.5	8064	0.88	0	842	6978	10673	2244	7820		0.97	No
SLV 13	ini.	-2207.84	9374	0.88	0	842	6978	10673	2244	7820		0.83	No
SLV 13	fin.	2417.89	7957	0.88	0	842	6978	10673	2244	7820		0.98	No
SLV 8	ini.	741.09	-5453	0.88	0	842	6978	10673	2244	7820		1.43	Si
SLV 8	fin.	-2296.55	-8132	0.88	0	842	6978	10673	2244	7820		0.96	No
SLV 4	ini.	1392.73	-12325	0.88	0	842	6978	10673	2244	7820		0.63	No
SLV 4	fin.	-5109.58	-14009	0.88	0	842	6978	10673	2244	7820		0.56	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.487	SLV 1	No
V_SLV	0.554	SLV 3	No
PF_SLU	1.113	SLU 83	Si
V_SLU	1.735	SLU 83	Si

Trave di accoppiamento 20

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.888	6.576	-0.98	1.02	2	-11.888	6.576	-0.98	1.02	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	319.07	-8358	-0.000032	0.0001872	0.0035	2		10722.86	10722.86	No	33.61	Si
SLU 84	fin.	978.65	-8739	-0.0001008	0.0001872	0.0035	2		10722.86	10722.86	No	10.96	Si
SLU 82	ini.	321.25	-8276	-0.0000322	0.0001872	0.0035	2		10722.86	10722.86	No	33.38	Si
SLU 82	fin.	972.79	-8652	-0.0001001	0.0001872	0.0035	2		10722.86	10722.86	No	11.02	Si
SLU 83	ini.	316.33	-8360	-0.0000317	0.0001872	0.0035	2		10722.86	10722.86	No	33.9	Si
SLU 83	fin.	976.12	-8741	-0.0001005	0.0001872	0.0035	2		10722.86	10722.86	No	10.99	Si
SLU 81	ini.	318.51	-8278	-0.0000319	0.0001872	0.0035	2		10722.86	10722.86	No	33.67	Si
SLU 81	fin.	970.27	-8654	-0.0000999	0.0001872	0.0035	2		10722.86	10722.86	No	11.05	Si
SLU 80	ini.	302.55	-8136	-0.0000303	0.0001872	0.0035	2		10722.86	10722.86	No	35.44	Si
SLU 80	fin.	927.67	-8501	-0.0000953	0.0001872	0.0035	2		10722.86	10722.86	No	11.56	Si
SLU 75	ini.	312.8	-8107	-0.0000313	0.0001872	0.0035	2		10722.86	10722.86	No	34.28	Si
SLU 75	fin.	931.1	-8468	-0.0000957	0.0001872	0.0035	2		10722.86	10722.86	No	11.52	Si
SLU 78	ini.	310.62	-8189	-0.0000311	0.0001872	0.0035	2		10722.86	10722.86	No	34.52	Si
SLU 78	fin.	936.96	-8555	-0.0000963	0.0001872	0.0035	2		10722.86	10722.86	No	11.44	Si
SLU 74	ini.	310.06	-8108	-0.000031	0.0001872	0.0035	2		10722.86	10722.86	No	34.58	Si
SLU 74	fin.	928.58	-8469	-0.0000954	0.0001872	0.0035	2		10722.86	10722.86	No	11.55	Si
SLU 79	ini.	299.81	-8137	-0.00003	0.0001872	0.0035	2		10722.86	10722.86	No	35.77	Si
SLU 79	fin.	925.15	-8503	-0.000095	0.0001872	0.0035	2		10722.86	10722.86	No	11.59	Si
SLU 77	ini.	307.88	-8191	-0.0000308	0.0001872	0.0035	2		10722.86	10722.86	No	34.83	Si
SLU 77	fin.	934.43	-8556	-0.000096	0.0001872	0.0035	2		10722.86	10722.86	No	11.48	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	299.81	1236	2	0	1304	7930	13475	5100	9234	No	7.47	Si
SLU 79	fin.	925.15	619	2	0	1304	7930	13475	5100	9234	No	14.91	Si
SLU 84	ini.	319.07	1253	2	0	1304	7930	13475	5100	9234	No	7.37	Si
SLU 84	fin.	978.65	696	2	0	1304	7930	13475	5100	9234	No	13.26	Si
SLU 80	ini.	302.55	1236	2	0	1304	7930	13475	5100	9234	No	7.47	Si
SLU 80	fin.	927.67	619	2	0	1304	7930	13475	5100	9234	No	14.91	Si
SLU 81	ini.	318.51	1247	2	0	1304	7930	13475	5100	9234	No	7.41	Si
SLU 81	fin.	970.27	679	2	0	1304	7930	13475	5100	9234	No	13.61	Si
SLU 82	ini.	321.25	1247	2	0	1304	7930	13475	5100	9234	No	7.4	Si
SLU 82	fin.	972.79	679	2	0	1304	7930	13475	5100	9234	No	13.61	Si
SLU 77	ini.	307.88	1231	2	0	1304	7930	13475	5100	9234	No	7.5	Si
SLU 77	fin.	934.43	626	2	0	1304	7930	13475	5100	9234	No	14.74	Si
SLU 83	ini.	316.33	1253	2	0	1304	7930	13475	5100	9234	No	7.37	Si
SLU 83	fin.	976.12	696	2	0	1304	7930	13475	5100	9234	No	13.26	Si
SLU 63	ini.	273.35	1234	2	0	1304	7930	13475	5100	9234	No	7.48	Si
SLU 63	fin.	857.07	513	2	0	1304	7930	13475	5100	9234	No	18.01	Si
SLU 62	ini.	270.61	1234	2	0	1304	7930	13475	5100	9234	No	7.49	Si
SLU 62	fin.	854.55	513	2	0	1304	7930	13475	5100	9234	No	18.01	Si
SLU 78	ini.	310.62	1231	2	0	1304	7930	13475	5100	9234	No	7.5	Si
SLU 78	fin.	936.96	626	2	0	1304	7930	13475	5100	9234	No	14.74	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	-3868.75	-2605	-0.0004414	0.0002807	0.0035	2		15648.46	15648.46		4.04	Si
SLV 4	fin.	4551.35	-8415	-0.0005365	0.0002807	0.0035	2		15635.95	15635.95		3.44	Si
SLD 1	ini.	-1423.47	-4137	-0.0001469	0.0002807	0.0035	2		15648.46	15648.46		10.99	Si
SLD 1	fin.	2462.56	-6848	-0.0002643	0.0002807	0.0035	2		15635.95	15635.95		6.35	Si
SLV 14	ini.	4438.27	-8804	-0.0005204	0.0002807	0.0035	2		15635.95	15635.95		3.52	Si
SLV 14	fin.	-3489.55	-3230	-0.0003912	0.0002807	0.0035	2		15648.46	15648.46		4.48	Si
SLV 3	ini.	-4022.73	-2459	-0.0004622	0.0002807	0.0035	2		15648.46	15648.46		3.89	Si
SLV 3	fin.	4713.18	-8522	-0.0005597	0.0002807	0.0035	2		15635.95	15635.95		3.32	Si
SLV 15	ini.	3875.09	-8981	-0.0004427	0.0002807	0.0035	2		15635.95	15635.95		4.03	Si
SLV 15	fin.	-3552.31	-3707	-0.0003994	0.0002807	0.0035	2		15648.46	15648.46		4.41	Si
SLV 2	ini.	-3459.55	-2281	-0.0003873	0.0002807	0.0035	2		15648.46	15648.46		4.52	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	fin.	4775.94	-8045	-0.0005688	0.0002807	0.0035	2		15635.95	15635.95		3.27	Si
SLD 2	ini.	-1357.37	-4199	-0.0001398	0.0002807	0.0035	2		15648.46	15648.46		11.53	Si
SLD 2	fin.	2393.09	-6802	-0.0002561	0.0002807	0.0035	2		15635.95	15635.95		6.53	Si
SLV 1	ini.	-3613.53	-2136	-0.0004074	0.0002807	0.0035	2		15648.46	15648.46		4.33	Si
SLV 1	fin.	4937.77	-8152	-0.0005925	0.0002807	0.0035	2		15635.95	15635.95		3.17	Si
SLV 13	ini.	4284.29	-8658	-0.0004988	0.0002807	0.0035	2		15635.95	15635.95		3.65	Si
SLV 13	fin.	-3327.72	-3337	-0.0003703	0.0002807	0.0035	2		15648.46	15648.46		4.7	Si
SLV 16	ini.	4029.08	-9127	-0.0004636	0.0002807	0.0035	2		15635.95	15635.95		3.88	Si
SLV 16	fin.	-3714.14	-3599	-0.0004207	0.0002807	0.0035	2		15648.46	15648.46		4.21	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	4284.29	-12647	2	0	1957	7930	20213	5100	9886		0.78	No
SLV 13	fin.	-3327.72	-13543	2	0	1957	7930	20213	5100	9886		0.73	No
SLV 14	ini.	4438.27	-13208	2	0	1957	7930	20213	5100	9886		0.75	No
SLV 14	fin.	-3489.55	-14103	2	0	1957	7930	20213	5100	9886		0.7	No
SLV 3	ini.	-4022.73	15030	2	0	1957	7930	20213	5100	9886		0.66	No
SLV 3	fin.	4713.18	14708	2	0	1957	7930	20213	5100	9886		0.67	No
SLV 2	ini.	-3459.55	14257	2	0	1957	7930	20213	5100	9886		0.69	No
SLV 2	fin.	4775.94	13283	2	0	1957	7930	20213	5100	9886		0.74	No
SLV 4	ini.	-3868.75	14469	2	0	1957	7930	20213	5100	9886		0.68	No
SLV 4	fin.	4551.35	14148	2	0	1957	7930	20213	5100	9886		0.7	No
SLD 3	ini.	-1601.61	6946	2	0	1957	7930	20213	5100	9886		1.42	Si
SLD 3	fin.	2364.35	6460	2	0	1957	7930	20213	5100	9886		1.53	Si
SLD 1	ini.	-1423.47	6856	2	0	1957	7930	20213	5100	9886		1.44	Si
SLD 1	fin.	2462.56	6090	2	0	1957	7930	20213	5100	9886		1.62	Si
SLV 16	ini.	4029.08	-12997	2	0	1957	7930	20213	5100	9886		0.76	No
SLV 16	fin.	-3714.14	-13239	2	0	1957	7930	20213	5100	9886		0.75	No
SLV 15	ini.	3875.09	-12435	2	0	1957	7930	20213	5100	9886		0.8	No
SLV 15	fin.	-3552.31	-12679	2	0	1957	7930	20213	5100	9886		0.78	No
SLV 1	ini.	-3613.53	14819	2	0	1957	7930	20213	5100	9886		0.67	No
SLV 1	fin.	4937.77	13844	2	0	1957	7930	20213	5100	9886		0.71	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.167	SLV 1	Si
V_SLV	0.658	SLV 3	No
PF_SLU	10.957	SLU 84	Si
V_SLU	7.368	SLU 84	Si

Trave di accoppiamento 21

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.888	6.576	1.42	2	0.58	-11.888	6.576	1.42	2	0.58	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-399.62	-1516	-0.0006003	0.0001872	0.0035	0.58		958.44	958.44	No	2.4	Si
SLU 82	fin.	-244.4	-972	-0.0003324	0.0001872	0.0035	0.58		958.44	958.44	No	3.92	Si
SLU 84	ini.	-403.3	-1530	-0.0006072	0.0001872	0.0035	0.58		958.44	958.44	No	2.38	Si
SLU 84	fin.	-246.17	-980	-0.0003352	0.0001872	0.0035	0.58		958.44	958.44	No	3.89	Si
SLU 77	ini.	-391.64	-1486	-0.0005856	0.0001872	0.0035	0.58		958.44	958.44	No	2.45	Si
SLU 77	fin.	-242.2	-963	-0.0003289	0.0001872	0.0035	0.58		958.44	958.44	No	3.96	Si
SLU 75	ini.	-388.14	-1472	-0.0005791	0.0001872	0.0035	0.58		958.44	958.44	No	2.47	Si
SLU 75	fin.	-240.67	-955	-0.0003265	0.0001872	0.0035	0.58		958.44	958.44	No	3.98	Si
SLU 83	ini.	-403.12	-1530	-0.0006069	0.0001872	0.0035	0.58		958.44	958.44	No	2.38	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	fin.	-245.93	-980	-0.0003348	0.0001872	0.0035	0.58		958.44	958.44	No	3.9	Si
SLU 79	ini.	-388.83	-1475	-0.0005804	0.0001872	0.0035	0.58		958.44	958.44	No	2.46	Si
SLU 79	fin.	-239.56	-953	-0.0003247	0.0001872	0.0035	0.58		958.44	958.44	No	4	Si
SLU 78	ini.	-391.82	-1486	-0.0005859	0.0001872	0.0035	0.58		958.44	958.44	No	2.45	Si
SLU 78	fin.	-242.43	-963	-0.0003293	0.0001872	0.0035	0.58		958.44	958.44	No	3.95	Si
SLU 80	ini.	-389.01	-1476	-0.0005807	0.0001872	0.0035	0.58		958.44	958.44	No	2.46	Si
SLU 80	fin.	-239.8	-954	-0.0003251	0.0001872	0.0035	0.58		958.44	958.44	No	4	Si
SLU 81	ini.	-399.44	-1515	-0.0006	0.0001872	0.0035	0.58		958.44	958.44	No	2.4	Si
SLU 81	fin.	-244.16	-972	-0.000332	0.0001872	0.0035	0.58		958.44	958.44	No	3.93	Si
SLU 74	ini.	-387.96	-1471	-0.0005788	0.0001872	0.0035	0.58		958.44	958.44	No	2.47	Si
SLU 74	fin.	-240.43	-955	-0.0003261	0.0001872	0.0035	0.58		958.44	958.44	No	3.99	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-387.96	1861	0.58	0	252	4599	3908	1479	4851	No	2.61	Si
SLU 74	fin.	-240.43	-1269	0.58	0	252	4599	3908	1479	4851	No	3.82	Si
SLU 83	ini.	-403.12	1929	0.58	0	252	4599	3908	1479	4851	No	2.52	Si
SLU 83	fin.	-245.93	-1298	0.58	0	252	4599	3908	1479	4851	No	3.74	Si
SLU 78	ini.	-391.82	1878	0.58	0	252	4599	3908	1479	4851	No	2.58	Si
SLU 78	fin.	-242.43	-1279	0.58	0	252	4599	3908	1479	4851	No	3.79	Si
SLU 79	ini.	-388.83	1863	0.58	0	252	4599	3908	1479	4851	No	2.6	Si
SLU 79	fin.	-239.56	-1265	0.58	0	252	4599	3908	1479	4851	No	3.84	Si
SLU 81	ini.	-399.44	1912	0.58	0	252	4599	3908	1479	4851	No	2.54	Si
SLU 81	fin.	-244.16	-1289	0.58	0	252	4599	3908	1479	4851	No	3.76	Si
SLU 82	ini.	-399.62	1913	0.58	0	252	4599	3908	1479	4851	No	2.54	Si
SLU 82	fin.	-244.4	-1290	0.58	0	252	4599	3908	1479	4851	No	3.76	Si
SLU 77	ini.	-391.64	1877	0.58	0	252	4599	3908	1479	4851	No	2.58	Si
SLU 77	fin.	-242.2	-1278	0.58	0	252	4599	3908	1479	4851	No	3.8	Si
SLU 75	ini.	-388.14	1862	0.58	0	252	4599	3908	1479	4851	No	2.61	Si
SLU 75	fin.	-240.67	-1270	0.58	0	252	4599	3908	1479	4851	No	3.82	Si
SLU 80	ini.	-389.01	1864	0.58	0	252	4599	3908	1479	4851	No	2.6	Si
SLU 80	fin.	-239.8	-1266	0.58	0	252	4599	3908	1479	4851	No	3.83	Si
SLU 84	ini.	-403.3	1930	0.58	0	252	4599	3908	1479	4851	No	2.51	Si
SLU 84	fin.	-246.17	-1299	0.58	0	252	4599	3908	1479	4851	No	3.74	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	826.65	2592	-0.0014834	0.0002807	0.0035	0.58		1324.07	1324.07		1.6	Si
SLV 14	fin.	-1246.22	-4637	-0.0032447	0.0002807	0.0035	0.58		1327.74	1327.74		1.07	Si
SLV 1	ini.	-1347.59	-4976	-0.0038094	0.0002807	0.0035	0.58		1327.74	1327.74		0.99	No
SLV 1	fin.	921.63	2961	-0.0017634	0.0002807	0.0035	0.58		1324.07	1324.07		1.44	Si
SLV 2	ini.	-1305.7	-4832	-0.0035844	0.0002807	0.0035	0.58		1327.74	1327.74		1.02	Si
SLV 2	fin.	879.32	2814	-0.0016328	0.0002807	0.0035	0.58		1324.07	1324.07		1.51	Si
SLD 3	ini.	-730.99	-2537	-0.0012348	0.0002807	0.0035	0.58		1327.74	1327.74		1.82	Si
SLD 3	fin.	293.46	1038	-0.0003926	0.0002807	0.0035	0.58		1324.07	1324.07		4.51	Si
SLV 4	ini.	-1313.85	-4449	-0.003629	0.0002807	0.0035	0.58		1327.74	1327.74		1.01	Si
SLV 4	fin.	868.73	3167	-0.0016017	0.0002807	0.0035	0.58		1324.07	1324.07		1.52	Si
SLD 1	ini.	-727.53	-2701	-0.0012266	0.0002807	0.0035	0.58		1327.74	1327.74		1.82	Si
SLD 1	fin.	297.8	886	-0.0003994	0.0002807	0.0035	0.58		1324.07	1324.07		4.45	Si
SLV 3	ini.	-1355.74	-4594	-0.003852	0.0002807	0.0035	0.58		1327.74	1327.74		0.98	No
SLV 3	fin.	911.05	3314	-0.0017298	0.0002807	0.0035	0.58		1324.07	1324.07		1.45	Si
SLV 16	ini.	818.51	2974	-0.0014614	0.0002807	0.0035	0.58		1324.07	1324.07		1.62	Si
SLV 16	fin.	-1256.8	-4285	-0.0033067	0.0002807	0.0035	0.58		1327.74	1327.74		1.06	Si
SLV 13	ini.	784.77	2447	-0.0013729	0.0002807	0.0035	0.58		1324.07	1324.07		1.69	Si
SLV 13	fin.	-1203.91	-4490	-0.0029954	0.0002807	0.0035	0.58		1327.74	1327.74		1.1	Si
SLV 15	ini.	776.62	2829	-0.0013521	0.0002807	0.0035	0.58		1324.07	1324.07		1.7	Si
SLV 15	fin.	-1214.49	-4137	-0.0030574	0.0002807	0.0035	0.58		1327.74	1327.74		1.09	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	784.77	-2579	0.58	0	378	4599	5862	1479	4977		1.93	Si
SLV 13	fin.	-1203.91	-5455	0.58	0	378	4599	5862	1479	4977		0.91	No
SLV 6	ini.	-557.44	3682	0.58	0	378	4599	5862	1479	4977		1.35	Si
SLV 6	fin.	155.37	-1015	0.58	0	378	4599	5862	1479	4977		4.9	Si
SLV 1	ini.	-1347.59	6005	0.58	0	378	4599	5862	1479	4977		0.83	No
SLV 1	fin.	921.63	3039	0.58	0	378	4599	5862	1479	4977		1.64	Si
SLV 16	ini.	818.51	-3451	0.58	0	378	4599	5862	1479	4977		1.44	Si
SLV 16	fin.	-1256.8	-4816	0.58	0	378	4599	5862	1479	4977		1.03	Si
SLV 4	ini.	-1313.85	5133	0.58	0	378	4599	5862	1479	4977		0.97	No
SLV 4	fin.	868.73	3678	0.58	0	378	4599	5862	1479	4977		1.35	Si
SLV 2	ini.	-1305.7	5836	0.58	0	378	4599	5862	1479	4977		0.85	No
SLV 2	fin.	879.32	2870	0.58	0	378	4599	5862	1479	4977		1.73	Si
SLV 15	ini.	776.62	-3282	0.58	0	378	4599	5862	1479	4977		1.52	Si
SLV 15	fin.	-1214.49	-4646	0.58	0	378	4599	5862	1479	4977		1.07	Si
SLV 14	ini.	826.65	-2748	0.58	0	378	4599	5862	1479	4977		1.81	Si
SLV 14	fin.	-1246.22	-5624	0.58	0	378	4599	5862	1479	4977		0.88	No
SLV 5	ini.	-584.19	3790	0.58	0	378	4599	5862	1479	4977		1.31	Si
SLV 5	fin.	182.39	-907	0.58	0	378	4599	5862	1479	4977		5.49	Si
SLV 3	ini.	-1355.74	5302	0.58	0	378	4599	5862	1479	4977		0.94	No
SLV 3	fin.	911.05	3848	0.58	0	378	4599	5862	1479	4977		1.29	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.979	SLV 3	No
V_SLV	0.829	SLV 1	No
PF_SLU	2.377	SLU 84	Si
V_SLU	2.514	SLU 84	Si

Trave di accoppiamento 22

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.008	6.576	-0.98	1.02	2	-7.008	6.576	-0.98	1.02	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-3400.85	-2821	-0.0004	0.0001872	0.0035	2		10737.13	10737.13	No	3.16	Si
SLU 77	fin.	5039.39	-6350	-0.0006461	0.0001872	0.0035	2		10722.86	10722.86	No	2.13	Si
SLU 83	ini.	-3445.49	-2890	-0.0004063	0.0001872	0.0035	2		10737.13	10737.13	No	3.12	Si
SLU 83	fin.	5140.61	-6482	-0.0006623	0.0001872	0.0035	2		10722.86	10722.86	No	2.09	Si
SLU 81	ini.	-3406.63	-2865	-0.0004008	0.0001872	0.0035	2		10737.13	10737.13	No	3.15	Si
SLU 81	fin.	5091.4	-6419	-0.0006544	0.0001872	0.0035	2		10722.86	10722.86	No	2.11	Si
SLU 82	ini.	-3407.45	-2862	-0.0004009	0.0001872	0.0035	2		10737.13	10737.13	No	3.15	Si
SLU 82	fin.	5098.29	-6418	-0.0006555	0.0001872	0.0035	2		10722.86	10722.86	No	2.1	Si
SLU 84	ini.	-3446.3	-2886	-0.0004064	0.0001872	0.0035	2		10737.13	10737.13	No	3.12	Si
SLU 84	fin.	5147.5	-6482	-0.0006634	0.0001872	0.0035	2		10722.86	10722.86	No	2.08	Si
SLU 75	ini.	-3362.81	-2793	-0.0003947	0.0001872	0.0035	2		10737.13	10737.13	No	3.19	Si
SLU 75	fin.	4997.08	-6286	-0.0006393	0.0001872	0.0035	2		10722.86	10722.86	No	2.15	Si
SLU 80	ini.	-3384.46	-2793	-0.0003977	0.0001872	0.0035	2		10737.13	10737.13	No	3.17	Si
SLU 80	fin.	5012.18	-6306	-0.0006417	0.0001872	0.0035	2		10722.86	10722.86	No	2.14	Si
SLU 79	ini.	-3383.64	-2797	-0.0003976	0.0001872	0.0035	2		10737.13	10737.13	No	3.17	Si
SLU 79	fin.	5005.28	-6306	-0.0006406	0.0001872	0.0035	2		10722.86	10722.86	No	2.14	Si
SLU 78	ini.	-3401.67	-2817	-0.0004001	0.0001872	0.0035	2		10737.13	10737.13	No	3.16	Si
SLU 78	fin.	5046.29	-6349	-0.0006472	0.0001872	0.0035	2		10722.86	10722.86	No	2.12	Si
SLU 74	ini.	-3362	-2797	-0.0003946	0.0001872	0.0035	2		10737.13	10737.13	No	3.19	Si
SLU 74	fin.	4990.18	-6287	-0.0006382	0.0001872	0.0035	2		10722.86	10722.86	No	2.15	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-3407.45	12551	2	0	1304	7930	13475	5100	9234	No	0.74	No
SLU 82	fin.	5098.29	12013	2	0	1304	7930	13475	5100	9234	No	0.77	No
SLU 83	ini.	-3445.49	12660	2	0	1304	7930	13475	5100	9234	No	0.73	No
SLU 83	fin.	5140.61	12135	2	0	1304	7930	13475	5100	9234	No	0.76	No
SLU 84	ini.	-3446.3	12671	2	0	1304	7930	13475	5100	9234	No	0.73	No
SLU 84	fin.	5147.5	12146	2	0	1304	7930	13475	5100	9234	No	0.76	No
SLU 80	ini.	-3384.46	12412	2	0	1304	7930	13475	5100	9234	No	0.74	No
SLU 80	fin.	5012.18	11830	2	0	1304	7930	13475	5100	9234	No	0.78	No
SLU 74	ini.	-3362	12346	2	0	1304	7930	13475	5100	9234	No	0.75	No
SLU 74	fin.	4990.18	11764	2	0	1304	7930	13475	5100	9234	No	0.78	No
SLU 78	ini.	-3401.67	12478	2	0	1304	7930	13475	5100	9234	No	0.74	No
SLU 78	fin.	5046.29	11908	2	0	1304	7930	13475	5100	9234	No	0.78	No
SLU 77	ini.	-3400.85	12467	2	0	1304	7930	13475	5100	9234	No	0.74	No
SLU 77	fin.	5039.39	11897	2	0	1304	7930	13475	5100	9234	No	0.78	No
SLU 81	ini.	-3406.63	12539	2	0	1304	7930	13475	5100	9234	No	0.74	No
SLU 81	fin.	5091.4	12002	2	0	1304	7930	13475	5100	9234	No	0.77	No
SLU 75	ini.	-3362.81	12357	2	0	1304	7930	13475	5100	9234	No	0.75	No
SLU 75	fin.	4997.08	11775	2	0	1304	7930	13475	5100	9234	No	0.78	No
SLU 79	ini.	-3383.64	12400	2	0	1304	7930	13475	5100	9234	No	0.74	No
SLU 79	fin.	5005.28	11819	2	0	1304	7930	13475	5100	9234	No	0.78	No

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	-4487.46	2163	-0.0005269	0.0002807	0.0035	2		15648.46	15648.46		3.49	Si
SLV 3	fin.	5974.23	-4105	-0.0007512	0.0002807	0.0035	2		15635.95	15635.95		2.62	Si
SLV 1	ini.	-4527.27	2524	-0.0005325	0.0002807	0.0035	2		15648.46	15648.46		3.46	Si
SLV 1	fin.	6578.14	-4099	-0.0008497	0.0002807	0.0035	2		15635.95	15635.95		2.38	Si
SLV 2	ini.	-4419.15	2410	-0.0005172	0.0002807	0.0035	2		15648.46	15648.46		3.54	Si
SLV 2	fin.	6483.16	-4045	-0.0008339	0.0002807	0.0035	2		15635.95	15635.95		2.41	Si
SLD 1	ini.	-3295.59	-22	-0.0003662	0.0002807	0.0035	2		15648.46	15648.46		4.75	Si
SLD 1	fin.	4803.74	-4251	-0.0005728	0.0002807	0.0035	2		15635.95	15635.95		3.25	Si
SLD 2	ini.	-3249.17	-70	-0.0003603	0.0002807	0.0035	2		15648.46	15648.46		4.82	Si
SLD 2	fin.	4762.97	-4227	-0.0005669	0.0002807	0.0035	2		15635.95	15635.95		3.28	Si
SLD 4	ini.	-3232.94	-224	-0.0003582	0.0002807	0.0035	2		15648.46	15648.46		4.84	Si
SLD 4	fin.	4498.63	-4229	-0.000529	0.0002807	0.0035	2		15635.95	15635.95		3.48	Si
SLV 4	ini.	-4379.34	2049	-0.0005116	0.0002807	0.0035	2		15648.46	15648.46		3.57	Si
SLV 4	fin.	5879.25	-4050	-0.0007361	0.0002807	0.0035	2		15635.95	15635.95		2.66	Si
SLV 5	ini.	-3100.68	-20	-0.0003415	0.0002807	0.0035	2		15648.46	15648.46		5.05	Si
SLV 5	fin.	5336.14	-4283	-0.000652	0.0002807	0.0035	2		15635.95	15635.95		2.93	Si
SLD 3	ini.	-3279.35	-175	-0.0003641	0.0002807	0.0035	2		15648.46	15648.46		4.77	Si
SLD 3	fin.	4539.4	-4252	-0.0005348	0.0002807	0.0035	2		15635.95	15635.95		3.44	Si
SLV 6	ini.	-3031.63	-93	-0.0003329	0.0002807	0.0035	2		15648.46	15648.46		5.16	Si
SLV 6	fin.	5275.48	-4248	-0.0006428	0.0002807	0.0035	2		15635.95	15635.95		2.96	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 2	ini.	-3249.17	12710	2	0	1957	7930	20213	5100	9886		0.78	No
SLD 2	fin.	4762.97	12055	2	0	1957	7930	20213	5100	9886		0.82	No
SLV 1	ini.	-4527.27	18389	2	0	1957	7930	20213	5100	9886		0.54	No
SLV 1	fin.	6578.14	17631	2	0	1957	7930	20213	5100	9886		0.56	No
SLV 6	ini.	-3031.63	13463	2	0	1957	7930	20213	5100	9886		0.73	No
SLV 6	fin.	5275.48	13405	2	0	1957	7930	20213	5100	9886		0.74	No
SLD 3	ini.	-3279.35	12294	2	0	1957	7930	20213	5100	9886		0.8	No
SLD 3	fin.	4539.4	11478	2	0	1957	7930	20213	5100	9886		0.86	No
SLV 2	ini.	-4419.15	18030	2	0	1957	7930	20213	5100	9886		0.55	No
SLV 2	fin.	6483.16	17274	2	0	1957	7930	20213	5100	9886		0.57	No
SLV 3	ini.	-4487.46	17069	2	0	1957	7930	20213	5100	9886		0.58	No
SLV 3	fin.	5974.23	15933	2	0	1957	7930	20213	5100	9886		0.62	No
SLV 4	ini.	-4379.34	16710	2	0	1957	7930	20213	5100	9886		0.59	No
SLV 4	fin.	5879.25	15576	2	0	1957	7930	20213	5100	9886		0.63	No
SLD 4	ini.	-3232.94	12140	2	0	1957	7930	20213	5100	9886		0.81	No
SLD 4	fin.	4498.63	11325	2	0	1957	7930	20213	5100	9886		0.87	No
SLV 5	ini.	-3100.68	13692	2	0	1957	7930	20213	5100	9886		0.72	No
SLV 5	fin.	5336.14	13633	2	0	1957	7930	20213	5100	9886		0.73	No
SLD 1	ini.	-3295.59	12865	2	0	1957	7930	20213	5100	9886		0.77	No
SLD 1	fin.	4803.74	12208	2	0	1957	7930	20213	5100	9886		0.81	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.377	SLV 1	Si
V_SLV	0.538	SLV 1	No
PF_SLU	2.083	SLU 84	Si
V_SLU	0.729	SLU 84	No

Trave di accoppiamento 23

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.008	6.576	1.42	2	0.58	-7.008	6.576	1.42	2	0.58	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-1398.16	-4746	-0.0043955	0.0001872	0.0035	0.58		958.44	958.44	No	0.69	No
SLU 83	fin.	889.33	3196	-0.0017924	0.0001872	0.0035	0.58		954.31	954.31	No	1.07	Si
SLU 79	ini.	-1362.88	-4625	-0.0042152	0.0001872	0.0035	0.58		958.44	958.44	No	0.7	No
SLU 79	fin.	870.55	3129	-0.0017301	0.0001872	0.0035	0.58		954.31	954.31	No	1.1	Si
SLU 77	ini.	-1371.97	-4656	-0.0042621	0.0001872	0.0035	0.58		958.44	958.44	No	0.7	No
SLU 77	fin.	875.13	3146	-0.0017451	0.0001872	0.0035	0.58		954.31	954.31	No	1.09	Si
SLU 78	ini.	-1373.12	-4660	-0.004268	0.0001872	0.0035	0.58		958.44	958.44	No	0.7	No
SLU 78	fin.	875.82	3149	-0.0017473	0.0001872	0.0035	0.58		954.31	954.31	No	1.09	Si
SLU 80	ini.	-1364.03	-4629	-0.0042211	0.0001872	0.0035	0.58		958.44	958.44	No	0.7	No
SLU 80	fin.	871.23	3132	-0.0017323	0.0001872	0.0035	0.58		954.31	954.31	No	1.1	Si
SLU 75	ini.	-1359.4	-4613	-0.0041971	0.0001872	0.0035	0.58		958.44	958.44	No	0.71	No
SLU 75	fin.	866.43	3115	-0.0017168	0.0001872	0.0035	0.58		954.31	954.31	No	1.1	Si
SLU 74	ini.	-1358.26	-4609	-0.0041912	0.0001872	0.0035	0.58		958.44	958.44	No	0.71	No
SLU 74	fin.	865.74	3113	-0.0017146	0.0001872	0.0035	0.58		954.31	954.31	No	1.1	Si
SLU 81	ini.	-1384.44	-4699	-0.004326	0.0001872	0.0035	0.58		958.44	958.44	No	0.69	No
SLU 81	fin.	879.94	3163	-0.001761	0.0001872	0.0035	0.58		954.31	954.31	No	1.08	Si
SLU 82	ini.	-1385.59	-4703	-0.0043318	0.0001872	0.0035	0.58		958.44	958.44	No	0.69	No
SLU 82	fin.	880.63	3166	-0.0017632	0.0001872	0.0035	0.58		954.31	954.31	No	1.08	Si
SLU 84	ini.	-1399.3	-4750	-0.0044013	0.0001872	0.0035	0.58		958.44	958.44	No	0.68	No
SLU 84	fin.	890.02	3199	-0.0017947	0.0001872	0.0035	0.58		954.31	954.31	No	1.07	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-1359.4	5931	0.58	0	252	4599	3908	1479	4851	No	0.82	No
SLU 75	fin.	866.43	3093	0.58	0	252	4599	3908	1479	4851	No	1.57	Si
SLU 84	ini.	-1399.3	6103	0.58	0	252	4599	3908	1479	4851	No	0.79	No
SLU 84	fin.	890.02	3178	0.58	0	252	4599	3908	1479	4851	No	1.53	Si
SLU 82	ini.	-1385.59	6045	0.58	0	252	4599	3908	1479	4851	No	0.8	No
SLU 82	fin.	880.63	3143	0.58	0	252	4599	3908	1479	4851	No	1.54	Si
SLU 74	ini.	-1358.26	5926	0.58	0	252	4599	3908	1479	4851	No	0.82	No
SLU 74	fin.	865.74	3090	0.58	0	252	4599	3908	1479	4851	No	1.57	Si
SLU 79	ini.	-1362.88	5945	0.58	0	252	4599	3908	1479	4851	No	0.82	No
SLU 79	fin.	870.55	3110	0.58	0	252	4599	3908	1479	4851	No	1.56	Si
SLU 81	ini.	-1384.44	6040	0.58	0	252	4599	3908	1479	4851	No	0.8	No
SLU 81	fin.	879.94	3140	0.58	0	252	4599	3908	1479	4851	No	1.54	Si
SLU 78	ini.	-1373.12	5990	0.58	0	252	4599	3908	1479	4851	No	0.81	No
SLU 78	fin.	875.82	3128	0.58	0	252	4599	3908	1479	4851	No	1.55	Si
SLU 83	ini.	-1398.16	6098	0.58	0	252	4599	3908	1479	4851	No	0.8	No
SLU 83	fin.	889.33	3175	0.58	0	252	4599	3908	1479	4851	No	1.53	Si
SLU 80	ini.	-1364.03	5950	0.58	0	252	4599	3908	1479	4851	No	0.82	No
SLU 80	fin.	871.23	3112	0.58	0	252	4599	3908	1479	4851	No	1.56	Si
SLU 77	ini.	-1371.97	5985	0.58	0	252	4599	3908	1479	4851	No	0.81	No
SLU 77	fin.	875.13	3125	0.58	0	252	4599	3908	1479	4851	No	1.55	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	-1528.89	-5097	-0.0046972	0.0002807	0.0035	0.58		1327.74	1327.74		0.87	No
SLV 3	fin.	1281.26	4447	-0.0034684	0.0002807	0.0035	0.58		1324.07	1324.07		1.03	Si
SLV 1	ini.	-1583.82	-5640	-0.0049486	0.0002807	0.0035	0.58		1327.74	1327.74		0.84	No
SLV 1	fin.	1289.9	4809	-0.0035171	0.0002807	0.0035	0.58		1324.07	1324.07		1.03	Si
SLD 3	ini.	-1195.49	-4016	-0.0029467	0.0002807	0.0035	0.58		1327.74	1327.74		1.11	Si
SLD 3	fin.	896.22	3155	-0.0016837	0.0002807	0.0035	0.58		1324.07	1324.07		1.48	Si
SLD 1	ini.	-1219.43	-4250	-0.0030866	0.0002807	0.0035	0.58		1327.74	1327.74		1.09	Si
SLD 1	fin.	900.18	3311	-0.0016959	0.0002807	0.0035	0.58		1324.07	1324.07		1.47	Si
SLD 4	ini.	-1183.63	-3976	-0.0028792	0.0002807	0.0035	0.58		1327.74	1327.74		1.12	Si
SLD 4	fin.	883.66	3111	-0.0016457	0.0002807	0.0035	0.58		1324.07	1324.07		1.5	Si
SLV 2	ini.	-1556.19	-5546	-0.0048228	0.0002807	0.0035	0.58		1327.74	1327.74		0.85	No
SLV 2	fin.	1260.64	4706	-0.0033498	0.0002807	0.0035	0.58		1324.07	1324.07		1.05	Si
SLV 6	ini.	-1208.32	-4718	-0.0030212	0.0002807	0.0035	0.58		1327.74	1327.74		1.1	Si
SLV 6	fin.	812.68	3476	-0.0014458	0.0002807	0.0035	0.58		1324.07	1324.07		1.63	Si
SLV 4	ini.	-1501.26	-5004	-0.0045682	0.0002807	0.0035	0.58		1327.74	1327.74		0.88	No
SLV 4	fin.	1252	4345	-0.0032994	0.0002807	0.0035	0.58		1324.07	1324.07		1.06	Si
SLV 5	ini.	-1225.97	-4778	-0.0031251	0.0002807	0.0035	0.58		1327.74	1327.74		1.08	Si
SLV 5	fin.	831.37	3542	-0.0014963	0.0002807	0.0035	0.58		1324.07	1324.07		1.59	Si
SLD 2	ini.	-1207.57	-4209	-0.0030168	0.0002807	0.0035	0.58		1327.74	1327.74		1.1	Si
SLD 2	fin.	887.62	3267	-0.0016576	0.0002807	0.0035	0.58		1324.07	1324.07		1.49	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 1	ini.	-1219.43	5442	0.58	0	378	4599	5862	1479	4977		0.91	No
SLD 1	fin.	900.18	3523	0.58	0	378	4599	5862	1479	4977		1.41	Si
SLV 2	ini.	-1556.19	7081	0.58	0	378	4599	5862	1479	4977		0.7	No
SLV 2	fin.	1260.64	5209	0.58	0	378	4599	5862	1479	4977		0.96	No
SLV 6	ini.	-1208.32	6549	0.58	0	378	4599	5862	1479	4977		0.76	No
SLV 6	fin.	812.68	4114	0.58	0	378	4599	5862	1479	4977		1.21	Si
SLD 6	ini.	-1059.35	5168	0.58	0	378	4599	5862	1479	4977		0.96	No
SLD 6	fin.	696.45	3005	0.58	0	378	4599	5862	1479	4977		1.66	Si
SLD 5	ini.	-1067.04	5199	0.58	0	378	4599	5862	1479	4977		0.96	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 5	fin.	704.6	3038	0.58	0	378	4599	5862	1479	4977		1.64	Si
SLD 2	ini.	-1207.57	5394	0.58	0	378	4599	5862	1479	4977		0.92	No
SLD 2	fin.	887.62	3472	0.58	0	378	4599	5862	1479	4977		1.43	Si
SLV 5	ini.	-1225.97	6621	0.58	0	378	4599	5862	1479	4977		0.75	No
SLV 5	fin.	831.37	4190	0.58	0	378	4599	5862	1479	4977		1.19	Si
SLV 3	ini.	-1528.89	6171	0.58	0	378	4599	5862	1479	4977		0.81	No
SLV 3	fin.	1281.26	4635	0.58	0	378	4599	5862	1479	4977		1.07	Si
SLV 1	ini.	-1583.82	7192	0.58	0	378	4599	5862	1479	4977		0.69	No
SLV 1	fin.	1289.9	5327	0.58	0	378	4599	5862	1479	4977		0.93	No
SLV 4	ini.	-1501.26	6059	0.58	0	378	4599	5862	1479	4977		0.82	No
SLV 4	fin.	1252	4517	0.58	0	378	4599	5862	1479	4977		1.1	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.838	SLV 1	No
V_SLV	0.692	SLV 1	No
PF_SLU	0.685	SLU 84	No
V_SLU	0.795	SLU 84	No

Trave di accoppiamento 24

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-9.728	1.271	1.22	2	0.78	-9.728	2.201	1.22	2	0.78	0.93	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	60.73	-2488	-0.00004	0.0002246	0.0035	0.78		2276.6	2276.6	No	37.49	Si
SLU 79	fin.	-2127.82	-6911	-0.0029923	0.0002246	0.0035	0.78		2281.47	2281.47	No	1.07	Si
SLU 81	ini.	60.71	-2474	-0.00004	0.0002246	0.0035	0.78		2276.6	2276.6	No	37.5	Si
SLU 81	fin.	-2179.88	-7000	-0.0031673	0.0002246	0.0035	0.78		2281.47	2281.47	No	1.05	Si
SLU 78	ini.	60.35	-2510	-0.0000398	0.0002246	0.0035	0.78		2276.6	2276.6	No	37.72	Si
SLU 78	fin.	-2136.77	-6948	-0.003022	0.0002246	0.0035	0.78		2281.47	2281.47	No	1.07	Si
SLU 80	ini.	59.84	-2475	-0.0000394	0.0002246	0.0035	0.78		2276.6	2276.6	No	38.05	Si
SLU 80	fin.	-2116.92	-6872	-0.0029564	0.0002246	0.0035	0.78		2281.47	2281.47	No	1.08	Si
SLU 77	ini.	61.24	-2523	-0.0000404	0.0002246	0.0035	0.78		2276.6	2276.6	No	37.18	Si
SLU 77	fin.	-2147.67	-6987	-0.0030585	0.0002246	0.0035	0.78		2281.47	2281.47	No	1.06	Si
SLU 75	ini.	59.71	-2477	-0.0000393	0.0002246	0.0035	0.78		2276.6	2276.6	No	38.13	Si
SLU 75	fin.	-2117.93	-6876	-0.0029597	0.0002246	0.0035	0.78		2281.47	2281.47	No	1.08	Si
SLU 84	ini.	60.46	-2493	-0.0000398	0.0002246	0.0035	0.78		2276.6	2276.6	No	37.65	Si
SLU 84	fin.	-2187.82	-7033	-0.0031942	0.0002246	0.0035	0.78		2281.47	2281.47	No	1.04	Si
SLU 74	ini.	60.6	-2491	-0.0000399	0.0002246	0.0035	0.78		2276.6	2276.6	No	37.57	Si
SLU 74	fin.	-2128.83	-6915	-0.0029956	0.0002246	0.0035	0.78		2281.47	2281.47	No	1.07	Si
SLU 83	ini.	61.35	-2507	-0.0000404	0.0002246	0.0035	0.78		2276.6	2276.6	No	37.11	Si
SLU 83	fin.	-2198.72	-7072	-0.0032311	0.0002246	0.0035	0.78		2281.47	2281.47	No	1.04	Si
SLU 82	ini.	59.82	-2461	-0.0000394	0.0002246	0.0035	0.78		2276.6	2276.6	No	38.06	Si
SLU 82	fin.	-2168.98	-6961	-0.0031304	0.0002246	0.0035	0.78		2281.47	2281.47	No	1.05	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	61.35	-1948	0.78	0	284	6185	4205	1989	6194	No	3.18	Si
SLU 83	fin.	-2198.72	-6960	0.78	0	284	6185	4205	1989	6194	No	0.89	No
SLU 74	ini.	60.6	-2035	0.78	0	284	6185	4205	1989	6194	No	3.04	Si
SLU 74	fin.	-2128.83	-6611	0.78	0	284	6185	4205	1989	6194	No	0.94	No
SLU 80	ini.	59.84	-2008	0.78	0	284	6185	4205	1989	6194	No	3.08	Si
SLU 80	fin.	-2116.92	-6585	0.78	0	284	6185	4205	1989	6194	No	0.94	No
SLU 75	ini.	59.71	-2010	0.78	0	284	6185	4205	1989	6194	No	3.08	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	fin.	-2117.93	-6587	0.78	0	284	6185	4205	1989	6194	No	0.94	No
SLU 79	ini.	60.73	-2033	0.78	0	284	6185	4205	1989	6194	No	3.05	Si
SLU 79	fin.	-2127.82	-6609	0.78	0	284	6185	4205	1989	6194	No	0.94	No
SLU 84	ini.	60.46	-1922	0.78	0	284	6185	4205	1989	6194	No	3.22	Si
SLU 84	fin.	-2187.82	-6936	0.78	0	284	6185	4205	1989	6194	No	0.89	No
SLU 77	ini.	61.24	-2076	0.78	0	284	6185	4205	1989	6194	No	2.98	Si
SLU 77	fin.	-2147.67	-6648	0.78	0	284	6185	4205	1989	6194	No	0.93	No
SLU 82	ini.	59.82	-1881	0.78	0	284	6185	4205	1989	6194	No	3.29	Si
SLU 82	fin.	-2168.98	-6899	0.78	0	284	6185	4205	1989	6194	No	0.9	No
SLU 81	ini.	60.71	-1907	0.78	0	284	6185	4205	1989	6194	No	3.25	Si
SLU 81	fin.	-2179.88	-6922	0.78	0	284	6185	4205	1989	6194	No	0.89	No
SLU 78	ini.	60.35	-2051	0.78	0	284	6185	4205	1989	6194	No	3.02	Si
SLU 78	fin.	-2136.77	-6625	0.78	0	284	6185	4205	1989	6194	No	0.93	No

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	98.79	-2832	-0.0000653	0.0003369	0.0035	0.78		2240.91	2240.91		22.68	Si
SLV 4	fin.	-2325.08	-7874	-0.0032973	0.0003369	0.0035	0.78		2246.04	2246.04		0.97	No
SLV 3	ini.	102.92	-2898	-0.0000681	0.0003369	0.0035	0.78		2240.91	2240.91		21.77	Si
SLV 3	fin.	-2377.11	-8060	-0.0034571	0.0003369	0.0035	0.78		2246.04	2246.04		0.94	No
SLD 12	ini.	-5.28	-2760	-0.0000034	0.0003369	0.0035	0.78		2246.04	2246.04		425.53	Si
SLD 12	fin.	-2040.68	-7009	-0.0024594	0.0003369	0.0035	0.78		2246.04	2246.04		1.1	Si
SLD 8	ini.	16.21	-2853	-0.0000106	0.0003369	0.0035	0.78		2240.91	2240.91		138.23	Si
SLD 8	fin.	-2153.37	-7385	-0.0027664	0.0003369	0.0035	0.78		2246.04	2246.04		1.04	Si
SLV 8	ini.	-24.11	-4239	-0.0000157	0.0003369	0.0035	0.78		2246.04	2246.04		93.16	Si
SLV 8	fin.	-3033.32	-10660	-0.0051796	0.0003369	0.0035	0.78		2246.04	2246.04		0.74	No
SLV 11	ini.	-72.12	-4057	-0.0000474	0.0003369	0.0035	0.78		2246.04	2246.04		31.14	Si
SLV 11	fin.	-2797.09	-9879	-0.0046005	0.0003369	0.0035	0.78		2246.04	2246.04		0.8	No
SLV 12	ini.	-74.76	-4014	-0.0000491	0.0003369	0.0035	0.78		2246.04	2246.04		30.04	Si
SLV 12	fin.	-2763.86	-9760	-0.0045165	0.0003369	0.0035	0.78		2246.04	2246.04		0.81	No
SLV 7	ini.	-21.47	-4282	-0.000014	0.0003369	0.0035	0.78		2246.04	2246.04		104.61	Si
SLV 7	fin.	-3066.55	-10779	-0.0052589	0.0003369	0.0035	0.78		2246.04	2246.04		0.73	No
SLD 7	ini.	17.36	-2871	-0.0000113	0.0003369	0.0035	0.78		2240.91	2240.91		129.06	Si
SLD 7	fin.	-2167.86	-7437	-0.0028089	0.0003369	0.0035	0.78		2246.04	2246.04		1.04	Si
SLD 11	ini.	-4.13	-2779	-0.0000027	0.0003369	0.0035	0.78		2246.04	2246.04		544.24	Si
SLD 11	fin.	-2055.18	-7061	-0.0024966	0.0003369	0.0035	0.78		2246.04	2246.04		1.09	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	102.92	-3677	0.78	0	427	6185	6307	1989	6612		1.8	Si
SLV 3	fin.	-2377.11	-6382	0.78	0	427	6185	6307	1989	6612		1.04	Si
SLV 4	ini.	98.79	-3556	0.78	0	427	6185	6307	1989	6612		1.86	Si
SLV 4	fin.	-2325.08	-6270	0.78	0	427	6185	6307	1989	6612		1.05	Si
SLD 11	ini.	-4.13	-2915	0.78	0	427	6185	6307	1989	6612		2.27	Si
SLD 11	fin.	-2055.18	-5675	0.78	0	427	6185	6307	1989	6612		1.17	Si
SLV 12	ini.	-74.76	-4542	0.78	0	427	6185	6307	1989	6612		1.46	Si
SLV 12	fin.	-2763.86	-7183	0.78	0	427	6185	6307	1989	6612		0.92	No
SLD 12	ini.	-5.28	-2881	0.78	0	427	6185	6307	1989	6612		2.29	Si
SLD 12	fin.	-2040.68	-5644	0.78	0	427	6185	6307	1989	6612		1.17	Si
SLD 7	ini.	17.36	-3180	0.78	0	427	6185	6307	1989	6612		2.08	Si
SLD 7	fin.	-2167.86	-5920	0.78	0	427	6185	6307	1989	6612		1.12	Si
SLV 11	ini.	-72.12	-4620	0.78	0	427	6185	6307	1989	6612		1.43	Si
SLV 11	fin.	-2797.09	-7255	0.78	0	427	6185	6307	1989	6612		0.91	No
SLV 8	ini.	-24.11	-5173	0.78	0	427	6185	6307	1989	6612		1.28	Si
SLV 8	fin.	-3033.32	-7768	0.78	0	427	6185	6307	1989	6612		0.85	No
SLD 8	ini.	16.21	-3146	0.78	0	427	6185	6307	1989	6612		2.1	Si
SLD 8	fin.	-2153.37	-5889	0.78	0	427	6185	6307	1989	6612		1.12	Si
SLV 7	ini.	-21.47	-5250	0.78	0	427	6185	6307	1989	6612		1.26	Si
SLV 7	fin.	-3066.55	-7840	0.78	0	427	6185	6307	1989	6612		0.84	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.732	SLV 7	No
V_SLV	0.843	SLV 7	No
PF_SLU	1.038	SLU 83	Si
V_SLU	0.89	SLU 83	No

Trave di accoppiamento 25

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-10.553	-3.284	1.07	2	0.93	-8.253	-3.284	1.07	2	0.93	2.3	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	187.39	1664	-0.0000887	0.0001872	0.0035	0.93		2372.99	2372.99	No	12.66	Si
SLU 83	fin.	-1722.63	-5485	-0.0011665	0.0001872	0.0035	0.93		2379.72	2379.72	No	1.38	Si
SLU 81	ini.	184.82	1651	-0.0000875	0.0001872	0.0035	0.93		2372.99	2372.99	No	12.84	Si
SLU 81	fin.	-1702.47	-5420	-0.0011478	0.0001872	0.0035	0.93		2379.72	2379.72	No	1.4	Si
SLU 76	ini.	175.25	1577	-0.0000828	0.0001872	0.0035	0.93		2372.99	2372.99	No	13.54	Si
SLU 76	fin.	-1640.88	-5229	-0.0010917	0.0001872	0.0035	0.93		2379.72	2379.72	No	1.45	Si
SLU 78	ini.	177.18	1589	-0.0000837	0.0001872	0.0035	0.93		2372.99	2372.99	No	13.39	Si
SLU 78	fin.	-1663.77	-5309	-0.0011124	0.0001872	0.0035	0.93		2379.72	2379.72	No	1.43	Si
SLU 82	ini.	187.09	1656	-0.0000886	0.0001872	0.0035	0.93		2372.99	2372.99	No	12.68	Si
SLU 82	fin.	-1707.35	-5438	-0.0011523	0.0001872	0.0035	0.93		2379.72	2379.72	No	1.39	Si
SLU 79	ini.	174.05	1580	-0.0000822	0.0001872	0.0035	0.93		2372.99	2372.99	No	13.63	Si
SLU 79	fin.	-1652.91	-5264	-0.0011025	0.0001872	0.0035	0.93		2379.72	2379.72	No	1.44	Si
SLU 80	ini.	176.31	1586	-0.0000833	0.0001872	0.0035	0.93		2372.99	2372.99	No	13.46	Si
SLU 80	fin.	-1657.78	-5282	-0.001107	0.0001872	0.0035	0.93		2379.72	2379.72	No	1.44	Si
SLU 77	ini.	174.92	1583	-0.0000826	0.0001872	0.0035	0.93		2372.99	2372.99	No	13.57	Si
SLU 77	fin.	-1658.9	-5291	-0.001108	0.0001872	0.0035	0.93		2379.72	2379.72	No	1.43	Si
SLU 75	ini.	174.62	1576	-0.0000825	0.0001872	0.0035	0.93		2372.99	2372.99	No	13.59	Si
SLU 75	fin.	-1643.61	-5244	-0.0010942	0.0001872	0.0035	0.93		2379.72	2379.72	No	1.45	Si
SLU 84	ini.	189.65	1669	-0.0000898	0.0001872	0.0035	0.93		2372.99	2372.99	No	12.51	Si
SLU 84	fin.	-1727.51	-5503	-0.001171	0.0001872	0.0035	0.93		2379.72	2379.72	No	1.38	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	187.39	4092	0.93	0	404	7375	6266	2372	7779	No	1.9	Si
SLU 83	fin.	-1722.63	-10101	0.93	0	404	7375	6266	2372	7779	No	0.77	No
SLU 77	ini.	174.92	3997	0.93	0	404	7375	6266	2372	7779	No	1.95	Si
SLU 77	fin.	-1658.9	-9734	0.93	0	404	7375	6266	2372	7779	No	0.8	No
SLU 81	ini.	184.82	4051	0.93	0	404	7375	6266	2372	7779	No	1.92	Si
SLU 81	fin.	-1702.47	-10004	0.93	0	404	7375	6266	2372	7779	No	0.78	No
SLU 76	ini.	175.25	3946	0.93	0	404	7375	6266	2372	7779	No	1.97	Si
SLU 76	fin.	-1640.88	-9649	0.93	0	404	7375	6266	2372	7779	No	0.81	No
SLU 78	ini.	177.18	4000	0.93	0	404	7375	6266	2372	7779	No	1.94	Si
SLU 78	fin.	-1663.77	-9767	0.93	0	404	7375	6266	2372	7779	No	0.8	No
SLU 82	ini.	187.09	4055	0.93	0	404	7375	6266	2372	7779	No	1.92	Si
SLU 82	fin.	-1707.35	-10037	0.93	0	404	7375	6266	2372	7779	No	0.77	No
SLU 79	ini.	174.05	3981	0.93	0	404	7375	6266	2372	7779	No	1.95	Si
SLU 79	fin.	-1652.91	-9691	0.93	0	404	7375	6266	2372	7779	No	0.8	No
SLU 84	ini.	189.65	4095	0.93	0	404	7375	6266	2372	7779	No	1.9	Si
SLU 84	fin.	-1727.51	-10134	0.93	0	404	7375	6266	2372	7779	No	0.77	No
SLU 80	ini.	176.31	3985	0.93	0	404	7375	6266	2372	7779	No	1.95	Si
SLU 80	fin.	-1657.78	-9724	0.93	0	404	7375	6266	2372	7779	No	0.8	No
SLU 75	ini.	174.62	3960	0.93	0	404	7375	6266	2372	7779	No	1.96	Si
SLU 75	fin.	-1643.61	-9671	0.93	0	404	7375	6266	2372	7779	No	0.8	No

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	619.42	2506	-0.0003123	0.0002807	0.0035	0.93		3396.93	3396.93		5.48	Si
SLV 15	fin.	-3250.33	-8746	-0.003334	0.0002807	0.0035	0.93		3402.99	3402.99		1.05	Si
SLD 14	ini.	397.55	1657	-0.0001925	0.0002807	0.0035	0.93		3396.93	3396.93		8.54	Si
SLD 14	fin.	-2079.96	-6061	-0.0014254	0.0002807	0.0035	0.93		3402.99	3402.99		1.64	Si
SLV 14	ini.	779.12	2451	-0.0004061	0.0002807	0.0035	0.93		3396.93	3396.93		4.36	Si
SLV 14	fin.	-3370.33	-9436	-0.0035975	0.0002807	0.0035	0.93		3402.99	3402.99		1.01	Si
SLV 13	ini.	785.95	2478	-0.0004102	0.0002807	0.0035	0.93		3396.93	3396.93		4.32	Si
SLV 13	fin.	-3405.29	-9507	-0.0036713	0.0002807	0.0035	0.93		3402.99	3402.99		1	No
SLV 16	ini.	612.58	2478	-0.0003084	0.0002807	0.0035	0.93		3396.93	3396.93		5.55	Si
SLV 16	fin.	-3215.37	-8675	-0.0032547	0.0002807	0.0035	0.93		3402.99	3402.99		1.06	Si
SLD 16	ini.	325.9	1668	-0.000156	0.0002807	0.0035	0.93		3396.93	3396.93		10.42	Si
SLD 16	fin.	-2012.51	-5733	-0.0013578	0.0002807	0.0035	0.93		3402.99	3402.99		1.69	Si
SLV 9	ini.	568.25	1451	-0.0002837	0.0002807	0.0035	0.93		3396.93	3396.93		5.98	Si
SLV 9	fin.	-2043.55	-6495	-0.0013886	0.0002807	0.0035	0.93		3402.99	3402.99		1.67	Si
SLD 13	ini.	400.48	1669	-0.000194	0.0002807	0.0035	0.93		3396.93	3396.93		8.48	Si
SLD 13	fin.	-2094.96	-6091	-0.0014408	0.0002807	0.0035	0.93		3402.99	3402.99		1.62	Si
SLV 10	ini.	563.88	1434	-0.0002812	0.0002807	0.0035	0.93		3396.93	3396.93		6.02	Si
SLV 10	fin.	-2021.22	-6450	-0.0013664	0.0002807	0.0035	0.93		3402.99	3402.99		1.68	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 15	ini.	328.83	1680	-0.0001575	0.0002807	0.0035	0.93		3396.93	3396.93		10.33	Si
SLD 15	fin.	-2027.51	-5764	-0.0013727	0.0002807	0.0035	0.93		3402.99	3402.99		1.68	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 13	ini.	400.48	2446	0.93	0	607	7375	9399	2372	7981		3.26	Si
SLD 13	fin.	-2094.96	-8489	0.93	0	607	7375	9399	2372	7981		0.94	No
SLV 16	ini.	612.58	2561	0.93	0	607	7375	9399	2372	7981		3.12	Si
SLV 16	fin.	-3215.37	-10413	0.93	0	607	7375	9399	2372	7981		0.77	No
SLD 14	ini.	397.55	2440	0.93	0	607	7375	9399	2372	7981		3.27	Si
SLD 14	fin.	-2079.96	-8453	0.93	0	607	7375	9399	2372	7981		0.94	No
SLD 15	ini.	328.83	2675	0.93	0	607	7375	9399	2372	7981		2.98	Si
SLD 15	fin.	-2027.51	-8227	0.93	0	607	7375	9399	2372	7981		0.97	No
SLV 9	ini.	568.25	1734	0.93	0	607	7375	9399	2372	7981		4.6	Si
SLV 9	fin.	-2043.55	-8845	0.93	0	607	7375	9399	2372	7981		0.9	No
SLD 16	ini.	325.9	2668	0.93	0	607	7375	9399	2372	7981		2.99	Si
SLD 16	fin.	-2012.51	-8191	0.93	0	607	7375	9399	2372	7981		0.97	No
SLV 14	ini.	779.12	2029	0.93	0	607	7375	9399	2372	7981		3.93	Si
SLV 14	fin.	-3370.33	-11023	0.93	0	607	7375	9399	2372	7981		0.72	No
SLV 15	ini.	619.42	2576	0.93	0	607	7375	9399	2372	7981		3.1	Si
SLV 15	fin.	-3250.33	-10497	0.93	0	607	7375	9399	2372	7981		0.76	No
SLV 13	ini.	785.95	2045	0.93	0	607	7375	9399	2372	7981		3.9	Si
SLV 13	fin.	-3405.29	-11107	0.93	0	607	7375	9399	2372	7981		0.72	No
SLV 10	ini.	563.88	1724	0.93	0	607	7375	9399	2372	7981		4.63	Si
SLV 10	fin.	-2021.22	-8791	0.93	0	607	7375	9399	2372	7981		0.91	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.999	SLV 13	No
V_SLV	0.719	SLV 13	No
PF_SLU	1.378	SLU 84	Si
V_SLU	0.768	SLU 84	No

Trave di accoppiamento 26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-7.463	-3.284	-0.98	1.02	2	-6.463	-3.284	-0.98	1.02	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	375.89	-15019	-0.0000377	0.0001872	0.0035	2		10722.86	10722.86	No	28.53	Si
SLU 84	fin.	905.79	-10851	-0.000093	0.0001872	0.0035	2		10722.86	10722.86	No	11.84	Si
SLU 80	ini.	328.13	-14539	-0.0000329	0.0001872	0.0035	2		10722.86	10722.86	No	32.68	Si
SLU 80	fin.	853.18	-10471	-0.0000874	0.0001872	0.0035	2		10722.86	10722.86	No	12.57	Si
SLU 79	ini.	311.14	-14547	-0.0000312	0.0001872	0.0035	2		10722.86	10722.86	No	34.46	Si
SLU 79	fin.	871.35	-10545	-0.0000893	0.0001872	0.0035	2		10722.86	10722.86	No	12.31	Si
SLU 78	ini.	311.2	-14601	-0.0000312	0.0001872	0.0035	2		10722.86	10722.86	No	34.46	Si
SLU 78	fin.	869.86	-10543	-0.0000891	0.0001872	0.0035	2		10722.86	10722.86	No	12.33	Si
SLU 75	ini.	298.68	-14462	-0.0000299	0.0001872	0.0035	2		10722.86	10722.86	No	35.9	Si
SLU 75	fin.	859.54	-10446	-0.000088	0.0001872	0.0035	2		10722.86	10722.86	No	12.48	Si
SLU 83	ini.	358.9	-15027	-0.000036	0.0001872	0.0035	2		10722.86	10722.86	No	29.88	Si
SLU 83	fin.	923.95	-10925	-0.0000949	0.0001872	0.0035	2		10722.86	10722.86	No	11.61	Si
SLU 77	ini.	294.21	-14609	-0.0000294	0.0001872	0.0035	2		10722.86	10722.86	No	36.45	Si
SLU 77	fin.	888.03	-10617	-0.0000911	0.0001872	0.0035	2		10722.86	10722.86	No	12.07	Si
SLU 82	ini.	363.37	-14880	-0.0000365	0.0001872	0.0035	2		10722.86	10722.86	No	29.51	Si
SLU 82	fin.	895.47	-10755	-0.0000919	0.0001872	0.0035	2		10722.86	10722.86	No	11.97	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	281.69	-14470	-0.0000282	0.0001872	0.0035	2		10722.86	10722.86	No	38.07	Si
SLU 74	fin.	877.71	-10520	-0.00009	0.0001872	0.0035	2		10722.86	10722.86	No	12.22	Si
SLU 81	ini.	346.39	-14888	-0.0000347	0.0001872	0.0035	2		10722.86	10722.86	No	30.96	Si
SLU 81	fin.	913.63	-10829	-0.0000938	0.0001872	0.0035	2		10722.86	10722.86	No	11.74	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 59	ini.	425.27	-3488	2	0	1304	7930	13475	5100	9234	No	2.65	Si
SLU 59	fin.	673.7	-3495	2	0	1304	7930	13475	5100	9234	No	2.64	Si
SLU 84	ini.	375.89	-3462	2	0	1304	7930	13475	5100	9234	No	2.67	Si
SLU 84	fin.	905.79	-3281	2	0	1304	7930	13475	5100	9234	No	2.81	Si
SLU 57	ini.	408.34	-3448	2	0	1304	7930	13475	5100	9234	No	2.68	Si
SLU 57	fin.	690.38	-3448	2	0	1304	7930	13475	5100	9234	No	2.68	Si
SLU 52	ini.	411.56	-3453	2	0	1304	7930	13475	5100	9234	No	2.67	Si
SLU 52	fin.	640.95	-3490	2	0	1304	7930	13475	5100	9234	No	2.65	Si
SLU 55	ini.	424.08	-3504	2	0	1304	7930	13475	5100	9234	No	2.64	Si
SLU 55	fin.	651.27	-3526	2	0	1304	7930	13475	5100	9234	No	2.62	Si
SLU 61	ini.	460.52	-3549	2	0	1304	7930	13475	5100	9234	No	2.6	Si
SLU 61	fin.	715.98	-3520	2	0	1304	7930	13475	5100	9234	No	2.62	Si
SLU 62	ini.	456.05	-3499	2	0	1304	7930	13475	5100	9234	No	2.64	Si
SLU 62	fin.	744.47	-3455	2	0	1304	7930	13475	5100	9234	No	2.67	Si
SLU 54	ini.	395.83	-3396	2	0	1304	7930	13475	5100	9234	No	2.72	Si
SLU 54	fin.	680.06	-3412	2	0	1304	7930	13475	5100	9234	No	2.71	Si
SLU 63	ini.	473.04	-3601	2	0	1304	7930	13475	5100	9234	No	2.56	Si
SLU 63	fin.	726.3	-3556	2	0	1304	7930	13475	5100	9234	No	2.6	Si
SLU 60	ini.	443.54	-3448	2	0	1304	7930	13475	5100	9234	No	2.68	Si
SLU 60	fin.	734.15	-3419	2	0	1304	7930	13475	5100	9234	No	2.7	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	5424.75	-17962	-0.0006655	0.0002807	0.0035	2		15635.95	15635.95		2.88	Si
SLV 15	fin.	-1901.68	-5297	-0.0001996	0.0002807	0.0035	2		15648.46	15648.46		8.23	Si
SLV 4	ini.	-4800.48	-2324	-0.0005718	0.0002807	0.0035	2		15648.46	15648.46		3.26	Si
SLV 4	fin.	2499.98	-8738	-0.0002687	0.0002807	0.0035	2		15635.95	15635.95		6.25	Si
SLD 15	ini.	2418.73	-13419	-0.0002591	0.0002807	0.0035	2		15635.95	15635.95		6.46	Si
SLD 15	fin.	-504.18	-6383	-0.0000506	0.0002807	0.0035	2		15648.46	15648.46		31.04	Si
SLV 13	ini.	5147.31	-17731	-0.0006235	0.0002807	0.0035	2		15635.95	15635.95		3.04	Si
SLV 13	fin.	-1412.08	-5654	-0.0001457	0.0002807	0.0035	2		15648.46	15648.46		11.08	Si
SLV 16	ini.	5276.54	-17771	-0.0006429	0.0002807	0.0035	2		15635.95	15635.95		2.96	Si
SLV 16	fin.	-1781.93	-5469	-0.0001862	0.0002807	0.0035	2		15648.46	15648.46		8.78	Si
SLV 2	ini.	-5077.91	-2094	-0.0006126	0.0002807	0.0035	2		15648.46	15648.46		3.08	Si
SLV 2	fin.	2989.58	-9095	-0.000328	0.0002807	0.0035	2		15635.95	15635.95		5.23	Si
SLV 14	ini.	4999.11	-17541	-0.0006015	0.0002807	0.0035	2		15635.95	15635.95		3.13	Si
SLV 14	fin.	-1292.34	-5826	-0.0001328	0.0002807	0.0035	2		15648.46	15648.46		12.11	Si
SLV 3	ini.	-4652.27	-2514	-0.0005504	0.0002807	0.0035	2		15648.46	15648.46		3.36	Si
SLV 3	fin.	2380.24	-8565	-0.0002546	0.0002807	0.0035	2		15635.95	15635.95		6.57	Si
SLV 1	ini.	-4929.7	-2284	-0.0005907	0.0002807	0.0035	2		15648.46	15648.46		3.17	Si
SLV 1	fin.	2869.84	-8922	-0.0003132	0.0002807	0.0035	2		15635.95	15635.95		5.45	Si
SLD 16	ini.	2355.12	-13338	-0.0002517	0.0002807	0.0035	2		15635.95	15635.95		6.64	Si
SLD 16	fin.	-452.78	-6457	-0.0000453	0.0002807	0.0035	2		15648.46	15648.46		34.56	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 15	ini.	2418.73	-9705	2	0	1957	7930	20213	5100	9886		1.02	Si
SLD 15	fin.	-504.18	-9706	2	0	1957	7930	20213	5100	9886		1.02	Si
SLV 15	ini.	5424.75	-19660	2	0	1957	7930	20213	5100	9886		0.5	No
SLV 15	fin.	-1901.68	-19619	2	0	1957	7930	20213	5100	9886		0.5	No
SLV 11	ini.	2194.68	-9561	2	0	1957	7930	20213	5100	9886		1.03	Si
SLV 11	fin.	-952.56	-9477	2	0	1957	7930	20213	5100	9886		1.04	Si
SLV 16	ini.	5276.54	-19037	2	0	1957	7930	20213	5100	9886		0.52	No
SLV 16	fin.	-1781.93	-18998	2	0	1957	7930	20213	5100	9886		0.52	No
SLV 2	ini.	-5077.91	15131	2	0	1957	7930	20213	5100	9886		0.65	No
SLV 2	fin.	2989.58	15026	2	0	1957	7930	20213	5100	9886		0.66	No
SLV 3	ini.	-4652.27	13208	2	0	1957	7930	20213	5100	9886		0.75	No
SLV 3	fin.	2380.24	13167	2	0	1957	7930	20213	5100	9886		0.75	No
SLV 1	ini.	-4929.7	14508	2	0	1957	7930	20213	5100	9886		0.68	No
SLV 1	fin.	2869.84	14406	2	0	1957	7930	20213	5100	9886		0.69	No
SLV 14	ini.	4999.11	-17737	2	0	1957	7930	20213	5100	9886		0.56	No
SLV 14	fin.	-1292.34	-17759	2	0	1957	7930	20213	5100	9886		0.56	No
SLV 13	ini.	5147.31	-18360	2	0	1957	7930	20213	5100	9886		0.54	No
SLV 13	fin.	-1412.08	-18380	2	0	1957	7930	20213	5100	9886		0.54	No
SLV 4	ini.	-4800.48	13831	2	0	1957	7930	20213	5100	9886		0.71	No
SLV 4	fin.	2499.98	13787	2	0	1957	7930	20213	5100	9886		0.72	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.882	SLV 15	Si
V_SLV	0.503	SLV 15	No
PF_SLU	11.605	SLU 83	Si
V_SLU	2.564	SLU 63	Si

Trave di accoppiamento 27

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-7.463	-3.284	1.42	2	0.58	-6.463	-3.284	1.42	2	0.58	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-413.56	-2941	-0.0006264	0.0001872	0.0035	0.58		958.44	958.44	No	2.32	Si
SLU 82	fin.	-29.72	-1623	-0.0000354	0.0001872	0.0035	0.58		958.44	958.44	No	32.24	Si
SLU 75	ini.	-402.02	-2849	-0.0006048	0.0001872	0.0035	0.58		958.44	958.44	No	2.38	Si
SLU 75	fin.	-23.4	-1548	-0.0000278	0.0001872	0.0035	0.58		958.44	958.44	No	40.95	Si
SLU 77	ini.	-404.91	-2874	-0.0006102	0.0001872	0.0035	0.58		958.44	958.44	No	2.37	Si
SLU 77	fin.	-26.47	-1561	-0.0000315	0.0001872	0.0035	0.58		958.44	958.44	No	36.21	Si
SLU 80	ini.	-400.32	-2845	-0.0006016	0.0001872	0.0035	0.58		958.44	958.44	No	2.39	Si
SLU 80	fin.	-27.63	-1577	-0.0000329	0.0001872	0.0035	0.58		958.44	958.44	No	34.69	Si
SLU 84	ini.	-417.99	-2971	-0.0006347	0.0001872	0.0035	0.58		958.44	958.44	No	2.29	Si
SLU 84	fin.	-30.73	-1642	-0.0000366	0.0001872	0.0035	0.58		958.44	958.44	No	31.19	Si
SLU 79	ini.	-398.77	-2840	-0.0005988	0.0001872	0.0035	0.58		958.44	958.44	No	2.4	Si
SLU 79	fin.	-29.69	-1572	-0.0000354	0.0001872	0.0035	0.58		958.44	958.44	No	32.29	Si
SLU 83	ini.	-416.44	-2966	-0.0006318	0.0001872	0.0035	0.58		958.44	958.44	No	2.3	Si
SLU 83	fin.	-32.79	-1636	-0.0000391	0.0001872	0.0035	0.58		958.44	958.44	No	29.23	Si
SLU 74	ini.	-400.47	-2844	-0.0006019	0.0001872	0.0035	0.58		958.44	958.44	No	2.39	Si
SLU 74	fin.	-25.46	-1543	-0.0000303	0.0001872	0.0035	0.58		958.44	958.44	No	37.64	Si
SLU 78	ini.	-406.46	-2879	-0.0006131	0.0001872	0.0035	0.58		958.44	958.44	No	2.36	Si
SLU 78	fin.	-24.41	-1567	-0.000029	0.0001872	0.0035	0.58		958.44	958.44	No	39.26	Si
SLU 81	ini.	-412.01	-2936	-0.0006235	0.0001872	0.0035	0.58		958.44	958.44	No	2.33	Si
SLU 81	fin.	-31.78	-1617	-0.0000379	0.0001872	0.0035	0.58		958.44	958.44	No	30.16	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 76	ini.	-396.91	4848	0.58	0	252	4599	3908	1479	4851	No	1	Si
SLU 76	fin.	-25.25	-5061	0.58	0	252	4599	3908	1479	4851	No	0.96	No
SLU 75	ini.	-402.02	4882	0.58	0	252	4599	3908	1479	4851	No	0.99	No
SLU 75	fin.	-23.4	-5036	0.58	0	252	4599	3908	1479	4851	No	0.96	No
SLU 82	ini.	-413.56	5033	0.58	0	252	4599	3908	1479	4851	No	0.96	No
SLU 82	fin.	-29.72	-5209	0.58	0	252	4599	3908	1479	4851	No	0.93	No
SLU 84	ini.	-417.99	5078	0.58	0	252	4599	3908	1479	4851	No	0.96	No
SLU 84	fin.	-30.73	-5258	0.58	0	252	4599	3908	1479	4851	No	0.92	No
SLU 77	ini.	-404.91	4907	0.58	0	252	4599	3908	1479	4851	No	0.99	No
SLU 77	fin.	-26.47	-5027	0.58	0	252	4599	3908	1479	4851	No	0.96	No
SLU 81	ini.	-412.01	5013	0.58	0	252	4599	3908	1479	4851	No	0.97	No
SLU 81	fin.	-31.78	-5152	0.58	0	252	4599	3908	1479	4851	No	0.94	No
SLU 83	ini.	-416.44	5058	0.58	0	252	4599	3908	1479	4851	No	0.96	No
SLU 83	fin.	-32.79	-5201	0.58	0	252	4599	3908	1479	4851	No	0.93	No
SLU 78	ini.	-406.46	4926	0.58	0	252	4599	3908	1479	4851	No	0.98	No
SLU 78	fin.	-24.41	-5084	0.58	0	252	4599	3908	1479	4851	No	0.95	No
SLU 80	ini.	-400.32	4880	0.58	0	252	4599	3908	1479	4851	No	0.99	No
SLU 80	fin.	-27.63	-5071	0.58	0	252	4599	3908	1479	4851	No	0.96	No
SLU 79	ini.	-398.77	4861	0.58	0	252	4599	3908	1479	4851	No	1	No
SLU 79	fin.	-29.69	-5014	0.58	0	252	4599	3908	1479	4851	No	0.97	No

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	271.16	374	-0.0003584	0.0002807	0.0035	0.58		1324.07	1324.07		4.88	Si
SLV 15	fin.	-783.66	-5822	-0.0013644	0.0002807	0.0035	0.58		1327.74	1327.74		1.69	Si
SLV 6	ini.	-609.2	-3301	-0.0009632	0.0002807	0.0035	0.58		1327.74	1327.74		2.18	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 6	fin.	276.47	1269	-0.0003665	0.0002807	0.0035	0.58		1324.07	1324.07		4.79	Si
SLV 5	ini.	-589.62	-3214	-0.0009226	0.0002807	0.0035	0.58		1327.74	1327.74		2.25	Si
SLV 5	fin.	258.08	1149	-0.0003388	0.0002807	0.0035	0.58		1324.07	1324.07		5.13	Si
SLV 1	ini.	-764.28	-3995	-0.0013157	0.0002807	0.0035	0.58		1327.74	1327.74		1.74	Si
SLV 1	fin.	714.52	3479	-0.0012007	0.0002807	0.0035	0.58		1324.07	1324.07		1.85	Si
SLV 14	ini.	120.36	-239	-0.0001483	0.0002807	0.0035	0.58		1324.07	1324.07		11	Si
SLV 14	fin.	-713.51	-5046	-0.0011936	0.0002807	0.0035	0.58		1327.74	1327.74		1.86	Si
SLV 3	ini.	-644.15	-3518	-0.0010376	0.0002807	0.0035	0.58		1327.74	1327.74		2.06	Si
SLV 3	fin.	673.16	2891	-0.0011057	0.0002807	0.0035	0.58		1324.07	1324.07		1.97	Si
SLV 16	ini.	240.49	238	-0.0003128	0.0002807	0.0035	0.58		1324.07	1324.07		5.51	Si
SLV 16	fin.	-754.86	-5633	-0.0012925	0.0002807	0.0035	0.58		1327.74	1327.74		1.76	Si
SLV 4	ini.	-674.81	-3655	-0.0011052	0.0002807	0.0035	0.58		1327.74	1327.74		1.97	Si
SLV 4	fin.	701.96	3080	-0.0011714	0.0002807	0.0035	0.58		1324.07	1324.07		1.89	Si
SLV 2	ini.	-794.95	-4131	-0.0013933	0.0002807	0.0035	0.58		1327.74	1327.74		1.67	Si
SLV 2	fin.	743.31	3667	-0.0012695	0.0002807	0.0035	0.58		1324.07	1324.07		1.78	Si
SLV 13	ini.	151.02	-102	-0.0001884	0.0002807	0.0035	0.58		1324.07	1324.07		8.77	Si
SLV 13	fin.	-742.31	-5234	-0.0012619	0.0002807	0.0035	0.58		1327.74	1327.74		1.79	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	-764.28	6225	0.58	0	378	4599	5862	1479	4977		0.8	No
SLV 1	fin.	714.52	499	0.58	0	378	4599	5862	1479	4977		9.98	Si
SLV 4	ini.	-674.81	5741	0.58	0	378	4599	5862	1479	4977		0.87	No
SLV 4	fin.	701.96	-157	0.58	0	378	4599	5862	1479	4977		31.69	Si
SLV 11	ini.	85.41	1357	0.58	0	378	4599	5862	1479	4977		3.67	Si
SLV 11	fin.	-316.82	-5983	0.58	0	378	4599	5862	1479	4977		0.83	No
SLV 15	ini.	271.16	158	0.58	0	378	4599	5862	1479	4977		31.5	Si
SLV 15	fin.	-783.66	-7545	0.58	0	378	4599	5862	1479	4977		0.66	No
SLV 16	ini.	240.49	301	0.58	0	378	4599	5862	1479	4977		16.55	Si
SLV 16	fin.	-754.86	-7351	0.58	0	378	4599	5862	1479	4977		0.68	No
SLV 3	ini.	-644.15	5598	0.58	0	378	4599	5862	1479	4977		0.89	No
SLV 3	fin.	673.16	-351	0.58	0	378	4599	5862	1479	4977		14.18	Si
SLV 13	ini.	151.02	785	0.58	0	378	4599	5862	1479	4977		6.34	Si
SLV 13	fin.	-742.31	-6695	0.58	0	378	4599	5862	1479	4977		0.74	No
SLV 12	ini.	65.83	1448	0.58	0	378	4599	5862	1479	4977		3.44	Si
SLV 12	fin.	-298.43	-5859	0.58	0	378	4599	5862	1479	4977		0.85	No
SLV 2	ini.	-794.95	6368	0.58	0	378	4599	5862	1479	4977		0.78	No
SLV 2	fin.	743.31	693	0.58	0	378	4599	5862	1479	4977		7.18	Si
SLV 14	ini.	120.36	928	0.58	0	378	4599	5862	1479	4977		5.37	Si
SLV 14	fin.	-713.51	-6501	0.58	0	378	4599	5862	1479	4977		0.77	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.67	SLV 2	Si
V_SLV	0.66	SLV 15	No
PF_SLU	2.293	SLU 84	Si
V_SLU	0.923	SLU 84	No

Trave di accoppiamento 28

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-3.233	-3.284	-0.98	1.02	2	-2.233	-3.284	-0.98	1.02	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	693.3	-1619	-0.0000705	0.0001872	0.0035	2		10722.86	10722.86	No	15.47	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	fin.	1680.93	-1753	-0.0001791	0.0001872	0.0035	2		10722.86	10722.86	No	6.38	Si
SLU 83	ini.	735.48	-1668	-0.0000749	0.0001872	0.0035	2		10722.86	10722.86	No	14.58	Si
SLU 83	fin.	1699.06	-1773	-0.0001812	0.0001872	0.0035	2		10722.86	10722.86	No	6.31	Si
SLU 73	ini.	609.36	-1761	-0.0000617	0.0001872	0.0035	2		10722.86	10722.86	No	17.6	Si
SLU 73	fin.	1669.76	-1931	-0.0001778	0.0001872	0.0035	2		10722.86	10722.86	No	6.42	Si
SLU 81	ini.	728.52	-1645	-0.0000742	0.0001872	0.0035	2		10722.86	10722.86	No	14.72	Si
SLU 81	fin.	1683.69	-1751	-0.0001794	0.0001872	0.0035	2		10722.86	10722.86	No	6.37	Si
SLU 84	ini.	691.75	-1791	-0.0000703	0.0001872	0.0035	2		10722.86	10722.86	No	15.5	Si
SLU 84	fin.	1720.12	-1922	-0.0001837	0.0001872	0.0035	2		10722.86	10722.86	No	6.23	Si
SLU 78	ini.	649.58	-1742	-0.0000659	0.0001872	0.0035	2		10722.86	10722.86	No	16.51	Si
SLU 78	fin.	1701.98	-1902	-0.0001815	0.0001872	0.0035	2		10722.86	10722.86	No	6.3	Si
SLU 75	ini.	642.63	-1719	-0.0000652	0.0001872	0.0035	2		10722.86	10722.86	No	16.69	Si
SLU 75	fin.	1686.61	-1881	-0.0001798	0.0001872	0.0035	2		10722.86	10722.86	No	6.36	Si
SLU 80	ini.	652.41	-1724	-0.0000662	0.0001872	0.0035	2		10722.86	10722.86	No	16.44	Si
SLU 80	fin.	1686.47	-1876	-0.0001797	0.0001872	0.0035	2		10722.86	10722.86	No	6.36	Si
SLU 82	ini.	684.8	-1768	-0.0000696	0.0001872	0.0035	2		10722.86	10722.86	No	15.66	Si
SLU 82	fin.	1704.74	-1900	-0.0001819	0.0001872	0.0035	2		10722.86	10722.86	No	6.29	Si
SLU 76	ini.	616.31	-1784	-0.0000625	0.0001872	0.0035	2		10722.86	10722.86	No	17.4	Si
SLU 76	fin.	1685.13	-1953	-0.0001796	0.0001872	0.0035	2		10722.86	10722.86	No	6.36	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	691.75	307	2	0	1304	7930	13475	5100	9234	No	30.06	Si
SLU 84	fin.	1720.12	1671	2	0	1304	7930	13475	5100	9234	No	5.53	Si
SLU 73	ini.	609.36	474	2	0	1304	7930	13475	5100	9234	No	19.5	Si
SLU 73	fin.	1669.76	1659	2	0	1304	7930	13475	5100	9234	No	5.57	Si
SLU 74	ini.	686.35	329	2	0	1304	7930	13475	5100	9234	No	28.1	Si
SLU 74	fin.	1665.55	1563	2	0	1304	7930	13475	5100	9234	No	5.91	Si
SLU 75	ini.	642.63	420	2	0	1304	7930	13475	5100	9234	No	21.97	Si
SLU 75	fin.	1686.61	1657	2	0	1304	7930	13475	5100	9234	No	5.57	Si
SLU 78	ini.	649.58	412	2	0	1304	7930	13475	5100	9234	No	22.43	Si
SLU 78	fin.	1701.98	1680	2	0	1304	7930	13475	5100	9234	No	5.5	Si
SLU 83	ini.	735.48	215	2	0	1304	7930	13475	5100	9234	No	42.87	Si
SLU 83	fin.	1699.06	1577	2	0	1304	7930	13475	5100	9234	No	5.86	Si
SLU 76	ini.	616.31	465	2	0	1304	7930	13475	5100	9234	No	19.87	Si
SLU 76	fin.	1685.13	1681	2	0	1304	7930	13475	5100	9234	No	5.49	Si
SLU 80	ini.	652.41	395	2	0	1304	7930	13475	5100	9234	No	23.38	Si
SLU 80	fin.	1686.47	1642	2	0	1304	7930	13475	5100	9234	No	5.62	Si
SLU 77	ini.	693.3	320	2	0	1304	7930	13475	5100	9234	No	28.87	Si
SLU 77	fin.	1680.93	1586	2	0	1304	7930	13475	5100	9234	No	5.82	Si
SLU 82	ini.	684.8	316	2	0	1304	7930	13475	5100	9234	No	29.23	Si
SLU 82	fin.	1704.74	1648	2	0	1304	7930	13475	5100	9234	No	5.6	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	2357.56	-3858	-0.0002519	0.0002807	0.0035	2		15635.95	15635.95		6.63	Si
SLV 13	fin.	-836.44	-886	-0.0000847	0.0002807	0.0035	2		15648.46	15648.46		18.71	Si
SLD 4	ini.	-352.56	152	-0.0000352	0.0002807	0.0035	2		15648.46	15648.46		44.38	Si
SLD 4	fin.	2030.12	-1289	-0.0002143	0.0002807	0.0035	2		15635.95	15635.95		7.7	Si
SLV 15	ini.	2785.65	-1659	-0.0003029	0.0002807	0.0035	2		15635.95	15635.95		5.61	Si
SLV 15	fin.	-734.43	1247	-0.0000742	0.0002807	0.0035	2		15648.46	15648.46		21.31	Si
SLV 16	ini.	2586.37	-1882	-0.0002789	0.0002807	0.0035	2		15635.95	15635.95		6.05	Si
SLV 16	fin.	-707.22	920	-0.0000714	0.0002807	0.0035	2		15648.46	15648.46		22.13	Si
SLV 2	ini.	-1870.18	-452	-0.0001961	0.0002807	0.0035	2		15648.46	15648.46		8.37	Si
SLV 2	fin.	3071.65	-3593	-0.0003382	0.0002807	0.0035	2		15635.95	15635.95		5.09	Si
SLV 14	ini.	2158.28	-4081	-0.0002289	0.0002807	0.0035	2		15635.95	15635.95		7.24	Si
SLV 14	fin.	-809.24	-1213	-0.0000819	0.0002807	0.0035	2		15648.46	15648.46		19.34	Si
SLD 3	ini.	-267.03	248	-0.0000266	0.0002807	0.0035	2		15648.46	15648.46		58.6	Si
SLD 3	fin.	2018.44	-1149	-0.0002129	0.0002807	0.0035	2		15635.95	15635.95		7.75	Si
SLV 3	ini.	-1242.81	1970	-0.0001275	0.0002807	0.0035	2		15648.46	15648.46		12.59	Si
SLV 3	fin.	3146.46	-1132	-0.0003476	0.0002807	0.0035	2		15635.95	15635.95		4.97	Si
SLV 1	ini.	-1670.91	-229	-0.0001739	0.0002807	0.0035	2		15648.46	15648.46		9.37	Si
SLV 1	fin.	3044.45	-3266	-0.0003348	0.0002807	0.0035	2		15635.95	15635.95		5.14	Si
SLV 4	ini.	-1442.09	1747	-0.000149	0.0002807	0.0035	2		15648.46	15648.46		10.85	Si
SLV 4	fin.	3173.66	-1459	-0.000351	0.0002807	0.0035	2		15635.95	15635.95		4.93	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 4	ini.	-352.56	3443	2	0	1957	7930	20213	5100	9886		2.87	Si
SLD 4	fin.	2030.12	4036	2	0	1957	7930	20213	5100	9886		2.45	Si
SLV 3	ini.	-1242.81	7222	2	0	1957	7930	20213	5100	9886		1.37	Si
SLV 3	fin.	3146.46	7708	2	0	1957	7930	20213	5100	9886		1.28	Si
SLV 16	ini.	2586.37	-6722	2	0	1957	7930	20213	5100	9886		1.47	Si
SLV 16	fin.	-707.22	-5459	2	0	1957	7930	20213	5100	9886		1.81	Si
SLD 2	ini.	-541.35	3544	2	0	1957	7930	20213	5100	9886		2.79	Si
SLD 2	fin.	1979.72	3963	2	0	1957	7930	20213	5100	9886		2.49	Si
SLV 15	ini.	2785.65	-7053	2	0	1957	7930	20213	5100	9886		1.4	Si
SLV 15	fin.	-734.43	-5790	2	0	1957	7930	20213	5100	9886		1.71	Si
SLV 4	ini.	-1442.09	7552	2	0	1957	7930	20213	5100	9886		1.31	Si
SLV 4	fin.	3173.66	8038	2	0	1957	7930	20213	5100	9886		1.23	Si
SLV 13	ini.	2357.56	-6810	2	0	1957	7930	20213	5100	9886		1.45	Si
SLV 13	fin.	-836.44	-5958	2	0	1957	7930	20213	5100	9886		1.66	Si
SLV 2	ini.	-1870.18	7795	2	0	1957	7930	20213	5100	9886		1.27	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	fin.	3071.65	7870	2	0	1957	7930	20213	5100	9886		1.26	Si
SLV 1	ini.	-1670.91	7464	2	0	1957	7930	20213	5100	9886		1.32	Si
SLV 1	fin.	3044.45	7539	2	0	1957	7930	20213	5100	9886		1.31	Si
SLV 14	ini.	2158.28	-6480	2	0	1957	7930	20213	5100	9886		1.53	Si
SLV 14	fin.	-809.24	-5628	2	0	1957	7930	20213	5100	9886		1.76	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.927	SLV 4	Si
V_SLV	1.23	SLV 4	Si
PF_SLU	6.234	SLU 84	Si
V_SLU	5.492	SLU 76	Si

Trave di accoppiamento 29

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-3.233	-3.284	1.42	2	0.58	-2.233	-3.284	1.42	2	0.58	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-533.19	-2003	-0.0008636	0.0001872	0.0035	0.58		958.44	958.44	No	1.8	Si
SLU 82	fin.	-51.82	-413	-0.0000624	0.0001872	0.0035	0.58		958.44	958.44	No	18.5	Si
SLU 84	ini.	-537.74	-2021	-0.0008731	0.0001872	0.0035	0.58		958.44	958.44	No	1.78	Si
SLU 84	fin.	-52.67	-418	-0.0000635	0.0001872	0.0035	0.58		958.44	958.44	No	18.2	Si
SLU 77	ini.	-528.96	-1973	-0.0008548	0.0001872	0.0035	0.58		958.44	958.44	No	1.81	Si
SLU 77	fin.	-50.06	-410	-0.0000603	0.0001872	0.0035	0.58		958.44	958.44	No	19.15	Si
SLU 78	ini.	-524.59	-1985	-0.0008457	0.0001872	0.0035	0.58		958.44	958.44	No	1.83	Si
SLU 78	fin.	-43.18	-384	-0.0000518	0.0001872	0.0035	0.58		958.44	958.44	No	22.2	Si
SLU 81	ini.	-537.56	-1992	-0.0008728	0.0001872	0.0035	0.58		958.44	958.44	No	1.78	Si
SLU 81	fin.	-58.7	-439	-0.000071	0.0001872	0.0035	0.58		958.44	958.44	No	16.33	Si
SLU 83	ini.	-542.12	-2010	-0.0008824	0.0001872	0.0035	0.58		958.44	958.44	No	1.77	Si
SLU 83	fin.	-59.55	-444	-0.000072	0.0001872	0.0035	0.58		958.44	958.44	No	16.09	Si
SLU 74	ini.	-524.41	-1956	-0.0008453	0.0001872	0.0035	0.58		958.44	958.44	No	1.83	Si
SLU 74	fin.	-49.21	-405	-0.0000592	0.0001872	0.0035	0.58		958.44	958.44	No	19.48	Si
SLU 75	ini.	-520.03	-1967	-0.0008362	0.0001872	0.0035	0.58		958.44	958.44	No	1.84	Si
SLU 75	fin.	-42.33	-379	-0.0000508	0.0001872	0.0035	0.58		958.44	958.44	No	22.64	Si
SLU 80	ini.	-519.93	-1965	-0.000836	0.0001872	0.0035	0.58		958.44	958.44	No	1.84	Si
SLU 80	fin.	-44.31	-385	-0.0000532	0.0001872	0.0035	0.58		958.44	958.44	No	21.63	Si
SLU 79	ini.	-524.31	-1954	-0.0008451	0.0001872	0.0035	0.58		958.44	958.44	No	1.83	Si
SLU 79	fin.	-51.19	-411	-0.0000617	0.0001872	0.0035	0.58		958.44	958.44	No	18.72	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-524.31	3907	0.58	0	252	4599	3908	1479	4851	No	1.24	Si
SLU 79	fin.	-51.19	-1202	0.58	0	252	4599	3908	1479	4851	No	4.04	Si
SLU 82	ini.	-533.19	3952	0.58	0	252	4599	3908	1479	4851	No	1.23	Si
SLU 82	fin.	-51.82	-1183	0.58	0	252	4599	3908	1479	4851	No	4.1	Si
SLU 80	ini.	-519.93	3838	0.58	0	252	4599	3908	1479	4851	No	1.26	Si
SLU 80	fin.	-44.31	-1121	0.58	0	252	4599	3908	1479	4851	No	4.33	Si
SLU 83	ini.	-542.12	4052	0.58	0	252	4599	3908	1479	4851	No	1.2	Si
SLU 83	fin.	-59.55	-1273	0.58	0	252	4599	3908	1479	4851	No	3.81	Si
SLU 74	ini.	-524.41	3905	0.58	0	252	4599	3908	1479	4851	No	1.24	Si
SLU 74	fin.	-49.21	-1193	0.58	0	252	4599	3908	1479	4851	No	4.07	Si
SLU 77	ini.	-528.96	3936	0.58	0	252	4599	3908	1479	4851	No	1.23	Si
SLU 77	fin.	-50.06	-1202	0.58	0	252	4599	3908	1479	4851	No	4.04	Si
SLU 81	ini.	-537.56	4020	0.58	0	252	4599	3908	1479	4851	No	1.21	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	fin.	-58.7	-1264	0.58	0	252	4599	3908	1479	4851	No	3.84	Si
SLU 75	ini.	-520.03	3836	0.58	0	252	4599	3908	1479	4851	No	1.26	Si
SLU 75	fin.	-42.33	-1112	0.58	0	252	4599	3908	1479	4851	No	4.36	Si
SLU 78	ini.	-524.59	3867	0.58	0	252	4599	3908	1479	4851	No	1.25	Si
SLU 78	fin.	-43.18	-1120	0.58	0	252	4599	3908	1479	4851	No	4.33	Si
SLU 84	ini.	-537.74	3983	0.58	0	252	4599	3908	1479	4851	No	1.22	Si
SLU 84	fin.	-52.67	-1191	0.58	0	252	4599	3908	1479	4851	No	4.07	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	141.39	907	-0.0001757	0.0002807	0.0035	0.58		1324.07	1324.07		9.36	Si
SLV 13	fin.	-590.23	-1829	-0.0009239	0.0002807	0.0035	0.58		1327.74	1327.74		2.25	Si
SLV 7	ini.	-703.18	-2180	-0.0011696	0.0002807	0.0035	0.58		1327.74	1327.74		1.89	Si
SLV 7	fin.	-37.94	-310	-0.0000452	0.0002807	0.0035	0.58		1327.74	1327.74		35	Si
SLV 4	ini.	-858.03	-3601	-0.0015639	0.0002807	0.0035	0.58		1327.74	1327.74		1.55	Si
SLV 4	fin.	538.93	1324	-0.000824	0.0002807	0.0035	0.58		1324.07	1324.07		2.46	Si
SLV 3	ini.	-834.9	-3483	-0.0014995	0.0002807	0.0035	0.58		1327.74	1327.74		1.59	Si
SLV 3	fin.	505.37	1237	-0.0007591	0.0002807	0.0035	0.58		1324.07	1324.07		2.62	Si
SLD 4	ini.	-572.34	-2312	-0.0008875	0.0002807	0.0035	0.58		1327.74	1327.74		2.32	Si
SLD 4	fin.	215.67	422	-0.0002771	0.0002807	0.0035	0.58		1324.07	1324.07		6.14	Si
SLV 8	ini.	-717.95	-2255	-0.001204	0.0002807	0.0035	0.58		1327.74	1327.74		1.85	Si
SLV 8	fin.	-16.51	-254	-0.0000195	0.0002807	0.0035	0.58		1327.74	1327.74		80.42	Si
SLV 1	ini.	-699.21	-3343	-0.0011605	0.0002807	0.0035	0.58		1327.74	1327.74		1.9	Si
SLV 1	fin.	614.77	1559	-0.0009786	0.0002807	0.0035	0.58		1324.07	1324.07		2.15	Si
SLV 16	ini.	-17.43	649	-0.0000206	0.0002807	0.0035	0.58		1327.74	1327.74		76.2	Si
SLV 16	fin.	-666.07	-2064	-0.0010857	0.0002807	0.0035	0.58		1327.74	1327.74		1.99	Si
SLV 2	ini.	-722.33	-3461	-0.0012143	0.0002807	0.0035	0.58		1327.74	1327.74		1.84	Si
SLV 2	fin.	648.33	1647	-0.0010507	0.0002807	0.0035	0.58		1324.07	1324.07		2.04	Si
SLV 15	ini.	5.7	767	-0.0000067	0.0002807	0.0035	0.58		1324.07	1324.07		232.35	Si
SLV 15	fin.	-699.62	-2152	-0.0011614	0.0002807	0.0035	0.58		1327.74	1327.74		1.9	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 4	ini.	-572.34	3736	0.58	0	378	4599	5862	1479	4977		1.33	Si
SLD 4	fin.	215.67	40	0.58	0	378	4599	5862	1479	4977		124.73	Si
SLV 2	ini.	-722.33	4598	0.58	0	378	4599	5862	1479	4977		1.08	Si
SLV 2	fin.	648.33	1889	0.58	0	378	4599	5862	1479	4977		2.63	Si
SLD 3	ini.	-562.42	3694	0.58	0	378	4599	5862	1479	4977		1.35	Si
SLD 3	fin.	201.27	-20	0.58	0	378	4599	5862	1479	4977		253.99	Si
SLV 7	ini.	-703.18	4220	0.58	0	378	4599	5862	1479	4977		1.18	Si
SLV 7	fin.	-37.94	-1381	0.58	0	378	4599	5862	1479	4977		3.6	Si
SLD 2	ini.	-513.86	3490	0.58	0	378	4599	5862	1479	4977		1.43	Si
SLD 2	fin.	262.7	355	0.58	0	378	4599	5862	1479	4977		14.03	Si
SLV 3	ini.	-834.9	5062	0.58	0	378	4599	5862	1479	4977		0.98	No
SLV 3	fin.	505.37	1020	0.58	0	378	4599	5862	1479	4977		4.88	Si
SLV 4	ini.	-858.03	5159	0.58	0	378	4599	5862	1479	4977		0.96	No
SLV 4	fin.	538.93	1158	0.58	0	378	4599	5862	1479	4977		4.3	Si
SLV 15	ini.	5.7	735	0.58	0	378	4599	5862	1479	4977		6.77	Si
SLV 15	fin.	-699.62	-3476	0.58	0	378	4599	5862	1479	4977		1.43	Si
SLV 8	ini.	-717.95	4282	0.58	0	378	4599	5862	1479	4977		1.16	Si
SLV 8	fin.	-16.51	-1293	0.58	0	378	4599	5862	1479	4977		3.85	Si
SLV 1	ini.	-699.21	4500	0.58	0	378	4599	5862	1479	4977		1.11	Si
SLV 1	fin.	614.77	1750	0.58	0	378	4599	5862	1479	4977		2.84	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.547	SLV 4	Si
V_SLV	0.965	SLV 4	No
PF_SLU	1.768	SLU 83	Si
V_SLU	1.197	SLU 83	Si

Trave di accoppiamento 30

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.158	1.471	1.12	2	0.88	-5.158	2.271	1.12	2	0.88	0.8	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	236.02	-525	-0.0001261	0.0002246	0.0035	0.88		2895.09	2895.09	No	12.27	Si
SLU 81	fin.	225.37	-1897	-0.0001201	0.0002246	0.0035	0.88		2895.09	2895.09	No	12.85	Si
SLU 80	ini.	216.89	-476	-0.0001154	0.0002246	0.0035	0.88		2895.09	2895.09	No	13.35	Si
SLU 80	fin.	237.52	-1741	-0.0001269	0.0002246	0.0035	0.88		2895.09	2895.09	No	12.19	Si
SLU 83	ini.	236.27	-525	-0.0001262	0.0002246	0.0035	0.88		2895.09	2895.09	No	12.25	Si
SLU 83	fin.	230.2	-1898	-0.0001228	0.0002246	0.0035	0.88		2895.09	2895.09	No	12.58	Si
SLU 82	ini.	232.97	-514	-0.0001244	0.0002246	0.0035	0.88		2895.09	2895.09	No	12.43	Si
SLU 82	fin.	231.75	-1866	-0.0001237	0.0002246	0.0035	0.88		2895.09	2895.09	No	12.49	Si
SLU 78	ini.	219.41	-480	-0.0001168	0.0002246	0.0035	0.88		2895.09	2895.09	No	13.19	Si
SLU 78	fin.	239.08	-1756	-0.0001278	0.0002246	0.0035	0.88		2895.09	2895.09	No	12.11	Si
SLU 77	ini.	222.46	-492	-0.0001185	0.0002246	0.0035	0.88		2895.09	2895.09	No	13.01	Si
SLU 77	fin.	232.69	-1787	-0.0001242	0.0002246	0.0035	0.88		2895.09	2895.09	No	12.44	Si
SLU 76	ini.	214.61	-469	-0.0001141	0.0002246	0.0035	0.88		2895.09	2895.09	No	13.49	Si
SLU 76	fin.	236.94	-1720	-0.0001266	0.0002246	0.0035	0.88		2895.09	2895.09	No	12.22	Si
SLU 75	ini.	219.16	-481	-0.0001167	0.0002246	0.0035	0.88		2895.09	2895.09	No	13.21	Si
SLU 75	fin.	234.24	-1756	-0.0001251	0.0002246	0.0035	0.88		2895.09	2895.09	No	12.36	Si
SLU 73	ini.	214.36	-470	-0.000114	0.0002246	0.0035	0.88		2895.09	2895.09	No	13.51	Si
SLU 73	fin.	232.1	-1720	-0.0001239	0.0002246	0.0035	0.88		2895.09	2895.09	No	12.47	Si
SLU 84	ini.	233.22	-513	-0.0001245	0.0002246	0.0035	0.88		2895.09	2895.09	No	12.41	Si
SLU 84	fin.	236.59	-1867	-0.0001264	0.0002246	0.0035	0.88		2895.09	2895.09	No	12.24	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	222.21	2174	0.88	0	383	6344	4744	2244	6726	No	3.09	Si
SLU 74	fin.	227.85	-7250	0.88	0	383	6344	4744	2244	6726	No	0.93	No
SLU 75	ini.	219.16	2196	0.88	0	383	6344	4744	2244	6726	No	3.06	Si
SLU 75	fin.	234.24	-7222	0.88	0	383	6344	4744	2244	6726	No	0.93	No
SLU 78	ini.	219.41	2222	0.88	0	383	6344	4744	2244	6726	No	3.03	Si
SLU 78	fin.	239.08	-7267	0.88	0	383	6344	4744	2244	6726	No	0.93	No
SLU 80	ini.	216.89	2209	0.88	0	383	6344	4744	2244	6726	No	3.04	Si
SLU 80	fin.	237.52	-7210	0.88	0	383	6344	4744	2244	6726	No	0.93	No
SLU 77	ini.	222.46	2200	0.88	0	383	6344	4744	2244	6726	No	3.06	Si
SLU 77	fin.	232.69	-7294	0.88	0	383	6344	4744	2244	6726	No	0.92	No
SLU 81	ini.	236.02	2200	0.88	0	383	6344	4744	2244	6726	No	3.06	Si
SLU 81	fin.	225.37	-7536	0.88	0	383	6344	4744	2244	6726	No	0.89	No
SLU 79	ini.	219.94	2187	0.88	0	383	6344	4744	2244	6726	No	3.08	Si
SLU 79	fin.	231.13	-7238	0.88	0	383	6344	4744	2244	6726	No	0.93	No
SLU 84	ini.	233.22	2248	0.88	0	383	6344	4744	2244	6726	No	2.99	Si
SLU 84	fin.	236.59	-7553	0.88	0	383	6344	4744	2244	6726	No	0.89	No
SLU 83	ini.	236.27	2226	0.88	0	383	6344	4744	2244	6726	No	3.02	Si
SLU 83	fin.	230.2	-7580	0.88	0	383	6344	4744	2244	6726	No	0.89	No
SLU 82	ini.	232.97	2222	0.88	0	383	6344	4744	2244	6726	No	3.03	Si
SLU 82	fin.	231.75	-7508	0.88	0	383	6344	4744	2244	6726	No	0.9	No

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	178.44	1045	-0.0000934	0.0003369	0.0035	0.88		2857.53	2857.53		16.01	Si
SLV 13	fin.	812.74	1136	-0.000476	0.0003369	0.0035	0.88		2857.53	2857.53		3.52	Si
SLV 14	ini.	141.51	1185	-0.0000737	0.0003369	0.0035	0.88		2857.53	2857.53		20.19	Si
SLV 14	fin.	889.38	1522	-0.0005297	0.0003369	0.0035	0.88		2857.53	2857.53		3.21	Si
SLV 7	ini.	530.68	-2587	-0.0002938	0.0003369	0.0035	0.88		2857.53	2857.53		5.38	Si
SLV 7	fin.	-1009.29	-6643	-0.0006158	0.0003369	0.0035	0.88		2863.23	2863.23		2.84	Si
SLV 8	ini.	507.09	-2497	-0.0002795	0.0003369	0.0035	0.88		2857.53	2857.53		5.64	Si
SLV 8	fin.	-960.35	-6397	-0.0005796	0.0003369	0.0035	0.88		2863.23	2863.23		2.98	Si
SLV 9	ini.	-222.29	1860	-0.0001169	0.0003369	0.0035	0.88		2863.23	2863.23		12.88	Si
SLV 9	fin.	1287.14	4073	-0.0008371	0.0003369	0.0035	0.88		2857.53	2857.53		2.22	Si
SLV 6	ini.	-331.94	1444	-0.0001774	0.0003369	0.0035	0.88		2863.23	2863.23		8.63	Si
SLV 6	fin.	1109.79	3737	-0.0006939	0.0003369	0.0035	0.88		2857.53	2857.53		2.57	Si
SLV 12	ini.	593.15	-1992	-0.0003321	0.0003369	0.0035	0.88		2857.53	2857.53		4.82	Si
SLV 12	fin.	-734.06	-5814	-0.0004219	0.0003369	0.0035	0.88		2863.23	2863.23		3.9	Si
SLV 11	ini.	616.73	-2082	-0.0003469	0.0003369	0.0035	0.88		2857.53	2857.53		4.63	Si
SLV 11	fin.	-783	-6061	-0.0004547	0.0003369	0.0035	0.88		2863.23	2863.23		3.66	Si
SLV 5	ini.	-308.35	1354	-0.0001642	0.0003369	0.0035	0.88		2863.23	2863.23		9.29	Si
SLV 5	fin.	1060.85	3491	-0.0006562	0.0003369	0.0035	0.88		2857.53	2857.53		2.69	Si
SLV 10	ini.	-245.88	1950	-0.0001297	0.0003369	0.0035	0.88		2863.23	2863.23		11.64	Si
SLV 10	fin.	1336.08	4320	-0.0008784	0.0003369	0.0035	0.88		2857.53	2857.53		2.14	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 7	ini.	530.68	-1992	0.88	0	574	6344	7116	2244	6918		3.47	Si
SLV 7	fin.	-1009.29	-9210	0.88	0	574	6344	7116	2244	6918		0.75	No
SLV 11	ini.	616.73	-1622	0.88	0	574	6344	7116	2244	6918		4.26	Si
SLV 11	fin.	-783	-9776	0.88	0	574	6344	7116	2244	6918		0.71	No
SLV 16	ini.	393.22	1298	0.88	0	574	6344	7116	2244	6918		5.33	Si
SLV 16	fin.	268.34	-6987	0.88	0	574	6344	7116	2244	6918		0.99	No
SLD 7	ini.	313.1	-14	0.88	0	574	6344	7116	2244	6918		495.25	Si
SLD 7	fin.	-348.86	-6787	0.88	0	574	6344	7116	2244	6918		1.02	Si
SLD 12	ini.	341.11	216	0.88	0	574	6344	7116	2244	6918		32.06	Si
SLD 12	fin.	-234.96	-6927	0.88	0	574	6344	7116	2244	6918		1	No
SLD 11	ini.	351.4	145	0.88	0	574	6344	7116	2244	6918		47.63	Si
SLD 11	fin.	-256.31	-7028	0.88	0	574	6344	7116	2244	6918		0.98	No
SLV 12	ini.	593.15	-1461	0.88	0	574	6344	7116	2244	6918		4.74	Si
SLV 12	fin.	-734.06	-9544	0.88	0	574	6344	7116	2244	6918		0.72	No
SLD 8	ini.	302.81	57	0.88	0	574	6344	7116	2244	6918		122.33	Si
SLD 8	fin.	-327.51	-6686	0.88	0	574	6344	7116	2244	6918		1.03	Si
SLV 8	ini.	507.09	-1830	0.88	0	574	6344	7116	2244	6918		3.78	Si
SLV 8	fin.	-960.35	-8979	0.88	0	574	6344	7116	2244	6918		0.77	No
SLV 15	ini.	430.15	1045	0.88	0	574	6344	7116	2244	6918		6.62	Si
SLV 15	fin.	191.7	-7350	0.88	0	574	6344	7116	2244	6918		0.94	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.139	SLV 10	Si
V_SLV	0.708	SLV 11	No
PF_SLU	12.109	SLU 78	Si
V_SLU	0.887	SLU 83	No

Trave di accoppiamento 31

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-3.013	5.876	-0.98	1.02	2	-2.013	5.876	-0.98	1.02	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-1655.4	-1526	-0.000176	0.0001872	0.0035	2		10737.13	10737.13	No	6.49	Si
SLU 78	fin.	3071.32	-2939	-0.0003549	0.0001872	0.0035	2		10722.86	10722.86	No	3.49	Si
SLU 80	ini.	-1651.63	-1511	-0.0001756	0.0001872	0.0035	2		10737.13	10737.13	No	6.5	Si
SLU 80	fin.	3055.97	-2920	-0.0003528	0.0001872	0.0035	2		10722.86	10722.86	No	3.51	Si
SLU 84	ini.	-1647.87	-1536	-0.0001751	0.0001872	0.0035	2		10737.13	10737.13	No	6.52	Si
SLU 84	fin.	3122.17	-2940	-0.0003618	0.0001872	0.0035	2		10722.86	10722.86	No	3.43	Si
SLU 74	ini.	-1638.23	-1521	-0.000174	0.0001872	0.0035	2		10737.13	10737.13	No	6.55	Si
SLU 74	fin.	3031.85	-2912	-0.0003495	0.0001872	0.0035	2		10722.86	10722.86	No	3.54	Si
SLU 82	ini.	-1626.32	-1516	-0.0001726	0.0001872	0.0035	2		10737.13	10737.13	No	6.6	Si
SLU 82	fin.	3089.97	-2897	-0.0003574	0.0001872	0.0035	2		10722.86	10722.86	No	3.47	Si
SLU 81	ini.	-1630.7	-1532	-0.0001731	0.0001872	0.0035	2		10737.13	10737.13	No	6.58	Si
SLU 81	fin.	3082.7	-2912	-0.0003564	0.0001872	0.0035	2		10722.86	10722.86	No	3.48	Si
SLU 83	ini.	-1652.24	-1553	-0.0001756	0.0001872	0.0035	2		10737.13	10737.13	No	6.5	Si
SLU 83	fin.	3114.89	-2955	-0.0003608	0.0001872	0.0035	2		10722.86	10722.86	No	3.44	Si
SLU 75	ini.	-1633.86	-1505	-0.0001735	0.0001872	0.0035	2		10737.13	10737.13	No	6.57	Si
SLU 75	fin.	3039.12	-2896	-0.0003505	0.0001872	0.0035	2		10722.86	10722.86	No	3.53	Si
SLU 79	ini.	-1656.01	-1528	-0.0001761	0.0001872	0.0035	2		10737.13	10737.13	No	6.48	Si
SLU 79	fin.	3048.69	-2936	-0.0003518	0.0001872	0.0035	2		10722.86	10722.86	No	3.52	Si
SLU 77	ini.	-1659.77	-1542	-0.0001765	0.0001872	0.0035	2		10737.13	10737.13	No	6.47	Si
SLU 77	fin.	3064.04	-2955	-0.0003539	0.0001872	0.0035	2		10722.86	10722.86	No	3.5	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-1633.86	7156	2	0	1304	7930	13475	5100	9234	No	1.29	Si
SLU 75	fin.	3039.12	8572	2	0	1304	7930	13475	5100	9234	No	1.08	Si
SLU 81	ini.	-1630.7	7187	2	0	1304	7930	13475	5100	9234	No	1.28	Si
SLU 81	fin.	3082.7	8688	2	0	1304	7930	13475	5100	9234	No	1.06	Si
SLU 84	ini.	-1647.87	7268	2	0	1304	7930	13475	5100	9234	No	1.27	Si
SLU 84	fin.	3122.17	8792	2	0	1304	7930	13475	5100	9234	No	1.05	Si
SLU 79	ini.	-1656.01	7204	2	0	1304	7930	13475	5100	9234	No	1.28	Si
SLU 79	fin.	3048.69	8625	2	0	1304	7930	13475	5100	9234	No	1.07	Si
SLU 78	ini.	-1655.4	7232	2	0	1304	7930	13475	5100	9234	No	1.28	Si
SLU 78	fin.	3071.32	8673	2	0	1304	7930	13475	5100	9234	No	1.06	Si
SLU 77	ini.	-1659.77	7229	2	0	1304	7930	13475	5100	9234	No	1.28	Si
SLU 77	fin.	3064.04	8669	2	0	1304	7930	13475	5100	9234	No	1.07	Si
SLU 74	ini.	-1638.23	7152	2	0	1304	7930	13475	5100	9234	No	1.29	Si
SLU 74	fin.	3031.85	8569	2	0	1304	7930	13475	5100	9234	No	1.08	Si
SLU 83	ini.	-1652.24	7264	2	0	1304	7930	13475	5100	9234	No	1.27	Si
SLU 83	fin.	3114.89	8788	2	0	1304	7930	13475	5100	9234	No	1.05	Si
SLU 82	ini.	-1626.32	7191	2	0	1304	7930	13475	5100	9234	No	1.28	Si
SLU 82	fin.	3089.97	8692	2	0	1304	7930	13475	5100	9234	No	1.06	Si
SLU 80	ini.	-1651.63	7208	2	0	1304	7930	13475	5100	9234	No	1.28	Si
SLU 80	fin.	3055.97	8629	2	0	1304	7930	13475	5100	9234	No	1.07	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	-2491.55	-79	-0.0002674	0.0002807	0.0035	2		15648.46	15648.46		6.28	Si
SLV 3	fin.	3268.71	-3033	-0.0003631	0.0002807	0.0035	2		15635.95	15635.95		4.78	Si
SLV 5	ini.	-684.39	1522	-0.000069	0.0002807	0.0035	2		15648.46	15648.46		22.86	Si
SLV 5	fin.	3158.7	353	-0.0003492	0.0002807	0.0035	2		15635.95	15635.95		4.95	Si
SLD 4	ini.	-1670.71	-570	-0.0001739	0.0002807	0.0035	2		15648.46	15648.46		9.37	Si
SLD 4	fin.	2617.17	-2348	-0.0002826	0.0002807	0.0035	2		15635.95	15635.95		5.97	Si
SLD 2	ini.	-1440.79	-12	-0.0001488	0.0002807	0.0035	2		15648.46	15648.46		10.86	Si
SLD 2	fin.	2784.94	-1680	-0.0003028	0.0002807	0.0035	2		15635.95	15635.95		5.61	Si
SLV 2	ini.	-1760.57	1379	-0.0001839	0.0002807	0.0035	2		15648.46	15648.46		8.89	Si
SLV 2	fin.	3649.28	-1158	-0.0004125	0.0002807	0.0035	2		15635.95	15635.95		4.28	Si
SLD 1	ini.	-1531.38	-90	-0.0001587	0.0002807	0.0035	2		15648.46	15648.46		10.22	Si
SLD 1	fin.	2783.23	-1829	-0.0003026	0.0002807	0.0035	2		15635.95	15635.95		5.62	Si
SLV 4	ini.	-2280.51	102	-0.0002428	0.0002807	0.0035	2		15648.46	15648.46		6.86	Si
SLV 4	fin.	3272.7	-2688	-0.0003636	0.0002807	0.0035	2		15635.95	15635.95		4.78	Si
SLD 3	ini.	-1761.3	-648	-0.0001839	0.0002807	0.0035	2		15648.46	15648.46		8.88	Si
SLD 3	fin.	2615.46	-2496	-0.0002824	0.0002807	0.0035	2		15635.95	15635.95		5.98	Si
SLV 1	ini.	-1971.61	1197	-0.0002075	0.0002807	0.0035	2		15648.46	15648.46		7.94	Si
SLV 1	fin.	3645.29	-1504	-0.000412	0.0002807	0.0035	2		15635.95	15635.95		4.29	Si
SLV 6	ini.	-549.62	1638	-0.0000552	0.0002807	0.0035	2		15648.46	15648.46		28.47	Si
SLV 6	fin.	3161.25	573	-0.0003495	0.0002807	0.0035	2		15635.95	15635.95		4.95	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 7	ini.	-2417.54	9311	2	0	1957	7930	20213	5100	9886		1.06	Si
SLV 7	fin.	1903.44	7515	2	0	1957	7930	20213	5100	9886		1.32	Si
SLV 8	ini.	-2282.76	9075	2	0	1957	7930	20213	5100	9886		1.09	Si
SLV 8	fin.	1905.99	7273	2	0	1957	7930	20213	5100	9886		1.36	Si
SLV 1	ini.	-1971.61	8388	2	0	1957	7930	20213	5100	9886		1.18	Si
SLV 1	fin.	3645.29	9629	2	0	1957	7930	20213	5100	9886		1.03	Si
SLD 1	ini.	-1531.38	6557	2	0	1957	7930	20213	5100	9886		1.51	Si
SLD 1	fin.	2783.23	7578	2	0	1957	7930	20213	5100	9886		1.3	Si
SLV 3	ini.	-2491.55	10092	2	0	1957	7930	20213	5100	9886		0.98	No
SLV 3	fin.	3268.71	9811	2	0	1957	7930	20213	5100	9886		1.01	Si
SLD 4	ini.	-1670.71	7131	2	0	1957	7930	20213	5100	9886		1.39	Si
SLD 4	fin.	2617.17	7494	2	0	1957	7930	20213	5100	9886		1.32	Si
SLD 3	ini.	-1761.3	7289	2	0	1957	7930	20213	5100	9886		1.36	Si
SLD 3	fin.	2615.46	7656	2	0	1957	7930	20213	5100	9886		1.29	Si
SLV 2	ini.	-1760.57	8019	2	0	1957	7930	20213	5100	9886		1.23	Si
SLV 2	fin.	3649.28	9251	2	0	1957	7930	20213	5100	9886		1.07	Si
SLD 2	ini.	-1440.79	6399	2	0	1957	7930	20213	5100	9886		1.54	Si
SLD 2	fin.	2784.94	7416	2	0	1957	7930	20213	5100	9886		1.33	Si
SLV 4	ini.	-2280.51	9723	2	0	1957	7930	20213	5100	9886		1.02	Si
SLV 4	fin.	3272.7	9433	2	0	1957	7930	20213	5100	9886		1.05	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.285	SLV 2	Si
V_SLV	0.98	SLV 3	No
PF_SLU	3.434	SLU 84	Si
V_SLU	1.05	SLU 84	Si

Trave di accoppiamento 32

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-3.013	5.876	1.42	2	0.58	-2.013	5.876	1.42	2	0.58	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-1138.35	-2073	-0.0029089	0.0001872	0.0035	0.58		958.44	958.44	No	0.84	No
SLU 77	fin.	553.77	1437	-0.0009105	0.0001872	0.0035	0.58		954.31	954.31	No	1.72	Si
SLU 78	ini.	-1138.93	-2074	-0.0029123	0.0001872	0.0035	0.58		958.44	958.44	No	0.84	No
SLU 78	fin.	554.09	1438	-0.0009111	0.0001872	0.0035	0.58		954.31	954.31	No	1.72	Si
SLU 80	ini.	-1133.77	-2063	-0.0028819	0.0001872	0.0035	0.58		958.44	958.44	No	0.85	No
SLU 80	fin.	551.93	1434	-0.0009065	0.0001872	0.0035	0.58		954.31	954.31	No	1.73	Si
SLU 79	ini.	-1133.2	-2062	-0.0028785	0.0001872	0.0035	0.58		958.44	958.44	No	0.85	No
SLU 79	fin.	551.61	1433	-0.0009058	0.0001872	0.0035	0.58		954.31	954.31	No	1.73	Si
SLU 75	ini.	-1127.05	-2049	-0.0028427	0.0001872	0.0035	0.58		958.44	958.44	No	0.85	No
SLU 75	fin.	546.93	1423	-0.0008959	0.0001872	0.0035	0.58		954.31	954.31	No	1.74	Si
SLU 83	ini.	-1160.88	-2098	-0.0030458	0.0001872	0.0035	0.58		958.44	958.44	No	0.83	No
SLU 83	fin.	551.05	1453	-0.0009046	0.0001872	0.0035	0.58		954.31	954.31	No	1.73	Si
SLU 74	ini.	-1126.48	-2049	-0.0028394	0.0001872	0.0035	0.58		958.44	958.44	No	0.85	No
SLU 74	fin.	546.61	1422	-0.0008952	0.0001872	0.0035	0.58		954.31	954.31	No	1.75	Si
SLU 81	ini.	-1149	-2074	-0.0029728	0.0001872	0.0035	0.58		958.44	958.44	No	0.83	No
SLU 81	fin.	543.9	1438	-0.0008894	0.0001872	0.0035	0.58		954.31	954.31	No	1.75	Si
SLU 82	ini.	-1149.57	-2075	-0.0029763	0.0001872	0.0035	0.58		958.44	958.44	No	0.83	No
SLU 82	fin.	544.22	1439	-0.0008901	0.0001872	0.0035	0.58		954.31	954.31	No	1.75	Si
SLU 84	ini.	-1161.45	-2099	-0.0030494	0.0001872	0.0035	0.58		958.44	958.44	No	0.83	No
SLU 84	fin.	551.37	1454	-0.0009053	0.0001872	0.0035	0.58		954.31	954.31	No	1.73	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-1160.88	4254	0.58	0	252	4599	3908	1479	4851	No	1.14	Si
SLU 83	fin.	551.05	1306	0.58	0	252	4599	3908	1479	4851	No	3.72	Si
SLU 75	ini.	-1127.05	4124	0.58	0	252	4599	3908	1479	4851	No	1.18	Si
SLU 75	fin.	546.93	1312	0.58	0	252	4599	3908	1479	4851	No	3.7	Si
SLU 77	ini.	-1138.35	4162	0.58	0	252	4599	3908	1479	4851	No	1.17	Si
SLU 77	fin.	553.77	1333	0.58	0	252	4599	3908	1479	4851	No	3.64	Si
SLU 79	ini.	-1133.2	4145	0.58	0	252	4599	3908	1479	4851	No	1.17	Si
SLU 79	fin.	551.61	1327	0.58	0	252	4599	3908	1479	4851	No	3.66	Si
SLU 78	ini.	-1138.93	4165	0.58	0	252	4599	3908	1479	4851	No	1.16	Si
SLU 78	fin.	554.09	1334	0.58	0	252	4599	3908	1479	4851	No	3.64	Si
SLU 82	ini.	-1149.57	4216	0.58	0	252	4599	3908	1479	4851	No	1.15	Si
SLU 82	fin.	544.22	1285	0.58	0	252	4599	3908	1479	4851	No	3.78	Si
SLU 74	ini.	-1126.48	4122	0.58	0	252	4599	3908	1479	4851	No	1.18	Si
SLU 74	fin.	546.61	1312	0.58	0	252	4599	3908	1479	4851	No	3.7	Si
SLU 84	ini.	-1161.45	4257	0.58	0	252	4599	3908	1479	4851	No	1.14	Si
SLU 84	fin.	551.37	1306	0.58	0	252	4599	3908	1479	4851	No	3.71	Si
SLU 81	ini.	-1149	4214	0.58	0	252	4599	3908	1479	4851	No	1.15	Si
SLU 81	fin.	543.9	1284	0.58	0	252	4599	3908	1479	4851	No	3.78	Si
SLU 80	ini.	-1133.77	4147	0.58	0	252	4599	3908	1479	4851	No	1.17	Si
SLU 80	fin.	551.93	1328	0.58	0	252	4599	3908	1479	4851	No	3.65	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	-1226.14	-2212	-0.0031262	0.0002807	0.0035	0.58		1327.74	1327.74		1.08	Si
SLV 4	fin.	882.75	1847	-0.001643	0.0002807	0.0035	0.58		1324.07	1324.07		1.5	Si
SLV 1	ini.	-1184.31	-2360	-0.002883	0.0002807	0.0035	0.58		1327.74	1327.74		1.12	Si
SLV 1	fin.	773.65	1929	-0.0013446	0.0002807	0.0035	0.58		1324.07	1324.07		1.71	Si
SLV 3	ini.	-1261.58	-2294	-0.0033345	0.0002807	0.0035	0.58		1327.74	1327.74		1.05	Si
SLV 3	fin.	923.1	1923	-0.0017682	0.0002807	0.0035	0.58		1324.07	1324.07		1.43	Si
SLD 2	ini.	-942.48	-1803	-0.001823	0.0002807	0.0035	0.58		1327.74	1327.74		1.41	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 2	fin.	543.12	1375	-0.0008323	0.0002807	0.0035	0.58		1324.07	1324.07		2.44	Si
SLV 8	ini.	-1031.37	-1564	-0.0021497	0.0002807	0.0035	0.58		1327.74	1327.74		1.29	Si
SLV 8	fin.	765.61	1247	-0.0013244	0.0002807	0.0035	0.58		1324.07	1324.07		1.73	Si
SLD 4	ini.	-975.63	-1775	-0.0019375	0.0002807	0.0035	0.58		1327.74	1327.74		1.36	Si
SLD 4	fin.	607.08	1373	-0.0009624	0.0002807	0.0035	0.58		1324.07	1324.07		2.18	Si
SLD 1	ini.	-957.69	-1838	-0.0018746	0.0002807	0.0035	0.58		1327.74	1327.74		1.39	Si
SLD 1	fin.	560.44	1408	-0.0008667	0.0002807	0.0035	0.58		1324.07	1324.07		2.36	Si
SLV 7	ini.	-1054.01	-1617	-0.0022435	0.0002807	0.0035	0.58		1327.74	1327.74		1.26	Si
SLV 7	fin.	791.38	1296	-0.0013899	0.0002807	0.0035	0.58		1324.07	1324.07		1.67	Si
SLV 2	ini.	-1148.87	-2278	-0.0026908	0.0002807	0.0035	0.58		1327.74	1327.74		1.16	Si
SLV 2	fin.	733.3	1852	-0.0012453	0.0002807	0.0035	0.58		1324.07	1324.07		1.81	Si
SLD 3	ini.	-990.84	-1811	-0.0019929	0.0002807	0.0035	0.58		1327.74	1327.74		1.34	Si
SLD 3	fin.	624.4	1406	-0.0009991	0.0002807	0.0035	0.58		1324.07	1324.07		2.12	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 7	ini.	-1054.01	4795	0.58	0	378	4599	5862	1479	4977		1.04	Si
SLV 7	fin.	791.38	2913	0.58	0	378	4599	5862	1479	4977		1.71	Si
SLV 11	ini.	-804.3	3988	0.58	0	378	4599	5862	1479	4977		1.25	Si
SLV 11	fin.	535.29	2060	0.58	0	378	4599	5862	1479	4977		2.42	Si
SLD 8	ini.	-892.65	3670	0.58	0	378	4599	5862	1479	4977		1.36	Si
SLD 8	fin.	557.07	1771	0.58	0	378	4599	5862	1479	4977		2.81	Si
SLV 2	ini.	-1148.87	3732	0.58	0	378	4599	5862	1479	4977		1.33	Si
SLV 2	fin.	733.3	1897	0.58	0	378	4599	5862	1479	4977		2.62	Si
SLD 7	ini.	-902.52	3701	0.58	0	378	4599	5862	1479	4977		1.35	Si
SLD 7	fin.	568.31	1809	0.58	0	378	4599	5862	1479	4977		2.75	Si
SLV 8	ini.	-1031.37	4725	0.58	0	378	4599	5862	1479	4977		1.05	Si
SLV 8	fin.	765.61	2826	0.58	0	378	4599	5862	1479	4977		1.76	Si
SLV 3	ini.	-1261.58	4725	0.58	0	378	4599	5862	1479	4977		1.05	Si
SLV 3	fin.	923.1	2909	0.58	0	378	4599	5862	1479	4977		1.71	Si
SLV 4	ini.	-1226.14	4616	0.58	0	378	4599	5862	1479	4977		1.08	Si
SLV 4	fin.	882.75	2774	0.58	0	378	4599	5862	1479	4977		1.79	Si
SLV 1	ini.	-1184.31	3841	0.58	0	378	4599	5862	1479	4977		1.3	Si
SLV 1	fin.	773.65	2032	0.58	0	378	4599	5862	1479	4977		2.45	Si
SLV 12	ini.	-781.67	3918	0.58	0	378	4599	5862	1479	4977		1.27	Si
SLV 12	fin.	509.51	1974	0.58	0	378	4599	5862	1479	4977		2.52	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.052	SLV 3	Si
V_SLV	1.038	SLV 7	Si
PF_SLU	0.825	SLU 84	No
V_SLU	1.14	SLU 84	Si

Trave di accoppiamento 33

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.763	5.826	2	2.9	0.9	-22.763	5.826	2	2.9	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-419.69	-748	-0.0002256	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.06	Si
SLU 83	fin.	961.06	-2785	-0.0006008	0.0001872	0.0035	0.9		2959	2959	No	3.08	Si
SLU 79	ini.	-422.03	-715	-0.000227	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.02	Si
SLU 79	fin.	952.31	-2741	-0.0005941	0.0001872	0.0035	0.9		2959	2959	No	3.11	Si
SLU 84	ini.	-418.47	-751	-0.0002249	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.08	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	fin.	960.45	-2785	-0.0006003	0.0001872	0.0035	0.9		2959	2959	No	3.08	Si
SLU 77	ini.	-419.68	-729	-0.0002256	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.06	Si
SLU 77	fin.	955.38	-2757	-0.0005964	0.0001872	0.0035	0.9		2959	2959	No	3.1	Si
SLU 75	ini.	-414.83	-721	-0.0002227	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.15	Si
SLU 75	fin.	942.92	-2723	-0.0005869	0.0001872	0.0035	0.9		2959	2959	No	3.14	Si
SLU 78	ini.	-418.46	-732	-0.0002249	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.08	Si
SLU 78	fin.	954.78	-2757	-0.000596	0.0001872	0.0035	0.9		2959	2959	No	3.1	Si
SLU 80	ini.	-420.8	-718	-0.0002263	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.05	Si
SLU 80	fin.	951.7	-2742	-0.0005936	0.0001872	0.0035	0.9		2959	2959	No	3.11	Si
SLU 82	ini.	-414.84	-739	-0.0002227	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.15	Si
SLU 82	fin.	948.59	-2750	-0.0005912	0.0001872	0.0035	0.9		2959	2959	No	3.12	Si
SLU 81	ini.	-416.06	-736	-0.0002234	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.13	Si
SLU 81	fin.	949.2	-2750	-0.0005917	0.0001872	0.0035	0.9		2959	2959	No	3.12	Si
SLU 74	ini.	-416.05	-718	-0.0002234	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.13	Si
SLU 74	fin.	943.53	-2722	-0.0005873	0.0001872	0.0035	0.9		2959	2959	No	3.14	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-416.06	1820	0.9	0	329	7137	3773	2295	6068	No	3.33	Si
SLU 81	fin.	949.2	2716	0.9	0	329	7137	3773	2295	6068	No	2.23	Si
SLU 75	ini.	-414.83	1808	0.9	0	329	7137	3773	2295	6068	No	3.36	Si
SLU 75	fin.	942.92	2703	0.9	0	329	7137	3773	2295	6068	No	2.24	Si
SLU 79	ini.	-422.03	1832	0.9	0	329	7137	3773	2295	6068	No	3.31	Si
SLU 79	fin.	952.31	2735	0.9	0	329	7137	3773	2295	6068	No	2.22	Si
SLU 82	ini.	-414.84	1815	0.9	0	329	7137	3773	2295	6068	No	3.34	Si
SLU 82	fin.	948.59	2714	0.9	0	329	7137	3773	2295	6068	No	2.24	Si
SLU 74	ini.	-416.05	1813	0.9	0	329	7137	3773	2295	6068	No	3.35	Si
SLU 74	fin.	943.53	2705	0.9	0	329	7137	3773	2295	6068	No	2.24	Si
SLU 80	ini.	-420.8	1828	0.9	0	329	7137	3773	2295	6068	No	3.32	Si
SLU 80	fin.	951.7	2733	0.9	0	329	7137	3773	2295	6068	No	2.22	Si
SLU 78	ini.	-418.46	1821	0.9	0	329	7137	3773	2295	6068	No	3.33	Si
SLU 78	fin.	954.78	2742	0.9	0	329	7137	3773	2295	6068	No	2.21	Si
SLU 77	ini.	-419.68	1825	0.9	0	329	7137	3773	2295	6068	No	3.32	Si
SLU 77	fin.	955.38	2744	0.9	0	329	7137	3773	2295	6068	No	2.21	Si
SLU 84	ini.	-418.47	1828	0.9	0	329	7137	3773	2295	6068	No	3.32	Si
SLU 84	fin.	960.45	2752	0.9	0	329	7137	3773	2295	6068	No	2.2	Si
SLU 83	ini.	-419.69	1832	0.9	0	329	7137	3773	2295	6068	No	3.31	Si
SLU 83	fin.	961.06	2754	0.9	0	329	7137	3773	2295	6068	No	2.2	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-1517.02	1367	-0.0010073	0.0002807	0.0035	0.9		2995.37	2995.37		1.97	Si
SLV 15	fin.	1780.7	-3213	-0.0012585	0.0002807	0.0035	0.9		2989.59	2989.59		1.68	Si
SLV 12	ini.	-840.76	377	-0.0004802	0.0002807	0.0035	0.9		2995.37	2995.37		3.56	Si
SLV 12	fin.	1089.22	-1984	-0.0006596	0.0002807	0.0035	0.9		2989.59	2989.59		2.74	Si
SLV 14	ini.	-1497.75	1334	-0.0009903	0.0002807	0.0035	0.9		2995.37	2995.37		2	Si
SLV 14	fin.	1802.49	-3505	-0.0012805	0.0002807	0.0035	0.9		2989.59	2989.59		1.66	Si
SLV 13	ini.	-1430.09	1214	-0.0009315	0.0002807	0.0035	0.9		2995.37	2995.37		2.09	Si
SLV 13	fin.	1746.18	-3447	-0.0012242	0.0002807	0.0035	0.9		2989.59	2989.59		1.71	Si
SLD 13	ini.	-792.51	256	-0.0004476	0.0002807	0.0035	0.9		2995.37	2995.37		3.78	Si
SLD 13	fin.	1135.87	-2577	-0.0006951	0.0002807	0.0035	0.9		2989.59	2989.59		2.63	Si
SLD 16	ini.	-859.96	375	-0.0004933	0.0002807	0.0035	0.9		2995.37	2995.37		3.48	Si
SLD 16	fin.	1175.41	-2501	-0.0007256	0.0002807	0.0035	0.9		2989.59	2989.59		2.54	Si
SLV 16	ini.	-1584.68	1487	-0.0010682	0.0002807	0.0035	0.9		2995.37	2995.37		1.89	Si
SLV 16	fin.	1837	-3270	-0.0013158	0.0002807	0.0035	0.9		2989.59	2989.59		1.63	Si
SLD 15	ini.	-830.92	324	-0.0004735	0.0002807	0.0035	0.9		2995.37	2995.37		3.6	Si
SLD 15	fin.	1151.24	-2477	-0.0007069	0.0002807	0.0035	0.9		2989.59	2989.59		2.6	Si
SLD 14	ini.	-821.55	307	-0.0004671	0.0002807	0.0035	0.9		2995.37	2995.37		3.65	Si
SLD 14	fin.	1160.03	-2602	-0.0007137	0.0002807	0.0035	0.9		2989.59	2989.59		2.58	Si
SLV 11	ini.	-797.56	300	-0.000451	0.0002807	0.0035	0.9		2995.37	2995.37		3.76	Si
SLV 11	fin.	1053.27	-1947	-0.0006327	0.0002807	0.0035	0.9		2989.59	2989.59		2.84	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 11	ini.	-797.56	4912	0.9	0	493	7137	5660	2295	7630		1.55	Si
SLV 11	fin.	1053.27	4367	0.9	0	493	7137	5660	2295	7630		1.75	Si
SLD 15	ini.	-830.92	3373	0.9	0	493	7137	5660	2295	7630		2.26	Si
SLD 15	fin.	1151.24	3741	0.9	0	493	7137	5660	2295	7630		2.04	Si
SLD 14	ini.	-821.55	2853	0.9	0	493	7137	5660	2295	7630		2.67	Si
SLD 14	fin.	1160.03	3485	0.9	0	493	7137	5660	2295	7630		2.19	Si
SLV 14	ini.	-1497.75	4833	0.9	0	493	7137	5660	2295	7630		1.58	Si
SLV 14	fin.	1802.49	5544	0.9	0	493	7137	5660	2295	7630		1.38	Si
SLV 12	ini.	-840.76	5051	0.9	0	493	7137	5660	2295	7630		1.51	Si
SLV 12	fin.	1089.22	4488	0.9	0	493	7137	5660	2295	7630		1.7	Si
SLV 1	ini.	950.2	-3523	0.9	0	493	7137	5660	2295	7630		2.17	Si
SLV 1	fin.	-476.3	-2434	0.9	0	493	7137	5660	2295	7630		3.13	Si
SLV 15	ini.	-1517.02	6049	0.9	0	493	7137	5660	2295	7630		1.26	Si
SLV 15	fin.	1780.7	6141	0.9	0	493	7137	5660	2295	7630		1.24	Si
SLV 16	ini.	-1584.68	6266	0.9	0	493	7137	5660	2295	7630		1.22	Si
SLV 16	fin.	1837	6331	0.9	0	493	7137	5660	2295	7630		1.21	Si
SLD 16	ini.	-859.96	3466	0.9	0	493	7137	5660	2295	7630		2.2	Si
SLD 16	fin.	1175.41	3822	0.9	0	493	7137	5660	2295	7630		2	Si
SLV 13	ini.	-1430.09	4615	0.9	0	493	7137	5660	2295	7630		1.65	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	fin.	1746.18	5355	0.9	0	493	7137	5660	2295	7630		1.42	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.627	SLV 16	Si
V_SLV	1.205	SLV 16	Si
PF_SLU	3.079	SLU 83	Si
V_SLU	2.203	SLU 83	Si

Trave di accoppiamento 34

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.763	5.826	4.8	5.44	0.64	-22.763	5.826	4.8	5.44	0.64	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-884.08	-1808	-0.0013068	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.7	Si
SLU 81	fin.	292.22	-183	-0.0003259	0.0001872	0.0035	0.64		1500.92	1500.92	No	5.14	Si
SLU 82	ini.	-884.5	-1809	-0.0013077	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.7	Si
SLU 82	fin.	291.06	-186	-0.0003244	0.0001872	0.0035	0.64		1500.92	1500.92	No	5.16	Si
SLU 75	ini.	-875.75	-1792	-0.0012893	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.72	Si
SLU 75	fin.	295.01	-176	-0.0003295	0.0001872	0.0035	0.64		1500.92	1500.92	No	5.09	Si
SLU 77	ini.	-886.5	-1818	-0.0013119	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.7	Si
SLU 77	fin.	298.09	-182	-0.0003336	0.0001872	0.0035	0.64		1500.92	1500.92	No	5.04	Si
SLU 80	ini.	-884.31	-1809	-0.0013073	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.7	Si
SLU 80	fin.	298.89	-177	-0.0003346	0.0001872	0.0035	0.64		1500.92	1500.92	No	5.02	Si
SLU 79	ini.	-883.9	-1808	-0.0013064	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.7	Si
SLU 79	fin.	300.05	-173	-0.0003361	0.0001872	0.0035	0.64		1500.92	1500.92	No	5	Si
SLU 84	ini.	-895.67	-1836	-0.0013313	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.68	Si
SLU 84	fin.	292.98	-194	-0.0003269	0.0001872	0.0035	0.64		1500.92	1500.92	No	5.12	Si
SLU 83	ini.	-895.25	-1835	-0.0013304	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.68	Si
SLU 83	fin.	294.13	-191	-0.0003284	0.0001872	0.0035	0.64		1500.92	1500.92	No	5.1	Si
SLU 74	ini.	-875.34	-1791	-0.0012885	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.72	Si
SLU 74	fin.	296.17	-173	-0.0003311	0.0001872	0.0035	0.64		1500.92	1500.92	No	5.07	Si
SLU 78	ini.	-886.92	-1820	-0.0013128	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.7	Si
SLU 78	fin.	296.93	-185	-0.0003321	0.0001872	0.0035	0.64		1500.92	1500.92	No	5.05	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-884.5	3007	0.64	0	173	5075	2683	1632	4315	No	1.43	Si
SLU 82	fin.	291.06	368	0.64	0	173	5075	2683	1632	4315	No	11.72	Si
SLU 80	ini.	-884.31	2995	0.64	0	173	5075	2683	1632	4315	No	1.44	Si
SLU 80	fin.	298.89	402	0.64	0	173	5075	2683	1632	4315	No	10.75	Si
SLU 75	ini.	-875.75	2968	0.64	0	173	5075	2683	1632	4315	No	1.45	Si
SLU 75	fin.	295.01	394	0.64	0	173	5075	2683	1632	4315	No	10.97	Si
SLU 77	ini.	-886.5	3003	0.64	0	173	5075	2683	1632	4315	No	1.44	Si
SLU 77	fin.	298.09	398	0.64	0	173	5075	2683	1632	4315	No	10.83	Si
SLU 79	ini.	-883.9	2993	0.64	0	173	5075	2683	1632	4315	No	1.44	Si
SLU 79	fin.	300.05	406	0.64	0	173	5075	2683	1632	4315	No	10.62	Si
SLU 74	ini.	-875.34	2965	0.64	0	173	5075	2683	1632	4315	No	1.46	Si
SLU 74	fin.	296.17	398	0.64	0	173	5075	2683	1632	4315	No	10.84	Si
SLU 84	ini.	-895.67	3045	0.64	0	173	5075	2683	1632	4315	No	1.42	Si
SLU 84	fin.	292.98	368	0.64	0	173	5075	2683	1632	4315	No	11.71	Si
SLU 81	ini.	-884.08	3005	0.64	0	173	5075	2683	1632	4315	No	1.44	Si
SLU 81	fin.	292.22	373	0.64	0	173	5075	2683	1632	4315	No	11.57	Si
SLU 83	ini.	-895.25	3042	0.64	0	173	5075	2683	1632	4315	No	1.42	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	fin.	294.13	373	0.64	0	173	5075	2683	1632	4315	No	11.56	Si
SLU 78	ini.	-886.92	3005	0.64	0	173	5075	2683	1632	4315	No	1.44	Si
SLU 78	fin.	296.93	394	0.64	0	173	5075	2683	1632	4315	No	10.96	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 16	ini.	-1030.16	-1772	-0.0015273	0.0002807	0.0035	0.64		1516.76	1516.76		1.47	Si
SLD 16	fin.	658.28	505	-0.0008258	0.0002807	0.0035	0.64		1512.56	1512.56		2.3	Si
SLD 13	ini.	-1023.65	-1867	-0.0015126	0.0002807	0.0035	0.64		1516.76	1516.76		1.48	Si
SLD 13	fin.	580.31	322	-0.0007036	0.0002807	0.0035	0.64		1512.56	1512.56		2.61	Si
SLV 9	ini.	-929.72	-2054	-0.0013116	0.0002807	0.0035	0.64		1516.76	1516.76		1.63	Si
SLV 9	fin.	278.46	-304	-0.0002952	0.0002807	0.0035	0.64		1512.56	1512.56		5.43	Si
SLV 14	ini.	-1591.88	-2706	-0.0035848	0.0002807	0.0035	0.64		1516.76	1516.76		0.95	No
SLV 14	fin.	1098.98	954	-0.0016991	0.0002807	0.0035	0.64		1512.56	1512.56		1.38	Si
SLV 13	ini.	-1555.61	-2676	-0.0034178	0.0002807	0.0035	0.64		1516.76	1516.76		0.98	No
SLV 13	fin.	1044.62	860	-0.0015669	0.0002807	0.0035	0.64		1512.56	1512.56		1.45	Si
SLD 15	ini.	-1014.59	-1758	-0.0014922	0.0002807	0.0035	0.64		1516.76	1516.76		1.49	Si
SLD 15	fin.	634.95	465	-0.0007885	0.0002807	0.0035	0.64		1512.56	1512.56		2.38	Si
SLV 15	ini.	-1535.16	-2429	-0.0033209	0.0002807	0.0035	0.64		1516.76	1516.76		0.99	No
SLV 15	fin.	1169.8	1185	-0.0018895	0.0002807	0.0035	0.64		1512.56	1512.56		1.29	Si
SLD 14	ini.	-1039.22	-1880	-0.0015481	0.0002807	0.0035	0.64		1516.76	1516.76		1.46	Si
SLD 14	fin.	603.64	362	-0.0007394	0.0002807	0.0035	0.64		1512.56	1512.56		2.51	Si
SLV 10	ini.	-952.89	-2074	-0.0013592	0.0002807	0.0035	0.64		1516.76	1516.76		1.59	Si
SLV 10	fin.	313.17	-245	-0.0003369	0.0002807	0.0035	0.64		1512.56	1512.56		4.83	Si
SLV 16	ini.	-1571.43	-2459	-0.0034915	0.0002807	0.0035	0.64		1516.76	1516.76		0.97	No
SLV 16	fin.	1224.16	1279	-0.0020526	0.0002807	0.0035	0.64		1512.56	1512.56		1.24	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 15	ini.	-1014.59	3187	0.64	0	260	5075	4025	1632	5335		1.67	Si
SLD 15	fin.	634.95	1502	0.64	0	260	5075	4025	1632	5335		3.55	Si
SLD 14	ini.	-1039.22	3308	0.64	0	260	5075	4025	1632	5335		1.61	Si
SLD 14	fin.	603.64	1418	0.64	0	260	5075	4025	1632	5335		3.76	Si
SLV 16	ini.	-1571.43	4731	0.64	0	260	5075	4025	1632	5335		1.13	Si
SLV 16	fin.	1224.16	3186	0.64	0	260	5075	4025	1632	5335		1.67	Si
SLD 16	ini.	-1030.16	3226	0.64	0	260	5075	4025	1632	5335		1.65	Si
SLD 16	fin.	658.28	1574	0.64	0	260	5075	4025	1632	5335		3.39	Si
SLV 15	ini.	-1535.16	4640	0.64	0	260	5075	4025	1632	5335		1.15	Si
SLV 15	fin.	1169.8	3018	0.64	0	260	5075	4025	1632	5335		1.77	Si
SLV 14	ini.	-1591.88	4919	0.64	0	260	5075	4025	1632	5335		1.08	Si
SLV 14	fin.	1098.98	2830	0.64	0	260	5075	4025	1632	5335		1.88	Si
SLV 13	ini.	-1555.61	4829	0.64	0	260	5075	4025	1632	5335		1.1	Si
SLV 13	fin.	1044.62	2662	0.64	0	260	5075	4025	1632	5335		2	Si
SLV 9	ini.	-929.72	3191	0.64	0	260	5075	4025	1632	5335		1.67	Si
SLV 9	fin.	278.46	487	0.64	0	260	5075	4025	1632	5335		10.96	Si
SLV 10	ini.	-952.89	3249	0.64	0	260	5075	4025	1632	5335		1.64	Si
SLV 10	fin.	313.17	594	0.64	0	260	5075	4025	1632	5335		8.98	Si
SLD 13	ini.	-1023.65	3269	0.64	0	260	5075	4025	1632	5335		1.63	Si
SLD 13	fin.	580.31	1345	0.64	0	260	5075	4025	1632	5335		3.97	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.953	SLV 14	No
V_SLV	1.084	SLV 14	Si
PF_SLU	1.68	SLU 84	Si
V_SLU	1.417	SLU 84	Si

Trave di accoppiamento 35

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.543	-3.314	2	2.9	0.9	-22.543	-3.314	2	2.9	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	286.65	-1636	-0.000149	0.0001872	0.0035	0.9		2959	2959	No	10.32	Si
SLU 74	fin.	344.9	-1726	-0.000182	0.0001872	0.0035	0.9		2959	2959	No	8.58	Si
SLU 66	ini.	227.2	-1420	-0.0001165	0.0001872	0.0035	0.9		2959	2959	No	13.02	Si
SLU 66	fin.	351.4	-1607	-0.0001857	0.0001872	0.0035	0.9		2959	2959	No	8.42	Si
SLU 69	ini.	232.47	-1441	-0.0001193	0.0001872	0.0035	0.9		2959	2959	No	12.73	Si
SLU 69	fin.	353.9	-1623	-0.0001872	0.0001872	0.0035	0.9		2959	2959	No	8.36	Si
SLU 81	ini.	305.64	-1696	-0.0001596	0.0001872	0.0035	0.9		2959	2959	No	9.68	Si
SLU 81	fin.	334.27	-1746	-0.0001759	0.0001872	0.0035	0.9		2959	2959	No	8.85	Si
SLU 83	ini.	310.91	-1717	-0.0001626	0.0001872	0.0035	0.9		2959	2959	No	9.52	Si
SLU 83	fin.	336.77	-1761	-0.0001773	0.0001872	0.0035	0.9		2959	2959	No	8.79	Si
SLU 79	ini.	290.71	-1645	-0.0001513	0.0001872	0.0035	0.9		2959	2959	No	10.18	Si
SLU 79	fin.	342.05	-1726	-0.0001803	0.0001872	0.0035	0.9		2959	2959	No	8.65	Si
SLU 77	ini.	291.92	-1657	-0.0001519	0.0001872	0.0035	0.9		2959	2959	No	10.14	Si
SLU 77	fin.	347.4	-1742	-0.0001834	0.0001872	0.0035	0.9		2959	2959	No	8.52	Si
SLU 71	ini.	231.26	-1430	-0.0001186	0.0001872	0.0035	0.9		2959	2959	No	12.79	Si
SLU 71	fin.	348.55	-1606	-0.0001841	0.0001872	0.0035	0.9		2959	2959	No	8.49	Si
SLU 64	ini.	220.72	-1388	-0.000113	0.0001872	0.0035	0.9		2959	2959	No	13.41	Si
SLU 64	fin.	343.55	-1576	-0.0001812	0.0001872	0.0035	0.9		2959	2959	No	8.61	Si
SLU 48	ini.	197.26	-1264	-0.0001004	0.0001872	0.0035	0.9		2959	2959	No	15	Si
SLU 48	fin.	325.63	-1457	-0.0001709	0.0001872	0.0035	0.9		2959	2959	No	9.09	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	281.36	-1265	0.9	0	329	7137	3773	2295	6068	No	4.8	Si
SLU 80	fin.	305.54	662	0.9	0	329	7137	3773	2295	6068	No	9.16	Si
SLU 81	ini.	305.64	-1358	0.9	0	329	7137	3773	2295	6068	No	4.47	Si
SLU 81	fin.	334.27	735	0.9	0	329	7137	3773	2295	6068	No	8.25	Si
SLU 84	ini.	301.57	-1339	0.9	0	329	7137	3773	2295	6068	No	4.53	Si
SLU 84	fin.	300.26	632	0.9	0	329	7137	3773	2295	6068	No	9.6	Si
SLU 82	ini.	296.3	-1309	0.9	0	329	7137	3773	2295	6068	No	4.64	Si
SLU 82	fin.	297.76	621	0.9	0	329	7137	3773	2295	6068	No	9.77	Si
SLU 77	ini.	291.92	-1325	0.9	0	329	7137	3773	2295	6068	No	4.58	Si
SLU 77	fin.	347.4	794	0.9	0	329	7137	3773	2295	6068	No	7.64	Si
SLU 74	ini.	286.65	-1295	0.9	0	329	7137	3773	2295	6068	No	4.68	Si
SLU 74	fin.	344.9	783	0.9	0	329	7137	3773	2295	6068	No	7.75	Si
SLU 79	ini.	290.71	-1314	0.9	0	329	7137	3773	2295	6068	No	4.62	Si
SLU 79	fin.	342.05	776	0.9	0	329	7137	3773	2295	6068	No	7.81	Si
SLU 75	ini.	277.3	-1246	0.9	0	329	7137	3773	2295	6068	No	4.87	Si
SLU 75	fin.	308.39	669	0.9	0	329	7137	3773	2295	6068	No	9.07	Si
SLU 78	ini.	282.58	-1276	0.9	0	329	7137	3773	2295	6068	No	4.75	Si
SLU 78	fin.	310.89	680	0.9	0	329	7137	3773	2295	6068	No	8.92	Si
SLU 83	ini.	310.91	-1388	0.9	0	329	7137	3773	2295	6068	No	4.37	Si
SLU 83	fin.	336.77	746	0.9	0	329	7137	3773	2295	6068	No	8.13	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-693.88	315	-0.0003832	0.0002807	0.0035	0.9		2995.37	2995.37		4.32	Si
SLV 16	fin.	1536.54	-3380	-0.0010272	0.0002807	0.0035	0.9		2989.59	2989.59		1.95	Si
SLV 8	ini.	963.14	-3110	-0.0005669	0.0002807	0.0035	0.9		2989.59	2989.59		3.1	Si
SLV 8	fin.	199.13	-2515	-0.0001003	0.0002807	0.0035	0.9		2989.59	2989.59		15.01	Si
SLV 14	ini.	-965.15	1161	-0.0005671	0.0002807	0.0035	0.9		2995.37	2995.37		3.1	Si
SLV 14	fin.	1340.07	-2285	-0.0008578	0.0002807	0.0035	0.9		2989.59	2989.59		2.23	Si
SLV 15	ini.	-756.6	449	-0.0004238	0.0002807	0.0035	0.9		2995.37	2995.37		3.96	Si
SLV 15	fin.	1600.23	-3449	-0.0010851	0.0002807	0.0035	0.9		2989.59	2989.59		1.87	Si
SLV 13	ini.	-1027.87	1294	-0.0006126	0.0002807	0.0035	0.9		2995.37	2995.37		2.91	Si
SLV 13	fin.	1403.76	-2354	-0.0009113	0.0002807	0.0035	0.9		2989.59	2989.59		2.13	Si
SLV 4	ini.	1385.93	-3475	-0.0008962	0.0002807	0.0035	0.9		2989.59	2989.59		2.16	Si
SLV 4	fin.	-891.36	-66	-0.000515	0.0002807	0.0035	0.9		2995.37	2995.37		3.36	Si
SLV 1	ini.	1051.94	-2497	-0.0006317	0.0002807	0.0035	0.9		2989.59	2989.59		2.84	Si
SLV 1	fin.	-1024.14	960	-0.0006098	0.0002807	0.0035	0.9		2995.37	2995.37		2.92	Si
SLV 3	ini.	1323.21	-3342	-0.0008439	0.0002807	0.0035	0.9		2989.59	2989.59		2.26	Si
SLV 3	fin.	-827.67	-135	-0.0004713	0.0002807	0.0035	0.9		2995.37	2995.37		3.62	Si
SLV 11	ini.	299.14	-1888	-0.0001531	0.0002807	0.0035	0.9		2989.59	2989.59		9.99	Si
SLV 11	fin.	968.17	-3554	-0.0005705	0.0002807	0.0035	0.9		2989.59	2989.59		3.09	Si
SLV 2	ini.	1114.66	-2630	-0.0006789	0.0002807	0.0035	0.9		2989.59	2989.59		2.68	Si
SLV 2	fin.	-1087.83	1029	-0.0006571	0.0002807	0.0035	0.9		2995.37	2995.37		2.75	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-1027.87	3680	0.9	0	493	7137	5660	2295	7630		2.07	Si
SLV 13	fin.	1403.76	4364	0.9	0	493	7137	5660	2295	7630		1.75	Si
SLV 14	ini.	-965.15	3445	0.9	0	493	7137	5660	2295	7630		2.21	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	fin.	1340.07	4169	0.9	0	493	7137	5660	2295	7630		1.83	Si
SLV 1	ini.	1051.94	-4236	0.9	0	493	7137	5660	2295	7630		1.8	Si
SLV 1	fin.	-1024.14	-3632	0.9	0	493	7137	5660	2295	7630		2.1	Si
SLV 3	ini.	1323.21	-5065	0.9	0	493	7137	5660	2295	7630		1.51	Si
SLV 3	fin.	-827.67	-2995	0.9	0	493	7137	5660	2295	7630		2.55	Si
SLV 7	ini.	923.09	-3304	0.9	0	493	7137	5660	2295	7630		2.31	Si
SLV 7	fin.	239.8	512	0.9	0	493	7137	5660	2295	7630		14.9	Si
SLV 15	ini.	-756.6	2851	0.9	0	493	7137	5660	2295	7630		2.68	Si
SLV 15	fin.	1600.23	5001	0.9	0	493	7137	5660	2295	7630		1.53	Si
SLV 8	ini.	963.14	-3454	0.9	0	493	7137	5660	2295	7630		2.21	Si
SLV 8	fin.	199.13	388	0.9	0	493	7137	5660	2295	7630		19.67	Si
SLV 2	ini.	1114.66	-4471	0.9	0	493	7137	5660	2295	7630		1.71	Si
SLV 2	fin.	-1087.83	-3827	0.9	0	493	7137	5660	2295	7630		1.99	Si
SLV 16	ini.	-693.88	2616	0.9	0	493	7137	5660	2295	7630		2.92	Si
SLV 16	fin.	1536.54	4807	0.9	0	493	7137	5660	2295	7630		1.59	Si
SLV 4	ini.	1385.93	-5299	0.9	0	493	7137	5660	2295	7630		1.44	Si
SLV 4	fin.	-891.36	-3190	0.9	0	493	7137	5660	2295	7630		2.39	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.868	SLV 15	Si
V_SLV	1.44	SLV 4	Si
PF_SLU	8.361	SLU 69	Si
V_SLU	4.372	SLU 83	Si

Trave di accoppiamento 36

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.543	-3.314	4.8	5.44	0.64	-22.543	-3.314	4.8	5.44	0.64	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-570.89	-1741	-0.0007317	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.64	Si
SLU 77	fin.	-106.78	-593	-0.0001075	0.0001872	0.0035	0.64		1504.96	1504.96	No	14.09	Si
SLU 79	ini.	-564.09	-1720	-0.0007208	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.67	Si
SLU 79	fin.	-107.18	-589	-0.0001079	0.0001872	0.0035	0.64		1504.96	1504.96	No	14.04	Si
SLU 80	ini.	-556.13	-1694	-0.000708	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.71	Si
SLU 80	fin.	-105.19	-577	-0.0001058	0.0001872	0.0035	0.64		1504.96	1504.96	No	14.31	Si
SLU 84	ini.	-565.6	-1728	-0.0007232	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.66	Si
SLU 84	fin.	-119.91	-620	-0.0001214	0.0001872	0.0035	0.64		1504.96	1504.96	No	12.55	Si
SLU 82	ini.	-560.33	-1709	-0.0007147	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.69	Si
SLU 82	fin.	-116.65	-607	-0.0001179	0.0001872	0.0035	0.64		1504.96	1504.96	No	12.9	Si
SLU 83	ini.	-573.56	-1754	-0.0007361	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.62	Si
SLU 83	fin.	-121.9	-632	-0.0001235	0.0001872	0.0035	0.64		1504.96	1504.96	No	12.35	Si
SLU 74	ini.	-565.62	-1722	-0.0007232	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.66	Si
SLU 74	fin.	-103.52	-580	-0.0001041	0.0001872	0.0035	0.64		1504.96	1504.96	No	14.54	Si
SLU 81	ini.	-568.29	-1735	-0.0007275	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.65	Si
SLU 81	fin.	-118.64	-619	-0.0001201	0.0001872	0.0035	0.64		1504.96	1504.96	No	12.68	Si
SLU 75	ini.	-557.66	-1696	-0.0007104	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.7	Si
SLU 75	fin.	-101.53	-568	-0.000102	0.0001872	0.0035	0.64		1504.96	1504.96	No	14.82	Si
SLU 78	ini.	-562.93	-1715	-0.0007189	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.67	Si
SLU 78	fin.	-104.79	-581	-0.0001054	0.0001872	0.0035	0.64		1504.96	1504.96	No	14.36	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-573.56	2563	0.64	0	173	5075	2683	1632	4315	No	1.68	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	fin.	-121.9	-870	0.64	0	173	5075	2683	1632	4315	No	4.96	Si
SLU 82	ini.	-560.33	2505	0.64	0	173	5075	2683	1632	4315	No	1.72	Si
SLU 82	fin.	-116.65	-842	0.64	0	173	5075	2683	1632	4315	No	5.12	Si
SLU 84	ini.	-565.6	2529	0.64	0	173	5075	2683	1632	4315	No	1.71	Si
SLU 84	fin.	-119.91	-858	0.64	0	173	5075	2683	1632	4315	No	5.03	Si
SLU 81	ini.	-568.29	2538	0.64	0	173	5075	2683	1632	4315	No	1.7	Si
SLU 81	fin.	-118.64	-854	0.64	0	173	5075	2683	1632	4315	No	5.05	Si
SLU 77	ini.	-570.89	2536	0.64	0	173	5075	2683	1632	4315	No	1.7	Si
SLU 77	fin.	-106.78	-802	0.64	0	173	5075	2683	1632	4315	No	5.38	Si
SLU 78	ini.	-562.93	2502	0.64	0	173	5075	2683	1632	4315	No	1.72	Si
SLU 78	fin.	-104.79	-790	0.64	0	173	5075	2683	1632	4315	No	5.46	Si
SLU 75	ini.	-557.66	2478	0.64	0	173	5075	2683	1632	4315	No	1.74	Si
SLU 75	fin.	-101.53	-774	0.64	0	173	5075	2683	1632	4315	No	5.57	Si
SLU 79	ini.	-564.09	2508	0.64	0	173	5075	2683	1632	4315	No	1.72	Si
SLU 79	fin.	-107.18	-800	0.64	0	173	5075	2683	1632	4315	No	5.39	Si
SLU 74	ini.	-565.62	2512	0.64	0	173	5075	2683	1632	4315	No	1.72	Si
SLU 74	fin.	-103.52	-786	0.64	0	173	5075	2683	1632	4315	No	5.49	Si
SLU 80	ini.	-556.13	2475	0.64	0	173	5075	2683	1632	4315	No	1.74	Si
SLU 80	fin.	-105.19	-789	0.64	0	173	5075	2683	1632	4315	No	5.47	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 11	ini.	-884.59	-2345	-0.001222	0.0002807	0.0035	0.64		1516.76	1516.76		1.71	Si
SLV 11	fin.	76.34	-144	-0.0000754	0.0002807	0.0035	0.64		1512.56	1512.56		19.81	Si
SLV 14	ini.	-1201.53	-2972	-0.0019735	0.0002807	0.0035	0.64		1516.76	1516.76		1.26	Si
SLV 14	fin.	857.83	1706	-0.0011749	0.0002807	0.0035	0.64		1512.56	1512.56		1.76	Si
SLV 4	ini.	441.27	648	-0.0005028	0.0002807	0.0035	0.64		1512.56	1512.56		3.43	Si
SLV 4	fin.	-1013.93	-2537	-0.0014907	0.0002807	0.0035	0.64		1516.76	1516.76		1.5	Si
SLV 16	ini.	-1329.26	-3296	-0.0024041	0.0002807	0.0035	0.64		1516.76	1516.76		1.14	Si
SLV 16	fin.	765.75	1449	-0.0010066	0.0002807	0.0035	0.64		1512.56	1512.56		1.98	Si
SLV 1	ini.	537.28	909	-0.0006392	0.0002807	0.0035	0.64		1512.56	1512.56		2.82	Si
SLV 1	fin.	-871.92	-2154	-0.0011975	0.0002807	0.0035	0.64		1516.76	1516.76		1.74	Si
SLV 2	ini.	569	972	-0.0006865	0.0002807	0.0035	0.64		1512.56	1512.56		2.66	Si
SLV 2	fin.	-921.85	-2280	-0.0012957	0.0002807	0.0035	0.64		1516.76	1516.76		1.65	Si
SLV 15	ini.	-1360.98	-3359	-0.0025271	0.0002807	0.0035	0.64		1516.76	1516.76		1.11	Si
SLV 15	fin.	815.67	1574	-0.0010962	0.0002807	0.0035	0.64		1512.56	1512.56		1.85	Si
SLV 13	ini.	-1233.25	-3035	-0.0020714	0.0002807	0.0035	0.64		1516.76	1516.76		1.23	Si
SLV 13	fin.	907.75	1832	-0.0012721	0.0002807	0.0035	0.64		1512.56	1512.56		1.67	Si
SLV 12	ini.	-864.33	-2305	-0.001183	0.0002807	0.0035	0.64		1516.76	1516.76		1.75	Si
SLV 12	fin.	44.45	-224	-0.0000435	0.0002807	0.0035	0.64		1512.56	1512.56		34.03	Si
SLV 3	ini.	409.55	585	-0.00046	0.0002807	0.0035	0.64		1512.56	1512.56		3.69	Si
SLV 3	fin.	-964	-2411	-0.0013825	0.0002807	0.0035	0.64		1516.76	1516.76		1.57	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-1360.98	5214	0.64	0	260	5075	4025	1632	5335		1.02	Si
SLV 15	fin.	815.67	2613	0.64	0	260	5075	4025	1632	5335		2.04	Si
SLV 13	ini.	-1233.25	4694	0.64	0	260	5075	4025	1632	5335		1.14	Si
SLV 13	fin.	907.75	2909	0.64	0	260	5075	4025	1632	5335		1.83	Si
SLV 12	ini.	-864.33	3527	0.64	0	260	5075	4025	1632	5335		1.51	Si
SLV 12	fin.	44.45	-84	0.64	0	260	5075	4025	1632	5335		63.52	Si
SLV 16	ini.	-1329.26	5114	0.64	0	260	5075	4025	1632	5335		1.04	Si
SLV 16	fin.	765.75	2419	0.64	0	260	5075	4025	1632	5335		2.21	Si
SLV 4	ini.	441.27	-1207	0.64	0	260	5075	4025	1632	5335		4.42	Si
SLV 4	fin.	-1013.93	-3847	0.64	0	260	5075	4025	1632	5335		1.39	Si
SLV 3	ini.	409.55	-1107	0.64	0	260	5075	4025	1632	5335		4.82	Si
SLV 3	fin.	-964	-3653	0.64	0	260	5075	4025	1632	5335		1.46	Si
SLV 1	ini.	537.28	-1628	0.64	0	260	5075	4025	1632	5335		3.28	Si
SLV 1	fin.	-871.92	-3358	0.64	0	260	5075	4025	1632	5335		1.59	Si
SLV 2	ini.	569	-1728	0.64	0	260	5075	4025	1632	5335		3.09	Si
SLV 2	fin.	-921.85	-3551	0.64	0	260	5075	4025	1632	5335		1.5	Si
SLV 14	ini.	-1201.53	4594	0.64	0	260	5075	4025	1632	5335		1.16	Si
SLV 14	fin.	857.83	2715	0.64	0	260	5075	4025	1632	5335		1.96	Si
SLV 11	ini.	-884.59	3591	0.64	0	260	5075	4025	1632	5335		1.49	Si
SLV 11	fin.	76.34	40	0.64	0	260	5075	4025	1632	5335		134.35	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.114	SLV 15	Si
V_SLV	1.023	SLV 15	Si
PF_SLU	2.624	SLU 83	Si
V_SLU	1.684	SLU 83	Si

Trave di accoppiamento 38

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.813	-3.314	4.8	5.44	0.64	-19.313	-3.314	4.8	5.44	0.64	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-548.36	-1745	-0.0006956	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.74	Si
SLU 84	fin.	544.33	-1745	-0.0006914	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.76	Si
SLU 78	ini.	-532.79	-1666	-0.0006709	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.82	Si
SLU 78	fin.	537.32	-1666	-0.0006803	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.79	Si
SLU 73	ini.	-533.77	-1584	-0.0006725	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.82	Si
SLU 73	fin.	541.45	-1584	-0.0006868	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.77	Si
SLU 83	ini.	-530.4	-1777	-0.0006672	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.84	Si
SLU 83	fin.	520.56	-1777	-0.0006539	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.88	Si
SLU 77	ini.	-514.83	-1699	-0.0006428	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.92	Si
SLU 77	fin.	513.55	-1699	-0.0006429	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.92	Si
SLU 75	ini.	-527.41	-1636	-0.0006625	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.85	Si
SLU 75	fin.	533.64	-1636	-0.0006744	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.81	Si
SLU 80	ini.	-532.54	-1666	-0.0006705	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.83	Si
SLU 80	fin.	532.95	-1666	-0.0006734	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.82	Si
SLU 81	ini.	-525.03	-1748	-0.0006588	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.87	Si
SLU 81	fin.	516.89	-1748	-0.0006481	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.9	Si
SLU 82	ini.	-542.99	-1715	-0.000687	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.77	Si
SLU 82	fin.	540.66	-1715	-0.0006856	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.78	Si
SLU 76	ini.	-539.14	-1614	-0.000681	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.79	Si
SLU 76	fin.	545.12	-1614	-0.0006927	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.75	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-548.36	2290	0.64	0	260	3965	2683	1632	4225	No	1.84	Si
SLU 84	fin.	544.33	2081	0.64	0	260	3965	2683	1632	4225	No	2.03	Si
SLU 73	ini.	-533.77	2255	0.64	0	260	3965	2683	1632	4225	No	1.87	Si
SLU 73	fin.	541.45	2046	0.64	0	260	3965	2683	1632	4225	No	2.07	Si
SLU 81	ini.	-525.03	2189	0.64	0	260	3965	2683	1632	4225	No	1.93	Si
SLU 81	fin.	516.89	1979	0.64	0	260	3965	2683	1632	4225	No	2.13	Si
SLU 78	ini.	-532.79	2245	0.64	0	260	3965	2683	1632	4225	No	1.88	Si
SLU 78	fin.	537.32	2035	0.64	0	260	3965	2683	1632	4225	No	2.08	Si
SLU 83	ini.	-530.4	2207	0.64	0	260	3965	2683	1632	4225	No	1.91	Si
SLU 83	fin.	520.56	1997	0.64	0	260	3965	2683	1632	4225	No	2.12	Si
SLU 82	ini.	-542.99	2272	0.64	0	260	3965	2683	1632	4225	No	1.86	Si
SLU 82	fin.	540.66	2062	0.64	0	260	3965	2683	1632	4225	No	2.05	Si
SLU 75	ini.	-527.41	2227	0.64	0	260	3965	2683	1632	4225	No	1.9	Si
SLU 75	fin.	533.64	2017	0.64	0	260	3965	2683	1632	4225	No	2.09	Si
SLU 76	ini.	-539.14	2273	0.64	0	260	3965	2683	1632	4225	No	1.86	Si
SLU 76	fin.	545.12	2064	0.64	0	260	3965	2683	1632	4225	No	2.05	Si
SLU 77	ini.	-514.83	2162	0.64	0	260	3965	2683	1632	4225	No	1.95	Si
SLU 77	fin.	513.55	1952	0.64	0	260	3965	2683	1632	4225	No	2.16	Si
SLU 80	ini.	-532.54	2236	0.64	0	260	3965	2683	1632	4225	No	1.89	Si
SLU 80	fin.	532.95	2026	0.64	0	260	3965	2683	1632	4225	No	2.08	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 16	ini.	-422.71	-199	-0.0004762	0.0002807	0.0035	0.64		1516.76	1516.76		3.59	Si
SLD 16	fin.	668.34	-119	-0.0008421	0.0002807	0.0035	0.64		1512.56	1512.56		2.26	Si
SLV 11	ini.	-598.87	-267	-0.0007297	0.0002807	0.0035	0.64		1516.76	1516.76		2.53	Si
SLV 11	fin.	857.87	-183	-0.0011749	0.0002807	0.0035	0.64		1512.56	1512.56		1.76	Si
SLD 15	ini.	-424.99	-162	-0.0004792	0.0002807	0.0035	0.64		1516.76	1516.76		3.57	Si
SLD 15	fin.	675.77	-83	-0.0008542	0.0002807	0.0035	0.64		1512.56	1512.56		2.24	Si
SLV 14	ini.	-383.52	909	-0.0004244	0.0002807	0.0035	0.64		1516.76	1516.76		3.95	Si
SLV 14	fin.	908.47	1085	-0.0012735	0.0002807	0.0035	0.64		1512.56	1512.56		1.66	Si
SLV 13	ini.	-388.84	995	-0.0004313	0.0002807	0.0035	0.64		1516.76	1516.76		3.9	Si
SLV 13	fin.	925.77	1170	-0.0013084	0.0002807	0.0035	0.64		1512.56	1512.56		1.63	Si
SLV 12	ini.	-595.47	-321	-0.0007244	0.0002807	0.0035	0.64		1516.76	1516.76		2.55	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	fin.	846.82	-238	-0.001154	0.0002807	0.0035	0.64		1512.56	1512.56		1.79	Si
SLV 15	ini.	-517	1102	-0.0006076	0.0002807	0.0035	0.64		1516.76	1516.76		2.93	Si
SLV 15	fin.	1105.46	1294	-0.0017156	0.0002807	0.0035	0.64		1512.56	1512.56		1.37	Si
SLV 16	ini.	-511.68	1016	-0.0005999	0.0002807	0.0035	0.64		1516.76	1516.76		2.96	Si
SLV 16	fin.	1088.16	1208	-0.0016719	0.0002807	0.0035	0.64		1512.56	1512.56		1.39	Si
SLD 14	ini.	-367.63	-243	-0.0004039	0.0002807	0.0035	0.64		1516.76	1516.76		4.13	Si
SLD 14	fin.	591.26	-171	-0.0007204	0.0002807	0.0035	0.64		1512.56	1512.56		2.56	Si
SLD 13	ini.	-369.91	-206	-0.0004069	0.0002807	0.0035	0.64		1516.76	1516.76		4.1	Si
SLD 13	fin.	598.69	-134	-0.0007318	0.0002807	0.0035	0.64		1512.56	1512.56		2.53	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 14	ini.	-367.63	2171	0.64	0	390	3965	4025	1632	4354		2.01	Si
SLD 14	fin.	591.26	1949	0.64	0	390	3965	4025	1632	4354		2.23	Si
SLV 14	ini.	-383.52	3081	0.64	0	390	3965	4025	1632	4354		1.41	Si
SLV 14	fin.	908.47	2761	0.64	0	390	3965	4025	1632	4354		1.58	Si
SLV 12	ini.	-595.47	2315	0.64	0	390	3965	4025	1632	4354		1.88	Si
SLV 12	fin.	846.82	1736	0.64	0	390	3965	4025	1632	4354		2.51	Si
SLV 13	ini.	-388.84	3126	0.64	0	390	3965	4025	1632	4354		1.39	Si
SLV 13	fin.	925.77	2806	0.64	0	390	3965	4025	1632	4354		1.55	Si
SLD 16	ini.	-422.71	2252	0.64	0	390	3965	4025	1632	4354		1.93	Si
SLD 16	fin.	668.34	1945	0.64	0	390	3965	4025	1632	4354		2.24	Si
SLV 11	ini.	-598.87	2343	0.64	0	390	3965	4025	1632	4354		1.86	Si
SLV 11	fin.	857.87	1765	0.64	0	390	3965	4025	1632	4354		2.47	Si
SLV 15	ini.	-517	3315	0.64	0	390	3965	4025	1632	4354		1.31	Si
SLV 15	fin.	1105.46	2791	0.64	0	390	3965	4025	1632	4354		1.56	Si
SLV 16	ini.	-511.68	3270	0.64	0	390	3965	4025	1632	4354		1.33	Si
SLV 16	fin.	1088.16	2746	0.64	0	390	3965	4025	1632	4354		1.59	Si
SLD 13	ini.	-369.91	2190	0.64	0	390	3965	4025	1632	4354		1.99	Si
SLD 13	fin.	598.69	1968	0.64	0	390	3965	4025	1632	4354		2.21	Si
SLD 15	ini.	-424.99	2272	0.64	0	390	3965	4025	1632	4354		1.92	Si
SLD 15	fin.	675.77	1964	0.64	0	390	3965	4025	1632	4354		2.22	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.368	SLV 15	Si
V_SLV	1.314	SLV 15	Si
PF_SLU	2.744	SLU 84	Si
V_SLU	1.845	SLU 84	Si

Trave di accoppiamento 39

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.313	-3.314	2	2.9	0.9	-18.313	-3.314	2	2.9	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	367.81	-1252	-0.0001953	0.0001872	0.0035	0.9		2959	2959	No	8.04	Si
SLU 81	fin.	-101.7	-3350	-0.0000506	0.0001872	0.0035	0.9		2964.67	2964.67	No	29.15	Si
SLU 62	ini.	381.58	-1226	-0.0002033	0.0001872	0.0035	0.9		2959	2959	No	7.75	Si
SLU 62	fin.	-121.98	-2978	-0.000061	0.0001872	0.0035	0.9		2964.67	2964.67	No	24.3	Si
SLU 63	ini.	385.52	-1229	-0.0002057	0.0001872	0.0035	0.9		2959	2959	No	7.68	Si
SLU 63	fin.	-138.32	-3096	-0.0000694	0.0001872	0.0035	0.9		2964.67	2964.67	No	21.43	Si
SLU 83	ini.	376.82	-1278	-0.0002005	0.0001872	0.0035	0.9		2959	2959	No	7.85	Si
SLU 83	fin.	-104.09	-3389	-0.0000519	0.0001872	0.0035	0.9		2964.67	2964.67	No	28.48	Si
SLU 61	ini.	376.52	-1203	-0.0002004	0.0001872	0.0035	0.9		2959	2959	No	7.86	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 61	fin.	-135.93	-3057	-0.0000682	0.0001872	0.0035	0.9		2964.67	2964.67	No	21.81	Si
SLU 58	ini.	366.85	-1186	-0.0001947	0.0001872	0.0035	0.9		2959	2959	No	8.07	Si
SLU 58	fin.	-114.76	-2896	-0.0000573	0.0001872	0.0035	0.9		2964.67	2964.67	No	25.83	Si
SLU 59	ini.	370.79	-1189	-0.000197	0.0001872	0.0035	0.9		2959	2959	No	7.98	Si
SLU 59	fin.	-131.1	-3015	-0.0000657	0.0001872	0.0035	0.9		2964.67	2964.67	No	22.61	Si
SLU 84	ini.	380.75	-1281	-0.0002028	0.0001872	0.0035	0.9		2959	2959	No	7.77	Si
SLU 84	fin.	-120.44	-3508	-0.0000602	0.0001872	0.0035	0.9		2964.67	2964.67	No	24.62	Si
SLU 82	ini.	371.75	-1255	-0.0001976	0.0001872	0.0035	0.9		2959	2959	No	7.96	Si
SLU 82	fin.	-118.05	-3469	-0.000059	0.0001872	0.0035	0.9		2964.67	2964.67	No	25.11	Si
SLU 60	ini.	372.58	-1200	-0.000198	0.0001872	0.0035	0.9		2959	2959	No	7.94	Si
SLU 60	fin.	-119.59	-2939	-0.0000598	0.0001872	0.0035	0.9		2964.67	2964.67	No	24.79	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	371.75	-2658	0.9	0	329	7137	3773	2295	6068	No	2.28	Si
SLU 82	fin.	-118.05	5620	0.9	0	329	7137	3773	2295	6068	No	1.08	Si
SLU 81	ini.	367.81	-2686	0.9	0	329	7137	3773	2295	6068	No	2.26	Si
SLU 81	fin.	-101.7	5537	0.9	0	329	7137	3773	2295	6068	No	1.1	Si
SLU 84	ini.	380.75	-2706	0.9	0	329	7137	3773	2295	6068	No	2.24	Si
SLU 84	fin.	-120.44	5678	0.9	0	329	7137	3773	2295	6068	No	1.07	Si
SLU 83	ini.	376.82	-2734	0.9	0	329	7137	3773	2295	6068	No	2.22	Si
SLU 83	fin.	-104.09	5595	0.9	0	329	7137	3773	2295	6068	No	1.08	Si
SLU 77	ini.	355.67	-2628	0.9	0	329	7137	3773	2295	6068	No	2.31	Si
SLU 77	fin.	-90.46	5539	0.9	0	329	7137	3773	2295	6068	No	1.1	Si
SLU 74	ini.	346.67	-2581	0.9	0	329	7137	3773	2295	6068	No	2.35	Si
SLU 74	fin.	-88.07	5481	0.9	0	329	7137	3773	2295	6068	No	1.11	Si
SLU 75	ini.	350.61	-2553	0.9	0	329	7137	3773	2295	6068	No	2.38	Si
SLU 75	fin.	-104.41	5565	0.9	0	329	7137	3773	2295	6068	No	1.09	Si
SLU 78	ini.	359.61	-2600	0.9	0	329	7137	3773	2295	6068	No	2.33	Si
SLU 78	fin.	-106.8	5623	0.9	0	329	7137	3773	2295	6068	No	1.08	Si
SLU 76	ini.	359.65	-2542	0.9	0	329	7137	3773	2295	6068	No	2.39	Si
SLU 76	fin.	-121.72	5538	0.9	0	329	7137	3773	2295	6068	No	1.1	Si
SLU 80	ini.	366.02	-2608	0.9	0	329	7137	3773	2295	6068	No	2.33	Si
SLU 80	fin.	-113.22	5540	0.9	0	329	7137	3773	2295	6068	No	1.1	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-1232.23	1506	-0.0007685	0.0002807	0.0035	0.9		2995.37	2995.37		2.43	Si
SLV 16	fin.	940.98	-4499	-0.0005511	0.0002807	0.0035	0.9		2989.59	2989.59		3.18	Si
SLV 2	ini.	1759.94	-3254	-0.0012378	0.0002807	0.0035	0.9		2989.59	2989.59		1.7	Si
SLV 2	fin.	-1106.65	65	-0.0006712	0.0002807	0.0035	0.9		2995.37	2995.37		2.71	Si
SLV 13	ini.	-1353.38	1889	-0.0008668	0.0002807	0.0035	0.9		2995.37	2995.37		2.21	Si
SLV 13	fin.	860.88	-5551	-0.000495	0.0002807	0.0035	0.9		2989.59	2989.59		3.47	Si
SLV 15	ini.	-1282.05	1597	-0.0008084	0.0002807	0.0035	0.9		2995.37	2995.37		2.34	Si
SLV 15	fin.	978.79	-4580	-0.0005782	0.0002807	0.0035	0.9		2989.59	2989.59		3.05	Si
SLV 1	ini.	1710.12	-3163	-0.001189	0.0002807	0.0035	0.9		2989.59	2989.59		1.75	Si
SLV 1	fin.	-1068.84	-17	-0.0006428	0.0002807	0.0035	0.9		2995.37	2995.37		2.8	Si
SLD 3	ini.	898.36	-1952	-0.000521	0.0002807	0.0035	0.9		2989.59	2989.59		3.33	Si
SLD 3	fin.	-442.36	-884	-0.0002318	0.0002807	0.0035	0.9		2995.37	2995.37		6.77	Si
SLV 4	ini.	1831.27	-3545	-0.0013099	0.0002807	0.0035	0.9		2989.59	2989.59		1.63	Si
SLV 4	fin.	-988.73	1036	-0.0005841	0.0002807	0.0035	0.9		2995.37	2995.37		3.03	Si
SLD 4	ini.	919.74	-1991	-0.000536	0.0002807	0.0035	0.9		2989.59	2989.59		3.25	Si
SLD 4	fin.	-458.59	-849	-0.000241	0.0002807	0.0035	0.9		2995.37	2995.37		6.53	Si
SLV 14	ini.	-1303.55	1798	-0.0008258	0.0002807	0.0035	0.9		2995.37	2995.37		2.3	Si
SLV 14	fin.	823.07	-5470	-0.0004692	0.0002807	0.0035	0.9		2989.59	2989.59		3.63	Si
SLV 3	ini.	1781.44	-3454	-0.0012593	0.0002807	0.0035	0.9		2989.59	2989.59		1.68	Si
SLV 3	fin.	-950.92	955	-0.0005569	0.0002807	0.0035	0.9		2995.37	2995.37		3.15	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-1232.23	1857	0.9	0	493	7137	5660	2295	7630		4.11	Si
SLV 16	fin.	940.98	8757	0.9	0	493	7137	5660	2295	7630		0.87	No
SLD 16	ini.	-389.77	-217	0.9	0	493	7137	5660	2295	7630		35.17	Si
SLD 16	fin.	364.85	5880	0.9	0	493	7137	5660	2295	7630		1.3	Si
SLV 12	ini.	-85.79	-1795	0.9	0	493	7137	5660	2295	7630		4.25	Si
SLV 12	fin.	409.98	6277	0.9	0	493	7137	5660	2295	7630		1.22	Si
SLV 4	ini.	1831.27	-6259	0.9	0	493	7137	5660	2295	7630		1.22	Si
SLV 4	fin.	-988.73	-704	0.9	0	493	7137	5660	2295	7630		10.84	Si
SLD 15	ini.	-411.16	-146	0.9	0	493	7137	5660	2295	7630		52.19	Si
SLD 15	fin.	381.08	5931	0.9	0	493	7137	5660	2295	7630		1.29	Si
SLV 13	ini.	-1353.38	2742	0.9	0	493	7137	5660	2295	7630		2.78	Si
SLV 13	fin.	860.88	8182	0.9	0	493	7137	5660	2295	7630		0.93	No
SLV 14	ini.	-1303.55	2578	0.9	0	493	7137	5660	2295	7630		2.96	Si
SLV 14	fin.	823.07	8063	0.9	0	493	7137	5660	2295	7630		0.95	No
SLV 11	ini.	-117.61	-1689	0.9	0	493	7137	5660	2295	7630		4.52	Si
SLV 11	fin.	434.13	6353	0.9	0	493	7137	5660	2295	7630		1.2	Si
SLV 3	ini.	1781.44	-6095	0.9	0	493	7137	5660	2295	7630		1.25	Si
SLV 3	fin.	-950.92	-585	0.9	0	493	7137	5660	2295	7630		13.05	Si
SLV 15	ini.	-1282.05	2022	0.9	0	493	7137	5660	2295	7630		3.77	Si
SLV 15	fin.	978.79	8876	0.9	0	493	7137	5660	2295	7630		0.86	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.633	SLV 4	Si
V_SLV	0.86	SLV 15	No
PF_SLU	7.675	SLU 63	Si
V_SLU	1.069	SLU 84	Si

Trave di accoppiamento 40

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.313	-3.314	4.8	5.44	0.64	-18.313	-3.314	4.8	5.44	0.64	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-323.7	-725	-0.0003664	0.0001872	0.0035	0.64		1504.96	1504.96	No	4.65	Si
SLU 75	fin.	-506.51	-2067	-0.00063	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.97	Si
SLU 82	ini.	-321.88	-712	-0.000364	0.0001872	0.0035	0.64		1504.96	1504.96	No	4.68	Si
SLU 82	fin.	-531.24	-2163	-0.0006685	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.83	Si
SLU 84	ini.	-325.52	-722	-0.0003689	0.0001872	0.0035	0.64		1504.96	1504.96	No	4.62	Si
SLU 84	fin.	-540.26	-2199	-0.0006827	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.79	Si
SLU 78	ini.	-327.35	-734	-0.0003713	0.0001872	0.0035	0.64		1504.96	1504.96	No	4.6	Si
SLU 78	fin.	-515.53	-2104	-0.0006439	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.92	Si
SLU 80	ini.	-320.66	-719	-0.0003624	0.0001872	0.0035	0.64		1504.96	1504.96	No	4.69	Si
SLU 80	fin.	-516.17	-2107	-0.0006449	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.92	Si
SLU 79	ini.	-317.5	-709	-0.0003582	0.0001872	0.0035	0.64		1504.96	1504.96	No	4.74	Si
SLU 79	fin.	-522.79	-2124	-0.0006553	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.88	Si
SLU 74	ini.	-320.54	-715	-0.0003622	0.0001872	0.0035	0.64		1504.96	1504.96	No	4.7	Si
SLU 74	fin.	-513.14	-2084	-0.0006402	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.93	Si
SLU 77	ini.	-324.18	-725	-0.0003671	0.0001872	0.0035	0.64		1504.96	1504.96	No	4.64	Si
SLU 77	fin.	-522.16	-2121	-0.0006543	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.88	Si
SLU 81	ini.	-318.71	-702	-0.0003598	0.0001872	0.0035	0.64		1504.96	1504.96	No	4.72	Si
SLU 81	fin.	-537.87	-2180	-0.0006789	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.8	Si
SLU 83	ini.	-322.36	-712	-0.0003646	0.0001872	0.0035	0.64		1504.96	1504.96	No	4.67	Si
SLU 83	fin.	-546.89	-2216	-0.0006932	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.75	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-324.18	1966	0.64	0	173	5075	2683	1632	4315	No	2.2	Si
SLU 77	fin.	-522.16	-4021	0.64	0	173	5075	2683	1632	4315	No	1.07	Si
SLU 81	ini.	-318.71	1956	0.64	0	173	5075	2683	1632	4315	No	2.21	Si
SLU 81	fin.	-537.87	-4124	0.64	0	173	5075	2683	1632	4315	No	1.05	Si
SLU 80	ini.	-320.66	1948	0.64	0	173	5075	2683	1632	4315	No	2.21	Si
SLU 80	fin.	-516.17	-3987	0.64	0	173	5075	2683	1632	4315	No	1.08	Si
SLU 78	ini.	-327.35	1981	0.64	0	173	5075	2683	1632	4315	No	2.18	Si
SLU 78	fin.	-515.53	-3998	0.64	0	173	5075	2683	1632	4315	No	1.08	Si
SLU 74	ini.	-320.54	1946	0.64	0	173	5075	2683	1632	4315	No	2.22	Si
SLU 74	fin.	-513.14	-3964	0.64	0	173	5075	2683	1632	4315	No	1.09	Si
SLU 84	ini.	-325.52	1991	0.64	0	173	5075	2683	1632	4315	No	2.17	Si
SLU 84	fin.	-540.26	-4158	0.64	0	173	5075	2683	1632	4315	No	1.04	Si
SLU 82	ini.	-321.88	1971	0.64	0	173	5075	2683	1632	4315	No	2.19	Si
SLU 82	fin.	-531.24	-4100	0.64	0	173	5075	2683	1632	4315	No	1.05	Si
SLU 83	ini.	-322.36	1976	0.64	0	173	5075	2683	1632	4315	No	2.18	Si
SLU 83	fin.	-546.89	-4181	0.64	0	173	5075	2683	1632	4315	No	1.03	Si
SLU 75	ini.	-323.7	1961	0.64	0	173	5075	2683	1632	4315	No	2.2	Si
SLU 75	fin.	-506.51	-3940	0.64	0	173	5075	2683	1632	4315	No	1.1	Si
SLU 79	ini.	-317.5	1933	0.64	0	173	5075	2683	1632	4315	No	2.23	Si
SLU 79	fin.	-522.79	-4010	0.64	0	173	5075	2683	1632	4315	No	1.08	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	212.54	485	-0.0002196	0.0002807	0.0035	0.64		1512.56	1512.56		7.12	Si
SLV 4	fin.	-1060.63	-4121	-0.0015982	0.0002807	0.0035	0.64		1516.76	1516.76		1.43	Si
SLV 7	ini.	-123.3	-232	-0.0001233	0.0002807	0.0035	0.64		1516.76	1516.76		12.3	Si
SLV 7	fin.	-652.08	-2471	-0.0008131	0.0002807	0.0035	0.64		1516.76	1516.76		2.33	Si
SLV 8	ini.	-114.79	-210	-0.0001145	0.0002807	0.0035	0.64		1516.76	1516.76		13.21	Si
SLV 8	fin.	-668.79	-2530	-0.00084	0.0002807	0.0035	0.64		1516.76	1516.76		2.27	Si
SLV 3	ini.	199.22	451	-0.0002049	0.0002807	0.0035	0.64		1512.56	1512.56		7.59	Si
SLV 3	fin.	-1034.46	-4028	-0.0015372	0.0002807	0.0035	0.64		1516.76	1516.76		1.47	Si
SLV 13	ini.	-652.87	-1483	-0.0008144	0.0002807	0.0035	0.64		1516.76	1516.76		2.32	Si
SLV 13	fin.	378.23	1330	-0.0004188	0.0002807	0.0035	0.64		1512.56	1512.56		4	Si
SLV 1	ini.	216.82	459	-0.0002244	0.0002807	0.0035	0.64		1512.56	1512.56		6.98	Si
SLV 1	fin.	-963.69	-3830	-0.0013818	0.0002807	0.0035	0.64		1516.76	1516.76		1.57	Si
SLV 2	ini.	230.14	493	-0.0002394	0.0002807	0.0035	0.64		1512.56	1512.56		6.57	Si
SLV 2	fin.	-989.86	-3923	-0.0014378	0.0002807	0.0035	0.64		1516.76	1516.76		1.53	Si
SLD 4	ini.	-35.22	-78	-0.0000343	0.0002807	0.0035	0.64		1516.76	1516.76		43.06	Si
SLD 4	fin.	-649.17	-2561	-0.0008084	0.0002807	0.0035	0.64		1516.76	1516.76		2.34	Si
SLV 16	ini.	-657.16	-1457	-0.0008212	0.0002807	0.0035	0.64		1516.76	1516.76		2.31	Si
SLV 16	fin.	281.29	1039	-0.0002985	0.0002807	0.0035	0.64		1512.56	1512.56		5.38	Si
SLV 15	ini.	-670.47	-1491	-0.0008427	0.0002807	0.0035	0.64		1516.76	1516.76		2.26	Si
SLV 15	fin.	307.46	1132	-0.0003299	0.0002807	0.0035	0.64		1512.56	1512.56		4.92	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	199.22	-372	0.64	0	260	5075	4025	1632	5335		14.36	Si
SLV 3	fin.	-1034.46	-5801	0.64	0	260	5075	4025	1632	5335		0.92	No
SLV 4	ini.	212.54	-422	0.64	0	260	5075	4025	1632	5335		12.63	Si
SLV 4	fin.	-1060.63	-5933	0.64	0	260	5075	4025	1632	5335		0.9	No
SLD 1	ini.	-33.43	460	0.64	0	260	5075	4025	1632	5335		11.59	Si
SLD 1	fin.	-607.2	-3820	0.64	0	260	5075	4025	1632	5335		1.4	Si
SLD 2	ini.	-27.71	439	0.64	0	260	5075	4025	1632	5335		12.16	Si
SLD 2	fin.	-618.43	-3877	0.64	0	260	5075	4025	1632	5335		1.38	Si
SLV 1	ini.	216.82	-710	0.64	0	260	5075	4025	1632	5335		7.52	Si
SLV 1	fin.	-963.69	-5394	0.64	0	260	5075	4025	1632	5335		0.99	No
SLV 2	ini.	230.14	-761	0.64	0	260	5075	4025	1632	5335		7.01	Si
SLV 2	fin.	-989.86	-5526	0.64	0	260	5075	4025	1632	5335		0.97	No
SLD 3	ini.	-40.94	606	0.64	0	260	5075	4025	1632	5335		8.8	Si
SLD 3	fin.	-637.93	-3999	0.64	0	260	5075	4025	1632	5335		1.33	Si
SLD 4	ini.	-35.22	584	0.64	0	260	5075	4025	1632	5335		9.13	Si
SLD 4	fin.	-649.17	-4056	0.64	0	260	5075	4025	1632	5335		1.32	Si
SLV 7	ini.	-123.3	1344	0.64	0	260	5075	4025	1632	5335		3.97	Si
SLV 7	fin.	-652.08	-4191	0.64	0	260	5075	4025	1632	5335		1.27	Si
SLV 8	ini.	-114.79	1311	0.64	0	260	5075	4025	1632	5335		4.07	Si
SLV 8	fin.	-668.79	-4275	0.64	0	260	5075	4025	1632	5335		1.25	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.43	SLV 4	Si
V_SLV	0.899	SLV 4	No
PF_SLU	2.752	SLU 83	Si
V_SLU	1.032	SLU 83	Si

Trave di accoppiamento 41

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.518	-0.094	4.1	5.44	1.34	-18.518	0.706	4.1	5.44	1.34	0.8	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 43	ini.	1200.26	305	-0.0002954	0.0002246	0.0035	1.34		6762.42	6762.42	No	5.63	Si
SLU 43	fin.	-40.38	-487	-0.0000089	0.0002246	0.0035	1.34		6770.76	6770.76	No	167.69	Si
SLU 49	ini.	1238.17	294	-0.000306	0.0002246	0.0035	1.34		6762.42	6762.42	No	5.46	Si
SLU 49	fin.	-36.07	-522	-0.000008	0.0002246	0.0035	1.34		6770.76	6770.76	No	187.71	Si
SLU 45	ini.	1216.09	284	-0.0002998	0.0002246	0.0035	1.34		6762.42	6762.42	No	5.56	Si
SLU 45	fin.	-36	-516	-0.0000079	0.0002246	0.0035	1.34		6770.76	6770.76	No	188.06	Si
SLU 48	ini.	1242.27	301	-0.0003072	0.0002246	0.0035	1.34		6762.42	6762.42	No	5.44	Si
SLU 48	fin.	-38.47	-518	-0.0000085	0.0002246	0.0035	1.34		6770.76	6770.76	No	176	Si
SLU 58	ini.	1205.58	44	-0.0002969	0.0002246	0.0035	1.34		6762.42	6762.42	No	5.61	Si
SLU 58	fin.	6.04	-730	-0.0000013	0.0002246	0.0035	1.34		6762.42	6762.42	No	1118.73	Si
SLU 50	ini.	1252.62	338	-0.0003101	0.0002246	0.0035	1.34		6762.42	6762.42	No	5.4	Si
SLU 50	fin.	-45.31	-491	-0.00001	0.0002246	0.0035	1.34		6770.76	6770.76	No	149.43	Si
SLU 59	ini.	1201.48	38	-0.0002957	0.0002246	0.0035	1.34		6762.42	6762.42	No	5.63	Si
SLU 59	fin.	8.44	-735	-0.0000019	0.0002246	0.0035	1.34		6762.42	6762.42	No	800.93	Si
SLU 51	ini.	1248.52	331	-0.000309	0.0002246	0.0035	1.34		6762.42	6762.42	No	5.42	Si
SLU 51	fin.	-42.91	-496	-0.0000095	0.0002246	0.0035	1.34		6770.76	6770.76	No	157.78	Si
SLU 47	ini.	1219.6	310	-0.0003008	0.0002246	0.0035	1.34		6762.42	6762.42	No	5.54	Si
SLU 47	fin.	-38.85	-496	-0.0000086	0.0002246	0.0035	1.34		6770.76	6770.76	No	174.29	Si
SLU 46	ini.	1211.99	278	-0.0002987	0.0002246	0.0035	1.34		6762.42	6762.42	No	5.58	Si
SLU 46	fin.	-33.6	-520	-0.0000074	0.0002246	0.0035	1.34		6770.76	6770.76	No	201.49	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 50	ini.	1252.62	-2107	1.34	0	311	6344	3853	3417	6654	No	3.16	Si
SLU 50	fin.	-45.31	-2512	1.34	0	311	6344	3853	3417	6654	No	2.65	Si
SLU 51	ini.	1248.52	-2097	1.34	0	311	6344	3853	3417	6654	No	3.17	Si
SLU 51	fin.	-42.91	-2502	1.34	0	311	6344	3853	3417	6654	No	2.66	Si
SLU 48	ini.	1242.27	-2076	1.34	0	311	6344	3853	3417	6654	No	3.21	Si
SLU 48	fin.	-38.47	-2481	1.34	0	311	6344	3853	3417	6654	No	2.68	Si
SLU 46	ini.	1211.99	-2015	1.34	0	311	6344	3853	3417	6654	No	3.3	Si
SLU 46	fin.	-33.6	-2420	1.34	0	311	6344	3853	3417	6654	No	2.75	Si
SLU 47	ini.	1219.6	-2039	1.34	0	311	6344	3853	3417	6654	No	3.26	Si
SLU 47	fin.	-38.85	-2444	1.34	0	311	6344	3853	3417	6654	No	2.72	Si
SLU 44	ini.	1193.42	-1987	1.34	0	311	6344	3853	3417	6654	No	3.35	Si
SLU 44	fin.	-36.38	-2393	1.34	0	311	6344	3853	3417	6654	No	2.78	Si
SLU 45	ini.	1216.09	-2025	1.34	0	311	6344	3853	3417	6654	No	3.29	Si
SLU 45	fin.	-36	-2430	1.34	0	311	6344	3853	3417	6654	No	2.74	Si
SLU 43	ini.	1200.26	-2004	1.34	0	311	6344	3853	3417	6654	No	3.32	Si
SLU 43	fin.	-40.38	-2409	1.34	0	311	6344	3853	3417	6654	No	2.76	Si
SLU 49	ini.	1238.17	-2066	1.34	0	311	6344	3853	3417	6654	No	3.22	Si
SLU 49	fin.	-36.07	-2471	1.34	0	311	6344	3853	3417	6654	No	2.69	Si
SLU 58	ini.	1205.58	-1938	1.34	0	311	6344	3853	3417	6654	No	3.43	Si
SLU 58	fin.	6.04	-2343	1.34	0	311	6344	3853	3417	6654	No	2.84	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	ini.	1379.17	1028	-0.0003328	0.0003369	0.0035	1.34		6950.74	6950.74		5.04	Si
SLV 12	fin.	27.96	225	-0.0000062	0.0003369	0.0035	1.34		6950.74	6950.74		248.6	Si
SLD 8	ini.	1396.18	911	-0.0003374	0.0003369	0.0035	1.34		6950.74	6950.74		4.98	Si
SLD 8	fin.	23.94	47	-0.0000053	0.0003369	0.0035	1.34		6950.74	6950.74		290.29	Si
SLV 4	ini.	2367.46	2401	-0.0006253	0.0003369	0.0035	1.34		6950.74	6950.74		2.94	Si
SLV 4	fin.	29.74	877	-0.0000066	0.0003369	0.0035	1.34		6950.74	6950.74		233.72	Si
SLV 7	ini.	2052.04	2093	-0.000526	0.0003369	0.0035	1.34		6950.74	6950.74		3.39	Si
SLV 7	fin.	53.16	845	-0.0000117	0.0003369	0.0035	1.34		6950.74	6950.74		130.76	Si
SLD 4	ini.	1475.41	956	-0.0003589	0.0003369	0.0035	1.34		6950.74	6950.74		4.71	Si
SLD 4	fin.	20.67	16	-0.0000046	0.0003369	0.0035	1.34		6950.74	6950.74		336.35	Si
SLV 8	ini.	2099.14	2161	-0.0005405	0.0003369	0.0035	1.34		6950.74	6950.74		3.31	Si
SLV 8	fin.	39.47	879	-0.0000087	0.0003369	0.0035	1.34		6950.74	6950.74		176.08	Si
SLV 2	ini.	1866.06	1457	-0.0004701	0.0003369	0.0035	1.34		6950.74	6950.74		3.72	Si
SLV 2	fin.	13.2	212	-0.0000029	0.0003369	0.0035	1.34		6950.74	6950.74		526.65	Si
SLV 3	ini.	2293.71	2294	-0.0006016	0.0003369	0.0035	1.34		6950.74	6950.74		3.03	Si
SLV 3	fin.	51.16	823	-0.0000113	0.0003369	0.0035	1.34		6950.74	6950.74		135.85	Si
SLV 1	ini.	1792.31	1350	-0.0004484	0.0003369	0.0035	1.34		6950.74	6950.74		3.88	Si
SLV 1	fin.	34.62	158	-0.0000076	0.0003369	0.0035	1.34		6950.74	6950.74		200.76	Si
SLD 3	ini.	1443.75	910	-0.0003503	0.0003369	0.0035	1.34		6950.74	6950.74		4.81	Si
SLD 3	fin.	29.86	-7	-0.0000066	0.0003369	0.0035	1.34		6950.74	6950.74		232.77	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	2367.46	-5029	1.34	0	466	6344	5779	3417	6810		1.35	Si
SLV 4	fin.	29.74	-2992	1.34	0	466	6344	5779	3417	6810		2.28	Si
SLV 8	ini.	2099.14	-4058	1.34	0	466	6344	5779	3417	6810		1.68	Si
SLV 8	fin.	39.47	-3523	1.34	0	466	6344	5779	3417	6810		1.93	Si
SLV 12	ini.	1379.17	-2229	1.34	0	466	6344	5779	3417	6810		3.05	Si
SLV 12	fin.	27.96	-3078	1.34	0	466	6344	5779	3417	6810		2.21	Si
SLV 11	ini.	1332.07	-2125	1.34	0	466	6344	5779	3417	6810		3.2	Si
SLV 11	fin.	41.64	-2974	1.34	0	466	6344	5779	3417	6810		2.29	Si
SLV 3	ini.	2293.71	-4866	1.34	0	466	6344	5779	3417	6810		1.4	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	fin.	51.16	-2829	1.34	0	466	6344	5779	3417	6810		2.41	Si
SLV 2	ini.	1866.06	-4007	1.34	0	466	6344	5779	3417	6810		1.7	Si
SLV 2	fin.	13.2	-2069	1.34	0	466	6344	5779	3417	6810		3.29	Si
SLV 7	ini.	2052.04	-3954	1.34	0	466	6344	5779	3417	6810		1.72	Si
SLV 7	fin.	53.16	-3418	1.34	0	466	6344	5779	3417	6810		1.99	Si
SLV 1	ini.	1792.31	-3844	1.34	0	466	6344	5779	3417	6810		1.77	Si
SLV 1	fin.	34.62	-1906	1.34	0	466	6344	5779	3417	6810		3.57	Si
SLD 3	ini.	1443.75	-2781	1.34	0	466	6344	5779	3417	6810		2.45	Si
SLD 3	fin.	29.86	-2166	1.34	0	466	6344	5779	3417	6810		3.14	Si
SLD 4	ini.	1475.41	-2851	1.34	0	466	6344	5779	3417	6810		2.39	Si
SLD 4	fin.	20.67	-2236	1.34	0	466	6344	5779	3417	6810		3.05	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.936	SLV 4	Si
V_SLV	1.354	SLV 4	Si
PF_SLU	5.399	SLU 50	Si
V_SLU	2.649	SLU 50	Si

Trave di accoppiamento 43

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-15.483	-3.314	4.1	5.44	1.34	-16.383	-3.314	4.1	5.44	1.34	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 63	ini.	-22.34	-3857	-0.0000049	0.0001872	0.0035	1.34		6566.28	6566.28	No	293.93	Si
SLU 63	fin.	-1117.07	-4055	-0.0002773	0.0001872	0.0035	1.34		6566.28	6566.28	No	5.88	Si
SLU 77	ini.	-163.65	-4336	-0.0000365	0.0001872	0.0035	1.34		6566.28	6566.28	No	40.12	Si
SLU 77	fin.	-1129.36	-4321	-0.0002808	0.0001872	0.0035	1.34		6566.28	6566.28	No	5.81	Si
SLU 83	ini.	-148.39	-4394	-0.0000331	0.0001872	0.0035	1.34		6566.28	6566.28	No	44.25	Si
SLU 83	fin.	-1158.22	-4416	-0.0002891	0.0001872	0.0035	1.34		6566.28	6566.28	No	5.67	Si
SLU 76	ini.	-163.03	-4262	-0.0000364	0.0001872	0.0035	1.34		6566.28	6566.28	No	40.28	Si
SLU 76	fin.	-1116.9	-4261	-0.0002772	0.0001872	0.0035	1.34		6566.28	6566.28	No	5.88	Si
SLU 81	ini.	-160.21	-4346	-0.0000357	0.0001872	0.0035	1.34		6566.28	6566.28	No	40.98	Si
SLU 81	fin.	-1136.96	-4352	-0.000283	0.0001872	0.0035	1.34		6566.28	6566.28	No	5.78	Si
SLU 84	ini.	-152.9	-4413	-0.0000341	0.0001872	0.0035	1.34		6566.28	6566.28	No	42.95	Si
SLU 84	fin.	-1162.97	-4435	-0.0002904	0.0001872	0.0035	1.34		6566.28	6566.28	No	5.65	Si
SLU 78	ini.	-168.16	-4354	-0.0000375	0.0001872	0.0035	1.34		6566.28	6566.28	No	39.05	Si
SLU 78	fin.	-1134.11	-4341	-0.0002821	0.0001872	0.0035	1.34		6566.28	6566.28	No	5.79	Si
SLU 79	ini.	-143.7	-4279	-0.000032	0.0001872	0.0035	1.34		6566.28	6566.28	No	45.69	Si
SLU 79	fin.	-1130.24	-4292	-0.000281	0.0001872	0.0035	1.34		6566.28	6566.28	No	5.81	Si
SLU 82	ini.	-164.72	-4365	-0.0000368	0.0001872	0.0035	1.34		6566.28	6566.28	No	39.86	Si
SLU 82	fin.	-1141.72	-4371	-0.0002843	0.0001872	0.0035	1.34		6566.28	6566.28	No	5.75	Si
SLU 80	ini.	-148.21	-4297	-0.000033	0.0001872	0.0035	1.34		6566.28	6566.28	No	44.31	Si
SLU 80	fin.	-1134.99	-4312	-0.0002824	0.0001872	0.0035	1.34		6566.28	6566.28	No	5.79	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-160.21	147	1.34	0	544	7137	5618	3417	7680	No	52.41	Si
SLU 81	fin.	-1136.96	-5965	1.34	0	544	7137	5618	3417	7680	No	1.29	Si
SLU 79	ini.	-143.7	56	1.34	0	544	7137	5618	3417	7680	No	137.02	Si
SLU 79	fin.	-1130.24	-5807	1.34	0	544	7137	5618	3417	7680	No	1.32	Si
SLU 75	ini.	-179.98	147	1.34	0	544	7137	5618	3417	7680	No	52.16	Si
SLU 75	fin.	-1112.85	-5717	1.34	0	544	7137	5618	3417	7680	No	1.34	Si
SLU 84	ini.	-152.9	100	1.34	0	544	7137	5618	3417	7680	No	76.74	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	fin.	-1162.97	-6063	1.34	0	544	7137	5618	3417	7680	No	1.27	Si
SLU 76	ini.	-163.03	100	1.34	0	544	7137	5618	3417	7680	No	77.02	Si
SLU 76	fin.	-1116.9	-5718	1.34	0	544	7137	5618	3417	7680	No	1.34	Si
SLU 80	ini.	-148.21	55	1.34	0	544	7137	5618	3417	7680	No	139.64	Si
SLU 80	fin.	-1134.99	-5810	1.34	0	544	7137	5618	3417	7680	No	1.32	Si
SLU 83	ini.	-148.39	101	1.34	0	544	7137	5618	3417	7680	No	75.95	Si
SLU 83	fin.	-1158.22	-6060	1.34	0	544	7137	5618	3417	7680	No	1.27	Si
SLU 82	ini.	-164.72	146	1.34	0	544	7137	5618	3417	7680	No	52.79	Si
SLU 82	fin.	-1141.72	-5968	1.34	0	544	7137	5618	3417	7680	No	1.29	Si
SLU 78	ini.	-168.16	102	1.34	0	544	7137	5618	3417	7680	No	75.43	Si
SLU 78	fin.	-1134.11	-5811	1.34	0	544	7137	5618	3417	7680	No	1.32	Si
SLU 77	ini.	-163.65	103	1.34	0	544	7137	5618	3417	7680	No	74.66	Si
SLU 77	fin.	-1129.36	-5808	1.34	0	544	7137	5618	3417	7680	No	1.32	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-3422.48	-6729	-0.0010296	0.0002807	0.0035	1.34		6565.65	6565.65		1.92	Si
SLV 16	fin.	896.98	-1810	-0.0002106	0.0002807	0.0035	1.34		6556.63	6556.63		7.31	Si
SLV 15	ini.	-3470.52	-6754	-0.0010491	0.0002807	0.0035	1.34		6565.65	6565.65		1.89	Si
SLV 15	fin.	939.98	-1777	-0.0002214	0.0002807	0.0035	1.34		6556.63	6556.63		6.98	Si
SLV 4	ini.	2967.39	421	-0.0008546	0.0002807	0.0035	1.34		6556.63	6556.63		2.21	Si
SLV 4	fin.	-2397.53	-4291	-0.0006514	0.0002807	0.0035	1.34		6565.65	6565.65		2.74	Si
SLV 2	ini.	3254.36	934	-0.0009643	0.0002807	0.0035	1.34		6556.63	6556.63		2.01	Si
SLV 2	fin.	-2482.13	-4039	-0.0006801	0.0002807	0.0035	1.34		6565.65	6565.65		2.65	Si
SLV 13	ini.	-3183.55	-6241	-0.0009352	0.0002807	0.0035	1.34		6565.65	6565.65		2.06	Si
SLV 13	fin.	855.38	-1525	-0.0002001	0.0002807	0.0035	1.34		6556.63	6556.63		7.67	Si
SLD 15	ini.	-1546.96	-4558	-0.0003852	0.0002807	0.0035	1.34		6565.65	6565.65		4.24	Si
SLD 15	fin.	-39.74	-2427	-0.0000088	0.0002807	0.0035	1.34		6565.65	6565.65		165.22	Si
SLV 3	ini.	2919.36	395	-0.0008368	0.0002807	0.0035	1.34		6556.63	6556.63		2.25	Si
SLV 3	fin.	-2354.53	-4258	-0.0006369	0.0002807	0.0035	1.34		6565.65	6565.65		2.79	Si
SLV 1	ini.	3206.33	909	-0.0009456	0.0002807	0.0035	1.34		6556.63	6556.63		2.04	Si
SLV 1	fin.	-2439.13	-4006	-0.0006655	0.0002807	0.0035	1.34		6565.65	6565.65		2.69	Si
SLV 11	ini.	-1560.18	-4846	-0.000389	0.0002807	0.0035	1.34		6565.65	6565.65		4.21	Si
SLV 11	fin.	-122.17	-2945	-0.0000271	0.0002807	0.0035	1.34		6565.65	6565.65		53.74	Si
SLV 14	ini.	-3135.51	-6215	-0.0009167	0.0002807	0.0035	1.34		6565.65	6565.65		2.09	Si
SLV 14	fin.	812.38	-1558	-0.0001894	0.0002807	0.0035	1.34		6556.63	6556.63		8.07	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-3183.55	8739	1.34	0	816	7137	8426	3417	7952		0.91	No
SLV 13	fin.	855.38	3564	1.34	0	816	7137	8426	3417	7952		2.23	Si
SLV 4	ini.	2967.39	-8686	1.34	0	816	7137	8426	3417	7952		0.92	No
SLV 4	fin.	-2397.53	-11224	1.34	0	816	7137	8426	3417	7952		0.71	No
SLV 1	ini.	3206.33	-9278	1.34	0	816	7137	8426	3417	7952		0.86	No
SLV 1	fin.	-2439.13	-10909	1.34	0	816	7137	8426	3417	7952		0.73	No
SLV 3	ini.	2919.36	-8544	1.34	0	816	7137	8426	3417	7952		0.93	No
SLV 3	fin.	-2354.53	-11044	1.34	0	816	7137	8426	3417	7952		0.72	No
SLV 2	ini.	3254.36	-9419	1.34	0	816	7137	8426	3417	7952		0.84	No
SLV 2	fin.	-2482.13	-11090	1.34	0	816	7137	8426	3417	7952		0.72	No
SLD 2	ini.	1330.8	-4014	1.34	0	816	7137	8426	3417	7952		1.98	Si
SLD 2	fin.	-1502.41	-6933	1.34	0	816	7137	8426	3417	7952		1.15	Si
SLD 4	ini.	1205.29	-3693	1.34	0	816	7137	8426	3417	7952		2.15	Si
SLD 4	fin.	-1465.86	-6989	1.34	0	816	7137	8426	3417	7952		1.14	Si
SLV 15	ini.	-3470.52	9473	1.34	0	816	7137	8426	3417	7952		0.84	No
SLV 15	fin.	939.98	3430	1.34	0	816	7137	8426	3417	7952		2.32	Si
SLV 14	ini.	-3135.51	8598	1.34	0	816	7137	8426	3417	7952		0.92	No
SLV 14	fin.	812.38	3384	1.34	0	816	7137	8426	3417	7952		2.35	Si
SLV 16	ini.	-3422.48	9332	1.34	0	816	7137	8426	3417	7952		0.85	No
SLV 16	fin.	896.98	3249	1.34	0	816	7137	8426	3417	7952		2.45	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.892	SLV 15	Si
V_SLV	0.709	SLV 4	No
PF_SLU	5.646	SLU 84	Si
V_SLU	1.267	SLU 84	Si

Trave di accoppiamento 45

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-15.033	1.366	4.1	5.44	1.34	-15.033	2.166	4.1	5.44	1.34	0.8	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 73	ini.	-124.98	810	-0.0000278	0.0002246	0.0035	1.34		6770.76	6770.76	No	54.18	Si
SLU 73	fin.	-4.68	679	-0.000001	0.0002246	0.0035	1.34		6770.76	6770.76	No	1447.79	Si
SLU 78	ini.	-125.75	829	-0.0000279	0.0002246	0.0035	1.34		6770.76	6770.76	No	53.84	Si
SLU 78	fin.	-3.58	690	-0.0000008	0.0002246	0.0035	1.34		6770.76	6770.76	No	1890.31	Si
SLU 79	ini.	-125.42	820	-0.0000279	0.0002246	0.0035	1.34		6770.76	6770.76	No	53.98	Si
SLU 79	fin.	-5.36	682	-0.0000012	0.0002246	0.0035	1.34		6770.76	6770.76	No	1262.86	Si
SLU 84	ini.	-134.77	854	-0.00003	0.0002246	0.0035	1.34		6770.76	6770.76	No	50.24	Si
SLU 84	fin.	2.84	719	-0.0000006	0.0002246	0.0035	1.34		6762.42	6762.42	No	2378.92	Si
SLU 83	ini.	-133.91	852	-0.0000298	0.0002246	0.0035	1.34		6770.76	6770.76	No	50.56	Si
SLU 83	fin.	0.87	714	-0.0000002	0.0002246	0.0035	1.34		6762.42	6762.42	No	7789.94	Si
SLU 77	ini.	-124.89	827	-0.0000277	0.0002246	0.0035	1.34		6770.76	6770.76	No	54.21	Si
SLU 77	fin.	-5.56	685	-0.0000012	0.0002246	0.0035	1.34		6770.76	6770.76	No	1218.56	Si
SLU 82	ini.	-133.83	847	-0.0000297	0.0002246	0.0035	1.34		6770.76	6770.76	No	50.59	Si
SLU 82	fin.	1.54	713	-0.0000003	0.0002246	0.0035	1.34		6762.42	6762.42	No	4392.29	Si
SLU 81	ini.	-132.96	845	-0.0000295	0.0002246	0.0035	1.34		6770.76	6770.76	No	50.92	Si
SLU 81	fin.	-0.43	708	-0.0000001	0.0002246	0.0035	1.34		6770.76	6770.76	No	15567.29	Si
SLU 80	ini.	-126.29	822	-0.000028	0.0002246	0.0035	1.34		6770.76	6770.76	No	53.61	Si
SLU 80	fin.	-3.39	687	-0.0000007	0.0002246	0.0035	1.34		6770.76	6770.76	No	1999.1	Si
SLU 76	ini.	-125.92	817	-0.000028	0.0002246	0.0035	1.34		6770.76	6770.76	No	53.77	Si
SLU 76	fin.	-3.37	684	-0.0000007	0.0002246	0.0035	1.34		6770.76	6770.76	No	2007	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 48	ini.	-92.56	174	1.34	0	311	6344	3853	3417	6654	No	38.19	Si
SLU 48	fin.	-32.13	-254	1.34	0	311	6344	3853	3417	6654	No	26.24	Si
SLU 43	ini.	-91.21	174	1.34	0	311	6344	3853	3417	6654	No	38.34	Si
SLU 43	fin.	-34.54	-254	1.34	0	311	6344	3853	3417	6654	No	26.17	Si
SLU 76	ini.	-125.92	258	1.34	0	311	6344	3853	3417	6654	No	25.84	Si
SLU 76	fin.	-3.37	-184	1.34	0	311	6344	3853	3417	6654	No	36.16	Si
SLU 81	ini.	-132.96	266	1.34	0	311	6344	3853	3417	6654	No	25.04	Si
SLU 81	fin.	-0.43	-176	1.34	0	311	6344	3853	3417	6654	No	37.85	Si
SLU 73	ini.	-124.98	255	1.34	0	311	6344	3853	3417	6654	No	26.06	Si
SLU 73	fin.	-4.68	-186	1.34	0	311	6344	3853	3417	6654	No	35.74	Si
SLU 82	ini.	-133.83	272	1.34	0	311	6344	3853	3417	6654	No	24.46	Si
SLU 82	fin.	1.54	-170	1.34	0	311	6344	3853	3417	6654	No	39.24	Si
SLU 45	ini.	-91.62	172	1.34	0	311	6344	3853	3417	6654	No	38.67	Si
SLU 45	fin.	-33.43	-256	1.34	0	311	6344	3853	3417	6654	No	26.02	Si
SLU 80	ini.	-126.29	256	1.34	0	311	6344	3853	3417	6654	No	26.04	Si
SLU 80	fin.	-3.39	-186	1.34	0	311	6344	3853	3417	6654	No	35.77	Si
SLU 83	ini.	-133.91	268	1.34	0	311	6344	3853	3417	6654	No	24.84	Si
SLU 83	fin.	0.87	-174	1.34	0	311	6344	3853	3417	6654	No	38.32	Si
SLU 84	ini.	-134.77	274	1.34	0	311	6344	3853	3417	6654	No	24.27	Si
SLU 84	fin.	2.84	-167	1.34	0	311	6344	3853	3417	6654	No	39.75	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 9	ini.	182.41	1537	-0.0000406	0.0003369	0.0035	1.34		6950.74	6950.74		38.11	Si
SLV 9	fin.	546.12	1417	-0.0001242	0.0003369	0.0035	1.34		6950.74	6950.74		12.73	Si
SLV 16	ini.	-363.05	161	-0.0000816	0.0003369	0.0035	1.34		6959.43	6959.43		19.17	Si
SLV 16	fin.	-390.47	-76	-0.0000879	0.0003369	0.0035	1.34		6959.43	6959.43		17.82	Si
SLV 7	ini.	-347.97	-417	-0.0000781	0.0003369	0.0035	1.34		6959.43	6959.43		20	Si
SLV 7	fin.	-575.72	-497	-0.000131	0.0003369	0.0035	1.34		6959.43	6959.43		12.09	Si
SLV 10	ini.	183.72	1534	-0.0000409	0.0003369	0.0035	1.34		6950.74	6950.74		37.83	Si
SLV 10	fin.	542.51	1409	-0.0001234	0.0003369	0.0035	1.34		6950.74	6950.74		12.81	Si
SLV 11	ini.	-459.39	-473	-0.0001038	0.0003369	0.0035	1.34		6959.43	6959.43		15.15	Si
SLV 11	fin.	-687.33	-628	-0.0001575	0.0003369	0.0035	1.34		6959.43	6959.43		10.13	Si
SLV 8	ini.	-346.66	-420	-0.0000778	0.0003369	0.0035	1.34		6959.43	6959.43		20.08	Si
SLV 8	fin.	-579.33	-506	-0.0001319	0.0003369	0.0035	1.34		6959.43	6959.43		12.01	Si
SLV 6	ini.	295.14	1590	-0.0000661	0.0003369	0.0035	1.34		6950.74	6950.74		23.55	Si
SLV 6	fin.	654.12	1539	-0.0001498	0.0003369	0.0035	1.34		6950.74	6950.74		10.63	Si
SLV 5	ini.	293.82	1593	-0.0000658	0.0003369	0.0035	1.34		6950.74	6950.74		23.66	Si
SLV 5	fin.	657.73	1548	-0.0001507	0.0003369	0.0035	1.34		6950.74	6950.74		10.57	Si
SLV 15	ini.	-365.11	167	-0.000082	0.0003369	0.0035	1.34		6959.43	6959.43		19.06	Si
SLV 15	fin.	-384.82	-62	-0.0000866	0.0003369	0.0035	1.34		6959.43	6959.43		18.09	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-458.07	-476	-0.0001035	0.0003369	0.0035	1.34		6959.43	6959.43		15.19	Si
SLV 12	fin.	-690.94	-637	-0.0001584	0.0003369	0.0035	1.34		6959.43	6959.43		10.07	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-458.07	-192	1.34	0	466	6344	5779	3417	6810		35.39	Si
SLV 12	fin.	-690.94	-700	1.34	0	466	6344	5779	3417	6810		9.73	Si
SLV 5	ini.	293.82	512	1.34	0	466	6344	5779	3417	6810		13.29	Si
SLV 5	fin.	657.73	346	1.34	0	466	6344	5779	3417	6810		19.66	Si
SLV 1	ini.	198.8	510	1.34	0	466	6344	5779	3417	6810		13.35	Si
SLV 1	fin.	357.26	-268	1.34	0	466	6344	5779	3417	6810		25.39	Si
SLV 4	ini.	8.32	332	1.34	0	466	6344	5779	3417	6810		20.51	Si
SLV 4	fin.	-18.43	-646	1.34	0	466	6344	5779	3417	6810		10.54	Si
SLV 7	ini.	-347.97	-25	1.34	0	466	6344	5779	3417	6810		271.21	Si
SLV 7	fin.	-575.72	-857	1.34	0	466	6344	5779	3417	6810		7.94	Si
SLV 11	ini.	-459.39	-182	1.34	0	466	6344	5779	3417	6810		37.47	Si
SLV 11	fin.	-687.33	-689	1.34	0	466	6344	5779	3417	6810		9.88	Si
SLV 10	ini.	183.72	345	1.34	0	466	6344	5779	3417	6810		19.74	Si
SLV 10	fin.	542.51	504	1.34	0	466	6344	5779	3417	6810		13.51	Si
SLV 8	ini.	-346.66	-36	1.34	0	466	6344	5779	3417	6810		190.28	Si
SLV 8	fin.	-579.33	-868	1.34	0	466	6344	5779	3417	6810		7.85	Si
SLV 9	ini.	182.41	356	1.34	0	466	6344	5779	3417	6810		19.14	Si
SLV 9	fin.	546.12	515	1.34	0	466	6344	5779	3417	6810		13.23	Si
SLV 3	ini.	6.26	349	1.34	0	466	6344	5779	3417	6810		19.53	Si
SLV 3	fin.	-12.77	-629	1.34	0	466	6344	5779	3417	6810		10.82	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	10.072	SLV 12	Si
V_SLV	7.846	SLV 8	Si
PF_SLU	50.239	SLU 84	Si
V_SLU	24.273	SLU 84	Si

Trave di accoppiamento 46

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-13.778	-0.194	4.1	5.44	1.34	-13.778	0.706	4.1	5.44	1.34	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 59	ini.	1307.89	-296	-0.0003334	0.0001872	0.0035	1.34		6557.71	6557.71	No	5.01	Si
SLU 59	fin.	25.91	-454	-0.0000057	0.0001872	0.0035	1.34		6557.71	6557.71	No	253.13	Si
SLU 60	ini.	1327.16	-354	-0.0003392	0.0001872	0.0035	1.34		6557.71	6557.71	No	4.94	Si
SLU 60	fin.	20.4	-506	-0.0000045	0.0001872	0.0035	1.34		6557.71	6557.71	No	321.51	Si
SLU 82	ini.	1309.07	-636	-0.0003338	0.0001872	0.0035	1.34		6557.71	6557.71	No	5.01	Si
SLU 82	fin.	45.4	-729	-0.00001	0.0001872	0.0035	1.34		6557.71	6557.71	No	144.44	Si
SLU 58	ini.	1312.23	-285	-0.0003347	0.0001872	0.0035	1.34		6557.71	6557.71	No	5	Si
SLU 58	fin.	23.25	-448	-0.0000051	0.0001872	0.0035	1.34		6557.71	6557.71	No	282.1	Si
SLU 63	ini.	1355.34	-352	-0.0003476	0.0001872	0.0035	1.34		6557.71	6557.71	No	4.84	Si
SLU 63	fin.	22.93	-506	-0.0000051	0.0001872	0.0035	1.34		6557.71	6557.71	No	286	Si
SLU 81	ini.	1313.4	-624	-0.0003351	0.0001872	0.0035	1.34		6557.71	6557.71	No	4.99	Si
SLU 81	fin.	42.74	-722	-0.0000094	0.0001872	0.0035	1.34		6557.71	6557.71	No	153.43	Si
SLU 83	ini.	1345.91	-610	-0.0003448	0.0001872	0.0035	1.34		6557.71	6557.71	No	4.87	Si
SLU 83	fin.	42.61	-715	-0.0000094	0.0001872	0.0035	1.34		6557.71	6557.71	No	153.89	Si
SLU 84	ini.	1341.58	-622	-0.0003435	0.0001872	0.0035	1.34		6557.71	6557.71	No	4.89	Si
SLU 84	fin.	45.27	-722	-0.00001	0.0001872	0.0035	1.34		6557.71	6557.71	No	144.85	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 61	ini.	1322.83	-366	-0.0003379	0.0001872	0.0035	1.34		6557.71	6557.71	No	4.96	Si
SLU 61	fin.	23.06	-513	-0.0000051	0.0001872	0.0035	1.34		6557.71	6557.71	No	284.41	Si
SLU 62	ini.	1359.67	-340	-0.000349	0.0001872	0.0035	1.34		6557.71	6557.71	No	4.82	Si
SLU 62	fin.	20.27	-499	-0.0000045	0.0001872	0.0035	1.34		6557.71	6557.71	No	323.53	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 60	ini.	1327.16	-1191	1.34	0	544	7137	5618	3417	7680	No	6.45	Si
SLU 60	fin.	20.4	-1964	1.34	0	544	7137	5618	3417	7680	No	3.91	Si
SLU 58	ini.	1312.23	-1180	1.34	0	544	7137	5618	3417	7680	No	6.51	Si
SLU 58	fin.	23.25	-1953	1.34	0	544	7137	5618	3417	7680	No	3.93	Si
SLU 59	ini.	1307.89	-1168	1.34	0	544	7137	5618	3417	7680	No	6.58	Si
SLU 59	fin.	25.91	-1942	1.34	0	544	7137	5618	3417	7680	No	3.96	Si
SLU 84	ini.	1341.58	-1132	1.34	0	544	7137	5618	3417	7680	No	6.79	Si
SLU 84	fin.	45.27	-1925	1.34	0	544	7137	5618	3417	7680	No	3.99	Si
SLU 61	ini.	1322.83	-1179	1.34	0	544	7137	5618	3417	7680	No	6.51	Si
SLU 61	fin.	23.06	-1953	1.34	0	544	7137	5618	3417	7680	No	3.93	Si
SLU 83	ini.	1345.91	-1143	1.34	0	544	7137	5618	3417	7680	No	6.72	Si
SLU 83	fin.	42.61	-1936	1.34	0	544	7137	5618	3417	7680	No	3.97	Si
SLU 62	ini.	1359.67	-1232	1.34	0	544	7137	5618	3417	7680	No	6.23	Si
SLU 62	fin.	20.27	-2006	1.34	0	544	7137	5618	3417	7680	No	3.83	Si
SLU 57	ini.	1286.53	-1128	1.34	0	544	7137	5618	3417	7680	No	6.81	Si
SLU 57	fin.	32.2	-1901	1.34	0	544	7137	5618	3417	7680	No	4.04	Si
SLU 63	ini.	1355.34	-1221	1.34	0	544	7137	5618	3417	7680	No	6.29	Si
SLU 63	fin.	22.93	-1994	1.34	0	544	7137	5618	3417	7680	No	3.85	Si
SLU 56	ini.	1290.86	-1139	1.34	0	544	7137	5618	3417	7680	No	6.74	Si
SLU 56	fin.	29.54	-1913	1.34	0	544	7137	5618	3417	7680	No	4.02	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	1728.29	1279	-0.0004391	0.0002807	0.0035	1.34		6556.63	6556.63		3.79	Si
SLV 3	fin.	410.3	1014	-0.0000928	0.0002807	0.0035	1.34		6556.63	6556.63		15.98	Si
SLD 4	ini.	1233.08	357	-0.0002981	0.0002807	0.0035	1.34		6556.63	6556.63		5.32	Si
SLD 4	fin.	193.92	193	-0.0000432	0.0002807	0.0035	1.34		6556.63	6556.63		33.81	Si
SLV 1	ini.	1550.02	499	-0.0003866	0.0002807	0.0035	1.34		6556.63	6556.63		4.23	Si
SLV 1	fin.	146.97	635	-0.0000327	0.0002807	0.0035	1.34		6556.63	6556.63		44.61	Si
SLV 4	ini.	1731.82	1287	-0.0004401	0.0002807	0.0035	1.34		6556.63	6556.63		3.79	Si
SLV 4	fin.	408.47	1020	-0.0000924	0.0002807	0.0035	1.34		6556.63	6556.63		16.05	Si
SLD 1	ini.	1155.16	14	-0.0002773	0.0002807	0.0035	1.34		6556.63	6556.63		5.68	Si
SLD 1	fin.	82.35	29	-0.0000182	0.0002807	0.0035	1.34		6556.63	6556.63		79.62	Si
SLD 2	ini.	1156.67	17	-0.0002777	0.0002807	0.0035	1.34		6556.63	6556.63		5.67	Si
SLD 2	fin.	81.57	32	-0.0000181	0.0002807	0.0035	1.34		6556.63	6556.63		80.38	Si
SLV 8	ini.	1393.65	1331	-0.0003422	0.0002807	0.0035	1.34		6556.63	6556.63		4.7	Si
SLV 8	fin.	545.31	585	-0.0001246	0.0002807	0.0035	1.34		6556.63	6556.63		12.02	Si
SLV 2	ini.	1553.55	507	-0.0003876	0.0002807	0.0035	1.34		6556.63	6556.63		4.22	Si
SLV 2	fin.	145.15	642	-0.0000323	0.0002807	0.0035	1.34		6556.63	6556.63		45.17	Si
SLV 7	ini.	1391.4	1325	-0.0003416	0.0002807	0.0035	1.34		6556.63	6556.63		4.71	Si
SLV 7	fin.	546.48	581	-0.0001249	0.0002807	0.0035	1.34		6556.63	6556.63		12	Si
SLD 3	ini.	1231.57	353	-0.0002977	0.0002807	0.0035	1.34		6556.63	6556.63		5.32	Si
SLD 3	fin.	194.7	191	-0.0000434	0.0002807	0.0035	1.34		6556.63	6556.63		33.68	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 8	ini.	1089.22	-1135	1.34	0	816	7137	8426	3417	7952		7.01	Si
SLD 8	fin.	252.13	-1751	1.34	0	816	7137	8426	3417	7952		4.54	Si
SLV 3	ini.	1728.29	-2561	1.34	0	816	7137	8426	3417	7952		3.1	Si
SLV 3	fin.	410.3	-2734	1.34	0	816	7137	8426	3417	7952		2.91	Si
SLV 7	ini.	1391.4	-1711	1.34	0	816	7137	8426	3417	7952		4.65	Si
SLV 7	fin.	546.48	-2357	1.34	0	816	7137	8426	3417	7952		3.37	Si
SLD 4	ini.	1233.08	-1494	1.34	0	816	7137	8426	3417	7952		5.32	Si
SLD 4	fin.	193.92	-1912	1.34	0	816	7137	8426	3417	7952		4.16	Si
SLV 2	ini.	1553.55	-2263	1.34	0	816	7137	8426	3417	7952		3.51	Si
SLV 2	fin.	145.15	-2325	1.34	0	816	7137	8426	3417	7952		3.42	Si
SLV 4	ini.	1731.82	-2569	1.34	0	816	7137	8426	3417	7952		3.1	Si
SLV 4	fin.	408.47	-2742	1.34	0	816	7137	8426	3417	7952		2.9	Si
SLD 7	ini.	1088.23	-1133	1.34	0	816	7137	8426	3417	7952		7.02	Si
SLD 7	fin.	252.64	-1749	1.34	0	816	7137	8426	3417	7952		4.55	Si
SLV 8	ini.	1393.65	-1716	1.34	0	816	7137	8426	3417	7952		4.63	Si
SLV 8	fin.	545.31	-2362	1.34	0	816	7137	8426	3417	7952		3.37	Si
SLV 1	ini.	1550.02	-2256	1.34	0	816	7137	8426	3417	7952		3.52	Si
SLV 1	fin.	146.97	-2318	1.34	0	816	7137	8426	3417	7952		3.43	Si
SLD 3	ini.	1231.57	-1490	1.34	0	816	7137	8426	3417	7952		5.34	Si
SLD 3	fin.	194.7	-1909	1.34	0	816	7137	8426	3417	7952		4.17	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.786	SLV 4	Si
V_SLV	2.9	SLV 4	Si
PF_SLU	4.823	SLU 62	Si
V_SLU	3.829	SLU 62	Si

Trave di accoppiamento 47

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.768	6.526	2	2.9	0.9	-16.768	6.526	2	2.9	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	2309.68	-5001	-0.0020447	0.0001872	0.0035	0.9		2959	2959	No	1.28	Si
SLU 83	fin.	-1466.24	338	-0.001028	0.0001872	0.0035	0.9		2964.67	2964.67	No	2.02	Si
SLU 81	ini.	2282.54	-4944	-0.0020007	0.0001872	0.0035	0.9		2959	2959	No	1.3	Si
SLU 81	fin.	-1449.44	333	-0.0010123	0.0001872	0.0035	0.9		2964.67	2964.67	No	2.05	Si
SLU 74	ini.	2239.63	-4849	-0.0019335	0.0001872	0.0035	0.9		2959	2959	No	1.32	Si
SLU 74	fin.	-1425.22	334	-0.0009899	0.0001872	0.0035	0.9		2964.67	2964.67	No	2.08	Si
SLU 78	ini.	2268.95	-4912	-0.0019791	0.0001872	0.0035	0.9		2959	2959	No	1.3	Si
SLU 78	fin.	-1442.96	338	-0.0010063	0.0001872	0.0035	0.9		2964.67	2964.67	No	2.05	Si
SLU 75	ini.	2241.81	-4854	-0.0019368	0.0001872	0.0035	0.9		2959	2959	No	1.32	Si
SLU 75	fin.	-1426.16	333	-0.0009908	0.0001872	0.0035	0.9		2964.67	2964.67	No	2.08	Si
SLU 79	ini.	2251.63	-4869	-0.001952	0.0001872	0.0035	0.9		2959	2959	No	1.31	Si
SLU 79	fin.	-1435.41	345	-0.0009993	0.0001872	0.0035	0.9		2964.67	2964.67	No	2.07	Si
SLU 82	ini.	2284.71	-4949	-0.0020042	0.0001872	0.0035	0.9		2959	2959	No	1.3	Si
SLU 82	fin.	-1450.38	332	-0.0010132	0.0001872	0.0035	0.9		2964.67	2964.67	No	2.04	Si
SLU 77	ini.	2266.77	-4906	-0.0019757	0.0001872	0.0035	0.9		2959	2959	No	1.31	Si
SLU 77	fin.	-1442.02	339	-0.0010054	0.0001872	0.0035	0.9		2964.67	2964.67	No	2.06	Si
SLU 80	ini.	2253.8	-4874	-0.0019554	0.0001872	0.0035	0.9		2959	2959	No	1.31	Si
SLU 80	fin.	-1436.34	344	-0.0010002	0.0001872	0.0035	0.9		2964.67	2964.67	No	2.06	Si
SLU 84	ini.	2311.85	-5007	-0.0020483	0.0001872	0.0035	0.9		2959	2959	No	1.28	Si
SLU 84	fin.	-1467.18	337	-0.0010288	0.0001872	0.0035	0.9		2964.67	2964.67	No	2.02	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	2266.77	-6948	0.9	0	329	7137	3773	2295	6068	No	0.87	No
SLU 77	fin.	-1442.02	-5133	0.9	0	329	7137	3773	2295	6068	No	1.18	Si
SLU 74	ini.	2239.63	-6864	0.9	0	329	7137	3773	2295	6068	No	0.88	No
SLU 74	fin.	-1425.22	-5073	0.9	0	329	7137	3773	2295	6068	No	1.2	Si
SLU 81	ini.	2282.54	-7006	0.9	0	329	7137	3773	2295	6068	No	0.87	No
SLU 81	fin.	-1449.44	-5149	0.9	0	329	7137	3773	2295	6068	No	1.18	Si
SLU 80	ini.	2253.8	-6906	0.9	0	329	7137	3773	2295	6068	No	0.88	No
SLU 80	fin.	-1436.34	-5113	0.9	0	329	7137	3773	2295	6068	No	1.19	Si
SLU 83	ini.	2309.68	-7090	0.9	0	329	7137	3773	2295	6068	No	0.86	No
SLU 83	fin.	-1466.24	-5208	0.9	0	329	7137	3773	2295	6068	No	1.17	Si
SLU 78	ini.	2268.95	-6954	0.9	0	329	7137	3773	2295	6068	No	0.87	No
SLU 78	fin.	-1442.96	-5136	0.9	0	329	7137	3773	2295	6068	No	1.18	Si
SLU 84	ini.	2311.85	-7096	0.9	0	329	7137	3773	2295	6068	No	0.86	No
SLU 84	fin.	-1467.18	-5212	0.9	0	329	7137	3773	2295	6068	No	1.16	Si
SLU 75	ini.	2241.81	-6870	0.9	0	329	7137	3773	2295	6068	No	0.88	No
SLU 75	fin.	-1426.16	-5077	0.9	0	329	7137	3773	2295	6068	No	1.2	Si
SLU 79	ini.	2251.63	-6900	0.9	0	329	7137	3773	2295	6068	No	0.88	No
SLU 79	fin.	-1435.41	-5110	0.9	0	329	7137	3773	2295	6068	No	1.19	Si
SLU 82	ini.	2284.71	-7012	0.9	0	329	7137	3773	2295	6068	No	0.87	No
SLU 82	fin.	-1450.38	-5153	0.9	0	329	7137	3773	2295	6068	No	1.18	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	3320.06	-5337	-0.003984	0.0002807	0.0035	0.9		2989.59	2989.59		0.9	No
SLV 15	fin.	-2975.01	3572	-0.0031818	0.0002807	0.0035	0.9		2995.37	2995.37		1.01	Si
SLD 13	ini.	2400.74	-4539	-0.0020229	0.0002807	0.0035	0.9		2989.59	2989.59		1.25	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 13	fin.	-1853.79	1328	-0.0013297	0.0002807	0.0035	0.9		2995.37	2995.37		1.62	Si
SLV 10	ini.	2495.75	-5406	-0.0021783	0.0002807	0.0035	0.9		2989.59	2989.59		1.2	Si
SLV 10	fin.	-1656.89	-181	-0.0011351	0.0002807	0.0035	0.9		2995.37	2995.37		1.81	Si
SLV 14	ini.	3583.68	-6179	-0.0045203	0.0002807	0.0035	0.9		2989.59	2989.59		0.83	No
SLV 14	fin.	-3053.87	2857	-0.0033735	0.0002807	0.0035	0.9		2995.37	2995.37		0.98	No
SLD 14	ini.	2421.55	-4560	-0.0020558	0.0002807	0.0035	0.9		2989.59	2989.59		1.23	Si
SLD 14	fin.	-1879.24	1372	-0.0013563	0.0002807	0.0035	0.9		2995.37	2995.37		1.59	Si
SLD 16	ini.	2327.8	-4217	-0.0019123	0.0002807	0.0035	0.9		2989.59	2989.59		1.28	Si
SLD 16	fin.	-1870.71	1723	-0.0013473	0.0002807	0.0035	0.9		2995.37	2995.37		1.6	Si
SLV 16	ini.	3368.56	-5386	-0.0040858	0.0002807	0.0035	0.9		2989.59	2989.59		0.89	No
SLV 16	fin.	-3034.3	3675	-0.0033264	0.0002807	0.0035	0.9		2995.37	2995.37		0.99	No
SLV 9	ini.	2464.78	-5375	-0.0021262	0.0002807	0.0035	0.9		2989.59	2989.59		1.21	Si
SLV 9	fin.	-1619.02	-246	-0.0010998	0.0002807	0.0035	0.9		2995.37	2995.37		1.85	Si
SLD 15	ini.	2306.98	-4196	-0.0018821	0.0002807	0.0035	0.9		2989.59	2989.59		1.3	Si
SLD 15	fin.	-1845.26	1679	-0.0013209	0.0002807	0.0035	0.9		2995.37	2995.37		1.62	Si
SLV 13	ini.	3535.19	-6129	-0.0044244	0.0002807	0.0035	0.9		2989.59	2989.59		0.85	No
SLV 13	fin.	-2994.58	2755	-0.0032297	0.0002807	0.0035	0.9		2995.37	2995.37		1	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 10	ini.	2495.75	-8774	0.9	0	493	7137	5660	2295	7630		0.87	No
SLV 10	fin.	-1656.89	-7907	0.9	0	493	7137	5660	2295	7630		0.96	No
SLV 16	ini.	3368.56	-10375	0.9	0	493	7137	5660	2295	7630		0.74	No
SLV 16	fin.	-3034.3	-9537	0.9	0	493	7137	5660	2295	7630		0.8	No
SLV 14	ini.	3583.68	-11652	0.9	0	493	7137	5660	2295	7630		0.65	No
SLV 14	fin.	-3053.87	-10918	0.9	0	493	7137	5660	2295	7630		0.7	No
SLD 15	ini.	2306.98	-7072	0.9	0	493	7137	5660	2295	7630		1.08	Si
SLD 15	fin.	-1845.26	-6051	0.9	0	493	7137	5660	2295	7630		1.26	Si
SLV 15	ini.	3320.06	-10206	0.9	0	493	7137	5660	2295	7630		0.75	No
SLV 15	fin.	-2975.01	-9358	0.9	0	493	7137	5660	2295	7630		0.82	No
SLD 16	ini.	2327.8	-7144	0.9	0	493	7137	5660	2295	7630		1.07	Si
SLD 16	fin.	-1870.71	-6128	0.9	0	493	7137	5660	2295	7630		1.24	Si
SLV 9	ini.	2464.78	-8666	0.9	0	493	7137	5660	2295	7630		0.88	No
SLV 9	fin.	-1619.02	-7793	0.9	0	493	7137	5660	2295	7630		0.98	No
SLD 13	ini.	2400.74	-7620	0.9	0	493	7137	5660	2295	7630		1	Si
SLD 13	fin.	-1853.79	-6644	0.9	0	493	7137	5660	2295	7630		1.15	Si
SLD 14	ini.	2421.55	-7692	0.9	0	493	7137	5660	2295	7630		0.99	No
SLD 14	fin.	-1879.24	-6721	0.9	0	493	7137	5660	2295	7630		1.14	Si
SLV 13	ini.	3535.19	-11483	0.9	0	493	7137	5660	2295	7630		0.66	No
SLV 13	fin.	-2994.58	-10738	0.9	0	493	7137	5660	2295	7630		0.71	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.834	SLV 14	No
V_SLV	0.655	SLV 14	No
PF_SLU	1.28	SLU 84	Si
V_SLU	0.855	SLU 84	No

Trave di accoppiamento 48

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.768	6.526	4.8	5.44	0.64	-16.768	6.526	4.8	5.44	0.64	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	659.95	1003	-0.0008836	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.27	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	fin.	-1539.36	-4014	-0.0036702	0.0001872	0.0035	0.64		1504.96	1504.96	No	0.98	No
SLU 80	ini.	656.28	999	-0.0008773	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.29	Si
SLU 80	fin.	-1507.86	-3939	-0.0035186	0.0001872	0.0035	0.64		1504.96	1504.96	No	1	No
SLU 75	ini.	650.57	987	-0.0008674	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.31	Si
SLU 75	fin.	-1503.98	-3929	-0.0034995	0.0001872	0.0035	0.64		1504.96	1504.96	No	1	Si
SLU 77	ini.	658.11	997	-0.0008804	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.28	Si
SLU 77	fin.	-1518.71	-3969	-0.0035715	0.0001872	0.0035	0.64		1504.96	1504.96	No	0.99	No
SLU 84	ini.	668.04	1012	-0.0008977	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.25	Si
SLU 84	fin.	-1556.61	-4063	-0.0037509	0.0001872	0.0035	0.64		1504.96	1504.96	No	0.97	No
SLU 83	ini.	667.76	1013	-0.0008972	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.25	Si
SLU 83	fin.	-1555.35	-4059	-0.003745	0.0001872	0.0035	0.64		1504.96	1504.96	No	0.97	No
SLU 74	ini.	650.3	987	-0.0008669	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.31	Si
SLU 74	fin.	-1502.72	-3925	-0.0034933	0.0001872	0.0035	0.64		1504.96	1504.96	No	1	Si
SLU 79	ini.	656	1000	-0.0008768	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.29	Si
SLU 79	fin.	-1506.59	-3935	-0.0035124	0.0001872	0.0035	0.64		1504.96	1504.96	No	1	No
SLU 82	ini.	660.23	1002	-0.0008841	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.27	Si
SLU 82	fin.	-1540.62	-4018	-0.0036762	0.0001872	0.0035	0.64		1504.96	1504.96	No	0.98	No
SLU 78	ini.	658.39	997	-0.0008809	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.28	Si
SLU 78	fin.	-1519.97	-3973	-0.0035776	0.0001872	0.0035	0.64		1504.96	1504.96	No	0.99	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	667.76	-1732	0.64	0	173	5075	2683	1632	4315	No	2.49	Si
SLU 83	fin.	-1555.35	-6154	0.64	0	173	5075	2683	1632	4315	No	0.7	No
SLU 79	ini.	656	-1726	0.64	0	173	5075	2683	1632	4315	No	2.5	Si
SLU 79	fin.	-1506.59	-5946	0.64	0	173	5075	2683	1632	4315	No	0.73	No
SLU 80	ini.	656.28	-1727	0.64	0	173	5075	2683	1632	4315	No	2.5	Si
SLU 80	fin.	-1507.86	-5951	0.64	0	173	5075	2683	1632	4315	No	0.73	No
SLU 74	ini.	650.3	-1701	0.64	0	173	5075	2683	1632	4315	No	2.54	Si
SLU 74	fin.	-1502.72	-5937	0.64	0	173	5075	2683	1632	4315	No	0.73	No
SLU 78	ini.	658.39	-1727	0.64	0	173	5075	2683	1632	4315	No	2.5	Si
SLU 78	fin.	-1519.97	-6000	0.64	0	173	5075	2683	1632	4315	No	0.72	No
SLU 77	ini.	658.11	-1726	0.64	0	173	5075	2683	1632	4315	No	2.5	Si
SLU 77	fin.	-1518.71	-5996	0.64	0	173	5075	2683	1632	4315	No	0.72	No
SLU 82	ini.	660.23	-1707	0.64	0	173	5075	2683	1632	4315	No	2.53	Si
SLU 82	fin.	-1540.62	-6099	0.64	0	173	5075	2683	1632	4315	No	0.71	No
SLU 75	ini.	650.57	-1702	0.64	0	173	5075	2683	1632	4315	No	2.54	Si
SLU 75	fin.	-1503.98	-5941	0.64	0	173	5075	2683	1632	4315	No	0.73	No
SLU 84	ini.	668.04	-1733	0.64	0	173	5075	2683	1632	4315	No	2.49	Si
SLU 84	fin.	-1556.61	-6159	0.64	0	173	5075	2683	1632	4315	No	0.7	No
SLU 81	ini.	659.95	-1706	0.64	0	173	5075	2683	1632	4315	No	2.53	Si
SLU 81	fin.	-1539.36	-6095	0.64	0	173	5075	2683	1632	4315	No	0.71	No

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 13	ini.	989.93	1897	-0.0014434	0.0002807	0.0035	0.64		1512.56	1512.56		1.53	Si
SLD 13	fin.	-1527.66	-3836	-0.003285	0.0002807	0.0035	0.64		1516.76	1516.76		0.99	No
SLV 9	ini.	759.78	996	-0.0009962	0.0002807	0.0035	0.64		1512.56	1512.56		1.99	Si
SLV 9	fin.	-1507.11	-3943	-0.0031858	0.0002807	0.0035	0.64		1516.76	1516.76		1.01	Si
SLV 16	ini.	1778.65	3920	-0.0043853	0.0002807	0.0035	0.64		1512.56	1512.56		0.85	No
SLV 16	fin.	-2142.12	-5144	-0.0057105	0.0002807	0.0035	0.64		1516.76	1516.76		0.71	No
SLV 10	ini.	783.48	1054	-0.001038	0.0002807	0.0035	0.64		1512.56	1512.56		1.93	Si
SLV 10	fin.	-1530.78	-3992	-0.0033	0.0002807	0.0035	0.64		1516.76	1516.76		0.99	No
SLD 15	ini.	1008.63	2048	-0.0014847	0.0002807	0.0035	0.64		1512.56	1512.56		1.5	Si
SLD 15	fin.	-1488.8	-3702	-0.003097	0.0002807	0.0035	0.64		1516.76	1516.76		1.02	Si
SLD 14	ini.	1005.86	1935	-0.0014785	0.0002807	0.0035	0.64		1512.56	1512.56		1.5	Si
SLD 14	fin.	-1543.57	-3869	-0.003361	0.0002807	0.0035	0.64		1516.76	1516.76		0.98	No
SLD 16	ini.	1024.56	2087	-0.0015206	0.0002807	0.0035	0.64		1512.56	1512.56		1.48	Si
SLD 16	fin.	-1504.71	-3734	-0.0031741	0.0002807	0.0035	0.64		1516.76	1516.76		1.01	Si
SLV 13	ini.	1697.91	3478	-0.0040595	0.0002807	0.0035	0.64		1512.56	1512.56		0.89	No
SLV 13	fin.	-2193.89	-5374	-0.0058918	0.0002807	0.0035	0.64		1516.76	1516.76		0.69	No
SLV 15	ini.	1741.55	3830	-0.0042374	0.0002807	0.0035	0.64		1512.56	1512.56		0.87	No
SLV 15	fin.	-2105.05	-5068	-0.0055796	0.0002807	0.0035	0.64		1516.76	1516.76		0.72	No
SLV 14	ini.	1735.01	3568	-0.0042111	0.0002807	0.0035	0.64		1512.56	1512.56		0.87	No
SLV 14	fin.	-2230.96	-5451	-0.0060206	0.0002807	0.0035	0.64		1516.76	1516.76		0.68	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	1741.55	-5890	0.64	0	260	5075	4025	1632	5335		0.91	No
SLV 15	fin.	-2105.05	-7783	0.64	0	260	5075	4025	1632	5335		0.69	No
SLV 9	ini.	759.78	-2428	0.64	0	260	5075	4025	1632	5335		2.2	Si
SLV 9	fin.	-1507.11	-5630	0.64	0	260	5075	4025	1632	5335		0.95	No
SLV 16	ini.	1778.65	-6012	0.64	0	260	5075	4025	1632	5335		0.89	No
SLV 16	fin.	-2142.12	-7922	0.64	0	260	5075	4025	1632	5335		0.67	No
SLD 16	ini.	1024.56	-3279	0.64	0	260	5075	4025	1632	5335		1.63	Si
SLD 16	fin.	-1504.71	-5704	0.64	0	260	5075	4025	1632	5335		0.94	No
SLD 15	ini.	1008.63	-3227	0.64	0	260	5075	4025	1632	5335		1.65	Si
SLD 15	fin.	-1488.8	-5644	0.64	0	260	5075	4025	1632	5335		0.95	No
SLD 13	ini.	989.93	-3183	0.64	0	260	5075	4025	1632	5335		1.68	Si
SLD 13	fin.	-1527.66	-5761	0.64	0	260	5075	4025	1632	5335		0.93	No
SLV 10	ini.	783.48	-2506	0.64	0	260	5075	4025	1632	5335		2.13	Si
SLV 10	fin.	-1530.78	-5719	0.64	0	260	5075	4025	1632	5335		0.93	No
SLD 14	ini.	1005.86	-3236	0.64	0	260	5075	4025	1632	5335		1.65	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 14	fin.	-1543.57	-5821	0.64	0	260	5075	4025	1632	5335		0.92	No
SLV 13	ini.	1697.91	-5788	0.64	0	260	5075	4025	1632	5335		0.92	No
SLV 13	fin.	-2193.89	-8049	0.64	0	260	5075	4025	1632	5335		0.66	No
SLV 14	ini.	1735.01	-5910	0.64	0	260	5075	4025	1632	5335		0.9	No
SLV 14	fin.	-2230.96	-8189	0.64	0	260	5075	4025	1632	5335		0.65	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.68	SLV 14	No
V_SLV	0.651	SLV 14	No
PF_SLU	0.967	SLU 84	No
V_SLU	0.701	SLU 84	No

Trave di accoppiamento 49

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.888	6.526	2	2.9	0.9	-11.888	6.526	2	2.9	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	256.5	-1902	-0.0001324	0.0001872	0.0035	0.9		2959	2959	No	11.54	Si
SLU 79	fin.	494	-2231	-0.000272	0.0001872	0.0035	0.9		2959	2959	No	5.99	Si
SLU 74	ini.	259.54	-1908	-0.000134	0.0001872	0.0035	0.9		2959	2959	No	11.4	Si
SLU 74	fin.	492.12	-2231	-0.0002708	0.0001872	0.0035	0.9		2959	2959	No	6.01	Si
SLU 84	ini.	270.67	-1981	-0.0001402	0.0001872	0.0035	0.9		2959	2959	No	10.93	Si
SLU 84	fin.	512.29	-2316	-0.0002836	0.0001872	0.0035	0.9		2959	2959	No	5.78	Si
SLU 80	ini.	257	-1904	-0.0001326	0.0001872	0.0035	0.9		2959	2959	No	11.51	Si
SLU 80	fin.	494.43	-2234	-0.0002722	0.0001872	0.0035	0.9		2959	2959	No	5.98	Si
SLU 82	ini.	268.93	-1964	-0.0001392	0.0001872	0.0035	0.9		2959	2959	No	11	Si
SLU 82	fin.	505.95	-2293	-0.0002795	0.0001872	0.0035	0.9		2959	2959	No	5.85	Si
SLU 77	ini.	261.28	-1925	-0.000135	0.0001872	0.0035	0.9		2959	2959	No	11.32	Si
SLU 77	fin.	498.46	-2255	-0.0002748	0.0001872	0.0035	0.9		2959	2959	No	5.94	Si
SLU 75	ini.	260.05	-1911	-0.0001343	0.0001872	0.0035	0.9		2959	2959	No	11.38	Si
SLU 75	fin.	492.55	-2233	-0.000271	0.0001872	0.0035	0.9		2959	2959	No	6.01	Si
SLU 83	ini.	270.17	-1979	-0.0001399	0.0001872	0.0035	0.9		2959	2959	No	10.95	Si
SLU 83	fin.	511.86	-2314	-0.0002833	0.0001872	0.0035	0.9		2959	2959	No	5.78	Si
SLU 78	ini.	261.79	-1928	-0.0001353	0.0001872	0.0035	0.9		2959	2959	No	11.3	Si
SLU 78	fin.	498.89	-2257	-0.000275	0.0001872	0.0035	0.9		2959	2959	No	5.93	Si
SLU 81	ini.	268.43	-1962	-0.0001389	0.0001872	0.0035	0.9		2959	2959	No	11.02	Si
SLU 81	fin.	505.52	-2290	-0.0002793	0.0001872	0.0035	0.9		2959	2959	No	5.85	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	261.28	-591	0.9	0	329	7137	3773	2295	6068	No	10.28	Si
SLU 77	fin.	498.46	1323	0.9	0	329	7137	3773	2295	6068	No	4.58	Si
SLU 84	ini.	270.67	-620	0.9	0	329	7137	3773	2295	6068	No	9.78	Si
SLU 84	fin.	512.29	1367	0.9	0	329	7137	3773	2295	6068	No	4.44	Si
SLU 81	ini.	268.43	-614	0.9	0	329	7137	3773	2295	6068	No	9.88	Si
SLU 81	fin.	505.52	1346	0.9	0	329	7137	3773	2295	6068	No	4.51	Si
SLU 75	ini.	260.05	-587	0.9	0	329	7137	3773	2295	6068	No	10.34	Si
SLU 75	fin.	492.55	1304	0.9	0	329	7137	3773	2295	6068	No	4.65	Si
SLU 82	ini.	268.93	-615	0.9	0	329	7137	3773	2295	6068	No	9.86	Si
SLU 82	fin.	505.95	1347	0.9	0	329	7137	3773	2295	6068	No	4.5	Si
SLU 80	ini.	257	-578	0.9	0	329	7137	3773	2295	6068	No	10.5	Si
SLU 80	fin.	494.43	1312	0.9	0	329	7137	3773	2295	6068	No	4.63	Si
SLU 78	ini.	261.79	-592	0.9	0	329	7137	3773	2295	6068	No	10.26	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	fin.	498.89	1324	0.9	0	329	7137	3773	2295	6068	No	4.58	Si
SLU 74	ini.	259.54	-586	0.9	0	329	7137	3773	2295	6068	No	10.36	Si
SLU 74	fin.	492.12	1303	0.9	0	329	7137	3773	2295	6068	No	4.66	Si
SLU 79	ini.	256.5	-576	0.9	0	329	7137	3773	2295	6068	No	10.53	Si
SLU 79	fin.	494	1311	0.9	0	329	7137	3773	2295	6068	No	4.63	Si
SLU 83	ini.	270.17	-619	0.9	0	329	7137	3773	2295	6068	No	9.8	Si
SLU 83	fin.	511.86	1366	0.9	0	329	7137	3773	2295	6068	No	4.44	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	2249.16	-3857	-0.001801	0.0002807	0.0035	0.9		2989.59	2989.59		1.33	Si
SLV 15	fin.	-1810.23	2342	-0.001285	0.0002807	0.0035	0.9		2995.37	2995.37		1.65	Si
SLD 4	ini.	-772.43	203	-0.0004343	0.0002807	0.0035	0.9		2995.37	2995.37		3.88	Si
SLD 4	fin.	1279.6	-2648	-0.0008083	0.0002807	0.0035	0.9		2989.59	2989.59		2.34	Si
SLV 4	ini.	-2033.52	2191	-0.0015261	0.0002807	0.0035	0.9		2995.37	2995.37		1.47	Si
SLV 4	fin.	2550.91	-4179	-0.002275	0.0002807	0.0035	0.9		2989.59	2989.59		1.17	Si
SLV 13	ini.	2371.39	-4752	-0.0019775	0.0002807	0.0035	0.9		2989.59	2989.59		1.26	Si
SLV 13	fin.	-1889.21	1168	-0.0013668	0.0002807	0.0035	0.9		2995.37	2995.37		1.59	Si
SLV 3	ini.	-2102.51	2292	-0.0016075	0.0002807	0.0035	0.9		2995.37	2995.37		1.42	Si
SLV 3	fin.	2619.49	-4280	-0.002402	0.0002807	0.0035	0.9		2989.59	2989.59		1.14	Si
SLV 2	ini.	-1911.28	1296	-0.0013903	0.0002807	0.0035	0.9		2995.37	2995.37		1.57	Si
SLV 2	fin.	2471.93	-5353	-0.0021381	0.0002807	0.0035	0.9		2989.59	2989.59		1.21	Si
SLV 1	ini.	-1980.28	1397	-0.0014657	0.0002807	0.0035	0.9		2995.37	2995.37		1.51	Si
SLV 1	fin.	2540.51	-5454	-0.0022564	0.0002807	0.0035	0.9		2989.59	2989.59		1.18	Si
SLV 14	ini.	2440.38	-4853	-0.0020861	0.0002807	0.0035	0.9		2989.59	2989.59		1.23	Si
SLV 14	fin.	-1957.79	1269	-0.0014408	0.0002807	0.0035	0.9		2995.37	2995.37		1.53	Si
SLV 16	ini.	2318.15	-3958	-0.0018982	0.0002807	0.0035	0.9		2989.59	2989.59		1.29	Si
SLV 16	fin.	-1878.81	2443	-0.0013558	0.0002807	0.0035	0.9		2995.37	2995.37		1.59	Si
SLD 3	ini.	-802.04	246	-0.000454	0.0002807	0.0035	0.9		2995.37	2995.37		3.73	Si
SLD 3	fin.	1309.04	-2691	-0.0008323	0.0002807	0.0035	0.9		2989.59	2989.59		2.28	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	-2033.52	7163	0.9	0	493	7137	5660	2295	7630		1.07	Si
SLV 4	fin.	2550.91	7566	0.9	0	493	7137	5660	2295	7630		1.01	Si
SLV 16	ini.	2318.15	-7344	0.9	0	493	7137	5660	2295	7630		1.04	Si
SLV 16	fin.	-1878.81	-6945	0.9	0	493	7137	5660	2295	7630		1.1	Si
SLV 13	ini.	2371.39	-7878	0.9	0	493	7137	5660	2295	7630		0.97	No
SLV 13	fin.	-1889.21	-5856	0.9	0	493	7137	5660	2295	7630		1.3	Si
SLV 2	ini.	-1911.28	6400	0.9	0	493	7137	5660	2295	7630		1.19	Si
SLV 2	fin.	2471.93	8427	0.9	0	493	7137	5660	2295	7630		0.91	No
SLV 5	ini.	-302.12	620	0.9	0	493	7137	5660	2295	7630		12.31	Si
SLV 5	fin.	885.57	4539	0.9	0	493	7137	5660	2295	7630		1.68	Si
SLV 1	ini.	-1980.28	6629	0.9	0	493	7137	5660	2295	7630		1.15	Si
SLV 1	fin.	2540.51	8654	0.9	0	493	7137	5660	2295	7630		0.88	No
SLV 14	ini.	2440.38	-8107	0.9	0	493	7137	5660	2295	7630		0.94	No
SLV 14	fin.	-1957.79	-6084	0.9	0	493	7137	5660	2295	7630		1.25	Si
SLV 6	ini.	-258.06	473	0.9	0	493	7137	5660	2295	7630		16.12	Si
SLV 6	fin.	841.78	4393	0.9	0	493	7137	5660	2295	7630		1.74	Si
SLV 15	ini.	2249.16	-7115	0.9	0	493	7137	5660	2295	7630		1.07	Si
SLV 15	fin.	-1810.23	-6717	0.9	0	493	7137	5660	2295	7630		1.14	Si
SLV 3	ini.	-2102.51	7392	0.9	0	493	7137	5660	2295	7630		1.03	Si
SLV 3	fin.	2619.49	7794	0.9	0	493	7137	5660	2295	7630		0.98	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.141	SLV 3	Si
V_SLV	0.882	SLV 1	No
PF_SLU	5.776	SLU 84	Si
V_SLU	4.438	SLU 84	Si

Trave di accoppiamento 50

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.888	6.526	4.8	5.44	0.64	-11.888	6.526	4.8	5.44	0.64	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-532.8	-1699	-0.000671	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.82	Si
SLU 80	fin.	-410.82	-1411	-0.0004873	0.0001872	0.0035	0.64		1504.96	1504.96	No	3.66	Si
SLU 82	ini.	-548.47	-1748	-0.0006958	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.74	Si
SLU 82	fin.	-427.59	-1462	-0.0005116	0.0001872	0.0035	0.64		1504.96	1504.96	No	3.52	Si
SLU 81	ini.	-548.06	-1746	-0.0006951	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.75	Si
SLU 81	fin.	-427.06	-1459	-0.0005108	0.0001872	0.0035	0.64		1504.96	1504.96	No	3.52	Si
SLU 74	ini.	-531.87	-1697	-0.0006695	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.83	Si
SLU 74	fin.	-412.73	-1416	-0.0004901	0.0001872	0.0035	0.64		1504.96	1504.96	No	3.65	Si
SLU 75	ini.	-532.28	-1699	-0.0006701	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.83	Si
SLU 75	fin.	-413.26	-1418	-0.0004909	0.0001872	0.0035	0.64		1504.96	1504.96	No	3.64	Si
SLU 84	ini.	-554.3	-1767	-0.0007051	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.72	Si
SLU 84	fin.	-430.99	-1475	-0.0005166	0.0001872	0.0035	0.64		1504.96	1504.96	No	3.49	Si
SLU 79	ini.	-532.39	-1697	-0.0006703	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.83	Si
SLU 79	fin.	-410.29	-1409	-0.0004866	0.0001872	0.0035	0.64		1504.96	1504.96	No	3.67	Si
SLU 77	ini.	-537.7	-1717	-0.0006787	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.8	Si
SLU 77	fin.	-416.12	-1430	-0.000495	0.0001872	0.0035	0.64		1504.96	1504.96	No	3.62	Si
SLU 83	ini.	-553.89	-1765	-0.0007044	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.72	Si
SLU 83	fin.	-430.46	-1473	-0.0005158	0.0001872	0.0035	0.64		1504.96	1504.96	No	3.5	Si
SLU 78	ini.	-538.11	-1718	-0.0006793	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.8	Si
SLU 78	fin.	-416.65	-1432	-0.0004957	0.0001872	0.0035	0.64		1504.96	1504.96	No	3.61	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-532.28	2670	0.64	0	173	5075	2683	1632	4315	No	1.62	Si
SLU 75	fin.	-413.26	-2241	0.64	0	173	5075	2683	1632	4315	No	1.93	Si
SLU 81	ini.	-548.06	2754	0.64	0	173	5075	2683	1632	4315	No	1.57	Si
SLU 81	fin.	-427.06	-2317	0.64	0	173	5075	2683	1632	4315	No	1.86	Si
SLU 79	ini.	-532.39	2669	0.64	0	173	5075	2683	1632	4315	No	1.62	Si
SLU 79	fin.	-410.29	-2229	0.64	0	173	5075	2683	1632	4315	No	1.94	Si
SLU 84	ini.	-554.3	2782	0.64	0	173	5075	2683	1632	4315	No	1.55	Si
SLU 84	fin.	-430.99	-2337	0.64	0	173	5075	2683	1632	4315	No	1.85	Si
SLU 77	ini.	-537.7	2695	0.64	0	173	5075	2683	1632	4315	No	1.6	Si
SLU 77	fin.	-416.12	-2257	0.64	0	173	5075	2683	1632	4315	No	1.91	Si
SLU 80	ini.	-532.8	2671	0.64	0	173	5075	2683	1632	4315	No	1.62	Si
SLU 80	fin.	-410.82	-2231	0.64	0	173	5075	2683	1632	4315	No	1.93	Si
SLU 83	ini.	-553.89	2781	0.64	0	173	5075	2683	1632	4315	No	1.55	Si
SLU 83	fin.	-430.46	-2335	0.64	0	173	5075	2683	1632	4315	No	1.85	Si
SLU 78	ini.	-538.11	2697	0.64	0	173	5075	2683	1632	4315	No	1.6	Si
SLU 78	fin.	-416.65	-2259	0.64	0	173	5075	2683	1632	4315	No	1.91	Si
SLU 82	ini.	-548.47	2756	0.64	0	173	5075	2683	1632	4315	No	1.57	Si
SLU 82	fin.	-427.59	-2319	0.64	0	173	5075	2683	1632	4315	No	1.86	Si
SLU 74	ini.	-531.87	2668	0.64	0	173	5075	2683	1632	4315	No	1.62	Si
SLU 74	fin.	-412.73	-2239	0.64	0	173	5075	2683	1632	4315	No	1.93	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	-1789.91	-4382	-0.0044116	0.0002807	0.0035	0.64		1516.76	1516.76		0.85	No
SLV 4	fin.	1199.97	2428	-0.0019781	0.0002807	0.0035	0.64		1512.56	1512.56		1.26	Si
SLV 3	ini.	-1831	-4476	-0.0045713	0.0002807	0.0035	0.64		1516.76	1516.76		0.83	No
SLV 3	fin.	1241.77	2525	-0.002109	0.0002807	0.0035	0.64		1512.56	1512.56		1.22	Si
SLV 13	ini.	1077.8	2117	-0.0016463	0.0002807	0.0035	0.64		1512.56	1512.56		1.4	Si
SLV 13	fin.	-1743.85	-4296	-0.0042287	0.0002807	0.0035	0.64		1516.76	1516.76		0.87	No
SLV 16	ini.	1182.45	2416	-0.001926	0.0002807	0.0035	0.64		1512.56	1512.56		1.28	Si
SLV 16	fin.	-1719.92	-4179	-0.0041318	0.0002807	0.0035	0.64		1516.76	1516.76		0.88	No
SLV 15	ini.	1141.36	2322	-0.0018103	0.0002807	0.0035	0.64		1512.56	1512.56		1.33	Si
SLV 15	fin.	-1678.13	-4082	-0.0039592	0.0002807	0.0035	0.64		1516.76	1516.76		0.9	No
SLV 14	ini.	1118.89	2212	-0.0017503	0.0002807	0.0035	0.64		1512.56	1512.56		1.35	Si
SLV 14	fin.	-1785.65	-4392	-0.0043948	0.0002807	0.0035	0.64		1516.76	1516.76		0.85	No
SLD 1	ini.	-1013.96	-2650	-0.0014908	0.0002807	0.0035	0.64		1516.76	1516.76		1.5	Si
SLD 1	fin.	346.69	452	-0.0003785	0.0002807	0.0035	0.64		1512.56	1512.56		4.36	Si
SLV 2	ini.	-1853.47	-4586	-0.0046574	0.0002807	0.0035	0.64		1516.76	1516.76		0.82	No
SLV 2	fin.	1134.25	2214	-0.001791	0.0002807	0.0035	0.64		1512.56	1512.56		1.33	Si
SLV 1	ini.	-1894.56	-4680	-0.004813	0.0002807	0.0035	0.64		1516.76	1516.76		0.8	No
SLV 1	fin.	1176.05	2311	-0.0019075	0.0002807	0.0035	0.64		1512.56	1512.56		1.29	Si
SLD 2	ini.	-996.33	-2610	-0.0014518	0.0002807	0.0035	0.64		1516.76	1516.76		1.52	Si
SLD 2	fin.	328.75	411	-0.0003561	0.0002807	0.0035	0.64		1512.56	1512.56		4.6	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	-1789.91	6848	0.64	0	260	5075	4025	1632	5335		0.78	No
SLV 4	fin.	1199.97	3656	0.64	0	260	5075	4025	1632	5335		1.46	Si
SLV 14	ini.	1118.89	-3421	0.64	0	260	5075	4025	1632	5335		1.56	Si
SLV 14	fin.	-1785.65	-6773	0.64	0	260	5075	4025	1632	5335		0.79	No
SLV 15	ini.	1141.36	-3468	0.64	0	260	5075	4025	1632	5335		1.54	Si
SLV 15	fin.	-1678.13	-6433	0.64	0	260	5075	4025	1632	5335		0.83	No
SLV 13	ini.	1077.8	-3275	0.64	0	260	5075	4025	1632	5335		1.63	Si
SLV 13	fin.	-1743.85	-6624	0.64	0	260	5075	4025	1632	5335		0.81	No
SLV 2	ini.	-1853.47	7041	0.64	0	260	5075	4025	1632	5335		0.76	No
SLV 2	fin.	1134.25	3466	0.64	0	260	5075	4025	1632	5335		1.54	Si
SLV 3	ini.	-1831	6994	0.64	0	260	5075	4025	1632	5335		0.76	No
SLV 3	fin.	1241.77	3806	0.64	0	260	5075	4025	1632	5335		1.4	Si
SLV 16	ini.	1182.45	-3614	0.64	0	260	5075	4025	1632	5335		1.48	Si
SLV 16	fin.	-1719.92	-6583	0.64	0	260	5075	4025	1632	5335		0.81	No
SLD 1	ini.	-1013.96	4096	0.64	0	260	5075	4025	1632	5335		1.3	Si
SLD 1	fin.	346.69	695	0.64	0	260	5075	4025	1632	5335		7.68	Si
SLD 2	ini.	-996.33	4033	0.64	0	260	5075	4025	1632	5335		1.32	Si
SLD 2	fin.	328.75	631	0.64	0	260	5075	4025	1632	5335		8.46	Si
SLV 1	ini.	-1894.56	7187	0.64	0	260	5075	4025	1632	5335		0.74	No
SLV 1	fin.	1176.05	3616	0.64	0	260	5075	4025	1632	5335		1.48	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.801	SLV 1	No
V_SLV	0.742	SLV 1	No
PF_SLU	2.715	SLU 84	Si
V_SLU	1.551	SLU 84	Si

Trave di accoppiamento 51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.008	6.526	2	2.9	0.9	-7.008	6.526	2	2.9	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-1084.13	40	-0.0006965	0.0001872	0.0035	0.9		2964.67	2964.67	No	2.73	Si
SLU 74	fin.	1778.62	-3948	-0.0013453	0.0001872	0.0035	0.9		2959	2959	No	1.66	Si
SLU 75	ini.	-1085.08	39	-0.0006972	0.0001872	0.0035	0.9		2964.67	2964.67	No	2.73	Si
SLU 75	fin.	1780.7	-3953	-0.0013475	0.0001872	0.0035	0.9		2959	2959	No	1.66	Si
SLU 84	ini.	-1109.08	22	-0.0007167	0.0001872	0.0035	0.9		2964.67	2964.67	No	2.67	Si
SLU 84	fin.	1832.11	-4076	-0.0014043	0.0001872	0.0035	0.9		2959	2959	No	1.62	Si
SLU 78	ini.	-1097.73	42	-0.0007075	0.0001872	0.0035	0.9		2964.67	2964.67	No	2.7	Si
SLU 78	fin.	1801.2	-3997	-0.00137	0.0001872	0.0035	0.9		2959	2959	No	1.64	Si
SLU 79	ini.	-1093.19	56	-0.0007038	0.0001872	0.0035	0.9		2964.67	2964.67	No	2.71	Si
SLU 79	fin.	1786.15	-3956	-0.0013535	0.0001872	0.0035	0.9		2959	2959	No	1.66	Si
SLU 80	ini.	-1094.14	55	-0.0007045	0.0001872	0.0035	0.9		2964.67	2964.67	No	2.71	Si
SLU 80	fin.	1788.23	-3961	-0.0013558	0.0001872	0.0035	0.9		2959	2959	No	1.65	Si
SLU 77	ini.	-1096.79	43	-0.0007067	0.0001872	0.0035	0.9		2964.67	2964.67	No	2.7	Si
SLU 77	fin.	1799.12	-3992	-0.0013677	0.0001872	0.0035	0.9		2959	2959	No	1.64	Si
SLU 81	ini.	-1095.49	19	-0.0007056	0.0001872	0.0035	0.9		2964.67	2964.67	No	2.71	Si
SLU 81	fin.	1809.53	-4028	-0.0013792	0.0001872	0.0035	0.9		2959	2959	No	1.64	Si
SLU 82	ini.	-1096.43	19	-0.0007064	0.0001872	0.0035	0.9		2964.67	2964.67	No	2.7	Si
SLU 82	fin.	1811.61	-4033	-0.0013815	0.0001872	0.0035	0.9		2959	2959	No	1.63	Si
SLU 83	ini.	-1108.14	22	-0.0007159	0.0001872	0.0035	0.9		2964.67	2964.67	No	2.68	Si
SLU 83	fin.	1830.03	-4071	-0.001402	0.0001872	0.0035	0.9		2959	2959	No	1.62	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-1084.13	3808	0.9	0	329	7137	3773	2295	6068	No	1.59	Si
SLU 74	fin.	1778.62	5421	0.9	0	329	7137	3773	2295	6068	No	1.12	Si
SLU 75	ini.	-1085.08	3812	0.9	0	329	7137	3773	2295	6068	No	1.59	Si
SLU 75	fin.	1780.7	5427	0.9	0	329	7137	3773	2295	6068	No	1.12	Si
SLU 84	ini.	-1109.08	3890	0.9	0	329	7137	3773	2295	6068	No	1.56	Si
SLU 84	fin.	1832.11	5592	0.9	0	329	7137	3773	2295	6068	No	1.09	Si
SLU 78	ini.	-1097.73	3854	0.9	0	329	7137	3773	2295	6068	No	1.57	Si
SLU 78	fin.	1801.2	5492	0.9	0	329	7137	3773	2295	6068	No	1.1	Si
SLU 77	ini.	-1096.79	3850	0.9	0	329	7137	3773	2295	6068	No	1.58	Si
SLU 77	fin.	1799.12	5486	0.9	0	329	7137	3773	2295	6068	No	1.11	Si
SLU 80	ini.	-1094.14	3840	0.9	0	329	7137	3773	2295	6068	No	1.58	Si
SLU 80	fin.	1788.23	5453	0.9	0	329	7137	3773	2295	6068	No	1.11	Si
SLU 79	ini.	-1093.19	3836	0.9	0	329	7137	3773	2295	6068	No	1.58	Si
SLU 79	fin.	1786.15	5447	0.9	0	329	7137	3773	2295	6068	No	1.11	Si
SLU 81	ini.	-1095.49	3845	0.9	0	329	7137	3773	2295	6068	No	1.58	Si
SLU 81	fin.	1809.53	5521	0.9	0	329	7137	3773	2295	6068	No	1.1	Si
SLU 83	ini.	-1108.14	3887	0.9	0	329	7137	3773	2295	6068	No	1.56	Si
SLU 83	fin.	1830.03	5586	0.9	0	329	7137	3773	2295	6068	No	1.09	Si
SLU 82	ini.	-1096.43	3848	0.9	0	329	7137	3773	2295	6068	No	1.58	Si
SLU 82	fin.	1811.61	5527	0.9	0	329	7137	3773	2295	6068	No	1.1	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 4	ini.	-1450.69	1357	-0.0009492	0.0002807	0.0035	0.9		2995.37	2995.37		2.06	Si
SLD 4	fin.	1758.07	-3131	-0.001236	0.0002807	0.0035	0.9		2989.59	2989.59		1.7	Si
SLV 5	ini.	-1317.7	234	-0.0008374	0.0002807	0.0035	0.9		2995.37	2995.37		2.27	Si
SLV 5	fin.	2015.57	-4428	-0.0015097	0.0002807	0.0035	0.9		2989.59	2989.59		1.48	Si
SLD 2	ini.	-1460.76	1171	-0.0009579	0.0002807	0.0035	0.9		2995.37	2995.37		2.05	Si
SLD 2	fin.	1851.71	-3462	-0.0013311	0.0002807	0.0035	0.9		2989.59	2989.59		1.61	Si
SLV 1	ini.	-2432.02	2710	-0.0020655	0.0002807	0.0035	0.9		2995.37	2995.37		1.23	Si
SLV 1	fin.	2720.6	-4511	-0.0026042	0.0002807	0.0035	0.9		2989.59	2989.59		1.1	Si
SLV 2	ini.	-2378.5	2624	-0.0019817	0.0002807	0.0035	0.9		2995.37	2995.37		1.26	Si
SLV 2	fin.	2673.5	-4455	-0.0025077	0.0002807	0.0035	0.9		2989.59	2989.59		1.12	Si
SLV 6	ini.	-1283.52	179	-0.0008096	0.0002807	0.0035	0.9		2995.37	2995.37		2.33	Si
SLV 6	fin.	1985.49	-4392	-0.0014756	0.0002807	0.0035	0.9		2989.59	2989.59		1.51	Si
SLV 4	ini.	-2354.91	3057	-0.0019461	0.0002807	0.0035	0.9		2995.37	2995.37		1.27	Si
SLV 4	fin.	2458.6	-3688	-0.002116	0.0002807	0.0035	0.9		2989.59	2989.59		1.22	Si
SLV 3	ini.	-2408.44	3143	-0.0020281	0.0002807	0.0035	0.9		2995.37	2995.37		1.24	Si
SLV 3	fin.	2505.7	-3744	-0.0021954	0.0002807	0.0035	0.9		2989.59	2989.59		1.19	Si
SLD 1	ini.	-1483.73	1208	-0.000978	0.0002807	0.0035	0.9		2995.37	2995.37		2.02	Si
SLD 1	fin.	1871.93	-3486	-0.0013522	0.0002807	0.0035	0.9		2989.59	2989.59		1.6	Si
SLD 3	ini.	-1473.66	1394	-0.0009692	0.0002807	0.0035	0.9		2995.37	2995.37		2.03	Si
SLD 3	fin.	1778.29	-3154	-0.0012561	0.0002807	0.0035	0.9		2989.59	2989.59		1.68	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 4	ini.	-1450.69	4541	0.9	0	493	7137	5660	2295	7630		1.68	Si
SLD 4	fin.	1758.07	5539	0.9	0	493	7137	5660	2295	7630		1.38	Si
SLV 2	ini.	-2378.5	8327	0.9	0	493	7137	5660	2295	7630		0.92	No
SLV 2	fin.	2673.5	8923	0.9	0	493	7137	5660	2295	7630		0.86	No
SLV 1	ini.	-2432.02	8493	0.9	0	493	7137	5660	2295	7630		0.9	No
SLV 1	fin.	2720.6	9084	0.9	0	493	7137	5660	2295	7630		0.84	No
SLD 3	ini.	-1473.66	4613	0.9	0	493	7137	5660	2295	7630		1.65	Si
SLD 3	fin.	1778.29	5608	0.9	0	493	7137	5660	2295	7630		1.36	Si
SLV 4	ini.	-2354.91	6966	0.9	0	493	7137	5660	2295	7630		1.1	Si
SLV 4	fin.	2458.6	7932	0.9	0	493	7137	5660	2295	7630		0.96	No
SLV 5	ini.	-1317.7	6554	0.9	0	493	7137	5660	2295	7630		1.16	Si
SLV 5	fin.	2015.57	6884	0.9	0	493	7137	5660	2295	7630		1.11	Si
SLD 2	ini.	-1460.76	5126	0.9	0	493	7137	5660	2295	7630		1.49	Si
SLD 2	fin.	1851.71	5965	0.9	0	493	7137	5660	2295	7630		1.28	Si
SLV 6	ini.	-1283.52	6447	0.9	0	493	7137	5660	2295	7630		1.18	Si
SLV 6	fin.	1985.49	6782	0.9	0	493	7137	5660	2295	7630		1.13	Si
SLD 1	ini.	-1483.73	5198	0.9	0	493	7137	5660	2295	7630		1.47	Si
SLD 1	fin.	1871.93	6033	0.9	0	493	7137	5660	2295	7630		1.26	Si
SLV 3	ini.	-2408.44	7133	0.9	0	493	7137	5660	2295	7630		1.07	Si
SLV 3	fin.	2505.7	8092	0.9	0	493	7137	5660	2295	7630		0.94	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.099	SLV 1	Si
V_SLV	0.84	SLV 1	No
PF_SLU	1.615	SLU 84	Si
V_SLU	1.085	SLU 84	Si

Trave di accoppiamento 52

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.008	6.526	4.8	5.44	0.64	-7.008	6.526	4.8	5.44	0.64	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-1306.06	-3414	-0.0025404	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.15	Si
SLU 74	fin.	458.89	607	-0.0005595	0.0001872	0.0035	0.64		1500.92	1500.92	No	3.27	Si
SLU 77	ini.	-1321.22	-3455	-0.0026045	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.14	Si
SLU 77	fin.	465.09	614	-0.0005688	0.0001872	0.0035	0.64		1500.92	1500.92	No	3.23	Si
SLU 79	ini.	-1311.67	-3425	-0.0025639	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.15	Si
SLU 79	fin.	465.81	623	-0.0005699	0.0001872	0.0035	0.64		1500.92	1500.92	No	3.22	Si
SLU 78	ini.	-1322.79	-3459	-0.0026113	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.14	Si
SLU 78	fin.	465.37	614	-0.0005692	0.0001872	0.0035	0.64		1500.92	1500.92	No	3.23	Si
SLU 81	ini.	-1333.06	-3484	-0.0026559	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.13	Si
SLU 81	fin.	459.48	601	-0.0005604	0.0001872	0.0035	0.64		1500.92	1500.92	No	3.27	Si
SLU 80	ini.	-1313.24	-3430	-0.0025705	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.15	Si
SLU 80	fin.	466.09	623	-0.0005703	0.0001872	0.0035	0.64		1500.92	1500.92	No	3.22	Si
SLU 82	ini.	-1334.62	-3488	-0.0026628	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.13	Si
SLU 82	fin.	459.77	600	-0.0005608	0.0001872	0.0035	0.64		1500.92	1500.92	No	3.26	Si
SLU 75	ini.	-1307.62	-3419	-0.0025469	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.15	Si
SLU 75	fin.	459.17	606	-0.0005599	0.0001872	0.0035	0.64		1500.92	1500.92	No	3.27	Si
SLU 83	ini.	-1348.22	-3524	-0.0027234	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.12	Si
SLU 83	fin.	465.68	609	-0.0005697	0.0001872	0.0035	0.64		1500.92	1500.92	No	3.22	Si
SLU 84	ini.	-1349.79	-3529	-0.0027305	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.11	Si
SLU 84	fin.	465.97	608	-0.0005701	0.0001872	0.0035	0.64		1500.92	1500.92	No	3.22	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-1313.24	5325	0.64	0	173	5075	2683	1632	4315	No	0.81	No
SLU 80	fin.	466.09	976	0.64	0	173	5075	2683	1632	4315	No	4.42	Si
SLU 79	ini.	-1311.67	5319	0.64	0	173	5075	2683	1632	4315	No	0.81	No
SLU 79	fin.	465.81	976	0.64	0	173	5075	2683	1632	4315	No	4.42	Si
SLU 82	ini.	-1334.62	5428	0.64	0	173	5075	2683	1632	4315	No	0.79	No
SLU 82	fin.	459.77	929	0.64	0	173	5075	2683	1632	4315	No	4.65	Si
SLU 75	ini.	-1307.62	5306	0.64	0	173	5075	2683	1632	4315	No	0.81	No
SLU 75	fin.	459.17	952	0.64	0	173	5075	2683	1632	4315	No	4.53	Si
SLU 83	ini.	-1348.22	5481	0.64	0	173	5075	2683	1632	4315	No	0.79	No
SLU 83	fin.	465.68	944	0.64	0	173	5075	2683	1632	4315	No	4.57	Si
SLU 78	ini.	-1322.79	5365	0.64	0	173	5075	2683	1632	4315	No	0.8	No
SLU 78	fin.	465.37	968	0.64	0	173	5075	2683	1632	4315	No	4.46	Si
SLU 81	ini.	-1333.06	5422	0.64	0	173	5075	2683	1632	4315	No	0.8	No
SLU 81	fin.	459.48	928	0.64	0	173	5075	2683	1632	4315	No	4.65	Si
SLU 77	ini.	-1321.22	5359	0.64	0	173	5075	2683	1632	4315	No	0.81	No
SLU 77	fin.	465.09	968	0.64	0	173	5075	2683	1632	4315	No	4.46	Si
SLU 74	ini.	-1306.06	5300	0.64	0	173	5075	2683	1632	4315	No	0.81	No
SLU 74	fin.	458.89	952	0.64	0	173	5075	2683	1632	4315	No	4.53	Si
SLU 84	ini.	-1349.79	5487	0.64	0	173	5075	2683	1632	4315	No	0.79	No
SLU 84	fin.	465.97	945	0.64	0	173	5075	2683	1632	4315	No	4.57	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	-1967.84	-4594	-0.005085	0.0002807	0.0035	0.64		1516.76	1516.76		0.77	No
SLV 2	fin.	1450.1	3108	-0.0029296	0.0002807	0.0035	0.64		1512.56	1512.56		1.04	Si
SLD 2	ini.	-1357.56	-3307	-0.0025135	0.0002807	0.0035	0.64		1516.76	1516.76		1.12	Si
SLD 2	fin.	813.58	1602	-0.0010924	0.0002807	0.0035	0.64		1512.56	1512.56		1.86	Si
SLV 6	ini.	-1392.23	-3572	-0.0026552	0.0002807	0.0035	0.64		1516.76	1516.76		1.09	Si
SLV 6	fin.	591.77	821	-0.0007211	0.0002807	0.0035	0.64		1512.56	1512.56		2.56	Si
SLD 1	ini.	-1370.72	-3336	-0.0025662	0.0002807	0.0035	0.64		1516.76	1516.76		1.11	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 1	fin.	827.28	1635	-0.0011175	0.0002807	0.0035	0.64		1512.56	1512.56		1.83	Si
SLV 4	ini.	-1851.5	-4221	-0.0046499	0.0002807	0.0035	0.64		1516.76	1516.76		0.82	No
SLV 4	fin.	1499.45	3394	-0.0031673	0.0002807	0.0035	0.64		1512.56	1512.56		1.01	Si
SLV 1	ini.	-1998.5	-4660	-0.005197	0.0002807	0.0035	0.64		1516.76	1516.76		0.76	No
SLV 1	fin.	1482	3184	-0.0030826	0.0002807	0.0035	0.64		1512.56	1512.56		1.02	Si
SLD 4	ini.	-1306.54	-3144	-0.0023201	0.0002807	0.0035	0.64		1516.76	1516.76		1.16	Si
SLD 4	fin.	834.61	1725	-0.0011312	0.0002807	0.0035	0.64		1512.56	1512.56		1.81	Si
SLV 3	ini.	-1882.16	-4288	-0.0047663	0.0002807	0.0035	0.64		1516.76	1516.76		0.81	No
SLV 3	fin.	1531.36	3471	-0.0033216	0.0002807	0.0035	0.64		1512.56	1512.56		0.99	No
SLD 3	ini.	-1319.7	-3172	-0.0023683	0.0002807	0.0035	0.64		1516.76	1516.76		1.15	Si
SLD 3	fin.	848.3	1758	-0.0011568	0.0002807	0.0035	0.64		1512.56	1512.56		1.78	Si
SLV 5	ini.	-1411.81	-3615	-0.0027392	0.0002807	0.0035	0.64		1516.76	1516.76		1.07	Si
SLV 5	fin.	612.15	870	-0.0007526	0.0002807	0.0035	0.64		1512.56	1512.56		2.47	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	-1967.84	7481	0.64	0	260	5075	4025	1632	5335		0.71	No
SLV 2	fin.	1450.1	4610	0.64	0	260	5075	4025	1632	5335		1.16	Si
SLV 1	ini.	-1998.5	7593	0.64	0	260	5075	4025	1632	5335		0.7	No
SLV 1	fin.	1482	4721	0.64	0	260	5075	4025	1632	5335		1.13	Si
SLV 6	ini.	-1392.23	5386	0.64	0	260	5075	4025	1632	5335		0.99	No
SLV 6	fin.	591.77	1752	0.64	0	260	5075	4025	1632	5335		3.04	Si
SLV 5	ini.	-1411.81	5457	0.64	0	260	5075	4025	1632	5335		0.98	No
SLV 5	fin.	612.15	1823	0.64	0	260	5075	4025	1632	5335		2.93	Si
SLD 2	ini.	-1357.56	5284	0.64	0	260	5075	4025	1632	5335		1.01	Si
SLD 2	fin.	813.58	2400	0.64	0	260	5075	4025	1632	5335		2.22	Si
SLD 3	ini.	-1319.7	5154	0.64	0	260	5075	4025	1632	5335		1.04	Si
SLD 3	fin.	848.3	2486	0.64	0	260	5075	4025	1632	5335		2.15	Si
SLD 4	ini.	-1306.54	5106	0.64	0	260	5075	4025	1632	5335		1.04	Si
SLD 4	fin.	834.61	2438	0.64	0	260	5075	4025	1632	5335		2.19	Si
SLV 3	ini.	-1882.16	7189	0.64	0	260	5075	4025	1632	5335		0.74	No
SLV 3	fin.	1531.36	4812	0.64	0	260	5075	4025	1632	5335		1.11	Si
SLV 4	ini.	-1851.5	7077	0.64	0	260	5075	4025	1632	5335		0.75	No
SLV 4	fin.	1499.45	4701	0.64	0	260	5075	4025	1632	5335		1.13	Si
SLD 1	ini.	-1370.72	5332	0.64	0	260	5075	4025	1632	5335		1	Si
SLD 1	fin.	827.28	2447	0.64	0	260	5075	4025	1632	5335		2.18	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.759	SLV 1	No
V_SLV	0.703	SLV 1	No
PF_SLU	1.115	SLU 84	Si
V_SLU	0.786	SLU 84	No

Trave di accoppiamento 53

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-19.813	1.006	4.1	5.44	1.34	-20.613	1.006	4.1	5.44	1.34	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-2026	-5987	-0.0005474	0.0002246	0.0035	1.34		6716.03	6716.03	No	3.31	Si
SLU 75	fin.	1103.7	-4278	-0.0002686	0.0002246	0.0035	1.34		6707.66	6707.66	No	6.08	Si
SLU 82	ini.	-2065.54	-6152	-0.0005605	0.0002246	0.0035	1.34		6716.03	6716.03	No	3.25	Si
SLU 82	fin.	1104	-4420	-0.0002687	0.0002246	0.0035	1.34		6707.66	6707.66	No	6.08	Si
SLU 84	ini.	-2086.43	-6214	-0.0005675	0.0002246	0.0035	1.34		6716.03	6716.03	No	3.22	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	fin.	1118.8	-4463	-0.0002727	0.0002246	0.0035	1.34		6707.66	6707.66	No	6	Si
SLU 83	ini.	-2086.93	-6211	-0.0005676	0.0002246	0.0035	1.34		6716.03	6716.03	No	3.22	Si
SLU 83	fin.	1121.27	-4458	-0.0002734	0.0002246	0.0035	1.34		6707.66	6707.66	No	5.98	Si
SLU 77	ini.	-2047.39	-6047	-0.0005545	0.0002246	0.0035	1.34		6716.03	6716.03	No	3.28	Si
SLU 77	fin.	1120.97	-4316	-0.0002733	0.0002246	0.0035	1.34		6707.66	6707.66	No	5.98	Si
SLU 78	ini.	-2046.88	-6050	-0.0005543	0.0002246	0.0035	1.34		6716.03	6716.03	No	3.28	Si
SLU 78	fin.	1118.51	-4320	-0.0002726	0.0002246	0.0035	1.34		6707.66	6707.66	No	6	Si
SLU 79	ini.	-2045.24	-5988	-0.0005538	0.0002246	0.0035	1.34		6716.03	6716.03	No	3.28	Si
SLU 79	fin.	1126.61	-4255	-0.0002749	0.0002246	0.0035	1.34		6707.66	6707.66	No	5.95	Si
SLU 80	ini.	-2044.73	-5991	-0.0005536	0.0002246	0.0035	1.34		6716.03	6716.03	No	3.28	Si
SLU 80	fin.	1124.14	-4259	-0.0002742	0.0002246	0.0035	1.34		6707.66	6707.66	No	5.97	Si
SLU 74	ini.	-2026.5	-5984	-0.0005476	0.0002246	0.0035	1.34		6716.03	6716.03	No	3.31	Si
SLU 74	fin.	1106.17	-4273	-0.0002693	0.0002246	0.0035	1.34		6707.66	6707.66	No	6.06	Si
SLU 81	ini.	-2066.05	-6149	-0.0005607	0.0002246	0.0035	1.34		6716.03	6716.03	No	3.25	Si
SLU 81	fin.	1106.46	-4415	-0.0002693	0.0002246	0.0035	1.34		6707.66	6707.66	No	6.06	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-2086.93	6488	1.34	0	544	6344	6742	3417	6887	No	1.06	Si
SLU 83	fin.	1121.27	4406	1.34	0	544	6344	6742	3417	6887	No	1.56	Si
SLU 77	ini.	-2047.39	6338	1.34	0	544	6344	6742	3417	6887	No	1.09	Si
SLU 77	fin.	1120.97	4420	1.34	0	544	6344	6742	3417	6887	No	1.56	Si
SLU 79	ini.	-2045.24	6344	1.34	0	544	6344	6742	3417	6887	No	1.09	Si
SLU 79	fin.	1126.61	4426	1.34	0	544	6344	6742	3417	6887	No	1.56	Si
SLU 78	ini.	-2046.88	6333	1.34	0	544	6344	6742	3417	6887	No	1.09	Si
SLU 78	fin.	1118.51	4415	1.34	0	544	6344	6742	3417	6887	No	1.56	Si
SLU 82	ini.	-2065.54	6422	1.34	0	544	6344	6742	3417	6887	No	1.07	Si
SLU 82	fin.	1104	4340	1.34	0	544	6344	6742	3417	6887	No	1.59	Si
SLU 74	ini.	-2026.5	6277	1.34	0	544	6344	6742	3417	6887	No	1.1	Si
SLU 74	fin.	1106.17	4359	1.34	0	544	6344	6742	3417	6887	No	1.58	Si
SLU 80	ini.	-2044.73	6339	1.34	0	544	6344	6742	3417	6887	No	1.09	Si
SLU 80	fin.	1124.14	4421	1.34	0	544	6344	6742	3417	6887	No	1.56	Si
SLU 81	ini.	-2066.05	6427	1.34	0	544	6344	6742	3417	6887	No	1.07	Si
SLU 81	fin.	1106.46	4345	1.34	0	544	6344	6742	3417	6887	No	1.59	Si
SLU 84	ini.	-2086.43	6483	1.34	0	544	6344	6742	3417	6887	No	1.06	Si
SLU 84	fin.	1118.8	4401	1.34	0	544	6344	6742	3417	6887	No	1.57	Si
SLU 76	ini.	-2023.51	6275	1.34	0	544	6344	6742	3417	6887	No	1.1	Si
SLU 76	fin.	1107.69	4357	1.34	0	544	6344	6742	3417	6887	No	1.58	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 15	ini.	-2703.23	-4707	-0.0007361	0.0003369	0.0035	1.34		6520.43	6520.43		2.41	Si
SLD 15	fin.	2156.43	-1827	-0.0005582	0.0003369	0.0035	1.34		6511.46	6511.46		3.02	Si
SLV 14	ini.	-4122.4	-4968	-0.0012907	0.0003369	0.0035	1.34		6520.43	6520.43		1.58	Si
SLV 14	fin.	3325.89	-1166	-0.0009629	0.0003369	0.0035	1.34		6511.46	6511.46		1.96	Si
SLD 13	ini.	-2580.12	-4439	-0.0006944	0.0003369	0.0035	1.34		6520.43	6520.43		2.53	Si
SLD 13	fin.	1884.1	-2115	-0.0004754	0.0003369	0.0035	1.34		6511.46	6511.46		3.46	Si
SLV 11	ini.	-2759.18	-5456	-0.0007553	0.0003369	0.0035	1.34		6520.43	6520.43		2.36	Si
SLV 11	fin.	2719.33	-1102	-0.0007427	0.0003369	0.0035	1.34		6511.46	6511.46		2.39	Si
SLV 12	ini.	-2761.92	-5454	-0.0007563	0.0003369	0.0035	1.34		6520.43	6520.43		2.36	Si
SLV 12	fin.	2728.99	-1092	-0.0007461	0.0003369	0.0035	1.34		6511.46	6511.46		2.39	Si
SLV 13	ini.	-4118.11	-4973	-0.0012887	0.0003369	0.0035	1.34		6520.43	6520.43		1.58	Si
SLV 13	fin.	3310.76	-1182	-0.0009571	0.0003369	0.0035	1.34		6511.46	6511.46		1.97	Si
SLV 15	ini.	-4405.91	-5598	-0.0014224	0.0003369	0.0035	1.34		6520.43	6520.43		1.48	Si
SLV 15	fin.	3946.93	-509	-0.0012155	0.0003369	0.0035	1.34		6511.46	6511.46		1.65	Si
SLD 16	ini.	-2705.08	-4705	-0.0007367	0.0003369	0.0035	1.34		6520.43	6520.43		2.41	Si
SLD 16	fin.	2162.93	-1820	-0.0005603	0.0003369	0.0035	1.34		6511.46	6511.46		3.01	Si
SLD 14	ini.	-2581.97	-4438	-0.000695	0.0003369	0.0035	1.34		6520.43	6520.43		2.53	Si
SLD 14	fin.	1890.6	-2108	-0.0004773	0.0003369	0.0035	1.34		6511.46	6511.46		3.44	Si
SLV 16	ini.	-4410.2	-5593	-0.0014245	0.0003369	0.0035	1.34		6520.43	6520.43		1.48	Si
SLV 16	fin.	3962.07	-494	-0.0012221	0.0003369	0.0035	1.34		6511.46	6511.46		1.64	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 15	ini.	-2703.23	8665	1.34	0	816	6344	10113	3417	7159		0.83	No
SLD 15	fin.	2156.43	7091	1.34	0	816	6344	10113	3417	7159		1.01	Si
SLD 16	ini.	-2705.08	8679	1.34	0	816	6344	10113	3417	7159		0.82	No
SLD 16	fin.	2162.93	7105	1.34	0	816	6344	10113	3417	7159		1.01	Si
SLD 13	ini.	-2580.12	8485	1.34	0	816	6344	10113	3417	7159		0.84	No
SLD 13	fin.	1884.1	7600	1.34	0	816	6344	10113	3417	7159		0.94	No
SLV 10	ini.	-1802.59	6655	1.34	0	816	6344	10113	3417	7159		1.08	Si
SLV 10	fin.	608.41	8112	1.34	0	816	6344	10113	3417	7159		0.88	No
SLV 15	ini.	-4405.91	14339	1.34	0	816	6344	10113	3417	7159		0.5	No
SLV 15	fin.	3946.93	12284	1.34	0	816	6344	10113	3417	7159		0.58	No
SLV 16	ini.	-4410.2	14373	1.34	0	816	6344	10113	3417	7159		0.5	No
SLV 16	fin.	3962.07	12318	1.34	0	816	6344	10113	3417	7159		0.58	No
SLV 9	ini.	-1799.85	6634	1.34	0	816	6344	10113	3417	7159		1.08	Si
SLV 9	fin.	598.74	8090	1.34	0	816	6344	10113	3417	7159		0.88	No
SLD 14	ini.	-2581.97	8500	1.34	0	816	6344	10113	3417	7159		0.84	No
SLD 14	fin.	1890.6	7614	1.34	0	816	6344	10113	3417	7159		0.94	No
SLV 13	ini.	-4118.11	13921	1.34	0	816	6344	10113	3417	7159		0.51	No
SLV 13	fin.	3310.76	13476	1.34	0	816	6344	10113	3417	7159		0.53	No
SLV 14	ini.	-4122.4	13954	1.34	0	816	6344	10113	3417	7159		0.51	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	fin.	3325.89	13509	1.34	0	816	6344	10113	3417	7159		0.53	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.478	SLV 16	Si
V_SLV	0.498	SLV 16	No
PF_SLU	3.218	SLU 83	Si
V_SLU	1.062	SLU 83	Si

Trave di accoppiamento 54

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-11.143	1.006	4.5	5.44	0.94	-12.263	1.006	4.5	5.44	0.94	1.12	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-1444.13	-4737	-0.0008712	0.0002246	0.0035	0.94		3310.78	3310.78	No	2.29	Si
SLU 81	fin.	584.21	-1837	-0.0002917	0.0002246	0.0035	0.94		3304.92	3304.92	No	5.66	Si
SLU 74	ini.	-1398.97	-4612	-0.0008362	0.0002246	0.0035	0.94		3310.78	3310.78	No	2.37	Si
SLU 74	fin.	584.32	-1780	-0.0002918	0.0002246	0.0035	0.94		3304.92	3304.92	No	5.66	Si
SLU 78	ini.	-1410.5	-4656	-0.0008451	0.0002246	0.0035	0.94		3310.78	3310.78	No	2.35	Si
SLU 78	fin.	589.27	-1802	-0.0002946	0.0002246	0.0035	0.94		3304.92	3304.92	No	5.61	Si
SLU 80	ini.	-1390.47	-4589	-0.0008296	0.0002246	0.0035	0.94		3310.78	3310.78	No	2.38	Si
SLU 80	fin.	572.58	-1789	-0.0002851	0.0002246	0.0035	0.94		3304.92	3304.92	No	5.77	Si
SLU 83	ini.	-1455.41	-4779	-0.0008801	0.0002246	0.0035	0.94		3310.78	3310.78	No	2.27	Si
SLU 83	fin.	588.94	-1858	-0.0002944	0.0002246	0.0035	0.94		3304.92	3304.92	No	5.61	Si
SLU 77	ini.	-1410.26	-4654	-0.0008449	0.0002246	0.0035	0.94		3310.78	3310.78	No	2.35	Si
SLU 77	fin.	589.05	-1801	-0.0002945	0.0002246	0.0035	0.94		3304.92	3304.92	No	5.61	Si
SLU 75	ini.	-1399.22	-4615	-0.0008364	0.0002246	0.0035	0.94		3310.78	3310.78	No	2.37	Si
SLU 75	fin.	584.54	-1782	-0.0002919	0.0002246	0.0035	0.94		3304.92	3304.92	No	5.65	Si
SLU 79	ini.	-1390.22	-4587	-0.0008294	0.0002246	0.0035	0.94		3310.78	3310.78	No	2.38	Si
SLU 79	fin.	572.36	-1787	-0.000285	0.0002246	0.0035	0.94		3304.92	3304.92	No	5.77	Si
SLU 84	ini.	-1455.66	-4781	-0.0008803	0.0002246	0.0035	0.94		3310.78	3310.78	No	2.27	Si
SLU 84	fin.	589.16	-1859	-0.0002945	0.0002246	0.0035	0.94		3304.92	3304.92	No	5.61	Si
SLU 82	ini.	-1444.38	-4740	-0.0008714	0.0002246	0.0035	0.94		3310.78	3310.78	No	2.29	Si
SLU 82	fin.	584.43	-1839	-0.0002918	0.0002246	0.0035	0.94		3304.92	3304.92	No	5.65	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-1410.26	4203	0.94	0	320	7454	4729	2397	7126	No	1.7	Si
SLU 77	fin.	589.05	1761	0.94	0	320	7454	4729	2397	7126	No	4.05	Si
SLU 82	ini.	-1444.38	4381	0.94	0	320	7454	4729	2397	7126	No	1.63	Si
SLU 82	fin.	584.43	1676	0.94	0	320	7454	4729	2397	7126	No	4.25	Si
SLU 84	ini.	-1455.66	4404	0.94	0	320	7454	4729	2397	7126	No	1.62	Si
SLU 84	fin.	589.16	1699	0.94	0	320	7454	4729	2397	7126	No	4.2	Si
SLU 81	ini.	-1444.13	4381	0.94	0	320	7454	4729	2397	7126	No	1.63	Si
SLU 81	fin.	584.21	1675	0.94	0	320	7454	4729	2397	7126	No	4.26	Si
SLU 79	ini.	-1390.22	4147	0.94	0	320	7454	4729	2397	7126	No	1.72	Si
SLU 79	fin.	572.36	1706	0.94	0	320	7454	4729	2397	7126	No	4.18	Si
SLU 83	ini.	-1455.41	4404	0.94	0	320	7454	4729	2397	7126	No	1.62	Si
SLU 83	fin.	588.94	1698	0.94	0	320	7454	4729	2397	7126	No	4.2	Si
SLU 74	ini.	-1398.97	4180	0.94	0	320	7454	4729	2397	7126	No	1.71	Si
SLU 74	fin.	584.32	1738	0.94	0	320	7454	4729	2397	7126	No	4.1	Si
SLU 78	ini.	-1410.5	4203	0.94	0	320	7454	4729	2397	7126	No	1.7	Si
SLU 78	fin.	589.27	1762	0.94	0	320	7454	4729	2397	7126	No	4.04	Si
SLU 75	ini.	-1399.22	4180	0.94	0	320	7454	4729	2397	7126	No	1.7	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	fin.	584.54	1739	0.94	0	320	7454	4729	2397	7126	No	4.1	Si
SLU 80	ini.	-1390.47	4148	0.94	0	320	7454	4729	2397	7126	No	1.72	Si
SLU 80	fin.	572.58	1707	0.94	0	320	7454	4729	2397	7126	No	4.17	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	3671.98	3579	-0.0039084	0.0003369	0.0035	0.94		3277.61	3277.61		0.89	No
SLV 3	fin.	-4726.96	-8818	-0.0057029	0.0003369	0.0035	0.94		3284.08	3284.08		0.69	No
SLV 15	ini.	-5466.11	-9188	-0.0068605	0.0003369	0.0035	0.94		3284.08	3284.08		0.6	No
SLV 15	fin.	5325.51	6128	-0.0066588	0.0003369	0.0035	0.94		3277.61	3277.61		0.62	No
SLV 2	ini.	3601.99	3025	-0.0037734	0.0003369	0.0035	0.94		3277.61	3277.61		0.91	No
SLV 2	fin.	-4529.35	-8508	-0.0053849	0.0003369	0.0035	0.94		3284.08	3284.08		0.73	No
SLV 14	ini.	-5536.1	-9742	-0.0069675	0.0003369	0.0035	0.94		3284.08	3284.08		0.59	No
SLV 14	fin.	5523.12	6439	-0.0069627	0.0003369	0.0035	0.94		3277.61	3277.61		0.59	No
SLV 1	ini.	3611.21	3038	-0.0037913	0.0003369	0.0035	0.94		3277.61	3277.61		0.91	No
SLV 1	fin.	-4540.1	-8525	-0.0054024	0.0003369	0.0035	0.94		3284.08	3284.08		0.72	No
SLV 4	ini.	3662.77	3566	-0.0038908	0.0003369	0.0035	0.94		3277.61	3277.61		0.89	No
SLV 4	fin.	-4716.21	-8801	-0.0056858	0.0003369	0.0035	0.94		3284.08	3284.08		0.7	No
SLD 14	ini.	-2899.61	-5928	-0.0023513	0.0003369	0.0035	0.94		3284.08	3284.08		1.13	Si
SLD 14	fin.	2588.48	2071	-0.0018977	0.0003369	0.0035	0.94		3277.61	3277.61		1.27	Si
SLV 13	ini.	-5526.89	-9729	-0.0069534	0.0003369	0.0035	0.94		3284.08	3284.08		0.59	No
SLV 13	fin.	5512.37	6422	-0.0069462	0.0003369	0.0035	0.94		3277.61	3277.61		0.59	No
SLV 16	ini.	-5475.33	-9201	-0.0068746	0.0003369	0.0035	0.94		3284.08	3284.08		0.6	No
SLV 16	fin.	5336.26	6145	-0.0066755	0.0003369	0.0035	0.94		3277.61	3277.61		0.61	No
SLD 13	ini.	-2895.65	-5923	-0.0023447	0.0003369	0.0035	0.94		3284.08	3284.08		1.13	Si
SLD 13	fin.	2583.87	2063	-0.0018916	0.0003369	0.0035	0.94		3277.61	3277.61		1.27	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	3671.98	-11766	0.94	0	480	7454	7094	2397	7934		0.67	No
SLV 3	fin.	-4726.96	-12973	0.94	0	480	7454	7094	2397	7934		0.61	No
SLV 13	ini.	-5526.89	17185	0.94	0	480	7454	7094	2397	7934		0.46	No
SLV 13	fin.	5512.37	15419	0.94	0	480	7454	7094	2397	7934		0.51	No
SLV 14	ini.	-5536.1	17215	0.94	0	480	7454	7094	2397	7934		0.46	No
SLV 14	fin.	5523.12	15449	0.94	0	480	7454	7094	2397	7934		0.51	No
SLD 13	ini.	-2895.65	8903	0.94	0	480	7454	7094	2397	7934		0.89	No
SLD 13	fin.	2583.87	7298	0.94	0	480	7454	7094	2397	7934		1.09	Si
SLV 4	ini.	3662.77	-11736	0.94	0	480	7454	7094	2397	7934		0.68	No
SLV 4	fin.	-4716.21	-12943	0.94	0	480	7454	7094	2397	7934		0.61	No
SLV 16	ini.	-5475.33	16989	0.94	0	480	7454	7094	2397	7934		0.47	No
SLV 16	fin.	5336.26	15735	0.94	0	480	7454	7094	2397	7934		0.5	No
SLV 2	ini.	3601.99	-11510	0.94	0	480	7454	7094	2397	7934		0.69	No
SLV 2	fin.	-4529.35	-13229	0.94	0	480	7454	7094	2397	7934		0.6	No
SLV 1	ini.	3611.21	-11540	0.94	0	480	7454	7094	2397	7934		0.69	No
SLV 1	fin.	-4540.1	-13259	0.94	0	480	7454	7094	2397	7934		0.6	No
SLD 14	ini.	-2899.61	8917	0.94	0	480	7454	7094	2397	7934		0.89	No
SLD 14	fin.	2588.48	7311	0.94	0	480	7454	7094	2397	7934		1.09	Si
SLV 15	ini.	-5466.11	16959	0.94	0	480	7454	7094	2397	7934		0.47	No
SLV 15	fin.	5325.51	15704	0.94	0	480	7454	7094	2397	7934		0.51	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.593	SLV 14	No
V_SLV	0.461	SLV 14	No
PF_SLU	2.274	SLU 84	Si
V_SLU	1.618	SLU 84	Si

Trave di accoppiamento 55

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.463	1.006	4.1	5.44	1.34	-7.463	1.006	4.1	5.44	1.34	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-1518.52	-5984	-0.0003874	0.0002246	0.0035	1.34		6716.03	6716.03	No	4.42	Si
SLU 79	fin.	652.09	-3931	-0.0001515	0.0002246	0.0035	1.34		6707.66	6707.66	No	10.29	Si
SLU 84	ini.	-1658.25	-6275	-0.0004299	0.0002246	0.0035	1.34		6716.03	6716.03	No	4.05	Si
SLU 84	fin.	765.71	-3993	-0.0001798	0.0002246	0.0035	1.34		6707.66	6707.66	No	8.76	Si
SLU 81	ini.	-1659.18	-6225	-0.0004302	0.0002246	0.0035	1.34		6716.03	6716.03	No	4.05	Si
SLU 81	fin.	772.78	-3937	-0.0001816	0.0002246	0.0035	1.34		6707.66	6707.66	No	8.68	Si
SLU 75	ini.	-1539.8	-6005	-0.0003938	0.0002246	0.0035	1.34		6716.03	6716.03	No	4.36	Si
SLU 75	fin.	676.38	-3913	-0.0001575	0.0002246	0.0035	1.34		6707.66	6707.66	No	9.92	Si
SLU 83	ini.	-1660.79	-6276	-0.0004307	0.0002246	0.0035	1.34		6716.03	6716.03	No	4.04	Si
SLU 83	fin.	767.4	-3990	-0.0001802	0.0002246	0.0035	1.34		6707.66	6707.66	No	8.74	Si
SLU 74	ini.	-1542.35	-6007	-0.0003945	0.0002246	0.0035	1.34		6716.03	6716.03	No	4.35	Si
SLU 74	fin.	678.08	-3911	-0.0001579	0.0002246	0.0035	1.34		6707.66	6707.66	No	9.89	Si
SLU 77	ini.	-1543.97	-6058	-0.000395	0.0002246	0.0035	1.34		6716.03	6716.03	No	4.35	Si
SLU 77	fin.	672.7	-3964	-0.0001566	0.0002246	0.0035	1.34		6707.66	6707.66	No	9.97	Si
SLU 80	ini.	-1515.97	-5982	-0.0003866	0.0002246	0.0035	1.34		6716.03	6716.03	No	4.43	Si
SLU 80	fin.	650.4	-3934	-0.0001511	0.0002246	0.0035	1.34		6707.66	6707.66	No	10.31	Si
SLU 82	ini.	-1656.63	-6223	-0.0004294	0.0002246	0.0035	1.34		6716.03	6716.03	No	4.05	Si
SLU 82	fin.	771.09	-3939	-0.0001812	0.0002246	0.0035	1.34		6707.66	6707.66	No	8.7	Si
SLU 78	ini.	-1541.42	-6057	-0.0003943	0.0002246	0.0035	1.34		6716.03	6716.03	No	4.36	Si
SLU 78	fin.	671	-3967	-0.0001562	0.0002246	0.0035	1.34		6707.66	6707.66	No	10	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 41	ini.	-1498.1	5188	1.34	0	544	7930	6742	3417	8473	No	1.63	Si
SLU 41	fin.	735.55	2045	1.34	0	544	7930	6742	3417	8473	No	4.14	Si
SLU 84	ini.	-1658.25	5627	1.34	0	544	7930	6742	3417	8473	No	1.51	Si
SLU 84	fin.	765.71	2224	1.34	0	544	7930	6742	3417	8473	No	3.81	Si
SLU 74	ini.	-1542.35	5151	1.34	0	544	7930	6742	3417	8473	No	1.65	Si
SLU 74	fin.	678.08	2043	1.34	0	544	7930	6742	3417	8473	No	4.15	Si
SLU 40	ini.	-1493.94	5186	1.34	0	544	7930	6742	3417	8473	No	1.63	Si
SLU 40	fin.	739.23	2043	1.34	0	544	7930	6742	3417	8473	No	4.15	Si
SLU 83	ini.	-1660.79	5634	1.34	0	544	7930	6742	3417	8473	No	1.5	Si
SLU 83	fin.	767.4	2231	1.34	0	544	7930	6742	3417	8473	No	3.8	Si
SLU 77	ini.	-1543.97	5146	1.34	0	544	7930	6742	3417	8473	No	1.65	Si
SLU 77	fin.	672.7	2038	1.34	0	544	7930	6742	3417	8473	No	4.16	Si
SLU 39	ini.	-1496.49	5193	1.34	0	544	7930	6742	3417	8473	No	1.63	Si
SLU 39	fin.	740.93	2050	1.34	0	544	7930	6742	3417	8473	No	4.13	Si
SLU 81	ini.	-1659.18	5639	1.34	0	544	7930	6742	3417	8473	No	1.5	Si
SLU 81	fin.	772.78	2236	1.34	0	544	7930	6742	3417	8473	No	3.79	Si
SLU 42	ini.	-1495.56	5181	1.34	0	544	7930	6742	3417	8473	No	1.64	Si
SLU 42	fin.	733.86	2038	1.34	0	544	7930	6742	3417	8473	No	4.16	Si
SLU 82	ini.	-1656.63	5632	1.34	0	544	7930	6742	3417	8473	No	1.5	Si
SLU 82	fin.	771.09	2229	1.34	0	544	7930	6742	3417	8473	No	3.8	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	2785.81	-990	-0.0007658	0.0003369	0.0035	1.34		6511.46	6511.46		2.34	Si
SLV 3	fin.	-3644.85	-6555	-0.0010869	0.0003369	0.0035	1.34		6520.43	6520.43		1.79	Si
SLV 13	ini.	-4712.6	-6995	-0.0015766	0.0003369	0.0035	1.34		6520.43	6520.43		1.38	Si
SLV 13	fin.	4367.96	1093	-0.0014068	0.0003369	0.0035	1.34		6511.46	6511.46		1.49	Si
SLV 4	ini.	2803.41	-956	-0.0007719	0.0003369	0.0035	1.34		6511.46	6511.46		2.32	Si
SLV 4	fin.	-3651.28	-6545	-0.0010895	0.0003369	0.0035	1.34		6520.43	6520.43		1.79	Si
SLV 12	ini.	-2937.23	-5821	-0.0008179	0.0003369	0.0035	1.34		6520.43	6520.43		2.22	Si
SLV 12	fin.	2208.03	-1041	-0.0005744	0.0003369	0.0035	1.34		6511.46	6511.46		2.95	Si
SLV 1	ini.	3261.12	-464	-0.0009383	0.0003369	0.0035	1.34		6511.46	6511.46		2	Si
SLV 1	fin.	-4002.55	-6849	-0.0012376	0.0003369	0.0035	1.34		6520.43	6520.43		1.63	Si
SLV 2	ini.	3278.73	-430	-0.0009449	0.0003369	0.0035	1.34		6511.46	6511.46		1.99	Si
SLV 2	fin.	-4008.99	-6839	-0.0012404	0.0003369	0.0035	1.34		6520.43	6520.43		1.63	Si
SLV 14	ini.	-4694.99	-6962	-0.0015674	0.0003369	0.0035	1.34		6520.43	6520.43		1.39	Si
SLV 14	fin.	4361.53	1104	-0.0014038	0.0003369	0.0035	1.34		6511.46	6511.46		1.49	Si
SLV 15	ini.	-5187.92	-7521	-0.0018479	0.0003369	0.0035	1.34		6520.43	6520.43		1.26	Si
SLV 15	fin.	4725.66	1387	-0.0015865	0.0003369	0.0035	1.34		6511.46	6511.46		1.38	Si
SLV 11	ini.	-2948.47	-5843	-0.0008219	0.0003369	0.0035	1.34		6520.43	6520.43		2.21	Si
SLV 11	fin.	2212.14	-1048	-0.0005757	0.0003369	0.0035	1.34		6511.46	6511.46		2.94	Si
SLV 16	ini.	-5170.31	-7488	-0.001837	0.0003369	0.0035	1.34		6520.43	6520.43		1.26	Si
SLV 16	fin.	4719.23	1398	-0.0015831	0.0003369	0.0035	1.34		6511.46	6511.46		1.38	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	2803.41	-9450	1.34	0	816	7930	10113	3417	8745		0.93	No
SLV 4	fin.	-3651.28	-10987	1.34	0	816	7930	10113	3417	8745		0.8	No
SLV 16	ini.	-5170.31	16407	1.34	0	816	7930	10113	3417	8745		0.53	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	fin.	4719.23	14850	1.34	0	816	7930	10113	3417	8745		0.59	No
SLV 14	ini.	-4694.99	15593	1.34	0	816	7930	10113	3417	8745		0.56	No
SLV 14	fin.	4361.53	13280	1.34	0	816	7930	10113	3417	8745		0.66	No
SLV 13	ini.	-4712.6	15632	1.34	0	816	7930	10113	3417	8745		0.56	No
SLV 13	fin.	4367.96	13320	1.34	0	816	7930	10113	3417	8745		0.66	No
SLV 2	ini.	3278.73	-10264	1.34	0	816	7930	10113	3417	8745		0.85	No
SLV 2	fin.	-4008.99	-12557	1.34	0	816	7930	10113	3417	8745		0.7	No
SLV 1	ini.	3261.12	-10225	1.34	0	816	7930	10113	3417	8745		0.86	No
SLV 1	fin.	-4002.55	-12517	1.34	0	816	7930	10113	3417	8745		0.7	No
SLD 16	ini.	-2756.65	8783	1.34	0	816	7930	10113	3417	8745		1	No
SLD 16	fin.	2222.02	7015	1.34	0	816	7930	10113	3417	8745		1.25	Si
SLV 15	ini.	-5187.92	16447	1.34	0	816	7930	10113	3417	8745		0.53	No
SLV 15	fin.	4725.66	14890	1.34	0	816	7930	10113	3417	8745		0.59	No
SLD 15	ini.	-2764.21	8800	1.34	0	816	7930	10113	3417	8745		0.99	No
SLD 15	fin.	2224.78	7032	1.34	0	816	7930	10113	3417	8745		1.24	Si
SLV 3	ini.	2785.81	-9410	1.34	0	816	7930	10113	3417	8745		0.93	No
SLV 3	fin.	-3644.85	-10948	1.34	0	816	7930	10113	3417	8745		0.8	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.257	SLV 15	Si
V_SLV	0.532	SLV 15	No
PF_SLU	4.044	SLU 83	Si
V_SLU	1.503	SLU 81	Si

Trave di accoppiamento 56

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-4.113	1.006	4.1	5.44	1.34	-4.913	1.006	4.1	5.44	1.34	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	1294.75	-4062	-0.0003222	0.0002246	0.0035	1.34		6707.66	6707.66	No	5.18	Si
SLU 77	fin.	-2248.97	-5989	-0.0006225	0.0002246	0.0035	1.34		6716.03	6716.03	No	2.99	Si
SLU 78	ini.	1292.65	-4066	-0.0003216	0.0002246	0.0035	1.34		6707.66	6707.66	No	5.19	Si
SLU 78	fin.	-2248.53	-5992	-0.0006223	0.0002246	0.0035	1.34		6716.03	6716.03	No	2.99	Si
SLU 82	ini.	1257.48	-4239	-0.0003115	0.0002246	0.0035	1.34		6707.66	6707.66	No	5.33	Si
SLU 82	fin.	-2283.82	-6166	-0.0006345	0.0002246	0.0035	1.34		6716.03	6716.03	No	2.94	Si
SLU 74	ini.	1274.65	-4030	-0.0003164	0.0002246	0.0035	1.34		6707.66	6707.66	No	5.26	Si
SLU 74	fin.	-2226.76	-5934	-0.0006149	0.0002246	0.0035	1.34		6716.03	6716.03	No	3.02	Si
SLU 83	ini.	1279.69	-4267	-0.0003178	0.0002246	0.0035	1.34		6707.66	6707.66	No	5.24	Si
SLU 83	fin.	-2306.47	-6218	-0.0006423	0.0002246	0.0035	1.34		6716.03	6716.03	No	2.91	Si
SLU 80	ini.	1293.74	-4008	-0.0003219	0.0002246	0.0035	1.34		6707.66	6707.66	No	5.18	Si
SLU 80	fin.	-2239.24	-5929	-0.0006191	0.0002246	0.0035	1.34		6716.03	6716.03	No	3	Si
SLU 84	ini.	1277.58	-4271	-0.0003172	0.0002246	0.0035	1.34		6707.66	6707.66	No	5.25	Si
SLU 84	fin.	-2306.03	-6221	-0.0006421	0.0002246	0.0035	1.34		6716.03	6716.03	No	2.91	Si
SLU 75	ini.	1272.54	-4034	-0.0003158	0.0002246	0.0035	1.34		6707.66	6707.66	No	5.27	Si
SLU 75	fin.	-2226.32	-5937	-0.0006147	0.0002246	0.0035	1.34		6716.03	6716.03	No	3.02	Si
SLU 79	ini.	1295.85	-4004	-0.0003225	0.0002246	0.0035	1.34		6707.66	6707.66	No	5.18	Si
SLU 79	fin.	-2239.69	-5926	-0.0006193	0.0002246	0.0035	1.34		6716.03	6716.03	No	3	Si
SLU 81	ini.	1259.59	-4235	-0.0003121	0.0002246	0.0035	1.34		6707.66	6707.66	No	5.33	Si
SLU 81	fin.	-2284.26	-6163	-0.0006346	0.0002246	0.0035	1.34		6716.03	6716.03	No	2.94	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	1294.75	-5057	1.34	0	544	6344	6742	3417	6887	No	1.36	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	fin.	-2248.97	-6986	1.34	0	544	6344	6742	3417	6887	No	0.99	No
SLU 78	ini.	1292.65	-5053	1.34	0	544	6344	6742	3417	6887	No	1.36	Si
SLU 78	fin.	-2248.53	-6982	1.34	0	544	6344	6742	3417	6887	No	0.99	No
SLU 74	ini.	1274.65	-4985	1.34	0	544	6344	6742	3417	6887	No	1.38	Si
SLU 74	fin.	-2226.76	-6914	1.34	0	544	6344	6742	3417	6887	No	1	No
SLU 82	ini.	1257.48	-4972	1.34	0	544	6344	6742	3417	6887	No	1.39	Si
SLU 82	fin.	-2283.82	-7065	1.34	0	544	6344	6742	3417	6887	No	0.97	No
SLU 81	ini.	1259.59	-4976	1.34	0	544	6344	6742	3417	6887	No	1.38	Si
SLU 81	fin.	-2284.26	-7070	1.34	0	544	6344	6742	3417	6887	No	0.97	No
SLU 83	ini.	1279.69	-5048	1.34	0	544	6344	6742	3417	6887	No	1.36	Si
SLU 83	fin.	-2306.47	-7142	1.34	0	544	6344	6742	3417	6887	No	0.96	No
SLU 80	ini.	1293.74	-5039	1.34	0	544	6344	6742	3417	6887	No	1.37	Si
SLU 80	fin.	-2239.24	-6968	1.34	0	544	6344	6742	3417	6887	No	0.99	No
SLU 79	ini.	1295.85	-5043	1.34	0	544	6344	6742	3417	6887	No	1.37	Si
SLU 79	fin.	-2239.69	-6973	1.34	0	544	6344	6742	3417	6887	No	0.99	No
SLU 75	ini.	1272.54	-4981	1.34	0	544	6344	6742	3417	6887	No	1.38	Si
SLU 75	fin.	-2226.32	-6910	1.34	0	544	6344	6742	3417	6887	No	1	No
SLU 84	ini.	1277.58	-5044	1.34	0	544	6344	6742	3417	6887	No	1.37	Si
SLU 84	fin.	-2306.03	-7137	1.34	0	544	6344	6742	3417	6887	No	0.96	No

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-2344.61	-7199	-0.000617	0.0003369	0.0035	1.34		6520.43	6520.43		2.78	Si
SLV 14	fin.	434.87	-5450	-0.0000982	0.0003369	0.0035	1.34		6511.46	6511.46		14.97	Si
SLV 7	ini.	2778.36	-396	-0.0007632	0.0003369	0.0035	1.34		6511.46	6511.46		2.34	Si
SLV 7	fin.	-2697.64	-4121	-0.0007342	0.0003369	0.0035	1.34		6520.43	6520.43		2.42	Si
SLV 8	ini.	2770.01	-400	-0.0007603	0.0003369	0.0035	1.34		6511.46	6511.46		2.35	Si
SLV 8	fin.	-2695.52	-4119	-0.0007334	0.0003369	0.0035	1.34		6520.43	6520.43		2.42	Si
SLD 3	ini.	2354.54	-591	-0.0006211	0.0003369	0.0035	1.34		6511.46	6511.46		2.77	Si
SLD 3	fin.	-2386.51	-3269	-0.0006305	0.0003369	0.0035	1.34		6520.43	6520.43		2.73	Si
SLV 1	ini.	3683.7	1542	-0.0011046	0.0003369	0.0035	1.34		6511.46	6511.46		1.77	Si
SLV 1	fin.	-3146.08	-1961	-0.0008937	0.0003369	0.0035	1.34		6520.43	6520.43		2.07	Si
SLD 4	ini.	2348.93	-595	-0.0006193	0.0003369	0.0035	1.34		6511.46	6511.46		2.77	Si
SLD 4	fin.	-2385.09	-3268	-0.0006301	0.0003369	0.0035	1.34		6520.43	6520.43		2.73	Si
SLV 4	ini.	4225.55	2052	-0.00134	0.0003369	0.0035	1.34		6511.46	6511.46		1.54	Si
SLV 4	fin.	-3514	-2391	-0.0010345	0.0003369	0.0035	1.34		6520.43	6520.43		1.86	Si
SLV 2	ini.	3670.62	1535	-0.0010993	0.0003369	0.0035	1.34		6511.46	6511.46		1.77	Si
SLV 2	fin.	-3142.77	-1958	-0.0008925	0.0003369	0.0035	1.34		6520.43	6520.43		2.07	Si
SLV 13	ini.	-2331.53	-7192	-0.0006128	0.0003369	0.0035	1.34		6520.43	6520.43		2.8	Si
SLV 13	fin.	431.56	-5453	-0.0000975	0.0003369	0.0035	1.34		6511.46	6511.46		15.09	Si
SLV 3	ini.	4238.63	2059	-0.001346	0.0003369	0.0035	1.34		6511.46	6511.46		1.54	Si
SLV 3	fin.	-3517.31	-2394	-0.0010358	0.0003369	0.0035	1.34		6520.43	6520.43		1.85	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 3	ini.	2354.54	-7069	1.34	0	816	6344	10113	3417	7159		1.01	Si
SLD 3	fin.	-2386.51	-8681	1.34	0	816	6344	10113	3417	7159		0.82	No
SLD 1	ini.	2116.9	-7091	1.34	0	816	6344	10113	3417	7159		1.01	Si
SLD 1	fin.	-2227.64	-7972	1.34	0	816	6344	10113	3417	7159		0.9	No
SLV 8	ini.	2770.01	-5944	1.34	0	816	6344	10113	3417	7159		1.2	Si
SLV 8	fin.	-2695.52	-10033	1.34	0	816	6344	10113	3417	7159		0.71	No
SLV 4	ini.	4225.55	-11661	1.34	0	816	6344	10113	3417	7159		0.61	No
SLV 4	fin.	-3514	-13794	1.34	0	816	6344	10113	3417	7159		0.52	No
SLV 1	ini.	3683.7	-11743	1.34	0	816	6344	10113	3417	7159		0.61	No
SLV 1	fin.	-3146.08	-12165	1.34	0	816	6344	10113	3417	7159		0.59	No
SLD 2	ini.	2111.29	-7078	1.34	0	816	6344	10113	3417	7159		1.01	Si
SLD 2	fin.	-2226.22	-7959	1.34	0	816	6344	10113	3417	7159		0.9	No
SLV 3	ini.	4238.63	-11690	1.34	0	816	6344	10113	3417	7159		0.61	No
SLV 3	fin.	-3517.31	-13822	1.34	0	816	6344	10113	3417	7159		0.52	No
SLV 7	ini.	2778.36	-5962	1.34	0	816	6344	10113	3417	7159		1.2	Si
SLV 7	fin.	-2697.64	-10051	1.34	0	816	6344	10113	3417	7159		0.71	No
SLV 2	ini.	3670.62	-11714	1.34	0	816	6344	10113	3417	7159		0.61	No
SLV 2	fin.	-3142.77	-12136	1.34	0	816	6344	10113	3417	7159		0.59	No
SLD 4	ini.	2348.93	-7056	1.34	0	816	6344	10113	3417	7159		1.01	Si
SLD 4	fin.	-2385.09	-8669	1.34	0	816	6344	10113	3417	7159		0.83	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.536	SLV 3	Si
V_SLV	0.518	SLV 3	No
PF_SLU	2.912	SLU 83	Si
V_SLU	0.964	SLU 83	No

Trave di accoppiamento 58

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.433	-3.314	4.1	5.44	1.34	-9.333	-3.314	4.1	5.44	1.34	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 63	ini.	-422.02	-3190	-0.0000965	0.0001872	0.0035	1.34		6566.28	6566.28	No	15.56	Si
SLU 63	fin.	-62.3	-3180	-0.0000138	0.0001872	0.0035	1.34		6566.28	6566.28	No	105.39	Si
SLU 54	ini.	-391.35	-3100	-0.0000892	0.0001872	0.0035	1.34		6566.28	6566.28	No	16.78	Si
SLU 54	fin.	-84.45	-3104	-0.0000187	0.0001872	0.0035	1.34		6566.28	6566.28	No	77.76	Si
SLU 57	ini.	-401.81	-3155	-0.0000917	0.0001872	0.0035	1.34		6566.28	6566.28	No	16.34	Si
SLU 57	fin.	-75.99	-3151	-0.0000168	0.0001872	0.0035	1.34		6566.28	6566.28	No	86.41	Si
SLU 60	ini.	-410.72	-3122	-0.0000938	0.0001872	0.0035	1.34		6566.28	6566.28	No	15.99	Si
SLU 60	fin.	-65.65	-3118	-0.0000145	0.0001872	0.0035	1.34		6566.28	6566.28	No	100.02	Si
SLU 59	ini.	-407.38	-3123	-0.000093	0.0001872	0.0035	1.34		6566.28	6566.28	No	16.12	Si
SLU 59	fin.	-65.1	-3112	-0.0000144	0.0001872	0.0035	1.34		6566.28	6566.28	No	100.87	Si
SLU 55	ini.	-397.47	-3078	-0.0000906	0.0001872	0.0035	1.34		6566.28	6566.28	No	16.52	Si
SLU 55	fin.	-76.96	-3074	-0.000017	0.0001872	0.0035	1.34		6566.28	6566.28	No	85.32	Si
SLU 56	ini.	-400.98	-3141	-0.0000915	0.0001872	0.0035	1.34		6566.28	6566.28	No	16.38	Si
SLU 56	fin.	-70.88	-3137	-0.0000157	0.0001872	0.0035	1.34		6566.28	6566.28	No	92.64	Si
SLU 61	ini.	-411.56	-3135	-0.000094	0.0001872	0.0035	1.34		6566.28	6566.28	No	15.95	Si
SLU 61	fin.	-70.76	-3133	-0.0000157	0.0001872	0.0035	1.34		6566.28	6566.28	No	92.8	Si
SLU 62	ini.	-421.19	-3177	-0.0000963	0.0001872	0.0035	1.34		6566.28	6566.28	No	15.59	Si
SLU 62	fin.	-57.2	-3166	-0.0000126	0.0001872	0.0035	1.34		6566.28	6566.28	No	114.8	Si
SLU 58	ini.	-406.55	-3109	-0.0000928	0.0001872	0.0035	1.34		6566.28	6566.28	No	16.15	Si
SLU 58	fin.	-59.99	-3098	-0.0000133	0.0001872	0.0035	1.34		6566.28	6566.28	No	109.45	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 60	ini.	-410.72	1158	1.34	0	544	7137	5618	3417	7680	No	6.64	Si
SLU 60	fin.	-65.65	-385	1.34	0	544	7137	5618	3417	7680	No	19.95	Si
SLU 61	ini.	-411.56	1152	1.34	0	544	7137	5618	3417	7680	No	6.67	Si
SLU 61	fin.	-70.76	-390	1.34	0	544	7137	5618	3417	7680	No	19.67	Si
SLU 62	ini.	-421.19	1184	1.34	0	544	7137	5618	3417	7680	No	6.49	Si
SLU 62	fin.	-57.2	-359	1.34	0	544	7137	5618	3417	7680	No	21.42	Si
SLU 58	ini.	-406.55	1107	1.34	0	544	7137	5618	3417	7680	No	6.94	Si
SLU 58	fin.	-59.99	-319	1.34	0	544	7137	5618	3417	7680	No	24.05	Si
SLU 53	ini.	-390.51	1057	1.34	0	544	7137	5618	3417	7680	No	7.27	Si
SLU 53	fin.	-79.34	-370	1.34	0	544	7137	5618	3417	7680	No	20.76	Si
SLU 57	ini.	-401.81	1078	1.34	0	544	7137	5618	3417	7680	No	7.12	Si
SLU 57	fin.	-75.99	-349	1.34	0	544	7137	5618	3417	7680	No	22.02	Si
SLU 55	ini.	-397.47	1072	1.34	0	544	7137	5618	3417	7680	No	7.16	Si
SLU 55	fin.	-76.96	-355	1.34	0	544	7137	5618	3417	7680	No	21.65	Si
SLU 59	ini.	-407.38	1102	1.34	0	544	7137	5618	3417	7680	No	6.97	Si
SLU 59	fin.	-65.1	-325	1.34	0	544	7137	5618	3417	7680	No	23.66	Si
SLU 56	ini.	-400.98	1083	1.34	0	544	7137	5618	3417	7680	No	7.09	Si
SLU 56	fin.	-70.88	-343	1.34	0	544	7137	5618	3417	7680	No	22.37	Si
SLU 63	ini.	-422.02	1179	1.34	0	544	7137	5618	3417	7680	No	6.52	Si
SLU 63	fin.	-62.3	-364	1.34	0	544	7137	5618	3417	7680	No	21.11	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-3471.27	-2414	-0.0010494	0.0002807	0.0035	1.34		6565.65	6565.65		1.89	Si
SLV 15	fin.	3603.91	843	-0.0011061	0.0002807	0.0035	1.34		6556.63	6556.63		1.82	Si
SLV 4	ini.	2971.09	-2909	-0.000856	0.0002807	0.0035	1.34		6556.63	6556.63		2.21	Si
SLV 4	fin.	-4177.62	-6311	-0.0013595	0.0002807	0.0035	1.34		6565.65	6565.65		1.57	Si
SLV 3	ini.	2913.48	-2924	-0.0008346	0.0002807	0.0035	1.34		6556.63	6556.63		2.25	Si
SLV 3	fin.	-4123.21	-6288	-0.0013339	0.0002807	0.0035	1.34		6565.65	6565.65		1.59	Si
SLV 16	ini.	-3413.66	-2399	-0.0010261	0.0002807	0.0035	1.34		6565.65	6565.65		1.92	Si
SLV 16	fin.	3549.51	820	-0.0010834	0.0002807	0.0035	1.34		6556.63	6556.63		1.85	Si
SLV 14	ini.	-3375.38	-1784	-0.0010107	0.0002807	0.0035	1.34		6565.65	6565.65		1.95	Si
SLV 14	fin.	3826.08	1427	-0.0012014	0.0002807	0.0035	1.34		6556.63	6556.63		1.71	Si
SLV 1	ini.	2951.76	-2309	-0.0008488	0.0002807	0.0035	1.34		6556.63	6556.63		2.22	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	fin.	-3846.64	-5680	-0.0012083	0.0002807	0.0035	1.34		6565.65	6565.65		1.71	Si
SLV 2	ini.	3009.37	-2294	-0.0008703	0.0002807	0.0035	1.34		6556.63	6556.63		2.18	Si
SLV 2	fin.	-3901.04	-5704	-0.0012324	0.0002807	0.0035	1.34		6565.65	6565.65		1.68	Si
SLV 13	ini.	-3432.99	-1799	-0.0010339	0.0002807	0.0035	1.34		6565.65	6565.65		1.91	Si
SLV 13	fin.	3880.49	1450	-0.0012254	0.0002807	0.0035	1.34		6556.63	6556.63		1.69	Si
SLD 4	ini.	1138.33	-2593	-0.0002728	0.0002807	0.0035	1.34		6556.63	6556.63		5.76	Si
SLD 4	fin.	-1872.08	-4092	-0.000482	0.0002807	0.0035	1.34		6565.65	6565.65		3.51	Si
SLD 3	ini.	1113.61	-2600	-0.0002663	0.0002807	0.0035	1.34		6556.63	6556.63		5.89	Si
SLD 3	fin.	-1848.73	-4082	-0.0004749	0.0002807	0.0035	1.34		6565.65	6565.65		3.55	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	3009.37	-9677	1.34	0	816	7137	8426	3417	7952		0.82	No
SLV 2	fin.	-3901.04	-10615	1.34	0	816	7137	8426	3417	7952		0.75	No
SLV 16	ini.	-3413.66	10689	1.34	0	816	7137	8426	3417	7952		0.74	No
SLV 16	fin.	3549.51	9432	1.34	0	816	7137	8426	3417	7952		0.84	No
SLV 14	ini.	-3375.38	10829	1.34	0	816	7137	8426	3417	7952		0.73	No
SLV 14	fin.	3826.08	9918	1.34	0	816	7137	8426	3417	7952		0.8	No
SLV 1	ini.	2951.76	-9524	1.34	0	816	7137	8426	3417	7952		0.83	No
SLV 1	fin.	-3846.64	-10462	1.34	0	816	7137	8426	3417	7952		0.76	No
SLD 13	ini.	-1600.23	5031	1.34	0	816	7137	8426	3417	7952		1.58	Si
SLD 13	fin.	1574.95	4013	1.34	0	816	7137	8426	3417	7952		1.98	Si
SLV 4	ini.	2971.09	-9817	1.34	0	816	7137	8426	3417	7952		0.81	No
SLV 4	fin.	-4177.62	-11100	1.34	0	816	7137	8426	3417	7952		0.72	No
SLD 4	ini.	1138.33	-3866	1.34	0	816	7137	8426	3417	7952		2.06	Si
SLD 4	fin.	-1872.08	-5043	1.34	0	816	7137	8426	3417	7952		1.58	Si
SLV 15	ini.	-3471.27	10842	1.34	0	816	7137	8426	3417	7952		0.73	No
SLV 15	fin.	3603.91	9585	1.34	0	816	7137	8426	3417	7952		0.83	No
SLV 13	ini.	-3432.99	10982	1.34	0	816	7137	8426	3417	7952		0.72	No
SLV 13	fin.	3880.49	10071	1.34	0	816	7137	8426	3417	7952		0.79	No
SLV 3	ini.	2913.48	-9664	1.34	0	816	7137	8426	3417	7952		0.82	No
SLV 3	fin.	-4123.21	-10947	1.34	0	816	7137	8426	3417	7952		0.73	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.572	SLV 4	Si
V_SLV	0.716	SLV 4	No
PF_SLU	15.559	SLU 63	Si
V_SLU	6.487	SLU 62	Si

Trave di accoppiamento 60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.268	-0.194	4.1	5.44	1.34	-6.268	0.706	4.1	5.44	1.34	0.9	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 51	ini.	542.85	-504	-0.0001249	0.0002246	0.0035	1.34		6762.42	6762.42	No	12.46	Si
SLU 51	fin.	247.77	-790	-0.0000556	0.0002246	0.0035	1.34		6762.42	6762.42	No	27.29	Si
SLU 43	ini.	517.52	-499	-0.0001188	0.0002246	0.0035	1.34		6762.42	6762.42	No	13.07	Si
SLU 43	fin.	240.62	-768	-0.000054	0.0002246	0.0035	1.34		6762.42	6762.42	No	28.1	Si
SLU 44	ini.	500.23	-528	-0.0001146	0.0002246	0.0035	1.34		6762.42	6762.42	No	13.52	Si
SLU 44	fin.	248.01	-784	-0.0000557	0.0002246	0.0035	1.34		6762.42	6762.42	No	27.27	Si
SLU 49	ini.	532.09	-538	-0.0001223	0.0002246	0.0035	1.34		6762.42	6762.42	No	12.71	Si
SLU 49	fin.	255.11	-813	-0.0000573	0.0002246	0.0035	1.34		6762.42	6762.42	No	26.51	Si
SLU 46	ini.	514.24	-544	-0.000118	0.0002246	0.0035	1.34		6762.42	6762.42	No	13.15	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 46	fin.	253.75	-807	-0.000057	0.0002246	0.0035	1.34		6762.42	6762.42	No	26.65	Si
SLU 47	ini.	518.08	-522	-0.0001189	0.0002246	0.0035	1.34		6762.42	6762.42	No	13.05	Si
SLU 47	fin.	249.37	-790	-0.000056	0.0002246	0.0035	1.34		6762.42	6762.42	No	27.12	Si
SLU 45	ini.	524.61	-527	-0.0001205	0.0002246	0.0035	1.34		6762.42	6762.42	No	12.89	Si
SLU 45	fin.	249.32	-797	-0.000056	0.0002246	0.0035	1.34		6762.42	6762.42	No	27.12	Si
SLU 48	ini.	542.47	-521	-0.0001248	0.0002246	0.0035	1.34		6762.42	6762.42	No	12.47	Si
SLU 48	fin.	250.68	-803	-0.0000563	0.0002246	0.0035	1.34		6762.42	6762.42	No	26.98	Si
SLU 50	ini.	553.22	-487	-0.0001274	0.0002246	0.0035	1.34		6762.42	6762.42	No	12.22	Si
SLU 50	fin.	243.34	-781	-0.0000546	0.0002246	0.0035	1.34		6762.42	6762.42	No	27.79	Si
SLU 84	ini.	188.53	-1494	-0.0000421	0.0002246	0.0035	1.34		6762.42	6762.42	No	35.87	Si
SLU 84	fin.	447.79	-1459	-0.0001022	0.0002246	0.0035	1.34		6762.42	6762.42	No	15.1	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 50	ini.	553.22	-332	1.34	0	311	7137	3853	3417	7270	No	21.92	Si
SLU 50	fin.	243.34	-778	1.34	0	311	7137	3853	3417	7270	No	9.35	Si
SLU 40	ini.	13.77	745	1.34	0	311	7137	3853	3417	7270	No	9.76	Si
SLU 40	fin.	414.4	373	1.34	0	311	7137	3853	3417	7270	No	19.48	Si
SLU 43	ini.	517.52	-277	1.34	0	311	7137	3853	3417	7270	No	26.2	Si
SLU 43	fin.	240.62	-723	1.34	0	311	7137	3853	3417	7270	No	10.05	Si
SLU 51	ini.	542.85	-309	1.34	0	311	7137	3853	3417	7270	No	23.51	Si
SLU 51	fin.	247.77	-755	1.34	0	311	7137	3853	3417	7270	No	9.63	Si
SLU 49	ini.	532.09	-281	1.34	0	311	7137	3853	3417	7270	No	25.89	Si
SLU 49	fin.	255.11	-727	1.34	0	311	7137	3853	3417	7270	No	10	Si
SLU 45	ini.	524.61	-276	1.34	0	311	7137	3853	3417	7270	No	26.34	Si
SLU 45	fin.	249.32	-722	1.34	0	311	7137	3853	3417	7270	No	10.07	Si
SLU 47	ini.	518.08	-267	1.34	0	311	7137	3853	3417	7270	No	27.2	Si
SLU 47	fin.	249.37	-713	1.34	0	311	7137	3853	3417	7270	No	10.19	Si
SLU 39	ini.	24.14	723	1.34	0	311	7137	3853	3417	7270	No	10.06	Si
SLU 39	fin.	409.97	351	1.34	0	311	7137	3853	3417	7270	No	20.72	Si
SLU 42	ini.	31.62	718	1.34	0	311	7137	3853	3417	7270	No	10.12	Si
SLU 42	fin.	415.76	346	1.34	0	311	7137	3853	3417	7270	No	21	Si
SLU 48	ini.	542.47	-303	1.34	0	311	7137	3853	3417	7270	No	23.98	Si
SLU 48	fin.	250.68	-749	1.34	0	311	7137	3853	3417	7270	No	9.7	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	ini.	1170.77	740	-0.000278	0.0003369	0.0035	1.34		6950.74	6950.74		5.94	Si
SLV 12	fin.	-65.64	-185	-0.0000145	0.0003369	0.0035	1.34		6959.43	6959.43		106.03	Si
SLV 16	ini.	840.61	-233	-0.0001949	0.0003369	0.0035	1.34		6950.74	6950.74		8.27	Si
SLV 16	fin.	-122.83	-913	-0.0000272	0.0003369	0.0035	1.34		6959.43	6959.43		56.66	Si
SLV 11	ini.	1218.63	807	-0.0002904	0.0003369	0.0035	1.34		6950.74	6950.74		5.7	Si
SLV 11	fin.	-81.78	-154	-0.0000181	0.0003369	0.0035	1.34		6959.43	6959.43		85.1	Si
SLV 6	ini.	-656.35	-2251	-0.0001501	0.0003369	0.0035	1.34		6959.43	6959.43		10.6	Si
SLV 6	fin.	594.78	-1490	-0.0001357	0.0003369	0.0035	1.34		6950.74	6950.74		11.69	Si
SLV 2	ini.	-353.27	-1316	-0.0000793	0.0003369	0.0035	1.34		6959.43	6959.43		19.7	Si
SLV 2	fin.	661.11	-778	-0.0001515	0.0003369	0.0035	1.34		6950.74	6950.74		10.51	Si
SLV 7	ini.	1005.75	745	-0.0002359	0.0003369	0.0035	1.34		6950.74	6950.74		6.91	Si
SLV 7	fin.	111.35	19	-0.0000247	0.0003369	0.0035	1.34		6950.74	6950.74		62.42	Si
SLD 11	ini.	690.2	-52	-0.0001584	0.0003369	0.0035	1.34		6950.74	6950.74		10.07	Si
SLD 11	fin.	110.1	-528	-0.0000244	0.0003369	0.0035	1.34		6950.74	6950.74		63.13	Si
SLD 12	ini.	669.33	-81	-0.0001534	0.0003369	0.0035	1.34		6950.74	6950.74		10.38	Si
SLD 12	fin.	117.15	-541	-0.000026	0.0003369	0.0035	1.34		6950.74	6950.74		59.33	Si
SLV 15	ini.	915.55	-128	-0.0002134	0.0003369	0.0035	1.34		6950.74	6950.74		7.59	Si
SLV 15	fin.	-148.11	-866	-0.0000329	0.0003369	0.0035	1.34		6959.43	6959.43		46.99	Si
SLV 8	ini.	957.89	678	-0.0002239	0.0003369	0.0035	1.34		6950.74	6950.74		7.26	Si
SLV 8	fin.	127.49	-11	-0.0000283	0.0003369	0.0035	1.34		6950.74	6950.74		54.52	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	-353.27	1785	1.34	0	466	7137	5779	3417	7603		4.26	Si
SLV 2	fin.	661.11	1184	1.34	0	466	7137	5779	3417	7603		6.42	Si
SLV 7	ini.	1005.75	-1693	1.34	0	466	7137	5779	3417	7603		4.49	Si
SLV 7	fin.	111.35	-1542	1.34	0	466	7137	5779	3417	7603		4.93	Si
SLV 12	ini.	1170.77	-2205	1.34	0	466	7137	5779	3417	7603		3.45	Si
SLV 12	fin.	-65.64	-2002	1.34	0	466	7137	5779	3417	7603		3.8	Si
SLV 6	ini.	-656.35	2469	1.34	0	466	7137	5779	3417	7603		3.08	Si
SLV 6	fin.	594.78	1555	1.34	0	466	7137	5779	3417	7603		4.89	Si
SLV 5	ini.	-608.49	2370	1.34	0	466	7137	5779	3417	7603		3.21	Si
SLV 5	fin.	578.64	1457	1.34	0	466	7137	5779	3417	7603		5.22	Si
SLV 15	ini.	915.55	-1620	1.34	0	466	7137	5779	3417	7603		4.69	Si
SLV 15	fin.	-148.11	-1730	1.34	0	466	7137	5779	3417	7603		4.39	Si
SLV 9	ini.	-395.61	1761	1.34	0	466	7137	5779	3417	7603		4.32	Si
SLV 9	fin.	385.51	898	1.34	0	466	7137	5779	3417	7603		8.46	Si
SLV 11	ini.	1218.63	-2303	1.34	0	466	7137	5779	3417	7603		3.3	Si
SLV 11	fin.	-81.78	-2101	1.34	0	466	7137	5779	3417	7603		3.62	Si
SLV 10	ini.	-443.47	1859	1.34	0	466	7137	5779	3417	7603		4.09	Si
SLV 10	fin.	401.65	997	1.34	0	466	7137	5779	3417	7603		7.63	Si
SLV 1	ini.	-278.32	1631	1.34	0	466	7137	5779	3417	7603		4.66	Si
SLV 1	fin.	635.83	1030	1.34	0	466	7137	5779	3417	7603		7.38	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.704	SLV 11	Si
V_SLV	3.08	SLV 6	Si
PF_SLU	12.224	SLU 50	Si
V_SLU	9.349	SLU 50	Si

Trave di accoppiamento 61

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.093	6.006	2	4	2	-5.093	6.506	2	4	2	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	947.55	-100	-0.0000974	0.0001872	0.0035	2		14344.28	14344.28	No	15.14	Si
SLU 78	fin.	-755.02	-1222	-0.0000769	0.0001872	0.0035	2		14357.01	14357.01	No	19.02	Si
SLU 79	ini.	938.91	-126	-0.0000965	0.0001872	0.0035	2		14344.28	14344.28	No	15.28	Si
SLU 79	fin.	-758.84	-1222	-0.0000773	0.0001872	0.0035	2		14357.01	14357.01	No	18.92	Si
SLU 77	ini.	945.07	-108	-0.0000972	0.0001872	0.0035	2		14344.28	14344.28	No	15.18	Si
SLU 77	fin.	-757.87	-1225	-0.0000772	0.0001872	0.0035	2		14357.01	14357.01	No	18.94	Si
SLU 81	ini.	945.16	-96	-0.0000972	0.0001872	0.0035	2		14344.28	14344.28	No	15.18	Si
SLU 81	fin.	-759.79	-1234	-0.0000774	0.0001872	0.0035	2		14357.01	14357.01	No	18.9	Si
SLU 83	ini.	954.93	-113	-0.0000982	0.0001872	0.0035	2		14344.28	14344.28	No	15.02	Si
SLU 83	fin.	-776.28	-1256	-0.0000792	0.0001872	0.0035	2		14357.01	14357.01	No	18.49	Si
SLU 75	ini.	937.78	-82	-0.0000964	0.0001872	0.0035	2		14344.28	14344.28	No	15.3	Si
SLU 75	fin.	-738.52	-1200	-0.0000752	0.0001872	0.0035	2		14357.01	14357.01	No	19.44	Si
SLU 80	ini.	941.39	-118	-0.0000968	0.0001872	0.0035	2		14344.28	14344.28	No	15.24	Si
SLU 80	fin.	-755.99	-1220	-0.000077	0.0001872	0.0035	2		14357.01	14357.01	No	18.99	Si
SLU 82	ini.	947.64	-88	-0.0000974	0.0001872	0.0035	2		14344.28	14344.28	No	15.14	Si
SLU 82	fin.	-756.93	-1231	-0.0000771	0.0001872	0.0035	2		14357.01	14357.01	No	18.97	Si
SLU 84	ini.	957.41	-105	-0.0000985	0.0001872	0.0035	2		14344.28	14344.28	No	14.98	Si
SLU 84	fin.	-773.42	-1254	-0.0000789	0.0001872	0.0035	2		14357.01	14357.01	No	18.56	Si
SLU 74	ini.	935.3	-91	-0.0000961	0.0001872	0.0035	2		14344.28	14344.28	No	15.34	Si
SLU 74	fin.	-741.38	-1203	-0.0000755	0.0001872	0.0035	2		14357.01	14357.01	No	19.37	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	945.16	-4369	2	0	812	3965	8384	5100	4776	No	1.09	Si
SLU 81	fin.	-759.79	-656	2	0	812	3965	8384	5100	4776	No	7.28	Si
SLU 79	ini.	938.91	-4384	2	0	812	3965	8384	5100	4776	No	1.09	Si
SLU 79	fin.	-758.84	-737	2	0	812	3965	8384	5100	4776	No	6.48	Si
SLU 75	ini.	937.78	-4298	2	0	812	3965	8384	5100	4776	No	1.11	Si
SLU 75	fin.	-738.52	-654	2	0	812	3965	8384	5100	4776	No	7.3	Si
SLU 74	ini.	935.3	-4304	2	0	812	3965	8384	5100	4776	No	1.11	Si
SLU 74	fin.	-741.38	-667	2	0	812	3965	8384	5100	4776	No	7.16	Si
SLU 82	ini.	947.64	-4363	2	0	812	3965	8384	5100	4776	No	1.09	Si
SLU 82	fin.	-756.93	-644	2	0	812	3965	8384	5100	4776	No	7.42	Si
SLU 80	ini.	941.39	-4377	2	0	812	3965	8384	5100	4776	No	1.09	Si
SLU 80	fin.	-755.99	-724	2	0	812	3965	8384	5100	4776	No	6.6	Si
SLU 78	ini.	947.55	-4384	2	0	812	3965	8384	5100	4776	No	1.09	Si
SLU 78	fin.	-755.02	-685	2	0	812	3965	8384	5100	4776	No	6.97	Si
SLU 84	ini.	957.41	-4449	2	0	812	3965	8384	5100	4776	No	1.07	Si
SLU 84	fin.	-773.42	-675	2	0	812	3965	8384	5100	4776	No	7.08	Si
SLU 83	ini.	954.93	-4456	2	0	812	3965	8384	5100	4776	No	1.07	Si
SLU 83	fin.	-776.28	-688	2	0	812	3965	8384	5100	4776	No	6.95	Si
SLU 77	ini.	945.07	-4391	2	0	812	3965	8384	5100	4776	No	1.09	Si
SLU 77	fin.	-757.87	-698	2	0	812	3965	8384	5100	4776	No	6.85	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	1060.14	5482	-0.0001082	0.0002807	0.0035	2		14202.07	14202.07		13.4	Si
SLV 14	fin.	2014.92	1611	-0.0002125	0.0002807	0.0035	2		14202.07	14202.07		7.05	Si
SLV 1	ini.	631.39	-4665	-0.0000636	0.0002807	0.0035	2		14202.07	14202.07		22.49	Si
SLV 1	fin.	-2487.1	-3137	-0.0002669	0.0002807	0.0035	2		14215.41	14215.41		5.72	Si
SLV 3	ini.	266.9	-5617	-0.0000266	0.0002807	0.0035	2		14202.07	14202.07		53.21	Si
SLV 3	fin.	-3023.58	-3243	-0.0003319	0.0002807	0.0035	2		14215.41	14215.41		4.7	Si
SLD 3	ini.	490.1	-2442	-0.0000492	0.0002807	0.0035	2		14202.07	14202.07		28.98	Si
SLD 3	fin.	-1581.56	-1854	-0.0001641	0.0002807	0.0035	2		14215.41	14215.41		8.99	Si
SLV 7	ini.	-13.07	-3207	-0.0000013	0.0002807	0.0035	2		14215.41	14215.41		1087.32	Si
SLV 7	fin.	-2087.34	-1720	-0.0002206	0.0002807	0.0035	2		14215.41	14215.41		6.81	Si
SLV 8	ini.	5.02	-3089	-0.0000005	0.0002807	0.0035	2		14202.07	14202.07		2826.6	Si
SLV 8	fin.	-2036.13	-1664	-0.0002148	0.0002807	0.0035	2		14215.41	14215.41		6.98	Si
SLD 4	ini.	502.27	-2363	-0.0000504	0.0002807	0.0035	2		14202.07	14202.07		28.28	Si
SLD 4	fin.	-1547.14	-1817	-0.0001604	0.0002807	0.0035	2		14215.41	14215.41		9.19	Si
SLV 13	ini.	1031.81	5297	-0.0001052	0.0002807	0.0035	2		14202.07	14202.07		13.76	Si
SLV 13	fin.	1934.74	1524	-0.0002035	0.0002807	0.0035	2		14202.07	14202.07		7.34	Si
SLV 4	ini.	295.24	-5432	-0.0000295	0.0002807	0.0035	2		14202.07	14202.07		48.1	Si
SLV 4	fin.	-2943.39	-3155	-0.000322	0.0002807	0.0035	2		14215.41	14215.41		4.83	Si
SLV 2	ini.	659.73	-4480	-0.0000665	0.0002807	0.0035	2		14202.07	14202.07		21.53	Si
SLV 2	fin.	-2406.91	-3049	-0.0002575	0.0002807	0.0035	2		14215.41	14215.41		5.91	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	695.65	4987	2	0	1217	3965	12577	5100	5182		1.04	Si
SLV 16	fin.	1478.44	7854	2	0	1217	3965	12577	5100	5182		0.66	No
SLV 8	ini.	5.02	-6888	2	0	1217	3965	12577	5100	5182		0.75	No
SLV 8	fin.	-2036.13	-5612	2	0	1217	3965	12577	5100	5182		0.92	No
SLV 3	ini.	266.9	-11852	2	0	1217	3965	12577	5100	5182		0.44	No
SLV 3	fin.	-3023.58	-10435	2	0	1217	3965	12577	5100	5182		0.5	No
SLV 7	ini.	-13.07	-7057	2	0	1217	3965	12577	5100	5182		0.73	No
SLV 7	fin.	-2087.34	-5801	2	0	1217	3965	12577	5100	5182		0.89	No
SLV 2	ini.	659.73	-10683	2	0	1217	3965	12577	5100	5182		0.49	No
SLV 2	fin.	-2406.91	-8667	2	0	1217	3965	12577	5100	5182		0.6	No
SLV 14	ini.	1060.14	5890	2	0	1217	3965	12577	5100	5182		0.88	No
SLV 14	fin.	2014.92	9326	2	0	1217	3965	12577	5100	5182		0.56	No
SLV 1	ini.	631.39	-10949	2	0	1217	3965	12577	5100	5182		0.47	No
SLV 1	fin.	-2487.1	-8963	2	0	1217	3965	12577	5100	5182		0.58	No
SLV 13	ini.	1031.81	5625	2	0	1217	3965	12577	5100	5182		0.92	No
SLV 13	fin.	1934.74	9031	2	0	1217	3965	12577	5100	5182		0.57	No
SLV 4	ini.	295.24	-11587	2	0	1217	3965	12577	5100	5182		0.45	No
SLV 4	fin.	-2943.39	-10139	2	0	1217	3965	12577	5100	5182		0.51	No
SLV 15	ini.	667.31	4722	2	0	1217	3965	12577	5100	5182		1.1	Si
SLV 15	fin.	1398.26	7559	2	0	1217	3965	12577	5100	5182		0.69	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.702	SLV 3	Si
V_SLV	0.437	SLV 3	No
PF_SLU	14.982	SLU 84	Si
V_SLU	1.072	SLU 83	Si

Trave di accoppiamento 62

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.093	6.006	4.8	5.44	0.64	-5.093	6.506	4.8	5.44	0.64	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-36.77	1	-0.000036	0.0001872	0.0035	0.64		1504.96	1504.96	No	40.93	Si
SLU 74	fin.	26.58	-55	-0.000026	0.0001872	0.0035	0.64		1500.92	1500.92	No	56.47	Si
SLU 75	ini.	-37.13	-1	-0.0000363	0.0001872	0.0035	0.64		1504.96	1504.96	No	40.54	Si
SLU 75	fin.	26.84	-56	-0.0000262	0.0001872	0.0035	0.64		1500.92	1500.92	No	55.92	Si
SLU 78	ini.	-37.27	2	-0.0000364	0.0001872	0.0035	0.64		1504.96	1504.96	No	40.39	Si
SLU 78	fin.	26.61	-55	-0.000026	0.0001872	0.0035	0.64		1500.92	1500.92	No	56.4	Si
SLU 81	ini.	-38.66	-5	-0.0000378	0.0001872	0.0035	0.64		1504.96	1504.96	No	38.93	Si
SLU 81	fin.	28.21	-59	-0.0000276	0.0001872	0.0035	0.64		1500.92	1500.92	No	53.21	Si
SLU 83	ini.	-38.8	-2	-0.000038	0.0001872	0.0035	0.64		1504.96	1504.96	No	38.79	Si
SLU 83	fin.	27.98	-58	-0.0000273	0.0001872	0.0035	0.64		1500.92	1500.92	No	53.64	Si
SLU 84	ini.	-39.15	-3	-0.0000383	0.0001872	0.0035	0.64		1504.96	1504.96	No	38.44	Si
SLU 84	fin.	28.24	-59	-0.0000276	0.0001872	0.0035	0.64		1500.92	1500.92	No	53.15	Si
SLU 80	ini.	-36.63	5	-0.0000358	0.0001872	0.0035	0.64		1504.96	1504.96	No	41.09	Si
SLU 80	fin.	25.63	-52	-0.000025	0.0001872	0.0035	0.64		1500.92	1500.92	No	58.56	Si
SLU 82	ini.	-39.02	-6	-0.0000382	0.0001872	0.0035	0.64		1504.96	1504.96	No	38.57	Si
SLU 82	fin.	28.47	-60	-0.0000278	0.0001872	0.0035	0.64		1500.92	1500.92	No	52.72	Si
SLU 76	ini.	-36.72	0	-0.0000359	0.0001872	0.0035	0.64		1504.96	1504.96	No	40.98	Si
SLU 76	fin.	26.04	-53	-0.0000254	0.0001872	0.0035	0.64		1500.92	1500.92	No	57.65	Si
SLU 77	ini.	-36.91	4	-0.0000361	0.0001872	0.0035	0.64		1504.96	1504.96	No	40.77	Si
SLU 77	fin.	26.35	-54	-0.0000257	0.0001872	0.0035	0.64		1500.92	1500.92	No	56.96	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-36.91	1564	0.64	0	260	3965	2683	1632	4225	No	2.7	Si
SLU 77	fin.	26.35	-1158	0.64	0	260	3965	2683	1632	4225	No	3.65	Si
SLU 80	ini.	-36.63	1542	0.64	0	260	3965	2683	1632	4225	No	2.74	Si
SLU 80	fin.	25.63	-1144	0.64	0	260	3965	2683	1632	4225	No	3.69	Si
SLU 74	ini.	-36.77	1548	0.64	0	260	3965	2683	1632	4225	No	2.73	Si
SLU 74	fin.	26.58	-1142	0.64	0	260	3965	2683	1632	4225	No	3.7	Si
SLU 84	ini.	-39.15	1609	0.64	0	260	3965	2683	1632	4225	No	2.63	Si
SLU 84	fin.	28.24	-1175	0.64	0	260	3965	2683	1632	4225	No	3.6	Si
SLU 78	ini.	-37.27	1568	0.64	0	260	3965	2683	1632	4225	No	2.69	Si
SLU 78	fin.	26.61	-1158	0.64	0	260	3965	2683	1632	4225	No	3.65	Si
SLU 79	ini.	-36.27	1538	0.64	0	260	3965	2683	1632	4225	No	2.75	Si
SLU 79	fin.	25.37	-1143	0.64	0	260	3965	2683	1632	4225	No	3.69	Si
SLU 82	ini.	-39.02	1592	0.64	0	260	3965	2683	1632	4225	No	2.65	Si
SLU 82	fin.	28.47	-1159	0.64	0	260	3965	2683	1632	4225	No	3.65	Si
SLU 75	ini.	-37.13	1551	0.64	0	260	3965	2683	1632	4225	No	2.72	Si
SLU 75	fin.	26.84	-1142	0.64	0	260	3965	2683	1632	4225	No	3.7	Si
SLU 81	ini.	-38.66	1589	0.64	0	260	3965	2683	1632	4225	No	2.66	Si
SLU 81	fin.	28.21	-1158	0.64	0	260	3965	2683	1632	4225	No	3.65	Si
SLU 83	ini.	-38.8	1605	0.64	0	260	3965	2683	1632	4225	No	2.63	Si
SLU 83	fin.	27.98	-1174	0.64	0	260	3965	2683	1632	4225	No	3.6	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 6	ini.	252.68	1105	-0.0002651	0.0002807	0.0035	0.64		1512.56	1512.56		5.99	Si
SLV 6	fin.	-111.93	291	-0.0001115	0.0002807	0.0035	0.64		1516.76	1516.76		13.55	Si
SLV 7	ini.	-195.63	-547	-0.0002004	0.0002807	0.0035	0.64		1516.76	1516.76		7.75	Si
SLV 7	fin.	52.53	-94	-0.0000515	0.0002807	0.0035	0.64		1512.56	1512.56		28.79	Si
SLV 2	ini.	214.71	1152	-0.0002221	0.0002807	0.0035	0.64		1512.56	1512.56		7.04	Si
SLV 2	fin.	-159.7	454	-0.0001616	0.0002807	0.0035	0.64		1516.76	1516.76		9.5	Si
SLV 8	ini.	-198.85	-562	-0.0002039	0.0002807	0.0035	0.64		1516.76	1516.76		7.63	Si
SLV 8	fin.	54.46	-100	-0.0000535	0.0002807	0.0035	0.64		1512.56	1512.56		27.77	Si
SLV 12	ini.	-302.54	-1105	-0.000323	0.0002807	0.0035	0.64		1516.76	1516.76		5.01	Si
SLV 12	fin.	145.8	-359	-0.0001472	0.0002807	0.0035	0.64		1512.56	1512.56		10.37	Si
SLV 1	ini.	219.74	1175	-0.0002277	0.0002807	0.0035	0.64		1512.56	1512.56		6.88	Si
SLV 1	fin.	-162.73	464	-0.0001648	0.0002807	0.0035	0.64		1516.76	1516.76		9.32	Si
SLV 15	ini.	-261.36	-1137	-0.0002744	0.0002807	0.0035	0.64		1516.76	1516.76		5.8	Si
SLV 15	fin.	191.64	-515	-0.0001966	0.0002807	0.0035	0.64		1512.56	1512.56		7.89	Si
SLV 11	ini.	-299.33	-1090	-0.0003192	0.0002807	0.0035	0.64		1516.76	1516.76		5.07	Si
SLV 11	fin.	143.87	-352	-0.0001452	0.0002807	0.0035	0.64		1512.56	1512.56		10.51	Si
SLV 5	ini.	255.89	1120	-0.0002688	0.0002807	0.0035	0.64		1512.56	1512.56		5.91	Si
SLV 5	fin.	-113.86	298	-0.0001135	0.0002807	0.0035	0.64		1516.76	1516.76		13.32	Si
SLV 16	ini.	-266.39	-1160	-0.0002802	0.0002807	0.0035	0.64		1516.76	1516.76		5.69	Si
SLV 16	fin.	194.66	-525	-0.0001999	0.0002807	0.0035	0.64		1512.56	1512.56		7.77	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-261.36	2340	0.64	0	390	3965	4025	1632	4354		1.86	Si
SLV 15	fin.	191.64	95	0.64	0	390	3965	4025	1632	4354		45.89	Si
SLV 14	ini.	-130.94	2529	0.64	0	390	3965	4025	1632	4354		1.72	Si
SLV 14	fin.	144.74	-719	0.64	0	390	3965	4025	1632	4354		6.06	Si
SLV 13	ini.	-125.91	2504	0.64	0	390	3965	4025	1632	4354		1.74	Si
SLV 13	fin.	141.72	-749	0.64	0	390	3965	4025	1632	4354		5.81	Si
SLV 10	ini.	148.98	1725	0.64	0	390	3965	4025	1632	4354		2.52	Si
SLV 10	fin.	-20.6	-2034	0.64	0	390	3965	4025	1632	4354		2.14	Si
SLV 9	ini.	152.2	1708	0.64	0	390	3965	4025	1632	4354		2.55	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 9	fin.	-22.53	-2054	0.64	0	390	3965	4025	1632	4354		2.12	Si
SLV 16	ini.	-266.39	2365	0.64	0	390	3965	4025	1632	4354		1.84	Si
SLV 16	fin.	194.66	126	0.64	0	390	3965	4025	1632	4354		34.65	Si
SLV 5	ini.	255.89	859	0.64	0	390	3965	4025	1632	4354		5.07	Si
SLV 5	fin.	-113.86	-2332	0.64	0	390	3965	4025	1632	4354		1.87	Si
SLV 1	ini.	219.74	-326	0.64	0	390	3965	4025	1632	4354		13.34	Si
SLV 1	fin.	-162.73	-1678	0.64	0	390	3965	4025	1632	4354		2.6	Si
SLV 6	ini.	252.68	876	0.64	0	390	3965	4025	1632	4354		4.97	Si
SLV 6	fin.	-111.93	-2313	0.64	0	390	3965	4025	1632	4354		1.88	Si
SLD 14	ini.	-66.81	1664	0.64	0	390	3965	4025	1632	4354		2.62	Si
SLD 14	fin.	70.29	-760	0.64	0	390	3965	4025	1632	4354		5.73	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.013	SLV 12	Si
V_SLV	1.722	SLV 14	Si
PF_SLU	38.436	SLU 84	Si
V_SLU	2.626	SLU 84	Si

Trave di accoppiamento 63

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.463	-3.314	2	2.9	0.9	-7.463	-3.314	2	2.9	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 76	ini.	-571.34	-3333	-0.0003211	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.19	Si
SLU 76	fin.	415.91	-2718	-0.0002238	0.0001872	0.0035	0.9		2959	2959	No	7.11	Si
SLU 61	ini.	-562.95	-2914	-0.0003156	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.27	Si
SLU 61	fin.	432.4	-2593	-0.0002338	0.0001872	0.0035	0.9		2959	2959	No	6.84	Si
SLU 80	ini.	-566.45	-3292	-0.0003179	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.23	Si
SLU 80	fin.	418.68	-2747	-0.0002255	0.0001872	0.0035	0.9		2959	2959	No	7.07	Si
SLU 83	ini.	-574.6	-3236	-0.0003232	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.16	Si
SLU 83	fin.	426.03	-2823	-0.0002299	0.0001872	0.0035	0.9		2959	2959	No	6.95	Si
SLU 81	ini.	-568.29	-3194	-0.0003191	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.22	Si
SLU 81	fin.	417.3	-2782	-0.0002246	0.0001872	0.0035	0.9		2959	2959	No	7.09	Si
SLU 63	ini.	-569.26	-2956	-0.0003197	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.21	Si
SLU 63	fin.	441.14	-2635	-0.0002391	0.0001872	0.0035	0.9		2959	2959	No	6.71	Si
SLU 84	ini.	-591.4	-3361	-0.0003343	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.01	Si
SLU 84	fin.	434.98	-2843	-0.0002353	0.0001872	0.0035	0.9		2959	2959	No	6.8	Si
SLU 78	ini.	-564.14	-3337	-0.0003164	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.26	Si
SLU 78	fin.	415.21	-2758	-0.0002234	0.0001872	0.0035	0.9		2959	2959	No	7.13	Si
SLU 82	ini.	-585.09	-3319	-0.0003302	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.07	Si
SLU 82	fin.	426.25	-2801	-0.00023	0.0001872	0.0035	0.9		2959	2959	No	6.94	Si
SLU 73	ini.	-565.03	-3291	-0.000317	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.25	Si
SLU 73	fin.	407.18	-2677	-0.0002185	0.0001872	0.0035	0.9		2959	2959	No	7.27	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-566.45	-3170	0.9	0	329	7137	3773	2295	6068	No	1.91	Si
SLU 80	fin.	418.68	3205	0.9	0	329	7137	3773	2295	6068	No	1.89	Si
SLU 82	ini.	-585.09	-3182	0.9	0	329	7137	3773	2295	6068	No	1.91	Si
SLU 82	fin.	426.25	3274	0.9	0	329	7137	3773	2295	6068	No	1.85	Si
SLU 76	ini.	-571.34	-3185	0.9	0	329	7137	3773	2295	6068	No	1.91	Si
SLU 76	fin.	415.91	3149	0.9	0	329	7137	3773	2295	6068	No	1.93	Si
SLU 79	ini.	-549.64	-3088	0.9	0	329	7137	3773	2295	6068	No	1.96	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	fin.	409.73	3211	0.9	0	329	7137	3773	2295	6068	No	1.89	Si
SLU 81	ini.	-568.29	-3099	0.9	0	329	7137	3773	2295	6068	No	1.96	Si
SLU 81	fin.	417.3	3280	0.9	0	329	7137	3773	2295	6068	No	1.85	Si
SLU 78	ini.	-564.14	-3227	0.9	0	329	7137	3773	2295	6068	No	1.88	Si
SLU 78	fin.	415.21	3208	0.9	0	329	7137	3773	2295	6068	No	1.89	Si
SLU 75	ini.	-557.83	-3187	0.9	0	329	7137	3773	2295	6068	No	1.9	Si
SLU 75	fin.	406.47	3156	0.9	0	329	7137	3773	2295	6068	No	1.92	Si
SLU 77	ini.	-547.33	-3145	0.9	0	329	7137	3773	2295	6068	No	1.93	Si
SLU 77	fin.	406.26	3214	0.9	0	329	7137	3773	2295	6068	No	1.89	Si
SLU 84	ini.	-591.4	-3222	0.9	0	329	7137	3773	2295	6068	No	1.88	Si
SLU 84	fin.	434.98	3327	0.9	0	329	7137	3773	2295	6068	No	1.82	Si
SLU 83	ini.	-574.6	-3139	0.9	0	329	7137	3773	2295	6068	No	1.93	Si
SLU 83	fin.	426.03	3333	0.9	0	329	7137	3773	2295	6068	No	1.82	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 15	ini.	-991.45	-502	-0.000586	0.0002807	0.0035	0.9		2995.37	2995.37		3.02	Si
SLD 15	fin.	1085.61	-3247	-0.0006569	0.0002807	0.0035	0.9		2989.59	2989.59		2.75	Si
SLV 3	ini.	893.14	-4804	-0.0005174	0.0002807	0.0035	0.9		2989.59	2989.59		3.35	Si
SLV 3	fin.	-1512.29	1303	-0.0010031	0.0002807	0.0035	0.9		2995.37	2995.37		1.98	Si
SLV 14	ini.	-1639.06	488	-0.0011184	0.0002807	0.0035	0.9		2995.37	2995.37		1.83	Si
SLV 14	fin.	2061.97	-4973	-0.0015636	0.0002807	0.0035	0.9		2989.59	2989.59		1.45	Si
SLV 4	ini.	942.69	-4887	-0.0005523	0.0002807	0.0035	0.9		2989.59	2989.59		3.17	Si
SLV 4	fin.	-1568.8	1400	-0.0010537	0.0002807	0.0035	0.9		2995.37	2995.37		1.91	Si
SLV 16	ini.	-1769.72	1631	-0.0012443	0.0002807	0.0035	0.9		2995.37	2995.37		1.69	Si
SLV 16	fin.	2115.25	-5042	-0.0016278	0.0002807	0.0035	0.9		2989.59	2989.59		1.41	Si
SLV 1	ini.	1023.8	-5947	-0.0006109	0.0002807	0.0035	0.9		2989.59	2989.59		2.92	Si
SLV 1	fin.	-1565.57	1373	-0.0010508	0.0002807	0.0035	0.9		2995.37	2995.37		1.91	Si
SLV 13	ini.	-1688.6	571	-0.0011653	0.0002807	0.0035	0.9		2995.37	2995.37		1.77	Si
SLV 13	fin.	2118.48	-5070	-0.0016317	0.0002807	0.0035	0.9		2989.59	2989.59		1.41	Si
SLD 13	ini.	-934.95	-991	-0.0005456	0.0002807	0.0035	0.9		2995.37	2995.37		3.2	Si
SLD 13	fin.	1062.78	-3217	-0.0006398	0.0002807	0.0035	0.9		2989.59	2989.59		2.81	Si
SLV 15	ini.	-1819.27	1714	-0.0012942	0.0002807	0.0035	0.9		2995.37	2995.37		1.65	Si
SLV 15	fin.	2171.77	-5139	-0.0016986	0.0002807	0.0035	0.9		2989.59	2989.59		1.38	Si
SLV 2	ini.	1073.35	-6030	-0.0006477	0.0002807	0.0035	0.9		2989.59	2989.59		2.79	Si
SLV 2	fin.	-1622.09	1470	-0.0011026	0.0002807	0.0035	0.9		2995.37	2995.37		1.85	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	893.14	-7591	0.9	0	493	7137	5660	2295	7630		1.01	Si
SLV 3	fin.	-1512.29	-4107	0.9	0	493	7137	5660	2295	7630		1.86	Si
SLV 1	ini.	1023.8	-7633	0.9	0	493	7137	5660	2295	7630		1	No
SLV 1	fin.	-1565.57	-4351	0.9	0	493	7137	5660	2295	7630		1.75	Si
SLV 13	ini.	-1688.6	3515	0.9	0	493	7137	5660	2295	7630		2.17	Si
SLV 13	fin.	2118.48	8609	0.9	0	493	7137	5660	2295	7630		0.89	No
SLD 16	ini.	-970.19	250	0.9	0	493	7137	5660	2295	7630		30.58	Si
SLD 16	fin.	1061.35	4932	0.9	0	493	7137	5660	2295	7630		1.55	Si
SLV 4	ini.	942.69	-7738	0.9	0	493	7137	5660	2295	7630		0.99	No
SLV 4	fin.	-1568.8	-4305	0.9	0	493	7137	5660	2295	7630		1.77	Si
SLV 14	ini.	-1639.06	3368	0.9	0	493	7137	5660	2295	7630		2.27	Si
SLV 14	fin.	2061.97	8411	0.9	0	493	7137	5660	2295	7630		0.91	No
SLV 16	ini.	-1769.72	3410	0.9	0	493	7137	5660	2295	7630		2.24	Si
SLV 16	fin.	2115.25	8654	0.9	0	493	7137	5660	2295	7630		0.88	No
SLV 2	ini.	1073.35	-7780	0.9	0	493	7137	5660	2295	7630		0.98	No
SLV 2	fin.	-1622.09	-4549	0.9	0	493	7137	5660	2295	7630		1.68	Si
SLV 15	ini.	-1819.27	3557	0.9	0	493	7137	5660	2295	7630		2.14	Si
SLV 15	fin.	2171.77	8852	0.9	0	493	7137	5660	2295	7630		0.86	No
SLD 15	ini.	-991.45	313	0.9	0	493	7137	5660	2295	7630		24.41	Si
SLD 15	fin.	1085.61	5017	0.9	0	493	7137	5660	2295	7630		1.52	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.377	SLV 15	Si
V_SLV	0.862	SLV 15	No
PF_SLU	5.013	SLU 84	Si
V_SLU	1.821	SLU 83	Si

Trave di accoppiamento 64

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.463	-3.314	4.8	5.44	0.64	-7.463	-3.314	4.8	5.44	0.64	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-514.07	-2749	-0.0006417	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.93	Si
SLU 74	fin.	15.56	-796	-0.0000151	0.0001872	0.0035	0.64		1500.92	1500.92	No	96.46	Si
SLU 84	ini.	-540.79	-2884	-0.0006836	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.78	Si
SLU 84	fin.	24.81	-802	-0.0000242	0.0001872	0.0035	0.64		1500.92	1500.92	No	60.5	Si
SLU 81	ini.	-539.48	-2866	-0.0006815	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.79	Si
SLU 81	fin.	28.61	-782	-0.000028	0.0001872	0.0035	0.64		1500.92	1500.92	No	52.47	Si
SLU 83	ini.	-547.93	-2909	-0.0006949	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.75	Si
SLU 83	fin.	28.47	-796	-0.0000278	0.0001872	0.0035	0.64		1500.92	1500.92	No	52.71	Si
SLU 80	ini.	-515.49	-2761	-0.0006439	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.92	Si
SLU 80	fin.	15.24	-799	-0.0000148	0.0001872	0.0035	0.64		1500.92	1500.92	No	98.46	Si
SLU 77	ini.	-522.52	-2792	-0.0006548	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.88	Si
SLU 77	fin.	15.43	-810	-0.000015	0.0001872	0.0035	0.64		1500.92	1500.92	No	97.29	Si
SLU 62	ini.	-509.2	-2677	-0.0006341	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.96	Si
SLU 62	fin.	31.07	-698	-0.0000304	0.0001872	0.0035	0.64		1500.92	1500.92	No	48.31	Si
SLU 79	ini.	-522.62	-2786	-0.000655	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.88	Si
SLU 79	fin.	18.91	-794	-0.0000184	0.0001872	0.0035	0.64		1500.92	1500.92	No	79.38	Si
SLU 82	ini.	-532.34	-2841	-0.0006702	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.83	Si
SLU 82	fin.	24.94	-788	-0.0000243	0.0001872	0.0035	0.64		1500.92	1500.92	No	60.17	Si
SLU 78	ini.	-515.38	-2767	-0.0006437	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.92	Si
SLU 78	fin.	11.76	-815	-0.0000114	0.0001872	0.0035	0.64		1500.92	1500.92	No	127.6	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-540.79	5242	0.64	0	173	5075	2683	1632	4315	No	0.82	No
SLU 84	fin.	24.81	-1763	0.64	0	173	5075	2683	1632	4315	No	2.45	Si
SLU 81	ini.	-539.48	5199	0.64	0	173	5075	2683	1632	4315	No	0.83	No
SLU 81	fin.	28.61	-1723	0.64	0	173	5075	2683	1632	4315	No	2.5	Si
SLU 83	ini.	-547.93	5269	0.64	0	173	5075	2683	1632	4315	No	0.82	No
SLU 83	fin.	28.47	-1746	0.64	0	173	5075	2683	1632	4315	No	2.47	Si
SLU 82	ini.	-532.34	5172	0.64	0	173	5075	2683	1632	4315	No	0.83	No
SLU 82	fin.	24.94	-1741	0.64	0	173	5075	2683	1632	4315	No	2.48	Si
SLU 75	ini.	-506.93	4983	0.64	0	173	5075	2683	1632	4315	No	0.87	No
SLU 75	fin.	11.9	-1746	0.64	0	173	5075	2683	1632	4315	No	2.47	Si
SLU 80	ini.	-515.49	5030	0.64	0	173	5075	2683	1632	4315	No	0.86	No
SLU 80	fin.	15.24	-1739	0.64	0	173	5075	2683	1632	4315	No	2.48	Si
SLU 78	ini.	-515.38	5053	0.64	0	173	5075	2683	1632	4315	No	0.85	No
SLU 78	fin.	11.76	-1768	0.64	0	173	5075	2683	1632	4315	No	2.44	Si
SLU 77	ini.	-522.52	5080	0.64	0	173	5075	2683	1632	4315	No	0.85	No
SLU 77	fin.	15.43	-1751	0.64	0	173	5075	2683	1632	4315	No	2.46	Si
SLU 79	ini.	-522.62	5057	0.64	0	173	5075	2683	1632	4315	No	0.85	No
SLU 79	fin.	18.91	-1722	0.64	0	173	5075	2683	1632	4315	No	2.51	Si
SLU 74	ini.	-514.07	5010	0.64	0	173	5075	2683	1632	4315	No	0.86	No
SLU 74	fin.	15.56	-1728	0.64	0	173	5075	2683	1632	4315	No	2.5	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 11	ini.	-735.58	-3469	-0.0009511	0.0002807	0.0035	0.64		1516.76	1516.76		2.06	Si
SLV 11	fin.	209.7	-347	-0.0002165	0.0002807	0.0035	0.64		1512.56	1512.56		7.21	Si
SLD 14	ini.	-735.13	-3310	-0.0009503	0.0002807	0.0035	0.64		1516.76	1516.76		2.06	Si
SLD 14	fin.	216.1	-2	-0.0002236	0.0002807	0.0035	0.64		1512.56	1512.56		7	Si
SLD 15	ini.	-772.64	-3492	-0.0010153	0.0002807	0.0035	0.64		1516.76	1516.76		1.96	Si
SLD 15	fin.	234.67	-33	-0.0002445	0.0002807	0.0035	0.64		1512.56	1512.56		6.45	Si
SLV 12	ini.	-716.58	-3391	-0.0009189	0.0002807	0.0035	0.64		1516.76	1516.76		2.12	Si
SLV 12	fin.	199.23	-371	-0.0002049	0.0002807	0.0035	0.64		1512.56	1512.56		7.59	Si
SLV 14	ini.	-1261.48	-5283	-0.0021634	0.0002807	0.0035	0.64		1516.76	1516.76		1.2	Si
SLV 14	fin.	499.32	730	-0.000584	0.0002807	0.0035	0.64		1512.56	1512.56		3.03	Si
SLV 15	ini.	-1348.18	-5701	-0.0024766	0.0002807	0.0035	0.64		1516.76	1516.76		1.13	Si
SLV 15	fin.	542.64	658	-0.0006471	0.0002807	0.0035	0.64		1512.56	1512.56		2.79	Si
SLV 13	ini.	-1291.22	-5404	-0.0022654	0.0002807	0.0035	0.64		1516.76	1516.76		1.17	Si
SLV 13	fin.	515.71	768	-0.0006076	0.0002807	0.0035	0.64		1512.56	1512.56		2.93	Si
SLD 16	ini.	-759.88	-3440	-0.0009929	0.0002807	0.0035	0.64		1516.76	1516.76		2	Si
SLD 16	fin.	227.64	-49	-0.0002366	0.0002807	0.0035	0.64		1512.56	1512.56		6.64	Si
SLD 13	ini.	-747.9	-3362	-0.0009722	0.0002807	0.0035	0.64		1516.76	1516.76		2.03	Si
SLD 13	fin.	223.14	14	-0.0002315	0.0002807	0.0035	0.64		1512.56	1512.56		6.78	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-1318.44	-5580	-0.0023637	0.0002807	0.0035	0.64		1516.76	1516.76		1.15	Si
SLV 16	fin.	526.26	620	-0.000623	0.0002807	0.0035	0.64		1512.56	1512.56		2.87	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 14	ini.	-735.13	4913	0.64	0	260	5075	4025	1632	5335		1.09	Si
SLD 14	fin.	216.1	-9	0.64	0	260	5075	4025	1632	5335		593.43	Si
SLV 13	ini.	-1291.22	7171	0.64	0	260	5075	4025	1632	5335		0.74	No
SLV 13	fin.	515.71	1633	0.64	0	260	5075	4025	1632	5335		3.27	Si
SLV 14	ini.	-1261.48	7008	0.64	0	260	5075	4025	1632	5335		0.76	No
SLV 14	fin.	499.32	1566	0.64	0	260	5075	4025	1632	5335		3.41	Si
SLD 13	ini.	-747.9	4983	0.64	0	260	5075	4025	1632	5335		1.07	Si
SLD 13	fin.	223.14	20	0.64	0	260	5075	4025	1632	5335		272.07	Si
SLD 16	ini.	-759.88	5146	0.64	0	260	5075	4025	1632	5335		1.04	Si
SLD 16	fin.	227.64	-129	0.64	0	260	5075	4025	1632	5335		41.22	Si
SLV 11	ini.	-735.58	5490	0.64	0	260	5075	4025	1632	5335		0.97	No
SLV 11	fin.	209.7	-836	0.64	0	260	5075	4025	1632	5335		6.38	Si
SLD 15	ini.	-772.64	5216	0.64	0	260	5075	4025	1632	5335		1.02	Si
SLD 15	fin.	234.67	-101	0.64	0	260	5075	4025	1632	5335		52.91	Si
SLV 12	ini.	-716.58	5385	0.64	0	260	5075	4025	1632	5335		0.99	No
SLV 12	fin.	199.23	-879	0.64	0	260	5075	4025	1632	5335		6.07	Si
SLV 16	ini.	-1318.44	7538	0.64	0	260	5075	4025	1632	5335		0.71	No
SLV 16	fin.	526.26	1287	0.64	0	260	5075	4025	1632	5335		4.15	Si
SLV 15	ini.	-1348.18	7701	0.64	0	260	5075	4025	1632	5335		0.69	No
SLV 15	fin.	542.64	1353	0.64	0	260	5075	4025	1632	5335		3.94	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.125	SLV 15	Si
V_SLV	0.693	SLV 15	No
PF_SLU	2.747	SLU 83	Si
V_SLU	0.819	SLU 83	No

Trave di accoppiamento 66

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.463	-3.314	4.8	5.44	0.64	-5.963	-3.314	4.8	5.44	0.64	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	547.87	-1915	-0.000697	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.74	Si
SLU 84	fin.	-751.5	-1915	-0.0010449	0.0001872	0.0035	0.64		1504.96	1504.96	No	2	Si
SLU 76	ini.	555.1	-1784	-0.0007086	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.7	Si
SLU 76	fin.	-731.33	-1784	-0.0010077	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.06	Si
SLU 81	ini.	516.67	-1914	-0.0006478	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.91	Si
SLU 81	fin.	-726.33	-1914	-0.0009985	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.07	Si
SLU 80	ini.	540.67	-1833	-0.0006856	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.78	Si
SLU 80	fin.	-727.91	-1833	-0.0010014	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.07	Si
SLU 82	ini.	544.05	-1886	-0.000691	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.76	Si
SLU 82	fin.	-743.48	-1886	-0.00103	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.02	Si
SLU 83	ini.	520.49	-1944	-0.0006538	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.88	Si
SLU 83	fin.	-734.35	-1944	-0.0010132	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.05	Si
SLU 77	ini.	518.62	-1869	-0.0006508	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.89	Si
SLU 77	fin.	-712.54	-1869	-0.0009735	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.11	Si
SLU 78	ini.	546	-1840	-0.0006941	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.75	Si
SLU 78	fin.	-729.69	-1840	-0.0010047	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.06	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 73	ini.	551.28	-1755	-0.0007025	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.72	Si
SLU 73	fin.	-723.31	-1755	-0.000993	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.08	Si
SLU 75	ini.	542.18	-1811	-0.000688	0.0001872	0.0035	0.64		1500.92	1500.92	No	2.77	Si
SLU 75	fin.	-721.68	-1811	-0.0009901	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.09	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	547.87	-2494	0.64	0	260	3965	2683	1632	4225	No	1.69	Si
SLU 84	fin.	-751.5	-2704	0.64	0	260	3965	2683	1632	4225	No	1.56	Si
SLU 75	ini.	542.18	-2423	0.64	0	260	3965	2683	1632	4225	No	1.74	Si
SLU 75	fin.	-721.68	-2633	0.64	0	260	3965	2683	1632	4225	No	1.6	Si
SLU 76	ini.	555.1	-2468	0.64	0	260	3965	2683	1632	4225	No	1.71	Si
SLU 76	fin.	-731.33	-2678	0.64	0	260	3965	2683	1632	4225	No	1.58	Si
SLU 80	ini.	540.67	-2432	0.64	0	260	3965	2683	1632	4225	No	1.74	Si
SLU 80	fin.	-727.91	-2642	0.64	0	260	3965	2683	1632	4225	No	1.6	Si
SLU 73	ini.	551.28	-2444	0.64	0	260	3965	2683	1632	4225	No	1.73	Si
SLU 73	fin.	-723.31	-2654	0.64	0	260	3965	2683	1632	4225	No	1.59	Si
SLU 78	ini.	546	-2447	0.64	0	260	3965	2683	1632	4225	No	1.73	Si
SLU 78	fin.	-729.69	-2656	0.64	0	260	3965	2683	1632	4225	No	1.59	Si
SLU 77	ini.	518.62	-2357	0.64	0	260	3965	2683	1632	4225	No	1.79	Si
SLU 77	fin.	-712.54	-2567	0.64	0	260	3965	2683	1632	4225	No	1.65	Si
SLU 81	ini.	516.67	-2381	0.64	0	260	3965	2683	1632	4225	No	1.77	Si
SLU 81	fin.	-726.33	-2591	0.64	0	260	3965	2683	1632	4225	No	1.63	Si
SLU 83	ini.	520.49	-2405	0.64	0	260	3965	2683	1632	4225	No	1.76	Si
SLU 83	fin.	-734.35	-2614	0.64	0	260	3965	2683	1632	4225	No	1.62	Si
SLU 82	ini.	544.05	-2470	0.64	0	260	3965	2683	1632	4225	No	1.71	Si
SLU 82	fin.	-743.48	-2680	0.64	0	260	3965	2683	1632	4225	No	1.58	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	1303.07	1067	-0.0023197	0.0002807	0.0035	0.64		1512.56	1512.56		1.16	Si
SLV 2	fin.	-368.72	1171	-0.0004053	0.0002807	0.0035	0.64		1516.76	1516.76		4.11	Si
SLV 7	ini.	963.29	-680	-0.0013862	0.0002807	0.0035	0.64		1512.56	1512.56		1.57	Si
SLV 7	fin.	-705.67	-796	-0.0009006	0.0002807	0.0035	0.64		1516.76	1516.76		2.15	Si
SLV 8	ini.	979.95	-628	-0.0014218	0.0002807	0.0035	0.64		1512.56	1512.56		1.54	Si
SLV 8	fin.	-705.43	-743	-0.0009002	0.0002807	0.0035	0.64		1516.76	1516.76		2.15	Si
SLD 3	ini.	832.46	-305	-0.0011272	0.0002807	0.0035	0.64		1512.56	1512.56		1.82	Si
SLD 3	fin.	-496.34	-295	-0.000578	0.0002807	0.0035	0.64		1516.76	1516.76		3.06	Si
SLV 4	ini.	1484.31	1009	-0.0030938	0.0002807	0.0035	0.64		1512.56	1512.56		1.02	Si
SLV 4	fin.	-508.72	1032	-0.0005957	0.0002807	0.0035	0.64		1516.76	1516.76		2.98	Si
SLD 4	ini.	843.66	-269	-0.0011481	0.0002807	0.0035	0.64		1512.56	1512.56		1.79	Si
SLD 4	fin.	-496.18	-260	-0.0005777	0.0002807	0.0035	0.64		1516.76	1516.76		3.06	Si
SLV 3	ini.	1458.22	927	-0.0029681	0.0002807	0.0035	0.64		1512.56	1512.56		1.04	Si
SLV 3	fin.	-509.09	950	-0.0005962	0.0002807	0.0035	0.64		1516.76	1516.76		2.98	Si
SLD 2	ini.	765.92	-243	-0.001007	0.0002807	0.0035	0.64		1512.56	1512.56		1.97	Si
SLD 2	fin.	-436.27	-198	-0.0004945	0.0002807	0.0035	0.64		1516.76	1516.76		3.48	Si
SLV 1	ini.	1276.98	985	-0.0022271	0.0002807	0.0035	0.64		1512.56	1512.56		1.18	Si
SLV 1	fin.	-369.08	1088	-0.0004058	0.0002807	0.0035	0.64		1516.76	1516.76		4.11	Si
SLD 1	ini.	754.72	-278	-0.0009874	0.0002807	0.0035	0.64		1512.56	1512.56		2	Si
SLD 1	fin.	-436.43	-234	-0.0004947	0.0002807	0.0035	0.64		1516.76	1516.76		3.48	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 8	ini.	979.95	-2503	0.64	0	390	3965	4025	1632	4354		1.74	Si
SLV 8	fin.	-705.43	-3005	0.64	0	390	3965	4025	1632	4354		1.45	Si
SLV 4	ini.	1484.31	-3634	0.64	0	390	3965	4025	1632	4354		1.2	Si
SLV 4	fin.	-508.72	-3826	0.64	0	390	3965	4025	1632	4354		1.14	Si
SLD 2	ini.	765.92	-2406	0.64	0	390	3965	4025	1632	4354		1.81	Si
SLD 2	fin.	-436.27	-2488	0.64	0	390	3965	4025	1632	4354		1.75	Si
SLD 3	ini.	832.46	-2461	0.64	0	390	3965	4025	1632	4354		1.77	Si
SLD 3	fin.	-496.34	-2635	0.64	0	390	3965	4025	1632	4354		1.65	Si
SLV 7	ini.	963.29	-2470	0.64	0	390	3965	4025	1632	4354		1.76	Si
SLV 7	fin.	-705.67	-2972	0.64	0	390	3965	4025	1632	4354		1.46	Si
SLV 1	ini.	1276.98	-3406	0.64	0	390	3965	4025	1632	4354		1.28	Si
SLV 1	fin.	-369.08	-3379	0.64	0	390	3965	4025	1632	4354		1.29	Si
SLV 3	ini.	1458.22	-3583	0.64	0	390	3965	4025	1632	4354		1.22	Si
SLV 3	fin.	-509.09	-3775	0.64	0	390	3965	4025	1632	4354		1.15	Si
SLV 2	ini.	1303.07	-3458	0.64	0	390	3965	4025	1632	4354		1.26	Si
SLV 2	fin.	-368.72	-3430	0.64	0	390	3965	4025	1632	4354		1.27	Si
SLD 1	ini.	754.72	-2384	0.64	0	390	3965	4025	1632	4354		1.83	Si
SLD 1	fin.	-436.43	-2466	0.64	0	390	3965	4025	1632	4354		1.77	Si
SLD 4	ini.	843.66	-2484	0.64	0	390	3965	4025	1632	4354		1.75	Si
SLD 4	fin.	-496.18	-2657	0.64	0	390	3965	4025	1632	4354		1.64	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.019	SLV 4	Si
V_SLV	1.138	SLV 4	Si
PF_SLU	2.003	SLU 84	Si
V_SLU	1.563	SLU 84	Si

Trave di accoppiamento 67

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.233	-3.314	2	2.9	0.9	-3.233	-3.314	2	2.9	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	262.26	-1538	-0.0001355	0.0001872	0.0035	0.9		2959	2959	No	11.28	Si
SLU 83	fin.	380.28	-1584	-0.0002026	0.0001872	0.0035	0.9		2959	2959	No	7.78	Si
SLU 62	ini.	241.78	-1394	-0.0001243	0.0001872	0.0035	0.9		2959	2959	No	12.24	Si
SLU 62	fin.	338.64	-1424	-0.0001784	0.0001872	0.0035	0.9		2959	2959	No	8.74	Si
SLU 80	ini.	234.58	-1337	-0.0001204	0.0001872	0.0035	0.9		2959	2959	No	12.61	Si
SLU 80	fin.	341.88	-1406	-0.0001802	0.0001872	0.0035	0.9		2959	2959	No	8.66	Si
SLU 81	ini.	260.35	-1523	-0.0001345	0.0001872	0.0035	0.9		2959	2959	No	11.37	Si
SLU 81	fin.	374.33	-1564	-0.0001991	0.0001872	0.0035	0.9		2959	2959	No	7.9	Si
SLU 74	ini.	273.18	-1512	-0.0001415	0.0001872	0.0035	0.9		2959	2959	No	10.83	Si
SLU 74	fin.	351.77	-1508	-0.0001859	0.0001872	0.0035	0.9		2959	2959	No	8.41	Si
SLU 77	ini.	275.1	-1526	-0.0001426	0.0001872	0.0035	0.9		2959	2959	No	10.76	Si
SLU 77	fin.	357.72	-1528	-0.0001894	0.0001872	0.0035	0.9		2959	2959	No	8.27	Si
SLU 79	ini.	270.48	-1512	-0.0001401	0.0001872	0.0035	0.9		2959	2959	No	10.94	Si
SLU 79	fin.	356.37	-1519	-0.0001886	0.0001872	0.0035	0.9		2959	2959	No	8.3	Si
SLU 84	ini.	226.36	-1363	-0.000116	0.0001872	0.0035	0.9		2959	2959	No	13.07	Si
SLU 84	fin.	365.79	-1471	-0.0001941	0.0001872	0.0035	0.9		2959	2959	No	8.09	Si
SLU 82	ini.	224.44	-1348	-0.000115	0.0001872	0.0035	0.9		2959	2959	No	13.18	Si
SLU 82	fin.	359.84	-1451	-0.0001906	0.0001872	0.0035	0.9		2959	2959	No	8.22	Si
SLU 78	ini.	239.19	-1351	-0.0001229	0.0001872	0.0035	0.9		2959	2959	No	12.37	Si
SLU 78	fin.	343.23	-1415	-0.000181	0.0001872	0.0035	0.9		2959	2959	No	8.62	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	234.58	-488	0.9	0	329	7137	3773	2295	6068	No	12.44	Si
SLU 80	fin.	341.88	1308	0.9	0	329	7137	3773	2295	6068	No	4.64	Si
SLU 84	ini.	226.36	-445	0.9	0	329	7137	3773	2295	6068	No	13.62	Si
SLU 84	fin.	365.79	1389	0.9	0	329	7137	3773	2295	6068	No	4.37	Si
SLU 74	ini.	273.18	-612	0.9	0	329	7137	3773	2295	6068	No	9.91	Si
SLU 74	fin.	351.77	1322	0.9	0	329	7137	3773	2295	6068	No	4.59	Si
SLU 78	ini.	239.19	-504	0.9	0	329	7137	3773	2295	6068	No	12.03	Si
SLU 78	fin.	343.23	1319	0.9	0	329	7137	3773	2295	6068	No	4.6	Si
SLU 81	ini.	260.35	-553	0.9	0	329	7137	3773	2295	6068	No	10.97	Si
SLU 81	fin.	374.33	1391	0.9	0	329	7137	3773	2295	6068	No	4.36	Si
SLU 83	ini.	262.26	-563	0.9	0	329	7137	3773	2295	6068	No	10.78	Si
SLU 83	fin.	380.28	1422	0.9	0	329	7137	3773	2295	6068	No	4.27	Si
SLU 75	ini.	237.28	-495	0.9	0	329	7137	3773	2295	6068	No	12.26	Si
SLU 75	fin.	337.28	1289	0.9	0	329	7137	3773	2295	6068	No	4.71	Si
SLU 77	ini.	275.1	-622	0.9	0	329	7137	3773	2295	6068	No	9.76	Si
SLU 77	fin.	357.72	1352	0.9	0	329	7137	3773	2295	6068	No	4.49	Si
SLU 79	ini.	270.48	-605	0.9	0	329	7137	3773	2295	6068	No	10.03	Si
SLU 79	fin.	356.37	1341	0.9	0	329	7137	3773	2295	6068	No	4.53	Si
SLU 82	ini.	224.44	-436	0.9	0	329	7137	3773	2295	6068	No	13.92	Si
SLU 82	fin.	359.84	1358	0.9	0	329	7137	3773	2295	6068	No	4.47	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	1565.93	-2120	-0.0010537	0.0002807	0.0035	0.9		2989.59	2989.59		1.91	Si
SLV 1	fin.	-1170.13	1780	-0.0007198	0.0002807	0.0035	0.9		2995.37	2995.37		2.56	Si
SLV 15	ini.	-1220.65	73	-0.0007593	0.0002807	0.0035	0.9		2995.37	2995.37		2.45	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	fin.	1688.81	-3925	-0.0011684	0.0002807	0.0035	0.9		2989.59	2989.59		1.77	Si
SLV 11	ini.	-2.99	-2287	-0.0000015	0.0002807	0.0035	0.9		2995.37	2995.37		1001.95	Si
SLV 11	fin.	899.55	-3789	-0.0005219	0.0002807	0.0035	0.9		2989.59	2989.59		3.32	Si
SLV 13	ini.	-1372.08	1113	-0.0008824	0.0002807	0.0035	0.9		2995.37	2995.37		2.18	Si
SLV 13	fin.	1540.58	-2682	-0.0010308	0.0002807	0.0035	0.9		2989.59	2989.59		1.94	Si
SLV 16	ini.	-1150.46	-8	-0.0007046	0.0002807	0.0035	0.9		2995.37	2995.37		2.6	Si
SLV 16	fin.	1614.45	-3791	-0.0010983	0.0002807	0.0035	0.9		2989.59	2989.59		1.85	Si
SLV 2	ini.	1636.12	-2201	-0.0011185	0.0002807	0.0035	0.9		2989.59	2989.59		1.83	Si
SLV 2	fin.	-1244.49	1914	-0.0007782	0.0002807	0.0035	0.9		2995.37	2995.37		2.41	Si
SLV 14	ini.	-1301.89	1032	-0.0008245	0.0002807	0.0035	0.9		2995.37	2995.37		2.3	Si
SLV 14	fin.	1466.22	-2548	-0.000965	0.0002807	0.0035	0.9		2989.59	2989.59		2.04	Si
SLV 8	ini.	923.24	-3309	-0.0005385	0.0002807	0.0035	0.9		2989.59	2989.59		3.24	Si
SLV 8	fin.	38.85	-2365	-0.0000191	0.0002807	0.0035	0.9		2989.59	2989.59		76.95	Si
SLV 4	ini.	1787.55	-3242	-0.0012654	0.0002807	0.0035	0.9		2989.59	2989.59		1.67	Si
SLV 4	fin.	-1096.27	671	-0.0006634	0.0002807	0.0035	0.9		2995.37	2995.37		2.73	Si
SLV 3	ini.	1717.36	-3161	-0.001196	0.0002807	0.0035	0.9		2989.59	2989.59		1.74	Si
SLV 3	fin.	-1021.91	537	-0.0006082	0.0002807	0.0035	0.9		2995.37	2995.37		2.93	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	1717.36	-5325	0.9	0	493	7137	5660	2295	7630		1.43	Si
SLV 3	fin.	-1021.91	-3354	0.9	0	493	7137	5660	2295	7630		2.27	Si
SLV 2	ini.	1636.12	-5177	0.9	0	493	7137	5660	2295	7630		1.47	Si
SLV 2	fin.	-1244.49	-4419	0.9	0	493	7137	5660	2295	7630		1.73	Si
SLV 16	ini.	-1150.46	4001	0.9	0	493	7137	5660	2295	7630		1.91	Si
SLV 16	fin.	1614.45	5799	0.9	0	493	7137	5660	2295	7630		1.32	Si
SLV 13	ini.	-1372.08	4587	0.9	0	493	7137	5660	2295	7630		1.66	Si
SLV 13	fin.	1540.58	5255	0.9	0	493	7137	5660	2295	7630		1.45	Si
SLV 15	ini.	-1220.65	4220	0.9	0	493	7137	5660	2295	7630		1.81	Si
SLV 15	fin.	1688.81	6059	0.9	0	493	7137	5660	2295	7630		1.26	Si
SLV 1	ini.	1565.93	-4957	0.9	0	493	7137	5660	2295	7630		1.54	Si
SLV 1	fin.	-1170.13	-4159	0.9	0	493	7137	5660	2295	7630		1.83	Si
SLV 4	ini.	1787.55	-5544	0.9	0	493	7137	5660	2295	7630		1.38	Si
SLV 4	fin.	-1096.27	-3615	0.9	0	493	7137	5660	2295	7630		2.11	Si
SLV 14	ini.	-1301.89	4368	0.9	0	493	7137	5660	2295	7630		1.75	Si
SLV 14	fin.	1466.22	4994	0.9	0	493	7137	5660	2295	7630		1.53	Si
SLV 11	ini.	-2.99	411	0.9	0	493	7137	5660	2295	7630		18.58	Si
SLV 11	fin.	899.55	3656	0.9	0	493	7137	5660	2295	7630		2.09	Si
SLV 12	ini.	41.84	271	0.9	0	493	7137	5660	2295	7630		28.18	Si
SLV 12	fin.	852.06	3490	0.9	0	493	7137	5660	2295	7630		2.19	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.672	SLV 4	Si
V_SLV	1.259	SLV 15	Si
PF_SLU	7.781	SLU 83	Si
V_SLU	4.269	SLU 83	Si

Trave di accoppiamento 68

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.233	-3.314	4.8	5.44	0.64	-3.233	-3.314	4.8	5.44	0.64	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-161.01	-867	-0.0001663	0.0001872	0.0035	0.64		1504.96	1504.96	No	9.35	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	fin.	-529.85	-1720	-0.0006663	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.84	Si
SLU 79	ini.	-148.23	-847	-0.0001521	0.0001872	0.0035	0.64		1504.96	1504.96	No	10.15	Si
SLU 79	fin.	-539.85	-1742	-0.0006821	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.79	Si
SLU 84	ini.	-164.54	-883	-0.0001702	0.0001872	0.0035	0.64		1504.96	1504.96	No	9.15	Si
SLU 84	fin.	-535.42	-1742	-0.0006751	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.81	Si
SLU 75	ini.	-143	-822	-0.0001464	0.0001872	0.0035	0.64		1504.96	1504.96	No	10.52	Si
SLU 75	fin.	-530.92	-1707	-0.000668	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.83	Si
SLU 83	ini.	-166.22	-899	-0.0001721	0.0001872	0.0035	0.64		1504.96	1504.96	No	9.05	Si
SLU 83	fin.	-545.19	-1775	-0.0006905	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.76	Si
SLU 81	ini.	-162.69	-883	-0.0001682	0.0001872	0.0035	0.64		1504.96	1504.96	No	9.25	Si
SLU 81	fin.	-539.62	-1753	-0.0006817	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.79	Si
SLU 78	ini.	-146.53	-838	-0.0001502	0.0001872	0.0035	0.64		1504.96	1504.96	No	10.27	Si
SLU 78	fin.	-536.49	-1729	-0.0006768	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.81	Si
SLU 74	ini.	-144.68	-838	-0.0001482	0.0001872	0.0035	0.64		1504.96	1504.96	No	10.4	Si
SLU 74	fin.	-540.68	-1740	-0.0006834	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.78	Si
SLU 80	ini.	-146.55	-831	-0.0001503	0.0001872	0.0035	0.64		1504.96	1504.96	No	10.27	Si
SLU 80	fin.	-530.08	-1709	-0.0006667	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.84	Si
SLU 77	ini.	-148.21	-853	-0.0001521	0.0001872	0.0035	0.64		1504.96	1504.96	No	10.15	Si
SLU 77	fin.	-546.26	-1761	-0.0006922	0.0001872	0.0035	0.64		1504.96	1504.96	No	2.76	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-146.55	954	0.64	0	173	5075	2683	1632	4315	No	4.52	Si
SLU 80	fin.	-530.08	-2330	0.64	0	173	5075	2683	1632	4315	No	1.85	Si
SLU 77	ini.	-148.21	965	0.64	0	173	5075	2683	1632	4315	No	4.47	Si
SLU 77	fin.	-546.26	-2392	0.64	0	173	5075	2683	1632	4315	No	1.8	Si
SLU 82	ini.	-161.01	1016	0.64	0	173	5075	2683	1632	4315	No	4.25	Si
SLU 82	fin.	-529.85	-2347	0.64	0	173	5075	2683	1632	4315	No	1.84	Si
SLU 78	ini.	-146.53	957	0.64	0	173	5075	2683	1632	4315	No	4.51	Si
SLU 78	fin.	-536.49	-2355	0.64	0	173	5075	2683	1632	4315	No	1.83	Si
SLU 75	ini.	-143	941	0.64	0	173	5075	2683	1632	4315	No	4.59	Si
SLU 75	fin.	-530.92	-2330	0.64	0	173	5075	2683	1632	4315	No	1.85	Si
SLU 84	ini.	-164.54	1033	0.64	0	173	5075	2683	1632	4315	No	4.18	Si
SLU 84	fin.	-535.42	-2373	0.64	0	173	5075	2683	1632	4315	No	1.82	Si
SLU 79	ini.	-148.23	962	0.64	0	173	5075	2683	1632	4315	No	4.49	Si
SLU 79	fin.	-539.85	-2366	0.64	0	173	5075	2683	1632	4315	No	1.82	Si
SLU 81	ini.	-162.69	1025	0.64	0	173	5075	2683	1632	4315	No	4.21	Si
SLU 81	fin.	-539.62	-2384	0.64	0	173	5075	2683	1632	4315	No	1.81	Si
SLU 74	ini.	-144.68	949	0.64	0	173	5075	2683	1632	4315	No	4.55	Si
SLU 74	fin.	-540.68	-2367	0.64	0	173	5075	2683	1632	4315	No	1.82	Si
SLU 83	ini.	-166.22	1041	0.64	0	173	5075	2683	1632	4315	No	4.14	Si
SLU 83	fin.	-545.19	-2409	0.64	0	173	5075	2683	1632	4315	No	1.79	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-1122.98	-2430	-0.0017535	0.0002807	0.0035	0.64		1516.76	1516.76		1.35	Si
SLV 14	fin.	762.39	1042	-0.0010008	0.0002807	0.0035	0.64		1512.56	1512.56		1.98	Si
SLV 13	ini.	-1179.2	-2559	-0.0019078	0.0002807	0.0035	0.64		1516.76	1516.76		1.29	Si
SLV 13	fin.	801.44	1102	-0.0010703	0.0002807	0.0035	0.64		1512.56	1512.56		1.89	Si
SLV 1	ini.	1087.51	1721	-0.0016703	0.0002807	0.0035	0.64		1512.56	1512.56		1.39	Si
SLV 1	fin.	-1443.45	-3016	-0.0028813	0.0002807	0.0035	0.64		1516.76	1516.76		1.05	Si
SLV 15	ini.	-1302.48	-2904	-0.0023055	0.0002807	0.0035	0.64		1516.76	1516.76		1.16	Si
SLV 15	fin.	718.28	671	-0.0009249	0.0002807	0.0035	0.64		1512.56	1512.56		2.11	Si
SLV 16	ini.	-1246.25	-2775	-0.0021132	0.0002807	0.0035	0.64		1516.76	1516.76		1.22	Si
SLV 16	fin.	679.23	612	-0.0008599	0.0002807	0.0035	0.64		1512.56	1512.56		2.23	Si
SLV 2	ini.	1143.74	1849	-0.0018167	0.0002807	0.0035	0.64		1512.56	1512.56		1.32	Si
SLV 2	fin.	-1482.5	-3075	-0.0030665	0.0002807	0.0035	0.64		1516.76	1516.76		1.02	Si
SLV 4	ini.	1020.46	1505	-0.0015113	0.0002807	0.0035	0.64		1512.56	1512.56		1.48	Si
SLV 4	fin.	-1565.66	-3506	-0.0034647	0.0002807	0.0035	0.64		1516.76	1516.76		0.97	No
SLD 4	ini.	390.65	341	-0.000435	0.0002807	0.0035	0.64		1512.56	1512.56		3.87	Si
SLD 4	fin.	-888.49	-2188	-0.0012296	0.0002807	0.0035	0.64		1516.76	1516.76		1.71	Si
SLV 3	ini.	964.24	1376	-0.0013882	0.0002807	0.0035	0.64		1512.56	1512.56		1.57	Si
SLV 3	fin.	-1526.61	-3446	-0.00328	0.0002807	0.0035	0.64		1516.76	1516.76		0.99	No
SLD 3	ini.	366.52	286	-0.0004037	0.0002807	0.0035	0.64		1512.56	1512.56		4.13	Si
SLD 3	fin.	-871.73	-2163	-0.0011972	0.0002807	0.0035	0.64		1516.76	1516.76		1.74	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	964.24	-2791	0.64	0	260	5075	4025	1632	5335		1.91	Si
SLV 3	fin.	-1526.61	-5490	0.64	0	260	5075	4025	1632	5335		0.97	No
SLV 1	ini.	1087.51	-3150	0.64	0	260	5075	4025	1632	5335		1.69	Si
SLV 1	fin.	-1443.45	-5021	0.64	0	260	5075	4025	1632	5335		1.06	Si
SLV 15	ini.	-1302.48	4510	0.64	0	260	5075	4025	1632	5335		1.18	Si
SLV 15	fin.	718.28	1838	0.64	0	260	5075	4025	1632	5335		2.9	Si
SLV 13	ini.	-1179.2	4151	0.64	0	260	5075	4025	1632	5335		1.29	Si
SLV 13	fin.	801.44	2306	0.64	0	260	5075	4025	1632	5335		2.31	Si
SLV 16	ini.	-1246.25	4305	0.64	0	260	5075	4025	1632	5335		1.24	Si
SLV 16	fin.	679.23	1723	0.64	0	260	5075	4025	1632	5335		3.1	Si
SLV 2	ini.	1143.74	-3354	0.64	0	260	5075	4025	1632	5335		1.59	Si
SLV 2	fin.	-1482.5	-5136	0.64	0	260	5075	4025	1632	5335		1.04	Si
SLV 8	ini.	73.14	15	0.64	0	260	5075	4025	1632	5335		350.58	Si
SLV 8	fin.	-869.92	-3566	0.64	0	260	5075	4025	1632	5335		1.5	Si
SLV 7	ini.	37.23	146	0.64	0	260	5075	4025	1632	5335		36.61	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 7	fin.	-844.98	-3492	0.64	0	260	5075	4025	1632	5335		1.53	Si
SLV 4	ini.	1020.46	-2996	0.64	0	260	5075	4025	1632	5335		1.78	Si
SLV 4	fin.	-1565.66	-5605	0.64	0	260	5075	4025	1632	5335		0.95	No
SLV 14	ini.	-1122.98	3946	0.64	0	260	5075	4025	1632	5335		1.35	Si
SLV 14	fin.	762.39	2191	0.64	0	260	5075	4025	1632	5335		2.43	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.969	SLV 4	No
V_SLV	0.952	SLV 4	No
PF_SLU	2.755	SLU 77	Si
V_SLU	1.791	SLU 83	Si

Trave di accoppiamento 69

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.013	5.826	2	2.9	0.9	-3.013	5.826	2	2.9	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	940.42	-2516	-0.0005849	0.0001872	0.0035	0.9		2959	2959	No	3.15	Si
SLU 80	fin.	-290.39	-1571	-0.0001508	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.21	Si
SLU 76	ini.	927.29	-2483	-0.0005749	0.0001872	0.0035	0.9		2959	2959	No	3.19	Si
SLU 76	fin.	-287.05	-1550	-0.0001489	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.33	Si
SLU 84	ini.	939.71	-2554	-0.0005844	0.0001872	0.0035	0.9		2959	2959	No	3.15	Si
SLU 84	fin.	-275.87	-1623	-0.0001427	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.75	Si
SLU 83	ini.	939.87	-2553	-0.0005845	0.0001872	0.0035	0.9		2959	2959	No	3.15	Si
SLU 83	fin.	-276.42	-1621	-0.0001431	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.73	Si
SLU 74	ini.	929.98	-2496	-0.000577	0.0001872	0.0035	0.9		2959	2959	No	3.18	Si
SLU 74	fin.	-284.82	-1563	-0.0001477	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.41	Si
SLU 77	ini.	943	-2530	-0.0005869	0.0001872	0.0035	0.9		2959	2959	No	3.14	Si
SLU 77	fin.	-287.79	-1585	-0.0001493	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.3	Si
SLU 78	ini.	942.84	-2531	-0.0005868	0.0001872	0.0035	0.9		2959	2959	No	3.14	Si
SLU 78	fin.	-287.23	-1586	-0.000149	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.32	Si
SLU 81	ini.	926.85	-2519	-0.0005746	0.0001872	0.0035	0.9		2959	2959	No	3.19	Si
SLU 81	fin.	-273.46	-1600	-0.0001414	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.84	Si
SLU 79	ini.	940.58	-2515	-0.0005851	0.0001872	0.0035	0.9		2959	2959	No	3.15	Si
SLU 79	fin.	-290.94	-1569	-0.0001511	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.19	Si
SLU 75	ini.	929.82	-2497	-0.0005768	0.0001872	0.0035	0.9		2959	2959	No	3.18	Si
SLU 75	fin.	-284.27	-1565	-0.0001474	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.43	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	939.71	-1827	0.9	0	329	7137	3773	2295	6068	No	3.32	Si
SLU 84	fin.	-275.87	-1369	0.9	0	329	7137	3773	2295	6068	No	4.43	Si
SLU 75	ini.	929.82	-1818	0.9	0	329	7137	3773	2295	6068	No	3.34	Si
SLU 75	fin.	-284.27	-1379	0.9	0	329	7137	3773	2295	6068	No	4.4	Si
SLU 77	ini.	943	-1849	0.9	0	329	7137	3773	2295	6068	No	3.28	Si
SLU 77	fin.	-287.79	-1392	0.9	0	329	7137	3773	2295	6068	No	4.36	Si
SLU 78	ini.	942.84	-1848	0.9	0	329	7137	3773	2295	6068	No	3.28	Si
SLU 78	fin.	-287.23	-1390	0.9	0	329	7137	3773	2295	6068	No	4.36	Si
SLU 74	ini.	929.98	-1818	0.9	0	329	7137	3773	2295	6068	No	3.34	Si
SLU 74	fin.	-284.82	-1381	0.9	0	329	7137	3773	2295	6068	No	4.4	Si
SLU 79	ini.	940.58	-1844	0.9	0	329	7137	3773	2295	6068	No	3.29	Si
SLU 79	fin.	-290.94	-1400	0.9	0	329	7137	3773	2295	6068	No	4.34	Si
SLU 69	ini.	914.28	-1816	0.9	0	329	7137	3773	2295	6068	No	3.34	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 69	fin.	-314.75	-1432	0.9	0	329	7137	3773	2295	6068	No	4.24	Si
SLU 70	ini.	914.12	-1815	0.9	0	329	7137	3773	2295	6068	No	3.34	Si
SLU 70	fin.	-314.19	-1430	0.9	0	329	7137	3773	2295	6068	No	4.24	Si
SLU 83	ini.	939.87	-1828	0.9	0	329	7137	3773	2295	6068	No	3.32	Si
SLU 83	fin.	-276.42	-1371	0.9	0	329	7137	3773	2295	6068	No	4.43	Si
SLU 80	ini.	940.42	-1844	0.9	0	329	7137	3773	2295	6068	No	3.29	Si
SLU 80	fin.	-290.39	-1398	0.9	0	329	7137	3773	2295	6068	No	4.34	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	1751.31	-2853	-0.0012293	0.0002807	0.0035	0.9		2989.59	2989.59		1.71	Si
SLV 2	fin.	-1200.17	-593	-0.0007432	0.0002807	0.0035	0.9		2995.37	2995.37		2.5	Si
SLD 1	ini.	1166.94	-2243	-0.000719	0.0002807	0.0035	0.9		2989.59	2989.59		2.56	Si
SLD 1	fin.	-680.18	-822	-0.0003745	0.0002807	0.0035	0.9		2995.37	2995.37		4.4	Si
SLD 4	ini.	1198.97	-2176	-0.000744	0.0002807	0.0035	0.9		2989.59	2989.59		2.49	Si
SLD 4	fin.	-747.82	-602	-0.0004181	0.0002807	0.0035	0.9		2995.37	2995.37		4.01	Si
SLV 3	ini.	1955.05	-2762	-0.0014417	0.0002807	0.0035	0.9		2989.59	2989.59		1.53	Si
SLV 3	fin.	-1503.24	79	-0.0009951	0.0002807	0.0035	0.9		2995.37	2995.37		1.99	Si
SLV 4	ini.	1889.65	-2730	-0.0013709	0.0002807	0.0035	0.9		2989.59	2989.59		1.58	Si
SLV 4	fin.	-1429.38	-4	-0.0009309	0.0002807	0.0035	0.9		2995.37	2995.37		2.1	Si
SLD 3	ini.	1227.04	-2190	-0.0007662	0.0002807	0.0035	0.9		2989.59	2989.59		2.44	Si
SLD 3	fin.	-779.52	-566	-0.000439	0.0002807	0.0035	0.9		2995.37	2995.37		3.84	Si
SLV 7	ini.	1284.9	-1881	-0.0008126	0.0002807	0.0035	0.9		2989.59	2989.59		2.33	Si
SLV 7	fin.	-977.39	195	-0.0005759	0.0002807	0.0035	0.9		2995.37	2995.37		3.06	Si
SLV 1	ini.	1816.71	-2885	-0.001295	0.0002807	0.0035	0.9		2989.59	2989.59		1.65	Si
SLV 1	fin.	-1274.03	-510	-0.0008019	0.0002807	0.0035	0.9		2995.37	2995.37		2.35	Si
SLV 8	ini.	1243.13	-1861	-0.000779	0.0002807	0.0035	0.9		2989.59	2989.59		2.4	Si
SLV 8	fin.	-930.22	142	-0.0005422	0.0002807	0.0035	0.9		2995.37	2995.37		3.22	Si
SLD 2	ini.	1138.87	-2229	-0.0006974	0.0002807	0.0035	0.9		2989.59	2989.59		2.63	Si
SLD 2	fin.	-648.47	-858	-0.0003545	0.0002807	0.0035	0.9		2995.37	2995.37		4.62	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 7	ini.	1284.9	-2985	0.9	0	493	7137	5660	2295	7630		2.56	Si
SLV 7	fin.	-977.39	-3821	0.9	0	493	7137	5660	2295	7630		2	Si
SLD 4	ini.	1198.97	-2781	0.9	0	493	7137	5660	2295	7630		2.74	Si
SLD 4	fin.	-747.82	-2550	0.9	0	493	7137	5660	2295	7630		2.99	Si
SLV 2	ini.	1751.31	-4341	0.9	0	493	7137	5660	2295	7630		1.76	Si
SLV 2	fin.	-1200.17	-3444	0.9	0	493	7137	5660	2295	7630		2.22	Si
SLV 3	ini.	1955.05	-4881	0.9	0	493	7137	5660	2295	7630		1.56	Si
SLV 3	fin.	-1503.24	-4711	0.9	0	493	7137	5660	2295	7630		1.62	Si
SLV 1	ini.	1816.71	-4518	0.9	0	493	7137	5660	2295	7630		1.69	Si
SLV 1	fin.	-1274.03	-3648	0.9	0	493	7137	5660	2295	7630		2.09	Si
SLV 4	ini.	1889.65	-4703	0.9	0	493	7137	5660	2295	7630		1.62	Si
SLV 4	fin.	-1429.38	-4507	0.9	0	493	7137	5660	2295	7630		1.69	Si
SLD 3	ini.	1227.04	-2858	0.9	0	493	7137	5660	2295	7630		2.67	Si
SLD 3	fin.	-779.52	-2638	0.9	0	493	7137	5660	2295	7630		2.89	Si
SLD 2	ini.	1138.87	-2624	0.9	0	493	7137	5660	2295	7630		2.91	Si
SLD 2	fin.	-648.47	-2094	0.9	0	493	7137	5660	2295	7630		3.64	Si
SLV 8	ini.	1243.13	-2872	0.9	0	493	7137	5660	2295	7630		2.66	Si
SLV 8	fin.	-930.22	-3690	0.9	0	493	7137	5660	2295	7630		2.07	Si
SLD 1	ini.	1166.94	-2700	0.9	0	493	7137	5660	2295	7630		2.83	Si
SLD 1	fin.	-680.18	-2181	0.9	0	493	7137	5660	2295	7630		3.5	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.529	SLV 3	Si
V_SLV	1.563	SLV 3	Si
PF_SLU	3.138	SLU 77	Si
V_SLU	3.282	SLU 77	Si

Trave di accoppiamento 70

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.013	5.826	4.8	5.44	0.64	-3.013	5.826	4.8	5.44	0.64	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	234.34	-448	-0.0002527	0.0001872	0.0035	0.64		1500.92	1500.92	No	6.4	Si
SLU 74	fin.	-883.09	-2011	-0.0013047	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.7	Si
SLU 79	ini.	239.26	-448	-0.0002587	0.0001872	0.0035	0.64		1500.92	1500.92	No	6.27	Si
SLU 79	fin.	-892.48	-2030	-0.0013245	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.69	Si
SLU 82	ini.	223.62	-472	-0.0002396	0.0001872	0.0035	0.64		1500.92	1500.92	No	6.71	Si
SLU 82	fin.	-888.43	-2030	-0.001316	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.69	Si
SLU 80	ini.	238.58	-451	-0.0002579	0.0001872	0.0035	0.64		1500.92	1500.92	No	6.29	Si
SLU 80	fin.	-893.47	-2034	-0.0013266	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.68	Si
SLU 83	ini.	226.64	-479	-0.0002433	0.0001872	0.0035	0.64		1500.92	1500.92	No	6.62	Si
SLU 83	fin.	-899.38	-2057	-0.0013392	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.67	Si
SLU 81	ini.	224.3	-469	-0.0002405	0.0001872	0.0035	0.64		1500.92	1500.92	No	6.69	Si
SLU 81	fin.	-887.44	-2027	-0.0013139	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.7	Si
SLU 75	ini.	233.66	-451	-0.0002518	0.0001872	0.0035	0.64		1500.92	1500.92	No	6.42	Si
SLU 75	fin.	-884.09	-2014	-0.0013068	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.7	Si
SLU 77	ini.	236.67	-458	-0.0002555	0.0001872	0.0035	0.64		1500.92	1500.92	No	6.34	Si
SLU 77	fin.	-895.04	-2042	-0.00133	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.68	Si
SLU 78	ini.	235.99	-461	-0.0002547	0.0001872	0.0035	0.64		1500.92	1500.92	No	6.36	Si
SLU 78	fin.	-896.03	-2045	-0.0013321	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.68	Si
SLU 84	ini.	225.95	-482	-0.0002425	0.0001872	0.0035	0.64		1500.92	1500.92	No	6.64	Si
SLU 84	fin.	-900.38	-2060	-0.0013414	0.0001872	0.0035	0.64		1504.96	1504.96	No	1.67	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	233.66	-286	0.64	0	173	5075	2683	1632	4315	No	15.08	Si
SLU 75	fin.	-884.09	-2923	0.64	0	173	5075	2683	1632	4315	No	1.48	Si
SLU 80	ini.	238.58	-299	0.64	0	173	5075	2683	1632	4315	No	14.45	Si
SLU 80	fin.	-893.47	-2951	0.64	0	173	5075	2683	1632	4315	No	1.46	Si
SLU 82	ini.	223.62	-245	0.64	0	173	5075	2683	1632	4315	No	17.64	Si
SLU 82	fin.	-888.43	-2949	0.64	0	173	5075	2683	1632	4315	No	1.46	Si
SLU 79	ini.	239.26	-302	0.64	0	173	5075	2683	1632	4315	No	14.3	Si
SLU 79	fin.	-892.48	-2947	0.64	0	173	5075	2683	1632	4315	No	1.46	Si
SLU 77	ini.	236.67	-292	0.64	0	173	5075	2683	1632	4315	No	14.77	Si
SLU 77	fin.	-895.04	-2957	0.64	0	173	5075	2683	1632	4315	No	1.46	Si
SLU 81	ini.	224.3	-248	0.64	0	173	5075	2683	1632	4315	No	17.41	Si
SLU 81	fin.	-887.44	-2945	0.64	0	173	5075	2683	1632	4315	No	1.47	Si
SLU 74	ini.	234.34	-289	0.64	0	173	5075	2683	1632	4315	No	14.91	Si
SLU 74	fin.	-883.09	-2919	0.64	0	173	5075	2683	1632	4315	No	1.48	Si
SLU 83	ini.	226.64	-251	0.64	0	173	5075	2683	1632	4315	No	17.22	Si
SLU 83	fin.	-899.38	-2983	0.64	0	173	5075	2683	1632	4315	No	1.45	Si
SLU 84	ini.	225.95	-247	0.64	0	173	5075	2683	1632	4315	No	17.44	Si
SLU 84	fin.	-900.38	-2987	0.64	0	173	5075	2683	1632	4315	No	1.44	Si
SLU 78	ini.	235.99	-289	0.64	0	173	5075	2683	1632	4315	No	14.93	Si
SLU 78	fin.	-896.03	-2961	0.64	0	173	5075	2683	1632	4315	No	1.46	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 6	ini.	221.89	-602	-0.0002301	0.0002807	0.0035	0.64		1512.56	1512.56		6.82	Si
SLV 6	fin.	-956.26	-2414	-0.0013662	0.0002807	0.0035	0.64		1516.76	1516.76		1.59	Si
SLV 3	ini.	1136.18	967	-0.0017962	0.0002807	0.0035	0.64		1512.56	1512.56		1.33	Si
SLV 3	fin.	-1503.13	-2472	-0.0031665	0.0002807	0.0035	0.64		1516.76	1516.76		1.01	Si
SLV 4	ini.	1083.55	877	-0.0016604	0.0002807	0.0035	0.64		1512.56	1512.56		1.4	Si
SLV 4	fin.	-1469.4	-2446	-0.0030036	0.0002807	0.0035	0.64		1516.76	1516.76		1.03	Si
SLD 3	ini.	598.87	266	-0.0007321	0.0002807	0.0035	0.64		1512.56	1512.56		2.53	Si
SLD 3	fin.	-1006.65	-1868	-0.0014745	0.0002807	0.0035	0.64		1516.76	1516.76		1.51	Si
SLV 5	ini.	255.5	-544	-0.0002684	0.0002807	0.0035	0.64		1512.56	1512.56		5.92	Si
SLV 5	fin.	-977.8	-2430	-0.0014118	0.0002807	0.0035	0.64		1516.76	1516.76		1.55	Si
SLD 1	ini.	543.4	105	-0.0006482	0.0002807	0.0035	0.64		1512.56	1512.56		2.78	Si
SLD 1	fin.	-1025.24	-2035	-0.0015162	0.0002807	0.0035	0.64		1516.76	1516.76		1.48	Si
SLD 2	ini.	520.8	66	-0.000615	0.0002807	0.0035	0.64		1512.56	1512.56		2.9	Si
SLD 2	fin.	-1010.76	-2024	-0.0014837	0.0002807	0.0035	0.64		1516.76	1516.76		1.5	Si
SLV 2	ini.	955.87	509	-0.0013706	0.0002807	0.0035	0.64		1512.56	1512.56		1.58	Si
SLV 2	fin.	-1511.08	-2826	-0.003205	0.0002807	0.0035	0.64		1516.76	1516.76		1	Si
SLV 1	ini.	1008.5	600	-0.0014844	0.0002807	0.0035	0.64		1512.56	1512.56		1.5	Si
SLV 1	fin.	-1544.8	-2852	-0.0033668	0.0002807	0.0035	0.64		1516.76	1516.76		0.98	No
SLD 4	ini.	576.28	227	-0.0006975	0.0002807	0.0035	0.64		1512.56	1512.56		2.62	Si
SLD 4	fin.	-992.17	-1857	-0.0014428	0.0002807	0.0035	0.64		1516.76	1516.76		1.53	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 2	ini.	520.8	-1255	0.64	0	260	5075	4025	1632	5335		4.25	Si
SLD 2	fin.	-1010.76	-3152	0.64	0	260	5075	4025	1632	5335		1.69	Si
SLV 4	ini.	1083.55	-2834	0.64	0	260	5075	4025	1632	5335		1.88	Si
SLV 4	fin.	-1469.4	-4283	0.64	0	260	5075	4025	1632	5335		1.25	Si
SLD 4	ini.	576.28	-1389	0.64	0	260	5075	4025	1632	5335		3.84	Si
SLD 4	fin.	-992.17	-3023	0.64	0	260	5075	4025	1632	5335		1.76	Si
SLV 6	ini.	221.89	-485	0.64	0	260	5075	4025	1632	5335		11	Si
SLV 6	fin.	-956.26	-3267	0.64	0	260	5075	4025	1632	5335		1.63	Si
SLV 2	ini.	955.87	-2531	0.64	0	260	5075	4025	1632	5335		2.11	Si
SLV 2	fin.	-1511.08	-4579	0.64	0	260	5075	4025	1632	5335		1.17	Si
SLD 1	ini.	543.4	-1326	0.64	0	260	5075	4025	1632	5335		4.02	Si
SLD 1	fin.	-1025.24	-3186	0.64	0	260	5075	4025	1632	5335		1.67	Si
SLV 1	ini.	1008.5	-2696	0.64	0	260	5075	4025	1632	5335		1.98	Si
SLV 1	fin.	-1544.8	-4659	0.64	0	260	5075	4025	1632	5335		1.14	Si
SLD 3	ini.	598.87	-1459	0.64	0	260	5075	4025	1632	5335		3.66	Si
SLD 3	fin.	-1006.65	-3058	0.64	0	260	5075	4025	1632	5335		1.74	Si
SLV 3	ini.	1136.18	-2999	0.64	0	260	5075	4025	1632	5335		1.78	Si
SLV 3	fin.	-1503.13	-4364	0.64	0	260	5075	4025	1632	5335		1.22	Si
SLV 5	ini.	255.5	-590	0.64	0	260	5075	4025	1632	5335		9.04	Si
SLV 5	fin.	-977.8	-3319	0.64	0	260	5075	4025	1632	5335		1.61	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.982	SLV 1	No
V_SLV	1.145	SLV 1	Si
PF_SLU	1.671	SLU 84	Si
V_SLU	1.445	SLU 84	Si

Trave di accoppiamento 71

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.813	5.826	5.44	6.34	0.9	-22.713	5.826	5.44	6.34	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-406.28	-691	-0.0002176	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.3	Si
SLU 83	fin.	718.36	-1737	-0.0004218	0.0001872	0.0035	0.9		2959	2959	No	4.12	Si
SLU 75	ini.	-402.51	-676	-0.0002153	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.37	Si
SLU 75	fin.	713.33	-1715	-0.0004183	0.0001872	0.0035	0.9		2959	2959	No	4.15	Si
SLU 78	ini.	-403.12	-698	-0.0002157	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.35	Si
SLU 78	fin.	722.22	-1746	-0.0004245	0.0001872	0.0035	0.9		2959	2959	No	4.1	Si
SLU 80	ini.	-407.17	-684	-0.0002181	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.28	Si
SLU 80	fin.	722.58	-1736	-0.0004248	0.0001872	0.0035	0.9		2959	2959	No	4.1	Si
SLU 82	ini.	-404.84	-676	-0.0002167	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.32	Si
SLU 82	fin.	711.04	-1714	-0.0004167	0.0001872	0.0035	0.9		2959	2959	No	4.16	Si
SLU 79	ini.	-408	-678	-0.0002186	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.27	Si
SLU 79	fin.	721.01	-1729	-0.0004237	0.0001872	0.0035	0.9		2959	2959	No	4.1	Si
SLU 77	ini.	-403.96	-692	-0.0002162	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.34	Si
SLU 77	fin.	720.65	-1738	-0.0004234	0.0001872	0.0035	0.9		2959	2959	No	4.11	Si
SLU 84	ini.	-405.44	-698	-0.0002171	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.31	Si
SLU 84	fin.	719.93	-1745	-0.0004229	0.0001872	0.0035	0.9		2959	2959	No	4.11	Si
SLU 74	ini.	-403.35	-670	-0.0002158	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.35	Si
SLU 74	fin.	711.76	-1708	-0.0004172	0.0001872	0.0035	0.9		2959	2959	No	4.16	Si
SLU 76	ini.	-406	-667	-0.0002174	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.3	Si
SLU 76	fin.	714.74	-1711	-0.0004193	0.0001872	0.0035	0.9		2959	2959	No	4.14	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-405.44	1421	0.9	0	365	7137	3773	2295	6068	No	4.27	Si
SLU 84	fin.	719.93	2155	0.9	0	365	7137	3773	2295	6068	No	2.82	Si
SLU 77	ini.	-403.96	1398	0.9	0	365	7137	3773	2295	6068	No	4.34	Si
SLU 77	fin.	720.65	2175	0.9	0	365	7137	3773	2295	6068	No	2.79	Si
SLU 70	ini.	-405.72	1385	0.9	0	365	7137	3773	2295	6068	No	4.38	Si
SLU 70	fin.	707.67	2157	0.9	0	365	7137	3773	2295	6068	No	2.81	Si
SLU 72	ini.	-409.76	1401	0.9	0	365	7137	3773	2295	6068	No	4.33	Si
SLU 72	fin.	708.03	2156	0.9	0	365	7137	3773	2295	6068	No	2.82	Si
SLU 57	ini.	-412.4	1413	0.9	0	365	7137	3773	2295	6068	No	4.29	Si
SLU 57	fin.	709.63	2158	0.9	0	365	7137	3773	2295	6068	No	2.81	Si
SLU 78	ini.	-403.12	1396	0.9	0	365	7137	3773	2295	6068	No	4.35	Si
SLU 78	fin.	722.22	2180	0.9	0	365	7137	3773	2295	6068	No	2.78	Si
SLU 56	ini.	-413.23	1416	0.9	0	365	7137	3773	2295	6068	No	4.29	Si
SLU 56	fin.	708.06	2154	0.9	0	365	7137	3773	2295	6068	No	2.82	Si
SLU 80	ini.	-407.17	1412	0.9	0	365	7137	3773	2295	6068	No	4.3	Si
SLU 80	fin.	722.58	2179	0.9	0	365	7137	3773	2295	6068	No	2.78	Si
SLU 79	ini.	-408	1414	0.9	0	365	7137	3773	2295	6068	No	4.29	Si
SLU 79	fin.	721.01	2174	0.9	0	365	7137	3773	2295	6068	No	2.79	Si
SLU 59	ini.	-416.44	1429	0.9	0	365	7137	3773	2295	6068	No	4.25	Si
SLU 59	fin.	709.99	2157	0.9	0	365	7137	3773	2295	6068	No	2.81	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 14	ini.	-803.8	-87	-0.0004552	0.0002807	0.0035	0.9		2995.37	2995.37		3.73	Si
SLD 14	fin.	1064.94	-1877	-0.0006414	0.0002807	0.0035	0.9		2989.59	2989.59		2.81	Si
SLV 16	ini.	-1481.38	837	-0.0009759	0.0002807	0.0035	0.9		2995.37	2995.37		2.02	Si
SLV 16	fin.	1677.14	-2153	-0.0011573	0.0002807	0.0035	0.9		2989.59	2989.59		1.78	Si
SLV 13	ini.	-1420.33	279	-0.0009232	0.0002807	0.0035	0.9		2995.37	2995.37		2.11	Si
SLV 13	fin.	1763.55	-2795	-0.0012414	0.0002807	0.0035	0.9		2989.59	2989.59		1.7	Si
SLD 15	ini.	-798.88	76	-0.0004519	0.0002807	0.0035	0.9		2995.37	2995.37		3.75	Si
SLD 15	fin.	1014.59	-1635	-0.0006042	0.0002807	0.0035	0.9		2989.59	2989.59		2.95	Si
SLV 9	ini.	-604.84	-934	-0.0003275	0.0002807	0.0035	0.9		2995.37	2995.37		4.95	Si
SLV 9	fin.	1050.95	-2605	-0.000631	0.0002807	0.0035	0.9		2989.59	2989.59		2.84	Si
SLD 13	ini.	-787.87	-127	-0.0004445	0.0002807	0.0035	0.9		2995.37	2995.37		3.8	Si
SLD 13	fin.	1058.87	-1896	-0.0006369	0.0002807	0.0035	0.9		2989.59	2989.59		2.82	Si
SLV 15	ini.	-1444.28	743	-0.0009437	0.0002807	0.0035	0.9		2995.37	2995.37		2.07	Si
SLV 15	fin.	1663.01	-2199	-0.0011438	0.0002807	0.0035	0.9		2989.59	2989.59		1.8	Si
SLV 14	ini.	-1457.43	373	-0.0009551	0.0002807	0.0035	0.9		2995.37	2995.37		2.06	Si
SLV 14	fin.	1777.67	-2749	-0.0012555	0.0002807	0.0035	0.9		2989.59	2989.59		1.68	Si
SLD 16	ini.	-814.8	116	-0.0004626	0.0002807	0.0035	0.9		2995.37	2995.37		3.68	Si
SLD 16	fin.	1020.65	-1615	-0.0006086	0.0002807	0.0035	0.9		2989.59	2989.59		2.93	Si
SLV 10	ini.	-628.53	-874	-0.0003421	0.0002807	0.0035	0.9		2995.37	2995.37		4.77	Si
SLV 10	fin.	1059.97	-2575	-0.0006377	0.0002807	0.0035	0.9		2989.59	2989.59		2.82	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-1444.28	4752	0.9	0	548	7137	5660	2295	7684		1.62	Si
SLV 15	fin.	1663.01	5262	0.9	0	548	7137	5660	2295	7684		1.46	Si
SLV 13	ini.	-1420.33	4626	0.9	0	548	7137	5660	2295	7684		1.66	Si
SLV 13	fin.	1763.55	5656	0.9	0	548	7137	5660	2295	7684		1.36	Si
SLD 15	ini.	-798.88	2658	0.9	0	548	7137	5660	2295	7684		2.89	Si
SLD 15	fin.	1014.59	3167	0.9	0	548	7137	5660	2295	7684		2.43	Si
SLV 10	ini.	-628.53	2017	0.9	0	548	7137	5660	2295	7684		3.81	Si
SLV 10	fin.	1059.97	3438	0.9	0	548	7137	5660	2295	7684		2.24	Si
SLV 14	ini.	-1457.43	4747	0.9	0	548	7137	5660	2295	7684		1.62	Si
SLV 14	fin.	1777.67	5699	0.9	0	548	7137	5660	2295	7684		1.35	Si
SLV 9	ini.	-604.84	1940	0.9	0	548	7137	5660	2295	7684		3.96	Si
SLV 9	fin.	1050.95	3410	0.9	0	548	7137	5660	2295	7684		2.25	Si
SLD 16	ini.	-814.8	2710	0.9	0	548	7137	5660	2295	7684		2.84	Si
SLD 16	fin.	1020.65	3185	0.9	0	548	7137	5660	2295	7684		2.41	Si
SLD 14	ini.	-803.8	2654	0.9	0	548	7137	5660	2295	7684		2.9	Si
SLD 14	fin.	1064.94	3358	0.9	0	548	7137	5660	2295	7684		2.29	Si
SLD 13	ini.	-787.87	2602	0.9	0	548	7137	5660	2295	7684		2.95	Si
SLD 13	fin.	1058.87	3339	0.9	0	548	7137	5660	2295	7684		2.3	Si
SLV 16	ini.	-1481.38	4873	0.9	0	548	7137	5660	2295	7684		1.58	Si
SLV 16	fin.	1677.14	5305	0.9	0	548	7137	5660	2295	7684		1.45	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.682	SLV 14	Si
V_SLV	1.348	SLV 14	Si
PF_SLU	4.095	SLU 80	Si
V_SLU	2.783	SLU 78	Si

Trave di accoppiamento 72

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.813	5.826	8.14	8.96	0.82	-22.713	5.826	8.14	8.96	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-644.61	-1629	-0.0004621	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.82	Si
SLU 84	fin.	84.72	26	-0.0000509	0.0001872	0.0035	0.82		2455.37	2455.37	No	28.98	Si
SLU 77	ini.	-640.39	-1619	-0.0004585	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.84	Si
SLU 77	fin.	85.5	35	-0.0000514	0.0001872	0.0035	0.82		2455.37	2455.37	No	28.72	Si
SLU 78	ini.	-642.95	-1628	-0.0004607	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.83	Si
SLU 78	fin.	84.66	29	-0.0000509	0.0001872	0.0035	0.82		2455.37	2455.37	No	29	Si
SLU 79	ini.	-640.37	-1611	-0.0004585	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.84	Si
SLU 79	fin.	88.8	50	-0.0000534	0.0001872	0.0035	0.82		2455.37	2455.37	No	27.65	Si
SLU 82	ini.	-636.66	-1597	-0.0004553	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.86	Si
SLU 82	fin.	88.21	46	-0.0000531	0.0001872	0.0035	0.82		2455.37	2455.37	No	27.83	Si
SLU 76	ini.	-636.68	-1594	-0.0004553	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.86	Si
SLU 76	fin.	90.88	61	-0.0000547	0.0001872	0.0035	0.82		2455.37	2455.37	No	27.02	Si
SLU 81	ini.	-634.1	-1587	-0.0004531	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.88	Si
SLU 81	fin.	89.06	52	-0.0000536	0.0001872	0.0035	0.82		2455.37	2455.37	No	27.57	Si
SLU 83	ini.	-642.06	-1620	-0.0004599	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.83	Si
SLU 83	fin.	85.56	32	-0.0000514	0.0001872	0.0035	0.82		2455.37	2455.37	No	28.7	Si
SLU 75	ini.	-634.99	-1596	-0.0004538	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.87	Si
SLU 75	fin.	88.15	50	-0.000053	0.0001872	0.0035	0.82		2455.37	2455.37	No	27.85	Si
SLU 80	ini.	-642.93	-1620	-0.0004607	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.83	Si
SLU 80	fin.	87.95	44	-0.0000529	0.0001872	0.0035	0.82		2455.37	2455.37	No	27.92	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-634.99	3026	0.82	0	303	6502	3438	2091	5529	No	1.83	Si
SLU 75	fin.	88.15	-507	0.82	0	303	6502	3438	2091	5529	No	10.9	Si
SLU 78	ini.	-642.95	3070	0.82	0	303	6502	3438	2091	5529	No	1.8	Si
SLU 78	fin.	84.66	-548	0.82	0	303	6502	3438	2091	5529	No	10.09	Si
SLU 83	ini.	-642.06	3078	0.82	0	303	6502	3438	2091	5529	No	1.8	Si
SLU 83	fin.	85.56	-567	0.82	0	303	6502	3438	2091	5529	No	9.75	Si
SLU 81	ini.	-634.1	3034	0.82	0	303	6502	3438	2091	5529	No	1.82	Si
SLU 81	fin.	89.06	-526	0.82	0	303	6502	3438	2091	5529	No	10.51	Si
SLU 80	ini.	-642.93	3063	0.82	0	303	6502	3438	2091	5529	No	1.8	Si
SLU 80	fin.	87.95	-520	0.82	0	303	6502	3438	2091	5529	No	10.63	Si
SLU 82	ini.	-636.66	3045	0.82	0	303	6502	3438	2091	5529	No	1.82	Si
SLU 82	fin.	88.21	-536	0.82	0	303	6502	3438	2091	5529	No	10.32	Si
SLU 77	ini.	-640.39	3059	0.82	0	303	6502	3438	2091	5529	No	1.81	Si
SLU 77	fin.	85.5	-539	0.82	0	303	6502	3438	2091	5529	No	10.27	Si
SLU 76	ini.	-636.68	3026	0.82	0	303	6502	3438	2091	5529	No	1.83	Si
SLU 76	fin.	90.88	-485	0.82	0	303	6502	3438	2091	5529	No	11.39	Si
SLU 79	ini.	-640.37	3052	0.82	0	303	6502	3438	2091	5529	No	1.81	Si
SLU 79	fin.	88.8	-511	0.82	0	303	6502	3438	2091	5529	No	10.83	Si
SLU 84	ini.	-644.61	3089	0.82	0	303	6502	3438	2091	5529	No	1.79	Si
SLU 84	fin.	84.72	-577	0.82	0	303	6502	3438	2091	5529	No	9.59	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 14	ini.	-825.24	-1791	-0.0005879	0.0002807	0.0035	0.82		2487.45	2487.45		3.01	Si
SLD 14	fin.	269.24	754	-0.0001668	0.0002807	0.0035	0.82		2482.11	2482.11		9.22	Si
SLV 9	ini.	-937.96	-2631	-0.0006889	0.0002807	0.0035	0.82		2487.45	2487.45		2.65	Si
SLV 9	fin.	136.37	19	-0.0000823	0.0002807	0.0035	0.82		2482.11	2482.11		18.2	Si
SLD 16	ini.	-763.78	-1500	-0.0005351	0.0002807	0.0035	0.82		2487.45	2487.45		3.26	Si
SLD 16	fin.	290.13	904	-0.0001805	0.0002807	0.0035	0.82		2482.11	2482.11		8.56	Si
SLV 16	ini.	-1165.11	-2017	-0.0009089	0.0002807	0.0035	0.82		2487.45	2487.45		2.13	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	fin.	562.78	1921	-0.0003739	0.0002807	0.0035	0.82		2482.11	2482.11		4.41	Si
SLD 15	ini.	-772.59	-1536	-0.0005426	0.0002807	0.0035	0.82		2487.45	2487.45		3.22	Si
SLD 15	fin.	284.85	872	-0.000177	0.0002807	0.0035	0.82		2482.11	2482.11		8.71	Si
SLV 15	ini.	-1185.64	-2100	-0.00093	0.0002807	0.0035	0.82		2487.45	2487.45		2.1	Si
SLV 15	fin.	550.48	1847	-0.0003645	0.0002807	0.0035	0.82		2482.11	2482.11		4.51	Si
SLV 14	ini.	-1304.48	-2678	-0.0010561	0.0002807	0.0035	0.82		2487.45	2487.45		1.91	Si
SLV 14	fin.	515.02	1580	-0.0003378	0.0002807	0.0035	0.82		2482.11	2482.11		4.82	Si
SLV 10	ini.	-924.85	-2577	-0.0006769	0.0002807	0.0035	0.82		2487.45	2487.45		2.69	Si
SLV 10	fin.	144.23	66	-0.0000872	0.0002807	0.0035	0.82		2482.11	2482.11		17.21	Si
SLV 13	ini.	-1325.01	-2762	-0.0010787	0.0002807	0.0035	0.82		2487.45	2487.45		1.88	Si
SLV 13	fin.	502.72	1506	-0.0003287	0.0002807	0.0035	0.82		2482.11	2482.11		4.94	Si
SLD 13	ini.	-834.06	-1827	-0.0005957	0.0002807	0.0035	0.82		2487.45	2487.45		2.98	Si
SLD 13	fin.	263.96	722	-0.0001633	0.0002807	0.0035	0.82		2482.11	2482.11		9.4	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-1185.64	4583	0.82	0	455	6502	5156	2091	6957		1.52	Si
SLV 15	fin.	550.48	2541	0.82	0	455	6502	5156	2091	6957		2.74	Si
SLV 10	ini.	-924.85	4103	0.82	0	455	6502	5156	2091	6957		1.7	Si
SLV 10	fin.	144.23	-121	0.82	0	455	6502	5156	2091	6957		57.34	Si
SLV 13	ini.	-1325.01	5274	0.82	0	455	6502	5156	2091	6957		1.32	Si
SLV 13	fin.	502.72	2084	0.82	0	455	6502	5156	2091	6957		3.34	Si
SLD 15	ini.	-772.59	3197	0.82	0	455	6502	5156	2091	6957		2.18	Si
SLD 15	fin.	284.85	997	0.82	0	455	6502	5156	2091	6957		6.98	Si
SLV 9	ini.	-937.96	4162	0.82	0	455	6502	5156	2091	6957		1.67	Si
SLV 9	fin.	136.37	-207	0.82	0	455	6502	5156	2091	6957		33.66	Si
SLD 16	ini.	-763.78	3157	0.82	0	455	6502	5156	2091	6957		2.2	Si
SLD 16	fin.	290.13	1054	0.82	0	455	6502	5156	2091	6957		6.6	Si
SLV 14	ini.	-1304.48	5182	0.82	0	455	6502	5156	2091	6957		1.34	Si
SLV 14	fin.	515.02	2217	0.82	0	455	6502	5156	2091	6957		3.14	Si
SLD 14	ini.	-825.24	3461	0.82	0	455	6502	5156	2091	6957		2.01	Si
SLD 14	fin.	269.24	853	0.82	0	455	6502	5156	2091	6957		8.16	Si
SLD 13	ini.	-834.06	3500	0.82	0	455	6502	5156	2091	6957		1.99	Si
SLD 13	fin.	263.96	795	0.82	0	455	6502	5156	2091	6957		8.75	Si
SLV 16	ini.	-1165.11	4491	0.82	0	455	6502	5156	2091	6957		1.55	Si
SLV 16	fin.	562.78	2675	0.82	0	455	6502	5156	2091	6957		2.6	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.877	SLV 13	Si
V_SLV	1.319	SLV 13	Si
PF_SLU	3.817	SLU 84	Si
V_SLU	1.79	SLU 84	Si

Trave di accoppiamento 73

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.593	-3.314	5.44	6.34	0.9	-22.493	-3.314	5.44	6.34	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	341.14	-1745	-0.0001798	0.0001872	0.0035	0.9		2959	2959	No	8.67	Si
SLU 82	fin.	37.3	-1098	-0.0000184	0.0001872	0.0035	0.9		2959	2959	No	79.33	Si
SLU 76	ini.	327.22	-1693	-0.0001718	0.0001872	0.0035	0.9		2959	2959	No	9.04	Si
SLU 76	fin.	43.98	-1083	-0.0000217	0.0001872	0.0035	0.9		2959	2959	No	67.28	Si
SLU 81	ini.	333.5	-1744	-0.0001754	0.0001872	0.0035	0.9		2959	2959	No	8.87	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	fin.	48.52	-1124	-0.000024	0.0001872	0.0035	0.9		2959	2959	No	60.98	Si
SLU 78	ini.	332.02	-1744	-0.0001746	0.0001872	0.0035	0.9		2959	2959	No	8.91	Si
SLU 78	fin.	55.04	-1138	-0.0000272	0.0001872	0.0035	0.9		2959	2959	No	53.77	Si
SLU 83	ini.	341.42	-1777	-0.00018	0.0001872	0.0035	0.9		2959	2959	No	8.67	Si
SLU 83	fin.	48.05	-1141	-0.0000237	0.0001872	0.0035	0.9		2959	2959	No	61.58	Si
SLU 79	ini.	322.4	-1724	-0.0001691	0.0001872	0.0035	0.9		2959	2959	No	9.18	Si
SLU 79	fin.	62.22	-1144	-0.0000308	0.0001872	0.0035	0.9		2959	2959	No	47.56	Si
SLU 75	ini.	324.1	-1711	-0.0001701	0.0001872	0.0035	0.9		2959	2959	No	9.13	Si
SLU 75	fin.	55.51	-1121	-0.0000274	0.0001872	0.0035	0.9		2959	2959	No	53.31	Si
SLU 80	ini.	330.04	-1725	-0.0001735	0.0001872	0.0035	0.9		2959	2959	No	8.97	Si
SLU 80	fin.	51	-1118	-0.0000252	0.0001872	0.0035	0.9		2959	2959	No	58.02	Si
SLU 77	ini.	324.38	-1743	-0.0001702	0.0001872	0.0035	0.9		2959	2959	No	9.12	Si
SLU 77	fin.	66.26	-1164	-0.0000328	0.0001872	0.0035	0.9		2959	2959	No	44.66	Si
SLU 84	ini.	349.06	-1777	-0.0001844	0.0001872	0.0035	0.9		2959	2959	No	8.48	Si
SLU 84	fin.	36.83	-1115	-0.0000181	0.0001872	0.0035	0.9		2959	2959	No	80.34	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 76	ini.	327.22	-1219	0.9	0	365	7137	3773	2295	6068	No	4.98	Si
SLU 76	fin.	43.98	-85	0.9	0	365	7137	3773	2295	6068	No	71.03	Si
SLU 78	ini.	332.02	-1262	0.9	0	365	7137	3773	2295	6068	No	4.81	Si
SLU 78	fin.	55.04	-28	0.9	0	365	7137	3773	2295	6068	No	215.82	Si
SLU 79	ini.	322.4	-1238	0.9	0	365	7137	3773	2295	6068	No	4.9	Si
SLU 79	fin.	62.22	11	0.9	0	365	7137	3773	2295	6068	No	536.63	Si
SLU 80	ini.	330.04	-1249	0.9	0	365	7137	3773	2295	6068	No	4.86	Si
SLU 80	fin.	51	-45	0.9	0	365	7137	3773	2295	6068	No	134.14	Si
SLU 75	ini.	324.1	-1224	0.9	0	365	7137	3773	2295	6068	No	4.96	Si
SLU 75	fin.	55.51	-31	0.9	0	365	7137	3773	2295	6068	No	198.22	Si
SLU 83	ini.	341.42	-1296	0.9	0	365	7137	3773	2295	6068	No	4.68	Si
SLU 83	fin.	48.05	-61	0.9	0	365	7137	3773	2295	6068	No	100.21	Si
SLU 84	ini.	349.06	-1307	0.9	0	365	7137	3773	2295	6068	No	4.64	Si
SLU 84	fin.	36.83	-117	0.9	0	365	7137	3773	2295	6068	No	51.82	Si
SLU 81	ini.	333.5	-1258	0.9	0	365	7137	3773	2295	6068	No	4.82	Si
SLU 81	fin.	48.52	-63	0.9	0	365	7137	3773	2295	6068	No	96.24	Si
SLU 82	ini.	341.14	-1269	0.9	0	365	7137	3773	2295	6068	No	4.78	Si
SLU 82	fin.	37.3	-120	0.9	0	365	7137	3773	2295	6068	No	50.74	Si
SLU 77	ini.	324.38	-1250	0.9	0	365	7137	3773	2295	6068	No	4.85	Si
SLU 77	fin.	66.26	28	0.9	0	365	7137	3773	2295	6068	No	213.45	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	1254.19	-2960	-0.0007878	0.0002807	0.0035	0.9		2989.59	2989.59		2.38	Si
SLV 3	fin.	-1012.94	583	-0.0006016	0.0002807	0.0035	0.9		2995.37	2995.37		2.96	Si
SLV 1	ini.	1248.37	-2428	-0.0007832	0.0002807	0.0035	0.9		2989.59	2989.59		2.39	Si
SLV 1	fin.	-1129.99	1478	-0.000689	0.0002807	0.0035	0.9		2995.37	2995.37		2.65	Si
SLD 4	ini.	663.78	-1965	-0.0003649	0.0002807	0.0035	0.9		2989.59	2989.59		4.5	Si
SLD 4	fin.	-400.27	-235	-0.0002081	0.0002807	0.0035	0.9		2995.37	2995.37		7.48	Si
SLV 4	ini.	1288.99	-3066	-0.0008159	0.0002807	0.0035	0.9		2989.59	2989.59		2.32	Si
SLV 4	fin.	-1025.97	553	-0.0006112	0.0002807	0.0035	0.9		2995.37	2995.37		2.92	Si
SLV 16	ini.	-853.23	146	-0.0004887	0.0002807	0.0035	0.9		2995.37	2995.37		3.51	Si
SLV 16	fin.	1259.63	-3108	-0.0007922	0.0002807	0.0035	0.9		2989.59	2989.59		2.37	Si
SLV 15	ini.	-888.03	251	-0.0005127	0.0002807	0.0035	0.9		2995.37	2995.37		3.37	Si
SLV 15	fin.	1272.66	-3077	-0.0008027	0.0002807	0.0035	0.9		2989.59	2989.59		2.35	Si
SLV 2	ini.	1283.17	-2534	-0.0008112	0.0002807	0.0035	0.9		2989.59	2989.59		2.33	Si
SLV 2	fin.	-1143.02	1447	-0.0006989	0.0002807	0.0035	0.9		2995.37	2995.37		2.62	Si
SLV 14	ini.	-859.06	678	-0.0004927	0.0002807	0.0035	0.9		2995.37	2995.37		3.49	Si
SLV 14	fin.	1142.58	-2213	-0.0007002	0.0002807	0.0035	0.9		2989.59	2989.59		2.62	Si
SLV 13	ini.	-893.85	783	-0.0005167	0.0002807	0.0035	0.9		2995.37	2995.37		3.35	Si
SLV 13	fin.	1155.61	-2183	-0.0007103	0.0002807	0.0035	0.9		2989.59	2989.59		2.59	Si
SLD 2	ini.	661.32	-1734	-0.0003633	0.0002807	0.0035	0.9		2989.59	2989.59		4.52	Si
SLD 2	fin.	-451.99	156	-0.0002373	0.0002807	0.0035	0.9		2995.37	2995.37		6.63	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	1248.37	-4944	0.9	0	548	7137	5660	2295	7684		1.55	Si
SLV 1	fin.	-1129.99	-4391	0.9	0	548	7137	5660	2295	7684		1.75	Si
SLV 15	ini.	-888.03	3562	0.9	0	548	7137	5660	2295	7684		2.16	Si
SLV 15	fin.	1272.66	4606	0.9	0	548	7137	5660	2295	7684		1.67	Si
SLD 4	ini.	663.78	-2601	0.9	0	548	7137	5660	2295	7684		2.95	Si
SLD 4	fin.	-400.27	-1527	0.9	0	548	7137	5660	2295	7684		5.03	Si
SLV 13	ini.	-893.85	3557	0.9	0	548	7137	5660	2295	7684		2.16	Si
SLV 13	fin.	1155.61	3879	0.9	0	548	7137	5660	2295	7684		1.98	Si
SLV 16	ini.	-853.23	3429	0.9	0	548	7137	5660	2295	7684		2.24	Si
SLV 16	fin.	1259.63	4568	0.9	0	548	7137	5660	2295	7684		1.68	Si
SLV 2	ini.	1283.17	-5077	0.9	0	548	7137	5660	2295	7684		1.51	Si
SLV 2	fin.	-1143.02	-4429	0.9	0	548	7137	5660	2295	7684		1.73	Si
SLD 2	ini.	661.32	-2602	0.9	0	548	7137	5660	2295	7684		2.95	Si
SLD 2	fin.	-451.99	-1845	0.9	0	548	7137	5660	2295	7684		4.16	Si
SLV 3	ini.	1254.19	-4940	0.9	0	548	7137	5660	2295	7684		1.56	Si
SLV 3	fin.	-1012.94	-3663	0.9	0	548	7137	5660	2295	7684		2.1	Si
SLV 4	ini.	1288.99	-5072	0.9	0	548	7137	5660	2295	7684		1.51	Si
SLV 4	fin.	-1025.97	-3702	0.9	0	548	7137	5660	2295	7684		2.08	Si
SLV 14	ini.	-859.06	3425	0.9	0	548	7137	5660	2295	7684		2.24	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	fin.	1142.58	3840	0.9	0	548	7137	5660	2295	7684		2	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.319	SLV 4	Si
V_SLV	1.514	SLV 2	Si
PF_SLU	8.477	SLU 84	Si
V_SLU	4.642	SLU 84	Si

Trave di accoppiamento 74

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.593	-3.314	8.14	8.96	0.82	-22.493	-3.314	8.14	8.96	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-97.74	-1077	-0.0000588	0.0001872	0.0035	0.82		2460.51	2460.51	No	25.17	Si
SLU 81	fin.	-406.13	-1270	-0.0002684	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.06	Si
SLU 84	ini.	-93.15	-1076	-0.000056	0.0001872	0.0035	0.82		2460.51	2460.51	No	26.41	Si
SLU 84	fin.	-418.44	-1302	-0.0002777	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.88	Si
SLU 75	ini.	-103.3	-1080	-0.0000623	0.0001872	0.0035	0.82		2460.51	2460.51	No	23.82	Si
SLU 75	fin.	-390.61	-1234	-0.0002567	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.3	Si
SLU 77	ini.	-111.04	-1123	-0.000067	0.0001872	0.0035	0.82		2460.51	2460.51	No	22.16	Si
SLU 77	fin.	-396.19	-1258	-0.0002609	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.21	Si
SLU 83	ini.	-99.32	-1098	-0.0000598	0.0001872	0.0035	0.82		2460.51	2460.51	No	24.77	Si
SLU 83	fin.	-415.08	-1298	-0.0002752	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.93	Si
SLU 80	ini.	-100.57	-1077	-0.0000606	0.0001872	0.0035	0.82		2460.51	2460.51	No	24.47	Si
SLU 80	fin.	-396.72	-1249	-0.0002613	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.2	Si
SLU 78	ini.	-104.87	-1101	-0.0000632	0.0001872	0.0035	0.82		2460.51	2460.51	No	23.46	Si
SLU 78	fin.	-399.55	-1262	-0.0002634	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.16	Si
SLU 79	ini.	-106.73	-1099	-0.0000644	0.0001872	0.0035	0.82		2460.51	2460.51	No	23.05	Si
SLU 79	fin.	-393.35	-1245	-0.0002588	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.26	Si
SLU 82	ini.	-91.57	-1055	-0.000055	0.0001872	0.0035	0.82		2460.51	2460.51	No	26.87	Si
SLU 82	fin.	-409.49	-1274	-0.0002709	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.01	Si
SLU 76	ini.	-94.88	-1041	-0.0000571	0.0001872	0.0035	0.82		2460.51	2460.51	No	25.93	Si
SLU 76	fin.	-390.01	-1223	-0.0002563	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.31	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-97.74	1764	0.82	0	303	6502	3438	2091	5529	No	3.13	Si
SLU 81	fin.	-406.13	-2126	0.82	0	303	6502	3438	2091	5529	No	2.6	Si
SLU 82	ini.	-91.57	1723	0.82	0	303	6502	3438	2091	5529	No	3.21	Si
SLU 82	fin.	-409.49	-2134	0.82	0	303	6502	3438	2091	5529	No	2.59	Si
SLU 79	ini.	-106.73	1791	0.82	0	303	6502	3438	2091	5529	No	3.09	Si
SLU 79	fin.	-393.35	-2066	0.82	0	303	6502	3438	2091	5529	No	2.68	Si
SLU 80	ini.	-100.57	1750	0.82	0	303	6502	3438	2091	5529	No	3.16	Si
SLU 80	fin.	-396.72	-2075	0.82	0	303	6502	3438	2091	5529	No	2.66	Si
SLU 77	ini.	-111.04	1826	0.82	0	303	6502	3438	2091	5529	No	3.03	Si
SLU 77	fin.	-396.19	-2080	0.82	0	303	6502	3438	2091	5529	No	2.66	Si
SLU 76	ini.	-94.88	1693	0.82	0	303	6502	3438	2091	5529	No	3.26	Si
SLU 76	fin.	-390.01	-2040	0.82	0	303	6502	3438	2091	5529	No	2.71	Si
SLU 78	ini.	-104.87	1785	0.82	0	303	6502	3438	2091	5529	No	3.1	Si
SLU 78	fin.	-399.55	-2089	0.82	0	303	6502	3438	2091	5529	No	2.65	Si
SLU 83	ini.	-99.32	1793	0.82	0	303	6502	3438	2091	5529	No	3.08	Si
SLU 83	fin.	-415.08	-2166	0.82	0	303	6502	3438	2091	5529	No	2.55	Si
SLU 84	ini.	-93.15	1752	0.82	0	303	6502	3438	2091	5529	No	3.16	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	fin.	-418.44	-2175	0.82	0	303	6502	3438	2091	5529	No	2.54	Si
SLU 75	ini.	-103.3	1755	0.82	0	303	6502	3438	2091	5529	No	3.15	Si
SLU 75	fin.	-390.61	-2048	0.82	0	303	6502	3438	2091	5529	No	2.7	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	530.87	858	-0.0003497	0.0002807	0.0035	0.82		2482.11	2482.11		4.68	Si
SLV 4	fin.	-1030.93	-2476	-0.0007762	0.0002807	0.0035	0.82		2487.45	2487.45		2.41	Si
SLV 2	ini.	716.99	1599	-0.0004971	0.0002807	0.0035	0.82		2482.11	2482.11		3.46	Si
SLV 2	fin.	-1000.85	-2136	-0.0007475	0.0002807	0.0035	0.82		2487.45	2487.45		2.49	Si
SLV 16	ini.	-899.8	-3204	-0.0006541	0.0002807	0.0035	0.82		2487.45	2487.45		2.76	Si
SLV 16	fin.	500.47	496	-0.000327	0.0002807	0.0035	0.82		2482.11	2482.11		4.96	Si
SLV 15	ini.	-884.05	-3123	-0.00064	0.0002807	0.0035	0.82		2487.45	2487.45		2.81	Si
SLV 15	fin.	513.47	558	-0.0003367	0.0002807	0.0035	0.82		2482.11	2482.11		4.83	Si
SLV 14	ini.	-713.68	-2463	-0.0004931	0.0002807	0.0035	0.82		2487.45	2487.45		3.49	Si
SLV 14	fin.	530.54	837	-0.0003495	0.0002807	0.0035	0.82		2482.11	2482.11		4.68	Si
SLV 13	ini.	-697.93	-2382	-0.0004802	0.0002807	0.0035	0.82		2487.45	2487.45		3.56	Si
SLV 13	fin.	543.55	898	-0.0003593	0.0002807	0.0035	0.82		2482.11	2482.11		4.57	Si
SLV 12	ini.	-613.36	-2632	-0.0004122	0.0002807	0.0035	0.82		2487.45	2487.45		4.06	Si
SLV 12	fin.	-68.26	-930	-0.0000406	0.0002807	0.0035	0.82		2487.45	2487.45		36.44	Si
SLV 3	ini.	546.62	939	-0.0003616	0.0002807	0.0035	0.82		2482.11	2482.11		4.54	Si
SLV 3	fin.	-1017.92	-2415	-0.0007637	0.0002807	0.0035	0.82		2487.45	2487.45		2.44	Si
SLV 1	ini.	732.74	1680	-0.0005102	0.0002807	0.0035	0.82		2482.11	2482.11		3.39	Si
SLV 1	fin.	-987.85	-2075	-0.0007353	0.0002807	0.0035	0.82		2487.45	2487.45		2.52	Si
SLV 11	ini.	-603.3	-2580	-0.0004044	0.0002807	0.0035	0.82		2487.45	2487.45		4.12	Si
SLV 11	fin.	-59.96	-891	-0.0000356	0.0002807	0.0035	0.82		2487.45	2487.45		41.49	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	546.62	-1740	0.82	0	455	6502	5156	2091	6957		4	Si
SLV 3	fin.	-1017.92	-4451	0.82	0	455	6502	5156	2091	6957		1.56	Si
SLV 13	ini.	-697.93	4151	0.82	0	455	6502	5156	2091	6957		1.68	Si
SLV 13	fin.	543.55	1879	0.82	0	455	6502	5156	2091	6957		3.7	Si
SLV 2	ini.	716.99	-2652	0.82	0	455	6502	5156	2091	6957		2.62	Si
SLV 2	fin.	-1000.85	-4461	0.82	0	455	6502	5156	2091	6957		1.56	Si
SLV 1	ini.	732.74	-2747	0.82	0	455	6502	5156	2091	6957		2.53	Si
SLV 1	fin.	-987.85	-4394	0.82	0	455	6502	5156	2091	6957		1.58	Si
SLV 16	ini.	-899.8	5254	0.82	0	455	6502	5156	2091	6957		1.32	Si
SLV 16	fin.	500.47	1757	0.82	0	455	6502	5156	2091	6957		3.96	Si
SLV 14	ini.	-713.68	4247	0.82	0	455	6502	5156	2091	6957		1.64	Si
SLV 14	fin.	530.54	1813	0.82	0	455	6502	5156	2091	6957		3.84	Si
SLV 11	ini.	-603.3	3937	0.82	0	455	6502	5156	2091	6957		1.77	Si
SLV 11	fin.	-59.96	-450	0.82	0	455	6502	5156	2091	6957		15.45	Si
SLV 15	ini.	-884.05	5159	0.82	0	455	6502	5156	2091	6957		1.35	Si
SLV 15	fin.	513.47	1823	0.82	0	455	6502	5156	2091	6957		3.82	Si
SLV 4	ini.	530.87	-1644	0.82	0	455	6502	5156	2091	6957		4.23	Si
SLV 4	fin.	-1030.93	-4517	0.82	0	455	6502	5156	2091	6957		1.54	Si
SLV 12	ini.	-613.36	3998	0.82	0	455	6502	5156	2091	6957		1.74	Si
SLV 12	fin.	-68.26	-493	0.82	0	455	6502	5156	2091	6957		14.12	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.413	SLV 4	Si
V_SLV	1.324	SLV 16	Si
PF_SLU	5.88	SLU 84	Si
V_SLU	2.542	SLU 84	Si

Trave di accoppiamento 75

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.813	-3.314	5.44	7.44	2	-19.313	-3.314	5.44	7.44	2	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 67	ini.	-625.01	-2543	-0.0000633	0.0001872	0.0035	2		14357.01	14357.01	No	22.97	Si
SLU 67	fin.	450.15	-2543	-0.0000453	0.0001872	0.0035	2		14344.28	14344.28	No	31.87	Si
SLU 68	ini.	-617.96	-2483	-0.0000626	0.0001872	0.0035	2		14357.01	14357.01	No	23.23	Si
SLU 68	fin.	470.31	-2483	-0.0000474	0.0001872	0.0035	2		14344.28	14344.28	No	30.5	Si
SLU 78	ini.	-623.06	-2724	-0.0000631	0.0001872	0.0035	2		14357.01	14357.01	No	23.04	Si
SLU 78	fin.	487.48	-2724	-0.0000492	0.0001872	0.0035	2		14344.28	14344.28	No	29.43	Si
SLU 70	ini.	-626.08	-2586	-0.0000634	0.0001872	0.0035	2		14357.01	14357.01	No	22.93	Si
SLU 70	fin.	455.75	-2586	-0.0000459	0.0001872	0.0035	2		14344.28	14344.28	No	31.47	Si
SLU 75	ini.	-621.99	-2681	-0.000063	0.0001872	0.0035	2		14357.01	14357.01	No	23.08	Si
SLU 75	fin.	481.88	-2681	-0.0000486	0.0001872	0.0035	2		14344.28	14344.28	No	29.77	Si
SLU 76	ini.	-614.93	-2621	-0.0000623	0.0001872	0.0035	2		14357.01	14357.01	No	23.35	Si
SLU 76	fin.	502.04	-2621	-0.0000506	0.0001872	0.0035	2		14344.28	14344.28	No	28.57	Si
SLU 73	ini.	-613.86	-2578	-0.0000622	0.0001872	0.0035	2		14357.01	14357.01	No	23.39	Si
SLU 73	fin.	496.44	-2578	-0.0000501	0.0001872	0.0035	2		14344.28	14344.28	No	28.89	Si
SLU 69	ini.	-610.04	-2587	-0.0000618	0.0001872	0.0035	2		14357.01	14357.01	No	23.53	Si
SLU 69	fin.	430.45	-2587	-0.0000433	0.0001872	0.0035	2		14344.28	14344.28	No	33.32	Si
SLU 66	ini.	-608.97	-2544	-0.0000617	0.0001872	0.0035	2		14357.01	14357.01	No	23.58	Si
SLU 66	fin.	424.85	-2544	-0.0000427	0.0001872	0.0035	2		14344.28	14344.28	No	33.76	Si
SLU 65	ini.	-616.89	-2440	-0.0000625	0.0001872	0.0035	2		14357.01	14357.01	No	23.27	Si
SLU 65	fin.	464.71	-2440	-0.0000468	0.0001872	0.0035	2		14344.28	14344.28	No	30.87	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-623.06	2470	2	0	812	3965	8384	5100	4776	No	1.93	Si
SLU 78	fin.	487.48	1878	2	0	812	3965	8384	5100	4776	No	2.54	Si
SLU 80	ini.	-605.31	2441	2	0	812	3965	8384	5100	4776	No	1.96	Si
SLU 80	fin.	490.78	1849	2	0	812	3965	8384	5100	4776	No	2.58	Si
SLU 84	ini.	-602.94	2452	2	0	812	3965	8384	5100	4776	No	1.95	Si
SLU 84	fin.	498.77	1861	2	0	812	3965	8384	5100	4776	No	2.57	Si
SLU 70	ini.	-626.08	2413	2	0	812	3965	8384	5100	4776	No	1.98	Si
SLU 70	fin.	455.75	1821	2	0	812	3965	8384	5100	4776	No	2.62	Si
SLU 65	ini.	-616.89	2412	2	0	812	3965	8384	5100	4776	No	1.98	Si
SLU 65	fin.	464.71	1820	2	0	812	3965	8384	5100	4776	No	2.62	Si
SLU 76	ini.	-614.93	2483	2	0	812	3965	8384	5100	4776	No	1.92	Si
SLU 76	fin.	502.04	1891	2	0	812	3965	8384	5100	4776	No	2.53	Si
SLU 73	ini.	-613.86	2469	2	0	812	3965	8384	5100	4776	No	1.93	Si
SLU 73	fin.	496.44	1878	2	0	812	3965	8384	5100	4776	No	2.54	Si
SLU 82	ini.	-601.87	2439	2	0	812	3965	8384	5100	4776	No	1.96	Si
SLU 82	fin.	493.17	1847	2	0	812	3965	8384	5100	4776	No	2.59	Si
SLU 75	ini.	-621.99	2457	2	0	812	3965	8384	5100	4776	No	1.94	Si
SLU 75	fin.	481.88	1865	2	0	812	3965	8384	5100	4776	No	2.56	Si
SLU 68	ini.	-617.96	2425	2	0	812	3965	8384	5100	4776	No	1.97	Si
SLU 68	fin.	470.31	1834	2	0	812	3965	8384	5100	4776	No	2.6	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-2514.8	-4831	-0.0002702	0.0002807	0.0035	2		14215.41	14215.41		5.65	Si
SLV 15	fin.	1777.47	-4601	-0.0001859	0.0002807	0.0035	2		14202.07	14202.07		7.99	Si
SLV 3	ini.	1434.7	698	-0.0001483	0.0002807	0.0035	2		14202.07	14202.07		9.9	Si
SLV 3	fin.	-890.85	480	-0.0000904	0.0002807	0.0035	2		14215.41	14215.41		15.96	Si
SLV 12	ini.	-1407.01	-3498	-0.0001452	0.0002807	0.0035	2		14215.41	14215.41		10.1	Si
SLV 12	fin.	1119.37	-3411	-0.0001145	0.0002807	0.0035	2		14202.07	14202.07		12.69	Si
SLV 14	ini.	-2306.08	-4399	-0.0002457	0.0002807	0.0035	2		14215.41	14215.41		6.16	Si
SLV 14	fin.	1542.49	-4181	-0.00016	0.0002807	0.0035	2		14202.07	14202.07		9.21	Si
SLV 11	ini.	-1397.03	-3466	-0.0001441	0.0002807	0.0035	2		14215.41	14215.41		10.18	Si
SLV 11	fin.	1118.83	-3380	-0.0001144	0.0002807	0.0035	2		14202.07	14202.07		12.69	Si
SLV 2	ini.	1643.42	1131	-0.0001711	0.0002807	0.0035	2		14202.07	14202.07		8.64	Si
SLV 2	fin.	-1125.83	901	-0.0001151	0.0002807	0.0035	2		14215.41	14215.41		12.63	Si
SLV 16	ini.	-2530.42	-4880	-0.000272	0.0002807	0.0035	2		14215.41	14215.41		5.62	Si
SLV 16	fin.	1778.31	-4651	-0.000186	0.0002807	0.0035	2		14202.07	14202.07		7.99	Si
SLV 13	ini.	-2290.45	-4349	-0.0002439	0.0002807	0.0035	2		14215.41	14215.41		6.21	Si
SLV 13	fin.	1541.66	-4131	-0.0001599	0.0002807	0.0035	2		14202.07	14202.07		9.21	Si
SLV 1	ini.	1659.05	1180	-0.0001728	0.0002807	0.0035	2		14202.07	14202.07		8.56	Si
SLV 1	fin.	-1126.66	950	-0.0001152	0.0002807	0.0035	2		14215.41	14215.41		12.62	Si
SLV 4	ini.	1419.08	649	-0.0001466	0.0002807	0.0035	2		14202.07	14202.07		10.01	Si
SLV 4	fin.	-890.01	431	-0.0000903	0.0002807	0.0035	2		14215.41	14215.41		15.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	1659.05	-5149	2	0	1217	3965	12577	5100	5182		1.01	Si
SLV 1	fin.	-1126.66	-5621	2	0	1217	3965	12577	5100	5182		0.92	No
SLV 3	ini.	1434.7	-4620	2	0	1217	3965	12577	5100	5182		1.12	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	fin.	-890.85	-5117	2	0	1217	3965	12577	5100	5182		1.01	Si
SLD 16	ini.	-1327.7	4637	2	0	1217	3965	12577	5100	5182		1.12	Si
SLD 16	fin.	941.39	4193	2	0	1217	3965	12577	5100	5182		1.24	Si
SLV 16	ini.	-2530.42	8576	2	0	1217	3965	12577	5100	5182		0.6	No
SLV 16	fin.	1778.31	8140	2	0	1217	3965	12577	5100	5182		0.64	No
SLD 15	ini.	-1320.99	4623	2	0	1217	3965	12577	5100	5182		1.12	Si
SLD 15	fin.	941.03	4179	2	0	1217	3965	12577	5100	5182		1.24	Si
SLV 4	ini.	1419.08	-4587	2	0	1217	3965	12577	5100	5182		1.13	Si
SLV 4	fin.	-890.01	-5084	2	0	1217	3965	12577	5100	5182		1.02	Si
SLV 13	ini.	-2290.45	8014	2	0	1217	3965	12577	5100	5182		0.65	No
SLV 13	fin.	1541.66	7603	2	0	1217	3965	12577	5100	5182		0.68	No
SLV 15	ini.	-2514.8	8543	2	0	1217	3965	12577	5100	5182		0.61	No
SLV 15	fin.	1777.47	8107	2	0	1217	3965	12577	5100	5182		0.64	No
SLV 2	ini.	1643.42	-5116	2	0	1217	3965	12577	5100	5182		1.01	Si
SLV 2	fin.	-1125.83	-5588	2	0	1217	3965	12577	5100	5182		0.93	No
SLV 14	ini.	-2306.08	8047	2	0	1217	3965	12577	5100	5182		0.64	No
SLV 14	fin.	1542.49	7636	2	0	1217	3965	12577	5100	5182		0.68	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.618	SLV 16	Si
V_SLV	0.604	SLV 16	No
PF_SLU	22.931	SLU 70	Si
V_SLU	1.924	SLU 76	Si

Trave di accoppiamento 76

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.813	-3.314	8.24	8.96	0.72	-19.313	-3.314	8.24	8.96	0.72	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-224.9	-1710	-0.0001851	0.0001872	0.0035	0.72		1901.86	1901.86	No	8.46	Si
SLU 78	fin.	54.87	-1422	-0.0000426	0.0001872	0.0035	0.72		1897.3	1897.3	No	34.58	Si
SLU 82	ini.	-227.82	-1730	-0.0001878	0.0001872	0.0035	0.72		1901.86	1901.86	No	8.35	Si
SLU 82	fin.	51.98	-1436	-0.0000403	0.0001872	0.0035	0.72		1897.3	1897.3	No	36.5	Si
SLU 80	ini.	-226.18	-1717	-0.0001863	0.0001872	0.0035	0.72		1901.86	1901.86	No	8.41	Si
SLU 80	fin.	53.03	-1425	-0.0000412	0.0001872	0.0035	0.72		1897.3	1897.3	No	35.78	Si
SLU 81	ini.	-226.81	-1736	-0.0001868	0.0001872	0.0035	0.72		1901.86	1901.86	No	8.39	Si
SLU 81	fin.	44.23	-1457	-0.0000342	0.0001872	0.0035	0.72		1897.3	1897.3	No	42.89	Si
SLU 76	ini.	-221.71	-1669	-0.0001823	0.0001872	0.0035	0.72		1901.86	1901.86	No	8.58	Si
SLU 76	fin.	59.68	-1372	-0.0000464	0.0001872	0.0035	0.72		1897.3	1897.3	No	31.79	Si
SLU 84	ini.	-232.96	-1773	-0.0001924	0.0001872	0.0035	0.72		1901.86	1901.86	No	8.16	Si
SLU 84	fin.	50.49	-1476	-0.0000392	0.0001872	0.0035	0.72		1897.3	1897.3	No	37.58	Si
SLU 75	ini.	-219.76	-1667	-0.0001805	0.0001872	0.0035	0.72		1901.86	1901.86	No	8.65	Si
SLU 75	fin.	56.36	-1383	-0.0000438	0.0001872	0.0035	0.72		1897.3	1897.3	No	33.66	Si
SLU 79	ini.	-225.17	-1723	-0.0001854	0.0001872	0.0035	0.72		1901.86	1901.86	No	8.45	Si
SLU 79	fin.	45.28	-1445	-0.0000351	0.0001872	0.0035	0.72		1897.3	1897.3	No	41.9	Si
SLU 83	ini.	-231.95	-1779	-0.0001915	0.0001872	0.0035	0.72		1901.86	1901.86	No	8.2	Si
SLU 83	fin.	42.74	-1496	-0.0000331	0.0001872	0.0035	0.72		1897.3	1897.3	No	44.39	Si
SLU 77	ini.	-223.89	-1716	-0.0001842	0.0001872	0.0035	0.72		1901.86	1901.86	No	8.49	Si
SLU 77	fin.	47.12	-1443	-0.0000365	0.0001872	0.0035	0.72		1897.3	1897.3	No	40.26	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-224.9	2976	0.72	0	292	3965	3018	1836	4257	No	1.43	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	fin.	54.87	38	0.72	0	292	3965	3018	1836	4257	No	112.16	Si
SLU 74	ini.	-218.74	2908	0.72	0	292	3965	3018	1836	4257	No	1.46	Si
SLU 74	fin.	48.61	9	0.72	0	292	3965	3018	1836	4257	No	472.52	Si
SLU 83	ini.	-231.95	3004	0.72	0	292	3965	3018	1836	4257	No	1.42	Si
SLU 83	fin.	42.74	13	0.72	0	292	3965	3018	1836	4257	No	337.89	Si
SLU 80	ini.	-226.18	2947	0.72	0	292	3965	3018	1836	4257	No	1.44	Si
SLU 80	fin.	53.03	49	0.72	0	292	3965	3018	1836	4257	No	87.66	Si
SLU 77	ini.	-223.89	2962	0.72	0	292	3965	3018	1836	4257	No	1.44	Si
SLU 77	fin.	47.12	7	0.72	0	292	3965	3018	1836	4257	No	632.85	Si
SLU 75	ini.	-219.76	2922	0.72	0	292	3965	3018	1836	4257	No	1.46	Si
SLU 75	fin.	56.36	40	0.72	0	292	3965	3018	1836	4257	No	105.79	Si
SLU 81	ini.	-226.81	2949	0.72	0	292	3965	3018	1836	4257	No	1.44	Si
SLU 81	fin.	44.23	15	0.72	0	292	3965	3018	1836	4257	No	286.07	Si
SLU 82	ini.	-227.82	2963	0.72	0	292	3965	3018	1836	4257	No	1.44	Si
SLU 82	fin.	51.98	46	0.72	0	292	3965	3018	1836	4257	No	92.32	Si
SLU 79	ini.	-225.17	2933	0.72	0	292	3965	3018	1836	4257	No	1.45	Si
SLU 79	fin.	45.28	17	0.72	0	292	3965	3018	1836	4257	No	245.61	Si
SLU 84	ini.	-232.96	3018	0.72	0	292	3965	3018	1836	4257	No	1.41	Si
SLU 84	fin.	50.49	44	0.72	0	292	3965	3018	1836	4257	No	97.13	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-45.75	418	-0.0000352	0.0002807	0.0035	0.72		1917.1	1917.1		41.91	Si
SLV 16	fin.	655.55	1091	-0.0006108	0.0002807	0.0035	0.72		1912.43	1912.43		2.92	Si
SLD 16	ini.	-104.97	-460	-0.0000819	0.0002807	0.0035	0.72		1917.1	1917.1		18.26	Si
SLD 16	fin.	302.11	-64	-0.0002491	0.0002807	0.0035	0.72		1912.43	1912.43		6.33	Si
SLV 4	ini.	-228.69	-2729	-0.0001842	0.0002807	0.0035	0.72		1917.1	1917.1		8.38	Si
SLV 4	fin.	-535.51	-3104	-0.0004768	0.0002807	0.0035	0.72		1917.1	1917.1		3.58	Si
SLV 2	ini.	-250.64	-2675	-0.0002031	0.0002807	0.0035	0.72		1917.1	1917.1		7.65	Si
SLV 2	fin.	-581.46	-2975	-0.0005263	0.0002807	0.0035	0.72		1917.1	1917.1		3.3	Si
SLD 15	ini.	-105.14	-452	-0.0000821	0.0002807	0.0035	0.72		1917.1	1917.1		18.23	Si
SLD 15	fin.	304.32	-49	-0.000251	0.0002807	0.0035	0.72		1912.43	1912.43		6.28	Si
SLV 13	ini.	-68.1	492	-0.0000527	0.0002807	0.0035	0.72		1917.1	1917.1		28.15	Si
SLV 13	fin.	614.75	1255	-0.0005646	0.0002807	0.0035	0.72		1912.43	1912.43		3.11	Si
SLV 15	ini.	-46.15	438	-0.0000355	0.0002807	0.0035	0.72		1917.1	1917.1		41.54	Si
SLV 15	fin.	660.7	1126	-0.0006167	0.0002807	0.0035	0.72		1912.43	1912.43		2.89	Si
SLV 3	ini.	-229.1	-2709	-0.0001845	0.0002807	0.0035	0.72		1917.1	1917.1		8.37	Si
SLV 3	fin.	-530.36	-3069	-0.0004713	0.0002807	0.0035	0.72		1917.1	1917.1		3.61	Si
SLV 14	ini.	-67.69	472	-0.0000524	0.0002807	0.0035	0.72		1917.1	1917.1		28.32	Si
SLV 14	fin.	609.6	1220	-0.0005588	0.0002807	0.0035	0.72		1912.43	1912.43		3.14	Si
SLV 1	ini.	-251.04	-2655	-0.0002034	0.0002807	0.0035	0.72		1917.1	1917.1		7.64	Si
SLV 1	fin.	-576.31	-2940	-0.0005207	0.0002807	0.0035	0.72		1917.1	1917.1		3.33	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-68.1	2998	0.72	0	438	3965	4528	1836	4403		1.47	Si
SLV 13	fin.	614.75	1661	0.72	0	438	3965	4528	1836	4403		2.65	Si
SLD 16	ini.	-104.97	2574	0.72	0	438	3965	4528	1836	4403		1.71	Si
SLD 16	fin.	302.11	582	0.72	0	438	3965	4528	1836	4403		7.57	Si
SLD 13	ini.	-114.68	2396	0.72	0	438	3965	4528	1836	4403		1.84	Si
SLD 13	fin.	284.62	726	0.72	0	438	3965	4528	1836	4403		6.06	Si
SLD 15	ini.	-105.14	2544	0.72	0	438	3965	4528	1836	4403		1.73	Si
SLD 15	fin.	304.32	601	0.72	0	438	3965	4528	1836	4403		7.32	Si
SLV 11	ini.	-84.51	2873	0.72	0	438	3965	4528	1836	4403		1.53	Si
SLV 11	fin.	296.51	7	0.72	0	438	3965	4528	1836	4403		587.33	Si
SLV 16	ini.	-45.75	3403	0.72	0	438	3965	4528	1836	4403		1.29	Si
SLV 16	fin.	655.55	1331	0.72	0	438	3965	4528	1836	4403		3.31	Si
SLV 12	ini.	-84.25	2917	0.72	0	438	3965	4528	1836	4403		1.51	Si
SLV 12	fin.	293.22	-21	0.72	0	438	3965	4528	1836	4403		209.2	Si
SLD 14	ini.	-114.5	2426	0.72	0	438	3965	4528	1836	4403		1.82	Si
SLD 14	fin.	282.41	707	0.72	0	438	3965	4528	1836	4403		6.23	Si
SLV 14	ini.	-67.69	3067	0.72	0	438	3965	4528	1836	4403		1.44	Si
SLV 14	fin.	609.6	1616	0.72	0	438	3965	4528	1836	4403		2.72	Si
SLV 15	ini.	-46.15	3334	0.72	0	438	3965	4528	1836	4403		1.32	Si
SLV 15	fin.	660.7	1376	0.72	0	438	3965	4528	1836	4403		3.2	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.895	SLV 15	Si
V_SLV	1.294	SLV 16	Si
PF_SLU	8.164	SLU 84	Si
V_SLU	1.411	SLU 84	Si

Trave di accoppiamento 77

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.314	5.44	6.34	0.9	-18.263	-3.314	5.44	6.34	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 62	ini.	486.63	-1902	-0.0002673	0.0001872	0.0035	0.9		2959	2959	No	6.08	Si
SLU 62	fin.	96.83	-787	-0.0000483	0.0001872	0.0035	0.9		2959	2959	No	30.56	Si
SLU 61	ini.	465.42	-1844	-0.0002541	0.0001872	0.0035	0.9		2959	2959	No	6.36	Si
SLU 61	fin.	98.51	-777	-0.0000491	0.0001872	0.0035	0.9		2959	2959	No	30.04	Si
SLU 81	ini.	473.19	-1971	-0.0002589	0.0001872	0.0035	0.9		2959	2959	No	6.25	Si
SLU 81	fin.	133.33	-934	-0.000067	0.0001872	0.0035	0.9		2959	2959	No	22.19	Si
SLU 60	ini.	472.65	-1858	-0.0002586	0.0001872	0.0035	0.9		2959	2959	No	6.26	Si
SLU 60	fin.	96.61	-775	-0.0000481	0.0001872	0.0035	0.9		2959	2959	No	30.63	Si
SLU 58	ini.	468.37	-1850	-0.0002559	0.0001872	0.0035	0.9		2959	2959	No	6.32	Si
SLU 58	fin.	105.46	-810	-0.0000527	0.0001872	0.0035	0.9		2959	2959	No	28.06	Si
SLU 79	ini.	468.91	-1964	-0.0002562	0.0001872	0.0035	0.9		2959	2959	No	6.31	Si
SLU 79	fin.	142.18	-968	-0.0000715	0.0001872	0.0035	0.9		2959	2959	No	20.81	Si
SLU 83	ini.	487.17	-2016	-0.0002677	0.0001872	0.0035	0.9		2959	2959	No	6.07	Si
SLU 83	fin.	133.55	-945	-0.0000671	0.0001872	0.0035	0.9		2959	2959	No	22.16	Si
SLU 84	ini.	479.94	-2002	-0.0002631	0.0001872	0.0035	0.9		2959	2959	No	6.17	Si
SLU 84	fin.	135.45	-947	-0.000068	0.0001872	0.0035	0.9		2959	2959	No	21.85	Si
SLU 63	ini.	479.4	-1888	-0.0002628	0.0001872	0.0035	0.9		2959	2959	No	6.17	Si
SLU 63	fin.	98.73	-789	-0.0000492	0.0001872	0.0035	0.9		2959	2959	No	29.97	Si
SLU 82	ini.	465.96	-1957	-0.0002544	0.0001872	0.0035	0.9		2959	2959	No	6.35	Si
SLU 82	fin.	135.23	-936	-0.0000679	0.0001872	0.0035	0.9		2959	2959	No	21.88	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	473.19	-2274	0.9	0	365	7137	3773	2295	6068	No	2.67	Si
SLU 81	fin.	133.33	1285	0.9	0	365	7137	3773	2295	6068	No	4.72	Si
SLU 83	ini.	487.17	-2339	0.9	0	365	7137	3773	2295	6068	No	2.59	Si
SLU 83	fin.	133.55	1298	0.9	0	365	7137	3773	2295	6068	No	4.68	Si
SLU 84	ini.	479.94	-2318	0.9	0	365	7137	3773	2295	6068	No	2.62	Si
SLU 84	fin.	135.45	1311	0.9	0	365	7137	3773	2295	6068	No	4.63	Si
SLU 79	ini.	468.91	-2264	0.9	0	365	7137	3773	2295	6068	No	2.68	Si
SLU 79	fin.	142.18	1340	0.9	0	365	7137	3773	2295	6068	No	4.53	Si
SLU 60	ini.	472.65	-2236	0.9	0	365	7137	3773	2295	6068	No	2.71	Si
SLU 60	fin.	96.61	1064	0.9	0	365	7137	3773	2295	6068	No	5.71	Si
SLU 63	ini.	479.4	-2280	0.9	0	365	7137	3773	2295	6068	No	2.66	Si
SLU 63	fin.	98.73	1089	0.9	0	365	7137	3773	2295	6068	No	5.57	Si
SLU 80	ini.	461.67	-2243	0.9	0	365	7137	3773	2295	6068	No	2.71	Si
SLU 80	fin.	144.08	1353	0.9	0	365	7137	3773	2295	6068	No	4.48	Si
SLU 82	ini.	465.96	-2253	0.9	0	365	7137	3773	2295	6068	No	2.69	Si
SLU 82	fin.	135.23	1298	0.9	0	365	7137	3773	2295	6068	No	4.68	Si
SLU 77	ini.	458.65	-2233	0.9	0	365	7137	3773	2295	6068	No	2.72	Si
SLU 77	fin.	154.55	1415	0.9	0	365	7137	3773	2295	6068	No	4.29	Si
SLU 62	ini.	486.63	-2301	0.9	0	365	7137	3773	2295	6068	No	2.64	Si
SLU 62	fin.	96.83	1076	0.9	0	365	7137	3773	2295	6068	No	5.64	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-1226.54	947	-0.000764	0.0002807	0.0035	0.9		2995.37	2995.37		2.44	Si
SLV 16	fin.	1160.95	-4042	-0.0007144	0.0002807	0.0035	0.9		2989.59	2989.59		2.58	Si
SLV 15	ini.	-1236.08	973	-0.0007715	0.0002807	0.0035	0.9		2995.37	2995.37		2.42	Si
SLV 15	fin.	1163.13	-4041	-0.0007161	0.0002807	0.0035	0.9		2989.59	2989.59		2.57	Si
SLV 5	ini.	977.95	-1879	-0.0005776	0.0002807	0.0035	0.9		2989.59	2989.59		3.06	Si
SLV 5	fin.	-427.61	1114	-0.0002234	0.0002807	0.0035	0.9		2995.37	2995.37		7	Si
SLV 6	ini.	984.05	-1895	-0.000582	0.0002807	0.0035	0.9		2989.59	2989.59		3.04	Si
SLV 6	fin.	-429.01	1113	-0.0002242	0.0002807	0.0035	0.9		2995.37	2995.37		6.98	Si
SLV 1	ini.	1831.92	-3563	-0.0013106	0.0002807	0.0035	0.9		2989.59	2989.59		1.63	Si
SLV 1	fin.	-940.07	2633	-0.0005492	0.0002807	0.0035	0.9		2995.37	2995.37		3.19	Si
SLV 13	ini.	-1092.27	1040	-0.0006604	0.0002807	0.0035	0.9		2995.37	2995.37		2.74	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	fin.	1015.92	-3503	-0.0006052	0.0002807	0.0035	0.9		2989.59	2989.59		2.94	Si
SLV 4	ini.	1697.65	-3656	-0.0011769	0.0002807	0.0035	0.9		2989.59	2989.59		1.76	Si
SLV 4	fin.	-795.04	2093	-0.0004493	0.0002807	0.0035	0.9		2995.37	2995.37		3.77	Si
SLV 14	ini.	-1082.73	1014	-0.0006532	0.0002807	0.0035	0.9		2995.37	2995.37		2.77	Si
SLV 14	fin.	1013.74	-3503	-0.0006036	0.0002807	0.0035	0.9		2989.59	2989.59		2.95	Si
SLV 3	ini.	1688.11	-3630	-0.0011677	0.0002807	0.0035	0.9		2989.59	2989.59		1.77	Si
SLV 3	fin.	-792.86	2094	-0.0004479	0.0002807	0.0035	0.9		2995.37	2995.37		3.78	Si
SLV 2	ini.	1841.46	-3589	-0.0013204	0.0002807	0.0035	0.9		2989.59	2989.59		1.62	Si
SLV 2	fin.	-942.25	2632	-0.0005508	0.0002807	0.0035	0.9		2995.37	2995.37		3.18	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-1092.27	4170	0.9	0	548	7137	5660	2295	7684		1.84	Si
SLV 13	fin.	1015.92	5285	0.9	0	548	7137	5660	2295	7684		1.45	Si
SLV 4	ini.	1697.65	-7122	0.9	0	548	7137	5660	2295	7684		1.08	Si
SLV 4	fin.	-795.04	-3292	0.9	0	548	7137	5660	2295	7684		2.33	Si
SLD 2	ini.	961.17	-4004	0.9	0	548	7137	5660	2295	7684		1.92	Si
SLD 2	fin.	-340.17	-1219	0.9	0	548	7137	5660	2295	7684		6.3	Si
SLV 2	ini.	1841.46	-7387	0.9	0	548	7137	5660	2295	7684		1.04	Si
SLV 2	fin.	-942.25	-4175	0.9	0	548	7137	5660	2295	7684		1.84	Si
SLV 3	ini.	1688.11	-7068	0.9	0	548	7137	5660	2295	7684		1.09	Si
SLV 3	fin.	-792.86	-3320	0.9	0	548	7137	5660	2295	7684		2.31	Si
SLV 15	ini.	-1236.08	4435	0.9	0	548	7137	5660	2295	7684		1.73	Si
SLV 15	fin.	1163.13	6167	0.9	0	548	7137	5660	2295	7684		1.25	Si
SLV 16	ini.	-1226.54	4382	0.9	0	548	7137	5660	2295	7684		1.75	Si
SLV 16	fin.	1160.95	6195	0.9	0	548	7137	5660	2295	7684		1.24	Si
SLD 1	ini.	957.07	-3981	0.9	0	548	7137	5660	2295	7684		1.93	Si
SLD 1	fin.	-339.23	-1231	0.9	0	548	7137	5660	2295	7684		6.24	Si
SLV 1	ini.	1831.92	-7334	0.9	0	548	7137	5660	2295	7684		1.05	Si
SLV 1	fin.	-940.07	-4202	0.9	0	548	7137	5660	2295	7684		1.83	Si
SLV 14	ini.	-1082.73	4116	0.9	0	548	7137	5660	2295	7684		1.87	Si
SLV 14	fin.	1013.74	5313	0.9	0	548	7137	5660	2295	7684		1.45	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.623	SLV 2	Si
V_SLV	1.04	SLV 2	Si
PF_SLU	6.074	SLU 83	Si
V_SLU	2.594	SLU 83	Si

Trave di accoppiamento 78

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.314	8.14	8.96	0.82	-18.263	-3.314	8.14	8.96	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	19.61	-535	-0.0000116	0.0001872	0.0035	0.82		2455.37	2455.37	No	125.18	Si
SLU 82	fin.	-350.36	-2015	-0.000227	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.02	Si
SLU 83	ini.	22.14	-548	-0.0000131	0.0001872	0.0035	0.82		2455.37	2455.37	No	110.91	Si
SLU 83	fin.	-365.93	-2085	-0.0002384	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.72	Si
SLU 77	ini.	4.21	-587	-0.0000025	0.0001872	0.0035	0.82		2455.37	2455.37	No	583.37	Si
SLU 77	fin.	-349.92	-2008	-0.0002267	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.03	Si
SLU 78	ini.	2.26	-588	-0.0000013	0.0001872	0.0035	0.82		2455.37	2455.37	No	1087.36	Si
SLU 78	fin.	-344.91	-1992	-0.0002231	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.13	Si
SLU 62	ini.	27.29	-485	-0.0000162	0.0001872	0.0035	0.82		2455.37	2455.37	No	89.98	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 62	fin.	-350.36	-1957	-0.000227	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.02	Si
SLU 79	ini.	10.47	-565	-0.0000062	0.0001872	0.0035	0.82		2455.37	2455.37	No	234.46	Si
SLU 79	fin.	-353.52	-2018	-0.0002293	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.96	Si
SLU 63	ini.	25.34	-487	-0.000015	0.0001872	0.0035	0.82		2455.37	2455.37	No	96.91	Si
SLU 63	fin.	-345.34	-1941	-0.0002234	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.12	Si
SLU 84	ini.	20.19	-550	-0.000012	0.0001872	0.0035	0.82		2455.37	2455.37	No	121.62	Si
SLU 84	fin.	-360.91	-2070	-0.0002347	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.82	Si
SLU 80	ini.	8.52	-567	-0.000005	0.0001872	0.0035	0.82		2455.37	2455.37	No	288.13	Si
SLU 80	fin.	-348.51	-2002	-0.0002257	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.06	Si
SLU 81	ini.	21.57	-534	-0.0000128	0.0001872	0.0035	0.82		2455.37	2455.37	No	113.86	Si
SLU 81	fin.	-355.37	-2031	-0.0002307	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.92	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	2.26	1355	0.82	0	303	6502	3438	2091	5529	No	4.08	Si
SLU 78	fin.	-344.91	-3966	0.82	0	303	6502	3438	2091	5529	No	1.39	Si
SLU 82	ini.	19.61	1282	0.82	0	303	6502	3438	2091	5529	No	4.31	Si
SLU 82	fin.	-350.36	-4019	0.82	0	303	6502	3438	2091	5529	No	1.38	Si
SLU 83	ini.	22.14	1289	0.82	0	303	6502	3438	2091	5529	No	4.29	Si
SLU 83	fin.	-365.93	-4134	0.82	0	303	6502	3438	2091	5529	No	1.34	Si
SLU 79	ini.	10.47	1296	0.82	0	303	6502	3438	2091	5529	No	4.27	Si
SLU 79	fin.	-353.52	-3985	0.82	0	303	6502	3438	2091	5529	No	1.39	Si
SLU 77	ini.	4.21	1345	0.82	0	303	6502	3438	2091	5529	No	4.11	Si
SLU 77	fin.	-349.92	-3992	0.82	0	303	6502	3438	2091	5529	No	1.38	Si
SLU 81	ini.	21.57	1273	0.82	0	303	6502	3438	2091	5529	No	4.34	Si
SLU 81	fin.	-355.37	-4046	0.82	0	303	6502	3438	2091	5529	No	1.37	Si
SLU 74	ini.	3.64	1330	0.82	0	303	6502	3438	2091	5529	No	4.16	Si
SLU 74	fin.	-339.37	-3904	0.82	0	303	6502	3438	2091	5529	No	1.42	Si
SLU 84	ini.	20.19	1298	0.82	0	303	6502	3438	2091	5529	No	4.26	Si
SLU 84	fin.	-360.91	-4107	0.82	0	303	6502	3438	2091	5529	No	1.35	Si
SLU 80	ini.	8.52	1305	0.82	0	303	6502	3438	2091	5529	No	4.24	Si
SLU 80	fin.	-348.51	-3959	0.82	0	303	6502	3438	2091	5529	No	1.4	Si
SLU 75	ini.	1.68	1339	0.82	0	303	6502	3438	2091	5529	No	4.13	Si
SLU 75	fin.	-334.36	-3878	0.82	0	303	6502	3438	2091	5529	No	1.43	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-529.15	-1559	-0.0003476	0.0002807	0.0035	0.82		2487.45	2487.45		4.7	Si
SLV 16	fin.	535.9	1415	-0.0003535	0.0002807	0.0035	0.82		2482.11	2482.11		4.63	Si
SLD 2	ini.	217.67	85	-0.0001334	0.0002807	0.0035	0.82		2482.11	2482.11		11.4	Si
SLD 2	fin.	-554.83	-2476	-0.000367	0.0002807	0.0035	0.82		2487.45	2487.45		4.48	Si
SLV 15	ini.	-526.26	-1536	-0.0003454	0.0002807	0.0035	0.82		2487.45	2487.45		4.73	Si
SLV 15	fin.	541.15	1443	-0.0003575	0.0002807	0.0035	0.82		2482.11	2482.11		4.59	Si
SLV 5	ini.	303.54	458	-0.0001893	0.0002807	0.0035	0.82		2482.11	2482.11		8.18	Si
SLV 5	fin.	-551.52	-2171	-0.0003645	0.0002807	0.0035	0.82		2487.45	2487.45		4.51	Si
SLV 2	ini.	515.25	731	-0.000338	0.0002807	0.0035	0.82		2482.11	2482.11		4.82	Si
SLV 2	fin.	-993.93	-4047	-0.000741	0.0002807	0.0035	0.82		2487.45	2487.45		2.5	Si
SLV 1	ini.	518.14	755	-0.0003402	0.0002807	0.0035	0.82		2482.11	2482.11		4.79	Si
SLV 1	fin.	-988.69	-4020	-0.0007361	0.0002807	0.0035	0.82		2487.45	2487.45		2.52	Si
SLV 6	ini.	301.7	443	-0.0001881	0.0002807	0.0035	0.82		2482.11	2482.11		8.23	Si
SLV 6	fin.	-554.87	-2188	-0.000367	0.0002807	0.0035	0.82		2487.45	2487.45		4.48	Si
SLV 4	ini.	415.39	396	-0.0002657	0.0002807	0.0035	0.82		2482.11	2482.11		5.98	Si
SLV 4	fin.	-929.76	-4009	-0.0006814	0.0002807	0.0035	0.82		2487.45	2487.45		2.68	Si
SLV 3	ini.	418.27	420	-0.0002677	0.0002807	0.0035	0.82		2482.11	2482.11		5.93	Si
SLV 3	fin.	-924.51	-3982	-0.0006766	0.0002807	0.0035	0.82		2487.45	2487.45		2.69	Si
SLD 1	ini.	218.91	95	-0.0001342	0.0002807	0.0035	0.82		2482.11	2482.11		11.34	Si
SLD 1	fin.	-552.58	-2464	-0.0003653	0.0002807	0.0035	0.82		2487.45	2487.45		4.5	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 1	ini.	218.91	-393	0.82	0	455	6502	5156	2091	6957		17.69	Si
SLD 1	fin.	-552.58	-4076	0.82	0	455	6502	5156	2091	6957		1.71	Si
SLV 1	ini.	518.14	-2140	0.82	0	455	6502	5156	2091	6957		3.25	Si
SLV 1	fin.	-988.69	-6076	0.82	0	455	6502	5156	2091	6957		1.15	Si
SLD 2	ini.	217.67	-380	0.82	0	455	6502	5156	2091	6957		18.31	Si
SLD 2	fin.	-554.83	-4110	0.82	0	455	6502	5156	2091	6957		1.69	Si
SLV 3	ini.	418.27	-1489	0.82	0	455	6502	5156	2091	6957		4.67	Si
SLV 3	fin.	-924.51	-6260	0.82	0	455	6502	5156	2091	6957		1.11	Si
SLD 3	ini.	175.24	-108	0.82	0	455	6502	5156	2091	6957		64.57	Si
SLD 3	fin.	-524.77	-4157	0.82	0	455	6502	5156	2091	6957		1.67	Si
SLV 16	ini.	-529.15	3976	0.82	0	455	6502	5156	2091	6957		1.75	Si
SLV 16	fin.	535.9	908	0.82	0	455	6502	5156	2091	6957		7.66	Si
SLV 8	ini.	-31.19	1197	0.82	0	455	6502	5156	2091	6957		5.81	Si
SLV 8	fin.	-340.96	-4002	0.82	0	455	6502	5156	2091	6957		1.74	Si
SLD 4	ini.	174	-95	0.82	0	455	6502	5156	2091	6957		73.59	Si
SLD 4	fin.	-527.02	-4190	0.82	0	455	6502	5156	2091	6957		1.66	Si
SLV 2	ini.	515.25	-2109	0.82	0	455	6502	5156	2091	6957		3.3	Si
SLV 2	fin.	-993.93	-6154	0.82	0	455	6502	5156	2091	6957		1.13	Si
SLV 4	ini.	415.39	-1459	0.82	0	455	6502	5156	2091	6957		4.77	Si
SLV 4	fin.	-929.76	-6338	0.82	0	455	6502	5156	2091	6957		1.1	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.503	SLV 2	Si
V_SLV	1.098	SLV 4	Si
PF_SLU	6.724	SLU 83	Si
V_SLU	1.337	SLU 83	Si

Trave di accoppiamento 79

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.518	-0.094	7.54	8.96	1.42	-18.518	0.706	7.54	8.96	1.42	0.8	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 51	ini.	1144.94	769	-0.0002458	0.0002246	0.0035	1.42		7594.91	7594.91	No	6.63	Si
SLU 51	fin.	13.22	33	-0.0000026	0.0002246	0.0035	1.42		7594.91	7594.91	No	574.44	Si
SLU 48	ini.	1105.43	693	-0.0002364	0.0002246	0.0035	1.42		7594.91	7594.91	No	6.87	Si
SLU 48	fin.	29.72	-8	-0.0000058	0.0002246	0.0035	1.42		7594.91	7594.91	No	255.58	Si
SLU 46	ini.	1086.15	686	-0.0002318	0.0002246	0.0035	1.42		7594.91	7594.91	No	6.99	Si
SLU 46	fin.	30.01	-5	-0.0000059	0.0002246	0.0035	1.42		7594.91	7594.91	No	253.09	Si
SLU 50	ini.	1131.09	748	-0.0002425	0.0002246	0.0035	1.42		7594.91	7594.91	No	6.71	Si
SLU 50	fin.	15.51	24	-0.000003	0.0002246	0.0035	1.42		7594.91	7594.91	No	489.75	Si
SLU 45	ini.	1072.29	665	-0.0002286	0.0002246	0.0035	1.42		7594.91	7594.91	No	7.08	Si
SLU 45	fin.	32.29	-14	-0.0000063	0.0002246	0.0035	1.42		7594.91	7594.91	No	235.18	Si
SLU 49	ini.	1119.28	713	-0.0002397	0.0002246	0.0035	1.42		7594.91	7594.91	No	6.79	Si
SLU 49	fin.	27.43	0	-0.0000054	0.0002246	0.0035	1.42		7594.91	7594.91	No	276.88	Si
SLU 44	ini.	1087.92	727	-0.0002323	0.0002246	0.0035	1.42		7594.91	7594.91	No	6.98	Si
SLU 44	fin.	16.85	28	-0.0000033	0.0002246	0.0035	1.42		7594.91	7594.91	No	450.65	Si
SLU 72	ini.	1023.96	490	-0.0002173	0.0002246	0.0035	1.42		7594.91	7594.91	No	7.42	Si
SLU 72	fin.	90.57	-146	-0.0000179	0.0002246	0.0035	1.42		7594.91	7594.91	No	83.85	Si
SLU 43	ini.	1064.82	693	-0.0002268	0.0002246	0.0035	1.42		7594.91	7594.91	No	7.13	Si
SLU 43	fin.	20.66	14	-0.0000041	0.0002246	0.0035	1.42		7594.91	7594.91	No	367.55	Si
SLU 47	ini.	1121.05	755	-0.0002401	0.0002246	0.0035	1.42		7594.91	7594.91	No	6.77	Si
SLU 47	fin.	14.28	34	-0.0000028	0.0002246	0.0035	1.42		7594.91	7594.91	No	532.03	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 44	ini.	1087.92	-1736	1.42	0	329	6344	4083	3621	6673	No	3.84	Si
SLU 44	fin.	16.85	-2166	1.42	0	329	6344	4083	3621	6673	No	3.08	Si
SLU 43	ini.	1064.82	-1685	1.42	0	329	6344	4083	3621	6673	No	3.96	Si
SLU 43	fin.	20.66	-2115	1.42	0	329	6344	4083	3621	6673	No	3.16	Si
SLU 72	ini.	1023.96	-1502	1.42	0	329	6344	4083	3621	6673	No	4.44	Si
SLU 72	fin.	90.57	-1947	1.42	0	329	6344	4083	3621	6673	No	3.43	Si
SLU 45	ini.	1072.29	-1680	1.42	0	329	6344	4083	3621	6673	No	3.97	Si
SLU 45	fin.	32.29	-2109	1.42	0	329	6344	4083	3621	6673	No	3.16	Si
SLU 46	ini.	1086.15	-1710	1.42	0	329	6344	4083	3621	6673	No	3.9	Si
SLU 46	fin.	30.01	-2140	1.42	0	329	6344	4083	3621	6673	No	3.12	Si
SLU 48	ini.	1105.43	-1744	1.42	0	329	6344	4083	3621	6673	No	3.83	Si
SLU 48	fin.	29.72	-2173	1.42	0	329	6344	4083	3621	6673	No	3.07	Si
SLU 50	ini.	1131.09	-1814	1.42	0	329	6344	4083	3621	6673	No	3.68	Si
SLU 50	fin.	15.51	-2243	1.42	0	329	6344	4083	3621	6673	No	2.97	Si
SLU 47	ini.	1121.05	-1801	1.42	0	329	6344	4083	3621	6673	No	3.71	Si
SLU 47	fin.	14.28	-2230	1.42	0	329	6344	4083	3621	6673	No	2.99	Si
SLU 51	ini.	1144.94	-1845	1.42	0	329	6344	4083	3621	6673	No	3.62	Si
SLU 51	fin.	13.22	-2274	1.42	0	329	6344	4083	3621	6673	No	2.93	Si
SLU 49	ini.	1119.28	-1775	1.42	0	329	6344	4083	3621	6673	No	3.76	Si
SLU 49	fin.	27.43	-2204	1.42	0	329	6344	4083	3621	6673	No	3.03	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	1110.71	984	-0.0002317	0.0003369	0.0035	1.42		7808.98	7808.98		7.03	Si
SLV 3	fin.	169.79	224	-0.0000336	0.0003369	0.0035	1.42		7808.98	7808.98		45.99	Si
SLD 4	ini.	877.52	580	-0.0001805	0.0003369	0.0035	1.42		7808.98	7808.98		8.9	Si
SLD 4	fin.	121.67	23	-0.000024	0.0003369	0.0035	1.42		7808.98	7808.98		64.18	Si
SLV 7	ini.	881.73	968	-0.0001814	0.0003369	0.0035	1.42		7808.98	7808.98		8.86	Si
SLV 7	fin.	569.87	936	-0.0001152	0.0003369	0.0035	1.42		7808.98	7808.98		13.7	Si
SLV 1	ini.	1079.23	678	-0.0002247	0.0003369	0.0035	1.42		7808.98	7808.98		7.24	Si
SLV 1	fin.	-134.84	-414	-0.0000266	0.0003369	0.0035	1.42		7818.07	7818.07		57.98	Si
SLD 1	ini.	860.49	443	-0.0001768	0.0003369	0.0035	1.42		7808.98	7808.98		9.08	Si
SLD 1	fin.	-8.72	-259	-0.0000017	0.0003369	0.0035	1.42		7818.07	7818.07		896.61	Si
SLD 3	ini.	873.19	576	-0.0001795	0.0003369	0.0035	1.42		7808.98	7808.98		8.94	Si
SLD 3	fin.	124.1	19	-0.0000245	0.0003369	0.0035	1.42		7808.98	7808.98		62.92	Si
SLV 8	ini.	888.17	973	-0.0001828	0.0003369	0.0035	1.42		7808.98	7808.98		8.79	Si
SLV 8	fin.	566.25	942	-0.0001144	0.0003369	0.0035	1.42		7808.98	7808.98		13.79	Si
SLV 2	ini.	1089.32	686	-0.000227	0.0003369	0.0035	1.42		7808.98	7808.98		7.17	Si
SLV 2	fin.	-140.5	-405	-0.0000277	0.0003369	0.0035	1.42		7818.07	7818.07		55.64	Si
SLD 2	ini.	864.81	447	-0.0001777	0.0003369	0.0035	1.42		7808.98	7808.98		9.03	Si
SLD 2	fin.	-11.15	-255	-0.0000022	0.0003369	0.0035	1.42		7818.07	7818.07		701.05	Si
SLV 4	ini.	1120.8	992	-0.000234	0.0003369	0.0035	1.42		7808.98	7808.98		6.97	Si
SLV 4	fin.	164.13	233	-0.0000325	0.0003369	0.0035	1.42		7808.98	7808.98		47.58	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	1079.23	-1445	1.42	0	494	6344	6124	3621	6838		4.73	Si
SLV 1	fin.	-134.84	-2381	1.42	0	494	6344	6124	3621	6838		2.87	Si
SLV 2	ini.	1089.32	-1464	1.42	0	494	6344	6124	3621	6838		4.67	Si
SLV 2	fin.	-140.5	-2400	1.42	0	494	6344	6124	3621	6838		2.85	Si
SLV 10	ini.	553.93	-2115	1.42	0	494	6344	6124	3621	6838		3.23	Si
SLV 10	fin.	-410.01	-3224	1.42	0	494	6344	6124	3621	6838		2.12	Si
SLV 6	ini.	783.24	-2177	1.42	0	494	6344	6124	3621	6838		3.14	Si
SLV 6	fin.	-449.18	-3487	1.42	0	494	6344	6124	3621	6838		1.96	Si
SLV 5	ini.	776.8	-2165	1.42	0	494	6344	6124	3621	6838		3.16	Si
SLV 5	fin.	-445.56	-3475	1.42	0	494	6344	6124	3621	6838		1.97	Si
SLD 5	ini.	740.6	-1525	1.42	0	494	6344	6124	3621	6838		4.48	Si
SLD 5	fin.	-147.68	-2278	1.42	0	494	6344	6124	3621	6838		3	Si
SLD 9	ini.	649.89	-1499	1.42	0	494	6344	6124	3621	6838		4.56	Si
SLD 9	fin.	-133.61	-2174	1.42	0	494	6344	6124	3621	6838		3.15	Si
SLV 9	ini.	547.49	-2103	1.42	0	494	6344	6124	3621	6838		3.25	Si
SLV 9	fin.	-406.39	-3212	1.42	0	494	6344	6124	3621	6838		2.13	Si
SLD 10	ini.	652.7	-1504	1.42	0	494	6344	6124	3621	6838		4.55	Si
SLD 10	fin.	-135.19	-2179	1.42	0	494	6344	6124	3621	6838		3.14	Si
SLD 6	ini.	743.41	-1530	1.42	0	494	6344	6124	3621	6838		4.47	Si
SLD 6	fin.	-149.26	-2283	1.42	0	494	6344	6124	3621	6838		2.99	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	6.967	SLV 4	Si
V_SLV	1.961	SLV 6	Si
PF_SLU	6.633	SLU 51	Si
V_SLU	2.935	SLU 51	Si

Trave di accoppiamento 80

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-15.433	-3.314	7.54	8.96	1.42	-16.333	-3.314	7.54	8.96	1.42	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 32	ini.	-266.14	-1923	-0.0000532	0.0001872	0.0035	1.42		7359.91	7359.91	No	27.65	Si
SLU 32	fin.	130.34	-1672	-0.0000258	0.0001872	0.0035	1.42		7350.79	7350.79	No	56.4	Si
SLU 33	ini.	-269.5	-1921	-0.0000539	0.0001872	0.0035	1.42		7359.91	7359.91	No	27.31	Si
SLU 33	fin.	136.82	-1666	-0.0000271	0.0001872	0.0035	1.42		7350.79	7350.79	No	53.73	Si
SLU 40	ini.	-260.86	-1872	-0.0000522	0.0001872	0.0035	1.42		7359.91	7359.91	No	28.21	Si
SLU 40	fin.	122.51	-1632	-0.0000243	0.0001872	0.0035	1.42		7350.79	7350.79	No	60	Si
SLU 36	ini.	-252.09	-1961	-0.0000504	0.0001872	0.0035	1.42		7359.91	7359.91	No	29.2	Si
SLU 36	fin.	123.71	-1719	-0.0000245	0.0001872	0.0035	1.42		7350.79	7350.79	No	59.42	Si
SLU 35	ini.	-248.73	-1964	-0.0000497	0.0001872	0.0035	1.42		7359.91	7359.91	No	29.59	Si
SLU 35	fin.	117.23	-1725	-0.0000232	0.0001872	0.0035	1.42		7350.79	7350.79	No	62.71	Si
SLU 31	ini.	-258.01	-1824	-0.0000516	0.0001872	0.0035	1.42		7359.91	7359.91	No	28.53	Si
SLU 31	fin.	128.34	-1582	-0.0000254	0.0001872	0.0035	1.42		7350.79	7350.79	No	57.27	Si
SLU 23	ini.	-246.15	-1716	-0.0000492	0.0001872	0.0035	1.42		7359.91	7359.91	No	29.9	Si
SLU 23	fin.	131.87	-1476	-0.0000261	0.0001872	0.0035	1.42		7350.79	7350.79	No	55.74	Si
SLU 24	ini.	-254.28	-1815	-0.0000508	0.0001872	0.0035	1.42		7359.91	7359.91	No	28.94	Si
SLU 24	fin.	133.86	-1565	-0.0000265	0.0001872	0.0035	1.42		7350.79	7350.79	No	54.91	Si
SLU 25	ini.	-257.64	-1812	-0.0000515	0.0001872	0.0035	1.42		7359.91	7359.91	No	28.57	Si
SLU 25	fin.	140.34	-1560	-0.0000278	0.0001872	0.0035	1.42		7350.79	7350.79	No	52.38	Si
SLU 39	ini.	-257.5	-1874	-0.0000515	0.0001872	0.0035	1.42		7359.91	7359.91	No	28.58	Si
SLU 39	fin.	116.03	-1637	-0.000023	0.0001872	0.0035	1.42		7350.79	7350.79	No	63.35	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-222.38	1397	1.42	0	576	7137	5953	3621	7713	No	5.52	Si
SLU 81	fin.	63.26	-443	1.42	0	576	7137	5953	3621	7713	No	17.42	Si
SLU 32	ini.	-266.14	1391	1.42	0	576	7137	5953	3621	7713	No	5.55	Si
SLU 32	fin.	130.34	-117	1.42	0	576	7137	5953	3621	7713	No	65.95	Si
SLU 42	ini.	-243.44	1383	1.42	0	576	7137	5953	3621	7713	No	5.58	Si
SLU 42	fin.	109.4	-243	1.42	0	576	7137	5953	3621	7713	No	31.8	Si
SLU 31	ini.	-258.01	1373	1.42	0	576	7137	5953	3621	7713	No	5.62	Si
SLU 31	fin.	128.34	-135	1.42	0	576	7137	5953	3621	7713	No	57.02	Si
SLU 75	ini.	-234.39	1388	1.42	0	576	7137	5953	3621	7713	No	5.56	Si
SLU 75	fin.	84.05	-333	1.42	0	576	7137	5953	3621	7713	No	23.14	Si
SLU 33	ini.	-269.5	1405	1.42	0	576	7137	5953	3621	7713	No	5.49	Si
SLU 33	fin.	136.82	-103	1.42	0	576	7137	5953	3621	7713	No	74.69	Si
SLU 40	ini.	-260.86	1427	1.42	0	576	7137	5953	3621	7713	No	5.4	Si
SLU 40	fin.	122.51	-199	1.42	0	576	7137	5953	3621	7713	No	38.78	Si
SLU 82	ini.	-225.74	1411	1.42	0	576	7137	5953	3621	7713	No	5.47	Si
SLU 82	fin.	69.74	-429	1.42	0	576	7137	5953	3621	7713	No	17.98	Si
SLU 39	ini.	-257.5	1413	1.42	0	576	7137	5953	3621	7713	No	5.46	Si
SLU 39	fin.	116.03	-213	1.42	0	576	7137	5953	3621	7713	No	36.28	Si
SLU 74	ini.	-231.03	1375	1.42	0	576	7137	5953	3621	7713	No	5.61	Si
SLU 74	fin.	77.57	-347	1.42	0	576	7137	5953	3621	7713	No	22.23	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	2847.55	1151	-0.0006997	0.0002807	0.0035	1.42		7337.02	7337.02		2.58	Si
SLV 1	fin.	-2707.07	-1343	-0.0006559	0.0002807	0.0035	1.42		7346.34	7346.34		2.71	Si
SLV 3	ini.	2518.63	452	-0.0006008	0.0002807	0.0035	1.42		7337.02	7337.02		2.91	Si
SLV 3	fin.	-2470.74	-1704	-0.000586	0.0002807	0.0035	1.42		7346.34	7346.34		2.97	Si
SLV 15	ini.	-3056.16	-4091	-0.0007638	0.0002807	0.0035	1.42		7346.34	7346.34		2.4	Si
SLV 15	fin.	2738.74	-1393	-0.0006664	0.0002807	0.0035	1.42		7337.02	7337.02		2.68	Si
SLV 2	ini.	2806.68	1062	-0.0006871	0.0002807	0.0035	1.42		7337.02	7337.02		2.61	Si
SLV 2	fin.	-2696.6	-1390	-0.0006527	0.0002807	0.0035	1.42		7346.34	7346.34		2.72	Si
SLV 12	ini.	-1522.21	-3389	-0.0003311	0.0002807	0.0035	1.42		7346.34	7346.34		4.83	Si
SLV 12	fin.	1199.72	-1961	-0.0002544	0.0002807	0.0035	1.42		7337.02	7337.02		6.12	Si
SLV 13	ini.	-2727.24	-3392	-0.0006619	0.0002807	0.0035	1.42		7346.34	7346.34		2.69	Si
SLV 13	fin.	2502.41	-1032	-0.0005961	0.0002807	0.0035	1.42		7337.02	7337.02		2.93	Si
SLV 14	ini.	-2768.11	-3481	-0.0006743	0.0002807	0.0035	1.42		7346.34	7346.34		2.65	Si
SLV 14	fin.	2512.88	-1079	-0.0005991	0.0002807	0.0035	1.42		7337.02	7337.02		2.92	Si
SLV 4	ini.	2477.76	363	-0.0005889	0.0002807	0.0035	1.42		7337.02	7337.02		2.96	Si
SLV 4	fin.	-2460.27	-1751	-0.0005829	0.0002807	0.0035	1.42		7346.34	7346.34		2.99	Si
SLV 11	ini.	-1496.11	-3332	-0.0003247	0.0002807	0.0035	1.42		7346.34	7346.34		4.91	Si
SLV 11	fin.	1193.04	-1931	-0.0002529	0.0002807	0.0035	1.42		7337.02	7337.02		6.15	Si
SLV 16	ini.	-3097.03	-4180	-0.0007768	0.0002807	0.0035	1.42		7346.34	7346.34		2.37	Si
SLV 16	fin.	2749.21	-1440	-0.0006696	0.0002807	0.0035	1.42		7337.02	7337.02		2.67	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	2806.68	-7345	1.42	0	864	7137	8929	3621	8001		1.09	Si
SLV 2	fin.	-2696.6	-8440	1.42	0	864	7137	8929	3621	8001		0.95	No
SLV 16	ini.	-3097.03	9086	1.42	0	864	7137	8929	3621	8001		0.88	No
SLV 16	fin.	2749.21	7905	1.42	0	864	7137	8929	3621	8001		1.01	Si
SLV 3	ini.	2518.63	-6702	1.42	0	864	7137	8929	3621	8001		1.19	Si
SLV 3	fin.	-2470.74	-7715	1.42	0	864	7137	8929	3621	8001		1.04	Si
SLV 4	ini.	2477.76	-6612	1.42	0	864	7137	8929	3621	8001		1.21	Si
SLV 4	fin.	-2460.27	-7624	1.42	0	864	7137	8929	3621	8001		1.05	Si
SLV 15	ini.	-3056.16	8996	1.42	0	864	7137	8929	3621	8001		0.89	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	fin.	2738.74	7815	1.42	0	864	7137	8929	3621	8001		1.02	Si
SLV 11	ini.	-1496.11	4374	1.42	0	864	7137	8929	3621	8001		1.83	Si
SLV 11	fin.	1193.04	3347	1.42	0	864	7137	8929	3621	8001		2.39	Si
SLV 12	ini.	-1522.21	4432	1.42	0	864	7137	8929	3621	8001		1.81	Si
SLV 12	fin.	1199.72	3405	1.42	0	864	7137	8929	3621	8001		2.35	Si
SLV 14	ini.	-2768.11	8352	1.42	0	864	7137	8929	3621	8001		0.96	No
SLV 14	fin.	2512.88	7089	1.42	0	864	7137	8929	3621	8001		1.13	Si
SLV 13	ini.	-2727.24	8262	1.42	0	864	7137	8929	3621	8001		0.97	No
SLV 13	fin.	2502.41	6999	1.42	0	864	7137	8929	3621	8001		1.14	Si
SLV 1	ini.	2847.55	-7436	1.42	0	864	7137	8929	3621	8001		1.08	Si
SLV 1	fin.	-2707.07	-8530	1.42	0	864	7137	8929	3621	8001		0.94	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.372	SLV 16	Si
V_SLV	0.881	SLV 16	No
PF_SLU	27.309	SLU 33	Si
V_SLU	5.405	SLU 40	Si

Trave di accoppiamento 82

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-15.033	1.366	7.54	8.96	1.42	-15.033	2.166	7.54	8.96	1.42	0.8	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-1159.2	1010	-0.0002489	0.0002246	0.0035	1.42		7603.79	7603.79	No	6.56	Si
SLU 79	fin.	-1689.7	1204	-0.0003832	0.0002246	0.0035	1.42		7603.79	7603.79	No	4.5	Si
SLU 80	ini.	-1160.77	1012	-0.0002492	0.0002246	0.0035	1.42		7603.79	7603.79	No	6.55	Si
SLU 80	fin.	-1690.88	1206	-0.0003836	0.0002246	0.0035	1.42		7603.79	7603.79	No	4.5	Si
SLU 74	ini.	-1159.38	1009	-0.0002489	0.0002246	0.0035	1.42		7603.79	7603.79	No	6.56	Si
SLU 74	fin.	-1691.87	1203	-0.0003838	0.0002246	0.0035	1.42		7603.79	7603.79	No	4.49	Si
SLU 83	ini.	-1205.67	1045	-0.00026	0.0002246	0.0035	1.42		7603.79	7603.79	No	6.31	Si
SLU 83	fin.	-1753.52	1249	-0.0004004	0.0002246	0.0035	1.42		7603.79	7603.79	No	4.34	Si
SLU 75	ini.	-1160.96	1011	-0.0002493	0.0002246	0.0035	1.42		7603.79	7603.79	No	6.55	Si
SLU 75	fin.	-1693.06	1205	-0.0003841	0.0002246	0.0035	1.42		7603.79	7603.79	No	4.49	Si
SLU 84	ini.	-1207.25	1047	-0.0002604	0.0002246	0.0035	1.42		7603.79	7603.79	No	6.3	Si
SLU 84	fin.	-1754.71	1251	-0.0004007	0.0002246	0.0035	1.42		7603.79	7603.79	No	4.33	Si
SLU 78	ini.	-1169.95	1019	-0.0002514	0.0002246	0.0035	1.42		7603.79	7603.79	No	6.5	Si
SLU 78	fin.	-1705.78	1214	-0.0003875	0.0002246	0.0035	1.42		7603.79	7603.79	No	4.46	Si
SLU 81	ini.	-1196.68	1038	-0.0002579	0.0002246	0.0035	1.42		7603.79	7603.79	No	6.35	Si
SLU 81	fin.	-1740.8	1241	-0.0003969	0.0002246	0.0035	1.42		7603.79	7603.79	No	4.37	Si
SLU 82	ini.	-1198.26	1040	-0.0002583	0.0002246	0.0035	1.42		7603.79	7603.79	No	6.35	Si
SLU 82	fin.	-1741.99	1243	-0.0003973	0.0002246	0.0035	1.42		7603.79	7603.79	No	4.37	Si
SLU 77	ini.	-1168.38	1017	-0.0002511	0.0002246	0.0035	1.42		7603.79	7603.79	No	6.51	Si
SLU 77	fin.	-1704.59	1212	-0.0003872	0.0002246	0.0035	1.42		7603.79	7603.79	No	4.46	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-1207.25	-244	1.42	0	329	6344	4083	3621	6673	No	27.31	Si
SLU 84	fin.	-1754.71	-748	1.42	0	329	6344	4083	3621	6673	No	8.92	Si
SLU 83	ini.	-1205.67	-245	1.42	0	329	6344	4083	3621	6673	No	27.24	Si
SLU 83	fin.	-1753.52	-749	1.42	0	329	6344	4083	3621	6673	No	8.91	Si
SLU 74	ini.	-1159.38	-235	1.42	0	329	6344	4083	3621	6673	No	28.43	Si
SLU 74	fin.	-1691.87	-738	1.42	0	329	6344	4083	3621	6673	No	9.04	Si
SLU 81	ini.	-1196.68	-241	1.42	0	329	6344	4083	3621	6673	No	27.64	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	fin.	-1740.8	-745	1.42	0	329	6344	4083	3621	6673	No	8.95	Si
SLU 75	ini.	-1160.96	-234	1.42	0	329	6344	4083	3621	6673	No	28.51	Si
SLU 75	fin.	-1693.06	-738	1.42	0	329	6344	4083	3621	6673	No	9.04	Si
SLU 82	ini.	-1198.26	-241	1.42	0	329	6344	4083	3621	6673	No	27.71	Si
SLU 82	fin.	-1741.99	-745	1.42	0	329	6344	4083	3621	6673	No	8.96	Si
SLU 77	ini.	-1168.38	-238	1.42	0	329	6344	4083	3621	6673	No	28.01	Si
SLU 77	fin.	-1704.59	-742	1.42	0	329	6344	4083	3621	6673	No	8.99	Si
SLU 78	ini.	-1169.95	-238	1.42	0	329	6344	4083	3621	6673	No	28.08	Si
SLU 78	fin.	-1705.78	-741	1.42	0	329	6344	4083	3621	6673	No	9	Si
SLU 79	ini.	-1159.2	-232	1.42	0	329	6344	4083	3621	6673	No	28.8	Si
SLU 79	fin.	-1689.7	-735	1.42	0	329	6344	4083	3621	6673	No	9.07	Si
SLU 80	ini.	-1160.77	-231	1.42	0	329	6344	4083	3621	6673	No	28.89	Si
SLU 80	fin.	-1690.88	-735	1.42	0	329	6344	4083	3621	6673	No	9.08	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-808.47	678	-0.0001654	0.0003369	0.0035	1.42		7818.07	7818.07		9.67	Si
SLV 15	fin.	-1336.84	397	-0.0002827	0.0003369	0.0035	1.42		7818.07	7818.07		5.85	Si
SLD 13	ini.	-716.37	824	-0.0001458	0.0003369	0.0035	1.42		7818.07	7818.07		10.91	Si
SLD 13	fin.	-1218.68	925	-0.0002557	0.0003369	0.0035	1.42		7818.07	7818.07		6.42	Si
SLV 14	ini.	-610.76	990	-0.0001235	0.0003369	0.0035	1.42		7818.07	7818.07		12.8	Si
SLV 14	fin.	-1293.17	1044	-0.0002727	0.0003369	0.0035	1.42		7818.07	7818.07		6.05	Si
SLV 11	ini.	-1090.86	210	-0.000227	0.0003369	0.0035	1.42		7818.07	7818.07		7.17	Si
SLV 11	fin.	-1274.85	-290	-0.0002685	0.0003369	0.0035	1.42		7818.07	7818.07		6.13	Si
SLV 16	ini.	-804.84	673	-0.0001646	0.0003369	0.0035	1.42		7818.07	7818.07		9.71	Si
SLV 16	fin.	-1333.57	393	-0.0002819	0.0003369	0.0035	1.42		7818.07	7818.07		5.86	Si
SLV 12	ini.	-1088.54	207	-0.0002265	0.0003369	0.0035	1.42		7818.07	7818.07		7.18	Si
SLV 12	fin.	-1272.77	-293	-0.000268	0.0003369	0.0035	1.42		7818.07	7818.07		6.14	Si
SLV 13	ini.	-614.39	995	-0.0001243	0.0003369	0.0035	1.42		7818.07	7818.07		12.72	Si
SLV 13	fin.	-1296.44	1049	-0.0002734	0.0003369	0.0035	1.42		7818.07	7818.07		6.03	Si
SLD 15	ini.	-798.09	687	-0.0001632	0.0003369	0.0035	1.42		7818.07	7818.07		9.8	Si
SLD 15	fin.	-1234.02	641	-0.0002592	0.0003369	0.0035	1.42		7818.07	7818.07		6.34	Si
SLD 14	ini.	-714.81	822	-0.0001454	0.0003369	0.0035	1.42		7818.07	7818.07		10.94	Si
SLD 14	fin.	-1217.28	923	-0.0002554	0.0003369	0.0035	1.42		7818.07	7818.07		6.42	Si
SLD 16	ini.	-796.53	685	-0.0001628	0.0003369	0.0035	1.42		7818.07	7818.07		9.82	Si
SLD 16	fin.	-1232.61	639	-0.0002589	0.0003369	0.0035	1.42		7818.07	7818.07		6.34	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 10	ini.	-441.6	-668	1.42	0	494	6344	6124	3621	6838		10.24	Si
SLV 10	fin.	-1138.11	-945	1.42	0	494	6344	6124	3621	6838		7.24	Si
SLD 16	ini.	-796.53	-91	1.42	0	494	6344	6124	3621	6838		75.28	Si
SLD 16	fin.	-1232.61	-731	1.42	0	494	6344	6124	3621	6838		9.35	Si
SLD 14	ini.	-714.81	-224	1.42	0	494	6344	6124	3621	6838		30.48	Si
SLD 14	fin.	-1217.28	-795	1.42	0	494	6344	6124	3621	6838		8.6	Si
SLD 15	ini.	-798.09	-91	1.42	0	494	6344	6124	3621	6838		75.45	Si
SLD 15	fin.	-1234.02	-731	1.42	0	494	6344	6124	3621	6838		9.35	Si
SLV 15	ini.	-808.47	0	1.42	0	494	6344	6124	3621	6838		29110.81	Si
SLV 15	fin.	-1336.84	-1022	1.42	0	494	6344	6124	3621	6838		6.69	Si
SLV 9	ini.	-443.92	-668	1.42	0	494	6344	6124	3621	6838		10.24	Si
SLV 9	fin.	-1140.2	-945	1.42	0	494	6344	6124	3621	6838		7.24	Si
SLV 14	ini.	-610.76	-311	1.42	0	494	6344	6124	3621	6838		21.98	Si
SLV 14	fin.	-1293.17	-1168	1.42	0	494	6344	6124	3621	6838		5.85	Si
SLV 13	ini.	-614.39	-311	1.42	0	494	6344	6124	3621	6838		22.01	Si
SLV 13	fin.	-1296.44	-1168	1.42	0	494	6344	6124	3621	6838		5.85	Si
SLD 13	ini.	-716.37	-224	1.42	0	494	6344	6124	3621	6838		30.51	Si
SLD 13	fin.	-1218.68	-795	1.42	0	494	6344	6124	3621	6838		8.6	Si
SLV 16	ini.	-804.84	-1	1.42	0	494	6344	6124	3621	6838		9647.43	Si
SLV 16	fin.	-1333.57	-1022	1.42	0	494	6344	6124	3621	6838		6.69	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.848	SLV 15	Si
V_SLV	5.852	SLV 14	Si
PF_SLU	4.333	SLU 84	Si
V_SLU	8.912	SLU 83	Si

Trave di accoppiamento 83

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-13.778	-0.194	7.54	8.96	1.42	-13.778	0.706	7.54	8.96	1.42	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 56	ini.	664.51	32	-0.0001378	0.0001872	0.0035	1.42		7350.79	7350.79	No	11.06	Si
SLU 56	fin.	315.1	-165	-0.0000634	0.0001872	0.0035	1.42		7350.79	7350.79	No	23.33	Si
SLU 58	ini.	713.45	104	-0.0001487	0.0001872	0.0035	1.42		7350.79	7350.79	No	10.3	Si
SLU 58	fin.	325.55	-147	-0.0000655	0.0001872	0.0035	1.42		7350.79	7350.79	No	22.58	Si
SLU 63	ini.	691.86	67	-0.0001439	0.0001872	0.0035	1.42		7350.79	7350.79	No	10.62	Si
SLU 63	fin.	315.88	-169	-0.0000635	0.0001872	0.0035	1.42		7350.79	7350.79	No	23.27	Si
SLU 57	ini.	669.33	32	-0.0001389	0.0001872	0.0035	1.42		7350.79	7350.79	No	10.98	Si
SLU 57	fin.	317.61	-166	-0.0000639	0.0001872	0.0035	1.42		7350.79	7350.79	No	23.14	Si
SLU 59	ini.	718.26	104	-0.0001498	0.0001872	0.0035	1.42		7350.79	7350.79	No	10.23	Si
SLU 59	fin.	328.06	-148	-0.000066	0.0001872	0.0035	1.42		7350.79	7350.79	No	22.41	Si
SLU 55	ini.	680.51	76	-0.0001414	0.0001872	0.0035	1.42		7350.79	7350.79	No	10.8	Si
SLU 55	fin.	316.21	-151	-0.0000636	0.0001872	0.0035	1.42		7350.79	7350.79	No	23.25	Si
SLU 51	ini.	684.29	125	-0.0001422	0.0001872	0.0035	1.42		7350.79	7350.79	No	10.74	Si
SLU 51	fin.	324.92	-104	-0.0000654	0.0001872	0.0035	1.42		7350.79	7350.79	No	22.62	Si
SLU 62	ini.	687.05	66	-0.0001428	0.0001872	0.0035	1.42		7350.79	7350.79	No	10.7	Si
SLU 62	fin.	313.38	-168	-0.000063	0.0001872	0.0035	1.42		7350.79	7350.79	No	23.46	Si
SLU 61	ini.	650.9	38	-0.0001348	0.0001872	0.0035	1.42		7350.79	7350.79	No	11.29	Si
SLU 61	fin.	302.36	-172	-0.0000607	0.0001872	0.0035	1.42		7350.79	7350.79	No	24.31	Si
SLU 50	ini.	679.47	125	-0.0001411	0.0001872	0.0035	1.42		7350.79	7350.79	No	10.82	Si
SLU 50	fin.	322.41	-103	-0.0000649	0.0001872	0.0035	1.42		7350.79	7350.79	No	22.8	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 60	ini.	646.09	-123	1.42	0	576	7137	5953	3621	7713	No	62.71	Si
SLU 60	fin.	299.86	-958	1.42	0	576	7137	5953	3621	7713	No	8.05	Si
SLU 51	ini.	684.29	-154	1.42	0	576	7137	5953	3621	7713	No	49.99	Si
SLU 51	fin.	324.92	-989	1.42	0	576	7137	5953	3621	7713	No	7.8	Si
SLU 63	ini.	691.86	-178	1.42	0	576	7137	5953	3621	7713	No	43.33	Si
SLU 63	fin.	315.88	-1013	1.42	0	576	7137	5953	3621	7713	No	7.61	Si
SLU 59	ini.	718.26	-207	1.42	0	576	7137	5953	3621	7713	No	37.33	Si
SLU 59	fin.	328.06	-1042	1.42	0	576	7137	5953	3621	7713	No	7.4	Si
SLU 57	ini.	669.33	-121	1.42	0	576	7137	5953	3621	7713	No	63.67	Si
SLU 57	fin.	317.61	-956	1.42	0	576	7137	5953	3621	7713	No	8.07	Si
SLU 58	ini.	713.45	-203	1.42	0	576	7137	5953	3621	7713	No	38.06	Si
SLU 58	fin.	325.55	-1038	1.42	0	576	7137	5953	3621	7713	No	7.43	Si
SLU 50	ini.	679.47	-150	1.42	0	576	7137	5953	3621	7713	No	51.31	Si
SLU 50	fin.	322.41	-985	1.42	0	576	7137	5953	3621	7713	No	7.83	Si
SLU 61	ini.	650.9	-127	1.42	0	576	7137	5953	3621	7713	No	60.75	Si
SLU 61	fin.	302.36	-962	1.42	0	576	7137	5953	3621	7713	No	8.02	Si
SLU 55	ini.	680.51	-158	1.42	0	576	7137	5953	3621	7713	No	48.75	Si
SLU 55	fin.	316.21	-993	1.42	0	576	7137	5953	3621	7713	No	7.76	Si
SLU 62	ini.	687.05	-174	1.42	0	576	7137	5953	3621	7713	No	44.31	Si
SLU 62	fin.	313.38	-1009	1.42	0	576	7137	5953	3621	7713	No	7.64	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 3	ini.	685.44	384	-0.0001401	0.0002807	0.0035	1.42		7337.02	7337.02		10.7	Si
SLD 3	fin.	224.99	-77	-0.0000447	0.0002807	0.0035	1.42		7337.02	7337.02		32.61	Si
SLV 4	ini.	1080.82	1022	-0.0002272	0.0002807	0.0035	1.42		7337.02	7337.02		6.79	Si
SLV 4	fin.	249.67	6	-0.0000497	0.0002807	0.0035	1.42		7337.02	7337.02		29.39	Si
SLV 2	ini.	1041.76	361	-0.0002183	0.0002807	0.0035	1.42		7337.02	7337.02		7.04	Si
SLV 2	fin.	204.66	-400	-0.0000406	0.0002807	0.0035	1.42		7337.02	7337.02		35.85	Si
SLV 3	ini.	1084.46	1026	-0.000228	0.0002807	0.0035	1.42		7337.02	7337.02		6.77	Si
SLV 3	fin.	251.31	6	-0.00005	0.0002807	0.0035	1.42		7337.02	7337.02		29.2	Si
SLV 1	ini.	1045.41	365	-0.0002191	0.0002807	0.0035	1.42		7337.02	7337.02		7.02	Si
SLV 1	fin.	206.29	-400	-0.0000409	0.0002807	0.0035	1.42		7337.02	7337.02		35.57	Si
SLV 7	ini.	656.74	1240	-0.000134	0.0002807	0.0035	1.42		7337.02	7337.02		11.17	Si
SLV 7	fin.	289.27	519	-0.0000577	0.0002807	0.0035	1.42		7337.02	7337.02		25.36	Si
SLV 8	ini.	654.41	1238	-0.0001335	0.0002807	0.0035	1.42		7337.02	7337.02		11.21	Si
SLV 8	fin.	288.23	519	-0.0000575	0.0002807	0.0035	1.42		7337.02	7337.02		25.46	Si
SLD 1	ini.	668.62	93	-0.0001365	0.0002807	0.0035	1.42		7337.02	7337.02		10.97	Si
SLD 1	fin.	208.27	-252	-0.0000413	0.0002807	0.0035	1.42		7337.02	7337.02		35.23	Si
SLD 4	ini.	683.87	383	-0.0001398	0.0002807	0.0035	1.42		7337.02	7337.02		10.73	Si
SLD 4	fin.	224.29	-77	-0.0000446	0.0002807	0.0035	1.42		7337.02	7337.02		32.71	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 2	ini.	667.05	91	-0.0001362	0.0002807	0.0035	1.42		7337.02	7337.02		11	Si
SLD 2	fin.	207.57	-252	-0.0000412	0.0002807	0.0035	1.42		7337.02	7337.02		35.35	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-269.55	1732	1.42	0	864	7137	8929	3621	8001		4.62	Si
SLV 16	fin.	208.94	729	1.42	0	864	7137	8929	3621	8001		10.97	Si
SLV 5	ini.	526.56	-1548	1.42	0	864	7137	8929	3621	8001		5.17	Si
SLV 5	fin.	139.21	-1566	1.42	0	864	7137	8929	3621	8001		5.11	Si
SLV 3	ini.	1084.46	-761	1.42	0	864	7137	8929	3621	8001		10.52	Si
SLV 3	fin.	251.31	-1416	1.42	0	864	7137	8929	3621	8001		5.65	Si
SLV 1	ini.	1045.41	-1526	1.42	0	864	7137	8929	3621	8001		5.24	Si
SLV 1	fin.	206.29	-1831	1.42	0	864	7137	8929	3621	8001		4.37	Si
SLV 6	ini.	524.23	-1544	1.42	0	864	7137	8929	3621	8001		5.18	Si
SLV 6	fin.	138.17	-1563	1.42	0	864	7137	8929	3621	8001		5.12	Si
SLV 12	ini.	249.3	1754	1.42	0	864	7137	8929	3621	8001		4.56	Si
SLV 12	fin.	276.01	464	1.42	0	864	7137	8929	3621	8001		17.23	Si
SLV 15	ini.	-265.91	1727	1.42	0	864	7137	8929	3621	8001		4.63	Si
SLV 15	fin.	210.57	724	1.42	0	864	7137	8929	3621	8001		11.05	Si
SLV 11	ini.	251.63	1750	1.42	0	864	7137	8929	3621	8001		4.57	Si
SLV 11	fin.	277.05	461	1.42	0	864	7137	8929	3621	8001		17.36	Si
SLV 4	ini.	1080.82	-755	1.42	0	864	7137	8929	3621	8001		10.59	Si
SLV 4	fin.	249.67	-1410	1.42	0	864	7137	8929	3621	8001		5.67	Si
SLV 2	ini.	1041.76	-1521	1.42	0	864	7137	8929	3621	8001		5.26	Si
SLV 2	fin.	204.66	-1826	1.42	0	864	7137	8929	3621	8001		4.38	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	6.766	SLV 3	Si
V_SLV	4.369	SLV 1	Si
PF_SLU	10.234	SLU 59	Si
V_SLU	7.403	SLU 59	Si

Trave di accoppiamento 84

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.718	6.526	5.44	6.34	0.9	-16.818	6.526	5.44	6.34	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	1488.74	-3600	-0.0010517	0.0001872	0.0035	0.9		2959	2959	No	1.99	Si
SLU 77	fin.	-962.88	-110	-0.0006009	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.08	Si
SLU 84	ini.	1519.39	-3677	-0.0010809	0.0001872	0.0035	0.9		2959	2959	No	1.95	Si
SLU 84	fin.	-984.61	-110	-0.0006177	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.01	Si
SLU 79	ini.	1476.9	-3559	-0.0010405	0.0001872	0.0035	0.9		2959	2959	No	2	Si
SLU 79	fin.	-961.21	-85	-0.0005996	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.08	Si
SLU 82	ini.	1503.47	-3642	-0.0010657	0.0001872	0.0035	0.9		2959	2959	No	1.97	Si
SLU 82	fin.	-973.79	-112	-0.0006093	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.04	Si
SLU 83	ini.	1518.1	-3674	-0.0010796	0.0001872	0.0035	0.9		2959	2959	No	1.95	Si
SLU 83	fin.	-983.64	-110	-0.0006169	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.01	Si
SLU 74	ini.	1472.82	-3565	-0.0010366	0.0001872	0.0035	0.9		2959	2959	No	2.01	Si
SLU 74	fin.	-952.06	-112	-0.0005925	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.11	Si
SLU 80	ini.	1478.19	-3562	-0.0010417	0.0001872	0.0035	0.9		2959	2959	No	2	Si
SLU 80	fin.	-962.18	-85	-0.0006003	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.08	Si
SLU 75	ini.	1474.12	-3568	-0.0010379	0.0001872	0.0035	0.9		2959	2959	No	2.01	Si
SLU 75	fin.	-953.03	-112	-0.0005933	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.11	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	1502.17	-3639	-0.0010644	0.0001872	0.0035	0.9		2959	2959	No	1.97	Si
SLU 81	fin.	-972.82	-113	-0.0006085	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.05	Si
SLU 78	ini.	1490.04	-3603	-0.0010529	0.0001872	0.0035	0.9		2959	2959	No	1.99	Si
SLU 78	fin.	-963.85	-109	-0.0006016	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.08	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	1478.19	-5302	0.9	0	365	7137	3773	2295	6068	No	1.14	Si
SLU 80	fin.	-962.18	-3393	0.9	0	365	7137	3773	2295	6068	No	1.79	Si
SLU 83	ini.	1518.1	-5422	0.9	0	365	7137	3773	2295	6068	No	1.12	Si
SLU 83	fin.	-983.64	-3490	0.9	0	365	7137	3773	2295	6068	No	1.74	Si
SLU 84	ini.	1519.39	-5428	0.9	0	365	7137	3773	2295	6068	No	1.12	Si
SLU 84	fin.	-984.61	-3492	0.9	0	365	7137	3773	2295	6068	No	1.74	Si
SLU 77	ini.	1488.74	-5343	0.9	0	365	7137	3773	2295	6068	No	1.14	Si
SLU 77	fin.	-962.88	-3389	0.9	0	365	7137	3773	2295	6068	No	1.79	Si
SLU 75	ini.	1474.12	-5285	0.9	0	365	7137	3773	2295	6068	No	1.15	Si
SLU 75	fin.	-953.03	-3361	0.9	0	365	7137	3773	2295	6068	No	1.81	Si
SLU 81	ini.	1502.17	-5358	0.9	0	365	7137	3773	2295	6068	No	1.13	Si
SLU 81	fin.	-972.82	-3459	0.9	0	365	7137	3773	2295	6068	No	1.75	Si
SLU 78	ini.	1490.04	-5349	0.9	0	365	7137	3773	2295	6068	No	1.13	Si
SLU 78	fin.	-963.85	-3391	0.9	0	365	7137	3773	2295	6068	No	1.79	Si
SLU 79	ini.	1476.9	-5296	0.9	0	365	7137	3773	2295	6068	No	1.15	Si
SLU 79	fin.	-961.21	-3391	0.9	0	365	7137	3773	2295	6068	No	1.79	Si
SLU 74	ini.	1472.82	-5279	0.9	0	365	7137	3773	2295	6068	No	1.15	Si
SLU 74	fin.	-952.06	-3359	0.9	0	365	7137	3773	2295	6068	No	1.81	Si
SLU 82	ini.	1503.47	-5364	0.9	0	365	7137	3773	2295	6068	No	1.13	Si
SLU 82	fin.	-973.79	-3462	0.9	0	365	7137	3773	2295	6068	No	1.75	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 14	ini.	1665.69	-3198	-0.0011464	0.0002807	0.0035	0.9		2989.59	2989.59		1.79	Si
SLD 14	fin.	-1395.62	1347	-0.0009022	0.0002807	0.0035	0.9		2995.37	2995.37		2.15	Si
SLD 16	ini.	1630.51	-3143	-0.0011132	0.0002807	0.0035	0.9		2989.59	2989.59		1.83	Si
SLD 16	fin.	-1359.05	1295	-0.0008715	0.0002807	0.0035	0.9		2995.37	2995.37		2.2	Si
SLD 13	ini.	1652.03	-3167	-0.0011334	0.0002807	0.0035	0.9		2989.59	2989.59		1.81	Si
SLD 13	fin.	-1385.83	1340	-0.000894	0.0002807	0.0035	0.9		2995.37	2995.37		2.16	Si
SLV 13	ini.	2498.33	-4140	-0.0021827	0.0002807	0.0035	0.9		2989.59	2989.59		1.2	Si
SLV 13	fin.	-2343.17	3171	-0.0019287	0.0002807	0.0035	0.9		2995.37	2995.37		1.28	Si
SLV 14	ini.	2530.16	-4212	-0.002238	0.0002807	0.0035	0.9		2989.59	2989.59		1.18	Si
SLV 14	fin.	-2365.97	3187	-0.0019627	0.0002807	0.0035	0.9		2995.37	2995.37		1.27	Si
SLV 16	ini.	2449.44	-4086	-0.0021009	0.0002807	0.0035	0.9		2989.59	2989.59		1.22	Si
SLV 16	fin.	-2281.6	3067	-0.0018401	0.0002807	0.0035	0.9		2995.37	2995.37		1.31	Si
SLV 15	ini.	2417.61	-4015	-0.0020495	0.0002807	0.0035	0.9		2989.59	2989.59		1.24	Si
SLV 15	fin.	-2258.8	3051	-0.0018086	0.0002807	0.0035	0.9		2995.37	2995.37		1.33	Si
SLV 9	ini.	1580	-3127	-0.0010666	0.0002807	0.0035	0.9		2989.59	2989.59		1.89	Si
SLV 9	fin.	-1296.22	1111	-0.0008199	0.0002807	0.0035	0.9		2995.37	2995.37		2.31	Si
SLD 15	ini.	1616.85	-3112	-0.0011005	0.0002807	0.0035	0.9		2989.59	2989.59		1.85	Si
SLD 15	fin.	-1349.26	1288	-0.0008634	0.0002807	0.0035	0.9		2995.37	2995.37		2.22	Si
SLV 10	ini.	1600.33	-3173	-0.0010852	0.0002807	0.0035	0.9		2989.59	2989.59		1.87	Si
SLV 10	fin.	-1310.78	1121	-0.0008317	0.0002807	0.0035	0.9		2995.37	2995.37		2.29	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	2530.16	-9273	0.9	0	548	7137	5660	2295	7684		0.83	No
SLV 14	fin.	-2365.97	-8659	0.9	0	548	7137	5660	2295	7684		0.89	No
SLV 15	ini.	2417.61	-8835	0.9	0	548	7137	5660	2295	7684		0.87	No
SLV 15	fin.	-2258.8	-8552	0.9	0	548	7137	5660	2295	7684		0.9	No
SLD 15	ini.	1616.85	-5873	0.9	0	548	7137	5660	2295	7684		1.31	Si
SLD 15	fin.	-1349.26	-5007	0.9	0	548	7137	5660	2295	7684		1.53	Si
SLD 16	ini.	1630.51	-5920	0.9	0	548	7137	5660	2295	7684		1.3	Si
SLD 16	fin.	-1359.05	-5047	0.9	0	548	7137	5660	2295	7684		1.52	Si
SLD 13	ini.	1652.03	-6018	0.9	0	548	7137	5660	2295	7684		1.28	Si
SLD 13	fin.	-1385.83	-5015	0.9	0	548	7137	5660	2295	7684		1.53	Si
SLV 16	ini.	2449.44	-8944	0.9	0	548	7137	5660	2295	7684		0.86	No
SLV 16	fin.	-2281.6	-8644	0.9	0	548	7137	5660	2295	7684		0.89	No
SLD 14	ini.	1665.69	-6065	0.9	0	548	7137	5660	2295	7684		1.27	Si
SLD 14	fin.	-1395.62	-5055	0.9	0	548	7137	5660	2295	7684		1.52	Si
SLV 10	ini.	1600.33	-5864	0.9	0	548	7137	5660	2295	7684		1.31	Si
SLV 10	fin.	-1310.78	-4288	0.9	0	548	7137	5660	2295	7684		1.79	Si
SLV 13	ini.	2498.33	-9164	0.9	0	548	7137	5660	2295	7684		0.84	No
SLV 13	fin.	-2343.17	-8567	0.9	0	548	7137	5660	2295	7684		0.9	No
SLV 9	ini.	1580	-5795	0.9	0	548	7137	5660	2295	7684		1.33	Si
SLV 9	fin.	-1296.22	-4229	0.9	0	548	7137	5660	2295	7684		1.82	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.182	SLV 14	Si
V_SLV	0.829	SLV 14	No
PF_SLU	1.947	SLU 84	Si
V_SLU	1.118	SLU 84	Si

Trave di accoppiamento 85

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.718	6.526	8.14	8.96	0.82	-16.818	6.526	8.14	8.96	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	538.89	1376	-0.000374	0.0001872	0.0035	0.82		2455.37	2455.37	No	4.56	Si
SLU 74	fin.	-1513.56	-2935	-0.0013907	0.0001872	0.0035	0.82		2460.51	2460.51	No	1.63	Si
SLU 80	ini.	545.78	1405	-0.0003797	0.0001872	0.0035	0.82		2455.37	2455.37	No	4.5	Si
SLU 80	fin.	-1518.39	-2931	-0.0013972	0.0001872	0.0035	0.82		2460.51	2460.51	No	1.62	Si
SLU 81	ini.	548.73	1399	-0.0003821	0.0001872	0.0035	0.82		2455.37	2455.37	No	4.47	Si
SLU 81	fin.	-1544.05	-2993	-0.001432	0.0001872	0.0035	0.82		2460.51	2460.51	No	1.59	Si
SLU 79	ini.	545.07	1403	-0.0003791	0.0001872	0.0035	0.82		2455.37	2455.37	No	4.5	Si
SLU 79	fin.	-1516.72	-2928	-0.001395	0.0001872	0.0035	0.82		2460.51	2460.51	No	1.62	Si
SLU 75	ini.	539.6	1378	-0.0003746	0.0001872	0.0035	0.82		2455.37	2455.37	No	4.55	Si
SLU 75	fin.	-1515.23	-2938	-0.001393	0.0001872	0.0035	0.82		2460.51	2460.51	No	1.62	Si
SLU 77	ini.	545.07	1392	-0.0003791	0.0001872	0.0035	0.82		2455.37	2455.37	No	4.5	Si
SLU 77	fin.	-1530.5	-2969	-0.0014135	0.0001872	0.0035	0.82		2460.51	2460.51	No	1.61	Si
SLU 78	ini.	545.78	1394	-0.0003797	0.0001872	0.0035	0.82		2455.37	2455.37	No	4.5	Si
SLU 78	fin.	-1532.17	-2972	-0.0014158	0.0001872	0.0035	0.82		2460.51	2460.51	No	1.61	Si
SLU 83	ini.	554.91	1415	-0.0003872	0.0001872	0.0035	0.82		2455.37	2455.37	No	4.42	Si
SLU 83	fin.	-1560.98	-3027	-0.0014553	0.0001872	0.0035	0.82		2460.51	2460.51	No	1.58	Si
SLU 82	ini.	549.44	1401	-0.0003827	0.0001872	0.0035	0.82		2455.37	2455.37	No	4.47	Si
SLU 82	fin.	-1545.72	-2996	-0.0014343	0.0001872	0.0035	0.82		2460.51	2460.51	No	1.59	Si
SLU 84	ini.	555.62	1417	-0.0003878	0.0001872	0.0035	0.82		2455.37	2455.37	No	4.42	Si
SLU 84	fin.	-1562.66	-3030	-0.0014576	0.0001872	0.0035	0.82		2460.51	2460.51	No	1.57	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	538.89	-1880	0.82	0	303	6502	3438	2091	5529	No	2.94	Si
SLU 74	fin.	-1513.56	-5911	0.82	0	303	6502	3438	2091	5529	No	0.94	No
SLU 79	ini.	545.07	-1919	0.82	0	303	6502	3438	2091	5529	No	2.88	Si
SLU 79	fin.	-1516.72	-5920	0.82	0	303	6502	3438	2091	5529	No	0.93	No
SLU 80	ini.	545.78	-1921	0.82	0	303	6502	3438	2091	5529	No	2.88	Si
SLU 80	fin.	-1518.39	-5926	0.82	0	303	6502	3438	2091	5529	No	0.93	No
SLU 77	ini.	545.07	-1904	0.82	0	303	6502	3438	2091	5529	No	2.9	Si
SLU 77	fin.	-1530.5	-5976	0.82	0	303	6502	3438	2091	5529	No	0.93	No
SLU 83	ini.	554.91	-1922	0.82	0	303	6502	3438	2091	5529	No	2.88	Si
SLU 83	fin.	-1560.98	-6100	0.82	0	303	6502	3438	2091	5529	No	0.91	No
SLU 81	ini.	548.73	-1899	0.82	0	303	6502	3438	2091	5529	No	2.91	Si
SLU 81	fin.	-1544.05	-6034	0.82	0	303	6502	3438	2091	5529	No	0.92	No
SLU 82	ini.	549.44	-1901	0.82	0	303	6502	3438	2091	5529	No	2.91	Si
SLU 82	fin.	-1545.72	-6041	0.82	0	303	6502	3438	2091	5529	No	0.92	No
SLU 78	ini.	545.78	-1906	0.82	0	303	6502	3438	2091	5529	No	2.9	Si
SLU 78	fin.	-1532.17	-5983	0.82	0	303	6502	3438	2091	5529	No	0.92	No
SLU 84	ini.	555.62	-1925	0.82	0	303	6502	3438	2091	5529	No	2.87	Si
SLU 84	fin.	-1562.66	-6106	0.82	0	303	6502	3438	2091	5529	No	0.91	No
SLU 75	ini.	539.6	-1883	0.82	0	303	6502	3438	2091	5529	No	2.94	Si
SLU 75	fin.	-1515.23	-5917	0.82	0	303	6502	3438	2091	5529	No	0.93	No

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	1264.08	3994	-0.0010151	0.0002807	0.0035	0.82		2482.11	2482.11		1.96	Si
SLV 16	fin.	-2240.38	-3277	-0.002549	0.0002807	0.0035	0.82		2487.45	2487.45		1.11	Si
SLD 14	ini.	773.79	2370	-0.0005449	0.0002807	0.0035	0.82		2482.11	2482.11		3.21	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 14	fin.	-1601.11	-2608	-0.0014091	0.0002807	0.0035	0.82		2487.45	2487.45		1.55	Si
SLD 13	ini.	774	2377	-0.0005451	0.0002807	0.0035	0.82		2482.11	2482.11		3.21	Si
SLD 13	fin.	-1596.57	-2592	-0.0014032	0.0002807	0.0035	0.82		2487.45	2487.45		1.56	Si
SLV 14	ini.	1293.9	4185	-0.0010474	0.0002807	0.0035	0.82		2482.11	2482.11		1.92	Si
SLV 14	fin.	-2348.42	-3442	-0.0028306	0.0002807	0.0035	0.82		2487.45	2487.45		1.06	Si
SLV 15	ini.	1264.56	4011	-0.0010156	0.0002807	0.0035	0.82		2482.11	2482.11		1.96	Si
SLV 15	fin.	-2229.8	-3242	-0.0025232	0.0002807	0.0035	0.82		2487.45	2487.45		1.12	Si
SLD 16	ini.	760.6	2287	-0.0005337	0.0002807	0.0035	0.82		2482.11	2482.11		3.26	Si
SLD 16	fin.	-1553.8	-2536	-0.0013485	0.0002807	0.0035	0.82		2487.45	2487.45		1.6	Si
SLD 15	ini.	760.8	2294	-0.0005339	0.0002807	0.0035	0.82		2482.11	2482.11		3.26	Si
SLD 15	fin.	-1549.26	-2520	-0.0013427	0.0002807	0.0035	0.82		2487.45	2487.45		1.61	Si
SLV 10	ini.	702.62	2250	-0.0004852	0.0002807	0.0035	0.82		2482.11	2482.11		3.53	Si
SLV 10	fin.	-1599.4	-2676	-0.0014069	0.0002807	0.0035	0.82		2487.45	2487.45		1.56	Si
SLV 9	ini.	702.93	2261	-0.0004854	0.0002807	0.0035	0.82		2482.11	2482.11		3.53	Si
SLV 9	fin.	-1592.64	-2653	-0.0013981	0.0002807	0.0035	0.82		2487.45	2487.45		1.56	Si
SLV 13	ini.	1294.38	4202	-0.0010479	0.0002807	0.0035	0.82		2482.11	2482.11		1.92	Si
SLV 13	fin.	-2337.84	-3406	-0.0028015	0.0002807	0.0035	0.82		2487.45	2487.45		1.06	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 16	ini.	760.6	-3428	0.82	0	455	6502	5156	2091	6957		2.03	Si
SLD 16	fin.	-1553.8	-5800	0.82	0	455	6502	5156	2091	6957		1.2	Si
SLV 15	ini.	1264.56	-6141	0.82	0	455	6502	5156	2091	6957		1.13	Si
SLV 15	fin.	-2229.8	-8102	0.82	0	455	6502	5156	2091	6957		0.86	No
SLV 9	ini.	702.93	-2920	0.82	0	455	6502	5156	2091	6957		2.38	Si
SLV 9	fin.	-1592.64	-5851	0.82	0	455	6502	5156	2091	6957		1.19	Si
SLV 10	ini.	702.62	-2919	0.82	0	455	6502	5156	2091	6957		2.38	Si
SLV 10	fin.	-1599.4	-5876	0.82	0	455	6502	5156	2091	6957		1.18	Si
SLD 13	ini.	774	-3452	0.82	0	455	6502	5156	2091	6957		2.02	Si
SLD 13	fin.	-1596.57	-5927	0.82	0	455	6502	5156	2091	6957		1.17	Si
SLD 14	ini.	773.79	-3452	0.82	0	455	6502	5156	2091	6957		2.02	Si
SLD 14	fin.	-1601.11	-5943	0.82	0	455	6502	5156	2091	6957		1.17	Si
SLV 13	ini.	1294.38	-6194	0.82	0	455	6502	5156	2091	6957		1.12	Si
SLV 13	fin.	-2337.84	-8426	0.82	0	455	6502	5156	2091	6957		0.83	No
SLD 15	ini.	760.8	-3428	0.82	0	455	6502	5156	2091	6957		2.03	Si
SLD 15	fin.	-1549.26	-5784	0.82	0	455	6502	5156	2091	6957		1.2	Si
SLV 14	ini.	1293.9	-6193	0.82	0	455	6502	5156	2091	6957		1.12	Si
SLV 14	fin.	-2348.42	-8463	0.82	0	455	6502	5156	2091	6957		0.82	No
SLV 16	ini.	1264.08	-6140	0.82	0	455	6502	5156	2091	6957		1.13	Si
SLV 16	fin.	-2240.38	-8139	0.82	0	455	6502	5156	2091	6957		0.85	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.059	SLV 14	Si
V_SLV	0.822	SLV 14	No
PF_SLU	1.575	SLU 84	Si
V_SLU	0.905	SLU 84	No

Trave di accoppiamento 86

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.838	6.526	5.44	6.34	0.9	-11.938	6.526	5.44	6.34	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	475.05	-3225	-0.0002601	0.0001872	0.0035	0.9		2959	2959	No	6.23	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	fin.	546.95	-3415	-0.0003059	0.0001872	0.0035	0.9		2959	2959	No	5.41	Si
SLU 74	ini.	467.13	-3170	-0.0002551	0.0001872	0.0035	0.9		2959	2959	No	6.33	Si
SLU 74	fin.	539.76	-3361	-0.0003012	0.0001872	0.0035	0.9		2959	2959	No	5.48	Si
SLU 75	ini.	467.77	-3173	-0.0002555	0.0001872	0.0035	0.9		2959	2959	No	6.33	Si
SLU 75	fin.	540.17	-3364	-0.0003015	0.0001872	0.0035	0.9		2959	2959	No	5.48	Si
SLU 77	ini.	471.89	-3205	-0.0002581	0.0001872	0.0035	0.9		2959	2959	No	6.27	Si
SLU 77	fin.	547.46	-3402	-0.0003062	0.0001872	0.0035	0.9		2959	2959	No	5.4	Si
SLU 84	ini.	480.44	-3264	-0.0002634	0.0001872	0.0035	0.9		2959	2959	No	6.16	Si
SLU 84	fin.	555.05	-3459	-0.0003111	0.0001872	0.0035	0.9		2959	2959	No	5.33	Si
SLU 80	ini.	463.6	-3160	-0.0002529	0.0001872	0.0035	0.9		2959	2959	No	6.38	Si
SLU 80	fin.	541.16	-3358	-0.0003021	0.0001872	0.0035	0.9		2959	2959	No	5.47	Si
SLU 82	ini.	475.69	-3229	-0.0002605	0.0001872	0.0035	0.9		2959	2959	No	6.22	Si
SLU 82	fin.	547.35	-3418	-0.0003061	0.0001872	0.0035	0.9		2959	2959	No	5.41	Si
SLU 79	ini.	462.97	-3156	-0.0002526	0.0001872	0.0035	0.9		2959	2959	No	6.39	Si
SLU 79	fin.	540.75	-3355	-0.0003018	0.0001872	0.0035	0.9		2959	2959	No	5.47	Si
SLU 78	ini.	472.52	-3208	-0.0002585	0.0001872	0.0035	0.9		2959	2959	No	6.26	Si
SLU 78	fin.	547.87	-3405	-0.0003065	0.0001872	0.0035	0.9		2959	2959	No	5.4	Si
SLU 83	ini.	479.81	-3261	-0.000263	0.0001872	0.0035	0.9		2959	2959	No	6.17	Si
SLU 83	fin.	554.65	-3456	-0.0003109	0.0001872	0.0035	0.9		2959	2959	No	5.33	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	475.05	-1128	0.9	0	365	7137	3773	2295	6068	No	5.38	Si
SLU 81	fin.	546.95	1467	0.9	0	365	7137	3773	2295	6068	No	4.14	Si
SLU 77	ini.	471.89	-1148	0.9	0	365	7137	3773	2295	6068	No	5.28	Si
SLU 77	fin.	547.46	1502	0.9	0	365	7137	3773	2295	6068	No	4.04	Si
SLU 74	ini.	467.13	-1132	0.9	0	365	7137	3773	2295	6068	No	5.36	Si
SLU 74	fin.	539.76	1474	0.9	0	365	7137	3773	2295	6068	No	4.12	Si
SLU 84	ini.	480.44	-1147	0.9	0	365	7137	3773	2295	6068	No	5.29	Si
SLU 84	fin.	555.05	1497	0.9	0	365	7137	3773	2295	6068	No	4.05	Si
SLU 75	ini.	467.77	-1134	0.9	0	365	7137	3773	2295	6068	No	5.35	Si
SLU 75	fin.	540.17	1475	0.9	0	365	7137	3773	2295	6068	No	4.11	Si
SLU 78	ini.	472.52	-1151	0.9	0	365	7137	3773	2295	6068	No	5.27	Si
SLU 78	fin.	547.87	1504	0.9	0	365	7137	3773	2295	6068	No	4.03	Si
SLU 80	ini.	463.6	-1120	0.9	0	365	7137	3773	2295	6068	No	5.42	Si
SLU 80	fin.	541.16	1480	0.9	0	365	7137	3773	2295	6068	No	4.1	Si
SLU 83	ini.	479.81	-1145	0.9	0	365	7137	3773	2295	6068	No	5.3	Si
SLU 83	fin.	554.65	1495	0.9	0	365	7137	3773	2295	6068	No	4.06	Si
SLU 82	ini.	475.69	-1131	0.9	0	365	7137	3773	2295	6068	No	5.37	Si
SLU 82	fin.	547.35	1468	0.9	0	365	7137	3773	2295	6068	No	4.13	Si
SLU 79	ini.	462.97	-1117	0.9	0	365	7137	3773	2295	6068	No	5.43	Si
SLU 79	fin.	540.75	1479	0.9	0	365	7137	3773	2295	6068	No	4.1	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	-1674.06	819	-0.0011514	0.0002807	0.0035	0.9		2995.37	2995.37		1.79	Si
SLV 1	fin.	2390.65	-5689	-0.0020071	0.0002807	0.0035	0.9		2989.59	2989.59		1.25	Si
SLV 13	ini.	2337.8	-5291	-0.001927	0.0002807	0.0035	0.9		2989.59	2989.59		1.28	Si
SLV 13	fin.	-1600.35	727	-0.0010825	0.0002807	0.0035	0.9		2995.37	2995.37		1.87	Si
SLV 3	ini.	-1743.03	1058	-0.001218	0.0002807	0.0035	0.9		2995.37	2995.37		1.72	Si
SLV 3	fin.	2366.51	-5335	-0.0019701	0.0002807	0.0035	0.9		2989.59	2989.59		1.26	Si
SLD 1	ini.	-535.79	-878	-0.0002859	0.0002807	0.0035	0.9		2995.37	2995.37		5.59	Si
SLD 1	fin.	1232.49	-3739	-0.0007705	0.0002807	0.0035	0.9		2989.59	2989.59		2.43	Si
SLV 15	ini.	2268.82	-5051	-0.0018281	0.0002807	0.0035	0.9		2989.59	2989.59		1.32	Si
SLV 15	fin.	-1624.49	1081	-0.0011048	0.0002807	0.0035	0.9		2995.37	2995.37		1.84	Si
SLV 4	ini.	-1710.49	1003	-0.0011863	0.0002807	0.0035	0.9		2995.37	2995.37		1.75	Si
SLV 4	fin.	2335.77	-5290	-0.001924	0.0002807	0.0035	0.9		2989.59	2989.59		1.28	Si
SLV 14	ini.	2370.33	-5346	-0.0019759	0.0002807	0.0035	0.9		2989.59	2989.59		1.26	Si
SLV 14	fin.	-1631.09	772	-0.001111	0.0002807	0.0035	0.9		2995.37	2995.37		1.84	Si
SLV 16	ini.	2301.36	-5107	-0.001874	0.0002807	0.0035	0.9		2989.59	2989.59		1.3	Si
SLV 16	fin.	-1655.23	1126	-0.0011336	0.0002807	0.0035	0.9		2995.37	2995.37		1.81	Si
SLD 3	ini.	-565.74	-774	-0.0003038	0.0002807	0.0035	0.9		2995.37	2995.37		5.29	Si
SLD 3	fin.	1221.94	-3586	-0.0007621	0.0002807	0.0035	0.9		2989.59	2989.59		2.45	Si
SLV 2	ini.	-1641.52	764	-0.0011207	0.0002807	0.0035	0.9		2995.37	2995.37		1.82	Si
SLV 2	fin.	2359.91	-5644	-0.0019601	0.0002807	0.0035	0.9		2989.59	2989.59		1.27	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	-1674.06	6662	0.9	0	548	7137	5660	2295	7684		1.15	Si
SLV 1	fin.	2390.65	8677	0.9	0	548	7137	5660	2295	7684		0.89	No
SLV 4	ini.	-1710.49	6722	0.9	0	548	7137	5660	2295	7684		1.14	Si
SLV 4	fin.	2335.77	8428	0.9	0	548	7137	5660	2295	7684		0.91	No
SLV 16	ini.	2301.36	-8185	0.9	0	548	7137	5660	2295	7684		0.94	No
SLV 16	fin.	-1655.23	-6653	0.9	0	548	7137	5660	2295	7684		1.16	Si
SLD 1	ini.	-535.79	2411	0.9	0	548	7137	5660	2295	7684		3.19	Si
SLD 1	fin.	1232.49	4289	0.9	0	548	7137	5660	2295	7684		1.79	Si
SLV 15	ini.	2268.82	-8067	0.9	0	548	7137	5660	2295	7684		0.95	No
SLV 15	fin.	-1624.49	-6539	0.9	0	548	7137	5660	2295	7684		1.18	Si
SLV 13	ini.	2337.8	-8245	0.9	0	548	7137	5660	2295	7684		0.93	No
SLV 13	fin.	-1600.35	-6404	0.9	0	548	7137	5660	2295	7684		1.2	Si
SLV 14	ini.	2370.33	-8363	0.9	0	548	7137	5660	2295	7684		0.92	No
SLV 14	fin.	-1631.09	-6519	0.9	0	548	7137	5660	2295	7684		1.18	Si
SLV 2	ini.	-1641.52	6544	0.9	0	548	7137	5660	2295	7684		1.17	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	fin.	2359.91	8563	0.9	0	548	7137	5660	2295	7684		0.9	No
SLV 3	ini.	-1743.03	6840	0.9	0	548	7137	5660	2295	7684		1.12	Si
SLV 3	fin.	2366.51	8543	0.9	0	548	7137	5660	2295	7684		0.9	No
SLD 2	ini.	-521.82	2360	0.9	0	548	7137	5660	2295	7684		3.26	Si
SLD 2	fin.	1219.3	4240	0.9	0	548	7137	5660	2295	7684		1.81	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.251	SLV 1	Si
V_SLV	0.886	SLV 1	No
PF_SLU	5.331	SLU 84	Si
V_SLU	4.034	SLU 78	Si

Trave di accoppiamento 87

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.838	6.526	8.14	8.96	0.82	-11.938	6.526	8.14	8.96	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-527.75	-2563	-0.000364	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.66	Si
SLU 78	fin.	-434.01	-2402	-0.0002897	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.67	Si
SLU 84	ini.	-536.69	-2607	-0.0003713	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.58	Si
SLU 84	fin.	-443.57	-2446	-0.0002971	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.55	Si
SLU 83	ini.	-536.3	-2605	-0.000371	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.59	Si
SLU 83	fin.	-442.94	-2443	-0.0002966	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.55	Si
SLU 81	ini.	-528.99	-2570	-0.000365	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.65	Si
SLU 81	fin.	-438.27	-2412	-0.000293	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.61	Si
SLU 75	ini.	-520.44	-2528	-0.0003581	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.73	Si
SLU 75	fin.	-429.34	-2371	-0.0002861	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.73	Si
SLU 82	ini.	-529.39	-2572	-0.0003653	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.65	Si
SLU 82	fin.	-438.89	-2415	-0.0002935	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.61	Si
SLU 77	ini.	-527.35	-2560	-0.0003637	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.67	Si
SLU 77	fin.	-433.39	-2399	-0.0002892	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.68	Si
SLU 80	ini.	-519.91	-2522	-0.0003576	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.73	Si
SLU 80	fin.	-425.59	-2359	-0.0002832	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.78	Si
SLU 79	ini.	-519.52	-2520	-0.0003573	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.74	Si
SLU 79	fin.	-424.97	-2356	-0.0002827	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.79	Si
SLU 74	ini.	-520.05	-2525	-0.0003577	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.73	Si
SLU 74	fin.	-428.71	-2368	-0.0002856	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.74	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-536.69	3196	0.82	0	303	6502	3438	2091	5529	No	1.73	Si
SLU 84	fin.	-443.57	-2107	0.82	0	303	6502	3438	2091	5529	No	2.62	Si
SLU 81	ini.	-528.99	3151	0.82	0	303	6502	3438	2091	5529	No	1.75	Si
SLU 81	fin.	-438.27	-2083	0.82	0	303	6502	3438	2091	5529	No	2.65	Si
SLU 77	ini.	-527.35	3129	0.82	0	303	6502	3438	2091	5529	No	1.77	Si
SLU 77	fin.	-433.39	-2057	0.82	0	303	6502	3438	2091	5529	No	2.69	Si
SLU 80	ini.	-519.91	3084	0.82	0	303	6502	3438	2091	5529	No	1.79	Si
SLU 80	fin.	-425.59	-2022	0.82	0	303	6502	3438	2091	5529	No	2.73	Si
SLU 82	ini.	-529.39	3154	0.82	0	303	6502	3438	2091	5529	No	1.75	Si
SLU 82	fin.	-438.89	-2085	0.82	0	303	6502	3438	2091	5529	No	2.65	Si
SLU 79	ini.	-519.52	3082	0.82	0	303	6502	3438	2091	5529	No	1.79	Si
SLU 79	fin.	-424.97	-2020	0.82	0	303	6502	3438	2091	5529	No	2.74	Si
SLU 78	ini.	-527.75	3131	0.82	0	303	6502	3438	2091	5529	No	1.77	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	fin.	-434.01	-2060	0.82	0	303	6502	3438	2091	5529	No	2.68	Si
SLU 74	ini.	-520.05	3087	0.82	0	303	6502	3438	2091	5529	No	1.79	Si
SLU 74	fin.	-428.71	-2035	0.82	0	303	6502	3438	2091	5529	No	2.72	Si
SLU 83	ini.	-536.3	3193	0.82	0	303	6502	3438	2091	5529	No	1.73	Si
SLU 83	fin.	-442.94	-2105	0.82	0	303	6502	3438	2091	5529	No	2.63	Si
SLU 75	ini.	-520.44	3090	0.82	0	303	6502	3438	2091	5529	No	1.79	Si
SLU 75	fin.	-429.34	-2038	0.82	0	303	6502	3438	2091	5529	No	2.71	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	864.6	1963	-0.0006241	0.0002807	0.0035	0.82		2482.11	2482.11		2.87	Si
SLV 14	fin.	-1988.41	-4147	-0.0020076	0.0002807	0.0035	0.82		2487.45	2487.45		1.25	Si
SLD 13	ini.	168.56	-131	-0.0001024	0.0002807	0.0035	0.82		2482.11	2482.11		14.73	Si
SLD 13	fin.	-1010.22	-2668	-0.0007564	0.0002807	0.0035	0.82		2487.45	2487.45		2.46	Si
SLV 15	ini.	892.48	2149	-0.0006492	0.0002807	0.0035	0.82		2482.11	2482.11		2.78	Si
SLV 15	fin.	-1941.35	-3879	-0.001922	0.0002807	0.0035	0.82		2487.45	2487.45		1.28	Si
SLV 16	ini.	896.36	2159	-0.0006527	0.0002807	0.0035	0.82		2482.11	2482.11		2.77	Si
SLV 16	fin.	-1946.48	-3891	-0.0019311	0.0002807	0.0035	0.82		2487.45	2487.45		1.28	Si
SLD 14	ini.	170.22	-126	-0.0001034	0.0002807	0.0035	0.82		2482.11	2482.11		14.58	Si
SLD 14	fin.	-1012.43	-2673	-0.0007585	0.0002807	0.0035	0.82		2487.45	2487.45		2.46	Si
SLV 2	ini.	-1588.57	-5519	-0.0013929	0.0002807	0.0035	0.82		2487.45	2487.45		1.57	Si
SLV 2	fin.	1374.76	736	-0.0011375	0.0002807	0.0035	0.82		2482.11	2482.11		1.81	Si
SLV 4	ini.	-1556.82	-5324	-0.0013523	0.0002807	0.0035	0.82		2487.45	2487.45		1.6	Si
SLV 4	fin.	1416.69	992	-0.0011858	0.0002807	0.0035	0.82		2482.11	2482.11		1.75	Si
SLV 13	ini.	860.73	1953	-0.0006207	0.0002807	0.0035	0.82		2482.11	2482.11		2.88	Si
SLV 13	fin.	-1983.28	-4134	-0.001998	0.0002807	0.0035	0.82		2487.45	2487.45		1.25	Si
SLV 1	ini.	-1592.44	-5529	-0.0013979	0.0002807	0.0035	0.82		2487.45	2487.45		1.56	Si
SLV 1	fin.	1379.9	748	-0.0011434	0.0002807	0.0035	0.82		2482.11	2482.11		1.8	Si
SLV 3	ini.	-1560.69	-5334	-0.0013572	0.0002807	0.0035	0.82		2487.45	2487.45		1.59	Si
SLV 3	fin.	1421.83	1004	-0.0011918	0.0002807	0.0035	0.82		2482.11	2482.11		1.75	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	864.6	-4027	0.82	0	455	6502	5156	2091	6957		1.73	Si
SLV 14	fin.	-1988.41	-7487	0.82	0	455	6502	5156	2091	6957		0.93	No
SLV 15	ini.	892.48	-4154	0.82	0	455	6502	5156	2091	6957		1.67	Si
SLV 15	fin.	-1941.35	-7262	0.82	0	455	6502	5156	2091	6957		0.96	No
SLD 2	ini.	-878.38	4703	0.82	0	455	6502	5156	2091	6957		1.48	Si
SLD 2	fin.	425.29	1180	0.82	0	455	6502	5156	2091	6957		5.89	Si
SLV 1	ini.	-1592.44	8285	0.82	0	455	6502	5156	2091	6957		0.84	No
SLV 1	fin.	1379.9	4589	0.82	0	455	6502	5156	2091	6957		1.52	Si
SLV 13	ini.	860.73	-3997	0.82	0	455	6502	5156	2091	6957		1.74	Si
SLV 13	fin.	-1983.28	-7465	0.82	0	455	6502	5156	2091	6957		0.93	No
SLV 2	ini.	-1588.57	8255	0.82	0	455	6502	5156	2091	6957		0.84	No
SLV 2	fin.	1374.76	4567	0.82	0	455	6502	5156	2091	6957		1.52	Si
SLV 3	ini.	-1560.69	8127	0.82	0	455	6502	5156	2091	6957		0.86	No
SLV 3	fin.	1421.83	4792	0.82	0	455	6502	5156	2091	6957		1.45	Si
SLD 1	ini.	-880.04	4716	0.82	0	455	6502	5156	2091	6957		1.48	Si
SLD 1	fin.	427.5	1190	0.82	0	455	6502	5156	2091	6957		5.85	Si
SLV 16	ini.	896.36	-4185	0.82	0	455	6502	5156	2091	6957		1.66	Si
SLV 16	fin.	-1946.48	-7284	0.82	0	455	6502	5156	2091	6957		0.96	No
SLV 4	ini.	-1556.82	8097	0.82	0	455	6502	5156	2091	6957		0.86	No
SLV 4	fin.	1416.69	4770	0.82	0	455	6502	5156	2091	6957		1.46	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.251	SLV 14	Si
V_SLV	0.84	SLV 1	No
PF_SLU	4.585	SLU 84	Si
V_SLU	1.73	SLU 84	Si

Trave di accoppiamento 88

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-7.958	6.526	5.44	6.34	0.9	-7.058	6.526	5.44	6.34	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-691.13	-777	-0.0004019	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.29	Si
SLU 82	fin.	1342.52	-3690	-0.0009174	0.0001872	0.0035	0.9		2959	2959	No	2.2	Si
SLU 81	ini.	-690.11	-776	-0.0004012	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.3	Si
SLU 81	fin.	1340.14	-3683	-0.0009152	0.0001872	0.0035	0.9		2959	2959	No	2.21	Si
SLU 80	ini.	-692.58	-745	-0.0004029	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.28	Si
SLU 80	fin.	1337.74	-3658	-0.0009131	0.0001872	0.0035	0.9		2959	2959	No	2.21	Si
SLU 79	ini.	-691.56	-744	-0.0004022	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.29	Si
SLU 79	fin.	1335.36	-3651	-0.000911	0.0001872	0.0035	0.9		2959	2959	No	2.22	Si
SLU 74	ini.	-681.09	-763	-0.000395	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.35	Si
SLU 74	fin.	1325.05	-3637	-0.0009018	0.0001872	0.0035	0.9		2959	2959	No	2.23	Si
SLU 83	ini.	-698.56	-786	-0.0004071	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.24	Si
SLU 83	fin.	1358.31	-3732	-0.0009315	0.0001872	0.0035	0.9		2959	2959	No	2.18	Si
SLU 77	ini.	-689.54	-773	-0.0004008	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.3	Si
SLU 77	fin.	1343.22	-3686	-0.000918	0.0001872	0.0035	0.9		2959	2959	No	2.2	Si
SLU 78	ini.	-690.56	-775	-0.0004015	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.29	Si
SLU 78	fin.	1345.59	-3693	-0.0009201	0.0001872	0.0035	0.9		2959	2959	No	2.2	Si
SLU 84	ini.	-699.58	-787	-0.0004078	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.24	Si
SLU 84	fin.	1360.69	-3739	-0.0009336	0.0001872	0.0035	0.9		2959	2959	No	2.17	Si
SLU 75	ini.	-682.11	-764	-0.0003957	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.35	Si
SLU 75	fin.	1327.42	-3643	-0.000904	0.0001872	0.0035	0.9		2959	2959	No	2.23	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-689.54	2598	0.9	0	365	7137	3773	2295	6068	No	2.34	Si
SLU 77	fin.	1343.22	4678	0.9	0	365	7137	3773	2295	6068	No	1.3	Si
SLU 82	ini.	-691.13	2631	0.9	0	365	7137	3773	2295	6068	No	2.31	Si
SLU 82	fin.	1342.52	4645	0.9	0	365	7137	3773	2295	6068	No	1.31	Si
SLU 84	ini.	-699.58	2658	0.9	0	365	7137	3773	2295	6068	No	2.28	Si
SLU 84	fin.	1360.69	4715	0.9	0	365	7137	3773	2295	6068	No	1.29	Si
SLU 74	ini.	-681.09	2571	0.9	0	365	7137	3773	2295	6068	No	2.36	Si
SLU 74	fin.	1325.05	4608	0.9	0	365	7137	3773	2295	6068	No	1.32	Si
SLU 83	ini.	-698.56	2654	0.9	0	365	7137	3773	2295	6068	No	2.29	Si
SLU 83	fin.	1358.31	4706	0.9	0	365	7137	3773	2295	6068	No	1.29	Si
SLU 80	ini.	-692.58	2617	0.9	0	365	7137	3773	2295	6068	No	2.32	Si
SLU 80	fin.	1337.74	4655	0.9	0	365	7137	3773	2295	6068	No	1.3	Si
SLU 81	ini.	-690.11	2628	0.9	0	365	7137	3773	2295	6068	No	2.31	Si
SLU 81	fin.	1340.14	4636	0.9	0	365	7137	3773	2295	6068	No	1.31	Si
SLU 79	ini.	-691.56	2613	0.9	0	365	7137	3773	2295	6068	No	2.32	Si
SLU 79	fin.	1335.36	4645	0.9	0	365	7137	3773	2295	6068	No	1.31	Si
SLU 78	ini.	-690.56	2601	0.9	0	365	7137	3773	2295	6068	No	2.33	Si
SLU 78	fin.	1345.59	4687	0.9	0	365	7137	3773	2295	6068	No	1.29	Si
SLU 75	ini.	-682.11	2575	0.9	0	365	7137	3773	2295	6068	No	2.36	Si
SLU 75	fin.	1327.42	4618	0.9	0	365	7137	3773	2295	6068	No	1.31	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	-1952.39	1993	-0.0014349	0.0002807	0.0035	0.9		2995.37	2995.37		1.53	Si
SLV 3	fin.	2355.43	-4628	-0.0019533	0.0002807	0.0035	0.9		2989.59	2989.59		1.27	Si
SLD 4	ini.	-1109.89	574	-0.0006737	0.0002807	0.0035	0.9		2995.37	2995.37		2.7	Si
SLD 4	fin.	1532.01	-3405	-0.0010231	0.0002807	0.0035	0.9		2989.59	2989.59		1.95	Si
SLV 4	ini.	-1936.46	1968	-0.0014175	0.0002807	0.0035	0.9		2995.37	2995.37		1.55	Si
SLV 4	fin.	2340.13	-4603	-0.0019305	0.0002807	0.0035	0.9		2989.59	2989.59		1.28	Si
SLD 3	ini.	-1116.73	585	-0.0006789	0.0002807	0.0035	0.9		2995.37	2995.37		2.68	Si
SLD 3	fin.	1538.58	-3416	-0.001029	0.0002807	0.0035	0.9		2989.59	2989.59		1.94	Si
SLD 2	ini.	-1112.52	467	-0.0006757	0.0002807	0.0035	0.9		2995.37	2995.37		2.69	Si
SLD 2	fin.	1603.47	-3599	-0.0010881	0.0002807	0.0035	0.9		2989.59	2989.59		1.86	Si
SLV 5	ini.	-943.88	-171	-0.0005519	0.0002807	0.0035	0.9		2995.37	2995.37		3.17	Si
SLV 5	fin.	1656.28	-3955	-0.0011374	0.0002807	0.0035	0.9		2989.59	2989.59		1.81	Si
SLV 6	ini.	-933.71	-187	-0.0005447	0.0002807	0.0035	0.9		2995.37	2995.37		3.21	Si
SLV 6	fin.	1646.51	-3939	-0.0011282	0.0002807	0.0035	0.9		2989.59	2989.59		1.82	Si
SLD 1	ini.	-1119.36	478	-0.0006809	0.0002807	0.0035	0.9		2995.37	2995.37		2.68	Si
SLD 1	fin.	1610.04	-3610	-0.0010942	0.0002807	0.0035	0.9		2989.59	2989.59		1.86	Si
SLV 1	ini.	-1958.05	1748	-0.0014411	0.0002807	0.0035	0.9		2995.37	2995.37		1.53	Si
SLV 1	fin.	2518.21	-5069	-0.0022171	0.0002807	0.0035	0.9		2989.59	2989.59		1.19	Si
SLV 2	ini.	-1942.13	1723	-0.0014236	0.0002807	0.0035	0.9		2995.37	2995.37		1.54	Si
SLV 2	fin.	2502.92	-5044	-0.0021906	0.0002807	0.0035	0.9		2989.59	2989.59		1.19	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 6	ini.	-933.71	3819	0.9	0	548	7137	5660	2295	7684		2.01	Si
SLV 6	fin.	1646.51	5843	0.9	0	548	7137	5660	2295	7684		1.32	Si
SLD 3	ini.	-1116.73	4299	0.9	0	548	7137	5660	2295	7684		1.79	Si
SLD 3	fin.	1538.58	5427	0.9	0	548	7137	5660	2295	7684		1.42	Si
SLV 3	ini.	-1952.39	7569	0.9	0	548	7137	5660	2295	7684		1.02	Si
SLV 3	fin.	2355.43	8359	0.9	0	548	7137	5660	2295	7684		0.92	No
SLV 5	ini.	-943.88	3855	0.9	0	548	7137	5660	2295	7684		1.99	Si
SLV 5	fin.	1656.28	5879	0.9	0	548	7137	5660	2295	7684		1.31	Si
SLV 4	ini.	-1936.46	7514	0.9	0	548	7137	5660	2295	7684		1.02	Si
SLV 4	fin.	2340.13	8302	0.9	0	548	7137	5660	2295	7684		0.93	No
SLV 1	ini.	-1958.05	7719	0.9	0	548	7137	5660	2295	7684		1	No
SLV 1	fin.	2518.21	8959	0.9	0	548	7137	5660	2295	7684		0.86	No
SLD 2	ini.	-1112.52	4342	0.9	0	548	7137	5660	2295	7684		1.77	Si
SLD 2	fin.	1603.47	5667	0.9	0	548	7137	5660	2295	7684		1.36	Si
SLD 1	ini.	-1119.36	4366	0.9	0	548	7137	5660	2295	7684		1.76	Si
SLD 1	fin.	1610.04	5691	0.9	0	548	7137	5660	2295	7684		1.35	Si
SLV 2	ini.	-1942.13	7664	0.9	0	548	7137	5660	2295	7684		1	Si
SLV 2	fin.	2502.92	8902	0.9	0	548	7137	5660	2295	7684		0.86	No
SLD 4	ini.	-1109.89	4275	0.9	0	548	7137	5660	2295	7684		1.8	Si
SLD 4	fin.	1532.01	5403	0.9	0	548	7137	5660	2295	7684		1.42	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.187	SLV 1	Si
V_SLV	0.858	SLV 1	No
PF_SLU	2.175	SLU 84	Si
V_SLU	1.287	SLU 84	Si

Trave di accoppiamento 89

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-7.958	6.526	8.14	8.96	0.82	-7.058	6.526	8.14	8.96	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-1131.74	-3799	-0.0009338	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.17	Si
SLU 78	fin.	464.41	92	-0.0003141	0.0001872	0.0035	0.82		2455.37	2455.37	No	5.29	Si
SLU 75	ini.	-1115.65	-3742	-0.0009165	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.21	Si
SLU 75	fin.	459.02	97	-0.0003098	0.0001872	0.0035	0.82		2455.37	2455.37	No	5.35	Si
SLU 83	ini.	-1143.86	-3840	-0.0009469	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.15	Si
SLU 83	fin.	467.59	95	-0.0003166	0.0001872	0.0035	0.82		2455.37	2455.37	No	5.25	Si
SLU 80	ini.	-1123.03	-3759	-0.0009244	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.19	Si
SLU 80	fin.	467.07	111	-0.0003162	0.0001872	0.0035	0.82		2455.37	2455.37	No	5.26	Si
SLU 84	ini.	-1145.92	-3847	-0.0009491	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.15	Si
SLU 84	fin.	468.21	94	-0.0003171	0.0001872	0.0035	0.82		2455.37	2455.37	No	5.24	Si
SLU 81	ini.	-1127.77	-3784	-0.0009295	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.18	Si
SLU 81	fin.	462.21	100	-0.0003123	0.0001872	0.0035	0.82		2455.37	2455.37	No	5.31	Si
SLU 79	ini.	-1120.97	-3751	-0.0009222	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.19	Si
SLU 79	fin.	466.45	112	-0.0003157	0.0001872	0.0035	0.82		2455.37	2455.37	No	5.26	Si
SLU 82	ini.	-1129.83	-3791	-0.0009317	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.18	Si
SLU 82	fin.	462.83	99	-0.0003128	0.0001872	0.0035	0.82		2455.37	2455.37	No	5.31	Si
SLU 74	ini.	-1113.58	-3735	-0.0009142	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.21	Si
SLU 74	fin.	458.4	98	-0.0003093	0.0001872	0.0035	0.82		2455.37	2455.37	No	5.36	Si
SLU 77	ini.	-1129.68	-3792	-0.0009315	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.18	Si
SLU 77	fin.	463.79	93	-0.0003136	0.0001872	0.0035	0.82		2455.37	2455.37	No	5.29	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-1131.74	6146	0.82	0	303	6502	3438	2091	5529	No	0.9	No
SLU 78	fin.	464.41	1327	0.82	0	303	6502	3438	2091	5529	No	4.17	Si
SLU 83	ini.	-1143.86	6234	0.82	0	303	6502	3438	2091	5529	No	0.89	No
SLU 83	fin.	467.59	1323	0.82	0	303	6502	3438	2091	5529	No	4.18	Si
SLU 82	ini.	-1129.83	6161	0.82	0	303	6502	3438	2091	5529	No	0.9	No
SLU 82	fin.	462.83	1307	0.82	0	303	6502	3438	2091	5529	No	4.23	Si
SLU 74	ini.	-1113.58	6055	0.82	0	303	6502	3438	2091	5529	No	0.91	No
SLU 74	fin.	458.4	1306	0.82	0	303	6502	3438	2091	5529	No	4.23	Si
SLU 80	ini.	-1123.03	6090	0.82	0	303	6502	3438	2091	5529	No	0.91	No
SLU 80	fin.	467.07	1343	0.82	0	303	6502	3438	2091	5529	No	4.12	Si
SLU 75	ini.	-1115.65	6064	0.82	0	303	6502	3438	2091	5529	No	0.91	No
SLU 75	fin.	459.02	1308	0.82	0	303	6502	3438	2091	5529	No	4.23	Si
SLU 79	ini.	-1120.97	6080	0.82	0	303	6502	3438	2091	5529	No	0.91	No
SLU 79	fin.	466.45	1340	0.82	0	303	6502	3438	2091	5529	No	4.13	Si
SLU 81	ini.	-1127.77	6152	0.82	0	303	6502	3438	2091	5529	No	0.9	No
SLU 81	fin.	462.21	1305	0.82	0	303	6502	3438	2091	5529	No	4.24	Si
SLU 77	ini.	-1129.68	6137	0.82	0	303	6502	3438	2091	5529	No	0.9	No
SLU 77	fin.	463.79	1325	0.82	0	303	6502	3438	2091	5529	No	4.17	Si
SLU 84	ini.	-1145.92	6243	0.82	0	303	6502	3438	2091	5529	No	0.89	No
SLU 84	fin.	468.21	1326	0.82	0	303	6502	3438	2091	5529	No	4.17	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 3	ini.	-1177.95	-3554	-0.000922	0.0002807	0.0035	0.82		2487.45	2487.45		2.11	Si
SLD 3	fin.	749.73	870	-0.0005245	0.0002807	0.0035	0.82		2482.11	2482.11		3.31	Si
SLD 1	ini.	-1236.61	-3755	-0.0009831	0.0002807	0.0035	0.82		2487.45	2487.45		2.01	Si
SLD 1	fin.	744.52	766	-0.0005201	0.0002807	0.0035	0.82		2482.11	2482.11		3.33	Si
SLD 4	ini.	-1178.37	-3553	-0.0009225	0.0002807	0.0035	0.82		2487.45	2487.45		2.11	Si
SLD 4	fin.	751.04	873	-0.0005256	0.0002807	0.0035	0.82		2482.11	2482.11		3.3	Si
SLV 1	ini.	-1856.89	-5354	-0.0017788	0.0002807	0.0035	0.82		2487.45	2487.45		1.34	Si
SLV 1	fin.	1287.37	1620	-0.0010403	0.0002807	0.0035	0.82		2482.11	2482.11		1.93	Si
SLV 3	ini.	-1723.33	-4897	-0.0015758	0.0002807	0.0035	0.82		2487.45	2487.45		1.44	Si
SLV 3	fin.	1299.9	1861	-0.001054	0.0002807	0.0035	0.82		2482.11	2482.11		1.91	Si
SLV 6	ini.	-1300.72	-4089	-0.001052	0.0002807	0.0035	0.82		2487.45	2487.45		1.91	Si
SLV 6	fin.	606.02	215	-0.0004074	0.0002807	0.0035	0.82		2482.11	2482.11		4.1	Si
SLV 2	ini.	-1857.87	-5352	-0.0017804	0.0002807	0.0035	0.82		2487.45	2487.45		1.34	Si
SLV 2	fin.	1290.44	1627	-0.0010436	0.0002807	0.0035	0.82		2482.11	2482.11		1.92	Si
SLV 4	ini.	-1724.31	-4895	-0.0015772	0.0002807	0.0035	0.82		2487.45	2487.45		1.44	Si
SLV 4	fin.	1302.97	1867	-0.0010573	0.0002807	0.0035	0.82		2482.11	2482.11		1.9	Si
SLV 5	ini.	-1300.09	-4090	-0.0010513	0.0002807	0.0035	0.82		2487.45	2487.45		1.91	Si
SLV 5	fin.	604.05	211	-0.0004059	0.0002807	0.0035	0.82		2482.11	2482.11		4.11	Si
SLD 2	ini.	-1237.03	-3754	-0.0009836	0.0002807	0.0035	0.82		2487.45	2487.45		2.01	Si
SLD 2	fin.	745.84	769	-0.0005212	0.0002807	0.0035	0.82		2482.11	2482.11		3.33	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	-1856.89	8758	0.82	0	455	6502	5156	2091	6957		0.79	No
SLV 1	fin.	1287.37	4920	0.82	0	455	6502	5156	2091	6957		1.41	Si
SLV 5	ini.	-1300.09	6370	0.82	0	455	6502	5156	2091	6957		1.09	Si
SLV 5	fin.	604.05	2218	0.82	0	455	6502	5156	2091	6957		3.14	Si
SLD 3	ini.	-1177.95	5887	0.82	0	455	6502	5156	2091	6957		1.18	Si
SLD 3	fin.	749.73	2659	0.82	0	455	6502	5156	2091	6957		2.62	Si
SLV 6	ini.	-1300.72	6360	0.82	0	455	6502	5156	2091	6957		1.09	Si
SLV 6	fin.	606.02	2229	0.82	0	455	6502	5156	2091	6957		3.12	Si
SLD 4	ini.	-1178.37	5881	0.82	0	455	6502	5156	2091	6957		1.18	Si
SLD 4	fin.	751.04	2666	0.82	0	455	6502	5156	2091	6957		2.61	Si
SLD 2	ini.	-1237.03	6122	0.82	0	455	6502	5156	2091	6957		1.14	Si
SLD 2	fin.	745.84	2682	0.82	0	455	6502	5156	2091	6957		2.59	Si
SLD 1	ini.	-1236.61	6128	0.82	0	455	6502	5156	2091	6957		1.14	Si
SLD 1	fin.	744.52	2674	0.82	0	455	6502	5156	2091	6957		2.6	Si
SLV 4	ini.	-1724.31	8197	0.82	0	455	6502	5156	2091	6957		0.85	No
SLV 4	fin.	1302.97	4905	0.82	0	455	6502	5156	2091	6957		1.42	Si
SLV 2	ini.	-1857.87	8744	0.82	0	455	6502	5156	2091	6957		0.8	No
SLV 2	fin.	1290.44	4937	0.82	0	455	6502	5156	2091	6957		1.41	Si
SLV 3	ini.	-1723.33	8212	0.82	0	455	6502	5156	2091	6957		0.85	No
SLV 3	fin.	1299.9	4888	0.82	0	455	6502	5156	2091	6957		1.42	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.339	SLV 2	Si
V_SLV	0.794	SLV 1	No
PF_SLU	2.147	SLU 84	Si
V_SLU	0.886	SLU 84	No

Trave di accoppiamento 90

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-19.813	1.006	7.54	8.96	1.42	-20.613	1.006	7.54	8.96	1.42	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	116.65	-2379	-0.0000231	0.0002246	0.0035	1.42		7536.27	7536.27	No	64.61	Si
SLU 78	fin.	-855.16	-2955	-0.0001785	0.0002246	0.0035	1.42		7545.1	7545.1	No	8.82	Si
SLU 81	ini.	142.85	-2328	-0.0000283	0.0002246	0.0035	1.42		7536.27	7536.27	No	52.76	Si
SLU 81	fin.	-887.81	-2937	-0.0001859	0.0002246	0.0035	1.42		7545.1	7545.1	No	8.5	Si
SLU 83	ini.	138.29	-2374	-0.0000274	0.0002246	0.0035	1.42		7536.27	7536.27	No	54.5	Si
SLU 83	fin.	-890.44	-2982	-0.0001865	0.0002246	0.0035	1.42		7545.1	7545.1	No	8.47	Si
SLU 77	ini.	118.27	-2376	-0.0000234	0.0002246	0.0035	1.42		7536.27	7536.27	No	63.72	Si
SLU 77	fin.	-854.31	-2953	-0.0001783	0.0002246	0.0035	1.42		7545.1	7545.1	No	8.83	Si
SLU 84	ini.	136.67	-2377	-0.0000271	0.0002246	0.0035	1.42		7536.27	7536.27	No	55.14	Si
SLU 84	fin.	-891.29	-2984	-0.0001867	0.0002246	0.0035	1.42		7545.1	7545.1	No	8.47	Si
SLU 74	ini.	122.83	-2330	-0.0000243	0.0002246	0.0035	1.42		7536.27	7536.27	No	61.35	Si
SLU 74	fin.	-851.68	-2908	-0.0001777	0.0002246	0.0035	1.42		7545.1	7545.1	No	8.86	Si
SLU 82	ini.	141.23	-2331	-0.000028	0.0002246	0.0035	1.42		7536.27	7536.27	No	53.36	Si
SLU 82	fin.	-888.66	-2939	-0.0001861	0.0002246	0.0035	1.42		7545.1	7545.1	No	8.49	Si
SLU 75	ini.	121.22	-2333	-0.000024	0.0002246	0.0035	1.42		7536.27	7536.27	No	62.17	Si
SLU 75	fin.	-852.53	-2910	-0.0001779	0.0002246	0.0035	1.42		7545.1	7545.1	No	8.85	Si
SLU 79	ini.	99.13	-2323	-0.0000196	0.0002246	0.0035	1.42		7536.27	7536.27	No	76.03	Si
SLU 79	fin.	-824.84	-2874	-0.0001717	0.0002246	0.0035	1.42		7545.1	7545.1	No	9.15	Si
SLU 80	ini.	97.51	-2326	-0.0000193	0.0002246	0.0035	1.42		7536.27	7536.27	No	77.29	Si
SLU 80	fin.	-825.69	-2876	-0.0001719	0.0002246	0.0035	1.42		7545.1	7545.1	No	9.14	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	142.85	-800	1.42	0	576	6344	7144	3621	6920	No	8.65	Si
SLU 81	fin.	-887.81	-2923	1.42	0	576	6344	7144	3621	6920	No	2.37	Si
SLU 82	ini.	141.23	-799	1.42	0	576	6344	7144	3621	6920	No	8.66	Si
SLU 82	fin.	-888.66	-2922	1.42	0	576	6344	7144	3621	6920	No	2.37	Si
SLU 75	ini.	121.22	-783	1.42	0	576	6344	7144	3621	6920	No	8.84	Si
SLU 75	fin.	-852.53	-2741	1.42	0	576	6344	7144	3621	6920	No	2.52	Si
SLU 77	ini.	118.27	-781	1.42	0	576	6344	7144	3621	6920	No	8.86	Si
SLU 77	fin.	-854.31	-2740	1.42	0	576	6344	7144	3621	6920	No	2.53	Si
SLU 78	ini.	116.65	-780	1.42	0	576	6344	7144	3621	6920	No	8.87	Si
SLU 78	fin.	-855.16	-2738	1.42	0	576	6344	7144	3621	6920	No	2.53	Si
SLU 84	ini.	136.67	-796	1.42	0	576	6344	7144	3621	6920	No	8.7	Si
SLU 84	fin.	-891.29	-2919	1.42	0	576	6344	7144	3621	6920	No	2.37	Si
SLU 83	ini.	138.29	-797	1.42	0	576	6344	7144	3621	6920	No	8.68	Si
SLU 83	fin.	-890.44	-2920	1.42	0	576	6344	7144	3621	6920	No	2.37	Si
SLU 40	ini.	155.7	-745	1.42	0	576	6344	7144	3621	6920	No	9.29	Si
SLU 40	fin.	-795.99	-2672	1.42	0	576	6344	7144	3621	6920	No	2.59	Si
SLU 39	ini.	157.32	-746	1.42	0	576	6344	7144	3621	6920	No	9.27	Si
SLU 39	fin.	-795.15	-2674	1.42	0	576	6344	7144	3621	6920	No	2.59	Si
SLU 74	ini.	122.83	-784	1.42	0	576	6344	7144	3621	6920	No	8.82	Si
SLU 74	fin.	-851.68	-2743	1.42	0	576	6344	7144	3621	6920	No	2.52	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 5	ini.	373.76	-1452	-0.0000747	0.0003369	0.0035	1.42		7270.13	7270.13		19.45	Si
SLV 5	fin.	-1670.58	-2029	-0.0003618	0.0003369	0.0035	1.42		7279.66	7279.66		4.36	Si
SLV 15	ini.	-2356.92	-2761	-0.0005396	0.0003369	0.0035	1.42		7279.66	7279.66		3.09	Si
SLV 15	fin.	2132.35	-592	-0.0004798	0.0003369	0.0035	1.42		7270.13	7270.13		3.41	Si
SLV 6	ini.	378.71	-1455	-0.0000757	0.0003369	0.0035	1.42		7270.13	7270.13		19.2	Si
SLV 6	fin.	-1669.33	-2034	-0.0003615	0.0003369	0.0035	1.42		7279.66	7279.66		4.36	Si
SLV 14	ini.	-2596.52	-2940	-0.0006066	0.0003369	0.0035	1.42		7279.66	7279.66		2.8	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	fin.	1906.88	-437	-0.0004212	0.0003369	0.0035	1.42		7270.13	7270.13		3.81	Si
SLV 1	ini.	2419.14	-337	-0.0005575	0.0003369	0.0035	1.42		7270.13	7270.13		3.01	Si
SLV 1	fin.	-3188.17	-3181	-0.0007832	0.0003369	0.0035	1.42		7279.66	7279.66		2.28	Si
SLV 13	ini.	-2604.28	-2936	-0.0006088	0.0003369	0.0035	1.42		7279.66	7279.66		2.8	Si
SLV 13	fin.	1904.92	-429	-0.0004207	0.0003369	0.0035	1.42		7270.13	7270.13		3.82	Si
SLV 16	ini.	-2349.16	-2765	-0.0005375	0.0003369	0.0035	1.42		7279.66	7279.66		3.1	Si
SLV 16	fin.	2134.32	-601	-0.0004803	0.0003369	0.0035	1.42		7270.13	7270.13		3.41	Si
SLV 2	ini.	2426.89	-341	-0.0005597	0.0003369	0.0035	1.42		7270.13	7270.13		3	Si
SLV 2	fin.	-3186.21	-3190	-0.0007826	0.0003369	0.0035	1.42		7279.66	7279.66		2.28	Si
SLV 4	ini.	2674.25	-165	-0.0006298	0.0003369	0.0035	1.42		7270.13	7270.13		2.72	Si
SLV 4	fin.	-2958.77	-3353	-0.0007128	0.0003369	0.0035	1.42		7279.66	7279.66		2.46	Si
SLV 3	ini.	2666.5	-161	-0.0006276	0.0003369	0.0035	1.42		7270.13	7270.13		2.73	Si
SLV 3	fin.	-2960.74	-3345	-0.0007134	0.0003369	0.0035	1.42		7279.66	7279.66		2.46	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	2674.25	-9174	1.42	0	864	6344	10717	3621	7208		0.79	No
SLV 4	fin.	-2958.77	-10530	1.42	0	864	6344	10717	3621	7208		0.68	No
SLD 3	ini.	1161.34	-4155	1.42	0	864	6344	10717	3621	7208		1.73	Si
SLD 3	fin.	-1567.23	-5445	1.42	0	864	6344	10717	3621	7208		1.32	Si
SLV 14	ini.	-2596.52	8349	1.42	0	864	6344	10717	3621	7208		0.86	No
SLV 14	fin.	1906.88	7212	1.42	0	864	6344	10717	3621	7208		1	No
SLV 1	ini.	2419.14	-8894	1.42	0	864	6344	10717	3621	7208		0.81	No
SLV 1	fin.	-3188.17	-10150	1.42	0	864	6344	10717	3621	7208		0.71	No
SLD 4	ini.	1164.66	-4159	1.42	0	864	6344	10717	3621	7208		1.73	Si
SLD 4	fin.	-1566.39	-5450	1.42	0	864	6344	10717	3621	7208		1.32	Si
SLV 3	ini.	2666.5	-9163	1.42	0	864	6344	10717	3621	7208		0.79	No
SLV 3	fin.	-2960.74	-10519	1.42	0	864	6344	10717	3621	7208		0.69	No
SLV 13	ini.	-2604.28	8360	1.42	0	864	6344	10717	3621	7208		0.86	No
SLV 13	fin.	1904.92	7223	1.42	0	864	6344	10717	3621	7208		1	No
SLV 15	ini.	-2356.92	8091	1.42	0	864	6344	10717	3621	7208		0.89	No
SLV 15	fin.	2132.35	6855	1.42	0	864	6344	10717	3621	7208		1.05	Si
SLV 16	ini.	-2349.16	8080	1.42	0	864	6344	10717	3621	7208		0.89	No
SLV 16	fin.	2134.32	6844	1.42	0	864	6344	10717	3621	7208		1.05	Si
SLV 2	ini.	2426.89	-8905	1.42	0	864	6344	10717	3621	7208		0.81	No
SLV 2	fin.	-3186.21	-10162	1.42	0	864	6344	10717	3621	7208		0.71	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.283	SLV 1	Si
V_SLV	0.685	SLV 4	No
PF_SLU	8.465	SLU 84	Si
V_SLU	2.367	SLU 81	Si

Trave di accoppiamento 91

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-11.143	1.006	7.94	8.96	1.02	-12.263	1.006	7.94	8.96	1.02	1.12	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-468.6	-1791	-0.0001904	0.0002246	0.0035	1.02		3900.37	3900.37	No	8.32	Si
SLU 82	fin.	25.74	-1357	-0.0000098	0.0002246	0.0035	1.02		3893.98	3893.98	No	151.3	Si
SLU 77	ini.	-469.81	-1854	-0.0001909	0.0002246	0.0035	1.02		3900.37	3900.37	No	8.3	Si
SLU 77	fin.	44.49	-1387	-0.000017	0.0002246	0.0035	1.02		3893.98	3893.98	No	87.53	Si
SLU 75	ini.	-466.1	-1825	-0.0001893	0.0002246	0.0035	1.02		3900.37	3900.37	No	8.37	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	fin.	46.21	-1360	-0.0000177	0.0002246	0.0035	1.02		3893.98	3893.98	No	84.28	Si
SLU 83	ini.	-472.32	-1820	-0.000192	0.0002246	0.0035	1.02		3900.37	3900.37	No	8.26	Si
SLU 83	fin.	24.02	-1384	-0.0000092	0.0002246	0.0035	1.02		3893.98	3893.98	No	162.1	Si
SLU 84	ini.	-472.56	-1822	-0.0001921	0.0002246	0.0035	1.02		3900.37	3900.37	No	8.25	Si
SLU 84	fin.	23.98	-1386	-0.0000091	0.0002246	0.0035	1.02		3893.98	3893.98	No	162.39	Si
SLU 78	ini.	-470.06	-1856	-0.000191	0.0002246	0.0035	1.02		3900.37	3900.37	No	8.3	Si
SLU 78	fin.	44.45	-1389	-0.000017	0.0002246	0.0035	1.02		3893.98	3893.98	No	87.61	Si
SLU 74	ini.	-465.85	-1823	-0.0001892	0.0002246	0.0035	1.02		3900.37	3900.37	No	8.37	Si
SLU 74	fin.	46.25	-1358	-0.0000177	0.0002246	0.0035	1.02		3893.98	3893.98	No	84.2	Si
SLU 81	ini.	-468.35	-1789	-0.0001903	0.0002246	0.0035	1.02		3900.37	3900.37	No	8.33	Si
SLU 81	fin.	25.78	-1355	-0.0000098	0.0002246	0.0035	1.02		3893.98	3893.98	No	151.04	Si
SLU 79	ini.	-459.07	-1811	-0.0001862	0.0002246	0.0035	1.02		3900.37	3900.37	No	8.5	Si
SLU 79	fin.	31.63	-1368	-0.0000121	0.0002246	0.0035	1.02		3893.98	3893.98	No	123.09	Si
SLU 80	ini.	-459.32	-1813	-0.0001863	0.0002246	0.0035	1.02		3900.37	3900.37	No	8.49	Si
SLU 80	fin.	31.59	-1370	-0.0000121	0.0002246	0.0035	1.02		3893.98	3893.98	No	123.26	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-470.06	1944	1.02	0	377	8088	5132	2601	7733	No	3.98	Si
SLU 78	fin.	44.45	-607	1.02	0	377	8088	5132	2601	7733	No	12.73	Si
SLU 84	ini.	-472.56	2051	1.02	0	377	8088	5132	2601	7733	No	3.77	Si
SLU 84	fin.	23.98	-776	1.02	0	377	8088	5132	2601	7733	No	9.97	Si
SLU 74	ini.	-465.85	1940	1.02	0	377	8088	5132	2601	7733	No	3.99	Si
SLU 74	fin.	46.25	-611	1.02	0	377	8088	5132	2601	7733	No	12.66	Si
SLU 80	ini.	-459.32	1911	1.02	0	377	8088	5132	2601	7733	No	4.05	Si
SLU 80	fin.	31.59	-640	1.02	0	377	8088	5132	2601	7733	No	12.09	Si
SLU 75	ini.	-466.1	1941	1.02	0	377	8088	5132	2601	7733	No	3.98	Si
SLU 75	fin.	46.21	-610	1.02	0	377	8088	5132	2601	7733	No	12.67	Si
SLU 83	ini.	-472.32	2051	1.02	0	377	8088	5132	2601	7733	No	3.77	Si
SLU 83	fin.	24.02	-776	1.02	0	377	8088	5132	2601	7733	No	9.97	Si
SLU 79	ini.	-459.07	1911	1.02	0	377	8088	5132	2601	7733	No	4.05	Si
SLU 79	fin.	31.63	-640	1.02	0	377	8088	5132	2601	7733	No	12.08	Si
SLU 81	ini.	-468.35	2048	1.02	0	377	8088	5132	2601	7733	No	3.78	Si
SLU 81	fin.	25.78	-779	1.02	0	377	8088	5132	2601	7733	No	9.93	Si
SLU 77	ini.	-469.81	1943	1.02	0	377	8088	5132	2601	7733	No	3.98	Si
SLU 77	fin.	44.49	-608	1.02	0	377	8088	5132	2601	7733	No	12.72	Si
SLU 82	ini.	-468.6	2048	1.02	0	377	8088	5132	2601	7733	No	3.78	Si
SLU 82	fin.	25.74	-779	1.02	0	377	8088	5132	2601	7733	No	9.93	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-2313.44	87	-0.0012326	0.0003369	0.0035	1.02		3845.03	3845.03		1.66	Si
SLV 13	fin.	4288.46	8308	-0.0038512	0.0003369	0.0035	1.02		3838.12	3838.12		0.89	No
SLV 3	ini.	1692.2	-2583	-0.0008132	0.0003369	0.0035	1.02		3838.12	3838.12		2.27	Si
SLV 3	fin.	-4212.73	-10150	-0.0037146	0.0003369	0.0035	1.02		3845.03	3845.03		0.91	No
SLV 4	ini.	1688.87	-2581	-0.0008112	0.0003369	0.0035	1.02		3838.12	3838.12		2.27	Si
SLV 4	fin.	-4205.74	-10136	-0.0037029	0.0003369	0.0035	1.02		3845.03	3845.03		0.91	No
SLV 16	ini.	-2326.45	239	-0.0012424	0.0003369	0.0035	1.02		3845.03	3845.03		1.65	Si
SLV 16	fin.	4343.02	8668	-0.0039397	0.0003369	0.0035	1.02		3838.12	3838.12		0.88	No
SLD 15	ini.	-1171.87	-612	-0.000516	0.0003369	0.0035	1.02		3845.03	3845.03		3.28	Si
SLD 15	fin.	1877.2	3176	-0.0009302	0.0003369	0.0035	1.02		3838.12	3838.12		2.04	Si
SLV 14	ini.	-2316.77	89	-0.0012351	0.0003369	0.0035	1.02		3845.03	3845.03		1.66	Si
SLV 14	fin.	4295.44	8323	-0.0038626	0.0003369	0.0035	1.02		3838.12	3838.12		0.89	No
SLV 2	ini.	1698.55	-2731	-0.0008171	0.0003369	0.0035	1.02		3838.12	3838.12		2.26	Si
SLV 2	fin.	-4253.32	-10480	-0.0037821	0.0003369	0.0035	1.02		3845.03	3845.03		0.9	No
SLD 16	ini.	-1173.3	-611	-0.0005167	0.0003369	0.0035	1.02		3845.03	3845.03		3.28	Si
SLD 16	fin.	1880.19	3183	-0.0009322	0.0003369	0.0035	1.02		3838.12	3838.12		2.04	Si
SLV 15	ini.	-2323.12	238	-0.0012399	0.0003369	0.0035	1.02		3845.03	3845.03		1.66	Si
SLV 15	fin.	4336.03	8653	-0.0039285	0.0003369	0.0035	1.02		3838.12	3838.12		0.89	No
SLV 1	ini.	1701.87	-2733	-0.0008192	0.0003369	0.0035	1.02		3838.12	3838.12		2.26	Si
SLV 1	fin.	-4260.3	-10495	-0.0037937	0.0003369	0.0035	1.02		3845.03	3845.03		0.9	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	1701.87	-7940	1.02	0	565	8088	7698	2601	8654		1.09	Si
SLV 1	fin.	-4260.3	-9610	1.02	0	565	8088	7698	2601	8654		0.9	No
SLV 15	ini.	-2323.12	10411	1.02	0	565	8088	7698	2601	8654		0.83	No
SLV 15	fin.	4336.03	8967	1.02	0	565	8088	7698	2601	8654		0.97	No
SLV 2	ini.	1698.55	-7925	1.02	0	565	8088	7698	2601	8654		1.09	Si
SLV 2	fin.	-4253.32	-9595	1.02	0	565	8088	7698	2601	8654		0.9	No
SLD 13	ini.	-1167.6	5184	1.02	0	565	8088	7698	2601	8654		1.67	Si
SLD 13	fin.	1856.95	3621	1.02	0	565	8088	7698	2601	8654		2.39	Si
SLV 16	ini.	-2326.45	10426	1.02	0	565	8088	7698	2601	8654		0.83	No
SLV 16	fin.	4343.02	8982	1.02	0	565	8088	7698	2601	8654		0.96	No
SLV 4	ini.	1688.87	-7978	1.02	0	565	8088	7698	2601	8654		1.08	Si
SLV 4	fin.	-4205.74	-9519	1.02	0	565	8088	7698	2601	8654		0.91	No
SLV 13	ini.	-2313.44	10464	1.02	0	565	8088	7698	2601	8654		0.83	No
SLV 13	fin.	4288.46	8891	1.02	0	565	8088	7698	2601	8654		0.97	No
SLV 3	ini.	1692.2	-7993	1.02	0	565	8088	7698	2601	8654		1.08	Si
SLV 3	fin.	-4212.73	-9534	1.02	0	565	8088	7698	2601	8654		0.91	No
SLD 14	ini.	-1169.03	5191	1.02	0	565	8088	7698	2601	8654		1.67	Si
SLD 14	fin.	1859.95	3628	1.02	0	565	8088	7698	2601	8654		2.39	Si
SLV 14	ini.	-2316.77	10479	1.02	0	565	8088	7698	2601	8654		0.83	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	fin.	4295.44	8906	1.02	0	565	8088	7698	2601	8654		0.97	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.884	SLV 16	No
V_SLV	0.826	SLV 14	No
PF_SLU	8.254	SLU 84	Si
V_SLU	3.77	SLU 84	Si

Trave di accoppiamento 92

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-9.398	1.006	7.94	8.96	1.02	-10.478	1.006	7.94	8.96	1.02	1.08	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 61	ini.	-673.84	-2645	-0.0002844	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.79	Si
SLU 61	fin.	44.02	-1754	-0.0000168	0.0002246	0.0035	1.02		3893.98	3893.98	No	88.46	Si
SLU 74	ini.	-683.05	-2832	-0.0002888	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.71	Si
SLU 74	fin.	1.67	-1980	-0.0000006	0.0002246	0.0035	1.02		3893.98	3893.98	No	2328.53	Si
SLU 83	ini.	-722.73	-2908	-0.0003081	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.4	Si
SLU 83	fin.	13.21	-1994	-0.000005	0.0002246	0.0035	1.02		3893.98	3893.98	No	294.87	Si
SLU 63	ini.	-674.09	-2674	-0.0002845	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.79	Si
SLU 63	fin.	40.13	-1786	-0.0000153	0.0002246	0.0035	1.02		3893.98	3893.98	No	97.04	Si
SLU 81	ini.	-722.47	-2880	-0.0003079	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.4	Si
SLU 81	fin.	17.1	-1963	-0.0000065	0.0002246	0.0035	1.02		3893.98	3893.98	No	227.77	Si
SLU 75	ini.	-683.31	-2835	-0.000289	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.71	Si
SLU 75	fin.	1.51	-1982	-0.0000006	0.0002246	0.0035	1.02		3893.98	3893.98	No	2578.78	Si
SLU 77	ini.	-683.3	-2861	-0.000289	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.71	Si
SLU 77	fin.	-2.22	-2011	-0.0000008	0.0002246	0.0035	1.02		3900.37	3900.37	No	1758.78	Si
SLU 84	ini.	-722.99	-2911	-0.0003082	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.39	Si
SLU 84	fin.	13.04	-1997	-0.000005	0.0002246	0.0035	1.02		3893.98	3893.98	No	298.54	Si
SLU 82	ini.	-722.74	-2882	-0.0003081	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.4	Si
SLU 82	fin.	16.93	-1965	-0.0000065	0.0002246	0.0035	1.02		3893.98	3893.98	No	229.96	Si
SLU 78	ini.	-683.56	-2864	-0.0002891	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.71	Si
SLU 78	fin.	-2.38	-2014	-0.0000009	0.0002246	0.0035	1.02		3900.37	3900.37	No	1638.86	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-722.74	2303	1.02	0	391	8088	5132	2601	7733	No	3.36	Si
SLU 82	fin.	16.93	-69	1.02	0	391	8088	5132	2601	7733	No	111.7	Si
SLU 75	ini.	-683.31	2127	1.02	0	391	8088	5132	2601	7733	No	3.64	Si
SLU 75	fin.	1.51	-55	1.02	0	391	8088	5132	2601	7733	No	140.98	Si
SLU 83	ini.	-722.73	2298	1.02	0	391	8088	5132	2601	7733	No	3.36	Si
SLU 83	fin.	13.21	-74	1.02	0	391	8088	5132	2601	7733	No	104.23	Si
SLU 84	ini.	-722.99	2299	1.02	0	391	8088	5132	2601	7733	No	3.36	Si
SLU 84	fin.	13.04	-74	1.02	0	391	8088	5132	2601	7733	No	104.44	Si
SLU 73	ini.	-670.04	2108	1.02	0	391	8088	5132	2601	7733	No	3.67	Si
SLU 73	fin.	2.74	-74	1.02	0	391	8088	5132	2601	7733	No	104.85	Si
SLU 76	ini.	-670.29	2103	1.02	0	391	8088	5132	2601	7733	No	3.68	Si
SLU 76	fin.	-1.15	-79	1.02	0	391	8088	5132	2601	7733	No	98.42	Si
SLU 81	ini.	-722.47	2303	1.02	0	391	8088	5132	2601	7733	No	3.36	Si
SLU 81	fin.	17.1	-69	1.02	0	391	8088	5132	2601	7733	No	111.46	Si
SLU 77	ini.	-683.3	2122	1.02	0	391	8088	5132	2601	7733	No	3.64	Si
SLU 77	fin.	-2.22	-60	1.02	0	391	8088	5132	2601	7733	No	129.28	Si
SLU 74	ini.	-683.05	2127	1.02	0	391	8088	5132	2601	7733	No	3.64	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	fin.	1.67	-55	1.02	0	391	8088	5132	2601	7733	No	140.6	Si
SLU 78	ini.	-683.56	2122	1.02	0	391	8088	5132	2601	7733	No	3.64	Si
SLU 78	fin.	-2.38	-60	1.02	0	391	8088	5132	2601	7733	No	129.61	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-3184.56	-8569	-0.0020505	0.0003369	0.0035	1.02		3845.03	3845.03		1.21	Si
SLV 16	fin.	826.61	-3822	-0.0003456	0.0003369	0.0035	1.02		3838.12	3838.12		4.64	Si
SLV 2	ini.	2290.27	4775	-0.001218	0.0003369	0.0035	1.02		3838.12	3838.12		1.68	Si
SLV 2	fin.	-839.95	1128	-0.0003513	0.0003369	0.0035	1.02		3845.03	3845.03		4.58	Si
SLV 1	ini.	2295.2	4785	-0.0012217	0.0003369	0.0035	1.02		3838.12	3838.12		1.67	Si
SLV 1	fin.	-841.87	1131	-0.0003522	0.0003369	0.0035	1.02		3845.03	3845.03		4.57	Si
SLD 14	ini.	-1662.08	-4875	-0.0007931	0.0003369	0.0035	1.02		3845.03	3845.03		2.31	Si
SLD 14	fin.	362.02	-2449	-0.0001428	0.0003369	0.0035	1.02		3838.12	3838.12		10.6	Si
SLV 13	ini.	-3286.49	-8858	-0.0021785	0.0003369	0.0035	1.02		3845.03	3845.03		1.17	Si
SLV 13	fin.	854.43	-3925	-0.0003587	0.0003369	0.0035	1.02		3838.12	3838.12		4.49	Si
SLD 13	ini.	-1659.96	-4870	-0.0007918	0.0003369	0.0035	1.02		3845.03	3845.03		2.32	Si
SLD 13	fin.	361.2	-2448	-0.0001425	0.0003369	0.0035	1.02		3838.12	3838.12		10.63	Si
SLV 3	ini.	2402.06	5084	-0.0013035	0.0003369	0.0035	1.02		3838.12	3838.12		1.6	Si
SLV 3	fin.	-871.6	1237	-0.0003662	0.0003369	0.0035	1.02		3845.03	3845.03		4.41	Si
SLV 15	ini.	-3179.63	-8559	-0.0020445	0.0003369	0.0035	1.02		3845.03	3845.03		1.21	Si
SLV 15	fin.	824.69	-3819	-0.0003447	0.0003369	0.0035	1.02		3838.12	3838.12		4.65	Si
SLV 14	ini.	-3291.42	-8868	-0.0021849	0.0003369	0.0035	1.02		3845.03	3845.03		1.17	Si
SLV 14	fin.	856.34	-3928	-0.0003596	0.0003369	0.0035	1.02		3838.12	3838.12		4.48	Si
SLV 4	ini.	2397.13	5074	-0.0012996	0.0003369	0.0035	1.02		3838.12	3838.12		1.6	Si
SLV 4	fin.	-869.69	1234	-0.0003653	0.0003369	0.0035	1.02		3845.03	3845.03		4.42	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-3286.49	6822	1.02	0	586	8088	7698	2601	8675		1.27	Si
SLV 13	fin.	854.43	5335	1.02	0	586	8088	7698	2601	8675		1.63	Si
SLD 14	ini.	-1662.08	3695	1.02	0	586	8088	7698	2601	8675		2.35	Si
SLD 14	fin.	362.02	2271	1.02	0	586	8088	7698	2601	8675		3.82	Si
SLV 4	ini.	2397.13	-4120	1.02	0	586	8088	7698	2601	8675		2.11	Si
SLV 4	fin.	-869.69	-5387	1.02	0	586	8088	7698	2601	8675		1.61	Si
SLV 1	ini.	2295.2	-3830	1.02	0	586	8088	7698	2601	8675		2.26	Si
SLV 1	fin.	-841.87	-5273	1.02	0	586	8088	7698	2601	8675		1.64	Si
SLV 14	ini.	-3291.42	6832	1.02	0	586	8088	7698	2601	8675		1.27	Si
SLV 14	fin.	856.34	5345	1.02	0	586	8088	7698	2601	8675		1.62	Si
SLV 15	ini.	-3179.63	6522	1.02	0	586	8088	7698	2601	8675		1.33	Si
SLV 15	fin.	824.69	5212	1.02	0	586	8088	7698	2601	8675		1.66	Si
SLV 2	ini.	2290.27	-3820	1.02	0	586	8088	7698	2601	8675		2.27	Si
SLV 2	fin.	-839.95	-5263	1.02	0	586	8088	7698	2601	8675		1.65	Si
SLV 16	ini.	-3184.56	6532	1.02	0	586	8088	7698	2601	8675		1.33	Si
SLV 16	fin.	826.61	5222	1.02	0	586	8088	7698	2601	8675		1.66	Si
SLV 3	ini.	2402.06	-4130	1.02	0	586	8088	7698	2601	8675		2.1	Si
SLV 3	fin.	-871.6	-5397	1.02	0	586	8088	7698	2601	8675		1.61	Si
SLD 13	ini.	-1659.96	3691	1.02	0	586	8088	7698	2601	8675		2.35	Si
SLD 13	fin.	361.2	2267	1.02	0	586	8088	7698	2601	8675		3.83	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.168	SLV 14	Si
V_SLV	1.27	SLV 14	Si
PF_SLU	5.395	SLU 84	Si
V_SLU	3.357	SLU 82	Si

Trave di accoppiamento 93

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.463	1.006	7.54	8.96	1.42	-7.463	1.006	7.54	8.96	1.42	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-1416.55	-4193	-0.0003122	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.33	Si
SLU 74	fin.	741.51	-2397	-0.0001535	0.0002246	0.0035	1.42		7536.27	7536.27	No	10.16	Si
SLU 42	ini.	-1423.99	-3852	-0.0003141	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.3	Si
SLU 42	fin.	811.06	-1991	-0.0001689	0.0002246	0.0035	1.42		7536.27	7536.27	No	9.29	Si
SLU 39	ini.	-1427.23	-3811	-0.0003149	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.29	Si
SLU 39	fin.	818.36	-1941	-0.0001705	0.0002246	0.0035	1.42		7536.27	7536.27	No	9.21	Si
SLU 40	ini.	-1424.83	-3808	-0.0003143	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.3	Si
SLU 40	fin.	816.79	-1942	-0.0001702	0.0002246	0.0035	1.42		7536.27	7536.27	No	9.23	Si
SLU 41	ini.	-1426.4	-3855	-0.0003147	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.29	Si
SLU 41	fin.	812.63	-1990	-0.0001692	0.0002246	0.0035	1.42		7536.27	7536.27	No	9.27	Si
SLU 81	ini.	-1545.4	-4339	-0.0003453	0.0002246	0.0035	1.42		7545.1	7545.1	No	4.88	Si
SLU 81	fin.	841.57	-2353	-0.0001757	0.0002246	0.0035	1.42		7536.27	7536.27	No	8.96	Si
SLU 82	ini.	-1543	-4336	-0.0003446	0.0002246	0.0035	1.42		7545.1	7545.1	No	4.89	Si
SLU 82	fin.	840	-2354	-0.0001753	0.0002246	0.0035	1.42		7536.27	7536.27	No	8.97	Si
SLU 77	ini.	-1415.71	-4237	-0.000312	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.33	Si
SLU 77	fin.	735.78	-2446	-0.0001523	0.0002246	0.0035	1.42		7536.27	7536.27	No	10.24	Si
SLU 83	ini.	-1544.57	-4383	-0.000345	0.0002246	0.0035	1.42		7545.1	7545.1	No	4.88	Si
SLU 83	fin.	835.84	-2402	-0.0001744	0.0002246	0.0035	1.42		7536.27	7536.27	No	9.02	Si
SLU 84	ini.	-1542.16	-4380	-0.0003444	0.0002246	0.0035	1.42		7545.1	7545.1	No	4.89	Si
SLU 84	fin.	834.27	-2403	-0.0001741	0.0002246	0.0035	1.42		7536.27	7536.27	No	9.03	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 40	ini.	-1424.83	5136	1.42	0	576	7930	7144	3621	8506	No	1.66	Si
SLU 40	fin.	816.79	1945	1.42	0	576	7930	7144	3621	8506	No	4.37	Si
SLU 41	ini.	-1426.4	5133	1.42	0	576	7930	7144	3621	8506	No	1.66	Si
SLU 41	fin.	812.63	1942	1.42	0	576	7930	7144	3621	8506	No	4.38	Si
SLU 74	ini.	-1416.55	4983	1.42	0	576	7930	7144	3621	8506	No	1.71	Si
SLU 74	fin.	741.51	1813	1.42	0	576	7930	7144	3621	8506	No	4.69	Si
SLU 39	ini.	-1427.23	5143	1.42	0	576	7930	7144	3621	8506	No	1.65	Si
SLU 39	fin.	818.36	1951	1.42	0	576	7930	7144	3621	8506	No	4.36	Si
SLU 75	ini.	-1414.15	4977	1.42	0	576	7930	7144	3621	8506	No	1.71	Si
SLU 75	fin.	739.94	1807	1.42	0	576	7930	7144	3621	8506	No	4.71	Si
SLU 82	ini.	-1543	5488	1.42	0	576	7930	7144	3621	8506	No	1.55	Si
SLU 82	fin.	840	2022	1.42	0	576	7930	7144	3621	8506	No	4.21	Si
SLU 83	ini.	-1544.57	5485	1.42	0	576	7930	7144	3621	8506	No	1.55	Si
SLU 83	fin.	835.84	2019	1.42	0	576	7930	7144	3621	8506	No	4.21	Si
SLU 42	ini.	-1423.99	5126	1.42	0	576	7930	7144	3621	8506	No	1.66	Si
SLU 42	fin.	811.06	1935	1.42	0	576	7930	7144	3621	8506	No	4.4	Si
SLU 84	ini.	-1542.16	5478	1.42	0	576	7930	7144	3621	8506	No	1.55	Si
SLU 84	fin.	834.27	2013	1.42	0	576	7930	7144	3621	8506	No	4.23	Si
SLU 81	ini.	-1545.4	5494	1.42	0	576	7930	7144	3621	8506	No	1.55	Si
SLU 81	fin.	841.57	2029	1.42	0	576	7930	7144	3621	8506	No	4.19	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	2203.59	437	-0.0004988	0.0003369	0.0035	1.42		7270.13	7270.13		3.3	Si
SLV 2	fin.	-2418.12	-2929	-0.0005565	0.0003369	0.0035	1.42		7279.66	7279.66		3.01	Si
SLV 16	ini.	-3868.85	-5810	-0.0010075	0.0003369	0.0035	1.42		7279.66	7279.66		1.88	Si
SLV 16	fin.	3180.07	-424	-0.0007819	0.0003369	0.0035	1.42		7270.13	7270.13		2.29	Si
SLV 3	ini.	2161.77	56	-0.0004876	0.0003369	0.0035	1.42		7270.13	7270.13		3.36	Si
SLV 3	fin.	-2513.86	-3288	-0.0005832	0.0003369	0.0035	1.42		7279.66	7279.66		2.9	Si
SLV 1	ini.	2198.35	415	-0.0004974	0.0003369	0.0035	1.42		7270.13	7270.13		3.31	Si
SLV 1	fin.	-2416.47	-2944	-0.000556	0.0003369	0.0035	1.42		7279.66	7279.66		3.01	Si
SLV 14	ini.	-3832.28	-5451	-0.0009948	0.0003369	0.0035	1.42		7279.66	7279.66		1.9	Si
SLV 14	fin.	3277.46	-80	-0.0008125	0.0003369	0.0035	1.42		7270.13	7270.13		2.22	Si
SLD 16	ini.	-2132.35	-4029	-0.0004791	0.0003369	0.0035	1.42		7279.66	7279.66		3.41	Si
SLD 16	fin.	1577.9	-1146	-0.0003398	0.0003369	0.0035	1.42		7270.13	7270.13		4.61	Si
SLD 15	ini.	-2134.6	-4038	-0.0004797	0.0003369	0.0035	1.42		7279.66	7279.66		3.41	Si
SLD 15	fin.	1578.61	-1153	-0.00034	0.0003369	0.0035	1.42		7270.13	7270.13		4.61	Si
SLV 13	ini.	-3837.52	-5473	-0.0009966	0.0003369	0.0035	1.42		7279.66	7279.66		1.9	Si
SLV 13	fin.	3279.11	-96	-0.000813	0.0003369	0.0035	1.42		7270.13	7270.13		2.22	Si
SLV 15	ini.	-3874.09	-5832	-0.0010093	0.0003369	0.0035	1.42		7279.66	7279.66		1.88	Si
SLV 15	fin.	3181.71	-440	-0.0007824	0.0003369	0.0035	1.42		7270.13	7270.13		2.28	Si
SLV 4	ini.	2167.01	78	-0.000489	0.0003369	0.0035	1.42		7270.13	7270.13		3.35	Si
SLV 4	fin.	-2515.51	-3273	-0.0005837	0.0003369	0.0035	1.42		7279.66	7279.66		2.89	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-3868.85	11811	1.42	0	864	7930	10717	3621	8794		0.74	No
SLV 16	fin.	3180.07	9915	1.42	0	864	7930	10717	3621	8794		0.89	No
SLV 4	ini.	2167.01	-6008	1.42	0	864	7930	10717	3621	8794		1.46	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	fin.	-2515.51	-7846	1.42	0	864	7930	10717	3621	8794		1.12	Si
SLD 16	ini.	-2132.35	6707	1.42	0	864	7930	10717	3621	8794		1.31	Si
SLD 16	fin.	1577.9	4767	1.42	0	864	7930	10717	3621	8794		1.84	Si
SLV 1	ini.	2198.35	-6019	1.42	0	864	7930	10717	3621	8794		1.46	Si
SLV 1	fin.	-2416.47	-8069	1.42	0	864	7930	10717	3621	8794		1.09	Si
SLV 13	ini.	-3837.52	11799	1.42	0	864	7930	10717	3621	8794		0.75	No
SLV 13	fin.	3279.11	9691	1.42	0	864	7930	10717	3621	8794		0.91	No
SLD 15	ini.	-2134.6	6713	1.42	0	864	7930	10717	3621	8794		1.31	Si
SLD 15	fin.	1578.61	4772	1.42	0	864	7930	10717	3621	8794		1.84	Si
SLV 2	ini.	2203.59	-6031	1.42	0	864	7930	10717	3621	8794		1.46	Si
SLV 2	fin.	-2418.12	-8081	1.42	0	864	7930	10717	3621	8794		1.09	Si
SLV 15	ini.	-3874.09	11823	1.42	0	864	7930	10717	3621	8794		0.74	No
SLV 15	fin.	3181.71	9927	1.42	0	864	7930	10717	3621	8794		0.89	No
SLV 3	ini.	2161.77	-5996	1.42	0	864	7930	10717	3621	8794		1.47	Si
SLV 3	fin.	-2513.86	-7834	1.42	0	864	7930	10717	3621	8794		1.12	Si
SLV 14	ini.	-3832.28	11787	1.42	0	864	7930	10717	3621	8794		0.75	No
SLV 14	fin.	3277.46	9679	1.42	0	864	7930	10717	3621	8794		0.91	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.879	SLV 15	Si
V_SLV	0.744	SLV 15	No
PF_SLU	4.882	SLU 81	Si
V_SLU	1.548	SLU 81	Si

Trave di accoppiamento 94

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-4.113	1.006	7.54	8.96	1.42	-4.913	1.006	7.54	8.96	1.42	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-937.5	-3496	-0.0001971	0.0002246	0.0035	1.42		7545.1	7545.1	No	8.05	Si
SLU 84	fin.	-209.21	-3006	-0.0000416	0.0002246	0.0035	1.42		7545.1	7545.1	No	36.06	Si
SLU 74	ini.	-874.34	-3335	-0.0001828	0.0002246	0.0035	1.42		7545.1	7545.1	No	8.63	Si
SLU 74	fin.	-200.58	-2875	-0.0000398	0.0002246	0.0035	1.42		7545.1	7545.1	No	37.62	Si
SLU 40	ini.	-855.76	-3076	-0.0001787	0.0002246	0.0035	1.42		7545.1	7545.1	No	8.82	Si
SLU 40	fin.	-163.3	-2627	-0.0000323	0.0002246	0.0035	1.42		7545.1	7545.1	No	46.2	Si
SLU 78	ini.	-876.15	-3378	-0.0001832	0.0002246	0.0035	1.42		7545.1	7545.1	No	8.61	Si
SLU 78	fin.	-206.02	-2918	-0.0000409	0.0002246	0.0035	1.42		7545.1	7545.1	No	36.62	Si
SLU 77	ini.	-874.68	-3376	-0.0001829	0.0002246	0.0035	1.42		7545.1	7545.1	No	8.63	Si
SLU 77	fin.	-205.21	-2916	-0.0000408	0.0002246	0.0035	1.42		7545.1	7545.1	No	36.77	Si
SLU 42	ini.	-856.1	-3116	-0.0001787	0.0002246	0.0035	1.42		7545.1	7545.1	No	8.81	Si
SLU 42	fin.	-167.93	-2668	-0.0000333	0.0002246	0.0035	1.42		7545.1	7545.1	No	44.93	Si
SLU 81	ini.	-935.69	-3453	-0.0001967	0.0002246	0.0035	1.42		7545.1	7545.1	No	8.06	Si
SLU 81	fin.	-203.77	-2963	-0.0000405	0.0002246	0.0035	1.42		7545.1	7545.1	No	37.03	Si
SLU 75	ini.	-875.82	-3338	-0.0001832	0.0002246	0.0035	1.42		7545.1	7545.1	No	8.61	Si
SLU 75	fin.	-201.39	-2877	-0.00004	0.0002246	0.0035	1.42		7545.1	7545.1	No	37.46	Si
SLU 83	ini.	-936.03	-3493	-0.0001968	0.0002246	0.0035	1.42		7545.1	7545.1	No	8.06	Si
SLU 83	fin.	-208.4	-3004	-0.0000414	0.0002246	0.0035	1.42		7545.1	7545.1	No	36.2	Si
SLU 82	ini.	-937.17	-3456	-0.0001971	0.0002246	0.0035	1.42		7545.1	7545.1	No	8.05	Si
SLU 82	fin.	-204.58	-2965	-0.0000406	0.0002246	0.0035	1.42		7545.1	7545.1	No	36.88	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-937.17	2441	1.42	0	576	6344	7144	3621	6920	No	2.83	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	fin.	-204.58	306	1.42	0	576	6344	7144	3621	6920	No	22.61	Si
SLU 77	ini.	-874.68	2253	1.42	0	576	6344	7144	3621	6920	No	3.07	Si
SLU 77	fin.	-205.21	282	1.42	0	576	6344	7144	3621	6920	No	24.51	Si
SLU 83	ini.	-936.03	2434	1.42	0	576	6344	7144	3621	6920	No	2.84	Si
SLU 83	fin.	-208.4	299	1.42	0	576	6344	7144	3621	6920	No	23.16	Si
SLU 40	ini.	-855.76	2249	1.42	0	576	6344	7144	3621	6920	No	3.08	Si
SLU 40	fin.	-163.3	312	1.42	0	576	6344	7144	3621	6920	No	22.2	Si
SLU 81	ini.	-935.69	2440	1.42	0	576	6344	7144	3621	6920	No	2.84	Si
SLU 81	fin.	-203.77	305	1.42	0	576	6344	7144	3621	6920	No	22.7	Si
SLU 84	ini.	-937.5	2435	1.42	0	576	6344	7144	3621	6920	No	2.84	Si
SLU 84	fin.	-209.21	300	1.42	0	576	6344	7144	3621	6920	No	23.07	Si
SLU 74	ini.	-874.34	2259	1.42	0	576	6344	7144	3621	6920	No	3.06	Si
SLU 74	fin.	-200.58	288	1.42	0	576	6344	7144	3621	6920	No	23.99	Si
SLU 78	ini.	-876.15	2254	1.42	0	576	6344	7144	3621	6920	No	3.07	Si
SLU 78	fin.	-206.02	284	1.42	0	576	6344	7144	3621	6920	No	24.4	Si
SLU 39	ini.	-854.29	2248	1.42	0	576	6344	7144	3621	6920	No	3.08	Si
SLU 39	fin.	-162.49	311	1.42	0	576	6344	7144	3621	6920	No	22.28	Si
SLU 75	ini.	-875.82	2260	1.42	0	576	6344	7144	3621	6920	No	3.06	Si
SLU 75	fin.	-201.39	290	1.42	0	576	6344	7144	3621	6920	No	23.89	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	2284.64	1692	-0.0005206	0.0003369	0.0035	1.42		7270.13	7270.13		3.18	Si
SLV 2	fin.	-1672.05	12	-0.0003622	0.0003369	0.0035	1.42		7279.66	7279.66		4.35	Si
SLV 13	ini.	-3491.04	-6088	-0.00088	0.0003369	0.0035	1.42		7279.66	7279.66		2.09	Si
SLV 13	fin.	1337.11	-3370	-0.0002831	0.0003369	0.0035	1.42		7270.13	7270.13		5.44	Si
SLV 15	ini.	-3334.33	-5884	-0.0008294	0.0003369	0.0035	1.42		7279.66	7279.66		2.18	Si
SLV 15	fin.	1361.83	-3659	-0.0002888	0.0003369	0.0035	1.42		7270.13	7270.13		5.34	Si
SLV 14	ini.	-3495.85	-6078	-0.0008816	0.0003369	0.0035	1.42		7279.66	7279.66		2.08	Si
SLV 14	fin.	1330.3	-3361	-0.0002815	0.0003369	0.0035	1.42		7270.13	7270.13		5.47	Si
SLV 3	ini.	2446.16	1887	-0.0005651	0.0003369	0.0035	1.42		7270.13	7270.13		2.97	Si
SLV 3	fin.	-1640.52	-286	-0.0003545	0.0003369	0.0035	1.42		7279.66	7279.66		4.44	Si
SLV 1	ini.	2289.45	1682	-0.0005219	0.0003369	0.0035	1.42		7270.13	7270.13		3.18	Si
SLV 1	fin.	-1665.24	3	-0.0003605	0.0003369	0.0035	1.42		7279.66	7279.66		4.37	Si
SLV 4	ini.	2441.35	1897	-0.0005637	0.0003369	0.0035	1.42		7270.13	7270.13		2.98	Si
SLV 4	fin.	-1647.32	-278	-0.0003561	0.0003369	0.0035	1.42		7279.66	7279.66		4.42	Si
SLV 16	ini.	-3339.13	-5874	-0.0008309	0.0003369	0.0035	1.42		7279.66	7279.66		2.18	Si
SLV 16	fin.	1355.03	-3650	-0.0002873	0.0003369	0.0035	1.42		7270.13	7270.13		5.37	Si
SLD 14	ini.	-1795.5	-3798	-0.0003926	0.0003369	0.0035	1.42		7279.66	7279.66		4.05	Si
SLD 14	fin.	480.11	-2480	-0.0000965	0.0003369	0.0035	1.42		7270.13	7270.13		15.14	Si
SLD 13	ini.	-1793.44	-3803	-0.0003921	0.0003369	0.0035	1.42		7279.66	7279.66		4.06	Si
SLD 13	fin.	483.04	-2483	-0.0000971	0.0003369	0.0035	1.42		7270.13	7270.13		15.05	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-3339.13	8874	1.42	0	864	6344	10717	3621	7208		0.81	No
SLV 16	fin.	1355.03	7484	1.42	0	864	6344	10717	3621	7208		0.96	No
SLV 14	ini.	-3495.85	8548	1.42	0	864	6344	10717	3621	7208		0.84	No
SLV 14	fin.	1330.3	7343	1.42	0	864	6344	10717	3621	7208		0.98	No
SLD 16	ini.	-1728.13	4568	1.42	0	864	6344	10717	3621	7208		1.58	Si
SLD 16	fin.	491.1	3257	1.42	0	864	6344	10717	3621	7208		2.21	Si
SLV 13	ini.	-3491.04	8552	1.42	0	864	6344	10717	3621	7208		0.84	No
SLV 13	fin.	1337.11	7346	1.42	0	864	6344	10717	3621	7208		0.98	No
SLV 3	ini.	2446.16	-5849	1.42	0	864	6344	10717	3621	7208		1.23	Si
SLV 3	fin.	-1640.52	-7155	1.42	0	864	6344	10717	3621	7208		1.01	Si
SLV 1	ini.	2289.45	-6176	1.42	0	864	6344	10717	3621	7208		1.17	Si
SLV 1	fin.	-1665.24	-7297	1.42	0	864	6344	10717	3621	7208		0.99	No
SLV 4	ini.	2441.35	-5853	1.42	0	864	6344	10717	3621	7208		1.23	Si
SLV 4	fin.	-1647.32	-7159	1.42	0	864	6344	10717	3621	7208		1.01	Si
SLV 15	ini.	-3334.33	8878	1.42	0	864	6344	10717	3621	7208		0.81	No
SLV 15	fin.	1361.83	7488	1.42	0	864	6344	10717	3621	7208		0.96	No
SLD 15	ini.	-1726.06	4570	1.42	0	864	6344	10717	3621	7208		1.58	Si
SLD 15	fin.	494.02	3258	1.42	0	864	6344	10717	3621	7208		2.21	Si
SLV 2	ini.	2284.64	-6179	1.42	0	864	6344	10717	3621	7208		1.17	Si
SLV 2	fin.	-1672.05	-7301	1.42	0	864	6344	10717	3621	7208		0.99	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.082	SLV 14	Si
V_SLV	0.812	SLV 15	No
PF_SLU	8.048	SLU 84	Si
V_SLU	2.835	SLU 82	Si

Trave di accoppiamento 96

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.433	-3.314	7.54	8.96	1.42	-9.333	-3.314	7.54	8.96	1.42	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 24	ini.	152.84	-1596	-0.0000303	0.0001872	0.0035	1.42		7350.79	7350.79	No	48.09	Si
SLU 24	fin.	-346.76	-1913	-0.0000698	0.0001872	0.0035	1.42		7359.91	7359.91	No	21.22	Si
SLU 39	ini.	147.46	-1646	-0.0000293	0.0001872	0.0035	1.42		7350.79	7350.79	No	49.85	Si
SLU 39	fin.	-347.83	-1979	-0.00007	0.0001872	0.0035	1.42		7359.91	7359.91	No	21.16	Si
SLU 33	ini.	160.95	-1682	-0.000032	0.0001872	0.0035	1.42		7350.79	7350.79	No	45.67	Si
SLU 33	fin.	-357.74	-2021	-0.0000721	0.0001872	0.0035	1.42		7359.91	7359.91	No	20.57	Si
SLU 36	ini.	153	-1737	-0.0000304	0.0001872	0.0035	1.42		7350.79	7350.79	No	48.04	Si
SLU 36	fin.	-347.32	-2070	-0.0000699	0.0001872	0.0035	1.42		7359.91	7359.91	No	21.19	Si
SLU 31	ini.	158.22	-1597	-0.0000314	0.0001872	0.0035	1.42		7350.79	7350.79	No	46.46	Si
SLU 31	fin.	-351.23	-1929	-0.0000707	0.0001872	0.0035	1.42		7359.91	7359.91	No	20.95	Si
SLU 32	ini.	154.16	-1688	-0.0000306	0.0001872	0.0035	1.42		7350.79	7350.79	No	47.68	Si
SLU 32	fin.	-353.88	-2023	-0.0000713	0.0001872	0.0035	1.42		7359.91	7359.91	No	20.8	Si
SLU 23	ini.	156.91	-1505	-0.0000311	0.0001872	0.0035	1.42		7350.79	7350.79	No	46.85	Si
SLU 23	fin.	-344.11	-1819	-0.0000693	0.0001872	0.0035	1.42		7359.91	7359.91	No	21.39	Si
SLU 40	ini.	154.26	-1640	-0.0000306	0.0001872	0.0035	1.42		7350.79	7350.79	No	47.65	Si
SLU 40	fin.	-351.7	-1977	-0.0000708	0.0001872	0.0035	1.42		7359.91	7359.91	No	20.93	Si
SLU 25	ini.	159.63	-1590	-0.0000317	0.0001872	0.0035	1.42		7350.79	7350.79	No	46.05	Si
SLU 25	fin.	-350.62	-1911	-0.0000706	0.0001872	0.0035	1.42		7359.91	7359.91	No	20.99	Si
SLU 75	ini.	115.09	-2024	-0.0000228	0.0001872	0.0035	1.42		7350.79	7350.79	No	63.87	Si
SLU 75	fin.	-344.76	-2351	-0.0000694	0.0001872	0.0035	1.42		7359.91	7359.91	No	21.35	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	108.39	158	1.42	0	576	7137	5953	3621	7713	No	48.69	Si
SLU 82	fin.	-338.72	-1665	1.42	0	576	7137	5953	3621	7713	No	4.63	Si
SLU 39	ini.	147.46	-10	1.42	0	576	7137	5953	3621	7713	No	791.29	Si
SLU 39	fin.	-347.83	-1619	1.42	0	576	7137	5953	3621	7713	No	4.76	Si
SLU 75	ini.	115.09	84	1.42	0	576	7137	5953	3621	7713	No	91.32	Si
SLU 75	fin.	-344.76	-1623	1.42	0	576	7137	5953	3621	7713	No	4.75	Si
SLU 84	ini.	100.45	183	1.42	0	576	7137	5953	3621	7713	No	42.08	Si
SLU 84	fin.	-328.3	-1640	1.42	0	576	7137	5953	3621	7713	No	4.7	Si
SLU 73	ini.	112.36	101	1.42	0	576	7137	5953	3621	7713	No	76.64	Si
SLU 73	fin.	-338.24	-1607	1.42	0	576	7137	5953	3621	7713	No	4.8	Si
SLU 42	ini.	146.31	0	1.42	0	576	7137	5953	3621	7713	No	28777.86	Si
SLU 42	fin.	-341.28	-1609	1.42	0	576	7137	5953	3621	7713	No	4.79	Si
SLU 74	ini.	108.29	99	1.42	0	576	7137	5953	3621	7713	No	77.64	Si
SLU 74	fin.	-340.9	-1608	1.42	0	576	7137	5953	3621	7713	No	4.8	Si
SLU 81	ini.	101.6	173	1.42	0	576	7137	5953	3621	7713	No	44.51	Si
SLU 81	fin.	-334.85	-1650	1.42	0	576	7137	5953	3621	7713	No	4.67	Si
SLU 40	ini.	154.26	-25	1.42	0	576	7137	5953	3621	7713	No	313.15	Si
SLU 40	fin.	-351.7	-1634	1.42	0	576	7137	5953	3621	7713	No	4.72	Si
SLU 83	ini.	93.66	198	1.42	0	576	7137	5953	3621	7713	No	38.92	Si
SLU 83	fin.	-324.43	-1625	1.42	0	576	7137	5953	3621	7713	No	4.75	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-2849.09	-1753	-0.0006991	0.0002807	0.0035	1.42		7346.34	7346.34		2.58	Si
SLV 15	fin.	2836.41	574	-0.0006962	0.0002807	0.0035	1.42		7337.02	7337.02		2.59	Si
SLV 14	ini.	-3039.25	-1231	-0.0007584	0.0002807	0.0035	1.42		7346.34	7346.34		2.42	Si
SLV 14	fin.	3224.64	1423	-0.0008192	0.0002807	0.0035	1.42		7337.02	7337.02		2.28	Si
SLV 13	ini.	-3030.04	-1277	-0.0007555	0.0002807	0.0035	1.42		7346.34	7346.34		2.42	Si
SLV 13	fin.	3185.7	1338	-0.0008066	0.0002807	0.0035	1.42		7337.02	7337.02		2.3	Si
SLV 2	ini.	2942.04	-1079	-0.000729	0.0002807	0.0035	1.42		7337.02	7337.02		2.49	Si
SLV 2	fin.	-3261.85	-3799	-0.0008301	0.0002807	0.0035	1.42		7346.34	7346.34		2.25	Si
SLV 1	ini.	2951.25	-1125	-0.0007319	0.0002807	0.0035	1.42		7337.02	7337.02		2.49	Si
SLV 1	fin.	-3300.78	-3883	-0.0008429	0.0002807	0.0035	1.42		7346.34	7346.34		2.23	Si
SLV 16	ini.	-2858.3	-1707	-0.0007019	0.0002807	0.0035	1.42		7346.34	7346.34		2.57	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	fin.	2875.35	659	-0.0007082	0.0002807	0.0035	1.42		7337.02	7337.02		2.55	Si
SLV 7	ini.	1248.19	-2202	-0.0002657	0.0002807	0.0035	1.42		7337.02	7337.02		5.88	Si
SLV 7	fin.	-1780.28	-3696	-0.0003963	0.0002807	0.0035	1.42		7346.34	7346.34		4.13	Si
SLV 8	ini.	1242.31	-2173	-0.0002644	0.0002807	0.0035	1.42		7337.02	7337.02		5.91	Si
SLV 8	fin.	-1755.41	-3642	-0.0003899	0.0002807	0.0035	1.42		7346.34	7346.34		4.18	Si
SLV 3	ini.	3132.2	-1601	-0.0007893	0.0002807	0.0035	1.42		7337.02	7337.02		2.34	Si
SLV 3	fin.	-3650.08	-4647	-0.0009613	0.0002807	0.0035	1.42		7346.34	7346.34		2.01	Si
SLV 4	ini.	3122.99	-1555	-0.0007863	0.0002807	0.0035	1.42		7337.02	7337.02		2.35	Si
SLV 4	fin.	-3611.14	-4563	-0.0009478	0.0002807	0.0035	1.42		7346.34	7346.34		2.03	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 4	ini.	1363.01	-3823	1.42	0	864	7137	8929	3621	8001		2.09	Si
SLD 4	fin.	-1668.15	-4987	1.42	0	864	7137	8929	3621	8001		1.6	Si
SLD 3	ini.	1366.96	-3859	1.42	0	864	7137	8929	3621	8001		2.07	Si
SLD 3	fin.	-1684.86	-5023	1.42	0	864	7137	8929	3621	8001		1.59	Si
SLV 2	ini.	2942.04	-8505	1.42	0	864	7137	8929	3621	8001		0.94	No
SLV 2	fin.	-3261.85	-9602	1.42	0	864	7137	8929	3621	8001		0.83	No
SLV 13	ini.	-3030.04	9340	1.42	0	864	7137	8929	3621	8001		0.86	No
SLV 13	fin.	3185.7	8286	1.42	0	864	7137	8929	3621	8001		0.97	No
SLV 16	ini.	-2858.3	8833	1.42	0	864	7137	8929	3621	8001		0.91	No
SLV 16	fin.	2875.35	7670	1.42	0	864	7137	8929	3621	8001		1.04	Si
SLV 3	ini.	3132.2	-9179	1.42	0	864	7137	8929	3621	8001		0.87	No
SLV 3	fin.	-3650.08	-10386	1.42	0	864	7137	8929	3621	8001		0.77	No
SLV 15	ini.	-2849.09	8749	1.42	0	864	7137	8929	3621	8001		0.91	No
SLV 15	fin.	2836.41	7586	1.42	0	864	7137	8929	3621	8001		1.05	Si
SLV 1	ini.	2951.25	-8588	1.42	0	864	7137	8929	3621	8001		0.93	No
SLV 1	fin.	-3300.78	-9686	1.42	0	864	7137	8929	3621	8001		0.83	No
SLV 14	ini.	-3039.25	9424	1.42	0	864	7137	8929	3621	8001		0.85	No
SLV 14	fin.	3224.64	8370	1.42	0	864	7137	8929	3621	8001		0.96	No
SLV 4	ini.	3122.99	-9095	1.42	0	864	7137	8929	3621	8001		0.88	No
SLV 4	fin.	-3611.14	-10302	1.42	0	864	7137	8929	3621	8001		0.78	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.013	SLV 3	Si
V_SLV	0.77	SLV 3	No
PF_SLU	20.573	SLU 33	Si
V_SLU	4.632	SLU 82	Si

Trave di accoppiamento 98

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.268	-0.194	7.54	8.96	1.42	-6.268	0.706	7.54	8.96	1.42	0.9	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 45	ini.	832.78	434	-0.0001737	0.0002246	0.0035	1.42		7594.91	7594.91	No	9.12	Si
SLU 45	fin.	-15.56	-104	-0.0000031	0.0002246	0.0035	1.42		7603.79	7603.79	No	488.56	Si
SLU 48	ini.	862.25	457	-0.0001803	0.0002246	0.0035	1.42		7594.91	7594.91	No	8.81	Si
SLU 48	fin.	-17.87	-100	-0.0000035	0.0002246	0.0035	1.42		7603.79	7603.79	No	425.56	Si
SLU 43	ini.	823.32	456	-0.0001716	0.0002246	0.0035	1.42		7594.91	7594.91	No	9.22	Si
SLU 43	fin.	-23.22	-81	-0.0000046	0.0002246	0.0035	1.42		7603.79	7603.79	No	327.51	Si
SLU 44	ini.	842.82	485	-0.000176	0.0002246	0.0035	1.42		7594.91	7594.91	No	9.01	Si
SLU 44	fin.	-26.36	-69	-0.0000052	0.0002246	0.0035	1.42		7603.79	7603.79	No	288.51	Si
SLU 51	ini.	893.97	520	-0.0001875	0.0002246	0.0035	1.42		7594.91	7594.91	No	8.5	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 51	fin.	-29.71	-66	-0.0000058	0.0002246	0.0035	1.42		7603.79	7603.79	No	255.95	Si
SLU 49	ini.	873.96	475	-0.000183	0.0002246	0.0035	1.42		7594.91	7594.91	No	8.69	Si
SLU 49	fin.	-19.75	-93	-0.0000039	0.0002246	0.0035	1.42		7603.79	7603.79	No	384.98	Si
SLU 46	ini.	844.48	452	-0.0001764	0.0002246	0.0035	1.42		7594.91	7594.91	No	8.99	Si
SLU 46	fin.	-17.45	-97	-0.0000034	0.0002246	0.0035	1.42		7603.79	7603.79	No	435.82	Si
SLU 47	ini.	872.3	509	-0.0001826	0.0002246	0.0035	1.42		7594.91	7594.91	No	8.71	Si
SLU 47	fin.	-28.66	-65	-0.0000056	0.0002246	0.0035	1.42		7603.79	7603.79	No	265.31	Si
SLU 72	ini.	734.66	189	-0.000152	0.0002246	0.0035	1.42		7594.91	7594.91	No	10.34	Si
SLU 72	fin.	40.21	-270	-0.0000079	0.0002246	0.0035	1.42		7594.91	7594.91	No	188.88	Si
SLU 50	ini.	882.27	503	-0.0001849	0.0002246	0.0035	1.42		7594.91	7594.91	No	8.61	Si
SLU 50	fin.	-27.82	-73	-0.0000055	0.0002246	0.0035	1.42		7603.79	7603.79	No	273.27	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 44	ini.	842.82	-1158	1.42	0	329	7137	4083	3621	7466	No	6.45	Si
SLU 44	fin.	-26.36	-1630	1.42	0	329	7137	4083	3621	7466	No	4.58	Si
SLU 45	ini.	832.78	-1122	1.42	0	329	7137	4083	3621	7466	No	6.65	Si
SLU 45	fin.	-15.56	-1595	1.42	0	329	7137	4083	3621	7466	No	4.68	Si
SLU 48	ini.	862.25	-1173	1.42	0	329	7137	4083	3621	7466	No	6.37	Si
SLU 48	fin.	-17.87	-1645	1.42	0	329	7137	4083	3621	7466	No	4.54	Si
SLU 59	ini.	733.69	-903	1.42	0	329	7137	4083	3621	7466	No	8.26	Si
SLU 59	fin.	28.24	-1376	1.42	0	329	7137	4083	3621	7466	No	5.43	Si
SLU 50	ini.	882.27	-1221	1.42	0	329	7137	4083	3621	7466	No	6.12	Si
SLU 50	fin.	-27.82	-1693	1.42	0	329	7137	4083	3621	7466	No	4.41	Si
SLU 51	ini.	893.97	-1244	1.42	0	329	7137	4083	3621	7466	No	6	Si
SLU 51	fin.	-29.71	-1716	1.42	0	329	7137	4083	3621	7466	No	4.35	Si
SLU 43	ini.	823.32	-1119	1.42	0	329	7137	4083	3621	7466	No	6.67	Si
SLU 43	fin.	-23.22	-1592	1.42	0	329	7137	4083	3621	7466	No	4.69	Si
SLU 49	ini.	873.96	-1196	1.42	0	329	7137	4083	3621	7466	No	6.24	Si
SLU 49	fin.	-19.75	-1669	1.42	0	329	7137	4083	3621	7466	No	4.47	Si
SLU 46	ini.	844.48	-1146	1.42	0	329	7137	4083	3621	7466	No	6.52	Si
SLU 46	fin.	-17.45	-1618	1.42	0	329	7137	4083	3621	7466	No	4.61	Si
SLU 47	ini.	872.3	-1209	1.42	0	329	7137	4083	3621	7466	No	6.18	Si
SLU 47	fin.	-28.66	-1681	1.42	0	329	7137	4083	3621	7466	No	4.44	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 11	ini.	793.35	923	-0.0001624	0.0003369	0.0035	1.42		7808.98	7808.98		9.84	Si
SLV 11	fin.	373.32	504	-0.0000746	0.0003369	0.0035	1.42		7808.98	7808.98		20.92	Si
SLV 15	ini.	849.37	382	-0.0001744	0.0003369	0.0035	1.42		7808.98	7808.98		9.19	Si
SLV 15	fin.	-106.22	-183	-0.0000209	0.0003369	0.0035	1.42		7818.07	7818.07		73.61	Si
SLV 14	ini.	708.01	-134	-0.0001442	0.0003369	0.0035	1.42		7808.98	7808.98		11.03	Si
SLV 14	fin.	-349.82	-671	-0.0000698	0.0003369	0.0035	1.42		7818.07	7818.07		22.35	Si
SLD 15	ini.	649.42	207	-0.0001318	0.0003369	0.0035	1.42		7808.98	7808.98		12.02	Si
SLD 15	fin.	-22.68	-209	-0.0000044	0.0003369	0.0035	1.42		7818.07	7818.07		344.74	Si
SLD 11	ini.	626.18	445	-0.0001269	0.0003369	0.0035	1.42		7808.98	7808.98		12.47	Si
SLD 11	fin.	185.74	90	-0.0000368	0.0003369	0.0035	1.42		7808.98	7808.98		42.04	Si
SLD 16	ini.	641.19	199	-0.0001301	0.0003369	0.0035	1.42		7808.98	7808.98		12.18	Si
SLD 16	fin.	-19.58	-215	-0.0000038	0.0003369	0.0035	1.42		7818.07	7818.07		399.32	Si
SLV 7	ini.	626.13	893	-0.0001269	0.0003369	0.0035	1.42		7808.98	7808.98		12.47	Si
SLV 7	fin.	532.4	619	-0.0001074	0.0003369	0.0035	1.42		7808.98	7808.98		14.67	Si
SLV 16	ini.	830.18	363	-0.0001703	0.0003369	0.0035	1.42		7808.98	7808.98		9.41	Si
SLV 16	fin.	-98.99	-196	-0.0000195	0.0003369	0.0035	1.42		7818.07	7818.07		78.98	Si
SLV 13	ini.	727.19	-116	-0.0001482	0.0003369	0.0035	1.42		7808.98	7808.98		10.74	Si
SLV 13	fin.	-357.04	-658	-0.0000712	0.0003369	0.0035	1.42		7818.07	7818.07		21.9	Si
SLV 12	ini.	781.09	911	-0.0001597	0.0003369	0.0035	1.42		7808.98	7808.98		10	Si
SLV 12	fin.	377.93	495	-0.0000756	0.0003369	0.0035	1.42		7808.98	7808.98		20.66	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 10	ini.	373.85	-2096	1.42	0	494	7137	6124	3621	7631		3.64	Si
SLV 10	fin.	-458.17	-2204	1.42	0	494	7137	6124	3621	7631		3.46	Si
SLV 5	ini.	218.89	-1602	1.42	0	494	7137	6124	3621	7631		4.76	Si
SLV 5	fin.	-303.7	-1771	1.42	0	494	7137	6124	3621	7631		4.31	Si
SLD 13	ini.	596.72	-1107	1.42	0	494	7137	6124	3621	7631		6.89	Si
SLD 13	fin.	-132.86	-1407	1.42	0	494	7137	6124	3621	7631		5.42	Si
SLV 13	ini.	727.19	-1822	1.42	0	494	7137	6124	3621	7631		4.19	Si
SLV 13	fin.	-357.04	-2027	1.42	0	494	7137	6124	3621	7631		3.76	Si
SLV 6	ini.	206.63	-1581	1.42	0	494	7137	6124	3621	7631		4.83	Si
SLV 6	fin.	-299.09	-1749	1.42	0	494	7137	6124	3621	7631		4.36	Si
SLD 9	ini.	450.52	-1249	1.42	0	494	7137	6124	3621	7631		6.11	Si
SLD 9	fin.	-181.53	-1501	1.42	0	494	7137	6124	3621	7631		5.08	Si
SLV 9	ini.	386.1	-2117	1.42	0	494	7137	6124	3621	7631		3.6	Si
SLV 9	fin.	-462.78	-2225	1.42	0	494	7137	6124	3621	7631		3.43	Si
SLD 10	ini.	445.18	-1240	1.42	0	494	7137	6124	3621	7631		6.15	Si
SLD 10	fin.	-179.51	-1492	1.42	0	494	7137	6124	3621	7631		5.11	Si
SLV 15	ini.	849.37	-1050	1.42	0	494	7137	6124	3621	7631		7.27	Si
SLV 15	fin.	-106.22	-1398	1.42	0	494	7137	6124	3621	7631		5.46	Si
SLV 14	ini.	708.01	-1789	1.42	0	494	7137	6124	3621	7631		4.27	Si
SLV 14	fin.	-349.82	-1993	1.42	0	494	7137	6124	3621	7631		3.83	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	9.194	SLV 15	Si
V_SLV	3.429	SLV 9	Si
PF_SLU	8.496	SLU 51	Si
V_SLU	4.35	SLU 51	Si

Trave di accoppiamento 99

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.093	6.006	5.44	7.44	2	-5.093	6.506	5.44	7.44	2	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-32.84	-428	-0.0000032	0.0001872	0.0035	2		14357.01	14357.01	No	437.21	Si
SLU 74	fin.	-358.14	-365	-0.0000359	0.0001872	0.0035	2		14357.01	14357.01	No	40.09	Si
SLU 78	ini.	-29.35	-439	-0.0000029	0.0001872	0.0035	2		14357.01	14357.01	No	489.13	Si
SLU 78	fin.	-365.56	-373	-0.0000366	0.0001872	0.0035	2		14357.01	14357.01	No	39.27	Si
SLU 79	ini.	-24.43	-435	-0.0000024	0.0001872	0.0035	2		14357.01	14357.01	No	587.6	Si
SLU 79	fin.	-360.37	-367	-0.0000361	0.0001872	0.0035	2		14357.01	14357.01	No	39.84	Si
SLU 77	ini.	-29.96	-437	-0.000003	0.0001872	0.0035	2		14357.01	14357.01	No	479.26	Si
SLU 77	fin.	-364.48	-371	-0.0000365	0.0001872	0.0035	2		14357.01	14357.01	No	39.39	Si
SLU 80	ini.	-23.83	-437	-0.0000024	0.0001872	0.0035	2		14357.01	14357.01	No	602.52	Si
SLU 80	fin.	-361.45	-368	-0.0000362	0.0001872	0.0035	2		14357.01	14357.01	No	39.72	Si
SLU 82	ini.	-44.19	-422	-0.0000044	0.0001872	0.0035	2		14357.01	14357.01	No	324.93	Si
SLU 82	fin.	-360.96	-368	-0.0000362	0.0001872	0.0035	2		14357.01	14357.01	No	39.77	Si
SLU 84	ini.	-41.3	-430	-0.0000041	0.0001872	0.0035	2		14357.01	14357.01	No	347.59	Si
SLU 84	fin.	-367.29	-374	-0.0000368	0.0001872	0.0035	2		14357.01	14357.01	No	39.09	Si
SLU 83	ini.	-41.91	-428	-0.0000041	0.0001872	0.0035	2		14357.01	14357.01	No	342.57	Si
SLU 83	fin.	-366.21	-373	-0.0000367	0.0001872	0.0035	2		14357.01	14357.01	No	39.2	Si
SLU 75	ini.	-32.23	-430	-0.0000032	0.0001872	0.0035	2		14357.01	14357.01	No	445.42	Si
SLU 75	fin.	-359.23	-366	-0.000036	0.0001872	0.0035	2		14357.01	14357.01	No	39.97	Si
SLU 81	ini.	-44.79	-420	-0.0000044	0.0001872	0.0035	2		14357.01	14357.01	No	320.54	Si
SLU 81	fin.	-359.88	-367	-0.0000361	0.0001872	0.0035	2		14357.01	14357.01	No	39.89	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-32.84	-1865	2	0	812	3965	8384	5100	4776	No	2.56	Si
SLU 74	fin.	-358.14	-43	2	0	812	3965	8384	5100	4776	No	111.6	Si
SLU 79	ini.	-24.43	-1893	2	0	812	3965	8384	5100	4776	No	2.52	Si
SLU 79	fin.	-360.37	-78	2	0	812	3965	8384	5100	4776	No	60.87	Si
SLU 78	ini.	-29.35	-1914	2	0	812	3965	8384	5100	4776	No	2.5	Si
SLU 78	fin.	-365.56	-55	2	0	812	3965	8384	5100	4776	No	86.58	Si
SLU 77	ini.	-29.96	-1907	2	0	812	3965	8384	5100	4776	No	2.5	Si
SLU 77	fin.	-364.48	-52	2	0	812	3965	8384	5100	4776	No	91.3	Si
SLU 83	ini.	-41.91	-1900	2	0	812	3965	8384	5100	4776	No	2.51	Si
SLU 83	fin.	-366.21	13	2	0	812	3965	8384	5100	4776	No	379.49	Si
SLU 80	ini.	-23.83	-1900	2	0	812	3965	8384	5100	4776	No	2.51	Si
SLU 80	fin.	-361.45	-81	2	0	812	3965	8384	5100	4776	No	58.74	Si
SLU 76	ini.	-26.31	-1862	2	0	812	3965	8384	5100	4776	No	2.57	Si
SLU 76	fin.	-355.85	-74	2	0	812	3965	8384	5100	4776	No	64.81	Si
SLU 82	ini.	-44.19	-1864	2	0	812	3965	8384	5100	4776	No	2.56	Si
SLU 82	fin.	-360.96	19	2	0	812	3965	8384	5100	4776	No	248.08	Si
SLU 75	ini.	-32.23	-1872	2	0	812	3965	8384	5100	4776	No	2.55	Si
SLU 75	fin.	-359.23	-46	2	0	812	3965	8384	5100	4776	No	104.63	Si
SLU 84	ini.	-41.3	-1907	2	0	812	3965	8384	5100	4776	No	2.51	Si
SLU 84	fin.	-367.29	10	2	0	812	3965	8384	5100	4776	No	490.58	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-624.79	-81	-0.0000629	0.0002807	0.0035	2		14215.41	14215.41		22.75	Si
SLV 16	fin.	-226.91	-44	-0.0000226	0.0002807	0.0035	2		14215.41	14215.41		62.65	Si
SLV 7	ini.	111.55	-420	-0.0000111	0.0002807	0.0035	2		14202.07	14202.07		127.32	Si
SLV 7	fin.	-769.75	24	-0.0000778	0.0002807	0.0035	2		14215.41	14215.41		18.47	Si
SLV 13	ini.	-595.24	-58	-0.0000599	0.0002807	0.0035	2		14215.41	14215.41		23.88	Si
SLV 13	fin.	55.91	-233	-0.0000055	0.0002807	0.0035	2		14202.07	14202.07		254.01	Si
SLV 11	ini.	-254.19	-273	-0.0000253	0.0002807	0.0035	2		14215.41	14215.41		55.93	Si
SLV 11	fin.	-672.98	92	-0.0000678	0.0002807	0.0035	2		14215.41	14215.41		21.12	Si
SLV 12	ini.	-247.24	-275	-0.0000246	0.0002807	0.0035	2		14215.41	14215.41		57.5	Si
SLV 12	fin.	-671.95	93	-0.0000677	0.0002807	0.0035	2		14215.41	14215.41		21.16	Si
SLV 4	ini.	594.33	-574	-0.0000598	0.0002807	0.0035	2		14202.07	14202.07		23.9	Si
SLV 4	fin.	-549.48	-272	-0.0000552	0.0002807	0.0035	2		14215.41	14215.41		25.87	Si
SLV 2	ini.	634.76	-555	-0.000064	0.0002807	0.0035	2		14202.07	14202.07		22.37	Si
SLV 2	fin.	-265.03	-458	-0.0000264	0.0002807	0.0035	2		14215.41	14215.41		53.64	Si
SLV 8	ini.	118.5	-423	-0.0000118	0.0002807	0.0035	2		14202.07	14202.07		119.85	Si
SLV 8	fin.	-768.72	25	-0.0000777	0.0002807	0.0035	2		14215.41	14215.41		18.49	Si
SLV 15	ini.	-635.67	-77	-0.000064	0.0002807	0.0035	2		14215.41	14215.41		22.36	Si
SLV 15	fin.	-228.53	-47	-0.0000227	0.0002807	0.0035	2		14215.41	14215.41		62.2	Si
SLV 1	ini.	623.88	-551	-0.0000628	0.0002807	0.0035	2		14202.07	14202.07		22.76	Si
SLV 1	fin.	-266.65	-460	-0.0000266	0.0002807	0.0035	2		14215.41	14215.41		53.31	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	594.33	-2498	2	0	1217	3965	12577	5100	5182		2.07	Si
SLV 4	fin.	-549.48	-3290	2	0	1217	3965	12577	5100	5182		1.57	Si
SLV 6	ini.	253.27	-2777	2	0	1217	3965	12577	5100	5182		1.87	Si
SLV 6	fin.	179.42	-611	2	0	1217	3965	12577	5100	5182		8.49	Si
SLV 2	ini.	634.76	-3108	2	0	1217	3965	12577	5100	5182		1.67	Si
SLV 2	fin.	-265.03	-3013	2	0	1217	3965	12577	5100	5182		1.72	Si
SLV 15	ini.	-635.67	498	2	0	1217	3965	12577	5100	5182		10.41	Si
SLV 15	fin.	-228.53	2669	2	0	1217	3965	12577	5100	5182		1.94	Si
SLV 5	ini.	246.33	-2757	2	0	1217	3965	12577	5100	5182		1.88	Si
SLV 5	fin.	178.39	-587	2	0	1217	3965	12577	5100	5182		8.83	Si
SLV 16	ini.	-624.79	466	2	0	1217	3965	12577	5100	5182		11.11	Si
SLV 16	fin.	-226.91	2631	2	0	1217	3965	12577	5100	5182		1.97	Si
SLV 13	ini.	-595.24	-112	2	0	1217	3965	12577	5100	5182		46.13	Si
SLV 13	fin.	55.91	2946	2	0	1217	3965	12577	5100	5182		1.76	Si
SLV 3	ini.	583.45	-2466	2	0	1217	3965	12577	5100	5182		2.1	Si
SLV 3	fin.	-551.09	-3253	2	0	1217	3965	12577	5100	5182		1.59	Si
SLV 14	ini.	-584.36	-144	2	0	1217	3965	12577	5100	5182		35.98	Si
SLV 14	fin.	57.53	2909	2	0	1217	3965	12577	5100	5182		1.78	Si
SLV 1	ini.	623.88	-3076	2	0	1217	3965	12577	5100	5182		1.68	Si
SLV 1	fin.	-266.65	-2976	2	0	1217	3965	12577	5100	5182		1.74	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	18.468	SLV 7	Si
V_SLV	1.575	SLV 4	Si
PF_SLU	39.088	SLU 84	Si
V_SLU	2.495	SLU 78	Si

Trave di accoppiamento 100

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.093	6.006	8.24	8.96	0.72	-5.093	6.506	8.24	8.96	0.72	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 70	ini.	93.57	451	-0.0000736	0.0001872	0.0035	0.72		1897.3	1897.3	No	20.28	Si
SLU 70	fin.	-21.14	-135	-0.0000162	0.0001872	0.0035	0.72		1901.86	1901.86	No	89.95	Si
SLU 47	ini.	96.92	460	-0.0000763	0.0001872	0.0035	0.72		1897.3	1897.3	No	19.58	Si
SLU 47	fin.	-34.83	-92	-0.0000268	0.0001872	0.0035	0.72		1901.86	1901.86	No	54.6	Si
SLU 71	ini.	94.64	458	-0.0000744	0.0001872	0.0035	0.72		1897.3	1897.3	No	20.05	Si
SLU 71	fin.	-22.72	-129	-0.0000174	0.0001872	0.0035	0.72		1901.86	1901.86	No	83.69	Si
SLU 45	ini.	93.85	447	-0.0000738	0.0001872	0.0035	0.72		1897.3	1897.3	No	20.22	Si
SLU 45	fin.	-30.61	-100	-0.0000235	0.0001872	0.0035	0.72		1901.86	1901.86	No	62.13	Si
SLU 72	ini.	95.39	460	-0.000075	0.0001872	0.0035	0.72		1897.3	1897.3	No	19.89	Si
SLU 72	fin.	-23.71	-128	-0.0000182	0.0001872	0.0035	0.72		1901.86	1901.86	No	80.2	Si
SLU 49	ini.	97.97	466	-0.0000771	0.0001872	0.0035	0.72		1897.3	1897.3	No	19.37	Si
SLU 49	fin.	-33.24	-101	-0.0000256	0.0001872	0.0035	0.72		1901.86	1901.86	No	57.22	Si
SLU 50	ini.	99.04	472	-0.000078	0.0001872	0.0035	0.72		1897.3	1897.3	No	19.16	Si
SLU 50	fin.	-34.82	-94	-0.0000268	0.0001872	0.0035	0.72		1901.86	1901.86	No	54.62	Si
SLU 51	ini.	99.79	475	-0.0000786	0.0001872	0.0035	0.72		1897.3	1897.3	No	19.01	Si
SLU 51	fin.	-35.81	-94	-0.0000276	0.0001872	0.0035	0.72		1901.86	1901.86	No	53.11	Si
SLU 48	ini.	97.22	463	-0.0000765	0.0001872	0.0035	0.72		1897.3	1897.3	No	19.52	Si
SLU 48	fin.	-32.25	-101	-0.0000248	0.0001872	0.0035	0.72		1901.86	1901.86	No	58.98	Si
SLU 46	ini.	94.6	450	-0.0000744	0.0001872	0.0035	0.72		1897.3	1897.3	No	20.06	Si
SLU 46	fin.	-31.6	-99	-0.0000243	0.0001872	0.0035	0.72		1901.86	1901.86	No	60.18	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 70	ini.	93.57	1401	0.72	0	292	3965	3018	1836	4257	No	3.04	Si
SLU 70	fin.	-21.14	-2223	0.72	0	292	3965	3018	1836	4257	No	1.92	Si
SLU 79	ini.	87.51	1488	0.72	0	292	3965	3018	1836	4257	No	2.86	Si
SLU 79	fin.	-7.81	-2197	0.72	0	292	3965	3018	1836	4257	No	1.94	Si
SLU 80	ini.	88.27	1495	0.72	0	292	3965	3018	1836	4257	No	2.85	Si
SLU 80	fin.	-8.8	-2215	0.72	0	292	3965	3018	1836	4257	No	1.92	Si
SLU 77	ini.	85.69	1507	0.72	0	292	3965	3018	1836	4257	No	2.83	Si
SLU 77	fin.	-5.24	-2193	0.72	0	292	3965	3018	1836	4257	No	1.94	Si
SLU 78	ini.	86.45	1514	0.72	0	292	3965	3018	1836	4257	No	2.81	Si
SLU 78	fin.	-6.23	-2212	0.72	0	292	3965	3018	1836	4257	No	1.92	Si
SLU 72	ini.	95.39	1382	0.72	0	292	3965	3018	1836	4257	No	3.08	Si
SLU 72	fin.	-23.71	-2226	0.72	0	292	3965	3018	1836	4257	No	1.91	Si
SLU 71	ini.	94.64	1375	0.72	0	292	3965	3018	1836	4257	No	3.1	Si
SLU 71	fin.	-22.72	-2208	0.72	0	292	3965	3018	1836	4257	No	1.93	Si
SLU 69	ini.	92.82	1394	0.72	0	292	3965	3018	1836	4257	No	3.05	Si
SLU 69	fin.	-20.15	-2204	0.72	0	292	3965	3018	1836	4257	No	1.93	Si
SLU 49	ini.	97.97	1268	0.72	0	292	3965	3018	1836	4257	No	3.36	Si
SLU 49	fin.	-33.24	-2180	0.72	0	292	3965	3018	1836	4257	No	1.95	Si
SLU 51	ini.	99.79	1249	0.72	0	292	3965	3018	1836	4257	No	3.41	Si
SLU 51	fin.	-35.81	-2183	0.72	0	292	3965	3018	1836	4257	No	1.95	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-403.28	-1582	-0.0003426	0.0002807	0.0035	0.72		1917.1	1917.1		4.75	Si
SLV 15	fin.	292.91	-580	-0.0002408	0.0002807	0.0035	0.72		1912.43	1912.43		6.53	Si
SLV 1	ini.	528.11	2189	-0.0004702	0.0002807	0.0035	0.72		1912.43	1912.43		3.62	Si
SLV 1	fin.	-305.99	365	-0.0002519	0.0002807	0.0035	0.72		1917.1	1917.1		6.27	Si
SLV 16	ini.	-395.02	-1542	-0.0003347	0.0002807	0.0035	0.72		1917.1	1917.1		4.85	Si
SLV 16	fin.	279.27	-564	-0.0002287	0.0002807	0.0035	0.72		1912.43	1912.43		6.85	Si
SLV 6	ini.	493.06	1163	-0.0004335	0.0002807	0.0035	0.72		1912.43	1912.43		3.88	Si
SLV 6	fin.	-284.05	256	-0.0002323	0.0002807	0.0035	0.72		1917.1	1917.1		6.75	Si
SLV 12	ini.	-354.7	-492	-0.0002965	0.0002807	0.0035	0.72		1917.1	1917.1		5.4	Si
SLV 12	fin.	248.62	-446	-0.0002018	0.0002807	0.0035	0.72		1912.43	1912.43		7.69	Si
SLV 11	ini.	-359.98	-517	-0.0003014	0.0002807	0.0035	0.72		1917.1	1917.1		5.33	Si
SLV 11	fin.	257.33	-456	-0.0002094	0.0002807	0.0035	0.72		1912.43	1912.43		7.43	Si
SLV 3	ini.	340.74	2016	-0.0002843	0.0002807	0.0035	0.72		1912.43	1912.43		5.61	Si
SLV 3	fin.	-189.62	227	-0.0001511	0.0002807	0.0035	0.72		1917.1	1917.1		10.11	Si
SLV 4	ini.	348.99	2056	-0.0002919	0.0002807	0.0035	0.72		1912.43	1912.43		5.48	Si
SLV 4	fin.	-203.26	243	-0.0001626	0.0002807	0.0035	0.72		1917.1	1917.1		9.43	Si
SLV 5	ini.	487.79	1138	-0.0004281	0.0002807	0.0035	0.72		1912.43	1912.43		3.92	Si
SLV 5	fin.	-275.33	246	-0.0002246	0.0002807	0.0035	0.72		1917.1	1917.1		6.96	Si
SLV 2	ini.	536.36	2229	-0.000479	0.0002807	0.0035	0.72		1912.43	1912.43		3.57	Si
SLV 2	fin.	-319.63	381	-0.0002642	0.0002807	0.0035	0.72		1917.1	1917.1		6	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 5	ini.	487.79	1639	0.72	0	438	3965	4528	1836	4403		2.69	Si
SLV 5	fin.	-275.33	-5649	0.72	0	438	3965	4528	1836	4403		0.78	No
SLV 15	ini.	-403.28	497	0.72	0	438	3965	4528	1836	4403		8.86	Si
SLV 15	fin.	292.91	3771	0.72	0	438	3965	4528	1836	4403		1.17	Si
SLV 6	ini.	493.06	1660	0.72	0	438	3965	4528	1836	4403		2.65	Si
SLV 6	fin.	-284.05	-5747	0.72	0	438	3965	4528	1836	4403		0.77	No
SLD 1	ini.	261.98	1220	0.72	0	438	3965	4528	1836	4403		3.61	Si
SLD 1	fin.	-138.67	-3815	0.72	0	438	3965	4528	1836	4403		1.15	Si
SLD 2	ini.	265.52	1234	0.72	0	438	3965	4528	1836	4403		3.57	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 2	fin.	-144.52	-3880	0.72	0	438	3965	4528	1836	4403		1.13	Si
SLV 2	ini.	536.36	1512	0.72	0	438	3965	4528	1836	4403		2.91	Si
SLV 2	fin.	-319.63	-6943	0.72	0	438	3965	4528	1836	4403		0.63	No
SLV 3	ini.	340.74	1151	0.72	0	438	3965	4528	1836	4403		3.82	Si
SLV 3	fin.	-189.62	-5123	0.72	0	438	3965	4528	1836	4403		0.86	No
SLV 16	ini.	-395.02	530	0.72	0	438	3965	4528	1836	4403		8.31	Si
SLV 16	fin.	279.27	3618	0.72	0	438	3965	4528	1836	4403		1.22	Si
SLV 1	ini.	528.11	1479	0.72	0	438	3965	4528	1836	4403		2.98	Si
SLV 1	fin.	-305.99	-6790	0.72	0	438	3965	4528	1836	4403		0.65	No
SLV 4	ini.	348.99	1184	0.72	0	438	3965	4528	1836	4403		3.72	Si
SLV 4	fin.	-203.26	-5276	0.72	0	438	3965	4528	1836	4403		0.83	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.566	SLV 2	Si
V_SLV	0.634	SLV 2	No
PF_SLU	19.012	SLU 51	Si
V_SLU	1.912	SLU 72	Si

Trave di accoppiamento 101

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.314	5.44	6.34	0.9	-7.413	-3.314	5.44	6.34	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 60	ini.	-117.15	-385	-0.0000585	0.0001872	0.0035	0.9		2964.67	2964.67	No	25.31	Si
SLU 60	fin.	447.27	-1756	-0.0002429	0.0001872	0.0035	0.9		2959	2959	No	6.62	Si
SLU 83	ini.	-106.63	-513	-0.0000532	0.0001872	0.0035	0.9		2964.67	2964.67	No	27.8	Si
SLU 83	fin.	465.16	-1886	-0.0002539	0.0001872	0.0035	0.9		2959	2959	No	6.36	Si
SLU 63	ini.	-117.42	-398	-0.0000587	0.0001872	0.0035	0.9		2964.67	2964.67	No	25.25	Si
SLU 63	fin.	452.39	-1781	-0.000246	0.0001872	0.0035	0.9		2959	2959	No	6.54	Si
SLU 61	ini.	-116.05	-386	-0.000058	0.0001872	0.0035	0.9		2964.67	2964.67	No	25.55	Si
SLU 61	fin.	441.43	-1739	-0.0002393	0.0001872	0.0035	0.9		2959	2959	No	6.7	Si
SLU 82	ini.	-104.15	-501	-0.0000519	0.0001872	0.0035	0.9		2964.67	2964.67	No	28.46	Si
SLU 82	fin.	448.36	-1828	-0.0002435	0.0001872	0.0035	0.9		2959	2959	No	6.6	Si
SLU 81	ini.	-105.26	-501	-0.0000525	0.0001872	0.0035	0.9		2964.67	2964.67	No	28.17	Si
SLU 81	fin.	454.19	-1845	-0.0002471	0.0001872	0.0035	0.9		2959	2959	No	6.51	Si
SLU 79	ini.	-90.49	-564	-0.000045	0.0001872	0.0035	0.9		2964.67	2964.67	No	32.76	Si
SLU 79	fin.	445.99	-1833	-0.0002421	0.0001872	0.0035	0.9		2959	2959	No	6.63	Si
SLU 62	ini.	-118.52	-398	-0.0000592	0.0001872	0.0035	0.9		2964.67	2964.67	No	25.01	Si
SLU 62	fin.	458.23	-1797	-0.0002496	0.0001872	0.0035	0.9		2959	2959	No	6.46	Si
SLU 84	ini.	-105.52	-513	-0.0000526	0.0001872	0.0035	0.9		2964.67	2964.67	No	28.1	Si
SLU 84	fin.	459.32	-1869	-0.0002503	0.0001872	0.0035	0.9		2959	2959	No	6.44	Si
SLU 77	ini.	-84.42	-598	-0.0000419	0.0001872	0.0035	0.9		2964.67	2964.67	No	35.12	Si
SLU 77	fin.	441.89	-1832	-0.0002396	0.0001872	0.0035	0.9		2959	2959	No	6.7	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-105.52	-1354	0.9	0	365	7137	3773	2295	6068	No	4.48	Si
SLU 84	fin.	459.32	2931	0.9	0	365	7137	3773	2295	6068	No	2.07	Si
SLU 77	ini.	-84.42	-1464	0.9	0	365	7137	3773	2295	6068	No	4.14	Si
SLU 77	fin.	441.89	2848	0.9	0	365	7137	3773	2295	6068	No	2.13	Si
SLU 62	ini.	-118.52	-1127	0.9	0	365	7137	3773	2295	6068	No	5.39	Si
SLU 62	fin.	458.23	2851	0.9	0	365	7137	3773	2295	6068	No	2.13	Si
SLU 79	ini.	-90.49	-1405	0.9	0	365	7137	3773	2295	6068	No	4.32	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	fin.	445.99	2855	0.9	0	365	7137	3773	2295	6068	No	2.13	Si
SLU 82	ini.	-104.15	-1329	0.9	0	365	7137	3773	2295	6068	No	4.57	Si
SLU 82	fin.	448.36	2863	0.9	0	365	7137	3773	2295	6068	No	2.12	Si
SLU 83	ini.	-106.63	-1344	0.9	0	365	7137	3773	2295	6068	No	4.51	Si
SLU 83	fin.	465.16	2950	0.9	0	365	7137	3773	2295	6068	No	2.06	Si
SLU 78	ini.	-83.31	-1473	0.9	0	365	7137	3773	2295	6068	No	4.12	Si
SLU 78	fin.	436.05	2829	0.9	0	365	7137	3773	2295	6068	No	2.14	Si
SLU 80	ini.	-89.39	-1414	0.9	0	365	7137	3773	2295	6068	No	4.29	Si
SLU 80	fin.	440.15	2836	0.9	0	365	7137	3773	2295	6068	No	2.14	Si
SLU 63	ini.	-117.42	-1136	0.9	0	365	7137	3773	2295	6068	No	5.34	Si
SLU 63	fin.	452.39	2832	0.9	0	365	7137	3773	2295	6068	No	2.14	Si
SLU 81	ini.	-105.26	-1320	0.9	0	365	7137	3773	2295	6068	No	4.6	Si
SLU 81	fin.	454.19	2882	0.9	0	365	7137	3773	2295	6068	No	2.11	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	909.88	-3803	-0.0005291	0.0002807	0.0035	0.9		2989.59	2989.59		3.29	Si
SLV 2	fin.	-1087.21	1895	-0.0006566	0.0002807	0.0035	0.9		2995.37	2995.37		2.76	Si
SLV 13	ini.	-1103.04	3425	-0.0006685	0.0002807	0.0035	0.9		2995.37	2995.37		2.72	Si
SLV 13	fin.	1734.52	-4352	-0.0012128	0.0002807	0.0035	0.9		2989.59	2989.59		1.72	Si
SLV 4	ini.	1002.3	-4293	-0.0005952	0.0002807	0.0035	0.9		2989.59	2989.59		2.98	Si
SLV 4	fin.	-1153.14	1911	-0.0007067	0.0002807	0.0035	0.9		2995.37	2995.37		2.6	Si
SLV 3	ini.	995.3	-4287	-0.0005901	0.0002807	0.0035	0.9		2989.59	2989.59		3	Si
SLV 3	fin.	-1143.72	1883	-0.0006995	0.0002807	0.0035	0.9		2995.37	2995.37		2.62	Si
SLV 14	ini.	-1096.04	3420	-0.0006632	0.0002807	0.0035	0.9		2995.37	2995.37		2.73	Si
SLV 14	fin.	1725.1	-4324	-0.0012035	0.0002807	0.0035	0.9		2989.59	2989.59		1.73	Si
SLD 13	ini.	-500.79	1219	-0.0002654	0.0002807	0.0035	0.9		2995.37	2995.37		5.98	Si
SLD 13	fin.	908.25	-2559	-0.000528	0.0002807	0.0035	0.9		2989.59	2989.59		3.29	Si
SLD 14	ini.	-497.79	1216	-0.0002636	0.0002807	0.0035	0.9		2995.37	2995.37		6.02	Si
SLD 14	fin.	904.21	-2547	-0.0005251	0.0002807	0.0035	0.9		2989.59	2989.59		3.31	Si
SLV 16	ini.	-1003.62	2930	-0.0005948	0.0002807	0.0035	0.9		2995.37	2995.37		2.98	Si
SLV 16	fin.	1659.17	-4308	-0.0011402	0.0002807	0.0035	0.9		2989.59	2989.59		1.8	Si
SLV 15	ini.	-1010.62	2936	-0.0005999	0.0002807	0.0035	0.9		2995.37	2995.37		2.96	Si
SLV 15	fin.	1668.6	-4336	-0.0011491	0.0002807	0.0035	0.9		2989.59	2989.59		1.79	Si
SLV 1	ini.	902.88	-3798	-0.0005242	0.0002807	0.0035	0.9		2989.59	2989.59		3.31	Si
SLV 1	fin.	-1077.79	1867	-0.0006495	0.0002807	0.0035	0.9		2995.37	2995.37		2.78	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-1003.62	3643	0.9	0	548	7137	5660	2295	7684		2.11	Si
SLV 16	fin.	1659.17	8325	0.9	0	548	7137	5660	2295	7684		0.92	No
SLD 15	ini.	-460.45	946	0.9	0	548	7137	5660	2295	7684		8.12	Si
SLD 15	fin.	879.62	4666	0.9	0	548	7137	5660	2295	7684		1.65	Si
SLV 14	ini.	-1096.04	4480	0.9	0	548	7137	5660	2295	7684		1.72	Si
SLV 14	fin.	1725.1	8278	0.9	0	548	7137	5660	2295	7684		0.93	No
SLV 1	ini.	902.88	-5714	0.9	0	548	7137	5660	2295	7684		1.34	Si
SLV 1	fin.	-1077.79	-4553	0.9	0	548	7137	5660	2295	7684		1.69	Si
SLD 13	ini.	-500.79	1313	0.9	0	548	7137	5660	2295	7684		5.85	Si
SLD 13	fin.	908.25	4647	0.9	0	548	7137	5660	2295	7684		1.65	Si
SLV 4	ini.	1002.3	-6518	0.9	0	548	7137	5660	2295	7684		1.18	Si
SLV 4	fin.	-1153.14	-4569	0.9	0	548	7137	5660	2295	7684		1.68	Si
SLV 13	ini.	-1103.04	4447	0.9	0	548	7137	5660	2295	7684		1.73	Si
SLV 13	fin.	1734.52	8342	0.9	0	548	7137	5660	2295	7684		0.92	No
SLV 15	ini.	-1010.62	3610	0.9	0	548	7137	5660	2295	7684		2.13	Si
SLV 15	fin.	1668.6	8389	0.9	0	548	7137	5660	2295	7684		0.92	No
SLV 3	ini.	995.3	-6551	0.9	0	548	7137	5660	2295	7684		1.17	Si
SLV 3	fin.	-1143.72	-4506	0.9	0	548	7137	5660	2295	7684		1.71	Si
SLV 2	ini.	909.88	-5681	0.9	0	548	7137	5660	2295	7684		1.35	Si
SLV 2	fin.	-1087.21	-4616	0.9	0	548	7137	5660	2295	7684		1.66	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.724	SLV 13	Si
V_SLV	0.916	SLV 15	No
PF_SLU	6.361	SLU 83	Si
V_SLU	2.057	SLU 83	Si

Trave di accoppiamento 102

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.314	8.14	8.96	0.82	-7.413	-3.314	8.14	8.96	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 62	ini.	-359.79	-2008	-0.0002339	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.84	Si
SLU 62	fin.	47.59	-282	-0.0000284	0.0001872	0.0035	0.82		2455.37	2455.37	No	51.6	Si
SLU 84	ini.	-373.14	-2134	-0.0002437	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.59	Si
SLU 84	fin.	44.26	-320	-0.0000264	0.0001872	0.0035	0.82		2455.37	2455.37	No	55.48	Si
SLU 79	ini.	-364.09	-2075	-0.0002371	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.76	Si
SLU 79	fin.	33.16	-354	-0.0000197	0.0001872	0.0035	0.82		2455.37	2455.37	No	74.05	Si
SLU 63	ini.	-355.1	-1994	-0.0002305	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.93	Si
SLU 63	fin.	45.54	-283	-0.0000271	0.0001872	0.0035	0.82		2455.37	2455.37	No	53.92	Si
SLU 78	ini.	-358.52	-2062	-0.000233	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.86	Si
SLU 78	fin.	26.6	-372	-0.0000158	0.0001872	0.0035	0.82		2455.37	2455.37	No	92.29	Si
SLU 81	ini.	-368.02	-2096	-0.00024	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.69	Si
SLU 81	fin.	46.27	-306	-0.0000276	0.0001872	0.0035	0.82		2455.37	2455.37	No	53.07	Si
SLU 82	ini.	-363.34	-2083	-0.0002365	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.77	Si
SLU 82	fin.	44.22	-307	-0.0000263	0.0001872	0.0035	0.82		2455.37	2455.37	No	55.53	Si
SLU 80	ini.	-359.4	-2061	-0.0002336	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.85	Si
SLU 80	fin.	31.11	-355	-0.0000185	0.0001872	0.0035	0.82		2455.37	2455.37	No	78.91	Si
SLU 83	ini.	-377.83	-2148	-0.0002472	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.51	Si
SLU 83	fin.	46.3	-319	-0.0000276	0.0001872	0.0035	0.82		2455.37	2455.37	No	53.03	Si
SLU 77	ini.	-363.21	-2076	-0.0002364	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.77	Si
SLU 77	fin.	28.65	-372	-0.000017	0.0001872	0.0035	0.82		2455.37	2455.37	No	85.7	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-363.21	4119	0.82	0	303	6502	3438	2091	5529	No	1.34	Si
SLU 77	fin.	28.65	-1188	0.82	0	303	6502	3438	2091	5529	No	4.65	Si
SLU 83	ini.	-377.83	4257	0.82	0	303	6502	3438	2091	5529	No	1.3	Si
SLU 83	fin.	46.3	-1123	0.82	0	303	6502	3438	2091	5529	No	4.92	Si
SLU 82	ini.	-363.34	4147	0.82	0	303	6502	3438	2091	5529	No	1.33	Si
SLU 82	fin.	44.22	-1110	0.82	0	303	6502	3438	2091	5529	No	4.98	Si
SLU 75	ini.	-348.72	4009	0.82	0	303	6502	3438	2091	5529	No	1.38	Si
SLU 75	fin.	26.57	-1176	0.82	0	303	6502	3438	2091	5529	No	4.7	Si
SLU 81	ini.	-368.02	4171	0.82	0	303	6502	3438	2091	5529	No	1.33	Si
SLU 81	fin.	46.27	-1103	0.82	0	303	6502	3438	2091	5529	No	5.01	Si
SLU 78	ini.	-358.52	4095	0.82	0	303	6502	3438	2091	5529	No	1.35	Si
SLU 78	fin.	26.6	-1195	0.82	0	303	6502	3438	2091	5529	No	4.63	Si
SLU 84	ini.	-373.14	4233	0.82	0	303	6502	3438	2091	5529	No	1.31	Si
SLU 84	fin.	44.26	-1130	0.82	0	303	6502	3438	2091	5529	No	4.89	Si
SLU 79	ini.	-364.09	4101	0.82	0	303	6502	3438	2091	5529	No	1.35	Si
SLU 79	fin.	33.16	-1151	0.82	0	303	6502	3438	2091	5529	No	4.8	Si
SLU 80	ini.	-359.4	4077	0.82	0	303	6502	3438	2091	5529	No	1.36	Si
SLU 80	fin.	31.11	-1158	0.82	0	303	6502	3438	2091	5529	No	4.78	Si
SLU 74	ini.	-353.4	4033	0.82	0	303	6502	3438	2091	5529	No	1.37	Si
SLU 74	fin.	28.61	-1169	0.82	0	303	6502	3438	2091	5529	No	4.73	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 16	ini.	-582.29	-2645	-0.000388	0.0002807	0.0035	0.82		2487.45	2487.45		4.27	Si
SLD 16	fin.	207.72	119	-0.0001271	0.0002807	0.0035	0.82		2482.11	2482.11		11.95	Si
SLD 15	ini.	-585.07	-2658	-0.0003902	0.0002807	0.0035	0.82		2487.45	2487.45		4.25	Si
SLD 15	fin.	206.8	111	-0.0001265	0.0002807	0.0035	0.82		2482.11	2482.11		12	Si
SLV 14	ini.	-1026	-4268	-0.0007714	0.0002807	0.0035	0.82		2487.45	2487.45		2.42	Si
SLV 14	fin.	599.84	1112	-0.0004026	0.0002807	0.0035	0.82		2482.11	2482.11		4.14	Si
SLV 15	ini.	-1054.24	-4415	-0.0007986	0.0002807	0.0035	0.82		2487.45	2487.45		2.36	Si
SLV 15	fin.	470.33	624	-0.000305	0.0002807	0.0035	0.82		2482.11	2482.11		5.28	Si
SLV 4	ini.	563.57	1608	-0.0003745	0.0002807	0.0035	0.82		2482.11	2482.11		4.4	Si
SLV 4	fin.	-575.95	-1631	-0.0003832	0.0002807	0.0035	0.82		2487.45	2487.45		4.32	Si
SLV 3	ini.	557.08	1576	-0.0003696	0.0002807	0.0035	0.82		2482.11	2482.11		4.46	Si
SLV 3	fin.	-578.11	-1650	-0.0003848	0.0002807	0.0035	0.82		2487.45	2487.45		4.3	Si
SLV 2	ini.	585.32	1723	-0.0003913	0.0002807	0.0035	0.82		2482.11	2482.11		4.24	Si
SLV 2	fin.	-448.61	-1163	-0.0002886	0.0002807	0.0035	0.82		2487.45	2487.45		5.54	Si
SLV 13	ini.	-1032.49	-4300	-0.0007777	0.0002807	0.0035	0.82		2487.45	2487.45		2.41	Si
SLV 13	fin.	597.68	1093	-0.0004009	0.0002807	0.0035	0.82		2482.11	2482.11		4.15	Si
SLV 1	ini.	578.83	1691	-0.0003863	0.0002807	0.0035	0.82		2482.11	2482.11		4.29	Si
SLV 1	fin.	-450.77	-1182	-0.0002902	0.0002807	0.0035	0.82		2487.45	2487.45		5.52	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-1047.76	-4383	-0.0007924	0.0002807	0.0035	0.82		2487.45	2487.45		2.37	Si
SLV 16	fin.	472.49	643	-0.0003065	0.0002807	0.0035	0.82		2482.11	2482.11		5.25	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 13	ini.	-575.73	4314	0.82	0	455	6502	5156	2091	6957		1.61	Si
SLD 13	fin.	262.22	609	0.82	0	455	6502	5156	2091	6957		11.43	Si
SLV 16	ini.	-1047.76	6628	0.82	0	455	6502	5156	2091	6957		1.05	Si
SLV 16	fin.	472.49	1957	0.82	0	455	6502	5156	2091	6957		3.55	Si
SLD 15	ini.	-585.07	4397	0.82	0	455	6502	5156	2091	6957		1.58	Si
SLD 15	fin.	206.8	349	0.82	0	455	6502	5156	2091	6957		19.93	Si
SLD 14	ini.	-572.95	4278	0.82	0	455	6502	5156	2091	6957		1.63	Si
SLD 14	fin.	263.15	620	0.82	0	455	6502	5156	2091	6957		11.22	Si
SLV 13	ini.	-1032.49	6521	0.82	0	455	6502	5156	2091	6957		1.07	Si
SLV 13	fin.	597.68	2521	0.82	0	455	6502	5156	2091	6957		2.76	Si
SLV 11	ini.	-514.49	4181	0.82	0	455	6502	5156	2091	6957		1.66	Si
SLV 11	fin.	-44.8	-899	0.82	0	455	6502	5156	2091	6957		7.74	Si
SLV 3	ini.	557.08	-1107	0.82	0	455	6502	5156	2091	6957		6.28	Si
SLV 3	fin.	-578.11	-4201	0.82	0	455	6502	5156	2091	6957		1.66	Si
SLV 14	ini.	-1026	6439	0.82	0	455	6502	5156	2091	6957		1.08	Si
SLV 14	fin.	599.84	2548	0.82	0	455	6502	5156	2091	6957		2.73	Si
SLV 15	ini.	-1054.24	6711	0.82	0	455	6502	5156	2091	6957		1.04	Si
SLV 15	fin.	470.33	1931	0.82	0	455	6502	5156	2091	6957		3.6	Si
SLD 16	ini.	-582.29	4361	0.82	0	455	6502	5156	2091	6957		1.6	Si
SLD 16	fin.	207.72	360	0.82	0	455	6502	5156	2091	6957		19.31	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.359	SLV 15	Si
V_SLV	1.037	SLV 15	Si
PF_SLU	6.512	SLU 83	Si
V_SLU	1.299	SLU 83	Si

Trave di accoppiamento 103

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.463	-3.314	5.44	7.44	2	-5.963	-3.314	5.44	7.44	2	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	793.05	-2450	-0.000081	0.0001872	0.0035	2		14344.28	14344.28	No	18.09	Si
SLU 75	fin.	-834.42	-2450	-0.0000853	0.0001872	0.0035	2		14357.01	14357.01	No	17.21	Si
SLU 84	ini.	816.5	-2444	-0.0000835	0.0001872	0.0035	2		14344.28	14344.28	No	17.57	Si
SLU 84	fin.	-823.31	-2444	-0.0000841	0.0001872	0.0035	2		14357.01	14357.01	No	17.44	Si
SLU 73	ini.	802.46	-2353	-0.000082	0.0001872	0.0035	2		14344.28	14344.28	No	17.88	Si
SLU 73	fin.	-824.37	-2353	-0.0000842	0.0001872	0.0035	2		14357.01	14357.01	No	17.42	Si
SLU 68	ini.	755.93	-2301	-0.0000771	0.0001872	0.0035	2		14344.28	14344.28	No	18.98	Si
SLU 68	fin.	-820.76	-2301	-0.0000838	0.0001872	0.0035	2		14357.01	14357.01	No	17.49	Si
SLU 70	ini.	746.52	-2398	-0.0000761	0.0001872	0.0035	2		14344.28	14344.28	No	19.21	Si
SLU 70	fin.	-830.8	-2398	-0.0000849	0.0001872	0.0035	2		14357.01	14357.01	No	17.28	Si
SLU 76	ini.	811.14	-2399	-0.0000829	0.0001872	0.0035	2		14344.28	14344.28	No	17.68	Si
SLU 76	fin.	-830.44	-2399	-0.0000849	0.0001872	0.0035	2		14357.01	14357.01	No	17.29	Si
SLU 78	ini.	801.73	-2496	-0.0000819	0.0001872	0.0035	2		14344.28	14344.28	No	17.89	Si
SLU 78	fin.	-840.49	-2496	-0.0000859	0.0001872	0.0035	2		14357.01	14357.01	No	17.08	Si
SLU 77	ini.	774.28	-2500	-0.000079	0.0001872	0.0035	2		14344.28	14344.28	No	18.53	Si
SLU 77	fin.	-823.57	-2500	-0.0000841	0.0001872	0.0035	2		14357.01	14357.01	No	17.43	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	801.52	-2448	-0.0000819	0.0001872	0.0035	2		14344.28	14344.28	No	17.9	Si
SLU 80	fin.	-825.23	-2448	-0.0000843	0.0001872	0.0035	2		14357.01	14357.01	No	17.4	Si
SLU 67	ini.	737.84	-2351	-0.0000752	0.0001872	0.0035	2		14344.28	14344.28	No	19.44	Si
SLU 67	fin.	-824.73	-2351	-0.0000843	0.0001872	0.0035	2		14357.01	14357.01	No	17.41	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	801.73	-2974	2	0	812	3965	8384	5100	4776	No	1.61	Si
SLU 78	fin.	-840.49	-3533	2	0	812	3965	8384	5100	4776	No	1.35	Si
SLU 84	ini.	816.5	-2969	2	0	812	3965	8384	5100	4776	No	1.61	Si
SLU 84	fin.	-823.31	-3528	2	0	812	3965	8384	5100	4776	No	1.35	Si
SLU 83	ini.	789.04	-2880	2	0	812	3965	8384	5100	4776	No	1.66	Si
SLU 83	fin.	-806.4	-3439	2	0	812	3965	8384	5100	4776	No	1.39	Si
SLU 80	ini.	801.52	-2943	2	0	812	3965	8384	5100	4776	No	1.62	Si
SLU 80	fin.	-825.23	-3502	2	0	812	3965	8384	5100	4776	No	1.36	Si
SLU 82	ini.	807.82	-2939	2	0	812	3965	8384	5100	4776	No	1.63	Si
SLU 82	fin.	-817.24	-3498	2	0	812	3965	8384	5100	4776	No	1.37	Si
SLU 77	ini.	774.28	-2885	2	0	812	3965	8384	5100	4776	No	1.66	Si
SLU 77	fin.	-823.57	-3444	2	0	812	3965	8384	5100	4776	No	1.39	Si
SLU 75	ini.	793.05	-2944	2	0	812	3965	8384	5100	4776	No	1.62	Si
SLU 75	fin.	-834.42	-3503	2	0	812	3965	8384	5100	4776	No	1.36	Si
SLU 76	ini.	811.14	-2972	2	0	812	3965	8384	5100	4776	No	1.61	Si
SLU 76	fin.	-830.44	-3531	2	0	812	3965	8384	5100	4776	No	1.35	Si
SLU 73	ini.	802.46	-2943	2	0	812	3965	8384	5100	4776	No	1.62	Si
SLU 73	fin.	-824.37	-3502	2	0	812	3965	8384	5100	4776	No	1.36	Si
SLU 74	ini.	765.6	-2855	2	0	812	3965	8384	5100	4776	No	1.67	Si
SLU 74	fin.	-817.5	-3415	2	0	812	3965	8384	5100	4776	No	1.4	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-845.83	1490	-0.0000857	0.0002807	0.0035	2		14215.41	14215.41		16.81	Si
SLV 14	fin.	1653.66	1611	-0.0001722	0.0002807	0.0035	2		14202.07	14202.07		8.59	Si
SLV 2	ini.	1776.67	-4369	-0.0001858	0.0002807	0.0035	2		14202.07	14202.07		7.99	Si
SLV 2	fin.	-2614.19	-4407	-0.000282	0.0002807	0.0035	2		14215.41	14215.41		5.44	Si
SLV 13	ini.	-840.99	1444	-0.0000852	0.0002807	0.0035	2		14215.41	14215.41		16.9	Si
SLV 13	fin.	1638.13	1564	-0.0001705	0.0002807	0.0035	2		14202.07	14202.07		8.67	Si
SLV 3	ini.	1926.74	-4902	-0.0002026	0.0002807	0.0035	2		14202.07	14202.07		7.37	Si
SLV 3	fin.	-2826.16	-5022	-0.0003076	0.0002807	0.0035	2		14215.41	14215.41		5.03	Si
SLD 4	ini.	1131.56	-3057	-0.0001158	0.0002807	0.0035	2		14202.07	14202.07		12.55	Si
SLD 4	fin.	-1537.71	-3108	-0.0001593	0.0002807	0.0035	2		14215.41	14215.41		9.24	Si
SLV 4	ini.	1921.9	-4855	-0.000202	0.0002807	0.0035	2		14202.07	14202.07		7.39	Si
SLV 4	fin.	-2810.63	-4975	-0.0003057	0.0002807	0.0035	2		14215.41	14215.41		5.06	Si
SLV 8	ini.	1174.33	-3380	-0.0001203	0.0002807	0.0035	2		14202.07	14202.07		12.09	Si
SLV 8	fin.	-1548.86	-3540	-0.0001606	0.0002807	0.0035	2		14215.41	14215.41		9.18	Si
SLV 1	ini.	1781.51	-4416	-0.0001863	0.0002807	0.0035	2		14202.07	14202.07		7.97	Si
SLV 1	fin.	-2629.73	-4454	-0.0002839	0.0002807	0.0035	2		14215.41	14215.41		5.41	Si
SLD 3	ini.	1133.64	-3077	-0.000116	0.0002807	0.0035	2		14202.07	14202.07		12.53	Si
SLD 3	fin.	-1544.38	-3129	-0.0001601	0.0002807	0.0035	2		14215.41	14215.41		9.2	Si
SLV 7	ini.	1177.43	-3410	-0.0001207	0.0002807	0.0035	2		14202.07	14202.07		12.06	Si
SLV 7	fin.	-1558.78	-3570	-0.0001616	0.0002807	0.0035	2		14215.41	14215.41		9.12	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 7	ini.	1177.43	-4813	2	0	1217	3965	12577	5100	5182		1.08	Si
SLV 7	fin.	-1558.78	-5221	2	0	1217	3965	12577	5100	5182		0.99	No
SLV 8	ini.	1174.33	-4787	2	0	1217	3965	12577	5100	5182		1.08	Si
SLV 8	fin.	-1548.86	-5195	2	0	1217	3965	12577	5100	5182		1	No
SLV 3	ini.	1926.74	-9161	2	0	1217	3965	12577	5100	5182		0.57	No
SLV 3	fin.	-2826.16	-9546	2	0	1217	3965	12577	5100	5182		0.54	No
SLV 4	ini.	1921.9	-9120	2	0	1217	3965	12577	5100	5182		0.57	No
SLV 4	fin.	-2810.63	-9505	2	0	1217	3965	12577	5100	5182		0.55	No
SLD 1	ini.	1071.62	-4885	2	0	1217	3965	12577	5100	5182		1.06	Si
SLD 1	fin.	-1458.27	-5297	2	0	1217	3965	12577	5100	5182		0.98	No
SLV 1	ini.	1781.51	-8734	2	0	1217	3965	12577	5100	5182		0.59	No
SLV 1	fin.	-2629.73	-9123	2	0	1217	3965	12577	5100	5182		0.57	No
SLD 3	ini.	1133.64	-5074	2	0	1217	3965	12577	5100	5182		1.02	Si
SLD 3	fin.	-1544.38	-5484	2	0	1217	3965	12577	5100	5182		0.94	No
SLD 2	ini.	1069.54	-4867	2	0	1217	3965	12577	5100	5182		1.06	Si
SLD 2	fin.	-1451.6	-5279	2	0	1217	3965	12577	5100	5182		0.98	No
SLD 4	ini.	1131.56	-5057	2	0	1217	3965	12577	5100	5182		1.02	Si
SLD 4	fin.	-1537.71	-5467	2	0	1217	3965	12577	5100	5182		0.95	No
SLV 2	ini.	1776.67	-8693	2	0	1217	3965	12577	5100	5182		0.6	No
SLV 2	fin.	-2614.19	-9083	2	0	1217	3965	12577	5100	5182		0.57	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.03	SLV 3	Si
V_SLV	0.543	SLV 3	No
PF_SLU	17.082	SLU 78	Si
V_SLU	1.352	SLU 78	Si

Trave di accoppiamento 104

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.463	-3.314	8.24	8.96	0.72	-5.963	-3.314	8.24	8.96	0.72	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	134.58	-1454	-0.0001073	0.0001872	0.0035	0.72		1897.3	1897.3	No	14.1	Si
SLU 75	fin.	-254.43	-1872	-0.0002121	0.0001872	0.0035	0.72		1901.86	1901.86	No	7.48	Si
SLU 79	ini.	124.76	-1507	-0.0000991	0.0001872	0.0035	0.72		1897.3	1897.3	No	15.21	Si
SLU 79	fin.	-258.26	-1917	-0.0002156	0.0001872	0.0035	0.72		1901.86	1901.86	No	7.36	Si
SLU 81	ini.	123.36	-1525	-0.000098	0.0001872	0.0035	0.72		1897.3	1897.3	No	15.38	Si
SLU 81	fin.	-260.8	-1938	-0.000218	0.0001872	0.0035	0.72		1901.86	1901.86	No	7.29	Si
SLU 80	ini.	132.84	-1488	-0.0001058	0.0001872	0.0035	0.72		1897.3	1897.3	No	14.28	Si
SLU 80	fin.	-259.49	-1913	-0.0002168	0.0001872	0.0035	0.72		1901.86	1901.86	No	7.33	Si
SLU 77	ini.	126.41	-1512	-0.0001005	0.0001872	0.0035	0.72		1897.3	1897.3	No	15.01	Si
SLU 77	fin.	-258.33	-1920	-0.0002157	0.0001872	0.0035	0.72		1901.86	1901.86	No	7.36	Si
SLU 84	ini.	131.37	-1544	-0.0001046	0.0001872	0.0035	0.72		1897.3	1897.3	No	14.44	Si
SLU 84	fin.	-267.17	-1977	-0.000224	0.0001872	0.0035	0.72		1901.86	1901.86	No	7.12	Si
SLU 83	ini.	123.28	-1564	-0.0000979	0.0001872	0.0035	0.72		1897.3	1897.3	No	15.39	Si
SLU 83	fin.	-265.93	-1981	-0.0002228	0.0001872	0.0035	0.72		1901.86	1901.86	No	7.15	Si
SLU 82	ini.	131.45	-1506	-0.0001047	0.0001872	0.0035	0.72		1897.3	1897.3	No	14.43	Si
SLU 82	fin.	-262.03	-1933	-0.0002192	0.0001872	0.0035	0.72		1901.86	1901.86	No	7.26	Si
SLU 76	ini.	138.32	-1436	-0.0001104	0.0001872	0.0035	0.72		1897.3	1897.3	No	13.72	Si
SLU 76	fin.	-255.17	-1866	-0.0002128	0.0001872	0.0035	0.72		1901.86	1901.86	No	7.45	Si
SLU 78	ini.	134.49	-1492	-0.0001072	0.0001872	0.0035	0.72		1897.3	1897.3	No	14.11	Si
SLU 78	fin.	-259.56	-1916	-0.0002169	0.0001872	0.0035	0.72		1901.86	1901.86	No	7.33	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	131.37	-382	0.72	0	292	3965	3018	1836	4257	No	11.14	Si
SLU 84	fin.	-267.17	-3460	0.72	0	292	3965	3018	1836	4257	No	1.23	Si
SLU 79	ini.	124.76	-347	0.72	0	292	3965	3018	1836	4257	No	12.27	Si
SLU 79	fin.	-258.26	-3368	0.72	0	292	3965	3018	1836	4257	No	1.26	Si
SLU 74	ini.	126.49	-340	0.72	0	292	3965	3018	1836	4257	No	12.52	Si
SLU 74	fin.	-253.2	-3340	0.72	0	292	3965	3018	1836	4257	No	1.27	Si
SLU 80	ini.	132.84	-379	0.72	0	292	3965	3018	1836	4257	No	11.22	Si
SLU 80	fin.	-259.49	-3384	0.72	0	292	3965	3018	1836	4257	No	1.26	Si
SLU 81	ini.	123.36	-348	0.72	0	292	3965	3018	1836	4257	No	12.22	Si
SLU 81	fin.	-260.8	-3383	0.72	0	292	3965	3018	1836	4257	No	1.26	Si
SLU 82	ini.	131.45	-381	0.72	0	292	3965	3018	1836	4257	No	11.18	Si
SLU 82	fin.	-262.03	-3399	0.72	0	292	3965	3018	1836	4257	No	1.25	Si
SLU 75	ini.	134.58	-373	0.72	0	292	3965	3018	1836	4257	No	11.43	Si
SLU 75	fin.	-254.43	-3356	0.72	0	292	3965	3018	1836	4257	No	1.27	Si
SLU 83	ini.	123.28	-350	0.72	0	292	3965	3018	1836	4257	No	12.17	Si
SLU 83	fin.	-265.93	-3444	0.72	0	292	3965	3018	1836	4257	No	1.24	Si
SLU 77	ini.	126.41	-341	0.72	0	292	3965	3018	1836	4257	No	12.47	Si
SLU 77	fin.	-258.33	-3401	0.72	0	292	3965	3018	1836	4257	No	1.25	Si
SLU 78	ini.	134.49	-374	0.72	0	292	3965	3018	1836	4257	No	11.39	Si
SLU 78	fin.	-259.56	-3417	0.72	0	292	3965	3018	1836	4257	No	1.25	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	733.17	1523	-0.000702	0.0002807	0.0035	0.72		1912.43	1912.43		2.61	Si
SLV 1	fin.	-60.78	635	-0.0000469	0.0002807	0.0035	0.72		1917.1	1917.1		31.54	Si
SLV 16	ini.	-544.82	-3458	-0.0004867	0.0002807	0.0035	0.72		1917.1	1917.1		3.52	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	fin.	-283.26	-3145	-0.0002316	0.0002807	0.0035	0.72		1917.1	1917.1		6.77	Si
SLV 14	ini.	-534.62	-3135	-0.0004758	0.0002807	0.0035	0.72		1917.1	1917.1		3.59	Si
SLV 14	fin.	-246.12	-2930	-0.0001991	0.0002807	0.0035	0.72		1917.1	1917.1		7.79	Si
SLV 15	ini.	-548.66	-3497	-0.0004908	0.0002807	0.0035	0.72		1917.1	1917.1		3.49	Si
SLV 15	fin.	-283.8	-3171	-0.0002321	0.0002807	0.0035	0.72		1917.1	1917.1		6.76	Si
SLD 1	ini.	367.49	98	-0.0003093	0.0002807	0.0035	0.72		1912.43	1912.43		5.2	Si
SLD 1	fin.	-124.25	-446	-0.0000974	0.0002807	0.0035	0.72		1917.1	1917.1		15.43	Si
SLD 2	ini.	369.14	115	-0.0003108	0.0002807	0.0035	0.72		1912.43	1912.43		5.18	Si
SLD 2	fin.	-124.02	-435	-0.0000972	0.0002807	0.0035	0.72		1917.1	1917.1		15.46	Si
SLV 3	ini.	722.97	1200	-0.0006897	0.0002807	0.0035	0.72		1912.43	1912.43		2.65	Si
SLV 3	fin.	-97.92	421	-0.0000763	0.0002807	0.0035	0.72		1917.1	1917.1		19.58	Si
SLV 13	ini.	-538.45	-3173	-0.0004799	0.0002807	0.0035	0.72		1917.1	1917.1		3.56	Si
SLV 13	fin.	-246.65	-2957	-0.0001996	0.0002807	0.0035	0.72		1917.1	1917.1		7.77	Si
SLV 4	ini.	726.81	1238	-0.0006943	0.0002807	0.0035	0.72		1912.43	1912.43		2.63	Si
SLV 4	fin.	-97.38	447	-0.0000759	0.0002807	0.0035	0.72		1917.1	1917.1		19.69	Si
SLV 2	ini.	737.01	1561	-0.0007066	0.0002807	0.0035	0.72		1912.43	1912.43		2.59	Si
SLV 2	fin.	-60.24	662	-0.0000465	0.0002807	0.0035	0.72		1917.1	1917.1		31.83	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	722.97	-1566	0.72	0	438	3965	4528	1836	4403		2.81	Si
SLV 3	fin.	-97.92	-3671	0.72	0	438	3965	4528	1836	4403		1.2	Si
SLD 1	ini.	367.49	-934	0.72	0	438	3965	4528	1836	4403		4.72	Si
SLD 1	fin.	-124.25	-2704	0.72	0	438	3965	4528	1836	4403		1.63	Si
SLD 7	ini.	168.07	-238	0.72	0	438	3965	4528	1836	4403		18.51	Si
SLD 7	fin.	-187.46	-2701	0.72	0	438	3965	4528	1836	4403		1.63	Si
SLV 7	ini.	266.69	-228	0.72	0	438	3965	4528	1836	4403		19.34	Si
SLV 7	fin.	-206.22	-3266	0.72	0	438	3965	4528	1836	4403		1.35	Si
SLD 3	ini.	363.19	-814	0.72	0	438	3965	4528	1836	4403		5.41	Si
SLD 3	fin.	-140.61	-2869	0.72	0	438	3965	4528	1836	4403		1.53	Si
SLV 2	ini.	737.01	-1875	0.72	0	438	3965	4528	1836	4403		2.35	Si
SLV 2	fin.	-60.24	-3218	0.72	0	438	3965	4528	1836	4403		1.37	Si
SLV 1	ini.	733.17	-1839	0.72	0	438	3965	4528	1836	4403		2.39	Si
SLV 1	fin.	-60.78	-3297	0.72	0	438	3965	4528	1836	4403		1.34	Si
SLD 4	ini.	364.84	-829	0.72	0	438	3965	4528	1836	4403		5.31	Si
SLD 4	fin.	-140.38	-2835	0.72	0	438	3965	4528	1836	4403		1.55	Si
SLV 4	ini.	726.81	-1602	0.72	0	438	3965	4528	1836	4403		2.75	Si
SLV 4	fin.	-97.38	-3592	0.72	0	438	3965	4528	1836	4403		1.23	Si
SLV 8	ini.	269.14	-251	0.72	0	438	3965	4528	1836	4403		17.54	Si
SLV 8	fin.	-205.88	-3216	0.72	0	438	3965	4528	1836	4403		1.37	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.595	SLV 2	Si
V_SLV	1.2	SLV 3	Si
PF_SLU	7.119	SLU 84	Si
V_SLU	1.23	SLU 84	Si

Trave di accoppiamento 105

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.283	-3.314	5.44	6.34	0.9	-3.183	-3.314	5.44	6.34	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 76	ini.	45.5	-1197	-0.0000225	0.0001872	0.0035	0.9		2959	2959	No	65.03	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 76	fin.	356.08	-1718	-0.0001884	0.0001872	0.0035	0.9		2959	2959	No	8.31	Si
SLU 82	ini.	36.18	-1208	-0.0000178	0.0001872	0.0035	0.9		2959	2959	No	81.79	Si
SLU 82	fin.	372.45	-1770	-0.000198	0.0001872	0.0035	0.9		2959	2959	No	7.94	Si
SLU 80	ini.	52.11	-1234	-0.0000257	0.0001872	0.0035	0.9		2959	2959	No	56.78	Si
SLU 80	fin.	359.8	-1751	-0.0001906	0.0001872	0.0035	0.9		2959	2959	No	8.22	Si
SLU 77	ini.	65.12	-1279	-0.0000323	0.0001872	0.0035	0.9		2959	2959	No	45.44	Si
SLU 77	fin.	355.78	-1769	-0.0001883	0.0001872	0.0035	0.9		2959	2959	No	8.32	Si
SLU 81	ini.	46	-1233	-0.0000227	0.0001872	0.0035	0.9		2959	2959	No	64.32	Si
SLU 81	fin.	365.63	-1769	-0.000194	0.0001872	0.0035	0.9		2959	2959	No	8.09	Si
SLU 78	ini.	55.3	-1254	-0.0000273	0.0001872	0.0035	0.9		2959	2959	No	53.51	Si
SLU 78	fin.	362.61	-1770	-0.0001922	0.0001872	0.0035	0.9		2959	2959	No	8.16	Si
SLU 75	ini.	55.23	-1233	-0.0000273	0.0001872	0.0035	0.9		2959	2959	No	53.57	Si
SLU 75	fin.	354.34	-1736	-0.0001874	0.0001872	0.0035	0.9		2959	2959	No	8.35	Si
SLU 79	ini.	61.94	-1260	-0.0000307	0.0001872	0.0035	0.9		2959	2959	No	47.77	Si
SLU 79	fin.	352.97	-1749	-0.0001866	0.0001872	0.0035	0.9		2959	2959	No	8.38	Si
SLU 83	ini.	46.06	-1253	-0.0000227	0.0001872	0.0035	0.9		2959	2959	No	64.24	Si
SLU 83	fin.	373.9	-1803	-0.0001988	0.0001872	0.0035	0.9		2959	2959	No	7.91	Si
SLU 84	ini.	36.24	-1228	-0.0000178	0.0001872	0.0035	0.9		2959	2959	No	81.65	Si
SLU 84	fin.	380.73	-1804	-0.0002028	0.0001872	0.0035	0.9		2959	2959	No	7.77	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	46	8	0.9	0	365	7137	3773	2295	6068	No	755.63	Si
SLU 81	fin.	365.63	1276	0.9	0	365	7137	3773	2295	6068	No	4.75	Si
SLU 78	ini.	55.3	-37	0.9	0	365	7137	3773	2295	6068	No	163.48	Si
SLU 78	fin.	362.61	1273	0.9	0	365	7137	3773	2295	6068	No	4.77	Si
SLU 76	ini.	45.5	18	0.9	0	365	7137	3773	2295	6068	No	333.68	Si
SLU 76	fin.	356.08	1228	0.9	0	365	7137	3773	2295	6068	No	4.94	Si
SLU 82	ini.	36.18	62	0.9	0	365	7137	3773	2295	6068	No	98.41	Si
SLU 82	fin.	372.45	1285	0.9	0	365	7137	3773	2295	6068	No	4.72	Si
SLU 83	ini.	46.06	3	0.9	0	365	7137	3773	2295	6068	No	1863.23	Si
SLU 83	fin.	373.9	1313	0.9	0	365	7137	3773	2295	6068	No	4.62	Si
SLU 75	ini.	55.23	-32	0.9	0	365	7137	3773	2295	6068	No	187.61	Si
SLU 75	fin.	354.34	1236	0.9	0	365	7137	3773	2295	6068	No	4.91	Si
SLU 84	ini.	36.24	57	0.9	0	365	7137	3773	2295	6068	No	106.67	Si
SLU 84	fin.	380.73	1322	0.9	0	365	7137	3773	2295	6068	No	4.59	Si
SLU 80	ini.	52.11	-22	0.9	0	365	7137	3773	2295	6068	No	271.61	Si
SLU 80	fin.	359.8	1259	0.9	0	365	7137	3773	2295	6068	No	4.82	Si
SLU 77	ini.	65.12	-91	0.9	0	365	7137	3773	2295	6068	No	66.87	Si
SLU 77	fin.	355.78	1264	0.9	0	365	7137	3773	2295	6068	No	4.8	Si
SLU 79	ini.	61.94	-76	0.9	0	365	7137	3773	2295	6068	No	79.88	Si
SLU 79	fin.	352.97	1250	0.9	0	365	7137	3773	2295	6068	No	4.85	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-1194.12	1502	-0.0007385	0.0002807	0.0035	0.9		2995.37	2995.37		2.51	Si
SLV 13	fin.	1334.49	-2604	-0.0008532	0.0002807	0.0035	0.9		2989.59	2989.59		2.24	Si
SLV 3	ini.	1310.74	-3327	-0.0008337	0.0002807	0.0035	0.9		2989.59	2989.59		2.28	Si
SLV 3	fin.	-865.77	187	-0.0004973	0.0002807	0.0035	0.9		2995.37	2995.37		3.46	Si
SLV 2	ini.	1204.57	-2548	-0.0007484	0.0002807	0.0035	0.9		2989.59	2989.59		2.48	Si
SLV 2	fin.	-919.38	761	-0.0005346	0.0002807	0.0035	0.9		2995.37	2995.37		3.26	Si
SLD 15	ini.	-421.2	-195	-0.0002198	0.0002807	0.0035	0.9		2995.37	2995.37		7.11	Si
SLD 15	fin.	703.48	-1979	-0.0003902	0.0002807	0.0035	0.9		2989.59	2989.59		4.25	Si
SLV 15	ini.	-1074.29	755	-0.0006469	0.0002807	0.0035	0.9		2995.37	2995.37		2.79	Si
SLV 15	fin.	1354.11	-3075	-0.0008695	0.0002807	0.0035	0.9		2989.59	2989.59		2.21	Si
SLV 14	ini.	-1180.46	1533	-0.0007278	0.0002807	0.0035	0.9		2995.37	2995.37		2.54	Si
SLV 14	fin.	1300.49	-2501	-0.0008253	0.0002807	0.0035	0.9		2989.59	2989.59		2.3	Si
SLV 1	ini.	1190.91	-2580	-0.0007377	0.0002807	0.0035	0.9		2989.59	2989.59		2.51	Si
SLV 1	fin.	-885.39	657	-0.0005109	0.0002807	0.0035	0.9		2995.37	2995.37		3.38	Si
SLV 16	ini.	-1060.63	786	-0.0006367	0.0002807	0.0035	0.9		2995.37	2995.37		2.82	Si
SLV 16	fin.	1320.12	-2971	-0.0008414	0.0002807	0.0035	0.9		2989.59	2989.59		2.26	Si
SLV 4	ini.	1324.39	-3296	-0.0008449	0.0002807	0.0035	0.9		2989.59	2989.59		2.26	Si
SLV 4	fin.	-899.76	291	-0.0005209	0.0002807	0.0035	0.9		2995.37	2995.37		3.33	Si
SLD 13	ini.	-474.06	132	-0.0002499	0.0002807	0.0035	0.9		2995.37	2995.37		6.32	Si
SLD 13	fin.	694.86	-1774	-0.0003846	0.0002807	0.0035	0.9		2989.59	2989.59		4.3	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	1204.57	-4255	0.9	0	548	7137	5660	2295	7684		1.81	Si
SLV 2	fin.	-919.38	-3805	0.9	0	548	7137	5660	2295	7684		2.02	Si
SLV 3	ini.	1310.74	-4808	0.9	0	548	7137	5660	2295	7684		1.6	Si
SLV 3	fin.	-865.77	-3599	0.9	0	548	7137	5660	2295	7684		2.14	Si
SLD 15	ini.	-421.2	1615	0.9	0	548	7137	5660	2295	7684		4.76	Si
SLD 15	fin.	703.48	2719	0.9	0	548	7137	5660	2295	7684		2.83	Si
SLV 15	ini.	-1074.29	3974	0.9	0	548	7137	5660	2295	7684		1.93	Si
SLV 15	fin.	1354.11	5333	0.9	0	548	7137	5660	2295	7684		1.44	Si
SLV 16	ini.	-1060.63	3934	0.9	0	548	7137	5660	2295	7684		1.95	Si
SLV 16	fin.	1320.12	5204	0.9	0	548	7137	5660	2295	7684		1.48	Si
SLD 13	ini.	-474.06	1876	0.9	0	548	7137	5660	2295	7684		4.1	Si
SLD 13	fin.	694.86	2684	0.9	0	548	7137	5660	2295	7684		2.86	Si
SLV 1	ini.	1190.91	-4215	0.9	0	548	7137	5660	2295	7684		1.82	Si
SLV 1	fin.	-885.39	-3676	0.9	0	548	7137	5660	2295	7684		2.09	Si
SLV 4	ini.	1324.39	-4847	0.9	0	548	7137	5660	2295	7684		1.59	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	fin.	-899.76	-3728	0.9	0	548	7137	5660	2295	7684		2.06	Si
SLV 14	ini.	-1180.46	4527	0.9	0	548	7137	5660	2295	7684		1.7	Si
SLV 14	fin.	1300.49	5127	0.9	0	548	7137	5660	2295	7684		1.5	Si
SLV 13	ini.	-1194.12	4567	0.9	0	548	7137	5660	2295	7684		1.68	Si
SLV 13	fin.	1334.49	5256	0.9	0	548	7137	5660	2295	7684		1.46	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.208	SLV 15	Si
V_SLV	1.441	SLV 15	Si
PF_SLU	7.772	SLU 84	Si
V_SLU	4.589	SLU 84	Si

Trave di accoppiamento 106

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.283	-3.314	8.14	8.96	0.82	-3.183	-3.314	8.14	8.96	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-348.74	-1394	-0.0002259	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.06	Si
SLU 81	fin.	-194.17	-1167	-0.0001198	0.0001872	0.0035	0.82		2460.51	2460.51	No	12.67	Si
SLU 79	ini.	-333.32	-1368	-0.0002147	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.38	Si
SLU 79	fin.	-204.14	-1201	-0.0001263	0.0001872	0.0035	0.82		2460.51	2460.51	No	12.05	Si
SLU 84	ini.	-359.97	-1427	-0.000234	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.84	Si
SLU 84	fin.	-192.71	-1172	-0.0001189	0.0001872	0.0035	0.82		2460.51	2460.51	No	12.77	Si
SLU 75	ini.	-331.84	-1354	-0.0002137	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.41	Si
SLU 75	fin.	-199.37	-1179	-0.0001232	0.0001872	0.0035	0.82		2460.51	2460.51	No	12.34	Si
SLU 77	ini.	-335.89	-1385	-0.0002166	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.33	Si
SLU 77	fin.	-208.47	-1223	-0.0001292	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.8	Si
SLU 76	ini.	-331.66	-1338	-0.0002135	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.42	Si
SLU 76	fin.	-191.51	-1144	-0.0001181	0.0001872	0.0035	0.82		2460.51	2460.51	No	12.85	Si
SLU 80	ini.	-336.91	-1369	-0.0002173	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.3	Si
SLU 80	fin.	-198.85	-1181	-0.0001229	0.0001872	0.0035	0.82		2460.51	2460.51	No	12.37	Si
SLU 83	ini.	-356.38	-1426	-0.0002314	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.9	Si
SLU 83	fin.	-198	-1192	-0.0001223	0.0001872	0.0035	0.82		2460.51	2460.51	No	12.43	Si
SLU 78	ini.	-339.48	-1385	-0.0002192	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.25	Si
SLU 78	fin.	-203.19	-1203	-0.0001257	0.0001872	0.0035	0.82		2460.51	2460.51	No	12.11	Si
SLU 82	ini.	-352.33	-1395	-0.0002285	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.98	Si
SLU 82	fin.	-188.89	-1148	-0.0001164	0.0001872	0.0035	0.82		2460.51	2460.51	No	13.03	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-328.25	1888	0.82	0	303	6502	3438	2091	5529	No	2.93	Si
SLU 74	fin.	-204.65	-1941	0.82	0	303	6502	3438	2091	5529	No	2.85	Si
SLU 78	ini.	-339.48	1934	0.82	0	303	6502	3438	2091	5529	No	2.86	Si
SLU 78	fin.	-203.19	-1941	0.82	0	303	6502	3438	2091	5529	No	2.85	Si
SLU 80	ini.	-336.91	1918	0.82	0	303	6502	3438	2091	5529	No	2.88	Si
SLU 80	fin.	-198.85	-1909	0.82	0	303	6502	3438	2091	5529	No	2.9	Si
SLU 77	ini.	-335.89	1927	0.82	0	303	6502	3438	2091	5529	No	2.87	Si
SLU 77	fin.	-208.47	-1977	0.82	0	303	6502	3438	2091	5529	No	2.8	Si
SLU 81	ini.	-348.74	1981	0.82	0	303	6502	3438	2091	5529	No	2.79	Si
SLU 81	fin.	-194.17	-1907	0.82	0	303	6502	3438	2091	5529	No	2.9	Si
SLU 82	ini.	-352.33	1987	0.82	0	303	6502	3438	2091	5529	No	2.78	Si
SLU 82	fin.	-188.89	-1870	0.82	0	303	6502	3438	2091	5529	No	2.96	Si
SLU 84	ini.	-359.97	2026	0.82	0	303	6502	3438	2091	5529	No	2.73	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	fin.	-192.71	-1906	0.82	0	303	6502	3438	2091	5529	No	2.9	Si
SLU 75	ini.	-331.84	1895	0.82	0	303	6502	3438	2091	5529	No	2.92	Si
SLU 75	fin.	-199.37	-1905	0.82	0	303	6502	3438	2091	5529	No	2.9	Si
SLU 79	ini.	-333.32	1912	0.82	0	303	6502	3438	2091	5529	No	2.89	Si
SLU 79	fin.	-204.14	-1945	0.82	0	303	6502	3438	2091	5529	No	2.84	Si
SLU 83	ini.	-356.38	2020	0.82	0	303	6502	3438	2091	5529	No	2.74	Si
SLU 83	fin.	-198	-1942	0.82	0	303	6502	3438	2091	5529	No	2.85	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-1093.7	-2509	-0.0008372	0.0002807	0.0035	0.82		2487.45	2487.45		2.27	Si
SLV 16	fin.	474.85	1225	-0.0003082	0.0002807	0.0035	0.82		2482.11	2482.11		5.23	Si
SLV 1	ini.	691.48	775	-0.000476	0.0002807	0.0035	0.82		2482.11	2482.11		3.59	Si
SLV 1	fin.	-772.58	-2906	-0.0005426	0.0002807	0.0035	0.82		2487.45	2487.45		3.22	Si
SLV 8	ini.	80.72	-958	-0.0000482	0.0002807	0.0035	0.82		2482.11	2482.11		30.75	Si
SLV 8	fin.	-633.46	-2704	-0.0004281	0.0002807	0.0035	0.82		2487.45	2487.45		3.93	Si
SLV 14	ini.	-1099.06	-2170	-0.0008425	0.0002807	0.0035	0.82		2487.45	2487.45		2.26	Si
SLV 14	fin.	642.82	1930	-0.0004366	0.0002807	0.0035	0.82		2482.11	2482.11		3.86	Si
SLV 2	ini.	700.68	844	-0.0004836	0.0002807	0.0035	0.82		2482.11	2482.11		3.54	Si
SLV 2	fin.	-756.25	-2829	-0.0005287	0.0002807	0.0035	0.82		2487.45	2487.45		3.29	Si
SLV 13	ini.	-1108.25	-2239	-0.0008516	0.0002807	0.0035	0.82		2487.45	2487.45		2.24	Si
SLV 13	fin.	626.48	1853	-0.0004236	0.0002807	0.0035	0.82		2482.11	2482.11		3.96	Si
SLV 15	ini.	-1102.89	-2578	-0.0008463	0.0002807	0.0035	0.82		2487.45	2487.45		2.26	Si
SLV 15	fin.	458.51	1148	-0.0002964	0.0002807	0.0035	0.82		2482.11	2482.11		5.41	Si
SLV 3	ini.	696.84	435	-0.0004804	0.0002807	0.0035	0.82		2482.11	2482.11		3.56	Si
SLV 3	fin.	-940.55	-3610	-0.0006913	0.0002807	0.0035	0.82		2487.45	2487.45		2.64	Si
SLV 7	ini.	74.85	-1003	-0.0000447	0.0002807	0.0035	0.82		2482.11	2482.11		33.16	Si
SLV 7	fin.	-643.89	-2754	-0.0004364	0.0002807	0.0035	0.82		2487.45	2487.45		3.86	Si
SLV 4	ini.	706.04	505	-0.000488	0.0002807	0.0035	0.82		2482.11	2482.11		3.52	Si
SLV 4	fin.	-924.22	-3533	-0.0006763	0.0002807	0.0035	0.82		2487.45	2487.45		2.69	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-1093.7	4694	0.82	0	455	6502	5156	2091	6957		1.48	Si
SLV 16	fin.	474.85	1767	0.82	0	455	6502	5156	2091	6957		3.94	Si
SLV 4	ini.	706.04	-2331	0.82	0	455	6502	5156	2091	6957		2.98	Si
SLV 4	fin.	-924.22	-5324	0.82	0	455	6502	5156	2091	6957		1.31	Si
SLV 8	ini.	80.72	190	0.82	0	455	6502	5156	2091	6957		36.67	Si
SLV 8	fin.	-633.46	-3956	0.82	0	455	6502	5156	2091	6957		1.76	Si
SLV 2	ini.	700.68	-2374	0.82	0	455	6502	5156	2091	6957		2.93	Si
SLV 2	fin.	-756.25	-4383	0.82	0	455	6502	5156	2091	6957		1.59	Si
SLV 14	ini.	-1099.06	4651	0.82	0	455	6502	5156	2091	6957		1.5	Si
SLV 14	fin.	642.82	2708	0.82	0	455	6502	5156	2091	6957		2.57	Si
SLV 15	ini.	-1102.89	4763	0.82	0	455	6502	5156	2091	6957		1.46	Si
SLV 15	fin.	458.51	1674	0.82	0	455	6502	5156	2091	6957		4.16	Si
SLV 1	ini.	691.48	-2305	0.82	0	455	6502	5156	2091	6957		3.02	Si
SLV 1	fin.	-772.58	-4477	0.82	0	455	6502	5156	2091	6957		1.55	Si
SLV 7	ini.	74.85	234	0.82	0	455	6502	5156	2091	6957		29.79	Si
SLV 7	fin.	-643.89	-4016	0.82	0	455	6502	5156	2091	6957		1.73	Si
SLV 3	ini.	696.84	-2263	0.82	0	455	6502	5156	2091	6957		3.07	Si
SLV 3	fin.	-940.55	-5417	0.82	0	455	6502	5156	2091	6957		1.28	Si
SLV 13	ini.	-1108.25	4720	0.82	0	455	6502	5156	2091	6957		1.47	Si
SLV 13	fin.	626.48	2614	0.82	0	455	6502	5156	2091	6957		2.66	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.244	SLV 13	Si
V_SLV	1.284	SLV 3	Si
PF_SLU	6.835	SLU 84	Si
V_SLU	2.728	SLU 84	Si

Trave di accoppiamento 107

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.063	5.826	5.44	6.34	0.9	-2.963	5.826	5.44	6.34	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 46	ini.	569.82	-1242	-0.0003208	0.0001872	0.0035	0.9		2959	2959	No	5.19	Si
SLU 46	fin.	-373.13	-374	-0.000198	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.95	Si
SLU 51	ini.	578.5	-1255	-0.0003265	0.0001872	0.0035	0.9		2959	2959	No	5.11	Si
SLU 51	fin.	-380.56	-371	-0.0002023	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.79	Si
SLU 69	ini.	572.51	-1329	-0.0003226	0.0001872	0.0035	0.9		2959	2959	No	5.17	Si
SLU 69	fin.	-354.64	-483	-0.0001872	0.0001872	0.0035	0.9		2964.67	2964.67	No	8.36	Si
SLU 50	ini.	576.43	-1247	-0.0003251	0.0001872	0.0035	0.9		2959	2959	No	5.13	Si
SLU 50	fin.	-380.81	-365	-0.0002025	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.79	Si
SLU 71	ini.	573.48	-1320	-0.0003232	0.0001872	0.0035	0.9		2959	2959	No	5.16	Si
SLU 71	fin.	-359.69	-467	-0.0001901	0.0001872	0.0035	0.9		2964.67	2964.67	No	8.24	Si
SLU 47	ini.	572.17	-1238	-0.0003223	0.0001872	0.0035	0.9		2959	2959	No	5.17	Si
SLU 47	fin.	-378.01	-361	-0.0002008	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.84	Si
SLU 48	ini.	575.46	-1257	-0.0003245	0.0001872	0.0035	0.9		2959	2959	No	5.14	Si
SLU 48	fin.	-375.76	-381	-0.0001995	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.89	Si
SLU 49	ini.	577.53	-1265	-0.0003259	0.0001872	0.0035	0.9		2959	2959	No	5.12	Si
SLU 49	fin.	-375.52	-387	-0.0001994	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.89	Si
SLU 70	ini.	574.58	-1337	-0.0003239	0.0001872	0.0035	0.9		2959	2959	No	5.15	Si
SLU 70	fin.	-354.4	-489	-0.0001871	0.0001872	0.0035	0.9		2964.67	2964.67	No	8.37	Si
SLU 72	ini.	575.55	-1328	-0.0003246	0.0001872	0.0035	0.9		2959	2959	No	5.14	Si
SLU 72	fin.	-359.44	-473	-0.00019	0.0001872	0.0035	0.9		2964.67	2964.67	No	8.25	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 69	ini.	572.51	-1877	0.9	0	365	7137	3773	2295	6068	No	3.23	Si
SLU 69	fin.	-354.64	-1064	0.9	0	365	7137	3773	2295	6068	No	5.7	Si
SLU 70	ini.	574.58	-1884	0.9	0	365	7137	3773	2295	6068	No	3.22	Si
SLU 70	fin.	-354.4	-1063	0.9	0	365	7137	3773	2295	6068	No	5.71	Si
SLU 71	ini.	573.48	-1877	0.9	0	365	7137	3773	2295	6068	No	3.23	Si
SLU 71	fin.	-359.69	-1084	0.9	0	365	7137	3773	2295	6068	No	5.6	Si
SLU 51	ini.	578.5	-1898	0.9	0	365	7137	3773	2295	6068	No	3.2	Si
SLU 51	fin.	-380.56	-1151	0.9	0	365	7137	3773	2295	6068	No	5.27	Si
SLU 72	ini.	575.55	-1884	0.9	0	365	7137	3773	2295	6068	No	3.22	Si
SLU 72	fin.	-359.44	-1083	0.9	0	365	7137	3773	2295	6068	No	5.6	Si
SLU 47	ini.	572.17	-1868	0.9	0	365	7137	3773	2295	6068	No	3.25	Si
SLU 47	fin.	-378.01	-1152	0.9	0	365	7137	3773	2295	6068	No	5.27	Si
SLU 48	ini.	575.46	-1891	0.9	0	365	7137	3773	2295	6068	No	3.21	Si
SLU 48	fin.	-375.76	-1131	0.9	0	365	7137	3773	2295	6068	No	5.36	Si
SLU 49	ini.	577.53	-1898	0.9	0	365	7137	3773	2295	6068	No	3.2	Si
SLU 49	fin.	-375.52	-1131	0.9	0	365	7137	3773	2295	6068	No	5.37	Si
SLU 46	ini.	569.82	-1864	0.9	0	365	7137	3773	2295	6068	No	3.26	Si
SLU 46	fin.	-373.13	-1133	0.9	0	365	7137	3773	2295	6068	No	5.36	Si
SLU 50	ini.	576.43	-1891	0.9	0	365	7137	3773	2295	6068	No	3.21	Si
SLU 50	fin.	-380.81	-1151	0.9	0	365	7137	3773	2295	6068	No	5.27	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 2	ini.	900.34	-1478	-0.0005224	0.0002807	0.0035	0.9		2989.59	2989.59		3.32	Si
SLD 2	fin.	-755.39	122	-0.0004231	0.0002807	0.0035	0.9		2995.37	2995.37		3.97	Si
SLV 16	ini.	-690.66	131	-0.0003811	0.0002807	0.0035	0.9		2995.37	2995.37		4.34	Si
SLV 16	fin.	896.37	-1524	-0.0005196	0.0002807	0.0035	0.9		2989.59	2989.59		3.34	Si
SLV 6	ini.	916.76	-2338	-0.0005339	0.0002807	0.0035	0.9		2989.59	2989.59		3.26	Si
SLV 6	fin.	-577.11	-792	-0.0003106	0.0002807	0.0035	0.9		2995.37	2995.37		5.19	Si
SLV 2	ini.	1532.92	-2138	-0.001024	0.0002807	0.0035	0.9		2989.59	2989.59		1.95	Si
SLV 2	fin.	-1405.25	751	-0.0009104	0.0002807	0.0035	0.9		2995.37	2995.37		2.13	Si
SLV 3	ini.	1437.88	-1428	-0.0009405	0.0002807	0.0035	0.9		2989.59	2989.59		2.08	Si
SLV 3	fin.	-1456.05	1341	-0.0009539	0.0002807	0.0035	0.9		2995.37	2995.37		2.06	Si
SLV 14	ini.	-585.04	-530	-0.0003154	0.0002807	0.0035	0.9		2995.37	2995.37		5.12	Si
SLV 14	fin.	915.07	-2027	-0.0005327	0.0002807	0.0035	0.9		2989.59	2989.59		3.27	Si
SLV 5	ini.	923.51	-2307	-0.0005387	0.0002807	0.0035	0.9		2989.59	2989.59		3.24	Si
SLV 5	fin.	-597.61	-736	-0.0003231	0.0002807	0.0035	0.9		2995.37	2995.37		5.01	Si
SLV 4	ini.	1427.3	-1477	-0.0009314	0.0002807	0.0035	0.9		2989.59	2989.59		2.09	Si
SLV 4	fin.	-1423.96	1253	-0.0009263	0.0002807	0.0035	0.9		2995.37	2995.37		2.1	Si
SLV 1	ini.	1543.49	-2090	-0.0010334	0.0002807	0.0035	0.9		2989.59	2989.59		1.94	Si
SLV 1	fin.	-1437.35	839	-0.0009377	0.0002807	0.0035	0.9		2995.37	2995.37		2.08	Si
SLD 1	ini.	904.88	-1457	-0.0005256	0.0002807	0.0035	0.9		2989.59	2989.59		3.3	Si
SLD 1	fin.	-769.17	160	-0.0004321	0.0002807	0.0035	0.9		2995.37	2995.37		3.89	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 3	ini.	858.31	-2834	0.9	0	548	7137	5660	2295	7684		2.71	Si
SLD 3	fin.	-777.72	-2436	0.9	0	548	7137	5660	2295	7684		3.15	Si
SLV 14	ini.	-585.04	2025	0.9	0	548	7137	5660	2295	7684		3.8	Si
SLV 14	fin.	915.07	2919	0.9	0	548	7137	5660	2295	7684		2.63	Si
SLV 3	ini.	1437.88	-4786	0.9	0	548	7137	5660	2295	7684		1.61	Si
SLV 3	fin.	-1456.05	-4581	0.9	0	548	7137	5660	2295	7684		1.68	Si
SLD 2	ini.	900.34	-3018	0.9	0	548	7137	5660	2295	7684		2.55	Si
SLD 2	fin.	-755.39	-2349	0.9	0	548	7137	5660	2295	7684		3.27	Si
SLV 1	ini.	1543.49	-5230	0.9	0	548	7137	5660	2295	7684		1.47	Si
SLV 1	fin.	-1437.35	-4493	0.9	0	548	7137	5660	2295	7684		1.71	Si
SLV 2	ini.	1532.92	-5204	0.9	0	548	7137	5660	2295	7684		1.48	Si
SLV 2	fin.	-1405.25	-4383	0.9	0	548	7137	5660	2295	7684		1.75	Si
SLD 1	ini.	904.88	-3029	0.9	0	548	7137	5660	2295	7684		2.54	Si
SLD 1	fin.	-769.17	-2396	0.9	0	548	7137	5660	2295	7684		3.21	Si
SLV 4	ini.	1427.3	-4759	0.9	0	548	7137	5660	2295	7684		1.61	Si
SLV 4	fin.	-1423.96	-4470	0.9	0	548	7137	5660	2295	7684		1.72	Si
SLV 5	ini.	923.51	-3214	0.9	0	548	7137	5660	2295	7684		2.39	Si
SLV 5	fin.	-597.61	-1815	0.9	0	548	7137	5660	2295	7684		4.23	Si
SLV 6	ini.	916.76	-3197	0.9	0	548	7137	5660	2295	7684		2.4	Si
SLV 6	fin.	-577.11	-1745	0.9	0	548	7137	5660	2295	7684		4.4	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.937	SLV 1	Si
V_SLV	1.469	SLV 1	Si
PF_SLU	5.115	SLU 51	Si
V_SLU	3.197	SLU 51	Si

Trave di accoppiamento 108

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.063	5.826	8.14	8.96	0.82	-2.963	5.826	8.14	8.96	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 68	ini.	36.55	-212	-0.0000217	0.0001872	0.0035	0.82		2455.37	2455.37	No	67.18	Si
SLU 68	fin.	-387.74	-1064	-0.0002546	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.35	Si
SLU 72	ini.	33.48	-230	-0.0000199	0.0001872	0.0035	0.82		2455.37	2455.37	No	73.33	Si
SLU 72	fin.	-390.17	-1080	-0.0002564	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.31	Si
SLU 70	ini.	29.41	-249	-0.0000175	0.0001872	0.0035	0.82		2455.37	2455.37	No	83.49	Si
SLU 70	fin.	-389.68	-1089	-0.000256	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.31	Si
SLU 80	ini.	3.9	-380	-0.0000023	0.0001872	0.0035	0.82		2455.37	2455.37	No	630	Si
SLU 80	fin.	-385.61	-1130	-0.000253	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.38	Si
SLU 50	ini.	62.96	-72	-0.0000377	0.0001872	0.0035	0.82		2455.37	2455.37	No	39	Si
SLU 50	fin.	-385.56	-1002	-0.000253	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.38	Si
SLU 69	ini.	29.87	-244	-0.0000177	0.0001872	0.0035	0.82		2455.37	2455.37	No	82.19	Si
SLU 69	fin.	-387.12	-1080	-0.0002541	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.36	Si
SLU 51	ini.	62.5	-77	-0.0000374	0.0001872	0.0035	0.82		2455.37	2455.37	No	39.29	Si
SLU 51	fin.	-388.12	-1010	-0.0002549	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.34	Si
SLU 49	ini.	58.42	-97	-0.0000349	0.0001872	0.0035	0.82		2455.37	2455.37	No	42.03	Si
SLU 49	fin.	-387.63	-1019	-0.0002545	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.35	Si
SLU 47	ini.	65.56	-59	-0.0000392	0.0001872	0.0035	0.82		2455.37	2455.37	No	37.45	Si
SLU 47	fin.	-385.69	-994	-0.000253	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.38	Si
SLU 71	ini.	33.95	-225	-0.0000202	0.0001872	0.0035	0.82		2455.37	2455.37	No	72.33	Si
SLU 71	fin.	-387.61	-1072	-0.0002545	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.35	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	3.19	1339	0.82	0	303	6502	3438	2091	5529	No	4.13	Si
SLU 75	fin.	-380.98	-2237	0.82	0	303	6502	3438	2091	5529	No	2.47	Si
SLU 79	ini.	4.36	1346	0.82	0	303	6502	3438	2091	5529	No	4.11	Si
SLU 79	fin.	-383.05	-2254	0.82	0	303	6502	3438	2091	5529	No	2.45	Si
SLU 80	ini.	3.9	1354	0.82	0	303	6502	3438	2091	5529	No	4.08	Si
SLU 80	fin.	-385.61	-2265	0.82	0	303	6502	3438	2091	5529	No	2.44	Si
SLU 76	ini.	6.96	1311	0.82	0	303	6502	3438	2091	5529	No	4.22	Si
SLU 76	fin.	-383.18	-2239	0.82	0	303	6502	3438	2091	5529	No	2.47	Si
SLU 78	ini.	-0.18	1388	0.82	0	303	6502	3438	2091	5529	No	3.98	Si
SLU 78	fin.	-385.12	-2269	0.82	0	303	6502	3438	2091	5529	No	2.44	Si
SLU 77	ini.	0.29	1380	0.82	0	303	6502	3438	2091	5529	No	4.01	Si
SLU 77	fin.	-382.56	-2259	0.82	0	303	6502	3438	2091	5529	No	2.45	Si
SLU 82	ini.	-2.04	1398	0.82	0	303	6502	3438	2091	5529	No	3.96	Si
SLU 82	fin.	-375.37	-2229	0.82	0	303	6502	3438	2091	5529	No	2.48	Si
SLU 74	ini.	3.66	1331	0.82	0	303	6502	3438	2091	5529	No	4.15	Si
SLU 74	fin.	-378.41	-2226	0.82	0	303	6502	3438	2091	5529	No	2.48	Si
SLU 84	ini.	-5.41	1446	0.82	0	303	6502	3438	2091	5529	No	3.82	Si
SLU 84	fin.	-379.51	-2261	0.82	0	303	6502	3438	2091	5529	No	2.45	Si
SLU 83	ini.	-4.95	1438	0.82	0	303	6502	3438	2091	5529	No	3.85	Si
SLU 83	fin.	-376.95	-2251	0.82	0	303	6502	3438	2091	5529	No	2.46	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	477.98	1303	-0.0003105	0.0002807	0.0035	0.82		2482.11	2482.11		5.19	Si
SLV 2	fin.	-926.35	-1710	-0.0006783	0.0002807	0.0035	0.82		2487.45	2487.45		2.69	Si
SLV 1	ini.	490.14	1383	-0.0003194	0.0002807	0.0035	0.82		2482.11	2482.11		5.06	Si
SLV 1	fin.	-907.63	-1627	-0.0006612	0.0002807	0.0035	0.82		2487.45	2487.45		2.74	Si
SLV 3	ini.	523.81	1704	-0.0003444	0.0002807	0.0035	0.82		2482.11	2482.11		4.74	Si
SLV 3	fin.	-759.89	-1143	-0.0005318	0.0002807	0.0035	0.82		2487.45	2487.45		3.27	Si
SLV 4	ini.	511.65	1624	-0.0003353	0.0002807	0.0035	0.82		2482.11	2482.11		4.85	Si
SLV 4	fin.	-778.61	-1226	-0.0005477	0.0002807	0.0035	0.82		2487.45	2487.45		3.19	Si
SLV 6	ini.	110.73	-214	-0.0000665	0.0002807	0.0035	0.82		2482.11	2482.11		22.42	Si
SLV 6	fin.	-708.17	-1814	-0.0004886	0.0002807	0.0035	0.82		2487.45	2487.45		3.51	Si
SLD 1	ini.	226.17	505	-0.0001389	0.0002807	0.0035	0.82		2482.11	2482.11		10.97	Si
SLD 1	fin.	-555.16	-1151	-0.0003672	0.0002807	0.0035	0.82		2487.45	2487.45		4.48	Si
SLD 3	ini.	240.93	645	-0.0001484	0.0002807	0.0035	0.82		2482.11	2482.11		10.3	Si
SLD 3	fin.	-490.25	-938	-0.0003188	0.0002807	0.0035	0.82		2487.45	2487.45		5.07	Si
SLD 2	ini.	220.96	470	-0.0001355	0.0002807	0.0035	0.82		2482.11	2482.11		11.23	Si
SLD 2	fin.	-563.2	-1187	-0.0003734	0.0002807	0.0035	0.82		2487.45	2487.45		4.42	Si
SLV 5	ini.	118.49	-162	-0.0000713	0.0002807	0.0035	0.82		2482.11	2482.11		20.95	Si
SLV 5	fin.	-696.21	-1761	-0.0004788	0.0002807	0.0035	0.82		2487.45	2487.45		3.57	Si
SLD 4	ini.	235.72	611	-0.000145	0.0002807	0.0035	0.82		2482.11	2482.11		10.53	Si
SLD 4	fin.	-498.29	-973	-0.0003247	0.0002807	0.0035	0.82		2487.45	2487.45		4.99	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	477.98	-1334	0.82	0	455	6502	5156	2091	6957		5.21	Si
SLV 2	fin.	-926.35	-4079	0.82	0	455	6502	5156	2091	6957		1.71	Si
SLV 15	ini.	-419.53	2794	0.82	0	455	6502	5156	2091	6957		2.49	Si
SLV 15	fin.	346.28	820	0.82	0	455	6502	5156	2091	6957		8.48	Si
SLV 13	ini.	-453.2	3256	0.82	0	455	6502	5156	2091	6957		2.14	Si
SLV 13	fin.	198.54	228	0.82	0	455	6502	5156	2091	6957		30.52	Si
SLV 4	ini.	511.65	-1797	0.82	0	455	6502	5156	2091	6957		3.87	Si
SLV 4	fin.	-778.61	-3487	0.82	0	455	6502	5156	2091	6957		2	Si
SLV 14	ini.	-465.35	3411	0.82	0	455	6502	5156	2091	6957		2.04	Si
SLV 14	fin.	179.82	134	0.82	0	455	6502	5156	2091	6957		51.78	Si
SLV 5	ini.	118.49	740	0.82	0	455	6502	5156	2091	6957		9.41	Si
SLV 5	fin.	-696.21	-3218	0.82	0	455	6502	5156	2091	6957		2.16	Si
SLV 16	ini.	-431.69	2949	0.82	0	455	6502	5156	2091	6957		2.36	Si
SLV 16	fin.	327.56	727	0.82	0	455	6502	5156	2091	6957		9.58	Si
SLV 1	ini.	490.14	-1489	0.82	0	455	6502	5156	2091	6957		4.67	Si
SLV 1	fin.	-907.63	-3985	0.82	0	455	6502	5156	2091	6957		1.75	Si
SLV 3	ini.	523.81	-1951	0.82	0	455	6502	5156	2091	6957		3.57	Si
SLV 3	fin.	-759.89	-3393	0.82	0	455	6502	5156	2091	6957		2.05	Si
SLV 6	ini.	110.73	838	0.82	0	455	6502	5156	2091	6957		8.3	Si
SLV 6	fin.	-708.17	-3278	0.82	0	455	6502	5156	2091	6957		2.12	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.685	SLV 2	Si
V_SLV	1.706	SLV 2	Si
PF_SLU	6.306	SLU 72	Si
V_SLU	2.436	SLU 78	Si

Trave di accoppiamento 109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-0.133	1.266	7.54	8.96	1.42	-0.133	2.066	7.54	8.96	1.42	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-573.66	-2176	-0.0001178	0.0001872	0.0035	1.42		7359.91	7359.91	No	12.83	Si
SLU 79	fin.	63.74	-1220	-0.0000126	0.0001872	0.0035	1.42		7350.79	7350.79	No	115.32	Si
SLU 69	ini.	-580.15	-2126	-0.0001192	0.0001872	0.0035	1.42		7359.91	7359.91	No	12.69	Si
SLU 69	fin.	133.02	-1056	-0.0000264	0.0001872	0.0035	1.42		7350.79	7350.79	No	55.26	Si
SLU 70	ini.	-583.56	-2131	-0.00012	0.0001872	0.0035	1.42		7359.91	7359.91	No	12.61	Si
SLU 70	fin.	137.86	-1053	-0.0000273	0.0001872	0.0035	1.42		7350.79	7350.79	No	53.32	Si
SLU 80	ini.	-577.08	-2181	-0.0001186	0.0001872	0.0035	1.42		7359.91	7359.91	No	12.75	Si
SLU 80	fin.	68.58	-1217	-0.0000135	0.0001872	0.0035	1.42		7350.79	7350.79	No	107.19	Si
SLU 75	ini.	-569.83	-2153	-0.000117	0.0001872	0.0035	1.42		7359.91	7359.91	No	12.92	Si
SLU 75	fin.	65.95	-1204	-0.000013	0.0001872	0.0035	1.42		7350.79	7350.79	No	111.45	Si
SLU 77	ini.	-578.87	-2209	-0.000119	0.0001872	0.0035	1.42		7359.91	7359.91	No	12.71	Si
SLU 77	fin.	62.82	-1245	-0.0000124	0.0001872	0.0035	1.42		7350.79	7350.79	No	117.01	Si
SLU 71	ini.	-574.94	-2094	-0.0001181	0.0001872	0.0035	1.42		7359.91	7359.91	No	12.8	Si
SLU 71	fin.	133.95	-1031	-0.0000265	0.0001872	0.0035	1.42		7350.79	7350.79	No	54.88	Si
SLU 67	ini.	-571.11	-2070	-0.0001173	0.0001872	0.0035	1.42		7359.91	7359.91	No	12.89	Si
SLU 67	fin.	136.16	-1015	-0.000027	0.0001872	0.0035	1.42		7350.79	7350.79	No	53.99	Si
SLU 78	ini.	-582.28	-2214	-0.0001197	0.0001872	0.0035	1.42		7359.91	7359.91	No	12.64	Si
SLU 78	fin.	67.65	-1242	-0.0000133	0.0001872	0.0035	1.42		7350.79	7350.79	No	108.65	Si
SLU 72	ini.	-578.36	-2099	-0.0001189	0.0001872	0.0035	1.42		7359.91	7359.91	No	12.73	Si
SLU 72	fin.	138.78	-1028	-0.0000275	0.0001872	0.0035	1.42		7350.79	7350.79	No	52.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 71	ini.	-574.94	3035	1.42	0	576	6344	5953	3621	6920	No	2.28	Si
SLU 71	fin.	133.95	688	1.42	0	576	6344	5953	3621	6920	No	10.06	Si
SLU 49	ini.	-559.81	3028	1.42	0	576	6344	5953	3621	6920	No	2.28	Si
SLU 49	fin.	182.04	839	1.42	0	576	6344	5953	3621	6920	No	8.25	Si
SLU 67	ini.	-571.11	3014	1.42	0	576	6344	5953	3621	6920	No	2.3	Si
SLU 67	fin.	136.16	689	1.42	0	576	6344	5953	3621	6920	No	10.04	Si
SLU 66	ini.	-567.7	2994	1.42	0	576	6344	5953	3621	6920	No	2.31	Si
SLU 66	fin.	131.32	675	1.42	0	576	6344	5953	3621	6920	No	10.25	Si
SLU 78	ini.	-582.28	2989	1.42	0	576	6344	5953	3621	6920	No	2.32	Si
SLU 78	fin.	67.65	448	1.42	0	576	6344	5953	3621	6920	No	15.46	Si
SLU 69	ini.	-580.15	3078	1.42	0	576	6344	5953	3621	6920	No	2.25	Si
SLU 69	fin.	133.02	678	1.42	0	576	6344	5953	3621	6920	No	10.21	Si
SLU 72	ini.	-578.36	3055	1.42	0	576	6344	5953	3621	6920	No	2.27	Si
SLU 72	fin.	138.78	702	1.42	0	576	6344	5953	3621	6920	No	9.85	Si
SLU 48	ini.	-556.39	3009	1.42	0	576	6344	5953	3621	6920	No	2.3	Si
SLU 48	fin.	177.21	825	1.42	0	576	6344	5953	3621	6920	No	8.39	Si
SLU 70	ini.	-583.56	3098	1.42	0	576	6344	5953	3621	6920	No	2.23	Si
SLU 70	fin.	137.86	692	1.42	0	576	6344	5953	3621	6920	No	10	Si
SLU 51	ini.	-554.6	2986	1.42	0	576	6344	5953	3621	6920	No	2.32	Si
SLU 51	fin.	182.96	849	1.42	0	576	6344	5953	3621	6920	No	8.15	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 5	ini.	-493.47	-1665	-0.0000995	0.0002807	0.0035	1.42		7346.34	7346.34		14.89	Si
SLD 5	fin.	173.36	-620	-0.0000343	0.0002807	0.0035	1.42		7337.02	7337.02		42.32	Si
SLV 6	ini.	-633.67	-1946	-0.0001289	0.0002807	0.0035	1.42		7346.34	7346.34		11.59	Si
SLV 6	fin.	330.99	-428	-0.0000662	0.0002807	0.0035	1.42		7337.02	7337.02		22.17	Si
SLV 2	ini.	-573.72	-1890	-0.0001163	0.0002807	0.0035	1.42		7346.34	7346.34		12.8	Si
SLV 2	fin.	446.13	-664	-0.0000898	0.0002807	0.0035	1.42		7337.02	7337.02		16.45	Si
SLV 9	ini.	-550.73	-1739	-0.0001115	0.0002807	0.0035	1.42		7346.34	7346.34		13.34	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 9	fin.	117.99	-437	-0.0000233	0.0002807	0.0035	1.42		7337.02	7337.02		62.19	Si
SLD 2	ini.	-484.5	-1670	-0.0000977	0.0002807	0.0035	1.42		7346.34	7346.34		15.16	Si
SLD 2	fin.	242.42	-710	-0.0000482	0.0002807	0.0035	1.42		7337.02	7337.02		30.27	Si
SLV 10	ini.	-589.69	-1809	-0.0001197	0.0002807	0.0035	1.42		7346.34	7346.34		12.46	Si
SLV 10	fin.	162.42	-407	-0.0000322	0.0002807	0.0035	1.42		7337.02	7337.02		45.17	Si
SLD 10	ini.	-491.64	-1636	-0.0000991	0.0002807	0.0035	1.42		7346.34	7346.34		14.94	Si
SLD 10	fin.	120.53	-598	-0.0000238	0.0002807	0.0035	1.42		7337.02	7337.02		60.87	Si
SLV 1	ini.	-512.71	-1781	-0.0001035	0.0002807	0.0035	1.42		7346.34	7346.34		14.33	Si
SLV 1	fin.	376.55	-711	-0.0000755	0.0002807	0.0035	1.42		7337.02	7337.02		19.48	Si
SLV 5	ini.	-594.7	-1876	-0.0001207	0.0002807	0.0035	1.42		7346.34	7346.34		12.35	Si
SLV 5	fin.	286.55	-458	-0.0000571	0.0002807	0.0035	1.42		7337.02	7337.02		25.6	Si
SLD 6	ini.	-510.47	-1695	-0.0001031	0.0002807	0.0035	1.42		7346.34	7346.34		14.39	Si
SLD 6	fin.	192.74	-607	-0.0000382	0.0002807	0.0035	1.42		7337.02	7337.02		38.07	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 5	ini.	-493.47	2620	1.42	0	864	6344	8929	3621	7208		2.75	Si
SLD 5	fin.	173.36	1070	1.42	0	864	6344	8929	3621	7208		6.74	Si
SLV 4	ini.	-468.91	2756	1.42	0	864	6344	8929	3621	7208		2.62	Si
SLV 4	fin.	365.48	623	1.42	0	864	6344	8929	3621	7208		11.57	Si
SLV 5	ini.	-594.7	3229	1.42	0	864	6344	8929	3621	7208		2.23	Si
SLV 5	fin.	286.55	1833	1.42	0	864	6344	8929	3621	7208		3.93	Si
SLD 6	ini.	-510.47	2706	1.42	0	864	6344	8929	3621	7208		2.66	Si
SLD 6	fin.	192.74	1149	1.42	0	864	6344	8929	3621	7208		6.27	Si
SLV 9	ini.	-550.73	2792	1.42	0	864	6344	8929	3621	7208		2.58	Si
SLV 9	fin.	117.99	1598	1.42	0	864	6344	8929	3621	7208		4.51	Si
SLV 1	ini.	-512.71	3020	1.42	0	864	6344	8929	3621	7208		2.39	Si
SLV 1	fin.	376.55	1131	1.42	0	864	6344	8929	3621	7208		6.37	Si
SLV 6	ini.	-633.67	3425	1.42	0	864	6344	8929	3621	7208		2.1	Si
SLV 6	fin.	330.99	2014	1.42	0	864	6344	8929	3621	7208		3.58	Si
SLV 2	ini.	-573.72	3326	1.42	0	864	6344	8929	3621	7208		2.17	Si
SLV 2	fin.	446.13	1415	1.42	0	864	6344	8929	3621	7208		5.09	Si
SLD 2	ini.	-484.5	2660	1.42	0	864	6344	8929	3621	7208		2.71	Si
SLD 2	fin.	242.42	887	1.42	0	864	6344	8929	3621	7208		8.13	Si
SLV 10	ini.	-589.69	2987	1.42	0	864	6344	8929	3621	7208		2.41	Si
SLV 10	fin.	162.42	1780	1.42	0	864	6344	8929	3621	7208		4.05	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	11.593	SLV 6	Si
V_SLV	2.105	SLV 6	Si
PF_SLU	12.612	SLU 70	Si
V_SLU	2.234	SLU 70	Si

Trave di accoppiamento 110

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-22.713	5.826	8.96	9.86	0.9	-21.813	5.826	8.96	9.86	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 50	ini.	308.99	-1209	-0.0001615	0.0001872	0.0035	0.9		2959	2959	No	9.58	Si
SLU 50	fin.	-210.96	-268	-0.0001075	0.0001872	0.0035	0.9		2964.67	2964.67	No	14.05	Si
SLU 55	ini.	309.53	-1206	-0.0001618	0.0001872	0.0035	0.9		2959	2959	No	9.56	Si
SLU 55	fin.	-204.05	-297	-0.0001038	0.0001872	0.0035	0.9		2964.67	2964.67	No	14.53	Si
SLU 48	ini.	308.04	-1211	-0.000161	0.0001872	0.0035	0.9		2959	2959	No	9.61	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 48	fin.	-205.3	-284	-0.0001045	0.0001872	0.0035	0.9		2964.67	2964.67	No	14.44	Si
SLU 49	ini.	311.1	-1225	-0.0001627	0.0001872	0.0035	0.9		2959	2959	No	9.51	Si
SLU 49	fin.	-206.39	-288	-0.0001051	0.0001872	0.0035	0.9		2964.67	2964.67	No	14.36	Si
SLU 59	ini.	309.8	-1216	-0.000162	0.0001872	0.0035	0.9		2959	2959	No	9.55	Si
SLU 59	fin.	-196.13	-325	-0.0000996	0.0001872	0.0035	0.9		2964.67	2964.67	No	15.12	Si
SLU 47	ini.	311.77	-1213	-0.0001631	0.0001872	0.0035	0.9		2959	2959	No	9.49	Si
SLU 47	fin.	-219.97	-244	-0.0001123	0.0001872	0.0035	0.9		2964.67	2964.67	No	13.48	Si
SLU 51	ini.	312.04	-1223	-0.0001632	0.0001872	0.0035	0.9		2959	2959	No	9.48	Si
SLU 51	fin.	-212.05	-272	-0.0001081	0.0001872	0.0035	0.9		2964.67	2964.67	No	13.98	Si
SLU 44	ini.	309.46	-1193	-0.0001618	0.0001872	0.0035	0.9		2959	2959	No	9.56	Si
SLU 44	fin.	-227.15	-212	-0.0001162	0.0001872	0.0035	0.9		2964.67	2964.67	No	13.05	Si
SLU 46	ini.	308.79	-1205	-0.0001614	0.0001872	0.0035	0.9		2959	2959	No	9.58	Si
SLU 46	fin.	-213.58	-257	-0.0001089	0.0001872	0.0035	0.9		2964.67	2964.67	No	13.88	Si
SLU 57	ini.	308.86	-1218	-0.0001614	0.0001872	0.0035	0.9		2959	2959	No	9.58	Si
SLU 57	fin.	-190.47	-341	-0.0000966	0.0001872	0.0035	0.9		2964.67	2964.67	No	15.56	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 72	ini.	307.61	-1801	0.9	0	365	7137	3773	2295	6068	No	3.37	Si
SLU 72	fin.	-185.01	-571	0.9	0	365	7137	3773	2295	6068	No	10.63	Si
SLU 47	ini.	311.77	-1840	0.9	0	365	7137	3773	2295	6068	No	3.3	Si
SLU 47	fin.	-219.97	-708	0.9	0	365	7137	3773	2295	6068	No	8.57	Si
SLU 45	ini.	305.73	-1810	0.9	0	365	7137	3773	2295	6068	No	3.35	Si
SLU 45	fin.	-212.48	-676	0.9	0	365	7137	3773	2295	6068	No	8.97	Si
SLU 46	ini.	308.79	-1832	0.9	0	365	7137	3773	2295	6068	No	3.31	Si
SLU 46	fin.	-213.58	-678	0.9	0	365	7137	3773	2295	6068	No	8.95	Si
SLU 44	ini.	309.46	-1800	0.9	0	365	7137	3773	2295	6068	No	3.37	Si
SLU 44	fin.	-227.15	-752	0.9	0	365	7137	3773	2295	6068	No	8.07	Si
SLU 49	ini.	311.1	-1872	0.9	0	365	7137	3773	2295	6068	No	3.24	Si
SLU 49	fin.	-206.39	-634	0.9	0	365	7137	3773	2295	6068	No	9.58	Si
SLU 51	ini.	312.04	-1865	0.9	0	365	7137	3773	2295	6068	No	3.25	Si
SLU 51	fin.	-212.05	-662	0.9	0	365	7137	3773	2295	6068	No	9.17	Si
SLU 70	ini.	306.66	-1808	0.9	0	365	7137	3773	2295	6068	No	3.36	Si
SLU 70	fin.	-179.35	-543	0.9	0	365	7137	3773	2295	6068	No	11.18	Si
SLU 50	ini.	308.99	-1843	0.9	0	365	7137	3773	2295	6068	No	3.29	Si
SLU 50	fin.	-210.96	-660	0.9	0	365	7137	3773	2295	6068	No	9.2	Si
SLU 48	ini.	308.04	-1850	0.9	0	365	7137	3773	2295	6068	No	3.28	Si
SLU 48	fin.	-205.3	-632	0.9	0	365	7137	3773	2295	6068	No	9.61	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	737.74	-2677	-0.0004124	0.0002807	0.0035	0.9		2989.59	2989.59		4.05	Si
SLV 13	fin.	-793.54	420	-0.0004483	0.0002807	0.0035	0.9		2995.37	2995.37		3.77	Si
SLD 13	ini.	449.14	-1664	-0.0002361	0.0002807	0.0035	0.9		2989.59	2989.59		6.66	Si
SLD 13	fin.	-428.31	53	-0.0002238	0.0002807	0.0035	0.9		2995.37	2995.37		6.99	Si
SLV 14	ini.	676.49	-2443	-0.0003729	0.0002807	0.0035	0.9		2989.59	2989.59		4.42	Si
SLV 14	fin.	-742.45	414	-0.0004146	0.0002807	0.0035	0.9		2995.37	2995.37		4.03	Si
SLV 4	ini.	-275.63	884	-0.0001403	0.0002807	0.0035	0.9		2995.37	2995.37		10.87	Si
SLV 4	fin.	485.69	-857	-0.0002571	0.0002807	0.0035	0.9		2989.59	2989.59		6.16	Si
SLV 9	ini.	678.6	-2721	-0.0003743	0.0002807	0.0035	0.9		2989.59	2989.59		4.41	Si
SLV 9	fin.	-517	-288	-0.0002748	0.0002807	0.0035	0.9		2995.37	2995.37		5.79	Si
SLV 16	ini.	488.47	-1619	-0.0002587	0.0002807	0.0035	0.9		2989.59	2989.59		6.12	Si
SLV 16	fin.	-635.28	586	-0.0003463	0.0002807	0.0035	0.9		2995.37	2995.37		4.72	Si
SLV 3	ini.	-214.38	650	-0.000108	0.0002807	0.0035	0.9		2995.37	2995.37		13.97	Si
SLV 3	fin.	434.6	-852	-0.0002278	0.0002807	0.0035	0.9		2989.59	2989.59		6.88	Si
SLV 5	ini.	449.37	-1970	-0.0002362	0.0002807	0.0035	0.9		2989.59	2989.59		6.65	Si
SLV 5	fin.	-180.7	-721	-0.0000906	0.0002807	0.0035	0.9		2995.37	2995.37		16.58	Si
SLV 15	ini.	549.72	-1853	-0.0002948	0.0002807	0.0035	0.9		2989.59	2989.59		5.44	Si
SLV 15	fin.	-686.37	592	-0.0003784	0.0002807	0.0035	0.9		2995.37	2995.37		4.36	Si
SLV 10	ini.	639.48	-2571	-0.0003496	0.0002807	0.0035	0.9		2989.59	2989.59		4.67	Si
SLV 10	fin.	-484.37	-292	-0.0002558	0.0002807	0.0035	0.9		2995.37	2995.37		6.18	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 6	ini.	410.26	-2781	0.9	0	548	7137	5659	2295	7684		2.76	Si
SLV 6	fin.	-148.08	-175	0.9	0	548	7137	5659	2295	7684		44	Si
SLV 14	ini.	676.49	-3941	0.9	0	548	7137	5659	2295	7684		1.95	Si
SLV 14	fin.	-742.45	-2530	0.9	0	548	7137	5659	2295	7684		3.04	Si
SLV 15	ini.	549.72	-2978	0.9	0	548	7137	5659	2295	7684		2.58	Si
SLV 15	fin.	-686.37	-2509	0.9	0	548	7137	5659	2295	7684		3.06	Si
SLD 9	ini.	426.3	-2621	0.9	0	548	7137	5659	2295	7684		2.93	Si
SLD 9	fin.	-311.01	-934	0.9	0	548	7137	5659	2295	7684		8.23	Si
SLV 16	ini.	488.47	-2586	0.9	0	548	7137	5659	2295	7684		2.97	Si
SLV 16	fin.	-635.28	-2343	0.9	0	548	7137	5659	2295	7684		3.28	Si
SLV 9	ini.	678.6	-4329	0.9	0	548	7137	5659	2295	7684		1.78	Si
SLV 9	fin.	-517	-1482	0.9	0	548	7137	5659	2295	7684		5.18	Si
SLV 10	ini.	639.48	-4079	0.9	0	548	7137	5659	2295	7684		1.88	Si
SLV 10	fin.	-484.37	-1376	0.9	0	548	7137	5659	2295	7684		5.58	Si
SLD 13	ini.	449.14	-2605	0.9	0	548	7137	5659	2295	7684		2.95	Si
SLD 13	fin.	-428.31	-1452	0.9	0	548	7137	5659	2295	7684		5.29	Si
SLV 13	ini.	737.74	-4333	0.9	0	548	7137	5659	2295	7684		1.77	Si
SLV 13	fin.	-793.54	-2696	0.9	0	548	7137	5659	2295	7684		2.85	Si
SLV 5	ini.	449.37	-3031	0.9	0	548	7137	5659	2295	7684		2.53	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 5	fin.	-180.7	-281	0.9	0	548	7137	5659	2295	7684		27.36	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.775	SLV 13	Si
V_SLV	1.774	SLV 13	Si
PF_SLU	9.483	SLU 51	Si
V_SLU	3.242	SLU 49	Si

Trave di accoppiamento 111

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-22.713	5.826	11.66	12.48	0.82	-21.813	5.826	11.66	12.48	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 51	ini.	88.01	16	-0.0000529	0.0001872	0.0035	0.82		2455.37	2455.37	No	27.9	Si
SLU 51	fin.	-237.91	-964	-0.0001487	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.34	Si
SLU 49	ini.	82.6	-1	-0.0000496	0.0001872	0.0035	0.82		2455.37	2455.37	No	29.73	Si
SLU 49	fin.	-237.58	-970	-0.0001485	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.36	Si
SLU 57	ini.	56.17	-77	-0.0000335	0.0001872	0.0035	0.82		2455.37	2455.37	No	43.72	Si
SLU 57	fin.	-235.79	-995	-0.0001473	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.44	Si
SLU 52	ini.	87.9	20	-0.0000529	0.0001872	0.0035	0.82		2455.37	2455.37	No	27.93	Si
SLU 52	fin.	-238.59	-960	-0.0001491	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.31	Si
SLU 54	ini.	68.96	-37	-0.0000413	0.0001872	0.0035	0.82		2455.37	2455.37	No	35.61	Si
SLU 54	fin.	-235.99	-977	-0.0001474	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.43	Si
SLU 55	ini.	75.11	-20	-0.000045	0.0001872	0.0035	0.82		2455.37	2455.37	No	32.69	Si
SLU 55	fin.	-238.38	-979	-0.000149	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.32	Si
SLU 47	ini.	101.54	56	-0.0000613	0.0001872	0.0035	0.82		2455.37	2455.37	No	24.18	Si
SLU 47	fin.	-240.18	-953	-0.0001502	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.24	Si
SLU 59	ini.	61.57	-61	-0.0000368	0.0001872	0.0035	0.82		2455.37	2455.37	No	39.88	Si
SLU 59	fin.	-236.12	-989	-0.0001475	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.42	Si
SLU 44	ini.	114.33	97	-0.0000692	0.0001872	0.0035	0.82		2455.37	2455.37	No	21.48	Si
SLU 44	fin.	-240.38	-935	-0.0001503	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.24	Si
SLU 46	ini.	95.39	40	-0.0000575	0.0001872	0.0035	0.82		2455.37	2455.37	No	25.74	Si
SLU 46	fin.	-237.79	-952	-0.0001486	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.35	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	29.46	492	0.82	0	303	6502	3438	2091	5529	No	11.24	Si
SLU 74	fin.	-227.6	-2131	0.82	0	303	6502	3438	2091	5529	No	2.59	Si
SLU 79	ini.	22.08	534	0.82	0	303	6502	3438	2091	5529	No	10.36	Si
SLU 79	fin.	-227.73	-2157	0.82	0	303	6502	3438	2091	5529	No	2.56	Si
SLU 83	ini.	23.54	535	0.82	0	303	6502	3438	2091	5529	No	10.33	Si
SLU 83	fin.	-227.16	-2157	0.82	0	303	6502	3438	2091	5529	No	2.56	Si
SLU 76	ini.	36.73	456	0.82	0	303	6502	3438	2091	5529	No	12.13	Si
SLU 76	fin.	-233.09	-2148	0.82	0	303	6502	3438	2091	5529	No	2.57	Si
SLU 78	ini.	17.79	561	0.82	0	303	6502	3438	2091	5529	No	9.85	Si
SLU 78	fin.	-230.49	-2185	0.82	0	303	6502	3438	2091	5529	No	2.53	Si
SLU 77	ini.	16.67	564	0.82	0	303	6502	3438	2091	5529	No	9.79	Si
SLU 77	fin.	-227.4	-2168	0.82	0	303	6502	3438	2091	5529	No	2.55	Si
SLU 82	ini.	37.45	459	0.82	0	303	6502	3438	2091	5529	No	12.04	Si
SLU 82	fin.	-230.46	-2136	0.82	0	303	6502	3438	2091	5529	No	2.59	Si
SLU 80	ini.	23.2	531	0.82	0	303	6502	3438	2091	5529	No	10.42	Si
SLU 80	fin.	-230.82	-2174	0.82	0	303	6502	3438	2091	5529	No	2.54	Si
SLU 84	ini.	24.66	532	0.82	0	303	6502	3438	2091	5529	No	10.4	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	fin.	-230.26	-2174	0.82	0	303	6502	3438	2091	5529	No	2.54	Si
SLU 75	ini.	30.58	489	0.82	0	303	6502	3438	2091	5529	No	11.31	Si
SLU 75	fin.	-230.7	-2148	0.82	0	303	6502	3438	2091	5529	No	2.57	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	367.28	591	-0.0002323	0.0002807	0.0035	0.82		2482.11	2482.11		6.76	Si
SLV 14	fin.	-511.62	-1623	-0.0003345	0.0002807	0.0035	0.82		2487.45	2487.45		4.86	Si
SLV 5	ini.	146.94	44	-0.0000889	0.0002807	0.0035	0.82		2482.11	2482.11		16.89	Si
SLV 5	fin.	-424.49	-1653	-0.0002715	0.0002807	0.0035	0.82		2487.45	2487.45		5.86	Si
SLV 6	ini.	109.95	-15	-0.000066	0.0002807	0.0035	0.82		2482.11	2482.11		22.57	Si
SLV 6	fin.	-376.68	-1495	-0.0002383	0.0002807	0.0035	0.82		2487.45	2487.45		6.6	Si
SLV 13	ini.	425.2	684	-0.0002726	0.0002807	0.0035	0.82		2482.11	2482.11		5.84	Si
SLV 13	fin.	-586.47	-1871	-0.0003913	0.0002807	0.0035	0.82		2487.45	2487.45		4.24	Si
SLD 9	ini.	172.55	166	-0.0001049	0.0002807	0.0035	0.82		2482.11	2482.11		14.38	Si
SLD 9	fin.	-358.72	-1317	-0.000226	0.0002807	0.0035	0.82		2487.45	2487.45		6.93	Si
SLD 13	ini.	216.03	290	-0.0001324	0.0002807	0.0035	0.82		2482.11	2482.11		11.49	Si
SLD 13	fin.	-353.99	-1221	-0.0002228	0.0002807	0.0035	0.82		2487.45	2487.45		7.03	Si
SLV 10	ini.	284.55	337	-0.0001768	0.0002807	0.0035	0.82		2482.11	2482.11		8.72	Si
SLV 10	fin.	-544.36	-1917	-0.0003591	0.0002807	0.0035	0.82		2487.45	2487.45		4.57	Si
SLD 10	ini.	156.42	141	-0.0000948	0.0002807	0.0035	0.82		2482.11	2482.11		15.87	Si
SLD 10	fin.	-337.86	-1248	-0.0002119	0.0002807	0.0035	0.82		2487.45	2487.45		7.36	Si
SLV 15	ini.	330.47	565	-0.0002073	0.0002807	0.0035	0.82		2482.11	2482.11		7.51	Si
SLV 15	fin.	-402.33	-1236	-0.000256	0.0002807	0.0035	0.82		2487.45	2487.45		6.18	Si
SLV 9	ini.	321.54	396	-0.0002013	0.0002807	0.0035	0.82		2482.11	2482.11		7.72	Si
SLV 9	fin.	-592.16	-2075	-0.0003957	0.0002807	0.0035	0.82		2487.45	2487.45		4.2	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	367.28	-810	0.82	0	455	6502	5156	2091	6957		8.59	Si
SLV 14	fin.	-511.62	-2993	0.82	0	455	6502	5156	2091	6957		2.32	Si
SLD 13	ini.	216.03	-352	0.82	0	455	6502	5156	2091	6957		19.79	Si
SLD 13	fin.	-353.99	-2334	0.82	0	455	6502	5156	2091	6957		2.98	Si
SLV 9	ini.	321.54	-461	0.82	0	455	6502	5156	2091	6957		15.08	Si
SLV 9	fin.	-592.16	-3655	0.82	0	455	6502	5156	2091	6957		1.9	Si
SLV 5	ini.	146.94	145	0.82	0	455	6502	5156	2091	6957		47.81	Si
SLV 5	fin.	-424.49	-2964	0.82	0	455	6502	5156	2091	6957		2.35	Si
SLD 10	ini.	156.42	-46	0.82	0	455	6502	5156	2091	6957		149.72	Si
SLD 10	fin.	-337.86	-2358	0.82	0	455	6502	5156	2091	6957		2.95	Si
SLD 9	ini.	172.55	-109	0.82	0	455	6502	5156	2091	6957		63.89	Si
SLD 9	fin.	-358.72	-2466	0.82	0	455	6502	5156	2091	6957		2.82	Si
SLV 10	ini.	284.55	-318	0.82	0	455	6502	5156	2091	6957		21.85	Si
SLV 10	fin.	-544.36	-3409	0.82	0	455	6502	5156	2091	6957		2.04	Si
SLV 6	ini.	109.95	289	0.82	0	455	6502	5156	2091	6957		24.11	Si
SLV 6	fin.	-376.68	-2718	0.82	0	455	6502	5156	2091	6957		2.56	Si
SLV 15	ini.	330.47	-883	0.82	0	455	6502	5156	2091	6957		7.88	Si
SLV 15	fin.	-402.33	-2391	0.82	0	455	6502	5156	2091	6957		2.91	Si
SLV 13	ini.	425.2	-1034	0.82	0	455	6502	5156	2091	6957		6.73	Si
SLV 13	fin.	-586.47	-3378	0.82	0	455	6502	5156	2091	6957		2.06	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.201	SLV 9	Si
V_SLV	1.904	SLV 9	Si
PF_SLU	10.236	SLU 44	Si
V_SLU	2.53	SLU 78	Si

Trave di accoppiamento 112

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.593	-3.314	8.96	9.86	0.9	-22.493	-3.314	8.96	9.86	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	468.56	-1694	-0.000256	0.0001872	0.0035	0.9		2959	2959	No	6.32	Si
SLU 80	fin.	-269.49	-146	-0.0001392	0.0001872	0.0035	0.9		2964.67	2964.67	No	11	Si
SLU 84	ini.	481.56	-1721	-0.0002641	0.0001872	0.0035	0.9		2959	2959	No	6.14	Si
SLU 84	fin.	-291.21	-104	-0.0001513	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.18	Si
SLU 77	ini.	471.13	-1719	-0.0002576	0.0001872	0.0035	0.9		2959	2959	No	6.28	Si
SLU 77	fin.	-259.77	-184	-0.0001339	0.0001872	0.0035	0.9		2964.67	2964.67	No	11.41	Si
SLU 78	ini.	473.75	-1719	-0.0002593	0.0001872	0.0035	0.9		2959	2959	No	6.25	Si
SLU 78	fin.	-268.26	-161	-0.0001386	0.0001872	0.0035	0.9		2964.67	2964.67	No	11.05	Si
SLU 83	ini.	478.94	-1721	-0.0002625	0.0001872	0.0035	0.9		2959	2959	No	6.18	Si
SLU 83	fin.	-282.72	-128	-0.0001465	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.49	Si
SLU 81	ini.	466.34	-1674	-0.0002546	0.0001872	0.0035	0.9		2959	2959	No	6.35	Si
SLU 81	fin.	-278.11	-117	-0.000144	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.66	Si
SLU 82	ini.	468.96	-1674	-0.0002563	0.0001872	0.0035	0.9		2959	2959	No	6.31	Si
SLU 82	fin.	-286.6	-94	-0.0001487	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.34	Si
SLU 79	ini.	465.93	-1694	-0.0002544	0.0001872	0.0035	0.9		2959	2959	No	6.35	Si
SLU 79	fin.	-260.99	-170	-0.0001346	0.0001872	0.0035	0.9		2964.67	2964.67	No	11.36	Si
SLU 75	ini.	461.16	-1671	-0.0002514	0.0001872	0.0035	0.9		2959	2959	No	6.42	Si
SLU 75	fin.	-263.66	-150	-0.000136	0.0001872	0.0035	0.9		2964.67	2964.67	No	11.24	Si
SLU 74	ini.	458.53	-1671	-0.0002498	0.0001872	0.0035	0.9		2959	2959	No	6.45	Si
SLU 74	fin.	-255.16	-173	-0.0001314	0.0001872	0.0035	0.9		2964.67	2964.67	No	11.62	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	468.96	-2488	0.9	0	365	7137	3773	2295	6068	No	2.44	Si
SLU 82	fin.	-286.6	-1227	0.9	0	365	7137	3773	2295	6068	No	4.95	Si
SLU 79	ini.	465.93	-2525	0.9	0	365	7137	3773	2295	6068	No	2.4	Si
SLU 79	fin.	-260.99	-1094	0.9	0	365	7137	3773	2295	6068	No	5.54	Si
SLU 83	ini.	478.94	-2561	0.9	0	365	7137	3773	2295	6068	No	2.37	Si
SLU 83	fin.	-282.72	-1198	0.9	0	365	7137	3773	2295	6068	No	5.07	Si
SLU 78	ini.	473.75	-2567	0.9	0	365	7137	3773	2295	6068	No	2.36	Si
SLU 78	fin.	-268.26	-1121	0.9	0	365	7137	3773	2295	6068	No	5.41	Si
SLU 74	ini.	458.53	-2484	0.9	0	365	7137	3773	2295	6068	No	2.44	Si
SLU 74	fin.	-255.16	-1075	0.9	0	365	7137	3773	2295	6068	No	5.64	Si
SLU 75	ini.	461.16	-2489	0.9	0	365	7137	3773	2295	6068	No	2.44	Si
SLU 75	fin.	-263.66	-1113	0.9	0	365	7137	3773	2295	6068	No	5.45	Si
SLU 81	ini.	466.34	-2483	0.9	0	365	7137	3773	2295	6068	No	2.44	Si
SLU 81	fin.	-278.11	-1189	0.9	0	365	7137	3773	2295	6068	No	5.1	Si
SLU 84	ini.	481.56	-2566	0.9	0	365	7137	3773	2295	6068	No	2.36	Si
SLU 84	fin.	-291.21	-1236	0.9	0	365	7137	3773	2295	6068	No	4.91	Si
SLU 80	ini.	468.56	-2530	0.9	0	365	7137	3773	2295	6068	No	2.4	Si
SLU 80	fin.	-269.49	-1132	0.9	0	365	7137	3773	2295	6068	No	5.36	Si
SLU 77	ini.	471.13	-2562	0.9	0	365	7137	3773	2295	6068	No	2.37	Si
SLU 77	fin.	-259.77	-1084	0.9	0	365	7137	3773	2295	6068	No	5.6	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	812.27	-2236	-0.0004619	0.0002807	0.0035	0.9		2989.59	2989.59		3.68	Si
SLV 2	fin.	-918.9	1292	-0.0005343	0.0002807	0.0035	0.9		2995.37	2995.37		3.26	Si
SLV 16	ini.	-245.51	53	-0.0001243	0.0002807	0.0035	0.9		2995.37	2995.37		12.2	Si
SLV 16	fin.	681.35	-1786	-0.000376	0.0002807	0.0035	0.9		2989.59	2989.59		4.39	Si
SLV 1	ini.	846.03	-2276	-0.0004848	0.0002807	0.0035	0.9		2989.59	2989.59		3.53	Si
SLV 1	fin.	-995.94	1488	-0.0005893	0.0002807	0.0035	0.9		2995.37	2995.37		3.01	Si
SLD 2	ini.	519.67	-1592	-0.000277	0.0002807	0.0035	0.9		2989.59	2989.59		5.75	Si
SLD 2	fin.	-484.36	471	-0.0002558	0.0002807	0.0035	0.9		2995.37	2995.37		6.18	Si
SLV 4	ini.	755.22	-2361	-0.0004238	0.0002807	0.0035	0.9		2989.59	2989.59		3.96	Si
SLV 4	fin.	-669.15	552	-0.0003675	0.0002807	0.0035	0.9		2995.37	2995.37		4.48	Si
SLV 15	ini.	-211.75	13	-0.0001067	0.0002807	0.0035	0.9		2995.37	2995.37		14.15	Si
SLV 15	fin.	604.31	-1590	-0.0003278	0.0002807	0.0035	0.9		2989.59	2989.59		4.95	Si
SLV 3	ini.	788.99	-2401	-0.0004462	0.0002807	0.0035	0.9		2989.59	2989.59		3.79	Si
SLV 3	fin.	-746.19	748	-0.000417	0.0002807	0.0035	0.9		2995.37	2995.37		4.01	Si
SLV 6	ini.	534.67	-1253	-0.0002858	0.0002807	0.0035	0.9		2989.59	2989.59		5.59	Si
SLV 6	fin.	-751.52	1371	-0.0004205	0.0002807	0.0035	0.9		2995.37	2995.37		3.99	Si
SLV 5	ini.	556.24	-1278	-0.0002987	0.0002807	0.0035	0.9		2989.59	2989.59		5.37	Si
SLV 5	fin.	-800.72	1497	-0.0004531	0.0002807	0.0035	0.9		2995.37	2995.37		3.74	Si
SLD 1	ini.	534.16	-1609	-0.0002855	0.0002807	0.0035	0.9		2989.59	2989.59		5.6	Si
SLD 1	fin.	-517.43	555	-0.0002751	0.0002807	0.0035	0.9		2995.37	2995.37		5.79	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 4	ini.	494.76	-2687	0.9	0	548	7137	5660	2295	7684		2.86	Si
SLD 4	fin.	-374.69	-1461	0.9	0	548	7137	5660	2295	7684		5.26	Si
SLD 3	ini.	509.25	-2755	0.9	0	548	7137	5660	2295	7684		2.79	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 3	fin.	-407.76	-1598	0.9	0	548	7137	5660	2295	7684		4.81	Si
SLD 1	ini.	534.16	-2754	0.9	0	548	7137	5660	2295	7684		2.79	Si
SLD 1	fin.	-517.43	-2082	0.9	0	548	7137	5660	2295	7684		3.69	Si
SLV 5	ini.	556.24	-2447	0.9	0	548	7137	5660	2295	7684		3.14	Si
SLV 5	fin.	-800.72	-3379	0.9	0	548	7137	5660	2295	7684		2.27	Si
SLV 4	ini.	755.22	-4080	0.9	0	548	7137	5660	2295	7684		1.88	Si
SLV 4	fin.	-669.15	-2532	0.9	0	548	7137	5660	2295	7684		3.03	Si
SLV 1	ini.	846.03	-4236	0.9	0	548	7137	5660	2295	7684		1.81	Si
SLV 1	fin.	-995.94	-3951	0.9	0	548	7137	5660	2295	7684		1.94	Si
SLD 2	ini.	519.67	-2687	0.9	0	548	7137	5660	2295	7684		2.86	Si
SLD 2	fin.	-484.36	-1945	0.9	0	548	7137	5660	2295	7684		3.95	Si
SLV 3	ini.	788.99	-4237	0.9	0	548	7137	5660	2295	7684		1.81	Si
SLV 3	fin.	-746.19	-2851	0.9	0	548	7137	5660	2295	7684		2.7	Si
SLV 2	ini.	812.27	-4078	0.9	0	548	7137	5660	2295	7684		1.88	Si
SLV 2	fin.	-918.9	-3632	0.9	0	548	7137	5660	2295	7684		2.12	Si
SLV 6	ini.	534.67	-2346	0.9	0	548	7137	5660	2295	7684		3.28	Si
SLV 6	fin.	-751.52	-3175	0.9	0	548	7137	5660	2295	7684		2.42	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.008	SLV 1	Si
V_SLV	1.814	SLV 3	Si
PF_SLU	6.145	SLU 84	Si
V_SLU	2.363	SLU 78	Si

Trave di accoppiamento 113

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.593	-3.314	11.66	12.48	0.82	-22.493	-3.314	11.66	12.48	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	122.9	146	-0.0000746	0.0001872	0.0035	0.82		2455.37	2455.37	No	19.98	Si
SLU 83	fin.	-499.85	-1226	-0.0003415	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.92	Si
SLU 75	ini.	110.11	109	-0.0000666	0.0001872	0.0035	0.82		2455.37	2455.37	No	22.3	Si
SLU 75	fin.	-475.23	-1176	-0.0003219	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.18	Si
SLU 77	ini.	104.53	78	-0.0000631	0.0001872	0.0035	0.82		2455.37	2455.37	No	23.49	Si
SLU 77	fin.	-485.03	-1218	-0.0003296	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.07	Si
SLU 84	ini.	128.42	166	-0.000078	0.0001872	0.0035	0.82		2455.37	2455.37	No	19.12	Si
SLU 84	fin.	-503.51	-1226	-0.0003444	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.89	Si
SLU 78	ini.	110.05	98	-0.0000666	0.0001872	0.0035	0.82		2455.37	2455.37	No	22.31	Si
SLU 78	fin.	-488.69	-1219	-0.0003325	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.03	Si
SLU 82	ini.	128.48	178	-0.0000781	0.0001872	0.0035	0.82		2455.37	2455.37	No	19.11	Si
SLU 82	fin.	-490.05	-1184	-0.0003336	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.02	Si
SLU 80	ini.	113.59	116	-0.0000688	0.0001872	0.0035	0.82		2455.37	2455.37	No	21.62	Si
SLU 80	fin.	-484.91	-1201	-0.0003295	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.07	Si
SLU 79	ini.	108.07	96	-0.0000653	0.0001872	0.0035	0.82		2455.37	2455.37	No	22.72	Si
SLU 79	fin.	-481.24	-1200	-0.0003266	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.11	Si
SLU 76	ini.	117.33	141	-0.0000711	0.0001872	0.0035	0.82		2455.37	2455.37	No	20.93	Si
SLU 76	fin.	-473.89	-1159	-0.0003208	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.19	Si
SLU 81	ini.	122.96	158	-0.0000746	0.0001872	0.0035	0.82		2455.37	2455.37	No	19.97	Si
SLU 81	fin.	-486.39	-1183	-0.0003307	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.06	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	110.05	198	0.82	0	303	6502	3438	2091	5529	No	27.9	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	fin.	-488.69	-2471	0.82	0	303	6502	3438	2091	5529	No	2.24	Si
SLU 75	ini.	110.11	179	0.82	0	303	6502	3438	2091	5529	No	30.85	Si
SLU 75	fin.	-475.23	-2408	0.82	0	303	6502	3438	2091	5529	No	2.3	Si
SLU 83	ini.	122.9	137	0.82	0	303	6502	3438	2091	5529	No	40.24	Si
SLU 83	fin.	-499.85	-2519	0.82	0	303	6502	3438	2091	5529	No	2.19	Si
SLU 82	ini.	128.48	89	0.82	0	303	6502	3438	2091	5529	No	61.92	Si
SLU 82	fin.	-490.05	-2468	0.82	0	303	6502	3438	2091	5529	No	2.24	Si
SLU 81	ini.	122.96	118	0.82	0	303	6502	3438	2091	5529	No	46.68	Si
SLU 81	fin.	-486.39	-2456	0.82	0	303	6502	3438	2091	5529	No	2.25	Si
SLU 80	ini.	113.59	167	0.82	0	303	6502	3438	2091	5529	No	33.14	Si
SLU 80	fin.	-484.91	-2447	0.82	0	303	6502	3438	2091	5529	No	2.26	Si
SLU 77	ini.	104.53	227	0.82	0	303	6502	3438	2091	5529	No	24.32	Si
SLU 77	fin.	-485.03	-2459	0.82	0	303	6502	3438	2091	5529	No	2.25	Si
SLU 74	ini.	104.59	208	0.82	0	303	6502	3438	2091	5529	No	26.54	Si
SLU 74	fin.	-471.57	-2396	0.82	0	303	6502	3438	2091	5529	No	2.31	Si
SLU 79	ini.	108.07	196	0.82	0	303	6502	3438	2091	5529	No	28.22	Si
SLU 79	fin.	-481.24	-2435	0.82	0	303	6502	3438	2091	5529	No	2.27	Si
SLU 84	ini.	128.42	108	0.82	0	303	6502	3438	2091	5529	No	51.07	Si
SLU 84	fin.	-503.51	-2531	0.82	0	303	6502	3438	2091	5529	No	2.18	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	485.22	1488	-0.0003158	0.0002807	0.0035	0.82		2482.11	2482.11		5.12	Si
SLV 2	fin.	-778.03	-1433	-0.0005472	0.0002807	0.0035	0.82		2487.45	2487.45		3.2	Si
SLD 2	ini.	245.73	668	-0.0001515	0.0002807	0.0035	0.82		2482.11	2482.11		10.1	Si
SLD 2	fin.	-506.7	-1044	-0.0003309	0.0002807	0.0035	0.82		2487.45	2487.45		4.91	Si
SLD 3	ini.	191.65	466	-0.0001169	0.0002807	0.0035	0.82		2482.11	2482.11		12.95	Si
SLD 3	fin.	-475.19	-1057	-0.0003078	0.0002807	0.0035	0.82		2487.45	2487.45		5.23	Si
SLV 1	ini.	564.54	1765	-0.0003753	0.0002807	0.0035	0.82		2482.11	2482.11		4.4	Si
SLV 1	fin.	-856.02	-1515	-0.000615	0.0002807	0.0035	0.82		2487.45	2487.45		2.91	Si
SLV 3	ini.	363.96	1035	-0.0002301	0.0002807	0.0035	0.82		2482.11	2482.11		6.82	Si
SLV 3	fin.	-707.71	-1463	-0.0004882	0.0002807	0.0035	0.82		2487.45	2487.45		3.51	Si
SLV 5	ini.	532.13	1718	-0.0003506	0.0002807	0.0035	0.82		2482.11	2482.11		4.66	Si
SLV 5	fin.	-706.31	-1073	-0.0004871	0.0002807	0.0035	0.82		2487.45	2487.45		3.52	Si
SLD 5	ini.	268.66	777	-0.0001664	0.0002807	0.0035	0.82		2482.11	2482.11		9.24	Si
SLD 5	fin.	-477.81	-890	-0.0003097	0.0002807	0.0035	0.82		2487.45	2487.45		5.21	Si
SLV 6	ini.	481.48	1541	-0.0003131	0.0002807	0.0035	0.82		2482.11	2482.11		5.16	Si
SLV 6	fin.	-656.5	-1021	-0.0004465	0.0002807	0.0035	0.82		2487.45	2487.45		3.79	Si
SLD 1	ini.	279.78	787	-0.0001737	0.0002807	0.0035	0.82		2482.11	2482.11		8.87	Si
SLD 1	fin.	-540.18	-1079	-0.0003559	0.0002807	0.0035	0.82		2487.45	2487.45		4.6	Si
SLV 4	ini.	284.64	758	-0.0001769	0.0002807	0.0035	0.82		2482.11	2482.11		8.72	Si
SLV 4	fin.	-629.72	-1382	-0.0004251	0.0002807	0.0035	0.82		2487.45	2487.45		3.95	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 6	ini.	481.48	-1936	0.82	0	455	6502	5156	2091	6957		3.59	Si
SLV 6	fin.	-656.5	-2384	0.82	0	455	6502	5156	2091	6957		2.92	Si
SLV 5	ini.	532.13	-2186	0.82	0	455	6502	5156	2091	6957		3.18	Si
SLV 5	fin.	-706.31	-2563	0.82	0	455	6502	5156	2091	6957		2.71	Si
SLD 3	ini.	191.65	-442	0.82	0	455	6502	5156	2091	6957		15.75	Si
SLD 3	fin.	-475.19	-2287	0.82	0	455	6502	5156	2091	6957		3.04	Si
SLD 1	ini.	279.78	-890	0.82	0	455	6502	5156	2091	6957		7.82	Si
SLD 1	fin.	-540.18	-2396	0.82	0	455	6502	5156	2091	6957		2.9	Si
SLV 3	ini.	363.96	-1254	0.82	0	455	6502	5156	2091	6957		5.55	Si
SLV 3	fin.	-707.71	-3269	0.82	0	455	6502	5156	2091	6957		2.13	Si
SLV 16	ini.	-435.6	2588	0.82	0	455	6502	5156	2091	6957		2.69	Si
SLV 16	fin.	252.15	408	0.82	0	455	6502	5156	2091	6957		17.07	Si
SLV 1	ini.	564.54	-2274	0.82	0	455	6502	5156	2091	6957		3.06	Si
SLV 1	fin.	-856.02	-3515	0.82	0	455	6502	5156	2091	6957		1.98	Si
SLV 4	ini.	284.64	-863	0.82	0	455	6502	5156	2091	6957		8.07	Si
SLV 4	fin.	-629.72	-2989	0.82	0	455	6502	5156	2091	6957		2.33	Si
SLV 2	ini.	485.22	-1883	0.82	0	455	6502	5156	2091	6957		3.69	Si
SLV 2	fin.	-778.03	-3235	0.82	0	455	6502	5156	2091	6957		2.15	Si
SLV 12	ini.	-403.19	2500	0.82	0	455	6502	5156	2091	6957		2.78	Si
SLV 12	fin.	102.44	-545	0.82	0	455	6502	5156	2091	6957		12.77	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.906	SLV 1	Si
V_SLV	1.979	SLV 1	Si
PF_SLU	4.887	SLU 84	Si
V_SLU	2.184	SLU 84	Si

Trave di accoppiamento 114

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.813	-3.314	8.96	10.96	2	-19.313	-3.314	8.96	10.96	2	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 63	ini.	295.98	-920	-0.0000296	0.0001872	0.0035	2		14344.28	14344.28	No	48.46	Si
SLU 63	fin.	95.56	-1319	-0.0000095	0.0001872	0.0035	2		14344.28	14344.28	No	150.11	Si
SLU 84	ini.	286.94	-1072	-0.0000287	0.0001872	0.0035	2		14344.28	14344.28	No	49.99	Si
SLU 84	fin.	103.14	-1506	-0.0000102	0.0001872	0.0035	2		14344.28	14344.28	No	139.08	Si
SLU 61	ini.	280.64	-886	-0.0000281	0.0001872	0.0035	2		14344.28	14344.28	No	51.11	Si
SLU 61	fin.	88.1	-1273	-0.0000087	0.0001872	0.0035	2		14344.28	14344.28	No	162.82	Si
SLU 60	ini.	282.25	-897	-0.0000282	0.0001872	0.0035	2		14344.28	14344.28	No	50.82	Si
SLU 60	fin.	77.91	-1280	-0.0000077	0.0001872	0.0035	2		14344.28	14344.28	No	184.11	Si
SLU 79	ini.	273.86	-1136	-0.0000274	0.0001872	0.0035	2		14344.28	14344.28	No	52.38	Si
SLU 79	fin.	104.17	-1567	-0.0000103	0.0001872	0.0035	2		14344.28	14344.28	No	137.7	Si
SLU 62	ini.	297.59	-932	-0.0000298	0.0001872	0.0035	2		14344.28	14344.28	No	48.2	Si
SLU 62	fin.	85.37	-1327	-0.0000085	0.0001872	0.0035	2		14344.28	14344.28	No	168.03	Si
SLU 81	ini.	273.21	-1049	-0.0000273	0.0001872	0.0035	2		14344.28	14344.28	No	52.5	Si
SLU 81	fin.	85.49	-1467	-0.0000085	0.0001872	0.0035	2		14344.28	14344.28	No	167.79	Si
SLU 59	ini.	281.29	-973	-0.0000281	0.0001872	0.0035	2		14344.28	14344.28	No	50.99	Si
SLU 59	fin.	106.79	-1372	-0.0000106	0.0001872	0.0035	2		14344.28	14344.28	No	134.33	Si
SLU 83	ini.	288.55	-1084	-0.0000289	0.0001872	0.0035	2		14344.28	14344.28	No	49.71	Si
SLU 83	fin.	92.95	-1513	-0.0000092	0.0001872	0.0035	2		14344.28	14344.28	No	154.33	Si
SLU 58	ini.	282.9	-985	-0.0000283	0.0001872	0.0035	2		14344.28	14344.28	No	50.7	Si
SLU 58	fin.	96.59	-1380	-0.0000096	0.0001872	0.0035	2		14344.28	14344.28	No	148.5	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	258.69	-862	2	0	812	3965	8384	5100	4776	No	5.54	Si
SLU 77	fin.	100.01	691	2	0	812	3965	8384	5100	4776	No	6.92	Si
SLU 63	ini.	295.98	-849	2	0	812	3965	8384	5100	4776	No	5.62	Si
SLU 63	fin.	95.56	495	2	0	812	3965	8384	5100	4776	No	9.66	Si
SLU 79	ini.	273.86	-857	2	0	812	3965	8384	5100	4776	No	5.57	Si
SLU 79	fin.	104.17	656	2	0	812	3965	8384	5100	4776	No	7.29	Si
SLU 62	ini.	297.59	-895	2	0	812	3965	8384	5100	4776	No	5.34	Si
SLU 62	fin.	85.37	466	2	0	812	3965	8384	5100	4776	No	10.24	Si
SLU 84	ini.	286.94	-857	2	0	812	3965	8384	5100	4776	No	5.57	Si
SLU 84	fin.	103.14	629	2	0	812	3965	8384	5100	4776	No	7.6	Si
SLU 83	ini.	288.55	-903	2	0	812	3965	8384	5100	4776	No	5.29	Si
SLU 83	fin.	92.95	600	2	0	812	3965	8384	5100	4776	No	7.95	Si
SLU 60	ini.	282.25	-859	2	0	812	3965	8384	5100	4776	No	5.56	Si
SLU 60	fin.	77.91	446	2	0	812	3965	8384	5100	4776	No	10.71	Si
SLU 81	ini.	273.21	-867	2	0	812	3965	8384	5100	4776	No	5.51	Si
SLU 81	fin.	85.49	580	2	0	812	3965	8384	5100	4776	No	8.24	Si
SLU 58	ini.	282.9	-849	2	0	812	3965	8384	5100	4776	No	5.63	Si
SLU 58	fin.	96.59	521	2	0	812	3965	8384	5100	4776	No	9.16	Si
SLU 56	ini.	267.73	-854	2	0	812	3965	8384	5100	4776	No	5.59	Si
SLU 56	fin.	92.44	556	2	0	812	3965	8384	5100	4776	No	8.58	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	1326.02	1420	-0.0001365	0.0002807	0.0035	2		14202.07	14202.07		10.71	Si
SLV 1	fin.	-693.97	1418	-0.00007	0.0002807	0.0035	2		14215.41	14215.41		20.48	Si
SLV 14	ini.	-767.42	-2044	-0.0000776	0.0002807	0.0035	2		14215.41	14215.41		18.52	Si
SLV 14	fin.	994.13	-2657	-0.0001013	0.0002807	0.0035	2		14202.07	14202.07		14.29	Si
SLV 6	ini.	850.13	1295	-0.0000862	0.0002807	0.0035	2		14202.07	14202.07		16.71	Si
SLV 6	fin.	102.29	1022	-0.0000101	0.0002807	0.0035	2		14202.07	14202.07		138.84	Si
SLV 16	ini.	-1015.69	-3035	-0.0001035	0.0002807	0.0035	2		14215.41	14215.41		14	Si
SLV 16	fin.	836.45	-3617	-0.0000848	0.0002807	0.0035	2		14202.07	14202.07		16.98	Si
SLV 5	ini.	894.81	1388	-0.0000909	0.0002807	0.0035	2		14202.07	14202.07		15.87	Si
SLV 5	fin.	73.08	1143	-0.0000072	0.0002807	0.0035	2		14202.07	14202.07		194.34	Si
SLV 4	ini.	1007.78	283	-0.0001027	0.0002807	0.0035	2		14202.07	14202.07		14.09	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	fin.	-805.91	269	-0.0000816	0.0002807	0.0035	2		14215.41	14215.41		17.64	Si
SLV 3	ini.	1077.74	429	-0.0001101	0.0002807	0.0035	2		14202.07	14202.07		13.18	Si
SLV 3	fin.	-851.65	458	-0.0000863	0.0002807	0.0035	2		14215.41	14215.41		16.69	Si
SLV 13	ini.	-697.46	-1897	-0.0000704	0.0002807	0.0035	2		14215.41	14215.41		20.38	Si
SLV 13	fin.	948.39	-2468	-0.0000965	0.0002807	0.0035	2		14202.07	14202.07		14.97	Si
SLV 2	ini.	1256.06	1273	-0.000129	0.0002807	0.0035	2		14202.07	14202.07		11.31	Si
SLV 2	fin.	-648.23	1228	-0.0000653	0.0002807	0.0035	2		14215.41	14215.41		21.93	Si
SLV 15	ini.	-945.73	-2888	-0.0000961	0.0002807	0.0035	2		14215.41	14215.41		15.03	Si
SLV 15	fin.	790.71	-3428	-0.0000801	0.0002807	0.0035	2		14202.07	14202.07		17.96	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-1015.69	4197	2	0	1217	3965	12577	5100	5182		1.23	Si
SLV 16	fin.	836.45	4957	2	0	1217	3965	12577	5100	5182		1.05	Si
SLV 2	ini.	1256.06	-4989	2	0	1217	3965	12577	5100	5182		1.04	Si
SLV 2	fin.	-648.23	-3652	2	0	1217	3965	12577	5100	5182		1.42	Si
SLV 1	ini.	1326.02	-5216	2	0	1217	3965	12577	5100	5182		0.99	No
SLV 1	fin.	-693.97	-3992	2	0	1217	3965	12577	5100	5182		1.3	Si
SLV 13	ini.	-697.46	4623	2	0	1217	3965	12577	5100	5182		1.12	Si
SLV 13	fin.	948.39	4646	2	0	1217	3965	12577	5100	5182		1.12	Si
SLV 8	ini.	22.55	-2999	2	0	1217	3965	12577	5100	5182		1.73	Si
SLV 8	fin.	-423.31	-754	2	0	1217	3965	12577	5100	5182		6.87	Si
SLV 15	ini.	-945.73	3971	2	0	1217	3965	12577	5100	5182		1.31	Si
SLV 15	fin.	790.71	4616	2	0	1217	3965	12577	5100	5182		1.12	Si
SLV 14	ini.	-767.42	4849	2	0	1217	3965	12577	5100	5182		1.07	Si
SLV 14	fin.	994.13	4986	2	0	1217	3965	12577	5100	5182		1.04	Si
SLV 3	ini.	1077.74	-5868	2	0	1217	3965	12577	5100	5182		0.88	No
SLV 3	fin.	-851.65	-4021	2	0	1217	3965	12577	5100	5182		1.29	Si
SLV 4	ini.	1007.78	-5641	2	0	1217	3965	12577	5100	5182		0.92	No
SLV 4	fin.	-805.91	-3681	2	0	1217	3965	12577	5100	5182		1.41	Si
SLV 7	ini.	67.23	-3144	2	0	1217	3965	12577	5100	5182		1.65	Si
SLV 7	fin.	-452.52	-971	2	0	1217	3965	12577	5100	5182		5.34	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	10.71	SLV 1	Si
V_SLV	0.883	SLV 3	No
PF_SLU	48.201	SLU 62	Si
V_SLU	5.289	SLU 83	Si

Trave di accoppiamento 115

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.813	-3.314	11.76	12.48	0.72	-19.313	-3.314	11.76	12.48	0.72	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 58	ini.	-139.18	-1149	-0.0001109	0.0001872	0.0035	0.72		1901.86	1901.86	No	13.66	Si
SLU 58	fin.	-23.32	-1003	-0.0000179	0.0001872	0.0035	0.72		1901.86	1901.86	No	81.56	Si
SLU 63	ini.	-139.01	-1152	-0.0001107	0.0001872	0.0035	0.72		1901.86	1901.86	No	13.68	Si
SLU 63	fin.	-24.63	-1004	-0.0000189	0.0001872	0.0035	0.72		1901.86	1901.86	No	77.21	Si
SLU 59	ini.	-140.07	-1150	-0.0001116	0.0001872	0.0035	0.72		1901.86	1901.86	No	13.58	Si
SLU 59	fin.	-19.57	-996	-0.000015	0.0001872	0.0035	0.72		1901.86	1901.86	No	97.2	Si
SLU 80	ini.	-145.9	-1204	-0.0001165	0.0001872	0.0035	0.72		1901.86	1901.86	No	13.03	Si
SLU 80	fin.	-13.48	-1044	-0.0000103	0.0001872	0.0035	0.72		1901.86	1901.86	No	141.09	Si
SLU 84	ini.	-144.85	-1206	-0.0001156	0.0001872	0.0035	0.72		1901.86	1901.86	No	13.13	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	fin.	-18.54	-1052	-0.0000142	0.0001872	0.0035	0.72		1901.86	1901.86	No	102.56	Si
SLU 76	ini.	-139.19	-1146	-0.0001109	0.0001872	0.0035	0.72		1901.86	1901.86	No	13.66	Si
SLU 76	fin.	-9.43	-987	-0.0000072	0.0001872	0.0035	0.72		1901.86	1901.86	No	201.61	Si
SLU 83	ini.	-143.96	-1204	-0.0001149	0.0001872	0.0035	0.72		1901.86	1901.86	No	13.21	Si
SLU 83	fin.	-22.3	-1059	-0.0000171	0.0001872	0.0035	0.72		1901.86	1901.86	No	85.3	Si
SLU 77	ini.	-143.58	-1195	-0.0001146	0.0001872	0.0035	0.72		1901.86	1901.86	No	13.25	Si
SLU 77	fin.	-14.86	-1048	-0.0000114	0.0001872	0.0035	0.72		1901.86	1901.86	No	127.95	Si
SLU 79	ini.	-145.02	-1203	-0.0001158	0.0001872	0.0035	0.72		1901.86	1901.86	No	13.11	Si
SLU 79	fin.	-17.23	-1051	-0.0000132	0.0001872	0.0035	0.72		1901.86	1901.86	No	110.37	Si
SLU 78	ini.	-144.47	-1197	-0.0001153	0.0001872	0.0035	0.72		1901.86	1901.86	No	13.16	Si
SLU 78	fin.	-11.11	-1040	-0.0000085	0.0001872	0.0035	0.72		1901.86	1901.86	No	171.14	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 76	ini.	-139.19	1585	0.72	0	292	3965	3018	1836	4257	No	2.68	Si
SLU 76	fin.	-9.43	-54	0.72	0	292	3965	3018	1836	4257	No	79.1	Si
SLU 84	ini.	-144.85	1630	0.72	0	292	3965	3018	1836	4257	No	2.61	Si
SLU 84	fin.	-18.54	-79	0.72	0	292	3965	3018	1836	4257	No	53.9	Si
SLU 79	ini.	-145.02	1637	0.72	0	292	3965	3018	1836	4257	No	2.6	Si
SLU 79	fin.	-17.23	-79	0.72	0	292	3965	3018	1836	4257	No	54.02	Si
SLU 75	ini.	-137.16	1611	0.72	0	292	3965	3018	1836	4257	No	2.64	Si
SLU 75	fin.	-9.57	-75	0.72	0	292	3965	3018	1836	4257	No	56.56	Si
SLU 80	ini.	-145.9	1645	0.72	0	292	3965	3018	1836	4257	No	2.59	Si
SLU 80	fin.	-13.48	-61	0.72	0	292	3965	3018	1836	4257	No	69.45	Si
SLU 74	ini.	-136.27	1602	0.72	0	292	3965	3018	1836	4257	No	2.66	Si
SLU 74	fin.	-13.32	-93	0.72	0	292	3965	3018	1836	4257	No	45.89	Si
SLU 82	ini.	-137.54	1564	0.72	0	292	3965	3018	1836	4257	No	2.72	Si
SLU 82	fin.	-17	-83	0.72	0	292	3965	3018	1836	4257	No	51.19	Si
SLU 83	ini.	-143.96	1621	0.72	0	292	3965	3018	1836	4257	No	2.63	Si
SLU 83	fin.	-22.3	-96	0.72	0	292	3965	3018	1836	4257	No	44.12	Si
SLU 77	ini.	-143.58	1667	0.72	0	292	3965	3018	1836	4257	No	2.55	Si
SLU 77	fin.	-14.86	-89	0.72	0	292	3965	3018	1836	4257	No	48.06	Si
SLU 78	ini.	-144.47	1676	0.72	0	292	3965	3018	1836	4257	No	2.54	Si
SLU 78	fin.	-11.11	-71	0.72	0	292	3965	3018	1836	4257	No	59.88	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	-202.56	-2206	-0.000162	0.0002807	0.0035	0.72		1917.1	1917.1		9.46	Si
SLV 1	fin.	-408.06	-2195	-0.0003473	0.0002807	0.0035	0.72		1917.1	1917.1		4.7	Si
SLV 4	ini.	-133.77	-1757	-0.0001051	0.0002807	0.0035	0.72		1917.1	1917.1		14.33	Si
SLV 4	fin.	-397.9	-1901	-0.0003374	0.0002807	0.0035	0.72		1917.1	1917.1		4.82	Si
SLV 2	ini.	-196.17	-2137	-0.0001566	0.0002807	0.0035	0.72		1917.1	1917.1		9.77	Si
SLV 2	fin.	-386.29	-2123	-0.0003263	0.0002807	0.0035	0.72		1917.1	1917.1		4.96	Si
SLV 5	ini.	-220.87	-1776	-0.0001775	0.0002807	0.0035	0.72		1917.1	1917.1		8.68	Si
SLV 5	fin.	-111.83	-1463	-0.0000874	0.0002807	0.0035	0.72		1917.1	1917.1		17.14	Si
SLV 16	ini.	18.61	701	-0.0000143	0.0002807	0.0035	0.72		1912.43	1912.43		102.79	Si
SLV 16	fin.	398.54	895	-0.0003389	0.0002807	0.0035	0.72		1912.43	1912.43		4.8	Si
SLV 6	ini.	-216.79	-1732	-0.000174	0.0002807	0.0035	0.72		1917.1	1917.1		8.84	Si
SLV 6	fin.	-97.93	-1416	-0.0000763	0.0002807	0.0035	0.72		1917.1	1917.1		19.58	Si
SLV 15	ini.	12.22	632	-0.0000094	0.0002807	0.0035	0.72		1912.43	1912.43		156.5	Si
SLV 15	fin.	376.78	822	-0.0003181	0.0002807	0.0035	0.72		1912.43	1912.43		5.08	Si
SLV 3	ini.	-140.16	-1827	-0.0001103	0.0002807	0.0035	0.72		1917.1	1917.1		13.68	Si
SLV 3	fin.	-419.66	-1973	-0.0003586	0.0002807	0.0035	0.72		1917.1	1917.1		4.57	Si
SLV 13	ini.	-50.18	252	-0.0000387	0.0002807	0.0035	0.72		1917.1	1917.1		38.2	Si
SLV 13	fin.	388.38	600	-0.0003292	0.0002807	0.0035	0.72		1912.43	1912.43		4.92	Si
SLV 14	ini.	-43.79	322	-0.0000337	0.0002807	0.0035	0.72		1917.1	1917.1		43.78	Si
SLV 14	fin.	410.15	673	-0.0003502	0.0002807	0.0035	0.72		1912.43	1912.43		4.66	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	12.22	1214	0.72	0	438	3965	4528	1836	4403		3.63	Si
SLV 15	fin.	376.78	420	0.72	0	438	3965	4528	1836	4403		10.48	Si
SLV 14	ini.	-43.79	1417	0.72	0	438	3965	4528	1836	4403		3.11	Si
SLV 14	fin.	410.15	912	0.72	0	438	3965	4528	1836	4403		4.83	Si
SLV 6	ini.	-216.79	1182	0.72	0	438	3965	4528	1836	4403		3.72	Si
SLV 6	fin.	-97.93	538	0.72	0	438	3965	4528	1836	4403		8.18	Si
SLD 16	ini.	-44.31	1175	0.72	0	438	3965	4528	1836	4403		3.75	Si
SLD 16	fin.	167.81	155	0.72	0	438	3965	4528	1836	4403		28.49	Si
SLV 16	ini.	18.61	1323	0.72	0	438	3965	4528	1836	4403		3.33	Si
SLV 16	fin.	398.54	433	0.72	0	438	3965	4528	1836	4403		10.16	Si
SLV 9	ini.	-175.16	1263	0.72	0	438	3965	4528	1836	4403		3.49	Si
SLV 9	fin.	127.1	959	0.72	0	438	3965	4528	1836	4403		4.59	Si
SLD 14	ini.	-71.81	1218	0.72	0	438	3965	4528	1836	4403		3.62	Si
SLD 14	fin.	173.07	366	0.72	0	438	3965	4528	1836	4403		12.05	Si
SLV 10	ini.	-171.08	1332	0.72	0	438	3965	4528	1836	4403		3.3	Si
SLV 10	fin.	141	967	0.72	0	438	3965	4528	1836	4403		4.55	Si
SLD 10	ini.	-127.16	1183	0.72	0	438	3965	4528	1836	4403		3.72	Si
SLD 10	fin.	58.2	396	0.72	0	438	3965	4528	1836	4403		11.12	Si
SLV 13	ini.	-50.18	1309	0.72	0	438	3965	4528	1836	4403		3.36	Si
SLV 13	fin.	388.38	899	0.72	0	438	3965	4528	1836	4403		4.9	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.568	SLV 3	Si
V_SLV	3.107	SLV 14	Si
PF_SLU	13.035	SLU 80	Si
V_SLU	2.54	SLU 78	Si

Trave di accoppiamento 116

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.314	8.96	9.86	0.9	-18.263	-3.314	8.96	9.86	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 56	ini.	313.09	-1232	-0.0001638	0.0001872	0.0035	0.9		2959	2959	No	9.45	Si
SLU 56	fin.	-58.87	-344	-0.0000291	0.0001872	0.0035	0.9		2964.67	2964.67	No	50.36	Si
SLU 60	ini.	316.94	-1205	-0.000166	0.0001872	0.0035	0.9		2959	2959	No	9.34	Si
SLU 60	fin.	-77.63	-227	-0.0000385	0.0001872	0.0035	0.9		2964.67	2964.67	No	38.19	Si
SLU 61	ini.	314.64	-1198	-0.0001647	0.0001872	0.0035	0.9		2959	2959	No	9.4	Si
SLU 61	fin.	-77.53	-224	-0.0000384	0.0001872	0.0035	0.9		2964.67	2964.67	No	38.24	Si
SLU 59	ini.	322.74	-1242	-0.0001693	0.0001872	0.0035	0.9		2959	2959	No	9.17	Si
SLU 59	fin.	-70.22	-284	-0.0000348	0.0001872	0.0035	0.9		2964.67	2964.67	No	42.22	Si
SLU 83	ini.	320.42	-1273	-0.000168	0.0001872	0.0035	0.9		2959	2959	No	9.23	Si
SLU 83	fin.	-63.5	-336	-0.0000314	0.0001872	0.0035	0.9		2964.67	2964.67	No	46.69	Si
SLU 62	ini.	331.89	-1256	-0.0001745	0.0001872	0.0035	0.9		2959	2959	No	8.92	Si
SLU 62	fin.	-81.16	-234	-0.0000403	0.0001872	0.0035	0.9		2964.67	2964.67	No	36.53	Si
SLU 84	ini.	318.11	-1266	-0.0001667	0.0001872	0.0035	0.9		2959	2959	No	9.3	Si
SLU 84	fin.	-63.4	-333	-0.0000313	0.0001872	0.0035	0.9		2964.67	2964.67	No	46.76	Si
SLU 63	ini.	329.58	-1249	-0.0001732	0.0001872	0.0035	0.9		2959	2959	No	8.98	Si
SLU 63	fin.	-81.06	-231	-0.0000402	0.0001872	0.0035	0.9		2964.67	2964.67	No	36.57	Si
SLU 58	ini.	325.05	-1249	-0.0001706	0.0001872	0.0035	0.9		2959	2959	No	9.1	Si
SLU 58	fin.	-70.32	-287	-0.0000348	0.0001872	0.0035	0.9		2964.67	2964.67	No	42.16	Si
SLU 79	ini.	313.58	-1266	-0.0001641	0.0001872	0.0035	0.9		2959	2959	No	9.44	Si
SLU 79	fin.	-52.66	-389	-0.000026	0.0001872	0.0035	0.9		2964.67	2964.67	No	56.3	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 58	ini.	325.05	-1973	0.9	0	365	7137	3773	2295	6068	No	3.08	Si
SLU 58	fin.	-70.32	616	0.9	0	365	7137	3773	2295	6068	No	9.85	Si
SLU 83	ini.	320.42	-1970	0.9	0	365	7137	3773	2295	6068	No	3.08	Si
SLU 83	fin.	-63.5	700	0.9	0	365	7137	3773	2295	6068	No	8.67	Si
SLU 63	ini.	329.58	-1979	0.9	0	365	7137	3773	2295	6068	No	3.07	Si
SLU 63	fin.	-81.06	530	0.9	0	365	7137	3773	2295	6068	No	11.45	Si
SLU 56	ini.	313.09	-1934	0.9	0	365	7137	3773	2295	6068	No	3.14	Si
SLU 56	fin.	-58.87	711	0.9	0	365	7137	3773	2295	6068	No	8.53	Si
SLU 59	ini.	322.74	-1962	0.9	0	365	7137	3773	2295	6068	No	3.09	Si
SLU 59	fin.	-70.22	610	0.9	0	365	7137	3773	2295	6068	No	9.95	Si
SLU 62	ini.	331.89	-1990	0.9	0	365	7137	3773	2295	6068	No	3.05	Si
SLU 62	fin.	-81.16	536	0.9	0	365	7137	3773	2295	6068	No	11.32	Si
SLU 80	ini.	311.27	-1943	0.9	0	365	7137	3773	2295	6068	No	3.12	Si
SLU 80	fin.	-52.56	773	0.9	0	365	7137	3773	2295	6068	No	7.85	Si
SLU 84	ini.	318.11	-1959	0.9	0	365	7137	3773	2295	6068	No	3.1	Si
SLU 84	fin.	-63.4	694	0.9	0	365	7137	3773	2295	6068	No	8.75	Si
SLU 79	ini.	313.58	-1954	0.9	0	365	7137	3773	2295	6068	No	3.11	Si
SLU 79	fin.	-52.66	779	0.9	0	365	7137	3773	2295	6068	No	7.79	Si
SLU 57	ini.	310.78	-1923	0.9	0	365	7137	3773	2295	6068	No	3.16	Si
SLU 57	fin.	-58.76	705	0.9	0	365	7137	3773	2295	6068	No	8.61	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-755.06	1206	-0.0004228	0.0002807	0.0035	0.9		2995.37	2995.37		3.97	Si
SLV 15	fin.	686.88	-3022	-0.0003795	0.0002807	0.0035	0.9		2989.59	2989.59		4.35	Si
SLV 14	ini.	-648.36	1066	-0.0003544	0.0002807	0.0035	0.9		2995.37	2995.37		4.62	Si
SLV 14	fin.	551.83	-2353	-0.000296	0.0002807	0.0035	0.9		2989.59	2989.59		5.42	Si
SLV 1	ini.	1196.21	-2955	-0.0007419	0.0002807	0.0035	0.9		2989.59	2989.59		2.5	Si
SLV 1	fin.	-766.57	2540	-0.0004304	0.0002807	0.0035	0.9		2995.37	2995.37		3.91	Si
SLD 1	ini.	625	-1737	-0.0003406	0.0002807	0.0035	0.9		2989.59	2989.59		4.78	Si
SLD 1	fin.	-341.92	908	-0.000176	0.0002807	0.0035	0.9		2995.37	2995.37		8.76	Si
SLV 4	ini.	991.88	-2615	-0.0005876	0.0002807	0.0035	0.9		2989.59	2989.59		3.01	Si
SLV 4	fin.	-563.13	1552	-0.0003022	0.0002807	0.0035	0.9		2995.37	2995.37		5.32	Si
SLV 3	ini.	1040.69	-2715	-0.0006234	0.0002807	0.0035	0.9		2989.59	2989.59		2.87	Si
SLV 3	fin.	-597.32	1711	-0.0003229	0.0002807	0.0035	0.9		2995.37	2995.37		5.01	Si
SLV 2	ini.	1147.4	-2855	-0.0007039	0.0002807	0.0035	0.9		2989.59	2989.59		2.61	Si
SLV 2	fin.	-732.38	2381	-0.000408	0.0002807	0.0035	0.9		2995.37	2995.37		4.09	Si
SLV 6	ini.	709.14	-1780	-0.0003938	0.0002807	0.0035	0.9		2989.59	2989.59		4.22	Si
SLV 6	fin.	-486.54	1719	-0.0002571	0.0002807	0.0035	0.9		2995.37	2995.37		6.16	Si
SLV 5	ini.	740.32	-1844	-0.0004141	0.0002807	0.0035	0.9		2989.59	2989.59		4.04	Si
SLV 5	fin.	-508.37	1820	-0.0002698	0.0002807	0.0035	0.9		2995.37	2995.37		5.89	Si
SLV 16	ini.	-803.88	1306	-0.0004552	0.0002807	0.0035	0.9		2995.37	2995.37		3.73	Si
SLV 16	fin.	721.07	-3181	-0.0004015	0.0002807	0.0035	0.9		2989.59	2989.59		4.15	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	1147.4	-5626	0.9	0	548	7137	5660	2295	7684		1.37	Si
SLV 2	fin.	-732.38	-3280	0.9	0	548	7137	5660	2295	7684		2.34	Si
SLV 16	ini.	-803.88	3317	0.9	0	548	7137	5660	2295	7684		2.32	Si
SLV 16	fin.	721.07	4807	0.9	0	548	7137	5660	2295	7684		1.6	Si
SLV 5	ini.	740.32	-3592	0.9	0	548	7137	5660	2295	7684		2.14	Si
SLV 5	fin.	-508.37	-2735	0.9	0	548	7137	5660	2295	7684		2.81	Si
SLV 12	ini.	-347.98	1096	0.9	0	548	7137	5660	2295	7684		7.01	Si
SLV 12	fin.	462.88	3966	0.9	0	548	7137	5660	2295	7684		1.94	Si
SLV 4	ini.	991.88	-5005	0.9	0	548	7137	5660	2295	7684		1.54	Si
SLV 4	fin.	-563.13	-1934	0.9	0	548	7137	5660	2295	7684		3.97	Si
SLV 11	ini.	-316.81	976	0.9	0	548	7137	5660	2295	7684		7.87	Si
SLV 11	fin.	441.04	3777	0.9	0	548	7137	5660	2295	7684		2.03	Si
SLV 1	ini.	1196.21	-5813	0.9	0	548	7137	5660	2295	7684		1.32	Si
SLV 1	fin.	-766.57	-3576	0.9	0	548	7137	5660	2295	7684		2.15	Si
SLV 15	ini.	-755.06	3130	0.9	0	548	7137	5660	2295	7684		2.46	Si
SLV 15	fin.	686.88	4512	0.9	0	548	7137	5660	2295	7684		1.7	Si
SLV 6	ini.	709.14	-3473	0.9	0	548	7137	5660	2295	7684		2.21	Si
SLV 6	fin.	-486.54	-2546	0.9	0	548	7137	5660	2295	7684		3.02	Si
SLV 3	ini.	1040.69	-5192	0.9	0	548	7137	5660	2295	7684		1.48	Si
SLV 3	fin.	-597.32	-2229	0.9	0	548	7137	5660	2295	7684		3.45	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.499	SLV 1	Si
V_SLV	1.322	SLV 1	Si
PF_SLU	8.916	SLU 62	Si
V_SLU	3.05	SLU 62	Si

Trave di accoppiamento 117

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.314	11.66	12.48	0.82	-18.263	-3.314	11.66	12.48	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 62	ini.	132.06	174	-0.0000803	0.0001872	0.0035	0.82		2455.37	2455.37	No	18.59	Si
SLU 62	fin.	-271.41	-1392	-0.0001714	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.07	Si
SLU 83	ini.	133.33	169	-0.0000811	0.0001872	0.0035	0.82		2455.37	2455.37	No	18.42	Si
SLU 83	fin.	-274.08	-1440	-0.0001732	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.98	Si
SLU 79	ini.	123.5	132	-0.000075	0.0001872	0.0035	0.82		2455.37	2455.37	No	19.88	Si
SLU 79	fin.	-272.59	-1434	-0.0001722	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.03	Si
SLU 78	ini.	118.28	119	-0.0000717	0.0001872	0.0035	0.82		2455.37	2455.37	No	20.76	Si
SLU 78	fin.	-266.9	-1419	-0.0001683	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.22	Si
SLU 77	ini.	118.08	115	-0.0000716	0.0001872	0.0035	0.82		2455.37	2455.37	No	20.79	Si
SLU 77	fin.	-268.28	-1420	-0.0001692	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.17	Si
SLU 84	ini.	133.53	172	-0.0000813	0.0001872	0.0035	0.82		2455.37	2455.37	No	18.39	Si
SLU 84	fin.	-272.7	-1438	-0.0001722	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.02	Si
SLU 63	ini.	132.26	177	-0.0000805	0.0001872	0.0035	0.82		2455.37	2455.37	No	18.56	Si
SLU 63	fin.	-270.04	-1391	-0.0001704	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.11	Si
SLU 80	ini.	123.71	135	-0.0000751	0.0001872	0.0035	0.82		2455.37	2455.37	No	19.85	Si
SLU 80	fin.	-271.21	-1432	-0.0001712	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.07	Si
SLU 59	ini.	122.44	140	-0.0000743	0.0001872	0.0035	0.82		2455.37	2455.37	No	20.05	Si
SLU 59	fin.	-268.54	-1385	-0.0001694	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.16	Si
SLU 58	ini.	122.23	137	-0.0000742	0.0001872	0.0035	0.82		2455.37	2455.37	No	20.09	Si
SLU 58	fin.	-269.92	-1387	-0.0001703	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.12	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	118.28	383	0.82	0	303	6502	3438	2091	5529	No	14.42	Si
SLU 78	fin.	-266.9	-2836	0.82	0	303	6502	3438	2091	5529	No	1.95	Si
SLU 82	ini.	129.17	290	0.82	0	303	6502	3438	2091	5529	No	19.08	Si
SLU 82	fin.	-258.7	-2751	0.82	0	303	6502	3438	2091	5529	No	2.01	Si
SLU 77	ini.	118.08	387	0.82	0	303	6502	3438	2091	5529	No	14.27	Si
SLU 77	fin.	-268.28	-2843	0.82	0	303	6502	3438	2091	5529	No	1.94	Si
SLU 80	ini.	123.71	331	0.82	0	303	6502	3438	2091	5529	No	16.7	Si
SLU 80	fin.	-271.21	-2827	0.82	0	303	6502	3438	2091	5529	No	1.96	Si
SLU 81	ini.	128.97	294	0.82	0	303	6502	3438	2091	5529	No	18.81	Si
SLU 81	fin.	-260.07	-2758	0.82	0	303	6502	3438	2091	5529	No	2	Si
SLU 83	ini.	133.33	296	0.82	0	303	6502	3438	2091	5529	No	18.69	Si
SLU 83	fin.	-274.08	-2872	0.82	0	303	6502	3438	2091	5529	No	1.92	Si
SLU 75	ini.	113.93	382	0.82	0	303	6502	3438	2091	5529	No	14.49	Si
SLU 75	fin.	-252.89	-2721	0.82	0	303	6502	3438	2091	5529	No	2.03	Si
SLU 84	ini.	133.53	292	0.82	0	303	6502	3438	2091	5529	No	18.95	Si
SLU 84	fin.	-272.7	-2866	0.82	0	303	6502	3438	2091	5529	No	1.93	Si
SLU 74	ini.	113.72	386	0.82	0	303	6502	3438	2091	5529	No	14.34	Si
SLU 74	fin.	-254.27	-2728	0.82	0	303	6502	3438	2091	5529	No	2.03	Si
SLU 79	ini.	123.5	335	0.82	0	303	6502	3438	2091	5529	No	16.5	Si
SLU 79	fin.	-272.59	-2834	0.82	0	303	6502	3438	2091	5529	No	1.95	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 1	ini.	242.72	443	-0.0001495	0.0002807	0.0035	0.82		2482.11	2482.11		10.23	Si
SLD 1	fin.	-403.29	-1814	-0.0002567	0.0002807	0.0035	0.82		2487.45	2487.45		6.17	Si
SLV 16	ini.	-324.91	-808	-0.0002032	0.0002807	0.0035	0.82		2487.45	2487.45		7.66	Si
SLV 16	fin.	373.74	1254	-0.0002368	0.0002807	0.0035	0.82		2482.11	2482.11		6.64	Si
SLV 4	ini.	291.78	357	-0.0001816	0.0002807	0.0035	0.82		2482.11	2482.11		8.51	Si
SLV 4	fin.	-601.43	-2472	-0.0004029	0.0002807	0.0035	0.82		2487.45	2487.45		4.14	Si
SLV 1	ini.	468.95	940	-0.000304	0.0002807	0.0035	0.82		2482.11	2482.11		5.29	Si
SLV 1	fin.	-713.85	-3040	-0.0004933	0.0002807	0.0035	0.82		2487.45	2487.45		3.48	Si
SLD 3	ini.	179.88	230	-0.0001095	0.0002807	0.0035	0.82		2482.11	2482.11		13.8	Si
SLD 3	fin.	-367.71	-1617	-0.0002321	0.0002807	0.0035	0.82		2487.45	2487.45		6.76	Si
SLV 5	ini.	414.3	1081	-0.000265	0.0002807	0.0035	0.82		2482.11	2482.11		5.99	Si
SLV 5	fin.	-461.25	-2238	-0.0002977	0.0002807	0.0035	0.82		2487.45	2487.45		5.39	Si
SLV 3	ini.	325.55	454	-0.000204	0.0002807	0.0035	0.82		2482.11	2482.11		7.62	Si
SLV 3	fin.	-632.93	-2591	-0.0004277	0.0002807	0.0035	0.82		2487.45	2487.45		3.93	Si
SLV 2	ini.	435.18	843	-0.0002797	0.0002807	0.0035	0.82		2482.11	2482.11		5.7	Si
SLV 2	fin.	-682.35	-2921	-0.0004674	0.0002807	0.0035	0.82		2487.45	2487.45		3.65	Si
SLD 2	ini.	228.23	401	-0.0001402	0.0002807	0.0035	0.82		2482.11	2482.11		10.88	Si
SLD 2	fin.	-389.76	-1763	-0.0002473	0.0002807	0.0035	0.82		2487.45	2487.45		6.38	Si
SLV 6	ini.	392.74	1019	-0.0002499	0.0002807	0.0035	0.82		2482.11	2482.11		6.32	Si
SLV 6	fin.	-441.13	-2163	-0.0002833	0.0002807	0.0035	0.82		2487.45	2487.45		5.64	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 4	ini.	165.38	-287	0.82	0	455	6502	5156	2091	6957		24.22	Si
SLD 4	fin.	-354.19	-2657	0.82	0	455	6502	5156	2091	6957		2.62	Si
SLD 3	ini.	179.88	-369	0.82	0	455	6502	5156	2091	6957		18.83	Si
SLD 3	fin.	-367.71	-2709	0.82	0	455	6502	5156	2091	6957		2.57	Si
SLD 1	ini.	242.72	-730	0.82	0	455	6502	5156	2091	6957		9.53	Si
SLD 1	fin.	-403.29	-2808	0.82	0	455	6502	5156	2091	6957		2.48	Si
SLV 6	ini.	392.74	-1581	0.82	0	455	6502	5156	2091	6957		4.4	Si
SLV 6	fin.	-441.13	-2785	0.82	0	455	6502	5156	2091	6957		2.5	Si
SLV 3	ini.	325.55	-1237	0.82	0	455	6502	5156	2091	6957		5.62	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	fin.	-632.93	-3947	0.82	0	455	6502	5156	2091	6957		1.76	Si
SLV 1	ini.	468.95	-2058	0.82	0	455	6502	5156	2091	6957		3.38	Si
SLV 1	fin.	-713.85	-4171	0.82	0	455	6502	5156	2091	6957		1.67	Si
SLV 4	ini.	291.78	-1046	0.82	0	455	6502	5156	2091	6957		6.65	Si
SLV 4	fin.	-601.43	-3827	0.82	0	455	6502	5156	2091	6957		1.82	Si
SLD 2	ini.	228.23	-647	0.82	0	455	6502	5156	2091	6957		10.75	Si
SLD 2	fin.	-389.76	-2757	0.82	0	455	6502	5156	2091	6957		2.52	Si
SLV 5	ini.	414.3	-1703	0.82	0	455	6502	5156	2091	6957		4.08	Si
SLV 5	fin.	-461.25	-2862	0.82	0	455	6502	5156	2091	6957		2.43	Si
SLV 2	ini.	435.18	-1866	0.82	0	455	6502	5156	2091	6957		3.73	Si
SLV 2	fin.	-682.35	-4051	0.82	0	455	6502	5156	2091	6957		1.72	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.485	SLV 1	Si
V_SLV	1.668	SLV 1	Si
PF_SLU	8.977	SLU 83	Si
V_SLU	1.925	SLU 83	Si

Trave di accoppiamento 118

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.518	-0.094	11.06	12.48	1.42	-18.518	0.706	11.06	12.48	1.42	0.8	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 47	ini.	1240.83	1305	-0.0002689	0.0002246	0.0035	1.42		7594.91	7594.91	No	6.12	Si
SLU 47	fin.	-181.41	411	-0.000036	0.0002246	0.0035	1.42		7603.79	7603.79	No	41.91	Si
SLU 51	ini.	1258.5	1312	-0.0002733	0.0002246	0.0035	1.42		7594.91	7594.91	No	6.03	Si
SLU 51	fin.	-181.95	409	-0.0000361	0.0002246	0.0035	1.42		7603.79	7603.79	No	41.79	Si
SLU 50	ini.	1226.39	1267	-0.0002654	0.0002246	0.0035	1.42		7594.91	7594.91	No	6.19	Si
SLU 50	fin.	-174.51	388	-0.0000346	0.0002246	0.0035	1.42		7603.79	7603.79	No	43.57	Si
SLU 45	ini.	1143.84	1148	-0.0002455	0.0002246	0.0035	1.42		7594.91	7594.91	No	6.64	Si
SLU 45	fin.	-149.84	332	-0.0000297	0.0002246	0.0035	1.42		7603.79	7603.79	No	50.75	Si
SLU 48	ini.	1182.91	1187	-0.0002549	0.0002246	0.0035	1.42		7594.91	7594.91	No	6.42	Si
SLU 48	fin.	-155.34	344	-0.0000308	0.0002246	0.0035	1.42		7603.79	7603.79	No	48.95	Si
SLU 72	ini.	1145.59	1106	-0.0002459	0.0002246	0.0035	1.42		7594.91	7594.91	No	6.63	Si
SLU 72	fin.	-131.24	281	-0.0000259	0.0002246	0.0035	1.42		7603.79	7603.79	No	57.94	Si
SLU 44	ini.	1201.75	1266	-0.0002594	0.0002246	0.0035	1.42		7594.91	7594.91	No	6.32	Si
SLU 44	fin.	-175.92	400	-0.0000349	0.0002246	0.0035	1.42		7603.79	7603.79	No	43.22	Si
SLU 43	ini.	1148.24	1190	-0.0002466	0.0002246	0.0035	1.42		7594.91	7594.91	No	6.61	Si
SLU 43	fin.	-163.51	365	-0.0000324	0.0002246	0.0035	1.42		7603.79	7603.79	No	46.5	Si
SLU 49	ini.	1215.02	1232	-0.0002627	0.0002246	0.0035	1.42		7594.91	7594.91	No	6.25	Si
SLU 49	fin.	-162.78	365	-0.0000322	0.0002246	0.0035	1.42		7603.79	7603.79	No	46.71	Si
SLU 46	ini.	1175.94	1194	-0.0002532	0.0002246	0.0035	1.42		7594.91	7594.91	No	6.46	Si
SLU 46	fin.	-157.28	353	-0.0000311	0.0002246	0.0035	1.42		7603.79	7603.79	No	48.35	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 44	ini.	1201.75	-2268	1.42	0	329	6344	4083	3621	6673	No	2.94	Si
SLU 44	fin.	-175.92	-2698	1.42	0	329	6344	4083	3621	6673	No	2.47	Si
SLU 50	ini.	1226.39	-2308	1.42	0	329	6344	4083	3621	6673	No	2.89	Si
SLU 50	fin.	-174.51	-2737	1.42	0	329	6344	4083	3621	6673	No	2.44	Si
SLU 43	ini.	1148.24	-2149	1.42	0	329	6344	4083	3621	6673	No	3.1	Si
SLU 43	fin.	-163.51	-2579	1.42	0	329	6344	4083	3621	6673	No	2.59	Si
SLU 49	ini.	1215.02	-2269	1.42	0	329	6344	4083	3621	6673	No	2.94	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 49	fin.	-162.78	-2699	1.42	0	329	6344	4083	3621	6673	No	2.47	Si
SLU 47	ini.	1240.83	-2348	1.42	0	329	6344	4083	3621	6673	No	2.84	Si
SLU 47	fin.	-181.41	-2777	1.42	0	329	6344	4083	3621	6673	No	2.4	Si
SLU 45	ini.	1143.84	-2118	1.42	0	329	6344	4083	3621	6673	No	3.15	Si
SLU 45	fin.	-149.84	-2548	1.42	0	329	6344	4083	3621	6673	No	2.62	Si
SLU 46	ini.	1175.94	-2190	1.42	0	329	6344	4083	3621	6673	No	3.05	Si
SLU 46	fin.	-157.28	-2619	1.42	0	329	6344	4083	3621	6673	No	2.55	Si
SLU 72	ini.	1145.59	-2100	1.42	0	329	6344	4083	3621	6673	No	3.18	Si
SLU 72	fin.	-131.24	-2545	1.42	0	329	6344	4083	3621	6673	No	2.62	Si
SLU 48	ini.	1182.91	-2198	1.42	0	329	6344	4083	3621	6673	No	3.04	Si
SLU 48	fin.	-155.34	-2627	1.42	0	329	6344	4083	3621	6673	No	2.54	Si
SLU 51	ini.	1258.5	-2379	1.42	0	329	6344	4083	3621	6673	No	2.8	Si
SLU 51	fin.	-181.95	-2809	1.42	0	329	6344	4083	3621	6673	No	2.38	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	1625.04	1801	-0.0003512	0.0003369	0.0035	1.42		7808.98	7808.98		4.81	Si
SLV 2	fin.	-236.11	641	-0.0000468	0.0003369	0.0035	1.42		7818.07	7818.07		33.11	Si
SLV 6	ini.	3007.98	3519	-0.0007288	0.0003369	0.0035	1.42		7808.98	7808.98		2.6	Si
SLV 6	fin.	-901.64	1098	-0.0001855	0.0003369	0.0035	1.42		7818.07	7818.07		8.67	Si
SLV 9	ini.	2930.57	3421	-0.0007054	0.0003369	0.0035	1.42		7808.98	7808.98		2.66	Si
SLV 9	fin.	-971.1	993	-0.0002006	0.0003369	0.0035	1.42		7818.07	7818.07		8.05	Si
SLV 1	ini.	1719.68	1934	-0.0003743	0.0003369	0.0035	1.42		7808.98	7808.98		4.54	Si
SLV 1	fin.	-257.02	695	-0.000051	0.0003369	0.0035	1.42		7818.07	7818.07		30.42	Si
SLD 5	ini.	1789.26	1999	-0.0003916	0.0003369	0.0035	1.42		7808.98	7808.98		4.36	Si
SLD 5	fin.	-448.64	598	-0.0000899	0.0003369	0.0035	1.42		7818.07	7818.07		17.43	Si
SLV 5	ini.	3068.42	3604	-0.0007472	0.0003369	0.0035	1.42		7808.98	7808.98		2.54	Si
SLV 5	fin.	-914.99	1132	-0.0001884	0.0003369	0.0035	1.42		7818.07	7818.07		8.54	Si
SLD 6	ini.	1762.89	1962	-0.000385	0.0003369	0.0035	1.42		7808.98	7808.98		4.43	Si
SLD 6	fin.	-442.82	583	-0.0000888	0.0003369	0.0035	1.42		7818.07	7818.07		17.66	Si
SLD 10	ini.	1707.53	1890	-0.0003713	0.0003369	0.0035	1.42		7808.98	7808.98		4.57	Si
SLD 10	fin.	-466.76	525	-0.0000937	0.0003369	0.0035	1.42		7818.07	7818.07		16.75	Si
SLD 9	ini.	1733.89	1927	-0.0003778	0.0003369	0.0035	1.42		7808.98	7808.98		4.5	Si
SLD 9	fin.	-472.59	540	-0.0000949	0.0003369	0.0035	1.42		7818.07	7818.07		16.54	Si
SLV 10	ini.	2870.13	3336	-0.0006873	0.0003369	0.0035	1.42		7808.98	7808.98		2.72	Si
SLV 10	fin.	-957.75	959	-0.0001977	0.0003369	0.0035	1.42		7818.07	7818.07		8.16	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-1491.74	4062	1.42	0	494	6344	6124	3621	6838		1.68	Si
SLV 12	fin.	745.93	3550	1.42	0	494	6344	6124	3621	6838		1.93	Si
SLV 10	ini.	2870.13	-6460	1.42	0	494	6344	6124	3621	6838		1.06	Si
SLV 10	fin.	-957.75	-6916	1.42	0	494	6344	6124	3621	6838		0.99	No
SLV 9	ini.	2930.57	-6597	1.42	0	494	6344	6124	3621	6838		1.04	Si
SLV 9	fin.	-971.1	-7053	1.42	0	494	6344	6124	3621	6838		0.97	No
SLD 9	ini.	1733.89	-3705	1.42	0	494	6344	6124	3621	6838		1.85	Si
SLD 9	fin.	-472.59	-4092	1.42	0	494	6344	6124	3621	6838		1.67	Si
SLD 5	ini.	1789.26	-3831	1.42	0	494	6344	6124	3621	6838		1.78	Si
SLD 5	fin.	-448.64	-4097	1.42	0	494	6344	6124	3621	6838		1.67	Si
SLV 11	ini.	-1431.3	3926	1.42	0	494	6344	6124	3621	6838		1.74	Si
SLV 11	fin.	732.57	3413	1.42	0	494	6344	6124	3621	6838		2	Si
SLD 6	ini.	1762.89	-3771	1.42	0	494	6344	6124	3621	6838		1.81	Si
SLD 6	fin.	-442.82	-4038	1.42	0	494	6344	6124	3621	6838		1.69	Si
SLV 6	ini.	3007.98	-6770	1.42	0	494	6344	6124	3621	6838		1.01	Si
SLV 6	fin.	-901.64	-6935	1.42	0	494	6344	6124	3621	6838		0.99	No
SLV 5	ini.	3068.42	-6907	1.42	0	494	6344	6124	3621	6838		0.99	No
SLV 5	fin.	-914.99	-7072	1.42	0	494	6344	6124	3621	6838		0.97	No
SLD 10	ini.	1707.53	-3646	1.42	0	494	6344	6124	3621	6838		1.88	Si
SLD 10	fin.	-466.76	-4032	1.42	0	494	6344	6124	3621	6838		1.7	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.545	SLV 5	Si
V_SLV	0.967	SLV 5	No
PF_SLU	6.035	SLU 51	Si
V_SLU	2.376	SLU 51	Si

Trave di accoppiamento 120

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-15.433	-3.314	11.06	12.48	1.42	-16.333	-3.314	11.06	12.48	1.42	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 27	ini.	-460.81	-1329	-0.0000937	0.0001872	0.0035	1.42		7359.91	7359.91	No	15.97	Si
SLU 27	fin.	287.72	-850	-0.0000577	0.0001872	0.0035	1.42		7350.79	7350.79	No	25.55	Si
SLU 74	ini.	-466.35	-1471	-0.0000949	0.0001872	0.0035	1.42		7359.91	7359.91	No	15.78	Si
SLU 74	fin.	291.97	-918	-0.0000586	0.0001872	0.0035	1.42		7350.79	7350.79	No	25.18	Si
SLU 67	ini.	-484.39	-1466	-0.0000987	0.0001872	0.0035	1.42		7359.91	7359.91	No	15.19	Si
SLU 67	fin.	282.17	-958	-0.0000566	0.0001872	0.0035	1.42		7350.79	7350.79	No	26.05	Si
SLU 24	ini.	-473.03	-1281	-0.0000963	0.0001872	0.0035	1.42		7359.91	7359.91	No	15.56	Si
SLU 24	fin.	296.45	-797	-0.0000595	0.0001872	0.0035	1.42		7350.79	7350.79	No	24.8	Si
SLU 75	ini.	-469.25	-1469	-0.0000955	0.0001872	0.0035	1.42		7359.91	7359.91	No	15.68	Si
SLU 75	fin.	296.13	-912	-0.0000594	0.0001872	0.0035	1.42		7350.79	7350.79	No	24.82	Si
SLU 70	ini.	-472.17	-1515	-0.0000961	0.0001872	0.0035	1.42		7359.91	7359.91	No	15.59	Si
SLU 70	fin.	273.44	-1011	-0.0000548	0.0001872	0.0035	1.42		7350.79	7350.79	No	26.88	Si
SLU 69	ini.	-469.27	-1517	-0.0000955	0.0001872	0.0035	1.42		7359.91	7359.91	No	15.68	Si
SLU 69	fin.	269.28	-1016	-0.0000539	0.0001872	0.0035	1.42		7350.79	7350.79	No	27.3	Si
SLU 66	ini.	-481.49	-1468	-0.0000981	0.0001872	0.0035	1.42		7359.91	7359.91	No	15.29	Si
SLU 66	fin.	278.01	-963	-0.0000557	0.0001872	0.0035	1.42		7350.79	7350.79	No	26.44	Si
SLU 28	ini.	-463.71	-1328	-0.0000943	0.0001872	0.0035	1.42		7359.91	7359.91	No	15.87	Si
SLU 28	fin.	291.88	-844	-0.0000586	0.0001872	0.0035	1.42		7350.79	7350.79	No	25.18	Si
SLU 25	ini.	-475.93	-1279	-0.0000969	0.0001872	0.0035	1.42		7359.91	7359.91	No	15.46	Si
SLU 25	fin.	300.61	-792	-0.0000604	0.0001872	0.0035	1.42		7350.79	7350.79	No	24.45	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 33	ini.	-460.79	2039	1.42	0	576	7137	5953	3621	7713	No	3.78	Si
SLU 33	fin.	314.57	529	1.42	0	576	7137	5953	3621	7713	No	14.58	Si
SLU 75	ini.	-469.25	2150	1.42	0	576	7137	5953	3621	7713	No	3.59	Si
SLU 75	fin.	296.13	426	1.42	0	576	7137	5953	3621	7713	No	18.12	Si
SLU 81	ini.	-423.03	2107	1.42	0	576	7137	5953	3621	7713	No	3.66	Si
SLU 81	fin.	265.98	264	1.42	0	576	7137	5953	3621	7713	No	29.19	Si
SLU 74	ini.	-466.35	2139	1.42	0	576	7137	5953	3621	7713	No	3.61	Si
SLU 74	fin.	291.97	415	1.42	0	576	7137	5953	3621	7713	No	18.59	Si
SLU 82	ini.	-425.94	2118	1.42	0	576	7137	5953	3621	7713	No	3.64	Si
SLU 82	fin.	270.14	275	1.42	0	576	7137	5953	3621	7713	No	28.04	Si
SLU 83	ini.	-410.81	2080	1.42	0	576	7137	5953	3621	7713	No	3.71	Si
SLU 83	fin.	257.25	238	1.42	0	576	7137	5953	3621	7713	No	32.45	Si
SLU 77	ini.	-454.13	2113	1.42	0	576	7137	5953	3621	7713	No	3.65	Si
SLU 77	fin.	283.24	388	1.42	0	576	7137	5953	3621	7713	No	19.86	Si
SLU 73	ini.	-434.36	2050	1.42	0	576	7137	5953	3621	7713	No	3.76	Si
SLU 73	fin.	266.93	326	1.42	0	576	7137	5953	3621	7713	No	23.69	Si
SLU 78	ini.	-457.03	2124	1.42	0	576	7137	5953	3621	7713	No	3.63	Si
SLU 78	fin.	287.4	399	1.42	0	576	7137	5953	3621	7713	No	19.32	Si
SLU 84	ini.	-413.72	2091	1.42	0	576	7137	5953	3621	7713	No	3.69	Si
SLU 84	fin.	261.41	249	1.42	0	576	7137	5953	3621	7713	No	31.03	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-1535.22	-2639	-0.0003344	0.0002807	0.0035	1.42		7346.34	7346.34		4.79	Si
SLV 12	fin.	1177.15	-1194	-0.0002492	0.0002807	0.0035	1.42		7337.02	7337.02		6.23	Si
SLV 15	ini.	-2210.72	-2571	-0.000512	0.0002807	0.0035	1.42		7346.34	7346.34		3.32	Si
SLV 15	fin.	2044.06	-596	-0.0004669	0.0002807	0.0035	1.42		7337.02	7337.02		3.59	Si
SLV 16	ini.	-2380.59	-2781	-0.00056	0.0002807	0.0035	1.42		7346.34	7346.34		3.09	Si
SLV 16	fin.	2156.24	-670	-0.0004976	0.0002807	0.0035	1.42		7337.02	7337.02		3.4	Si
SLV 11	ini.	-1426.74	-2505	-0.0003078	0.0002807	0.0035	1.42		7346.34	7346.34		5.15	Si
SLV 11	fin.	1105.5	-1147	-0.0002328	0.0002807	0.0035	1.42		7337.02	7337.02		6.64	Si
SLV 2	ini.	1618.98	606	-0.0003557	0.0002807	0.0035	1.42		7337.02	7337.02		4.53	Si
SLV 2	fin.	-1724.42	-702	-0.000382	0.0002807	0.0035	1.42		7346.34	7346.34		4.26	Si
SLV 3	ini.	1403.02	103	-0.0003025	0.0002807	0.0035	1.42		7337.02	7337.02		5.23	Si
SLV 3	fin.	-1573.26	-975	-0.0003438	0.0002807	0.0035	1.42		7346.34	7346.34		4.67	Si
SLV 14	ini.	-1994.77	-2068	-0.0004529	0.0002807	0.0035	1.42		7346.34	7346.34		3.68	Si
SLV 14	fin.	1892.89	-323	-0.0004264	0.0002807	0.0035	1.42		7337.02	7337.02		3.88	Si
SLV 1	ini.	1788.84	816	-0.0003991	0.0002807	0.0035	1.42		7337.02	7337.02		4.1	Si
SLV 1	fin.	-1836.6	-628	-0.000411	0.0002807	0.0035	1.42		7346.34	7346.34		4	Si
SLV 4	ini.	1233.15	-107	-0.0002622	0.0002807	0.0035	1.42		7337.02	7337.02		5.95	Si
SLV 4	fin.	-1461.08	-1049	-0.0003162	0.0002807	0.0035	1.42		7346.34	7346.34		5.03	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-1824.9	-1858	-0.0004079	0.0002807	0.0035	1.42		7346.34	7346.34		4.03	Si
SLV 13	fin.	1780.71	-249	-0.000397	0.0002807	0.0035	1.42		7337.02	7337.02		4.12	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-2380.59	7117	1.42	0	864	7137	8929	3621	8001		1.12	Si
SLV 16	fin.	2156.24	5979	1.42	0	864	7137	8929	3621	8001		1.34	Si
SLV 2	ini.	1618.98	-4021	1.42	0	864	7137	8929	3621	8001		1.99	Si
SLV 2	fin.	-1724.42	-5164	1.42	0	864	7137	8929	3621	8001		1.55	Si
SLV 1	ini.	1788.84	-4441	1.42	0	864	7137	8929	3621	8001		1.8	Si
SLV 1	fin.	-1836.6	-5584	1.42	0	864	7137	8929	3621	8001		1.43	Si
SLV 4	ini.	1233.15	-3110	1.42	0	864	7137	8929	3621	8001		2.57	Si
SLV 4	fin.	-1461.08	-4210	1.42	0	864	7137	8929	3621	8001		1.9	Si
SLV 11	ini.	-1426.74	4256	1.42	0	864	7137	8929	3621	8001		1.88	Si
SLV 11	fin.	1105.5	3182	1.42	0	864	7137	8929	3621	8001		2.51	Si
SLV 12	ini.	-1535.22	4524	1.42	0	864	7137	8929	3621	8001		1.77	Si
SLV 12	fin.	1177.15	3450	1.42	0	864	7137	8929	3621	8001		2.32	Si
SLV 3	ini.	1403.02	-3530	1.42	0	864	7137	8929	3621	8001		2.27	Si
SLV 3	fin.	-1573.26	-4630	1.42	0	864	7137	8929	3621	8001		1.73	Si
SLV 13	ini.	-1824.9	5785	1.42	0	864	7137	8929	3621	8001		1.38	Si
SLV 13	fin.	1780.71	4605	1.42	0	864	7137	8929	3621	8001		1.74	Si
SLV 15	ini.	-2210.72	6696	1.42	0	864	7137	8929	3621	8001		1.19	Si
SLV 15	fin.	2044.06	5559	1.42	0	864	7137	8929	3621	8001		1.44	Si
SLV 14	ini.	-1994.77	6205	1.42	0	864	7137	8929	3621	8001		1.29	Si
SLV 14	fin.	1892.89	5025	1.42	0	864	7137	8929	3621	8001		1.59	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.086	SLV 16	Si
V_SLV	1.124	SLV 16	Si
PF_SLU	15.194	SLU 67	Si
V_SLU	3.587	SLU 75	Si

Trave di accoppiamento 122

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-15.033	1.366	11.06	12.48	1.42	-15.033	2.166	11.06	12.48	1.42	0.8	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-1058.54	1397	-0.0002251	0.0002246	0.0035	1.42		7603.79	7603.79	No	7.18	Si
SLU 81	fin.	454.04	2863	-0.0000919	0.0002246	0.0035	1.42		7594.91	7594.91	No	16.73	Si
SLU 80	ini.	-1031.19	1361	-0.0002187	0.0002246	0.0035	1.42		7603.79	7603.79	No	7.37	Si
SLU 80	fin.	431.94	2782	-0.0000873	0.0002246	0.0035	1.42		7594.91	7594.91	No	17.58	Si
SLU 84	ini.	-1063.05	1403	-0.0002261	0.0002246	0.0035	1.42		7603.79	7603.79	No	7.15	Si
SLU 84	fin.	453.36	2874	-0.0000918	0.0002246	0.0035	1.42		7594.91	7594.91	No	16.75	Si
SLU 74	ini.	-1032.95	1364	-0.0002191	0.0002246	0.0035	1.42		7603.79	7603.79	No	7.36	Si
SLU 74	fin.	438.37	2791	-0.0000886	0.0002246	0.0035	1.42		7594.91	7594.91	No	17.33	Si
SLU 77	ini.	-1038.66	1371	-0.0002204	0.0002246	0.0035	1.42		7603.79	7603.79	No	7.32	Si
SLU 77	fin.	442.17	2807	-0.0000894	0.0002246	0.0035	1.42		7594.91	7594.91	No	17.18	Si
SLU 83	ini.	-1064.25	1404	-0.0002264	0.0002246	0.0035	1.42		7603.79	7603.79	No	7.14	Si
SLU 83	fin.	457.83	2879	-0.0000927	0.0002246	0.0035	1.42		7594.91	7594.91	No	16.59	Si
SLU 82	ini.	-1057.33	1396	-0.0002248	0.0002246	0.0035	1.42		7603.79	7603.79	No	7.19	Si
SLU 82	fin.	449.56	2858	-0.000091	0.0002246	0.0035	1.42		7594.91	7594.91	No	16.89	Si
SLU 78	ini.	-1037.46	1369	-0.0002201	0.0002246	0.0035	1.42		7603.79	7603.79	No	7.33	Si
SLU 78	fin.	437.69	2802	-0.0000885	0.0002246	0.0035	1.42		7594.91	7594.91	No	17.35	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-1031.74	1363	-0.0002188	0.0002246	0.0035	1.42		7603.79	7603.79	No	7.37	Si
SLU 75	fin.	433.9	2786	-0.0000877	0.0002246	0.0035	1.42		7594.91	7594.91	No	17.5	Si
SLU 79	ini.	-1032.4	1363	-0.000219	0.0002246	0.0035	1.42		7603.79	7603.79	No	7.37	Si
SLU 79	fin.	436.42	2788	-0.0000882	0.0002246	0.0035	1.42		7594.91	7594.91	No	17.4	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-1063.05	3432	1.42	0	329	6344	4083	3621	6673	No	1.94	Si
SLU 84	fin.	453.36	2981	1.42	0	329	6344	4083	3621	6673	No	2.24	Si
SLU 78	ini.	-1037.46	3346	1.42	0	329	6344	4083	3621	6673	No	1.99	Si
SLU 78	fin.	437.69	2895	1.42	0	329	6344	4083	3621	6673	No	2.31	Si
SLU 81	ini.	-1058.54	3422	1.42	0	329	6344	4083	3621	6673	No	1.95	Si
SLU 81	fin.	454.04	2971	1.42	0	329	6344	4083	3621	6673	No	2.25	Si
SLU 79	ini.	-1032.4	3331	1.42	0	329	6344	4083	3621	6673	No	2	Si
SLU 79	fin.	436.42	2880	1.42	0	329	6344	4083	3621	6673	No	2.32	Si
SLU 80	ini.	-1031.19	3320	1.42	0	329	6344	4083	3621	6673	No	2.01	Si
SLU 80	fin.	431.94	2869	1.42	0	329	6344	4083	3621	6673	No	2.33	Si
SLU 82	ini.	-1057.33	3412	1.42	0	329	6344	4083	3621	6673	No	1.96	Si
SLU 82	fin.	449.56	2961	1.42	0	329	6344	4083	3621	6673	No	2.25	Si
SLU 75	ini.	-1031.74	3326	1.42	0	329	6344	4083	3621	6673	No	2.01	Si
SLU 75	fin.	433.9	2875	1.42	0	329	6344	4083	3621	6673	No	2.32	Si
SLU 77	ini.	-1038.66	3356	1.42	0	329	6344	4083	3621	6673	No	1.99	Si
SLU 77	fin.	442.17	2905	1.42	0	329	6344	4083	3621	6673	No	2.3	Si
SLU 74	ini.	-1032.95	3336	1.42	0	329	6344	4083	3621	6673	No	2	Si
SLU 74	fin.	438.37	2885	1.42	0	329	6344	4083	3621	6673	No	2.31	Si
SLU 83	ini.	-1064.25	3442	1.42	0	329	6344	4083	3621	6673	No	1.94	Si
SLU 83	fin.	457.83	2991	1.42	0	329	6344	4083	3621	6673	No	2.23	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 7	ini.	-1495.65	749	-0.0003198	0.0003369	0.0035	1.42		7818.07	7818.07		5.23	Si
SLV 7	fin.	198.39	1455	-0.0000393	0.0003369	0.0035	1.42		7808.98	7808.98		39.36	Si
SLV 4	ini.	-1141.23	743	-0.0002382	0.0003369	0.0035	1.42		7818.07	7818.07		6.85	Si
SLV 4	fin.	259.45	1946	-0.0000516	0.0003369	0.0035	1.42		7808.98	7808.98		30.1	Si
SLV 3	ini.	-1136.17	736	-0.0002371	0.0003369	0.0035	1.42		7818.07	7818.07		6.88	Si
SLV 3	fin.	245.18	1926	-0.0000487	0.0003369	0.0035	1.42		7808.98	7808.98		31.85	Si
SLD 12	ini.	-1006.27	917	-0.0002083	0.0003369	0.0035	1.42		7818.07	7818.07		7.77	Si
SLD 12	fin.	258.85	1698	-0.0000514	0.0003369	0.0035	1.42		7808.98	7808.98		30.17	Si
SLV 12	ini.	-1378.15	856	-0.0002923	0.0003369	0.0035	1.42		7818.07	7818.07		5.67	Si
SLV 12	fin.	215.38	1377	-0.0000427	0.0003369	0.0035	1.42		7808.98	7808.98		36.26	Si
SLD 8	ini.	-1057.55	872	-0.0002196	0.0003369	0.0035	1.42		7818.07	7818.07		7.39	Si
SLD 8	fin.	255.98	1736	-0.0000509	0.0003369	0.0035	1.42		7808.98	7808.98		30.51	Si
SLD 11	ini.	-1004.86	915	-0.000208	0.0003369	0.0035	1.42		7818.07	7818.07		7.78	Si
SLD 11	fin.	254.87	1693	-0.0000506	0.0003369	0.0035	1.42		7808.98	7808.98		30.64	Si
SLV 11	ini.	-1374.92	852	-0.0002915	0.0003369	0.0035	1.42		7818.07	7818.07		5.69	Si
SLV 11	fin.	206.26	1364	-0.0000409	0.0003369	0.0035	1.42		7808.98	7808.98		37.86	Si
SLV 8	ini.	-1498.88	753	-0.0003205	0.0003369	0.0035	1.42		7818.07	7818.07		5.22	Si
SLV 8	fin.	207.51	1467	-0.0000411	0.0003369	0.0035	1.42		7808.98	7808.98		37.63	Si
SLD 7	ini.	-1056.14	871	-0.0002193	0.0003369	0.0035	1.42		7818.07	7818.07		7.4	Si
SLD 7	fin.	252	1730	-0.0000501	0.0003369	0.0035	1.42		7808.98	7808.98		30.99	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 8	ini.	-1057.55	3017	1.42	0	494	6344	6124	3621	6838		2.27	Si
SLD 8	fin.	255.98	2421	1.42	0	494	6344	6124	3621	6838		2.82	Si
SLV 7	ini.	-1495.65	3900	1.42	0	494	6344	6124	3621	6838		1.75	Si
SLV 7	fin.	198.39	2965	1.42	0	494	6344	6124	3621	6838		2.31	Si
SLV 3	ini.	-1136.17	2913	1.42	0	494	6344	6124	3621	6838		2.35	Si
SLV 3	fin.	245.18	2369	1.42	0	494	6344	6124	3621	6838		2.89	Si
SLV 4	ini.	-1141.23	2948	1.42	0	494	6344	6124	3621	6838		2.32	Si
SLV 4	fin.	259.45	2405	1.42	0	494	6344	6124	3621	6838		2.84	Si
SLD 11	ini.	-1004.86	2969	1.42	0	494	6344	6124	3621	6838		2.3	Si
SLD 11	fin.	254.87	2378	1.42	0	494	6344	6124	3621	6838		2.87	Si
SLD 12	ini.	-1006.27	2979	1.42	0	494	6344	6124	3621	6838		2.3	Si
SLD 12	fin.	258.85	2388	1.42	0	494	6344	6124	3621	6838		2.86	Si
SLV 11	ini.	-1374.92	3811	1.42	0	494	6344	6124	3621	6838		1.79	Si
SLV 11	fin.	206.26	2891	1.42	0	494	6344	6124	3621	6838		2.36	Si
SLV 8	ini.	-1498.88	3923	1.42	0	494	6344	6124	3621	6838		1.74	Si
SLV 8	fin.	207.51	2988	1.42	0	494	6344	6124	3621	6838		2.29	Si
SLV 12	ini.	-1378.15	3834	1.42	0	494	6344	6124	3621	6838		1.78	Si
SLV 12	fin.	215.38	2914	1.42	0	494	6344	6124	3621	6838		2.35	Si
SLD 7	ini.	-1056.14	3007	1.42	0	494	6344	6124	3621	6838		2.27	Si
SLD 7	fin.	252	2411	1.42	0	494	6344	6124	3621	6838		2.84	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.216	SLV 8	Si
V_SLV	1.743	SLV 8	Si
PF_SLU	7.145	SLU 83	Si
V_SLU	1.939	SLU 83	Si

Trave di accoppiamento 123

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-13.778	-0.194	11.06	12.48	1.42	-13.778	0.706	11.06	12.48	1.42	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 63	ini.	216.33	144	-0.0000431	0.0001872	0.0035	1.42		7350.79	7350.79	No	33.98	Si
SLU 63	fin.	69.52	84	-0.0000137	0.0001872	0.0035	1.42		7350.79	7350.79	No	105.74	Si
SLU 48	ini.	212.95	158	-0.0000425	0.0001872	0.0035	1.42		7350.79	7350.79	No	34.52	Si
SLU 48	fin.	87.24	101	-0.0000172	0.0001872	0.0035	1.42		7350.79	7350.79	No	84.25	Si
SLU 59	ini.	243.04	198	-0.0000486	0.0001872	0.0035	1.42		7350.79	7350.79	No	30.25	Si
SLU 59	fin.	73.55	116	-0.0000145	0.0001872	0.0035	1.42		7350.79	7350.79	No	99.94	Si
SLU 49	ini.	221.04	171	-0.0000441	0.0001872	0.0035	1.42		7350.79	7350.79	No	33.26	Si
SLU 49	fin.	86.72	107	-0.0000171	0.0001872	0.0035	1.42		7350.79	7350.79	No	84.77	Si
SLU 57	ini.	220.14	125	-0.0000439	0.0001872	0.0035	1.42		7350.79	7350.79	No	33.39	Si
SLU 57	fin.	81.14	72	-0.000016	0.0001872	0.0035	1.42		7350.79	7350.79	No	90.59	Si
SLU 50	ini.	235.84	231	-0.0000471	0.0001872	0.0035	1.42		7350.79	7350.79	No	31.17	Si
SLU 50	fin.	79.65	145	-0.0000157	0.0001872	0.0035	1.42		7350.79	7350.79	No	92.29	Si
SLU 51	ini.	243.93	244	-0.0000488	0.0001872	0.0035	1.42		7350.79	7350.79	No	30.13	Si
SLU 51	fin.	79.12	152	-0.0000156	0.0001872	0.0035	1.42		7350.79	7350.79	No	92.9	Si
SLU 58	ini.	234.95	185	-0.0000469	0.0001872	0.0035	1.42		7350.79	7350.79	No	31.29	Si
SLU 58	fin.	74.08	110	-0.0000146	0.0001872	0.0035	1.42		7350.79	7350.79	No	99.23	Si
SLU 47	ini.	223	219	-0.0000445	0.0001872	0.0035	1.42		7350.79	7350.79	No	32.96	Si
SLU 47	fin.	77.13	138	-0.0000152	0.0001872	0.0035	1.42		7350.79	7350.79	No	95.3	Si
SLU 55	ini.	222.11	173	-0.0000443	0.0001872	0.0035	1.42		7350.79	7350.79	No	33.1	Si
SLU 55	fin.	71.56	103	-0.0000141	0.0001872	0.0035	1.42		7350.79	7350.79	No	102.73	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 49	ini.	221.04	238	1.42	0	576	7137	5953	3621	7713	No	32.37	Si
SLU 49	fin.	86.72	-559	1.42	0	576	7137	5953	3621	7713	No	13.8	Si
SLU 57	ini.	220.14	242	1.42	0	576	7137	5953	3621	7713	No	31.92	Si
SLU 57	fin.	81.14	-555	1.42	0	576	7137	5953	3621	7713	No	13.89	Si
SLU 59	ini.	243.04	185	1.42	0	576	7137	5953	3621	7713	No	41.65	Si
SLU 59	fin.	73.55	-612	1.42	0	576	7137	5953	3621	7713	No	12.61	Si
SLU 47	ini.	223	212	1.42	0	576	7137	5953	3621	7713	No	36.39	Si
SLU 47	fin.	77.13	-585	1.42	0	576	7137	5953	3621	7713	No	13.18	Si
SLU 50	ini.	235.84	197	1.42	0	576	7137	5953	3621	7713	No	39.14	Si
SLU 50	fin.	79.65	-600	1.42	0	576	7137	5953	3621	7713	No	12.86	Si
SLU 55	ini.	222.11	215	1.42	0	576	7137	5953	3621	7713	No	35.82	Si
SLU 55	fin.	71.56	-582	1.42	0	576	7137	5953	3621	7713	No	13.26	Si
SLU 63	ini.	216.33	227	1.42	0	576	7137	5953	3621	7713	No	33.99	Si
SLU 63	fin.	69.52	-570	1.42	0	576	7137	5953	3621	7713	No	13.53	Si
SLU 51	ini.	243.93	182	1.42	0	576	7137	5953	3621	7713	No	42.42	Si
SLU 51	fin.	79.12	-615	1.42	0	576	7137	5953	3621	7713	No	12.54	Si
SLU 58	ini.	234.95	200	1.42	0	576	7137	5953	3621	7713	No	38.48	Si
SLU 58	fin.	74.08	-597	1.42	0	576	7137	5953	3621	7713	No	12.93	Si
SLU 62	ini.	208.24	242	1.42	0	576	7137	5953	3621	7713	No	31.85	Si
SLU 62	fin.	70.05	-555	1.42	0	576	7137	5953	3621	7713	No	13.9	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 7	ini.	-609.91	-1192	-0.0001239	0.0002807	0.0035	1.42		7346.34	7346.34		12.05	Si
SLV 7	fin.	764.01	-378	-0.000157	0.0002807	0.0035	1.42		7337.02	7337.02		9.6	Si
SLV 1	ini.	567.86	943	-0.0001152	0.0002807	0.0035	1.42		7337.02	7337.02		12.92	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	fin.	-6.1	749	-0.0000012	0.0002807	0.0035	1.42		7346.34	7346.34		1204.43	Si
SLV 10	ini.	851.6	1199	-0.0001761	0.0002807	0.0035	1.42		7337.02	7337.02		8.62	Si
SLV 10	fin.	-624.26	392	-0.000127	0.0002807	0.0035	1.42		7346.34	7346.34		11.77	Si
SLV 5	ini.	978.96	1523	-0.0002042	0.0002807	0.0035	1.42		7337.02	7337.02		7.49	Si
SLV 5	fin.	-551.57	739	-0.0001116	0.0002807	0.0035	1.42		7346.34	7346.34		13.32	Si
SLV 9	ini.	855.67	1208	-0.0001769	0.0002807	0.0035	1.42		7337.02	7337.02		8.57	Si
SLV 9	fin.	-624.5	396	-0.000127	0.0002807	0.0035	1.42		7346.34	7346.34		11.76	Si
SLV 8	ini.	-613.97	-1201	-0.0001248	0.0002807	0.0035	1.42		7346.34	7346.34		11.97	Si
SLV 8	fin.	764.25	-383	-0.0001571	0.0002807	0.0035	1.42		7337.02	7337.02		9.6	Si
SLV 2	ini.	561.48	930	-0.0001139	0.0002807	0.0035	1.42		7337.02	7337.02		13.07	Si
SLV 2	fin.	-5.72	742	-0.0000011	0.0002807	0.0035	1.42		7346.34	7346.34		1284.89	Si
SLV 6	ini.	974.89	1514	-0.0002033	0.0002807	0.0035	1.42		7337.02	7337.02		7.53	Si
SLV 6	fin.	-551.32	735	-0.0001116	0.0002807	0.0035	1.42		7346.34	7346.34		13.32	Si
SLV 11	ini.	-733.2	-1508	-0.0001502	0.0002807	0.0035	1.42		7346.34	7346.34		10.02	Si
SLV 11	fin.	691.07	-721	-0.0001413	0.0002807	0.0035	1.42		7337.02	7337.02		10.62	Si
SLV 12	ini.	-737.27	-1516	-0.0001511	0.0002807	0.0035	1.42		7346.34	7346.34		9.96	Si
SLV 12	fin.	691.32	-726	-0.0001414	0.0002807	0.0035	1.42		7337.02	7337.02		10.61	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 11	ini.	-733.2	1923	1.42	0	864	7137	8929	3621	8001		4.16	Si
SLV 11	fin.	691.07	1521	1.42	0	864	7137	8929	3621	8001		5.26	Si
SLV 6	ini.	974.89	-1345	1.42	0	864	7137	8929	3621	8001		5.95	Si
SLV 6	fin.	-551.32	-2193	1.42	0	864	7137	8929	3621	8001		3.65	Si
SLV 10	ini.	851.6	-1026	1.42	0	864	7137	8929	3621	8001		7.8	Si
SLV 10	fin.	-624.26	-1911	1.42	0	864	7137	8929	3621	8001		4.19	Si
SLV 2	ini.	561.48	-680	1.42	0	864	7137	8929	3621	8001		11.77	Si
SLV 2	fin.	-5.72	-1317	1.42	0	864	7137	8929	3621	8001		6.08	Si
SLV 12	ini.	-737.27	1931	1.42	0	864	7137	8929	3621	8001		4.14	Si
SLV 12	fin.	691.32	1529	1.42	0	864	7137	8929	3621	8001		5.23	Si
SLV 1	ini.	567.86	-693	1.42	0	864	7137	8929	3621	8001		11.55	Si
SLV 1	fin.	-6.1	-1330	1.42	0	864	7137	8929	3621	8001		6.02	Si
SLV 5	ini.	978.96	-1353	1.42	0	864	7137	8929	3621	8001		5.91	Si
SLV 5	fin.	-551.57	-2202	1.42	0	864	7137	8929	3621	8001		3.63	Si
SLV 9	ini.	855.67	-1034	1.42	0	864	7137	8929	3621	8001		7.73	Si
SLV 9	fin.	-624.5	-1919	1.42	0	864	7137	8929	3621	8001		4.17	Si
SLV 8	ini.	-613.97	1612	1.42	0	864	7137	8929	3621	8001		4.96	Si
SLV 8	fin.	764.25	1246	1.42	0	864	7137	8929	3621	8001		6.42	Si
SLV 7	ini.	-609.91	1604	1.42	0	864	7137	8929	3621	8001		4.99	Si
SLV 7	fin.	764.01	1238	1.42	0	864	7137	8929	3621	8001		6.46	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	7.495	SLV 5	Si
V_SLV	3.634	SLV 5	Si
PF_SLU	30.135	SLU 51	Si
V_SLU	12.538	SLU 51	Si

Trave di accoppiamento 124

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.718	6.526	8.96	9.86	0.9	-16.818	6.526	8.96	9.86	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	814.17	-2837	-0.0004905	0.0001872	0.0035	0.9		2959	2959	No	3.63	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	fin.	-790.89	-24	-0.0004725	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.75	Si
SLU 77	ini.	812.64	-2857	-0.0004894	0.0001872	0.0035	0.9		2959	2959	No	3.64	Si
SLU 77	fin.	-768.53	-84	-0.0004564	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.86	Si
SLU 80	ini.	805.18	-2819	-0.0004839	0.0001872	0.0035	0.9		2959	2959	No	3.67	Si
SLU 80	fin.	-770.69	-55	-0.000458	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.85	Si
SLU 84	ini.	823.75	-2875	-0.0004975	0.0001872	0.0035	0.9		2959	2959	No	3.59	Si
SLU 84	fin.	-795.87	-36	-0.0004761	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.73	Si
SLU 83	ini.	822.49	-2870	-0.0004966	0.0001872	0.0035	0.9		2959	2959	No	3.6	Si
SLU 83	fin.	-794.73	-36	-0.0004753	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.73	Si
SLU 81	ini.	812.91	-2833	-0.0004895	0.0001872	0.0035	0.9		2959	2959	No	3.64	Si
SLU 81	fin.	-789.75	-24	-0.0004717	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.75	Si
SLU 74	ini.	803.06	-2819	-0.0004824	0.0001872	0.0035	0.9		2959	2959	No	3.68	Si
SLU 74	fin.	-763.56	-72	-0.0004529	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.88	Si
SLU 75	ini.	804.32	-2824	-0.0004833	0.0001872	0.0035	0.9		2959	2959	No	3.68	Si
SLU 75	fin.	-764.7	-72	-0.0004537	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.88	Si
SLU 79	ini.	803.92	-2814	-0.000483	0.0001872	0.0035	0.9		2959	2959	No	3.68	Si
SLU 79	fin.	-769.55	-55	-0.0004571	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.85	Si
SLU 78	ini.	813.9	-2861	-0.0004903	0.0001872	0.0035	0.9		2959	2959	No	3.64	Si
SLU 78	fin.	-769.67	-84	-0.0004572	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.85	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	804.32	-4171	0.9	0	365	7137	3773	2295	6068	No	1.45	Si
SLU 75	fin.	-764.7	-2513	0.9	0	365	7137	3773	2295	6068	No	2.41	Si
SLU 83	ini.	822.49	-4232	0.9	0	365	7137	3773	2295	6068	No	1.43	Si
SLU 83	fin.	-794.73	-2628	0.9	0	365	7137	3773	2295	6068	No	2.31	Si
SLU 80	ini.	805.18	-4166	0.9	0	365	7137	3773	2295	6068	No	1.46	Si
SLU 80	fin.	-770.69	-2538	0.9	0	365	7137	3773	2295	6068	No	2.39	Si
SLU 79	ini.	803.92	-4159	0.9	0	365	7137	3773	2295	6068	No	1.46	Si
SLU 79	fin.	-769.55	-2534	0.9	0	365	7137	3773	2295	6068	No	2.39	Si
SLU 78	ini.	813.9	-4225	0.9	0	365	7137	3773	2295	6068	No	1.44	Si
SLU 78	fin.	-769.67	-2525	0.9	0	365	7137	3773	2295	6068	No	2.4	Si
SLU 77	ini.	812.64	-4218	0.9	0	365	7137	3773	2295	6068	No	1.44	Si
SLU 77	fin.	-768.53	-2522	0.9	0	365	7137	3773	2295	6068	No	2.41	Si
SLU 84	ini.	823.75	-4239	0.9	0	365	7137	3773	2295	6068	No	1.43	Si
SLU 84	fin.	-795.87	-2631	0.9	0	365	7137	3773	2295	6068	No	2.31	Si
SLU 81	ini.	812.91	-4177	0.9	0	365	7137	3773	2295	6068	No	1.45	Si
SLU 81	fin.	-789.75	-2616	0.9	0	365	7137	3773	2295	6068	No	2.32	Si
SLU 74	ini.	803.06	-4164	0.9	0	365	7137	3773	2295	6068	No	1.46	Si
SLU 74	fin.	-763.56	-2510	0.9	0	365	7137	3773	2295	6068	No	2.42	Si
SLU 82	ini.	814.17	-4185	0.9	0	365	7137	3773	2295	6068	No	1.45	Si
SLU 82	fin.	-790.89	-2619	0.9	0	365	7137	3773	2295	6068	No	2.32	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 15	ini.	826.09	-2653	-0.0004712	0.0002807	0.0035	0.9		2989.59	2989.59		3.62	Si
SLD 15	fin.	-960.27	503	-0.0005636	0.0002807	0.0035	0.9		2995.37	2995.37		3.12	Si
SLV 10	ini.	893.45	-2954	-0.0005176	0.0002807	0.0035	0.9		2989.59	2989.59		3.35	Si
SLV 10	fin.	-975.85	455	-0.0005748	0.0002807	0.0035	0.9		2995.37	2995.37		3.07	Si
SLV 15	ini.	1185.77	-3595	-0.0007337	0.0002807	0.0035	0.9		2989.59	2989.59		2.52	Si
SLV 15	fin.	-1526.24	1214	-0.0010155	0.0002807	0.0035	0.9		2995.37	2995.37		1.96	Si
SLD 13	ini.	864.14	-2781	-0.0004973	0.0002807	0.0035	0.9		2989.59	2989.59		3.46	Si
SLD 13	fin.	-999.24	538	-0.0005917	0.0002807	0.0035	0.9		2995.37	2995.37		3	Si
SLV 16	ini.	1163.51	-3556	-0.0007164	0.0002807	0.0035	0.9		2989.59	2989.59		2.57	Si
SLV 16	fin.	-1482.94	1137	-0.0009773	0.0002807	0.0035	0.9		2995.37	2995.37		2.02	Si
SLD 16	ini.	816.53	-2637	-0.0004648	0.0002807	0.0035	0.9		2989.59	2989.59		3.66	Si
SLD 16	fin.	-941.69	470	-0.0005504	0.0002807	0.0035	0.9		2995.37	2995.37		3.18	Si
SLV 13	ini.	1272.52	-3885	-0.0008026	0.0002807	0.0035	0.9		2989.59	2989.59		2.35	Si
SLV 13	fin.	-1615.37	1295	-0.0010964	0.0002807	0.0035	0.9		2995.37	2995.37		1.85	Si
SLV 9	ini.	907.67	-2979	-0.0005275	0.0002807	0.0035	0.9		2989.59	2989.59		3.29	Si
SLV 9	fin.	-1003.5	504	-0.0005948	0.0002807	0.0035	0.9		2995.37	2995.37		2.98	Si
SLD 14	ini.	854.58	-2764	-0.0004907	0.0002807	0.0035	0.9		2989.59	2989.59		3.5	Si
SLD 14	fin.	-980.66	505	-0.0005782	0.0002807	0.0035	0.9		2995.37	2995.37		3.05	Si
SLV 14	ini.	1250.26	-3846	-0.0007847	0.0002807	0.0035	0.9		2989.59	2989.59		2.39	Si
SLV 14	fin.	-1572.07	1218	-0.0010567	0.0002807	0.0035	0.9		2995.37	2995.37		1.91	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	1163.51	-5603	0.9	0	548	7137	5660	2295	7684		1.37	Si
SLV 16	fin.	-1482.94	-5364	0.9	0	548	7137	5660	2295	7684		1.43	Si
SLD 14	ini.	854.58	-4265	0.9	0	548	7137	5660	2295	7684		1.8	Si
SLD 14	fin.	-980.66	-3321	0.9	0	548	7137	5660	2295	7684		2.31	Si
SLD 13	ini.	864.14	-4312	0.9	0	548	7137	5660	2295	7684		1.78	Si
SLD 13	fin.	-999.24	-3385	0.9	0	548	7137	5660	2295	7684		2.27	Si
SLD 16	ini.	816.53	-4057	0.9	0	548	7137	5660	2295	7684		1.89	Si
SLD 16	fin.	-941.69	-3307	0.9	0	548	7137	5660	2295	7684		2.32	Si
SLV 13	ini.	1272.52	-6186	0.9	0	548	7137	5660	2295	7684		1.24	Si
SLV 13	fin.	-1615.37	-5543	0.9	0	548	7137	5660	2295	7684		1.39	Si
SLV 14	ini.	1250.26	-6076	0.9	0	548	7137	5660	2295	7684		1.26	Si
SLV 14	fin.	-1572.07	-5394	0.9	0	548	7137	5660	2295	7684		1.42	Si
SLV 9	ini.	907.67	-4626	0.9	0	548	7137	5660	2295	7684		1.66	Si
SLV 9	fin.	-1003.5	-2972	0.9	0	548	7137	5660	2295	7684		2.59	Si
SLD 15	ini.	826.09	-4104	0.9	0	548	7137	5660	2295	7684		1.87	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 15	fin.	-960.27	-3370	0.9	0	548	7137	5660	2295	7684		2.28	Si
SLV 15	ini.	1185.77	-5713	0.9	0	548	7137	5660	2295	7684		1.35	Si
SLV 15	fin.	-1526.24	-5513	0.9	0	548	7137	5660	2295	7684		1.39	Si
SLV 10	ini.	893.45	-4556	0.9	0	548	7137	5660	2295	7684		1.69	Si
SLV 10	fin.	-975.85	-2877	0.9	0	548	7137	5660	2295	7684		2.67	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.854	SLV 13	Si
V_SLV	1.242	SLV 13	Si
PF_SLU	3.592	SLU 84	Si
V_SLU	1.432	SLU 84	Si

Trave di accoppiamento 125

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.718	6.526	11.66	12.48	0.82	-16.818	6.526	11.66	12.48	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	609.37	798	-0.000433	0.0001872	0.0035	0.82		2455.37	2455.37	No	4.03	Si
SLU 81	fin.	-830.8	-2464	-0.0006303	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.96	Si
SLU 84	ini.	613.65	792	-0.0004366	0.0001872	0.0035	0.82		2455.37	2455.37	No	4	Si
SLU 84	fin.	-842.63	-2505	-0.0006415	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.92	Si
SLU 83	ini.	612.59	791	-0.0004357	0.0001872	0.0035	0.82		2455.37	2455.37	No	4.01	Si
SLU 83	fin.	-841.05	-2501	-0.00064	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.93	Si
SLU 77	ini.	594.31	736	-0.0004202	0.0001872	0.0035	0.82		2455.37	2455.37	No	4.13	Si
SLU 77	fin.	-831.67	-2490	-0.0006311	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.96	Si
SLU 74	ini.	591.09	743	-0.0004175	0.0001872	0.0035	0.82		2455.37	2455.37	No	4.15	Si
SLU 74	fin.	-821.42	-2453	-0.0006215	0.0001872	0.0035	0.82		2460.51	2460.51	No	3	Si
SLU 82	ini.	610.43	799	-0.0004339	0.0001872	0.0035	0.82		2455.37	2455.37	No	4.02	Si
SLU 82	fin.	-832.37	-2469	-0.0006318	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.96	Si
SLU 79	ini.	594.32	757	-0.0004202	0.0001872	0.0035	0.82		2455.37	2455.37	No	4.13	Si
SLU 79	fin.	-820.28	-2446	-0.0006204	0.0001872	0.0035	0.82		2460.51	2460.51	No	3	Si
SLU 78	ini.	595.37	737	-0.0004211	0.0001872	0.0035	0.82		2455.37	2455.37	No	4.12	Si
SLU 78	fin.	-833.25	-2495	-0.0006326	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.95	Si
SLU 75	ini.	592.15	744	-0.0004184	0.0001872	0.0035	0.82		2455.37	2455.37	No	4.15	Si
SLU 75	fin.	-823	-2458	-0.000623	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.99	Si
SLU 80	ini.	595.38	758	-0.0004211	0.0001872	0.0035	0.82		2455.37	2455.37	No	4.12	Si
SLU 80	fin.	-821.86	-2451	-0.0006219	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.99	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	595.37	-1742	0.82	0	303	6502	3438	2091	5529	No	3.17	Si
SLU 78	fin.	-833.25	-4226	0.82	0	303	6502	3438	2091	5529	No	1.31	Si
SLU 82	ini.	610.43	-1796	0.82	0	303	6502	3438	2091	5529	No	3.08	Si
SLU 82	fin.	-832.37	-4232	0.82	0	303	6502	3438	2091	5529	No	1.31	Si
SLU 75	ini.	592.15	-1735	0.82	0	303	6502	3438	2091	5529	No	3.19	Si
SLU 75	fin.	-823	-4175	0.82	0	303	6502	3438	2091	5529	No	1.32	Si
SLU 84	ini.	613.65	-1803	0.82	0	303	6502	3438	2091	5529	No	3.07	Si
SLU 84	fin.	-842.63	-4282	0.82	0	303	6502	3438	2091	5529	No	1.29	Si
SLU 81	ini.	609.37	-1793	0.82	0	303	6502	3438	2091	5529	No	3.08	Si
SLU 81	fin.	-830.8	-4224	0.82	0	303	6502	3438	2091	5529	No	1.31	Si
SLU 83	ini.	612.59	-1800	0.82	0	303	6502	3438	2091	5529	No	3.07	Si
SLU 83	fin.	-841.05	-4274	0.82	0	303	6502	3438	2091	5529	No	1.29	Si
SLU 79	ini.	594.32	-1753	0.82	0	303	6502	3438	2091	5529	No	3.15	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	fin.	-820.28	-4157	0.82	0	303	6502	3438	2091	5529	No	1.33	Si
SLU 80	ini.	595.38	-1756	0.82	0	303	6502	3438	2091	5529	No	3.15	Si
SLU 80	fin.	-821.86	-4165	0.82	0	303	6502	3438	2091	5529	No	1.33	Si
SLU 74	ini.	591.09	-1732	0.82	0	303	6502	3438	2091	5529	No	3.19	Si
SLU 74	fin.	-821.42	-4167	0.82	0	303	6502	3438	2091	5529	No	1.33	Si
SLU 77	ini.	594.31	-1739	0.82	0	303	6502	3438	2091	5529	No	3.18	Si
SLU 77	fin.	-831.67	-4218	0.82	0	303	6502	3438	2091	5529	No	1.31	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	869.07	1438	-0.0006281	0.0002807	0.0035	0.82		2482.11	2482.11		2.86	Si
SLV 16	fin.	-994.58	-2886	-0.0007416	0.0002807	0.0035	0.82		2487.45	2487.45		2.5	Si
SLD 13	ini.	675.69	1041	-0.0004631	0.0002807	0.0035	0.82		2482.11	2482.11		3.67	Si
SLD 13	fin.	-814.99	-2380	-0.000579	0.0002807	0.0035	0.82		2487.45	2487.45		3.05	Si
SLV 9	ini.	748.05	1105	-0.0005231	0.0002807	0.0035	0.82		2482.11	2482.11		3.32	Si
SLV 9	fin.	-915.07	-2685	-0.000668	0.0002807	0.0035	0.82		2487.45	2487.45		2.72	Si
SLV 14	ini.	961.4	1562	-0.0007124	0.0002807	0.0035	0.82		2482.11	2482.11		2.58	Si
SLV 14	fin.	-1105.45	-3215	-0.0008489	0.0002807	0.0035	0.82		2487.45	2487.45		2.25	Si
SLD 14	ini.	651.61	987	-0.0004436	0.0002807	0.0035	0.82		2482.11	2482.11		3.81	Si
SLD 14	fin.	-796.75	-2336	-0.0005633	0.0002807	0.0035	0.82		2487.45	2487.45		3.12	Si
SLV 13	ini.	1017.52	1689	-0.0007653	0.0002807	0.0035	0.82		2482.11	2482.11		2.44	Si
SLV 13	fin.	-1147.93	-3319	-0.0008914	0.0002807	0.0035	0.82		2487.45	2487.45		2.17	Si
SLV 15	ini.	925.19	1565	-0.0006789	0.0002807	0.0035	0.82		2482.11	2482.11		2.68	Si
SLV 15	fin.	-1037.06	-2990	-0.0007821	0.0002807	0.0035	0.82		2487.45	2487.45		2.4	Si
SLD 16	ini.	611.31	933	-0.0004116	0.0002807	0.0035	0.82		2482.11	2482.11		4.06	Si
SLD 16	fin.	-748.17	-2191	-0.0005219	0.0002807	0.0035	0.82		2487.45	2487.45		3.32	Si
SLD 15	ini.	635.4	988	-0.0004307	0.0002807	0.0035	0.82		2482.11	2482.11		3.91	Si
SLD 15	fin.	-766.4	-2236	-0.0005373	0.0002807	0.0035	0.82		2487.45	2487.45		3.25	Si
SLV 10	ini.	712.21	1023	-0.0004931	0.0002807	0.0035	0.82		2482.11	2482.11		3.49	Si
SLV 10	fin.	-887.94	-2618	-0.0006435	0.0002807	0.0035	0.82		2487.45	2487.45		2.8	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 14	ini.	651.61	-2164	0.82	0	455	6502	5156	2091	6957		3.22	Si
SLD 14	fin.	-796.75	-3895	0.82	0	455	6502	5156	2091	6957		1.79	Si
SLD 13	ini.	675.69	-2255	0.82	0	455	6502	5156	2091	6957		3.09	Si
SLD 13	fin.	-814.99	-3981	0.82	0	455	6502	5156	2091	6957		1.75	Si
SLV 16	ini.	869.07	-3331	0.82	0	455	6502	5156	2091	6957		2.09	Si
SLV 16	fin.	-994.58	-4738	0.82	0	455	6502	5156	2091	6957		1.47	Si
SLD 16	ini.	611.31	-2143	0.82	0	455	6502	5156	2091	6957		3.25	Si
SLD 16	fin.	-748.17	-3654	0.82	0	455	6502	5156	2091	6957		1.9	Si
SLV 14	ini.	961.4	-3376	0.82	0	455	6502	5156	2091	6957		2.06	Si
SLV 14	fin.	-1105.45	-5287	0.82	0	455	6502	5156	2091	6957		1.32	Si
SLV 10	ini.	712.21	-1924	0.82	0	455	6502	5156	2091	6957		3.62	Si
SLV 10	fin.	-887.94	-4378	0.82	0	455	6502	5156	2091	6957		1.59	Si
SLV 13	ini.	1017.52	-3588	0.82	0	455	6502	5156	2091	6957		1.94	Si
SLV 13	fin.	-1147.93	-5489	0.82	0	455	6502	5156	2091	6957		1.27	Si
SLV 15	ini.	925.19	-3543	0.82	0	455	6502	5156	2091	6957		1.96	Si
SLV 15	fin.	-1037.06	-4940	0.82	0	455	6502	5156	2091	6957		1.41	Si
SLV 9	ini.	748.05	-2059	0.82	0	455	6502	5156	2091	6957		3.38	Si
SLV 9	fin.	-915.07	-4507	0.82	0	455	6502	5156	2091	6957		1.54	Si
SLD 15	ini.	635.4	-2234	0.82	0	455	6502	5156	2091	6957		3.11	Si
SLD 15	fin.	-766.4	-3741	0.82	0	455	6502	5156	2091	6957		1.86	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.167	SLV 13	Si
V_SLV	1.268	SLV 13	Si
PF_SLU	2.92	SLU 84	Si
V_SLU	1.291	SLU 84	Si

Trave di accoppiamento 126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.838	6.526	8.96	9.86	0.9	-11.938	6.526	8.96	9.86	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	304.29	-1712	-0.0001589	0.0001872	0.0035	0.9		2959	2959	No	9.72	Si
SLU 84	fin.	199.64	-1504	-0.0001017	0.0001872	0.0035	0.9		2959	2959	No	14.82	Si
SLU 82	ini.	299.18	-1681	-0.000156	0.0001872	0.0035	0.9		2959	2959	No	9.89	Si
SLU 82	fin.	193.41	-1472	-0.0000984	0.0001872	0.0035	0.9		2959	2959	No	15.3	Si
SLU 78	ini.	307.78	-1737	-0.0001608	0.0001872	0.0035	0.9		2959	2959	No	9.61	Si
SLU 78	fin.	208.55	-1537	-0.0001064	0.0001872	0.0035	0.9		2959	2959	No	14.19	Si
SLU 80	ini.	298.1	-1687	-0.0001554	0.0001872	0.0035	0.9		2959	2959	No	9.93	Si
SLU 80	fin.	203.14	-1497	-0.0001036	0.0001872	0.0035	0.9		2959	2959	No	14.57	Si
SLU 83	ini.	303.75	-1709	-0.0001586	0.0001872	0.0035	0.9		2959	2959	No	9.74	Si
SLU 83	fin.	199.34	-1502	-0.0001015	0.0001872	0.0035	0.9		2959	2959	No	14.84	Si
SLU 79	ini.	297.56	-1685	-0.0001551	0.0001872	0.0035	0.9		2959	2959	No	9.94	Si
SLU 79	fin.	202.84	-1494	-0.0001034	0.0001872	0.0035	0.9		2959	2959	No	14.59	Si
SLU 74	ini.	302.13	-1703	-0.0001577	0.0001872	0.0035	0.9		2959	2959	No	9.79	Si
SLU 74	fin.	202.03	-1502	-0.000103	0.0001872	0.0035	0.9		2959	2959	No	14.65	Si
SLU 81	ini.	298.63	-1678	-0.0001557	0.0001872	0.0035	0.9		2959	2959	No	9.91	Si
SLU 81	fin.	193.11	-1469	-0.0000982	0.0001872	0.0035	0.9		2959	2959	No	15.32	Si
SLU 77	ini.	307.24	-1734	-0.0001605	0.0001872	0.0035	0.9		2959	2959	No	9.63	Si
SLU 77	fin.	208.25	-1535	-0.0001063	0.0001872	0.0035	0.9		2959	2959	No	14.21	Si
SLU 75	ini.	302.67	-1706	-0.000158	0.0001872	0.0035	0.9		2959	2959	No	9.78	Si
SLU 75	fin.	202.32	-1505	-0.0001031	0.0001872	0.0035	0.9		2959	2959	No	14.63	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	302.67	-1878	0.9	0	365	7137	3773	2295	6068	No	3.23	Si
SLU 75	fin.	202.32	873	0.9	0	365	7137	3773	2295	6068	No	6.95	Si
SLU 78	ini.	307.78	-1913	0.9	0	365	7137	3773	2295	6068	No	3.17	Si
SLU 78	fin.	208.55	902	0.9	0	365	7137	3773	2295	6068	No	6.73	Si
SLU 77	ini.	307.24	-1910	0.9	0	365	7137	3773	2295	6068	No	3.18	Si
SLU 77	fin.	208.25	900	0.9	0	365	7137	3773	2295	6068	No	6.74	Si
SLU 83	ini.	303.75	-1871	0.9	0	365	7137	3773	2295	6068	No	3.24	Si
SLU 83	fin.	199.34	854	0.9	0	365	7137	3773	2295	6068	No	7.11	Si
SLU 80	ini.	298.1	-1854	0.9	0	365	7137	3773	2295	6068	No	3.27	Si
SLU 80	fin.	203.14	876	0.9	0	365	7137	3773	2295	6068	No	6.93	Si
SLU 79	ini.	297.56	-1851	0.9	0	365	7137	3773	2295	6068	No	3.28	Si
SLU 79	fin.	202.84	874	0.9	0	365	7137	3773	2295	6068	No	6.94	Si
SLU 82	ini.	299.18	-1839	0.9	0	365	7137	3773	2295	6068	No	3.3	Si
SLU 82	fin.	193.41	827	0.9	0	365	7137	3773	2295	6068	No	7.34	Si
SLU 81	ini.	298.63	-1836	0.9	0	365	7137	3773	2295	6068	No	3.31	Si
SLU 81	fin.	193.11	825	0.9	0	365	7137	3773	2295	6068	No	7.35	Si
SLU 74	ini.	302.13	-1875	0.9	0	365	7137	3773	2295	6068	No	3.24	Si
SLU 74	fin.	202.03	872	0.9	0	365	7137	3773	2295	6068	No	6.96	Si
SLU 84	ini.	304.29	-1874	0.9	0	365	7137	3773	2295	6068	No	3.24	Si
SLU 84	fin.	199.64	855	0.9	0	365	7137	3773	2295	6068	No	7.09	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	1234.1	-3664	-0.0007718	0.0002807	0.0035	0.9		2989.59	2989.59		2.42	Si
SLV 15	fin.	-1284.87	1119	-0.0008106	0.0002807	0.0035	0.9		2995.37	2995.37		2.33	Si
SLD 2	ini.	-238.7	-78	-0.0001207	0.0002807	0.0035	0.9		2995.37	2995.37		12.55	Si
SLD 2	fin.	748.92	-1943	-0.0004197	0.0002807	0.0035	0.9		2989.59	2989.59		3.99	Si
SLV 3	ini.	-852.4	1492	-0.0004881	0.0002807	0.0035	0.9		2995.37	2995.37		3.51	Si
SLV 3	fin.	1508.31	-2845	-0.001002	0.0002807	0.0035	0.9		2989.59	2989.59		1.98	Si
SLV 14	ini.	1257.09	-3796	-0.0007902	0.0002807	0.0035	0.9		2989.59	2989.59		2.38	Si
SLV 14	fin.	-1229.02	794	-0.0007659	0.0002807	0.0035	0.9		2995.37	2995.37		2.44	Si
SLV 2	ini.	-829.4	1360	-0.0004724	0.0002807	0.0035	0.9		2995.37	2995.37		3.61	Si
SLV 2	fin.	1564.15	-3170	-0.0010521	0.0002807	0.0035	0.9		2989.59	2989.59		1.91	Si
SLD 4	ini.	-265.6	21	-0.0001349	0.0002807	0.0035	0.9		2995.37	2995.37		11.28	Si
SLD 4	fin.	745.72	-1833	-0.0004176	0.0002807	0.0035	0.9		2989.59	2989.59		4.01	Si
SLV 16	ini.	1195.38	-3569	-0.0007412	0.0002807	0.0035	0.9		2989.59	2989.59		2.5	Si
SLV 16	fin.	-1236.28	1049	-0.0007717	0.0002807	0.0035	0.9		2995.37	2995.37		2.42	Si
SLV 4	ini.	-891.11	1587	-0.0005148	0.0002807	0.0035	0.9		2995.37	2995.37		3.36	Si
SLV 4	fin.	1556.9	-2915	-0.0010455	0.0002807	0.0035	0.9		2989.59	2989.59		1.92	Si
SLV 13	ini.	1295.81	-3891	-0.0008215	0.0002807	0.0035	0.9		2989.59	2989.59		2.31	Si
SLV 13	fin.	-1277.61	864	-0.0008048	0.0002807	0.0035	0.9		2995.37	2995.37		2.34	Si
SLV 1	ini.	-790.69	1265	-0.0004464	0.0002807	0.0035	0.9		2995.37	2995.37		3.79	Si
SLV 1	fin.	1515.56	-3100	-0.0010085	0.0002807	0.0035	0.9		2989.59	2989.59		1.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 14	ini.	653.68	-3428	0.9	0	548	7137	5660	2295	7684		2.24	Si
SLD 14	fin.	-445.58	-1504	0.9	0	548	7137	5660	2295	7684		5.11	Si
SLV 15	ini.	1234.1	-6175	0.9	0	548	7137	5660	2295	7684		1.24	Si
SLV 15	fin.	-1284.87	-4569	0.9	0	548	7137	5660	2295	7684		1.68	Si
SLV 14	ini.	1257.09	-6305	0.9	0	548	7137	5660	2295	7684		1.22	Si
SLV 14	fin.	-1229.02	-4326	0.9	0	548	7137	5660	2295	7684		1.78	Si
SLV 2	ini.	-829.4	3623	0.9	0	548	7137	5660	2295	7684		2.12	Si
SLV 2	fin.	1564.15	5777	0.9	0	548	7137	5660	2295	7684		1.33	Si
SLV 16	ini.	1195.38	-5986	0.9	0	548	7137	5660	2295	7684		1.28	Si
SLV 16	fin.	-1236.28	-4388	0.9	0	548	7137	5660	2295	7684		1.75	Si
SLV 1	ini.	-790.69	3434	0.9	0	548	7137	5660	2295	7684		2.24	Si
SLV 1	fin.	1515.56	5595	0.9	0	548	7137	5660	2295	7684		1.37	Si
SLV 4	ini.	-891.11	3942	0.9	0	548	7137	5660	2295	7684		1.95	Si
SLV 4	fin.	1556.9	5715	0.9	0	548	7137	5660	2295	7684		1.34	Si
SLD 13	ini.	670.3	-3510	0.9	0	548	7137	5660	2295	7684		2.19	Si
SLD 13	fin.	-466.43	-1582	0.9	0	548	7137	5660	2295	7684		4.86	Si
SLV 13	ini.	1295.81	-6494	0.9	0	548	7137	5660	2295	7684		1.18	Si
SLV 13	fin.	-1277.61	-4507	0.9	0	548	7137	5660	2295	7684		1.7	Si
SLV 3	ini.	-852.4	3753	0.9	0	548	7137	5660	2295	7684		2.05	Si
SLV 3	fin.	1508.31	5534	0.9	0	548	7137	5660	2295	7684		1.39	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.911	SLV 2	Si
V_SLV	1.183	SLV 13	Si
PF_SLU	9.614	SLU 78	Si
V_SLU	3.172	SLU 78	Si

Trave di accoppiamento 127

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.838	6.526	11.66	12.48	0.82	-11.938	6.526	11.66	12.48	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-119.2	-839	-0.0000721	0.0001872	0.0035	0.82		2460.51	2460.51	No	20.64	Si
SLU 79	fin.	-238.62	-939	-0.0001492	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.31	Si
SLU 77	ini.	-124.22	-875	-0.0000753	0.0001872	0.0035	0.82		2460.51	2460.51	No	19.81	Si
SLU 77	fin.	-247.62	-980	-0.0001552	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.94	Si
SLU 82	ini.	-112.61	-808	-0.000068	0.0001872	0.0035	0.82		2460.51	2460.51	No	21.85	Si
SLU 82	fin.	-243.49	-928	-0.0001524	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.11	Si
SLU 74	ini.	-119.6	-846	-0.0000724	0.0001872	0.0035	0.82		2460.51	2460.51	No	20.57	Si
SLU 74	fin.	-243.62	-954	-0.0001525	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.1	Si
SLU 75	ini.	-119.88	-848	-0.0000725	0.0001872	0.0035	0.82		2460.51	2460.51	No	20.52	Si
SLU 75	fin.	-244.01	-956	-0.0001528	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.08	Si
SLU 84	ini.	-117.23	-837	-0.0000709	0.0001872	0.0035	0.82		2460.51	2460.51	No	20.99	Si
SLU 84	fin.	-247.48	-954	-0.0001551	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.94	Si
SLU 81	ini.	-112.33	-806	-0.0000678	0.0001872	0.0035	0.82		2460.51	2460.51	No	21.91	Si
SLU 81	fin.	-243.1	-926	-0.0001522	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.12	Si
SLU 78	ini.	-124.5	-877	-0.0000754	0.0001872	0.0035	0.82		2460.51	2460.51	No	19.76	Si
SLU 78	fin.	-248	-982	-0.0001555	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.92	Si
SLU 80	ini.	-119.49	-841	-0.0000723	0.0001872	0.0035	0.82		2460.51	2460.51	No	20.59	Si
SLU 80	fin.	-239	-941	-0.0001494	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.29	Si
SLU 83	ini.	-116.94	-836	-0.0000707	0.0001872	0.0035	0.82		2460.51	2460.51	No	21.04	Si
SLU 83	fin.	-247.1	-952	-0.0001549	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.96	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-124.5	1453	0.82	0	303	6502	3438	2091	5529	No	3.8	Si
SLU 78	fin.	-248	-1138	0.82	0	303	6502	3438	2091	5529	No	4.86	Si
SLU 84	ini.	-117.23	1415	0.82	0	303	6502	3438	2091	5529	No	3.91	Si
SLU 84	fin.	-247.48	-1140	0.82	0	303	6502	3438	2091	5529	No	4.85	Si
SLU 74	ini.	-119.6	1409	0.82	0	303	6502	3438	2091	5529	No	3.92	Si
SLU 74	fin.	-243.62	-1119	0.82	0	303	6502	3438	2091	5529	No	4.94	Si
SLU 82	ini.	-112.61	1373	0.82	0	303	6502	3438	2091	5529	No	4.03	Si
SLU 82	fin.	-243.49	-1122	0.82	0	303	6502	3438	2091	5529	No	4.93	Si
SLU 79	ini.	-119.2	1399	0.82	0	303	6502	3438	2091	5529	No	3.95	Si
SLU 79	fin.	-238.62	-1101	0.82	0	303	6502	3438	2091	5529	No	5.02	Si
SLU 81	ini.	-112.33	1371	0.82	0	303	6502	3438	2091	5529	No	4.03	Si
SLU 81	fin.	-243.1	-1120	0.82	0	303	6502	3438	2091	5529	No	4.93	Si
SLU 83	ini.	-116.94	1413	0.82	0	303	6502	3438	2091	5529	No	3.91	Si
SLU 83	fin.	-247.1	-1138	0.82	0	303	6502	3438	2091	5529	No	4.86	Si
SLU 77	ini.	-124.22	1451	0.82	0	303	6502	3438	2091	5529	No	3.81	Si
SLU 77	fin.	-247.62	-1137	0.82	0	303	6502	3438	2091	5529	No	4.86	Si
SLU 80	ini.	-119.49	1401	0.82	0	303	6502	3438	2091	5529	No	3.95	Si
SLU 80	fin.	-239	-1102	0.82	0	303	6502	3438	2091	5529	No	5.02	Si
SLU 75	ini.	-119.88	1411	0.82	0	303	6502	3438	2091	5529	No	3.92	Si
SLU 75	fin.	-244.01	-1121	0.82	0	303	6502	3438	2091	5529	No	4.93	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	-742.48	-3404	-0.0005171	0.0002807	0.0035	0.82		2487.45	2487.45		3.35	Si
SLV 2	fin.	1004.96	516	-0.0007534	0.0002807	0.0035	0.82		2482.11	2482.11		2.47	Si
SLV 14	ini.	506.41	1919	-0.0003314	0.0002807	0.0035	0.82		2482.11	2482.11		4.9	Si
SLV 14	fin.	-1272.62	-1955	-0.0010215	0.0002807	0.0035	0.82		2487.45	2487.45		1.95	Si
SLD 13	ini.	190.06	585	-0.0001159	0.0002807	0.0035	0.82		2482.11	2482.11		13.06	Si
SLD 13	fin.	-671.76	-1228	-0.0004588	0.0002807	0.0035	0.82		2487.45	2487.45		3.7	Si
SLV 4	ini.	-708.46	-3201	-0.0004888	0.0002807	0.0035	0.82		2487.45	2487.45		3.51	Si
SLV 4	fin.	1043.58	816	-0.0007904	0.0002807	0.0035	0.82		2482.11	2482.11		2.38	Si
SLV 16	ini.	540.43	2123	-0.0003569	0.0002807	0.0035	0.82		2482.11	2482.11		4.59	Si
SLV 16	fin.	-1234	-1655	-0.0009804	0.0002807	0.0035	0.82		2487.45	2487.45		2.02	Si
SLV 13	ini.	550.21	2103	-0.0003643	0.0002807	0.0035	0.82		2482.11	2482.11		4.51	Si
SLV 13	fin.	-1358.7	-2045	-0.0011162	0.0002807	0.0035	0.82		2487.45	2487.45		1.83	Si
SLD 15	ini.	204.85	674	-0.0001253	0.0002807	0.0035	0.82		2482.11	2482.11		12.12	Si
SLD 15	fin.	-654.91	-1098	-0.0004452	0.0002807	0.0035	0.82		2487.45	2487.45		3.8	Si
SLV 3	ini.	-664.66	-3016	-0.0004531	0.0002807	0.0035	0.82		2487.45	2487.45		3.74	Si
SLV 3	fin.	957.5	725	-0.0007087	0.0002807	0.0035	0.82		2482.11	2482.11		2.59	Si
SLV 15	ini.	584.23	2307	-0.0003904	0.0002807	0.0035	0.82		2482.11	2482.11		4.25	Si
SLV 15	fin.	-1320.09	-1746	-0.0010732	0.0002807	0.0035	0.82		2487.45	2487.45		1.88	Si
SLV 1	ini.	-698.68	-3220	-0.0004808	0.0002807	0.0035	0.82		2487.45	2487.45		3.56	Si
SLV 1	fin.	918.88	426	-0.0006732	0.0002807	0.0035	0.82		2482.11	2482.11		2.7	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	584.23	-3178	0.82	0	455	6502	5156	2091	6957		2.19	Si
SLV 15	fin.	-1320.09	-4475	0.82	0	455	6502	5156	2091	6957		1.55	Si
SLV 13	ini.	550.21	-2991	0.82	0	455	6502	5156	2091	6957		2.33	Si
SLV 13	fin.	-1358.7	-4665	0.82	0	455	6502	5156	2091	6957		1.49	Si
SLV 2	ini.	-742.48	4993	0.82	0	455	6502	5156	2091	6957		1.39	Si
SLV 2	fin.	1004.96	3013	0.82	0	455	6502	5156	2091	6957		2.31	Si
SLD 2	ini.	-363.1	2656	0.82	0	455	6502	5156	2091	6957		2.62	Si
SLD 2	fin.	339.79	871	0.82	0	455	6502	5156	2091	6957		7.99	Si
SLD 4	ini.	-348.31	2575	0.82	0	455	6502	5156	2091	6957		2.7	Si
SLD 4	fin.	356.64	954	0.82	0	455	6502	5156	2091	6957		7.29	Si
SLV 4	ini.	-708.46	4806	0.82	0	455	6502	5156	2091	6957		1.45	Si
SLV 4	fin.	1043.58	3203	0.82	0	455	6502	5156	2091	6957		2.17	Si
SLV 16	ini.	540.43	-2938	0.82	0	455	6502	5156	2091	6957		2.37	Si
SLV 16	fin.	-1234	-4200	0.82	0	455	6502	5156	2091	6957		1.66	Si
SLV 3	ini.	-664.66	4567	0.82	0	455	6502	5156	2091	6957		1.52	Si
SLV 3	fin.	957.5	2929	0.82	0	455	6502	5156	2091	6957		2.38	Si
SLV 14	ini.	506.41	-2752	0.82	0	455	6502	5156	2091	6957		2.53	Si
SLV 14	fin.	-1272.62	-4390	0.82	0	455	6502	5156	2091	6957		1.58	Si
SLV 1	ini.	-698.68	4753	0.82	0	455	6502	5156	2091	6957		1.46	Si
SLV 1	fin.	918.88	2739	0.82	0	455	6502	5156	2091	6957		2.54	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.831	SLV 13	Si
V_SLV	1.393	SLV 2	Si
PF_SLU	9.921	SLU 78	Si
V_SLU	3.805	SLU 78	Si

Trave di accoppiamento 128

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-7.958	6.526	8.96	9.86	0.9	-7.058	6.526	8.96	9.86	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 76	ini.	-420.02	177	-0.0002258	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.06	Si
SLU 76	fin.	885.6	-2112	-0.0005434	0.0001872	0.0035	0.9		2959	2959	No	3.34	Si
SLU 82	ini.	-423.81	181	-0.0002281	0.0001872	0.0035	0.9		2964.67	2964.67	No	7	Si
SLU 82	fin.	889.59	-2124	-0.0005464	0.0001872	0.0035	0.9		2959	2959	No	3.33	Si
SLU 81	ini.	-422.57	180	-0.0002273	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.02	Si
SLU 81	fin.	886.95	-2118	-0.0005444	0.0001872	0.0035	0.9		2959	2959	No	3.34	Si
SLU 83	ini.	-427.18	173	-0.0002301	0.0001872	0.0035	0.9		2964.67	2964.67	No	6.94	Si
SLU 83	fin.	903.18	-2161	-0.0005566	0.0001872	0.0035	0.9		2959	2959	No	3.28	Si
SLU 79	ini.	-422.55	167	-0.0002273	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.02	Si
SLU 79	fin.	897.44	-2146	-0.0005523	0.0001872	0.0035	0.9		2959	2959	No	3.3	Si
SLU 75	ini.	-412.73	140	-0.0002214	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.18	Si
SLU 75	fin.	887.66	-2135	-0.0005449	0.0001872	0.0035	0.9		2959	2959	No	3.33	Si
SLU 78	ini.	-417.33	132	-0.0002242	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.1	Si
SLU 78	fin.	903.88	-2178	-0.0005571	0.0001872	0.0035	0.9		2959	2959	No	3.27	Si
SLU 80	ini.	-423.79	168	-0.0002281	0.0001872	0.0035	0.9		2964.67	2964.67	No	7	Si
SLU 80	fin.	900.07	-2151	-0.0005543	0.0001872	0.0035	0.9		2959	2959	No	3.29	Si
SLU 84	ini.	-428.42	174	-0.0002309	0.0001872	0.0035	0.9		2964.67	2964.67	No	6.92	Si
SLU 84	fin.	905.81	-2167	-0.0005586	0.0001872	0.0035	0.9		2959	2959	No	3.27	Si
SLU 77	ini.	-416.09	131	-0.0002234	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.13	Si
SLU 77	fin.	901.25	-2172	-0.0005551	0.0001872	0.0035	0.9		2959	2959	No	3.28	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-417.33	1393	0.9	0	365	7137	3773	2295	6068	No	4.36	Si
SLU 78	fin.	903.88	3547	0.9	0	365	7137	3773	2295	6068	No	1.71	Si
SLU 84	ini.	-428.42	1476	0.9	0	365	7137	3773	2295	6068	No	4.11	Si
SLU 84	fin.	905.81	3531	0.9	0	365	7137	3773	2295	6068	No	1.72	Si
SLU 79	ini.	-422.55	1437	0.9	0	365	7137	3773	2295	6068	No	4.22	Si
SLU 79	fin.	897.44	3512	0.9	0	365	7137	3773	2295	6068	No	1.73	Si
SLU 77	ini.	-416.09	1389	0.9	0	365	7137	3773	2295	6068	No	4.37	Si
SLU 77	fin.	901.25	3536	0.9	0	365	7137	3773	2295	6068	No	1.72	Si
SLU 80	ini.	-423.79	1441	0.9	0	365	7137	3773	2295	6068	No	4.21	Si
SLU 80	fin.	900.07	3523	0.9	0	365	7137	3773	2295	6068	No	1.72	Si
SLU 83	ini.	-427.18	1472	0.9	0	365	7137	3773	2295	6068	No	4.12	Si
SLU 83	fin.	903.18	3520	0.9	0	365	7137	3773	2295	6068	No	1.72	Si
SLU 74	ini.	-411.49	1383	0.9	0	365	7137	3773	2295	6068	No	4.39	Si
SLU 74	fin.	885.03	3467	0.9	0	365	7137	3773	2295	6068	No	1.75	Si
SLU 75	ini.	-412.73	1387	0.9	0	365	7137	3773	2295	6068	No	4.37	Si
SLU 75	fin.	887.66	3478	0.9	0	365	7137	3773	2295	6068	No	1.74	Si
SLU 82	ini.	-423.81	1470	0.9	0	365	7137	3773	2295	6068	No	4.13	Si
SLU 82	fin.	889.59	3461	0.9	0	365	7137	3773	2295	6068	No	1.75	Si
SLU 76	ini.	-420.02	1438	0.9	0	365	7137	3773	2295	6068	No	4.22	Si
SLU 76	fin.	885.6	3461	0.9	0	365	7137	3773	2295	6068	No	1.75	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 6	ini.	-681.12	892	-0.0003751	0.0002807	0.0035	0.9		2995.37	2995.37		4.4	Si
SLV 6	fin.	1190.28	-2480	-0.0007372	0.0002807	0.0035	0.9		2989.59	2989.59		2.51	Si
SLV 2	ini.	-1181.57	2157	-0.0007287	0.0002807	0.0035	0.9		2995.37	2995.37		2.54	Si
SLV 2	fin.	1735.98	-3154	-0.0012142	0.0002807	0.0035	0.9		2989.59	2989.59		1.72	Si
SLD 2	ini.	-679.04	1007	-0.0003737	0.0002807	0.0035	0.9		2995.37	2995.37		4.41	Si
SLD 2	fin.	1102.27	-2199	-0.0006695	0.0002807	0.0035	0.9		2989.59	2989.59		2.71	Si
SLV 4	ini.	-1110.91	2075	-0.0006745	0.0002807	0.0035	0.9		2995.37	2995.37		2.7	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	fin.	1589.51	-2834	-0.0010753	0.0002807	0.0035	0.9		2989.59	2989.59		1.88	Si
SLD 4	ini.	-647.9	971	-0.0003541	0.0002807	0.0035	0.9		2995.37	2995.37		4.62	Si
SLD 4	fin.	1037.72	-2058	-0.0006212	0.0002807	0.0035	0.9		2989.59	2989.59		2.88	Si
SLV 3	ini.	-1065.69	1963	-0.0006405	0.0002807	0.0035	0.9		2995.37	2995.37		2.81	Si
SLV 3	fin.	1540.33	-2772	-0.0010306	0.0002807	0.0035	0.9		2989.59	2989.59		1.94	Si
SLV 5	ini.	-652.24	821	-0.0003569	0.0002807	0.0035	0.9		2995.37	2995.37		4.59	Si
SLV 5	fin.	1158.87	-2441	-0.0007128	0.0002807	0.0035	0.9		2989.59	2989.59		2.58	Si
SLD 3	ini.	-628.49	923	-0.0003421	0.0002807	0.0035	0.9		2995.37	2995.37		4.77	Si
SLD 3	fin.	1016.61	-2031	-0.0006057	0.0002807	0.0035	0.9		2989.59	2989.59		2.94	Si
SLV 1	ini.	-1136.36	2045	-0.0006938	0.0002807	0.0035	0.9		2995.37	2995.37		2.64	Si
SLV 1	fin.	1686.8	-3092	-0.0011665	0.0002807	0.0035	0.9		2989.59	2989.59		1.77	Si
SLD 1	ini.	-659.63	959	-0.0003615	0.0002807	0.0035	0.9		2995.37	2995.37		4.54	Si
SLD 1	fin.	1081.16	-2173	-0.0006536	0.0002807	0.0035	0.9		2989.59	2989.59		2.77	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	-1181.57	4848	0.9	0	548	7137	5660	2295	7684		1.58	Si
SLV 2	fin.	1735.98	6782	0.9	0	548	7137	5660	2295	7684		1.13	Si
SLV 6	ini.	-681.12	2295	0.9	0	548	7137	5660	2295	7684		3.35	Si
SLV 6	fin.	1190.28	4717	0.9	0	548	7137	5660	2295	7684		1.63	Si
SLD 2	ini.	-679.04	2666	0.9	0	548	7137	5660	2295	7684		2.88	Si
SLD 2	fin.	1102.27	4310	0.9	0	548	7137	5660	2295	7684		1.78	Si
SLV 4	ini.	-1110.91	4795	0.9	0	548	7137	5660	2295	7684		1.6	Si
SLV 4	fin.	1589.51	6167	0.9	0	548	7137	5660	2295	7684		1.25	Si
SLV 1	ini.	-1136.36	4635	0.9	0	548	7137	5660	2295	7684		1.66	Si
SLV 1	fin.	1686.8	6601	0.9	0	548	7137	5660	2295	7684		1.16	Si
SLV 5	ini.	-652.24	2159	0.9	0	548	7137	5660	2295	7684		3.56	Si
SLV 5	fin.	1158.87	4602	0.9	0	548	7137	5660	2295	7684		1.67	Si
SLV 3	ini.	-1065.69	4581	0.9	0	548	7137	5660	2295	7684		1.68	Si
SLV 3	fin.	1540.33	5986	0.9	0	548	7137	5660	2295	7684		1.28	Si
SLD 3	ini.	-628.49	2550	0.9	0	548	7137	5660	2295	7684		3.01	Si
SLD 3	fin.	1016.61	3961	0.9	0	548	7137	5660	2295	7684		1.94	Si
SLD 4	ini.	-647.9	2641	0.9	0	548	7137	5660	2295	7684		2.91	Si
SLD 4	fin.	1037.72	4039	0.9	0	548	7137	5660	2295	7684		1.9	Si
SLD 1	ini.	-659.63	2574	0.9	0	548	7137	5660	2295	7684		2.98	Si
SLD 1	fin.	1081.16	4232	0.9	0	548	7137	5660	2295	7684		1.82	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.722	SLV 2	Si
V_SLV	1.133	SLV 2	Si
PF_SLU	3.267	SLU 84	Si
V_SLU	1.711	SLU 78	Si

Trave di accoppiamento 129

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-7.958	6.526	11.66	12.48	0.82	-7.058	6.526	11.66	12.48	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-976.58	-1833	-0.0007722	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.52	Si
SLU 79	fin.	348.08	971	-0.0002259	0.0001872	0.0035	0.82		2455.37	2455.37	No	7.05	Si
SLU 84	ini.	-987.78	-1845	-0.0007834	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.49	Si
SLU 84	fin.	353.26	989	-0.0002297	0.0001872	0.0035	0.82		2455.37	2455.37	No	6.95	Si
SLU 80	ini.	-979.25	-1839	-0.0007748	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.51	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	fin.	348.73	971	-0.0002264	0.0001872	0.0035	0.82		2455.37	2455.37	No	7.04	Si
SLU 82	ini.	-970.19	-1800	-0.0007657	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.54	Si
SLU 82	fin.	350.41	991	-0.0002276	0.0001872	0.0035	0.82		2455.37	2455.37	No	7.01	Si
SLU 83	ini.	-985.11	-1839	-0.0007807	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.5	Si
SLU 83	fin.	352.61	989	-0.0002292	0.0001872	0.0035	0.82		2455.37	2455.37	No	6.96	Si
SLU 81	ini.	-967.53	-1794	-0.0007631	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.54	Si
SLU 81	fin.	349.76	990	-0.0002271	0.0001872	0.0035	0.82		2455.37	2455.37	No	7.02	Si
SLU 78	ini.	-985.5	-1867	-0.0007811	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.5	Si
SLU 78	fin.	345.27	950	-0.0002238	0.0001872	0.0035	0.82		2455.37	2455.37	No	7.11	Si
SLU 74	ini.	-965.24	-1816	-0.0007608	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.55	Si
SLU 74	fin.	341.78	951	-0.0002213	0.0001872	0.0035	0.82		2455.37	2455.37	No	7.18	Si
SLU 77	ini.	-982.83	-1861	-0.0007784	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.5	Si
SLU 77	fin.	344.62	950	-0.0002234	0.0001872	0.0035	0.82		2455.37	2455.37	No	7.12	Si
SLU 75	ini.	-967.91	-1822	-0.0007635	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.54	Si
SLU 75	fin.	342.43	952	-0.0002218	0.0001872	0.0035	0.82		2455.37	2455.37	No	7.17	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-985.11	3819	0.82	0	303	6502	3438	2091	5529	No	1.45	Si
SLU 83	fin.	352.61	1170	0.82	0	303	6502	3438	2091	5529	No	4.73	Si
SLU 82	ini.	-970.19	3764	0.82	0	303	6502	3438	2091	5529	No	1.47	Si
SLU 82	fin.	350.41	1166	0.82	0	303	6502	3438	2091	5529	No	4.74	Si
SLU 75	ini.	-967.91	3749	0.82	0	303	6502	3438	2091	5529	No	1.47	Si
SLU 75	fin.	342.43	1139	0.82	0	303	6502	3438	2091	5529	No	4.85	Si
SLU 78	ini.	-985.5	3813	0.82	0	303	6502	3438	2091	5529	No	1.45	Si
SLU 78	fin.	345.27	1146	0.82	0	303	6502	3438	2091	5529	No	4.82	Si
SLU 77	ini.	-982.83	3804	0.82	0	303	6502	3438	2091	5529	No	1.45	Si
SLU 77	fin.	344.62	1142	0.82	0	303	6502	3438	2091	5529	No	4.84	Si
SLU 80	ini.	-979.25	3779	0.82	0	303	6502	3438	2091	5529	No	1.46	Si
SLU 80	fin.	348.73	1185	0.82	0	303	6502	3438	2091	5529	No	4.66	Si
SLU 81	ini.	-967.53	3756	0.82	0	303	6502	3438	2091	5529	No	1.47	Si
SLU 81	fin.	349.76	1163	0.82	0	303	6502	3438	2091	5529	No	4.76	Si
SLU 74	ini.	-965.24	3741	0.82	0	303	6502	3438	2091	5529	No	1.48	Si
SLU 74	fin.	341.78	1135	0.82	0	303	6502	3438	2091	5529	No	4.87	Si
SLU 79	ini.	-976.58	3770	0.82	0	303	6502	3438	2091	5529	No	1.47	Si
SLU 79	fin.	348.08	1182	0.82	0	303	6502	3438	2091	5529	No	4.68	Si
SLU 84	ini.	-987.78	3828	0.82	0	303	6502	3438	2091	5529	No	1.44	Si
SLU 84	fin.	353.26	1173	0.82	0	303	6502	3438	2091	5529	No	4.71	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 2	ini.	-1091.52	-1950	-0.0008351	0.0002807	0.0035	0.82		2487.45	2487.45		2.28	Si
SLD 2	fin.	456.5	1350	-0.000295	0.0002807	0.0035	0.82		2482.11	2482.11		5.44	Si
SLV 3	ini.	-1416.76	-2412	-0.0011826	0.0002807	0.0035	0.82		2487.45	2487.45		1.76	Si
SLV 3	fin.	648.59	2045	-0.0004412	0.0002807	0.0035	0.82		2482.11	2482.11		3.83	Si
SLD 4	ini.	-1025.27	-1789	-0.0007708	0.0002807	0.0035	0.82		2487.45	2487.45		2.43	Si
SLD 4	fin.	438.12	1348	-0.0002818	0.0002807	0.0035	0.82		2482.11	2482.11		5.67	Si
SLV 4	ini.	-1490.74	-2517	-0.0012704	0.0002807	0.0035	0.82		2487.45	2487.45		1.67	Si
SLV 4	fin.	688.63	2183	-0.0004737	0.0002807	0.0035	0.82		2482.11	2482.11		3.6	Si
SLV 6	ini.	-1207.95	-2310	-0.0009531	0.0002807	0.0035	0.82		2487.45	2487.45		2.06	Si
SLV 6	fin.	464.99	1192	-0.0003011	0.0002807	0.0035	0.82		2482.11	2482.11		5.34	Si
SLV 1	ini.	-1567.01	-2776	-0.0013652	0.0002807	0.0035	0.82		2487.45	2487.45		1.59	Si
SLV 1	fin.	690.34	2050	-0.0004751	0.0002807	0.0035	0.82		2482.11	2482.11		3.6	Si
SLV 2	ini.	-1640.99	-2882	-0.0014618	0.0002807	0.0035	0.82		2487.45	2487.45		1.52	Si
SLV 2	fin.	730.38	2188	-0.0005082	0.0002807	0.0035	0.82		2482.11	2482.11		3.4	Si
SLV 5	ini.	-1160.71	-2242	-0.0009044	0.0002807	0.0035	0.82		2487.45	2487.45		2.14	Si
SLV 5	fin.	439.42	1104	-0.0002827	0.0002807	0.0035	0.82		2482.11	2482.11		5.65	Si
SLD 3	ini.	-993.52	-1744	-0.0007406	0.0002807	0.0035	0.82		2487.45	2487.45		2.5	Si
SLD 3	fin.	420.94	1288	-0.0002696	0.0002807	0.0035	0.82		2482.11	2482.11		5.9	Si
SLD 1	ini.	-1059.77	-1904	-0.000804	0.0002807	0.0035	0.82		2487.45	2487.45		2.35	Si
SLD 1	fin.	439.31	1290	-0.0002827	0.0002807	0.0035	0.82		2482.11	2482.11		5.65	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 4	ini.	-1025.27	3750	0.82	0	455	6502	5156	2091	6957		1.86	Si
SLD 4	fin.	438.12	1989	0.82	0	455	6502	5156	2091	6957		3.5	Si
SLV 1	ini.	-1567.01	5537	0.82	0	455	6502	5156	2091	6957		1.26	Si
SLV 1	fin.	690.34	3286	0.82	0	455	6502	5156	2091	6957		2.12	Si
SLV 4	ini.	-1490.74	5280	0.82	0	455	6502	5156	2091	6957		1.32	Si
SLV 4	fin.	688.63	3438	0.82	0	455	6502	5156	2091	6957		2.02	Si
SLD 2	ini.	-1091.52	3967	0.82	0	455	6502	5156	2091	6957		1.75	Si
SLD 2	fin.	456.5	2022	0.82	0	455	6502	5156	2091	6957		3.44	Si
SLD 1	ini.	-1059.77	3866	0.82	0	455	6502	5156	2091	6957		1.8	Si
SLD 1	fin.	439.31	1925	0.82	0	455	6502	5156	2091	6957		3.61	Si
SLV 6	ini.	-1207.95	4348	0.82	0	455	6502	5156	2091	6957		1.6	Si
SLV 6	fin.	464.99	1837	0.82	0	455	6502	5156	2091	6957		3.79	Si
SLD 3	ini.	-993.52	3648	0.82	0	455	6502	5156	2091	6957		1.91	Si
SLD 3	fin.	420.94	1892	0.82	0	455	6502	5156	2091	6957		3.68	Si
SLV 3	ini.	-1416.76	5044	0.82	0	455	6502	5156	2091	6957		1.38	Si
SLV 3	fin.	648.59	3213	0.82	0	455	6502	5156	2091	6957		2.17	Si
SLV 2	ini.	-1640.99	5774	0.82	0	455	6502	5156	2091	6957		1.2	Si
SLV 2	fin.	730.38	3512	0.82	0	455	6502	5156	2091	6957		1.98	Si
SLV 5	ini.	-1160.71	4197	0.82	0	455	6502	5156	2091	6957		1.66	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 5	fin.	439.42	1693	0.82	0	455	6502	5156	2091	6957		4.11	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.516	SLV 2	Si
V_SLV	1.205	SLV 2	Si
PF_SLU	2.491	SLU 84	Si
V_SLU	1.444	SLU 84	Si

Trave di accoppiamento 131

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-11.143	1.006	11.46	12.48	1.02	-12.263	1.006	11.46	12.48	1.02	1.12	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 64	ini.	-146.65	-425	-0.0000567	0.0002246	0.0035	1.02		3900.37	3900.37	No	26.6	Si
SLU 64	fin.	-9.11	-376	-0.0000035	0.0002246	0.0035	1.02		3900.37	3900.37	No	428.09	Si
SLU 70	ini.	-160.4	-532	-0.0000622	0.0002246	0.0035	1.02		3900.37	3900.37	No	24.32	Si
SLU 70	fin.	-8.46	-473	-0.0000032	0.0002246	0.0035	1.02		3900.37	3900.37	No	461.23	Si
SLU 25	ini.	-161.1	-447	-0.0000625	0.0002246	0.0035	1.02		3900.37	3900.37	No	24.21	Si
SLU 25	fin.	7.43	-349	-0.0000028	0.0002246	0.0035	1.02		3893.98	3893.98	No	523.74	Si
SLU 67	ini.	-163.08	-507	-0.0000632	0.0002246	0.0035	1.02		3900.37	3900.37	No	23.92	Si
SLU 67	fin.	2.69	-430	-0.000001	0.0002246	0.0035	1.02		3893.98	3893.98	No	1447.16	Si
SLU 66	ini.	-164.34	-508	-0.0000637	0.0002246	0.0035	1.02		3900.37	3900.37	No	23.73	Si
SLU 66	fin.	3.64	-428	-0.0000014	0.0002246	0.0035	1.02		3893.98	3893.98	No	1069.23	Si
SLU 28	ini.	-158.42	-471	-0.0000614	0.0002246	0.0035	1.02		3900.37	3900.37	No	24.62	Si
SLU 28	fin.	-3.71	-391	-0.0000014	0.0002246	0.0035	1.02		3900.37	3900.37	No	1050.67	Si
SLU 27	ini.	-159.67	-472	-0.0000619	0.0002246	0.0035	1.02		3900.37	3900.37	No	24.43	Si
SLU 27	fin.	-2.76	-389	-0.000001	0.0002246	0.0035	1.02		3900.37	3900.37	No	1412.58	Si
SLU 24	ini.	-162.35	-447	-0.000063	0.0002246	0.0035	1.02		3900.37	3900.37	No	24.02	Si
SLU 24	fin.	8.39	-347	-0.0000032	0.0002246	0.0035	1.02		3893.98	3893.98	No	464.34	Si
SLU 74	ini.	-145.19	-353	-0.0000562	0.0002246	0.0035	1.02		3900.37	3900.37	No	26.86	Si
SLU 74	fin.	-36.67	-374	-0.000014	0.0002246	0.0035	1.02		3900.37	3900.37	No	106.36	Si
SLU 69	ini.	-161.66	-532	-0.0000627	0.0002246	0.0035	1.02		3900.37	3900.37	No	24.13	Si
SLU 69	fin.	-7.51	-471	-0.0000029	0.0002246	0.0035	1.02		3900.37	3900.37	No	519.68	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-116.62	1392	1.02	0	377	8088	5132	2601	7733	No	5.55	Si
SLU 83	fin.	-77.85	-1435	1.02	0	377	8088	5132	2601	7733	No	5.39	Si
SLU 82	ini.	-118.04	1410	1.02	0	377	8088	5132	2601	7733	No	5.48	Si
SLU 82	fin.	-67.65	-1417	1.02	0	377	8088	5132	2601	7733	No	5.46	Si
SLU 75	ini.	-143.93	1355	1.02	0	377	8088	5132	2601	7733	No	5.7	Si
SLU 75	fin.	-37.62	-1196	1.02	0	377	8088	5132	2601	7733	No	6.47	Si
SLU 77	ini.	-142.51	1338	1.02	0	377	8088	5132	2601	7733	No	5.78	Si
SLU 77	fin.	-47.82	-1213	1.02	0	377	8088	5132	2601	7733	No	6.37	Si
SLU 78	ini.	-141.25	1335	1.02	0	377	8088	5132	2601	7733	No	5.79	Si
SLU 78	fin.	-48.77	-1216	1.02	0	377	8088	5132	2601	7733	No	6.36	Si
SLU 74	ini.	-145.19	1359	1.02	0	377	8088	5132	2601	7733	No	5.69	Si
SLU 74	fin.	-36.67	-1192	1.02	0	377	8088	5132	2601	7733	No	6.48	Si
SLU 62	ini.	-52.19	1086	1.02	0	377	8088	5132	2601	7733	No	7.12	Si
SLU 62	fin.	-83.19	-1313	1.02	0	377	8088	5132	2601	7733	No	5.89	Si
SLU 84	ini.	-115.36	1389	1.02	0	377	8088	5132	2601	7733	No	5.57	Si
SLU 84	fin.	-78.8	-1438	1.02	0	377	8088	5132	2601	7733	No	5.38	Si
SLU 81	ini.	-119.29	1413	1.02	0	377	8088	5132	2601	7733	No	5.47	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	fin.	-66.7	-1414	1.02	0	377	8088	5132	2601	7733	No	5.47	Si
SLU 63	ini.	-50.94	1083	1.02	0	377	8088	5132	2601	7733	No	7.14	Si
SLU 63	fin.	-84.14	-1316	1.02	0	377	8088	5132	2601	7733	No	5.88	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 2	ini.	583.06	-867	-0.000236	0.0003369	0.0035	1.02		3838.12	3838.12		6.58	Si
SLD 2	fin.	-1480.37	-3627	-0.0006856	0.0003369	0.0035	1.02		3845.03	3845.03		2.6	Si
SLV 15	ini.	-1673.02	1141	-0.0007998	0.0003369	0.0035	1.02		3845.03	3845.03		2.3	Si
SLV 15	fin.	3394.46	7574	-0.0023318	0.0003369	0.0035	1.02		3838.12	3838.12		1.13	Si
SLV 14	ini.	-1560.93	1288	-0.0007326	0.0003369	0.0035	1.02		3845.03	3845.03		2.46	Si
SLV 14	fin.	3293.31	7440	-0.0021943	0.0003369	0.0035	1.02		3838.12	3838.12		1.17	Si
SLV 2	ini.	1486.67	-1674	-0.0006906	0.0003369	0.0035	1.02		3838.12	3838.12		2.58	Si
SLV 2	fin.	-3433.86	-8117	-0.0023801	0.0003369	0.0035	1.02		3845.03	3845.03		1.12	Si
SLV 3	ini.	1374.58	-1820	-0.0006269	0.0003369	0.0035	1.02		3838.12	3838.12		2.79	Si
SLV 3	fin.	-3332.71	-7983	-0.0022395	0.0003369	0.0035	1.02		3845.03	3845.03		1.15	Si
SLV 16	ini.	-1675.48	1147	-0.0008013	0.0003369	0.0035	1.02		3845.03	3845.03		2.29	Si
SLV 16	fin.	3403.47	7595	-0.0023445	0.0003369	0.0035	1.02		3838.12	3838.12		1.13	Si
SLV 1	ini.	1489.12	-1679	-0.000692	0.0003369	0.0035	1.02		3838.12	3838.12		2.58	Si
SLV 1	fin.	-3442.87	-8138	-0.0023931	0.0003369	0.0035	1.02		3845.03	3845.03		1.12	Si
SLV 4	ini.	1372.12	-1815	-0.0006255	0.0003369	0.0035	1.02		3838.12	3838.12		2.8	Si
SLV 4	fin.	-3323.7	-7963	-0.0022275	0.0003369	0.0035	1.02		3845.03	3845.03		1.16	Si
SLD 1	ini.	584.11	-870	-0.0002365	0.0003369	0.0035	1.02		3838.12	3838.12		6.57	Si
SLD 1	fin.	-1484.24	-3636	-0.0006878	0.0003369	0.0035	1.02		3845.03	3845.03		2.59	Si
SLV 13	ini.	-1558.48	1282	-0.0007311	0.0003369	0.0035	1.02		3845.03	3845.03		2.47	Si
SLV 13	fin.	3284.3	7420	-0.0021825	0.0003369	0.0035	1.02		3838.12	3838.12		1.17	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-1673.02	8091	1.02	0	565	8088	7698	2601	8654		1.07	Si
SLV 15	fin.	3394.46	6623	1.02	0	565	8088	7698	2601	8654		1.31	Si
SLV 13	ini.	-1558.48	7934	1.02	0	565	8088	7698	2601	8654		1.09	Si
SLV 13	fin.	3284.3	6303	1.02	0	565	8088	7698	2601	8654		1.37	Si
SLV 4	ini.	1372.12	-6257	1.02	0	565	8088	7698	2601	8654		1.38	Si
SLV 4	fin.	-3323.7	-7740	1.02	0	565	8088	7698	2601	8654		1.12	Si
SLV 14	ini.	-1560.93	7951	1.02	0	565	8088	7698	2601	8654		1.09	Si
SLV 14	fin.	3293.31	6320	1.02	0	565	8088	7698	2601	8654		1.37	Si
SLV 3	ini.	1374.58	-6274	1.02	0	565	8088	7698	2601	8654		1.38	Si
SLV 3	fin.	-3332.71	-7757	1.02	0	565	8088	7698	2601	8654		1.12	Si
SLD 16	ini.	-770.47	3949	1.02	0	565	8088	7698	2601	8654		2.19	Si
SLD 16	fin.	1444.84	2430	1.02	0	565	8088	7698	2601	8654		3.56	Si
SLD 15	ini.	-769.42	3941	1.02	0	565	8088	7698	2601	8654		2.2	Si
SLD 15	fin.	1440.97	2423	1.02	0	565	8088	7698	2601	8654		3.57	Si
SLV 16	ini.	-1675.48	8108	1.02	0	565	8088	7698	2601	8654		1.07	Si
SLV 16	fin.	3403.47	6640	1.02	0	565	8088	7698	2601	8654		1.3	Si
SLV 2	ini.	1486.67	-6413	1.02	0	565	8088	7698	2601	8654		1.35	Si
SLV 2	fin.	-3433.86	-8060	1.02	0	565	8088	7698	2601	8654		1.07	Si
SLV 1	ini.	1489.12	-6430	1.02	0	565	8088	7698	2601	8654		1.35	Si
SLV 1	fin.	-3442.87	-8077	1.02	0	565	8088	7698	2601	8654		1.07	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.117	SLV 1	Si
V_SLV	1.067	SLV 16	Si
PF_SLU	23.734	SLU 66	Si
V_SLU	5.378	SLU 84	Si

Trave di accoppiamento 132

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-9.398	1.006	11.46	12.48	1.02	-10.478	1.006	11.46	12.48	1.02	1.08	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-729.64	-1606	-0.0003114	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.35	Si
SLU 84	fin.	325.06	-215	-0.0001293	0.0002246	0.0035	1.02		3893.98	3893.98	No	11.98	Si
SLU 81	ini.	-734.06	-1592	-0.0003136	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.31	Si
SLU 81	fin.	327.78	-194	-0.0001304	0.0002246	0.0035	1.02		3893.98	3893.98	No	11.88	Si
SLU 83	ini.	-728.03	-1603	-0.0003107	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.36	Si
SLU 83	fin.	323.34	-216	-0.0001285	0.0002246	0.0035	1.02		3893.98	3893.98	No	12.04	Si
SLU 62	ini.	-705.79	-1549	-0.0002998	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.53	Si
SLU 62	fin.	360.89	-149	-0.0001443	0.0002246	0.0035	1.02		3893.98	3893.98	No	10.79	Si
SLU 63	ini.	-707.4	-1552	-0.0003006	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.51	Si
SLU 63	fin.	362.61	-147	-0.000145	0.0002246	0.0035	1.02		3893.98	3893.98	No	10.74	Si
SLU 82	ini.	-735.67	-1595	-0.0003144	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.3	Si
SLU 82	fin.	329.5	-193	-0.0001311	0.0002246	0.0035	1.02		3893.98	3893.98	No	11.82	Si
SLU 75	ini.	-679.99	-1603	-0.0002874	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.74	Si
SLU 75	fin.	284.28	-326	-0.0001124	0.0002246	0.0035	1.02		3893.98	3893.98	No	13.7	Si
SLU 60	ini.	-711.83	-1538	-0.0003028	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.48	Si
SLU 60	fin.	365.33	-127	-0.0001462	0.0002246	0.0035	1.02		3893.98	3893.98	No	10.66	Si
SLU 61	ini.	-713.44	-1541	-0.0003035	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.47	Si
SLU 61	fin.	367.05	-125	-0.0001469	0.0002246	0.0035	1.02		3893.98	3893.98	No	10.61	Si
SLU 74	ini.	-678.38	-1600	-0.0002866	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.75	Si
SLU 74	fin.	282.56	-327	-0.0001116	0.0002246	0.0035	1.02		3893.98	3893.98	No	13.78	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 73	ini.	-673.17	2583	1.02	0	391	8088	5132	2601	7733	No	2.99	Si
SLU 73	fin.	290.18	401	1.02	0	391	8088	5132	2601	7733	No	19.28	Si
SLU 81	ini.	-734.06	2829	1.02	0	391	8088	5132	2601	7733	No	2.73	Si
SLU 81	fin.	327.78	456	1.02	0	391	8088	5132	2601	7733	No	16.95	Si
SLU 61	ini.	-713.44	2660	1.02	0	391	8088	5132	2601	7733	No	2.91	Si
SLU 61	fin.	367.05	680	1.02	0	391	8088	5132	2601	7733	No	11.36	Si
SLU 84	ini.	-729.64	2819	1.02	0	391	8088	5132	2601	7733	No	2.74	Si
SLU 84	fin.	325.06	446	1.02	0	391	8088	5132	2601	7733	No	17.33	Si
SLU 60	ini.	-711.83	2655	1.02	0	391	8088	5132	2601	7733	No	2.91	Si
SLU 60	fin.	365.33	675	1.02	0	391	8088	5132	2601	7733	No	11.45	Si
SLU 83	ini.	-728.03	2814	1.02	0	391	8088	5132	2601	7733	No	2.75	Si
SLU 83	fin.	323.34	441	1.02	0	391	8088	5132	2601	7733	No	17.53	Si
SLU 82	ini.	-735.67	2834	1.02	0	391	8088	5132	2601	7733	No	2.73	Si
SLU 82	fin.	329.5	461	1.02	0	391	8088	5132	2601	7733	No	16.76	Si
SLU 62	ini.	-705.79	2639	1.02	0	391	8088	5132	2601	7733	No	2.93	Si
SLU 62	fin.	360.89	660	1.02	0	391	8088	5132	2601	7733	No	11.71	Si
SLU 63	ini.	-707.4	2644	1.02	0	391	8088	5132	2601	7733	No	2.92	Si
SLU 63	fin.	362.61	665	1.02	0	391	8088	5132	2601	7733	No	11.62	Si
SLU 75	ini.	-679.99	2586	1.02	0	391	8088	5132	2601	7733	No	2.99	Si
SLU 75	fin.	284.28	404	1.02	0	391	8088	5132	2601	7733	No	19.14	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-3031.07	-6966	-0.0018738	0.0003369	0.0035	1.02		3845.03	3845.03		1.27	Si
SLV 14	fin.	1257.58	-1582	-0.0005626	0.0003369	0.0035	1.02		3838.12	3838.12		3.05	Si
SLV 15	ini.	-2838.7	-6667	-0.0016767	0.0003369	0.0035	1.02		3845.03	3845.03		1.35	Si
SLV 15	fin.	1079.84	-1730	-0.0004694	0.0003369	0.0035	1.02		3838.12	3838.12		3.55	Si
SLV 2	ini.	1960.45	4548	-0.0009851	0.0003369	0.0035	1.02		3838.12	3838.12		1.96	Si
SLV 2	fin.	-712.62	1263	-0.0002928	0.0003369	0.0035	1.02		3845.03	3845.03		5.4	Si
SLV 3	ini.	2152.81	4848	-0.0011177	0.0003369	0.0035	1.02		3838.12	3838.12		1.78	Si
SLV 3	fin.	-890.36	1115	-0.0003751	0.0003369	0.0035	1.02		3845.03	3845.03		4.32	Si
SLV 16	ini.	-2848.55	-6683	-0.0016862	0.0003369	0.0035	1.02		3845.03	3845.03		1.35	Si
SLV 16	fin.	1086.88	-1724	-0.0004729	0.0003369	0.0035	1.02		3838.12	3838.12		3.53	Si
SLD 14	ini.	-1548.78	-3587	-0.0007254	0.0003369	0.0035	1.02		3845.03	3845.03		2.48	Si
SLD 14	fin.	644.01	-809	-0.0002627	0.0003369	0.0035	1.02		3838.12	3838.12		5.96	Si
SLD 13	ini.	-1544.56	-3580	-0.0007229	0.0003369	0.0035	1.02		3845.03	3845.03		2.49	Si
SLD 13	fin.	640.99	-811	-0.0002614	0.0003369	0.0035	1.02		3838.12	3838.12		5.99	Si
SLV 4	ini.	2142.97	4832	-0.0011107	0.0003369	0.0035	1.02		3838.12	3838.12		1.79	Si
SLV 4	fin.	-883.31	1121	-0.0003717	0.0003369	0.0035	1.02		3845.03	3845.03		4.35	Si
SLV 1	ini.	1970.29	4564	-0.0009917	0.0003369	0.0035	1.02		3838.12	3838.12		1.95	Si
SLV 1	fin.	-719.66	1258	-0.000296	0.0003369	0.0035	1.02		3845.03	3845.03		5.34	Si
SLV 13	ini.	-3021.23	-6950	-0.0018631	0.0003369	0.0035	1.02		3845.03	3845.03		1.27	Si
SLV 13	fin.	1250.53	-1587	-0.0005588	0.0003369	0.0035	1.02		3838.12	3838.12		3.07	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	1960.45	-3242	1.02	0	586	8088	7698	2601	8675		2.68	Si
SLV 2	fin.	-712.62	-4683	1.02	0	586	8088	7698	2601	8675		1.85	Si
SLV 15	ini.	-2838.7	6551	1.02	0	586	8088	7698	2601	8675		1.32	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	fin.	1079.84	5240	1.02	0	586	8088	7698	2601	8675		1.66	Si
SLV 13	ini.	-3021.23	7114	1.02	0	586	8088	7698	2601	8675		1.22	Si
SLV 13	fin.	1250.53	5698	1.02	0	586	8088	7698	2601	8675		1.52	Si
SLV 4	ini.	2142.97	-3804	1.02	0	586	8088	7698	2601	8675		2.28	Si
SLV 4	fin.	-883.31	-5142	1.02	0	586	8088	7698	2601	8675		1.69	Si
SLV 1	ini.	1970.29	-3268	1.02	0	586	8088	7698	2601	8675		2.65	Si
SLV 1	fin.	-719.66	-4709	1.02	0	586	8088	7698	2601	8675		1.84	Si
SLV 3	ini.	2152.81	-3830	1.02	0	586	8088	7698	2601	8675		2.26	Si
SLV 3	fin.	-890.36	-5168	1.02	0	586	8088	7698	2601	8675		1.68	Si
SLV 14	ini.	-3031.07	7139	1.02	0	586	8088	7698	2601	8675		1.22	Si
SLV 14	fin.	1257.58	5724	1.02	0	586	8088	7698	2601	8675		1.52	Si
SLV 9	ini.	-1488.92	4141	1.02	0	586	8088	7698	2601	8675		2.09	Si
SLV 9	fin.	761.38	2595	1.02	0	586	8088	7698	2601	8675		3.34	Si
SLV 10	ini.	-1495.2	4157	1.02	0	586	8088	7698	2601	8675		2.09	Si
SLV 10	fin.	765.88	2612	1.02	0	586	8088	7698	2601	8675		3.32	Si
SLV 16	ini.	-2848.55	6577	1.02	0	586	8088	7698	2601	8675		1.32	Si
SLV 16	fin.	1086.88	5266	1.02	0	586	8088	7698	2601	8675		1.65	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.269	SLV 14	Si
V_SLV	1.215	SLV 14	Si
PF_SLU	5.302	SLU 82	Si
V_SLU	2.729	SLU 82	Si

Trave di accoppiamento 133

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.463	1.006	11.06	12.48	1.42	-7.463	1.006	11.06	12.48	1.42	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-1343.63	-999	-0.0002939	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.62	Si
SLU 81	fin.	1885.35	1569	-0.000437	0.0002246	0.0035	1.42		7536.27	7536.27	No	4	Si
SLU 80	ini.	-1196.82	-943	-0.0002579	0.0002246	0.0035	1.42		7545.1	7545.1	No	6.3	Si
SLU 80	fin.	1738.22	1384	-0.0003968	0.0002246	0.0035	1.42		7536.27	7536.27	No	4.34	Si
SLU 77	ini.	-1237.56	-1037	-0.0002678	0.0002246	0.0035	1.42		7545.1	7545.1	No	6.1	Si
SLU 77	fin.	1785.83	1363	-0.0004097	0.0002246	0.0035	1.42		7536.27	7536.27	No	4.22	Si
SLU 84	ini.	-1345.87	-1028	-0.0002945	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.61	Si
SLU 84	fin.	1894.24	1549	-0.0004394	0.0002246	0.0035	1.42		7536.27	7536.27	No	3.98	Si
SLU 82	ini.	-1343.42	-999	-0.0002939	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.62	Si
SLU 82	fin.	1885.08	1568	-0.0004369	0.0002246	0.0035	1.42		7536.27	7536.27	No	4	Si
SLU 83	ini.	-1346.08	-1028	-0.0002945	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.61	Si
SLU 83	fin.	1894.51	1550	-0.0004395	0.0002246	0.0035	1.42		7536.27	7536.27	No	3.98	Si
SLU 75	ini.	-1234.9	-1008	-0.0002671	0.0002246	0.0035	1.42		7545.1	7545.1	No	6.11	Si
SLU 75	fin.	1776.4	1381	-0.0004071	0.0002246	0.0035	1.42		7536.27	7536.27	No	4.24	Si
SLU 78	ini.	-1237.35	-1037	-0.0002677	0.0002246	0.0035	1.42		7545.1	7545.1	No	6.1	Si
SLU 78	fin.	1785.56	1362	-0.0004096	0.0002246	0.0035	1.42		7536.27	7536.27	No	4.22	Si
SLU 74	ini.	-1235.11	-1008	-0.0002672	0.0002246	0.0035	1.42		7545.1	7545.1	No	6.11	Si
SLU 74	fin.	1776.67	1382	-0.0004072	0.0002246	0.0035	1.42		7536.27	7536.27	No	4.24	Si
SLU 79	ini.	-1197.03	-943	-0.000258	0.0002246	0.0035	1.42		7545.1	7545.1	No	6.3	Si
SLU 79	fin.	1738.49	1385	-0.0003969	0.0002246	0.0035	1.42		7536.27	7536.27	No	4.33	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 42	ini.	-1257.17	6235	1.42	0	576	7930	7144	3621	8506	No	1.36	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 42	fin.	1717.58	3044	1.42	0	576	7930	7144	3621	8506	No	2.79	Si
SLU 77	ini.	-1237.56	6278	1.42	0	576	7930	7144	3621	8506	No	1.35	Si
SLU 77	fin.	1785.83	3107	1.42	0	576	7930	7144	3621	8506	No	2.74	Si
SLU 74	ini.	-1235.11	6259	1.42	0	576	7930	7144	3621	8506	No	1.36	Si
SLU 74	fin.	1776.67	3089	1.42	0	576	7930	7144	3621	8506	No	2.75	Si
SLU 84	ini.	-1345.87	6768	1.42	0	576	7930	7144	3621	8506	No	1.26	Si
SLU 84	fin.	1894.24	3302	1.42	0	576	7930	7144	3621	8506	No	2.58	Si
SLU 82	ini.	-1343.42	6749	1.42	0	576	7930	7144	3621	8506	No	1.26	Si
SLU 82	fin.	1885.08	3283	1.42	0	576	7930	7144	3621	8506	No	2.59	Si
SLU 41	ini.	-1257.38	6237	1.42	0	576	7930	7144	3621	8506	No	1.36	Si
SLU 41	fin.	1717.85	3045	1.42	0	576	7930	7144	3621	8506	No	2.79	Si
SLU 81	ini.	-1343.63	6750	1.42	0	576	7930	7144	3621	8506	No	1.26	Si
SLU 81	fin.	1885.35	3284	1.42	0	576	7930	7144	3621	8506	No	2.59	Si
SLU 75	ini.	-1234.9	6258	1.42	0	576	7930	7144	3621	8506	No	1.36	Si
SLU 75	fin.	1776.4	3087	1.42	0	576	7930	7144	3621	8506	No	2.75	Si
SLU 78	ini.	-1237.35	6277	1.42	0	576	7930	7144	3621	8506	No	1.36	Si
SLU 78	fin.	1785.56	3106	1.42	0	576	7930	7144	3621	8506	No	2.74	Si
SLU 83	ini.	-1346.08	6769	1.42	0	576	7930	7144	3621	8506	No	1.26	Si
SLU 83	fin.	1894.51	3303	1.42	0	576	7930	7144	3621	8506	No	2.58	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 10	ini.	-1550.53	-1410	-0.0003328	0.0003369	0.0035	1.42		7279.66	7279.66		4.69	Si
SLV 10	fin.	1846.89	1199	-0.000406	0.0003369	0.0035	1.42		7270.13	7270.13		3.94	Si
SLV 13	ini.	-2692.19	-2685	-0.0006341	0.0003369	0.0035	1.42		7279.66	7279.66		2.7	Si
SLV 13	fin.	2821.08	1397	-0.0006727	0.0003369	0.0035	1.42		7270.13	7270.13		2.58	Si
SLV 14	ini.	-2706.98	-2689	-0.0006384	0.0003369	0.0035	1.42		7279.66	7279.66		2.69	Si
SLV 14	fin.	2835.98	1418	-0.0006771	0.0003369	0.0035	1.42		7270.13	7270.13		2.56	Si
SLD 15	ini.	-1481.88	-1378	-0.0003165	0.0003369	0.0035	1.42		7279.66	7279.66		4.91	Si
SLD 15	fin.	1756.1	1053	-0.0003833	0.0003369	0.0035	1.42		7270.13	7270.13		4.14	Si
SLV 9	ini.	-1541.08	-1408	-0.0003306	0.0003369	0.0035	1.42		7279.66	7279.66		4.72	Si
SLV 9	fin.	1837.37	1186	-0.0004036	0.0003369	0.0035	1.42		7270.13	7270.13		3.96	Si
SLD 14	ini.	-1559.2	-1449	-0.0003349	0.0003369	0.0035	1.42		7279.66	7279.66		4.67	Si
SLD 14	fin.	1831.08	1107	-0.000402	0.0003369	0.0035	1.42		7270.13	7270.13		3.97	Si
SLD 16	ini.	-1488.23	-1380	-0.000318	0.0003369	0.0035	1.42		7279.66	7279.66		4.89	Si
SLD 16	fin.	1762.5	1062	-0.0003849	0.0003369	0.0035	1.42		7270.13	7270.13		4.12	Si
SLD 13	ini.	-1552.85	-1447	-0.0003334	0.0003369	0.0035	1.42		7279.66	7279.66		4.69	Si
SLD 13	fin.	1824.68	1098	-0.0004004	0.0003369	0.0035	1.42		7270.13	7270.13		3.98	Si
SLV 16	ini.	-2544.6	-2532	-0.0005919	0.0003369	0.0035	1.42		7279.66	7279.66		2.86	Si
SLV 16	fin.	2678.64	1314	-0.0006311	0.0003369	0.0035	1.42		7270.13	7270.13		2.71	Si
SLV 15	ini.	-2529.81	-2527	-0.0005877	0.0003369	0.0035	1.42		7279.66	7279.66		2.88	Si
SLV 15	fin.	2663.74	1292	-0.0006268	0.0003369	0.0035	1.42		7270.13	7270.13		2.73	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 13	ini.	-1552.85	6045	1.42	0	864	7930	10717	3621	8794		1.45	Si
SLD 13	fin.	1824.68	4102	1.42	0	864	7930	10717	3621	8794		2.14	Si
SLD 14	ini.	-1559.2	6066	1.42	0	864	7930	10717	3621	8794		1.45	Si
SLD 14	fin.	1831.08	4123	1.42	0	864	7930	10717	3621	8794		2.13	Si
SLV 13	ini.	-2692.19	9140	1.42	0	864	7930	10717	3621	8794		0.96	No
SLV 13	fin.	2821.08	7237	1.42	0	864	7930	10717	3621	8794		1.22	Si
SLD 16	ini.	-1488.23	5873	1.42	0	864	7930	10717	3621	8794		1.5	Si
SLD 16	fin.	1762.5	3917	1.42	0	864	7930	10717	3621	8794		2.25	Si
SLV 14	ini.	-2706.98	9188	1.42	0	864	7930	10717	3621	8794		0.96	No
SLV 14	fin.	2835.98	7285	1.42	0	864	7930	10717	3621	8794		1.21	Si
SLV 9	ini.	-1541.08	6012	1.42	0	864	7930	10717	3621	8794		1.46	Si
SLV 9	fin.	1837.37	4106	1.42	0	864	7930	10717	3621	8794		2.14	Si
SLV 10	ini.	-1550.53	6043	1.42	0	864	7930	10717	3621	8794		1.46	Si
SLV 10	fin.	1846.89	4137	1.42	0	864	7930	10717	3621	8794		2.13	Si
SLD 15	ini.	-1481.88	5853	1.42	0	864	7930	10717	3621	8794		1.5	Si
SLD 15	fin.	1756.1	3896	1.42	0	864	7930	10717	3621	8794		2.26	Si
SLV 16	ini.	-2544.6	8747	1.42	0	864	7930	10717	3621	8794		1.01	Si
SLV 16	fin.	2678.64	6813	1.42	0	864	7930	10717	3621	8794		1.29	Si
SLV 15	ini.	-2529.81	8699	1.42	0	864	7930	10717	3621	8794		1.01	Si
SLV 15	fin.	2663.74	6765	1.42	0	864	7930	10717	3621	8794		1.3	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.564	SLV 14	Si
V_SLV	0.957	SLV 14	No
PF_SLU	3.978	SLU 83	Si
V_SLU	1.257	SLU 83	Si

Trave di accoppiamento 136

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.433	-3.314	11.06	12.48	1.42	-9.333	-3.314	11.06	12.48	1.42	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 32	ini.	260.85	-772	-0.0000522	0.0001872	0.0035	1.42		7350.79	7350.79	No	28.18	Si
SLU 32	fin.	-483.43	-1234	-0.0000985	0.0001872	0.0035	1.42		7359.91	7359.91	No	15.22	Si
SLU 82	ini.	220.34	-846	-0.000044	0.0001872	0.0035	1.42		7350.79	7350.79	No	33.36	Si
SLU 82	fin.	-472.89	-1295	-0.0000963	0.0001872	0.0035	1.42		7359.91	7359.91	No	15.56	Si
SLU 78	ini.	241.21	-986	-0.0000482	0.0001872	0.0035	1.42		7350.79	7350.79	No	30.47	Si
SLU 78	fin.	-489.98	-1465	-0.0000999	0.0001872	0.0035	1.42		7359.91	7359.91	No	15.02	Si
SLU 35	ini.	261.12	-825	-0.0000523	0.0001872	0.0035	1.42		7350.79	7350.79	No	28.15	Si
SLU 35	fin.	-479.8	-1291	-0.0000977	0.0001872	0.0035	1.42		7359.91	7359.91	No	15.34	Si
SLU 77	ini.	237.75	-992	-0.0000475	0.0001872	0.0035	1.42		7350.79	7350.79	No	30.92	Si
SLU 77	fin.	-487.85	-1467	-0.0000994	0.0001872	0.0035	1.42		7359.91	7359.91	No	15.09	Si
SLU 67	ini.	229.32	-956	-0.0000458	0.0001872	0.0035	1.42		7350.79	7350.79	No	32.05	Si
SLU 67	fin.	-474.82	-1408	-0.0000967	0.0001872	0.0035	1.42		7359.91	7359.91	No	15.5	Si
SLU 74	ini.	237.49	-940	-0.0000474	0.0001872	0.0035	1.42		7350.79	7350.79	No	30.95	Si
SLU 74	fin.	-491.48	-1410	-0.0001002	0.0001872	0.0035	1.42		7359.91	7359.91	No	14.98	Si
SLU 33	ini.	264.31	-767	-0.0000529	0.0001872	0.0035	1.42		7350.79	7350.79	No	27.81	Si
SLU 33	fin.	-485.56	-1231	-0.0000989	0.0001872	0.0035	1.42		7359.91	7359.91	No	15.16	Si
SLU 75	ini.	240.95	-934	-0.0000482	0.0001872	0.0035	1.42		7350.79	7350.79	No	30.51	Si
SLU 75	fin.	-493.61	-1408	-0.0001007	0.0001872	0.0035	1.42		7359.91	7359.91	No	14.91	Si
SLU 36	ini.	264.58	-819	-0.000053	0.0001872	0.0035	1.42		7350.79	7350.79	No	27.78	Si
SLU 36	fin.	-481.93	-1288	-0.0000982	0.0001872	0.0035	1.42		7359.91	7359.91	No	15.27	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	240.95	-361	1.42	0	576	7137	5953	3621	7713	No	21.36	Si
SLU 75	fin.	-493.61	-2048	1.42	0	576	7137	5953	3621	7713	No	3.77	Si
SLU 77	ini.	237.75	-352	1.42	0	576	7137	5953	3621	7713	No	21.89	Si
SLU 77	fin.	-487.85	-2039	1.42	0	576	7137	5953	3621	7713	No	3.78	Si
SLU 82	ini.	220.34	-237	1.42	0	576	7137	5953	3621	7713	No	32.49	Si
SLU 82	fin.	-472.89	-2040	1.42	0	576	7137	5953	3621	7713	No	3.78	Si
SLU 73	ini.	217.67	-279	1.42	0	576	7137	5953	3621	7713	No	27.61	Si
SLU 73	fin.	-466.26	-1966	1.42	0	576	7137	5953	3621	7713	No	3.92	Si
SLU 83	ini.	217.15	-229	1.42	0	576	7137	5953	3621	7713	No	33.75	Si
SLU 83	fin.	-467.13	-2031	1.42	0	576	7137	5953	3621	7713	No	3.8	Si
SLU 74	ini.	237.49	-352	1.42	0	576	7137	5953	3621	7713	No	21.89	Si
SLU 74	fin.	-491.48	-2039	1.42	0	576	7137	5953	3621	7713	No	3.78	Si
SLU 78	ini.	241.21	-361	1.42	0	576	7137	5953	3621	7713	No	21.36	Si
SLU 78	fin.	-489.98	-2047	1.42	0	576	7137	5953	3621	7713	No	3.77	Si
SLU 76	ini.	217.93	-279	1.42	0	576	7137	5953	3621	7713	No	27.62	Si
SLU 76	fin.	-462.63	-1966	1.42	0	576	7137	5953	3621	7713	No	3.92	Si
SLU 84	ini.	220.61	-237	1.42	0	576	7137	5953	3621	7713	No	32.51	Si
SLU 84	fin.	-469.26	-2040	1.42	0	576	7137	5953	3621	7713	No	3.78	Si
SLU 81	ini.	216.88	-229	1.42	0	576	7137	5953	3621	7713	No	33.73	Si
SLU 81	fin.	-470.76	-2031	1.42	0	576	7137	5953	3621	7713	No	3.8	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 8	ini.	1183.58	-1369	-0.0002507	0.0002807	0.0035	1.42		7337.02	7337.02		6.2	Si
SLV 8	fin.	-1682.31	-2626	-0.0003712	0.0002807	0.0035	1.42		7346.34	7346.34		4.37	Si
SLV 1	ini.	2056.15	-327	-0.0004701	0.0002807	0.0035	1.42		7337.02	7337.02		3.57	Si
SLV 1	fin.	-2300.53	-2465	-0.0005372	0.0002807	0.0035	1.42		7346.34	7346.34		3.19	Si
SLV 15	ini.	-1696.74	-1061	-0.0003749	0.0002807	0.0035	1.42		7346.34	7346.34		4.33	Si
SLV 15	fin.	1526.44	363	-0.0003326	0.0002807	0.0035	1.42		7337.02	7337.02		4.81	Si
SLV 2	ini.	1949.65	-253	-0.0004414	0.0002807	0.0035	1.42		7337.02	7337.02		3.76	Si
SLV 2	fin.	-2136.23	-2250	-0.0004914	0.0002807	0.0035	1.42		7346.34	7346.34		3.44	Si
SLV 14	ini.	-2093.99	-521	-0.0004798	0.0002807	0.0035	1.42		7346.34	7346.34		3.51	Si
SLV 14	fin.	2161.85	1308	-0.0004991	0.0002807	0.0035	1.42		7337.02	7337.02		3.39	Si
SLV 13	ini.	-1987.49	-596	-0.000451	0.0002807	0.0035	1.42		7346.34	7346.34		3.7	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	fin.	1997.55	1093	-0.0004543	0.0002807	0.0035	1.42		7337.02	7337.02		3.67	Si
SLV 3	ini.	2346.9	-793	-0.0005511	0.0002807	0.0035	1.42		7337.02	7337.02		3.13	Si
SLV 3	fin.	-2771.64	-3195	-0.0006754	0.0002807	0.0035	1.42		7346.34	7346.34		2.65	Si
SLV 16	ini.	-1803.24	-987	-0.0004023	0.0002807	0.0035	1.42		7346.34	7346.34		4.07	Si
SLV 16	fin.	1690.75	578	-0.0003739	0.0002807	0.0035	1.42		7337.02	7337.02		4.34	Si
SLV 4	ini.	2240.4	-719	-0.000521	0.0002807	0.0035	1.42		7337.02	7337.02		3.27	Si
SLV 4	fin.	-2607.33	-2980	-0.0006261	0.0002807	0.0035	1.42		7346.34	7346.34		2.82	Si
SLV 7	ini.	1251.59	-1417	-0.0002665	0.0002807	0.0035	1.42		7337.02	7337.02		5.86	Si
SLV 7	fin.	-1787.24	-2763	-0.0003981	0.0002807	0.0035	1.42		7346.34	7346.34		4.11	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 7	ini.	1251.59	-3952	1.42	0	864	7137	8929	3621	8001		2.02	Si
SLV 7	fin.	-1787.24	-5064	1.42	0	864	7137	8929	3621	8001		1.58	Si
SLV 14	ini.	-2093.99	6581	1.42	0	864	7137	8929	3621	8001		1.22	Si
SLV 14	fin.	2161.85	5497	1.42	0	864	7137	8929	3621	8001		1.46	Si
SLV 13	ini.	-1987.49	6169	1.42	0	864	7137	8929	3621	8001		1.3	Si
SLV 13	fin.	1997.55	5085	1.42	0	864	7137	8929	3621	8001		1.57	Si
SLV 4	ini.	2240.4	-6488	1.42	0	864	7137	8929	3621	8001		1.23	Si
SLV 4	fin.	-2607.33	-7632	1.42	0	864	7137	8929	3621	8001		1.05	Si
SLV 1	ini.	2056.15	-5779	1.42	0	864	7137	8929	3621	8001		1.38	Si
SLV 1	fin.	-2300.53	-6930	1.42	0	864	7137	8929	3621	8001		1.15	Si
SLV 16	ini.	-1803.24	5460	1.42	0	864	7137	8929	3621	8001		1.47	Si
SLV 16	fin.	1690.75	4383	1.42	0	864	7137	8929	3621	8001		1.83	Si
SLV 3	ini.	2346.9	-6900	1.42	0	864	7137	8929	3621	8001		1.16	Si
SLV 3	fin.	-2771.64	-8044	1.42	0	864	7137	8929	3621	8001		0.99	No
SLV 8	ini.	1183.58	-3689	1.42	0	864	7137	8929	3621	8001		2.17	Si
SLV 8	fin.	-1682.31	-4801	1.42	0	864	7137	8929	3621	8001		1.67	Si
SLV 2	ini.	1949.65	-5367	1.42	0	864	7137	8929	3621	8001		1.49	Si
SLV 2	fin.	-2136.23	-6518	1.42	0	864	7137	8929	3621	8001		1.23	Si
SLV 15	ini.	-1696.74	5048	1.42	0	864	7137	8929	3621	8001		1.59	Si
SLV 15	fin.	1526.44	3971	1.42	0	864	7137	8929	3621	8001		2.01	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.651	SLV 3	Si
V_SLV	0.995	SLV 3	No
PF_SLU	14.91	SLU 75	Si
V_SLU	3.767	SLU 75	Si

Trave di accoppiamento 138

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.268	-0.194	11.06	12.48	1.42	-6.268	0.706	11.06	12.48	1.42	0.9	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 43	ini.	1055.15	1095	-0.0002246	0.0002246	0.0035	1.42		7594.91	7594.91	No	7.2	Si
SLU 43	fin.	-302.87	291	-0.0000606	0.0002246	0.0035	1.42		7603.79	7603.79	No	25.11	Si
SLU 49	ini.	1119.46	1136	-0.0002397	0.0002246	0.0035	1.42		7594.91	7594.91	No	6.78	Si
SLU 49	fin.	-309.31	290	-0.0000619	0.0002246	0.0035	1.42		7603.79	7603.79	No	24.58	Si
SLU 45	ini.	1053.67	1058	-0.0002242	0.0002246	0.0035	1.42		7594.91	7594.91	No	7.21	Si
SLU 45	fin.	-294.83	261	-0.0000589	0.0002246	0.0035	1.42		7603.79	7603.79	No	25.79	Si
SLU 47	ini.	1141.89	1202	-0.0002451	0.0002246	0.0035	1.42		7594.91	7594.91	No	6.65	Si
SLU 47	fin.	-322.81	333	-0.0000646	0.0002246	0.0035	1.42		7603.79	7603.79	No	23.55	Si
SLU 48	ini.	1088.02	1091	-0.0002323	0.0002246	0.0035	1.42		7594.91	7594.91	No	6.98	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 48	fin.	-301.12	270	-0.0000602	0.0002246	0.0035	1.42		7603.79	7603.79	No	25.25	Si
SLU 50	ini.	1123.85	1160	-0.0002408	0.0002246	0.0035	1.42		7594.91	7594.91	No	6.76	Si
SLU 50	fin.	-315.44	309	-0.0000631	0.0002246	0.0035	1.42		7603.79	7603.79	No	24.11	Si
SLU 44	ini.	1107.54	1170	-0.0002369	0.0002246	0.0035	1.42		7594.91	7594.91	No	6.86	Si
SLU 44	fin.	-316.53	324	-0.0000634	0.0002246	0.0035	1.42		7603.79	7603.79	No	24.02	Si
SLU 72	ini.	1019.85	959	-0.0002163	0.0002246	0.0035	1.42		7594.91	7594.91	No	7.45	Si
SLU 72	fin.	-289.61	174	-0.0000579	0.0002246	0.0035	1.42		7603.79	7603.79	No	26.26	Si
SLU 51	ini.	1155.29	1205	-0.0002483	0.0002246	0.0035	1.42		7594.91	7594.91	No	6.57	Si
SLU 51	fin.	-323.64	328	-0.0000648	0.0002246	0.0035	1.42		7603.79	7603.79	No	23.49	Si
SLU 46	ini.	1085.11	1103	-0.0002316	0.0002246	0.0035	1.42		7594.91	7594.91	No	7	Si
SLU 46	fin.	-303.03	281	-0.0000606	0.0002246	0.0035	1.42		7603.79	7603.79	No	25.09	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 51	ini.	1155.29	-2090	1.42	0	329	7137	4083	3621	7466	No	3.57	Si
SLU 51	fin.	-323.64	-2563	1.42	0	329	7137	4083	3621	7466	No	2.91	Si
SLU 45	ini.	1053.67	-1882	1.42	0	329	7137	4083	3621	7466	No	3.97	Si
SLU 45	fin.	-294.83	-2355	1.42	0	329	7137	4083	3621	7466	No	3.17	Si
SLU 49	ini.	1119.46	-2010	1.42	0	329	7137	4083	3621	7466	No	3.71	Si
SLU 49	fin.	-309.31	-2483	1.42	0	329	7137	4083	3621	7466	No	3.01	Si
SLU 50	ini.	1123.85	-2026	1.42	0	329	7137	4083	3621	7466	No	3.68	Si
SLU 50	fin.	-315.44	-2499	1.42	0	329	7137	4083	3621	7466	No	2.99	Si
SLU 47	ini.	1141.89	-2069	1.42	0	329	7137	4083	3621	7466	No	3.61	Si
SLU 47	fin.	-322.81	-2541	1.42	0	329	7137	4083	3621	7466	No	2.94	Si
SLU 44	ini.	1107.54	-2005	1.42	0	329	7137	4083	3621	7466	No	3.72	Si
SLU 44	fin.	-316.53	-2477	1.42	0	329	7137	4083	3621	7466	No	3.01	Si
SLU 43	ini.	1055.15	-1899	1.42	0	329	7137	4083	3621	7466	No	3.93	Si
SLU 43	fin.	-302.87	-2371	1.42	0	329	7137	4083	3621	7466	No	3.15	Si
SLU 59	ini.	1017.47	-1844	1.42	0	329	7137	4083	3621	7466	No	4.05	Si
SLU 59	fin.	-302.3	-2316	1.42	0	329	7137	4083	3621	7466	No	3.22	Si
SLU 48	ini.	1088.02	-1946	1.42	0	329	7137	4083	3621	7466	No	3.84	Si
SLU 48	fin.	-301.12	-2419	1.42	0	329	7137	4083	3621	7466	No	3.09	Si
SLU 46	ini.	1085.11	-1946	1.42	0	329	7137	4083	3621	7466	No	3.84	Si
SLU 46	fin.	-303.03	-2419	1.42	0	329	7137	4083	3621	7466	No	3.09	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 10	ini.	3111.93	3637	-0.0007607	0.0003369	0.0035	1.42		7808.98	7808.98		2.51	Si
SLV 10	fin.	-1118.04	1123	-0.0002331	0.0003369	0.0035	1.42		7818.07	7818.07		6.99	Si
SLD 9	ini.	1732.16	1917	-0.0003774	0.0003369	0.0035	1.42		7808.98	7808.98		4.51	Si
SLD 9	fin.	-600.37	532	-0.0001214	0.0003369	0.0035	1.42		7818.07	7818.07		13.02	Si
SLV 5	ini.	2853.24	3425	-0.0006823	0.0003369	0.0035	1.42		7808.98	7808.98		2.74	Si
SLV 5	fin.	-979.79	1160	-0.0002025	0.0003369	0.0035	1.42		7818.07	7818.07		7.98	Si
SLV 7	ini.	-1716.21	-2364	-0.000373	0.0003369	0.0035	1.42		7818.07	7818.07		4.56	Si
SLV 7	fin.	701.68	-936	-0.0001428	0.0003369	0.0035	1.42		7808.98	7808.98		11.13	Si
SLV 13	ini.	1659.79	1637	-0.0003596	0.0003369	0.0035	1.42		7808.98	7808.98		4.7	Si
SLV 13	fin.	-648.98	258	-0.0001316	0.0003369	0.0035	1.42		7818.07	7818.07		12.05	Si
SLV 6	ini.	2916.37	3515	-0.0007011	0.0003369	0.0035	1.42		7808.98	7808.98		2.68	Si
SLV 6	fin.	-996.87	1196	-0.0002062	0.0003369	0.0035	1.42		7818.07	7818.07		7.84	Si
SLD 6	ini.	1676.26	1905	-0.0003637	0.0003369	0.0035	1.42		7808.98	7808.98		4.66	Si
SLD 6	fin.	-556.05	579	-0.0001121	0.0003369	0.0035	1.42		7818.07	7818.07		14.06	Si
SLV 9	ini.	3048.8	3547	-0.0007412	0.0003369	0.0035	1.42		7808.98	7808.98		2.56	Si
SLV 9	fin.	-1100.96	1087	-0.0002293	0.0003369	0.0035	1.42		7818.07	7818.07		7.1	Si
SLV 14	ini.	1758.64	1778	-0.0003839	0.0003369	0.0035	1.42		7808.98	7808.98		4.44	Si
SLV 14	fin.	-675.72	314	-0.0001372	0.0003369	0.0035	1.42		7818.07	7818.07		11.57	Si
SLD 10	ini.	1759.69	1957	-0.0003842	0.0003369	0.0035	1.42		7808.98	7808.98		4.44	Si
SLD 10	fin.	-607.82	548	-0.0001229	0.0003369	0.0035	1.42		7818.07	7818.07		12.86	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 7	ini.	-1716.21	3803	1.42	0	494	7137	6124	3621	7631		2.01	Si
SLV 7	fin.	701.68	3647	1.42	0	494	7137	6124	3621	7631		2.09	Si
SLV 13	ini.	1659.79	-3361	1.42	0	494	7137	6124	3621	7631		2.27	Si
SLV 13	fin.	-648.98	-3794	1.42	0	494	7137	6124	3621	7631		2.01	Si
SLV 5	ini.	2853.24	-5668	1.42	0	494	7137	6124	3621	7631		1.35	Si
SLV 5	fin.	-979.79	-6271	1.42	0	494	7137	6124	3621	7631		1.22	Si
SLD 10	ini.	1759.69	-3457	1.42	0	494	7137	6124	3621	7631		2.21	Si
SLD 10	fin.	-607.82	-3931	1.42	0	494	7137	6124	3621	7631		1.94	Si
SLV 6	ini.	2916.37	-5800	1.42	0	494	7137	6124	3621	7631		1.32	Si
SLV 6	fin.	-996.87	-6403	1.42	0	494	7137	6124	3621	7631		1.19	Si
SLD 6	ini.	1676.26	-3251	1.42	0	494	7137	6124	3621	7631		2.35	Si
SLD 6	fin.	-556.05	-3728	1.42	0	494	7137	6124	3621	7631		2.05	Si
SLV 9	ini.	3048.8	-6150	1.42	0	494	7137	6124	3621	7631		1.24	Si
SLV 9	fin.	-1100.96	-6748	1.42	0	494	7137	6124	3621	7631		1.13	Si
SLD 9	ini.	1732.16	-3399	1.42	0	494	7137	6124	3621	7631		2.24	Si
SLD 9	fin.	-600.37	-3874	1.42	0	494	7137	6124	3621	7631		1.97	Si
SLV 10	ini.	3111.93	-6282	1.42	0	494	7137	6124	3621	7631		1.21	Si
SLV 10	fin.	-1118.04	-6880	1.42	0	494	7137	6124	3621	7631		1.11	Si
SLV 14	ini.	1758.64	-3568	1.42	0	494	7137	6124	3621	7631		2.14	Si
SLV 14	fin.	-675.72	-4001	1.42	0	494	7137	6124	3621	7631		1.91	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.509	SLV 10	Si
V_SLV	1.109	SLV 10	Si
PF_SLU	6.574	SLU 51	Si
V_SLU	2.914	SLU 51	Si

Trave di accoppiamento 139

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.093	6.006	8.96	10.96	2	-5.093	6.506	8.96	10.96	2	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-32.83	-514	-0.0000032	0.0001872	0.0035	2		14357.01	14357.01	No	437.33	Si
SLU 83	fin.	116.41	53	-0.0000116	0.0001872	0.0035	2		14344.28	14344.28	No	123.23	Si
SLU 78	ini.	-25.87	-540	-0.0000026	0.0001872	0.0035	2		14357.01	14357.01	No	555.02	Si
SLU 78	fin.	116.91	50	-0.0000116	0.0001872	0.0035	2		14344.28	14344.28	No	122.69	Si
SLU 77	ini.	-28.04	-532	-0.0000028	0.0001872	0.0035	2		14357.01	14357.01	No	512.05	Si
SLU 77	fin.	116.79	51	-0.0000116	0.0001872	0.0035	2		14344.28	14344.28	No	122.82	Si
SLU 76	ini.	-21.04	-532	-0.0000021	0.0001872	0.0035	2		14357.01	14357.01	No	682.29	Si
SLU 76	fin.	115.12	49	-0.0000114	0.0001872	0.0035	2		14344.28	14344.28	No	124.6	Si
SLU 59	ini.	0.78	-544	-0.0000001	0.0001872	0.0035	2		14344.28	14344.28	No	18290.02	Si
SLU 59	fin.	114.63	44	-0.0000114	0.0001872	0.0035	2		14344.28	14344.28	No	125.14	Si
SLU 80	ini.	-18.78	-547	-0.0000019	0.0001872	0.0035	2		14357.01	14357.01	No	764.47	Si
SLU 80	fin.	118.22	50	-0.0000117	0.0001872	0.0035	2		14344.28	14344.28	No	121.33	Si
SLU 72	ini.	0.28	-557	0	0.0001872	0.0035	2		14344.28	14344.28	No	51109.58	Si
SLU 72	fin.	114.75	42	-0.0000114	0.0001872	0.0035	2		14344.28	14344.28	No	125.01	Si
SLU 71	ini.	-1.89	-548	-0.0000002	0.0001872	0.0035	2		14357.01	14357.01	No	7596.48	Si
SLU 71	fin.	114.62	43	-0.0000114	0.0001872	0.0035	2		14344.28	14344.28	No	125.14	Si
SLU 79	ini.	-20.95	-539	-0.0000021	0.0001872	0.0035	2		14357.01	14357.01	No	685.27	Si
SLU 79	fin.	118.1	51	-0.0000117	0.0001872	0.0035	2		14344.28	14344.28	No	121.46	Si
SLU 84	ini.	-30.66	-523	-0.000003	0.0001872	0.0035	2		14357.01	14357.01	No	468.29	Si
SLU 84	fin.	116.53	52	-0.0000116	0.0001872	0.0035	2		14344.28	14344.28	No	123.09	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 72	ini.	0.28	-2608	2	0	812	3965	8384	5100	4776	No	1.83	Si
SLU 72	fin.	114.75	13	2	0	812	3965	8384	5100	4776	No	366.95	Si
SLU 69	ini.	-8.98	-2558	2	0	812	3965	8384	5100	4776	No	1.87	Si
SLU 69	fin.	113.31	52	2	0	812	3965	8384	5100	4776	No	92.17	Si
SLU 79	ini.	-20.95	-2605	2	0	812	3965	8384	5100	4776	No	1.83	Si
SLU 79	fin.	118.1	92	2	0	812	3965	8384	5100	4776	No	51.71	Si
SLU 70	ini.	-6.81	-2590	2	0	812	3965	8384	5100	4776	No	1.84	Si
SLU 70	fin.	113.44	46	2	0	812	3965	8384	5100	4776	No	102.76	Si
SLU 76	ini.	-21.04	-2553	2	0	812	3965	8384	5100	4776	No	1.87	Si
SLU 76	fin.	115.12	85	2	0	812	3965	8384	5100	4776	No	55.91	Si
SLU 59	ini.	0.78	-2565	2	0	812	3965	8384	5100	4776	No	1.86	Si
SLU 59	fin.	114.63	7	2	0	812	3965	8384	5100	4776	No	685.38	Si
SLU 71	ini.	-1.89	-2577	2	0	812	3965	8384	5100	4776	No	1.85	Si
SLU 71	fin.	114.62	18	2	0	812	3965	8384	5100	4776	No	260.2	Si
SLU 77	ini.	-28.04	-2586	2	0	812	3965	8384	5100	4776	No	1.85	Si
SLU 77	fin.	116.79	126	2	0	812	3965	8384	5100	4776	No	37.96	Si
SLU 78	ini.	-25.87	-2618	2	0	812	3965	8384	5100	4776	No	1.82	Si
SLU 78	fin.	116.91	120	2	0	812	3965	8384	5100	4776	No	39.64	Si
SLU 80	ini.	-18.78	-2636	2	0	812	3965	8384	5100	4776	No	1.81	Si
SLU 80	fin.	118.22	87	2	0	812	3965	8384	5100	4776	No	54.88	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 11	ini.	-806.24	1444	-0.0000816	0.0002807	0.0035	2		14215.41	14215.41		17.63	Si
SLV 11	fin.	-97	175	-0.0000096	0.0002807	0.0035	2		14215.41	14215.41		146.55	Si
SLV 3	ini.	1123.05	-2615	-0.0001149	0.0002807	0.0035	2		14202.07	14202.07		12.65	Si
SLV 3	fin.	472.13	301	-0.0000473	0.0002807	0.0035	2		14202.07	14202.07		30.08	Si
SLV 12	ini.	-792.49	1392	-0.0000802	0.0002807	0.0035	2		14215.41	14215.41		17.94	Si
SLV 12	fin.	-94.95	170	-0.0000094	0.0002807	0.0035	2		14215.41	14215.41		149.72	Si
SLV 4	ini.	1144.58	-2696	-0.0001172	0.0002807	0.0035	2		14202.07	14202.07		12.41	Si
SLV 4	fin.	475.35	293	-0.0000477	0.0002807	0.0035	2		14202.07	14202.07		29.88	Si
SLV 16	ini.	-1386.5	2461	-0.0001429	0.0002807	0.0035	2		14215.41	14215.41		10.25	Si
SLV 16	fin.	-339.51	-115	-0.0000339	0.0002807	0.0035	2		14215.41	14215.41		41.87	Si
SLV 14	ini.	-1139.66	1842	-0.0001165	0.0002807	0.0035	2		14215.41	14215.41		12.47	Si
SLV 14	fin.	-305.18	-235	-0.0000304	0.0002807	0.0035	2		14215.41	14215.41		46.58	Si
SLV 2	ini.	1391.42	-3315	-0.0001436	0.0002807	0.0035	2		14202.07	14202.07		10.21	Si
SLV 2	fin.	509.69	173	-0.0000512	0.0002807	0.0035	2		14202.07	14202.07		27.86	Si
SLV 1	ini.	1369.89	-3234	-0.0001413	0.0002807	0.0035	2		14202.07	14202.07		10.37	Si
SLV 1	fin.	506.47	181	-0.0000508	0.0002807	0.0035	2		14202.07	14202.07		28.04	Si
SLV 13	ini.	-1161.19	1924	-0.0001188	0.0002807	0.0035	2		14215.41	14215.41		12.24	Si
SLV 13	fin.	-308.4	-227	-0.0000308	0.0002807	0.0035	2		14215.41	14215.41		46.09	Si
SLV 15	ini.	-1408.03	2542	-0.0001453	0.0002807	0.0035	2		14215.41	14215.41		10.1	Si
SLV 15	fin.	-342.73	-107	-0.0000342	0.0002807	0.0035	2		14215.41	14215.41		41.48	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-1386.5	9550	2	0	1217	3965	12577	5100	5182		0.54	No
SLV 16	fin.	-339.51	2254	2	0	1217	3965	12577	5100	5182		2.3	Si
SLV 6	ini.	789.63	-8542	2	0	1217	3965	12577	5100	5182		0.61	No
SLV 6	fin.	263.96	-1235	2	0	1217	3965	12577	5100	5182		4.2	Si
SLV 4	ini.	1144.58	-11356	2	0	1217	3965	12577	5100	5182		0.46	No
SLV 4	fin.	475.35	-1946	2	0	1217	3965	12577	5100	5182		2.66	Si
SLV 1	ini.	1369.89	-13181	2	0	1217	3965	12577	5100	5182		0.39	No
SLV 1	fin.	506.47	-2213	2	0	1217	3965	12577	5100	5182		2.34	Si
SLV 3	ini.	1123.05	-11080	2	0	1217	3965	12577	5100	5182		0.47	No
SLV 3	fin.	472.13	-1855	2	0	1217	3965	12577	5100	5182		2.79	Si
SLV 14	ini.	-1139.66	7448	2	0	1217	3965	12577	5100	5182		0.7	No
SLV 14	fin.	-305.18	1896	2	0	1217	3965	12577	5100	5182		2.73	Si
SLV 15	ini.	-1408.03	9827	2	0	1217	3965	12577	5100	5182		0.53	No
SLV 15	fin.	-342.73	2345	2	0	1217	3965	12577	5100	5182		2.21	Si
SLV 5	ini.	775.88	-8365	2	0	1217	3965	12577	5100	5182		0.62	No
SLV 5	fin.	261.9	-1177	2	0	1217	3965	12577	5100	5182		4.4	Si
SLV 13	ini.	-1161.19	7725	2	0	1217	3965	12577	5100	5182		0.67	No
SLV 13	fin.	-308.4	1988	2	0	1217	3965	12577	5100	5182		2.61	Si
SLV 2	ini.	1391.42	-13458	2	0	1217	3965	12577	5100	5182		0.39	No
SLV 2	fin.	509.69	-2304	2	0	1217	3965	12577	5100	5182		2.25	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	10.096	SLV 15	Si
V_SLV	0.385	SLV 2	No
PF_SLU	121.331	SLU 80	Si
V_SLU	1.812	SLU 80	Si

Trave di accoppiamento 140

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.093	6.006	11.76	12.48	0.72	-5.093	6.506	11.76	12.48	0.72	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 50	ini.	107.84	197	-0.0000852	0.0001872	0.0035	0.72		1897.3	1897.3	No	17.59	Si
SLU 50	fin.	-56.35	171	-0.0000437	0.0001872	0.0035	0.72		1901.86	1901.86	No	33.75	Si
SLU 49	ini.	105.48	185	-0.0000833	0.0001872	0.0035	0.72		1897.3	1897.3	No	17.99	Si
SLU 49	fin.	-54.31	164	-0.0000421	0.0001872	0.0035	0.72		1901.86	1901.86	No	35.02	Si
SLU 72	ini.	101.68	161	-0.0000802	0.0001872	0.0035	0.72		1897.3	1897.3	No	18.66	Si
SLU 72	fin.	-51.31	154	-0.0000397	0.0001872	0.0035	0.72		1901.86	1901.86	No	37.07	Si
SLU 71	ini.	99.54	154	-0.0000784	0.0001872	0.0035	0.72		1897.3	1897.3	No	19.06	Si
SLU 71	fin.	-49.92	150	-0.0000386	0.0001872	0.0035	0.72		1901.86	1901.86	No	38.1	Si
SLU 48	ini.	103.34	178	-0.0000815	0.0001872	0.0035	0.72		1897.3	1897.3	No	18.36	Si
SLU 48	fin.	-52.93	160	-0.000041	0.0001872	0.0035	0.72		1901.86	1901.86	No	35.93	Si
SLU 44	ini.	101.62	192	-0.0000801	0.0001872	0.0035	0.72		1897.3	1897.3	No	18.67	Si
SLU 44	fin.	-52.38	160	-0.0000406	0.0001872	0.0035	0.72		1901.86	1901.86	No	36.31	Si
SLU 46	ini.	100.59	177	-0.0000793	0.0001872	0.0035	0.72		1897.3	1897.3	No	18.86	Si
SLU 46	fin.	-51.17	155	-0.0000396	0.0001872	0.0035	0.72		1901.86	1901.86	No	37.16	Si
SLU 51	ini.	109.97	204	-0.0000869	0.0001872	0.0035	0.72		1897.3	1897.3	No	17.25	Si
SLU 51	fin.	-57.73	176	-0.0000448	0.0001872	0.0035	0.72		1901.86	1901.86	No	32.94	Si
SLU 59	ini.	98.83	157	-0.0000778	0.0001872	0.0035	0.72		1897.3	1897.3	No	19.2	Si
SLU 59	fin.	-49.05	148	-0.0000379	0.0001872	0.0035	0.72		1901.86	1901.86	No	38.77	Si
SLU 47	ini.	106.51	200	-0.0000841	0.0001872	0.0035	0.72		1897.3	1897.3	No	17.81	Si
SLU 47	fin.	-55.52	169	-0.000043	0.0001872	0.0035	0.72		1901.86	1901.86	No	34.26	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	88.39	726	0.72	0	292	3965	3018	1836	4257	No	5.86	Si
SLU 79	fin.	-41.24	-584	0.72	0	292	3965	3018	1836	4257	No	7.29	Si
SLU 83	ini.	78.72	723	0.72	0	292	3965	3018	1836	4257	No	5.89	Si
SLU 83	fin.	-34.38	-535	0.72	0	292	3965	3018	1836	4257	No	7.96	Si
SLU 36	ini.	61.23	693	0.72	0	292	3965	3018	1836	4257	No	6.14	Si
SLU 36	fin.	-25.96	-437	0.72	0	292	3965	3018	1836	4257	No	9.75	Si
SLU 75	ini.	81.15	720	0.72	0	292	3965	3018	1836	4257	No	5.91	Si
SLU 75	fin.	-36.07	-547	0.72	0	292	3965	3018	1836	4257	No	7.78	Si
SLU 78	ini.	86.04	761	0.72	0	292	3965	3018	1836	4257	No	5.6	Si
SLU 78	fin.	-39.21	-578	0.72	0	292	3965	3018	1836	4257	No	7.37	Si
SLU 74	ini.	79.01	721	0.72	0	292	3965	3018	1836	4257	No	5.9	Si
SLU 74	fin.	-34.68	-536	0.72	0	292	3965	3018	1836	4257	No	7.94	Si
SLU 35	ini.	59.09	695	0.72	0	292	3965	3018	1836	4257	No	6.13	Si
SLU 35	fin.	-24.57	-426	0.72	0	292	3965	3018	1836	4257	No	10	Si
SLU 80	ini.	90.53	725	0.72	0	292	3965	3018	1836	4257	No	5.87	Si
SLU 80	fin.	-42.63	-595	0.72	0	292	3965	3018	1836	4257	No	7.16	Si
SLU 77	ini.	83.9	762	0.72	0	292	3965	3018	1836	4257	No	5.59	Si
SLU 77	fin.	-37.82	-567	0.72	0	292	3965	3018	1836	4257	No	7.51	Si
SLU 84	ini.	80.86	722	0.72	0	292	3965	3018	1836	4257	No	5.9	Si
SLU 84	fin.	-35.77	-546	0.72	0	292	3965	3018	1836	4257	No	7.8	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 6	ini.	563.17	1577	-0.0005078	0.0002807	0.0035	0.72		1912.43	1912.43		3.4	Si
SLV 6	fin.	-280.69	844	-0.0002294	0.0002807	0.0035	0.72		1917.1	1917.1		6.83	Si
SLV 13	ini.	-569.15	-2043	-0.0005129	0.0002807	0.0035	0.72		1917.1	1917.1		3.37	Si
SLV 13	fin.	165.11	-623	-0.0001311	0.0002807	0.0035	0.72		1912.43	1912.43		11.58	Si
SLV 2	ini.	869.79	2697	-0.0008729	0.0002807	0.0035	0.72		1912.43	1912.43		2.2	Si
SLV 2	fin.	-332.39	1105	-0.0002759	0.0002807	0.0035	0.72		1917.1	1917.1		5.77	Si
SLV 5	ini.	547.38	1525	-0.0004908	0.0002807	0.0035	0.72		1912.43	1912.43		3.49	Si
SLV 5	fin.	-268.99	807	-0.0002191	0.0002807	0.0035	0.72		1917.1	1917.1		7.13	Si
SLV 14	ini.	-544.42	-1961	-0.0004863	0.0002807	0.0035	0.72		1917.1	1917.1		3.52	Si
SLV 14	fin.	146.79	-566	-0.000116	0.0002807	0.0035	0.72		1912.43	1912.43		13.03	Si
SLV 1	ini.	845.06	2615	-0.0008409	0.0002807	0.0035	0.72		1912.43	1912.43		2.26	Si
SLV 1	fin.	-314.07	1047	-0.0002592	0.0002807	0.0035	0.72		1917.1	1917.1		6.1	Si
SLV 3	ini.	679.78	2165	-0.0006388	0.0002807	0.0035	0.72		1912.43	1912.43		2.81	Si
SLV 3	fin.	-211.8	761	-0.0001698	0.0002807	0.0035	0.72		1917.1	1917.1		9.05	Si
SLV 15	ini.	-734.43	-2493	-0.0007014	0.0002807	0.0035	0.72		1917.1	1917.1		2.61	Si
SLV 15	fin.	267.38	-910	-0.0002182	0.0002807	0.0035	0.72		1912.43	1912.43		7.15	Si
SLV 16	ini.	-709.7	-2411	-0.000672	0.0002807	0.0035	0.72		1917.1	1917.1		2.7	Si
SLV 16	fin.	249.07	-853	-0.0002022	0.0002807	0.0035	0.72		1912.43	1912.43		7.68	Si
SLV 4	ini.	704.51	2247	-0.0006678	0.0002807	0.0035	0.72		1912.43	1912.43		2.71	Si
SLV 4	fin.	-230.11	818	-0.0001854	0.0002807	0.0035	0.72		1917.1	1917.1		8.33	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-734.43	3161	0.72	0	438	3965	4528	1836	4403		1.39	Si
SLV 15	fin.	267.38	2553	0.72	0	438	3965	4528	1836	4403		1.72	Si
SLV 3	ini.	679.78	-2044	0.72	0	438	3965	4528	1836	4403		2.15	Si
SLV 3	fin.	-211.8	-2545	0.72	0	438	3965	4528	1836	4403		1.73	Si
SLV 2	ini.	869.79	-2307	0.72	0	438	3965	4528	1836	4403		1.91	Si
SLV 2	fin.	-332.39	-3409	0.72	0	438	3965	4528	1836	4403		1.29	Si
SLV 1	ini.	845.06	-2282	0.72	0	438	3965	4528	1836	4403		1.93	Si
SLV 1	fin.	-314.07	-3283	0.72	0	438	3965	4528	1836	4403		1.34	Si
SLV 6	ini.	563.17	-758	0.72	0	438	3965	4528	1836	4403		5.81	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 6	fin.	-280.69	-2462	0.72	0	438	3965	4528	1836	4403		1.79	Si
SLV 13	ini.	-569.15	2923	0.72	0	438	3965	4528	1836	4403		1.51	Si
SLV 13	fin.	165.11	1816	0.72	0	438	3965	4528	1836	4403		2.43	Si
SLV 14	ini.	-544.42	2898	0.72	0	438	3965	4528	1836	4403		1.52	Si
SLV 14	fin.	146.79	1689	0.72	0	438	3965	4528	1836	4403		2.61	Si
SLV 4	ini.	704.51	-2069	0.72	0	438	3965	4528	1836	4403		2.13	Si
SLV 4	fin.	-230.11	-2671	0.72	0	438	3965	4528	1836	4403		1.65	Si
SLV 5	ini.	547.38	-742	0.72	0	438	3965	4528	1836	4403		5.93	Si
SLV 5	fin.	-268.99	-2382	0.72	0	438	3965	4528	1836	4403		1.85	Si
SLV 16	ini.	-709.7	3136	0.72	0	438	3965	4528	1836	4403		1.4	Si
SLV 16	fin.	249.07	2427	0.72	0	438	3965	4528	1836	4403		1.81	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.199	SLV 2	Si
V_SLV	1.292	SLV 2	Si
PF_SLU	17.252	SLU 51	Si
V_SLU	5.587	SLU 77	Si

Trave di accoppiamento 141

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.314	8.96	9.86	0.9	-7.413	-3.314	8.96	9.86	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 60	ini.	-96.73	-153	-0.0000481	0.0001872	0.0035	0.9		2964.67	2964.67	No	30.65	Si
SLU 60	fin.	332.62	-1210	-0.0001749	0.0001872	0.0035	0.9		2959	2959	No	8.9	Si
SLU 56	ini.	-77.14	-270	-0.0000382	0.0001872	0.0035	0.9		2964.67	2964.67	No	38.43	Si
SLU 56	fin.	327.51	-1240	-0.000172	0.0001872	0.0035	0.9		2959	2959	No	9.03	Si
SLU 83	ini.	-83.98	-255	-0.0000417	0.0001872	0.0035	0.9		2964.67	2964.67	No	35.3	Si
SLU 83	fin.	337.34	-1279	-0.0001776	0.0001872	0.0035	0.9		2959	2959	No	8.77	Si
SLU 63	ini.	-99.3	-160	-0.0000494	0.0001872	0.0035	0.9		2964.67	2964.67	No	29.85	Si
SLU 63	fin.	343.59	-1250	-0.0001812	0.0001872	0.0035	0.9		2959	2959	No	8.61	Si
SLU 61	ini.	-97.03	-149	-0.0000483	0.0001872	0.0035	0.9		2964.67	2964.67	No	30.55	Si
SLU 61	fin.	331	-1203	-0.000174	0.0001872	0.0035	0.9		2959	2959	No	8.94	Si
SLU 58	ini.	-84.96	-229	-0.0000422	0.0001872	0.0035	0.9		2964.67	2964.67	No	34.89	Si
SLU 58	fin.	333.94	-1246	-0.0001757	0.0001872	0.0035	0.9		2959	2959	No	8.86	Si
SLU 62	ini.	-99.01	-164	-0.0000493	0.0001872	0.0035	0.9		2964.67	2964.67	No	29.94	Si
SLU 62	fin.	345.21	-1256	-0.0001821	0.0001872	0.0035	0.9		2959	2959	No	8.57	Si
SLU 84	ini.	-84.28	-251	-0.0000418	0.0001872	0.0035	0.9		2964.67	2964.67	No	35.18	Si
SLU 84	fin.	335.72	-1273	-0.0001767	0.0001872	0.0035	0.9		2959	2959	No	8.81	Si
SLU 59	ini.	-85.26	-225	-0.0000423	0.0001872	0.0035	0.9		2964.67	2964.67	No	34.77	Si
SLU 59	fin.	332.33	-1239	-0.0001748	0.0001872	0.0035	0.9		2959	2959	No	8.9	Si
SLU 79	ini.	-69.93	-320	-0.0000346	0.0001872	0.0035	0.9		2964.67	2964.67	No	42.39	Si
SLU 79	fin.	326.07	-1269	-0.0001712	0.0001872	0.0035	0.9		2959	2959	No	9.07	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 56	ini.	-77.14	-604	0.9	0	365	7137	3773	2295	6068	No	10.05	Si
SLU 56	fin.	327.51	1971	0.9	0	365	7137	3773	2295	6068	No	3.08	Si
SLU 77	ini.	-62.11	-750	0.9	0	365	7137	3773	2295	6068	No	8.09	Si
SLU 77	fin.	319.64	1964	0.9	0	365	7137	3773	2295	6068	No	3.09	Si
SLU 83	ini.	-83.98	-580	0.9	0	365	7137	3773	2295	6068	No	10.47	Si
SLU 83	fin.	337.34	2005	0.9	0	365	7137	3773	2295	6068	No	3.03	Si
SLU 58	ini.	-84.96	-533	0.9	0	365	7137	3773	2295	6068	No	11.39	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 58	fin.	333.94	1986	0.9	0	365	7137	3773	2295	6068	No	3.06	Si
SLU 84	ini.	-84.28	-572	0.9	0	365	7137	3773	2295	6068	No	10.6	Si
SLU 84	fin.	335.72	1995	0.9	0	365	7137	3773	2295	6068	No	3.04	Si
SLU 62	ini.	-99.01	-433	0.9	0	365	7137	3773	2295	6068	No	14.01	Si
SLU 62	fin.	345.21	2011	0.9	0	365	7137	3773	2295	6068	No	3.02	Si
SLU 80	ini.	-70.23	-672	0.9	0	365	7137	3773	2295	6068	No	9.03	Si
SLU 80	fin.	324.45	1970	0.9	0	365	7137	3773	2295	6068	No	3.08	Si
SLU 79	ini.	-69.93	-679	0.9	0	365	7137	3773	2295	6068	No	8.93	Si
SLU 79	fin.	326.07	1979	0.9	0	365	7137	3773	2295	6068	No	3.07	Si
SLU 63	ini.	-99.3	-426	0.9	0	365	7137	3773	2295	6068	No	14.25	Si
SLU 63	fin.	343.59	2002	0.9	0	365	7137	3773	2295	6068	No	3.03	Si
SLU 59	ini.	-85.26	-526	0.9	0	365	7137	3773	2295	6068	No	11.55	Si
SLU 59	fin.	332.33	1976	0.9	0	365	7137	3773	2295	6068	No	3.07	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 10	ini.	-589.01	2084	-0.0003178	0.0002807	0.0035	0.9		2995.37	2995.37		5.09	Si
SLV 10	fin.	786.42	-2130	-0.0004445	0.0002807	0.0035	0.9		2989.59	2989.59		3.8	Si
SLV 4	ini.	806	-3425	-0.0004577	0.0002807	0.0035	0.9		2989.59	2989.59		3.71	Si
SLV 4	fin.	-880.07	1533	-0.0005072	0.0002807	0.0035	0.9		2995.37	2995.37		3.4	Si
SLV 3	ini.	839.23	-3575	-0.0004802	0.0002807	0.0035	0.9		2989.59	2989.59		3.56	Si
SLV 3	fin.	-926.58	1629	-0.0005397	0.0002807	0.0035	0.9		2995.37	2995.37		3.23	Si
SLV 2	ini.	617.51	-2544	-0.000336	0.0002807	0.0035	0.9		2989.59	2989.59		4.84	Si
SLV 2	fin.	-726.83	1178	-0.0004044	0.0002807	0.0035	0.9		2995.37	2995.37		4.12	Si
SLV 13	ini.	-876.36	2885	-0.0005046	0.0002807	0.0035	0.9		2995.37	2995.37		3.42	Si
SLV 13	fin.	1292.62	-3204	-0.0008189	0.0002807	0.0035	0.9		2989.59	2989.59		2.31	Si
SLV 15	ini.	-687.87	2003	-0.0003794	0.0002807	0.0035	0.9		2995.37	2995.37		4.35	Si
SLV 15	fin.	1139.38	-2848	-0.0006978	0.0002807	0.0035	0.9		2989.59	2989.59		2.62	Si
SLV 16	ini.	-721.1	2154	-0.0004007	0.0002807	0.0035	0.9		2995.37	2995.37		4.15	Si
SLV 16	fin.	1185.89	-2944	-0.0007338	0.0002807	0.0035	0.9		2989.59	2989.59		2.52	Si
SLV 9	ini.	-567.79	1988	-0.000305	0.0002807	0.0035	0.9		2995.37	2995.37		5.28	Si
SLV 9	fin.	756.71	-2069	-0.0004248	0.0002807	0.0035	0.9		2989.59	2989.59		3.95	Si
SLV 14	ini.	-909.59	3035	-0.0005277	0.0002807	0.0035	0.9		2995.37	2995.37		3.29	Si
SLV 14	fin.	1339.13	-3299	-0.0008571	0.0002807	0.0035	0.9		2989.59	2989.59		2.23	Si
SLV 1	ini.	650.74	-2694	-0.0003567	0.0002807	0.0035	0.9		2989.59	2989.59		4.59	Si
SLV 1	fin.	-773.35	1273	-0.0004349	0.0002807	0.0035	0.9		2995.37	2995.37		3.87	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-909.59	4337	0.9	0	548	7137	5660	2295	7684		1.77	Si
SLV 14	fin.	1339.13	6504	0.9	0	548	7137	5660	2295	7684		1.18	Si
SLV 4	ini.	806	-5134	0.9	0	548	7137	5660	2295	7684		1.5	Si
SLV 4	fin.	-880.07	-3776	0.9	0	548	7137	5660	2295	7684		2.04	Si
SLV 13	ini.	-876.36	4054	0.9	0	548	7137	5660	2295	7684		1.9	Si
SLV 13	fin.	1292.62	6329	0.9	0	548	7137	5660	2295	7684		1.21	Si
SLV 8	ini.	497.43	-4065	0.9	0	548	7137	5660	2295	7684		1.89	Si
SLV 8	fin.	-344.16	-1277	0.9	0	548	7137	5660	2295	7684		6.02	Si
SLV 1	ini.	650.74	-3971	0.9	0	548	7137	5660	2295	7684		1.94	Si
SLV 1	fin.	-773.35	-3246	0.9	0	548	7137	5660	2295	7684		2.37	Si
SLV 3	ini.	839.23	-5418	0.9	0	548	7137	5660	2295	7684		1.42	Si
SLV 3	fin.	-926.58	-3950	0.9	0	548	7137	5660	2295	7684		1.95	Si
SLV 7	ini.	518.65	-4246	0.9	0	548	7137	5660	2295	7684		1.81	Si
SLV 7	fin.	-373.87	-1388	0.9	0	548	7137	5660	2295	7684		5.54	Si
SLV 10	ini.	-589.01	3165	0.9	0	548	7137	5660	2295	7684		2.43	Si
SLV 10	fin.	786.42	3942	0.9	0	548	7137	5660	2295	7684		1.95	Si
SLV 15	ini.	-687.87	2607	0.9	0	548	7137	5660	2295	7684		2.95	Si
SLV 15	fin.	1139.38	5626	0.9	0	548	7137	5660	2295	7684		1.37	Si
SLV 16	ini.	-721.1	2891	0.9	0	548	7137	5660	2295	7684		2.66	Si
SLV 16	fin.	1185.89	5800	0.9	0	548	7137	5660	2295	7684		1.32	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.232	SLV 14	Si
V_SLV	1.181	SLV 14	Si
PF_SLU	8.572	SLU 62	Si
V_SLU	3.017	SLU 62	Si

Trave di accoppiamento 142

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.314	11.66	12.48	0.82	-7.413	-3.314	11.66	12.48	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 63	ini.	-277.58	-1397	-0.0001756	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.86	Si
SLU 63	fin.	130.9	147	-0.0000796	0.0001872	0.0035	0.82		2455.37	2455.37	No	18.76	Si
SLU 77	ini.	-279.15	-1443	-0.0001767	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.81	Si
SLU 77	fin.	118.87	87	-0.0000721	0.0001872	0.0035	0.82		2455.37	2455.37	No	20.66	Si
SLU 62	ini.	-278.67	-1398	-0.0001763	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.83	Si
SLU 62	fin.	130.39	142	-0.0000793	0.0001872	0.0035	0.82		2455.37	2455.37	No	18.83	Si
SLU 83	ini.	-283.55	-1455	-0.0001797	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.68	Si
SLU 83	fin.	133.5	142	-0.0000812	0.0001872	0.0035	0.82		2455.37	2455.37	No	18.39	Si
SLU 58	ini.	-275.46	-1387	-0.0001741	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.93	Si
SLU 58	fin.	119.27	101	-0.0000723	0.0001872	0.0035	0.82		2455.37	2455.37	No	20.59	Si
SLU 78	ini.	-278.06	-1443	-0.0001759	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.85	Si
SLU 78	fin.	119.38	91	-0.0000724	0.0001872	0.0035	0.82		2455.37	2455.37	No	20.57	Si
SLU 79	ini.	-280.34	-1444	-0.0001775	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.78	Si
SLU 79	fin.	122.37	100	-0.0000743	0.0001872	0.0035	0.82		2455.37	2455.37	No	20.06	Si
SLU 59	ini.	-274.37	-1386	-0.0001734	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.97	Si
SLU 59	fin.	119.78	105	-0.0000726	0.0001872	0.0035	0.82		2455.37	2455.37	No	20.5	Si
SLU 80	ini.	-279.25	-1443	-0.0001767	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.81	Si
SLU 80	fin.	122.88	104	-0.0000746	0.0001872	0.0035	0.82		2455.37	2455.37	No	19.98	Si
SLU 84	ini.	-282.46	-1454	-0.0001789	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.71	Si
SLU 84	fin.	134.01	146	-0.0000816	0.0001872	0.0035	0.82		2455.37	2455.37	No	18.32	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-283.55	2887	0.82	0	303	6502	3438	2091	5529	No	1.92	Si
SLU 83	fin.	133.5	-317	0.82	0	303	6502	3438	2091	5529	No	17.42	Si
SLU 79	ini.	-280.34	2845	0.82	0	303	6502	3438	2091	5529	No	1.94	Si
SLU 79	fin.	122.37	-369	0.82	0	303	6502	3438	2091	5529	No	15	Si
SLU 81	ini.	-270.21	2773	0.82	0	303	6502	3438	2091	5529	No	1.99	Si
SLU 81	fin.	129.2	-309	0.82	0	303	6502	3438	2091	5529	No	17.9	Si
SLU 78	ini.	-278.06	2861	0.82	0	303	6502	3438	2091	5529	No	1.93	Si
SLU 78	fin.	119.38	-401	0.82	0	303	6502	3438	2091	5529	No	13.77	Si
SLU 74	ini.	-265.81	2752	0.82	0	303	6502	3438	2091	5529	No	2.01	Si
SLU 74	fin.	114.57	-398	0.82	0	303	6502	3438	2091	5529	No	13.88	Si
SLU 84	ini.	-282.46	2882	0.82	0	303	6502	3438	2091	5529	No	1.92	Si
SLU 84	fin.	134.01	-312	0.82	0	303	6502	3438	2091	5529	No	17.72	Si
SLU 80	ini.	-279.25	2840	0.82	0	303	6502	3438	2091	5529	No	1.95	Si
SLU 80	fin.	122.88	-363	0.82	0	303	6502	3438	2091	5529	No	15.22	Si
SLU 75	ini.	-264.72	2747	0.82	0	303	6502	3438	2091	5529	No	2.01	Si
SLU 75	fin.	115.08	-393	0.82	0	303	6502	3438	2091	5529	No	14.07	Si
SLU 82	ini.	-269.12	2768	0.82	0	303	6502	3438	2091	5529	No	2	Si
SLU 82	fin.	129.71	-303	0.82	0	303	6502	3438	2091	5529	No	18.22	Si
SLU 77	ini.	-279.15	2866	0.82	0	303	6502	3438	2091	5529	No	1.93	Si
SLU 77	fin.	118.87	-407	0.82	0	303	6502	3438	2091	5529	No	13.59	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-729.09	-2906	-0.0005059	0.0002807	0.0035	0.82		2487.45	2487.45		3.41	Si
SLV 16	fin.	390.06	576	-0.000248	0.0002807	0.0035	0.82		2482.11	2482.11		6.36	Si
SLV 13	ini.	-793.81	-3289	-0.0005607	0.0002807	0.0035	0.82		2487.45	2487.45		3.13	Si
SLV 13	fin.	514.68	1010	-0.0003376	0.0002807	0.0035	0.82		2482.11	2482.11		4.82	Si
SLV 14	ini.	-824.36	-3399	-0.0005872	0.0002807	0.0035	0.82		2487.45	2487.45		3.02	Si
SLV 14	fin.	547.13	1103	-0.000362	0.0002807	0.0035	0.82		2482.11	2482.11		4.54	Si
SLD 14	ini.	-453.75	-1975	-0.0002923	0.0002807	0.0035	0.82		2487.45	2487.45		5.48	Si
SLD 14	fin.	274.77	496	-0.0001704	0.0002807	0.0035	0.82		2482.11	2482.11		9.03	Si
SLV 4	ini.	443.05	1481	-0.0002853	0.0002807	0.0035	0.82		2482.11	2482.11		5.6	Si
SLV 4	fin.	-375.8	-936	-0.0002377	0.0002807	0.0035	0.82		2487.45	2487.45		6.62	Si
SLV 9	ini.	-500.22	-2349	-0.0003261	0.0002807	0.0035	0.82		2487.45	2487.45		4.97	Si
SLV 9	fin.	435.74	1113	-0.0002801	0.0002807	0.0035	0.82		2482.11	2482.11		5.7	Si
SLV 3	ini.	473.6	1592	-0.0003073	0.0002807	0.0035	0.82		2482.11	2482.11		5.24	Si
SLV 3	fin.	-408.24	-1029	-0.0002601	0.0002807	0.0035	0.82		2487.45	2487.45		6.09	Si
SLV 10	ini.	-519.73	-2419	-0.0003406	0.0002807	0.0035	0.82		2487.45	2487.45		4.79	Si
SLV 10	fin.	456.46	1172	-0.0002949	0.0002807	0.0035	0.82		2482.11	2482.11		5.44	Si
SLV 15	ini.	-698.54	-2796	-0.0004807	0.0002807	0.0035	0.82		2487.45	2487.45		3.56	Si
SLV 15	fin.	357.62	482	-0.0002257	0.0002807	0.0035	0.82		2482.11	2482.11		6.94	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 13	ini.	-440.64	-1927	-0.000283	0.0002807	0.0035	0.82		2487.45	2487.45		5.65	Si
SLD 13	fin.	260.84	456	-0.0001613	0.0002807	0.0035	0.82		2482.11	2482.11		9.52	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 16	ini.	-411.79	2951	0.82	0	455	6502	5156	2091	6957		2.36	Si
SLD 16	fin.	205.75	499	0.82	0	455	6502	5156	2091	6957		13.95	Si
SLV 3	ini.	473.6	-1155	0.82	0	455	6502	5156	2091	6957		6.02	Si
SLV 3	fin.	-408.24	-3071	0.82	0	455	6502	5156	2091	6957		2.27	Si
SLV 16	ini.	-729.09	4506	0.82	0	455	6502	5156	2091	6957		1.54	Si
SLV 16	fin.	390.06	1572	0.82	0	455	6502	5156	2091	6957		4.43	Si
SLV 13	ini.	-793.81	4625	0.82	0	455	6502	5156	2091	6957		1.5	Si
SLV 13	fin.	514.68	2294	0.82	0	455	6502	5156	2091	6957		3.03	Si
SLV 15	ini.	-698.54	4396	0.82	0	455	6502	5156	2091	6957		1.58	Si
SLV 15	fin.	357.62	1386	0.82	0	455	6502	5156	2091	6957		5.02	Si
SLV 14	ini.	-824.36	4735	0.82	0	455	6502	5156	2091	6957		1.47	Si
SLV 14	fin.	547.13	2480	0.82	0	455	6502	5156	2091	6957		2.8	Si
SLD 13	ini.	-440.64	3005	0.82	0	455	6502	5156	2091	6957		2.32	Si
SLD 13	fin.	260.84	818	0.82	0	455	6502	5156	2091	6957		8.5	Si
SLD 14	ini.	-453.75	3052	0.82	0	455	6502	5156	2091	6957		2.28	Si
SLD 14	fin.	274.77	898	0.82	0	455	6502	5156	2091	6957		7.75	Si
SLV 9	ini.	-500.22	2969	0.82	0	455	6502	5156	2091	6957		2.34	Si
SLV 9	fin.	435.74	1828	0.82	0	455	6502	5156	2091	6957		3.81	Si
SLV 10	ini.	-519.73	3039	0.82	0	455	6502	5156	2091	6957		2.29	Si
SLV 10	fin.	456.46	1947	0.82	0	455	6502	5156	2091	6957		3.57	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.017	SLV 14	Si
V_SLV	1.469	SLV 14	Si
PF_SLU	8.678	SLU 83	Si
V_SLU	1.915	SLU 83	Si

Trave di accoppiamento 143

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.463	-3.314	8.96	10.96	2	-5.963	-3.314	8.96	10.96	2	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 62	ini.	136.57	-1301	-0.0000136	0.0001872	0.0035	2		14344.28	14344.28	No	105.04	Si
SLU 62	fin.	293.15	-833	-0.0000293	0.0001872	0.0035	2		14344.28	14344.28	No	48.93	Si
SLU 81	ini.	145.58	-1431	-0.0000145	0.0001872	0.0035	2		14344.28	14344.28	No	98.53	Si
SLU 81	fin.	272.67	-933	-0.0000273	0.0001872	0.0035	2		14344.28	14344.28	No	52.61	Si
SLU 59	ini.	156.04	-1357	-0.0000155	0.0001872	0.0035	2		14344.28	14344.28	No	91.93	Si
SLU 59	fin.	275.14	-885	-0.0000275	0.0001872	0.0035	2		14344.28	14344.28	No	52.13	Si
SLU 58	ini.	145.99	-1366	-0.0000145	0.0001872	0.0035	2		14344.28	14344.28	No	98.25	Si
SLU 58	fin.	276.24	-898	-0.0000276	0.0001872	0.0035	2		14344.28	14344.28	No	51.93	Si
SLU 84	ini.	163.16	-1475	-0.0000162	0.0001872	0.0035	2		14344.28	14344.28	No	87.92	Si
SLU 84	fin.	285.05	-960	-0.0000285	0.0001872	0.0035	2		14344.28	14344.28	No	50.32	Si
SLU 60	ini.	129.03	-1249	-0.0000128	0.0001872	0.0035	2		14344.28	14344.28	No	111.17	Si
SLU 60	fin.	279.68	-794	-0.000028	0.0001872	0.0035	2		14344.28	14344.28	No	51.29	Si
SLU 61	ini.	139.08	-1240	-0.0000138	0.0001872	0.0035	2		14344.28	14344.28	No	103.14	Si
SLU 61	fin.	278.59	-781	-0.0000279	0.0001872	0.0035	2		14344.28	14344.28	No	51.49	Si
SLU 83	ini.	153.11	-1484	-0.0000152	0.0001872	0.0035	2		14344.28	14344.28	No	93.68	Si
SLU 83	fin.	286.14	-972	-0.0000286	0.0001872	0.0035	2		14344.28	14344.28	No	50.13	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 63	ini.	146.61	-1292	-0.0000146	0.0001872	0.0035	2		14344.28	14344.28	No	97.84	Si
SLU 63	fin.	292.05	-820	-0.0000292	0.0001872	0.0035	2		14344.28	14344.28	No	49.12	Si
SLU 82	ini.	155.63	-1423	-0.0000155	0.0001872	0.0035	2		14344.28	14344.28	No	92.17	Si
SLU 82	fin.	271.58	-921	-0.0000271	0.0001872	0.0035	2		14344.28	14344.28	No	52.82	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 67	ini.	164.83	-1065	2	0	812	3965	8384	5100	4776	No	4.49	Si
SLU 67	fin.	174.3	421	2	0	812	3965	8384	5100	4776	No	11.35	Si
SLU 72	ini.	177	-1069	2	0	812	3965	8384	5100	4776	No	4.47	Si
SLU 72	fin.	197.26	438	2	0	812	3965	8384	5100	4776	No	10.9	Si
SLU 65	ini.	168.64	-1032	2	0	812	3965	8384	5100	4776	No	4.63	Si
SLU 65	fin.	169.6	344	2	0	812	3965	8384	5100	4776	No	13.9	Si
SLU 80	ini.	172.59	-1004	2	0	812	3965	8384	5100	4776	No	4.76	Si
SLU 80	fin.	268.14	617	2	0	812	3965	8384	5100	4776	No	7.74	Si
SLU 71	ini.	166.96	-1042	2	0	812	3965	8384	5100	4776	No	4.58	Si
SLU 71	fin.	198.35	481	2	0	812	3965	8384	5100	4776	No	9.92	Si
SLU 70	ini.	172.36	-1092	2	0	812	3965	8384	5100	4776	No	4.38	Si
SLU 70	fin.	187.76	454	2	0	812	3965	8384	5100	4776	No	10.52	Si
SLU 69	ini.	162.31	-1065	2	0	812	3965	8384	5100	4776	No	4.48	Si
SLU 69	fin.	188.86	497	2	0	812	3965	8384	5100	4776	No	9.61	Si
SLU 66	ini.	154.78	-1038	2	0	812	3965	8384	5100	4776	No	4.6	Si
SLU 66	fin.	175.39	464	2	0	812	3965	8384	5100	4776	No	10.29	Si
SLU 78	ini.	167.94	-1027	2	0	812	3965	8384	5100	4776	No	4.65	Si
SLU 78	fin.	258.64	633	2	0	812	3965	8384	5100	4776	No	7.55	Si
SLU 68	ini.	176.17	-1059	2	0	812	3965	8384	5100	4776	No	4.51	Si
SLU 68	fin.	183.07	377	2	0	812	3965	8384	5100	4776	No	12.68	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	827.5	-3814	-0.0000839	0.0002807	0.0035	2		14202.07	14202.07		17.16	Si
SLV 4	fin.	-1163.33	-3206	-0.0001191	0.0002807	0.0035	2		14215.41	14215.41		12.22	Si
SLV 10	ini.	112.81	1274	-0.0000112	0.0002807	0.0035	2		14202.07	14202.07		125.9	Si
SLV 10	fin.	1055.64	1536	-0.0001078	0.0002807	0.0035	2		14202.07	14202.07		13.45	Si
SLV 14	ini.	-650.25	1829	-0.0000655	0.0002807	0.0035	2		14215.41	14215.41		21.86	Si
SLV 14	fin.	1537.2	1874	-0.0001594	0.0002807	0.0035	2		14202.07	14202.07		9.24	Si
SLV 16	ini.	-806.79	871	-0.0000816	0.0002807	0.0035	2		14215.41	14215.41		17.62	Si
SLV 16	fin.	1223.59	908	-0.0001256	0.0002807	0.0035	2		14202.07	14202.07		11.61	Si
SLV 2	ini.	984.04	-2856	-0.0001002	0.0002807	0.0035	2		14202.07	14202.07		14.43	Si
SLV 2	fin.	-849.71	-2239	-0.0000861	0.0002807	0.0035	2		14215.41	14215.41		16.73	Si
SLV 13	ini.	-603.62	1646	-0.0000607	0.0002807	0.0035	2		14215.41	14215.41		23.55	Si
SLV 13	fin.	1470.64	1734	-0.0001522	0.0002807	0.0035	2		14202.07	14202.07		9.66	Si
SLV 3	ini.	874.13	-3998	-0.0000887	0.0002807	0.0035	2		14202.07	14202.07		16.25	Si
SLV 3	fin.	-1229.89	-3346	-0.0001261	0.0002807	0.0035	2		14215.41	14215.41		11.56	Si
SLV 1	ini.	1030.66	-3040	-0.0001051	0.0002807	0.0035	2		14202.07	14202.07		13.78	Si
SLV 1	fin.	-916.28	-2379	-0.000093	0.0002807	0.0035	2		14215.41	14215.41		15.51	Si
SLV 9	ini.	142.58	1157	-0.0000142	0.0002807	0.0035	2		14202.07	14202.07		99.61	Si
SLV 9	fin.	1013.13	1447	-0.0001033	0.0002807	0.0035	2		14202.07	14202.07		14.02	Si
SLV 15	ini.	-760.16	688	-0.0000768	0.0002807	0.0035	2		14215.41	14215.41		18.7	Si
SLV 15	fin.	1157.02	768	-0.0001185	0.0002807	0.0035	2		14202.07	14202.07		12.27	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	874.13	-5714	2	0	1217	3965	12577	5100	5182		0.91	No
SLV 3	fin.	-1229.89	-4807	2	0	1217	3965	12577	5100	5182		1.08	Si
SLD 16	ini.	-282.86	1313	2	0	1217	3965	12577	5100	5182		3.95	Si
SLD 16	fin.	608.95	2759	2	0	1217	3965	12577	5100	5182		1.88	Si
SLV 15	ini.	-760.16	3677	2	0	1217	3965	12577	5100	5182		1.41	Si
SLV 15	fin.	1157.02	5720	2	0	1217	3965	12577	5100	5182		0.91	No
SLV 4	ini.	827.5	-5379	2	0	1217	3965	12577	5100	5182		0.96	No
SLV 4	fin.	-1163.33	-4586	2	0	1217	3965	12577	5100	5182		1.13	Si
SLV 1	ini.	1030.66	-5425	2	0	1217	3965	12577	5100	5182		0.96	No
SLV 1	fin.	-916.28	-5193	2	0	1217	3965	12577	5100	5182		1	No
SLV 16	ini.	-806.79	4013	2	0	1217	3965	12577	5100	5182		1.29	Si
SLV 16	fin.	1223.59	5940	2	0	1217	3965	12577	5100	5182		0.87	No
SLD 3	ini.	437.73	-2852	2	0	1217	3965	12577	5100	5182		1.82	Si
SLD 3	fin.	-439.59	-1842	2	0	1217	3965	12577	5100	5182		2.81	Si
SLV 2	ini.	984.04	-5089	2	0	1217	3965	12577	5100	5182		1.02	Si
SLV 2	fin.	-849.71	-4972	2	0	1217	3965	12577	5100	5182		1.04	Si
SLV 13	ini.	-603.62	3966	2	0	1217	3965	12577	5100	5182		1.31	Si
SLV 13	fin.	1470.64	5334	2	0	1217	3965	12577	5100	5182		0.97	No
SLV 14	ini.	-650.25	4302	2	0	1217	3965	12577	5100	5182		1.2	Si
SLV 14	fin.	1537.2	5554	2	0	1217	3965	12577	5100	5182		0.93	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	9.239	SLV 14	Si
V_SLV	0.872	SLV 16	No
PF_SLU	48.932	SLU 62	Si
V_SLU	4.375	SLU 70	Si

Trave di accoppiamento 144

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.463	-3.314	11.76	12.48	0.72	-5.963	-3.314	11.76	12.48	0.72	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	14.26	-1069	-0.0000109	0.0001872	0.0035	0.72		1897.3	1897.3	No	133.07	Si
SLU 78	fin.	-150.63	-1249	-0.0001205	0.0001872	0.0035	0.72		1901.86	1901.86	No	12.63	Si
SLU 82	ini.	8.32	-1024	-0.0000064	0.0001872	0.0035	0.72		1897.3	1897.3	No	227.94	Si
SLU 82	fin.	-143.58	-1197	-0.0001146	0.0001872	0.0035	0.72		1901.86	1901.86	No	13.25	Si
SLU 80	ini.	13.08	-1064	-0.00001	0.0001872	0.0035	0.72		1897.3	1897.3	No	145.06	Si
SLU 80	fin.	-151.03	-1248	-0.0001208	0.0001872	0.0035	0.72		1901.86	1901.86	No	12.59	Si
SLU 76	ini.	16.02	-1009	-0.0000123	0.0001872	0.0035	0.72		1897.3	1897.3	No	118.43	Si
SLU 76	fin.	-144.63	-1191	-0.0001154	0.0001872	0.0035	0.72		1901.86	1901.86	No	13.15	Si
SLU 59	ini.	4.38	-1010	-0.0000034	0.0001872	0.0035	0.72		1897.3	1897.3	No	432.76	Si
SLU 59	fin.	-143.29	-1182	-0.0001143	0.0001872	0.0035	0.72		1901.86	1901.86	No	13.27	Si
SLU 79	ini.	9.61	-1070	-0.0000074	0.0001872	0.0035	0.72		1897.3	1897.3	No	197.48	Si
SLU 79	fin.	-150.17	-1246	-0.0001201	0.0001872	0.0035	0.72		1901.86	1901.86	No	12.66	Si
SLU 77	ini.	10.79	-1075	-0.0000083	0.0001872	0.0035	0.72		1897.3	1897.3	No	175.91	Si
SLU 77	fin.	-149.78	-1247	-0.0001198	0.0001872	0.0035	0.72		1901.86	1901.86	No	12.7	Si
SLU 75	ini.	14.88	-1018	-0.0000114	0.0001872	0.0035	0.72		1897.3	1897.3	No	127.47	Si
SLU 75	fin.	-143.66	-1192	-0.0001146	0.0001872	0.0035	0.72		1901.86	1901.86	No	13.24	Si
SLU 83	ini.	4.22	-1081	-0.0000032	0.0001872	0.0035	0.72		1897.3	1897.3	No	449.08	Si
SLU 83	fin.	-149.69	-1252	-0.0001197	0.0001872	0.0035	0.72		1901.86	1901.86	No	12.71	Si
SLU 84	ini.	7.7	-1075	-0.0000059	0.0001872	0.0035	0.72		1897.3	1897.3	No	246.51	Si
SLU 84	fin.	-150.55	-1254	-0.0001204	0.0001872	0.0035	0.72		1901.86	1901.86	No	12.63	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	4.22	18	0.72	0	292	3965	3018	1836	4257	No	241.35	Si
SLU 83	fin.	-149.69	-1761	0.72	0	292	3965	3018	1836	4257	No	2.42	Si
SLU 82	ini.	8.32	6	0.72	0	292	3965	3018	1836	4257	No	684.61	Si
SLU 82	fin.	-143.58	-1699	0.72	0	292	3965	3018	1836	4257	No	2.51	Si
SLU 75	ini.	14.88	0	0.72	0	292	3965	3018	1836	4257	No	8851.78	Si
SLU 75	fin.	-143.66	-1746	0.72	0	292	3965	3018	1836	4257	No	2.44	Si
SLU 74	ini.	11.41	16	0.72	0	292	3965	3018	1836	4257	No	268.65	Si
SLU 74	fin.	-142.81	-1739	0.72	0	292	3965	3018	1836	4257	No	2.45	Si
SLU 84	ini.	7.7	1	0.72	0	292	3965	3018	1836	4257	No	3245.96	Si
SLU 84	fin.	-150.55	-1769	0.72	0	292	3965	3018	1836	4257	No	2.41	Si
SLU 78	ini.	14.26	-5	0.72	0	292	3965	3018	1836	4257	No	790.15	Si
SLU 78	fin.	-150.63	-1816	0.72	0	292	3965	3018	1836	4257	No	2.34	Si
SLU 77	ini.	10.79	11	0.72	0	292	3965	3018	1836	4257	No	389.15	Si
SLU 77	fin.	-149.78	-1808	0.72	0	292	3965	3018	1836	4257	No	2.35	Si
SLU 79	ini.	9.61	2	0.72	0	292	3965	3018	1836	4257	No	1704.18	Si
SLU 79	fin.	-150.17	-1778	0.72	0	292	3965	3018	1836	4257	No	2.39	Si
SLU 80	ini.	13.08	-14	0.72	0	292	3965	3018	1836	4257	No	307.84	Si
SLU 80	fin.	-151.03	-1785	0.72	0	292	3965	3018	1836	4257	No	2.38	Si
SLU 76	ini.	16.02	-20	0.72	0	292	3965	3018	1836	4257	No	214.93	Si
SLU 76	fin.	-144.63	-1720	0.72	0	292	3965	3018	1836	4257	No	2.47	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	404.72	1062	-0.0003449	0.0002807	0.0035	0.72		1912.43	1912.43		4.73	Si
SLV 1	fin.	-23	513	-0.0000176	0.0002807	0.0035	0.72		1917.1	1917.1		83.37	Si
SLV 10	ini.	-106.04	-1638	-0.0000828	0.0002807	0.0035	0.72		1917.1	1917.1		18.08	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 10	fin.	-221.91	-1894	-0.0001784	0.0002807	0.0035	0.72		1917.1	1917.1		8.64	Si
SLV 15	ini.	-356.73	-2322	-0.0002984	0.0002807	0.0035	0.72		1917.1	1917.1		5.37	Si
SLV 15	fin.	-163.16	-2016	-0.0001292	0.0002807	0.0035	0.72		1917.1	1917.1		11.75	Si
SLV 16	ini.	-378.27	-2390	-0.0003187	0.0002807	0.0035	0.72		1917.1	1917.1		5.07	Si
SLV 16	fin.	-168.54	-2079	-0.0001336	0.0002807	0.0035	0.72		1917.1	1917.1		11.37	Si
SLV 2	ini.	383.18	994	-0.0003242	0.0002807	0.0035	0.72		1912.43	1912.43		4.99	Si
SLV 2	fin.	-28.37	450	-0.0000218	0.0002807	0.0035	0.72		1917.1	1917.1		67.56	Si
SLV 9	ini.	-92.28	-1595	-0.0000718	0.0002807	0.0035	0.72		1917.1	1917.1		20.78	Si
SLV 9	fin.	-218.47	-1854	-0.0001754	0.0002807	0.0035	0.72		1917.1	1917.1		8.77	Si
SLV 4	ini.	382.17	1239	-0.0003232	0.0002807	0.0035	0.72		1912.43	1912.43		5	Si
SLV 4	fin.	28.54	842	-0.0000219	0.0002807	0.0035	0.72		1912.43	1912.43		67.01	Si
SLV 13	ini.	-355.72	-2567	-0.0002975	0.0002807	0.0035	0.72		1917.1	1917.1		5.39	Si
SLV 13	fin.	-220.08	-2408	-0.0001768	0.0002807	0.0035	0.72		1917.1	1917.1		8.71	Si
SLV 3	ini.	403.71	1306	-0.0003439	0.0002807	0.0035	0.72		1912.43	1912.43		4.74	Si
SLV 3	fin.	33.92	905	-0.0000261	0.0002807	0.0035	0.72		1912.43	1912.43		56.38	Si
SLV 14	ini.	-377.26	-2634	-0.0003177	0.0002807	0.0035	0.72		1917.1	1917.1		5.08	Si
SLV 14	fin.	-225.46	-2471	-0.0001814	0.0002807	0.0035	0.72		1917.1	1917.1		8.5	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	403.71	-662	0.72	0	438	3965	4528	1836	4403		6.65	Si
SLV 3	fin.	33.92	-1472	0.72	0	438	3965	4528	1836	4403		2.99	Si
SLD 2	ini.	171.64	-433	0.72	0	438	3965	4528	1836	4403		10.17	Si
SLD 2	fin.	-67.38	-1249	0.72	0	438	3965	4528	1836	4403		3.53	Si
SLV 1	ini.	404.72	-1021	0.72	0	438	3965	4528	1836	4403		4.31	Si
SLV 1	fin.	-23	-1482	0.72	0	438	3965	4528	1836	4403		2.97	Si
SLV 2	ini.	383.18	-1004	0.72	0	438	3965	4528	1836	4403		4.39	Si
SLV 2	fin.	-28.37	-1367	0.72	0	438	3965	4528	1836	4403		3.22	Si
SLV 7	ini.	132.49	342	0.72	0	438	3965	4528	1836	4403		12.89	Si
SLV 7	fin.	30.37	-1256	0.72	0	438	3965	4528	1836	4403		3.51	Si
SLV 5	ini.	135.85	-854	0.72	0	438	3965	4528	1836	4403		5.16	Si
SLV 5	fin.	-159.35	-1292	0.72	0	438	3965	4528	1836	4403		3.41	Si
SLV 4	ini.	382.17	-645	0.72	0	438	3965	4528	1836	4403		6.83	Si
SLV 4	fin.	28.54	-1356	0.72	0	438	3965	4528	1836	4403		3.25	Si
SLD 3	ini.	180.34	-282	0.72	0	438	3965	4528	1836	4403		15.6	Si
SLD 3	fin.	-39.98	-1293	0.72	0	438	3965	4528	1836	4403		3.41	Si
SLD 4	ini.	171.09	-275	0.72	0	438	3965	4528	1836	4403		16.02	Si
SLD 4	fin.	-42.29	-1244	0.72	0	438	3965	4528	1836	4403		3.54	Si
SLD 1	ini.	180.89	-440	0.72	0	438	3965	4528	1836	4403		10	Si
SLD 1	fin.	-65.07	-1298	0.72	0	438	3965	4528	1836	4403		3.39	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.725	SLV 1	Si
V_SLV	2.97	SLV 1	Si
PF_SLU	12.593	SLU 80	Si
V_SLU	2.345	SLU 78	Si

Trave di accoppiamento 145

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.283	-3.314	8.96	9.86	0.9	-3.183	-3.314	8.96	9.86	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-221.71	-245	-0.0001133	0.0001872	0.0035	0.9		2964.67	2964.67	No	13.37	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	fin.	448.56	-1696	-0.0002437	0.0001872	0.0035	0.9		2959	2959	No	6.6	Si
SLU 83	ini.	-236.87	-221	-0.0001214	0.0001872	0.0035	0.9		2964.67	2964.67	No	12.52	Si
SLU 83	fin.	459.98	-1725	-0.0002507	0.0001872	0.0035	0.9		2959	2959	No	6.43	Si
SLU 78	ini.	-222.05	-257	-0.0001135	0.0001872	0.0035	0.9		2964.67	2964.67	No	13.35	Si
SLU 78	fin.	454.85	-1723	-0.0002475	0.0001872	0.0035	0.9		2959	2959	No	6.51	Si
SLU 81	ini.	-234.1	-206	-0.0001199	0.0001872	0.0035	0.9		2964.67	2964.67	No	12.66	Si
SLU 81	fin.	448.03	-1677	-0.0002433	0.0001872	0.0035	0.9		2959	2959	No	6.6	Si
SLU 77	ini.	-214.04	-279	-0.0001092	0.0001872	0.0035	0.9		2964.67	2964.67	No	13.85	Si
SLU 77	fin.	452.52	-1724	-0.0002461	0.0001872	0.0035	0.9		2959	2959	No	6.54	Si
SLU 79	ini.	-213.7	-268	-0.000109	0.0001872	0.0035	0.9		2964.67	2964.67	No	13.87	Si
SLU 79	fin.	446.23	-1696	-0.0002422	0.0001872	0.0035	0.9		2959	2959	No	6.63	Si
SLU 82	ini.	-242.11	-183	-0.0001243	0.0001872	0.0035	0.9		2964.67	2964.67	No	12.24	Si
SLU 82	fin.	450.36	-1676	-0.0002448	0.0001872	0.0035	0.9		2959	2959	No	6.57	Si
SLU 75	ini.	-219.29	-242	-0.000112	0.0001872	0.0035	0.9		2964.67	2964.67	No	13.52	Si
SLU 75	fin.	442.9	-1675	-0.0002402	0.0001872	0.0035	0.9		2959	2959	No	6.68	Si
SLU 84	ini.	-244.88	-198	-0.0001258	0.0001872	0.0035	0.9		2964.67	2964.67	No	12.11	Si
SLU 84	fin.	462.31	-1724	-0.0002521	0.0001872	0.0035	0.9		2959	2959	No	6.4	Si
SLU 74	ini.	-211.28	-264	-0.0001077	0.0001872	0.0035	0.9		2964.67	2964.67	No	14.03	Si
SLU 74	fin.	440.57	-1675	-0.0002388	0.0001872	0.0035	0.9		2959	2959	No	6.72	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-244.88	990	0.9	0	365	7137	3773	2295	6068	No	6.13	Si
SLU 84	fin.	462.31	2520	0.9	0	365	7137	3773	2295	6068	No	2.41	Si
SLU 79	ini.	-213.7	847	0.9	0	365	7137	3773	2295	6068	No	7.16	Si
SLU 79	fin.	446.23	2471	0.9	0	365	7137	3773	2295	6068	No	2.46	Si
SLU 83	ini.	-236.87	954	0.9	0	365	7137	3773	2295	6068	No	6.36	Si
SLU 83	fin.	459.98	2514	0.9	0	365	7137	3773	2295	6068	No	2.41	Si
SLU 82	ini.	-242.11	988	0.9	0	365	7137	3773	2295	6068	No	6.14	Si
SLU 82	fin.	450.36	2443	0.9	0	365	7137	3773	2295	6068	No	2.48	Si
SLU 77	ini.	-214.04	842	0.9	0	365	7137	3773	2295	6068	No	7.2	Si
SLU 77	fin.	452.52	2514	0.9	0	365	7137	3773	2295	6068	No	2.41	Si
SLU 78	ini.	-222.05	878	0.9	0	365	7137	3773	2295	6068	No	6.91	Si
SLU 78	fin.	454.85	2519	0.9	0	365	7137	3773	2295	6068	No	2.41	Si
SLU 81	ini.	-234.1	953	0.9	0	365	7137	3773	2295	6068	No	6.37	Si
SLU 81	fin.	448.03	2438	0.9	0	365	7137	3773	2295	6068	No	2.49	Si
SLU 75	ini.	-219.29	876	0.9	0	365	7137	3773	2295	6068	No	6.92	Si
SLU 75	fin.	442.9	2443	0.9	0	365	7137	3773	2295	6068	No	2.48	Si
SLU 74	ini.	-211.28	841	0.9	0	365	7137	3773	2295	6068	No	7.22	Si
SLU 74	fin.	440.57	2438	0.9	0	365	7137	3773	2295	6068	No	2.49	Si
SLU 80	ini.	-221.71	883	0.9	0	365	7137	3773	2295	6068	No	6.87	Si
SLU 80	fin.	448.56	2476	0.9	0	365	7137	3773	2295	6068	No	2.45	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 9	ini.	-792.31	1487	-0.0004475	0.0002807	0.0035	0.9		2995.37	2995.37		3.78	Si
SLV 9	fin.	549.43	-1366	-0.0002946	0.0002807	0.0035	0.9		2989.59	2989.59		5.44	Si
SLV 16	ini.	-773.04	897	-0.0004347	0.0002807	0.0035	0.9		2995.37	2995.37		3.87	Si
SLV 16	fin.	799.85	-2433	-0.0004535	0.0002807	0.0035	0.9		2989.59	2989.59		3.74	Si
SLV 15	ini.	-696.63	700	-0.000385	0.0002807	0.0035	0.9		2995.37	2995.37		4.3	Si
SLV 15	fin.	767.78	-2398	-0.0004321	0.0002807	0.0035	0.9		2989.59	2989.59		3.89	Si
SLV 13	ini.	-976.5	1505	-0.0005752	0.0002807	0.0035	0.9		2995.37	2995.37		3.07	Si
SLV 13	fin.	836.01	-2329	-0.000478	0.0002807	0.0035	0.9		2989.59	2989.59		3.58	Si
SLV 3	ini.	801.97	-2134	-0.0004549	0.0002807	0.0035	0.9		2989.59	2989.59		3.73	Si
SLV 3	fin.	-295	142	-0.0001506	0.0002807	0.0035	0.9		2995.37	2995.37		10.15	Si
SLV 7	ini.	590.17	-2046	-0.0003192	0.0002807	0.0035	0.9		2989.59	2989.59		5.07	Si
SLV 7	fin.	3.16	-833	-0.0000015	0.0002807	0.0035	0.9		2989.59	2989.59		945.73	Si
SLV 4	ini.	725.57	-1937	-0.0004045	0.0002807	0.0035	0.9		2989.59	2989.59		4.12	Si
SLV 4	fin.	-262.93	107	-0.0001335	0.0002807	0.0035	0.9		2995.37	2995.37		11.39	Si
SLV 8	ini.	541.38	-1920	-0.0002898	0.0002807	0.0035	0.9		2989.59	2989.59		5.52	Si
SLV 8	fin.	23.64	-856	-0.0000116	0.0002807	0.0035	0.9		2989.59	2989.59		126.44	Si
SLV 14	ini.	-1052.9	1702	-0.000631	0.0002807	0.0035	0.9		2995.37	2995.37		2.84	Si
SLV 14	fin.	868.08	-2364	-0.0005	0.0002807	0.0035	0.9		2989.59	2989.59		3.44	Si
SLV 10	ini.	-841.1	1613	-0.0004804	0.0002807	0.0035	0.9		2995.37	2995.37		3.56	Si
SLV 10	fin.	569.91	-1388	-0.0003069	0.0002807	0.0035	0.9		2989.59	2989.59		5.25	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 14	ini.	-524.15	2037	0.9	0	548	7137	5660	2295	7684		3.77	Si
SLD 14	fin.	536.02	2898	0.9	0	548	7137	5660	2295	7684		2.65	Si
SLV 3	ini.	801.97	-3059	0.9	0	548	7137	5660	2295	7684		2.51	Si
SLV 3	fin.	-295	-1417	0.9	0	548	7137	5660	2295	7684		5.42	Si
SLV 9	ini.	-792.31	3257	0.9	0	548	7137	5660	2295	7684		2.36	Si
SLV 9	fin.	549.43	2679	0.9	0	548	7137	5660	2295	7684		2.87	Si
SLV 16	ini.	-773.04	2859	0.9	0	548	7137	5660	2295	7684		2.69	Si
SLV 16	fin.	799.85	4463	0.9	0	548	7137	5660	2295	7684		1.72	Si
SLD 13	ini.	-491.35	1901	0.9	0	548	7137	5660	2295	7684		4.04	Si
SLD 13	fin.	522.25	2831	0.9	0	548	7137	5660	2295	7684		2.71	Si
SLV 14	ini.	-1052.9	4067	0.9	0	548	7137	5660	2295	7684		1.89	Si
SLV 14	fin.	868.08	4623	0.9	0	548	7137	5660	2295	7684		1.66	Si
SLV 13	ini.	-976.5	3751	0.9	0	548	7137	5660	2295	7684		2.05	Si
SLV 13	fin.	836.01	4469	0.9	0	548	7137	5660	2295	7684		1.72	Si
SLV 15	ini.	-696.63	2543	0.9	0	548	7137	5660	2295	7684		3.02	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	fin.	767.78	4309	0.9	0	548	7137	5660	2295	7684		1.78	Si
SLD 16	ini.	-400.92	1505	0.9	0	548	7137	5660	2295	7684		5.11	Si
SLD 16	fin.	505.97	2827	0.9	0	548	7137	5660	2295	7684		2.72	Si
SLV 10	ini.	-841.1	3459	0.9	0	548	7137	5660	2295	7684		2.22	Si
SLV 10	fin.	569.91	2777	0.9	0	548	7137	5660	2295	7684		2.77	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.845	SLV 14	Si
V_SLV	1.662	SLV 14	Si
PF_SLU	6.4	SLU 84	Si
V_SLU	2.408	SLU 84	Si

Trave di accoppiamento 146

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.283	-3.314	11.66	12.48	0.82	-3.183	-3.314	11.66	12.48	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-472.36	-1206	-0.0003196	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.21	Si
SLU 82	fin.	97.85	70	-0.000059	0.0001872	0.0035	0.82		2455.37	2455.37	No	25.09	Si
SLU 75	ini.	-458.34	-1200	-0.0003086	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.37	Si
SLU 75	fin.	80.4	1	-0.0000483	0.0001872	0.0035	0.82		2455.37	2455.37	No	30.54	Si
SLU 83	ini.	-481.32	-1248	-0.0003267	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.11	Si
SLU 83	fin.	91.28	32	-0.000055	0.0001872	0.0035	0.82		2455.37	2455.37	No	26.9	Si
SLU 77	ini.	-467.3	-1242	-0.0003156	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.27	Si
SLU 77	fin.	73.83	-37	-0.0000443	0.0001872	0.0035	0.82		2455.37	2455.37	No	33.25	Si
SLU 81	ini.	-468.99	-1206	-0.0003169	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.25	Si
SLU 81	fin.	92.69	50	-0.0000558	0.0001872	0.0035	0.82		2455.37	2455.37	No	26.49	Si
SLU 74	ini.	-454.97	-1200	-0.0003059	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.41	Si
SLU 74	fin.	75.25	-19	-0.0000451	0.0001872	0.0035	0.82		2455.37	2455.37	No	32.63	Si
SLU 79	ini.	-461.19	-1220	-0.0003108	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.34	Si
SLU 79	fin.	75.51	-24	-0.0000453	0.0001872	0.0035	0.82		2455.37	2455.37	No	32.52	Si
SLU 84	ini.	-484.69	-1248	-0.0003294	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.08	Si
SLU 84	fin.	96.43	52	-0.0000581	0.0001872	0.0035	0.82		2455.37	2455.37	No	25.46	Si
SLU 78	ini.	-470.67	-1242	-0.0003183	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.23	Si
SLU 78	fin.	78.99	-17	-0.0000474	0.0001872	0.0035	0.82		2455.37	2455.37	No	31.08	Si
SLU 80	ini.	-464.56	-1220	-0.0003134	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.3	Si
SLU 80	fin.	80.67	-4	-0.0000484	0.0001872	0.0035	0.82		2455.37	2455.37	No	30.44	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-461.19	2384	0.82	0	303	6502	3438	2091	5529	No	2.32	Si
SLU 79	fin.	75.51	-402	0.82	0	303	6502	3438	2091	5529	No	13.75	Si
SLU 83	ini.	-481.32	2475	0.82	0	303	6502	3438	2091	5529	No	2.23	Si
SLU 83	fin.	91.28	-338	0.82	0	303	6502	3438	2091	5529	No	16.38	Si
SLU 84	ini.	-484.69	2486	0.82	0	303	6502	3438	2091	5529	No	2.22	Si
SLU 84	fin.	96.43	-310	0.82	0	303	6502	3438	2091	5529	No	17.86	Si
SLU 77	ini.	-467.3	2416	0.82	0	303	6502	3438	2091	5529	No	2.29	Si
SLU 77	fin.	73.83	-425	0.82	0	303	6502	3438	2091	5529	No	13.01	Si
SLU 81	ini.	-468.99	2415	0.82	0	303	6502	3438	2091	5529	No	2.29	Si
SLU 81	fin.	92.69	-311	0.82	0	303	6502	3438	2091	5529	No	17.79	Si
SLU 75	ini.	-458.34	2368	0.82	0	303	6502	3438	2091	5529	No	2.33	Si
SLU 75	fin.	80.4	-370	0.82	0	303	6502	3438	2091	5529	No	14.94	Si
SLU 80	ini.	-464.56	2395	0.82	0	303	6502	3438	2091	5529	No	2.31	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	fin.	80.67	-374	0.82	0	303	6502	3438	2091	5529	No	14.78	Si
SLU 82	ini.	-472.36	2426	0.82	0	303	6502	3438	2091	5529	No	2.28	Si
SLU 82	fin.	97.85	-283	0.82	0	303	6502	3438	2091	5529	No	19.56	Si
SLU 74	ini.	-454.97	2357	0.82	0	303	6502	3438	2091	5529	No	2.35	Si
SLU 74	fin.	75.25	-398	0.82	0	303	6502	3438	2091	5529	No	13.88	Si
SLU 78	ini.	-470.67	2427	0.82	0	303	6502	3438	2091	5529	No	2.28	Si
SLU 78	fin.	78.99	-397	0.82	0	303	6502	3438	2091	5529	No	13.93	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-725.67	-1531	-0.0005031	0.0002807	0.0035	0.82		2487.45	2487.45		3.43	Si
SLV 16	fin.	379.2	1103	-0.0002405	0.0002807	0.0035	0.82		2482.11	2482.11		6.55	Si
SLV 14	ini.	-914.74	-1643	-0.0006677	0.0002807	0.0035	0.82		2487.45	2487.45		2.72	Si
SLV 14	fin.	607.19	1957	-0.0004084	0.0002807	0.0035	0.82		2482.11	2482.11		4.09	Si
SLV 3	ini.	337.81	114	-0.0002123	0.0002807	0.0035	0.82		2482.11	2482.11		7.35	Si
SLV 3	fin.	-521.52	-2023	-0.0003419	0.0002807	0.0035	0.82		2487.45	2487.45		4.77	Si
SLV 13	ini.	-839.02	-1563	-0.0006	0.0002807	0.0035	0.82		2487.45	2487.45		2.96	Si
SLV 13	fin.	530.99	1680	-0.0003498	0.0002807	0.0035	0.82		2482.11	2482.11		4.67	Si
SLD 13	ini.	-525.58	-1108	-0.0003449	0.0002807	0.0035	0.82		2487.45	2487.45		4.73	Si
SLD 13	fin.	253.3	706	-0.0001564	0.0002807	0.0035	0.82		2482.11	2482.11		9.8	Si
SLD 14	ini.	-558.08	-1142	-0.0003695	0.0002807	0.0035	0.82		2487.45	2487.45		4.46	Si
SLD 14	fin.	286.01	825	-0.0001778	0.0002807	0.0035	0.82		2482.11	2482.11		8.68	Si
SLV 15	ini.	-649.95	-1450	-0.0004413	0.0002807	0.0035	0.82		2487.45	2487.45		3.83	Si
SLV 15	fin.	303.01	826	-0.000189	0.0002807	0.0035	0.82		2482.11	2482.11		8.19	Si
SLV 10	ini.	-775.92	-1213	-0.0005454	0.0002807	0.0035	0.82		2487.45	2487.45		3.21	Si
SLV 10	fin.	570.81	1907	-0.0003801	0.0002807	0.0035	0.82		2482.11	2482.11		4.35	Si
SLD 10	ini.	-501.28	-959	-0.0003269	0.0002807	0.0035	0.82		2487.45	2487.45		4.96	Si
SLD 10	fin.	273.75	816	-0.0001697	0.0002807	0.0035	0.82		2482.11	2482.11		9.07	Si
SLV 9	ini.	-727.56	-1162	-0.0005047	0.0002807	0.0035	0.82		2487.45	2487.45		3.42	Si
SLV 9	fin.	522.15	1730	-0.0003432	0.0002807	0.0035	0.82		2482.11	2482.11		4.75	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 10	ini.	-775.92	2566	0.82	0	455	6502	5156	2091	6957		2.71	Si
SLV 10	fin.	570.81	2407	0.82	0	455	6502	5156	2091	6957		2.89	Si
SLV 15	ini.	-649.95	3198	0.82	0	455	6502	5156	2091	6957		2.18	Si
SLV 15	fin.	303.01	970	0.82	0	455	6502	5156	2091	6957		7.17	Si
SLV 16	ini.	-725.67	3472	0.82	0	455	6502	5156	2091	6957		2	Si
SLV 16	fin.	379.2	1350	0.82	0	455	6502	5156	2091	6957		5.15	Si
SLV 8	ini.	150.63	646	0.82	0	455	6502	5156	2091	6957		10.77	Si
SLV 8	fin.	-436.49	-2757	0.82	0	455	6502	5156	2091	6957		2.52	Si
SLV 7	ini.	198.99	471	0.82	0	455	6502	5156	2091	6957		14.77	Si
SLV 7	fin.	-485.15	-3000	0.82	0	455	6502	5156	2091	6957		2.32	Si
SLV 13	ini.	-839.02	3426	0.82	0	455	6502	5156	2091	6957		2.03	Si
SLV 13	fin.	530.99	2151	0.82	0	455	6502	5156	2091	6957		3.23	Si
SLV 14	ini.	-914.74	3701	0.82	0	455	6502	5156	2091	6957		1.88	Si
SLV 14	fin.	607.19	2531	0.82	0	455	6502	5156	2091	6957		2.75	Si
SLD 14	ini.	-558.08	2456	0.82	0	455	6502	5156	2091	6957		2.83	Si
SLD 14	fin.	286.01	922	0.82	0	455	6502	5156	2091	6957		7.54	Si
SLV 3	ini.	337.81	-664	0.82	0	455	6502	5156	2091	6957		10.48	Si
SLV 3	fin.	-521.52	-3124	0.82	0	455	6502	5156	2091	6957		2.23	Si
SLV 4	ini.	262.09	-389	0.82	0	455	6502	5156	2091	6957		17.86	Si
SLV 4	fin.	-445.33	-2744	0.82	0	455	6502	5156	2091	6957		2.54	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.719	SLV 14	Si
V_SLV	1.88	SLV 14	Si
PF_SLU	5.076	SLU 84	Si
V_SLU	2.224	SLU 84	Si

Trave di accoppiamento 147

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.063	5.826	8.96	9.86	0.9	-2.963	5.826	8.96	9.86	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 44	ini.	215.28	-972	-0.00011	0.0001872	0.0035	0.9		2959	2959	No	13.74	Si
SLU 44	fin.	-12.45	-662	-0.0000061	0.0001872	0.0035	0.9		2964.67	2964.67	No	238.17	Si
SLU 46	ini.	212.59	-980	-0.0001086	0.0001872	0.0035	0.9		2959	2959	No	13.92	Si
SLU 46	fin.	7.48	-721	-0.0000037	0.0001872	0.0035	0.9		2959	2959	No	395.48	Si
SLU 49	ini.	214.18	-1000	-0.0001095	0.0001872	0.0035	0.9		2959	2959	No	13.82	Si
SLU 49	fin.	18.98	-764	-0.0000093	0.0001872	0.0035	0.9		2959	2959	No	155.94	Si
SLU 50	ini.	213.07	-987	-0.0001089	0.0001872	0.0035	0.9		2959	2959	No	13.89	Si
SLU 50	fin.	14.35	-745	-0.000007	0.0001872	0.0035	0.9		2959	2959	No	206.22	Si
SLU 68	ini.	202.63	-963	-0.0001033	0.0001872	0.0035	0.9		2959	2959	No	14.6	Si
SLU 68	fin.	50.03	-836	-0.0000247	0.0001872	0.0035	0.9		2959	2959	No	59.15	Si
SLU 51	ini.	216.3	-1001	-0.0001106	0.0001872	0.0035	0.9		2959	2959	No	13.68	Si
SLU 51	fin.	12.06	-746	-0.0000059	0.0001872	0.0035	0.9		2959	2959	No	245.29	Si
SLU 45	ini.	209.35	-966	-0.0001069	0.0001872	0.0035	0.9		2959	2959	No	14.13	Si
SLU 45	fin.	9.77	-719	-0.0000048	0.0001872	0.0035	0.9		2959	2959	No	302.94	Si
SLU 43	ini.	209.88	-948	-0.0001072	0.0001872	0.0035	0.9		2959	2959	No	14.1	Si
SLU 43	fin.	-8.64	-660	-0.0000042	0.0001872	0.0035	0.9		2964.67	2964.67	No	343.21	Si
SLU 48	ini.	210.94	-985	-0.0001077	0.0001872	0.0035	0.9		2959	2959	No	14.03	Si
SLU 48	fin.	21.26	-762	-0.0000104	0.0001872	0.0035	0.9		2959	2959	No	139.17	Si
SLU 47	ini.	216.87	-992	-0.0001109	0.0001872	0.0035	0.9		2959	2959	No	13.64	Si
SLU 47	fin.	-0.95	-705	-0.0000005	0.0001872	0.0035	0.9		2964.67	2964.67	No	3107.75	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 70	ini.	199.93	-1051	0.9	0	365	7137	3773	2295	6068	No	5.77	Si
SLU 70	fin.	69.96	249	0.9	0	365	7137	3773	2295	6068	No	24.32	Si
SLU 48	ini.	210.94	-1155	0.9	0	365	7137	3773	2295	6068	No	5.26	Si
SLU 48	fin.	21.26	86	0.9	0	365	7137	3773	2295	6068	No	70.67	Si
SLU 49	ini.	214.18	-1179	0.9	0	365	7137	3773	2295	6068	No	5.15	Si
SLU 49	fin.	18.98	80	0.9	0	365	7137	3773	2295	6068	No	75.95	Si
SLU 47	ini.	216.87	-1165	0.9	0	365	7137	3773	2295	6068	No	5.21	Si
SLU 47	fin.	-0.95	-13	0.9	0	365	7137	3773	2295	6068	No	481.8	Si
SLU 51	ini.	216.3	-1175	0.9	0	365	7137	3773	2295	6068	No	5.17	Si
SLU 51	fin.	12.06	46	0.9	0	365	7137	3773	2295	6068	No	133.22	Si
SLU 43	ini.	209.88	-1097	0.9	0	365	7137	3773	2295	6068	No	5.53	Si
SLU 43	fin.	-8.64	-57	0.9	0	365	7137	3773	2295	6068	No	106.85	Si
SLU 45	ini.	209.35	-1128	0.9	0	365	7137	3773	2295	6068	No	5.38	Si
SLU 45	fin.	9.77	32	0.9	0	365	7137	3773	2295	6068	No	191.36	Si
SLU 44	ini.	215.28	-1138	0.9	0	365	7137	3773	2295	6068	No	5.33	Si
SLU 44	fin.	-12.45	-67	0.9	0	365	7137	3773	2295	6068	No	90.9	Si
SLU 50	ini.	213.07	-1150	0.9	0	365	7137	3773	2295	6068	No	5.28	Si
SLU 50	fin.	14.35	52	0.9	0	365	7137	3773	2295	6068	No	117.77	Si
SLU 46	ini.	212.59	-1153	0.9	0	365	7137	3773	2295	6068	No	5.26	Si
SLU 46	fin.	7.48	26	0.9	0	365	7137	3773	2295	6068	No	235.81	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 5	ini.	524.43	-2275	-0.0002798	0.0002807	0.0035	0.9		2989.59	2989.59		5.7	Si
SLV 5	fin.	-304.29	-559	-0.0001556	0.0002807	0.0035	0.9		2995.37	2995.37		9.84	Si
SLV 1	ini.	577.65	-2213	-0.0003116	0.0002807	0.0035	0.9		2989.59	2989.59		5.18	Si
SLV 1	fin.	-469.77	-174	-0.0002474	0.0002807	0.0035	0.9		2995.37	2995.37		6.38	Si
SLV 15	ini.	-343.02	1065	-0.0001766	0.0002807	0.0035	0.9		2995.37	2995.37		8.73	Si
SLV 15	fin.	586.58	-1028	-0.000317	0.0002807	0.0035	0.9		2989.59	2989.59		5.1	Si
SLV 14	ini.	-111.93	53	-0.0000555	0.0002807	0.0035	0.9		2995.37	2995.37		26.76	Si
SLV 14	fin.	411.68	-1101	-0.0002149	0.0002807	0.0035	0.9		2989.59	2989.59		7.26	Si
SLV 2	ini.	638.64	-2457	-0.0003491	0.0002807	0.0035	0.9		2989.59	2989.59		4.68	Si
SLV 2	fin.	-515.44	-192	-0.0002739	0.0002807	0.0035	0.9		2995.37	2995.37		5.81	Si
SLV 4	ini.	468.54	-1689	-0.0002472	0.0002807	0.0035	0.9		2989.59	2989.59		6.38	Si
SLV 4	fin.	-386.22	-138	-0.0002003	0.0002807	0.0035	0.9		2995.37	2995.37		7.76	Si
SLV 6	ini.	563.38	-2430	-0.000303	0.0002807	0.0035	0.9		2989.59	2989.59		5.31	Si
SLV 6	fin.	-333.46	-570	-0.0001713	0.0002807	0.0035	0.9		2995.37	2995.37		8.98	Si
SLV 16	ini.	-282.03	821	-0.0001437	0.0002807	0.0035	0.9		2995.37	2995.37		10.62	Si
SLV 16	fin.	540.9	-1047	-0.0002895	0.0002807	0.0035	0.9		2989.59	2989.59		5.53	Si
SLV 3	ini.	407.55	-1445	-0.0002126	0.0002807	0.0035	0.9		2989.59	2989.59		7.34	Si
SLV 3	fin.	-340.55	-120	-0.0001752	0.0002807	0.0035	0.9		2995.37	2995.37		8.8	Si
SLV 13	ini.	-172.92	297	-0.0000866	0.0002807	0.0035	0.9		2995.37	2995.37		17.32	Si
SLV 13	fin.	457.35	-1082	-0.0002408	0.0002807	0.0035	0.9		2989.59	2989.59		6.54	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 6	ini.	563.38	-3627	0.9	0	548	7137	5659	2295	7684		2.12	Si
SLV 6	fin.	-333.46	-1008	0.9	0	548	7137	5659	2295	7684		7.62	Si
SLV 15	ini.	-343.02	1924	0.9	0	548	7137	5659	2295	7684		3.99	Si
SLV 15	fin.	586.58	2192	0.9	0	548	7137	5659	2295	7684		3.51	Si
SLV 9	ini.	299.25	-2313	0.9	0	548	7137	5659	2295	7684		3.32	Si
SLV 9	fin.	-26.16	214	0.9	0	548	7137	5659	2295	7684		35.97	Si
SLV 10	ini.	338.2	-2565	0.9	0	548	7137	5659	2295	7684		3	Si
SLV 10	fin.	-55.33	120	0.9	0	548	7137	5659	2295	7684		63.8	Si
SLV 5	ini.	524.43	-3375	0.9	0	548	7137	5659	2295	7684		2.28	Si
SLV 5	fin.	-304.29	-915	0.9	0	548	7137	5659	2295	7684		8.4	Si
SLV 4	ini.	468.54	-2010	0.9	0	548	7137	5659	2295	7684		3.82	Si
SLV 4	fin.	-386.22	-1716	0.9	0	548	7137	5659	2295	7684		4.48	Si
SLV 1	ini.	577.65	-2967	0.9	0	548	7137	5659	2295	7684		2.59	Si
SLV 1	fin.	-469.77	-1864	0.9	0	548	7137	5659	2295	7684		4.12	Si
SLV 2	ini.	638.64	-3361	0.9	0	548	7137	5659	2295	7684		2.29	Si
SLV 2	fin.	-515.44	-2010	0.9	0	548	7137	5659	2295	7684		3.82	Si
SLV 11	ini.	-267.75	2190	0.9	0	548	7137	5659	2295	7684		3.51	Si
SLV 11	fin.	404.59	1191	0.9	0	548	7137	5659	2295	7684		6.45	Si
SLV 16	ini.	-282.03	1530	0.9	0	548	7137	5659	2295	7684		5.02	Si
SLV 16	fin.	540.9	2046	0.9	0	548	7137	5659	2295	7684		3.76	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.681	SLV 2	Si
V_SLV	2.119	SLV 6	Si
PF_SLU	13.644	SLU 47	Si
V_SLU	5.146	SLU 49	Si

Trave di accoppiamento 148

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.063	5.826	11.66	12.48	0.82	-2.963	5.826	11.66	12.48	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 43	ini.	-30.37	-314	-0.000018	0.0001872	0.0035	0.82		2460.51	2460.51	No	81.03	Si
SLU 43	fin.	-170.32	-549	-0.0001044	0.0001872	0.0035	0.82		2460.51	2460.51	No	14.45	Si
SLU 44	ini.	-28.15	-310	-0.0000167	0.0001872	0.0035	0.82		2460.51	2460.51	No	87.4	Si
SLU 44	fin.	-176.96	-563	-0.0001087	0.0001872	0.0035	0.82		2460.51	2460.51	No	13.9	Si
SLU 49	ini.	-58.42	-445	-0.0000348	0.0001872	0.0035	0.82		2460.51	2460.51	No	42.12	Si
SLU 49	fin.	-162.16	-598	-0.0000992	0.0001872	0.0035	0.82		2460.51	2460.51	No	15.17	Si
SLU 45	ini.	-48.08	-394	-0.0000286	0.0001872	0.0035	0.82		2460.51	2460.51	No	51.17	Si
SLU 45	fin.	-162.07	-570	-0.0000992	0.0001872	0.0035	0.82		2460.51	2460.51	No	15.18	Si
SLU 50	ini.	-53.69	-421	-0.000032	0.0001872	0.0035	0.82		2460.51	2460.51	No	45.82	Si
SLU 50	fin.	-162.54	-588	-0.0000995	0.0001872	0.0035	0.82		2460.51	2460.51	No	15.14	Si
SLU 51	ini.	-52.37	-418	-0.0000312	0.0001872	0.0035	0.82		2460.51	2460.51	No	46.99	Si
SLU 51	fin.	-166.52	-597	-0.000102	0.0001872	0.0035	0.82		2460.51	2460.51	No	14.78	Si
SLU 47	ini.	-39.82	-363	-0.0000236	0.0001872	0.0035	0.82		2460.51	2460.51	No	61.79	Si
SLU 47	fin.	-173.07	-583	-0.0001062	0.0001872	0.0035	0.82		2460.51	2460.51	No	14.22	Si
SLU 48	ini.	-59.75	-447	-0.0000356	0.0001872	0.0035	0.82		2460.51	2460.51	No	41.18	Si
SLU 48	fin.	-158.18	-589	-0.0000967	0.0001872	0.0035	0.82		2460.51	2460.51	No	15.56	Si
SLU 65	ini.	-68.99	-492	-0.0000412	0.0001872	0.0035	0.82		2460.51	2460.51	No	35.66	Si
SLU 65	fin.	-150.96	-574	-0.0000921	0.0001872	0.0035	0.82		2460.51	2460.51	No	16.3	Si
SLU 46	ini.	-46.76	-391	-0.0000278	0.0001872	0.0035	0.82		2460.51	2460.51	No	52.63	Si
SLU 46	fin.	-166.05	-579	-0.0001017	0.0001872	0.0035	0.82		2460.51	2460.51	No	14.82	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-130.4	1472	0.82	0	303	6502	3438	2091	5529	No	3.76	Si
SLU 80	fin.	-111.36	-889	0.82	0	303	6502	3438	2091	5529	No	6.22	Si
SLU 35	ini.	-141.54	1463	0.82	0	303	6502	3438	2091	5529	No	3.78	Si
SLU 35	fin.	-56.85	-632	0.82	0	303	6502	3438	2091	5529	No	8.75	Si
SLU 79	ini.	-131.73	1475	0.82	0	303	6502	3438	2091	5529	No	3.75	Si
SLU 79	fin.	-107.37	-874	0.82	0	303	6502	3438	2091	5529	No	6.33	Si
SLU 83	ini.	-136	1525	0.82	0	303	6502	3438	2091	5529	No	3.63	Si
SLU 83	fin.	-98.77	-849	0.82	0	303	6502	3438	2091	5529	No	6.51	Si
SLU 77	ini.	-137.78	1528	0.82	0	303	6502	3438	2091	5529	No	3.62	Si
SLU 77	fin.	-103.01	-868	0.82	0	303	6502	3438	2091	5529	No	6.37	Si
SLU 36	ini.	-140.21	1459	0.82	0	303	6502	3438	2091	5529	No	3.79	Si
SLU 36	fin.	-60.84	-648	0.82	0	303	6502	3438	2091	5529	No	8.54	Si
SLU 78	ini.	-136.45	1524	0.82	0	303	6502	3438	2091	5529	No	3.63	Si
SLU 78	fin.	-107	-884	0.82	0	303	6502	3438	2091	5529	No	6.25	Si
SLU 84	ini.	-134.67	1522	0.82	0	303	6502	3438	2091	5529	No	3.63	Si
SLU 84	fin.	-102.75	-865	0.82	0	303	6502	3438	2091	5529	No	6.4	Si
SLU 41	ini.	-139.76	1460	0.82	0	303	6502	3438	2091	5529	No	3.79	Si
SLU 41	fin.	-52.61	-612	0.82	0	303	6502	3438	2091	5529	No	9.03	Si
SLU 42	ini.	-138.44	1456	0.82	0	303	6502	3438	2091	5529	No	3.8	Si
SLU 42	fin.	-56.59	-628	0.82	0	303	6502	3438	2091	5529	No	8.8	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 2	ini.	55.95	-37	-0.0000333	0.0002807	0.0035	0.82		2482.11	2482.11		44.37	Si
SLD 2	fin.	-321.04	-814	-0.0002006	0.0002807	0.0035	0.82		2487.45	2487.45		7.75	Si
SLV 6	ini.	136.72	164	-0.0000825	0.0002807	0.0035	0.82		2482.11	2482.11		18.15	Si
SLV 6	fin.	-584.17	-1391	-0.0003895	0.0002807	0.0035	0.82		2487.45	2487.45		4.26	Si
SLV 5	ini.	111.69	94	-0.0000671	0.0002807	0.0035	0.82		2482.11	2482.11		22.22	Si
SLV 5	fin.	-523.95	-1267	-0.0003437	0.0002807	0.0035	0.82		2487.45	2487.45		4.75	Si
SLV 15	ini.	-317.28	-1206	-0.0001981	0.0002807	0.0035	0.82		2487.45	2487.45		7.84	Si
SLV 15	fin.	384.28	476	-0.000244	0.0002807	0.0035	0.82		2482.11	2482.11		6.46	Si
SLV 1	ini.	165.23	320	-0.0001003	0.0002807	0.0035	0.82		2482.11	2482.11		15.02	Si
SLV 1	fin.	-506.8	-1133	-0.000331	0.0002807	0.0035	0.82		2487.45	2487.45		4.91	Si
SLV 2	ini.	204.44	429	-0.000125	0.0002807	0.0035	0.82		2482.11	2482.11		12.14	Si
SLV 2	fin.	-601.08	-1326	-0.0004026	0.0002807	0.0035	0.82		2487.45	2487.45		4.14	Si
SLV 11	ini.	-249.57	-942	-0.0001536	0.0002807	0.0035	0.82		2487.45	2487.45		9.97	Si
SLV 11	fin.	367.37	540	-0.0002324	0.0002807	0.0035	0.82		2482.11	2482.11		6.76	Si
SLV 4	ini.	133.06	238	-0.0000803	0.0002807	0.0035	0.82		2482.11	2482.11		18.65	Si
SLV 4	fin.	-395.37	-889	-0.0002512	0.0002807	0.0035	0.82		2487.45	2487.45		6.29	Si
SLV 9	ini.	-11.66	-306	-0.0000069	0.0002807	0.0035	0.82		2487.45	2487.45		213.41	Si
SLV 9	fin.	-318.34	-916	-0.0001988	0.0002807	0.0035	0.82		2487.45	2487.45		7.81	Si
SLV 10	ini.	13.38	-236	-0.0000079	0.0002807	0.0035	0.82		2482.11	2482.11		185.52	Si
SLV 10	fin.	-378.56	-1039	-0.0002396	0.0002807	0.0035	0.82		2487.45	2487.45		6.57	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 6	ini.	136.72	140	0.82	0	455	6502	5156	2091	6957		49.78	Si
SLV 6	fin.	-584.17	-2491	0.82	0	455	6502	5156	2091	6957		2.79	Si
SLV 16	ini.	-278.08	2042	0.82	0	455	6502	5156	2091	6957		3.41	Si
SLV 16	fin.	290	594	0.82	0	455	6502	5156	2091	6957		11.71	Si
SLV 10	ini.	13.38	912	0.82	0	455	6502	5156	2091	6957		7.63	Si
SLV 10	fin.	-378.56	-1847	0.82	0	455	6502	5156	2091	6957		3.77	Si
SLV 13	ini.	-245.91	2103	0.82	0	455	6502	5156	2091	6957		3.31	Si
SLV 13	fin.	178.57	130	0.82	0	455	6502	5156	2091	6957		53.52	Si
SLV 1	ini.	165.23	-471	0.82	0	455	6502	5156	2091	6957		14.78	Si
SLV 1	fin.	-506.8	-2018	0.82	0	455	6502	5156	2091	6957		3.45	Si
SLV 15	ini.	-317.28	2224	0.82	0	455	6502	5156	2091	6957		3.13	Si
SLV 15	fin.	384.28	938	0.82	0	455	6502	5156	2091	6957		7.41	Si
SLV 9	ini.	-11.66	1028	0.82	0	455	6502	5156	2091	6957		6.77	Si
SLV 9	fin.	-318.34	-1627	0.82	0	455	6502	5156	2091	6957		4.28	Si
SLV 14	ini.	-206.71	1921	0.82	0	455	6502	5156	2091	6957		3.62	Si
SLV 14	fin.	84.28	-214	0.82	0	455	6502	5156	2091	6957		32.49	Si
SLV 2	ini.	204.44	-653	0.82	0	455	6502	5156	2091	6957		10.66	Si
SLV 2	fin.	-601.08	-2362	0.82	0	455	6502	5156	2091	6957		2.95	Si
SLV 5	ini.	111.69	256	0.82	0	455	6502	5156	2091	6957		27.18	Si
SLV 5	fin.	-523.95	-2271	0.82	0	455	6502	5156	2091	6957		3.06	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.138	SLV 2	Si
V_SLV	2.793	SLV 6	Si
PF_SLU	13.904	SLU 44	Si
V_SLU	3.619	SLU 77	Si

Trave di accoppiamento 149

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.813	5.826	12.48	13.38	0.9	-22.713	5.826	12.48	13.38	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 60	ini.	-88.24	198	-0.0000438	0.0001872	0.0035	0.9		2964.67	2964.67	No	33.6	Si
SLU 60	fin.	158.11	-404	-0.0000798	0.0001872	0.0035	0.9		2959	2959	No	18.71	Si
SLU 52	ini.	-98.07	225	-0.0000488	0.0001872	0.0035	0.9		2964.67	2964.67	No	30.23	Si
SLU 52	fin.	173.84	-439	-0.000088	0.0001872	0.0035	0.9		2959	2959	No	17.02	Si
SLU 46	ini.	-89.59	207	-0.0000445	0.0001872	0.0035	0.9		2964.67	2964.67	No	33.09	Si
SLU 46	fin.	165.21	-423	-0.0000835	0.0001872	0.0035	0.9		2959	2959	No	17.91	Si
SLU 55	ini.	-78.07	167	-0.0000387	0.0001872	0.0035	0.9		2964.67	2964.67	No	37.97	Si
SLU 55	fin.	151.08	-399	-0.0000761	0.0001872	0.0035	0.9		2959	2959	No	19.59	Si
SLU 47	ini.	-93.08	214	-0.0000463	0.0001872	0.0035	0.9		2964.67	2964.67	No	31.85	Si
SLU 47	fin.	170.74	-435	-0.0000864	0.0001872	0.0035	0.9		2959	2959	No	17.33	Si
SLU 65	ini.	-81.83	177	-0.0000406	0.0001872	0.0035	0.9		2964.67	2964.67	No	36.23	Si
SLU 65	fin.	156.38	-411	-0.0000789	0.0001872	0.0035	0.9		2959	2959	No	18.92	Si
SLU 61	ini.	-90.28	202	-0.0000449	0.0001872	0.0035	0.9		2964.67	2964.67	No	32.84	Si
SLU 61	fin.	162.49	-416	-0.0000821	0.0001872	0.0035	0.9		2959	2959	No	18.21	Si
SLU 44	ini.	-113.08	272	-0.0000564	0.0001872	0.0035	0.9		2964.67	2964.67	No	26.22	Si
SLU 44	fin.	193.5	-476	-0.0000984	0.0001872	0.0035	0.9		2959	2959	No	15.29	Si
SLU 45	ini.	-87.55	203	-0.0000435	0.0001872	0.0035	0.9		2964.67	2964.67	No	33.86	Si
SLU 45	fin.	160.82	-411	-0.0000812	0.0001872	0.0035	0.9		2959	2959	No	18.4	Si
SLU 43	ini.	-109.68	265	-0.0000547	0.0001872	0.0035	0.9		2964.67	2964.67	No	27.03	Si
SLU 43	fin.	186.19	-456	-0.0000946	0.0001872	0.0035	0.9		2959	2959	No	15.89	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 44	ini.	-113.08	506	0.9	0	365	7137	3773	2295	6068	No	12	Si
SLU 44	fin.	193.5	698	0.9	0	365	7137	3773	2295	6068	No	8.69	Si
SLU 50	ini.	-69.69	175	0.9	0	365	7137	3773	2295	6068	No	34.66	Si
SLU 50	fin.	140.68	564	0.9	0	365	7137	3773	2295	6068	No	10.76	Si
SLU 43	ini.	-109.68	493	0.9	0	365	7137	3773	2295	6068	No	12.31	Si
SLU 43	fin.	186.19	662	0.9	0	365	7137	3773	2295	6068	No	9.16	Si
SLU 45	ini.	-87.55	302	0.9	0	365	7137	3773	2295	6068	No	20.08	Si
SLU 45	fin.	160.82	623	0.9	0	365	7137	3773	2295	6068	No	9.74	Si
SLU 61	ini.	-90.28	546	0.9	0	365	7137	3773	2295	6068	No	11.12	Si
SLU 61	fin.	162.49	429	0.9	0	365	7137	3773	2295	6068	No	14.16	Si
SLU 51	ini.	-71.72	183	0.9	0	365	7137	3773	2295	6068	No	33.21	Si
SLU 51	fin.	145.06	586	0.9	0	365	7137	3773	2295	6068	No	10.36	Si
SLU 49	ini.	-69.59	151	0.9	0	365	7137	3773	2295	6068	No	40.21	Si
SLU 49	fin.	142.45	595	0.9	0	365	7137	3773	2295	6068	No	10.19	Si
SLU 46	ini.	-89.59	310	0.9	0	365	7137	3773	2295	6068	No	19.58	Si
SLU 46	fin.	165.21	644	0.9	0	365	7137	3773	2295	6068	No	9.42	Si
SLU 48	ini.	-67.55	143	0.9	0	365	7137	3773	2295	6068	No	42.37	Si
SLU 48	fin.	138.07	574	0.9	0	365	7137	3773	2295	6068	No	10.57	Si
SLU 47	ini.	-93.08	347	0.9	0	365	7137	3773	2295	6068	No	17.5	Si
SLU 47	fin.	170.74	649	0.9	0	365	7137	3773	2295	6068	No	9.35	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	-323.72	-58	-0.0001661	0.0002807	0.0035	0.9		2995.37	2995.37		9.25	Si
SLV 3	fin.	197.09	-589	-0.0000992	0.0002807	0.0035	0.9		2989.59	2989.59		15.17	Si
SLV 9	ini.	-259.02	892	-0.0001315	0.0002807	0.0035	0.9		2995.37	2995.37		11.56	Si
SLV 9	fin.	554.24	-1250	-0.0002975	0.0002807	0.0035	0.9		2989.59	2989.59		5.39	Si
SLV 16	ini.	346.06	-36	-0.0001786	0.0002807	0.0035	0.9		2989.59	2989.59		8.64	Si
SLV 16	fin.	-219.91	559	-0.0001109	0.0002807	0.0035	0.9		2995.37	2995.37		13.62	Si
SLV 1	ini.	-471.88	312	-0.0002486	0.0002807	0.0035	0.9		2995.37	2995.37		6.35	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	fin.	454.34	-1169	-0.0002391	0.0002807	0.0035	0.9		2989.59	2989.59		6.58	Si
SLV 2	ini.	-366.14	28	-0.0001892	0.0002807	0.0035	0.9		2995.37	2995.37		8.18	Si
SLV 2	fin.	303.43	-845	-0.0001554	0.0002807	0.0035	0.9		2989.59	2989.59		9.85	Si
SLD 5	ini.	-222.3	428	-0.0001122	0.0002807	0.0035	0.9		2995.37	2995.37		13.47	Si
SLD 5	fin.	343.23	-827	-0.000177	0.0002807	0.0035	0.9		2989.59	2989.59		8.71	Si
SLV 6	ini.	-360.7	618	-0.0001862	0.0002807	0.0035	0.9		2995.37	2995.37		8.3	Si
SLV 6	fin.	537.69	-1291	-0.0002876	0.0002807	0.0035	0.9		2989.59	2989.59		5.56	Si
SLV 10	ini.	-191.49	710	-0.0000961	0.0002807	0.0035	0.9		2995.37	2995.37		15.64	Si
SLV 10	fin.	457.86	-1044	-0.0002411	0.0002807	0.0035	0.9		2989.59	2989.59		6.53	Si
SLV 12	ini.	302.41	-524	-0.0001549	0.0002807	0.0035	0.9		2989.59	2989.59		9.89	Si
SLV 12	fin.	-399.63	888	-0.0002078	0.0002807	0.0035	0.9		2995.37	2995.37		7.5	Si
SLV 5	ini.	-428.23	800	-0.0002238	0.0002807	0.0035	0.9		2995.37	2995.37		6.99	Si
SLV 5	fin.	634.07	-1498	-0.0003462	0.0002807	0.0035	0.9		2989.59	2989.59		4.71	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 10	ini.	-191.49	929	0.9	0	548	7137	5660	2295	7684		8.27	Si
SLV 10	fin.	457.86	1870	0.9	0	548	7137	5660	2295	7684		4.11	Si
SLV 11	ini.	234.87	-669	0.9	0	548	7137	5660	2295	7684		11.48	Si
SLV 11	fin.	-303.26	-1379	0.9	0	548	7137	5660	2295	7684		5.57	Si
SLV 8	ini.	133.2	-595	0.9	0	548	7137	5660	2295	7684		12.91	Si
SLV 8	fin.	-319.8	-1601	0.9	0	548	7137	5660	2295	7684		4.8	Si
SLD 5	ini.	-222.3	905	0.9	0	548	7137	5660	2295	7684		8.49	Si
SLD 5	fin.	343.23	1292	0.9	0	548	7137	5660	2295	7684		5.95	Si
SLV 1	ini.	-471.88	1532	0.9	0	548	7137	5660	2295	7684		5.01	Si
SLV 1	fin.	454.34	1575	0.9	0	548	7137	5660	2295	7684		4.88	Si
SLV 9	ini.	-259.02	1252	0.9	0	548	7137	5660	2295	7684		6.14	Si
SLV 9	fin.	554.24	2296	0.9	0	548	7137	5660	2295	7684		3.35	Si
SLD 9	ini.	-149.49	734	0.9	0	548	7137	5660	2295	7684		10.47	Si
SLD 9	fin.	309.04	1204	0.9	0	548	7137	5660	2295	7684		6.38	Si
SLV 5	ini.	-428.23	1650	0.9	0	548	7137	5660	2295	7684		4.66	Si
SLV 5	fin.	634.07	2501	0.9	0	548	7137	5660	2295	7684		3.07	Si
SLV 6	ini.	-360.7	1326	0.9	0	548	7137	5660	2295	7684		5.79	Si
SLV 6	fin.	537.69	2075	0.9	0	548	7137	5660	2295	7684		3.7	Si
SLV 12	ini.	302.41	-993	0.9	0	548	7137	5660	2295	7684		7.74	Si
SLV 12	fin.	-399.63	-1806	0.9	0	548	7137	5660	2295	7684		4.26	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.715	SLV 5	Si
V_SLV	3.072	SLV 5	Si
PF_SLU	15.292	SLU 44	Si
V_SLU	8.692	SLU 44	Si

Trave di accoppiamento 150

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.813	5.826	15.18	15.64	0.46	-22.713	5.826	15.18	15.64	0.46	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 52	ini.	-80.31	-240	-0.0001597	0.0001872	0.0035	0.46		780.23	780.23	No	9.72	Si
SLU 52	fin.	140.51	186	-0.0002994	0.0001872	0.0035	0.46		777.36	777.36	No	5.53	Si
SLU 64	ini.	-81.34	-218	-0.0001619	0.0001872	0.0035	0.46		780.23	780.23	No	9.59	Si
SLU 64	fin.	122.59	176	-0.0002559	0.0001872	0.0035	0.46		777.36	777.36	No	6.34	Si
SLU 44	ini.	-100.47	-236	-0.0002039	0.0001872	0.0035	0.46		780.23	780.23	No	7.77	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 44	fin.	141.42	232	-0.0003016	0.0001872	0.0035	0.46		777.36	777.36	No	5.5	Si
SLU 82	ini.	-54.99	-228	-0.0001069	0.0001872	0.0035	0.46		780.23	780.23	No	14.19	Si
SLU 82	fin.	123.07	115	-0.0002571	0.0001872	0.0035	0.46		777.36	777.36	No	6.32	Si
SLU 43	ini.	-96.38	-230	-0.0001948	0.0001872	0.0035	0.46		780.23	780.23	No	8.1	Si
SLU 43	fin.	138.43	224	-0.0002943	0.0001872	0.0035	0.46		777.36	777.36	No	5.62	Si
SLU 73	ini.	-65.27	-228	-0.000128	0.0001872	0.0035	0.46		780.23	780.23	No	11.95	Si
SLU 73	fin.	124.66	138	-0.0002609	0.0001872	0.0035	0.46		777.36	777.36	No	6.24	Si
SLU 60	ini.	-67.59	-236	-0.0001328	0.0001872	0.0035	0.46		780.23	780.23	No	11.54	Si
SLU 60	fin.	137.12	159	-0.000291	0.0001872	0.0035	0.46		777.36	777.36	No	5.67	Si
SLU 65	ini.	-85.42	-224	-0.0001707	0.0001872	0.0035	0.46		780.23	780.23	No	9.13	Si
SLU 65	fin.	125.58	184	-0.0002631	0.0001872	0.0035	0.46		777.36	777.36	No	6.19	Si
SLU 47	ini.	-109.76	-218	-0.000225	0.0001872	0.0035	0.46		780.23	780.23	No	7.11	Si
SLU 47	fin.	123.36	233	-0.0002578	0.0001872	0.0035	0.46		777.36	777.36	No	6.3	Si
SLU 61	ini.	-70.04	-239	-0.000138	0.0001872	0.0035	0.46		780.23	780.23	No	11.14	Si
SLU 61	fin.	138.92	163	-0.0002954	0.0001872	0.0035	0.46		777.36	777.36	No	5.6	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-54.99	168	0.46	0	124	3648	1928	1173	3101	No	18.44	Si
SLU 82	fin.	123.07	554	0.46	0	124	3648	1928	1173	3101	No	5.6	Si
SLU 52	ini.	-80.31	247	0.46	0	124	3648	1928	1173	3101	No	12.56	Si
SLU 52	fin.	140.51	602	0.46	0	124	3648	1928	1173	3101	No	5.15	Si
SLU 43	ini.	-96.38	312	0.46	0	124	3648	1928	1173	3101	No	9.92	Si
SLU 43	fin.	138.43	553	0.46	0	124	3648	1928	1173	3101	No	5.61	Si
SLU 60	ini.	-67.59	202	0.46	0	124	3648	1928	1173	3101	No	15.34	Si
SLU 60	fin.	137.12	609	0.46	0	124	3648	1928	1173	3101	No	5.09	Si
SLU 61	ini.	-70.04	209	0.46	0	124	3648	1928	1173	3101	No	14.83	Si
SLU 61	fin.	138.92	615	0.46	0	124	3648	1928	1173	3101	No	5.04	Si
SLU 64	ini.	-81.34	272	0.46	0	124	3648	1928	1173	3101	No	11.42	Si
SLU 64	fin.	122.59	491	0.46	0	124	3648	1928	1173	3101	No	6.31	Si
SLU 65	ini.	-85.42	283	0.46	0	124	3648	1928	1173	3101	No	10.95	Si
SLU 65	fin.	125.58	502	0.46	0	124	3648	1928	1173	3101	No	6.18	Si
SLU 81	ini.	-52.54	161	0.46	0	124	3648	1928	1173	3101	No	19.24	Si
SLU 81	fin.	121.28	548	0.46	0	124	3648	1928	1173	3101	No	5.66	Si
SLU 44	ini.	-100.47	324	0.46	0	124	3648	1928	1173	3101	No	9.57	Si
SLU 44	fin.	141.42	563	0.46	0	124	3648	1928	1173	3101	No	5.51	Si
SLU 73	ini.	-65.27	206	0.46	0	124	3648	1928	1173	3101	No	15.05	Si
SLU 73	fin.	124.66	541	0.46	0	124	3648	1928	1173	3101	No	5.73	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 5	ini.	-377.56	-612	-0.0009402	0.0002807	0.0035	0.46		788.4	788.4		2.09	Si
SLV 5	fin.	366.34	819	-0.000908	0.0002807	0.0035	0.46		785.44	785.44		2.14	Si
SLV 2	ini.	-282.42	-492	-0.0006492	0.0002807	0.0035	0.46		788.4	788.4		2.79	Si
SLV 2	fin.	309.45	607	-0.0007311	0.0002807	0.0035	0.46		785.44	785.44		2.54	Si
SLD 5	ini.	-198.49	-363	-0.0004242	0.0002807	0.0035	0.46		788.4	788.4		3.97	Si
SLD 5	fin.	214.64	432	-0.0004672	0.0002807	0.0035	0.46		785.44	785.44		3.66	Si
SLV 3	ini.	-245.77	-443	-0.0005474	0.0002807	0.0035	0.46		788.4	788.4		3.21	Si
SLV 3	fin.	277.82	525	-0.0006389	0.0002807	0.0035	0.46		785.44	785.44		2.83	Si
SLV 1	ini.	-380.69	-628	-0.0009505	0.0002807	0.0035	0.46		788.4	788.4		2.07	Si
SLV 1	fin.	388.64	818	-0.0009816	0.0002807	0.0035	0.46		785.44	785.44		2.02	Si
SLV 16	ini.	260.46	285	-0.0005901	0.0002807	0.0035	0.46		785.44	785.44		3.02	Si
SLV 16	fin.	-193.61	-553	-0.000412	0.0002807	0.0035	0.46		788.4	788.4		4.07	Si
SLD 1	ini.	-197.85	-367	-0.0004226	0.0002807	0.0035	0.46		788.4	788.4		3.98	Si
SLD 1	fin.	222.57	428	-0.0004879	0.0002807	0.0035	0.46		785.44	785.44		3.53	Si
SLV 12	ini.	257.32	269	-0.0005814	0.0002807	0.0035	0.46		785.44	785.44		3.05	Si
SLV 12	fin.	-171.3	-553	-0.0003576	0.0002807	0.0035	0.46		788.4	788.4		4.6	Si
SLV 6	ini.	-314.8	-525	-0.0007437	0.0002807	0.0035	0.46		788.4	788.4		2.5	Si
SLV 6	fin.	315.76	684	-0.00075	0.0002807	0.0035	0.46		785.44	785.44		2.49	Si
SLV 9	ini.	-255.17	-434	-0.000573	0.0002807	0.0035	0.46		788.4	788.4		3.09	Si
SLV 9	fin.	248.67	559	-0.0005577	0.0002807	0.0035	0.46		785.44	785.44		3.16	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 1	ini.	-197.85	616	0.46	0	187	3648	2893	1173	3834		6.23	Si
SLD 1	fin.	222.57	871	0.46	0	187	3648	2893	1173	3834		4.4	Si
SLV 2	ini.	-282.42	892	0.46	0	187	3648	2893	1173	3834		4.3	Si
SLV 2	fin.	309.45	1214	0.46	0	187	3648	2893	1173	3834		3.16	Si
SLV 4	ini.	-147.5	509	0.46	0	187	3648	2893	1173	3834		7.54	Si
SLV 4	fin.	198.63	822	0.46	0	187	3648	2893	1173	3834		4.66	Si
SLV 9	ini.	-255.17	732	0.46	0	187	3648	2893	1173	3834		5.24	Si
SLV 9	fin.	248.67	919	0.46	0	187	3648	2893	1173	3834		4.17	Si
SLV 3	ini.	-245.77	789	0.46	0	187	3648	2893	1173	3834		4.86	Si
SLV 3	fin.	277.82	1102	0.46	0	187	3648	2893	1173	3834		3.48	Si
SLV 6	ini.	-314.8	940	0.46	0	187	3648	2893	1173	3834		4.08	Si
SLV 6	fin.	315.76	1193	0.46	0	187	3648	2893	1173	3834		3.21	Si
SLD 5	ini.	-198.49	598	0.46	0	187	3648	2893	1173	3834		6.41	Si
SLD 5	fin.	214.64	825	0.46	0	187	3648	2893	1173	3834		4.65	Si
SLV 16	ini.	260.46	-781	0.46	0	187	3648	2893	1173	3834		4.91	Si
SLV 16	fin.	-193.61	-688	0.46	0	187	3648	2893	1173	3834		5.57	Si
SLV 5	ini.	-377.56	1119	0.46	0	187	3648	2893	1173	3834		3.43	Si
SLV 5	fin.	366.34	1372	0.46	0	187	3648	2893	1173	3834		2.8	Si
SLV 1	ini.	-380.69	1173	0.46	0	187	3648	2893	1173	3834		3.27	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	fin.	388.64	1494	0.46	0	187	3648	2893	1173	3834		2.57	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.021	SLV 1	Si
V_SLV	2.567	SLV 1	Si
PF_SLU	5.497	SLU 44	Si
V_SLU	5.04	SLU 61	Si

Trave di accoppiamento 151

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.593	-3.314	12.48	13.38	0.9	-22.493	-3.314	12.48	13.38	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	407.69	-1346	-0.0002189	0.0001872	0.0035	0.9		2959	2959	No	7.26	Si
SLU 80	fin.	-387.07	357	-0.0002062	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.66	Si
SLU 84	ini.	414.76	-1352	-0.0002231	0.0001872	0.0035	0.9		2959	2959	No	7.13	Si
SLU 84	fin.	-399.57	381	-0.0002136	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.42	Si
SLU 78	ini.	414.29	-1377	-0.0002228	0.0001872	0.0035	0.9		2959	2959	No	7.14	Si
SLU 78	fin.	-386.81	343	-0.000206	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.66	Si
SLU 77	ini.	410.91	-1372	-0.0002208	0.0001872	0.0035	0.9		2959	2959	No	7.2	Si
SLU 77	fin.	-379.01	324	-0.0002014	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.82	Si
SLU 82	ini.	402.18	-1310	-0.0002156	0.0001872	0.0035	0.9		2959	2959	No	7.36	Si
SLU 82	fin.	-384.16	357	-0.0002044	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.72	Si
SLU 75	ini.	401.71	-1334	-0.0002153	0.0001872	0.0035	0.9		2959	2959	No	7.37	Si
SLU 75	fin.	-371.4	320	-0.000197	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.98	Si
SLU 74	ini.	398.33	-1329	-0.0002133	0.0001872	0.0035	0.9		2959	2959	No	7.43	Si
SLU 74	fin.	-363.61	301	-0.0001924	0.0001872	0.0035	0.9		2964.67	2964.67	No	8.15	Si
SLU 79	ini.	404.32	-1341	-0.0002168	0.0001872	0.0035	0.9		2959	2959	No	7.32	Si
SLU 79	fin.	-379.28	338	-0.0002016	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.82	Si
SLU 81	ini.	398.8	-1305	-0.0002135	0.0001872	0.0035	0.9		2959	2959	No	7.42	Si
SLU 81	fin.	-376.37	339	-0.0001999	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.88	Si
SLU 83	ini.	411.38	-1347	-0.0002211	0.0001872	0.0035	0.9		2959	2959	No	7.19	Si
SLU 83	fin.	-391.78	362	-0.0002089	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.57	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 57	ini.	378.3	-1873	0.9	0	365	7137	3773	2295	6068	No	3.24	Si
SLU 57	fin.	-344.45	-1514	0.9	0	365	7137	3773	2295	6068	No	4.01	Si
SLU 84	ini.	414.76	-1926	0.9	0	365	7137	3773	2295	6068	No	3.15	Si
SLU 84	fin.	-399.57	-1809	0.9	0	365	7137	3773	2295	6068	No	3.35	Si
SLU 79	ini.	404.32	-1957	0.9	0	365	7137	3773	2295	6068	No	3.1	Si
SLU 79	fin.	-379.28	-1679	0.9	0	365	7137	3773	2295	6068	No	3.61	Si
SLU 75	ini.	401.71	-1907	0.9	0	365	7137	3773	2295	6068	No	3.18	Si
SLU 75	fin.	-371.4	-1674	0.9	0	365	7137	3773	2295	6068	No	3.63	Si
SLU 77	ini.	410.91	-2004	0.9	0	365	7137	3773	2295	6068	No	3.03	Si
SLU 77	fin.	-379.01	-1672	0.9	0	365	7137	3773	2295	6068	No	3.63	Si
SLU 83	ini.	411.38	-1911	0.9	0	365	7137	3773	2295	6068	No	3.18	Si
SLU 83	fin.	-391.78	-1777	0.9	0	365	7137	3773	2295	6068	No	3.41	Si
SLU 76	ini.	397.36	-1869	0.9	0	365	7137	3773	2295	6068	No	3.25	Si
SLU 76	fin.	-376.86	-1702	0.9	0	365	7137	3773	2295	6068	No	3.56	Si
SLU 78	ini.	414.29	-2018	0.9	0	365	7137	3773	2295	6068	No	3.01	Si
SLU 78	fin.	-386.81	-1704	0.9	0	365	7137	3773	2295	6068	No	3.56	Si
SLU 80	ini.	407.69	-1971	0.9	0	365	7137	3773	2295	6068	No	3.08	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	fin.	-387.07	-1711	0.9	0	365	7137	3773	2295	6068	No	3.55	Si
SLU 74	ini.	398.33	-1892	0.9	0	365	7137	3773	2295	6068	No	3.21	Si
SLU 74	fin.	-363.61	-1642	0.9	0	365	7137	3773	2295	6068	No	3.7	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 6	ini.	385.16	-1115	-0.0002001	0.0002807	0.0035	0.9		2989.59	2989.59		7.76	Si
SLV 6	fin.	-743.26	1243	-0.0004151	0.0002807	0.0035	0.9		2995.37	2995.37		4.03	Si
SLV 10	ini.	543.36	-1388	-0.000291	0.0002807	0.0035	0.9		2989.59	2989.59		5.5	Si
SLV 10	fin.	-503.84	864	-0.0002671	0.0002807	0.0035	0.9		2995.37	2995.37		5.95	Si
SLV 14	ini.	543.87	-1352	-0.0002913	0.0002807	0.0035	0.9		2989.59	2989.59		5.5	Si
SLV 14	fin.	120.6	-340	-0.00006	0.0002807	0.0035	0.9		2989.59	2989.59		24.79	Si
SLV 1	ini.	120.88	-687	-0.0000602	0.0002807	0.0035	0.9		2989.59	2989.59		24.73	Si
SLV 1	fin.	-844.98	1258	-0.000483	0.0002807	0.0035	0.9		2995.37	2995.37		3.54	Si
SLV 5	ini.	451.8	-1273	-0.0002376	0.0002807	0.0035	0.9		2989.59	2989.59		6.62	Si
SLV 5	fin.	-850.24	1456	-0.0004866	0.0002807	0.0035	0.9		2995.37	2995.37		3.52	Si
SLV 3	ini.	-20.72	-421	-0.0000101	0.0002807	0.0035	0.9		2995.37	2995.37		144.53	Si
SLV 3	fin.	-575.12	657	-0.0003094	0.0002807	0.0035	0.9		2995.37	2995.37		5.21	Si
SLV 15	ini.	506.63	-1333	-0.0002693	0.0002807	0.0035	0.9		2989.59	2989.59		5.9	Si
SLV 15	fin.	222.95	-608	-0.0001127	0.0002807	0.0035	0.9		2989.59	2989.59		13.41	Si
SLV 13	ini.	648.23	-1599	-0.0003551	0.0002807	0.0035	0.9		2989.59	2989.59		4.61	Si
SLV 13	fin.	-46.91	-8	-0.0000231	0.0002807	0.0035	0.9		2995.37	2995.37		63.85	Si
SLV 9	ini.	610.01	-1547	-0.0003313	0.0002807	0.0035	0.9		2989.59	2989.59		4.9	Si
SLV 9	fin.	-610.82	1076	-0.0003312	0.0002807	0.0035	0.9		2995.37	2995.37		4.9	Si
SLV 2	ini.	16.52	-440	-0.0000081	0.0002807	0.0035	0.9		2989.59	2989.59		180.93	Si
SLV 2	fin.	-677.47	926	-0.0003728	0.0002807	0.0035	0.9		2995.37	2995.37		4.42	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 9	ini.	413.68	-1830	0.9	0	548	7137	5660	2295	7684		4.2	Si
SLD 9	fin.	-396.56	-2050	0.9	0	548	7137	5660	2295	7684		3.75	Si
SLV 10	ini.	543.36	-2266	0.9	0	548	7137	5660	2295	7684		3.39	Si
SLV 10	fin.	-503.84	-2904	0.9	0	548	7137	5660	2295	7684		2.65	Si
SLV 14	ini.	543.87	-1856	0.9	0	548	7137	5660	2295	7684		4.14	Si
SLV 14	fin.	120.6	-1881	0.9	0	548	7137	5660	2295	7684		4.09	Si
SLD 10	ini.	384.6	-1680	0.9	0	548	7137	5660	2295	7684		4.57	Si
SLD 10	fin.	-349.89	-1869	0.9	0	548	7137	5660	2295	7684		4.11	Si
SLV 5	ini.	451.8	-2256	0.9	0	548	7137	5660	2295	7684		3.41	Si
SLV 5	fin.	-850.24	-2970	0.9	0	548	7137	5660	2295	7684		2.59	Si
SLV 13	ini.	648.23	-2395	0.9	0	548	7137	5660	2295	7684		3.21	Si
SLV 13	fin.	-46.91	-2531	0.9	0	548	7137	5660	2295	7684		3.04	Si
SLV 15	ini.	506.63	-1774	0.9	0	548	7137	5660	2295	7684		4.33	Si
SLV 15	fin.	222.95	-1405	0.9	0	548	7137	5660	2295	7684		5.47	Si
SLV 9	ini.	610.01	-2610	0.9	0	548	7137	5660	2295	7684		2.94	Si
SLV 9	fin.	-610.82	-3320	0.9	0	548	7137	5660	2295	7684		2.31	Si
SLD 5	ini.	345.74	-1678	0.9	0	548	7137	5660	2295	7684		4.58	Si
SLD 5	fin.	-499.55	-1900	0.9	0	548	7137	5660	2295	7684		4.04	Si
SLV 6	ini.	385.16	-1912	0.9	0	548	7137	5660	2295	7684		4.02	Si
SLV 6	fin.	-743.26	-2555	0.9	0	548	7137	5660	2295	7684		3.01	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.523	SLV 5	Si
V_SLV	2.315	SLV 9	Si
PF_SLU	7.134	SLU 84	Si
V_SLU	3.006	SLU 78	Si

Trave di accoppiamento 152

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.593	-3.314	15.18	15.64	0.46	-22.493	-3.314	15.18	15.64	0.46	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 76	ini.	64.35	418	-0.0001266	0.0001872	0.0035	0.46		777.36	777.36	No	12.08	Si
SLU 76	fin.	-173.22	-1367	-0.000381	0.0001872	0.0035	0.46		780.23	780.23	No	4.5	Si
SLU 82	ini.	83.41	450	-0.000167	0.0001872	0.0035	0.46		777.36	777.36	No	9.32	Si
SLU 82	fin.	-174.27	-1391	-0.0003837	0.0001872	0.0035	0.46		780.23	780.23	No	4.48	Si
SLU 75	ini.	57.95	401	-0.0001134	0.0001872	0.0035	0.46		777.36	777.36	No	13.41	Si
SLU 75	fin.	-176.27	-1380	-0.000389	0.0001872	0.0035	0.46		780.23	780.23	No	4.43	Si
SLU 84	ini.	75.42	453	-0.0001499	0.0001872	0.0035	0.46		777.36	777.36	No	10.31	Si
SLU 84	fin.	-181.56	-1437	-0.0004029	0.0001872	0.0035	0.46		780.23	780.23	No	4.3	Si
SLU 78	ini.	49.96	404	-0.0000971	0.0001872	0.0035	0.46		777.36	777.36	No	15.56	Si
SLU 78	fin.	-183.56	-1427	-0.0004082	0.0001872	0.0035	0.46		780.23	780.23	No	4.25	Si
SLU 80	ini.	54.68	415	-0.0001066	0.0001872	0.0035	0.46		777.36	777.36	No	14.22	Si
SLU 80	fin.	-179.6	-1406	-0.0003977	0.0001872	0.0035	0.46		780.23	780.23	No	4.34	Si
SLU 74	ini.	55.43	392	-0.0001082	0.0001872	0.0035	0.46		777.36	777.36	No	14.02	Si
SLU 74	fin.	-174.9	-1369	-0.0003854	0.0001872	0.0035	0.46		780.23	780.23	No	4.46	Si
SLU 79	ini.	52.16	406	-0.0001015	0.0001872	0.0035	0.46		777.36	777.36	No	14.9	Si
SLU 79	fin.	-178.23	-1395	-0.0003941	0.0001872	0.0035	0.46		780.23	780.23	No	4.38	Si
SLU 77	ini.	47.44	395	-0.000092	0.0001872	0.0035	0.46		777.36	777.36	No	16.38	Si
SLU 77	fin.	-182.2	-1416	-0.0004046	0.0001872	0.0035	0.46		780.23	780.23	No	4.28	Si
SLU 83	ini.	72.9	444	-0.0001445	0.0001872	0.0035	0.46		777.36	777.36	No	10.66	Si
SLU 83	fin.	-180.19	-1426	-0.0003993	0.0001872	0.0035	0.46		780.23	780.23	No	4.33	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	57.95	135	0.46	0	124	3648	1928	1173	3101	No	22.98	Si
SLU 75	fin.	-176.27	-2757	0.46	0	124	3648	1928	1173	3101	No	1.12	Si
SLU 78	ini.	49.96	200	0.46	0	124	3648	1928	1173	3101	No	15.51	Si
SLU 78	fin.	-183.56	-2964	0.46	0	124	3648	1928	1173	3101	No	1.05	Si
SLU 77	ini.	47.44	209	0.46	0	124	3648	1928	1173	3101	No	14.84	Si
SLU 77	fin.	-182.2	-2950	0.46	0	124	3648	1928	1173	3101	No	1.05	Si
SLU 69	ini.	17.69	318	0.46	0	124	3648	1928	1173	3101	No	9.75	Si
SLU 69	fin.	-160.61	-2733	0.46	0	124	3648	1928	1173	3101	No	1.13	Si
SLU 80	ini.	54.68	171	0.46	0	124	3648	1928	1173	3101	No	18.1	Si
SLU 80	fin.	-179.6	-2910	0.46	0	124	3648	1928	1173	3101	No	1.07	Si
SLU 83	ini.	72.9	68	0.46	0	124	3648	1928	1173	3101	No	45.28	Si
SLU 83	fin.	-180.19	-2784	0.46	0	124	3648	1928	1173	3101	No	1.11	Si
SLU 70	ini.	20.2	309	0.46	0	124	3648	1928	1173	3101	No	10.03	Si
SLU 70	fin.	-161.98	-2746	0.46	0	124	3648	1928	1173	3101	No	1.13	Si
SLU 84	ini.	75.42	60	0.46	0	124	3648	1928	1173	3101	No	52.11	Si
SLU 84	fin.	-181.56	-2797	0.46	0	124	3648	1928	1173	3101	No	1.11	Si
SLU 79	ini.	52.16	180	0.46	0	124	3648	1928	1173	3101	No	17.2	Si
SLU 79	fin.	-178.23	-2897	0.46	0	124	3648	1928	1173	3101	No	1.07	Si
SLU 74	ini.	55.43	144	0.46	0	124	3648	1928	1173	3101	No	21.55	Si
SLU 74	fin.	-174.9	-2744	0.46	0	124	3648	1928	1173	3101	No	1.13	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 8	ini.	-257.32	-645	-0.0005789	0.0002807	0.0035	0.46		788.4	788.4		3.06	Si
SLV 8	fin.	62.46	486	-0.000121	0.0002807	0.0035	0.46		785.44	785.44		12.57	Si
SLV 15	ini.	217.43	737	-0.0004745	0.0002807	0.0035	0.46		785.44	785.44		3.61	Si
SLV 15	fin.	-222.41	-1678	-0.0004854	0.0002807	0.0035	0.46		788.4	788.4		3.54	Si
SLV 4	ini.	-267.72	-619	-0.0006077	0.0002807	0.0035	0.46		788.4	788.4		2.94	Si
SLV 4	fin.	71.71	494	-0.0001397	0.0002807	0.0035	0.46		785.44	785.44		10.95	Si
SLV 13	ini.	341.31	1126	-0.0008284	0.0002807	0.0035	0.46		785.44	785.44		2.3	Si
SLV 13	fin.	-295.06	-2263	-0.0006856	0.0002807	0.0035	0.46		788.4	788.4		2.67	Si
SLV 9	ini.	330.91	1152	-0.0007961	0.0002807	0.0035	0.46		785.44	785.44		2.37	Si
SLV 9	fin.	-285.81	-2255	-0.0006589	0.0002807	0.0035	0.46		788.4	788.4		2.76	Si
SLV 5	ini.	211.72	827	-0.0004597	0.0002807	0.0035	0.46		785.44	785.44		3.71	Si
SLV 5	fin.	-213.43	-1727	-0.0004621	0.0002807	0.0035	0.46		788.4	788.4		3.69	Si
SLV 10	ini.	274.82	977	-0.0006304	0.0002807	0.0035	0.46		785.44	785.44		2.86	Si
SLV 10	fin.	-252.07	-1992	-0.0005645	0.0002807	0.0035	0.46		788.4	788.4		3.13	Si
SLV 14	ini.	253.47	853	-0.0005708	0.0002807	0.0035	0.46		785.44	785.44		3.1	Si
SLV 14	fin.	-242.22	-1851	-0.0005378	0.0002807	0.0035	0.46		788.4	788.4		3.25	Si
SLV 7	ini.	-201.22	-470	-0.0004311	0.0002807	0.0035	0.46		788.4	788.4		3.92	Si
SLV 7	fin.	28.72	223	-0.0000545	0.0002807	0.0035	0.46		785.44	785.44		27.35	Si
SLD 13	ini.	168.08	630	-0.0003514	0.0002807	0.0035	0.46		785.44	785.44		4.67	Si
SLD 13	fin.	-190.7	-1478	-0.0004048	0.0002807	0.0035	0.46		788.4	788.4		4.13	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	341.31	-1169	0.46	0	187	3648	2893	1173	3834		3.28	Si
SLV 13	fin.	-295.06	-2929	0.46	0	187	3648	2893	1173	3834		1.31	Si
SLV 5	ini.	211.72	-526	0.46	0	187	3648	2893	1173	3834		7.28	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 5	fin.	-213.43	-2611	0.46	0	187	3648	2893	1173	3834		1.47	Si
SLD 9	ini.	165.27	-406	0.46	0	187	3648	2893	1173	3834		9.45	Si
SLD 9	fin.	-187.71	-2305	0.46	0	187	3648	2893	1173	3834		1.66	Si
SLD 13	ini.	168.08	-453	0.46	0	187	3648	2893	1173	3834		8.47	Si
SLD 13	fin.	-190.7	-2254	0.46	0	187	3648	2893	1173	3834		1.7	Si
SLD 10	ini.	140.8	-314	0.46	0	187	3648	2893	1173	3834		12.21	Si
SLD 10	fin.	-172.99	-2193	0.46	0	187	3648	2893	1173	3834		1.75	Si
SLV 15	ini.	217.43	-707	0.46	0	187	3648	2893	1173	3834		5.42	Si
SLV 15	fin.	-222.41	-2360	0.46	0	187	3648	2893	1173	3834		1.62	Si
SLV 6	ini.	155.63	-317	0.46	0	187	3648	2893	1173	3834		12.11	Si
SLV 6	fin.	-179.69	-2353	0.46	0	187	3648	2893	1173	3834		1.63	Si
SLV 14	ini.	253.47	-840	0.46	0	187	3648	2893	1173	3834		4.56	Si
SLV 14	fin.	-242.22	-2525	0.46	0	187	3648	2893	1173	3834		1.52	Si
SLV 10	ini.	274.82	-835	0.46	0	187	3648	2893	1173	3834		4.59	Si
SLV 10	fin.	-252.07	-2772	0.46	0	187	3648	2893	1173	3834		1.38	Si
SLV 9	ini.	330.91	-1045	0.46	0	187	3648	2893	1173	3834		3.67	Si
SLV 9	fin.	-285.81	-3030	0.46	0	187	3648	2893	1173	3834		1.27	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.301	SLV 13	Si
V_SLV	1.265	SLV 9	Si
PF_SLU	4.25	SLU 78	Si
V_SLU	1.046	SLU 78	Si

Trave di accoppiamento 153

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.813	-3.314	12.48	14.48	2	-19.313	-3.314	12.48	14.48	2	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 62	ini.	432.6	-32	-0.0000435	0.0001872	0.0035	2		14344.28	14344.28	No	33.16	Si
SLU 62	fin.	349.65	-446	-0.0000351	0.0001872	0.0035	2		14344.28	14344.28	No	41.03	Si
SLU 69	ini.	367.26	-445	-0.0000369	0.0001872	0.0035	2		14344.28	14344.28	No	39.06	Si
SLU 69	fin.	434.9	-913	-0.0000438	0.0001872	0.0035	2		14344.28	14344.28	No	32.98	Si
SLU 59	ini.	443.91	-137	-0.0000447	0.0001872	0.0035	2		14344.28	14344.28	No	32.31	Si
SLU 59	fin.	398.1	-581	-0.00004	0.0001872	0.0035	2		14344.28	14344.28	No	36.03	Si
SLU 78	ini.	416.67	-265	-0.0000419	0.0001872	0.0035	2		14344.28	14344.28	No	34.43	Si
SLU 78	fin.	441.4	-752	-0.0000444	0.0001872	0.0035	2		14344.28	14344.28	No	32.5	Si
SLU 63	ini.	433.44	-21	-0.0000436	0.0001872	0.0035	2		14344.28	14344.28	No	33.09	Si
SLU 63	fin.	359.15	-440	-0.000036	0.0001872	0.0035	2		14344.28	14344.28	No	39.94	Si
SLU 57	ini.	432.24	-214	-0.0000435	0.0001872	0.0035	2		14344.28	14344.28	No	33.19	Si
SLU 57	fin.	405.54	-666	-0.0000408	0.0001872	0.0035	2		14344.28	14344.28	No	35.37	Si
SLU 70	ini.	368.09	-434	-0.0000369	0.0001872	0.0035	2		14344.28	14344.28	No	38.97	Si
SLU 70	fin.	444.4	-907	-0.0000447	0.0001872	0.0035	2		14344.28	14344.28	No	32.28	Si
SLU 80	ini.	428.34	-188	-0.0000431	0.0001872	0.0035	2		14344.28	14344.28	No	33.49	Si
SLU 80	fin.	433.96	-667	-0.0000437	0.0001872	0.0035	2		14344.28	14344.28	No	33.05	Si
SLU 72	ini.	379.76	-357	-0.0000381	0.0001872	0.0035	2		14344.28	14344.28	No	37.77	Si
SLU 72	fin.	436.96	-823	-0.000044	0.0001872	0.0035	2		14344.28	14344.28	No	32.83	Si
SLU 58	ini.	443.07	-148	-0.0000446	0.0001872	0.0035	2		14344.28	14344.28	No	32.37	Si
SLU 58	fin.	388.6	-587	-0.000039	0.0001872	0.0035	2		14344.28	14344.28	No	36.91	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 70	ini.	368.09	595	2	0	812	3965	8384	5100	4776	No	8.03	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 70	fin.	444.4	996	2	0	812	3965	8384	5100	4776	No	4.8	Si
SLU 78	ini.	416.67	555	2	0	812	3965	8384	5100	4776	No	8.61	Si
SLU 78	fin.	441.4	906	2	0	812	3965	8384	5100	4776	No	5.27	Si
SLU 69	ini.	367.26	560	2	0	812	3965	8384	5100	4776	No	8.52	Si
SLU 69	fin.	434.9	970	2	0	812	3965	8384	5100	4776	No	4.92	Si
SLU 67	ini.	336.8	570	2	0	812	3965	8384	5100	4776	No	8.37	Si
SLU 67	fin.	406.73	910	2	0	812	3965	8384	5100	4776	No	5.25	Si
SLU 77	ini.	415.84	520	2	0	812	3965	8384	5100	4776	No	9.18	Si
SLU 77	fin.	431.9	881	2	0	812	3965	8384	5100	4776	No	5.42	Si
SLU 66	ini.	335.97	536	2	0	812	3965	8384	5100	4776	No	8.91	Si
SLU 66	fin.	397.23	884	2	0	812	3965	8384	5100	4776	No	5.4	Si
SLU 28	ini.	287.39	566	2	0	812	3965	8384	5100	4776	No	8.44	Si
SLU 28	fin.	380.87	910	2	0	812	3965	8384	5100	4776	No	5.25	Si
SLU 27	ini.	286.56	531	2	0	812	3965	8384	5100	4776	No	8.99	Si
SLU 27	fin.	371.37	884	2	0	812	3965	8384	5100	4776	No	5.4	Si
SLU 71	ini.	378.92	539	2	0	812	3965	8384	5100	4776	No	8.86	Si
SLU 71	fin.	427.46	908	2	0	812	3965	8384	5100	4776	No	5.26	Si
SLU 72	ini.	379.76	574	2	0	812	3965	8384	5100	4776	No	8.32	Si
SLU 72	fin.	436.96	934	2	0	812	3965	8384	5100	4776	No	5.11	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-611.37	-1395	-0.0000615	0.0002807	0.0035	2		14215.41	14215.41		23.25	Si
SLV 15	fin.	-731.45	-1609	-0.0000739	0.0002807	0.0035	2		14215.41	14215.41		19.43	Si
SLD 1	ini.	709.15	485	-0.0000716	0.0002807	0.0035	2		14202.07	14202.07		20.03	Si
SLD 1	fin.	650.51	162	-0.0000656	0.0002807	0.0035	2		14202.07	14202.07		21.83	Si
SLV 5	ini.	1136.29	1579	-0.0001163	0.0002807	0.0035	2		14202.07	14202.07		12.5	Si
SLV 5	fin.	1070.75	933	-0.0001094	0.0002807	0.0035	2		14202.07	14202.07		13.26	Si
SLV 16	ini.	-780.74	-1638	-0.000079	0.0002807	0.0035	2		14215.41	14215.41		18.21	Si
SLV 16	fin.	-638.34	-1901	-0.0000643	0.0002807	0.0035	2		14215.41	14215.41		22.27	Si
SLV 2	ini.	1132.65	1084	-0.0001159	0.0002807	0.0035	2		14202.07	14202.07		12.54	Si
SLV 2	fin.	1255.7	689	-0.000129	0.0002807	0.0035	2		14202.07	14202.07		11.31	Si
SLV 3	ini.	949.57	503	-0.0000966	0.0002807	0.0035	2		14202.07	14202.07		14.96	Si
SLV 3	fin.	797.15	380	-0.0000807	0.0002807	0.0035	2		14202.07	14202.07		17.82	Si
SLV 1	ini.	1302.02	1327	-0.000134	0.0002807	0.0035	2		14202.07	14202.07		10.91	Si
SLV 1	fin.	1162.59	981	-0.0001191	0.0002807	0.0035	2		14202.07	14202.07		12.22	Si
SLV 4	ini.	780.2	260	-0.000079	0.0002807	0.0035	2		14202.07	14202.07		18.2	Si
SLV 4	fin.	890.26	88	-0.0000904	0.0002807	0.0035	2		14202.07	14202.07		15.95	Si
SLV 6	ini.	1028.13	1424	-0.0001049	0.0002807	0.0035	2		14202.07	14202.07		13.81	Si
SLV 6	fin.	1130.22	746	-0.0001156	0.0002807	0.0035	2		14202.07	14202.07		12.57	Si
SLD 2	ini.	636.45	381	-0.0000641	0.0002807	0.0035	2		14202.07	14202.07		22.31	Si
SLD 2	fin.	690.48	36	-0.0000697	0.0002807	0.0035	2		14202.07	14202.07		20.57	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 9	ini.	668.01	1821	2	0	1217	3965	12577	5100	5182		2.85	Si
SLV 9	fin.	612.17	631	2	0	1217	3965	12577	5100	5182		8.22	Si
SLV 2	ini.	1132.65	-269	2	0	1217	3965	12577	5100	5182		19.29	Si
SLV 2	fin.	1255.7	1514	2	0	1217	3965	12577	5100	5182		3.42	Si
SLV 13	ini.	-258.91	1700	2	0	1217	3965	12577	5100	5182		3.05	Si
SLV 13	fin.	-366.01	-210	2	0	1217	3965	12577	5100	5182		24.71	Si
SLV 14	ini.	-428.28	2248	2	0	1217	3965	12577	5100	5182		2.31	Si
SLV 14	fin.	-272.9	434	2	0	1217	3965	12577	5100	5182		11.95	Si
SLV 10	ini.	559.85	2172	2	0	1217	3965	12577	5100	5182		2.39	Si
SLV 10	fin.	671.64	1042	2	0	1217	3965	12577	5100	5182		4.98	Si
SLV 4	ini.	780.2	-1043	2	0	1217	3965	12577	5100	5182		4.97	Si
SLV 4	fin.	890.26	1218	2	0	1217	3965	12577	5100	5182		4.26	Si
SLV 6	ini.	1028.13	1417	2	0	1217	3965	12577	5100	5182		3.66	Si
SLV 6	fin.	1130.22	1366	2	0	1217	3965	12577	5100	5182		3.79	Si
SLV 7	ini.	-38.57	-1515	2	0	1217	3965	12577	5100	5182		3.42	Si
SLV 7	fin.	-147.39	-34	2	0	1217	3965	12577	5100	5182		153.03	Si
SLV 16	ini.	-780.74	1474	2	0	1217	3965	12577	5100	5182		3.52	Si
SLV 16	fin.	-638.34	137	2	0	1217	3965	12577	5100	5182		37.8	Si
SLV 3	ini.	949.57	-1591	2	0	1217	3965	12577	5100	5182		3.26	Si
SLV 3	fin.	797.15	574	2	0	1217	3965	12577	5100	5182		9.03	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	10.908	SLV 1	Si
V_SLV	2.305	SLV 14	Si
PF_SLU	32.278	SLU 70	Si
V_SLU	4.797	SLU 70	Si

Trave di accoppiamento 154

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.813	-3.314	15.28	15.64	0.36	-19.313	-3.314	15.28	15.64	0.36	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 71	ini.	-67.14	-543	-0.0002239	0.0001872	0.0035	0.36		482.14	482.14	No	7.18	Si
SLU 71	fin.	-7.9	-326	-0.0000242	0.0001872	0.0035	0.36		482.14	482.14	No	60.99	Si
SLU 78	ini.	-69.74	-570	-0.0002336	0.0001872	0.0035	0.36		482.14	482.14	No	6.91	Si
SLU 78	fin.	-9.25	-349	-0.0000284	0.0001872	0.0035	0.36		482.14	482.14	No	52.1	Si
SLU 80	ini.	-68.12	-567	-0.0002276	0.0001872	0.0035	0.36		482.14	482.14	No	7.08	Si
SLU 80	fin.	-8.61	-351	-0.0000264	0.0001872	0.0035	0.36		482.14	482.14	No	56.03	Si
SLU 72	ini.	-68.04	-549	-0.0002273	0.0001872	0.0035	0.36		482.14	482.14	No	7.09	Si
SLU 72	fin.	-6.85	-324	-0.0000209	0.0001872	0.0035	0.36		482.14	482.14	No	70.35	Si
SLU 49	ini.	-66.44	-548	-0.0002213	0.0001872	0.0035	0.36		482.14	482.14	No	7.26	Si
SLU 49	fin.	-9.14	-338	-0.000028	0.0001872	0.0035	0.36		482.14	482.14	No	52.74	Si
SLU 57	ini.	-66.53	-566	-0.0002216	0.0001872	0.0035	0.36		482.14	482.14	No	7.25	Si
SLU 57	fin.	-10.89	-365	-0.0000335	0.0001872	0.0035	0.36		482.14	482.14	No	44.26	Si
SLU 77	ini.	-68.84	-564	-0.0002303	0.0001872	0.0035	0.36		482.14	482.14	No	7	Si
SLU 77	fin.	-10.3	-351	-0.0000316	0.0001872	0.0035	0.36		482.14	482.14	No	46.79	Si
SLU 70	ini.	-69.66	-551	-0.0002333	0.0001872	0.0035	0.36		482.14	482.14	No	6.92	Si
SLU 70	fin.	-7.5	-323	-0.0000229	0.0001872	0.0035	0.36		482.14	482.14	No	64.27	Si
SLU 69	ini.	-68.76	-546	-0.00023	0.0001872	0.0035	0.36		482.14	482.14	No	7.01	Si
SLU 69	fin.	-8.55	-324	-0.0000262	0.0001872	0.0035	0.36		482.14	482.14	No	56.37	Si
SLU 79	ini.	-67.22	-561	-0.0002242	0.0001872	0.0035	0.36		482.14	482.14	No	7.17	Si
SLU 79	fin.	-9.66	-352	-0.0000296	0.0001872	0.0035	0.36		482.14	482.14	No	49.93	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 71	ini.	-67.14	412	0.36	0	105	2855	1509	918	2427	No	5.89	Si
SLU 71	fin.	-7.9	18	0.36	0	105	2855	1509	918	2427	No	135.47	Si
SLU 77	ini.	-68.84	418	0.36	0	105	2855	1509	918	2427	No	5.81	Si
SLU 77	fin.	-10.3	10	0.36	0	105	2855	1509	918	2427	No	245.58	Si
SLU 69	ini.	-68.76	432	0.36	0	105	2855	1509	918	2427	No	5.62	Si
SLU 69	fin.	-8.55	10	0.36	0	105	2855	1509	918	2427	No	247.66	Si
SLU 78	ini.	-69.74	423	0.36	0	105	2855	1509	918	2427	No	5.73	Si
SLU 78	fin.	-9.25	17	0.36	0	105	2855	1509	918	2427	No	145.93	Si
SLU 49	ini.	-66.44	401	0.36	0	105	2855	1509	918	2427	No	6.05	Si
SLU 49	fin.	-9.14	15	0.36	0	105	2855	1509	918	2427	No	164.12	Si
SLU 72	ini.	-68.04	418	0.36	0	105	2855	1509	918	2427	No	5.81	Si
SLU 72	fin.	-6.85	25	0.36	0	105	2855	1509	918	2427	No	98.4	Si
SLU 70	ini.	-69.66	437	0.36	0	105	2855	1509	918	2427	No	5.55	Si
SLU 70	fin.	-7.5	17	0.36	0	105	2855	1509	918	2427	No	146.66	Si
SLU 79	ini.	-67.22	398	0.36	0	105	2855	1509	918	2427	No	6.1	Si
SLU 79	fin.	-9.66	18	0.36	0	105	2855	1509	918	2427	No	134.85	Si
SLU 48	ini.	-65.55	396	0.36	0	105	2855	1509	918	2427	No	6.13	Si
SLU 48	fin.	-10.19	8	0.36	0	105	2855	1509	918	2427	No	301.88	Si
SLU 80	ini.	-68.12	404	0.36	0	105	2855	1509	918	2427	No	6.01	Si
SLU 80	fin.	-8.61	25	0.36	0	105	2855	1509	918	2427	No	98.07	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 10	ini.	-90.48	-775	-0.0003014	0.0002807	0.0035	0.36		485.29	485.29		5.36	Si
SLV 10	fin.	34.98	-303	-0.00011	0.0002807	0.0035	0.36		482.94	482.94		13.81	Si
SLV 6	ini.	-113.5	-1007	-0.0003901	0.0002807	0.0035	0.36		485.29	485.29		4.28	Si
SLV 6	fin.	85.73	-183	-0.0002852	0.0002807	0.0035	0.36		482.94	482.94		5.63	Si
SLV 15	ini.	17.41	181	-0.0000539	0.0002807	0.0035	0.36		482.94	482.94		27.73	Si
SLV 15	fin.	-114.25	-458	-0.0003931	0.0002807	0.0035	0.36		485.29	485.29		4.25	Si
SLV 5	ini.	-110.84	-1043	-0.0003795	0.0002807	0.0035	0.36		485.29	485.29		4.38	Si
SLV 5	fin.	73.26	-280	-0.0002401	0.0002807	0.0035	0.36		482.94	482.94		6.59	Si
SLV 9	ini.	-87.82	-812	-0.0002915	0.0002807	0.0035	0.36		485.29	485.29		5.53	Si
SLV 9	fin.	22.52	-400	-0.00007	0.0002807	0.0035	0.36		482.94	482.94		21.45	Si
SLV 13	ini.	-18.41	-157	-0.0000567	0.0002807	0.0035	0.36		485.29	485.29		26.35	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	fin.	-80.08	-508	-0.0002633	0.0002807	0.0035	0.36		485.29	485.29		6.06	Si
SLV 16	ini.	13.24	239	-0.0000408	0.0002807	0.0035	0.36		482.94	482.94		36.47	Si
SLV 16	fin.	-94.73	-307	-0.0003173	0.0002807	0.0035	0.36		485.29	485.29		5.12	Si
SLV 2	ini.	-99.31	-872	-0.0003347	0.0002807	0.0035	0.36		485.29	485.29		4.89	Si
SLV 2	fin.	108.59	43	-0.0003726	0.0002807	0.0035	0.36		482.94	482.94		4.45	Si
SLV 1	ini.	-95.14	-929	-0.0003188	0.0002807	0.0035	0.36		485.29	485.29		5.1	Si
SLV 1	fin.	89.08	-108	-0.0002977	0.0002807	0.0035	0.36		482.94	482.94		5.42	Si
SLV 11	ini.	31.6	317	-0.0000991	0.0002807	0.0035	0.36		482.94	482.94		15.28	Si
SLV 11	fin.	-91.38	-232	-0.0003047	0.0002807	0.0035	0.36		485.29	485.29		5.31	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 5	ini.	-110.84	574	0.36	0	158	2855	2264	918	3012		5.25	Si
SLV 5	fin.	73.26	413	0.36	0	158	2855	2264	918	3012		7.29	Si
SLV 3	ini.	-59.31	468	0.36	0	158	2855	2264	918	3012		6.43	Si
SLV 3	fin.	54.91	236	0.36	0	158	2855	2264	918	3012		12.75	Si
SLD 6	ini.	-72.67	410	0.36	0	158	2855	2264	918	3012		7.35	Si
SLD 6	fin.	35.66	214	0.36	0	158	2855	2264	918	3012		14.05	Si
SLD 2	ini.	-66.08	441	0.36	0	158	2855	2264	918	3012		6.83	Si
SLD 2	fin.	45.11	226	0.36	0	158	2855	2264	918	3012		13.31	Si
SLV 15	ini.	17.41	-224	0.36	0	158	2855	2264	918	3012		13.42	Si
SLV 15	fin.	-114.25	-442	0.36	0	158	2855	2264	918	3012		6.81	Si
SLV 10	ini.	-90.48	420	0.36	0	158	2855	2264	918	3012		7.17	Si
SLV 10	fin.	34.98	255	0.36	0	158	2855	2264	918	3012		11.81	Si
SLV 1	ini.	-95.14	622	0.36	0	158	2855	2264	918	3012		4.85	Si
SLV 1	fin.	89.08	422	0.36	0	158	2855	2264	918	3012		7.14	Si
SLV 6	ini.	-113.5	628	0.36	0	158	2855	2264	918	3012		4.8	Si
SLV 6	fin.	85.73	459	0.36	0	158	2855	2264	918	3012		6.57	Si
SLV 4	ini.	-63.48	553	0.36	0	158	2855	2264	918	3012		5.45	Si
SLV 4	fin.	74.42	307	0.36	0	158	2855	2264	918	3012		9.81	Si
SLV 2	ini.	-99.31	707	0.36	0	158	2855	2264	918	3012		4.26	Si
SLV 2	fin.	108.59	493	0.36	0	158	2855	2264	918	3012		6.11	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.248	SLV 15	Si
V_SLV	4.263	SLV 2	Si
PF_SLU	6.913	SLU 78	Si
V_SLU	5.551	SLU 70	Si

Trave di accoppiamento 155

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.314	12.48	13.38	0.9	-18.263	-3.314	12.48	13.38	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 63	ini.	246.15	-724	-0.0001267	0.0001872	0.0035	0.9		2959	2959	No	12.02	Si
SLU 63	fin.	-155.79	420	-0.0000785	0.0001872	0.0035	0.9		2964.67	2964.67	No	19.03	Si
SLU 59	ini.	255.4	-785	-0.0001318	0.0001872	0.0035	0.9		2959	2959	No	11.59	Si
SLU 59	fin.	-147.21	346	-0.000074	0.0001872	0.0035	0.9		2964.67	2964.67	No	20.14	Si
SLU 56	ini.	244.37	-778	-0.0001258	0.0001872	0.0035	0.9		2959	2959	No	12.11	Si
SLU 56	fin.	-132.94	275	-0.0000666	0.0001872	0.0035	0.9		2964.67	2964.67	No	22.3	Si
SLU 80	ini.	234.75	-748	-0.0001205	0.0001872	0.0035	0.9		2959	2959	No	12.6	Si
SLU 80	fin.	-130.74	291	-0.0000655	0.0001872	0.0035	0.9		2964.67	2964.67	No	22.68	Si
SLU 55	ini.	233.05	-709	-0.0001196	0.0001872	0.0035	0.9		2959	2959	No	12.7	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 55	fin.	-141.75	351	-0.0000712	0.0001872	0.0035	0.9		2964.67	2964.67	No	20.91	Si
SLU 84	ini.	225.5	-687	-0.0001155	0.0001872	0.0035	0.9		2959	2959	No	13.12	Si
SLU 84	fin.	-139.32	365	-0.0000699	0.0001872	0.0035	0.9		2964.67	2964.67	No	21.28	Si
SLU 79	ini.	233.99	-748	-0.0001201	0.0001872	0.0035	0.9		2959	2959	No	12.65	Si
SLU 79	fin.	-129.42	285	-0.0000648	0.0001872	0.0035	0.9		2964.67	2964.67	No	22.91	Si
SLU 58	ini.	254.64	-786	-0.0001314	0.0001872	0.0035	0.9		2959	2959	No	11.62	Si
SLU 58	fin.	-145.89	339	-0.0000733	0.0001872	0.0035	0.9		2964.67	2964.67	No	20.32	Si
SLU 62	ini.	245.38	-724	-0.0001263	0.0001872	0.0035	0.9		2959	2959	No	12.06	Si
SLU 62	fin.	-154.47	414	-0.0000778	0.0001872	0.0035	0.9		2964.67	2964.67	No	19.19	Si
SLU 57	ini.	245.14	-777	-0.0001262	0.0001872	0.0035	0.9		2959	2959	No	12.07	Si
SLU 57	fin.	-134.26	282	-0.0000673	0.0001872	0.0035	0.9		2964.67	2964.67	No	22.08	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 50	ini.	222.89	-1167	0.9	0	365	7137	3773	2295	6068	No	5.2	Si
SLU 50	fin.	-111.08	-296	0.9	0	365	7137	3773	2295	6068	No	20.47	Si
SLU 49	ini.	213.38	-1133	0.9	0	365	7137	3773	2295	6068	No	5.35	Si
SLU 49	fin.	-99.45	-213	0.9	0	365	7137	3773	2295	6068	No	28.53	Si
SLU 59	ini.	255.4	-1240	0.9	0	365	7137	3773	2295	6068	No	4.89	Si
SLU 59	fin.	-147.21	-586	0.9	0	365	7137	3773	2295	6068	No	10.35	Si
SLU 58	ini.	254.64	-1239	0.9	0	365	7137	3773	2295	6068	No	4.9	Si
SLU 58	fin.	-145.89	-575	0.9	0	365	7137	3773	2295	6068	No	10.55	Si
SLU 63	ini.	246.15	-1147	0.9	0	365	7137	3773	2295	6068	No	5.29	Si
SLU 63	fin.	-155.79	-698	0.9	0	365	7137	3773	2295	6068	No	8.69	Si
SLU 48	ini.	212.62	-1133	0.9	0	365	7137	3773	2295	6068	No	5.36	Si
SLU 48	fin.	-98.14	-201	0.9	0	365	7137	3773	2295	6068	No	30.15	Si
SLU 57	ini.	245.14	-1206	0.9	0	365	7137	3773	2295	6068	No	5.03	Si
SLU 57	fin.	-134.26	-491	0.9	0	365	7137	3773	2295	6068	No	12.35	Si
SLU 56	ini.	244.37	-1205	0.9	0	365	7137	3773	2295	6068	No	5.03	Si
SLU 56	fin.	-132.94	-480	0.9	0	365	7137	3773	2295	6068	No	12.65	Si
SLU 51	ini.	223.65	-1167	0.9	0	365	7137	3773	2295	6068	No	5.2	Si
SLU 51	fin.	-112.4	-308	0.9	0	365	7137	3773	2295	6068	No	19.71	Si
SLU 62	ini.	245.38	-1147	0.9	0	365	7137	3773	2295	6068	No	5.29	Si
SLU 62	fin.	-154.47	-687	0.9	0	365	7137	3773	2295	6068	No	8.84	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 9	ini.	364.28	-921	-0.0001886	0.0002807	0.0035	0.9		2989.59	2989.59		8.21	Si
SLV 9	fin.	-336.34	1345	-0.0001729	0.0002807	0.0035	0.9		2995.37	2995.37		8.91	Si
SLD 1	ini.	378.08	-961	-0.0001962	0.0002807	0.0035	0.9		2989.59	2989.59		7.91	Si
SLD 1	fin.	-296.02	1002	-0.0001512	0.0002807	0.0035	0.9		2995.37	2995.37		10.12	Si
SLV 4	ini.	401.66	-1015	-0.0002093	0.0002807	0.0035	0.9		2989.59	2989.59		7.44	Si
SLV 4	fin.	-299.62	895	-0.0001531	0.0002807	0.0035	0.9		2995.37	2995.37		10	Si
SLV 12	ini.	-346.63	546	-0.0001785	0.0002807	0.0035	0.9		2995.37	2995.37		8.64	Si
SLV 12	fin.	402.92	-1858	-0.00021	0.0002807	0.0035	0.9		2989.59	2989.59		7.42	Si
SLV 1	ini.	700.84	-1637	-0.0003885	0.0002807	0.0035	0.9		2989.59	2989.59		4.27	Si
SLV 1	fin.	-586.12	2125	-0.0003161	0.0002807	0.0035	0.9		2995.37	2995.37		5.11	Si
SLV 6	ini.	546.77	-1303	-0.000293	0.0002807	0.0035	0.9		2989.59	2989.59		5.47	Si
SLV 6	fin.	-504.97	1948	-0.0002678	0.0002807	0.0035	0.9		2995.37	2995.37		5.93	Si
SLV 3	ini.	507.93	-1240	-0.0002701	0.0002807	0.0035	0.9		2989.59	2989.59		5.89	Si
SLV 3	fin.	-379.69	1228	-0.0001967	0.0002807	0.0035	0.9		2995.37	2995.37		7.89	Si
SLV 2	ini.	594.57	-1412	-0.0003219	0.0002807	0.0035	0.9		2989.59	2989.59		5.03	Si
SLV 2	fin.	-506.05	1793	-0.0002684	0.0002807	0.0035	0.9		2995.37	2995.37		5.92	Si
SLV 16	ini.	-432.84	736	-0.0002264	0.0002807	0.0035	0.9		2995.37	2995.37		6.92	Si
SLV 16	fin.	432.93	-1823	-0.0002269	0.0002807	0.0035	0.9		2989.59	2989.59		6.91	Si
SLV 5	ini.	614.63	-1446	-0.0003342	0.0002807	0.0035	0.9		2989.59	2989.59		4.86	Si
SLV 5	fin.	-556.1	2160	-0.000298	0.0002807	0.0035	0.9		2995.37	2995.37		5.39	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	507.93	-2552	0.9	0	548	7137	5660	2295	7684		3.01	Si
SLV 3	fin.	-379.69	-1655	0.9	0	548	7137	5660	2295	7684		4.64	Si
SLV 1	ini.	700.84	-3466	0.9	0	548	7137	5660	2295	7684		2.22	Si
SLV 1	fin.	-586.12	-2980	0.9	0	548	7137	5660	2295	7684		2.58	Si
SLV 11	ini.	-278.77	1360	0.9	0	548	7137	5660	2295	7684		5.65	Si
SLV 11	fin.	351.78	2291	0.9	0	548	7137	5660	2295	7684		3.35	Si
SLV 16	ini.	-432.84	2163	0.9	0	548	7137	5660	2295	7684		3.55	Si
SLV 16	fin.	432.93	2425	0.9	0	548	7137	5660	2295	7684		3.17	Si
SLV 5	ini.	614.63	-2959	0.9	0	548	7137	5660	2295	7684		2.6	Si
SLV 5	fin.	-556.1	-3189	0.9	0	548	7137	5660	2295	7684		2.41	Si
SLV 9	ini.	364.28	-1684	0.9	0	548	7137	5660	2295	7684		4.56	Si
SLV 9	fin.	-336.34	-2126	0.9	0	548	7137	5660	2295	7684		3.61	Si
SLV 2	ini.	594.57	-3001	0.9	0	548	7137	5660	2295	7684		2.56	Si
SLV 2	fin.	-506.05	-2443	0.9	0	548	7137	5660	2295	7684		3.15	Si
SLV 6	ini.	546.77	-2662	0.9	0	548	7137	5660	2295	7684		2.89	Si
SLV 6	fin.	-504.97	-2846	0.9	0	548	7137	5660	2295	7684		2.7	Si
SLV 12	ini.	-346.63	1657	0.9	0	548	7137	5660	2295	7684		4.64	Si
SLV 12	fin.	402.92	2634	0.9	0	548	7137	5660	2295	7684		2.92	Si
SLV 4	ini.	401.66	-2087	0.9	0	548	7137	5660	2295	7684		3.68	Si
SLV 4	fin.	-299.62	-1118	0.9	0	548	7137	5660	2295	7684		6.87	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.266	SLV 1	Si
V_SLV	2.217	SLV 1	Si
PF_SLU	11.586	SLU 59	Si
V_SLU	4.893	SLU 59	Si

Trave di accoppiamento 156

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.314	15.18	15.64	0.46	-18.263	-3.314	15.18	15.64	0.46	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 59	ini.	198.42	545	-0.00045	0.0001872	0.0035	0.46		777.36	777.36	No	3.92	Si
SLU 59	fin.	-138.66	-1057	-0.0002936	0.0001872	0.0035	0.46		780.23	780.23	No	5.63	Si
SLU 84	ini.	195.71	557	-0.0004427	0.0001872	0.0035	0.46		777.36	777.36	No	3.97	Si
SLU 84	fin.	-125.18	-974	-0.0002611	0.0001872	0.0035	0.46		780.23	780.23	No	6.23	Si
SLU 62	ini.	197.64	553	-0.0004479	0.0001872	0.0035	0.46		777.36	777.36	No	3.93	Si
SLU 62	fin.	-129.84	-989	-0.0002722	0.0001872	0.0035	0.46		780.23	780.23	No	6.01	Si
SLU 55	ini.	191.17	534	-0.0004304	0.0001872	0.0035	0.46		777.36	777.36	No	4.07	Si
SLU 55	fin.	-127.09	-971	-0.0002656	0.0001872	0.0035	0.46		780.23	780.23	No	6.14	Si
SLU 79	ini.	195.14	546	-0.0004411	0.0001872	0.0035	0.46		777.36	777.36	No	3.98	Si
SLU 79	fin.	-133.5	-1035	-0.000281	0.0001872	0.0035	0.46		780.23	780.23	No	5.84	Si
SLU 58	ini.	197.75	543	-0.0004482	0.0001872	0.0035	0.46		777.36	777.36	No	3.93	Si
SLU 58	fin.	-138.41	-1053	-0.000293	0.0001872	0.0035	0.46		780.23	780.23	No	5.64	Si
SLU 63	ini.	198.32	554	-0.0004498	0.0001872	0.0035	0.46		777.36	777.36	No	3.92	Si
SLU 63	fin.	-130.09	-993	-0.0002728	0.0001872	0.0035	0.46		780.23	780.23	No	6	Si
SLU 83	ini.	195.03	556	-0.0004408	0.0001872	0.0035	0.46		777.36	777.36	No	3.99	Si
SLU 83	fin.	-124.93	-971	-0.0002605	0.0001872	0.0035	0.46		780.23	780.23	No	6.25	Si
SLU 80	ini.	195.81	548	-0.0004429	0.0001872	0.0035	0.46		777.36	777.36	No	3.97	Si
SLU 80	fin.	-133.75	-1038	-0.0002816	0.0001872	0.0035	0.46		780.23	780.23	No	5.83	Si
SLU 57	ini.	191.49	538	-0.0004312	0.0001872	0.0035	0.46		777.36	777.36	No	4.06	Si
SLU 57	fin.	-137.84	-1057	-0.0002916	0.0001872	0.0035	0.46		780.23	780.23	No	5.66	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	195.14	-479	0.46	0	124	3648	1928	1173	3101	No	6.48	Si
SLU 79	fin.	-133.5	-1401	0.46	0	124	3648	1928	1173	3101	No	2.21	Si
SLU 56	ini.	190.82	-460	0.46	0	124	3648	1928	1173	3101	No	6.74	Si
SLU 56	fin.	-137.59	-1427	0.46	0	124	3648	1928	1173	3101	No	2.17	Si
SLU 58	ini.	197.75	-493	0.46	0	124	3648	1928	1173	3101	No	6.29	Si
SLU 58	fin.	-138.41	-1389	0.46	0	124	3648	1928	1173	3101	No	2.23	Si
SLU 80	ini.	195.81	-482	0.46	0	124	3648	1928	1173	3101	No	6.44	Si
SLU 80	fin.	-133.75	-1402	0.46	0	124	3648	1928	1173	3101	No	2.21	Si
SLU 77	ini.	188.21	-445	0.46	0	124	3648	1928	1173	3101	No	6.97	Si
SLU 77	fin.	-132.68	-1440	0.46	0	124	3648	1928	1173	3101	No	2.15	Si
SLU 57	ini.	191.49	-463	0.46	0	124	3648	1928	1173	3101	No	6.7	Si
SLU 57	fin.	-137.84	-1428	0.46	0	124	3648	1928	1173	3101	No	2.17	Si
SLU 78	ini.	188.88	-448	0.46	0	124	3648	1928	1173	3101	No	6.92	Si
SLU 78	fin.	-132.93	-1440	0.46	0	124	3648	1928	1173	3101	No	2.15	Si
SLU 70	ini.	171.15	-382	0.46	0	124	3648	1928	1173	3101	No	8.12	Si
SLU 70	fin.	-125.54	-1392	0.46	0	124	3648	1928	1173	3101	No	2.23	Si
SLU 69	ini.	170.48	-379	0.46	0	124	3648	1928	1173	3101	No	8.19	Si
SLU 69	fin.	-125.29	-1392	0.46	0	124	3648	1928	1173	3101	No	2.23	Si
SLU 59	ini.	198.42	-496	0.46	0	124	3648	1928	1173	3101	No	6.25	Si
SLU 59	fin.	-138.66	-1390	0.46	0	124	3648	1928	1173	3101	No	2.23	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 5	ini.	239.94	650	-0.000534	0.0002807	0.0035	0.46		785.44	785.44		3.27	Si
SLD 5	fin.	-155.06	-1166	-0.0003193	0.0002807	0.0035	0.46		788.4	788.4		5.08	Si
SLV 1	ini.	374.34	938	-0.0009341	0.0002807	0.0035	0.46		785.44	785.44		2.1	Si
SLV 1	fin.	-248.5	-1782	-0.0005548	0.0002807	0.0035	0.46		788.4	788.4		3.17	Si
SLV 6	ini.	351.11	923	-0.0008592	0.0002807	0.0035	0.46		785.44	785.44		2.24	Si
SLV 6	fin.	-224.82	-1696	-0.0004917	0.0002807	0.0035	0.46		788.4	788.4		3.51	Si
SLV 2	ini.	326.27	809	-0.0007819	0.0002807	0.0035	0.46		785.44	785.44		2.41	Si
SLV 2	fin.	-210.2	-1539	-0.0004539	0.0002807	0.0035	0.46		788.4	788.4		3.75	Si
SLV 10	ini.	252.74	711	-0.0005688	0.0002807	0.0035	0.46		785.44	785.44		3.11	Si
SLV 10	fin.	-158.4	-1246	-0.0003271	0.0002807	0.0035	0.46		788.4	788.4		4.98	Si
SLD 1	ini.	235.35	618	-0.0005217	0.0002807	0.0035	0.46		785.44	785.44		3.34	Si
SLD 1	fin.	-153.81	-1129	-0.0003164	0.0002807	0.0035	0.46		788.4	788.4		5.13	Si
SLD 6	ini.	226.55	615	-0.0004983	0.0002807	0.0035	0.46		785.44	785.44		3.47	Si
SLD 6	fin.	-144.39	-1099	-0.0002948	0.0002807	0.0035	0.46		788.4	788.4		5.46	Si
SLV 3	ini.	262.13	649	-0.0005948	0.0002807	0.0035	0.46		785.44	785.44		3	Si
SLV 3	fin.	-175.48	-1234	-0.0003676	0.0002807	0.0035	0.46		788.4	788.4		4.49	Si
SLV 5	ini.	381.81	1005	-0.0009587	0.0002807	0.0035	0.46		785.44	785.44		2.06	Si
SLV 5	fin.	-249.28	-1852	-0.0005569	0.0002807	0.0035	0.46		788.4	788.4		3.16	Si
SLV 9	ini.	283.44	793	-0.000655	0.0002807	0.0035	0.46		785.44	785.44		2.77	Si
SLV 9	fin.	-182.86	-1401	-0.0003855	0.0002807	0.0035	0.46		788.4	788.4		4.31	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 1	ini.	235.35	-705	0.46	0	187	3648	2893	1173	3834		5.44	Si
SLD 1	fin.	-153.81	-1301	0.46	0	187	3648	2893	1173	3834		2.95	Si
SLV 5	ini.	381.81	-1232	0.46	0	187	3648	2893	1173	3834		3.11	Si
SLV 5	fin.	-249.28	-1993	0.46	0	187	3648	2893	1173	3834		1.92	Si
SLV 6	ini.	351.11	-1125	0.46	0	187	3648	2893	1173	3834		3.41	Si
SLV 6	fin.	-224.82	-1821	0.46	0	187	3648	2893	1173	3834		2.11	Si
SLD 5	ini.	239.94	-711	0.46	0	187	3648	2893	1173	3834		5.39	Si
SLD 5	fin.	-155.06	-1349	0.46	0	187	3648	2893	1173	3834		2.84	Si
SLV 3	ini.	262.13	-820	0.46	0	187	3648	2893	1173	3834		4.68	Si
SLV 3	fin.	-175.48	-1380	0.46	0	187	3648	2893	1173	3834		2.78	Si
SLD 6	ini.	226.55	-664	0.46	0	187	3648	2893	1173	3834		5.77	Si
SLD 6	fin.	-144.39	-1274	0.46	0	187	3648	2893	1173	3834		3.01	Si
SLV 10	ini.	252.74	-746	0.46	0	187	3648	2893	1173	3834		5.14	Si
SLV 10	fin.	-158.4	-1429	0.46	0	187	3648	2893	1173	3834		2.68	Si
SLV 1	ini.	374.34	-1228	0.46	0	187	3648	2893	1173	3834		3.12	Si
SLV 1	fin.	-248.5	-1896	0.46	0	187	3648	2893	1173	3834		2.02	Si
SLV 9	ini.	283.44	-853	0.46	0	187	3648	2893	1173	3834		4.49	Si
SLV 9	fin.	-182.86	-1601	0.46	0	187	3648	2893	1173	3834		2.4	Si
SLV 2	ini.	326.27	-1060	0.46	0	187	3648	2893	1173	3834		3.62	Si
SLV 2	fin.	-210.2	-1627	0.46	0	187	3648	2893	1173	3834		2.36	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.057	SLV 5	Si
V_SLV	1.924	SLV 5	Si
PF_SLU	3.918	SLU 59	Si
V_SLU	2.153	SLU 78	Si

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Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.518	-0.094	14.58	15.64	1.06	-18.518	0.706	14.58	15.64	1.06	0.8	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 49	ini.	716.98	1547	-0.0002807	0.0002246	0.0035	1.06		4231.66	4231.66	No	5.9	Si
SLU 49	fin.	39.76	151	-0.0000141	0.0002246	0.0035	1.06		4231.66	4231.66	No	106.43	Si
SLU 68	ini.	726.3	1588	-0.0002848	0.0002246	0.0035	1.06		4231.66	4231.66	No	5.83	Si
SLU 68	fin.	49.73	174	-0.0000176	0.0002246	0.0035	1.06		4231.66	4231.66	No	85.1	Si
SLU 47	ini.	756.04	1652	-0.0002981	0.0002246	0.0035	1.06		4231.66	4231.66	No	5.6	Si
SLU 47	fin.	47.25	178	-0.0000168	0.0002246	0.0035	1.06		4231.66	4231.66	No	89.56	Si
SLU 72	ini.	731.06	1595	-0.0002869	0.0002246	0.0035	1.06		4231.66	4231.66	No	5.79	Si
SLU 72	fin.	47.68	172	-0.0000169	0.0002246	0.0035	1.06		4231.66	4231.66	No	88.75	Si
SLU 51	ini.	760.81	1658	-0.0003003	0.0002246	0.0035	1.06		4231.66	4231.66	No	5.56	Si
SLU 51	fin.	45.2	176	-0.000016	0.0002246	0.0035	1.06		4231.66	4231.66	No	93.62	Si
SLU 59	ini.	740.72	1622	-0.0002912	0.0002246	0.0035	1.06		4231.66	4231.66	No	5.71	Si
SLU 59	fin.	50.57	182	-0.0000179	0.0002246	0.0035	1.06		4231.66	4231.66	No	83.67	Si
SLU 44	ini.	735.67	1610	-0.000289	0.0002246	0.0035	1.06		4231.66	4231.66	No	5.75	Si
SLU 44	fin.	48.06	175	-0.000017	0.0002246	0.0035	1.06		4231.66	4231.66	No	88.05	Si
SLU 58	ini.	717.3	1568	-0.0002808	0.0002246	0.0035	1.06		4231.66	4231.66	No	5.9	Si
SLU 58	fin.	48.72	175	-0.0000173	0.0002246	0.0035	1.06		4231.66	4231.66	No	86.86	Si
SLU 55	ini.	735.95	1615	-0.0002891	0.0002246	0.0035	1.06		4231.66	4231.66	No	5.75	Si
SLU 55	fin.	52.62	184	-0.0000187	0.0002246	0.0035	1.06		4231.66	4231.66	No	80.41	Si
SLU 50	ini.	737.4	1605	-0.0002897	0.0002246	0.0035	1.06		4231.66	4231.66	No	5.74	Si
SLU 50	fin.	43.34	169	-0.0000154	0.0002246	0.0035	1.06		4231.66	4231.66	No	97.63	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 50	ini.	737.4	-1638	1.06	0	246	6344	3048	2703	5751	No	3.51	Si
SLU 50	fin.	43.34	-1964	1.06	0	246	6344	3048	2703	5751	No	2.93	Si
SLU 68	ini.	726.3	-1598	1.06	0	246	6344	3048	2703	5751	No	3.6	Si
SLU 68	fin.	49.73	-1936	1.06	0	246	6344	3048	2703	5751	No	2.97	Si
SLU 59	ini.	740.72	-1636	1.06	0	246	6344	3048	2703	5751	No	3.51	Si
SLU 59	fin.	50.57	-1961	1.06	0	246	6344	3048	2703	5751	No	2.93	Si
SLU 47	ini.	756.04	-1682	1.06	0	246	6344	3048	2703	5751	No	3.42	Si
SLU 47	fin.	47.25	-2007	1.06	0	246	6344	3048	2703	5751	No	2.86	Si
SLU 51	ini.	760.81	-1696	1.06	0	246	6344	3048	2703	5751	No	3.39	Si
SLU 51	fin.	45.2	-2021	1.06	0	246	6344	3048	2703	5751	No	2.84	Si
SLU 44	ini.	735.67	-1629	1.06	0	246	6344	3048	2703	5751	No	3.53	Si
SLU 44	fin.	48.06	-1955	1.06	0	246	6344	3048	2703	5751	No	2.94	Si
SLU 55	ini.	735.95	-1622	1.06	0	246	6344	3048	2703	5751	No	3.55	Si
SLU 55	fin.	52.62	-1947	1.06	0	246	6344	3048	2703	5751	No	2.95	Si
SLU 72	ini.	731.06	-1612	1.06	0	246	6344	3048	2703	5751	No	3.57	Si
SLU 72	fin.	47.68	-1950	1.06	0	246	6344	3048	2703	5751	No	2.95	Si
SLU 49	ini.	716.98	-1591	1.06	0	246	6344	3048	2703	5751	No	3.61	Si
SLU 49	fin.	39.76	-1917	1.06	0	246	6344	3048	2703	5751	No	3	Si
SLU 58	ini.	717.3	-1578	1.06	0	246	6344	3048	2703	5751	No	3.64	Si
SLU 58	fin.	48.72	-1904	1.06	0	246	6344	3048	2703	5751	No	3.02	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 5	ini.	1205.71	2635	-0.000489	0.0003369	0.0035	1.06		4343.51	4343.51		3.6	Si
SLD 5	fin.	19.9	184	-0.000007	0.0003369	0.0035	1.06		4343.51	4343.51		218.29	Si
SLV 5	ini.	2089.71	4562	-0.0009701	0.0003369	0.0035	1.06		4343.51	4343.51		2.08	Si
SLV 5	fin.	-5.61	248	-0.000002	0.0003369	0.0035	1.06		4350.23	4350.23		775.71	Si
SLV 1	ini.	1153.62	2503	-0.0004643	0.0003369	0.0035	1.06		4343.51	4343.51		3.77	Si
SLV 1	fin.	105.65	365	-0.0000376	0.0003369	0.0035	1.06		4343.51	4343.51		41.11	Si
SLD 9	ini.	1171.41	2566	-0.0004727	0.0003369	0.0035	1.06		4343.51	4343.51		3.71	Si
SLD 9	fin.	-1.91	130	-0.0000007	0.0003369	0.0035	1.06		4350.23	4350.23		2276.32	Si
SLV 10	ini.	1941.66	4247	-0.0008809	0.0003369	0.0035	1.06		4343.51	4343.51		2.24	Si
SLV 10	fin.	-61.57	104	-0.0000218	0.0003369	0.0035	1.06		4350.23	4350.23		70.65	Si
SLV 6	ini.	2024.64	4415	-0.0009304	0.0003369	0.0035	1.06		4343.51	4343.51		2.15	Si
SLV 6	fin.	-9.9	230	-0.0000035	0.0003369	0.0035	1.06		4350.23	4350.23		439.58	Si
SLD 10	ini.	1143.02	2502	-0.0004593	0.0003369	0.0035	1.06		4343.51	4343.51		3.8	Si
SLD 10	fin.	-3.78	122	-0.0000013	0.0003369	0.0035	1.06		4350.23	4350.23		1150.36	Si
SLV 12	ini.	-1062.11	-2314	-0.000421	0.0003369	0.0035	1.06		4350.23	4350.23		4.1	Si
SLV 12	fin.	80.57	1	-0.0000286	0.0003369	0.0035	1.06		4343.51	4343.51		53.91	Si
SLD 6	ini.	1177.32	2571	-0.0004755	0.0003369	0.0035	1.06		4343.51	4343.51		3.69	Si
SLD 6	fin.	18.03	175	-0.0000064	0.0003369	0.0035	1.06		4343.51	4343.51		240.94	Si
SLV 9	ini.	2006.73	4394	-0.0009196	0.0003369	0.0035	1.06		4343.51	4343.51		2.16	Si
SLV 9	fin.	-57.29	122	-0.0000203	0.0003369	0.0035	1.06		4350.23	4350.23		75.94	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 9	ini.	1171.41	-2782	1.06	0	369	6344	4571	2703	6712		2.41	Si
SLD 9	fin.	-1.91	-3036	1.06	0	369	6344	4571	2703	6712		2.21	Si
SLD 5	ini.	1205.71	-2864	1.06	0	369	6344	4571	2703	6712		2.34	Si
SLD 5	fin.	19.9	-3126	1.06	0	369	6344	4571	2703	6712		2.15	Si
SLD 6	ini.	1177.32	-2793	1.06	0	369	6344	4571	2703	6712		2.4	Si
SLD 6	fin.	18.03	-3056	1.06	0	369	6344	4571	2703	6712		2.2	Si
SLV 9	ini.	2006.73	-4902	1.06	0	369	6344	4571	2703	6712		1.37	Si
SLV 9	fin.	-57.29	-5152	1.06	0	369	6344	4571	2703	6712		1.3	Si
SLV 5	ini.	2089.71	-5099	1.06	0	369	6344	4571	2703	6712		1.32	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 5	fin.	-5.61	-5369	1.06	0	369	6344	4571	2703	6712		1.25	Si
SLD 10	ini.	1143.02	-2711	1.06	0	369	6344	4571	2703	6712		2.48	Si
SLD 10	fin.	-3.78	-2965	1.06	0	369	6344	4571	2703	6712		2.26	Si
SLV 1	ini.	1153.62	-2712	1.06	0	369	6344	4571	2703	6712		2.48	Si
SLV 1	fin.	105.65	-3003	1.06	0	369	6344	4571	2703	6712		2.24	Si
SLV 12	ini.	-1062.11	2867	1.06	0	369	6344	4571	2703	6712		2.34	Si
SLV 12	fin.	80.57	2622	1.06	0	369	6344	4571	2703	6712		2.56	Si
SLV 10	ini.	1941.66	-4741	1.06	0	369	6344	4571	2703	6712		1.42	Si
SLV 10	fin.	-61.57	-4991	1.06	0	369	6344	4571	2703	6712		1.34	Si
SLV 6	ini.	2024.64	-4938	1.06	0	369	6344	4571	2703	6712		1.36	Si
SLV 6	fin.	-9.9	-5208	1.06	0	369	6344	4571	2703	6712		1.29	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.079	SLV 5	Si
V_SLV	1.25	SLV 5	Si
PF_SLU	5.562	SLU 51	Si
V_SLU	2.845	SLU 51	Si

Trave di accoppiamento 159

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-13.778	-0.194	14.58	15.64	1.06	-13.778	0.706	14.58	15.64	1.06	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 49	ini.	111.39	142	-0.0000399	0.0001872	0.0035	1.06		4105.5	4105.5	No	36.86	Si
SLU 49	fin.	-7.16	-37	-0.0000025	0.0001872	0.0035	1.06		4112.11	4112.11	No	574.03	Si
SLU 9	ini.	102.15	123	-0.0000365	0.0001872	0.0035	1.06		4105.5	4105.5	No	40.19	Si
SLU 9	fin.	-4.1	-29	-0.0000014	0.0001872	0.0035	1.06		4112.11	4112.11	No	1002.46	Si
SLU 58	ini.	99.51	97	-0.0000356	0.0001872	0.0035	1.06		4105.5	4105.5	No	41.26	Si
SLU 58	fin.	-6.43	-38	-0.0000023	0.0001872	0.0035	1.06		4112.11	4112.11	No	639.61	Si
SLU 50	ini.	114.33	137	-0.0000409	0.0001872	0.0035	1.06		4105.5	4105.5	No	35.91	Si
SLU 50	fin.	-4.25	-36	-0.0000015	0.0001872	0.0035	1.06		4112.11	4112.11	No	968.46	Si
SLU 51	ini.	119.16	148	-0.0000427	0.0001872	0.0035	1.06		4105.5	4105.5	No	34.45	Si
SLU 51	fin.	-3.91	-36	-0.0000014	0.0001872	0.0035	1.06		4112.11	4112.11	No	1052.79	Si
SLU 71	ini.	105.53	107	-0.0000378	0.0001872	0.0035	1.06		4105.5	4105.5	No	38.9	Si
SLU 71	fin.	-10.06	-39	-0.0000035	0.0001872	0.0035	1.06		4112.11	4112.11	No	408.85	Si
SLU 59	ini.	104.34	108	-0.0000373	0.0001872	0.0035	1.06		4105.5	4105.5	No	39.35	Si
SLU 59	fin.	-6.09	-38	-0.0000021	0.0001872	0.0035	1.06		4112.11	4112.11	No	675.33	Si
SLU 70	ini.	102.59	112	-0.0000367	0.0001872	0.0035	1.06		4105.5	4105.5	No	40.02	Si
SLU 70	fin.	-12.98	-39	-0.0000046	0.0001872	0.0035	1.06		4112.11	4112.11	No	316.92	Si
SLU 72	ini.	110.37	118	-0.0000395	0.0001872	0.0035	1.06		4105.5	4105.5	No	37.2	Si
SLU 72	fin.	-9.72	-39	-0.0000034	0.0001872	0.0035	1.06		4112.11	4112.11	No	423.16	Si
SLU 48	ini.	106.55	131	-0.0000381	0.0001872	0.0035	1.06		4105.5	4105.5	No	38.53	Si
SLU 48	fin.	-7.5	-37	-0.0000026	0.0001872	0.0035	1.06		4112.11	4112.11	No	548.01	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 51	ini.	119.16	78	1.06	0	430	7137	4444	2703	7147	No	91.73	Si
SLU 51	fin.	-3.91	-541	1.06	0	430	7137	4444	2703	7147	No	13.22	Si
SLU 70	ini.	102.59	113	1.06	0	430	7137	4444	2703	7147	No	63.03	Si
SLU 70	fin.	-12.98	-522	1.06	0	430	7137	4444	2703	7147	No	13.68	Si
SLU 47	ini.	97.06	116	1.06	0	430	7137	4444	2703	7147	No	61.49	Si
SLU 47	fin.	-4.45	-502	1.06	0	430	7137	4444	2703	7147	No	14.23	Si
SLU 49	ini.	111.39	86	1.06	0	430	7137	4444	2703	7147	No	82.79	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 49	fin.	-7.16	-532	1.06	0	430	7137	4444	2703	7147	No	13.43	Si
SLU 69	ini.	97.76	125	1.06	0	430	7137	4444	2703	7147	No	57.29	Si
SLU 69	fin.	-13.32	-511	1.06	0	430	7137	4444	2703	7147	No	13.99	Si
SLU 50	ini.	114.33	89	1.06	0	430	7137	4444	2703	7147	No	80.06	Si
SLU 50	fin.	-4.25	-529	1.06	0	430	7137	4444	2703	7147	No	13.5	Si
SLU 71	ini.	105.53	116	1.06	0	430	7137	4444	2703	7147	No	61.43	Si
SLU 71	fin.	-10.06	-519	1.06	0	430	7137	4444	2703	7147	No	13.76	Si
SLU 72	ini.	110.37	105	1.06	0	430	7137	4444	2703	7147	No	68.07	Si
SLU 72	fin.	-9.72	-531	1.06	0	430	7137	4444	2703	7147	No	13.47	Si
SLU 59	ini.	104.34	115	1.06	0	430	7137	4444	2703	7147	No	62.38	Si
SLU 59	fin.	-6.09	-504	1.06	0	430	7137	4444	2703	7147	No	14.18	Si
SLU 48	ini.	106.55	98	1.06	0	430	7137	4444	2703	7147	No	73.17	Si
SLU 48	fin.	-7.5	-521	1.06	0	430	7137	4444	2703	7147	No	13.72	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 7	ini.	-319.2	-593	-0.0001162	0.0002807	0.0035	1.06		4169.53	4169.53		13.06	Si
SLV 7	fin.	242.75	493	-0.0000878	0.0002807	0.0035	1.06		4162.81	4162.81		17.15	Si
SLV 11	ini.	-390.87	-756	-0.0001435	0.0002807	0.0035	1.06		4169.53	4169.53		10.67	Si
SLV 11	fin.	154.01	353	-0.0000552	0.0002807	0.0035	1.06		4162.81	4162.81		27.03	Si
SLV 2	ini.	275.81	507	-0.0001001	0.0002807	0.0035	1.06		4162.81	4162.81		15.09	Si
SLV 2	fin.	77.4	68	-0.0000275	0.0002807	0.0035	1.06		4162.81	4162.81		53.79	Si
SLV 8	ini.	-322.41	-601	-0.0001175	0.0002807	0.0035	1.06		4169.53	4169.53		12.93	Si
SLV 8	fin.	242.37	492	-0.0000876	0.0002807	0.0035	1.06		4162.81	4162.81		17.18	Si
SLV 6	ini.	470.68	814	-0.0001748	0.0002807	0.0035	1.06		4162.81	4162.81		8.84	Si
SLV 6	fin.	-170.56	-412	-0.0000611	0.0002807	0.0035	1.06		4169.53	4169.53		24.45	Si
SLV 1	ini.	280.83	520	-0.000102	0.0002807	0.0035	1.06		4162.81	4162.81		14.82	Si
SLV 1	fin.	77.99	68	-0.0000277	0.0002807	0.0035	1.06		4162.81	4162.81		53.37	Si
SLV 9	ini.	402.22	659	-0.0001481	0.0002807	0.0035	1.06		4162.81	4162.81		10.35	Si
SLV 9	fin.	-258.92	-551	-0.0000937	0.0002807	0.0035	1.06		4169.53	4169.53		16.1	Si
SLV 5	ini.	473.89	822	-0.0001761	0.0002807	0.0035	1.06		4162.81	4162.81		8.78	Si
SLV 5	fin.	-170.17	-411	-0.000061	0.0002807	0.0035	1.06		4169.53	4169.53		24.5	Si
SLV 10	ini.	399.01	651	-0.0001469	0.0002807	0.0035	1.06		4162.81	4162.81		10.43	Si
SLV 10	fin.	-259.3	-552	-0.0000938	0.0002807	0.0035	1.06		4169.53	4169.53		16.08	Si
SLV 12	ini.	-394.09	-764	-0.0001448	0.0002807	0.0035	1.06		4169.53	4169.53		10.58	Si
SLV 12	fin.	153.63	353	-0.000055	0.0002807	0.0035	1.06		4162.81	4162.81		27.1	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-394.09	1364	1.06	0	645	7137	6666	2703	7782		5.71	Si
SLV 12	fin.	153.63	670	1.06	0	645	7137	6666	2703	7782		11.61	Si
SLV 5	ini.	473.89	-1034	1.06	0	645	7137	6666	2703	7782		7.52	Si
SLV 5	fin.	-170.17	-1311	1.06	0	645	7137	6666	2703	7782		5.93	Si
SLV 11	ini.	-390.87	1356	1.06	0	645	7137	6666	2703	7782		5.74	Si
SLV 11	fin.	154.01	662	1.06	0	645	7137	6666	2703	7782		11.75	Si
SLV 2	ini.	275.81	-394	1.06	0	645	7137	6666	2703	7782		19.74	Si
SLV 2	fin.	77.4	-808	1.06	0	645	7137	6666	2703	7782		9.63	Si
SLV 7	ini.	-319.2	1220	1.06	0	645	7137	6666	2703	7782		6.38	Si
SLV 7	fin.	242.75	532	1.06	0	645	7137	6666	2703	7782		14.62	Si
SLV 6	ini.	470.68	-1027	1.06	0	645	7137	6666	2703	7782		7.58	Si
SLV 6	fin.	-170.56	-1304	1.06	0	645	7137	6666	2703	7782		5.97	Si
SLV 8	ini.	-322.41	1228	1.06	0	645	7137	6666	2703	7782		6.34	Si
SLV 8	fin.	242.37	540	1.06	0	645	7137	6666	2703	7782		14.41	Si
SLV 1	ini.	280.83	-406	1.06	0	645	7137	6666	2703	7782		19.15	Si
SLV 1	fin.	77.99	-820	1.06	0	645	7137	6666	2703	7782		9.49	Si
SLV 9	ini.	402.22	-898	1.06	0	645	7137	6666	2703	7782		8.66	Si
SLV 9	fin.	-258.92	-1181	1.06	0	645	7137	6666	2703	7782		6.59	Si
SLV 10	ini.	399.01	-891	1.06	0	645	7137	6666	2703	7782		8.74	Si
SLV 10	fin.	-259.3	-1174	1.06	0	645	7137	6666	2703	7782		6.63	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	8.784	SLV 5	Si
V_SLV	5.707	SLV 12	Si
PF_SLU	34.453	SLU 51	Si
V_SLU	13.22	SLU 51	Si

Trave di accoppiamento 160

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.718	6.526	12.48	13.38	0.9	-16.818	6.526	12.48	13.38	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	829.35	-1890	-0.0005016	0.0001872	0.0035	0.9		2959	2959	No	3.57	Si
SLU 75	fin.	-761.93	1418	-0.0004517	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.89	Si
SLU 74	ini.	826.44	-1881	-0.0004995	0.0001872	0.0035	0.9		2959	2959	No	3.58	Si
SLU 74	fin.	-761.07	1419	-0.0004511	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.9	Si
SLU 76	ini.	824.75	-1869	-0.0004982	0.0001872	0.0035	0.9		2959	2959	No	3.59	Si
SLU 76	fin.	-763.77	1436	-0.000453	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.88	Si
SLU 80	ini.	826.11	-1871	-0.0004992	0.0001872	0.0035	0.9		2959	2959	No	3.58	Si
SLU 80	fin.	-766.19	1439	-0.0004547	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.87	Si
SLU 84	ini.	850.01	-1909	-0.0005168	0.0001872	0.0035	0.9		2959	2959	No	3.48	Si
SLU 84	fin.	-797.87	1521	-0.0004775	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.72	Si
SLU 78	ini.	832.63	-1898	-0.000504	0.0001872	0.0035	0.9		2959	2959	No	3.55	Si
SLU 78	fin.	-764.92	1420	-0.0004538	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.88	Si
SLU 81	ini.	843.82	-1892	-0.0005123	0.0001872	0.0035	0.9		2959	2959	No	3.51	Si
SLU 81	fin.	-794.02	1520	-0.0004747	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.73	Si
SLU 83	ini.	847.11	-1900	-0.0005147	0.0001872	0.0035	0.9		2959	2959	No	3.49	Si
SLU 83	fin.	-797.01	1522	-0.0004769	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.72	Si
SLU 82	ini.	846.72	-1901	-0.0005144	0.0001872	0.0035	0.9		2959	2959	No	3.49	Si
SLU 82	fin.	-794.88	1519	-0.0004754	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.73	Si
SLU 77	ini.	829.73	-1889	-0.0005019	0.0001872	0.0035	0.9		2959	2959	No	3.57	Si
SLU 77	fin.	-764.06	1421	-0.0004532	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.88	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	850.01	-3435	0.9	0	365	7137	3773	2295	6068	No	1.77	Si
SLU 84	fin.	-797.87	-3765	0.9	0	365	7137	3773	2295	6068	No	1.61	Si
SLU 73	ini.	821.46	-3319	0.9	0	365	7137	3773	2295	6068	No	1.83	Si
SLU 73	fin.	-760.78	-3595	0.9	0	365	7137	3773	2295	6068	No	1.69	Si
SLU 74	ini.	826.44	-3381	0.9	0	365	7137	3773	2295	6068	No	1.79	Si
SLU 74	fin.	-761.07	-3548	0.9	0	365	7137	3773	2295	6068	No	1.71	Si
SLU 76	ini.	824.75	-3352	0.9	0	365	7137	3773	2295	6068	No	1.81	Si
SLU 76	fin.	-763.77	-3585	0.9	0	365	7137	3773	2295	6068	No	1.69	Si
SLU 81	ini.	843.82	-3391	0.9	0	365	7137	3773	2295	6068	No	1.79	Si
SLU 81	fin.	-794.02	-3769	0.9	0	365	7137	3773	2295	6068	No	1.61	Si
SLU 75	ini.	829.35	-3392	0.9	0	365	7137	3773	2295	6068	No	1.79	Si
SLU 75	fin.	-761.93	-3554	0.9	0	365	7137	3773	2295	6068	No	1.71	Si
SLU 79	ini.	823.2	-3367	0.9	0	365	7137	3773	2295	6068	No	1.8	Si
SLU 79	fin.	-765.33	-3566	0.9	0	365	7137	3773	2295	6068	No	1.7	Si
SLU 83	ini.	847.11	-3424	0.9	0	365	7137	3773	2295	6068	No	1.77	Si
SLU 83	fin.	-797.01	-3759	0.9	0	365	7137	3773	2295	6068	No	1.61	Si
SLU 80	ini.	826.11	-3378	0.9	0	365	7137	3773	2295	6068	No	1.8	Si
SLU 80	fin.	-766.19	-3572	0.9	0	365	7137	3773	2295	6068	No	1.7	Si
SLU 82	ini.	846.72	-3402	0.9	0	365	7137	3773	2295	6068	No	1.78	Si
SLU 82	fin.	-794.88	-3775	0.9	0	365	7137	3773	2295	6068	No	1.61	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	1103.58	-2705	-0.0006705	0.0002807	0.0035	0.9		2989.59	2989.59		2.71	Si
SLV 13	fin.	-853.95	1411	-0.0004892	0.0002807	0.0035	0.9		2995.37	2995.37		3.51	Si
SLD 13	ini.	808.55	-1931	-0.0004594	0.0002807	0.0035	0.9		2989.59	2989.59		3.7	Si
SLD 13	fin.	-669.3	1162	-0.0003676	0.0002807	0.0035	0.9		2995.37	2995.37		4.48	Si
SLV 5	ini.	838.29	-2107	-0.0004795	0.0002807	0.0035	0.9		2989.59	2989.59		3.57	Si
SLV 5	fin.	-611.57	891	-0.0003316	0.0002807	0.0035	0.9		2995.37	2995.37		4.9	Si
SLV 9	ini.	1055.5	-2672	-0.0006344	0.0002807	0.0035	0.9		2989.59	2989.59		2.83	Si
SLV 9	fin.	-754.8	1104	-0.0004227	0.0002807	0.0035	0.9		2995.37	2995.37		3.97	Si
SLV 6	ini.	763.03	-1941	-0.000429	0.0002807	0.0035	0.9		2989.59	2989.59		3.92	Si
SLV 6	fin.	-549.66	773	-0.0002941	0.0002807	0.0035	0.9		2995.37	2995.37		5.45	Si
SLV 16	ini.	791.49	-1868	-0.0004479	0.0002807	0.0035	0.9		2989.59	2989.59		3.78	Si
SLV 16	fin.	-683.74	1248	-0.0003767	0.0002807	0.0035	0.9		2995.37	2995.37		4.38	Si
SLV 15	ini.	909.33	-2128	-0.0005287	0.0002807	0.0035	0.9		2989.59	2989.59		3.29	Si
SLV 15	fin.	-780.69	1434	-0.0004398	0.0002807	0.0035	0.9		2995.37	2995.37		3.84	Si
SLD 9	ini.	790.3	-1924	-0.0004471	0.0002807	0.0035	0.9		2989.59	2989.59		3.78	Si
SLD 9	fin.	-627.52	1030	-0.0003415	0.0002807	0.0035	0.9		2995.37	2995.37		4.77	Si
SLV 14	ini.	985.74	-2444	-0.0005832	0.0002807	0.0035	0.9		2989.59	2989.59		3.03	Si
SLV 14	fin.	-757	1226	-0.0004241	0.0002807	0.0035	0.9		2995.37	2995.37		3.96	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 10	ini.	980.24	-2505	-0.0005792	0.0002807	0.0035	0.9		2989.59	2989.59		3.05	Si
SLV 10	fin.	-692.89	985	-0.0003826	0.0002807	0.0035	0.9		2995.37	2995.37		4.32	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 13	ini.	808.55	-3225	0.9	0	548	7137	5660	2295	7684		2.38	Si
SLD 13	fin.	-669.3	-3362	0.9	0	548	7137	5660	2295	7684		2.29	Si
SLV 16	ini.	791.49	-3167	0.9	0	548	7137	5660	2295	7684		2.43	Si
SLV 16	fin.	-683.74	-3565	0.9	0	548	7137	5660	2295	7684		2.16	Si
SLD 15	ini.	723.46	-2920	0.9	0	548	7137	5660	2295	7684		2.63	Si
SLD 15	fin.	-637.4	-3146	0.9	0	548	7137	5660	2295	7684		2.44	Si
SLV 9	ini.	1055.5	-4106	0.9	0	548	7137	5660	2295	7684		1.87	Si
SLV 9	fin.	-754.8	-3929	0.9	0	548	7137	5660	2295	7684		1.96	Si
SLV 5	ini.	838.29	-3293	0.9	0	548	7137	5660	2295	7684		2.33	Si
SLV 5	fin.	-611.57	-2985	0.9	0	548	7137	5660	2295	7684		2.57	Si
SLV 13	ini.	1103.58	-4327	0.9	0	548	7137	5660	2295	7684		1.78	Si
SLV 13	fin.	-853.95	-4537	0.9	0	548	7137	5660	2295	7684		1.69	Si
SLV 14	ini.	985.74	-3862	0.9	0	548	7137	5660	2295	7684		1.99	Si
SLV 14	fin.	-757	-4062	0.9	0	548	7137	5660	2295	7684		1.89	Si
SLV 10	ini.	980.24	-3809	0.9	0	548	7137	5660	2295	7684		2.02	Si
SLV 10	fin.	-692.89	-3625	0.9	0	548	7137	5660	2295	7684		2.12	Si
SLV 15	ini.	909.33	-3632	0.9	0	548	7137	5660	2295	7684		2.12	Si
SLV 15	fin.	-780.69	-4040	0.9	0	548	7137	5660	2295	7684		1.9	Si
SLD 14	ini.	757.97	-3026	0.9	0	548	7137	5660	2295	7684		2.54	Si
SLD 14	fin.	-627.69	-3158	0.9	0	548	7137	5660	2295	7684		2.43	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.709	SLV 13	Si
V_SLV	1.694	SLV 13	Si
PF_SLU	3.481	SLU 84	Si
V_SLU	1.608	SLU 82	Si

Trave di accoppiamento 161

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.718	6.526	15.18	15.64	0.46	-16.818	6.526	15.18	15.64	0.46	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	350.43	1461	-0.0009143	0.0001872	0.0035	0.46		777.36	777.36	No	2.22	Si
SLU 78	fin.	-377.59	-1666	-0.0010039	0.0001872	0.0035	0.46		780.23	780.23	No	2.07	Si
SLU 82	ini.	369.64	1460	-0.0009807	0.0001872	0.0035	0.46		777.36	777.36	No	2.1	Si
SLU 82	fin.	-364.33	-1661	-0.0009576	0.0001872	0.0035	0.46		780.23	780.23	No	2.14	Si
SLU 74	ini.	351.71	1441	-0.0009187	0.0001872	0.0035	0.46		777.36	777.36	No	2.21	Si
SLU 74	fin.	-369.52	-1646	-0.0009756	0.0001872	0.0035	0.46		780.23	780.23	No	2.11	Si
SLU 79	ini.	351	1449	-0.0009163	0.0001872	0.0035	0.46		777.36	777.36	No	2.21	Si
SLU 79	fin.	-368.33	-1635	-0.0009715	0.0001872	0.0035	0.46		780.23	780.23	No	2.12	Si
SLU 75	ini.	352.02	1440	-0.0009197	0.0001872	0.0035	0.46		777.36	777.36	No	2.21	Si
SLU 75	fin.	-370.17	-1651	-0.0009779	0.0001872	0.0035	0.46		780.23	780.23	No	2.11	Si
SLU 84	ini.	368.05	1481	-0.0009751	0.0001872	0.0035	0.46		777.36	777.36	No	2.11	Si
SLU 84	fin.	-371.74	-1676	-0.0009834	0.0001872	0.0035	0.46		780.23	780.23	No	2.1	Si
SLU 77	ini.	350.12	1462	-0.0009133	0.0001872	0.0035	0.46		777.36	777.36	No	2.22	Si
SLU 77	fin.	-376.93	-1661	-0.0010016	0.0001872	0.0035	0.46		780.23	780.23	No	2.07	Si
SLU 83	ini.	367.74	1481	-0.000974	0.0001872	0.0035	0.46		777.36	777.36	No	2.11	Si
SLU 83	fin.	-371.09	-1671	-0.0009811	0.0001872	0.0035	0.46		780.23	780.23	No	2.1	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	351.31	1448	-0.0009173	0.0001872	0.0035	0.46		777.36	777.36	No	2.21	Si
SLU 80	fin.	-368.99	-1639	-0.0009738	0.0001872	0.0035	0.46		780.23	780.23	No	2.11	Si
SLU 81	ini.	369.33	1461	-0.0009796	0.0001872	0.0035	0.46		777.36	777.36	No	2.1	Si
SLU 81	fin.	-363.67	-1657	-0.0009553	0.0001872	0.0035	0.46		780.23	780.23	No	2.15	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	352.02	-1238	0.46	0	124	3648	1928	1173	3101	No	2.5	Si
SLU 75	fin.	-370.17	-2124	0.46	0	124	3648	1928	1173	3101	No	1.46	Si
SLU 80	ini.	351.31	-1232	0.46	0	124	3648	1928	1173	3101	No	2.52	Si
SLU 80	fin.	-368.99	-2118	0.46	0	124	3648	1928	1173	3101	No	1.46	Si
SLU 78	ini.	350.43	-1217	0.46	0	124	3648	1928	1173	3101	No	2.55	Si
SLU 78	fin.	-377.59	-2181	0.46	0	124	3648	1928	1173	3101	No	1.42	Si
SLU 74	ini.	351.71	-1236	0.46	0	124	3648	1928	1173	3101	No	2.51	Si
SLU 74	fin.	-369.52	-2121	0.46	0	124	3648	1928	1173	3101	No	1.46	Si
SLU 70	ini.	315.07	-1073	0.46	0	124	3648	1928	1173	3101	No	2.89	Si
SLU 70	fin.	-353.86	-2061	0.46	0	124	3648	1928	1173	3101	No	1.5	Si
SLU 77	ini.	350.12	-1215	0.46	0	124	3648	1928	1173	3101	No	2.55	Si
SLU 77	fin.	-376.93	-2178	0.46	0	124	3648	1928	1173	3101	No	1.42	Si
SLU 76	ini.	353.11	-1255	0.46	0	124	3648	1928	1173	3101	No	2.47	Si
SLU 76	fin.	-362.01	-2063	0.46	0	124	3648	1928	1173	3101	No	1.5	Si
SLU 79	ini.	351	-1230	0.46	0	124	3648	1928	1173	3101	No	2.52	Si
SLU 79	fin.	-368.33	-2116	0.46	0	124	3648	1928	1173	3101	No	1.47	Si
SLU 84	ini.	368.05	-1315	0.46	0	124	3648	1928	1173	3101	No	2.36	Si
SLU 84	fin.	-371.74	-2113	0.46	0	124	3648	1928	1173	3101	No	1.47	Si
SLU 83	ini.	367.74	-1313	0.46	0	124	3648	1928	1173	3101	No	2.36	Si
SLU 83	fin.	-371.09	-2110	0.46	0	124	3648	1928	1173	3101	No	1.47	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 9	ini.	301.4	969	-0.0007073	0.0002807	0.0035	0.46		785.44	785.44		2.61	Si
SLV 9	fin.	-370.35	-1890	-0.0009167	0.0002807	0.0035	0.46		788.4	788.4		2.13	Si
SLV 6	ini.	305.97	1092	-0.0007207	0.0002807	0.0035	0.46		785.44	785.44		2.57	Si
SLV 6	fin.	-291.77	-1455	-0.000676	0.0002807	0.0035	0.46		788.4	788.4		2.7	Si
SLV 5	ini.	337.83	1188	-0.0008175	0.0002807	0.0035	0.46		785.44	785.44		2.32	Si
SLV 5	fin.	-321.97	-1621	-0.0007653	0.0002807	0.0035	0.46		788.4	788.4		2.45	Si
SLD 13	ini.	241.07	876	-0.0005371	0.0002807	0.0035	0.46		785.44	785.44		3.26	Si
SLD 13	fin.	-309.41	-1469	-0.0007277	0.0002807	0.0035	0.46		788.4	788.4		2.55	Si
SLV 1	ini.	351.22	1446	-0.0008595	0.0002807	0.0035	0.46		785.44	785.44		2.24	Si
SLV 1	fin.	-220.54	-988	-0.0004805	0.0002807	0.0035	0.46		788.4	788.4		3.57	Si
SLV 10	ini.	269.54	873	-0.0006155	0.0002807	0.0035	0.46		785.44	785.44		2.91	Si
SLV 10	fin.	-340.15	-1725	-0.0008209	0.0002807	0.0035	0.46		788.4	788.4		2.32	Si
SLV 15	ini.	197.1	696	-0.0004225	0.0002807	0.0035	0.46		785.44	785.44		3.98	Si
SLV 15	fin.	-335.92	-1575	-0.0008079	0.0002807	0.0035	0.46		788.4	788.4		2.35	Si
SLV 3	ini.	318.53	1425	-0.0007584	0.0002807	0.0035	0.46		785.44	785.44		2.47	Si
SLV 3	fin.	-174.65	-675	-0.0003656	0.0002807	0.0035	0.46		788.4	788.4		4.51	Si
SLV 14	ini.	179.89	567	-0.0003799	0.0002807	0.0035	0.46		785.44	785.44		4.37	Si
SLV 14	fin.	-334.51	-1628	-0.0008035	0.0002807	0.0035	0.46		788.4	788.4		2.36	Si
SLV 13	ini.	229.79	717	-0.0005069	0.0002807	0.0035	0.46		785.44	785.44		3.42	Si
SLV 13	fin.	-381.81	-1887	-0.0009542	0.0002807	0.0035	0.46		788.4	788.4		2.06	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 9	ini.	272.01	-988	0.46	0	187	3648	2893	1173	3834		3.88	Si
SLD 9	fin.	-305	-1649	0.46	0	187	3648	2893	1173	3834		2.32	Si
SLV 10	ini.	269.54	-981	0.46	0	187	3648	2893	1173	3834		3.91	Si
SLV 10	fin.	-340.15	-1765	0.46	0	187	3648	2893	1173	3834		2.17	Si
SLV 13	ini.	229.79	-768	0.46	0	187	3648	2893	1173	3834		4.99	Si
SLV 13	fin.	-381.81	-1905	0.46	0	187	3648	2893	1173	3834		2.01	Si
SLV 6	ini.	305.97	-1162	0.46	0	187	3648	2893	1173	3834		3.3	Si
SLV 6	fin.	-291.77	-1616	0.46	0	187	3648	2893	1173	3834		2.37	Si
SLV 5	ini.	337.83	-1298	0.46	0	187	3648	2893	1173	3834		2.96	Si
SLV 5	fin.	-321.97	-1762	0.46	0	187	3648	2893	1173	3834		2.18	Si
SLV 15	ini.	197.1	-617	0.46	0	187	3648	2893	1173	3834		6.22	Si
SLV 15	fin.	-335.92	-1716	0.46	0	187	3648	2893	1173	3834		2.23	Si
SLD 13	ini.	241.07	-837	0.46	0	187	3648	2893	1173	3834		4.58	Si
SLD 13	fin.	-309.41	-1645	0.46	0	187	3648	2893	1173	3834		2.33	Si
SLV 14	ini.	179.89	-555	0.46	0	187	3648	2893	1173	3834		6.91	Si
SLV 14	fin.	-334.51	-1677	0.46	0	187	3648	2893	1173	3834		2.29	Si
SLD 10	ini.	258.11	-928	0.46	0	187	3648	2893	1173	3834		4.13	Si
SLD 10	fin.	-291.82	-1586	0.46	0	187	3648	2893	1173	3834		2.42	Si
SLV 9	ini.	301.4	-1117	0.46	0	187	3648	2893	1173	3834		3.43	Si
SLV 9	fin.	-370.35	-1910	0.46	0	187	3648	2893	1173	3834		2.01	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.065	SLV 13	Si
V_SLV	2.007	SLV 9	Si
PF_SLU	2.066	SLU 78	Si
V_SLU	1.422	SLU 78	Si

Trave di accoppiamento 162

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.838	6.526	12.48	13.38	0.9	-11.938	6.526	12.48	13.38	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	8.79	7	-0.0000043	0.0001872	0.0035	0.9		2959	2959	No	336.46	Si
SLU 80	fin.	-223.29	404	-0.0001141	0.0001872	0.0035	0.9		2964.67	2964.67	No	13.28	Si
SLU 83	ini.	2.46	67	-0.0000012	0.0001872	0.0035	0.9		2959	2959	No	1200.51	Si
SLU 83	fin.	-245.41	480	-0.0001261	0.0001872	0.0035	0.9		2964.67	2964.67	No	12.08	Si
SLU 84	ini.	2.65	65	-0.0000013	0.0001872	0.0035	0.9		2959	2959	No	1116.48	Si
SLU 84	fin.	-245.01	479	-0.0001259	0.0001872	0.0035	0.9		2964.67	2964.67	No	12.1	Si
SLU 79	ini.	8.61	8	-0.0000042	0.0001872	0.0035	0.9		2959	2959	No	343.71	Si
SLU 79	fin.	-223.69	406	-0.0001143	0.0001872	0.0035	0.9		2964.67	2964.67	No	13.25	Si
SLU 81	ini.	-0.69	90	-0.0000003	0.0001872	0.0035	0.9		2964.67	2964.67	No	4270.4	Si
SLU 81	fin.	-248.49	499	-0.0001277	0.0001872	0.0035	0.9		2964.67	2964.67	No	11.93	Si
SLU 74	ini.	13.95	-19	-0.0000068	0.0001872	0.0035	0.9		2959	2959	No	212.17	Si
SLU 74	fin.	-225.01	394	-0.000115	0.0001872	0.0035	0.9		2964.67	2964.67	No	13.18	Si
SLU 73	ini.	2.6	52	-0.0000013	0.0001872	0.0035	0.9		2959	2959	No	1138.01	Si
SLU 73	fin.	-229.18	441	-0.0001173	0.0001872	0.0035	0.9		2964.67	2964.67	No	12.94	Si
SLU 76	ini.	5.76	29	-0.0000028	0.0001872	0.0035	0.9		2959	2959	No	513.79	Si
SLU 76	fin.	-226.1	422	-0.0001156	0.0001872	0.0035	0.9		2964.67	2964.67	No	13.11	Si
SLU 75	ini.	14.13	-20	-0.0000069	0.0001872	0.0035	0.9		2959	2959	No	209.39	Si
SLU 75	fin.	-224.61	392	-0.0001148	0.0001872	0.0035	0.9		2964.67	2964.67	No	13.2	Si
SLU 82	ini.	-0.51	89	-0.0000002	0.0001872	0.0035	0.9		2964.67	2964.67	No	5827.62	Si
SLU 82	fin.	-248.09	498	-0.0001275	0.0001872	0.0035	0.9		2964.67	2964.67	No	11.95	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 48	ini.	27.63	-755	0.9	0	365	7137	3773	2295	6068	No	8.03	Si
SLU 48	fin.	-148.4	-354	0.9	0	365	7137	3773	2295	6068	No	17.12	Si
SLU 67	ini.	21.1	-687	0.9	0	365	7137	3773	2295	6068	No	8.83	Si
SLU 67	fin.	-181.12	-460	0.9	0	365	7137	3773	2295	6068	No	13.19	Si
SLU 69	ini.	24.07	-728	0.9	0	365	7137	3773	2295	6068	No	8.34	Si
SLU 69	fin.	-178.44	-444	0.9	0	365	7137	3773	2295	6068	No	13.68	Si
SLU 70	ini.	24.26	-730	0.9	0	365	7137	3773	2295	6068	No	8.31	Si
SLU 70	fin.	-178.04	-442	0.9	0	365	7137	3773	2295	6068	No	13.72	Si
SLU 66	ini.	20.91	-686	0.9	0	365	7137	3773	2295	6068	No	8.85	Si
SLU 66	fin.	-181.53	-462	0.9	0	365	7137	3773	2295	6068	No	13.15	Si
SLU 82	ini.	-0.51	-456	0.9	0	365	7137	3773	2295	6068	No	13.3	Si
SLU 82	fin.	-248.09	-691	0.9	0	365	7137	3773	2295	6068	No	8.78	Si
SLU 45	ini.	24.47	-713	0.9	0	365	7137	3773	2295	6068	No	8.51	Si
SLU 45	fin.	-151.48	-372	0.9	0	365	7137	3773	2295	6068	No	16.29	Si
SLU 81	ini.	-0.69	-454	0.9	0	365	7137	3773	2295	6068	No	13.36	Si
SLU 81	fin.	-248.49	-692	0.9	0	365	7137	3773	2295	6068	No	8.77	Si
SLU 49	ini.	27.82	-757	0.9	0	365	7137	3773	2295	6068	No	8.01	Si
SLU 49	fin.	-147.99	-353	0.9	0	365	7137	3773	2295	6068	No	17.19	Si
SLU 46	ini.	24.66	-715	0.9	0	365	7137	3773	2295	6068	No	8.49	Si
SLU 46	fin.	-151.07	-371	0.9	0	365	7137	3773	2295	6068	No	16.36	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 15	ini.	193.57	-656	-0.0000974	0.0002807	0.0035	0.9		2989.59	2989.59		15.44	Si
SLD 15	fin.	-515.33	704	-0.0002739	0.0002807	0.0035	0.9		2995.37	2995.37		5.81	Si
SLV 13	ini.	485.38	-1718	-0.0002569	0.0002807	0.0035	0.9		2989.59	2989.59		6.16	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	fin.	-1005.5	1004	-0.0005962	0.0002807	0.0035	0.9		2995.37	2995.37		2.98	Si
SLV 15	ini.	444.14	-1524	-0.0002333	0.0002807	0.0035	0.9		2989.59	2989.59		6.73	Si
SLV 15	fin.	-1003.81	1292	-0.000595	0.0002807	0.0035	0.9		2995.37	2995.37		2.98	Si
SLD 13	ini.	211.46	-741	-0.0001067	0.0002807	0.0035	0.9		2989.59	2989.59		14.14	Si
SLD 13	fin.	-516	579	-0.0002743	0.0002807	0.0035	0.9		2995.37	2995.37		5.8	Si
SLV 1	ini.	-344.92	1199	-0.0001776	0.0002807	0.0035	0.9		2995.37	2995.37		8.68	Si
SLV 1	fin.	551.77	-605	-0.000296	0.0002807	0.0035	0.9		2989.59	2989.59		5.42	Si
SLV 4	ini.	-473.55	1703	-0.0002496	0.0002807	0.0035	0.9		2995.37	2995.37		6.33	Si
SLV 4	fin.	707.14	-481	-0.0003925	0.0002807	0.0035	0.9		2989.59	2989.59		4.23	Si
SLV 2	ini.	-432.32	1509	-0.0002261	0.0002807	0.0035	0.9		2995.37	2995.37		6.93	Si
SLV 2	fin.	705.45	-769	-0.0003914	0.0002807	0.0035	0.9		2989.59	2989.59		4.24	Si
SLV 3	ini.	-386.15	1393	-0.0002003	0.0002807	0.0035	0.9		2995.37	2995.37		7.76	Si
SLV 3	fin.	553.46	-317	-0.000297	0.0002807	0.0035	0.9		2989.59	2989.59		5.4	Si
SLV 14	ini.	397.98	-1408	-0.0002072	0.0002807	0.0035	0.9		2989.59	2989.59		7.51	Si
SLV 14	fin.	-851.82	840	-0.0004877	0.0002807	0.0035	0.9		2995.37	2995.37		3.52	Si
SLV 16	ini.	356.75	-1214	-0.0001844	0.0002807	0.0035	0.9		2989.59	2989.59		8.38	Si
SLV 16	fin.	-850.13	1128	-0.0004866	0.0002807	0.0035	0.9		2995.37	2995.37		3.52	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	356.75	-2441	0.9	0	548	7137	5660	2295	7684		3.15	Si
SLV 16	fin.	-850.13	-2763	0.9	0	548	7137	5660	2295	7684		2.78	Si
SLV 1	ini.	-344.92	1601	0.9	0	548	7137	5660	2295	7684		4.8	Si
SLV 1	fin.	551.77	1965	0.9	0	548	7137	5660	2295	7684		3.91	Si
SLV 15	ini.	444.14	-2975	0.9	0	548	7137	5660	2295	7684		2.58	Si
SLV 15	fin.	-1003.81	-3262	0.9	0	548	7137	5660	2295	7684		2.36	Si
SLV 13	ini.	485.38	-3239	0.9	0	548	7137	5660	2295	7684		2.37	Si
SLV 13	fin.	-1005.5	-3164	0.9	0	548	7137	5660	2295	7684		2.43	Si
SLV 14	ini.	397.98	-2704	0.9	0	548	7137	5660	2295	7684		2.84	Si
SLV 14	fin.	-851.82	-2665	0.9	0	548	7137	5660	2295	7684		2.88	Si
SLV 2	ini.	-432.32	2135	0.9	0	548	7137	5660	2295	7684		3.6	Si
SLV 2	fin.	705.45	2464	0.9	0	548	7137	5660	2295	7684		3.12	Si
SLD 13	ini.	211.46	-1628	0.9	0	548	7137	5660	2295	7684		4.72	Si
SLD 13	fin.	-516	-1583	0.9	0	548	7137	5660	2295	7684		4.85	Si
SLV 4	ini.	-473.55	2399	0.9	0	548	7137	5660	2295	7684		3.2	Si
SLV 4	fin.	707.14	2366	0.9	0	548	7137	5660	2295	7684		3.25	Si
SLV 9	ini.	227.09	-1756	0.9	0	548	7137	5660	2295	7684		4.38	Si
SLV 9	fin.	-434.66	-1164	0.9	0	548	7137	5660	2295	7684		6.6	Si
SLV 3	ini.	-386.15	1864	0.9	0	548	7137	5660	2295	7684		4.12	Si
SLV 3	fin.	553.46	1867	0.9	0	548	7137	5660	2295	7684		4.12	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.979	SLV 13	Si
V_SLV	2.356	SLV 15	Si
PF_SLU	11.931	SLU 81	Si
V_SLU	8.013	SLU 49	Si

Trave di accoppiamento 163

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.838	6.526	15.18	15.64	0.46	-11.938	6.526	15.18	15.64	0.46	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	27.71	501	-0.0000529	0.0001872	0.0035	0.46		777.36	777.36	No	28.05	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	fin.	-75.69	101	-0.0001499	0.0001872	0.0035	0.46		780.23	780.23	No	10.31	Si
SLU 66	ini.	18.05	427	-0.0000342	0.0001872	0.0035	0.46		777.36	777.36	No	43.06	Si
SLU 66	fin.	-69.25	94	-0.0001363	0.0001872	0.0035	0.46		780.23	780.23	No	11.27	Si
SLU 77	ini.	27.86	502	-0.0000532	0.0001872	0.0035	0.46		777.36	777.36	No	27.9	Si
SLU 77	fin.	-75.65	101	-0.0001498	0.0001872	0.0035	0.46		780.23	780.23	No	10.31	Si
SLU 69	ini.	15.12	420	-0.0000286	0.0001872	0.0035	0.46		777.36	777.36	No	51.41	Si
SLU 69	fin.	-74	85	-0.0001463	0.0001872	0.0035	0.46		780.23	780.23	No	10.54	Si
SLU 56	ini.	21.7	444	-0.0000412	0.0001872	0.0035	0.46		777.36	777.36	No	35.83	Si
SLU 56	fin.	-70.26	91	-0.0001384	0.0001872	0.0035	0.46		780.23	780.23	No	11.1	Si
SLU 57	ini.	21.55	444	-0.0000409	0.0001872	0.0035	0.46		777.36	777.36	No	36.07	Si
SLU 57	fin.	-70.3	91	-0.0001385	0.0001872	0.0035	0.46		780.23	780.23	No	11.1	Si
SLU 70	ini.	14.98	419	-0.0000283	0.0001872	0.0035	0.46		777.36	777.36	No	51.91	Si
SLU 70	fin.	-74.04	85	-0.0001464	0.0001872	0.0035	0.46		780.23	780.23	No	10.54	Si
SLU 75	ini.	30.64	507	-0.0000586	0.0001872	0.0035	0.46		777.36	777.36	No	25.37	Si
SLU 75	fin.	-70.93	109	-0.0001398	0.0001872	0.0035	0.46		780.23	780.23	No	11	Si
SLU 67	ini.	17.91	426	-0.0000339	0.0001872	0.0035	0.46		777.36	777.36	No	43.41	Si
SLU 67	fin.	-69.29	93	-0.0001364	0.0001872	0.0035	0.46		780.23	780.23	No	11.26	Si
SLU 74	ini.	30.79	508	-0.0000589	0.0001872	0.0035	0.46		777.36	777.36	No	25.25	Si
SLU 74	fin.	-70.9	110	-0.0001398	0.0001872	0.0035	0.46		780.23	780.23	No	11	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 66	ini.	18.05	229	0.46	0	124	3648	1928	1173	3101	No	13.57	Si
SLU 66	fin.	-69.25	-545	0.46	0	124	3648	1928	1173	3101	No	5.69	Si
SLU 56	ini.	21.7	209	0.46	0	124	3648	1928	1173	3101	No	14.81	Si
SLU 56	fin.	-70.26	-549	0.46	0	124	3648	1928	1173	3101	No	5.65	Si
SLU 74	ini.	30.79	176	0.46	0	124	3648	1928	1173	3101	No	17.58	Si
SLU 74	fin.	-70.9	-561	0.46	0	124	3648	1928	1173	3101	No	5.53	Si
SLU 78	ini.	27.71	201	0.46	0	124	3648	1928	1173	3101	No	15.43	Si
SLU 78	fin.	-75.69	-588	0.46	0	124	3648	1928	1173	3101	No	5.27	Si
SLU 70	ini.	14.98	253	0.46	0	124	3648	1928	1173	3101	No	12.25	Si
SLU 70	fin.	-74.04	-572	0.46	0	124	3648	1928	1173	3101	No	5.42	Si
SLU 67	ini.	17.91	229	0.46	0	124	3648	1928	1173	3101	No	13.52	Si
SLU 67	fin.	-69.29	-545	0.46	0	124	3648	1928	1173	3101	No	5.69	Si
SLU 69	ini.	15.12	252	0.46	0	124	3648	1928	1173	3101	No	12.29	Si
SLU 69	fin.	-74	-572	0.46	0	124	3648	1928	1173	3101	No	5.42	Si
SLU 77	ini.	27.86	200	0.46	0	124	3648	1928	1173	3101	No	15.49	Si
SLU 77	fin.	-75.65	-588	0.46	0	124	3648	1928	1173	3101	No	5.28	Si
SLU 57	ini.	21.55	210	0.46	0	124	3648	1928	1173	3101	No	14.76	Si
SLU 57	fin.	-70.3	-549	0.46	0	124	3648	1928	1173	3101	No	5.64	Si
SLU 75	ini.	30.64	177	0.46	0	124	3648	1928	1173	3101	No	17.5	Si
SLU 75	fin.	-70.93	-561	0.46	0	124	3648	1928	1173	3101	No	5.53	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	-193.18	-721	-0.000411	0.0002807	0.0035	0.46		788.4	788.4		4.08	Si
SLV 2	fin.	178.87	918	-0.0003774	0.0002807	0.0035	0.46		785.44	785.44		4.39	Si
SLV 13	ini.	213.35	1306	-0.0004639	0.0002807	0.0035	0.46		785.44	785.44		3.68	Si
SLV 13	fin.	-287.99	-844	-0.0006651	0.0002807	0.0035	0.46		788.4	788.4		2.74	Si
SLD 15	ini.	113.9	807	-0.0002282	0.0002807	0.0035	0.46		785.44	785.44		6.9	Si
SLD 15	fin.	-137.64	-260	-0.0002796	0.0002807	0.0035	0.46		788.4	788.4		5.73	Si
SLV 3	ini.	-114.18	-336	-0.0002279	0.0002807	0.0035	0.46		788.4	788.4		6.91	Si
SLV 3	fin.	137.94	790	-0.0002813	0.0002807	0.0035	0.46		785.44	785.44		5.69	Si
SLV 9	ini.	53.41	514	-0.0001029	0.0002807	0.0035	0.46		785.44	785.44		14.71	Si
SLV 9	fin.	-163.3	-401	-0.0003386	0.0002807	0.0035	0.46		788.4	788.4		4.83	Si
SLV 14	ini.	157.58	1032	-0.0003265	0.0002807	0.0035	0.46		785.44	785.44		4.98	Si
SLV 14	fin.	-223.27	-603	-0.0004876	0.0002807	0.0035	0.46		788.4	788.4		3.53	Si
SLV 4	ini.	-169.95	-610	-0.0003544	0.0002807	0.0035	0.46		788.4	788.4		4.64	Si
SLV 4	fin.	202.66	1031	-0.0004365	0.0002807	0.0035	0.46		785.44	785.44		3.88	Si
SLD 13	ini.	103.86	759	-0.0002066	0.0002807	0.0035	0.46		785.44	785.44		7.56	Si
SLD 13	fin.	-147.94	-309	-0.0003029	0.0002807	0.0035	0.46		788.4	788.4		5.33	Si
SLV 15	ini.	236.58	1417	-0.000525	0.0002807	0.0035	0.46		785.44	785.44		3.32	Si
SLV 15	fin.	-264.2	-731	-0.0005979	0.0002807	0.0035	0.46		788.4	788.4		2.98	Si
SLV 16	ini.	180.8	1143	-0.0003821	0.0002807	0.0035	0.46		785.44	785.44		4.34	Si
SLV 16	fin.	-199.48	-489	-0.0004267	0.0002807	0.0035	0.46		788.4	788.4		3.95	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	180.8	-555	0.46	0	187	3648	2893	1173	3834		6.9	Si
SLV 16	fin.	-199.48	-1116	0.46	0	187	3648	2893	1173	3834		3.43	Si
SLV 4	ini.	-169.95	1185	0.46	0	187	3648	2893	1173	3834		3.24	Si
SLV 4	fin.	202.66	566	0.46	0	187	3648	2893	1173	3834		6.77	Si
SLV 15	ini.	236.58	-833	0.46	0	187	3648	2893	1173	3834		4.6	Si
SLV 15	fin.	-264.2	-1388	0.46	0	187	3648	2893	1173	3834		2.76	Si
SLV 13	ini.	213.35	-954	0.46	0	187	3648	2893	1173	3834		4.02	Si
SLV 13	fin.	-287.99	-1285	0.46	0	187	3648	2893	1173	3834		2.98	Si
SLV 2	ini.	-193.18	1064	0.46	0	187	3648	2893	1173	3834		3.6	Si
SLV 2	fin.	178.87	669	0.46	0	187	3648	2893	1173	3834		5.73	Si
SLV 14	ini.	157.58	-676	0.46	0	187	3648	2893	1173	3834		5.67	Si
SLV 14	fin.	-223.27	-1014	0.46	0	187	3648	2893	1173	3834		3.78	Si
SLV 3	ini.	-114.18	907	0.46	0	187	3648	2893	1173	3834		4.23	Si
SLV 3	fin.	137.94	295	0.46	0	187	3648	2893	1173	3834		13	Si
SLV 1	ini.	-137.41	786	0.46	0	187	3648	2893	1173	3834		4.88	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	fin.	114.15	398	0.46	0	187	3648	2893	1173	3834		9.64	Si
SLD 15	ini.	113.9	-291	0.46	0	187	3648	2893	1173	3834		13.17	Si
SLD 15	fin.	-137.64	-801	0.46	0	187	3648	2893	1173	3834		4.79	Si
SLV 11	ini.	130.84	-33	0.46	0	187	3648	2893	1173	3834		115.84	Si
SLV 11	fin.	-84	-870	0.46	0	187	3648	2893	1173	3834		4.41	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.738	SLV 13	Si
V_SLV	2.763	SLV 15	Si
PF_SLU	10.309	SLU 78	Si
V_SLU	5.274	SLU 78	Si

Trave di accoppiamento 164

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-7.958	6.526	12.48	13.38	0.9	-7.058	6.526	12.48	13.38	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-955.7	1222	-0.0005953	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.1	Si
SLU 83	fin.	555.34	-1772	-0.0003113	0.0001872	0.0035	0.9		2959	2959	No	5.33	Si
SLU 84	ini.	-957.95	1223	-0.0005971	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.09	Si
SLU 84	fin.	557.34	-1779	-0.0003126	0.0001872	0.0035	0.9		2959	2959	No	5.31	Si
SLU 78	ini.	-931.12	1148	-0.0005765	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.18	Si
SLU 78	fin.	556.16	-1804	-0.0003119	0.0001872	0.0035	0.9		2959	2959	No	5.32	Si
SLU 76	ini.	-928.96	1168	-0.0005749	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.19	Si
SLU 76	fin.	547.93	-1762	-0.0003065	0.0001872	0.0035	0.9		2959	2959	No	5.4	Si
SLU 81	ini.	-944.75	1213	-0.0005869	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.14	Si
SLU 81	fin.	546.81	-1740	-0.0003058	0.0001872	0.0035	0.9		2959	2959	No	5.41	Si
SLU 75	ini.	-920.17	1139	-0.0005682	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.22	Si
SLU 75	fin.	547.62	-1773	-0.0003063	0.0001872	0.0035	0.9		2959	2959	No	5.4	Si
SLU 77	ini.	-928.88	1146	-0.0005748	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.19	Si
SLU 77	fin.	554.16	-1797	-0.0003105	0.0001872	0.0035	0.9		2959	2959	No	5.34	Si
SLU 82	ini.	-946.99	1215	-0.0005886	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.13	Si
SLU 82	fin.	548.81	-1747	-0.0003071	0.0001872	0.0035	0.9		2959	2959	No	5.39	Si
SLU 79	ini.	-936.18	1173	-0.0005804	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.17	Si
SLU 79	fin.	553.14	-1782	-0.0003099	0.0001872	0.0035	0.9		2959	2959	No	5.35	Si
SLU 80	ini.	-938.42	1175	-0.0005821	0.0001872	0.0035	0.9		2964.67	2964.67	No	3.16	Si
SLU 80	fin.	555.14	-1789	-0.0003112	0.0001872	0.0035	0.9		2959	2959	No	5.33	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-920.17	3160	0.9	0	365	7137	3773	2295	6068	No	1.92	Si
SLU 75	fin.	547.62	3265	0.9	0	365	7137	3773	2295	6068	No	1.86	Si
SLU 81	ini.	-944.75	3291	0.9	0	365	7137	3773	2295	6068	No	1.84	Si
SLU 81	fin.	546.81	3174	0.9	0	365	7137	3773	2295	6068	No	1.91	Si
SLU 79	ini.	-936.18	3213	0.9	0	365	7137	3773	2295	6068	No	1.89	Si
SLU 79	fin.	553.14	3297	0.9	0	365	7137	3773	2295	6068	No	1.84	Si
SLU 82	ini.	-946.99	3299	0.9	0	365	7137	3773	2295	6068	No	1.84	Si
SLU 82	fin.	548.81	3186	0.9	0	365	7137	3773	2295	6068	No	1.9	Si
SLU 83	ini.	-955.7	3312	0.9	0	365	7137	3773	2295	6068	No	1.83	Si
SLU 83	fin.	555.34	3251	0.9	0	365	7137	3773	2295	6068	No	1.87	Si
SLU 78	ini.	-931.12	3181	0.9	0	365	7137	3773	2295	6068	No	1.91	Si
SLU 78	fin.	556.16	3342	0.9	0	365	7137	3773	2295	6068	No	1.82	Si
SLU 77	ini.	-928.88	3173	0.9	0	365	7137	3773	2295	6068	No	1.91	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	fin.	554.16	3330	0.9	0	365	7137	3773	2295	6068	No	1.82	Si
SLU 80	ini.	-938.42	3221	0.9	0	365	7137	3773	2295	6068	No	1.88	Si
SLU 80	fin.	555.14	3309	0.9	0	365	7137	3773	2295	6068	No	1.83	Si
SLU 84	ini.	-957.95	3320	0.9	0	365	7137	3773	2295	6068	No	1.83	Si
SLU 84	fin.	557.34	3263	0.9	0	365	7137	3773	2295	6068	No	1.86	Si
SLU 70	ini.	-860	2901	0.9	0	365	7137	3773	2295	6068	No	2.09	Si
SLU 70	fin.	531.1	3269	0.9	0	365	7137	3773	2295	6068	No	1.86	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	-1125.32	1212	-0.0006854	0.0002807	0.0035	0.9		2995.37	2995.37		2.66	Si
SLV 4	fin.	751.16	-2534	-0.0004212	0.0002807	0.0035	0.9		2989.59	2989.59		3.98	Si
SLD 6	ini.	-825.54	950	-0.0004698	0.0002807	0.0035	0.9		2995.37	2995.37		3.63	Si
SLD 6	fin.	533.67	-1761	-0.0002852	0.0002807	0.0035	0.9		2989.59	2989.59		5.6	Si
SLD 2	ini.	-910.94	1023	-0.0005287	0.0002807	0.0035	0.9		2995.37	2995.37		3.29	Si
SLD 2	fin.	594.31	-1980	-0.0003217	0.0002807	0.0035	0.9		2989.59	2989.59		5.03	Si
SLD 1	ini.	-854.21	947	-0.0004894	0.0002807	0.0035	0.9		2995.37	2995.37		3.51	Si
SLD 1	fin.	557.16	-1870	-0.0002992	0.0002807	0.0035	0.9		2989.59	2989.59		5.37	Si
SLV 1	ini.	-1120.09	1140	-0.0006814	0.0002807	0.0035	0.9		2995.37	2995.37		2.67	Si
SLV 1	fin.	774.52	-2655	-0.0004366	0.0002807	0.0035	0.9		2989.59	2989.59		3.86	Si
SLD 4	ini.	-854.91	977	-0.0004898	0.0002807	0.0035	0.9		2995.37	2995.37		3.5	Si
SLD 4	fin.	545.86	-1814	-0.0002925	0.0002807	0.0035	0.9		2989.59	2989.59		5.48	Si
SLV 6	ini.	-1047.95	1143	-0.0006273	0.0002807	0.0035	0.9		2995.37	2995.37		2.86	Si
SLV 6	fin.	715.07	-2385	-0.0003976	0.0002807	0.0035	0.9		2989.59	2989.59		4.18	Si
SLV 5	ini.	-963.54	1030	-0.0005659	0.0002807	0.0035	0.9		2995.37	2995.37		3.11	Si
SLV 5	fin.	659.81	-2221	-0.0003624	0.0002807	0.0035	0.9		2989.59	2989.59		4.53	Si
SLV 3	ini.	-993.15	1036	-0.0005872	0.0002807	0.0035	0.9		2995.37	2995.37		3.02	Si
SLV 3	fin.	664.62	-2277	-0.0003654	0.0002807	0.0035	0.9		2989.59	2989.59		4.5	Si
SLV 2	ini.	-1252.26	1316	-0.0007844	0.0002807	0.0035	0.9		2995.37	2995.37		2.39	Si
SLV 2	fin.	861.05	-2912	-0.0004951	0.0002807	0.0035	0.9		2989.59	2989.59		3.47	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 5	ini.	-963.54	3405	0.9	0	548	7137	5660	2295	7684		2.26	Si
SLV 5	fin.	659.81	3926	0.9	0	548	7137	5660	2295	7684		1.96	Si
SLD 4	ini.	-854.91	3071	0.9	0	548	7137	5660	2295	7684		2.5	Si
SLD 4	fin.	545.86	3160	0.9	0	548	7137	5660	2295	7684		2.43	Si
SLV 6	ini.	-1047.95	3700	0.9	0	548	7137	5660	2295	7684		2.08	Si
SLV 6	fin.	715.07	4227	0.9	0	548	7137	5660	2295	7684		1.82	Si
SLV 4	ini.	-1125.32	4174	0.9	0	548	7137	5660	2295	7684		1.84	Si
SLV 4	fin.	751.16	4252	0.9	0	548	7137	5660	2295	7684		1.81	Si
SLD 1	ini.	-854.21	3066	0.9	0	548	7137	5660	2295	7684		2.51	Si
SLD 1	fin.	557.16	3255	0.9	0	548	7137	5660	2295	7684		2.36	Si
SLV 3	ini.	-993.15	3713	0.9	0	548	7137	5660	2295	7684		2.07	Si
SLV 3	fin.	664.62	3781	0.9	0	548	7137	5660	2295	7684		2.03	Si
SLV 2	ini.	-1252.26	4612	0.9	0	548	7137	5660	2295	7684		1.67	Si
SLV 2	fin.	861.05	4927	0.9	0	548	7137	5660	2295	7684		1.56	Si
SLD 2	ini.	-910.94	3264	0.9	0	548	7137	5660	2295	7684		2.35	Si
SLD 2	fin.	594.31	3457	0.9	0	548	7137	5660	2295	7684		2.22	Si
SLD 6	ini.	-825.54	2880	0.9	0	548	7137	5660	2295	7684		2.67	Si
SLD 6	fin.	533.67	3169	0.9	0	548	7137	5660	2295	7684		2.42	Si
SLV 1	ini.	-1120.09	4151	0.9	0	548	7137	5660	2295	7684		1.85	Si
SLV 1	fin.	774.52	4456	0.9	0	548	7137	5660	2295	7684		1.72	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.392	SLV 2	Si
V_SLV	1.56	SLV 2	Si
PF_SLU	3.095	SLU 84	Si
V_SLU	1.816	SLU 78	Si

Trave di accoppiamento 165

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-7.958	6.526	15.18	15.64	0.46	-7.058	6.526	15.18	15.64	0.46	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-298.32	-1529	-0.0007403	0.0001872	0.0035	0.46		780.23	780.23	No	2.62	Si
SLU 74	fin.	264.19	1408	-0.0006386	0.0001872	0.0035	0.46		777.36	777.36	No	2.94	Si
SLU 75	ini.	-299.23	-1535	-0.0007432	0.0001872	0.0035	0.46		780.23	780.23	No	2.61	Si
SLU 75	fin.	264.94	1411	-0.0006409	0.0001872	0.0035	0.46		777.36	777.36	No	2.93	Si
SLU 79	ini.	-300.59	-1540	-0.0007475	0.0001872	0.0035	0.46		780.23	780.23	No	2.6	Si
SLU 79	fin.	267.84	1431	-0.0006496	0.0001872	0.0035	0.46		777.36	777.36	No	2.9	Si
SLU 80	ini.	-301.51	-1545	-0.0007503	0.0001872	0.0035	0.46		780.23	780.23	No	2.59	Si
SLU 80	fin.	268.6	1434	-0.0006519	0.0001872	0.0035	0.46		777.36	777.36	No	2.89	Si
SLU 70	ini.	-295.26	-1515	-0.0007307	0.0001872	0.0035	0.46		780.23	780.23	No	2.64	Si
SLU 70	fin.	245.91	1334	-0.0005844	0.0001872	0.0035	0.46		777.36	777.36	No	3.16	Si
SLU 84	ini.	-298.86	-1533	-0.000742	0.0001872	0.0035	0.46		780.23	780.23	No	2.61	Si
SLU 84	fin.	276.49	1455	-0.0006759	0.0001872	0.0035	0.46		777.36	777.36	No	2.81	Si
SLU 76	ini.	-294.5	-1514	-0.0007284	0.0001872	0.0035	0.46		780.23	780.23	No	2.65	Si
SLU 76	fin.	268.64	1415	-0.000652	0.0001872	0.0035	0.46		777.36	777.36	No	2.89	Si
SLU 83	ini.	-297.95	-1528	-0.0007391	0.0001872	0.0035	0.46		780.23	780.23	No	2.62	Si
SLU 83	fin.	275.74	1452	-0.0006736	0.0001872	0.0035	0.46		777.36	777.36	No	2.82	Si
SLU 77	ini.	-305.93	-1564	-0.0007643	0.0001872	0.0035	0.46		780.23	780.23	No	2.55	Si
SLU 77	fin.	264.65	1429	-0.00064	0.0001872	0.0035	0.46		777.36	777.36	No	2.94	Si
SLU 78	ini.	-306.84	-1570	-0.0007672	0.0001872	0.0035	0.46		780.23	780.23	No	2.54	Si
SLU 78	fin.	265.4	1431	-0.0006422	0.0001872	0.0035	0.46		777.36	777.36	No	2.93	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-299.23	2396	0.46	0	124	3648	1928	1173	3101	No	1.29	Si
SLU 75	fin.	264.94	868	0.46	0	124	3648	1928	1173	3101	No	3.57	Si
SLU 80	ini.	-301.51	2409	0.46	0	124	3648	1928	1173	3101	No	1.29	Si
SLU 80	fin.	268.6	882	0.46	0	124	3648	1928	1173	3101	No	3.52	Si
SLU 83	ini.	-297.95	2353	0.46	0	124	3648	1928	1173	3101	No	1.32	Si
SLU 83	fin.	275.74	940	0.46	0	124	3648	1928	1173	3101	No	3.3	Si
SLU 84	ini.	-298.86	2358	0.46	0	124	3648	1928	1173	3101	No	1.32	Si
SLU 84	fin.	276.49	944	0.46	0	124	3648	1928	1173	3101	No	3.29	Si
SLU 78	ini.	-306.84	2482	0.46	0	124	3648	1928	1173	3101	No	1.25	Si
SLU 78	fin.	265.4	842	0.46	0	124	3648	1928	1173	3101	No	3.68	Si
SLU 77	ini.	-305.93	2477	0.46	0	124	3648	1928	1173	3101	No	1.25	Si
SLU 77	fin.	264.65	838	0.46	0	124	3648	1928	1173	3101	No	3.7	Si
SLU 70	ini.	-295.26	2401	0.46	0	124	3648	1928	1173	3101	No	1.29	Si
SLU 70	fin.	245.91	758	0.46	0	124	3648	1928	1173	3101	No	4.09	Si
SLU 74	ini.	-298.32	2392	0.46	0	124	3648	1928	1173	3101	No	1.3	Si
SLU 74	fin.	264.19	864	0.46	0	124	3648	1928	1173	3101	No	3.59	Si
SLU 79	ini.	-300.59	2404	0.46	0	124	3648	1928	1173	3101	No	1.29	Si
SLU 79	fin.	267.84	878	0.46	0	124	3648	1928	1173	3101	No	3.53	Si
SLU 69	ini.	-294.35	2396	0.46	0	124	3648	1928	1173	3101	No	1.29	Si
SLU 69	fin.	245.15	754	0.46	0	124	3648	1928	1173	3101	No	4.11	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 1	ini.	-261.05	-1387	-0.0005892	0.0002807	0.0035	0.46		788.4	788.4		3.02	Si
SLD 1	fin.	224.94	1092	-0.0004941	0.0002807	0.0035	0.46		785.44	785.44		3.49	Si
SLV 10	ini.	-271.91	-1485	-0.0006194	0.0002807	0.0035	0.46		788.4	788.4		2.9	Si
SLV 10	fin.	253.69	1220	-0.0005714	0.0002807	0.0035	0.46		785.44	785.44		3.1	Si
SLD 2	ini.	-280.85	-1502	-0.0006447	0.0002807	0.0035	0.46		788.4	788.4		2.81	Si
SLD 2	fin.	244.84	1174	-0.0005473	0.0002807	0.0035	0.46		785.44	785.44		3.21	Si
SLD 6	ini.	-267.71	-1438	-0.0006077	0.0002807	0.0035	0.46		788.4	788.4		2.94	Si
SLD 6	fin.	239.57	1159	-0.000533	0.0002807	0.0035	0.46		785.44	785.44		3.28	Si
SLV 6	ini.	-342.02	-1892	-0.0008267	0.0002807	0.0035	0.46		788.4	788.4		2.31	Si
SLV 6	fin.	300.46	1362	-0.0007045	0.0002807	0.0035	0.46		785.44	785.44		2.61	Si
SLV 4	ini.	-325.12	-1742	-0.0007748	0.0002807	0.0035	0.46		788.4	788.4		2.42	Si
SLV 4	fin.	272.09	1265	-0.0006227	0.0002807	0.0035	0.46		785.44	785.44		2.89	Si
SLV 3	ini.	-278.99	-1474	-0.0006394	0.0002807	0.0035	0.46		788.4	788.4		2.83	Si
SLV 3	fin.	225.73	1073	-0.0004962	0.0002807	0.0035	0.46		785.44	785.44		3.48	Si
SLV 1	ini.	-328.39	-1785	-0.0007848	0.0002807	0.0035	0.46		788.4	788.4		2.4	Si
SLV 1	fin.	267.87	1211	-0.0006108	0.0002807	0.0035	0.46		785.44	785.44		2.93	Si
SLV 2	ini.	-374.52	-2053	-0.0009303	0.0002807	0.0035	0.46		788.4	788.4		2.11	Si
SLV 2	fin.	314.23	1402	-0.0007454	0.0002807	0.0035	0.46		785.44	785.44		2.5	Si
SLV 5	ini.	-312.56	-1721	-0.0007371	0.0002807	0.0035	0.46		788.4	788.4		2.52	Si
SLV 5	fin.	270.85	1240	-0.0006192	0.0002807	0.0035	0.46		785.44	785.44		2.9	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 2	ini.	-280.85	2039	0.46	0	187	3648	2893	1173	3834		1.88	Si
SLD 2	fin.	244.84	916	0.46	0	187	3648	2893	1173	3834		4.19	Si
SLV 5	ini.	-312.56	2240	0.46	0	187	3648	2893	1173	3834		1.71	Si
SLV 5	fin.	270.85	1070	0.46	0	187	3648	2893	1173	3834		3.58	Si
SLV 3	ini.	-278.99	2000	0.46	0	187	3648	2893	1173	3834		1.92	Si
SLV 3	fin.	225.73	797	0.46	0	187	3648	2893	1173	3834		4.81	Si
SLV 2	ini.	-374.52	2559	0.46	0	187	3648	2893	1173	3834		1.5	Si
SLV 2	fin.	314.23	1249	0.46	0	187	3648	2893	1173	3834		3.07	Si
SLD 1	ini.	-261.05	1925	0.46	0	187	3648	2893	1173	3834		1.99	Si
SLD 1	fin.	224.94	818	0.46	0	187	3648	2893	1173	3834		4.69	Si
SLV 10	ini.	-271.91	2028	0.46	0	187	3648	2893	1173	3834		1.89	Si
SLV 10	fin.	253.69	1000	0.46	0	187	3648	2893	1173	3834		3.83	Si
SLV 6	ini.	-342.02	2409	0.46	0	187	3648	2893	1173	3834		1.59	Si
SLV 6	fin.	300.46	1216	0.46	0	187	3648	2893	1173	3834		3.15	Si
SLD 6	ini.	-267.71	1979	0.46	0	187	3648	2893	1173	3834		1.94	Si
SLD 6	fin.	239.57	905	0.46	0	187	3648	2893	1173	3834		4.24	Si
SLV 1	ini.	-328.39	2294	0.46	0	187	3648	2893	1173	3834		1.67	Si
SLV 1	fin.	267.87	1020	0.46	0	187	3648	2893	1173	3834		3.76	Si
SLV 4	ini.	-325.12	2265	0.46	0	187	3648	2893	1173	3834		1.69	Si
SLV 4	fin.	272.09	1026	0.46	0	187	3648	2893	1173	3834		3.74	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.105	SLV 2	Si
V_SLV	1.499	SLV 2	Si
PF_SLU	2.543	SLU 78	Si
V_SLU	1.25	SLU 78	Si

Trave di accoppiamento 167

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-11.143	1.006	14.98	15.64	0.66	-12.263	1.006	14.98	15.64	0.66	1.12	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 29	ini.	-160.45	-408	-0.0001538	0.0002246	0.0035	0.66		1634.45	1634.45	No	10.19	Si
SLU 29	fin.	60.48	535	-0.0000561	0.0002246	0.0035	0.66		1630.36	1630.36	No	26.96	Si
SLU 69	ini.	-208.55	-519	-0.0002037	0.0002246	0.0035	0.66		1634.45	1634.45	No	7.84	Si
SLU 69	fin.	50.23	673	-0.0000464	0.0002246	0.0035	0.66		1630.36	1630.36	No	32.46	Si
SLU 24	ini.	-211.78	-579	-0.0002072	0.0002246	0.0035	0.66		1634.45	1634.45	No	7.72	Si
SLU 24	fin.	91.3	658	-0.0000856	0.0002246	0.0035	0.66		1630.36	1630.36	No	17.86	Si
SLU 28	ini.	-209.04	-575	-0.0002043	0.0002246	0.0035	0.66		1634.45	1634.45	No	7.82	Si
SLU 28	fin.	74.53	604	-0.0000695	0.0002246	0.0035	0.66		1630.36	1630.36	No	21.87	Si
SLU 67	ini.	-205.85	-500	-0.0002009	0.0002246	0.0035	0.66		1634.45	1634.45	No	7.94	Si
SLU 67	fin.	62.34	720	-0.0000579	0.0002246	0.0035	0.66		1630.36	1630.36	No	26.15	Si
SLU 22	ini.	-160.5	-393	-0.0001538	0.0002246	0.0035	0.66		1634.45	1634.45	No	10.18	Si
SLU 22	fin.	89.35	637	-0.0000837	0.0002246	0.0035	0.66		1630.36	1630.36	No	18.25	Si
SLU 66	ini.	-208.57	-512	-0.0002038	0.0002246	0.0035	0.66		1634.45	1634.45	No	7.84	Si
SLU 66	fin.	64.67	724	-0.0000601	0.0002246	0.0035	0.66		1630.36	1630.36	No	25.21	Si
SLU 27	ini.	-211.76	-587	-0.0002072	0.0002246	0.0035	0.66		1634.45	1634.45	No	7.72	Si
SLU 27	fin.	76.87	608	-0.0000717	0.0002246	0.0035	0.66		1630.36	1630.36	No	21.21	Si
SLU 25	ini.	-209.06	-568	-0.0002043	0.0002246	0.0035	0.66		1634.45	1634.45	No	7.82	Si
SLU 25	fin.	88.97	655	-0.0000833	0.0002246	0.0035	0.66		1630.36	1630.36	No	18.33	Si
SLU 70	ini.	-205.83	-508	-0.0002009	0.0002246	0.0035	0.66		1634.45	1634.45	No	7.94	Si
SLU 70	fin.	47.9	669	-0.0000443	0.0002246	0.0035	0.66		1630.36	1630.36	No	34.04	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 25	ini.	-209.06	2494	0.66	0	179	5234	3321	1683	5004	No	2.01	Si
SLU 25	fin.	88.97	-849	0.66	0	179	5234	3321	1683	5004	No	5.89	Si
SLU 67	ini.	-205.85	2876	0.66	0	179	5234	3321	1683	5004	No	1.74	Si
SLU 67	fin.	62.34	-1201	0.66	0	179	5234	3321	1683	5004	No	4.17	Si
SLU 77	ini.	-151.12	2755	0.66	0	179	5234	3321	1683	5004	No	1.82	Si
SLU 77	fin.	48.43	-1321	0.66	0	179	5234	3321	1683	5004	No	3.79	Si
SLU 66	ini.	-208.57	2884	0.66	0	179	5234	3321	1683	5004	No	1.73	Si
SLU 66	fin.	64.67	-1192	0.66	0	179	5234	3321	1683	5004	No	4.2	Si
SLU 74	ini.	-151.14	2781	0.66	0	179	5234	3321	1683	5004	No	1.8	Si
SLU 74	fin.	62.87	-1296	0.66	0	179	5234	3321	1683	5004	No	3.86	Si
SLU 78	ini.	-148.4	2747	0.66	0	179	5234	3321	1683	5004	No	1.82	Si
SLU 78	fin.	46.1	-1330	0.66	0	179	5234	3321	1683	5004	No	3.76	Si
SLU 24	ini.	-211.78	2503	0.66	0	179	5234	3321	1683	5004	No	2	Si
SLU 24	fin.	91.3	-841	0.66	0	179	5234	3321	1683	5004	No	5.95	Si
SLU 70	ini.	-205.83	2850	0.66	0	179	5234	3321	1683	5004	No	1.76	Si
SLU 70	fin.	47.9	-1227	0.66	0	179	5234	3321	1683	5004	No	4.08	Si
SLU 75	ini.	-148.42	2772	0.66	0	179	5234	3321	1683	5004	No	1.8	Si
SLU 75	fin.	60.53	-1304	0.66	0	179	5234	3321	1683	5004	No	3.84	Si
SLU 69	ini.	-208.55	2859	0.66	0	179	5234	3321	1683	5004	No	1.75	Si
SLU 69	fin.	50.23	-1218	0.66	0	179	5234	3321	1683	5004	No	4.11	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-641.11	-1709	-0.0007165	0.0003369	0.0035	0.66		1614.71	1614.71		2.52	Si
SLV 16	fin.	1616.42	5066	-0.0031177	0.0003369	0.0035	0.66		1610.37	1610.37		1	No
SLV 11	ini.	-542.56	-1797	-0.0005833	0.0003369	0.0035	0.66		1614.71	1614.71		2.98	Si
SLV 11	fin.	732.83	2176	-0.0008519	0.0003369	0.0035	0.66		1610.37	1610.37		2.2	Si
SLV 4	ini.	275.41	700	-0.0002695	0.0003369	0.0035	0.66		1610.37	1610.37		5.85	Si
SLV 4	fin.	-1396.84	-3789	-0.0022513	0.0003369	0.0035	0.66		1614.71	1614.71		1.16	Si
SLV 13	ini.	-449.45	-922	-0.0004661	0.0003369	0.0035	0.66		1614.71	1614.71		3.59	Si
SLV 13	fin.	1455.76	4837	-0.002464	0.0003369	0.0035	0.66		1610.37	1610.37		1.11	Si
SLV 14	ini.	-450.14	-915	-0.0004669	0.0003369	0.0035	0.66		1614.71	1614.71		3.59	Si
SLV 14	fin.	1464.01	4866	-0.0024938	0.0003369	0.0035	0.66		1610.37	1610.37		1.1	Si
SLV 1	ini.	467.06	1487	-0.0004891	0.0003369	0.0035	0.66		1610.37	1610.37		3.45	Si
SLV 1	fin.	-1557.51	-4018	-0.0028444	0.0003369	0.0035	0.66		1614.71	1614.71		1.04	Si
SLV 3	ini.	276.09	694	-0.0002703	0.0003369	0.0035	0.66		1610.37	1610.37		5.83	Si
SLV 3	fin.	-1405.1	-3818	-0.0022782	0.0003369	0.0035	0.66		1614.71	1614.71		1.15	Si
SLV 2	ini.	466.37	1493	-0.0004882	0.0003369	0.0035	0.66		1610.37	1610.37		3.45	Si
SLV 2	fin.	-1549.25	-3989	-0.00281	0.0003369	0.0035	0.66		1614.71	1614.71		1.04	Si
SLV 12	ini.	-543	-1793	-0.0005839	0.0003369	0.0035	0.66		1614.71	1614.71		2.97	Si
SLV 12	fin.	738.1	2194	-0.0008598	0.0003369	0.0035	0.66		1610.37	1610.37		2.18	Si
SLV 15	ini.	-640.42	-1715	-0.0007156	0.0003369	0.0035	0.66		1614.71	1614.71		2.52	Si
SLV 15	fin.	1608.17	5037	-0.0030812	0.0003369	0.0035	0.66		1610.37	1610.37		1	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-640.42	5791	0.66	0	268	5234	4981	1683	5501		0.95	No
SLV 15	fin.	1608.17	2883	0.66	0	268	5234	4981	1683	5501		1.91	Si
SLV 3	ini.	276.09	-1601	0.66	0	268	5234	4981	1683	5501		3.44	Si
SLV 3	fin.	-1405.1	-4113	0.66	0	268	5234	4981	1683	5501		1.34	Si
SLV 2	ini.	466.37	-2194	0.66	0	268	5234	4981	1683	5501		2.51	Si
SLV 2	fin.	-1549.25	-4690	0.66	0	268	5234	4981	1683	5501		1.17	Si
SLV 4	ini.	275.41	-1587	0.66	0	268	5234	4981	1683	5501		3.47	Si
SLV 4	fin.	-1396.84	-4099	0.66	0	268	5234	4981	1683	5501		1.34	Si
SLV 1	ini.	467.06	-2208	0.66	0	268	5234	4981	1683	5501		2.49	Si
SLV 1	fin.	-1557.51	-4705	0.66	0	268	5234	4981	1683	5501		1.17	Si
SLV 12	ini.	-543	3923	0.66	0	268	5234	4981	1683	5501		1.4	Si
SLV 12	fin.	738.1	1136	0.66	0	268	5234	4981	1683	5501		4.84	Si
SLV 16	ini.	-641.11	5805	0.66	0	268	5234	4981	1683	5501		0.95	No
SLV 16	fin.	1616.42	2897	0.66	0	268	5234	4981	1683	5501		1.9	Si
SLV 13	ini.	-449.45	5184	0.66	0	268	5234	4981	1683	5501		1.06	Si
SLV 13	fin.	1455.76	2291	0.66	0	268	5234	4981	1683	5501		2.4	Si
SLV 11	ini.	-542.56	3914	0.66	0	268	5234	4981	1683	5501		1.41	Si
SLV 11	fin.	732.83	1127	0.66	0	268	5234	4981	1683	5501		4.88	Si
SLV 14	ini.	-450.14	5198	0.66	0	268	5234	4981	1683	5501		1.06	Si
SLV 14	fin.	1464.01	2306	0.66	0	268	5234	4981	1683	5501		2.39	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.996	SLV 16	No
V_SLV	0.948	SLV 16	No
PF_SLU	7.718	SLU 24	Si
V_SLU	1.735	SLU 66	Si

Trave di accoppiamento 168

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-9.398	1.006	14.98	15.64	0.66	-10.478	1.006	14.98	15.64	0.66	1.08	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 60	ini.	-323.89	-1482	-0.0003338	0.0002246	0.0035	0.66		1634.45	1634.45	No	5.05	Si
SLU 60	fin.	266.78	165	-0.0002682	0.0002246	0.0035	0.66		1630.36	1630.36	No	6.11	Si
SLU 56	ini.	-310.73	-1552	-0.0003182	0.0002246	0.0035	0.66		1634.45	1634.45	No	5.26	Si
SLU 56	fin.	163.61	-32	-0.0001574	0.0002246	0.0035	0.66		1630.36	1630.36	No	9.96	Si
SLU 57	ini.	-312.28	-1559	-0.00032	0.0002246	0.0035	0.66		1634.45	1634.45	No	5.23	Si
SLU 57	fin.	165.99	-27	-0.0001598	0.0002246	0.0035	0.66		1630.36	1630.36	No	9.82	Si
SLU 53	ini.	-314.36	-1531	-0.0003225	0.0002246	0.0035	0.66		1634.45	1634.45	No	5.2	Si
SLU 53	fin.	175.16	-44	-0.0001693	0.0002246	0.0035	0.66		1630.36	1630.36	No	9.31	Si
SLU 54	ini.	-315.92	-1538	-0.0003243	0.0002246	0.0035	0.66		1634.45	1634.45	No	5.17	Si
SLU 54	fin.	177.53	-39	-0.0001717	0.0002246	0.0035	0.66		1630.36	1630.36	No	9.18	Si
SLU 55	ini.	-301.65	-1446	-0.0003075	0.0002246	0.0035	0.66		1634.45	1634.45	No	5.42	Si
SLU 55	fin.	211.82	94	-0.0002078	0.0002246	0.0035	0.66		1630.36	1630.36	No	7.7	Si
SLU 52	ini.	-305.28	-1426	-0.0003118	0.0002246	0.0035	0.66		1634.45	1634.45	No	5.35	Si
SLU 52	fin.	223.36	81	-0.0002202	0.0002246	0.0035	0.66		1630.36	1630.36	No	7.3	Si
SLU 63	ini.	-321.81	-1510	-0.0003313	0.0002246	0.0035	0.66		1634.45	1634.45	No	5.08	Si
SLU 63	fin.	257.61	182	-0.0002579	0.0002246	0.0035	0.66		1630.36	1630.36	No	6.33	Si
SLU 62	ini.	-320.25	-1503	-0.0003294	0.0002246	0.0035	0.66		1634.45	1634.45	No	5.1	Si
SLU 62	fin.	255.23	177	-0.0002552	0.0002246	0.0035	0.66		1630.36	1630.36	No	6.39	Si
SLU 61	ini.	-325.44	-1490	-0.0003356	0.0002246	0.0035	0.66		1634.45	1634.45	No	5.02	Si
SLU 61	fin.	269.15	170	-0.0002709	0.0002246	0.0035	0.66		1630.36	1630.36	No	6.06	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 49	ini.	-262.83	1255	0.66	0	179	5234	3321	1683	5004	No	3.99	Si
SLU 49	fin.	55.46	234	0.66	0	179	5234	3321	1683	5004	No	21.43	Si
SLU 58	ini.	-295.42	1237	0.66	0	179	5234	3321	1683	5004	No	4.05	Si
SLU 58	fin.	196.32	678	0.66	0	179	5234	3321	1683	5004	No	7.38	Si
SLU 59	ini.	-296.98	1245	0.66	0	179	5234	3321	1683	5004	No	4.02	Si
SLU 59	fin.	198.69	685	0.66	0	179	5234	3321	1683	5004	No	7.31	Si
SLU 50	ini.	-245.97	1185	0.66	0	179	5234	3321	1683	5004	No	4.22	Si
SLU 50	fin.	85.79	299	0.66	0	179	5234	3321	1683	5004	No	16.75	Si
SLU 56	ini.	-310.73	1299	0.66	0	179	5234	3321	1683	5004	No	3.85	Si
SLU 56	fin.	163.61	606	0.66	0	179	5234	3321	1683	5004	No	8.26	Si
SLU 53	ini.	-314.36	1157	0.66	0	179	5234	3321	1683	5004	No	4.32	Si
SLU 53	fin.	175.16	690	0.66	0	179	5234	3321	1683	5004	No	7.25	Si
SLU 48	ini.	-261.27	1247	0.66	0	179	5234	3321	1683	5004	No	4.01	Si
SLU 48	fin.	53.08	227	0.66	0	179	5234	3321	1683	5004	No	22.08	Si
SLU 54	ini.	-315.92	1166	0.66	0	179	5234	3321	1683	5004	No	4.29	Si
SLU 54	fin.	177.53	697	0.66	0	179	5234	3321	1683	5004	No	7.18	Si
SLU 57	ini.	-312.28	1307	0.66	0	179	5234	3321	1683	5004	No	3.83	Si
SLU 57	fin.	165.99	612	0.66	0	179	5234	3321	1683	5004	No	8.17	Si
SLU 51	ini.	-247.52	1193	0.66	0	179	5234	3321	1683	5004	No	4.2	Si
SLU 51	fin.	88.16	306	0.66	0	179	5234	3321	1683	5004	No	16.36	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-1063.88	-4054	-0.0014151	0.0003369	0.0035	0.66		1614.71	1614.71		1.52	Si
SLV 16	fin.	300.59	-867	-0.0002965	0.0003369	0.0035	0.66		1610.37	1610.37		5.36	Si
SLV 15	ini.	-1054.95	-4020	-0.0013975	0.0003369	0.0035	0.66		1614.71	1614.71		1.53	Si
SLV 15	fin.	294.22	-874	-0.0002896	0.0003369	0.0035	0.66		1610.37	1610.37		5.47	Si
SLV 1	ini.	674.76	2163	-0.0007666	0.0003369	0.0035	0.66		1610.37	1610.37		2.39	Si
SLV 1	fin.	-123.79	628	-0.0001158	0.0003369	0.0035	0.66		1614.71	1614.71		13.04	Si
SLV 9	ini.	-702.75	-2900	-0.0008047	0.0003369	0.0035	0.66		1614.71	1614.71		2.3	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 9	fin.	487.68	343	-0.0005148	0.0003369	0.0035	0.66		1610.37	1610.37		3.3	Si
SLV 3	ini.	813.25	2734	-0.0009762	0.0003369	0.0035	0.66		1610.37	1610.37		1.98	Si
SLV 3	fin.	-310.18	249	-0.0003061	0.0003369	0.0035	0.66		1614.71	1614.71		5.21	Si
SLV 2	ini.	665.84	2128	-0.0007538	0.0003369	0.0035	0.66		1610.37	1610.37		2.42	Si
SLV 2	fin.	-117.42	635	-0.0001097	0.0003369	0.0035	0.66		1614.71	1614.71		13.75	Si
SLV 10	ini.	-708.45	-2922	-0.0008131	0.0003369	0.0035	0.66		1614.71	1614.71		2.28	Si
SLV 10	fin.	491.75	347	-0.0005199	0.0003369	0.0035	0.66		1610.37	1610.37		3.27	Si
SLV 13	ini.	-1193.44	-4591	-0.0016923	0.0003369	0.0035	0.66		1614.71	1614.71		1.35	Si
SLV 13	fin.	480.62	-494	-0.0005059	0.0003369	0.0035	0.66		1610.37	1610.37		3.35	Si
SLV 4	ini.	804.32	2699	-0.0009621	0.0003369	0.0035	0.66		1610.37	1610.37		2	Si
SLV 4	fin.	-303.81	255	-0.0002992	0.0003369	0.0035	0.66		1614.71	1614.71		5.31	Si
SLV 14	ini.	-1202.36	-4626	-0.0017133	0.0003369	0.0035	0.66		1614.71	1614.71		1.34	Si
SLV 14	fin.	486.98	-488	-0.0005139	0.0003369	0.0035	0.66		1610.37	1610.37		3.31	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-1054.95	1970	0.66	0	268	5234	4981	1683	5501		2.79	Si
SLV 15	fin.	294.22	2065	0.66	0	268	5234	4981	1683	5501		2.66	Si
SLV 14	ini.	-1202.36	2595	0.66	0	268	5234	4981	1683	5501		2.12	Si
SLV 14	fin.	486.98	2676	0.66	0	268	5234	4981	1683	5501		2.06	Si
SLV 10	ini.	-708.45	2117	0.66	0	268	5234	4981	1683	5501		2.6	Si
SLV 10	fin.	491.75	1972	0.66	0	268	5234	4981	1683	5501		2.79	Si
SLD 14	ini.	-626.56	1464	0.66	0	268	5234	4981	1683	5501		3.76	Si
SLD 14	fin.	260.1	1376	0.66	0	268	5234	4981	1683	5501		4	Si
SLV 3	ini.	813.25	-1373	0.66	0	268	5234	4981	1683	5501		4.01	Si
SLV 3	fin.	-310.18	-1881	0.66	0	268	5234	4981	1683	5501		2.92	Si
SLV 13	ini.	-1193.44	2567	0.66	0	268	5234	4981	1683	5501		2.14	Si
SLV 13	fin.	480.62	2650	0.66	0	268	5234	4981	1683	5501		2.08	Si
SLV 4	ini.	804.32	-1345	0.66	0	268	5234	4981	1683	5501		4.09	Si
SLV 4	fin.	-303.81	-1855	0.66	0	268	5234	4981	1683	5501		2.97	Si
SLD 13	ini.	-622.73	1452	0.66	0	268	5234	4981	1683	5501		3.79	Si
SLD 13	fin.	257.36	1365	0.66	0	268	5234	4981	1683	5501		4.03	Si
SLV 9	ini.	-702.75	2099	0.66	0	268	5234	4981	1683	5501		2.62	Si
SLV 9	fin.	487.68	1956	0.66	0	268	5234	4981	1683	5501		2.81	Si
SLV 16	ini.	-1063.88	1998	0.66	0	268	5234	4981	1683	5501		2.75	Si
SLV 16	fin.	300.59	2091	0.66	0	268	5234	4981	1683	5501		2.63	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.343	SLV 14	Si
V_SLV	2.056	SLV 14	Si
PF_SLU	5.022	SLU 61	Si
V_SLU	3.828	SLU 57	Si

Trave di accoppiamento 169

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.463	1.006	14.58	15.64	1.06	-7.463	1.006	14.58	15.64	1.06	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-31.17	1617	-0.000011	0.0002246	0.0035	1.06		4210.93	4210.93	No	135.07	Si
SLU 83	fin.	1505.36	3653	-0.0006793	0.0002246	0.0035	1.06		4204.29	4204.29	No	2.79	Si
SLU 80	ini.	-12.54	1563	-0.0000044	0.0002246	0.0035	1.06		4210.93	4210.93	No	335.88	Si
SLU 80	fin.	1434.96	3463	-0.0006399	0.0002246	0.0035	1.06		4204.29	4204.29	No	2.93	Si
SLU 81	ini.	-13.62	1655	-0.0000048	0.0002246	0.0035	1.06		4210.93	4210.93	No	309.25	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	fin.	1460.37	3614	-0.000654	0.0002246	0.0035	1.06		4204.29	4204.29	No	2.88	Si
SLU 75	ini.	-28.1	1508	-0.0000099	0.0002246	0.0035	1.06		4210.93	4210.93	No	149.85	Si
SLU 75	fin.	1413.15	3434	-0.0006278	0.0002246	0.0035	1.06		4204.29	4204.29	No	2.98	Si
SLU 77	ini.	-45.24	1473	-0.000016	0.0002246	0.0035	1.06		4210.93	4210.93	No	93.08	Si
SLU 77	fin.	1458.28	3476	-0.0006529	0.0002246	0.0035	1.06		4204.29	4204.29	No	2.88	Si
SLU 82	ini.	-14.04	1652	-0.0000049	0.0002246	0.0035	1.06		4210.93	4210.93	No	300.02	Si
SLU 82	fin.	1460.23	3612	-0.0006539	0.0002246	0.0035	1.06		4204.29	4204.29	No	2.88	Si
SLU 84	ini.	-31.59	1615	-0.0000112	0.0002246	0.0035	1.06		4210.93	4210.93	No	133.28	Si
SLU 84	fin.	1505.22	3651	-0.0006792	0.0002246	0.0035	1.06		4204.29	4204.29	No	2.79	Si
SLU 78	ini.	-45.66	1471	-0.0000162	0.0002246	0.0035	1.06		4210.93	4210.93	No	92.23	Si
SLU 78	fin.	1458.15	3474	-0.0006528	0.0002246	0.0035	1.06		4204.29	4204.29	No	2.88	Si
SLU 79	ini.	-12.12	1566	-0.0000043	0.0002246	0.0035	1.06		4210.93	4210.93	No	347.49	Si
SLU 79	fin.	1435.1	3465	-0.00064	0.0002246	0.0035	1.06		4204.29	4204.29	No	2.93	Si
SLU 74	ini.	-27.68	1510	-0.0000098	0.0002246	0.0035	1.06		4210.93	4210.93	No	152.12	Si
SLU 74	fin.	1413.29	3436	-0.0006279	0.0002246	0.0035	1.06		4204.29	4204.29	No	2.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-31.59	4001	1.06	0	430	7930	5333	2703	8036	No	2.01	Si
SLU 84	fin.	1505.22	1479	1.06	0	430	7930	5333	2703	8036	No	5.43	Si
SLU 79	ini.	-12.12	3839	1.06	0	430	7930	5333	2703	8036	No	2.09	Si
SLU 79	fin.	1435.1	1317	1.06	0	430	7930	5333	2703	8036	No	6.1	Si
SLU 77	ini.	-45.24	4126	1.06	0	430	7930	5333	2703	8036	No	1.95	Si
SLU 77	fin.	1458.28	1293	1.06	0	430	7930	5333	2703	8036	No	6.22	Si
SLU 78	ini.	-45.66	4126	1.06	0	430	7930	5333	2703	8036	No	1.95	Si
SLU 78	fin.	1458.15	1293	1.06	0	430	7930	5333	2703	8036	No	6.21	Si
SLU 81	ini.	-13.62	3898	1.06	0	430	7930	5333	2703	8036	No	2.06	Si
SLU 81	fin.	1460.37	1375	1.06	0	430	7930	5333	2703	8036	No	5.84	Si
SLU 82	ini.	-14.04	3898	1.06	0	430	7930	5333	2703	8036	No	2.06	Si
SLU 82	fin.	1460.23	1376	1.06	0	430	7930	5333	2703	8036	No	5.84	Si
SLU 80	ini.	-12.54	3840	1.06	0	430	7930	5333	2703	8036	No	2.09	Si
SLU 80	fin.	1434.96	1317	1.06	0	430	7930	5333	2703	8036	No	6.1	Si
SLU 75	ini.	-28.1	4023	1.06	0	430	7930	5333	2703	8036	No	2	Si
SLU 75	fin.	1413.15	1190	1.06	0	430	7930	5333	2703	8036	No	6.75	Si
SLU 74	ini.	-27.68	4022	1.06	0	430	7930	5333	2703	8036	No	2	Si
SLU 74	fin.	1413.29	1190	1.06	0	430	7930	5333	2703	8036	No	6.75	Si
SLU 83	ini.	-31.17	4001	1.06	0	430	7930	5333	2703	8036	No	2.01	Si
SLU 83	fin.	1505.36	1478	1.06	0	430	7930	5333	2703	8036	No	5.44	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 14	ini.	-146.12	894	-0.0000521	0.0003369	0.0035	1.06		4170.47	4170.47		28.54	Si
SLD 14	fin.	1134	2576	-0.000455	0.0003369	0.0035	1.06		4163.27	4163.27		3.67	Si
SLV 14	ini.	-427.59	468	-0.0001568	0.0003369	0.0035	1.06		4170.47	4170.47		9.75	Si
SLV 14	fin.	1503.94	3023	-0.0006382	0.0003369	0.0035	1.06		4163.27	4163.27		2.77	Si
SLD 15	ini.	-85.29	1065	-0.0000303	0.0003369	0.0035	1.06		4170.47	4170.47		48.9	Si
SLD 15	fin.	1088.64	2588	-0.0004339	0.0003369	0.0035	1.06		4163.27	4163.27		3.82	Si
SLD 13	ini.	-138.07	915	-0.0000492	0.0003369	0.0035	1.06		4170.47	4170.47		30.21	Si
SLD 13	fin.	1123.5	2567	-0.0004501	0.0003369	0.0035	1.06		4163.27	4163.27		3.71	Si
SLV 9	ini.	-255.24	496	-0.000092	0.0003369	0.0035	1.06		4170.47	4170.47		16.34	Si
SLV 9	fin.	1159.83	2394	-0.0004672	0.0003369	0.0035	1.06		4163.27	4163.27		3.59	Si
SLV 10	ini.	-267.22	466	-0.0000964	0.0003369	0.0035	1.06		4170.47	4170.47		15.61	Si
SLV 10	fin.	1175.45	2407	-0.0004746	0.0003369	0.0035	1.06		4163.27	4163.27		3.54	Si
SLD 16	ini.	-93.35	1045	-0.0000331	0.0003369	0.0035	1.06		4170.47	4170.47		44.68	Si
SLD 16	fin.	1099.14	2596	-0.0004388	0.0003369	0.0035	1.06		4163.27	4163.27		3.79	Si
SLV 15	ini.	-288.77	857	-0.0001044	0.0003369	0.0035	1.06		4170.47	4170.47		14.44	Si
SLV 15	fin.	1399.81	3050	-0.0005846	0.0003369	0.0035	1.06		4163.27	4163.27		2.97	Si
SLV 16	ini.	-307.54	810	-0.0001114	0.0003369	0.0035	1.06		4170.47	4170.47		13.56	Si
SLV 16	fin.	1424.27	3070	-0.000597	0.0003369	0.0035	1.06		4163.27	4163.27		2.92	Si
SLV 13	ini.	-408.82	515	-0.0001496	0.0003369	0.0035	1.06		4170.47	4170.47		10.2	Si
SLV 13	fin.	1479.48	3003	-0.0006254	0.0003369	0.0035	1.06		4163.27	4163.27		2.81	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 15	ini.	-85.29	3002	1.06	0	645	7930	8000	2703	8575		2.86	Si
SLD 15	fin.	1088.64	1090	1.06	0	645	7930	8000	2703	8575		7.87	Si
SLV 15	ini.	-288.77	3833	1.06	0	645	7930	8000	2703	8575		2.24	Si
SLV 15	fin.	1399.81	1921	1.06	0	645	7930	8000	2703	8575		4.46	Si
SLD 14	ini.	-146.12	3184	1.06	0	645	7930	8000	2703	8575		2.69	Si
SLD 14	fin.	1134	1209	1.06	0	645	7930	8000	2703	8575		7.09	Si
SLV 9	ini.	-255.24	3417	1.06	0	645	7930	8000	2703	8575		2.51	Si
SLV 9	fin.	1159.83	1244	1.06	0	645	7930	8000	2703	8575		6.89	Si
SLV 10	ini.	-267.22	3468	1.06	0	645	7930	8000	2703	8575		2.47	Si
SLV 10	fin.	1175.45	1294	1.06	0	645	7930	8000	2703	8575		6.63	Si
SLV 14	ini.	-427.59	4249	1.06	0	645	7930	8000	2703	8575		2.02	Si
SLV 14	fin.	1503.94	2194	1.06	0	645	7930	8000	2703	8575		3.91	Si
SLV 13	ini.	-408.82	4170	1.06	0	645	7930	8000	2703	8575		2.06	Si
SLV 13	fin.	1479.48	2115	1.06	0	645	7930	8000	2703	8575		4.05	Si
SLD 16	ini.	-93.35	3036	1.06	0	645	7930	8000	2703	8575		2.82	Si
SLD 16	fin.	1099.14	1124	1.06	0	645	7930	8000	2703	8575		7.63	Si
SLD 13	ini.	-138.07	3150	1.06	0	645	7930	8000	2703	8575		2.72	Si
SLD 13	fin.	1123.5	1175	1.06	0	645	7930	8000	2703	8575		7.3	Si
SLV 16	ini.	-307.54	3912	1.06	0	645	7930	8000	2703	8575		2.19	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	fin.	1424.27	2000	1.06	0	645	7930	8000	2703	8575		4.29	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.768	SLV 14	Si
V_SLV	2.018	SLV 14	Si
PF_SLU	2.793	SLU 83	Si
V_SLU	1.948	SLU 78	Si

Trave di accoppiamento 171

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.268	-0.194	14.58	15.64	1.06	-6.268	0.706	14.58	15.64	1.06	0.9	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 55	ini.	453.24	1622	-0.0001697	0.0002246	0.0035	1.06		4231.66	4231.66	No	9.34	Si
SLU 55	fin.	-95.48	-114	-0.000034	0.0002246	0.0035	1.06		4238.3	4238.3	No	44.39	Si
SLU 68	ini.	444.16	1586	-0.0001661	0.0002246	0.0035	1.06		4231.66	4231.66	No	9.53	Si
SLU 68	fin.	-95.63	-118	-0.0000341	0.0002246	0.0035	1.06		4238.3	4238.3	No	44.32	Si
SLU 59	ini.	452.45	1618	-0.0001694	0.0002246	0.0035	1.06		4231.66	4231.66	No	9.35	Si
SLU 59	fin.	-100	-122	-0.0000356	0.0002246	0.0035	1.06		4238.3	4238.3	No	42.38	Si
SLU 50	ini.	458.61	1628	-0.0001718	0.0002246	0.0035	1.06		4231.66	4231.66	No	9.23	Si
SLU 50	fin.	-89.23	-97	-0.0000317	0.0002246	0.0035	1.06		4238.3	4238.3	No	47.5	Si
SLU 49	ini.	438.68	1560	-0.0001639	0.0002246	0.0035	1.06		4231.66	4231.66	No	9.65	Si
SLU 49	fin.	-97.32	-122	-0.0000347	0.0002246	0.0035	1.06		4238.3	4238.3	No	43.55	Si
SLU 52	ini.	442.62	1581	-0.0001654	0.0002246	0.0035	1.06		4231.66	4231.66	No	9.56	Si
SLU 52	fin.	-91.82	-110	-0.0000327	0.0002246	0.0035	1.06		4238.3	4238.3	No	46.16	Si
SLU 47	ini.	476.53	1697	-0.000179	0.0002246	0.0035	1.06		4231.66	4231.66	No	8.88	Si
SLU 47	fin.	-83.4	-82	-0.0000297	0.0002246	0.0035	1.06		4238.3	4238.3	No	50.82	Si
SLU 51	ini.	475.74	1694	-0.0001787	0.0002246	0.0035	1.06		4231.66	4231.66	No	8.89	Si
SLU 51	fin.	-87.92	-90	-0.0000313	0.0002246	0.0035	1.06		4238.3	4238.3	No	48.2	Si
SLU 44	ini.	465.9	1657	-0.0001748	0.0002246	0.0035	1.06		4231.66	4231.66	No	9.08	Si
SLU 44	fin.	-79.74	-78	-0.0000283	0.0002246	0.0035	1.06		4238.3	4238.3	No	53.15	Si
SLU 72	ini.	443.37	1582	-0.0001657	0.0002246	0.0035	1.06		4231.66	4231.66	No	9.54	Si
SLU 72	fin.	-100.16	-127	-0.0000357	0.0002246	0.0035	1.06		4238.3	4238.3	No	42.32	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 47	ini.	476.53	-1488	1.06	0	246	7137	3048	2703	5751	No	3.86	Si
SLU 47	fin.	-83.4	-1834	1.06	0	246	7137	3048	2703	5751	No	3.13	Si
SLU 59	ini.	452.45	-1456	1.06	0	246	7137	3048	2703	5751	No	3.95	Si
SLU 59	fin.	-100	-1803	1.06	0	246	7137	3048	2703	5751	No	3.19	Si
SLU 51	ini.	475.74	-1495	1.06	0	246	7137	3048	2703	5751	No	3.85	Si
SLU 51	fin.	-87.92	-1841	1.06	0	246	7137	3048	2703	5751	No	3.12	Si
SLU 72	ini.	443.37	-1418	1.06	0	246	7137	3048	2703	5751	No	4.06	Si
SLU 72	fin.	-100.16	-1783	1.06	0	246	7137	3048	2703	5751	No	3.22	Si
SLU 49	ini.	438.68	-1404	1.06	0	246	7137	3048	2703	5751	No	4.1	Si
SLU 49	fin.	-97.32	-1750	1.06	0	246	7137	3048	2703	5751	No	3.29	Si
SLU 55	ini.	453.24	-1449	1.06	0	246	7137	3048	2703	5751	No	3.97	Si
SLU 55	fin.	-95.48	-1796	1.06	0	246	7137	3048	2703	5751	No	3.2	Si
SLU 44	ini.	465.9	-1446	1.06	0	246	7137	3048	2703	5751	No	3.98	Si
SLU 44	fin.	-79.74	-1793	1.06	0	246	7137	3048	2703	5751	No	3.21	Si
SLU 68	ini.	444.16	-1411	1.06	0	246	7137	3048	2703	5751	No	4.07	Si
SLU 68	fin.	-95.63	-1777	1.06	0	246	7137	3048	2703	5751	No	3.24	Si
SLU 50	ini.	458.61	-1442	1.06	0	246	7137	3048	2703	5751	No	3.99	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 50	fin.	-89.23	-1788	1.06	0	246	7137	3048	2703	5751	No	3.22	Si
SLU 52	ini.	442.62	-1408	1.06	0	246	7137	3048	2703	5751	No	4.09	Si
SLU 52	fin.	-91.82	-1754	1.06	0	246	7137	3048	2703	5751	No	3.28	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 5	ini.	1383.52	4926	-0.0005764	0.0003369	0.0035	1.06		4343.51	4343.51		3.14	Si
SLV 5	fin.	-78.09	75	-0.0000277	0.0003369	0.0035	1.06		4350.23	4350.23		55.71	Si
SLV 9	ini.	1447.64	5159	-0.000609	0.0003369	0.0035	1.06		4343.51	4343.51		3	Si
SLV 9	fin.	-110.06	48	-0.0000391	0.0003369	0.0035	1.06		4350.23	4350.23		39.53	Si
SLV 6	ini.	1435.99	5120	-0.000603	0.0003369	0.0035	1.06		4343.51	4343.51		3.02	Si
SLV 6	fin.	-75.69	91	-0.0000268	0.0003369	0.0035	1.06		4350.23	4350.23		57.47	Si
SLV 11	ini.	-812.01	-2905	-0.0003111	0.0003369	0.0035	1.06		4350.23	4350.23		5.36	Si
SLV 11	fin.	-70.68	-285	-0.000025	0.0003369	0.0035	1.06		4350.23	4350.23		61.54	Si
SLD 9	ini.	811.83	2890	-0.0003116	0.0003369	0.0035	1.06		4343.51	4343.51		5.35	Si
SLD 9	fin.	-88.25	-29	-0.0000313	0.0003369	0.0035	1.06		4350.23	4350.23		49.29	Si
SLV 10	ini.	1500.1	5353	-0.0006362	0.0003369	0.0035	1.06		4343.51	4343.51		2.9	Si
SLV 10	fin.	-107.66	64	-0.0000383	0.0003369	0.0035	1.06		4350.23	4350.23		40.41	Si
SLD 6	ini.	807.45	2875	-0.0003097	0.0003369	0.0035	1.06		4343.51	4343.51		5.38	Si
SLD 6	fin.	-73.53	-11	-0.0000261	0.0003369	0.0035	1.06		4350.23	4350.23		59.16	Si
SLV 8	ini.	-823.66	-2944	-0.000316	0.0003369	0.0035	1.06		4350.23	4350.23		5.28	Si
SLV 8	fin.	-36.32	-243	-0.0000128	0.0003369	0.0035	1.06		4350.23	4350.23		119.78	Si
SLD 10	ini.	834.72	2975	-0.0003213	0.0003369	0.0035	1.06		4343.51	4343.51		5.2	Si
SLD 10	fin.	-87.21	-22	-0.0000309	0.0003369	0.0035	1.06		4350.23	4350.23		49.88	Si
SLV 7	ini.	-876.12	-3138	-0.0003385	0.0003369	0.0035	1.06		4350.23	4350.23		4.97	Si
SLV 7	fin.	-38.72	-258	-0.0000137	0.0003369	0.0035	1.06		4350.23	4350.23		112.36	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 6	ini.	807.45	-2544	1.06	0	369	7137	4571	2703	7274		2.86	Si
SLD 6	fin.	-73.53	-2826	1.06	0	369	7137	4571	2703	7274		2.57	Si
SLD 10	ini.	834.72	-2658	1.06	0	369	7137	4571	2703	7274		2.74	Si
SLD 10	fin.	-87.21	-2929	1.06	0	369	7137	4571	2703	7274		2.48	Si
SLV 9	ini.	1447.64	-4626	1.06	0	369	7137	4571	2703	7274		1.57	Si
SLV 9	fin.	-110.06	-4889	1.06	0	369	7137	4571	2703	7274		1.49	Si
SLV 5	ini.	1383.52	-4360	1.06	0	369	7137	4571	2703	7274		1.67	Si
SLV 5	fin.	-78.09	-4647	1.06	0	369	7137	4571	2703	7274		1.57	Si
SLD 5	ini.	784.56	-2474	1.06	0	369	7137	4571	2703	7274		2.94	Si
SLD 5	fin.	-74.57	-2756	1.06	0	369	7137	4571	2703	7274		2.64	Si
SLD 9	ini.	811.83	-2588	1.06	0	369	7137	4571	2703	7274		2.81	Si
SLD 9	fin.	-88.25	-2859	1.06	0	369	7137	4571	2703	7274		2.54	Si
SLV 6	ini.	1435.99	-4520	1.06	0	369	7137	4571	2703	7274		1.61	Si
SLV 6	fin.	-75.69	-4807	1.06	0	369	7137	4571	2703	7274		1.51	Si
SLV 7	ini.	-876.12	2804	1.06	0	369	7137	4571	2703	7274		2.59	Si
SLV 7	fin.	-38.72	2512	1.06	0	369	7137	4571	2703	7274		2.9	Si
SLV 14	ini.	798.88	-2637	1.06	0	369	7137	4571	2703	7274		2.76	Si
SLV 14	fin.	-130.5	-2871	1.06	0	369	7137	4571	2703	7274		2.53	Si
SLV 10	ini.	1500.1	-4787	1.06	0	369	7137	4571	2703	7274		1.52	Si
SLV 10	fin.	-107.66	-5049	1.06	0	369	7137	4571	2703	7274		1.44	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.895	SLV 10	Si
V_SLV	1.441	SLV 10	Si
PF_SLU	8.88	SLU 47	Si
V_SLU	3.123	SLU 51	Si

Trave di accoppiamento 172

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.093	6.006	12.48	14.48	2	-5.093	6.506	12.48	14.48	2	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 50	ini.	48.06	-526	-0.0000048	0.0001872	0.0035	2		14344.28	14344.28	No	298.46	Si
SLU 50	fin.	-360.26	-395	-0.0000361	0.0001872	0.0035	2		14357.01	14357.01	No	39.85	Si
SLU 70	ini.	48.29	-535	-0.0000048	0.0001872	0.0035	2		14344.28	14344.28	No	297.06	Si
SLU 70	fin.	-361.67	-397	-0.0000363	0.0001872	0.0035	2		14357.01	14357.01	No	39.7	Si
SLU 51	ini.	50.57	-540	-0.000005	0.0001872	0.0035	2		14344.28	14344.28	No	283.68	Si
SLU 51	fin.	-368.45	-404	-0.0000369	0.0001872	0.0035	2		14357.01	14357.01	No	38.97	Si
SLU 71	ini.	52.54	-535	-0.0000052	0.0001872	0.0035	2		14344.28	14344.28	No	273	Si
SLU 71	fin.	-362.52	-398	-0.0000363	0.0001872	0.0035	2		14357.01	14357.01	No	39.6	Si
SLU 49	ini.	43.8	-526	-0.0000043	0.0001872	0.0035	2		14344.28	14344.28	No	327.46	Si
SLU 49	fin.	-359.41	-394	-0.000036	0.0001872	0.0035	2		14357.01	14357.01	No	39.95	Si
SLU 80	ini.	52.32	-527	-0.0000052	0.0001872	0.0035	2		14344.28	14344.28	No	274.17	Si
SLU 80	fin.	-352.51	-388	-0.0000353	0.0001872	0.0035	2		14357.01	14357.01	No	40.73	Si
SLU 69	ini.	45.78	-521	-0.0000045	0.0001872	0.0035	2		14344.28	14344.28	No	313.31	Si
SLU 69	fin.	-353.48	-388	-0.0000354	0.0001872	0.0035	2		14357.01	14357.01	No	40.62	Si
SLU 48	ini.	41.3	-513	-0.0000041	0.0001872	0.0035	2		14344.28	14344.28	No	347.32	Si
SLU 48	fin.	-351.22	-386	-0.0000352	0.0001872	0.0035	2		14357.01	14357.01	No	40.88	Si
SLU 59	ini.	47.84	-519	-0.0000047	0.0001872	0.0035	2		14344.28	14344.28	No	299.87	Si
SLU 59	fin.	-350.25	-385	-0.0000351	0.0001872	0.0035	2		14357.01	14357.01	No	40.99	Si
SLU 72	ini.	55.05	-549	-0.0000055	0.0001872	0.0035	2		14344.28	14344.28	No	260.57	Si
SLU 72	fin.	-370.71	-406	-0.0000372	0.0001872	0.0035	2		14357.01	14357.01	No	38.73	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 71	ini.	52.54	-1660	2	0	812	3965	8384	5100	4776	No	2.88	Si
SLU 71	fin.	-362.52	-1183	2	0	812	3965	8384	5100	4776	No	4.04	Si
SLU 70	ini.	48.29	-1673	2	0	812	3965	8384	5100	4776	No	2.85	Si
SLU 70	fin.	-361.67	-1167	2	0	812	3965	8384	5100	4776	No	4.09	Si
SLU 77	ini.	43.05	-1621	2	0	812	3965	8384	5100	4776	No	2.95	Si
SLU 77	fin.	-335.28	-1081	2	0	812	3965	8384	5100	4776	No	4.42	Si
SLU 72	ini.	55.05	-1699	2	0	812	3965	8384	5100	4776	No	2.81	Si
SLU 72	fin.	-370.71	-1212	2	0	812	3965	8384	5100	4776	No	3.94	Si
SLU 79	ini.	49.81	-1647	2	0	812	3965	8384	5100	4776	No	2.9	Si
SLU 79	fin.	-344.32	-1126	2	0	812	3965	8384	5100	4776	No	4.24	Si
SLU 78	ini.	45.56	-1660	2	0	812	3965	8384	5100	4776	No	2.88	Si
SLU 78	fin.	-343.47	-1110	2	0	812	3965	8384	5100	4776	No	4.3	Si
SLU 59	ini.	47.84	-1595	2	0	812	3965	8384	5100	4776	No	2.99	Si
SLU 59	fin.	-350.25	-1143	2	0	812	3965	8384	5100	4776	No	4.18	Si
SLU 80	ini.	52.32	-1686	2	0	812	3965	8384	5100	4776	No	2.83	Si
SLU 80	fin.	-352.51	-1155	2	0	812	3965	8384	5100	4776	No	4.14	Si
SLU 51	ini.	50.57	-1609	2	0	812	3965	8384	5100	4776	No	2.97	Si
SLU 51	fin.	-368.45	-1200	2	0	812	3965	8384	5100	4776	No	3.98	Si
SLU 69	ini.	45.78	-1634	2	0	812	3965	8384	5100	4776	No	2.92	Si
SLU 69	fin.	-353.48	-1138	2	0	812	3965	8384	5100	4776	No	4.2	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	1138.88	-3307	-0.0001166	0.0002807	0.0035	2		14202.07	14202.07		12.47	Si
SLV 3	fin.	-1144.54	-1178	-0.0001171	0.0002807	0.0035	2		14215.41	14215.41		12.42	Si
SLV 2	ini.	1287.42	-4321	-0.0001324	0.0002807	0.0035	2		14202.07	14202.07		11.03	Si
SLV 2	fin.	-1693.27	-1799	-0.0001764	0.0002807	0.0035	2		14215.41	14215.41		8.4	Si
SLV 5	ini.	549.98	-2747	-0.0000553	0.0002807	0.0035	2		14202.07	14202.07		25.82	Si
SLV 5	fin.	-1297.66	-1446	-0.0001334	0.0002807	0.0035	2		14215.41	14215.41		10.95	Si
SLV 16	ini.	-1224.14	3488	-0.0001255	0.0002807	0.0035	2		14215.41	14215.41		11.61	Si
SLV 16	fin.	1128.98	1181	-0.0001155	0.0002807	0.0035	2		14202.07	14202.07		12.58	Si
SLV 6	ini.	572.86	-2850	-0.0000576	0.0002807	0.0035	2		14202.07	14202.07		24.79	Si
SLV 6	fin.	-1363.29	-1515	-0.0001404	0.0002807	0.0035	2		14215.41	14215.41		10.43	Si
SLV 14	ini.	-1111.42	2636	-0.0001136	0.0002807	0.0035	2		14215.41	14215.41		12.79	Si
SLV 14	fin.	683.02	668	-0.0000689	0.0002807	0.0035	2		14202.07	14202.07		20.79	Si
SLV 15	ini.	-1259.97	3650	-0.0001294	0.0002807	0.0035	2		14215.41	14215.41		11.28	Si
SLV 15	fin.	1231.75	1289	-0.0001265	0.0002807	0.0035	2		14202.07	14202.07		11.53	Si
SLV 1	ini.	1251.6	-4159	-0.0001286	0.0002807	0.0035	2		14202.07	14202.07		11.35	Si
SLV 1	fin.	-1590.5	-1691	-0.0001651	0.0002807	0.0035	2		14215.41	14215.41		8.94	Si
SLV 4	ini.	1174.71	-3469	-0.0001204	0.0002807	0.0035	2		14202.07	14202.07		12.09	Si
SLV 4	fin.	-1247.31	-1286	-0.000128	0.0002807	0.0035	2		14215.41	14215.41		11.4	Si
SLV 13	ini.	-1147.25	2799	-0.0001174	0.0002807	0.0035	2		14215.41	14215.41		12.39	Si
SLV 13	fin.	785.79	776	-0.0000795	0.0002807	0.0035	2		14202.07	14202.07		18.07	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 11	ini.	-545.4	3851	2	0	1217	3965	12577	5100	5182		1.35	Si
SLV 11	fin.	901.77	3057	2	0	1217	3965	12577	5100	5182		1.7	Si
SLV 4	ini.	1174.71	-3596	2	0	1217	3965	12577	5100	5182		1.44	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	fin.	-1247.31	-3538	2	0	1217	3965	12577	5100	5182		1.46	Si
SLV 5	ini.	549.98	-5527	2	0	1217	3965	12577	5100	5182		0.94	No
SLV 5	fin.	-1297.66	-4291	2	0	1217	3965	12577	5100	5182		1.21	Si
SLV 15	ini.	-1259.97	3813	2	0	1217	3965	12577	5100	5182		1.36	Si
SLV 15	fin.	1231.75	3662	2	0	1217	3965	12577	5100	5182		1.42	Si
SLV 6	ini.	572.86	-5823	2	0	1217	3965	12577	5100	5182		0.89	No
SLV 6	fin.	-1363.29	-4523	2	0	1217	3965	12577	5100	5182		1.15	Si
SLV 10	ini.	-146.8	-3740	2	0	1217	3965	12577	5100	5182		1.39	Si
SLV 10	fin.	-650.4	-2471	2	0	1217	3965	12577	5100	5182		2.1	Si
SLV 2	ini.	1287.42	-5785	2	0	1217	3965	12577	5100	5182		0.9	No
SLV 2	fin.	-1693.27	-5127	2	0	1217	3965	12577	5100	5182		1.01	Si
SLV 9	ini.	-169.68	-3444	2	0	1217	3965	12577	5100	5182		1.5	Si
SLV 9	fin.	-584.77	-2240	2	0	1217	3965	12577	5100	5182		2.31	Si
SLV 12	ini.	-522.52	3556	2	0	1217	3965	12577	5100	5182		1.46	Si
SLV 12	fin.	836.14	2826	2	0	1217	3965	12577	5100	5182		1.83	Si
SLV 1	ini.	1251.6	-5321	2	0	1217	3965	12577	5100	5182		0.97	No
SLV 1	fin.	-1590.5	-4765	2	0	1217	3965	12577	5100	5182		1.09	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	8.395	SLV 2	Si
V_SLV	0.89	SLV 6	No
PF_SLU	38.729	SLU 72	Si
V_SLU	2.812	SLU 72	Si

Trave di accoppiamento 173

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.093	6.006	15.28	15.64	0.36	-5.093	6.506	15.28	15.64	0.36	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	69.95	282	-0.0002356	0.0001872	0.0035	0.36		479.9	479.9	No	6.86	Si
SLU 78	fin.	-18.92	101	-0.0000587	0.0001872	0.0035	0.36		482.14	482.14	No	25.48	Si
SLU 51	ini.	72.62	304	-0.0002458	0.0001872	0.0035	0.36		479.9	479.9	No	6.61	Si
SLU 51	fin.	-16.37	106	-0.0000506	0.0001872	0.0035	0.36		482.14	482.14	No	29.45	Si
SLU 59	ini.	70.69	292	-0.0002384	0.0001872	0.0035	0.36		479.9	479.9	No	6.79	Si
SLU 59	fin.	-16.36	101	-0.0000506	0.0001872	0.0035	0.36		482.14	482.14	No	29.46	Si
SLU 79	ini.	70.27	289	-0.0002368	0.0001872	0.0035	0.36		479.9	479.9	No	6.83	Si
SLU 79	fin.	-18.91	107	-0.0000586	0.0001872	0.0035	0.36		482.14	482.14	No	25.5	Si
SLU 50	ini.	70.36	294	-0.0002372	0.0001872	0.0035	0.36		479.9	479.9	No	6.82	Si
SLU 50	fin.	-16.06	104	-0.0000496	0.0001872	0.0035	0.36		482.14	482.14	No	30.02	Si
SLU 70	ini.	71.88	294	-0.000243	0.0001872	0.0035	0.36		479.9	479.9	No	6.68	Si
SLU 70	fin.	-18.93	107	-0.0000587	0.0001872	0.0035	0.36		482.14	482.14	No	25.47	Si
SLU 80	ini.	72.52	299	-0.0002455	0.0001872	0.0035	0.36		479.9	479.9	No	6.62	Si
SLU 80	fin.	-19.22	109	-0.0000596	0.0001872	0.0035	0.36		482.14	482.14	No	25.09	Si
SLU 71	ini.	72.2	302	-0.0002442	0.0001872	0.0035	0.36		479.9	479.9	No	6.65	Si
SLU 71	fin.	-18.92	112	-0.0000587	0.0001872	0.0035	0.36		482.14	482.14	No	25.48	Si
SLU 49	ini.	70.04	287	-0.000236	0.0001872	0.0035	0.36		479.9	479.9	No	6.85	Si
SLU 49	fin.	-16.07	98	-0.0000497	0.0001872	0.0035	0.36		482.14	482.14	No	29.99	Si
SLU 72	ini.	74.45	312	-0.0002529	0.0001872	0.0035	0.36		479.9	479.9	No	6.45	Si
SLU 72	fin.	-19.23	115	-0.0000597	0.0001872	0.0035	0.36		482.14	482.14	No	25.07	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	70.27	-345	0.36	0	105	2855	1509	918	2427	No	7.04	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	fin.	-18.91	-29	0.36	0	105	2855	1509	918	2427	No	83.65	Si
SLU 70	ini.	71.88	-350	0.36	0	105	2855	1509	918	2427	No	6.94	Si
SLU 70	fin.	-18.93	-33	0.36	0	105	2855	1509	918	2427	No	73.44	Si
SLU 72	ini.	74.45	-380	0.36	0	105	2855	1509	918	2427	No	6.39	Si
SLU 72	fin.	-19.23	-3	0.36	0	105	2855	1509	918	2427	No	779.53	Si
SLU 59	ini.	70.69	-353	0.36	0	105	2855	1509	918	2427	No	6.88	Si
SLU 59	fin.	-16.36	-10	0.36	0	105	2855	1509	918	2427	No	239.04	Si
SLU 58	ini.	68.43	-339	0.36	0	105	2855	1509	918	2427	No	7.16	Si
SLU 58	fin.	-16.05	-15	0.36	0	105	2855	1509	918	2427	No	162.56	Si
SLU 51	ini.	72.62	-374	0.36	0	105	2855	1509	918	2427	No	6.5	Si
SLU 51	fin.	-16.37	11	0.36	0	105	2855	1509	918	2427	No	221.24	Si
SLU 50	ini.	70.36	-360	0.36	0	105	2855	1509	918	2427	No	6.75	Si
SLU 50	fin.	-16.06	6	0.36	0	105	2855	1509	918	2427	No	391.89	Si
SLU 71	ini.	72.2	-366	0.36	0	105	2855	1509	918	2427	No	6.63	Si
SLU 71	fin.	-18.92	-8	0.36	0	105	2855	1509	918	2427	No	307.6	Si
SLU 80	ini.	72.52	-359	0.36	0	105	2855	1509	918	2427	No	6.77	Si
SLU 80	fin.	-19.22	-24	0.36	0	105	2855	1509	918	2427	No	100.14	Si
SLU 49	ini.	70.04	-344	0.36	0	105	2855	1509	918	2427	No	7.06	Si
SLU 49	fin.	-16.07	-19	0.36	0	105	2855	1509	918	2427	No	127.97	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-295.65	-1158	-0.0013108	0.0002807	0.0035	0.36		485.29	485.29		1.64	Si
SLV 14	fin.	47.8	-185	-0.0001523	0.0002807	0.0035	0.36		482.94	482.94		10.1	Si
SLV 6	ini.	377.28	1583	-0.0019433	0.0002807	0.0035	0.36		482.94	482.94		1.28	Si
SLV 6	fin.	-57.08	297	-0.0001828	0.0002807	0.0035	0.36		485.29	485.29		8.5	Si
SLV 1	ini.	503.41	2023	-0.0035748	0.0002807	0.0035	0.36		482.94	482.94		0.96	No
SLV 1	fin.	-77.18	363	-0.0002528	0.0002807	0.0035	0.36		485.29	485.29		6.29	Si
SLV 16	ini.	-415.01	-1682	-0.0023129	0.0002807	0.0035	0.36		485.29	485.29		1.17	Si
SLV 16	fin.	65.98	-277	-0.0002144	0.0002807	0.0035	0.36		482.94	482.94		7.32	Si
SLV 13	ini.	-326.07	-1288	-0.0015156	0.0002807	0.0035	0.36		485.29	485.29		1.49	Si
SLV 13	fin.	52.97	-222	-0.0001697	0.0002807	0.0035	0.36		482.94	482.94		9.12	Si
SLV 4	ini.	414.48	1628	-0.0023284	0.0002807	0.0035	0.36		482.94	482.94		1.17	Si
SLV 4	fin.	-64.17	307	-0.0002071	0.0002807	0.0035	0.36		485.29	485.29		7.56	Si
SLV 5	ini.	357.85	1500	-0.001772	0.0002807	0.0035	0.36		482.94	482.94		1.35	Si
SLV 5	fin.	-53.78	273	-0.0001716	0.0002807	0.0035	0.36		485.29	485.29		9.02	Si
SLV 15	ini.	-445.44	-1812	-0.0026891	0.0002807	0.0035	0.36		485.29	485.29		1.09	Si
SLV 15	fin.	71.15	-315	-0.0002326	0.0002807	0.0035	0.36		482.94	482.94		6.79	Si
SLV 3	ini.	384.05	1498	-0.0020075	0.0002807	0.0035	0.36		482.94	482.94		1.26	Si
SLV 3	fin.	-59	270	-0.0001893	0.0002807	0.0035	0.36		485.29	485.29		8.23	Si
SLV 2	ini.	533.84	2153	-0.003991	0.0002807	0.0035	0.36		482.94	482.94		0.9	No
SLV 2	fin.	-82.35	400	-0.0002715	0.0002807	0.0035	0.36		485.29	485.29		5.89	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-445.44	2209	0.36	0	158	2855	2264	918	3012		1.36	Si
SLV 15	fin.	71.15	-536	0.36	0	158	2855	2264	918	3012		5.62	Si
SLV 12	ini.	-269.45	1512	0.36	0	158	2855	2264	918	3012		1.99	Si
SLV 12	fin.	42.58	-539	0.36	0	158	2855	2264	918	3012		5.59	Si
SLV 16	ini.	-415.01	2022	0.36	0	158	2855	2264	918	3012		1.49	Si
SLV 16	fin.	65.98	-468	0.36	0	158	2855	2264	918	3012		6.44	Si
SLV 4	ini.	414.48	-1891	0.36	0	158	2855	2264	918	3012		1.59	Si
SLV 4	fin.	-64.17	210	0.36	0	158	2855	2264	918	3012		14.32	Si
SLV 2	ini.	533.84	-2599	0.36	0	158	2855	2264	918	3012		1.16	Si
SLV 2	fin.	-82.35	464	0.36	0	158	2855	2264	918	3012		6.49	Si
SLV 3	ini.	384.05	-1703	0.36	0	158	2855	2264	918	3012		1.77	Si
SLV 3	fin.	-59	142	0.36	0	158	2855	2264	918	3012		21.2	Si
SLV 1	ini.	503.41	-2411	0.36	0	158	2855	2264	918	3012		1.25	Si
SLV 1	fin.	-77.18	396	0.36	0	158	2855	2264	918	3012		7.61	Si
SLV 6	ini.	377.28	-2022	0.36	0	158	2855	2264	918	3012		1.49	Si
SLV 6	fin.	-57.08	510	0.36	0	158	2855	2264	918	3012		5.9	Si
SLV 5	ini.	357.85	-1902	0.36	0	158	2855	2264	918	3012		1.58	Si
SLV 5	fin.	-53.78	467	0.36	0	158	2855	2264	918	3012		6.46	Si
SLV 11	ini.	-288.88	1632	0.36	0	158	2855	2264	918	3012		1.85	Si
SLV 11	fin.	45.88	-582	0.36	0	158	2855	2264	918	3012		5.17	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.905	SLV 2	No
V_SLV	1.159	SLV 2	Si
PF_SLU	6.446	SLU 72	Si
V_SLU	6.394	SLU 72	Si

Trave di accoppiamento 174

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.063	5.826	12.48	13.38	0.9	-2.963	5.826	12.48	13.38	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 42	ini.	-147.12	595	-0.000074	0.0001872	0.0035	0.9		2964.67	2964.67	No	20.15	Si
SLU 42	fin.	95.58	-23	-0.0000476	0.0001872	0.0035	0.9		2959	2959	No	30.96	Si
SLU 80	ini.	-147.98	611	-0.0000744	0.0001872	0.0035	0.9		2964.67	2964.67	No	20.03	Si
SLU 80	fin.	55.75	54	-0.0000276	0.0001872	0.0035	0.9		2959	2959	No	53.08	Si
SLU 77	ini.	-156.59	643	-0.0000789	0.0001872	0.0035	0.9		2964.67	2964.67	No	18.93	Si
SLU 77	fin.	70.9	32	-0.0000352	0.0001872	0.0035	0.9		2959	2959	No	41.74	Si
SLU 78	ini.	-152.57	626	-0.0000768	0.0001872	0.0035	0.9		2964.67	2964.67	No	19.43	Si
SLU 78	fin.	66.48	34	-0.0000329	0.0001872	0.0035	0.9		2959	2959	No	44.51	Si
SLU 79	ini.	-152.01	628	-0.0000765	0.0001872	0.0035	0.9		2964.67	2964.67	No	19.5	Si
SLU 79	fin.	60.16	52	-0.0000298	0.0001872	0.0035	0.9		2959	2959	No	49.19	Si
SLU 36	ini.	-157.27	634	-0.0000792	0.0001872	0.0035	0.9		2964.67	2964.67	No	18.85	Si
SLU 36	fin.	98.1	-15	-0.0000489	0.0001872	0.0035	0.9		2959	2959	No	30.16	Si
SLU 37	ini.	-156.71	637	-0.0000789	0.0001872	0.0035	0.9		2964.67	2964.67	No	18.92	Si
SLU 37	fin.	91.78	3	-0.0000457	0.0001872	0.0035	0.9		2959	2959	No	32.24	Si
SLU 41	ini.	-151.15	612	-0.000076	0.0001872	0.0035	0.9		2964.67	2964.67	No	19.61	Si
SLU 41	fin.	99.99	-25	-0.0000499	0.0001872	0.0035	0.9		2959	2959	No	29.59	Si
SLU 35	ini.	-161.3	651	-0.0000813	0.0001872	0.0035	0.9		2964.67	2964.67	No	18.38	Si
SLU 35	fin.	102.52	-17	-0.0000512	0.0001872	0.0035	0.9		2959	2959	No	28.86	Si
SLU 38	ini.	-152.69	620	-0.0000768	0.0001872	0.0035	0.9		2964.67	2964.67	No	19.42	Si
SLU 38	fin.	87.37	5	-0.0000435	0.0001872	0.0035	0.9		2959	2959	No	33.87	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 37	ini.	-156.71	586	0.9	0	365	7137	3773	2295	6068	No	10.35	Si
SLU 37	fin.	91.78	490	0.9	0	365	7137	3773	2295	6068	No	12.38	Si
SLU 40	ini.	-126.09	636	0.9	0	365	7137	3773	2295	6068	No	9.54	Si
SLU 40	fin.	81.62	306	0.9	0	365	7137	3773	2295	6068	No	19.84	Si
SLU 83	ini.	-146.45	579	0.9	0	365	7137	3773	2295	6068	No	10.48	Si
SLU 83	fin.	68.37	357	0.9	0	365	7137	3773	2295	6068	No	16.98	Si
SLU 39	ini.	-130.12	662	0.9	0	365	7137	3773	2295	6068	No	9.16	Si
SLU 39	fin.	86.04	320	0.9	0	365	7137	3773	2295	6068	No	18.96	Si
SLU 36	ini.	-157.27	565	0.9	0	365	7137	3773	2295	6068	No	10.75	Si
SLU 36	fin.	98.1	528	0.9	0	365	7137	3773	2295	6068	No	11.5	Si
SLU 41	ini.	-151.15	692	0.9	0	365	7137	3773	2295	6068	No	8.77	Si
SLU 41	fin.	99.99	431	0.9	0	365	7137	3773	2295	6068	No	14.1	Si
SLU 32	ini.	-140.27	562	0.9	0	365	7137	3773	2295	6068	No	10.8	Si
SLU 32	fin.	88.56	432	0.9	0	365	7137	3773	2295	6068	No	14.06	Si
SLU 35	ini.	-161.3	591	0.9	0	365	7137	3773	2295	6068	No	10.26	Si
SLU 35	fin.	102.52	542	0.9	0	365	7137	3773	2295	6068	No	11.19	Si
SLU 42	ini.	-147.12	665	0.9	0	365	7137	3773	2295	6068	No	9.12	Si
SLU 42	fin.	95.58	416	0.9	0	365	7137	3773	2295	6068	No	14.58	Si
SLU 38	ini.	-152.69	560	0.9	0	365	7137	3773	2295	6068	No	10.84	Si
SLU 38	fin.	87.37	476	0.9	0	365	7137	3773	2295	6068	No	12.75	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 6	ini.	260.87	-1144	-0.0001327	0.0002807	0.0035	0.9		2989.59	2989.59		11.46	Si
SLV 6	fin.	-535.57	522	-0.0002858	0.0002807	0.0035	0.9		2995.37	2995.37		5.59	Si
SLV 5	ini.	194.6	-899	-0.0000979	0.0002807	0.0035	0.9		2989.59	2989.59		15.36	Si
SLV 5	fin.	-432.96	406	-0.0002265	0.0002807	0.0035	0.9		2995.37	2995.37		6.92	Si
SLV 8	ini.	-426.83	1677	-0.000223	0.0002807	0.0035	0.9		2995.37	2995.37		7.02	Si
SLV 8	fin.	238.72	152	-0.000121	0.0002807	0.0035	0.9		2989.59	2989.59		12.52	Si
SLV 12	ini.	-309.5	1399	-0.0001584	0.0002807	0.0035	0.9		2995.37	2995.37		9.68	Si
SLV 12	fin.	408.44	-262	-0.0002131	0.0002807	0.0035	0.9		2989.59	2989.59		7.32	Si
SLV 10	ini.	378.21	-1421	-0.0001962	0.0002807	0.0035	0.9		2989.59	2989.59		7.9	Si
SLV 10	fin.	-365.85	107	-0.0001891	0.0002807	0.0035	0.9		2995.37	2995.37		8.19	Si
SLV 2	ini.	-97.96	98	-0.0000485	0.0002807	0.0035	0.9		2995.37	2995.37		30.58	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	fin.	-491.6	909	-0.00026	0.0002807	0.0035	0.9		2995.37	2995.37		6.09	Si
SLV 15	ini.	-16.94	403	-0.0000083	0.0002807	0.0035	0.9		2995.37	2995.37		176.82	Si
SLV 15	fin.	467.08	-765	-0.0002464	0.0002807	0.0035	0.9		2989.59	2989.59		6.4	Si
SLV 7	ini.	-493.11	1922	-0.0002609	0.0002807	0.0035	0.9		2995.37	2995.37		6.07	Si
SLV 7	fin.	341.33	37	-0.000176	0.0002807	0.0035	0.9		2989.59	2989.59		8.76	Si
SLV 11	ini.	-375.78	1645	-0.0001945	0.0002807	0.0035	0.9		2995.37	2995.37		7.97	Si
SLV 11	fin.	511.05	-378	-0.0002719	0.0002807	0.0035	0.9		2989.59	2989.59		5.85	Si
SLV 3	ini.	-408.06	1328	-0.0002125	0.0002807	0.0035	0.9		2995.37	2995.37		7.34	Si
SLV 3	fin.	-98.64	617	-0.0000488	0.0002807	0.0035	0.9		2995.37	2995.37		30.37	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 5	ini.	194.6	-1779	0.9	0	548	7137	5660	2295	7684		4.32	Si
SLV 5	fin.	-432.96	-1312	0.9	0	548	7137	5660	2295	7684		5.86	Si
SLV 12	ini.	-309.5	1995	0.9	0	548	7137	5660	2295	7684		3.85	Si
SLV 12	fin.	408.44	1419	0.9	0	548	7137	5660	2295	7684		5.42	Si
SLV 3	ini.	-408.06	1568	0.9	0	548	7137	5660	2295	7684		4.9	Si
SLV 3	fin.	-98.64	-278	0.9	0	548	7137	5660	2295	7684		27.67	Si
SLV 9	ini.	311.93	-2049	0.9	0	548	7137	5660	2295	7684		3.75	Si
SLV 9	fin.	-263.24	-735	0.9	0	548	7137	5660	2295	7684		10.46	Si
SLV 11	ini.	-375.78	2429	0.9	0	548	7137	5660	2295	7684		3.16	Si
SLV 11	fin.	511.05	1750	0.9	0	548	7137	5660	2295	7684		4.39	Si
SLV 8	ini.	-426.83	2264	0.9	0	548	7137	5660	2295	7684		3.39	Si
SLV 8	fin.	238.72	841	0.9	0	548	7137	5660	2295	7684		9.14	Si
SLV 6	ini.	260.87	-2214	0.9	0	548	7137	5660	2295	7684		3.47	Si
SLV 6	fin.	-535.57	-1643	0.9	0	548	7137	5660	2295	7684		4.68	Si
SLV 10	ini.	378.21	-2483	0.9	0	548	7137	5660	2295	7684		3.09	Si
SLV 10	fin.	-365.85	-1065	0.9	0	548	7137	5660	2295	7684		7.21	Si
SLV 15	ini.	-16.94	671	0.9	0	548	7137	5660	2295	7684		11.45	Si
SLV 15	fin.	467.08	1648	0.9	0	548	7137	5660	2295	7684		4.66	Si
SLV 7	ini.	-493.11	2698	0.9	0	548	7137	5660	2295	7684		2.85	Si
SLV 7	fin.	341.33	1172	0.9	0	548	7137	5660	2295	7684		6.56	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.593	SLV 6	Si
V_SLV	2.848	SLV 7	Si
PF_SLU	18.38	SLU 35	Si
V_SLU	8.774	SLU 41	Si

Trave di accoppiamento 175

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.063	5.826	15.18	15.64	0.46	-2.963	5.826	15.18	15.64	0.46	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 37	ini.	-82.79	-293	-0.0001651	0.0001872	0.0035	0.46		780.23	780.23	No	9.42	Si
SLU 37	fin.	55.51	413	-0.0001083	0.0001872	0.0035	0.46		777.36	777.36	No	14	Si
SLU 35	ini.	-89.68	-323	-0.00018	0.0001872	0.0035	0.46		780.23	780.23	No	8.7	Si
SLU 35	fin.	54.89	418	-0.0001071	0.0001872	0.0035	0.46		777.36	777.36	No	14.16	Si
SLU 27	ini.	-76.97	-225	-0.0001526	0.0001872	0.0035	0.46		780.23	780.23	No	10.14	Si
SLU 27	fin.	29.44	338	-0.0000562	0.0001872	0.0035	0.46		777.36	777.36	No	26.41	Si
SLU 79	ini.	-79.83	-240	-0.0001587	0.0001872	0.0035	0.46		780.23	780.23	No	9.77	Si
SLU 79	fin.	50.86	428	-0.0000989	0.0001872	0.0035	0.46		777.36	777.36	No	15.29	Si
SLU 78	ini.	-85.09	-258	-0.00017	0.0001872	0.0035	0.46		780.23	780.23	No	9.17	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	fin.	47.71	423	-0.0000925	0.0001872	0.0035	0.46		777.36	777.36	No	16.29	Si
SLU 77	ini.	-86.71	-270	-0.0001735	0.0001872	0.0035	0.46		780.23	780.23	No	9	Si
SLU 77	fin.	50.24	433	-0.0000976	0.0001872	0.0035	0.46		777.36	777.36	No	15.47	Si
SLU 28	ini.	-75.34	-214	-0.0001491	0.0001872	0.0035	0.46		780.23	780.23	No	10.36	Si
SLU 28	fin.	26.91	329	-0.0000513	0.0001872	0.0035	0.46		777.36	777.36	No	28.89	Si
SLU 38	ini.	-81.17	-282	-0.0001616	0.0001872	0.0035	0.46		780.23	780.23	No	9.61	Si
SLU 38	fin.	52.98	403	-0.0001032	0.0001872	0.0035	0.46		777.36	777.36	No	14.67	Si
SLU 80	ini.	-78.2	-229	-0.0001552	0.0001872	0.0035	0.46		780.23	780.23	No	9.98	Si
SLU 80	fin.	48.33	418	-0.0000938	0.0001872	0.0035	0.46		777.36	777.36	No	16.08	Si
SLU 36	ini.	-88.05	-312	-0.0001764	0.0001872	0.0035	0.46		780.23	780.23	No	8.86	Si
SLU 36	fin.	52.36	408	-0.0001019	0.0001872	0.0035	0.46		777.36	777.36	No	14.85	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-85.09	941	0.46	0	124	3648	1928	1173	3101	No	3.3	Si
SLU 78	fin.	47.71	-172	0.46	0	124	3648	1928	1173	3101	No	18.01	Si
SLU 69	ini.	-74	909	0.46	0	124	3648	1928	1173	3101	No	3.41	Si
SLU 69	fin.	24.79	-285	0.46	0	124	3648	1928	1173	3101	No	10.87	Si
SLU 28	ini.	-75.34	893	0.46	0	124	3648	1928	1173	3101	No	3.47	Si
SLU 28	fin.	26.91	-229	0.46	0	124	3648	1928	1173	3101	No	13.53	Si
SLU 35	ini.	-89.68	947	0.46	0	124	3648	1928	1173	3101	No	3.28	Si
SLU 35	fin.	54.89	-96	0.46	0	124	3648	1928	1173	3101	No	32.47	Si
SLU 77	ini.	-86.71	952	0.46	0	124	3648	1928	1173	3101	No	3.26	Si
SLU 77	fin.	50.24	-162	0.46	0	124	3648	1928	1173	3101	No	19.16	Si
SLU 79	ini.	-79.83	892	0.46	0	124	3648	1928	1173	3101	No	3.48	Si
SLU 79	fin.	50.86	-145	0.46	0	124	3648	1928	1173	3101	No	21.34	Si
SLU 27	ini.	-76.97	904	0.46	0	124	3648	1928	1173	3101	No	3.43	Si
SLU 27	fin.	29.44	-219	0.46	0	124	3648	1928	1173	3101	No	14.17	Si
SLU 36	ini.	-88.05	936	0.46	0	124	3648	1928	1173	3101	No	3.31	Si
SLU 36	fin.	52.36	-106	0.46	0	124	3648	1928	1173	3101	No	29.29	Si
SLU 70	ini.	-72.37	898	0.46	0	124	3648	1928	1173	3101	No	3.46	Si
SLU 70	fin.	22.26	-296	0.46	0	124	3648	1928	1173	3101	No	10.49	Si
SLU 37	ini.	-82.79	887	0.46	0	124	3648	1928	1173	3101	No	3.49	Si
SLU 37	fin.	55.51	-79	0.46	0	124	3648	1928	1173	3101	No	39.27	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 6	ini.	101.84	881	-0.0002023	0.0002807	0.0035	0.46		785.44	785.44		7.71	Si
SLV 6	fin.	-174.06	-479	-0.0003642	0.0002807	0.0035	0.46		788.4	788.4		4.53	Si
SLV 8	ini.	-188.41	-1140	-0.0003992	0.0002807	0.0035	0.46		788.4	788.4		4.18	Si
SLV 8	fin.	268.09	1161	-0.0006114	0.0002807	0.0035	0.46		785.44	785.44		2.93	Si
SLV 12	ini.	-122.16	-714	-0.0002453	0.0002807	0.0035	0.46		788.4	788.4		6.45	Si
SLV 12	fin.	175.73	749	-0.0003698	0.0002807	0.0035	0.46		785.44	785.44		4.47	Si
SLV 3	ini.	-204.84	-1211	-0.0004402	0.0002807	0.0035	0.46		788.4	788.4		3.85	Si
SLV 3	fin.	274.55	1252	-0.0006296	0.0002807	0.0035	0.46		785.44	785.44		2.86	Si
SLV 9	ini.	136.34	1087	-0.0002778	0.0002807	0.0035	0.46		785.44	785.44		5.76	Si
SLV 9	fin.	-224.75	-749	-0.0004915	0.0002807	0.0035	0.46		788.4	788.4		3.51	Si
SLV 10	ini.	168.09	1306	-0.0003514	0.0002807	0.0035	0.46		785.44	785.44		4.67	Si
SLV 10	fin.	-266.42	-892	-0.0006041	0.0002807	0.0035	0.46		788.4	788.4		2.96	Si
SLV 14	ini.	152.78	1158	-0.0003153	0.0002807	0.0035	0.46		785.44	785.44		5.14	Si
SLV 14	fin.	-231.22	-839	-0.0005085	0.0002807	0.0035	0.46		788.4	788.4		3.41	Si
SLV 4	ini.	-155.13	-868	-0.0003195	0.0002807	0.0035	0.46		788.4	788.4		5.08	Si
SLV 4	fin.	209.31	1028	-0.0004535	0.0002807	0.0035	0.46		785.44	785.44		3.75	Si
SLV 7	ini.	-220.15	-1360	-0.0004795	0.0002807	0.0035	0.46		788.4	788.4		3.58	Si
SLV 7	fin.	309.76	1304	-0.000732	0.0002807	0.0035	0.46		785.44	785.44		2.54	Si
SLV 11	ini.	-153.9	-934	-0.0003167	0.0002807	0.0035	0.46		788.4	788.4		5.12	Si
SLV 11	fin.	217.39	891	-0.0004744	0.0002807	0.0035	0.46		785.44	785.44		3.61	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	-117.77	994	0.46	0	187	3648	2893	1173	3834		3.86	Si
SLV 1	fin.	141.91	402	0.46	0	187	3648	2893	1173	3834		9.53	Si
SLV 11	ini.	-153.9	1132	0.46	0	187	3648	2893	1173	3834		3.39	Si
SLV 11	fin.	217.39	703	0.46	0	187	3648	2893	1173	3834		5.46	Si
SLV 7	ini.	-220.15	1632	0.46	0	187	3648	2893	1173	3834		2.35	Si
SLV 7	fin.	309.76	1083	0.46	0	187	3648	2893	1173	3834		3.54	Si
SLV 3	ini.	-204.84	1585	0.46	0	187	3648	2893	1173	3834		2.42	Si
SLV 3	fin.	274.55	944	0.46	0	187	3648	2893	1173	3834		4.06	Si
SLV 14	ini.	152.78	-989	0.46	0	187	3648	2893	1173	3834		3.88	Si
SLV 14	fin.	-231.22	-1142	0.46	0	187	3648	2893	1173	3834		3.36	Si
SLV 12	ini.	-122.16	931	0.46	0	187	3648	2893	1173	3834		4.12	Si
SLV 12	fin.	175.73	525	0.46	0	187	3648	2893	1173	3834		7.3	Si
SLV 10	ini.	168.09	-1037	0.46	0	187	3648	2893	1173	3834		3.7	Si
SLV 10	fin.	-266.42	-1281	0.46	0	187	3648	2893	1173	3834		2.99	Si
SLV 8	ini.	-188.41	1431	0.46	0	187	3648	2893	1173	3834		2.68	Si
SLV 8	fin.	268.09	905	0.46	0	187	3648	2893	1173	3834		4.24	Si
SLV 4	ini.	-155.13	1270	0.46	0	187	3648	2893	1173	3834		3.02	Si
SLV 4	fin.	209.31	666	0.46	0	187	3648	2893	1173	3834		5.76	Si
SLV 9	ini.	136.34	-836	0.46	0	187	3648	2893	1173	3834		4.59	Si
SLV 9	fin.	-224.75	-1103	0.46	0	187	3648	2893	1173	3834		3.48	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.536	SLV 7	Si
V_SLV	2.349	SLV 7	Si
PF_SLU	8.7	SLU 35	Si
V_SLU	3.258	SLU 77	Si

Trave di accoppiamento 177

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-15.433	-3.314	14.58	15.703	1.123	-16.333	-3.314	14.58	15.704	1.124	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 69	ini.	-303.62	-793	-0.0000989	0.0001872	0.0035	1.123		4629.75	4629.75	No	15.25	Si
SLU 69	fin.	96.19	-158	-0.0000305	0.0001872	0.0035	1.1238		4621.23	4621.23	No	48.04	Si
SLU 83	ini.	-291.02	-739	-0.0000947	0.0001872	0.0035	1.123		4629.75	4629.75	No	15.91	Si
SLU 83	fin.	83.49	-106	-0.0000264	0.0001872	0.0035	1.1238		4621.23	4621.23	No	55.35	Si
SLU 66	ini.	-304.08	-769	-0.0000991	0.0001872	0.0035	1.123		4629.75	4629.75	No	15.23	Si
SLU 66	fin.	106.14	-125	-0.0000337	0.0001872	0.0035	1.1238		4621.23	4621.23	No	43.54	Si
SLU 67	ini.	-303.6	-766	-0.0000989	0.0001872	0.0035	1.123		4629.75	4629.75	No	15.25	Si
SLU 67	fin.	107.25	-120	-0.0000341	0.0001872	0.0035	1.1238		4621.23	4621.23	No	43.09	Si
SLU 78	ini.	-311.92	-808	-0.0001018	0.0001872	0.0035	1.123		4629.75	4629.75	No	14.84	Si
SLU 78	fin.	98.17	-129	-0.0000312	0.0001872	0.0035	1.1238		4621.23	4621.23	No	47.07	Si
SLU 81	ini.	-291.49	-715	-0.0000948	0.0001872	0.0035	1.123		4629.75	4629.75	No	15.88	Si
SLU 81	fin.	93.44	-74	-0.0000296	0.0001872	0.0035	1.1238		4621.23	4621.23	No	49.45	Si
SLU 74	ini.	-312.87	-786	-0.0001021	0.0001872	0.0035	1.123		4629.75	4629.75	No	14.8	Si
SLU 74	fin.	107.01	-102	-0.000034	0.0001872	0.0035	1.1238		4621.23	4621.23	No	43.18	Si
SLU 75	ini.	-312.39	-784	-0.0001019	0.0001872	0.0035	1.123		4629.75	4629.75	No	14.82	Si
SLU 75	fin.	108.12	-97	-0.0000344	0.0001872	0.0035	1.1238		4621.23	4621.23	No	42.74	Si
SLU 77	ini.	-312.4	-810	-0.0001019	0.0001872	0.0035	1.123		4629.75	4629.75	No	14.82	Si
SLU 77	fin.	97.06	-134	-0.0000308	0.0001872	0.0035	1.1238		4621.23	4621.23	No	47.61	Si
SLU 70	ini.	-303.13	-790	-0.0000988	0.0001872	0.0035	1.123		4629.75	4629.75	No	15.27	Si
SLU 70	fin.	97.3	-152	-0.0000309	0.0001872	0.0035	1.1238		4621.23	4621.23	No	47.49	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-286.79	1992	1.123	0	456	7137	4708	2864	7571	No	3.8	Si
SLU 79	fin.	73.16	-120	1.1238	0	456	7137	4711	2866	7577	No	62.97	Si
SLU 77	ini.	-312.4	2139	1.123	0	456	7137	4708	2864	7571	No	3.54	Si
SLU 77	fin.	97.06	-83	1.1238	0	456	7137	4711	2866	7577	No	91.38	Si
SLU 75	ini.	-312.39	1994	1.123	0	456	7137	4708	2864	7571	No	3.8	Si
SLU 75	fin.	108.12	-9	1.1238	0	456	7137	4711	2866	7577	No	822.84	Si
SLU 74	ini.	-312.87	1990	1.123	0	456	7137	4708	2864	7571	No	3.8	Si
SLU 74	fin.	107.01	-11	1.1238	0	456	7137	4711	2866	7577	No	675.38	Si
SLU 78	ini.	-311.92	2143	1.123	0	456	7137	4708	2864	7571	No	3.53	Si
SLU 78	fin.	98.17	-81	1.1238	0	456	7137	4711	2866	7577	No	93.65	Si
SLU 70	ini.	-303.13	2115	1.123	0	456	7137	4708	2864	7571	No	3.58	Si
SLU 70	fin.	97.3	-121	1.1238	0	456	7137	4711	2866	7577	No	62.84	Si
SLU 80	ini.	-286.31	1996	1.123	0	456	7137	4708	2864	7571	No	3.79	Si
SLU 80	fin.	74.28	-118	1.1238	0	456	7137	4711	2866	7577	No	64.04	Si
SLU 35	ini.	-290.01	1974	1.123	0	456	7137	4708	2864	7571	No	3.84	Si
SLU 35	fin.	111.85	54	1.1238	0	456	7137	4711	2866	7577	No	140.75	Si
SLU 36	ini.	-289.53	1977	1.123	0	456	7137	4708	2864	7571	No	3.83	Si
SLU 36	fin.	112.97	56	1.1238	0	456	7137	4711	2866	7577	No	135.68	Si
SLU 69	ini.	-303.62	2111	1.123	0	456	7137	4708	2864	7571	No	3.59	Si
SLU 69	fin.	96.19	-123	1.1238	0	456	7137	4711	2866	7577	No	61.81	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-614.87	-1025	-0.0002049	0.0002807	0.0035	1.123		4662.08	4662.08		7.58	Si
SLV 15	fin.	570.17	403	-0.0001892	0.0002807	0.0035	1.1238		4674.7	4674.7		8.2	Si
SLV 5	ini.	261	291	-0.0000839	0.0002807	0.0035	1.123		4654.6	4654.6		17.83	Si
SLV 5	fin.	-483.92	-445	-0.0001588	0.0002807	0.0035	1.1238		4682.2	4682.2		9.68	Si
SLV 14	ini.	-560.48	-922	-0.0001857	0.0002807	0.0035	1.123		4662.08	4662.08		8.32	Si
SLV 14	fin.	481.33	374	-0.0001582	0.0002807	0.0035	1.1238		4674.7	4674.7		9.71	Si
SLD 16	ini.	-432.39	-827	-0.0001412	0.0002807	0.0035	1.123		4662.08	4662.08		10.78	Si
SLD 16	fin.	330.97	157	-0.0001071	0.0002807	0.0035	1.1238		4674.7	4674.7		14.12	Si
SLV 12	ini.	-657.84	-1284	-0.0002204	0.0002807	0.0035	1.123		4662.08	4662.08		7.09	Si
SLV 12	fin.	594.2	266	-0.0001977	0.0002807	0.0035	1.1238		4674.7	4674.7		7.87	Si
SLV 13	ini.	-433.6	-684	-0.0001417	0.0002807	0.0035	1.123		4662.08	4662.08		10.75	Si
SLV 13	fin.	355.55	291	-0.0001153	0.0002807	0.0035	1.1238		4674.7	4674.7		13.15	Si
SLV 1	ini.	344.91	270	-0.0001118	0.0002807	0.0035	1.123		4654.6	4654.6		13.49	Si
SLV 1	fin.	-585.67	-664	-0.0001944	0.0002807	0.0035	1.1238		4682.2	4682.2		7.99	Si
SLV 11	ini.	-576.81	-1132	-0.0001914	0.0002807	0.0035	1.123		4662.08	4662.08		8.08	Si
SLV 11	fin.	513.87	213	-0.0001695	0.0002807	0.0035	1.1238		4674.7	4674.7		9.1	Si
SLV 16	ini.	-741.76	-1263	-0.000251	0.0002807	0.0035	1.123		4662.08	4662.08		6.29	Si
SLV 16	fin.	695.96	485	-0.0002344	0.0002807	0.0035	1.1238		4674.7	4674.7		6.72	Si
SLV 2	ini.	218.03	32	-0.0000698	0.0002807	0.0035	1.123		4654.6	4654.6		21.35	Si
SLV 2	fin.	-459.89	-581	-0.0001506	0.0002807	0.0035	1.1238		4682.2	4682.2		10.18	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 11	ini.	-576.81	2723	1.123	0	684	7137	7062	2864	7820		2.87	Si
SLV 11	fin.	513.87	1168	1.1238	0	684	7137	7067	2866	7821		6.69	Si
SLV 1	ini.	344.91	-827	1.123	0	684	7137	7062	2864	7820		9.45	Si
SLV 1	fin.	-585.67	-1982	1.1238	0	684	7137	7067	2866	7821		3.95	Si
SLV 14	ini.	-560.48	2447	1.123	0	684	7137	7062	2864	7820		3.2	Si
SLV 14	fin.	481.33	1283	1.1238	0	684	7137	7067	2866	7821		6.1	Si
SLV 12	ini.	-657.84	3043	1.123	0	684	7137	7062	2864	7820		2.57	Si
SLV 12	fin.	594.2	1473	1.1238	0	684	7137	7067	2866	7821		5.31	Si
SLV 13	ini.	-433.6	1946	1.123	0	684	7137	7062	2864	7820		4.02	Si
SLV 13	fin.	355.55	806	1.1238	0	684	7137	7067	2866	7821		9.7	Si
SLV 8	ini.	-424.29	2211	1.123	0	684	7137	7062	2864	7820		3.54	Si
SLV 8	fin.	311.83	636	1.1238	0	684	7137	7067	2866	7821		12.29	Si
SLV 16	ini.	-741.76	3212	1.123	0	684	7137	7062	2864	7820		2.43	Si
SLV 16	fin.	695.96	1861	1.1238	0	684	7137	7067	2866	7821		4.2	Si
SLV 15	ini.	-614.87	2711	1.123	0	684	7137	7062	2864	7820		2.88	Si
SLV 15	fin.	570.17	1384	1.1238	0	684	7137	7067	2866	7821		5.65	Si
SLD 12	ini.	-399.19	2001	1.123	0	684	7137	7062	2864	7820		3.91	Si
SLD 12	fin.	290.4	609	1.1238	0	684	7137	7067	2866	7821		12.85	Si
SLD 16	ini.	-432.39	2062	1.123	0	684	7137	7062	2864	7820		3.79	Si
SLD 16	fin.	330.97	766	1.1238	0	684	7137	7067	2866	7821		10.21	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	6.285	SLV 16	Si
V_SLV	2.435	SLV 16	Si
PF_SLU	14.798	SLU 74	Si
V_SLU	3.533	SLU 78	Si

Trave di accoppiamento 180

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.433	-3.314	14.58	15.697	1.117	-9.333	-3.314	14.58	15.698	1.118	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 27	ini.	42.42	100	-0.0000135	0.0001872	0.0035	1.1171		4568.53	4568.53	No	107.71	Si
SLU 27	fin.	-314.67	-400	-0.0001035	0.0001872	0.0035	1.1179		4605.28	4605.28	No	14.64	Si
SLU 78	ini.	14.7	116	-0.0000047	0.0001872	0.0035	1.1171		4568.53	4568.53	No	310.8	Si
SLU 78	fin.	-324.3	-415	-0.0001068	0.0001872	0.0035	1.1179		4605.28	4605.28	No	14.2	Si
SLU 70	ini.	26.28	81	-0.0000084	0.0001872	0.0035	1.1171		4568.53	4568.53	No	173.81	Si
SLU 70	fin.	-328.44	-429	-0.0001083	0.0001872	0.0035	1.1179		4605.28	4605.28	No	14.02	Si
SLU 28	ini.	42.69	105	-0.0000136	0.0001872	0.0035	1.1171		4568.53	4568.53	No	107.02	Si
SLU 28	fin.	-314.25	-397	-0.0001034	0.0001872	0.0035	1.1179		4605.28	4605.28	No	14.65	Si
SLU 74	ini.	24.28	133	-0.0000077	0.0001872	0.0035	1.1171		4568.53	4568.53	No	188.13	Si
SLU 74	fin.	-310.74	-399	-0.0001022	0.0001872	0.0035	1.1179		4605.28	4605.28	No	14.82	Si
SLU 69	ini.	26.01	76	-0.0000083	0.0001872	0.0035	1.1171		4568.53	4568.53	No	175.63	Si
SLU 69	fin.	-328.87	-432	-0.0001084	0.0001872	0.0035	1.1179		4605.28	4605.28	No	14	Si
SLU 67	ini.	36.14	102	-0.0000115	0.0001872	0.0035	1.1171		4568.53	4568.53	No	126.41	Si
SLU 67	fin.	-314.46	-410	-0.0001034	0.0001872	0.0035	1.1179		4605.28	4605.28	No	14.65	Si
SLU 35	ini.	30.83	135	-0.0000098	0.0001872	0.0035	1.1171		4568.53	4568.53	No	148.18	Si
SLU 35	fin.	-310.53	-385	-0.0001021	0.0001872	0.0035	1.1179		4605.28	4605.28	No	14.83	Si
SLU 77	ini.	14.43	112	-0.0000046	0.0001872	0.0035	1.1171		4568.53	4568.53	No	316.66	Si
SLU 77	fin.	-324.73	-418	-0.000107	0.0001872	0.0035	1.1179		4605.28	4605.28	No	14.18	Si
SLU 66	ini.	35.87	98	-0.0000114	0.0001872	0.0035	1.1171		4568.53	4568.53	No	127.37	Si
SLU 66	fin.	-314.88	-413	-0.0001036	0.0001872	0.0035	1.1179		4605.28	4605.28	No	14.63	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	14.43	400	1.1171	0	453	7137	4683	2849	7532	No	18.84	Si
SLU 77	fin.	-324.73	-1623	1.1179	0	454	7137	4687	2851	7537	No	4.64	Si
SLU 70	ini.	26.28	409	1.1171	0	453	7137	4683	2849	7532	No	18.4	Si
SLU 70	fin.	-328.44	-1649	1.1179	0	454	7137	4687	2851	7537	No	4.57	Si
SLU 79	ini.	-1.62	397	1.1171	0	453	7137	4683	2849	7532	No	18.98	Si
SLU 79	fin.	-300.85	-1526	1.1179	0	454	7137	4687	2851	7537	No	4.94	Si
SLU 72	ini.	10.24	406	1.1171	0	453	7137	4683	2849	7532	No	18.54	Si
SLU 72	fin.	-304.57	-1552	1.1179	0	454	7137	4687	2851	7537	No	4.86	Si
SLU 69	ini.	26.01	410	1.1171	0	453	7137	4683	2849	7532	No	18.37	Si
SLU 69	fin.	-328.87	-1647	1.1179	0	454	7137	4687	2851	7537	No	4.58	Si
SLU 27	ini.	42.42	255	1.1171	0	453	7137	4683	2849	7532	No	29.48	Si
SLU 27	fin.	-314.67	-1534	1.1179	0	454	7137	4687	2851	7537	No	4.91	Si
SLU 78	ini.	14.7	399	1.1171	0	453	7137	4683	2849	7532	No	18.87	Si
SLU 78	fin.	-324.3	-1625	1.1179	0	454	7137	4687	2851	7537	No	4.64	Si
SLU 80	ini.	-1.35	396	1.1171	0	453	7137	4683	2849	7532	No	19.01	Si
SLU 80	fin.	-300.43	-1528	1.1179	0	454	7137	4687	2851	7537	No	4.93	Si
SLU 28	ini.	42.69	255	1.1171	0	453	7137	4683	2849	7532	No	29.55	Si
SLU 28	fin.	-314.25	-1535	1.1179	0	454	7137	4687	2851	7537	No	4.91	Si
SLU 71	ini.	9.97	407	1.1171	0	453	7137	4683	2849	7532	No	18.51	Si
SLU 71	fin.	-305	-1550	1.1179	0	454	7137	4687	2851	7537	No	4.86	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	758.09	909	-0.0002606	0.0002807	0.0035	1.1171		4616.67	4616.67		6.09	Si
SLV 3	fin.	-1063.05	-999	-0.000379	0.0002807	0.0035	1.1179		4603.77	4603.77		4.33	Si
SLV 7	ini.	649.94	399	-0.0002204	0.0002807	0.0035	1.1171		4616.67	4616.67		7.1	Si
SLV 7	fin.	-895.37	-966	-0.0003117	0.0002807	0.0035	1.1179		4603.77	4603.77		5.14	Si
SLV 14	ini.	-739.72	-772	-0.0002533	0.0002807	0.0035	1.1171		4624.12	4624.12		6.25	Si
SLV 14	fin.	683.43	495	-0.0002318	0.0002807	0.0035	1.1179		4596.34	4596.34		6.73	Si
SLV 10	ini.	-631.57	-262	-0.0002134	0.0002807	0.0035	1.1171		4624.12	4624.12		7.32	Si
SLV 10	fin.	515.76	462	-0.0001716	0.0002807	0.0035	1.1179		4596.34	4596.34		8.91	Si
SLV 8	ini.	584.32	327	-0.0001967	0.0002807	0.0035	1.1171		4616.67	4616.67		7.9	Si
SLV 8	fin.	-789.89	-845	-0.0002711	0.0002807	0.0035	1.1179		4603.77	4603.77		5.83	Si
SLV 1	ini.	495.22	869	-0.000165	0.0002807	0.0035	1.1171		4616.67	4616.67		9.32	Si
SLV 1	fin.	-789.01	-697	-0.0002708	0.0002807	0.0035	1.1179		4603.77	4603.77		5.83	Si
SLD 3	ini.	331.58	429	-0.0001086	0.0002807	0.0035	1.1171		4616.67	4616.67		13.92	Si
SLD 3	fin.	-565.84	-574	-0.000189	0.0002807	0.0035	1.1179		4603.77	4603.77		8.14	Si
SLV 2	ini.	392.47	757	-0.0001293	0.0002807	0.0035	1.1171		4616.67	4616.67		11.76	Si
SLV 2	fin.	-623.84	-507	-0.0002098	0.0002807	0.0035	1.1179		4603.77	4603.77		7.38	Si
SLV 13	ini.	-636.97	-660	-0.0002154	0.0002807	0.0035	1.1171		4624.12	4624.12		7.26	Si
SLV 13	fin.	518.27	306	-0.0001725	0.0002807	0.0035	1.1179		4596.34	4596.34		8.87	Si
SLV 4	ini.	655.34	797	-0.0002224	0.0002807	0.0035	1.1171		4616.67	4616.67		7.04	Si
SLV 4	fin.	-897.88	-810	-0.0003126	0.0002807	0.0035	1.1179		4603.77	4603.77		5.13	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	758.09	-2359	1.1171	0	680	7137	7025	2849	7817		3.31	Si
SLV 3	fin.	-1063.05	-3619	1.1179	0	680	7137	7030	2851	7817		2.16	Si
SLD 3	ini.	331.58	-894	1.1171	0	680	7137	7025	2849	7817		8.75	Si
SLD 3	fin.	-565.84	-2070	1.1179	0	680	7137	7030	2851	7817		3.78	Si
SLV 13	ini.	-636.97	2314	1.1171	0	680	7137	7025	2849	7817		3.38	Si
SLV 13	fin.	518.27	1319	1.1179	0	680	7137	7030	2851	7817		5.93	Si
SLV 7	ini.	649.94	-1773	1.1171	0	680	7137	7025	2849	7817		4.41	Si
SLV 7	fin.	-895.37	-3133	1.1179	0	680	7137	7030	2851	7817		2.49	Si
SLV 10	ini.	-631.57	2201	1.1171	0	680	7137	7025	2849	7817		3.55	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 10	fin.	515.76	1336	1.1179	0	680	7137	7030	2851	7817		5.85	Si
SLV 2	ini.	392.47	-1137	1.1171	0	680	7137	7025	2849	7817		6.87	Si
SLV 2	fin.	-623.84	-2237	1.1179	0	680	7137	7030	2851	7817		3.49	Si
SLV 4	ini.	655.34	-1885	1.1171	0	680	7137	7025	2849	7817		4.15	Si
SLV 4	fin.	-897.88	-3116	1.1179	0	680	7137	7030	2851	7817		2.51	Si
SLV 1	ini.	495.22	-1611	1.1171	0	680	7137	7025	2849	7817		4.85	Si
SLV 1	fin.	-789.01	-2740	1.1179	0	680	7137	7030	2851	7817		2.85	Si
SLV 8	ini.	584.32	-1470	1.1171	0	680	7137	7025	2849	7817		5.32	Si
SLV 8	fin.	-789.89	-2812	1.1179	0	680	7137	7030	2851	7817		2.78	Si
SLV 14	ini.	-739.72	2787	1.1171	0	680	7137	7025	2849	7817		2.8	Si
SLV 14	fin.	683.43	1822	1.1179	0	680	7137	7030	2851	7817		4.29	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.331	SLV 3	Si
V_SLV	2.16	SLV 3	Si
PF_SLU	14.003	SLU 69	Si
V_SLU	4.571	SLU 70	Si

Trave di accoppiamento 182

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.314	12.48	13.38	0.9	-7.413	-3.314	12.48	13.38	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-137.29	275	-0.0000689	0.0001872	0.0035	0.9		2964.67	2964.67	No	21.59	Si
SLU 78	fin.	250.7	-827	-0.0001292	0.0001872	0.0035	0.9		2959	2959	No	11.8	Si
SLU 56	ini.	-146.8	303	-0.0000738	0.0001872	0.0035	0.9		2964.67	2964.67	No	20.19	Si
SLU 56	fin.	263.65	-846	-0.0001363	0.0001872	0.0035	0.9		2959	2959	No	11.22	Si
SLU 59	ini.	-156.63	354	-0.0000789	0.0001872	0.0035	0.9		2964.67	2964.67	No	18.93	Si
SLU 59	fin.	269.66	-846	-0.0001396	0.0001872	0.0035	0.9		2959	2959	No	10.97	Si
SLU 63	ini.	-168.35	438	-0.000085	0.0001872	0.0035	0.9		2964.67	2964.67	No	17.61	Si
SLU 63	fin.	263	-795	-0.0001359	0.0001872	0.0035	0.9		2959	2959	No	11.25	Si
SLU 57	ini.	-148.55	311	-0.0000747	0.0001872	0.0035	0.9		2964.67	2964.67	No	19.96	Si
SLU 57	fin.	264.79	-847	-0.0001369	0.0001872	0.0035	0.9		2959	2959	No	11.18	Si
SLU 80	ini.	-145.38	319	-0.000073	0.0001872	0.0035	0.9		2964.67	2964.67	No	20.39	Si
SLU 80	fin.	255.57	-826	-0.0001319	0.0001872	0.0035	0.9		2959	2959	No	11.58	Si
SLU 77	ini.	-135.55	267	-0.000068	0.0001872	0.0035	0.9		2964.67	2964.67	No	21.87	Si
SLU 77	fin.	249.56	-827	-0.0001286	0.0001872	0.0035	0.9		2959	2959	No	11.86	Si
SLU 79	ini.	-143.63	311	-0.0000721	0.0001872	0.0035	0.9		2964.67	2964.67	No	20.64	Si
SLU 79	fin.	254.43	-825	-0.0001312	0.0001872	0.0035	0.9		2959	2959	No	11.63	Si
SLU 58	ini.	-154.89	346	-0.000078	0.0001872	0.0035	0.9		2964.67	2964.67	No	19.14	Si
SLU 58	fin.	268.52	-845	-0.000139	0.0001872	0.0035	0.9		2959	2959	No	11.02	Si
SLU 62	ini.	-166.6	430	-0.0000841	0.0001872	0.0035	0.9		2964.67	2964.67	No	17.79	Si
SLU 62	fin.	261.86	-795	-0.0001353	0.0001872	0.0035	0.9		2959	2959	No	11.3	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-145.38	612	0.9	0	365	7137	3773	2295	6068	No	9.92	Si
SLU 80	fin.	255.57	1222	0.9	0	365	7137	3773	2295	6068	No	4.97	Si
SLU 57	ini.	-148.55	552	0.9	0	365	7137	3773	2295	6068	No	10.98	Si
SLU 57	fin.	264.79	1315	0.9	0	365	7137	3773	2295	6068	No	4.61	Si
SLU 62	ini.	-166.6	738	0.9	0	365	7137	3773	2295	6068	No	8.22	Si
SLU 62	fin.	261.86	1240	0.9	0	365	7137	3773	2295	6068	No	4.89	Si
SLU 51	ini.	-116.45	315	0.9	0	365	7137	3773	2295	6068	No	19.27	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 51	fin.	235.5	1227	0.9	0	365	7137	3773	2295	6068	No	4.95	Si
SLU 58	ini.	-154.89	607	0.9	0	365	7137	3773	2295	6068	No	10	Si
SLU 58	fin.	268.52	1321	0.9	0	365	7137	3773	2295	6068	No	4.59	Si
SLU 63	ini.	-168.35	751	0.9	0	365	7137	3773	2295	6068	No	8.08	Si
SLU 63	fin.	263	1243	0.9	0	365	7137	3773	2295	6068	No	4.88	Si
SLU 56	ini.	-146.8	539	0.9	0	365	7137	3773	2295	6068	No	11.25	Si
SLU 56	fin.	263.65	1312	0.9	0	365	7137	3773	2295	6068	No	4.62	Si
SLU 59	ini.	-156.63	620	0.9	0	365	7137	3773	2295	6068	No	9.79	Si
SLU 59	fin.	269.66	1324	0.9	0	365	7137	3773	2295	6068	No	4.58	Si
SLU 79	ini.	-143.63	598	0.9	0	365	7137	3773	2295	6068	No	10.14	Si
SLU 79	fin.	254.43	1219	0.9	0	365	7137	3773	2295	6068	No	4.98	Si
SLU 50	ini.	-114.7	302	0.9	0	365	7137	3773	2295	6068	No	20.11	Si
SLU 50	fin.	234.36	1224	0.9	0	365	7137	3773	2295	6068	No	4.96	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 7	ini.	470.53	-2091	-0.0002484	0.0002807	0.0035	0.9		2989.59	2989.59		6.35	Si
SLV 7	fin.	-419.38	680	-0.0002188	0.0002807	0.0035	0.9		2995.37	2995.37		7.14	Si
SLV 10	ini.	-640.65	2423	-0.0003496	0.0002807	0.0035	0.9		2995.37	2995.37		4.68	Si
SLV 10	fin.	718.45	-1676	-0.0003998	0.0002807	0.0035	0.9		2989.59	2989.59		4.16	Si
SLV 4	ini.	455.43	-1844	-0.0002397	0.0002807	0.0035	0.9		2989.59	2989.59		6.56	Si
SLV 4	fin.	-454.29	763	-0.0002386	0.0002807	0.0035	0.9		2995.37	2995.37		6.59	Si
SLV 9	ini.	-588.75	2214	-0.0003177	0.0002807	0.0035	0.9		2995.37	2995.37		5.09	Si
SLV 9	fin.	651.55	-1535	-0.0003572	0.0002807	0.0035	0.9		2989.59	2989.59		4.59	Si
SLD 14	ini.	-352.76	1174	-0.0001819	0.0002807	0.0035	0.9		2995.37	2995.37		8.49	Si
SLD 14	fin.	454.51	-1136	-0.0002392	0.0002807	0.0035	0.9		2989.59	2989.59		6.58	Si
SLV 13	ini.	-625.55	2177	-0.0003402	0.0002807	0.0035	0.9		2995.37	2995.37		4.79	Si
SLV 13	fin.	753.36	-1759	-0.0004226	0.0002807	0.0035	0.9		2989.59	2989.59		3.97	Si
SLV 14	ini.	-706.83	2504	-0.0003915	0.0002807	0.0035	0.9		2995.37	2995.37		4.24	Si
SLV 14	fin.	858.11	-1980	-0.0004931	0.0002807	0.0035	0.9		2989.59	2989.59		3.48	Si
SLV 16	ini.	-472.56	1515	-0.000249	0.0002807	0.0035	0.9		2995.37	2995.37		6.34	Si
SLV 16	fin.	634.85	-1521	-0.0003467	0.0002807	0.0035	0.9		2989.59	2989.59		4.71	Si
SLV 15	ini.	-391.29	1188	-0.0002031	0.0002807	0.0035	0.9		2995.37	2995.37		7.66	Si
SLV 15	fin.	530.1	-1300	-0.0002831	0.0002807	0.0035	0.9		2989.59	2989.59		5.64	Si
SLV 3	ini.	536.7	-2171	-0.000287	0.0002807	0.0035	0.9		2989.59	2989.59		5.57	Si
SLV 3	fin.	-559.04	983	-0.0002998	0.0002807	0.0035	0.9		2995.37	2995.37		5.36	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-706.83	3560	0.9	0	548	7137	5660	2295	7684		2.16	Si
SLV 14	fin.	858.11	4209	0.9	0	548	7137	5660	2295	7684		1.83	Si
SLV 8	ini.	418.63	-2627	0.9	0	548	7137	5660	2295	7684		2.93	Si
SLV 8	fin.	-352.48	-1687	0.9	0	548	7137	5660	2295	7684		4.56	Si
SLV 4	ini.	455.43	-2397	0.9	0	548	7137	5660	2295	7684		3.21	Si
SLV 4	fin.	-454.29	-2302	0.9	0	548	7137	5660	2295	7684		3.34	Si
SLV 15	ini.	-391.29	1564	0.9	0	548	7137	5660	2295	7684		4.91	Si
SLV 15	fin.	530.1	2709	0.9	0	548	7137	5660	2295	7684		2.84	Si
SLV 16	ini.	-472.56	2097	0.9	0	548	7137	5660	2295	7684		3.66	Si
SLV 16	fin.	634.85	3166	0.9	0	548	7137	5660	2295	7684		2.43	Si
SLV 3	ini.	536.7	-2930	0.9	0	548	7137	5660	2295	7684		2.62	Si
SLV 3	fin.	-559.04	-2758	0.9	0	548	7137	5660	2295	7684		2.79	Si
SLV 7	ini.	470.53	-2968	0.9	0	548	7137	5660	2295	7684		2.59	Si
SLV 7	fin.	-419.38	-1979	0.9	0	548	7137	5660	2295	7684		3.88	Si
SLV 9	ini.	-588.75	3257	0.9	0	548	7137	5660	2295	7684		2.36	Si
SLV 9	fin.	651.55	3137	0.9	0	548	7137	5660	2295	7684		2.45	Si
SLV 13	ini.	-625.55	3026	0.9	0	548	7137	5660	2295	7684		2.54	Si
SLV 13	fin.	753.36	3752	0.9	0	548	7137	5660	2295	7684		2.05	Si
SLV 10	ini.	-640.65	3597	0.9	0	548	7137	5660	2295	7684		2.14	Si
SLV 10	fin.	718.45	3429	0.9	0	548	7137	5660	2295	7684		2.24	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.484	SLV 14	Si
V_SLV	1.826	SLV 14	Si
PF_SLU	10.973	SLU 59	Si
V_SLU	4.584	SLU 59	Si

Trave di accoppiamento 183

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.314	15.18	15.695	0.515	-7.413	-3.314	15.18	15.696	0.516	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 59	ini.	-223.54	-613	-0.0003948	0.0001872	0.0035	0.5154		975.69	975.69	No	4.36	Si
SLU 59	fin.	106.65	727	-0.0001693	0.0001872	0.0035	0.5162		985.7	985.7	No	9.24	Si
SLU 58	ini.	-222.77	-610	-0.0003932	0.0001872	0.0035	0.5154		975.69	975.69	No	4.38	Si
SLU 58	fin.	105.9	723	-0.000168	0.0001872	0.0035	0.5162		985.7	985.7	No	9.31	Si
SLU 80	ini.	-220.98	-597	-0.0003894	0.0001872	0.0035	0.5154		975.69	975.69	No	4.42	Si
SLU 80	fin.	104.47	728	-0.0001656	0.0001872	0.0035	0.5162		985.7	985.7	No	9.44	Si
SLU 79	ini.	-220.2	-594	-0.0003878	0.0001872	0.0035	0.5154		975.69	975.69	No	4.43	Si
SLU 79	fin.	103.72	724	-0.0001643	0.0001872	0.0035	0.5162		985.7	985.7	No	9.5	Si
SLU 63	ini.	-211.24	-568	-0.0003692	0.0001872	0.0035	0.5154		975.69	975.69	No	4.62	Si
SLU 63	fin.	109.32	736	-0.0001739	0.0001872	0.0035	0.5162		985.7	985.7	No	9.02	Si
SLU 57	ini.	-226.44	-615	-0.0004009	0.0001872	0.0035	0.5154		975.69	975.69	No	4.31	Si
SLU 57	fin.	103.77	719	-0.0001644	0.0001872	0.0035	0.5162		985.7	985.7	No	9.5	Si
SLU 56	ini.	-225.67	-612	-0.0003993	0.0001872	0.0035	0.5154		975.69	975.69	No	4.32	Si
SLU 56	fin.	103.03	715	-0.0001631	0.0001872	0.0035	0.5162		985.7	985.7	No	9.57	Si
SLU 49	ini.	-211.16	-575	-0.000369	0.0001872	0.0035	0.5154		975.69	975.69	No	4.62	Si
SLU 49	fin.	89.09	636	-0.0001396	0.0001872	0.0035	0.5162		985.7	985.7	No	11.06	Si
SLU 78	ini.	-223.88	-599	-0.0003955	0.0001872	0.0035	0.5154		975.69	975.69	No	4.36	Si
SLU 78	fin.	101.59	719	-0.0001606	0.0001872	0.0035	0.5162		985.7	985.7	No	9.7	Si
SLU 77	ini.	-223.1	-596	-0.0003939	0.0001872	0.0035	0.5154		975.69	975.69	No	4.37	Si
SLU 77	fin.	100.85	716	-0.0001594	0.0001872	0.0035	0.5162		985.7	985.7	No	9.77	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 58	ini.	-222.77	1147	0.5154	0	139	4090	2161	1314	3475	No	3.03	Si
SLU 58	fin.	105.9	314	0.5162	0	140	4090	2164	1316	3480	No	11.09	Si
SLU 78	ini.	-223.88	1187	0.5154	0	139	4090	2161	1314	3475	No	2.93	Si
SLU 78	fin.	101.59	267	0.5162	0	140	4090	2164	1316	3480	No	13.03	Si
SLU 69	ini.	-207.82	1119	0.5154	0	139	4090	2161	1314	3475	No	3.11	Si
SLU 69	fin.	86.16	155	0.5162	0	140	4090	2164	1316	3480	No	22.49	Si
SLU 56	ini.	-225.67	1176	0.5154	0	139	4090	2161	1314	3475	No	2.96	Si
SLU 56	fin.	103.03	279	0.5162	0	140	4090	2164	1316	3480	No	12.49	Si
SLU 79	ini.	-220.2	1156	0.5154	0	139	4090	2161	1314	3475	No	3.01	Si
SLU 79	fin.	103.72	297	0.5162	0	140	4090	2164	1316	3480	No	11.73	Si
SLU 57	ini.	-226.44	1178	0.5154	0	139	4090	2161	1314	3475	No	2.95	Si
SLU 57	fin.	103.77	284	0.5162	0	140	4090	2164	1316	3480	No	12.25	Si
SLU 77	ini.	-223.1	1184	0.5154	0	139	4090	2161	1314	3475	No	2.93	Si
SLU 77	fin.	100.85	262	0.5162	0	140	4090	2164	1316	3480	No	13.31	Si
SLU 59	ini.	-223.54	1150	0.5154	0	139	4090	2161	1314	3475	No	3.02	Si
SLU 59	fin.	106.65	319	0.5162	0	140	4090	2164	1316	3480	No	10.9	Si
SLU 70	ini.	-208.6	1122	0.5154	0	139	4090	2161	1314	3475	No	3.1	Si
SLU 70	fin.	86.91	160	0.5162	0	140	4090	2164	1316	3480	No	21.71	Si
SLU 80	ini.	-220.98	1159	0.5154	0	139	4090	2161	1314	3475	No	3	Si
SLU 80	fin.	104.47	302	0.5162	0	140	4090	2164	1316	3480	No	11.51	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 10	ini.	-442.25	-1347	-0.0008615	0.0002807	0.0035	0.5154		987.2	987.2		2.23	Si
SLV 10	fin.	258.21	1618	-0.0004412	0.0002807	0.0035	0.5162		989.52	989.52		3.83	Si
SLD 10	ini.	-268.59	-784	-0.0004647	0.0002807	0.0035	0.5154		987.2	987.2		3.68	Si
SLD 10	fin.	150.86	975	-0.0002403	0.0002807	0.0035	0.5162		989.52	989.52		6.56	Si
SLV 5	ini.	-279.44	-750	-0.0004872	0.0002807	0.0035	0.5154		987.2	987.2		3.53	Si
SLV 5	fin.	156.5	1133	-0.0002501	0.0002807	0.0035	0.5162		989.52	989.52		6.32	Si
SLV 9	ini.	-404.71	-1237	-0.0007688	0.0002807	0.0035	0.5154		987.2	987.2		2.44	Si
SLV 9	fin.	235.8	1493	-0.0003967	0.0002807	0.0035	0.5162		989.52	989.52		4.2	Si
SLV 14	ini.	-439.91	-1454	-0.0008556	0.0002807	0.0035	0.5154		987.2	987.2		2.24	Si
SLV 14	fin.	259.25	1442	-0.0004433	0.0002807	0.0035	0.5162		989.52	989.52		3.82	Si
SLV 16	ini.	-303.54	-1032	-0.0005382	0.0002807	0.0035	0.5154		987.2	987.2		3.25	Si
SLV 16	fin.	175.39	902	-0.0002835	0.0002807	0.0035	0.5162		989.52	989.52		5.64	Si
SLV 6	ini.	-316.98	-861	-0.0005673	0.0002807	0.0035	0.5154		987.2	987.2		3.11	Si
SLV 6	fin.	178.91	1258	-0.0002898	0.0002807	0.0035	0.5162		989.52	989.52		5.53	Si
SLD 14	ini.	-265.67	-823	-0.0004588	0.0002807	0.0035	0.5154		987.2	987.2		3.72	Si
SLD 14	fin.	150.19	893	-0.0002392	0.0002807	0.0035	0.5162		989.52	989.52		6.59	Si
SLV 13	ini.	-381.13	-1281	-0.0007126	0.0002807	0.0035	0.5154		987.2	987.2		2.59	Si
SLV 13	fin.	224.16	1248	-0.0003741	0.0002807	0.0035	0.5162		989.52	989.52		4.41	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 9	ini.	-252.21	-735	-0.0004314	0.0002807	0.0035	0.5154		987.2	987.2		3.91	Si
SLD 9	fin.	141.08	921	-0.0002235	0.0002807	0.0035	0.5162		989.52	989.52		7.01	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 14	ini.	-265.67	1191	0.5154	0	209	4090	3241	1314	4299		3.61	Si
SLD 14	fin.	150.19	730	0.5162	0	209	4090	3246	1316	4300		5.89	Si
SLV 13	ini.	-381.13	1574	0.5154	0	209	4090	3241	1314	4299		2.73	Si
SLV 13	fin.	224.16	1245	0.5162	0	209	4090	3246	1316	4300		3.45	Si
SLV 9	ini.	-404.71	1778	0.5154	0	209	4090	3241	1314	4299		2.42	Si
SLV 9	fin.	235.8	1285	0.5162	0	209	4090	3246	1316	4300		3.35	Si
SLD 10	ini.	-268.59	1249	0.5154	0	209	4090	3241	1314	4299		3.44	Si
SLD 10	fin.	150.86	725	0.5162	0	209	4090	3246	1316	4300		5.93	Si
SLV 6	ini.	-316.98	1512	0.5154	0	209	4090	3241	1314	4299		2.84	Si
SLV 6	fin.	178.91	881	0.5162	0	209	4090	3246	1316	4300		4.88	Si
SLV 10	ini.	-442.25	1929	0.5154	0	209	4090	3241	1314	4299		2.23	Si
SLV 10	fin.	258.21	1412	0.5162	0	209	4090	3246	1316	4300		3.04	Si
SLV 14	ini.	-439.91	1811	0.5154	0	209	4090	3241	1314	4299		2.37	Si
SLV 14	fin.	259.25	1444	0.5162	0	209	4090	3246	1316	4300		2.98	Si
SLV 5	ini.	-279.44	1361	0.5154	0	209	4090	3241	1314	4299		3.16	Si
SLV 5	fin.	156.5	754	0.5162	0	209	4090	3246	1316	4300		5.7	Si
SLV 16	ini.	-303.54	1256	0.5154	0	209	4090	3241	1314	4299		3.42	Si
SLV 16	fin.	175.39	908	0.5162	0	209	4090	3246	1316	4300		4.73	Si
SLD 9	ini.	-252.21	1183	0.5154	0	209	4090	3241	1314	4299		3.63	Si
SLD 9	fin.	141.08	669	0.5162	0	209	4090	3246	1316	4300		6.43	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.232	SLV 10	Si
V_SLV	2.229	SLV 10	Si
PF_SLU	4.309	SLU 57	Si
V_SLU	2.927	SLU 78	Si

Trave di accoppiamento 184

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.463	-3.314	12.48	14.48	2	-5.963	-3.314	12.48	14.48	2	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 57	ini.	303.46	-547	-0.0000304	0.0001872	0.0035	2		14344.28	14344.28	No	47.27	Si
SLU 57	fin.	411.87	-141	-0.0000414	0.0001872	0.0035	2		14344.28	14344.28	No	34.83	Si
SLU 80	ini.	328.95	-546	-0.000033	0.0001872	0.0035	2		14344.28	14344.28	No	43.61	Si
SLU 80	fin.	407.22	-113	-0.0000409	0.0001872	0.0035	2		14344.28	14344.28	No	35.22	Si
SLU 58	ini.	292.06	-489	-0.0000292	0.0001872	0.0035	2		14344.28	14344.28	No	49.11	Si
SLU 58	fin.	413.62	-93	-0.0000416	0.0001872	0.0035	2		14344.28	14344.28	No	34.68	Si
SLU 78	ini.	332.05	-613	-0.0000333	0.0001872	0.0035	2		14344.28	14344.28	No	43.2	Si
SLU 78	fin.	403.41	-174	-0.0000405	0.0001872	0.0035	2		14344.28	14344.28	No	35.56	Si
SLU 63	ini.	261.35	-332	-0.0000261	0.0001872	0.0035	2		14344.28	14344.28	No	54.88	Si
SLU 63	fin.	409.52	45	-0.0000412	0.0001872	0.0035	2		14344.28	14344.28	No	35.03	Si
SLU 59	ini.	300.36	-481	-0.0000301	0.0001872	0.0035	2		14344.28	14344.28	No	47.76	Si
SLU 59	fin.	415.68	-80	-0.0000418	0.0001872	0.0035	2		14344.28	14344.28	No	34.51	Si
SLU 77	ini.	323.76	-621	-0.0000324	0.0001872	0.0035	2		14344.28	14344.28	No	44.31	Si
SLU 77	fin.	401.35	-186	-0.0000403	0.0001872	0.0035	2		14344.28	14344.28	No	35.74	Si
SLU 79	ini.	320.66	-554	-0.0000321	0.0001872	0.0035	2		14344.28	14344.28	No	44.73	Si
SLU 79	fin.	405.17	-125	-0.0000407	0.0001872	0.0035	2		14344.28	14344.28	No	35.4	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 56	ini.	295.17	-555	-0.0000295	0.0001872	0.0035	2		14344.28	14344.28	No	48.6	Si
SLU 56	fin.	409.81	-153	-0.0000412	0.0001872	0.0035	2		14344.28	14344.28	No	35	Si
SLU 62	ini.	253.06	-340	-0.0000253	0.0001872	0.0035	2		14344.28	14344.28	No	56.68	Si
SLU 62	fin.	407.47	33	-0.000041	0.0001872	0.0035	2		14344.28	14344.28	No	35.2	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 67	ini.	312.08	-586	2	0	812	3965	8384	5100	4776	No	8.16	Si
SLU 67	fin.	317.01	-260	2	0	812	3965	8384	5100	4776	No	18.35	Si
SLU 29	ini.	286.42	-569	2	0	812	3965	8384	5100	4776	No	8.39	Si
SLU 29	fin.	278.23	-260	2	0	812	3965	8384	5100	4776	No	18.34	Si
SLU 72	ini.	342.27	-625	2	0	812	3965	8384	5100	4776	No	7.64	Si
SLU 72	fin.	351.05	-275	2	0	812	3965	8384	5100	4776	No	17.39	Si
SLU 27	ini.	289.52	-603	2	0	812	3965	8384	5100	4776	No	7.92	Si
SLU 27	fin.	274.42	-255	2	0	812	3965	8384	5100	4776	No	18.74	Si
SLU 69	ini.	337.08	-639	2	0	812	3965	8384	5100	4776	No	7.47	Si
SLU 69	fin.	345.18	-241	2	0	812	3965	8384	5100	4776	No	19.85	Si
SLU 71	ini.	333.98	-606	2	0	812	3965	8384	5100	4776	No	7.89	Si
SLU 71	fin.	349	-246	2	0	812	3965	8384	5100	4776	No	19.4	Si
SLU 30	ini.	294.71	-589	2	0	812	3965	8384	5100	4776	No	8.11	Si
SLU 30	fin.	280.28	-289	2	0	812	3965	8384	5100	4776	No	16.54	Si
SLU 28	ini.	297.81	-623	2	0	812	3965	8384	5100	4776	No	7.67	Si
SLU 28	fin.	276.47	-283	2	0	812	3965	8384	5100	4776	No	16.85	Si
SLU 70	ini.	345.38	-659	2	0	812	3965	8384	5100	4776	No	7.25	Si
SLU 70	fin.	347.24	-269	2	0	812	3965	8384	5100	4776	No	17.74	Si
SLU 66	ini.	303.79	-566	2	0	812	3965	8384	5100	4776	No	8.44	Si
SLU 66	fin.	314.96	-232	2	0	812	3965	8384	5100	4776	No	20.6	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 9	ini.	852.89	1093	-0.0000865	0.0002807	0.0035	2		14202.07	14202.07		16.65	Si
SLV 9	fin.	1100	1827	-0.0001124	0.0002807	0.0035	2		14202.07	14202.07		12.91	Si
SLV 13	ini.	857.75	1203	-0.000087	0.0002807	0.0035	2		14202.07	14202.07		16.56	Si
SLV 13	fin.	1082.72	1775	-0.0001106	0.0002807	0.0035	2		14202.07	14202.07		13.12	Si
SLD 14	ini.	439.23	428	-0.000044	0.0002807	0.0035	2		14202.07	14202.07		32.33	Si
SLD 14	fin.	675.29	808	-0.0000681	0.0002807	0.0035	2		14202.07	14202.07		21.03	Si
SLV 3	ini.	-369.58	-2261	-0.0000369	0.0002807	0.0035	2		14215.41	14215.41		38.46	Si
SLV 3	fin.	-769.49	-2226	-0.0000778	0.0002807	0.0035	2		14215.41	14215.41		18.47	Si
SLV 10	ini.	790.96	1282	-0.0000801	0.0002807	0.0035	2		14202.07	14202.07		17.96	Si
SLV 10	fin.	1206.33	1980	-0.0001237	0.0002807	0.0035	2		14202.07	14202.07		11.77	Si
SLV 5	ini.	572.17	262	-0.0000575	0.0002807	0.0035	2		14202.07	14202.07		24.82	Si
SLV 5	fin.	670.04	905	-0.0000676	0.0002807	0.0035	2		14202.07	14202.07		21.2	Si
SLV 6	ini.	510.24	450	-0.0000512	0.0002807	0.0035	2		14202.07	14202.07		27.83	Si
SLV 6	fin.	776.36	1058	-0.0000786	0.0002807	0.0035	2		14202.07	14202.07		18.29	Si
SLV 14	ini.	760.77	1498	-0.0000769	0.0002807	0.0035	2		14202.07	14202.07		18.67	Si
SLV 14	fin.	1249.21	2014	-0.0001283	0.0002807	0.0035	2		14202.07	14202.07		11.37	Si
SLV 7	ini.	-399.77	-2045	-0.00004	0.0002807	0.0035	2		14215.41	14215.41		35.56	Si
SLV 7	fin.	-726.6	-2191	-0.0000734	0.0002807	0.0035	2		14215.41	14215.41		19.56	Si
SLV 16	ini.	469.19	806	-0.000047	0.0002807	0.0035	2		14202.07	14202.07		30.27	Si
SLV 16	fin.	830.22	1085	-0.0000842	0.0002807	0.0035	2		14202.07	14202.07		17.11	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	566.16	-140	2	0	1217	3965	12577	5100	5182		37	Si
SLV 15	fin.	663.73	1246	2	0	1217	3965	12577	5100	5182		4.16	Si
SLV 14	ini.	760.77	483	2	0	1217	3965	12577	5100	5182		10.74	Si
SLV 14	fin.	1249.21	1345	2	0	1217	3965	12577	5100	5182		3.85	Si
SLV 16	ini.	469.19	516	2	0	1217	3965	12577	5100	5182		10.04	Si
SLV 16	fin.	830.22	1804	2	0	1217	3965	12577	5100	5182		2.87	Si
SLV 6	ini.	510.24	-268	2	0	1217	3965	12577	5100	5182		19.36	Si
SLV 6	fin.	776.36	-1134	2	0	1217	3965	12577	5100	5182		4.57	Si
SLV 5	ini.	572.17	-687	2	0	1217	3965	12577	5100	5182		7.54	Si
SLV 5	fin.	670.04	-1491	2	0	1217	3965	12577	5100	5182		3.48	Si
SLV 4	ini.	-466.55	-395	2	0	1217	3965	12577	5100	5182		13.12	Si
SLV 4	fin.	-603	-1032	2	0	1217	3965	12577	5100	5182		5.02	Si
SLV 1	ini.	-78	-1085	2	0	1217	3965	12577	5100	5182		4.78	Si
SLV 1	fin.	-350.49	-2049	2	0	1217	3965	12577	5100	5182		2.53	Si
SLV 12	ini.	-180.98	118	2	0	1217	3965	12577	5100	5182		43.91	Si
SLV 12	fin.	-190.32	1246	2	0	1217	3965	12577	5100	5182		4.16	Si
SLV 3	ini.	-369.58	-1052	2	0	1217	3965	12577	5100	5182		4.93	Si
SLV 3	fin.	-769.49	-1590	2	0	1217	3965	12577	5100	5182		3.26	Si
SLV 2	ini.	-174.97	-429	2	0	1217	3965	12577	5100	5182		12.09	Si
SLV 2	fin.	-184	-1491	2	0	1217	3965	12577	5100	5182		3.48	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	11.369	SLV 14	Si
V_SLV	2.529	SLV 1	Si
PF_SLU	34.508	SLU 59	Si
V_SLU	7.248	SLU 70	Si

Trave di accoppiamento 185

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.463	-3.314	15.28	15.694	0.414	-5.963	-3.314	15.28	15.695	0.415	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 72	ini.	-46.91	-286	-0.0001123	0.0001872	0.0035	0.4145		637.25	637.25	No	13.58	Si
SLU 72	fin.	-75.31	-552	-0.0001861	0.0001872	0.0035	0.4149		636.41	636.41	No	8.45	Si
SLU 78	ini.	-54.43	-330	-0.0001314	0.0001872	0.0035	0.4145		637.25	637.25	No	11.71	Si
SLU 78	fin.	-74.5	-591	-0.0001839	0.0001872	0.0035	0.4149		636.41	636.41	No	8.54	Si
SLU 80	ini.	-52.51	-316	-0.0001265	0.0001872	0.0035	0.4145		637.25	637.25	No	12.14	Si
SLU 80	fin.	-74.63	-580	-0.0001843	0.0001872	0.0035	0.4149		636.41	636.41	No	8.53	Si
SLU 51	ini.	-48.76	-293	-0.000117	0.0001872	0.0035	0.4145		637.25	637.25	No	13.07	Si
SLU 51	fin.	-71.02	-549	-0.0001746	0.0001872	0.0035	0.4149		636.41	636.41	No	8.96	Si
SLU 77	ini.	-54.86	-334	-0.0001325	0.0001872	0.0035	0.4145		637.25	637.25	No	11.62	Si
SLU 77	fin.	-73.05	-588	-0.00018	0.0001872	0.0035	0.4149		636.41	636.41	No	8.71	Si
SLU 71	ini.	-47.34	-289	-0.0001134	0.0001872	0.0035	0.4145		637.25	637.25	No	13.46	Si
SLU 71	fin.	-73.86	-549	-0.0001822	0.0001872	0.0035	0.4149		636.41	636.41	No	8.62	Si
SLU 49	ini.	-50.68	-307	-0.0001219	0.0001872	0.0035	0.4145		637.25	637.25	No	12.57	Si
SLU 49	fin.	-70.89	-560	-0.0001742	0.0001872	0.0035	0.4149		636.41	636.41	No	8.98	Si
SLU 69	ini.	-49.26	-304	-0.0001183	0.0001872	0.0035	0.4145		637.25	637.25	No	12.94	Si
SLU 69	fin.	-73.73	-559	-0.0001819	0.0001872	0.0035	0.4149		636.41	636.41	No	8.63	Si
SLU 79	ini.	-52.94	-320	-0.0001276	0.0001872	0.0035	0.4145		637.25	637.25	No	12.04	Si
SLU 79	fin.	-73.18	-577	-0.0001804	0.0001872	0.0035	0.4149		636.41	636.41	No	8.7	Si
SLU 70	ini.	-48.84	-300	-0.0001172	0.0001872	0.0035	0.4145		637.25	637.25	No	13.05	Si
SLU 70	fin.	-75.18	-563	-0.0001858	0.0001872	0.0035	0.4149		636.41	636.41	No	8.47	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 49	ini.	-50.68	314	0.4145	0	139	3288	1738	1057	2794	No	8.91	Si
SLU 49	fin.	-70.89	-348	0.4149	0	140	3288	1739	1058	2797	No	8.03	Si
SLU 72	ini.	-46.91	304	0.4145	0	139	3288	1738	1057	2794	No	9.2	Si
SLU 72	fin.	-75.31	-374	0.4149	0	140	3288	1739	1058	2797	No	7.48	Si
SLU 70	ini.	-48.84	344	0.4145	0	139	3288	1738	1057	2794	No	8.13	Si
SLU 70	fin.	-75.18	-380	0.4149	0	140	3288	1739	1058	2797	No	7.35	Si
SLU 69	ini.	-49.26	353	0.4145	0	139	3288	1738	1057	2794	No	7.93	Si
SLU 69	fin.	-73.73	-375	0.4149	0	140	3288	1739	1058	2797	No	7.46	Si
SLU 67	ini.	-42.62	293	0.4145	0	139	3288	1738	1057	2794	No	9.54	Si
SLU 67	fin.	-68.48	-350	0.4149	0	140	3288	1739	1058	2797	No	7.98	Si
SLU 77	ini.	-54.86	359	0.4145	0	139	3288	1738	1057	2794	No	7.78	Si
SLU 77	fin.	-73.05	-359	0.4149	0	140	3288	1739	1058	2797	No	7.79	Si
SLU 80	ini.	-52.51	310	0.4145	0	139	3288	1738	1057	2794	No	9	Si
SLU 80	fin.	-74.63	-358	0.4149	0	140	3288	1739	1058	2797	No	7.81	Si
SLU 79	ini.	-52.94	319	0.4145	0	139	3288	1738	1057	2794	No	8.76	Si
SLU 79	fin.	-73.18	-353	0.4149	0	140	3288	1739	1058	2797	No	7.93	Si
SLU 71	ini.	-47.34	313	0.4145	0	139	3288	1738	1057	2794	No	8.94	Si
SLU 71	fin.	-73.86	-368	0.4149	0	140	3288	1739	1058	2797	No	7.6	Si
SLU 78	ini.	-54.43	350	0.4145	0	139	3288	1738	1057	2794	No	7.98	Si
SLU 78	fin.	-74.5	-365	0.4149	0	140	3288	1739	1058	2797	No	7.67	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-103.5	-320	-0.0002564	0.0002807	0.0035	0.4145		641.69	641.69		6.2	Si
SLV 13	fin.	-132.35	-1109	-0.0003367	0.0002807	0.0035	0.4149		641.84	641.84		4.85	Si
SLV 16	ini.	-104.17	-379	-0.0002582	0.0002807	0.0035	0.4145		641.69	641.69		6.16	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	fin.	-70.91	-882	-0.0001706	0.0002807	0.0035	0.4149		641.84	641.84		9.05	Si
SLV 14	ini.	-133.01	-497	-0.000339	0.0002807	0.0035	0.4145		641.69	641.69		4.82	Si
SLV 14	fin.	-118.33	-1230	-0.0002969	0.0002807	0.0035	0.4149		641.84	641.84		5.42	Si
SLV 9	ini.	-89.99	-365	-0.0002202	0.0002807	0.0035	0.4145		641.69	641.69		7.13	Si
SLV 9	fin.	-145.77	-1075	-0.0003761	0.0002807	0.0035	0.4149		641.84	641.84		4.4	Si
SLD 9	ini.	-55.55	-256	-0.0001322	0.0002807	0.0035	0.4145		641.69	641.69		11.55	Si
SLD 9	fin.	-89.27	-659	-0.0002181	0.0002807	0.0035	0.4149		641.84	641.84		7.19	Si
SLV 6	ini.	-63.85	-370	-0.0001529	0.0002807	0.0035	0.4145		641.69	641.69		10.05	Si
SLV 6	fin.	-103.06	-756	-0.0002549	0.0002807	0.0035	0.4149		641.84	641.84		6.23	Si
SLD 10	ini.	-63.77	-305	-0.0001528	0.0002807	0.0035	0.4145		641.69	641.69		10.06	Si
SLD 10	fin.	-85.37	-692	-0.0002079	0.0002807	0.0035	0.4149		641.84	641.84		7.52	Si
SLV 5	ini.	-45	-258	-0.0001063	0.0002807	0.0035	0.4145		641.69	641.69		14.26	Si
SLV 5	fin.	-112.02	-679	-0.0002793	0.0002807	0.0035	0.4149		641.84	641.84		5.73	Si
SLV 15	ini.	-74.67	-202	-0.0001804	0.0002807	0.0035	0.4145		641.69	641.69		8.59	Si
SLV 15	fin.	-84.93	-762	-0.0002067	0.0002807	0.0035	0.4149		641.84	641.84		7.56	Si
SLV 10	ini.	-108.83	-478	-0.0002709	0.0002807	0.0035	0.4145		641.69	641.69		5.9	Si
SLV 10	fin.	-136.81	-1152	-0.0003497	0.0002807	0.0035	0.4149		641.84	641.84		4.69	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 7	ini.	51.11	570	0.4145	0	209	3288	2606	1057	3498		6.14	Si
SLV 7	fin.	46.06	100	0.4149	0	210	3288	2609	1058	3498		34.97	Si
SLV 14	ini.	-133.01	-354	0.4145	0	209	3288	2606	1057	3498		9.87	Si
SLV 14	fin.	-118.33	-670	0.4149	0	210	3288	2609	1058	3498		5.22	Si
SLV 13	ini.	-103.5	-461	0.4145	0	209	3288	2606	1057	3498		7.58	Si
SLV 13	fin.	-132.35	-778	0.4149	0	210	3288	2609	1058	3498		4.5	Si
SLV 4	ini.	45.78	776	0.4145	0	209	3288	2606	1057	3498		4.5	Si
SLV 4	fin.	41.6	326	0.4149	0	210	3288	2609	1058	3498		10.72	Si
SLV 2	ini.	16.95	594	0.4145	0	209	3288	2606	1057	3498		5.89	Si
SLV 2	fin.	-5.82	187	0.4149	0	210	3288	2609	1058	3498		18.67	Si
SLV 8	ini.	32.27	638	0.4145	0	209	3288	2606	1057	3498		5.48	Si
SLV 8	fin.	55.02	169	0.4149	0	210	3288	2609	1058	3498		20.73	Si
SLV 15	ini.	-74.67	-279	0.4145	0	209	3288	2606	1057	3498		12.55	Si
SLV 15	fin.	-84.93	-639	0.4149	0	210	3288	2609	1058	3498		5.48	Si
SLV 10	ini.	-108.83	-255	0.4145	0	209	3288	2606	1057	3498		13.73	Si
SLV 10	fin.	-136.81	-551	0.4149	0	210	3288	2609	1058	3498		6.34	Si
SLV 3	ini.	75.29	670	0.4145	0	209	3288	2606	1057	3498		5.22	Si
SLV 3	fin.	27.58	219	0.4149	0	210	3288	2609	1058	3498		16	Si
SLV 9	ini.	-89.99	-323	0.4145	0	209	3288	2606	1057	3498		10.83	Si
SLV 9	fin.	-145.77	-620	0.4149	0	210	3288	2609	1058	3498		5.64	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.403	SLV 9	Si
V_SLV	4.499	SLV 13	Si
PF_SLU	8.451	SLU 72	Si
V_SLU	7.355	SLU 70	Si

Trave di accoppiamento 186

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.283	-3.314	12.48	13.38	0.9	-3.183	-3.314	12.48	13.38	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-423.45	396	-0.0002279	0.0001872	0.0035	0.9		2964.67	2964.67	No	7	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	fin.	443.04	-1471	-0.0002403	0.0001872	0.0035	0.9		2959	2959	No	6.68	Si
SLU 83	ini.	-416.07	378	-0.0002234	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.13	Si
SLU 83	fin.	439.71	-1467	-0.0002382	0.0001872	0.0035	0.9		2959	2959	No	6.73	Si
SLU 77	ini.	-403.4	337	-0.0002158	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.35	Si
SLU 77	fin.	438.69	-1496	-0.0002376	0.0001872	0.0035	0.9		2959	2959	No	6.75	Si
SLU 74	ini.	-390.15	321	-0.000208	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.6	Si
SLU 74	fin.	426.6	-1450	-0.0002303	0.0001872	0.0035	0.9		2959	2959	No	6.94	Si
SLU 78	ini.	-410.78	355	-0.0002203	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.22	Si
SLU 78	fin.	442.02	-1501	-0.0002396	0.0001872	0.0035	0.9		2959	2959	No	6.69	Si
SLU 75	ini.	-397.53	339	-0.0002124	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.46	Si
SLU 75	fin.	429.93	-1455	-0.0002323	0.0001872	0.0035	0.9		2959	2959	No	6.88	Si
SLU 81	ini.	-402.82	362	-0.0002155	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.36	Si
SLU 81	fin.	427.62	-1421	-0.0002309	0.0001872	0.0035	0.9		2959	2959	No	6.92	Si
SLU 80	ini.	-406.02	359	-0.0002174	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.3	Si
SLU 80	fin.	432.69	-1462	-0.0002339	0.0001872	0.0035	0.9		2959	2959	No	6.84	Si
SLU 82	ini.	-410.2	380	-0.0002199	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.23	Si
SLU 82	fin.	430.95	-1425	-0.0002329	0.0001872	0.0035	0.9		2959	2959	No	6.87	Si
SLU 79	ini.	-398.64	341	-0.000213	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.44	Si
SLU 79	fin.	429.36	-1457	-0.0002319	0.0001872	0.0035	0.9		2959	2959	No	6.89	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 57	ini.	-366.93	1581	0.9	0	365	7137	3773	2295	6068	No	3.84	Si
SLU 57	fin.	403.19	1999	0.9	0	365	7137	3773	2295	6068	No	3.04	Si
SLU 74	ini.	-390.15	1723	0.9	0	365	7137	3773	2295	6068	No	3.52	Si
SLU 74	fin.	426.6	2039	0.9	0	365	7137	3773	2295	6068	No	2.98	Si
SLU 75	ini.	-397.53	1753	0.9	0	365	7137	3773	2295	6068	No	3.46	Si
SLU 75	fin.	429.93	2053	0.9	0	365	7137	3773	2295	6068	No	2.96	Si
SLU 84	ini.	-423.45	1882	0.9	0	365	7137	3773	2295	6068	No	3.22	Si
SLU 84	fin.	443.04	2069	0.9	0	365	7137	3773	2295	6068	No	2.93	Si
SLU 83	ini.	-416.07	1851	0.9	0	365	7137	3773	2295	6068	No	3.28	Si
SLU 83	fin.	439.71	2056	0.9	0	365	7137	3773	2295	6068	No	2.95	Si
SLU 76	ini.	-397.69	1764	0.9	0	365	7137	3773	2295	6068	No	3.44	Si
SLU 76	fin.	422.82	1997	0.9	0	365	7137	3773	2295	6068	No	3.04	Si
SLU 79	ini.	-398.64	1736	0.9	0	365	7137	3773	2295	6068	No	3.49	Si
SLU 79	fin.	429.36	2083	0.9	0	365	7137	3773	2295	6068	No	2.91	Si
SLU 77	ini.	-403.4	1746	0.9	0	365	7137	3773	2295	6068	No	3.47	Si
SLU 77	fin.	438.69	2149	0.9	0	365	7137	3773	2295	6068	No	2.82	Si
SLU 78	ini.	-410.78	1777	0.9	0	365	7137	3773	2295	6068	No	3.42	Si
SLU 78	fin.	442.02	2162	0.9	0	365	7137	3773	2295	6068	No	2.81	Si
SLU 80	ini.	-406.02	1767	0.9	0	365	7137	3773	2295	6068	No	3.43	Si
SLU 80	fin.	432.69	2097	0.9	0	365	7137	3773	2295	6068	No	2.89	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-856.7	1136	-0.0004911	0.0002807	0.0035	0.9		2995.37	2995.37		3.5	Si
SLV 14	fin.	705.06	-1806	-0.0003912	0.0002807	0.0035	0.9		2989.59	2989.59		4.24	Si
SLD 10	ini.	-543.48	774	-0.0002905	0.0002807	0.0035	0.9		2995.37	2995.37		5.51	Si
SLD 10	fin.	463.93	-1321	-0.0002446	0.0002807	0.0035	0.9		2989.59	2989.59		6.44	Si
SLV 13	ini.	-691.33	806	-0.0003816	0.0002807	0.0035	0.9		2995.37	2995.37		4.33	Si
SLV 13	fin.	600.89	-1563	-0.0003257	0.0002807	0.0035	0.9		2989.59	2989.59		4.98	Si
SLV 6	ini.	-704.7	1274	-0.0003901	0.0002807	0.0035	0.9		2995.37	2995.37		4.25	Si
SLV 6	fin.	532.91	-1454	-0.0002848	0.0002807	0.0035	0.9		2989.59	2989.59		5.61	Si
SLD 9	ini.	-497.41	682	-0.0002634	0.0002807	0.0035	0.9		2995.37	2995.37		6.02	Si
SLD 9	fin.	434.91	-1254	-0.000228	0.0002807	0.0035	0.9		2989.59	2989.59		6.87	Si
SLV 16	ini.	-543.21	452	-0.0002903	0.0002807	0.0035	0.9		2995.37	2995.37		5.51	Si
SLV 16	fin.	521.01	-1458	-0.0002778	0.0002807	0.0035	0.9		2989.59	2989.59		5.74	Si
SLV 5	ini.	-599.09	1063	-0.000324	0.0002807	0.0035	0.9		2995.37	2995.37		5	Si
SLV 5	fin.	466.39	-1299	-0.000246	0.0002807	0.0035	0.9		2989.59	2989.59		6.41	Si
SLV 9	ini.	-824.25	1340	-0.000469	0.0002807	0.0035	0.9		2995.37	2995.37		3.63	Si
SLV 9	fin.	636.26	-1628	-0.0003476	0.0002807	0.0035	0.9		2989.59	2989.59		4.7	Si
SLV 10	ini.	-929.86	1551	-0.000542	0.0002807	0.0035	0.9		2995.37	2995.37		3.22	Si
SLV 10	fin.	702.78	-1784	-0.0003897	0.0002807	0.0035	0.9		2989.59	2989.59		4.25	Si
SLD 14	ini.	-507.88	587	-0.0002695	0.0002807	0.0035	0.9		2995.37	2995.37		5.9	Si
SLD 14	fin.	462.44	-1326	-0.0002437	0.0002807	0.0035	0.9		2989.59	2989.59		6.46	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 9	ini.	-824.25	3056	0.9	0	548	7137	5660	2295	7684		2.51	Si
SLV 9	fin.	636.26	2276	0.9	0	548	7137	5660	2295	7684		3.38	Si
SLD 5	ini.	-400.58	1975	0.9	0	548	7137	5660	2295	7684		3.89	Si
SLD 5	fin.	361.87	1827	0.9	0	548	7137	5660	2295	7684		4.21	Si
SLV 14	ini.	-856.7	2028	0.9	0	548	7137	5660	2295	7684		3.79	Si
SLV 14	fin.	705.06	1594	0.9	0	548	7137	5660	2295	7684		4.82	Si
SLV 6	ini.	-704.7	3495	0.9	0	548	7137	5660	2295	7684		2.2	Si
SLV 6	fin.	532.91	2832	0.9	0	548	7137	5660	2295	7684		2.71	Si
SLV 2	ini.	-106.16	2121	0.9	0	548	7137	5660	2295	7684		3.62	Si
SLV 2	fin.	138.82	2305	0.9	0	548	7137	5660	2295	7684		3.33	Si
SLV 10	ini.	-929.86	3467	0.9	0	548	7137	5660	2295	7684		2.22	Si
SLV 10	fin.	702.78	2619	0.9	0	548	7137	5660	2295	7684		2.93	Si
SLV 5	ini.	-599.09	3084	0.9	0	548	7137	5660	2295	7684		2.49	Si
SLV 5	fin.	466.39	2489	0.9	0	548	7137	5660	2295	7684		3.09	Si
SLD 9	ini.	-497.41	1962	0.9	0	548	7137	5660	2295	7684		3.92	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 9	fin.	434.91	1735	0.9	0	548	7137	5660	2295	7684		4.43	Si
SLD 6	ini.	-446.65	2154	0.9	0	548	7137	5660	2295	7684		3.57	Si
SLD 6	fin.	390.89	1977	0.9	0	548	7137	5660	2295	7684		3.89	Si
SLD 10	ini.	-543.48	2142	0.9	0	548	7137	5660	2295	7684		3.59	Si
SLD 10	fin.	463.93	1885	0.9	0	548	7137	5660	2295	7684		4.08	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.221	SLV 10	Si
V_SLV	2.199	SLV 6	Si
PF_SLU	6.679	SLU 84	Si
V_SLU	2.806	SLU 78	Si

Trave di accoppiamento 187

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.283	-3.314	15.18	15.692	0.512	-3.183	-3.314	15.18	15.692	0.512	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-324.85	-799	-0.0006319	0.0001872	0.0035	0.5116		963.49	963.49	No	2.97	Si
SLU 83	fin.	100.36	679	-0.000162	0.0001872	0.0035	0.5124		960.55	960.55	No	9.57	Si
SLU 79	ini.	-315.84	-759	-0.0006103	0.0001872	0.0035	0.5116		963.49	963.49	No	3.05	Si
SLU 79	fin.	87.82	590	-0.0001404	0.0001872	0.0035	0.5124		960.55	960.55	No	10.94	Si
SLU 75	ini.	-316.51	-774	-0.0006119	0.0001872	0.0035	0.5116		963.49	963.49	No	3.04	Si
SLU 75	fin.	90.55	613	-0.000145	0.0001872	0.0035	0.5124		960.55	960.55	No	10.61	Si
SLU 78	ini.	-326.03	-783	-0.0006348	0.0001872	0.0035	0.5116		963.49	963.49	No	2.96	Si
SLU 78	fin.	88.5	596	-0.0001415	0.0001872	0.0035	0.5124		960.55	960.55	No	10.85	Si
SLU 82	ini.	-317.9	-794	-0.0006152	0.0001872	0.0035	0.5116		963.49	963.49	No	3.03	Si
SLU 82	fin.	104.4	709	-0.000169	0.0001872	0.0035	0.5124		960.55	960.55	No	9.2	Si
SLU 81	ini.	-315.33	-789	-0.0006091	0.0001872	0.0035	0.5116		963.49	963.49	No	3.06	Si
SLU 81	fin.	102.41	696	-0.0001655	0.0001872	0.0035	0.5124		960.55	960.55	No	9.38	Si
SLU 80	ini.	-318.41	-764	-0.0006164	0.0001872	0.0035	0.5116		963.49	963.49	No	3.03	Si
SLU 80	fin.	89.81	603	-0.0001438	0.0001872	0.0035	0.5124		960.55	960.55	No	10.7	Si
SLU 84	ini.	-327.42	-804	-0.0006381	0.0001872	0.0035	0.5116		963.49	963.49	No	2.94	Si
SLU 84	fin.	102.35	692	-0.0001654	0.0001872	0.0035	0.5124		960.55	960.55	No	9.39	Si
SLU 74	ini.	-313.93	-768	-0.0006057	0.0001872	0.0035	0.5116		963.49	963.49	No	3.07	Si
SLU 74	fin.	88.56	600	-0.0001416	0.0001872	0.0035	0.5124		960.55	960.55	No	10.85	Si
SLU 77	ini.	-323.45	-778	-0.0006286	0.0001872	0.0035	0.5116		963.49	963.49	No	2.98	Si
SLU 77	fin.	86.51	583	-0.0001381	0.0001872	0.0035	0.5124		960.55	960.55	No	11.1	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-323.45	1599	0.5116	0	138	4060	2145	1305	3450	No	2.16	Si
SLU 77	fin.	86.51	-111	0.5124	0	139	4060	2148	1307	3455	No	31.19	Si
SLU 82	ini.	-317.9	1495	0.5116	0	138	4060	2145	1305	3450	No	2.31	Si
SLU 82	fin.	104.4	257	0.5124	0	139	4060	2148	1307	3455	No	13.47	Si
SLU 79	ini.	-315.84	1559	0.5116	0	138	4060	2145	1305	3450	No	2.21	Si
SLU 79	fin.	87.82	-76	0.5124	0	139	4060	2148	1307	3455	No	45.67	Si
SLU 83	ini.	-324.85	1557	0.5116	0	138	4060	2145	1305	3450	No	2.22	Si
SLU 83	fin.	100.36	122	0.5124	0	139	4060	2148	1307	3455	No	28.29	Si
SLU 75	ini.	-316.51	1537	0.5116	0	138	4060	2145	1305	3450	No	2.24	Si
SLU 75	fin.	90.55	24	0.5124	0	139	4060	2148	1307	3455	No	146	Si
SLU 80	ini.	-318.41	1569	0.5116	0	138	4060	2145	1305	3450	No	2.2	Si
SLU 80	fin.	89.81	-63	0.5124	0	139	4060	2148	1307	3455	No	54.87	Si
SLU 74	ini.	-313.93	1527	0.5116	0	138	4060	2145	1305	3450	No	2.26	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	fin.	88.56	11	0.5124	0	139	4060	2148	1307	3455	No	314.78	Si
SLU 76	ini.	-310.61	1504	0.5116	0	138	4060	2145	1305	3450	No	2.29	Si
SLU 76	fin.	93.18	67	0.5124	0	139	4060	2148	1307	3455	No	51.38	Si
SLU 78	ini.	-326.03	1609	0.5116	0	138	4060	2145	1305	3450	No	2.14	Si
SLU 78	fin.	88.5	-98	0.5124	0	139	4060	2148	1307	3455	No	35.22	Si
SLU 84	ini.	-327.42	1567	0.5116	0	138	4060	2145	1305	3450	No	2.2	Si
SLU 84	fin.	102.35	135	0.5124	0	139	4060	2148	1307	3455	No	25.63	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 6	ini.	-354.69	-880	-0.0006625	0.0002807	0.0035	0.5116		973.5	973.5		2.74	Si
SLD 6	fin.	157.72	1043	-0.0002578	0.0002807	0.0035	0.5124		971.98	971.98		6.16	Si
SLV 1	ini.	-405.87	-1057	-0.0007851	0.0002807	0.0035	0.5116		973.5	973.5		2.4	Si
SLV 1	fin.	206.3	1250	-0.0003479	0.0002807	0.0035	0.5124		971.98	971.98		4.71	Si
SLD 5	ini.	-328.56	-816	-0.0006027	0.0002807	0.0035	0.5116		973.5	973.5		2.96	Si
SLD 5	fin.	141.26	931	-0.0002286	0.0002807	0.0035	0.5124		971.98	971.98		6.88	Si
SLV 10	ini.	-449.35	-1085	-0.0008951	0.0002807	0.0035	0.5116		973.5	973.5		2.17	Si
SLV 10	fin.	210.84	1452	-0.0003567	0.0002807	0.0035	0.5124		971.98	971.98		4.61	Si
SLV 2	ini.	-499.66	-1286	-0.0010301	0.0002807	0.0035	0.5116		973.5	973.5		1.95	Si
SLV 2	fin.	265.4	1653	-0.0004666	0.0002807	0.0035	0.5124		971.98	971.98		3.66	Si
SLV 9	ini.	-389.45	-939	-0.0007449	0.0002807	0.0035	0.5116		973.5	973.5		2.5	Si
SLV 9	fin.	173.1	1194	-0.0002856	0.0002807	0.0035	0.5124		971.98	971.98		5.62	Si
SLV 6	ini.	-551.99	-1372	-0.0011801	0.0002807	0.0035	0.5116		973.5	973.5		1.76	Si
SLV 6	fin.	287.06	1883	-0.0005124	0.0002807	0.0035	0.5124		971.98	971.98		3.39	Si
SLV 4	ini.	-337.65	-891	-0.0006232	0.0002807	0.0035	0.5116		973.5	973.5		2.88	Si
SLV 4	fin.	161.46	962	-0.0002645	0.0002807	0.0035	0.5124		971.98	971.98		6.02	Si
SLV 5	ini.	-492.09	-1225	-0.0010092	0.0002807	0.0035	0.5116		973.5	973.5		1.98	Si
SLV 5	fin.	249.32	1626	-0.0004333	0.0002807	0.0035	0.5124		971.98	971.98		3.9	Si
SLD 2	ini.	-329.84	-837	-0.0006055	0.0002807	0.0035	0.5116		973.5	973.5		2.95	Si
SLD 2	fin.	146.94	934	-0.0002386	0.0002807	0.0035	0.5124		971.98	971.98		6.61	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 11	ini.	150.6	-375	0.5116	0	208	4060	3217	1305	4268		11.39	Si
SLV 11	fin.	-173.35	-1539	0.5124	0	208	4060	3222	1307	4268		2.77	Si
SLV 9	ini.	-389.45	1693	0.5116	0	208	4060	3217	1305	4268		2.52	Si
SLV 9	fin.	173.1	730	0.5124	0	208	4060	3222	1307	4268		5.85	Si
SLV 4	ini.	-337.65	1528	0.5116	0	208	4060	3217	1305	4268		2.79	Si
SLV 4	fin.	161.46	980	0.5124	0	208	4060	3222	1307	4268		4.35	Si
SLV 6	ini.	-551.99	2331	0.5116	0	208	4060	3217	1305	4268		1.83	Si
SLV 6	fin.	287.06	1628	0.5124	0	208	4060	3222	1307	4268		2.62	Si
SLV 2	ini.	-499.66	2148	0.5116	0	208	4060	3217	1305	4268		1.99	Si
SLV 2	fin.	265.4	1661	0.5124	0	208	4060	3222	1307	4268		2.57	Si
SLD 6	ini.	-354.69	1571	0.5116	0	208	4060	3217	1305	4268		2.72	Si
SLD 6	fin.	157.72	737	0.5124	0	208	4060	3222	1307	4268		5.79	Si
SLV 15	ini.	98.27	-192	0.5116	0	208	4060	3217	1305	4268		22.25	Si
SLV 15	fin.	-151.69	-1572	0.5124	0	208	4060	3222	1307	4268		2.71	Si
SLV 5	ini.	-492.09	2102	0.5116	0	208	4060	3217	1305	4268		2.03	Si
SLV 5	fin.	249.32	1379	0.5124	0	208	4060	3222	1307	4268		3.1	Si
SLV 1	ini.	-405.87	1789	0.5116	0	208	4060	3217	1305	4268		2.39	Si
SLV 1	fin.	206.3	1272	0.5124	0	208	4060	3222	1307	4268		3.36	Si
SLV 10	ini.	-449.35	1923	0.5116	0	208	4060	3217	1305	4268		2.22	Si
SLV 10	fin.	210.84	978	0.5124	0	208	4060	3222	1307	4268		4.36	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.764	SLV 6	Si
V_SLV	1.831	SLV 6	Si
PF_SLU	2.943	SLU 84	Si
V_SLU	2.144	SLU 78	Si

Trave di accoppiamento 188

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.933	-4.824	13.65	14.868	1.218	-11.933	-4.824	13.65	14.867	1.217	1	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	111.38	261	-0.00003	0.0001872	0.0035	1.2178		5371.64	5371.64	No	48.23	Si
SLU 82	fin.	-439.07	-202	-0.0001229	0.0001872	0.0035	1.2169		5389.58	5389.58	No	12.27	Si
SLU 74	ini.	87	169	-0.0000234	0.0001872	0.0035	1.2178		5371.64	5371.64	No	61.75	Si
SLU 74	fin.	-424.9	-246	-0.0001187	0.0001872	0.0035	1.2169		5389.58	5389.58	No	12.68	Si
SLU 79	ini.	81.96	132	-0.000022	0.0001872	0.0035	1.2178		5371.64	5371.64	No	65.54	Si
SLU 79	fin.	-428.93	-269	-0.0001199	0.0001872	0.0035	1.2169		5389.58	5389.58	No	12.57	Si
SLU 84	ini.	107.32	222	-0.0000289	0.0001872	0.0035	1.2178		5371.64	5371.64	No	50.05	Si
SLU 84	fin.	-445.56	-234	-0.0001248	0.0001872	0.0035	1.2169		5389.58	5389.58	No	12.1	Si
SLU 80	ini.	83.03	135	-0.0000223	0.0001872	0.0035	1.2178		5371.64	5371.64	No	64.69	Si
SLU 80	fin.	-428.86	-267	-0.0001199	0.0001872	0.0035	1.2169		5389.58	5389.58	No	12.57	Si
SLU 83	ini.	106.25	219	-0.0000286	0.0001872	0.0035	1.2178		5371.64	5371.64	No	50.56	Si
SLU 83	fin.	-445.63	-236	-0.0001248	0.0001872	0.0035	1.2169		5389.58	5389.58	No	12.09	Si
SLU 78	ini.	84.01	132	-0.0000226	0.0001872	0.0035	1.2178		5371.64	5371.64	No	63.94	Si
SLU 78	fin.	-431.32	-275	-0.0001206	0.0001872	0.0035	1.2169		5389.58	5389.58	No	12.5	Si
SLU 75	ini.	88.07	172	-0.0000237	0.0001872	0.0035	1.2178		5371.64	5371.64	No	61	Si
SLU 75	fin.	-424.83	-244	-0.0001187	0.0001872	0.0035	1.2169		5389.58	5389.58	No	12.69	Si
SLU 77	ini.	82.94	130	-0.0000223	0.0001872	0.0035	1.2178		5371.64	5371.64	No	64.77	Si
SLU 77	fin.	-431.39	-277	-0.0001206	0.0001872	0.0035	1.2169		5389.58	5389.58	No	12.49	Si
SLU 81	ini.	110.31	259	-0.0000297	0.0001872	0.0035	1.2178		5371.64	5371.64	No	48.7	Si
SLU 81	fin.	-439.14	-205	-0.0001229	0.0001872	0.0035	1.2169		5389.58	5389.58	No	12.27	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	106.25	47	1.2178	0	529	7930	5470	3105	8459	No	180	Si
SLU 83	fin.	-445.63	-1633	1.2169	0	529	7930	5466	3103	8459	No	5.18	Si
SLU 76	ini.	87.81	117	1.2178	0	529	7930	5470	3105	8459	No	72.03	Si
SLU 76	fin.	-422.32	-1568	1.2169	0	529	7930	5466	3103	8459	No	5.39	Si
SLU 79	ini.	81.96	258	1.2178	0	529	7930	5470	3105	8459	No	32.74	Si
SLU 79	fin.	-428.93	-1683	1.2169	0	529	7930	5466	3103	8459	No	5.03	Si
SLU 80	ini.	83.03	259	1.2178	0	529	7930	5470	3105	8459	No	32.65	Si
SLU 80	fin.	-428.86	-1686	1.2169	0	529	7930	5466	3103	8459	No	5.02	Si
SLU 78	ini.	84.01	229	1.2178	0	529	7930	5470	3105	8459	No	36.87	Si
SLU 78	fin.	-431.32	-1672	1.2169	0	529	7930	5466	3103	8459	No	5.06	Si
SLU 75	ini.	88.07	87	1.2178	0	529	7930	5470	3105	8459	No	96.8	Si
SLU 75	fin.	-424.83	-1553	1.2169	0	529	7930	5466	3103	8459	No	5.45	Si
SLU 84	ini.	107.32	48	1.2178	0	529	7930	5470	3105	8459	No	177.52	Si
SLU 84	fin.	-445.56	-1636	1.2169	0	529	7930	5466	3103	8459	No	5.17	Si
SLU 59	ini.	61.29	258	1.2178	0	529	7930	5470	3105	8459	No	32.85	Si
SLU 59	fin.	-395.31	-1528	1.2169	0	529	7930	5466	3103	8459	No	5.54	Si
SLU 74	ini.	87	87	1.2178	0	529	7930	5470	3105	8459	No	97.53	Si
SLU 74	fin.	-424.9	-1550	1.2169	0	529	7930	5466	3103	8459	No	5.46	Si
SLU 77	ini.	82.94	229	1.2178	0	529	7930	5470	3105	8459	No	36.98	Si
SLU 77	fin.	-431.39	-1670	1.2169	0	529	7930	5466	3103	8459	No	5.07	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	1146.67	1510	-0.0003405	0.0002807	0.0035	1.2178		5432.34	5432.34		4.74	Si
SLV 13	fin.	-1634.57	-1320	-0.0005153	0.0002807	0.0035	1.2169		5401.76	5401.76		3.3	Si
SLD 14	ini.	547.52	748	-0.0001527	0.0002807	0.0035	1.2178		5432.34	5432.34		9.92	Si
SLD 14	fin.	-903.78	-688	-0.0002609	0.0002807	0.0035	1.2169		5401.76	5401.76		5.98	Si
SLV 3	ini.	-1139.63	-1413	-0.0003376	0.0002807	0.0035	1.2178		5440.59	5440.59		4.77	Si
SLV 3	fin.	1156.5	1079	-0.0003441	0.0002807	0.0035	1.2169		5393.51	5393.51		4.66	Si
SLD 16	ini.	518.95	627	-0.0001444	0.0002807	0.0035	1.2178		5432.34	5432.34		10.47	Si
SLD 16	fin.	-909.32	-810	-0.0002626	0.0002807	0.0035	1.2169		5401.76	5401.76		5.94	Si
SLV 1	ini.	-1074.64	-1139	-0.0003159	0.0002807	0.0035	1.2178		5440.59	5440.59		5.06	Si
SLV 1	fin.	1169.52	1356	-0.0003485	0.0002807	0.0035	1.2169		5393.51	5393.51		4.61	Si
SLV 14	ini.	1223.02	1611	-0.0003666	0.0002807	0.0035	1.2178		5432.34	5432.34		4.44	Si
SLV 14	fin.	-1729.35	-1399	-0.0005516	0.0002807	0.0035	1.2169		5401.76	5401.76		3.12	Si
SLV 2	ini.	-998.29	-1038	-0.0002909	0.0002807	0.0035	1.2178		5440.59	5440.59		5.45	Si
SLV 2	fin.	1074.74	1277	-0.0003167	0.0002807	0.0035	1.2169		5393.51	5393.51		5.02	Si
SLV 16	ini.	1158.03	1337	-0.0003444	0.0002807	0.0035	1.2178		5432.34	5432.34		4.69	Si
SLV 16	fin.	-1742.37	-1676	-0.0005567	0.0002807	0.0035	1.2169		5401.76	5401.76		3.1	Si
SLV 4	ini.	-1063.28	-1312	-0.0003122	0.0002807	0.0035	1.2178		5440.59	5440.59		5.12	Si
SLV 4	fin.	1061.72	1000	-0.0003124	0.0002807	0.0035	1.2169		5393.51	5393.51		5.08	Si
SLV 15	ini.	1081.68	1237	-0.0003187	0.0002807	0.0035	1.2178		5432.34	5432.34		5.02	Si
SLV 15	fin.	-1647.59	-1597	-0.0005203	0.0002807	0.0035	1.2169		5401.76	5401.76		3.28	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	-1063.28	3935	1.2178	0	794	7930	8205	3105	8724		2.22	Si
SLV 4	fin.	1061.72	2798	1.2169	0	794	7930	8199	3103	8723		3.12	Si
SLV 3	ini.	-1139.63	4208	1.2178	0	794	7930	8205	3105	8724		2.07	Si
SLV 3	fin.	1156.5	3073	1.2169	0	794	7930	8199	3103	8723		2.84	Si
SLD 14	ini.	547.52	-1718	1.2178	0	794	7930	8205	3105	8724		5.08	Si
SLD 14	fin.	-903.78	-2739	1.2169	0	794	7930	8199	3103	8723		3.19	Si
SLV 2	ini.	-998.29	3782	1.2178	0	794	7930	8205	3105	8724		2.31	Si
SLV 2	fin.	1074.74	2817	1.2169	0	794	7930	8199	3103	8723		3.1	Si
SLV 13	ini.	1146.67	-3819	1.2178	0	794	7930	8205	3105	8724		2.28	Si
SLV 13	fin.	-1634.57	-4792	1.2169	0	794	7930	8199	3103	8723		1.82	Si
SLV 16	ini.	1158.03	-3939	1.2178	0	794	7930	8205	3105	8724		2.21	Si
SLV 16	fin.	-1742.37	-5086	1.2169	0	794	7930	8199	3103	8723		1.72	Si
SLV 1	ini.	-1074.64	4055	1.2178	0	794	7930	8205	3105	8724		2.15	Si
SLV 1	fin.	1169.52	3092	1.2169	0	794	7930	8199	3103	8723		2.82	Si
SLV 15	ini.	1081.68	-3666	1.2178	0	794	7930	8205	3105	8724		2.38	Si
SLV 15	fin.	-1647.59	-4811	1.2169	0	794	7930	8199	3103	8723		1.81	Si
SLV 14	ini.	1223.02	-4092	1.2178	0	794	7930	8205	3105	8724		2.13	Si
SLV 14	fin.	-1729.35	-5068	1.2169	0	794	7930	8199	3103	8723		1.72	Si
SLD 16	ini.	518.95	-1651	1.2178	0	794	7930	8205	3105	8724		5.28	Si
SLD 16	fin.	-909.32	-2746	1.2169	0	794	7930	8199	3103	8723		3.18	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.1	SLV 16	Si
V_SLV	1.715	SLV 16	Si
PF_SLU	12.094	SLU 83	Si
V_SLU	5.017	SLU 80	Si

Trave di accoppiamento 190

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.933	-4.824	3.13	4.68	1.55	-11.933	-4.824	3.13	4.68	1.55	1	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	1991.08	-2450	-0.0003879	0.0001872	0.0035	1.55		8673.05	8673.05	No	4.36	Si
SLU 77	fin.	-69.83	-2450	-0.0000115	0.0001872	0.0035	1.55		8682.76	8682.76	No	124.35	Si
SLU 84	ini.	2086.31	-2551	-0.0004101	0.0001872	0.0035	1.55		8673.05	8673.05	No	4.16	Si
SLU 84	fin.	-92.32	-2551	-0.0000153	0.0001872	0.0035	1.55		8682.76	8682.76	No	94.05	Si
SLU 83	ini.	2082.77	-2546	-0.0004092	0.0001872	0.0035	1.55		8673.05	8673.05	No	4.16	Si
SLU 83	fin.	-88.41	-2546	-0.0000146	0.0001872	0.0035	1.55		8682.76	8682.76	No	98.22	Si
SLU 74	ini.	1969.69	-2419	-0.0003829	0.0001872	0.0035	1.55		8673.05	8673.05	No	4.4	Si
SLU 74	fin.	-69.56	-2419	-0.0000115	0.0001872	0.0035	1.55		8682.76	8682.76	No	124.82	Si
SLU 75	ini.	1973.23	-2424	-0.0003838	0.0001872	0.0035	1.55		8673.05	8673.05	No	4.4	Si
SLU 75	fin.	-73.48	-2424	-0.0000121	0.0001872	0.0035	1.55		8682.76	8682.76	No	118.17	Si
SLU 78	ini.	1994.61	-2455	-0.0003887	0.0001872	0.0035	1.55		8673.05	8673.05	No	4.35	Si
SLU 78	fin.	-73.74	-2455	-0.0000122	0.0001872	0.0035	1.55		8682.76	8682.76	No	117.74	Si
SLU 79	ini.	1984.3	-2440	-0.0003863	0.0001872	0.0035	1.55		8673.05	8673.05	No	4.37	Si
SLU 79	fin.	-69.72	-2440	-0.0000115	0.0001872	0.0035	1.55		8682.76	8682.76	No	124.53	Si
SLU 81	ini.	2061.39	-2515	-0.0004042	0.0001872	0.0035	1.55		8673.05	8673.05	No	4.21	Si
SLU 81	fin.	-88.14	-2515	-0.0000146	0.0001872	0.0035	1.55		8682.76	8682.76	No	98.51	Si
SLU 82	ini.	2064.93	-2520	-0.0004051	0.0001872	0.0035	1.55		8673.05	8673.05	No	4.2	Si
SLU 82	fin.	-92.06	-2520	-0.0000152	0.0001872	0.0035	1.55		8682.76	8682.76	No	94.32	Si
SLU 80	ini.	1987.83	-2445	-0.0003871	0.0001872	0.0035	1.55		8673.05	8673.05	No	4.36	Si
SLU 80	fin.	-73.64	-2445	-0.0000122	0.0001872	0.0035	1.55		8682.76	8682.76	No	117.91	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	2061.39	-1434	1.55	0	674	7930	6962	3953	8604	No	6	Si
SLU 81	fin.	-88.14	-2863	1.55	0	674	7930	6962	3953	8604	No	3.01	Si
SLU 82	ini.	2064.93	-1441	1.55	0	674	7930	6962	3953	8604	No	5.97	Si
SLU 82	fin.	-92.06	-2870	1.55	0	674	7930	6962	3953	8604	No	3	Si
SLU 75	ini.	1973.23	-1331	1.55	0	674	7930	6962	3953	8604	No	6.46	Si
SLU 75	fin.	-73.48	-2760	1.55	0	674	7930	6962	3953	8604	No	3.12	Si
SLU 77	ini.	1991.08	-1345	1.55	0	674	7930	6962	3953	8604	No	6.39	Si
SLU 77	fin.	-69.83	-2774	1.55	0	674	7930	6962	3953	8604	No	3.1	Si
SLU 78	ini.	1994.61	-1353	1.55	0	674	7930	6962	3953	8604	No	6.36	Si
SLU 78	fin.	-73.74	-2782	1.55	0	674	7930	6962	3953	8604	No	3.09	Si
SLU 80	ini.	1987.83	-1346	1.55	0	674	7930	6962	3953	8604	No	6.39	Si
SLU 80	fin.	-73.64	-2775	1.55	0	674	7930	6962	3953	8604	No	3.1	Si
SLU 83	ini.	2082.77	-1456	1.55	0	674	7930	6962	3953	8604	No	5.91	Si
SLU 83	fin.	-88.41	-2884	1.55	0	674	7930	6962	3953	8604	No	2.98	Si
SLU 84	ini.	2086.31	-1463	1.55	0	674	7930	6962	3953	8604	No	5.88	Si
SLU 84	fin.	-92.32	-2892	1.55	0	674	7930	6962	3953	8604	No	2.98	Si
SLU 76	ini.	1968.81	-1329	1.55	0	674	7930	6962	3953	8604	No	6.47	Si
SLU 76	fin.	-75.98	-2758	1.55	0	674	7930	6962	3953	8604	No	3.12	Si
SLU 79	ini.	1984.3	-1338	1.55	0	674	7930	6962	3953	8604	No	6.43	Si
SLU 79	fin.	-69.72	-2767	1.55	0	674	7930	6962	3953	8604	No	3.11	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	8641.61	-62	-0.0030259	0.0002807	0.0035	1.55		8579.25	8579.25		0.99	No
SLV 13	fin.	-4931.37	-238	-0.0011377	0.0002807	0.0035	1.55		8589.57	8589.57		1.74	Si
SLD 15	ini.	4527.81	-1149	-0.0010148	0.0002807	0.0035	1.55		8579.25	8579.25		1.89	Si
SLD 15	fin.	-2078.21	-1193	-0.0003867	0.0002807	0.0035	1.55		8589.57	8589.57		4.13	Si
SLV 14	ini.	8474.24	-86	-0.0028908	0.0002807	0.0035	1.55		8579.25	8579.25		1.01	Si
SLV 14	fin.	-4827.78	-262	-0.0011051	0.0002807	0.0035	1.55		8589.57	8589.57		1.78	Si
SLD 16	ini.	4455.96	-1159	-0.0009933	0.0002807	0.0035	1.55		8579.25	8579.25		1.93	Si
SLD 16	fin.	-2033.74	-1203	-0.0003772	0.0002807	0.0035	1.55		8589.57	8589.57		4.22	Si
SLV 2	ini.	-6206.98	-2682	-0.0015912	0.0002807	0.0035	1.55		8589.57	8589.57		1.38	Si
SLV 2	fin.	4758.47	-2580	-0.0010851	0.0002807	0.0035	1.55		8579.25	8579.25		1.8	Si
SLV 3	ini.	-5849.44	-3128	-0.0014527	0.0002807	0.0035	1.55		8589.57	8589.57		1.47	Si
SLV 3	fin.	4764.77	-2953	-0.0010871	0.0002807	0.0035	1.55		8579.25	8579.25		1.8	Si
SLV 15	ini.	8831.78	-532	-0.0031828	0.0002807	0.0035	1.55		8579.25	8579.25		0.97	No
SLV 15	fin.	-4821.48	-634	-0.0011031	0.0002807	0.0035	1.55		8589.57	8589.57		1.78	Si
SLV 4	ini.	-6016.82	-3152	-0.0015162	0.0002807	0.0035	1.55		8589.57	8589.57		1.43	Si
SLV 4	fin.	4868.35	-2976	-0.0011195	0.0002807	0.0035	1.55		8579.25	8579.25		1.76	Si
SLV 16	ini.	8664.41	-556	-0.0030446	0.0002807	0.0035	1.55		8579.25	8579.25		0.99	No
SLV 16	fin.	-4717.9	-658	-0.001071	0.0002807	0.0035	1.55		8589.57	8589.57		1.82	Si
SLV 1	ini.	-6039.61	-2659	-0.001525	0.0002807	0.0035	1.55		8589.57	8589.57		1.42	Si
SLV 1	fin.	4654.88	-2556	-0.0010532	0.0002807	0.0035	1.55		8579.25	8579.25		1.84	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	-6016.82	11391	1.55	0	1011	7930	10443	3953	8940		0.78	No
SLV 4	fin.	4868.35	10304	1.55	0	1011	7930	10443	3953	8940		0.87	No
SLD 15	ini.	4527.81	-6065	1.55	0	1011	7930	10443	3953	8940		1.47	Si
SLD 15	fin.	-2078.21	-7167	1.55	0	1011	7930	10443	3953	8940		1.25	Si
SLV 14	ini.	8474.24	-12709	1.55	0	1011	7930	10443	3953	8940		0.7	No
SLV 14	fin.	-4827.78	-13815	1.55	0	1011	7930	10443	3953	8940		0.65	No
SLV 13	ini.	8641.61	-12980	1.55	0	1011	7930	10443	3953	8940		0.69	No
SLV 13	fin.	-4931.37	-14086	1.55	0	1011	7930	10443	3953	8940		0.63	No
SLD 13	ini.	4444	-6003	1.55	0	1011	7930	10443	3953	8940		1.49	Si
SLD 13	fin.	-2126.59	-7103	1.55	0	1011	7930	10443	3953	8940		1.26	Si
SLV 1	ini.	-6039.61	11264	1.55	0	1011	7930	10443	3953	8940		0.79	No
SLV 1	fin.	4654.88	10180	1.55	0	1011	7930	10443	3953	8940		0.88	No
SLV 16	ini.	8664.41	-12854	1.55	0	1011	7930	10443	3953	8940		0.7	No
SLV 16	fin.	-4717.9	-13963	1.55	0	1011	7930	10443	3953	8940		0.64	No
SLV 15	ini.	8831.78	-13125	1.55	0	1011	7930	10443	3953	8940		0.68	No
SLV 15	fin.	-4821.48	-14234	1.55	0	1011	7930	10443	3953	8940		0.63	No
SLV 3	ini.	-5849.44	11120	1.55	0	1011	7930	10443	3953	8940		0.8	No
SLV 3	fin.	4764.77	10033	1.55	0	1011	7930	10443	3953	8940		0.89	No
SLV 2	ini.	-6206.98	11535	1.55	0	1011	7930	10443	3953	8940		0.78	No
SLV 2	fin.	4758.47	10451	1.55	0	1011	7930	10443	3953	8940		0.86	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.971	SLV 15	No
V_SLV	0.628	SLV 15	No
PF_SLU	4.157	SLU 84	Si
V_SLU	2.975	SLU 84	Si

Trave di accoppiamento 191

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.933	-4.824	6.68	8.13	1.45	-11.933	-4.824	6.68	8.13	1.45	1	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	1237.14	-1245	-0.0002608	0.0001872	0.0035	1.45		7546.08	7546.08	No	6.1	Si
SLU 83	fin.	-805.06	-1420	-0.0001618	0.0001872	0.0035	1.45		7555.42	7555.42	No	9.38	Si
SLU 79	ini.	1176	-1209	-0.0002462	0.0001872	0.0035	1.45		7546.08	7546.08	No	6.42	Si
SLU 79	fin.	-740.59	-1377	-0.0001479	0.0001872	0.0035	1.45		7555.42	7555.42	No	10.2	Si
SLU 74	ini.	1165.6	-1195	-0.0002437	0.0001872	0.0035	1.45		7546.08	7546.08	No	6.47	Si
SLU 74	fin.	-740.57	-1360	-0.0001479	0.0001872	0.0035	1.45		7555.42	7555.42	No	10.2	Si
SLU 81	ini.	1225.49	-1228	-0.000258	0.0001872	0.0035	1.45		7546.08	7546.08	No	6.16	Si
SLU 81	fin.	-798.22	-1402	-0.0001603	0.0001872	0.0035	1.45		7555.42	7555.42	No	9.47	Si
SLU 77	ini.	1177.24	-1211	-0.0002465	0.0001872	0.0035	1.45		7546.08	7546.08	No	6.41	Si
SLU 77	fin.	-747.4	-1379	-0.0001494	0.0001872	0.0035	1.45		7555.42	7555.42	No	10.11	Si
SLU 80	ini.	1172.75	-1225	-0.0002454	0.0001872	0.0035	1.45		7546.08	7546.08	No	6.43	Si
SLU 80	fin.	-744.72	-1392	-0.0001488	0.0001872	0.0035	1.45		7555.42	7555.42	No	10.15	Si
SLU 78	ini.	1173.99	-1227	-0.0002457	0.0001872	0.0035	1.45		7546.08	7546.08	No	6.43	Si
SLU 78	fin.	-751.53	-1395	-0.0001503	0.0001872	0.0035	1.45		7555.42	7555.42	No	10.05	Si
SLU 75	ini.	1162.35	-1211	-0.0002429	0.0001872	0.0035	1.45		7546.08	7546.08	No	6.49	Si
SLU 75	fin.	-744.69	-1376	-0.0001488	0.0001872	0.0035	1.45		7555.42	7555.42	No	10.15	Si
SLU 84	ini.	1233.89	-1261	-0.00026	0.0001872	0.0035	1.45		7546.08	7546.08	No	6.12	Si
SLU 84	fin.	-809.18	-1436	-0.0001627	0.0001872	0.0035	1.45		7555.42	7555.42	No	9.34	Si
SLU 82	ini.	1222.24	-1244	-0.0002572	0.0001872	0.0035	1.45		7546.08	7546.08	No	6.17	Si
SLU 82	fin.	-802.35	-1417	-0.0001612	0.0001872	0.0035	1.45		7555.42	7555.42	No	9.42	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	1176	-983	1.45	0	630	7930	6513	3698	8560	No	8.71	Si
SLU 79	fin.	-740.59	-2527	1.45	0	630	7930	6513	3698	8560	No	3.39	Si
SLU 75	ini.	1162.35	-981	1.45	0	630	7930	6513	3698	8560	No	8.73	Si
SLU 75	fin.	-744.69	-2517	1.45	0	630	7930	6513	3698	8560	No	3.4	Si
SLU 74	ini.	1165.6	-978	1.45	0	630	7930	6513	3698	8560	No	8.75	Si
SLU 74	fin.	-740.57	-2516	1.45	0	630	7930	6513	3698	8560	No	3.4	Si
SLU 84	ini.	1233.89	-1098	1.45	0	630	7930	6513	3698	8560	No	7.79	Si
SLU 84	fin.	-809.18	-2658	1.45	0	630	7930	6513	3698	8560	No	3.22	Si
SLU 80	ini.	1172.75	-985	1.45	0	630	7930	6513	3698	8560	No	8.69	Si
SLU 80	fin.	-744.72	-2528	1.45	0	630	7930	6513	3698	8560	No	3.39	Si
SLU 81	ini.	1225.49	-1086	1.45	0	630	7930	6513	3698	8560	No	7.88	Si
SLU 81	fin.	-798.22	-2638	1.45	0	630	7930	6513	3698	8560	No	3.25	Si
SLU 78	ini.	1173.99	-990	1.45	0	630	7930	6513	3698	8560	No	8.64	Si
SLU 78	fin.	-751.53	-2537	1.45	0	630	7930	6513	3698	8560	No	3.37	Si
SLU 77	ini.	1177.24	-988	1.45	0	630	7930	6513	3698	8560	No	8.67	Si
SLU 77	fin.	-747.4	-2536	1.45	0	630	7930	6513	3698	8560	No	3.38	Si
SLU 82	ini.	1222.24	-1089	1.45	0	630	7930	6513	3698	8560	No	7.86	Si
SLU 82	fin.	-802.35	-2639	1.45	0	630	7930	6513	3698	8560	No	3.24	Si
SLU 83	ini.	1237.14	-1096	1.45	0	630	7930	6513	3698	8560	No	7.81	Si
SLU 83	fin.	-805.06	-2658	1.45	0	630	7930	6513	3698	8560	No	3.22	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 15	ini.	2409.54	-746	-0.0005414	0.0002807	0.0035	1.45		7650.82	7650.82		3.18	Si
SLD 15	fin.	-2472.74	-1053	-0.000558	0.0002807	0.0035	1.45		7660.66	7660.66		3.1	Si
SLV 14	ini.	4612.47	-311	-0.0012531	0.0002807	0.0035	1.45		7650.82	7650.82		1.66	Si
SLV 14	fin.	-5078.84	-831	-0.001439	0.0002807	0.0035	1.45		7660.66	7660.66		1.51	Si
SLV 1	ini.	-3034.58	-990	-0.0007188	0.0002807	0.0035	1.45		7660.66	7660.66		2.52	Si
SLV 1	fin.	4242.46	-637	-0.0011154	0.0002807	0.0035	1.45		7650.82	7650.82		1.8	Si
SLV 16	ini.	4591.47	-643	-0.001245	0.0002807	0.0035	1.45		7650.82	7650.82		1.67	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	fin.	-5162.51	-1215	-0.0014747	0.0002807	0.0035	1.45		7660.66	7660.66		1.48	Si
SLV 2	ini.	-3037.16	-985	-0.0007195	0.0002807	0.0035	1.45		7660.66	7660.66		2.52	Si
SLV 2	fin.	4247.11	-633	-0.0011171	0.0002807	0.0035	1.45		7650.82	7650.82		1.8	Si
SLV 3	ini.	-3055.58	-1322	-0.000725	0.0002807	0.0035	1.45		7660.66	7660.66		2.51	Si
SLV 3	fin.	4158.79	-1021	-0.0010855	0.0002807	0.0035	1.45		7650.82	7650.82		1.84	Si
SLD 16	ini.	2408.43	-744	-0.0005411	0.0002807	0.0035	1.45		7650.82	7650.82		3.18	Si
SLD 16	fin.	-2470.75	-1051	-0.0005574	0.0002807	0.0035	1.45		7660.66	7660.66		3.1	Si
SLV 4	ini.	-3058.16	-1318	-0.0007258	0.0002807	0.0035	1.45		7660.66	7660.66		2.5	Si
SLV 4	fin.	4163.44	-1017	-0.0010872	0.0002807	0.0035	1.45		7650.82	7650.82		1.84	Si
SLV 15	ini.	4594.05	-648	-0.001246	0.0002807	0.0035	1.45		7650.82	7650.82		1.67	Si
SLV 15	fin.	-5167.16	-1219	-0.0014767	0.0002807	0.0035	1.45		7660.66	7660.66		1.48	Si
SLV 13	ini.	4615.05	-316	-0.0012541	0.0002807	0.0035	1.45		7650.82	7650.82		1.66	Si
SLV 13	fin.	-5083.49	-835	-0.0014409	0.0002807	0.0035	1.45		7660.66	7660.66		1.51	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	-3058.16	7550	1.45	0	946	7930	9769	3698	8875		1.18	Si
SLV 4	fin.	4163.44	6982	1.45	0	946	7930	9769	3698	8875		1.27	Si
SLV 16	ini.	4591.47	-8623	1.45	0	946	7930	9769	3698	8875		1.03	Si
SLV 16	fin.	-5162.51	-10454	1.45	0	946	7930	9769	3698	8875		0.85	No
SLV 13	ini.	4615.05	-8687	1.45	0	946	7930	9769	3698	8875		1.02	Si
SLV 13	fin.	-5083.49	-10374	1.45	0	946	7930	9769	3698	8875		0.86	No
SLV 1	ini.	-3034.58	7486	1.45	0	946	7930	9769	3698	8875		1.19	Si
SLV 1	fin.	4242.46	7062	1.45	0	946	7930	9769	3698	8875		1.26	Si
SLV 3	ini.	-3055.58	7533	1.45	0	946	7930	9769	3698	8875		1.18	Si
SLV 3	fin.	4158.79	6975	1.45	0	946	7930	9769	3698	8875		1.27	Si
SLD 15	ini.	2409.54	-4019	1.45	0	946	7930	9769	3698	8875		2.21	Si
SLD 15	fin.	-2472.74	-5444	1.45	0	946	7930	9769	3698	8875		1.63	Si
SLD 16	ini.	2408.43	-4012	1.45	0	946	7930	9769	3698	8875		2.21	Si
SLD 16	fin.	-2470.75	-5441	1.45	0	946	7930	9769	3698	8875		1.63	Si
SLV 14	ini.	4612.47	-8670	1.45	0	946	7930	9769	3698	8875		1.02	Si
SLV 14	fin.	-5078.84	-10367	1.45	0	946	7930	9769	3698	8875		0.86	No
SLV 15	ini.	4594.05	-8640	1.45	0	946	7930	9769	3698	8875		1.03	Si
SLV 15	fin.	-5167.16	-10461	1.45	0	946	7930	9769	3698	8875		0.85	No
SLV 2	ini.	-3037.16	7503	1.45	0	946	7930	9769	3698	8875		1.18	Si
SLV 2	fin.	4247.11	7069	1.45	0	946	7930	9769	3698	8875		1.26	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.483	SLV 15	Si
V_SLV	0.848	SLV 15	No
PF_SLU	6.1	SLU 83	Si
V_SLU	3.22	SLU 84	Si

Trave di accoppiamento 192

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.933	-4.824	10.13	11.65	1.52	-11.933	-4.824	10.13	11.65	1.52	1	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	1180.93	-1028	-0.0002223	0.0001872	0.0035	1.52		8297.04	8297.04	No	7.03	Si
SLU 77	fin.	-653.15	-1028	-0.0001171	0.0001872	0.0035	1.52		8306.86	8306.86	No	12.72	Si
SLU 81	ini.	1225.2	-1042	-0.0002317	0.0001872	0.0035	1.52		8297.04	8297.04	No	6.77	Si
SLU 81	fin.	-707.31	-1042	-0.0001274	0.0001872	0.0035	1.52		8306.86	8306.86	No	11.74	Si
SLU 79	ini.	1180.28	-1026	-0.0002222	0.0001872	0.0035	1.52		8297.04	8297.04	No	7.03	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	fin.	-640.73	-1026	-0.0001148	0.0001872	0.0035	1.52		8306.86	8306.86	No	12.96	Si
SLU 84	ini.	1237.58	-1077	-0.0002343	0.0001872	0.0035	1.52		8297.04	8297.04	No	6.7	Si
SLU 84	fin.	-710.8	-1077	-0.0001281	0.0001872	0.0035	1.52		8306.86	8306.86	No	11.69	Si
SLU 80	ini.	1179.19	-1044	-0.000222	0.0001872	0.0035	1.52		8297.04	8297.04	No	7.04	Si
SLU 80	fin.	-641.66	-1044	-0.000115	0.0001872	0.0035	1.52		8306.86	8306.86	No	12.95	Si
SLU 74	ini.	1167.47	-1012	-0.0002195	0.0001872	0.0035	1.52		8297.04	8297.04	No	7.11	Si
SLU 74	fin.	-650.58	-1012	-0.0001166	0.0001872	0.0035	1.52		8306.86	8306.86	No	12.77	Si
SLU 78	ini.	1179.85	-1046	-0.0002221	0.0001872	0.0035	1.52		8297.04	8297.04	No	7.03	Si
SLU 78	fin.	-654.07	-1046	-0.0001173	0.0001872	0.0035	1.52		8306.86	8306.86	No	12.7	Si
SLU 82	ini.	1224.12	-1060	-0.0002315	0.0001872	0.0035	1.52		8297.04	8297.04	No	6.78	Si
SLU 82	fin.	-708.23	-1060	-0.0001276	0.0001872	0.0035	1.52		8306.86	8306.86	No	11.73	Si
SLU 83	ini.	1238.67	-1059	-0.0002346	0.0001872	0.0035	1.52		8297.04	8297.04	No	6.7	Si
SLU 83	fin.	-709.88	-1059	-0.0001279	0.0001872	0.0035	1.52		8306.86	8306.86	No	11.7	Si
SLU 75	ini.	1166.38	-1030	-0.0002193	0.0001872	0.0035	1.52		8297.04	8297.04	No	7.11	Si
SLU 75	fin.	-651.5	-1030	-0.0001168	0.0001872	0.0035	1.52		8306.86	8306.86	No	12.75	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	1179.85	-1194	1.52	0	661	7930	6827	3876	8590	No	7.19	Si
SLU 78	fin.	-654.07	-2382	1.52	0	661	7930	6827	3876	8590	No	3.61	Si
SLU 81	ini.	1225.2	-1293	1.52	0	661	7930	6827	3876	8590	No	6.64	Si
SLU 81	fin.	-707.31	-2481	1.52	0	661	7930	6827	3876	8590	No	3.46	Si
SLU 74	ini.	1167.47	-1178	1.52	0	661	7930	6827	3876	8590	No	7.29	Si
SLU 74	fin.	-650.58	-2366	1.52	0	661	7930	6827	3876	8590	No	3.63	Si
SLU 82	ini.	1224.12	-1293	1.52	0	661	7930	6827	3876	8590	No	6.65	Si
SLU 82	fin.	-708.23	-2480	1.52	0	661	7930	6827	3876	8590	No	3.46	Si
SLU 79	ini.	1180.28	-1181	1.52	0	661	7930	6827	3876	8590	No	7.27	Si
SLU 79	fin.	-640.73	-2369	1.52	0	661	7930	6827	3876	8590	No	3.63	Si
SLU 80	ini.	1179.19	-1181	1.52	0	661	7930	6827	3876	8590	No	7.27	Si
SLU 80	fin.	-641.66	-2369	1.52	0	661	7930	6827	3876	8590	No	3.63	Si
SLU 84	ini.	1237.58	-1309	1.52	0	661	7930	6827	3876	8590	No	6.56	Si
SLU 84	fin.	-710.8	-2496	1.52	0	661	7930	6827	3876	8590	No	3.44	Si
SLU 83	ini.	1238.67	-1309	1.52	0	661	7930	6827	3876	8590	No	6.56	Si
SLU 83	fin.	-709.88	-2497	1.52	0	661	7930	6827	3876	8590	No	3.44	Si
SLU 77	ini.	1180.93	-1195	1.52	0	661	7930	6827	3876	8590	No	7.19	Si
SLU 77	fin.	-653.15	-2382	1.52	0	661	7930	6827	3876	8590	No	3.61	Si
SLU 75	ini.	1166.38	-1178	1.52	0	661	7930	6827	3876	8590	No	7.29	Si
SLU 75	fin.	-651.5	-2366	1.52	0	661	7930	6827	3876	8590	No	3.63	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	3733.75	-296	-0.0008309	0.0002807	0.0035	1.52		8347.35	8347.35		2.24	Si
SLV 16	fin.	-3789.94	-443	-0.0008459	0.0002807	0.0035	1.52		8357.44	8357.44		2.21	Si
SLV 15	ini.	3584.86	-319	-0.0007886	0.0002807	0.0035	1.52		8347.35	8347.35		2.33	Si
SLV 15	fin.	-3619.94	-466	-0.0007974	0.0002807	0.0035	1.52		8357.44	8357.44		2.31	Si
SLV 13	ini.	3679.43	0	-0.0008154	0.0002807	0.0035	1.52		8347.35	8347.35		2.27	Si
SLV 13	fin.	-3510.89	-242	-0.0007669	0.0002807	0.0035	1.52		8357.44	8357.44		2.38	Si
SLV 2	ini.	-2020.76	-1044	-0.0003923	0.0002807	0.0035	1.52		8357.44	8357.44		4.14	Si
SLV 2	fin.	2838.92	-896	-0.0005892	0.0002807	0.0035	1.52		8347.35	8347.35		2.94	Si
SLV 3	ini.	-2264.22	-1385	-0.0004482	0.0002807	0.0035	1.52		8357.44	8357.44		3.69	Si
SLV 3	fin.	2899.88	-1143	-0.0006048	0.0002807	0.0035	1.52		8347.35	8347.35		2.88	Si
SLV 14	ini.	3828.33	23	-0.0008582	0.0002807	0.0035	1.52		8347.35	8347.35		2.18	Si
SLV 14	fin.	-3680.89	-220	-0.0008147	0.0002807	0.0035	1.52		8357.44	8357.44		2.27	Si
SLD 14	ini.	2085.72	-378	-0.0004075	0.0002807	0.0035	1.52		8347.35	8347.35		4	Si
SLD 14	fin.	-1797.07	-483	-0.0003428	0.0002807	0.0035	1.52		8357.44	8357.44		4.65	Si
SLD 16	ini.	2043.76	-518	-0.000398	0.0002807	0.0035	1.52		8347.35	8347.35		4.08	Si
SLD 16	fin.	-1845.3	-580	-0.0003533	0.0002807	0.0035	1.52		8357.44	8357.44		4.53	Si
SLV 4	ini.	-2115.33	-1363	-0.0004138	0.0002807	0.0035	1.52		8357.44	8357.44		3.95	Si
SLV 4	fin.	2729.87	-1120	-0.0005617	0.0002807	0.0035	1.52		8347.35	8347.35		3.06	Si
SLV 1	ini.	-2169.65	-1067	-0.0004263	0.0002807	0.0035	1.52		8357.44	8357.44		3.85	Si
SLV 1	fin.	3008.93	-919	-0.0006329	0.0002807	0.0035	1.52		8347.35	8347.35		2.77	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 14	ini.	2085.72	-3411	1.52	0	991	7930	10241	3876	8921		2.62	Si
SLD 14	fin.	-1797.07	-4320	1.52	0	991	7930	10241	3876	8921		2.07	Si
SLV 16	ini.	3733.75	-7008	1.52	0	991	7930	10241	3876	8921		1.27	Si
SLV 16	fin.	-3789.94	-7914	1.52	0	991	7930	10241	3876	8921		1.13	Si
SLV 13	ini.	3679.43	-6743	1.52	0	991	7930	10241	3876	8921		1.32	Si
SLV 13	fin.	-3510.89	-7648	1.52	0	991	7930	10241	3876	8921		1.17	Si
SLV 2	ini.	-2020.76	5326	1.52	0	991	7930	10241	3876	8921		1.67	Si
SLV 2	fin.	2838.92	4409	1.52	0	991	7930	10241	3876	8921		2.02	Si
SLV 4	ini.	-2115.33	5380	1.52	0	991	7930	10241	3876	8921		1.66	Si
SLV 4	fin.	2729.87	4462	1.52	0	991	7930	10241	3876	8921		2	Si
SLD 16	ini.	2043.76	-3387	1.52	0	991	7930	10241	3876	8921		2.63	Si
SLD 16	fin.	-1845.3	-4296	1.52	0	991	7930	10241	3876	8921		2.08	Si
SLV 3	ini.	-2264.22	5699	1.52	0	991	7930	10241	3876	8921		1.57	Si
SLV 3	fin.	2899.88	4781	1.52	0	991	7930	10241	3876	8921		1.87	Si
SLV 15	ini.	3584.86	-6690	1.52	0	991	7930	10241	3876	8921		1.33	Si
SLV 15	fin.	-3619.94	-7595	1.52	0	991	7930	10241	3876	8921		1.17	Si
SLV 1	ini.	-2169.65	5645	1.52	0	991	7930	10241	3876	8921		1.58	Si
SLV 1	fin.	3008.93	4727	1.52	0	991	7930	10241	3876	8921		1.89	Si
SLV 14	ini.	3828.33	-7062	1.52	0	991	7930	10241	3876	8921		1.26	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	fin.	-3680.89	-7967	1.52	0	991	7930	10241	3876	8921		1.12	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.18	SLV 14	Si
V_SLV	1.12	SLV 14	Si
PF_SLU	6.698	SLU 83	Si
V_SLU	3.441	SLU 83	Si